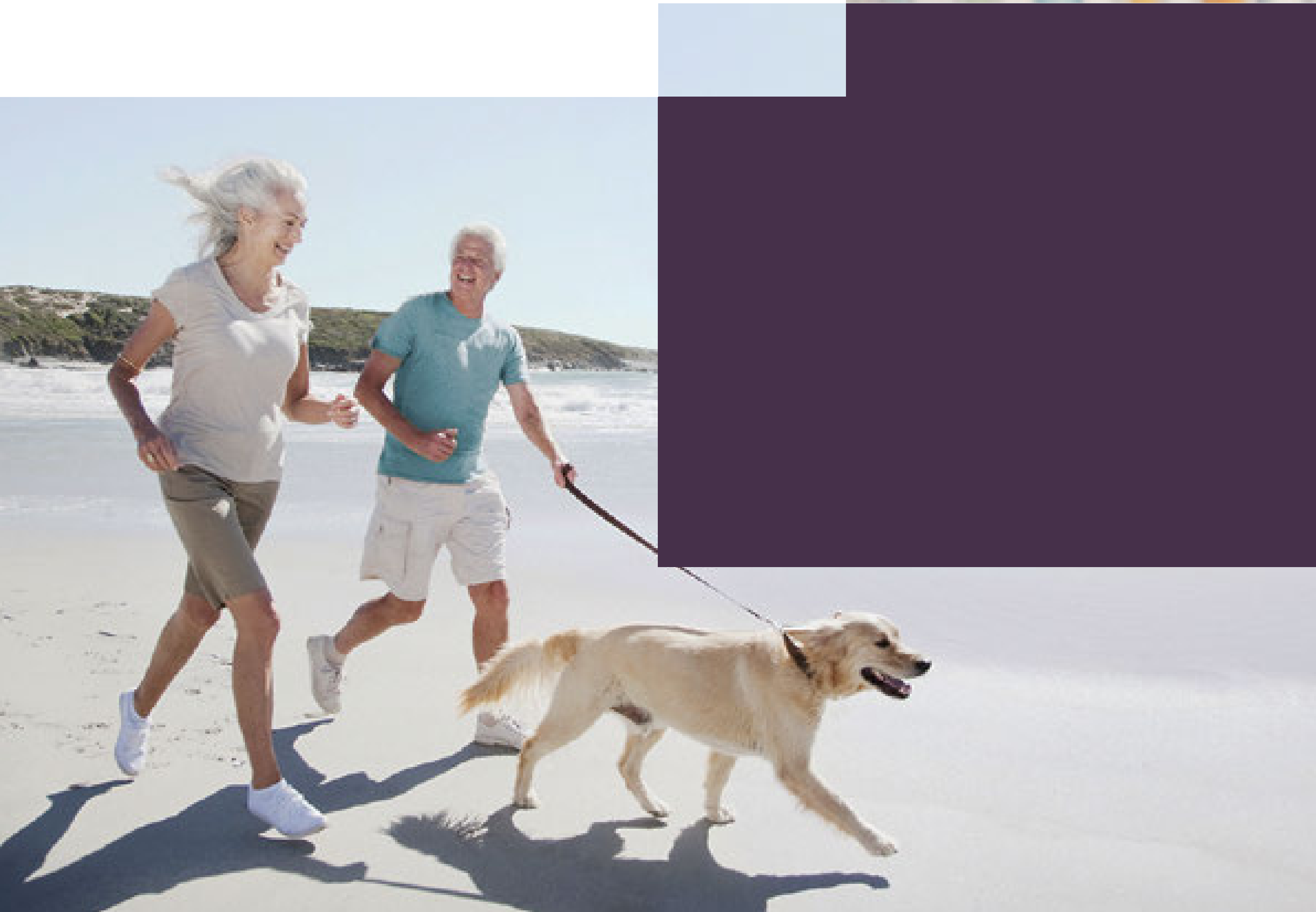

Lonza

Annual Report 2018



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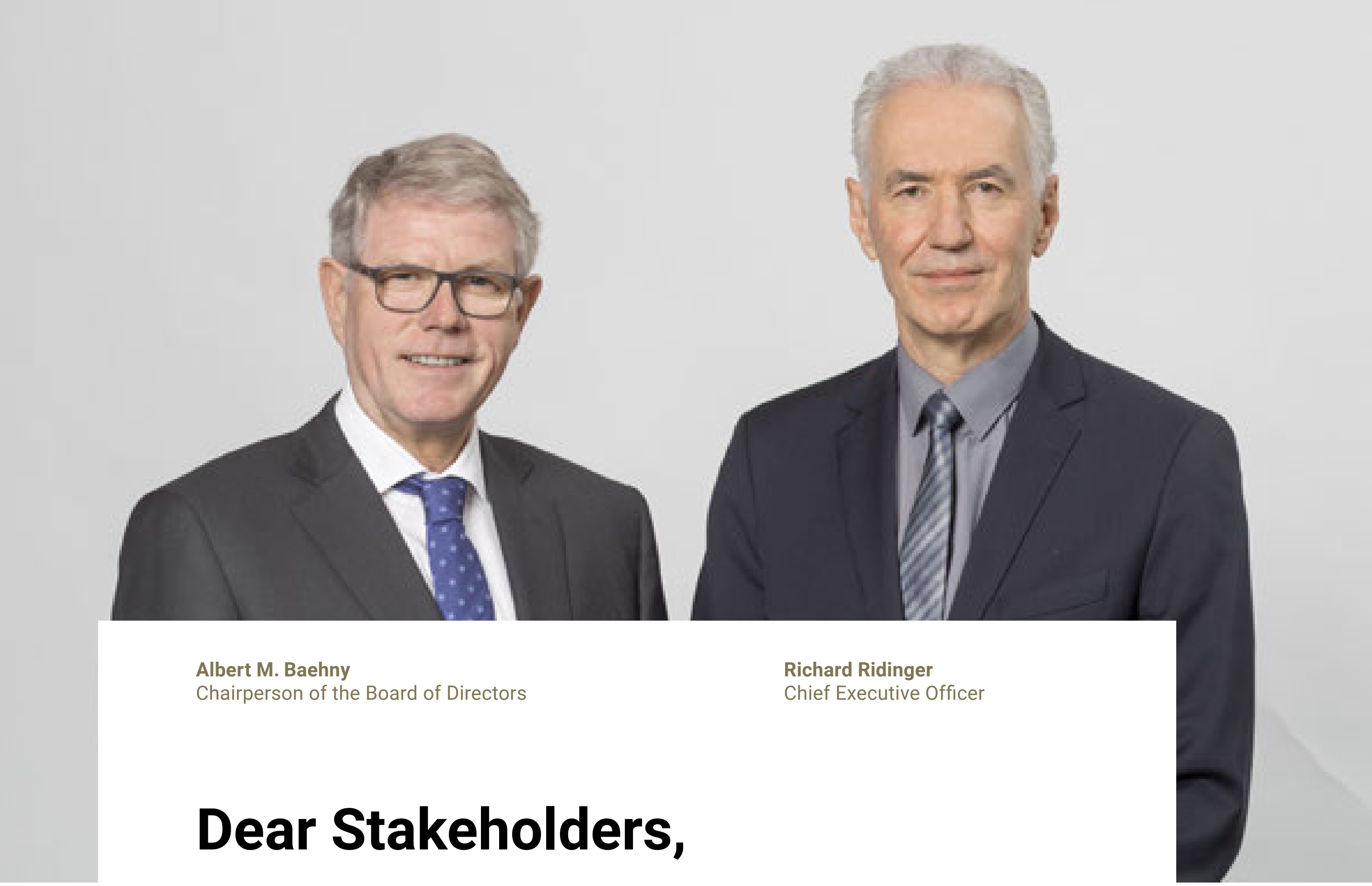
Being one of the world's leading and most-trusted integrated solutions provider to the pharmaceutical, biotech, consumer health and specialty chemicals markets, Lonza is creating value along the Healthcare Continuum® with a strong focus on patient healthcare, consumer preventive healthcare and consumer's healthy environment.

Company



Albert M. Baehny
Chairperson of the Board of Directors

Richard Ridinger
Chief Executive Officer

Dear Stakeholders,

Looking back at another successful year at Lonza, we demonstrated that we have continued on our growth trajectory along the Healthcare Continuum® with 9% organic sales growth and strong profitability. At the same time, we have been investing in Lonza's future and continuing to create value for all of Lonza's stakeholders, including our shareholders.

Healthcare Businesses at Our Core

The drivers of our success were our healthcare businesses in Pharma & Biotech and in the Consumer Health part of Specialty Ingredients. In the Pharma & Biotech segment, Lonza benefited from our broad expertise and innovative offerings as a contract development and manufacturing organization (CDMO) that provides integrated solutions with various technologies that span the whole pharma value chain – from molecule to patient. Our consumer health and nutrition business complements our pharma offerings with effective nutritional ingredients combined with optimized dosage forms and delivery systems solutions.

Prescriptive and preventive healthcare are at the heart of what Lonza does for consumers and patients. We see continued high demand for our CDMO services and integrated offerings in both areas and are capitalizing on global needs generated by a growing, aging and more affluent population.

Successful Capsugel Integration Achieved

Our Healthcare Continuum® strategy was further reinforced in 2018 with the successful Capsugel acquisition and integration. Capsugel has become an integral part of the Lonza family and is now – within the first full year after closing – completely integrated within the Lonza businesses and functions.

First synergies could be realized in 2018, and during the year we began launching combined products in consumer health and nutrition. In our small-molecule businesses, we have also started to introduce joint offerings in early clinical phases; and we have participated in cross-selling opportunities and extended our value chain already. The highly compatible cultures, thoroughly planned and executed integration process and most importantly dedication of the combined teams made it possible for the transformative acquisition to add value.

Next-Generation Biologics Manufacturing

Another highlight of the business year 2018 was clearly the expansion of our Ibex® offerings in Visp, Switzerland – now also providing clinical development and manufacturing services from drug substance to drug product, including fill and finish. We have a highly competitive offering with our biopark, a generational project fully based on concrete customer demand and focused on technological advances.

In 2018 we also opened our Houston, TX (USA) facility, the world's largest cell- and gene-therapy facility in the world. With the technological Cocoon™ innovation, an automated «autologous-cell-therapy-in-a-box» device, we are at the forefront of supporting our customers to provide next-generation medicines to treat or even cure severe diseases. All of our growth investments in our healthcare businesses are progressing as planned.

Creating a Resilient Business

The Healthcare Continuum® spans from the patient to the consumer and therefore also includes specialty solutions for a safe and sustainable environment. Within our Consumer Health and Consumer & Resources Protection businesses of the Specialty Ingredients segment, we offer efficient and at the same time health-related and environmentally friendly formulations against harmful microbes for household applications and industrial markets. Whereas demand for our microbial-control solutions remained high in 2018, we faced headwinds in the more mature, basic chemical parts of our business.

Therefore, we have to prudently work on becoming more resilient. Targeted measures in Consumer & Resources Protection regarding raw-material supply and pricing are being taken while we backward-integrate certain raw materials, re-purpose assets for our core healthcare businesses and even discontinue the manufacturing of some products.

Further Strengthening the Healthcare Continuum®

In 2018 we have announced the divestment of our Water Care business unit to Platinum Equity, an experienced owner who will develop Water Care as a stand-alone business and will give new perspectives to the global sites and its employees. The divestment further strengthens our strategic healthcare focus. We plan to re-invest parts of the proceeds of the Water Care disposal into the Healthcare Continuum® with expected higher returns to deliver more shareholder value.

In this regard 2019 will be a challenging year in which we take the opportunity to further accelerate our growth with targeted investments, especially in the biologics space, and with ongoing innovation and R&D projects. We will invest in new pharma technologies and in ingredients and delivery solutions for nutritional supplements, as well as in innovative solutions for microbial control.

As a result of these investments, we expect to participate fully in the anticipated market growth toward and beyond our Mid-Term Guidance 2022. In addition, in 2019 Lonza will accelerate the review of our current portfolio to further strengthen the company's position along the Healthcare Continuum®.

The year 2019 will also be a year of leadership transition with Marc Funk, formerly COO of Lonza Pharma & Biotech, as the new incoming CEO of Lonza from 1 March 2019. Marc is committed to building on the company's strong foundation and to driving forward our strategy across all our businesses along the Healthcare Continuum®.

Strong Commitment to Sustainability

Today sustainability is a critical part of Lonza's economic success; and we take our social, environmental and governance-related responsibilities seriously. We believe we can create value for society by innovating science-based solutions along the Healthcare Continuum® to develop the medicines and consumer products of tomorrow.

As a baseline for whatever we do, we ensure that regulatory compliance, integrity and ethical conduct are the foundations in every place we operate. While working toward achieving our Vision Zero – the aspiration to work without incidents and reduce emissions, water consumption and waste – we also take responsibility for our industrial heritage, as demonstrated by our continued progress in Visp on remediating the mercury situation.

Continuing on Our Growth Trajectory

We would like to thank all our stakeholders for their continued support, especially our shareholders, customers, suppliers and the local communities where we operate. Lonza is committed to continuing to grow by focusing on commercial and operational excellence. At the same time, we will make dedicated investments in our biologics businesses and further shape our business portfolio within an accelerated timeframe. The Healthcare Continuum® strategy has been setting the path, and Lonza is well prepared to benefit from a breadth of opportunities in the pharma and healthcare markets. We believe we can succeed based on our global footprint, technological capabilities, customer- and market-focused offerings, constant innovation and, most importantly, the expertise and dedication of our people.

Lonza's excellent results in 2018 have been reached because of this dedication and the integrity of our approximately 15,500 employees globally. We are committed to attracting and retaining the best talent globally, and we have the ambition to become a place where our employees professionally and personally grow. With the ongoing support of our employees, along with all other stakeholders, Lonza is confident we can continue on our growth trajectory.

Albert M. Baehny
Chairperson of the Board of Directors

Richard Ridinger
Chief Executive Officer

Highlights of the Business Year 2018

January

Lonza started 2018 by announcing record-breaking full-year 2017 results in a major transformational year

February

Lonza inaugurated a new research & development center for South America in Salto (BR)

Lonza established a venture capital (VC) fund to invest in consumer health and wellness startups

April

Lonza opened the world's largest dedicated cell and gene therapy manufacturing facility in Pearland, Greater Houston, TX (USA)

May

Lonza invested in expansion of its Portsmouth, NH (USA) site, including mid-scale biologics

July

Lonza reported strong momentum with organic growth of 8% sales and 11% CORE EBITDA in H1 2018

1-year anniversary of successful closing of Capsugel acquisition, now fully integrated into Lonza

December

Lonza announced it was establishing a strategic biomanufacturing base in Guangzhou (CN) utilizing GE Healthcare's KUBio™

October

Clovis Oncology and Lonza celebrated the grand opening of new monoplant for Rubraca®

Lonza acquired a controlling stake in Octane Biotech to further develop Cocoon™ autologous technology

November

Lonza released the first commercial 2,000 L single-use bioreactor (SUB) batch from Singapore

Lonza further strengthened focus on its Healthcare Continuum® strategy by signing agreement to divest Water Care business to Platinum Equity

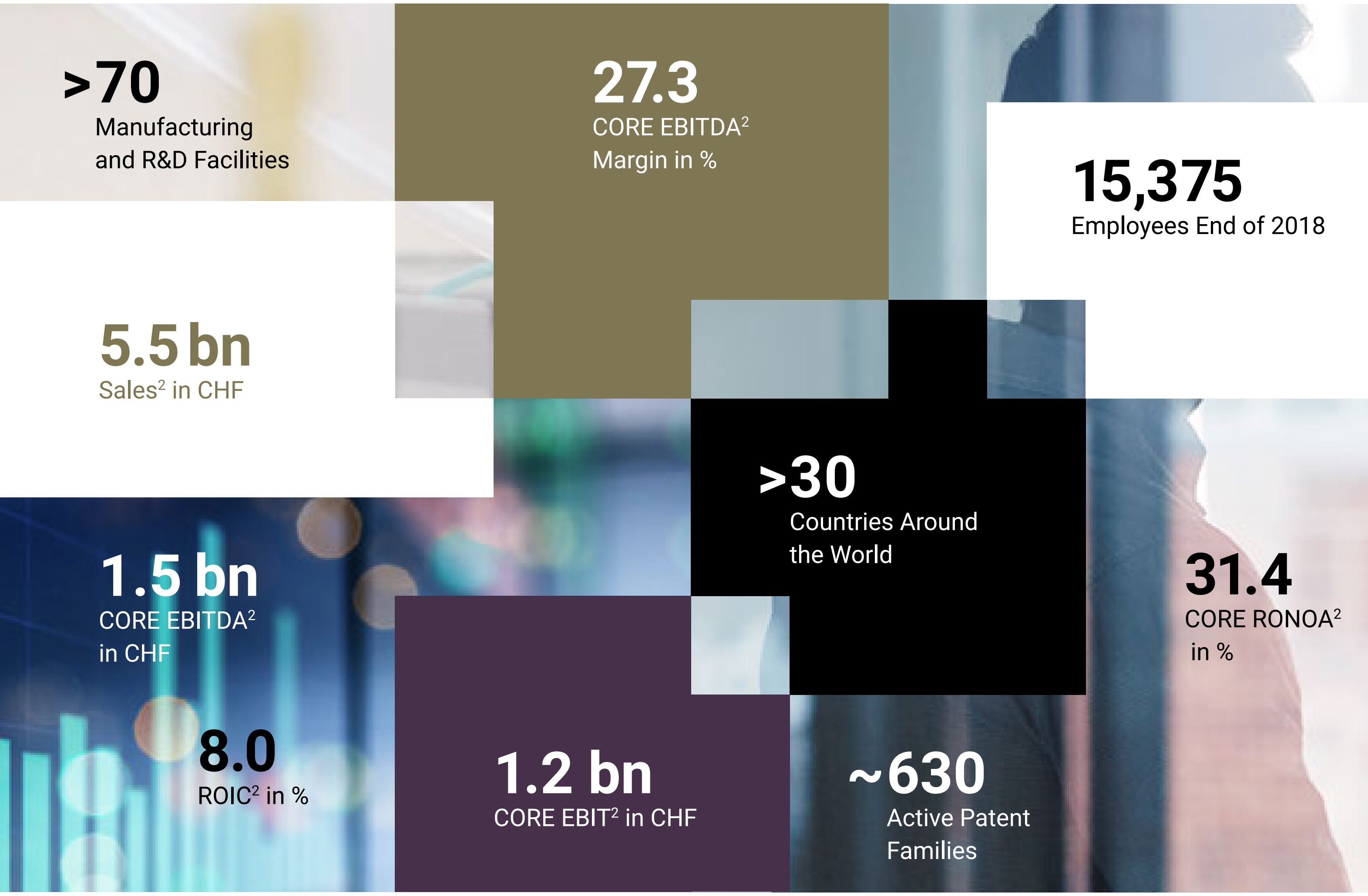
September

Lonza broke ground on an expanded manufacturing facility for nutritional offerings in Greenwood, SC (USA)

Lonza expanded Ibex™ Solutions to offer complete product lifecycle management in one location

Lonza's Capital Markets Day 2018 outlined sustainable growth plans through focus and investment

Financial Highlights[1]

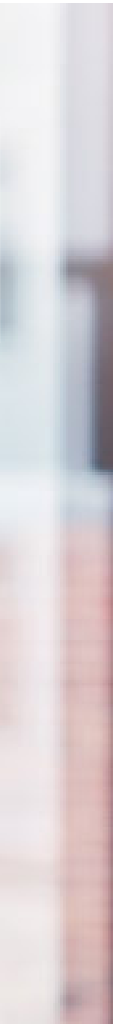


Lonza is looking back at another successful year and is continuing on our trajectory of profitable organic growth. We reported a 9% organic (like-for-like) sales, 12% organic CORE EBITDA and 14% organic CORE EBIT growth. Having completed the first full year with Capsugel as a combined company, sales amounted to CHF 5.5 billion for 2018; and margins for Lonza further improved, resulting in a CORE EBITDA margin of 27.3% and a CORE EBIT margin of 21.0%.

All figures are for Lonza continuing operations (excluding the Water Care business unit) in reported currency and are compared with the same period in 2017 on a like-for-like basis (reported Lonza full-Year 2017 financial results including Capsugel 2017 financial results from 1 January 2017, restated to reflect adoption of IFRS 15).

1 Lonza believes that disclosing CORE results of the Group's performance enhances the financial markets' understanding of the company because the CORE results enable better comparison across years. See more in Supplementary Financial Information – CORE results

2 Lonza continuing operations excluding Water Care business as discontinued operations



On a segment level, Lonza Pharma & Biotech contributed significantly to Lonza’s 2018 performance with 14% organic sales growth and a 32.8% CORE EBITDA margin, especially driven by Clinical Development and Manufacturing and by Commercial Manufacturing in our biologics business.

Lonza’s Specialty Ingredients segment achieved 3.4% organic sales growth and a 22.1% CORE EBITDA margin, despite headwinds due to raw-material price increases, supply-chain challenges and negative cyclical impacts throughout 2018 as already communicated.

The Consumer Health division performed strongly with continued momentum, particularly in consumer health and nutrition, benefiting from synergies across nutritional ingredients, formulation capabilities, and dosage form offerings. The specialty portfolios in Consumer & Resources Protection also performed robustly. Cyclical and commoditized categories especially in the agricultural ingredients and wood protection businesses were negatively impacted by market developments in 2018; countermeasures have been initiated for operational and commercial improvements.

The strong results for the full-year 2018 show that growth and profitability in the healthcare businesses and in the specialty chemical portfolios balance the exposure to cyclicality in other more mature parts of our business.

Key Figures Lonza

Pro-Forma Results[1] Continuing Business

million CHF	2018	Change in %	2017 [2]restated
Sales	5,542	9.0	5,083
CORE EBITDA	1,511	12.0	1,349
Margin in %	27.3		26.5
Result from operating activities (CORE EBIT)	1,165	14.1	1,021
Margin in %	21.0		20.1

1 Restated to reflect adoption of IFRS 15 and classification of Water Care business as discontinued operations

2 Reported pro-forma full-year 2017 financial results (restated for IFRS 15) include Capsugel full-year 2017 financial results. This explanation applies to the terms «pro-forma,» «like-for-like» and «organic,» which are used as synonyms throughout this report

CORE Earnings[1] Continuing Business

million CHF		2018	Change in %	2017 [2]restated
CORE EBITDA		1,511	26.3	1,196
Margin in %		27.3		26.3
Result from operating activities (CORE EBIT)		1,165	28.9	904
Margin in %		21.0		19.9
CORE profit for the period		899	21.5	[3]740
CORE EPS basic	CHF	12.03	10.7	[3]10.87
CORE EPS diluted	CHF	11.98	11.1	[3]10.78
CORE RONOA in %		31.4	4.7	30.0

IFRS Results Continuing Business

million CHF		2018	Change in %	2017 [2]restated
Sales		5,542	21.9	4,548
EBITDA		1,429	31.8	1,084
Margin in %		25.8		23.8
Result from operating activities (EBIT)		842	25.1	673
Margin in %		15.2		14.8
Profit for the period		659	(1.1)	[3]666
EPS basic	CHF	8.80	(10.0)	[3]9.78
EPS diluted	CHF	8.77	(9.6)	[3]9.70

Other Performance Measures Continuing Business

million CHF	2018	Change in %	2017 [2]restated
Operational free cash flow (before acquisitions)	884	34.3	658
ROIC in %	8.0	(4.8)	8.4
RONOA in %	12.1	23.5	9.8

Other Performance Measures
Lonza Group incl. Discontinued Operations

million CHF	2018	Change in %	2017 [2]restated
Operational free cash flow (before acquisitions)	848	37.0	619
Operational free cash flow	820	(130.5)	(2,691)
Net debt	3,534	(6.1)	3,762
Debt – equity ratio	0.56	(8.2)	0.61
Net debt / CORE EBITDA ratio	2.28	(15.6)	2.70
Number of employees	15,375	5.2	14,618

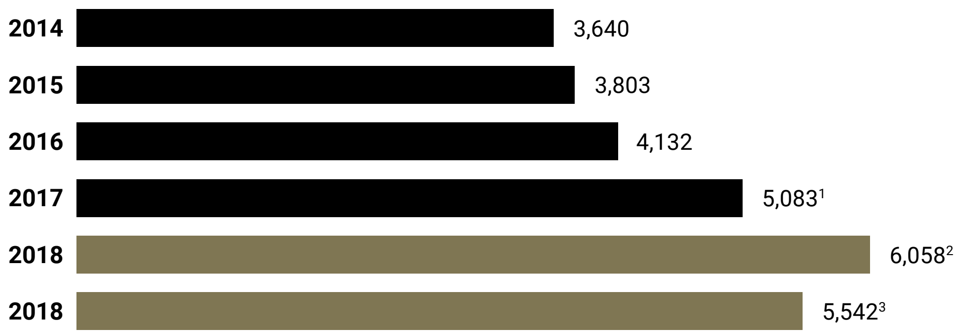
1 In the CORE results for the items «EBITDA,» «Result from operating activities (EBIT)», «Profit for the period» and «Earnings per share», the impact of amortization of acquisition-related intangible assets, impairment and reversal of impairment of assets, results from associates and other special charges / income from restructuring are eliminated «CORE RONOA» does not include acquisition-related intangible assets

2 Restated to reflect adotpion of IFRS 15 and classification of Water Care

3 Includes the favorable impact of CHF 187 million resulting from the tax reforms in the United States and Belgium

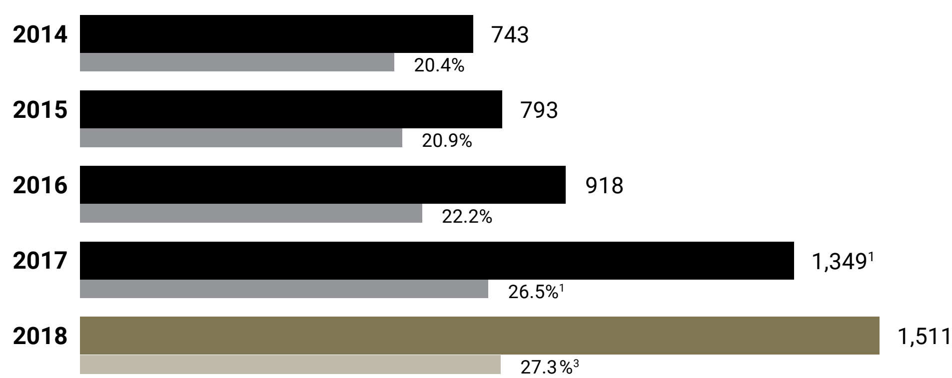
Historical Progression

Sales million CHF

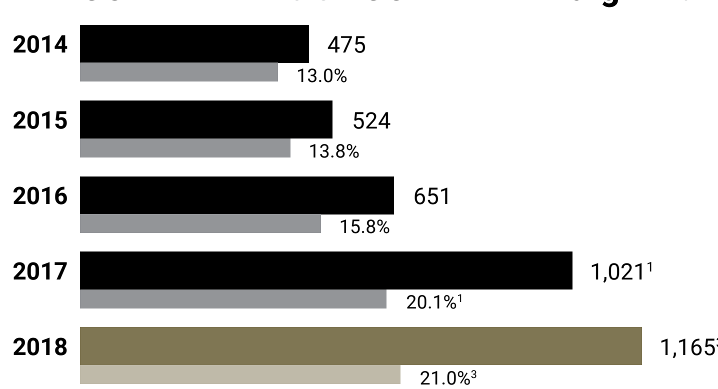


1 Reported pro-forma full-year 2017 financial results (restated for IFRS 15) include Capsugel full-year 2017 financial results
2 Lonza including Water Care business
3 Lonza Continuing Operations excluding Water Care business as discontinued operations

CORE EBITDA million CHF CORE EBITDA Margin in %

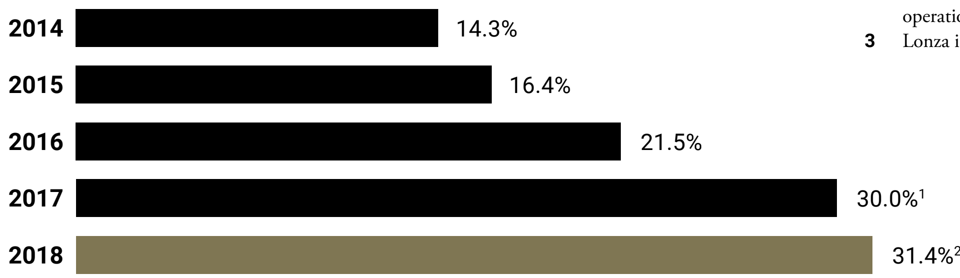


CORE EBIT million CHF CORE EBIT Margin in %

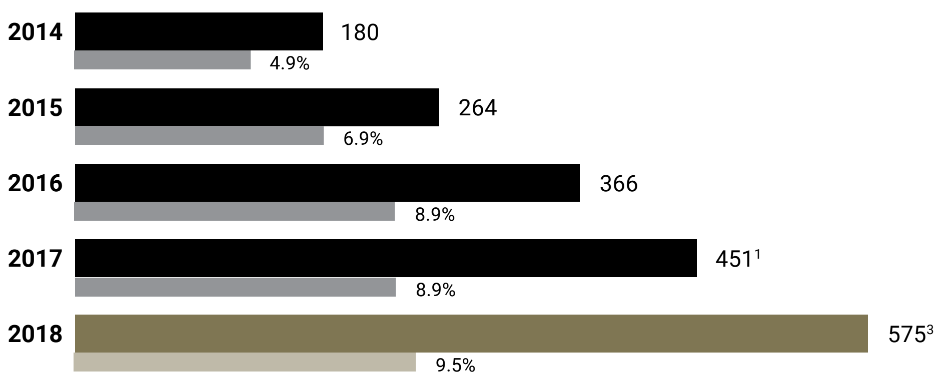


1 Reported to reflect adoptation of IFRS 15 and classification of Water Care business as discontinued operations
2 Lonza Continuing Operations excluding Water Care business as discontinued operations
3 Lonza including Water Care business

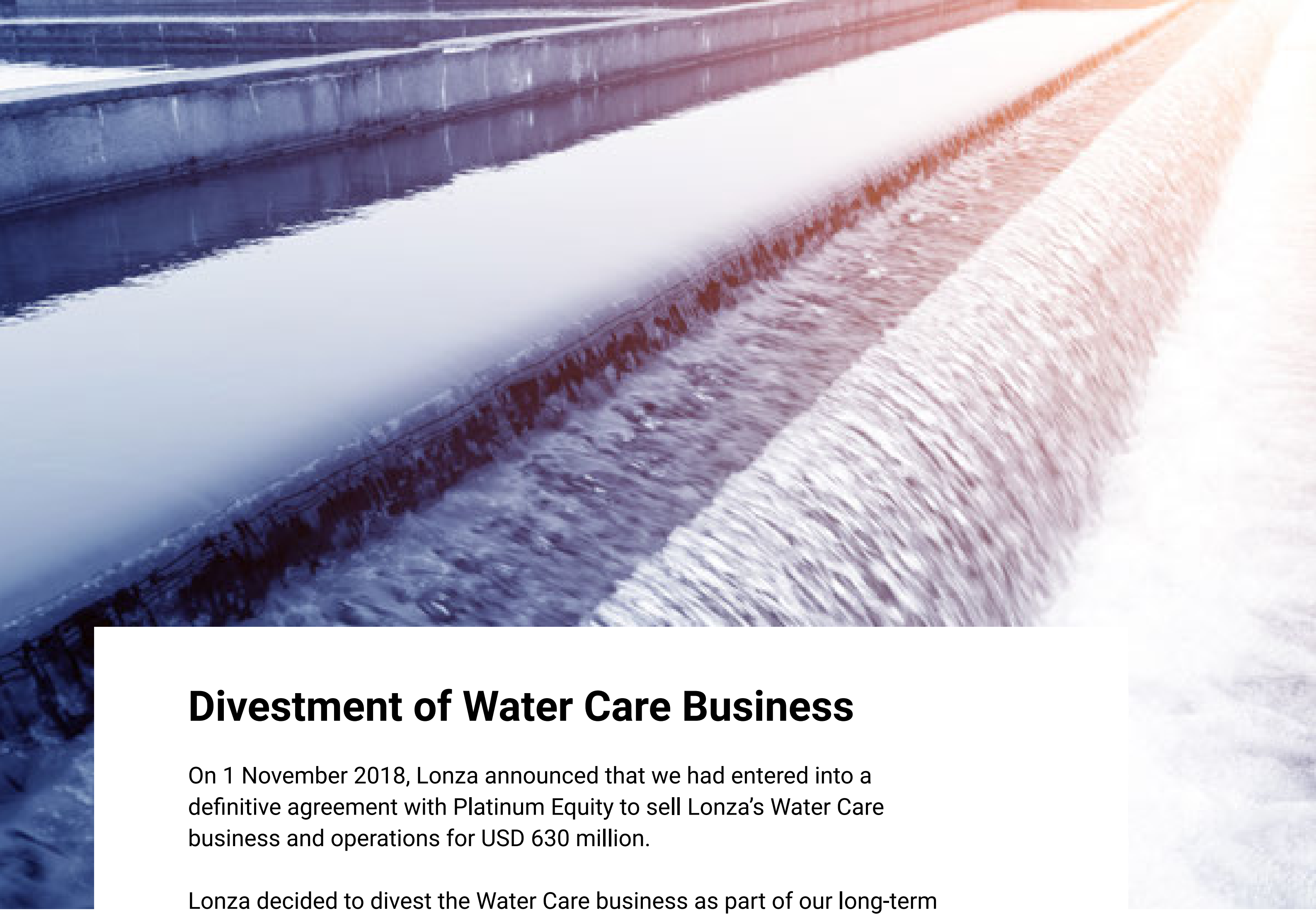
CORE RONOA in %



Capital Expenditures million CHF CAPEX / Sales in %



Net Debt / CORE EBITDA ratio



Divestment of Water Care Business

On 1 November 2018, Lonza announced that we had entered into a definitive agreement with Platinum Equity to sell Lonza's Water Care business and operations for USD 630 million.

Lonza decided to divest the Water Care business as part of our long-term strategy to grow sustainably along the Healthcare Continuum® and to focus all growth initiatives and investments on its core businesses.

Consequently, Water Care is being classified as an asset held for sale according to IFRS 5 «Non-Current Assets Held for Sale and Discontinued Operations»; and it is reported accordingly in the full-year 2018 results. The divestment of the Water Care business has an impact on Lonza Group and on our Specialty Ingredients segment only. The Pharma & Biotech segment is not affected. Further information can be found in the Financial Report.

« The divestment further strengthens our strategic focus on our three core pillars – Pharma & Biotech, Consumer Health and Consumer & Resources Protection – within the Healthcare Continuum®. »

Richard Ridinger, CEO of Lonza

Mid-Term Guidance 2022

To reflect the divestment of its former Water Care business unit and to emphasize Lonza's focus on growth along the Healthcare Continuum® Lonza provided an adjusted Mid-Term Guidance 2022 in March 2019. The adjustment consists of excluding the Water Care Mid-Term Guidance from the Lonza Group financial projections prepared in 2017. The Water Care Mid-Term Guidance was disclosed at Lonza's Capital Markets Day 2018.

In addition, Lonza is reflecting not only the Water Care divestment but also the latest strategy development. The Mid-Term Guidance 2022 was first issued in 2017. The adjusted Mid-Term Guidance demonstrates our focus on growing our businesses along the Healthcare Continuum® while continuing to aim for operational excellence, productivity improvements and attractive margins.

The adjusted Mid-Term Guidance for Lonza's continuing operations (excluding the Water Care business unit) is the following[1]:

- Sales of CHF 7.1 billion
- CORE EBITDA margin of 30.5%
- CORE RONOA 35%
- Double-digit ROIC

At Lonza's Capital Markets Day in September 2018, the growth trajectory by business was outlined[2]:

	Pharma & Biotech	Specialty Ingredients	
	Pharma & Biotech	**Consumer Health**	**Consumer & Resources Protection**
Sales Growth 2017PF–2022	**High-single digits**	**Mid- to high-single digits**	**Low- to mid-single digits**
2022 CORE EBITDA Margin Trajectory	**Sustain > 30+%**	**From high twenties to > 30%**	**From high teens to ~25%**
Building Blocks	• Growth projects • Capsugel synergies • Manufacturing excellence • Capex investments and throughput optimization	• Capsugel synergies • Leveraging pharma technologies • Innovation	• Microbial-control expertise • Procurement and supply-chain excellence • Product portfolio optimization

Lonza plans to re-invest parts of the proceeds of the Water Care disposal into the Healthcare Continuum® with expected higher returns to deliver more shareholder value. Lonza will continue to focus on deleveraging as has already been communicated.

1 Lonza's Mid-Term Guidance for the Group is based on the present business composition, the present macro-economic environment, current visibility and constant exchange rates
2 Lonza's Mid-Term Guidance for segments and divisions is based on the 2018 business composition, macro-economic environment, current visibility and constant exchange rates

« A highlight of 2018 was clearly our Capital Markets Day in September, where we had the chance to discuss our growth trajectory toward and beyond 2022. We emphasized that we are focusing our investments and initiatives on our core markets along the Healthcare Continuum®. »

Richard Ridinger, CEO of Lonza

Outlook 2019

In 2019 Lonza will focus on the thorough execution of our growth initiatives in what is expected to be a year of significant investments. Lonza is also factoring into our outlook the continued macro-economic uncertainty and some potential ongoing headwinds in the cyclical categories of our Specialty Ingredients businesses.

Based on these assumptions, Lonza is providing the following outlook for full-year 2019:

- Mid-to-high-single digit sales growth
- Sustained high CORE EBITDA margin level

In addition, Lonza will accelerate the review of its current portfolio to further strengthen the company's position along the Healthcare Continuum®. At the same time, Lonza will continue to focus on operational and commercial excellence while investing in innovation and growth, especially in the biologics businesses. Lonza will also be continuing to implement measures to counter the cyclical-exposed businesses. An update on outlook will be provided with the Q1 Qualitative Business Update 2019.

The Outlook for 2019 is based on the present business composition for Lonza continuing operations (excluding the Water Care business unit), the present macro-economic environment, current visibility and constant exchange rates. It is a next step toward achieving our Mid-Term Guidance 2022. After becoming fully operational, all investments previously announced are expected to accelerate top-line growth and profitability to contribute to our mid-term targets.

Value Creation Along the Healthcare Continuum®

Lonza's strategy is to be the leading integrated, value-adding solutions provider for the Healthcare Continuum®. Through our Pharma & Biotech segment and our Specialty Ingredients segment businesses, we harness science and technology to serve markets along this continuum – from creating a healthy environment, promoting a healthier lifestyle, preventing illness to improving patient healthcare.

We have a unique capability to connect our expertise in biotech, fine chemistry, formulation and application technology, delivery systems, microbial control, and regulatory and quality requirements across all pillars of our company, which allows Lonza to provide the best solutions for our customers to meet some of the world's greatest challenges. Patients and consumers are benefiting from transferring our know-how from pharma to the healthcare, hygiene and fast-moving consumer goods markets all the way to the preservation and protection of our environment.

The closure of the Capsugel acquisition in July 2017 represented a major leap forward in our strategic quest to become the world's leading integrated solutions provider along the Healthcare Continuum®. Now that the former Capsugel business is fully integrated within Lonza, we have further shaped our Healthcare Continuum® offerings in 2018.

Discover More Spanning the Healthcare Continuum® /
Being a Leading Integrated Service Provider

Lonza's Healthcare Continuum®

Spanning the Healthcare Continuum®

The Healthcare Continuum® spans all of Lonza's Pharma & Biotech and Specialty Ingredients businesses and translates into Lonza's three-pillar strategy to serve customers through our Pharma & Biotech, Consumer Health and Consumer & Resources Protection offerings.

Lonza creates solutions that contribute to healthier living by developing and manufacturing preventive and curative medicine for pharma and biotech companies and their patients, nutritional ingredients and personal-care products for consumer health and anti-microbial solutions for safe environment. We have introduced the four «Ps» to define the scope of our Healthcare Continuum® and translate it into concrete markets and offerings for our customers – prescription, prevention, protection and preservation.

The four «Ps» demonstrate our capabilities to provide full-service offerings to our customers in the pharma, healthcare and industrial markets – from the molecule to the patient, from nutritional ingredients to value-added consumer solutions and from microbial-control ingredients to safe surroundings. More information on our businesses is available in the segment reporting:

- Pharma & Biotech
- Specialty Ingredients – Consumer Health
- Specialty Ingredients – Consumer & Resources Protection

The Healthcare Continuum® Spans All of Lonza's Businesses

Pharma & Biotech

Patient Healthcare

- Clinical development and manufacturing
- Commercial manufacturing
- Consumables and research tools

Consumer Health

Consumer Preventive Healthcare

- Consumer health & well-being solutions in nutritional ingredients, functional food, delivery forms and personal care
- Microbial-control and hygiene solutions for professional and consumer markets

Consumer & Resources Protection

Consumer's Healthy Environment

- Coatings and composites solutions
- Agricultural products and services including basic chemicals

Prescription → Prevention → Protection → Preservation

Being a Leading Integrated Service Provider

All of our initiatives are focused on further strengthening and broadening our Healthcare Continuum® for integrated solutions across technologies and along the entire pharma and consumer health value chain to leverage synergies in technologies and know-how and provide customers a «one-stop-shop» offering.

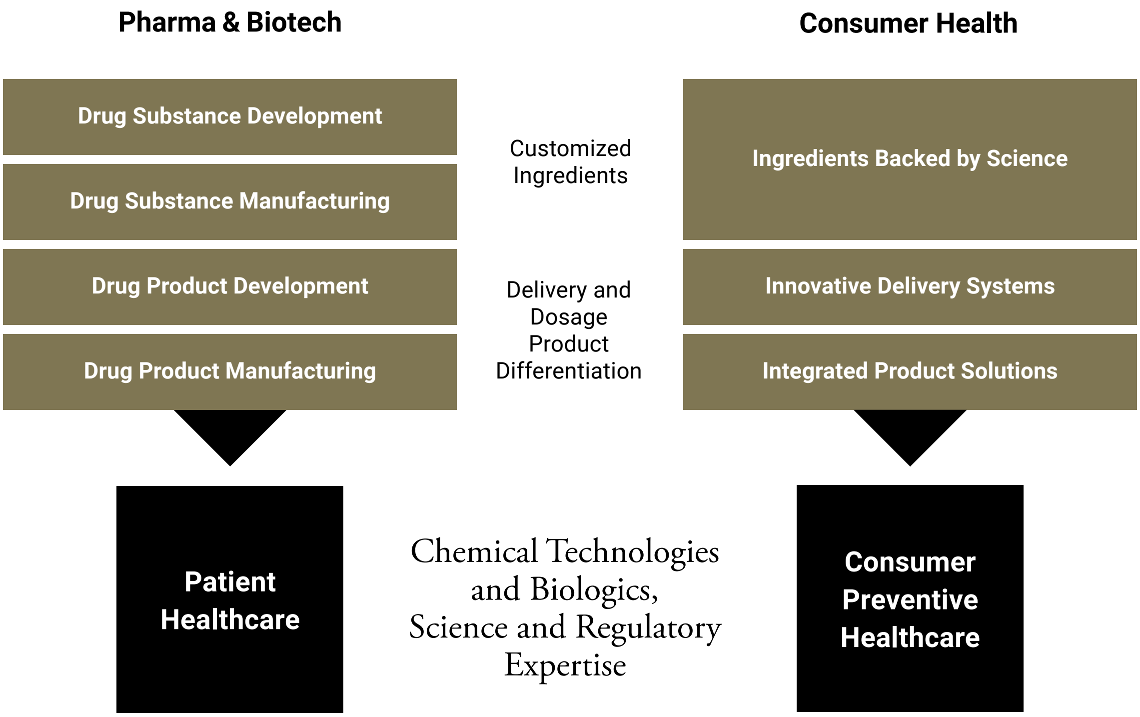
Accordingly, the integration of Capsugel has further strengthened the depth and breadth of Lonza's integrated solutions. We now provide parallel offerings from a value-chain perspective for prescriptive and curative patient healthcare and for consumer preventive healthcare. Bringing together Lonza's drug substance services in small molecules with a regulatory track record of developing and manufacturing highly potent active ingredients and Capsugel's world-leading position in advanced oral dosage delivery technologies and hard capsule manufacturing, we now have a complete small-molecule-to-patient offering along an integrated value chain in Pharma & Biotech.

« We look back at a successful first year after acquiring Capsugel and see that integration is progressing better than planned, operational and commercial synergies are starting to materialize and our Healthcare Continuum® offerings are becoming even stronger. »

Richard Ridinger, CEO of Lonza

The same synergistic dynamic applies to Consumer Health, where tailored dosage forms can optimize the value of nutritional, dietary and other health supplements and ingredients manufactured by Lonza. We are also leveraging synergies between pharma and consumer health by bringing pharma technologies into the consumer markets. Lonza is uniquely positioned to benefit from new growth opportunities in both markets due to these synergistic offerings. Our aim is to get closer to the patient and consumer and to fully serve their needs by helping our clients get to market faster with a reliable and agile partner – one who is dedicated to highest quality, constant innovation, technological advances, and has a strong regulatory track-record and scientific expertise.

Lonza's Integrated Offerings In Pharma & Biotech and Consumer Health



Discover More Integrating Capsugel Successfully / Leveraging Significant Overlaps Among Lonza's Businesses

Integrating Capsugel Successfully

Having completed the first full year as a combined company, we now have a strong organization; and we are positive about our joint forces and synergistic potential.

« The successful integration was made possible by our strong shared values and cultural fit. The determination and commitment of both Lonza and Capsugel teams have created a high-performing working environment. »

Fridtjof Helemann, CHRO of Lonza

Operations and functions are fully integrated, both company's cultures are closely aligned and the new teams are dedicated to becoming one integrated service provider to deliver the most value for our customers. Throughout 2018 «Delivering Together» has been our theme, supported by all managerial levels and put into action by our people. We are finding that the cultural fit we anticipated – such as our joint commitment to constant innovation, strong customer focus, nurturing high-performance teams and championing entrepreneurial projects – is coming to fruition. With proven scientific expertise and innovation in engineering, Capsugel is also a real powerhouse in research & development and adds to Lonza's innovation activities.

« As expected we are benefiting from operational and supply chain synergies and cost savings, as well as from growing commercial opportunities. New, combined offerings complement our value proposition along the Healthcare Continuum®. »

Rodolfo Savitzky, CFO of Lonza

Commercial synergies are coming through in all of the businesses where the former Capsugel has been integrated. Capsugel adds to Lonza's offerings from molecule to patient in Pharma & Biotech and from ingredient-to-consumer in Consumer Health. We are leveraging formulation technologies and delivery systems throughout all these businesses. For example, we are seeing strong customer interest among consumer health and nutrition for clean label, animal-free capsules.This interest in high quality capsules is echoed on the Pharma & Biotech side along with demand for specialty polymer capsules for enhanced bio-availability. The Capsugel integration is fulfilling its strategic promise to help make Lonza the most comprehensive supplier of integrated solutions along the Healthcare Continuum®.

Expected Synergies with Capsugel Integration

Top Operating Synergies	Other Synergies	Top Commercial Synergies	
• Corporate • Procurement • IT	• Tax	• Broaden and deepen customer relationships (cross-selling) • Integrate value chain and product offerings, including consumables	• Add new high-performance consumer health product offerings • Enhance market access • Accelerate innovation
c. CHF 30million p.a. by year 3	c. CHF 15million p.a. by year 3	c. CHF 100million p.a. by year 5	
Near- to mid-term		Mid- to long-term	

Discover More Capsugel-Enabled Solutions in Consumer Health / Tailored Solutions and Cross-Selling in Pharma & Biotech

Capsugel-Enabled Solutions in Consumer Health

Lonza's consumer health and nutrition business is proving to be a marketplace leader in the realm of nutraceuticals and other innovative nutritional ingredients and functional foods. Our two leading actives – UC-II® undenatured type II collagen ingredient for joint health and our Carnipure® L-Carnitine ingredient for sports nutrition – are experiencing high demand. And both of these market-leading products are benefiting from tailored capsule delivery technologies brought to us by the former Capsugel businesses.

Utilizing the synergies of our combined offering, we introduced the pairing of our Carnipure® ingredient – proven to be beneficial for sports recovery and helping to reduce tissue damage and muscle soreness – with Capsugel® Licaps® cutting-edge liquid-filled capsules.

Also more than 30 new dietary supplement product concepts were launched, combining Lonza's specialty ingredients with Capsugel's innovative dosage forms. Plantcaps® capsules are a vegetarian capsule, for instance, made from pullulan, which is naturally fermented from tapioca. Underscoring the value of our approved ingredients and regulatory expertise, these capsules may be used with organic ingredients so that the finished product can be labeled in the United States as «made with all-organic ingredients». We also are drawing on Capsugel technologies to optimize the use of our industry-leading UC-II® ingredient, a patented, clinically proven undenatured type II collagen. For example, customers have the option to combine our ingredient with further joint-health ingredients, such as krill oil and fish oil, and to package them in our DUOCAP® «capsule-in-capsule» patented technology. This technology allows for incompatible ingredients to be combined into a single capsule. Customers can also encapsulate the UC-II® product with curcumin to provide yet another proposition to support joint health and mobility.

To satisfy customer demand for our existing and future products and to simplify the supply chain, in September 2018 we broke ground to expand production capacity at the former Capsugel Greenwood, SC (USA) site. The expansion will combine capsule production, ingredient production and finished dosage form development. This investment highlights the value of the Capsugel acquisition and its successful integration in propelling Lonza's growth strategy.

Tailored Solutions and Cross-Selling in Pharma & Biotech

We are experiencing high interest from our customers and are already working on small-molecule offerings from active pharmaceutical ingredient (API) manufacturing to formulation and encapsulation. Clinical trial and regulatory approval processes in the pharma area have to be taken into consideration when comparing timelines for launching combined products with the consumer health area.

In 2018 synergies have been noted from cross-selling and better commercial terms. The pharma hard capsules and dosage form and delivery systems performed above expectations due to buoyant demand and capturing of these cross-selling synergies. In addition, new pharma hard capsule products have been launched and are further supporting the ongoing momentum.

For example, one of the newest vegan-family capsules Lonza offers is our Capsugel® Vcaps® Gen C, a product based on a carrageenan gelling-agent formulation. It meets the demand of pharmaceutical manufacturers for a fast-dissolving, non-animal capsule that is robust and offers high-performance machinability.

A common issue drug product developers face is that the color composition choice for the commercial drug product is often made after initial stability studies. If new colors are introduced, it may require additional studies, which can result in costly delays. To address this issue, we are drawing upon Colorista™ capsules from the Capsugel® Color Lab. This fast and flexible technology enables customers to cut down on development time while giving them the choice to progress with technical development before making the final commercial color decision.

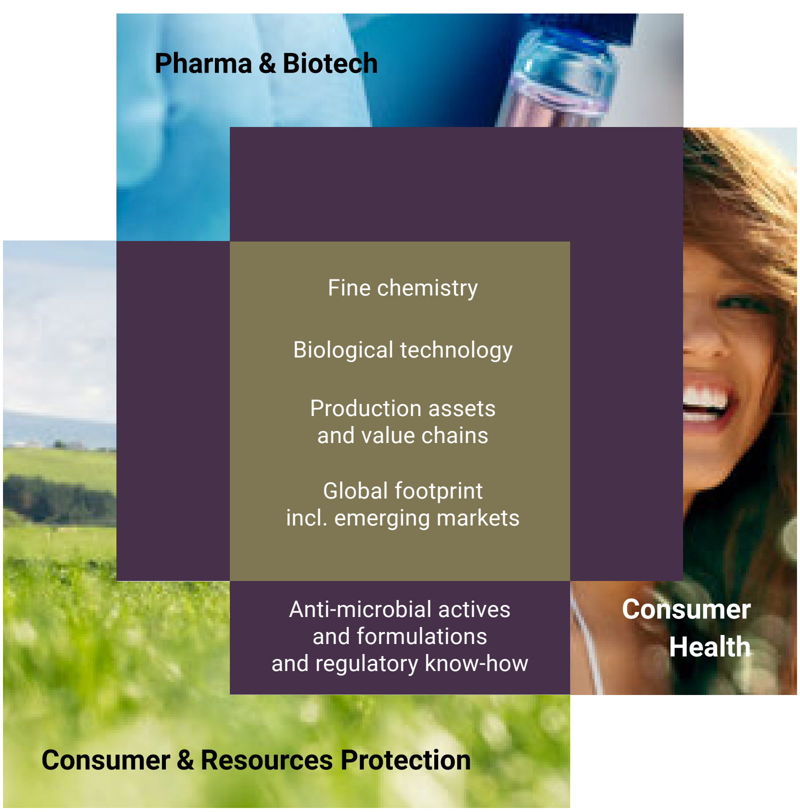
Leveraging Significant Overlaps Among Lonza's Businesses

Lonza's quest to be the leading integrated service provider for the pharma and consumer health markets not only applies to the Capsugel integration but also to the leveraging of overlaps and synergies across our businesses. Lonza's growth trajectory is based on a global asset strategy and on leveraging of assets, as well as technological and know-how overlaps along the Healthcare Continuum®.

One area to point out is the attractiveness of applying pharma technologies to the consumer health markets. We will continue to capitalize on the growth momentum in Consumer Health with our pharma-related offerings by further strengthening the synergies between the pillars – in addition to taking advantage of the synergies between Lonza and Capsugel.

At the same time, Consumer & Resources Protection is continuing to strengthen its innovative offerings and make use of Group-wide regulatory expertise and chemical know-how to address an evolving regulatory landscape. For example, feeding into an increasing global market demand for biocide formulations free of methylisothiazolinone (MIT)-free, the Consumer & Resources Protection business announced the launch of a new MIT-free preservative in 2018.

Leveraging Significant Overlaps Among Lonza's Strategic Businesses



Our focus is on growth investments along the Healthcare Continuum®. In 2019 we expect to see stronger capital expenditures (CAPEX) investments into biologics to allow us to participate fully in the anticipated market growth toward and beyond our Mid-Term Guidance 2022. Consumer Health and Consumer & Resources Protection are less CAPEX-intensive but we will continue to invest in innovation and technological advances including potential bolt on acquisitions.

It is Lonza's objective to make our market-oriented pillars more independent, but we are at the start of the journey so we are continuing to thoroughly review the portfolio on an ongoing basis.

Within the Consumer & Resources Protection division of our Specialty Ingredients segment, we are focusing on high-value specialty product and service offerings in coatings and composites and agricultural markets while reviewing more mature, basic chemical parts of the portfolio.

Part of this review is the discontinuation of certain commodity products or the re-purposing of Specialty Ingredients assets within the Healthcare Continuum®. We have already started in 2018 with the re-purposing of some assets in our Visp (CH) site that were formerly used for basic offerings in our agricultural business. They are now used to produce intermediates for our pharma business.

Also in 2018 we have discontinued the fertilizer business, part of Consumer & Resources Protection. On 1 November 2018, we also announced the divestment of the Water Care business unit to Platinum Equity.

More information on our businesses and 2018 initiatives is available in the segment reporting:

- Pharma & Biotech
- Specialty Ingredients – Consumer Health
- Specialty Ingredients – Consumer & Resources Protection

Showing How We Create Value

Drawing upon more than 120 years of experience in satisfying both fundamental and emerging human needs, we are providing solutions to the most-urgent issues being generated by our current era's growing, aging and more affluent population.

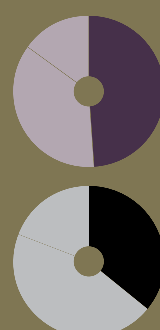
We believe our pharma, biotech and preventive healthcare expertise, combined with our specialty chemicals' know-how, will enable us to continue to satisfy demands arising from global megatrends needs along the entire Healthcare Continuum® – for curative and preventive healthcare, as well as for resources protection and preservation.

Lonza's Value Creation Worldwide

Total

5,542million
Sales in 2018 in CHF

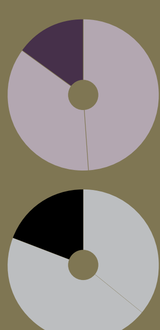
15,375
Number of Employees
End of 2018



Americas

2,690million
48.5% of Total Sales in CHF

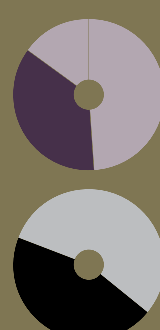
5,526
35.9% of Total Employees



APAC

824million
14.9 % of Total Sales in CHF

2,879
18.7 % of Total Employees

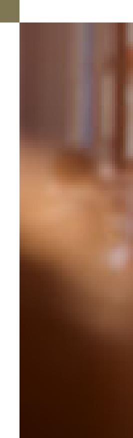


EMEA

2,028million
36.6 % of Total Sales in CHF

6,970
45.3% of Total Employees

Discover More Addressing Global Megatrends / Structuring Our Businesses / Highlighting Our Initiatives in 2018 / Demonstrating a Spirit of Innovation / Investing in Our People



Addressing Global Megatrends

Lonza's businesses are satisfying vital global needs along the Healthcare Continuum® and beyond that often span the intersecting effects of several global megatrends:

- Growing of World Population
- Aging of World Population
- Rapid Growth of Megacities
- Growth of Middle Classes in BRIC[1] and VISTA[1] Countries

1 BRIC countries are Brazil, Russia, India and China. VISTA countries are Vietnam, Indonesia, South Africa, Turkey and Argentina

In response to paradigm shifts in growing health-risk awareness and consumer demands for safe and sustainable solutions, we focus on creating a healthy environment, promoting a healthier lifestyle and preventing illness, as well as improving patient healthcare. Lonza places highest importance on environmental, social and governance priorities and reflects this mindset in all of our business practices and operations. For more information please see the Environment, Health and Safety (EHS) report.

Addressing the Growth in World Population

In a world where the population exceeds 7 billion people and will reach an estimated 10 billion by 2050, according to United Nations research, prescriptive and preventive healthcare, as well as resources protection and preservation, have become overarching topics.

Medicine has made undisputable progress within the last century, and we are benefiting from a high standard of living as never before. However, a growing world population adds to the high demand for successful medical treatments and even curative medicines to address major illnesses of our time – like oncology, diabetes, arthritis, thrombosis, dementia, HIV and cardiovascular diseases. At the same time, savvy consumers want to take actions to prevent their health from deteriorating and are looking for preventive healthcare offerings for immune health, mobility (e.g. joint health), anti-aging, digestive health and active living, among others.

The real threat of communicable diseases in an ever-more-crowded world drives demand for clean-label hygiene and anti-microbial solutions for homes, hospitals and other medical care settings, restaurants, transportation systems and more. Lonza is focused on aiding in the fight against hospital-acquired infections, for example.

Lonza's consumer health and nutrition and Agro Ingredients businesses are at the forefront of helping address a growing world population that is looking for safe, healthy and abundant foods, incuding nutritional supplements. We are also innovative leaders in addressing the sustainability of natural resources.

Our Coatings and Composites products, for instance, help conserve energy by making aircraft, automobiles and satellites lighter and stronger, by reducing fouling on ocean-going ships to improve fuel efficiency and to lower maintenance costs, and by improving yields in the production of shale oil and gas.

Addressing Aging World Population

Populations in the developed world are aging rapidly. Lonza is well-positioned to support healthy aging through everything from active pharmaceutical ingredients and nutraceuticals to anti-aging skin creams and other cosmetic products that make the elderly look and feel their best.

Our technologies support our pharma and biotech customers to deliver advanced medical treatments for fighting the prevalence of many age-related illnesses, and to develop innovative medicines that help treat or even cure severe diseases.

The rapid growth of elderly populations in the West is also driving ever-rising demand for healthy foods and nutritional supplements, anti-aging cosmetics and other personal-care products. Our consumer health and nutrition business's strategy of providing «Active Ingredients for Living Actively™» is benefiting from our expanding nutritional offerings in combination with optimal dosage forms and delivery systems. Patients are transitioning from passive healthcare recipients to active healthcare consumers; and people have a greater sense of individual autonomy and increased interest in well-being, self-education and self-care.

Whereas populations in most developed societies are getting older rapidly, other societies are young and growing, which will create ever-larger consumer markets (e.g. in South East Asia). Lonza is well positioned to serve these markets and is taking a sustainable approach to supporting the increasing needs of consumers. Health for growing populations may be improved by the use of Lonza's targeted nutraceuticals, food bioactives or herbal products; healthy foods; and infection control for safe and healthy living environments.

Addressing the Rapid Growth of Megacities

Movement of populations from rural areas to megacities is generating a need for many Lonza products and services. For example, we are addressing consumer demand for simple yet effective hygiene products to combat a broad range of pathogens, including often difficult-to-treat bacteria and viruses that challenge healthcare and other public facilities. Around the world our clean-label sanitizers and disinfectants – many with global regulatory approvals – are used in hospitals and other medical settings, industrial cleanrooms, homes, restaurants and institutional food-preparation facilities, schools, offices, gyms and cruise ships.
Wood is one of the world's most-renewable natural resources – and it is facilitating the growth of megacities. Our technologies enable the use of wood products for critical construction and infrastructure needs and for the added beauty and luster of wood products. Lonza offers fire-protection and mold-control technologies for the treatment of wood materials used in commercial construction, including nursing / retirement homes, high-rise apartments and condominiums, schools, hospitals, etc.

Addressing the Growth of Middle Classes in BRIC and VISTA Countries

The growing middle classes in BRIC and VISTA countries are generating increasing demand for medication, healthy food and nutrition, hygiene, personal care, and efficient yet sustainable solutions for housing and living. Serving all these markets provides Lonza with positive, long-term opportunities, as highlighted by the fact that in 2030 Asia is expected to represent 66% of the global middle class and 59% of total middle-class consumption worldwide.[1]

1 PwC report «The World in 2050»

With modern facilities around the globe, Lonza's Pharma & Biotech and Specialty Ingredients segments are capitalizing on rising demand in Asia Pacific and elsewhere. Lonza is poised to meet the growing middle classes' demands for new patient treatments and for more active approaches to preventive health.

Additionally, many of the BRIC and VISTA nations are in hot, humid areas of the planet. This fact underscores the value of our Coatings and Composites business, which helps more and more customers fight mold that contributes to the so-called «sick-building syndrome» by providing protective biocides and fungicides for paints, wallboard, ceiling tiles, adhesives and other building products.

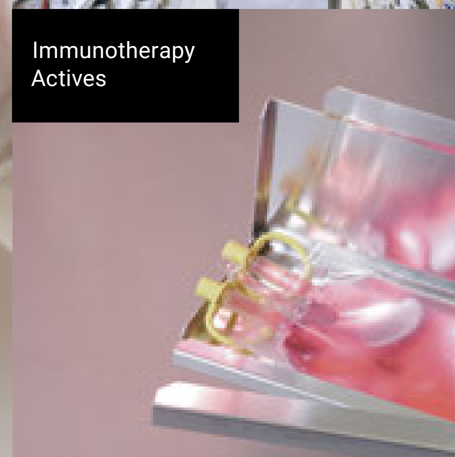
Growth of these emerging middle classes is creating needs for improved hygienic and personal care standards that can be met by Lonza's products, too.

Closer Than You Think®


Prescription Medicine Actives


Cell and Gene Technology

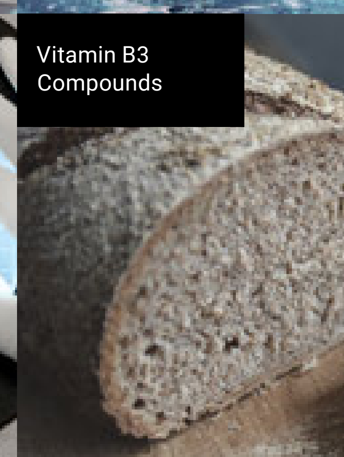

Drug Delivery Technologies

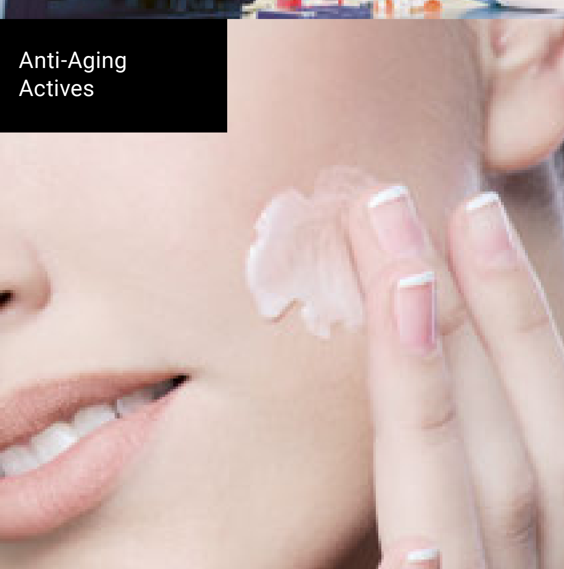

Immunotherapy Actives


Anti-Dandruff Agents

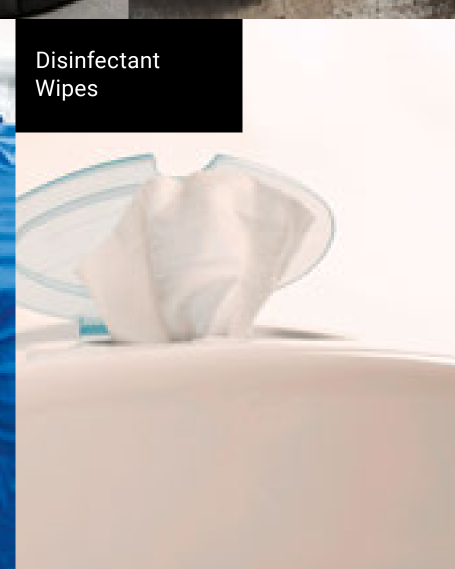

Tools for Researchers

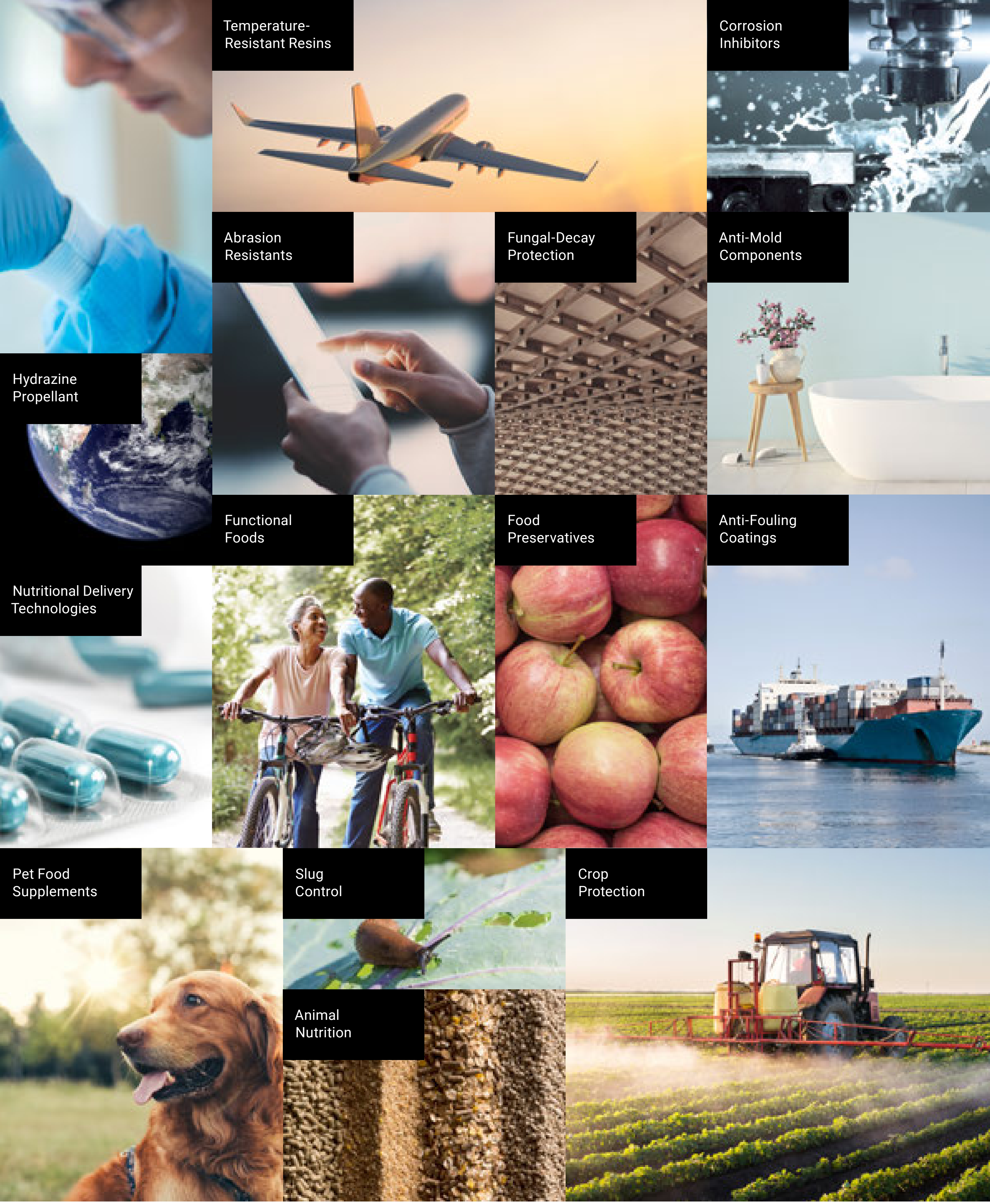

Human Tissue Cells


Vitamin B3 Compounds


Anti-Aging Actives


Hospital Hygiene


Disinfectant Wipes


Temperature-
Resistant Resins
Corrosion
Inhibitors
Abrasion
Resistants
Fungal-Decay
Protection
Anti-Mold
Components
Hydrazine
Propellant
Functional
Foods
Food
Preservatives
Anti-Fouling
Coatings
Nutritional Delivery
Technologies
Pet Food
Supplements
Slug
Control
Crop
Protection
Animal
Nutrition

Structuring Our Businesses

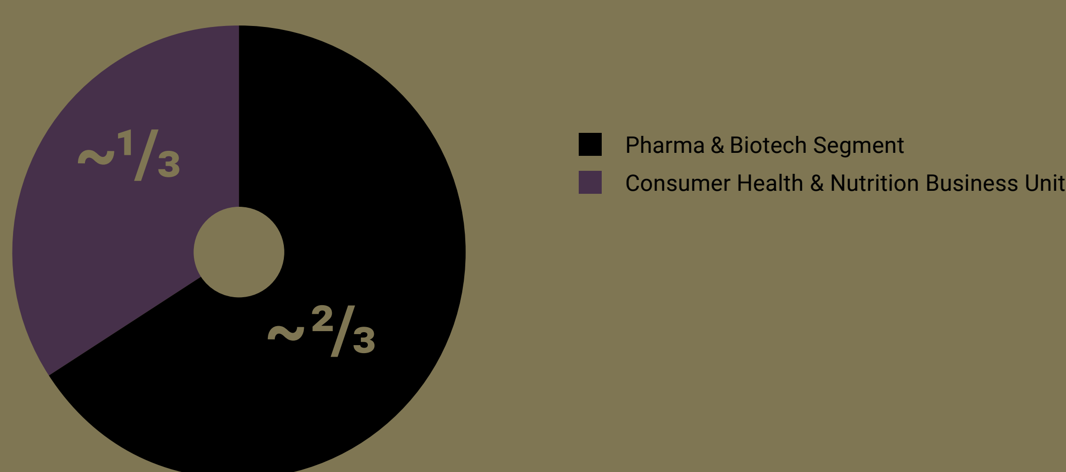
Lonza is organized as a market-oriented, innovation-driven solution provider pre-dominantly operating a customer-centric «business-to-business» model. We serve a number of highly attractive and growing markets related to our strategic focus on patient and consumer needs in prescription, prevention, protection and preservation.

Lonza's organizational structure enables a dedicated approach to our target markets and allows us to serve our customers' needs in the most efficient way possible. In 2018 Lonza operated with two segments – Pharma & Biotech and Specialty Ingredients.

As of 1 January 2018, following the integration of Capsugel, the Specialty Ingredients segment began to operate in: a Consumer Health division, a Consumer & Resources Protection division and a Water Care business unit.

Capsugel has been fully integrated in 2018 into both segments with former Capsugel's pharma capsules business and dosage forms and delivery systems services being part of Pharma & Biotech's small-molecules businesses and former Capsugel's consumer health and nutrition businesses being part of Lonza's Consumer Health & Nutrition business unit within the Consumer Health division.

Former Capsugel Integration into Lonza Businesses



Highlighting Our Initiatives in 2018

In 2018 we have introduced several new initiatives and offerings to meet challenges in our markets. Internal initiatives across all pillars enable sustainable growth as an underlying foundation:

- Excelling in quality, environmental, health and safety management and fulfilling our Vision Zero
- Improving efficiency and productivity through automation and digitalization with a strong impact on operations
- Consolidating our global network of assets and expanding our footprint outside North America and Europe for further enhancement of our global footprint
- Constantly investing in targeted research & development initiatives and internal and external innovations

Highlighting Initiatives in Pharma & Biotech

In the last two years, we launched a series of expansion projects that would allow Lonza to continuously innovate and be prepared to enable our Pharma & Biotech customers to support patients. These projects included not only acquisitions, but also investment in cutting-edge technologies and conceptualization and realization of new business models.

The following major programs were initiated in 2018 to strengthen Lonza as the go-to partner for the pharma and biotech industry:

Expansion of Ibex™ Solutions with new, innovative offerings Ibex™ Design and Ibex™ Develop: They are designed to meet the evolving needs of biotech companies with antibody therapies, from the preclinical stage through to commercialization.

Expansion of mid-scale biologics manufacturing and state-of-the-art technological advances at Lonza's Portsmouth, NH (USA) site: The expansion includes 6,000 L mammalian capacity with a strong focus on automation and the use of state-of-the-art, single-use technologies for optimized processing.

Expansion of Singapore (SG) single-use commercial mammalian manufacturing, which began in 2016: The first 2,000 L batches were successfully released from Lonza Pharma & Biotech's new single-use facility in Tuas (SG) in Q4 2018. With the expansion, Lonza commissioned a hub for single-use commercial manufacturing in Asia to complement our existing mammalian network.

Opening of the world's largest dedicated cell-and-gene-technology facility in Pearland, Greater Houston, TX (USA): It is the first-of-its-kind, state-of-the-art manufacturing facility with capacity to produce treatment for thousands of patients suffering from rare genetic disorders or life-threatening diseases. Houston is one of Lonza's four global centers of excellence in cell and gene technology.

Acquisition of a controlling stake in Octane Biotech to further develop Cocoon™ autologous technology, a patient-scale, closed and automated cell therapy manufacturing system: This Cocoon™ system is part of Lonza's array of cell and gene therapy offerings. The company is currently working with a number of customers who have therapies in various clinical stages to integrate the Cocoon™ manufacturing equipment as a key part of their clinical and commercial manufacturing strategy.

Establishment of a strategic biomanufacturing base in Guangzhou (CN) using a GE Healthcare Solution: The new biologics facility, scheduled to be operational in 2020, will provide development and manufacturing facilities from early- to late-clinical and early-commercial stages. The facility will be based on Lonza's proprietary platforms for development and GE healthcare's KUBio™ off-the-shelf biologics factory for current good manufacturing practice (cGMP) manufacturing.

Full changeover to Lonza operations, earlier than expected, in our Clinical Development and Manufacturing facility in Hayward, CA (USA): The facility was acquired in September 2017 from Shire – with first customer-batches having been released already in Q3 2018.

Expansion of operations in Lonza's Slough (UK) site for clinical development and manufacturing: The site will run 24/7 to account for increased demand in Lonza's clinical services. The expansion also includes new offerings for development and manufacturing of complex proteins.

Increase of capacity and expansion of capabilities in Parenteral Dosage Form development with a further build-out of our Drug Product Services (DPS) offerings in Basel (CH): Together with former Capsugel's expertise in oral solids, Lonza provides high-end solutions for both oral and parenteral dosage forms.

Grand opening of a dedicated highly potent active pharmaceutical ingredients (HPAPI) production train for Clovis Oncology Inc. at Lonza's Visp (CH) site to exclusively produce Rubraca® (rucaparib) and an expansion of HPAPI development and manufacturing capacity for antibody drug conjugate (ADC) payloads, based on a tailored business agreement with a major biopharmaceutical partner

Opening of Lonza's Collaborative Innovation Center in the Haifa Life Science Park in Israel: The new center will be a hub to identify and accelerate fresh solutions to rethink drug development and manufacturing.

Highlighting Initiatives in Specialty Ingredients

Addressing evolving regulatory landscapes and identifying unmet needs in the marketplace, Lonza Specialty Ingredients in 2018 focused on converting those customer needs into solutions.

In the consumer space, we are capitalizing on the «whole health to whole life» trend as consumers are now directing their own way to take care of their health. Self-care methods such as nutritional supplements are addressing health concerns. Individuals increasiangly try to prevent or manage health through self-directed solutions. We have a broad portfolio of products and services; and, like Pharma & Biotech, Specialty Ingredients has demonstrated that we are continuously driven by investment in new technologies and complementary offerings to our current portfolio.

Capsugel, of course, is a big driver here; but also our InterHealth acquisition in 2016 added branded proprietary nutritional ingredients for dietary supplements and functional foods and beverages. Our brands include UC-II®, Super CitriMax®, Meratrim®, 7-Keto®, LOWAT®, ZMA®, Zychrome® and ChromeMate®.

The following major programs were initiated in 2018 to strengthen Lonza as the go-to partner for the fast-moving consumer goods, coatings and composites and agricultural industries – all serving consumer health and the consumer's healthy environment:

Establishment of a venture capital (VC) fund to strengthen innovation and targeted research & technology.

Expansion of production capacity at our Greenwood, SC (USA) site to combine capsule production, ingredient production and finished dosage form development: This expansion is part of an ongoing program to enhance production of Lonza's nutritional ingredients and dosage-form technologies.

Continued launch of new innovative specialty polymer solutions for hard capsules, such as Lonza's delayed-release capsules (DRcaps™) and lipid multiparticulate delivery technology

Continued launch of modern hygiene solutions and products offering effective prevention against pathogenic micro-organisms to meet increasing demand across all regions. Growth is driven by tighter regulatory landscape developments in the professional and consumer hygiene markets.

Ongoing innovation initiatives to strengthen the personal-care portfolio, such as a recently launched bioactive functional ingredient that helps to protect skin against environmental stressors such as blue light.

Opening of a new Research & Development Center for South America in Salto (BR), which allows the development of customized solutions for Bioscience Solutions, Consumer Health and Nutrition, Hygiene, Coatings & Composites and Agro Ingredients customers.

The Consumer & Resources Protection division is focusing on further applying and innovating our microbial-control expertise in the specialty parts of our business like composites, material protection or agricultural crop protection.

As discussed at Lonza's Capital Market's Day in September 2018, initiatives for re-purposing of assets within the cyclical parts of the product portfolio, like basic materials or intermediates, are underway. For example, in 2018 Lonza launched a pharmaceutical early-intermediates supply initiative to leverage chemical production facilities at the Visp (CH) site. By vertically integrating early-intermediate production, Lonza addresses increasing global supply security and quality concerns. Lonza now offers our customers an integrated supply chain from non-GMP early intermediates to current good manufacturing practices (cGMP) advanced intermediates and active pharmaceutical ingredients (APIs). Lonza replaces current sources of non-GMP material, forward processes basic or specialty chemicals, and back integrates current API supply. The seven ISO-certified plants within the Visp complex provide more than $600m^3$ of reactor volume and a full range of capabilities across an array of chemical technologies to service customer requirements.

Furthermore, in 2018 Lonza featured a wide range of offerings for chemical supplies, including key raw materials that address the needs of customers affected by the China Blue Sky initiatives. These environmental initiatives were introduced for The People's Republic of China by the Ministry of Environmental Protection and significantly reduced supply of raw materials manufactured in facilities not meeting minimum environmental requirements. Lonza could step up supply of these chemicals like Hydrogen Cyanide (HCN), Cyanogen Chloride (ClCN), Ketene and Diketene, Acetylene, Ethylene, Carbon monoxide (CO), Hydrogene (H_2). Due to backwards integration, the supply comes out of Lonza's multi-purpose production plants in Visp that offer customers highly flexible production concepts: 15 multi-purpose plants in 1 site, reactor volumes of 1–16 m^3, total reactor volume of 750 m^3 and access to the key raw materials listed above.

The fertilizer business, which had been part of Lonza for more than 90 years, was discontinued in 2018. In addition, we actively pursued an ongoing optimization of our Specialty Ingredients portfolio. As part of this process, Lonza decided to divest the Water Care business as part of our long-term strategy to grow sustainably along the Healthcare Continuum® and to focus growth initiatives and investments on our core businesses.

Additional information about our Specialty Ingredients initiatives is available here.

Demonstrating a Spirit of Innovation

At Lonza we understand that innovation is the lifeblood of our businesses and a major reason why customers are attracted to us. Our innovative spirit is alive all throughout Lonza. We celebrate and reward employees and teams who excel at innovation, whether these efforts involve new product developments, operational excellence breakthroughs or error prevention tools and methods in the realms of quality and safety. We recognize that keeping our pipelines full with innovative products and services that meet customers' emerging and unmet needs requires a disciplined «Innovation Project Management» (IPM) approach. As part of this process, we begin with a vigorous evaluation of innovation projects through an integrated approach that involves business and marketing leaders, technology reviews and a financial overview to determine whether the project is worthy of investment.

The first principle of our IPM philosophy is that a project must be customer focused and satisfy must-have needs. And to ensure that the project remains on target, we require frequent contacts with customers, other marketplace and our own research & development (R&D) experts so that we can fine-tune the project to respond to any new customer concerns or ideas.

Once innovation projects are selected for further investment, dedicated cross-functional teams work to execute the projects, to track their progress against critical milestones and to otherwise manage and optimize the innovation portfolio in order to deliver the expected results and strategic goals. This vital teamwork is overseen on a regular basis by segment and business unit innovation leadership councils, which include key business portfolio managers and process owners, as well as technical subject matter experts from R&D, Operations and IT, following our Go-to-Market Excellence (G2ME) Innovation Management processes.

Discover More Pharma & Biotech Innovations / Specialty Ingredients Innovations

Pharma & Biotech Innovations

Our Pharma & Biotech segment is recognized as an innovative leader among contract development and manufacturing organizations (CDMOs) worldwide. We continue to pioneer advanced technologies that are enabling our customers to develop breakthrough treatments and cures for challenging diseases.

Modern medicines are becoming increasingly complex – from their molecular structure and the handling they require, to their formulation and delivery systems. In addition, a dynamic regulatory environment means that customers choose to work with Lonza to gain access to expertise across technologies and to de-risk their path to market.

Research & development (R&D) and innovation projects are ongoing to increase efficiencies across all modalities, with a sharp focus on accelerating cell-line construction and offerings in drug product services, as well as digitalizing biological upstream and downstream manufacturing. Automation is a clear priority across all our operations, with the in-house experience in more-established areas of the business, such as small molecules and mammalian manufacturing, serving as a solid base for industrializing cell and gene technology.

Toward the end of 2018, Lonza Pharma & Biotech officially opened the Collaborative Innovation Center in the Haifa Life Science Park in Israel – a nation that has established itself as a point of convergence for digital technologies, engineering and life sciences. The collaborative Innovation Center labs, together with Lonza funding and in-house expertise, will enable biologics development and manufacturing projects in collaboration with Israeli talents in academia, medical institutions and early-stage innovative companies.

Innovating Breakthrough Therapies

Lonza Pharma & Biotech's R&D work is one of the key pillars to position the segment as a partner of choice for the pharma and biotech industries. Our innovative spirit is captured in the brand description of Lonza Pharma & Biotech – Delivering the Medicines of Tomorrow, Today®.

Throughout 2018 we applied our inventive mindset to address the development and manufacturing needs of the increasing number of medicines that are obtaining breakthrough-therapy designation and other accelerated-approval pathways.

Due to the fast timelines, these molecules require innovative regulatory, development and project-planning solutions. These requirements were key drivers for launching our Ibex™ Design offering for antibody therapies that will deliver drug product based on at least 1 kg drug substance within 12 months. Another trend in many accelerated-pathway therapies is their increasing complexity, and this diversity throws up challenges for manufacturing – proteins become harder to express and small molecules more potent. In 2018 we launched new solutions for manufacturing these innovative formats, including for the expression of bispecific antibodies and increased capacity for antibody drug conjugate (ADC) payloads.

Innovating Along the Integrated Value Chain

One valuable offering for our biopharma customers is our ability to provide them comprehensive, one-stop technologies and services that cover development through scale-up testing, clinical trials and commercial manufacturing. We further strengthened this competitive advantage in 2018 when we announced a CHF 400 million investment into our Visp (CH) biopark to expand our Ibex™ Solutions offerings. The expansion includes drug substance development, drug substance and drug product manufacturing, including fill and finish, which allows customers to manage the complete product lifecycle through one site.

Capitalizing on the drug delivery and dosage technologies brought to us by our 2017 acquisition of Capsugel, we can now offer customers tailored formulation and delivery solutions for every stage of the drug-development process. Our offerings have evolved to provide an integrated approach from active pharmaceutical ingredient (API) to finished dosage form and from point of concept to commercialization, which results in a significant reduction in the complexity of drug programs.

For further information, visit one of the following pages:

- Ibex™
- Lonza Pharma & Biotech small-molecule businesses

Innovating to Increase Potency and Efficacy

Several key approvals in highly potent active pharmaceutical ingredients (HPAPIs) in 2018 reflect the trend of increasing numbers of low-dose / highly potent applications. With our expertise and investments in capacity for HPAPIs, as well as with the isolation capabilities we have available across all of our drug delivery technologies, we are strongly aligned to support this trend. In our collaboration with Clovis Oncology, we are moving toward real-time release testing of APIs, a first in the pharmaceutical contract development manufacturing organization (CDMO) industry. This process requires close collaboration with customers and regulators.

Increasing complexity in biologics not only requires fresh solutions for expressing new formats of antibodies, including bispecifics and antibody drug conjugates (ADCs), but also a flexible asset network as volumes decrease for some products. In 2018 we announced expansion in single-use, small-scale capacity, and the launch of mid-scale assets with 6,000 L bioreactors.

As this new generation of highly potent, more-effective therapies move to commercialization, Lonza is able to offer customized solutions based on the best expertise, technology and assets.

Innovating Autologous Technologies

Innovation in the field of cell and gene technologies is transforming the way that patients with cancers and genetic disorders are treated – or possibly even cured. At the forefront of this revolution are autologous therapies, in which cells from a specific patient are extracted, processed *ex vivo* and then returned to the patient as therapeutic medicines. Given the small-batch, patient-specific nature of this approach, large-scale production with its cost efficiencies does not apply.

For this reason it is critical to challenge the paradigm for manufacturing autologous cell therapies. Lonza is a leader in research & development (R&D) in this field through an extensive internal program and the 2018 acquisition of a controlling stake in Octane Biotech, with which we have been developing the Cocoon™ system.

« The acquisition of a controlling stake in Octane Biotech is a clear message to the market that we are committed to making commercially viable and scalable personalized therapies a reality. »

Marc Funk, COO of Lonza Pharma & Biotech

This disruptive and innovative technology is based on an automated cGMP-in-a-box concept for autologous cell and gene therapy manufacturing. Following the intensive joint-development program that has been running since 2015 with Octane Biotech, the Cocoon™ system now incorporates the majority of unit operations needed for scalable end-to-end manufacturing of cell therapies including Mesenchymal Stem Cells (MSC) and Chimeric Antigen Receptor T cells (CAR-T cells).
For further information visit our cell and gene technology webpage.

Specialty Ingredients Innovations

Lonza's research & technology teams in Specialty Ingredients focus on innovation in anticipation of evolving needs and changes in the marketplace. The focus is clearly on our health and well-being solutions in nutritional supplements, functional food and personal care and on our microbial-control solutions in consumer product preservation, household and institutional hygiene and coatings for different surfaces. Research & technology (R&T) – as we call our colleagues in Specialty Ingredients due to a strong focus on technological advances including formulation & application technologies, automation and digitalization– is working on upscaling and manufacturing of proprietary innovative technology to best serve our customers in health & well-being and microbial control while further optimizing our manufacturing capabilities and processes.

Innovating in Nutritional Ingredients and Functional Food

Innovation in the nutritional ingredients and functional food markets needs to address consumers' demands for active living, anti-aging, clean-label and preventive health products with indications for immune, digestive or joint health.

Lonza's consumer health and nutrition businesses are a market leader in the field of nutraceuticals and other innovative nutritional ingredients and functional foods. Our two leading actives – UC-II® ingredient for joint health and Carnipure® ingredient for sports nutrition – are benefiting from high demand.

With the addition of the Capsugel® tailored dosage-delivery systems, we are capitalizing by offering customers a pipeline of innovative, synergistic solutions – such as the introduction of more than 30 dietary supplement product concepts that combine Lonza's specialty ingredients and innovative dosage forms. Our innovations include clean label, animal-free Vcaps® Plus capsules or Vcaps® Plus natural colored capsules.

Utilizing various international conference and exhibition platforms, Lonza featured our latest ingredients, delivery systems and finished product formulations for the nutraceuticals industry. This approach included the launch of consumer health and nutrition's patented UC-II® joint-health ingredient to the European market. Backed by clinical studies, our high-quality undenatured type II collagen product has been shown to support optimal joint health at low dosages by improving comfort, mobility and flexibility.

New formulations introduced during the year paired Lonza's Carnipure® ingredient – proven to be beneficial for sports recovery by helping to reduce tissue damage and muscle soreness – with the Capsugel® Licaps® cutting-edge liquid-filled capsules. Also featured were new products that include probiotics combinations, for exercise and weight-management benefits, as well as a concept with vitamin B12 and choline to aid exercise recovery and treat fatigue. To meet increasing customer demand, we broke ground in late 2018 to expand manufacturing operations in Lonza's Greenwood, SC (USA) site to enhance production of our specialty ingredients and dosage form technologies. This investment demonstrates Lonza's continued commitment to be an integrated, end-to-end solutions provider and at the forefront of innovation in technologies and offerings.

Innovating in Personal Care

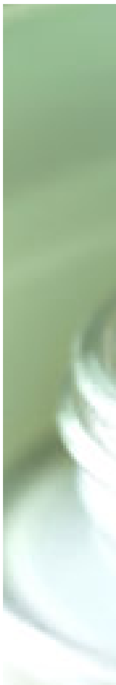
Our innovation in personal care addresses active living and anti-aging. Lonza has long been a pioneer of innovative cosmetic and personal-care products that help people look and feel their best. We added to this track record with the recent launch of a bioactive functional ingredient that helps protect skin against the visible effects of environmental stressors such as blue light from cell phones and other devices, UV light and pollution. In fact, our ScreenLight™ Block received the ITEHPEC Innovation Award Finalist Recognition for the best bioactive functional at the in-Cosmetics Latin America trade show in 2018.

At the in-Cosmetics Tradeshow in Asia, Lonza launched our XPressEV™ bioactive functional ingredient for the appearance of firmer, fitter skin. This product helps combat the effects of chronological aging. Called an evolution for personal care in skin-surface architecture because it works within the skin layers targeting the dermis and the dermal-epidermal junction, XPressEV™ bioactive is especially relevant for Asian consumers.

Innovating in Microbial Control Solutions

A growing health-risk awareness increases demand for innovative safe and sustainable hygiene and microbial-control solutions for infection control, clean-label preservation, a safe and healthy living environment and a sustainable use of resources.

In the areas of hygiene and disinfection, Lonza offers industry-leading innovative blends of anti-microbial ingredients that provide safe and effective protection against bacteria, molds and other contaminants while at the same time, our compounds satisfy increasingly strict global regulations. In fact, Lonza's extensive portfolio of approved actives is a major competitive advantage when traditional biocides such as methylisothiazolinone (MIT)-free are being more strictly regulated due to health and environmental concerns.



To satisfy this increasing global market demand for biocide formulations free of MIT, Lonza recently expanded the Proxel® range of preservatives into the North American market. Proxel Spektra™ Preservative is a dual-active, broad-spectrum preservative that offers effective preservation of industrial products against spoilage caused by bacteria, yeast and mold. This formulation benefits customers as it uses two complementary active ingredients, providing enhanced anti-microbial efficacy and long-term protection.

Modern Paths to Innovation: Collaboration and Start-up Funding

To accelerate the development of innovative new products in the consumer health and well-being marketplace in 2018, Lonza launched a venture capital fund to back emerging consumer-health companies in North America. In partnership with Prolog Ventures, the Prolog Lonza Consumer Fund will focus on products, technologies and innovative business models related to fast-moving consumer goods markets, such as personal care, functional foods and beverages, medical food, dietary supplements and home care.

The emphasis is on products that maintain, protect or preserve the health and well-being of people and companion animals around the world through proprietary ingredients, formulations and delivery technologies.

The newly created fund offers value beyond financial support by leveraging Lonza's global resources and expertise to accelerate the growth of the fund's portfolio companies – many of which are located on America's West Coast, which is a locus of disruptive companies in everything from information technology to medicines and consumer health.

> « The establishment of a Venture Capital fund demonstrates Lonza's commitment to innovating along the value chain and to creating additional value for our customers with new technologies and integrated solution. »

Sven Abend, COO of Lonza Specialty Ingredients

Investing in Our People

Our Human Resources (HR) strategy consists of two simple – highly important – goals. First, we aim to support all Lonza colleagues in their personal and professional growth. In addition, we want to attract and retain the best talent globally that fits our corporate culture, values and objectives.

We addressed both of these goals in 2018 by focusing on several initiatives to assure that Lonza remains both an employer of choice and a destination of choice. Lonza's HR professionals conducted focused interviews with employees and leaders about what they valued most in terms of both their personal career and their work for Lonza. We also conducted benchmark assessments of our key talent competitors and target candidate pools to understand their awareness of Lonza's reputation and career opportunities. From all of this research, we gained understanding of current talent attractors, including our organizational culture and characteristics.

Recruiting the Right Talent

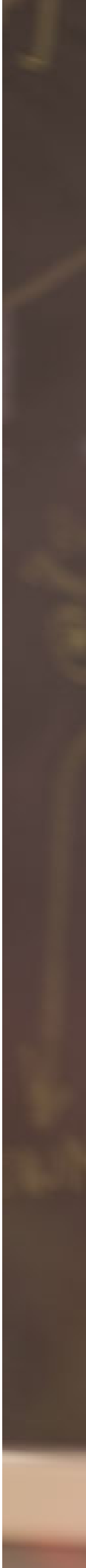
In 2018 we completed implementation of a new recruitment delivery model throughout the global organization. This model involves state-of-the-art platforms to attract, assess and engage the talents we need to deliver against our growth agenda.

We are also taking steps to redesign our careers' web portal for prospective employees. The new site, which will be launched in 2019, will reflect the key values and principles of Lonza as an employer. We also are focusing more and more on building proactive relationships with talent in the market in advance of our needs – building talent pipelines that enable organizational readiness. Our motto is Our Future, Today. We have an internal and external Talent Scouting organization that is constantly present in the market.

Supporting a Diverse Global Workforce

At Lonza we recognize the business value and ethical value of having a diverse global workforce. We are proud of the progress we are making in creating a vibrant, healthful balance in our workforce in terms of age, gender, nationality and many other personal factors.

While we are proud that approximately 50% of our business unit leaders are women, we know we have to do more to ensure that women get equal opportunities to excel, grow and lead. At a 2018 meeting with our Board of Directors, we shared new projects and current initiatives within the realm of gender equality. For instance, in order to broaden the diversity of our Swiss workforce, Lonza is an active member of

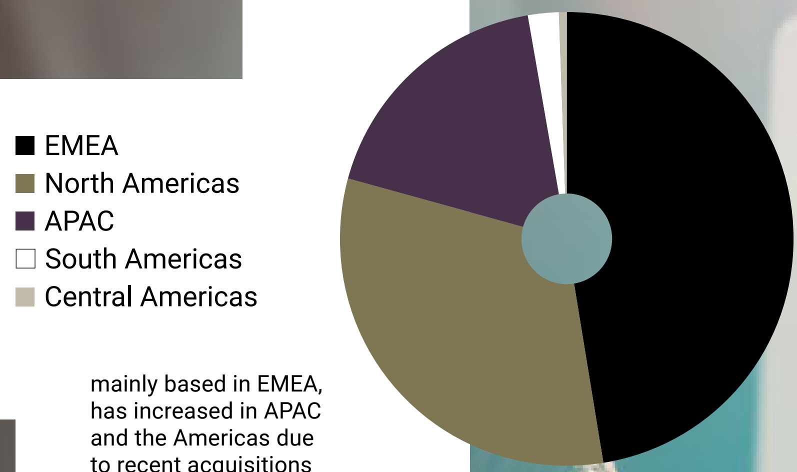


Lonza's Workforce

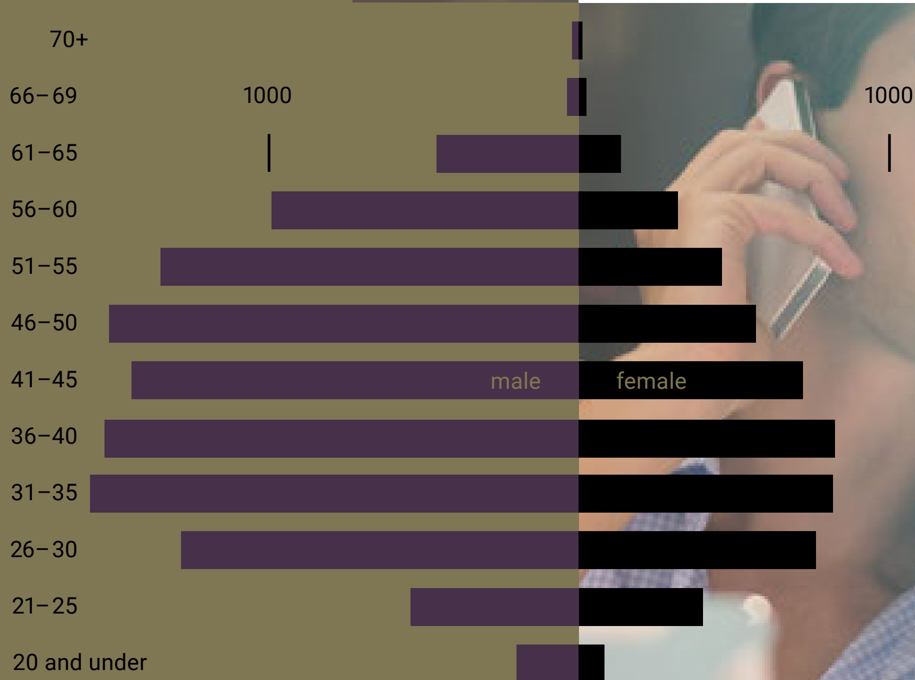
more than
100
nationalities

mainly from Switzerland and the United States

diverse



mainly based in EMEA, has increased in APAC and the Americas due to recent acquisitions



balanced
across all age groups

highly engaged

according to our Life@Lonza employee survey:

- 80% response rate
- 2000+ follow-up actions

31%
female

30% female
Board members

50% female
business unit heads

the Advance Women in Swiss Business network of approximately 100 companies, a group that aims to actively increase the share of women in leading positions in Swiss firms. Reflecting the global breadth of Lonza's businesses, HR leaders and business partners have been creating a best-in-class approach to managing and serving Lonza's growing expatriate population. Among other services and support, we offer a wide range of domestic relocation and global mobility services and technology-enabled practices. This exchange of talents across the globe is one of the keys to Lonza's present and future success.

« Lonza's focus is on our people – attracting, developing and retaining the talented and engaged individuals who share our commitment to create value for patients, customers and stakeholders. »

Fridtjof Helemann, CHRO of Lonza

Developing Along a Career Path

Employees have the opportunity to develop through site-based, centrally organized learning programs. We introduced several online interactive tools for Lonza employees, including «Pathfinder – Planning Your Career at Lonza,» which provides proactive and personal career planning and development. In addition, targeted leaders, managers and employees have access to an online micro-learning platform. This portfolio of curated videos, worksheets and tools is aligned with Lonza's core competencies to provide just-in-time learning. The resource also offers structured certificate programs in 18 topic areas. Employees who complete the entire course receive a certificate. Leaders can also use the content to drive change, execute strategy or motivate their teams.

Building Stronger Leaders and High-Performing Teams

Building high-performing teams is at the heart of our culture and people strategy. More than 100 leaders have focused on leading from the «inside out» through the self-managing leadership journeys for key executives and their teams.

We recently piloted an online Self-Managing Leadership program to spread this unique program further into the organization. We coach teams and provide a team diagnostic tool to improve their productivity and positivity. In December 2018 we piloted «Strategic Intuition» to help leaders build competence and master how to design strategies for the future.

In October 2018 about 20 leaders graduated from our third Leadership Acceleration Program in partnership with Duke Corporate Education. This nine-month leadership program builds leadership and business skills. Participants work in small groups to apply their learnings to real Lonza business projects; they develop defensive and offensive strategies for those projects, such as the integration of recently acquired companies and their technologies.

Lonza is now 15,375 employees strong. We are proud to be working together to create the world's leading, integrated solutions provider to the Healthcare Continuum®. Our corporate HR team, working closely with our HR business partners, will continue in 2019 to position Lonza as a preferred employer and destination of choice for the best and brightest global talent.

Management and Company Structure

Segments

In 2018 Lonza's activities were organized in the following segments[1]:

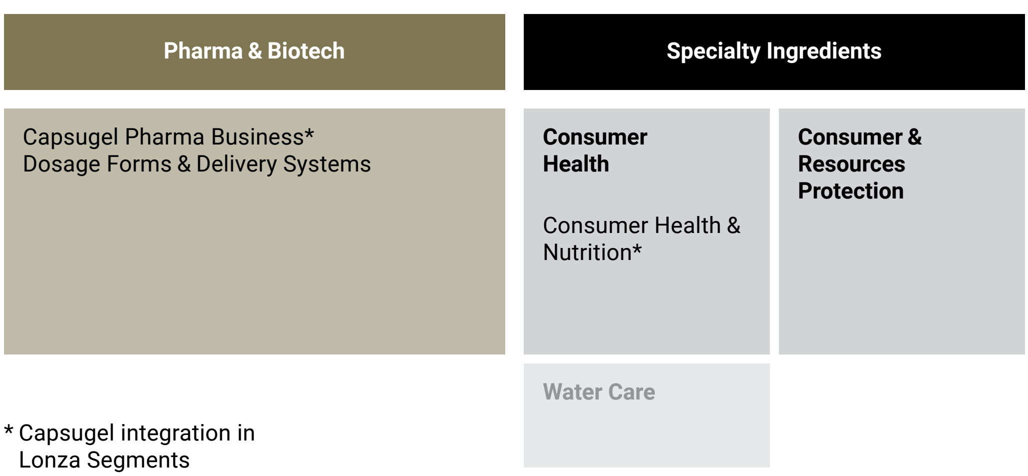
The **Pharma & Biotech**[2] market-focused segment comprised the following offerings:

- Clinical development services and manufacturing in biologics and small-molecule businesses
- Commercial manufacturing in biologics and small-molecule businesses
- Consumables and research tools

The **Specialty Ingredients**[3] consumer-focused segment operated in:

- a Consumer Health division
- a Consumer & Resources Protection division
- a Water Care business unit[4]

Overview of Lonza's Segments Including Capsugel



1 As of 1 January 2018, Capsugel operating segment was fully integrated into Lonza's Pharma & Biotech and Specialty Ingredients segments

2 As of 1 January 2018, the former Capsugel's pharma capsules business, as well as dosage forms and delivery systems services, were integrated into Pharma & Biotech's small-molecule businesses

3 As of 1 January 2018, the Specialty Ingredients segment is operating in three distinct units: a Consumer Health division, a Consumer & Resources Protection division and a Water Care business unit. The former consumer health and nutrition business of Capsugel has been integrated within the Consumer Health division of Lonza's Specialty Ingredients segment. Coatings & Composites and Agro Ingredients are continuing to operate in their current structures under the new umbrella of a Consumer & Resources Protection division. As of 1 November 2018, the Water Care business unit has been classified as discontinuing operations

4 On 1 November 2018, Lonza announced that it had entered into a definitive agreement with Platinum Equity to sell Lonza's Water Care business

Corporate Functions

The Corporate Functions include Human Resources, Finance & Controlling, Tax, Treasury, Corporate Development, Procurement, Quality, Environment, Health and Safety, Corporate Communications, Investor Relations, Legal / Ethics & Compliance/ IP, Engineering and IT.

Global Business Services Organization

Our Global Business Services Organization (GBSO) supports our segments, operational units and corporate functions with transactional services in financial, customer service, HR and IT. The GBSO focuses on standardization and automation of processes to drive productivity and higher quality services.

Service delivery through the GBSO is being centralized in Manchester (UK) to support EMEA markets and in San Jose (CR) for the Americas.

Holding Company and Listed Companies

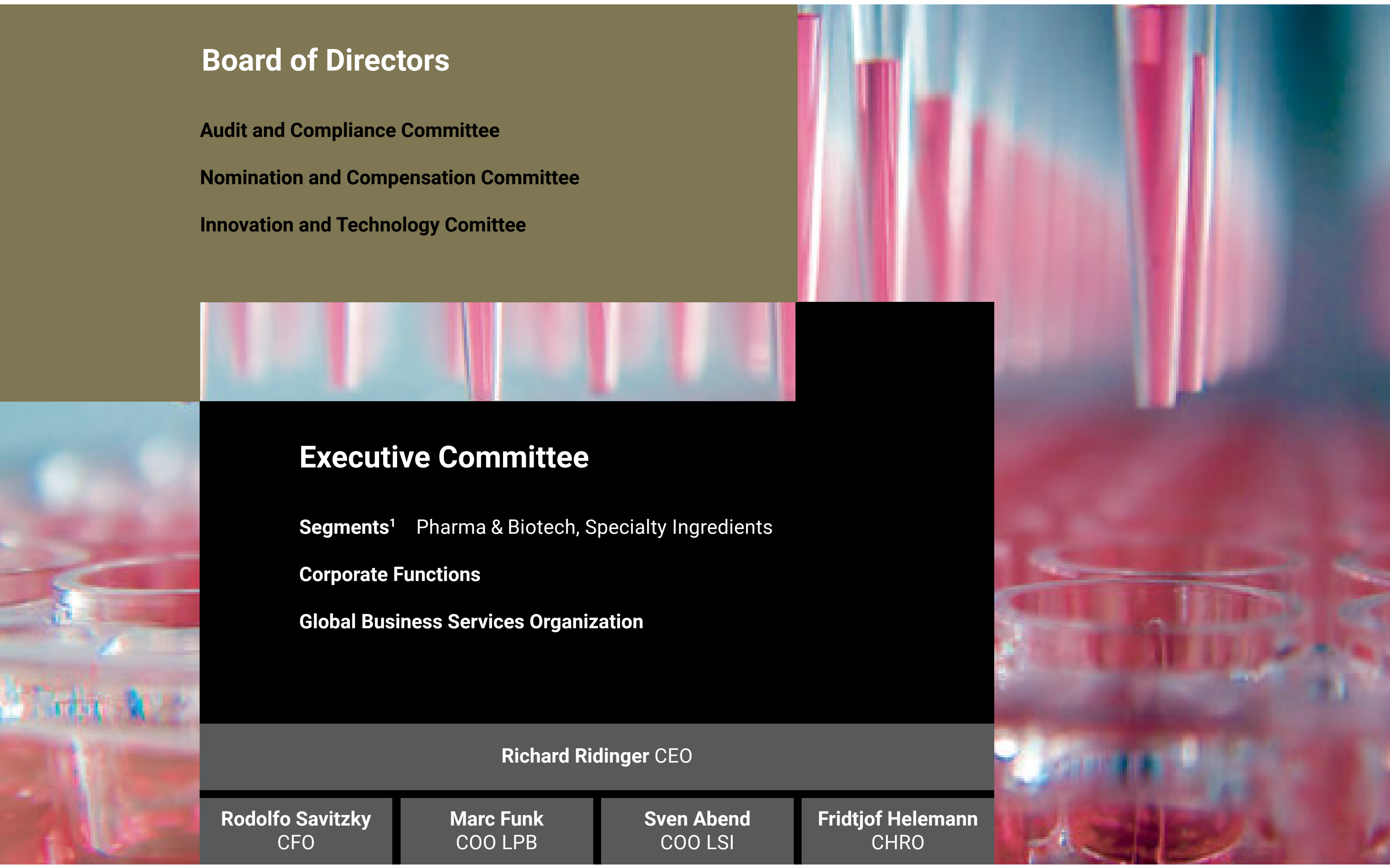
Lonza Group Ltd, with our registered office in Basel (CH), is the ultimate parent company of the Lonza Group. Except for Lonza Group Ltd, no company belonging to the Lonza Group is listed. Please refer to the Shares and Participation Certificates section for information on the listed shares, the stock exchanges on which Lonza Group Ltd is listed and the market capitalization.

Principal Subsidiaries and Joint Ventures

The principal subsidiaries and joint ventures of the Lonza Group are shown in note 33: Principal Subsidiaries and Joint Ventures in our Consolidated Financial Statements.

Corporate Governance and Remuneration Policy

Operational Group Structure



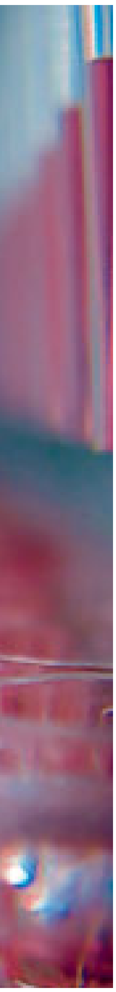
1 As of 1 January 2018, Capsugel was fully integrated into Lonza's Pharma & Biotech and Specialty Ingredients segments

Board of Directors

The Board of Directors (BoD) is Lonza's supreme governance body, consisting of the Chairperson, the Vice Chairperson and the other members. All Board members are elected by shareholders during the Annual General Meeting. Lonza's Board defines the strategic direction and is responsible for the ultimate management of Lonza. It monitors the business and financial performance against agreed goals and objectives, ensures that appropriate controls and systems are in place to manage risks and is committed to maintaining the highest standards of integrity and transparency in its governance of Lonza.

Executive Committee

The Executive Committee is responsible for managing Lonza worldwide and for implementing policies and strategies as defined by the Board of Directors. It supports and coordinates the activities of the segments, corporate functions and the Global Business Services Organization. Appointed by the Board of Directors, the Executive Committee performs the duties delegated to it by the Board. Lonza's Executive Committee consists of the Chief Executive Officer (CEO), the Chief Financial Officer (CFO), the two Chief Operating Officers (COO) and the Chief Human Resources Officer (CHRO).



Committees

Standing Board Committees in the following areas provide corporate governance guidance and support for the Board of Directors:

Audit and Compliance Committee

Lonza's Audit and Compliance Committee meets and consults regularly with the Executive Committee, the Lonza Audit Services (Internal Audit) and the independent external auditors to review the scope and results of their work and performance, according to the Audit and Compliance Committee Charter. This committee reviews the systems of internal control and financial reporting, as well as the company's compliance with laws and regulations.

Nomination and Compensation Committee

The Nomination and Compensation Committee is entrusted with the review and recommendation of compensation policies and programs, as well as the compensation of the members of the Executive Committee and key executives. Furthermore, this committee evaluates potential members of the Board of Directors.

Innovation and Technology Committee

The Innovation and Technology Committee supports innovation and technology by monitoring potential technology breakthroughs, by supporting management in driving innovation projects and by providing and facilitating contacts with academia and research institutions, for example.

More information is available in the 2018 Corporate Governance Report and the 2018 Remuneration Report.

Leadership

Antonio Trius, BoD
Andreas Bohrer, Company Secretary
Angelica Kohlmann BoD
Jürgen Steinemann, BoD
Werner Bauer, BoD
Christoph Mäder, BoD

Margot Scheltema, BoD
Richard Ridinger, CEO
Albert M. Baehny, Chairperson BoD
Barbara Richmond, BoD
Olivier Verscheure, BoD

Marc Funk, COO LPB
Fridtjof Helemann, CHRO
Sven Abend, COO LSI
Patrick Aebischer, Vice-Chairperson BoD
Rodolfo Savitzky, CFO

Corporate Responsibility Insights

Lonza is committed to sustainable development as a long-term business approach. This approach includes our supply chain, our operations, our products and our business model.

We approach sustainability from three perspectives: environmental, social and economic.

Learn more about our activities and achievements in the last business year in our Sustainability Report 2018.

Discover more about our sustainability insights:

- Sustainability in the Healthcare Continuum®
- Creating Value by Driving Sourcing Under Tightening Conditions
- Excelling in Quality Management to Create Value
- Investing in Our Communities

Sustainability in the Healthcare Continuum®

Commitment to Safety and Sustainability

Lonza is dedicated to providing the highest-quality products and services to our customers while minimizing our impact on the environment, striving for energy and resources efficiency and helping to improve the quality of life.

Our Commitment

Compliance and Integrity

We ensure that regulatory compliance, integrity and ethical conduct are the foundations in every place we operate.

Vision ZERO

We continually improve our systems and aspire to ZERO incidents, injuries or emissions.

Our People

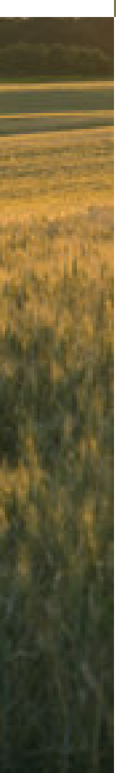
We develop our employees by helping them grow. We provide safe workplaces, care for employees' well-being and foster their involvement and participation.

Our Environment

We improve our environmental footprint by continually reducing energy, water and material demand per unit.

Value for Society

We create value for society by innovating science-based solutions along the Healthcare Continuum® to develop the medicines and consumer products of tomorrow. We engage in the communities where we operate.



As part of this commitment, Lonza fosters transparency and reporting in line with the Global Reporting Initiative (GRI) Standards, which represent the industry practice for reporting on economic, environmental and social indicators. The Lonza Sustainability Report 2018 focuses on the topics most relevant to Lonza's business, as identified in the 2018 materiality assessment.

In 2018, a Sustainability Council was established by Lonza's Executive Committee. The cross-functional Council is headed by the Lonza Group General Counsel and includes members from Legal, Environment, Health & Safety, Human Resources, Investor Relations and Corporate Communications and it directly interacts with the Executive Committee and the Board of Directors. The ultimate responsibility for all sustainability-related matters lies with the Chairperson of the Board.

Material Topics and Sustainable Development Goals

In 2018 Lonza performed a materiality assessment with the involvement of more than 100 stakeholders to prioritize the themes, initiatives and focus areas that best support sustainable development. A total of 16 topics were identified as the most relevant for Lonza globally, reflecting the sustainability benefits and impacts of Lonza's operations, products and services along the entire value chain. The topics are depicted in the graphic below, following the report's structure.

Material Topics for Lonza

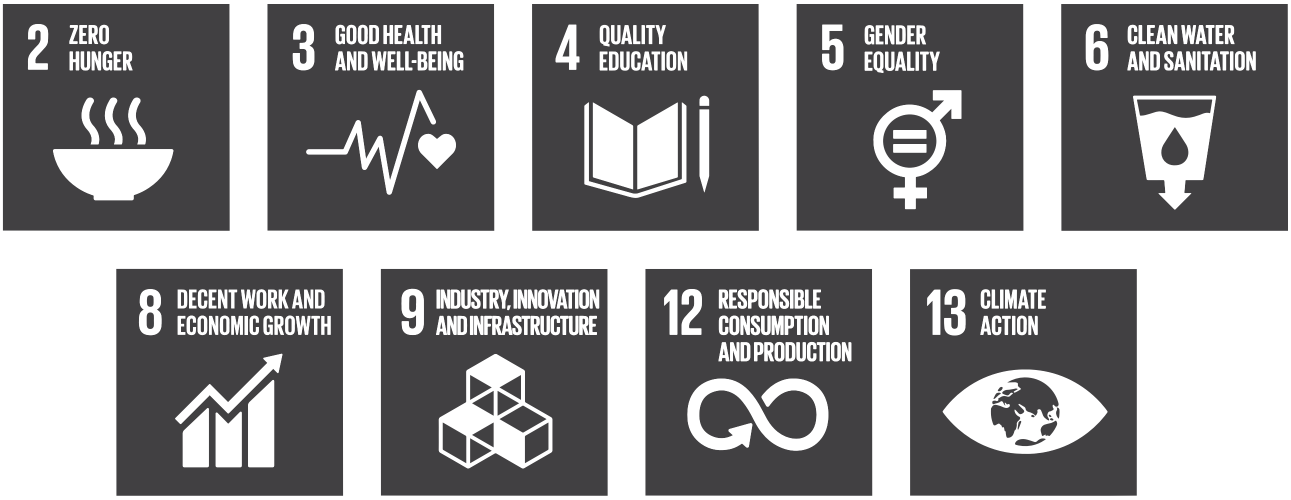
Economic
Economic Performance
Anti-Corruption
Product Quality and Reliability
Customer Satisfaction

Environmental
Energy Conservation and Efficiency
GHG Management
Waste and Recycling
Environmental Compliance
Innovation

Social
Occupational Health and Safety
Non-Discrimination
Protection of Human Rights
Customer Health and Safety
Socioeconomic Compliance
Talent Management
Employee Engagement

In addition to the materiality topics, Lonza also recognizes the importance and relevance of the UN Sustainable Development Goals (SDGs). The goals contain a broad range of sustainable development themes, including alleviating poverty and hunger, improving health and education, reducing inequalities, promoting responsible consumption, combatting climate change and protecting natural resources. These goals interconnect; and in order to leave no one behind, each goal and target should be achieved by 2030 worldwide.

Lonza is committed to contributing to the realization of these goals. From the 17 SDGs, Lonza has identified 9 that we consider to be most relevant for our industry, operations and sustainability focus areas.



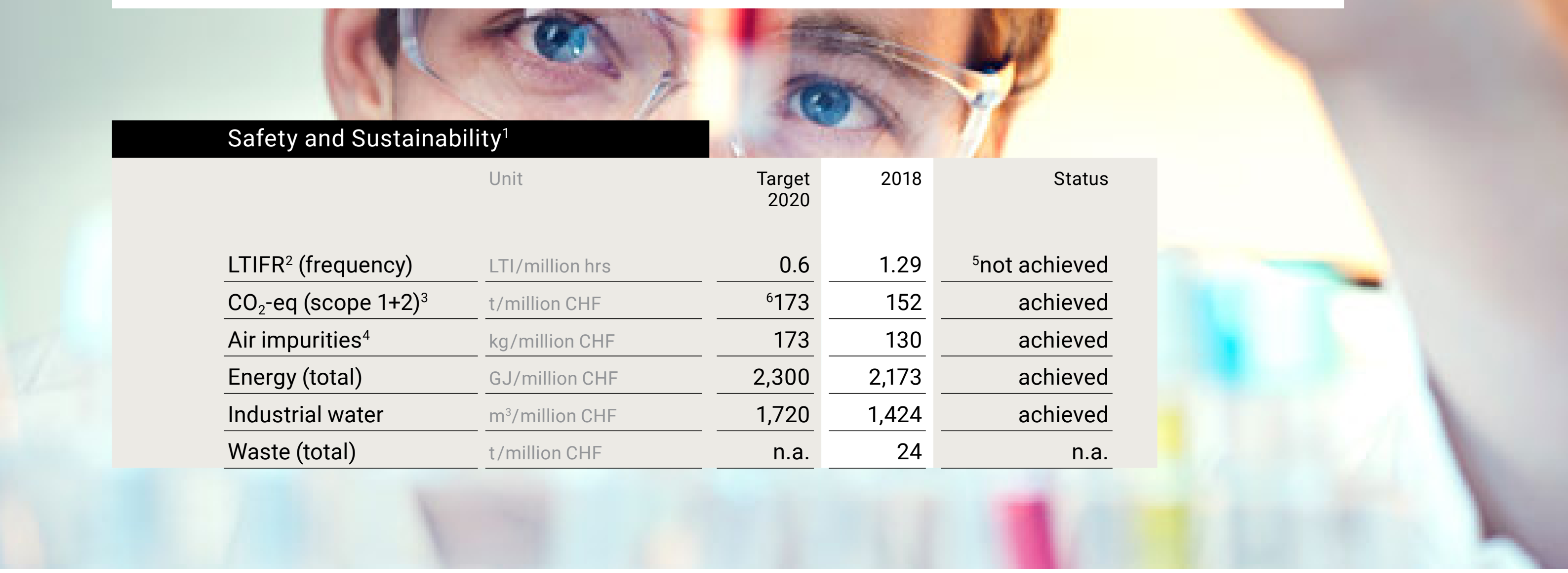
Examples of Lonza's contributions to the SDGs are our portfolio of agro ingredients to improve crop yields and food quality and to provide nutritional supplements. Lonza's Pharma & Biotech segment contributes to saving lives, extending lives and enhancing lives. Our company is an equal opportunity employer who empowers our employees and continuously invests in innovation and resource efficiency. We also have established partnerships and sponsoring for research, education and basic healthcare.

To align our reporting with the contribution to the SDGs, we have tied each material topic from the materiality assessment to a relevant SDG. The Sustainability Report 2018 goes deeper into each topic and outlines Lonza's management approach and performance results.

Lonza's Material Topics	SDG
Product Range, Quality and Reliability	**2, 12**
Economic Performance	**8**
Environmental Compliance	**12**
Socioeconomic Compliance	**12**
Customer Satisfaction	**3**
Anti-Corruption	**8**
Protection of Human Rights	**5, 8**
Occupational Health & Safety	**3, 8**
Employee Engagement	**5, 8**
Innovation	**9**
Waste and Recycling	**3, 6, 12**
Greenhouse Gas Management	**3, 12, 13**
Non-Discrimination	**5, 8**
Customer Health and Safety	**3, 12**
Energy Conservation and Efficiency	**9, 12, 13**
Talent Management	**4, 8**

Safety and Sustainability Targets

Lonza's long-term goal is to improve our sustainability performance and reduce our environmental footprint. From a medium-term perspective, Lonza set specific safety and environmental targets until 2020 based on the reported values for 2015.



Safety and Sustainability[1]

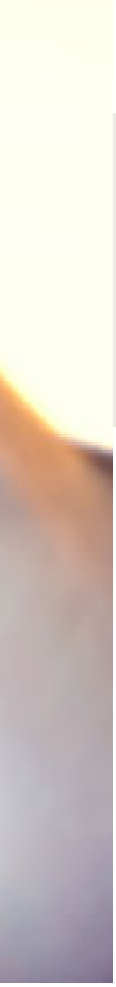
	Unit	Target 2020	2018	Status
LTIFR[2] (frequency)	LTI/million hrs	0.6	1.29	[5]not achieved
CO_2-eq (scope 1+2)[3]	t/million CHF	[6]173	152	achieved
Air impurities[4]	kg/million CHF	173	130	achieved
Energy (total)	GJ/million CHF	2,300	2,173	achieved
Industrial water	m^3/million CHF	1,720	1,424	achieved
Waste (total)	t/million CHF	n.a.	24	n.a.

These goals included a 60% reduction of the 2015 safety indicator lost-time injury frequency rate (LTIFR) and a 10% reduction of environmental and resource rates: direct (scope 1) and indirect (scope 2) greenhouse gas emissions (GHG), as well as other established lead parameters for air emissions and energy and water consumption.

We applied targets based on million CHF sales on the basis of Lonza's diverse product portfolio, which ranges from manufacturing of chemical bulk products to pharmaceutical ingredients, from medical capsules to food supplements, from gene technology to cell-media production. This diversity could only be integrated with a value-related denominator.

To account for the significant change in composition of our business through the integration of Capsugel and the divestiture of the Water Care business unit, we have reviewed the safety and sustainability targets. We will base the goals for the next decade on the year 2018 for continuing operations. Moreover, we would like to achieve a greenhouse gas reduction of more than 50% compared with our 2010 carbon footprint intensity, in line with the Paris Agreement timeline. Therefore, we have defined the goals for 2019–2030 that are depicted in the following table. In addition to the global goals, sites will set local targets for material topics for their locations, e.g. emissions, water quantity and parameters. Sites will develop a three-year roadmap to include their action plans around global and local targets.

1 Includes all active production and R&D sites, as well as headquarters in the referenced years. Rates are expressed as units (per 1 million) per hours worked for safety and as units (per million sales) in CHF for sustainability metrics
2 Lost-time injury frequency rate: number of accidents per 1 million hours worked
3 Carbon dioxide equivalent, contains all climate-relevant gases standardized to the warming potential of CO_2
4 Air impurities comprise VOC (volatile organic compounds), nitrogen oxides (NO_x), sulphur dioxide (SO_2) and particulate matter
5 Lonza's commitment and measures to prevent and mitigate safety incidents can be found in the Occupational Health and Safety section of the Sustainability Report 2018
6 The GHG emissions intensity values for 2015–2017 and the 2020 goal have been restated due to data entry inaccuracies



	Unit	FY 2018	FY 2018 cont. ops.	Targets 2030
LTIFR[1]	LTI/million hrs	1.29	1.19	[2]new 2019
CO_2-eq (scope 1+2)	t/million CHF	152	151	97
Air impurities[3]	kg/million CHF	130	128	local
Energy	GJ/million CHF	2,173	2,231	1,695
Industrial Water	m^3/million CHF	1,424	1,364	local
Waste[4]	mt/million CHF	24	25	19.0

1 Lost-time injury frequency rate: number of accidents per 1 million hours worked
2 For accidents we will establish a new target combining a pre-accident with an outcome metric
3 Carbon dioxide equivalent, contains all climate-relevant gases standardized to the warming potential of CO_2
4 Lonza's commitment and measures to prevent and mitigate safety incidents can be found in the Occupational Health and Safety section of the Sustainability Report 2018

A Systematic Approach to Safety and Sustainability

Our approach to safety and sustainability in Lonza is systematic. We have policies in place, including our aspirational Vision Zero, for the reduction of accidents, incidents and emissions. In all our sites, we collect data for accidents and incidents, energy, water and waste and analyze deviations from expected goals. We regularly visit and audit our sites for compliance risks and performance against Lonza standards.

Also we perform risk management analyses from high-level business effects to workplace risks and then find ways to mitigate these potential risks. In this context we see safety and sustainability as opportunities rather than a burden as they allow us to maximize our value creation for society, our customers and our people while reducing environmental footprint at the same time.

Our product ranges respond to several SDGs, e.g. agro products to SDG 2-Zero Hunger, and pharma and consumer health products to SDG 3-Good Health and Well-Being.

At the end of the reporting year, approximately 200 people worked in the core EHS field. EHS operating costs amounted to CHF 64.4 million in 2018, 8.6% up on the previous year. Capital expenditure on EHS was CHF 43 million in 2018.

Chemicals Registration, Labeling, Packaging

Lonza's product formulation expertise, product-regulatory assurance and global regulatory support provide us distinct competitive advantages in a world of increasing requirements for chemicals registration, labeling and packaging. At Lonza a team of more than 60 regulatory experts in Europe, the Americas and Asia Pacific serve and support Lonza businesses globally ensuring compliance with existing regulatory requirements and to stay abreast of future requirements. Their expertise is also a great value to customers who incorporate our regulated ingredients in their end-use applications.

One challenging program is the European Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) initiative. In the year 2018, Lonza Specialty Ingredients has successfully registered all substances imported, manufactured and marketed in the European Union under REACH by the deadline in May. REACH is an ongoing effort, and Lonza will continue to comply with the requirements.

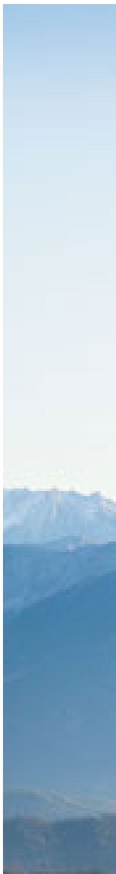
Lonza focuses on the health and safety of its employees. Significant improvements were made with respect to the risk-based exposure control of chemicals in the work environment with formation of a corporate function for toxicological assessments of substances. Previously this assessment was done locally in the sites or by consultants. During 2018 nearly 700 substances were re-assessed for their safe handling limits, which puts Lonza in the top of the industry with respect to the efficiency and the results of the process.

Remediation – Responsibility for Our History

Lonza's largest site in Visp (CH) continues to make progress to address legacy mercury contamination along a former wastewater discharge canal, on surrounding soils and other areas where contaminated sediments were deposited many decades ago. This industrial legacy can be traced back to when Lonza used large amounts of mercury as a catalyst in chemical processes, and the site discharged industrial mercury-contaminated wastewater into the canal in the 1930–1970s before the construction of the wastewater treatment plant.

Since 2013 Lonza has worked closely with the local communities in carrying out and financing all required technical investigations in residential areas and agricultural zones between Visp and Niedergesteln (CH). During 2018 vast advancements were made: by the end of the year 63 parcels of land in Visp and Raron (CH) were remediated. In 2019 the remediation of parcels in the residential area will be pursued and further investigations will be conducted on the agricultural area and the canal area.

Lonza, the Swiss Canton of Valais, the municipalities and other parties involved are working closely to efficiently resolve the mercury-related industrial heritage in the perimeters of concern. Additionally, Lonza maintains a public website (in German) on the remediation activities and progress.



Creating Value by Driving Sourcing Under Tightening Conditions

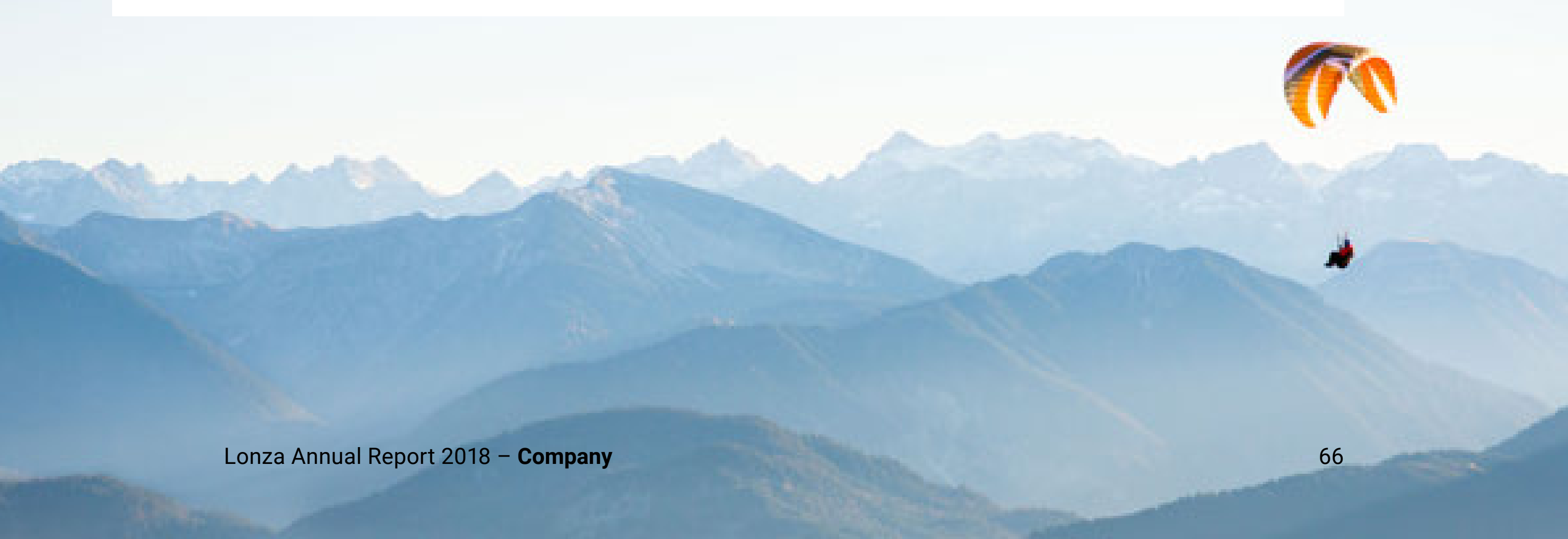
Drawing on a broad global base, the Procurement team played a vital role in cost-effectively providing to more than 70 manufacturing and research & development sites worldwide the raw materials, services and other support they needed to grow.

Strengthening Competitiveness

Close internal collaboration across all disciplines, as well as new and tailored go-to-market approaches, yielded a strong savings performance for Procurement, which added to Lonza's competitive position and profitability. Together with stakeholders from the different businesses and functions, Procurement developed solid strategies for spend categories across a diverse range of strategic raw materials and services. The team enhanced data quality, analytics and dashboards to track and communicate progress. This approach allows our different businesses to make their choices in a more timely manner. In tight alignment with our business leadership and value-chain management professionals, Procurement continued our progress on our breakthrough initiative known as DIVER – Drive and Improve Vendor Results. During the last 18 months, this initiative reassessed almost CHF 1 billion of Lonza's external spend and ensured a highly competitive sourcing process to secure inputs with positive results.

« Our Procurement team drove business performance by establishing best-in-class processes and procedures that could provide cost benefits for the whole group and be tracked with concrete metrics. »

Rodolfo Savitzky, CFO of Lonza



Ensuring Seamless Supplies

At any particular time, the Procurement team must be ready to respond to everything from unexpected disruptions to rising costs for vital raw materials in order to assure reliable, competitive external supplies. The Procurement team faced various and significant challenges in 2018. Newly established trade barriers started to have an impact on global supply chains. In addition, extremely tightened environmental policies in China created strong knock-on effects on global commodity markets. Demand and supply imbalances resulted in unfavorable price effects on raw materials. However, Lonza responded to such challenges appropriately and effectively; and we managed to step up our level of excellence in Procurement even further during the year. In addition, the team successfully navigated several unexpected force majeure events at some major suppliers. Those events and the geopolitical challenges around us encouraged us to sharpen our risk management and mitigation processes and tools.

Supporting Business Growth

The Procurement team helped facilitate Lonza's growth in serving the strategic Healthcare Continuum® markets by directing growing demand to the right sourcing market segments, by identifying new supply sources and by scaling-up existing sources. For example, the team stepped-up support in Lonza's main growth areas in the Pharma & Biotech segment, as well as in the Consumer Health division. In 2019 the Procurement team is set to continue realizing the vision of a One Purchasing Community that features greater coordination with local sites through regional hubs. We plan to capitalize on Lonza's Global Business Service Centers in Manchester (UK) and San José (CR) as we drive effective business support at all levels while capturing efficiency gains.

Sourcing Responsibly

Suppliers to Lonza must adhere to the requirements defined in Lonza's Supplier Code of Conduct. This code defines standards of business ethics, as well as labor, health, environmental and safety practices. We routinely conduct visits of suppliers to monitor adherence to this code. These strict ethical requirements are of utmost value when sourcing compliant materials for medicines and therapies, as well as natural and organic ingredients for consumer health and nutrition products. One highlight of 2018 was when Lonza became a full member of the Pharmaceutical Supply Chain Initiative (PSCI). PSCI is an association of pharmaceutical / biotech / medical devices industries. Its aim is to establish and promote responsible practices that will continuously improve ethics, labor, health, safety and environmentally sustainable outcomes, as well as to improve supplier capability for the members' supply chains.

Excelling in Quality Management to Create Value

We at Lonza recognize that the very nature of our offerings – from life-saving medicines to nutritional supplements, from hospital and home disinfectants to biocides that prevent the growth of harmful mold on painted surfaces – requires that we must reliably provide our customers with products and services that not only satisfy their own demanding expectations, but also meet strict regulatory quality requirements. That's why our advanced manufacturing, operational excellence, quality-control and quality-assurance systems are some of Lonza's core competitive advantages. Lonza's quality management priorities are the following:

- Delivering high-quality, safe and effective products and services that meet or exceed customer expectations
- Complying with current regulatory requirements and applicable standards
- Continuously improving our quality management system, products and services

To achieve these goals, Lonza operates a quality management system that complies with internal policies, as well as with national and international standards (e.g. ISO) and regulations – e.g. current good manufacturing practices (cGMP), Pharmaceutical Inspection Convention (PIC) and Hazard Analysis Critical Control Point (HACCP). The fundamental elements of the quality management system are continuously undergoing improvement.

Implementing a Global Quality Organization

In 2018 Lonza implemented a new global Quality organization covering all aspects of quality control and quality assurance. Having such a centralized Quality organization is fundamental to assuring a consistent approach to quality for the entire company. In a next step, we are also enhancing our quality management system in a way that core processes are standardized at the Corporate level and are applicable for all sites and businesses. This process started in 2018 and will continue in the coming years.

In parallel to the standardization of processes, we are further optimizing our training approach through harmonization of training curricula throughout the entire company, as well as through the systematic implementation of tailored qualification modules. Newly hired employees will get structured trainings focused on the specific tasks they have to perform at a certain point of time. Through a modular, stepwise approach, new hires are operational much more quickly while ensuring they are at all times properly qualified for all tasks they are asked to perform. Flawless execution and strong customer focus remain high priorities for Lonza. We strive to perfectly understand the expectations of our customers and act accordingly.

Launched in 2014 Lonza's Error Prevention System and other operational excellence initiatives have helped us reduce the number of deviations while production output increased. These continuous improvement efforts, which extensively engage shop-floor employees in the quest for superior quality, also have had a positive impact on the batch success rate.

Being Constantly Audited by Regulators and Customers

In 2018 Lonza Pharma & Biotech sites underwent 37 regulatory cGMP inspections, which represents the highest number ever in Lonza's history (2017: 26 inspections). In parallel, the number of customer audits is also increasing in line with the increasing number of commercial and developmental products in Lonza's Pharma and Biotech business. Lonza strives for continuous improvements.

For example, we implemented corrective measures after the U.S. Food and Drug Administration (FDA) issued a warning letter in April 2017 regarding quality issues involving the production of certain biotherapeutic liquid media products at one area of our Bioscience Solutions site in Walkersville, MD (USA). The FDA completed a follow-up inspection of the site in July 2018 to verify that needed remedial steps were undertaken at that production unit, which resumed delivering products to customers in January 2018.

To be well prepared for future audits and inspections, Lonza is carefully monitoring the quality and regulatory trends in the industry in an ongoing manner and triggering proactive initiatives if needed. Lonza's internal quality audit program verifies that any such actions are consistently implemented at the relevant sites. Those internal audits are also a great opportunity to identify and share best practices throughout the network, including the newly acquired sites.

Thanks to our proactive quality initiatives, Lonza is sustaining a reputation as a high-quality, reliable supplier throughout the Healthcare Continuum®.

Investing in Our Communities

Caring About Communities Around the Globe

By cultivating relationships and contributing our knowledge, expertise, logistics and financial support, Lonza is creating sustainable value for our communities around the world. With our commitment to ethical, social and environmental responsibility and sustainability, Lonza supports events, projects and programs directly linked to Lonza's employees and sites. Our sponsoring activities focus on the following priority giving areas:

Social
- **Humanitarian**
- **Education and Science**
- **Health and Sports**
- **Arts and Culture**

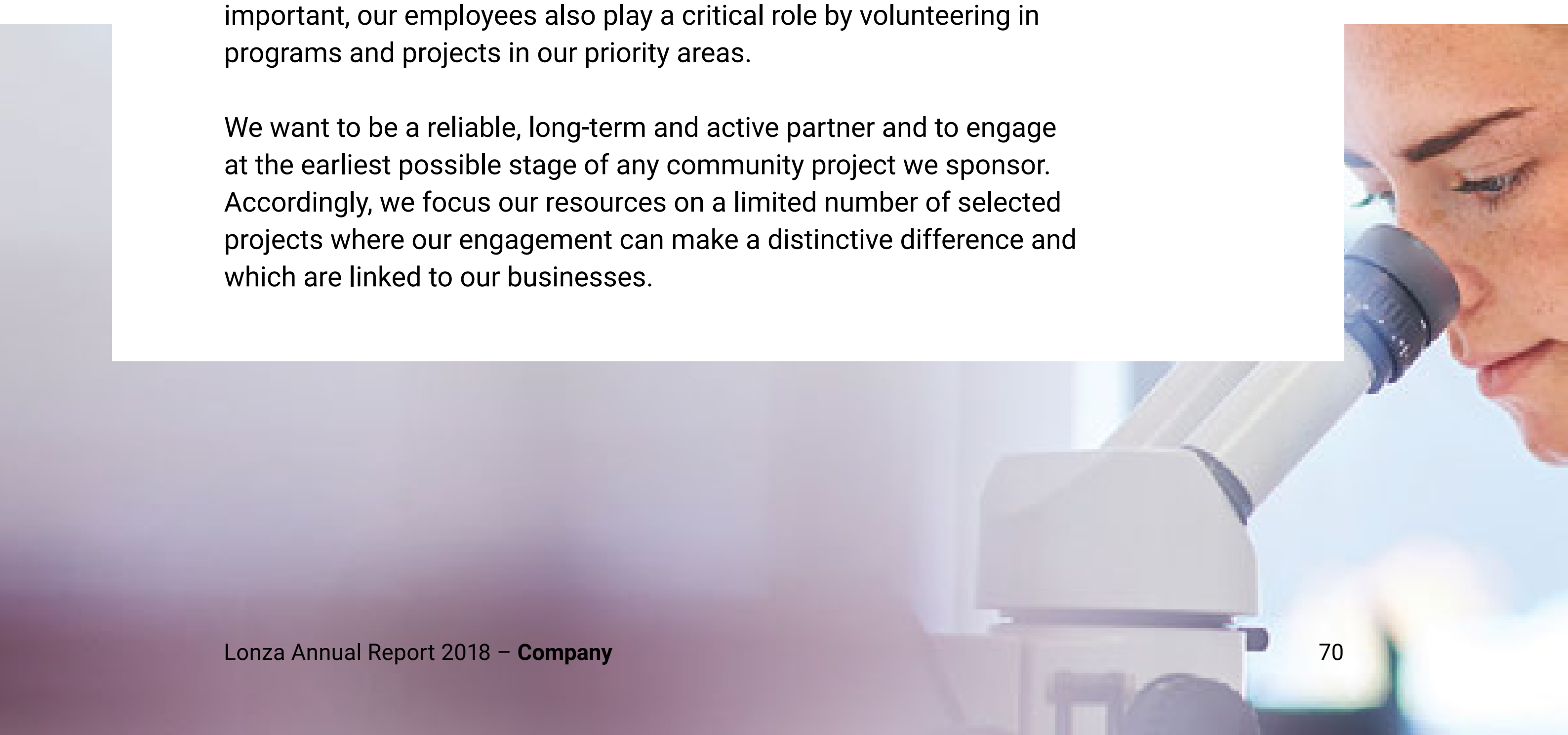
Environmental

The Global Megatrends and the Environment, Health and Safety (EHS) sections of this Annual Report give further details about Lonza's efforts toward a responsible use of natural resources and our ambitions to reduce our footprint.

Our Sponsoring Approach: Linked to Our Businesses

In the communities where we operate, Lonza is committed to having a positive impact. We are neighbors, a vital source of jobs, a charitable sponsor of local civic and cultural projects and often a significant contributor to local economies. While our financial donations are important, our employees also play a critical role by volunteering in programs and projects in our priority areas.

We want to be a reliable, long-term and active partner and to engage at the earliest possible stage of any community project we sponsor. Accordingly, we focus our resources on a limited number of selected projects where our engagement can make a distinctive difference and which are linked to our businesses.



Social

Humanitarian

Improving Sanitation in Uganda

Uganda, as one of the poorest countries in the world, is in dire need of sanitary improvements. Many people in rural areas and even in the outskirts of major cities rely on pit latrines or outhouses as their bathrooms. If untreated, pit latrines can become a breeding ground for mosquitoes, germs and viruses, which contaminate the environment and spread diseases.

To address this vital issue, Lonza is teaming up with the non-governmental organization Clean Habitat Uganda to provide Water Care's HTH Scientific® sanitizer tablets for use in treating pit latrines. Clean Habitat Uganda distributes our sanitizing tablets to communities serving 5,000 homes. Since the kick-off in 2015, the project has evolved and expanded its reach into more local communities.

Education and Science

Committing to Support School for Underprivileged Children in India

Education is the backbone of every society in the world, but a quality education is still a dream for many. In India, for example, only a few students receive a quality education with good teachers and teaching aids.

In 2015 Lonza India decided to focus our local corporate social responsibility (CSR) efforts to establish a direct, close and continuing interaction with the Marathi Medium School Vidya Vikas Mandal for underprivileged children in Mumbai (IN). The school, established in 1957, is currently home to around 600 students and facilitates education from primary school to secondary school. As part of our CSR, Lonza India has supported the school by constructing and renovating school buildings and by setting up e-learning facilities, a computer lab and a science lab.

In June 2018 Lonza Group General Counsel Andreas Bohrer visited the school to meet the students and to see how the project had developed with our aid since 2015. Our support has made a positive change in students' lives and has encouraged management to work toward their mission of improving education for these deprived students.

Partnering with Swiss Youth in Science

Another continuing project in 2018 was Lonza's partnership with Swiss Youth in Science, which began in July 2014. Founded in 1967 the foundation Schweizer Jugend forscht (Swiss Youth in Science) supports inquisitive and motivated children and young people with the aim of awakening joy and fascination for scientific work.

With the foundation's series of courses, children and young people become more interested in subjects such as mathematics, computer science, natural sciences and technology; and they learn about options for their future studies or professional careers. Through this intense engagement, Lonza contributes to the promotion of science and helps in the development of the next generation of scientific professionals.

Sponsoring a Swiss Think Tank

As a corporate citizen interested in the future development of society and its interdependencies with politics and economics, Lonza has been a partner of Avenir Suisse, an independent think tank for economic and social issues, for many years. In 2018 Lonza continued to support Avenir Suisse, which aims to demonstrate a need for political action and to help solve problems by means of initiatives and proposals.

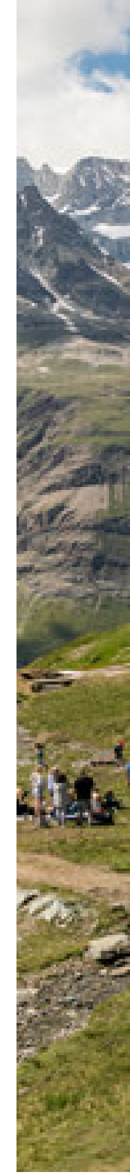
To this end Avenir Suisse performs analyses based on scientific principles, organizes conferences and participates in public debates. Founded in 1999 it is supported by more than 100 companies and private individuals from all economic branches and regions of Switzerland.

Health and Sports

Continuing the Successful «Lonza Makes You Fit» Program

In cooperation with the organizers of the Gornergrat Zermatt Marathon, the project «Lonza Makes You Fit» was initiated in Visp (CH) and Basel (CH) in 2016. The goal of the program was to make Lonza employees fit for the Gornergrat Zermatt Half-Marathon. Lonza developed a comprehensive health program and successfully prepared participants to complete the most beautiful mountain race in the world.

Then in 2017, in addition to the Gornergrat Zermatt Marathon, the project in Visp was extended to cycling and the «Energy for Every Day» concept,



supporting a healthy work-life balance. For almost three years now, the number of people taking part in one or more programs has been around 500 employees, which is about 20% of the workforce at Lonza Visp, and the trend is upward.

For 2019 more than 200 employees from Basel (CH) and Visp (CH) have registered just for the running project. As in previous years, most of them will run the half-marathon course; and some experienced runners will dare to take part in the marathon, the relay or the «ultra».

Organizing an Annual Charity Golf Event

The Lonza Harvest Open is an annual charity golf tournament organized by volunteers from the Lonza site in Portsmouth, NH (USA). A fun event for organizers and attendees, it raises awareness and funding for specialized projects for local non-profit organizations in the Seacoast region of Maine, Massachusetts and New Hampshire. During the last 17 years, Lonza has raised more than $1.7 million for 36 New Hampshire charities.

Cycling for Children

Cycling for Children is a unique public cycling event organized in Switzerland in collaboration with Crans-Montana Tourism & Congress. The aim is to show commitment through sporting performance and creative fundraising to help children in need. In 2018 Lonza signed up as part of the «Lonza Makes You Fit Program», and employees from Visp and Basel participated in the fundraising event.

Giving Back by Going Pink in Singapore

The Pink Ribbon Walk & Run is Singapore's largest signature event dedicated to raising awareness and showing support for those affected by breast cancer. In 2018 Lonza Singapore participated for the first time and ran a donation campaign during the month of October, which is known worldwide as breast cancer awareness month. The site collected a total of SGD 10,000 (CHF 7,000) donations for this cause.

Completing the Virgin Pulse 100-Day Global Challenge in the UK

During the summer more than 300 colleagues at Lonza Slough and Cambridge (UK) took part in a virtual «Walk around the World» with 35,000 other teams as part of the Virgin Pulse Global Challenge. Our 43 teams of 7 took part in exercise activities, as well as improved healthy habits regarding nutrition, mental wellbeing and sleep – all during a virtual travel tour covering destinations such as Peru or Norway. They then earned points and «trophies» along the way. Lonza Slough and Cambridge employees walked more than 410 million steps, which equates to a distance of 263,331 km. Among the Lonza participants, the number of employees who now meet the recommendation of 10,000 steps per day is 81% vs. 18% pre-Global Challenge.

Sponsoring the Lonza Arena in Visp

Lonza will be contributing CHF 3 million to the new ice and sports center in Visp (CH), which will officially be named the Lonza Arena for the next 20 years. The new sports center will be the home of the EHC Visp (a Swiss professional ice-hockey team) and have a capacity of 5,000 spectators.

Arts and Culture

Bringing Classical Music Closer to Kids and Teens

In September 2015 Lonza initiated a new sponsoring partnership with the Basel Chamber Orchestra to support the group's project «Classroom Piece». The project was produced in cooperation with a theater pedagogue and four musicians from the orchestra with the goal of giving children and teens the necessary impetus to develop their musical personality, independent of social and cultural backgrounds. Lonza is proud to be continuing actively to support the development of this novel project with the goal of bringing classical music closer to the community.

Environmental

Building Opportunities for Action

Our employees in Porriño (ES) contribute time to demonstrate our concern for corporate social responsibility in many ways. One successful project in place is run by the site's donations team. Employees from different departments donated reusable and recyclable goods such as crystal bottles or test tubes; equipment like weighting scales or PH-meters; reagents and gels; or used office material that is perfectly usable for educational purposes.

Receiving Wildlife and Industry Together (W.A.I.T.) Certification

Lonza Greenwood, SC (USA) has been certified by the South Carolina Wildlife Federation (SCWF) for the W.A.I.T. program. The SCWF advocates for the preservation and recreation of wildlife habitats across South Carolina. The W.A.I.T. program is designed to encourage corporate landowners to integrate wildlife habitat needs into corporate land management decisions. The outcome is enhanced environmental awareness, a positive environmental impact, and a pleasing work environment for colleagues.

As part of the program, Lonza Greenwood has dedicated a corner plot by the east gate to the creation of a Carolina Fence Garden. This garden serves as a habitat for the Carolina Wren and the South Carolina official state butterfly, the Eastern Tiger Swallowtail. It also integrates several cultural symbols of South Carolina such as the Yellow Jessamine, the state flower; South Carolina Blue Granite; and a split rail fence, which is representative of what South Carolina farmers typically used between the 1800s and early 1900s.

In addition, Lonza Greenwood established a partnership with the Horticulture Team at Piedmont Technical College to promote community involvement and to incorporate the garden into horticulture curriculum for plant identification.

For an overview of our environmental initiatives, please see the Sustainability Report.

Investor Information

Shares of Lonza Group Ltd are listed on the SIX Swiss Exchange and were included in the Swiss Market Index (SMI) in 2018. Lonza also maintains a secondary listing on the SGX Singapore Exchange. The nominal value of the Lonza Group Ltd share is CHF 1. Lonza's share price closed at the end of 2018 at CHF 254.7, which represents a decrease of 2.3% in 2018.

The free float in Lonza Group Ltd registered shares reached 99.7% at year-end, and the average daily trade volume was 335,189 shares in 2018.

Listing and Security Information

Stock Exchange Listing / Trading:	SIX Swiss Exchange SGX Singapore Exchange
Common Stock Symbols:	Bloomberg LONN SW Reuters LONN.S SIX Financial Information LONN SGX O6Z
Security Number:	Valor 001384101 ISIN CH0013841017

Upcoming Financial Events

Upcoming Financial Events

Date	Event
4 April 2019, 5:00 pm CEST	Closing of the Share Register
18 April 2019, 10:00 am CEST	Annual General Meeting for the Financial Year 2018 Congress Center Basel, Switzerland
18 April 2019	Q1 2019 Qualitative Business Update
24 April 2019	Ex-Dividend Date
25 April 2019	Record-Dividend Date
26 April 2019	Dividend-Payment Date
24 July 2019	Half-Year Results 2019
28 April 2020, 10:00 am CEST	Annual General Meeting for the Financial Year 2019 Congress Center Basel, Switzerland

Shareholdings

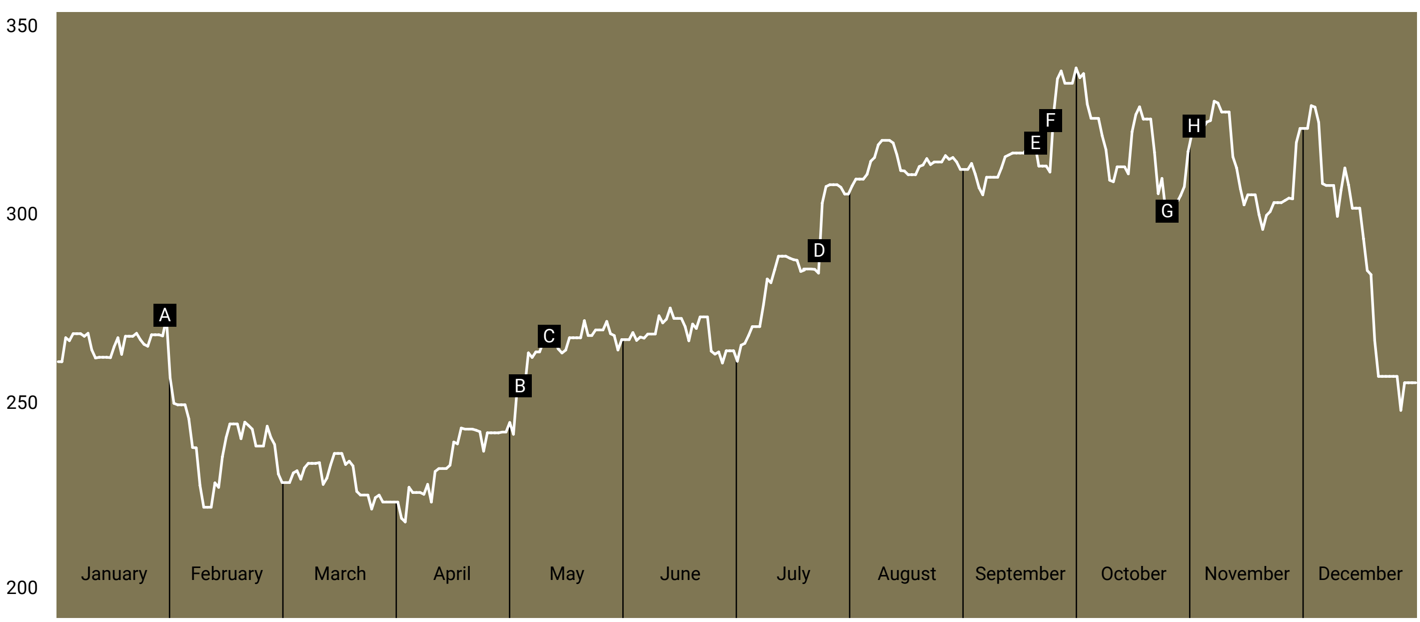
According to disclosure notifications filed with Lonza, the following shareholders held more than 3% of Lonza's share capital as of 31 December 2018:

Principal Shareholders

- BlackRock, Inc., New York, NY (USA): 9.67%
- Artisan Partners: 3.02%

Lonza knows of no other shareholder(s) that owned more than 3% of our share capital as of 31 December 2018. To the best of Lonza's knowledge, the above-mentioned shareholders are not linked by any shareholders' agreement or similar arrangement with respect to their shareholdings in Lonza or the exercise of shareholders' rights. For a full review of the individual disclosure notifications made during 2018, please refer to the SIX Swiss Exchange disclosure platform. More information is available on Lonza's Investor Relations webpage.

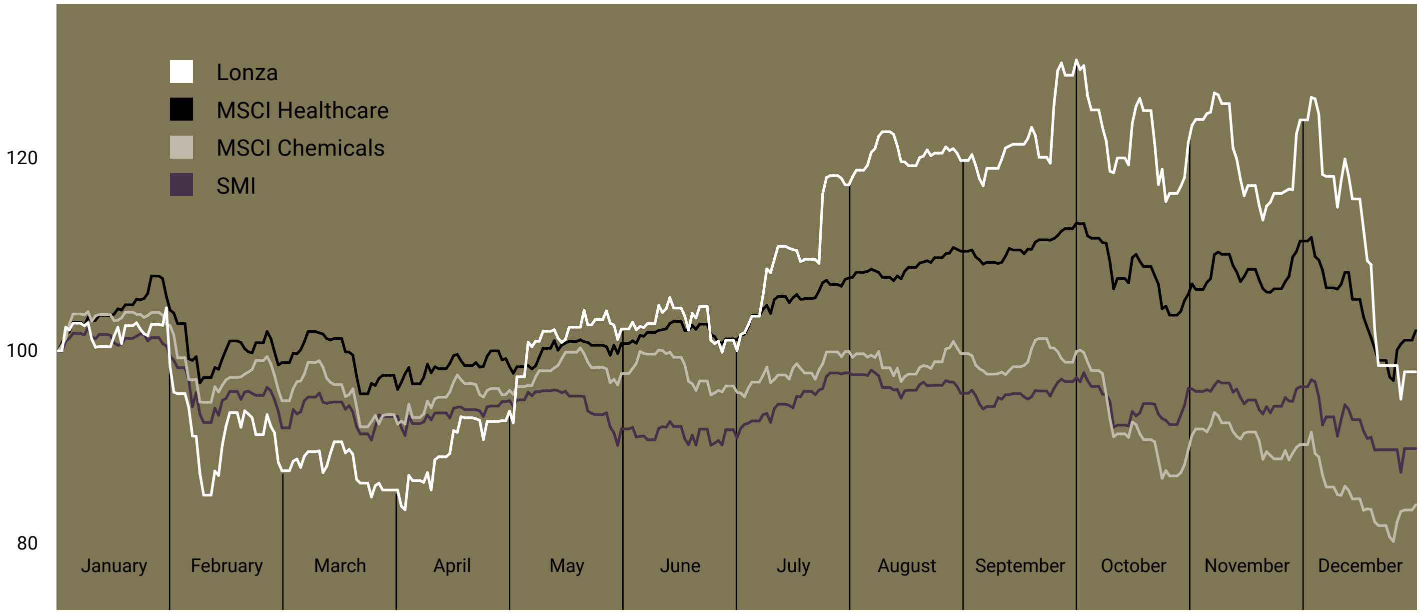
Lonza Share Price Development 2018 in CHF / share



- **A** Full-Year 2017 Results 31 January
- **B** Lonza Annual General Meeting 4 May
- **B** Q1 Qualitative Business Update 4 May
- **C** Dividend Payment 11 May
- **D** Half-Year 2018 Results 25 July
- **E** Announcement of Ibex™ Solutions Investment 20 September
- **F** Capital Markets Day 25 September
- **G** Q3 Qualitative Business Update 25 October
- **H** Announcement of Water Care Divestment 1 November

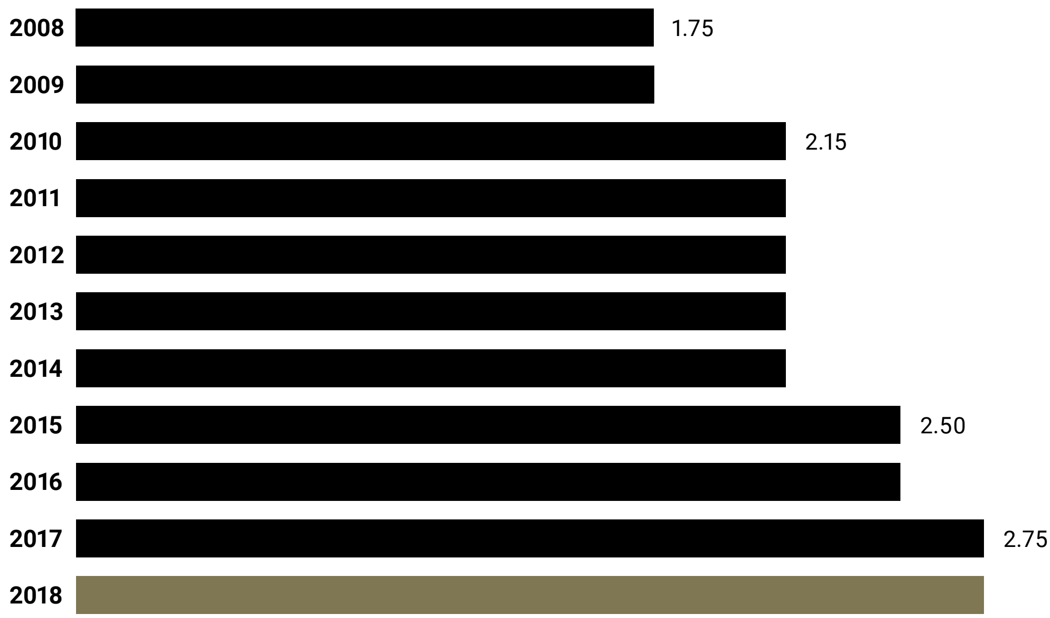
in CHF / share	
Share price high	339.1
Share price low	217.5
Closing price	254.7

Lonza Share Price Development vs. Swiss Market Index (SMI), MSCI Chemicals Index and MSCI Healthcare Index rebased



Dividend Payment History

in CHF / share



Lonza’s Board of Directors is proposing a stable dividend for shareholders of CHF 2.75 per share for 2018. Subject to approval at the upcoming Annual General Meeting (AGM) on 18 April 2019, the dividend of CHF 2.75 per share for 2018 will be paid out of the reserve capital contribution and will be free from Swiss withholding tax.

Ten-Year Overview of Major Highlights

Ten-Year Overview of Major Highlights

million CHF	2009	2010	2011	2012	2013	2014	2015	2016	[1]2017	[2]2018
Sales	2,690	2,680	2,692	3,741	3,584	3,640	3,803	4,132	4,548	5,542
CORE EBITDA	n.a.	n.a.	n.a.	657	711	743	793	918	1,196	1,511
Margin in %	n.a.	n.a.	n.a.	17.6	19.8	20.4	20.9	22.2	26.5	27.3
EBITDA	601	643	537	620	647	737	780	848	1,084	1,429
Margin in %	22.3	24.0	19.9	16.6	18.1	20.2	20.5	20.5	23.8	25.8
Result from operating activities (CORE EBIT)	397	387	326	392	436	475	524	651	904	1,165
Margin in %	14.8	14.4	12.1	10.5	12.2	13.0	13.8	15.8	20.1	21.0
Result from operating activities (EBIT)	239	374	261	316	253	423	428	486	673	842
Margin in %	8.9	14.0	9.7	8.4	7.1	11.6	11.3	11.8	14.8	15.2
CORE RONOA in %	n.a.	n.a.	n.a.	11.0	12.3	14.3	16.4	21.5	30.0	31.4
RONOA in %	6.7	10.8	6.9	7.0	5.9	10.3	10.8	12.7	9.8	12.1
ROIC[3]	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	8.4	8.0
CORE EPS (diluted) in CHF	5.83	5.81	4.34	4.48	4.97	6.76	6.76	8.38	10.78	11.98
EPS (diluted) in CHF	3.17	5.53	2.97	3.00	1.67	4.54	5.26	5.69	9.70	8.77
Operating free cash flow	51	362	127	465	519	476	693	638	658	884
Net debt	1,166	1,108	2,647	2,301	2,103	2,011	1,660	1,584	3,762	3,534
Net debt / CORE EBITDA	n.a.	n.a.	n.a.	3.50	2.96	2.70	2.09	1.73	2.70	2.28
Headcount	8,386	8,280	11,001	10,789	9,935	9,809	9,829	10,130	14,618	15,375

1 Restated to reflect adoption of IFRS 15 and classification of Water Care business as discontinued operations, except for «Operating free cash flow,» «Net debt,» «Net debt / CORE EBITDA» and Headcount»

2 Lonza continuing operations, excluding Water Care business classified as discontinued operations, except for «Operating free cash flow,» «Net debt,» «Net debt / CORE EBITDA» and Headcount»

3 Introduced in 2018, comparable data for 2017 was provided

Significant News Releases

The most significant news releases during the course of 2018 were the following:

31 January 2018 Lonza Reports Record-Breaking Full-Year Results with Double-Digit Lonza Standalone Sales Growth and More than 26% CORE EBIT Growth in a Major Transformational Year

7 February 2018 Lonza Partners with Prolog Ventures to Establish VC Fund to Invest in Consumer Health and Wellness Startups

14 February 2018 Lonza to Establish Cell- and Gene-Therapy Centers of Excellence to Accelerate Growth

20 February 2018 Lonza Expands Encapsulation and HPAPI Capabilities in North America

27 February 2018 Lonza Group Inaugurates New Research Development Center for South America in Salto, Brazil

22 March 2018 Lonza Publishes Invitation to the 2018 Annual General Meeting and Annual Report 2017

10 April 2018 Lonza Opens World's Largest Dedicated Cell-and-Gene-Therapy Manufacturing Facility in Pearland, Greater Houston, TX (USA)

2 May 2018 Lonza Consumer Health and Nutrition Invests in Greenwood, SC (USA) Facility to Expand Specialty Ingredients Production

4 May 2018 Lonza Reports Positive Start to 2018 with Businesses Along the Healthcare Continuum® as Growth Drivers

4 May 2018 Lonza to Invest in Portsmouth, NH (USA) Site, Including Mid-Scale Biologics

4 May 2018 Lonza Announces Results of the 2018 Annual General Meeting – All Motions Proposed by Board of Directors Accepted

19 June 2018 Lonza's Capsule Delivery Solutions Launches Capsugel® Vcaps® Gen C, a New Specialty Polymer Capsule

25 July 2018 Lonza Reports Strong Momentum with Organic Growth of 8% Sales and 11% CORE EBITDA in H1 2018

31 August 2018 Lonza's Capsule Delivery Solutions Launches Capsugel® Colorista™

12 September 2018 Lonza Breaks Ground on Expanded Manufacturing Facility in Greenwood, SC (USA)

14 September 2018 Lonza Launches Early-Intermediates Supply Initiative for Small-Molecule APIs

20 September 2018 Lonza Expands Ibex™ Solutions to Offer Complete Product Lifecycle Management in One Location

25 September 2018 Lonza's Capital Markets Day 2018 Outlines Sustainable Growth Plans Through Focus and Investment

4 October 2018 Clovis Oncology and Lonza Celebrate Grand Opening of New Monoplant for Rubraca® (rucaparib)

8 October 2018 Lonza Expands HPAPI Development and Manufacturing Capacity for ADC Payloads

25 October 2018 Lonza Continues Strong Momentum in Businesses Along the Healthcare Continuum® in Q3 2018 and Confirms Positive Outlook for the Full Year

29 October 2018 Lonza Acquires a Controlling Stake in Octane Biotech to Further Develop Cocoon™ Autologous Technology

1 November 2018 Lonza Further Strengthens Focus on Its Healthcare Continuum Strategy by Signing Agreement to Divest Water Care Business to Platinum Equity

5 November 2018 Lonza Releases First 2,000 L Single-Use Bioreactor (SUB) Batch from Singapore for TRACON Pharmaceuticals

15 November 2018 Lonza and Sartorius Stedim Biotech Modify Relationship for Supply of Cell Culture Media

19 November 2018 Lonza Opens Collaborative Innovation Center in Haifa, Israel

10 December 2018 Lonza to Establish Strategic Biomanufacturing Base in China Using GE Healthcare Solution

For a comprehensive review of the media releases issued during 2018, refer to www.lonza.com/news.

The core competencies that span Lonza's segments are advanced manufacturing and quality-control systems, superior regulatory expertise, in-depth market knowledge, sales, marketing and business development, as well as extensive technical customer-support and R&D capabilities. In 2018 Lonza conducted its operations through the following segments: Pharma & Biotech and Specialty Ingredients

Segments

Pharma & Biotech

Lonza Pharma & Biotech's vision is to enable our customers to meet some of the greatest challenges in patient treatment and by Delivering the Medicines of Tomorrow, Today®. The Pharma & Biotech market-focused segment comprised the following offerings in 2018:

- Clinical development services and manufacturing in biologics and small-molecule businesses
- Commercial manufacturing in biologics and small-molecule businesses
- Consumables and research tools

The modalities across biologics include mammalian and microbial expression systems, and cell and gene technologies, covering both drug substance and parenteral drug product services. The modalities across small molecules cover early and current good manufacturing practice (cGMP) chemical intermediates, and customized active pharmaceutical ingredients (API), including highly potent APIs (HPAPIs) and cytotoxics. Drug formulation and enhanced oral dosage forms and delivery systems complete the capability. The consumables include cell-culture, transfection and molecular biology tools for life-science research.

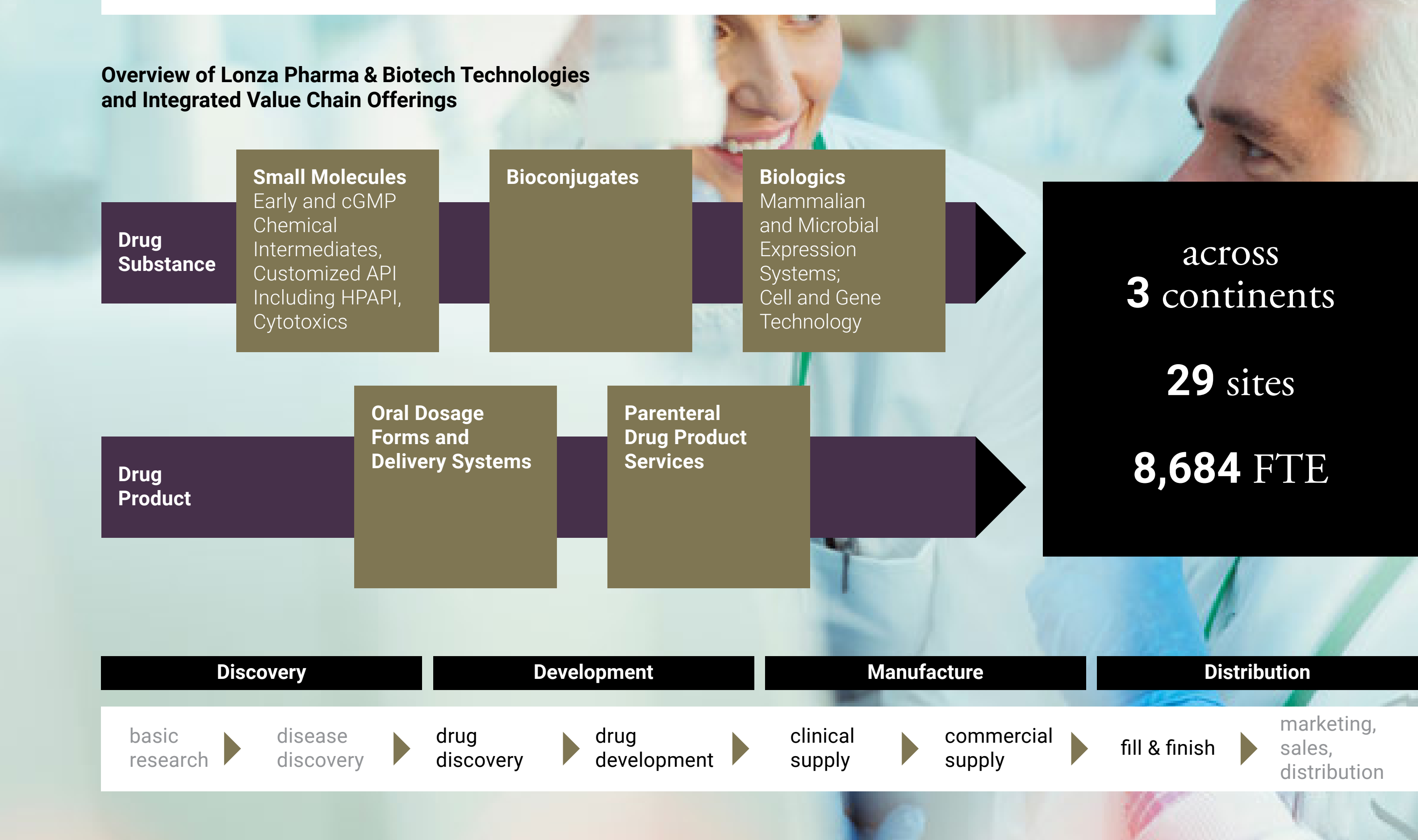
>575 clinical development programs

>290 commercial medicines supplied

(including dosage form and delivery systems)

>200 billion capsules produced

(including capsules for pharma and consumer health and nutrition businesses)



Overview of Lonza Pharma & Biotech Technologies and Integrated Value Chain Offerings

Drug Substance

Small Molecules
Early and cGMP Chemical Intermediates, Customized API Including HPAPI, Cytotoxics

Bioconjugates

Biologics
Mammalian and Microbial Expression Systems; Cell and Gene Technology

Drug Product

Oral Dosage Forms and Delivery Systems

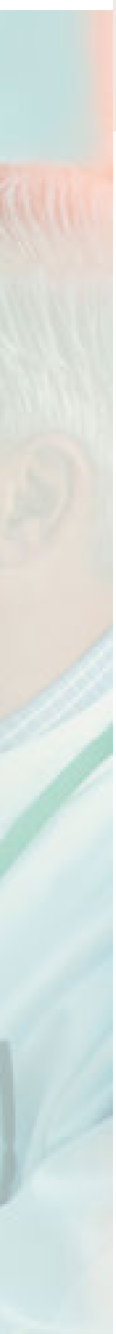
Parenteral Drug Product Services

across **3** continents

29 sites

8,684 FTE

Discovery		Development		Manufacture		Distribution	
basic research	disease discovery	drug discovery	drug development	clinical supply	commercial supply	fill & finish	marketing, sales, distribution



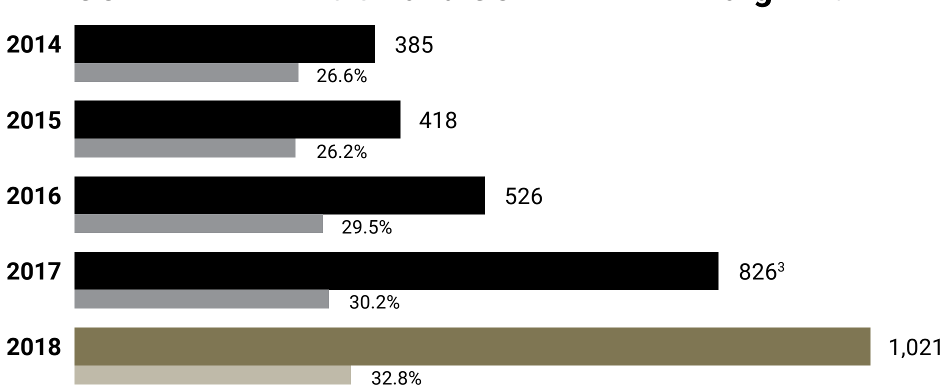
Pharma & Biotech million CHF	2018	Change in %	2017 [1] restated	Change in %	2017 [2] pro-forma
Sales	3,113	29.3	2,408	13.9	2,733
CORE EBITDA	1,021	38.7	736	23.6	826
CORE EBITDA margin in %	32.8		30.6		30.2
CORE EBIT	826	41.9	582	27.3	649
CORE EBIT margin in %	26.5		24.2		23.7

1 Restated to reflect adoption of IFRS 15

2 Reported Lonza full-year 2017 financial results (restated for IFRS 15) include Capsugel full-year 2017 financial results

Lonza Pharma & Biotech continued to outperform with 14% organic sales growth and a 32.8% CORE EBITDA margin, an improvement of 260 bps on a like-for-like basis. This segment delivered CHF 3.1 billion sales for 2018; and CORE EBITDA amounted to CHF 1.0 billion, a pro-forma increase of 23.6% versus prior year. Excellent organic CORE EBIT growth of 27.3% resulted in a CORE EBIT of CHF 826 million and a CORE EBIT margin of 26.5%.

CORE EBITDA million CHF and CORE EBITDA Margin in %

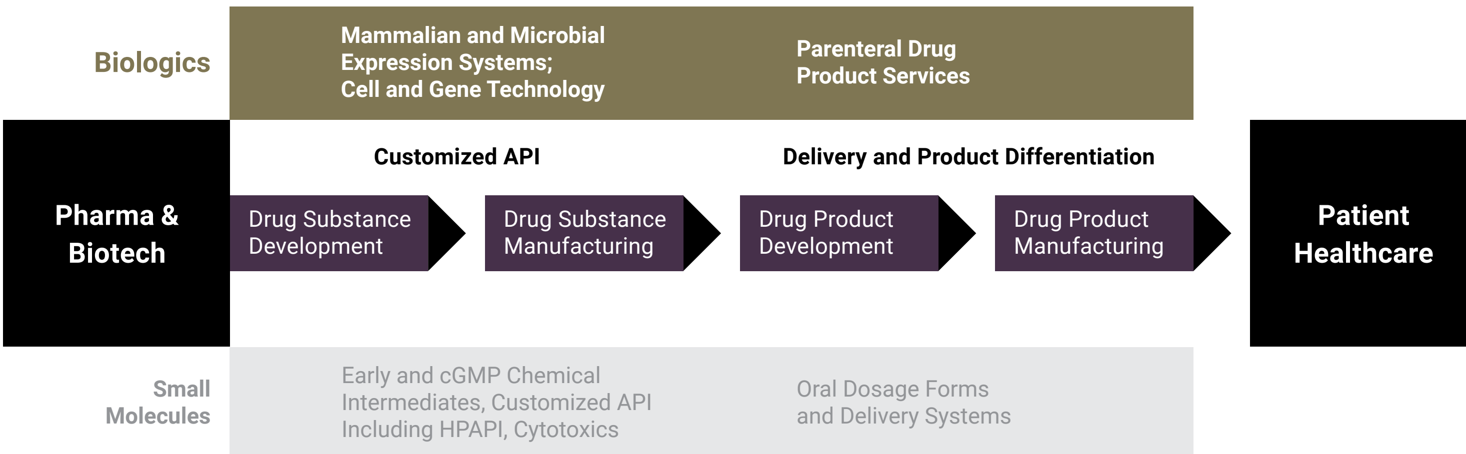


3 Reported pro-forma full-year 2017 financial results (restated for IFRS 15) include Capsugel full-year 2017 financial results

Biologics Businesses

We serve our customers throughout the product lifecycle – for all clinical manufacturing needs and through the transition of their products to commercial manufacturing.

Integrated Offerings in Pharma & Biotech – Biologics



Commercial Manufacturing

Lonza is a leading commercial contract manufacturing provider for biopharmaceuticals. Our offerings include the manufacture of commercial drug substance of monoclonal antibodies (mAbs) and recombinant proteins from mammalian cell culture and microbial fermentation. Currently our manufacturing product portfolio includes products that represent essential active pharmaceutical ingredients (APIs) for life-saving medicines, including cancer treatments and orphan drugs for rare diseases where no alternative treatment exists.

Today Lonza's commercial mammalian manufacturing offerings have a global footprint, comprising production scales from 2,000 L to 20,000 L across three existing state-of-the-art current good manufacturing practice (cGMP) sites: Portsmouth, NH (USA), Porriño (ES) and Tuas, Singapore (SG). Furthermore, we are adding new capacity in our Ibex™ Solutions biopark in Visp (CH), with the aim of bringing flexibility and the most-fitting scale of capacity to fulfill different market segments' and customers' needs.

Our commercial microbial manufacturing business currently operates from three plants at one location in Visp (CH), with a customer base that is a healthy mix of large, mid-size and emerging pharmaceutical companies.

>25 commercial large-molecule medicines

Production scales from **2,000–20,000 L** across four existing state-of-the art cGMP manufacturing sites: Portsmouth, NH (USA), Porriño (ES), Tuas, Singapore (SG) and Visp (CH)

Recent pipeline development in novel molecules such as antibody fragments, protein scaffolds and bioconjugates require a toolbox of solutions and our experience handling complex molecules. Our know-how and platform technologies enable our customers to define their own tailored solution from a full range of services. Our GS Xceed® Gene Expression System for mammalian expression and our XS® Technologies for microbial expression include well-established processes for efficient, scalable and regulatory-compliant commercial manufacture. In addition, our Ibex™ Solutions further help to mitigate customers' capital expenditure investment risks; and we have the capabilities to construct dedicated facilities for specific manufacturing needs.

Our commercial track record and proven expertise over two decades have enabled us to gain a broad accreditation from global health authorities, including the U.S. Food and Drug Administration (FDA) and the European Medicines Agency (EMA), among others. We pride ourselves on being the market leader for highly customized, reliable and innovative solutions to meet customers' needs.

Discover More For further information about our mammalian cell-culture capabilities for large-molecule drug substance, as well as for descriptions of Lonza's mammalian cell culture facilities, including Portsmouth, Porriño and Singapore, please visit our mammalian manufacturing webpage. / For further information about our microbial fermentation capabilities, please visit our microbial development and manufacturing webpage. Explore Lonza's worldwide sites by location via our 360° Virtual Tours.

Clinical Development and Manufacturing

Lonza's Clinical Development and Manufacturing business focuses on the early phase of drug development, from late discovery through clinical trial supply. In 2018 we offered a broad portfolio of drug substance and drug product development services and clinical supply manufacturing across the mammalian and microbial modalities.

>305 large-molecule clinical development programs

6 sites: Slough (UK), Hayward, CA (USA), Cambridge (UK), Visp (CH), Basel (CH) and Singapore (SG)

Our bioconjugate team in Visp (CH) is one of the industry leaders in process development and current good manufacturing practice (cGMP) manufacturing of clinical and commercial bioconjugates, including antibody drug conjugates (ADCs). The team's track record encompasses manufacture of several bioconjugate constructs, including customers' novel payload, linker and conjugation technologies.

Our teams work with customers to ensure reliable delivery of integrated, innovative and value-adding gene-to-patient custom solutions. We work in partnership with our customers to enable them to progress their candidates rapidly and effectively through clinical development in order to deliver medical treatments successfully to patients.

Late Discovery Services

For our customers in late discovery phase, our Applied Protein Services offering includes technologies and programs designed to assess and mitigate risks, reduce attrition and improve the quality and safety of therapeutic proteins in a cost-efficient and timely manner. These technologies include our Epibase® *in silico* and *in vitro*, cellular immunogenicity screening, and our antibody humanization and deimmunization services.

Our Sentinel APART™ Platform serves as a tool for antibody aggregation prediction and re-engineering, and our manufacturability assessment service is used to help predict and mitigate manufacturing risk. Early-stage customers also benefit from our mammalian and microbial-based Lightpath™ material supply services for their research and proof-of-concept studies. We also complement these services with developability assessment services to support our customers' lead candidate selection. More information on our late discovery services is available online.

Protein Expression

When a lead candidate is selected, our industry-leading expression technologies, including the GS Xceed® Gene Expression System and XS® Microbial Expression Technologies, are used to create commercially relevant cell lines or strains for protein expression.

Process Development or Transfer

Following creation of a new cell line or strain, we engage in a program of process development and scale-up studies that creates a robust process suitable for transfer to current good manufacturing practice (cGMP) sites. Once a process has been established, we can manufacture products to support not only preclinical activities, but also clinical trial material. In addition to developing a process at Lonza, we are also able to transfer into Lonza many product and process technologies that have been developed by our customers.

Parental Drug Delivery

Lonza's Drug Product Services (DPS) team in Basel (CH) focuses on parenteral dosage forms and offers solutions for customers developing therapeutic proteins, peptides, cell and gene therapies as well as small molecules that require a parenteral dosage form. These products are for injection and infusion for intravenous, subcutaneous and intraocular routes of administration.

The DPS team provides a complete portfolio of services for parenteral dosage forms, including formulation development, simulated clinical administration setup and testing, analytical method development and quality control, primary packaging and device design and integration, drug product process development, and manufacturing of parenteral dosage forms for stability testing, preclinical or clinical testing.

Special services also include surfactant characterization and characterization of excipient degradation, extractables and leachables assessment, and container-closure integrity and device testing. Our experts have multiple years of experience in the development, manufacturing, testing and commercialization of parenteral dosage forms and related regulatory requirements; and they have extensively researched and published in this area. Our customers benefit from seamless integration of pharmaceutical and drug substance development for rapid and reliable entry into the clinic and for robust late-stage development. In addition, Lonza DPS offers best-in-class analytical and specialized services for routine processes and troubleshooting in pharmaceutical manufacturing.

The recent expansion of Drug Product Services in Basel (CH) contributes to Lonza's gene-to-patient offerings.

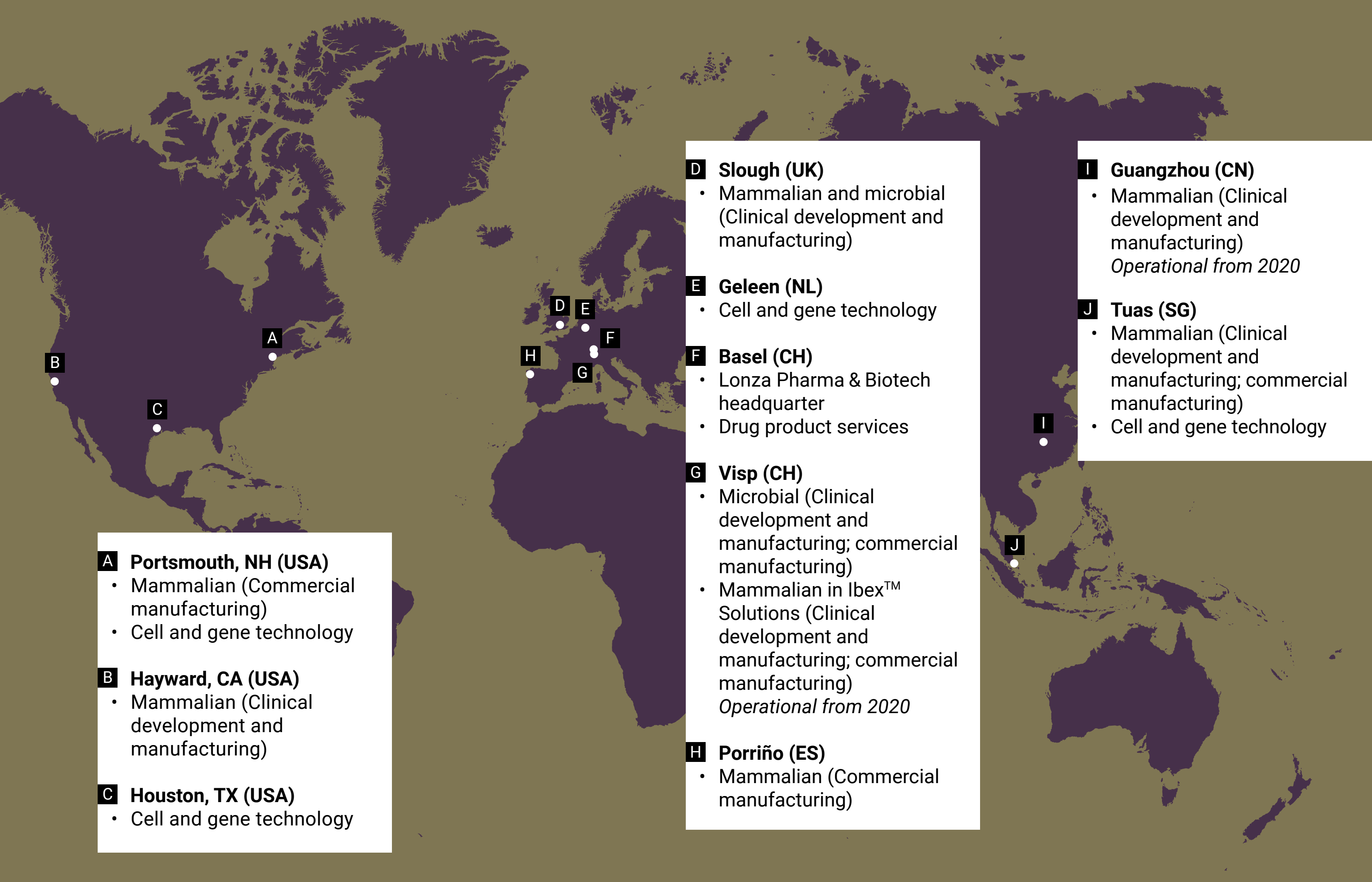
Discover More Our Clinical Development and Manufacturing global footprint of manufacturing facilities includes Slough (UK) and Cambridge (UK), Hayward, CA (USA), Basel (CH) and Tuas, Singapore (SG), for mammalian projects, and Visp (CH) for mammalian, microbial and bioconjugates projects. Explore Lonza's worldwide sites by location via our 360° Virtual Tours. For further information about Epibase®, Sentinel APART™, GS Xceed® Gene Expression System, as well as our development and manufacturing capabilities for large-molecule drug substance and drug products, click here.

Highlights and Initiatives 2018

Lonza's biological businesses performed strongly in the reporting year. The Commercial Mammalian and Microbial Manufacturing team continued to benefit from a solid customer base and strong demand, enabling the business to secure additional contracts for the mid- and long-term.

The year 2018 saw substantial investment in the Portsmouth, NH (USA) site, including mid-scale biologics. We introduced new mid-scale assets for commercial mammalian manufacturing to meet strong demand and complement existing small- and large-scale assets within the Lonza network. Lonza is installing multiple 6,000 L bioreactors at the site to meet existing and new customers' needs, with construction starting in late 2018. The reactors were designed from the outset with advanced in-line testing and automation capabilities.

Lonza Biologics' Global Footprint and Investments



A Portsmouth, NH (USA)
- Mammalian (Commercial manufacturing)
- Cell and gene technology

B Hayward, CA (USA)
- Mammalian (Clinical development and manufacturing)

C Houston, TX (USA)
- Cell and gene technology

D Slough (UK)
- Mammalian and microbial (Clinical development and manufacturing)

E Geleen (NL)
- Cell and gene technology

F Basel (CH)
- Lonza Pharma & Biotech headquarter
- Drug product services

G Visp (CH)
- Microbial (Clinical development and manufacturing; commercial manufacturing)
- Mammalian in Ibex™ Solutions (Clinical development and manufacturing; commercial manufacturing)
  Operational from 2020

H Porriño (ES)
- Mammalian (Commercial manufacturing)

I Guangzhou (CN)
- Mammalian (Clinical development and manufacturing)
  Operational from 2020

J Tuas (SG)
- Mammalian (Clinical development and manufacturing; commercial manufacturing)
- Cell and gene technology

The new facilities have been designed to ensure reliable delivery of innovative medicines. With a strong focus on automation, Lonza is implementing full-suite process analytic technology (PAT) and advanced multi-variate analysis (MVA) to help ensure consistent performance. This hybrid facility also incorporates state-of-the-art, single-use technologies for simplified processing.

« These new facilities in Portsmouth have been designed specifically to deliver innovative medicines for our customers and their patients. They will be enabled by cutting-edge technology developed with our R&D team and the decades of expertise at our Portsmouth site. »

Marc Funk, COO of Lonza Pharma & Biotech

The operations of our Tuas, Singapore (SG) single-use bioreactor facility developed as planned in 2018. The first Singapore 2,000 L batch was successfully released in November. The batch was supplied under the strategic manufacturing agreement with one of our customers for their therapeutic antibody. Lonza performed cell-line development and provided clinical supply for this antibody at our Slough (UK) site and used our established GS Gene Expression System®. The process was subsequently transferred into 2,000 L scale disposable bioreactors at Lonza Singapore, which will continue to manufacture material for our customer's ongoing clinical trials and, if the antibody is approved for commercial use, will also provide the commercial supply.

Demand for Lonza's development services and clinical manufacturing in all technologies remained strong, further fueled by increasing pressure to shorten time to the clinic and to the market, which creates new fast-track approval pathways for regulatory authorities. Therefore, we are expanding our clinical development services and manufacturing capacity in Slough (UK).

Earlier than expected, our Clinical Development and Manufacturing team saw full changeover to Lonza platforms, processes and technologies at our Hayward, CA (USA), facility, which was acquired in September 2017 from Shire. The first customer batches were released already in the third quarter of 2018, and the transfer of new and existing customers to the Hayward site continues to progress well.

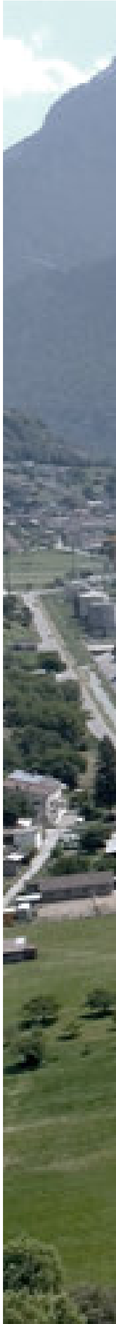
Shaping the Future of Biomanufacturing with Ibex™ Solutions

In September 2018, Lonza expanded our Ibex™ Solutions facility in Visp (CH), with two new, innovative packages – Ibex™ Design and Ibex™ Develop. The two new offerings are designed to meet the evolving needs of biotech companies with antibody therapies, from the preclinical stage through to commercialization. This expansion includes drug substance development and drug substance and now also drug product manufacturing. Together with the existing Ibex™ Dedicate offering that targets companies in later stages, the new investment allows Lonza's customers to benefit from a complete product lifecycle management at one site. Advanced technology, single-use bioreactors and improved platform processes are applied to shorten time to clinic and to market, while innovative business models are expected to increase predictability. The innovative offerings received positive feedback in the market. Construction at the Visp (CH) site is well underway, and the Lonza-Sanofi joint venture (the first Ibex™ Dedicate) and the Ibex™ Design and Ibex™ Develop (one wing of one building) will become operational from 2020. The full Ibex™ Solutions facility is a generational project.

More information on our Ibex™ Solutions is available online.

« We are capitalizing on attractive organic growth opportunities, like the recently announced expansion of our Ibex™ Solutions offerings in Visp (CH) that provide clinical development and manufacturing services along the whole value chain and now include fill and finish. »

Richard Ridinger, CEO of Lonza



Gold buildings: under contruction; operational from 2020

Ibex™ Design covers the early stages of creating a new biologic, from gene through to clinical phase I. The offering comprises a pioneering fixed-price gene-to-vial package with terms under which Lonza can deliver drug products based on at least 1 kg drug substance within 12 months – shortening timelines from receipt of gene sequence to Investigational New Drug (IND). This package also includes the reservation of a manufacturing slot for clinical resupply. Ibex™ Design allows aspiring companies to start clinical trials earlier while reducing uncertainty. The result strengthens our capabilities from the early stages of drug development all the way through to commercialization. It will help biotech companies deliver life-saving medicines to patients faster.

Ibex™ Develop helps companies seamlessly and rapidly transition from clinical phase II to commercialization. Co-location at one site eliminates the need for tech transfers, and accelerates the path to market. This offering enables biologics license applications (BLAs) to be submitted within 22 months from the start of process characterization. Eliminating the need for tech transfers, allowing process optimizations and creating operational efficiencies are all expected to accelerate the path to market.

With **Ibex™ Dedicate**, a fully customized commercial supply solution that is exclusive for our customers' products, Lonza is able to offer complete product lifecycle management in one site. A pre-built wing and faster ramp-up could save our customers up to 30 months total time to market. Ibex™ Dedicate allows our customers to delay their capacity build decisions and better manage investment risk. Moreover, flexible ownership and operating models give our customers freedom of choice, in combination with a technology-agnostic solution that can be tailored to suit mammalian and microbial production, vaccines and cell and gene therapies.

Cell and Gene Technology

4 centers of excellence: Houston, TX (USA), Maastricht / Geleen (NL), Portsmouth, NH (USA) and Singapore (SG)

Cell and gene therapies are seen as the new frontier in medicine. The field of cell and gene therapy has the potential to transform the way patients diagnosed with cancers or genetic diseases can be treated. These novel drug candidates provide drastically improved patient outcomes and, in some cases, may even prove to be curative. With our comprehensive offering that spans allogeneic and autologous cell therapies, as well as viral vector gene therapies, Lonza is at the forefront of supporting this new frontier.

However, the manufacture of such medicines poses new challenges that are unique to each of the sectors we serve in cell and gene therapy. For example, the small, patient-scale batch sizes for autologous products require scale-out approaches to meet commercial demand for certain larger indications. Furthermore, getting these drugs to patients around the globe may present logistical challenges. For allogeneic cell therapies and viral-vector gene therapies, other challenges exist, such as scale-up to increase batch sizes and treat more patients per batch. Today the cost of production still represents a major hurdle on the way to the market. New technologies are needed that enable robust and efficient manufacturing and yield replicable high-quality medicines.

Enabling Technologies Offered by Lonza Cell and Gene Technology

Autologous Cell Therapy Manufacturing Automation	Viral and Non-Viral Genetic Modification	iPSC Generation, Differentiation and Expansion	Allogeneic Cell Therapy	Synthetic AAV Vector Platform
Octane Cocoon™	4D-Nucleofector™ LV unit	Induced Pluripotent Stem Cells	2D and 3D Bioreactors	AncAAV (Ancestral) Vectors

By developing innovative technologies and platforms that industrialize the manufacturing of cell and gene therapies, our goal is to enable developers to make these therapies mainstream and commercially viable. With decades of experience in cell processing and as an industry leader in process development and manufacturing of cells and viral vectors under current good manufacturing practices (cGMP), Lonza is well positioned to achieve this goal. Our broad service offerings – combined with a global footprint that spans the United States, Europe and Asia – enable us to support our clients throughout clinical development and commercial production.

At our new Houston, TX (USA) facility, the Lonza team offers development and cGMP services for cell and gene therapies, including viral vector production. The range includes a wide selection of cell and virus types, such as T-cells, dendritic cells, pluripotent stem cells (PSCs), mesenchymal stem cells (MSCs) and adenoviral, adeno-associated virus (AAV) and lentiviral vectors.

> « We really want anyone we work with to be genuinely engaged in the purpose. I do not consider Lonza a vendor; I consider Lonza a partner. I do not consider this a manufacturing facility; I consider this a house of hope. »

Nick Leschly, CEO of bluebird bio at Lonza Houston Grand Opening, 10 April 2018

We aim to be the industry partner of choice in this process and to help our customers drive pioneering therapies to the market by investing in enabling technologies and using our expertise to support the development and commercialization of new, innovative therapies. Our scientists and engineers bring decades-long development experience across a broad spectrum of cell types and technologies. This expertise builds the backbone of an extensive service offering and provides a tailored approach to analytical development, manufacturing and regulatory services.

Cell and gene technology is one of the key pillars for Lonza Pharma & Biotech's overall strategy: Delivering the Medicines of Tomorrow, Today®.

Discover More Additional information about our services, such as process development, cGMP manufacturing, assay development, analytical and all other related services, is available on our cell and gene technology website. Some of our facilities can also be viewed on our 360° Virtual Tour.

Highlights and Initiatives 2018

During the reporting year, a key focus at Lonza was on the development of our cell- and gene-therapy capabilities, an area of high potential for the future of medical treatment.

The opening of the world's largest dedicated cell-and-gene-technology manufacturing facility in Pearland, Greater Houston, TX (USA) in April 2018 was a major step forward for Lonza. The expanded capabilities were well received, and the transfer of existing and new customers into the facility progressed as expected during 2018. At 300,000 square feet (27,870 square meters), the site is growing and recruiting highly qualified personnel to meet market demand.

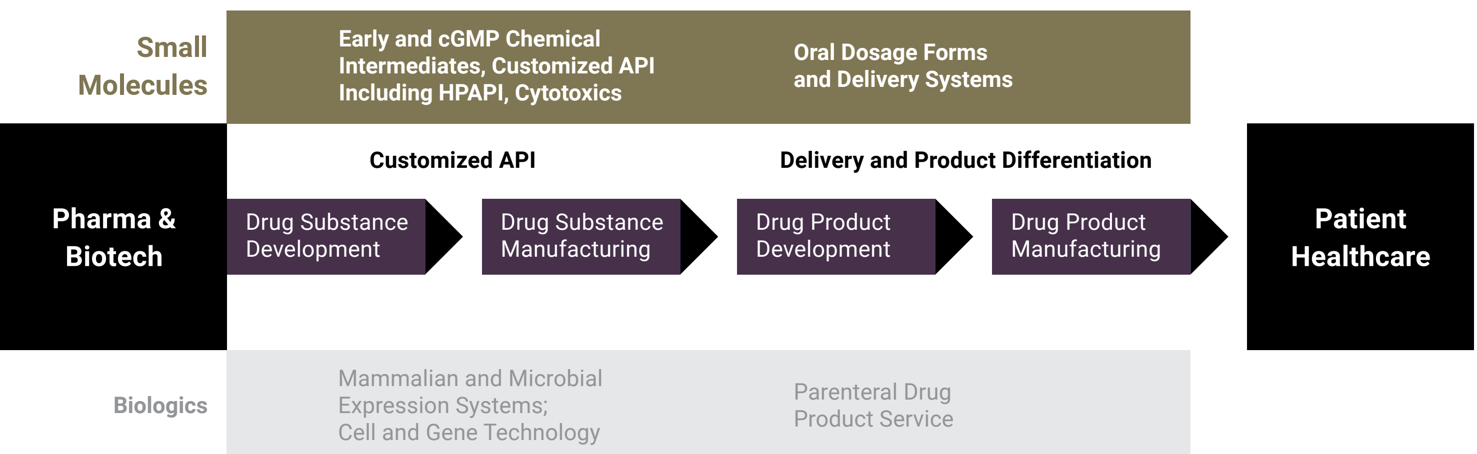
Lonza announced in February that it was to establish centers of excellence for cell and gene technology to support and accelerate the growth of this priority area for the company. The Lonza sites in Pearland and in Geleen / Maastricht (NL) will offer a fully integrated range of cell-and-gene-therapy services, including process and analytical development, clinical product supply and commercial product supply. Lonza's facilities in Portsmouth, NH (USA) and Singapore (SG) will continue to serve as clinical and commercial manufacturing sites. The centers represent a global network spanning the United States, Europe and Asia and provide flexible solutions to support fast-track programs.

Lonza is actively investing in key innovation technologies in viral vector manufacturing, allogeneic manufacturing in 3D bioreactors and autologous manufacturing in the Cocoon™ system. In 2018 we further strengthened our commitment to drive the next generation of manufacturing patient-specific and personalized therapies with the acquisition of a controlling stake in Octane Biotech, with the right to acquire full ownership of the Cocoon™ technology. The increase in equity share will allow us to further develop the technology necessary to support the growing need for scalable autologous manufacturing.

Small-Molecule Businesses

Drug candidates based on chemical technologies in the development pipeline are increasingly innovative and often highly potent specialty medicines. They enable drastically improved treatment opportunities for patients in need. Fast-track regulatory approval programs have been introduced to meet these needs by shortening the time to market and compressing timelines for the developer. At the same time, the increased potency can lead to challenges in development and manufacturing, including the need for specialized handling in high containment systems. As these molecules are often poorly soluble, expertise in formulation is also required to increase bio-availabilty. Lonza is uniquely positioned to provide solutions to these challenges.

Integrated Offerings in Pharma & Biotech – Chemical Technologies



Drug Substance Development and Manufacturing

Lonza has one of the widest breadths of expertise in the production of highly potent active pharmaceutical ingredients (HPAPIs) within the contract manufacturing organization industry. This expertise spans highly skilled teams, state-of-the-art facilities and approximately 20 years of experience in successfully commercializing HPAPI products and full scalability allowing our customers to use clinical-phase appropriate manufacturing scales. For the production of other APIs, Lonza's breadth and economy of scale, our many years of experience in launch and long-term manufacture, and the dedication of our personnel ensure that we remain a leader in small-molecule contract manufacturing.

>270 clinical small-molecule programs

>265 commercial small-molecule programs
(including dosage form and delivery systems)

The small-molecule team is heavily involved in the development of therapies designated by the U.S. Food and Drug Administration (FDA) as breakthrough therapies. Accelerated time-to-market is a key factor in their development and production. Lonza has driven processes to ensure APIs are delivered to the accelerated timelines to support these launches.

With the 2017 transformational acquisition of Capsugel and the bolt-on acquisition of Micro-Macinazione, Monteggio (CH) the small-molecule businesses further extended our offerings for development and manufacturing of highly potent active pharmaceutical ingredients (HPAPIs). Lonza now has a fully established value chain for highly potent products from the active pharmaceutical ingredients (API) through particle engineering into the final dosage forms. This broad offering adds substantial value to our customers as it simplifies interfaces, reduces costs and accelerates timelines.

Drug Product Development and Manufacturing

The newly acquired drug formulation development capabilities from Capsugel aim to overcome our customers' key challenges of complexity, bioavailability, solubility and high potency, while helping shorten lead times for drug launches. As the majority of the products in clinical development pipelines have poor solubility, we are addressing that market need with our broad toolkit for bio-availability enhancement, our expertise in APIs and modulating pharmacokinetics, and our capability in handling highly potent materials and dosage-form expertise to support modulated release.

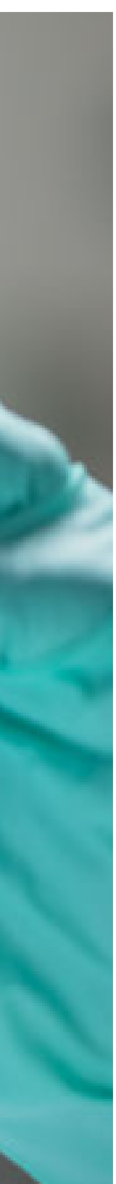
The addition of Micro-Macinazione to the Lonza portfolio has extended our small-molecule offerings into particle engineering that facilitates the conversion of APIs to the finished dosage forms. By adding Capsugel, a world leader in enhanced oral dosage delivery technologies with a market-leading position in hard capsules, Lonza has created a powerful all-round player, from drug substance and formulation expertise to final dosage form.

Pharma Hard Capsules

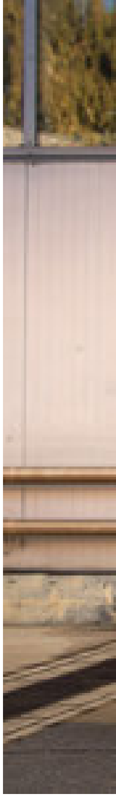
The hard-capsule business continues to build on a long track record of ingenuity, credibility and flexibility to deliver an exemplary experience and drive added value creation for our customers. Proprietary and patent-protected technologies, unrivaled expertise in capsule polymer science, and product and process design capabilities all help customers meet their target product profiles and commercial objectives while allowing rapid design and development across a wide range of dosage forms.

Leveraging extensive experience in capsule delivery solutions, Lonza also offers an unmatched value-added service portfolio with a global quality organization, which includes an integrated supply chain, technical and operational engineers, color lab support and global regulatory expertise. Continuing a commitment to delivering high-quality products and maintaining the highest standard of regulatory compliance, the hard-capsule business has established standards and systems to oversee internal and external quality performance, which is known industry wide.

Capitalizing on the vast global network built by Lonza and Capsugel, coupled with the unmatched science and engineering behind the hard-capsule business, Lonza can provide a broad range of capsule polymers, sizes and designs for the industry. We also have the ability to offer integrated product design, development, clinical supply and commercial manufacturing services to our customers around the world. The diversified customer base includes companies that make branded, generic and specialty pharmaceuticals, as well as biotech products and over-the-counter medicines.



Discover More For further information about our offerings in small molecules, including our expertise in HPAPI and other active pharmaceutical ingredients, visit our website. Click here for a 360° Virtual Tour of our facilities in Visp (CH) and Nansha (CN). Visit our Capsugel and Micro-Macinazione websites.



Highlights and Initiatives 2018

Throughout the year our small-molecule businesses – including capsule and combined ingredient and dosage-form offerings – continued to perform strongly. Lonza Pharma & Biotech's small-molecule businesses reported continued operational and commercial improvements. Demand for Lonza's offerings in API development and clinical and commercial manufacturing held firm. Pharma hard capsules and dosage form and delivery systems performed above expectations as a result of buoyant customer interest and the capture of cross-selling synergies.

Drug Substance Development and Manufacturing

Lonza expanded HPAPI manufacturing at our Visp (CH) plant when Lonza and Clovis Oncology celebrated the opening of a new, dedicated production train for Rubraca® (rucaparib), Clovis's U.S.- and EU-approved drug for several ovarian cancer indications. The innovative operating model and technology deployed reduce production lead time and costs. Under a long-term agreement, the new, state-of-the-art monoplant enables security of supply and flexibility to ensure a rapid response to changes in market demand for Rubraca®.

Lonza added two new manufacturing suites at the Visp site for the manufacture of antibody drug conjugate (ADC) payloads, based on a tailored business agreement with a major biopharmaceutical partner. The new suites enable handling of a variety of highly potent products with occupational exposure levels down to 1ng/m^3 and thereby strengthen the overall bioconjugation capabilities of Lonza in Visp.

Lonza announced the launch of our pharmaceutical early-intermediates supply initiative. The initiative leverages chemical production facilities at the Visp site to address increasing global early-intermediates supply security and quality concerns. Lonza now offers customers an integrated supply chain from non-GMP early intermediates to current good manufacturing practice (cGMP) advanced intermediates and APIs.

Drug Product Development and Manufacturing

During 2018 Lonza completed the integration of the Capsugel businesses, and the addition of Capsugel further strengthened the depth and breadth of Lonza's offerings for small molecules. It expanded the reach of Lonza's contract development and manufacturing organization (CDMO) and products businesses and further growth is expected in the years ahead, not least through the synergies the acquisition has unleashed.

« Our partnership with Lonza and the opening of this dedicated facility in Visp (CH) should allow the continued availability of Rubraca® to patients who may benefit from its use, now and in the future »

Patrick Mahaffy, CEO and President of Clovis Oncology

Our oral drug product services added to the positive year 2018 by securing several projects with new and existing customers and by strengthening the overall portfolio. Firm demand continued for dosage forms and for delivery solutions and services to enhance bioavailability and efficacy of drugs.

First synergistic projects have been captured that either leverage Lonza's network to extend the value chain or that cross-sell to customers. Innovation projects are ongoing and deal with continuous manufacturing and automation, bioavailability and efficacy enhancements through the introduction of new formulations, modulated-release mechanisms and new approaches to the manufacturing of high-potency substances.

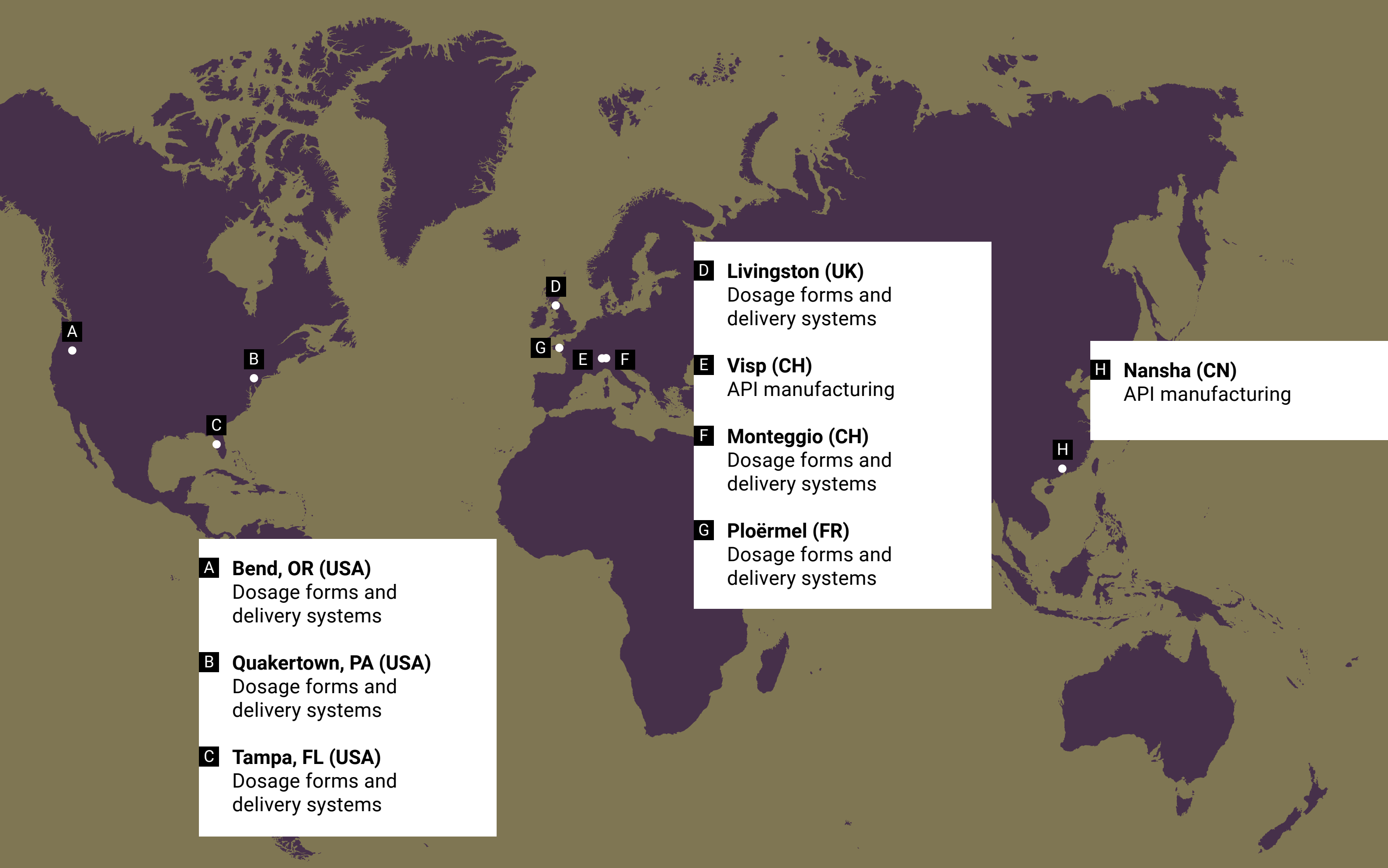
In February we announced the expansion of our late-stage clinical and commercial encapsulation capabilities for solid oral and inhaled dosage forms in North America, with the installation of a new encapsulation unit at our integrated product development and manufacturing facility in Tampa, FL (USA). The added capacity will further strengthen our speed-to-market capabilities. This specialized drum-dosing technology is used for powder-in-capsule (PIC) filling for oral solid dosage forms including dry powder inhaler (DPI) applications.

Pharma Hard Capsules

The hard-capsule business reported a robust year 2018 and saw increasing demand for Lonza's specialty polymer capsules by pharmaceutical companies to enhance bioavailability and to provide a wider choice for customers. Geographic expansion programs, expansions across the sites and operational excellence programs have been implemented and are ongoing to strengthen the business's global presence to meet customer demand.

From early-stage development to commercial solutions, the hard-capsule business continues to offer the broadest portfolio of gelatin and Hydroxypropylmethylcellulose (HPMC) capsules. In August Capsugel® Colorista™ capsules – a high-quality capsule based on an «all-colorants» formulation – was launched. It is a new single research & development solution for pharmaceutical formulation development that cuts development time and allows for flexibility with testing. This new capsule further expands the Lonza Capsugel® clinical offering.

Lonza Small Molecules' Global Footprint and Investments



Consumables and Research Tools

>2,800 scientific publications used a Lonza Bioscience product

274 bioscience products filed with regulatory agencies

110 different primary cell types

Lonza's Bioscience Solutions offerings include cell-culture, transfection and endotoxin testing tools for the life-science industry. We serve customers across the world in academic and government institutions, as well as in major biotech and pharmaceutical organizations.

Our Bioscience Solutions team provides products and customer services in life-science research with our Biowhittaker™ Cell Culture Media, Clonetics™ and Poietics™ primary cells and media, Nucleofector™ Transfection technology and CellBio Services custom solutions.

For the drug-discovery and translational research markets, we offer products and services targeting cardiovascular, respiratory, neurological, metabolic, cancer and other disease-research areas.

Bioscience Solutions' therapeutic cell-culture media business serves customers in the pharmaceutical and biotech industry. Therapeutic cell-culture media are used in the production of therapeutics, including antibodies, antibody drug conjugates (ADCs), vaccines, cell- and gene-therapy applications and other biologics.

Lonza Testing Solutions offers endotoxin-detection assays that are applied in pharmaceutical product-release testing, medical-device testing and dialysis clinics to help ensure the safety of injectable drugs, implantable medical devices and dialysis equipment.

Our fully integrated MODA™ software solutions streamline quality-control processes and offer insight into manufacturing operations, with quick access to management, compliance and trending data.

Discover More Additional information about our offerings, such as process development, cGMP manufacturing, assay development, analytical and all other related services, is available online. For further information specifically about Bioscience Solutions products – such as Endotoxin-Detection Assays, PowerCHO Advance™ Media, Hepatocytes, RAFT™ 3D Cell Culture System, CytoSMART™ 2 System, CellBio Services, 4DNucleofector™ LV (large volume) Transfection Device, MODA™ Paperless QC Micro Solution and PyroGene™ rFC Assay – visit our Bioscience Solutions website. Visit our Walkersville, MD (USA), Durham, NC (USA), Cologne (DE), Verviers (BE) and other facilities online and take a 360° Virtual Tour of some of our facilities.

Highlights and Initiatives 2018

Market demand for Lonza's Bioscience Solutions technologies and products was sustained in the reporting year, notably for our cell-culture modeling, transfection, genome editing and endotoxin product portfolio. Demand for Lonza's research media and testing products continued in 2018. New research products were launched to further respond to customer demand. Improvements in production availability continued to be implemented to increase supply to meet demands of existing and new customers.

Among our many advances in 2018, Lonza developed cell-culture models that more closely mimic the *in vivo* environment for enhanced research into drug-induced liver injury and hepatic-signaling pathways and for improved *in vitro* hepatotoxicity testing. Lonza presented our latest research into developing more physiologically relevant *in vitro* cell-culture models for Absorption, Distribution, Metabolism, Excretion and Toxicity (ADME-Tox) testing. The Quasi Vivo® System is an interconnected fluidics system to create more physiologically relevant cell-culture conditions, which helps researchers improve the predictive value of their studies.

> « Building on Lonza's industry-respected cell-culture portfolio, the addition of the Quasi Vivo® System is an important step forward in advancing the use of primary cells in biomedical research. »

Dr Maureen Bunger, Product Manager for absorption, distribution, metabolism, excretion (ADME) / Tox Solutions at Lonza

Another advance, the RAFT™ 3D Culture System, creates hepatocytes with stronger cytochrome responses and increased stability. This system helps researchers to simulate *in vivo* conditions, while 3D culturing of organotypic *in vitro* liver models using HepaRG™ cells improves the predictability of studies looking into drug metabolism, drug-induced liver injury and hepatic-signaling pathways.

These advances highlight Lonza's scientific initiatives to support the development of cell-based modeling systems with more human relevance for toxicity research by helping improve the translatability of *in vitro* drug metabolism, phenotypic screening and mechanistic toxicity studies.

The Clustered Regularly Interspaced Short Palindromic Repeats (CRISPR / Cas9) system has emerged as the genome-editing method of choice for research, medicine and biotechnology applications. Compared with other gene-editing technologies, such as Zinc Finger Nucleases (ZFNs) and Transcriptional Activator-like Effector Nucleases (TALENs,) CRISPR / Cas9 is simpler to re-engineer, easier to use, more versatile and capable of targeting multiple sites.

This market trend supported the continued growth of our Nucleofector™ Transfection Technology, ranging from research applications to preclinical studies. A wide range of publications confirmed the use of our technology as the gold standard for genome-editing applications. We also pre-marketed our next-generation endotoxin automation solution PyroTec™ Pro Robotic Solution, which integrates instruments, endotoxin reagents and software into a robotic platform, providing a fully automated workflow solution.

In 2018 Lonza unveiled an advanced electronic batch record execution platform, MODA™ Execution System. The software platform builds on our extensive informatics know-how and experience as a contract manufacturing organization. It offers a flexible, cost-effective solution for consolidating and managing batch and quality data produced across cell- and gene-therapy manufacturing processes.

To strengthen our sales channels and accelerate our digital presence, we introduced a new website and e-shop in 2018. The new site offers state-of-the-art technology, including mobile-friendly design and navigation, detailed product pages with substantial technical information and a full suite of Lonza's technical resources with personalized content after log-in. In addition, it includes a modern e-commerce platform that allows us to expand our sales channels by offering improved e-shop capabilities and streamlined order-taking via punch-out solutions.

Specialty Ingredients

In 2018, the Specialty Ingredients segment operated in:

- a Consumer Health division
- a Consumer & Resources Protection division
- a Water Care business unit

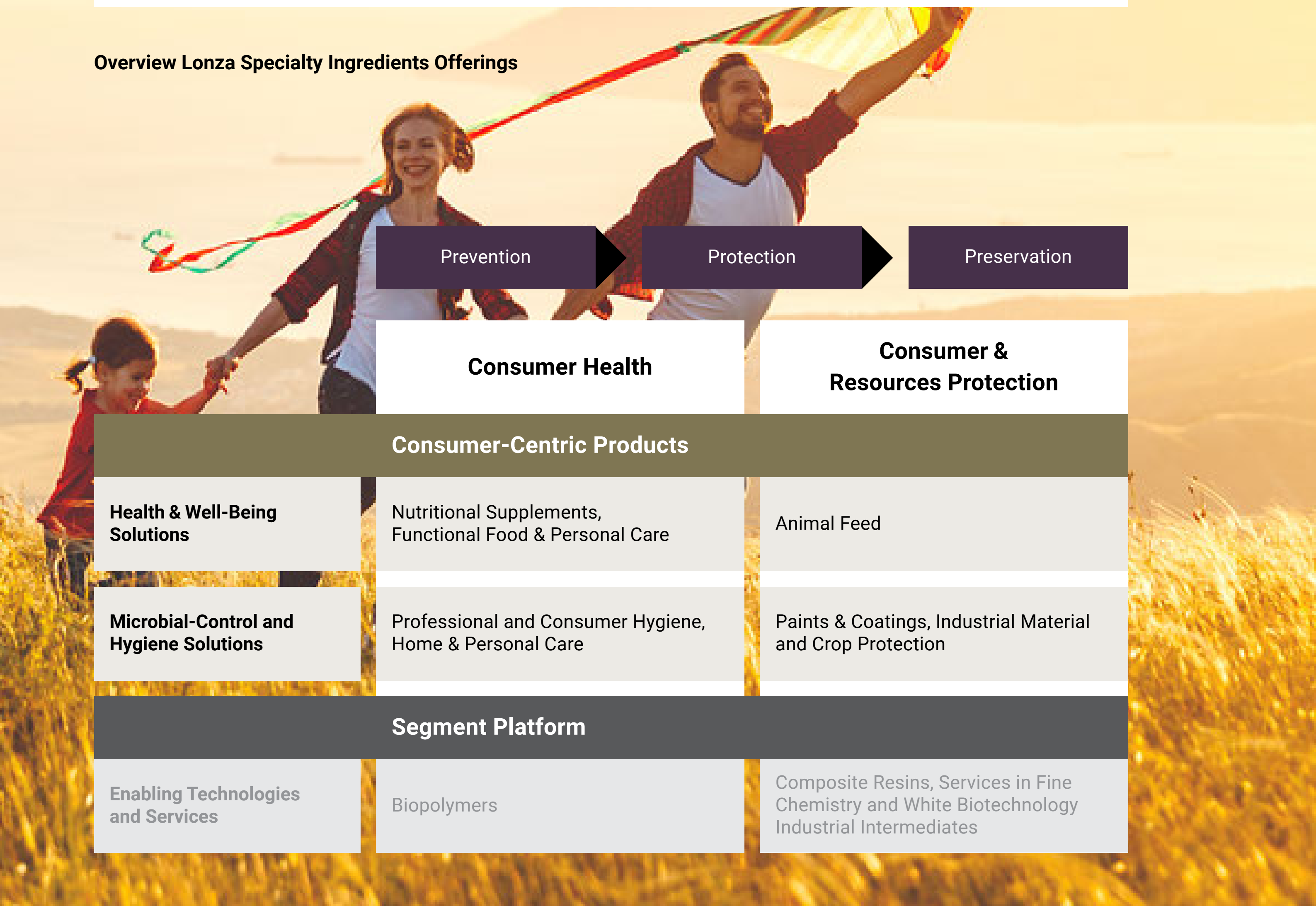
The Consumer Health division addressed the fast-moving consumer goods markets in nutritional ingredients for supplements and functional food, hygiene and personal care. The Consumer & Resources Protection division addressed a wide range of industrial markets, as well as the global agricultural markets. The Water Care business unit offered a broad range of products and solutions for residential and industrial water treatment globally. On 1 November 2018, Lonza announced that it had entered into a definitive agreement with Platinum Equity to sell Lonza's Water Care business. Therefore, Water Care is being reported as discontinued operations for all periods presented.

>19,000 customers worldwide

42 manufacturing sites

Serving **60** consumer, healthcare and industrial markets globally

Overview Lonza Specialty Ingredients Offerings



Prevention → Protection → Preservation

	Consumer Health	Consumer & Resources Protection
Consumer-Centric Products		
Health & Well-Being Solutions	Nutritional Supplements, Functional Food & Personal Care	Animal Feed
Microbial-Control and Hygiene Solutions	Professional and Consumer Hygiene, Home & Personal Care	Paints & Coatings, Industrial Material and Crop Protection
Segment Platform		
Enabling Technologies and Services	Biopolymers	Composite Resins, Services in Fine Chemistry and White Biotechnology Industrial Intermediates

Specialty Ingredients

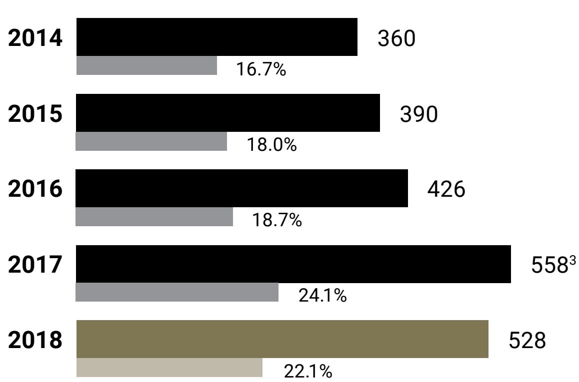
million CHF	2018	Change in %	2017 [1]restated	Change in %	2017 [2]pro-forma
Sales	2,391	13.7	2,102	3.4	2,312
CORE EBITDA	528	6.7	495	(5.4)	558
CORE EBITDA margin in %	22.1		23.5		24.1
CORE EBIT	421	5.8	398	(6.0)	448
CORE EBIT margin in %	17.6		18.9		19.4

1 Restated to reflect classification of Water Care business as discontinued operations

2 Reported Lonza full-year 2017 financial results include Capsugel full-year 2017 financial results

Specialty Ingredients delivered 3.4% organic sales growth and a 22.1% CORE EBITDA margin despite a challenging environment for cyclical categories and some raw material pricing and supply-chain related headwinds in parts of the portfolio. The segment reported CHF 2.4 billion sales for 2018, and CORE EBITDA amounted to CHF 528 million (pro-forma –5.4% versus prior year). CORE EBIT was CHF 421 million (pro-forma –6% versus prior year) and resulted in a CORE EBIT margin of 17.6%.

CORE EBITDA million CHF and CORE EBITDA Margin in %



3 Reported pro-forma full-year 2017 financial results include Capsugel full-year 2017 financial results

Consumer Health

The Consumer Health division within Lonza's Specialty Ingredients segment is uniquely positioned to address consumer needs in human and pet nutrition, personal care, and home and professional hygiene through our portfolio of powerful science-backed ingredients, formulation expertise and dosage form delivery capabilities.

The teams in Consumer Health are capitalizing on the evolving consumer trends toward healthier lifestyles that include food, beverage and dietary supplements, protection from dangerous viruses and other pathogens in hospitals, homes, at work and in all other surroundings, and the ability to look and feel their best.

>7,000 customers worldwide

24 manufacturing sites

>200 billion capsules produced annually

(including capsules for pharma and consumer health and nutrition businesses)

Overview Consumer Health Offerings

Consumer Health

Health & Well-Being Solutions in Nutritional Supplements, Functional Food & Personal Care

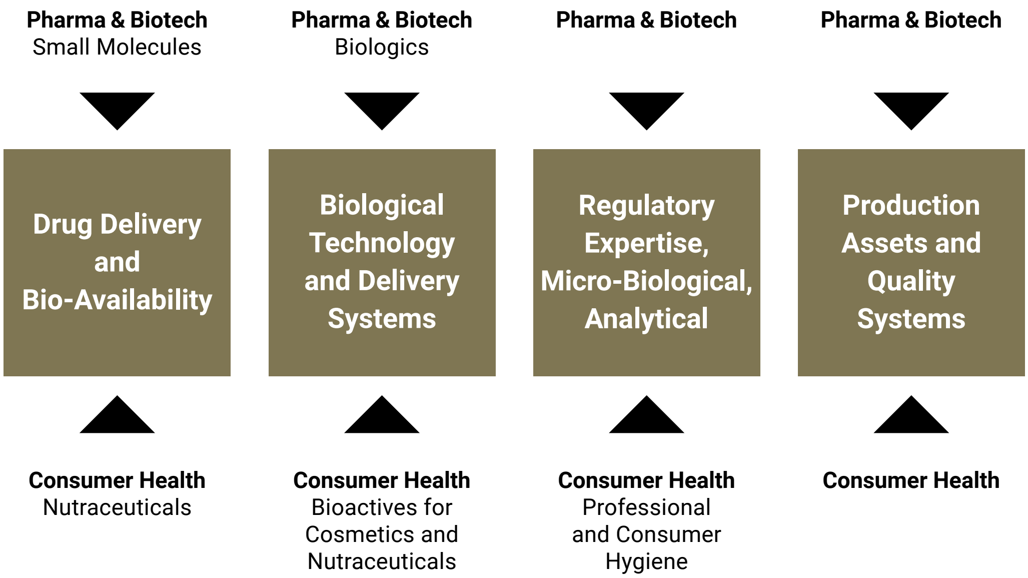
- High-value ingredients backed by science
- Innovative delivery forms and integrated solutions
- Functional ingredients and bioactives enhancing consumer experience
- Formulation expertise

Microbial-Control and Hygiene Solutions for Professional and Consumer Home & Personal Care

- Next-generation consumer protection
- New preservation solutions
- High-performance disinfection and hygiene solution
- Industry-leading regulatory and toxicology expertise

Our consumer market-oriented, collaborative innovation approach and our world-class quality allow us to develop solutions for our customers that offer superior product efficacy combined with delivery forms that enhance the consumer experience. In addition, we have unique capabilities and expertise that we leverage from the pharma industry to the consumer world. This advantage means that our customers have the regulatory support to obtain registrations required by local governmental agencies. Our products are supported by science in order to make marketable claims that help deliver meaningful differentiation. We enable our customers to improve the lives of consumers by creating healthier environments, providing better nutritional support, improving vitamin and supplement delivery and bioavailability, and offering customer-focused hair-, scalp- and skin-care solutions through the Consumer Health businesses.

Leveraging Overlaps of Pharma & Biotech and Consumer Health



Health and Well-Being Solutions

Nutritional Supplements and Functional Food Offerings

Lonza's health and nutrition businesses offer customers fully integrated solutions from concept through product commercialization. We supply branded health ingredients that address the key market segments in the nutritional supplement category, along with regulatory and commercial support. Differentiated benefits and a wide range of applications make our products attractive for the dietary supplement, food and beverage, and human and pet nutrition markets.

With the integration of the Capsugel portfolio in 2017, Lonza's health and nutrition business has become a leading global solutions provider in nutraceuticals with our combined offering of science-backed ingredients, innovative delivery forms and integrated solutions for our customers. Lonza offers formulation know-how, delivery solutions, strong service capabilities and global regulatory expertise to help our customers take their innovative and differentiated nutritional products to market in the shortest possible time.

We apply our consumer market insights and our extensive experience in pharmaceutical-delivery science to help our customers improve the bio-availability, targeted delivery, swallowability, odor masking and taste of their nutritionals. Our technology enables us to develop unique combination products and visually appealing dosage forms that meet the expectations of today's health-conscious consumers.

Consumer Health's Unique Solutions in Nutritional Supplements and Functional Food

Backed by Science	Delivery Systems	Integrated Solutions
High-Value Ingredients	**Unique and Innovative**	**Attractive Combinations**
Healthy Aging • UC-II® / Relora® / Meratrim® **Sports Nutrition** • Carnipure® / ZMA® / 7-Keto® **Digestive and Immune** • ResistAid®	**Hard Empty Capsules** • Vegetarian: Vcaps®, Vcaps Plus®, Plantcaps®, DRcaps™ • Gelatin, Gelcaps, Sprinkle Caps **Formulation Technologies** • Lipid Multi-Particulate • Beadlet Technology • Micronization	**Finished Dosage Forms** • Improved Performance • Modified / Targeted Release • Enhanced Consumer Experience

Personal Care Offerings

Our personal care business serves the global beauty and well-being markets as an established supplier of functional ingredients, such as specialty plant-based emulsifiers and aesthetic modifiers, and traditional and next-generation preservation and protection systems. Through custom-developed fermentation and technologies perfected for pharma, the personal care team is introducing premium-positioned bioactive functionals, which enhance the consumer experience and uniquely improve the performance of finished products. As a world-class manufacturer, we are among the global leaders in innovative hair- and skin-care formulations and ingredients.

Microbial Control and Hygiene Solutions

As a global leader in registered biocides, preservatives and antimicrobial formulations, the hygiene and preservative business offers home and institutional solutions for disinfecting or sanitizing trouble areas in schools, food-processing plants, restaurants, grocery stores, hospitals, operating theaters, health clinics and more. Our products offer broad-spectrum efficacy and extensive substrate compatibility. We provide industry-leading regulatory and toxicology expertise, supporting compliance with global regulatory regimes. Our robust data packages and innovative, market-focused research & technology offerings enable our customers to stay at the forefront of industry developments.

Discover More For further information about our businesses, visit our Consumer Health website or one of the following websites: Hygiene / Preservation / Nutrition / Personal Care / Capsules & Food Supplements

Highlights and Initiatives 2018

Specialty Ingredients' Consumer Health division grew organic sales by 6.3% to CHF 1.1 billion in 2018. CORE EBITDA amounted to CHF 292 million, a 13.2% like-for-like increase with a 27.3% CORE EBITDA margin, which is an improvement of 170 bps on a like-for-like basis.

Consumer Health million CHF	2018	Change in %	2017	Change in %	2017 [1]pro-forma
Sales	1,071	34.2	798	6.3	1,008
CORE EBITDA	292	49.7	195	13.2	258
CORE EBITDA margin in %	27.3		24.4		25.6

1 Reported Lonza full-year 2017 financial results include Capsugel full-year 2017 financial results

This division's performance was driven by Lonza's proprietary nutritional ingredients, innovative dosage forms and increasing demand for specialty polymers hard capsules, e.g. all-natural and clean-label products, as well as Lonza's household and professional hygiene solutions. New, combined Lonza-Capsugel offerings experienced strong demand, and 2018 saw a series of product launches that brought together innovative nutritional ingredients, optimized formulations and tailored capsule-delivery technologies.

Additional growth momentum resulted from geographic expansion across all businesses and from further expanded offerings for health and well-being as well as microbial-control and hygiene solutions.

Health and Well-Being Solutions

Nutritional Supplements and Functional Food Offerings

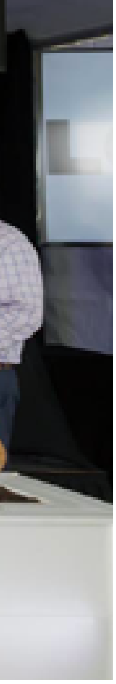
The consumer health and nutrition businesses continued to build a robust launch pipeline of synergistic offerings, and consumer insight-driven concepts have been successfully introduced into markets. Throughout 2018 full integration of Capsugel brought healthy momentum, fueled by the strengthened global reach of the combined businesses, further geographic expansion, innovative product offerings and synergies. Our more than 30 new dietary supplement product concept launches that join Lonza's specialty ingredients and former Capsugel's innovative dosage forms continue to attract interest. Building on our geographical expansion, we launched our first liquid dosage form solution in South Korea and a first combination UC-II® / liquid dosage-form solution product in Russia, a key growth region in EMEA.

« The Greenwood, SC (USA) investment further demonstrates our commitment to providing high-quality products and services to our customers worldwide. Bringing together expanded manufacturing capabilities for our science-backed ingredients, with the production of our innovative dosage forms in one facility, allows us to offer a broader range of integrated, end-to-end solutions for our customers – from function through to form. »

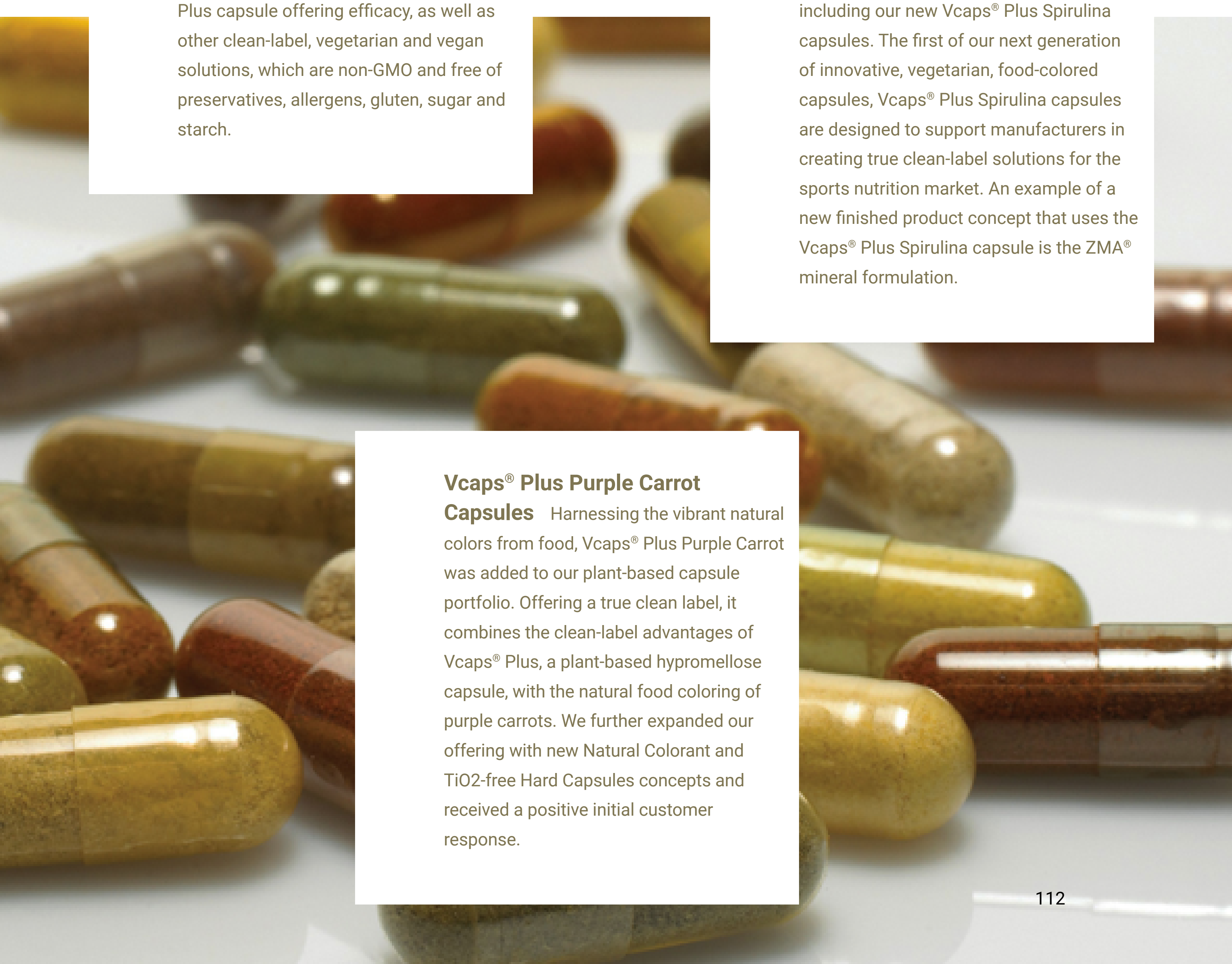
Sven Abend, COO of Lonza Specialty Ingredients

On the ingredients side, the two leading actives – the UC-II® ingredient for joint health and Carnipure® ingredient in sports – were benefiting from high demand. In 2018 published research further validated Lonza's UCII® brand as a leader in the joint health ingredient space. Discover more about UC-II® in our video.

The expansion of production capacity in Lonza's Greenwood, SC (USA) site – to combine capsule production, ingredient production and finished dosage form development – is progressing as planned. Lonza broke ground for the expanded capabilities in September as part of an ongoing program to enhance production of our nutritional ingredients and dosage-form technologies. The facilities, due to open in mid-2019, will add approximately 50,000 ft^2 (4650 m^2) of new manufacturing space. The Greenwood site currently produces empty capsules and finished dosage forms for the global biopharma and consumer health and nutrition markets.



Examples of Lonza Nutritional Supplements Offerings Introduced in 2018



Vcaps® Plus capsules Strong customer interest was noted in our innovative product offerings, including our specialty plant-based polymer Vcaps® Plus capsule offering efficacy, as well as other clean-label, vegetarian and vegan solutions, which are non-GMO and free of preservatives, allergens, gluten, sugar and starch.

Vcaps® Plus Spirulina Capsules Lonza has also invested significantly in a range of certified vegetarian and vegan delivery systems, including our new Vcaps® Plus Spirulina capsules. The first of our next generation of innovative, vegetarian, food-colored capsules, Vcaps® Plus Spirulina capsules are designed to support manufacturers in creating true clean-label solutions for the sports nutrition market. An example of a new finished product concept that uses the Vcaps® Plus Spirulina capsule is the ZMA® mineral formulation.

Vcaps® Plus Purple Carrot Capsules Harnessing the vibrant natural colors from food, Vcaps® Plus Purple Carrot was added to our plant-based capsule portfolio. Offering a true clean label, it combines the clean-label advantages of Vcaps® Plus, a plant-based hypromellose capsule, with the natural food coloring of purple carrots. We further expanded our offering with new Natural Colorant and TiO2-free Hard Capsules concepts and received a positive initial customer response.

Personal Care Offerings

With the launch of two Bioactive Functional ingredients, ScreenLight™ Block and XPressEV™, the Personal Care business demonstrated our commitment to investing in innovative solutions that meet our customers' current and future needs. ScreenLight™ Block provides a proven, powerful defensive shield against the visible skin-aging effects of blue light and environmental stressors, such as UV light and pollution. XPressEV™ bioactive functional helps mitigate the visible effects of chronological aging, leading to the appearance of firmer and «fitter» skin, as demonstrated in independent efficacy studies.

The personal care portfolio was further strengthened with ongoing innovation initiatives, such as the latest research on our specialty polyglyceryl ester surfactants (PGEs). They are naturally derived emulsifiers that can be easily customized to suit the needs of the global personal care market for greener personalized cleansing formulations. The PGEs are proprietary and versatile alternatives to synthetic surfactants, and they offer excellent foam generation while maintaining mildness.

Microbial Control and Hygiene Solutions

The businesses in professional and consumer hygiene performed well, boosted by the tighter regulatory landscape and demand across all regions for modern hygiene solutions and effective prevention against pathogenic micro-organisms.

Leveraging our global expertise in microbial control, Lonza is developing the next generation of preservative solutions in consumer products, anticipating the latest and upcoming regulatory challenges and changing consumer preferences.

As a trusted supplier to homecare formulators, Lonza offers a portfolio of biocides, many intended to be supported through the Authorization Process of the European Biocidal Products Regulation (BPR).

With the launch of NUGEN® – a new generation of low-streak, quat-containing disinfectant wipes, we set the standard for convenience and ease of use in professional markets.

NUGEN® NR Wipes developed for the North American markets are an ideal choice for control of norovirus and 13 other pathogens in food service facilities, schools, long-term care facilities and day-care centers. These cost-effective, quat-containing disinfectant wipes leave no harsh chemical residues; hence, surfaces do not require a potable-water post-rinse.

Consumer & Resources Protection

Leading with customer-focused, innovative smart solutions for a consumer-centric healthy environment, the Consumer & Resources Protection division addresses a wide range of industrial markets, as well as the global agricultural markets. We strive to develop environmentally sustainable and innovative technologies in response to our customers' demands and the increasing challenges presented by the global regulatory landscape. Please see our Sustainability Report for further information.

Overview Offerings in Consumer & Resources Protection

Consumer & Resources Protection

Microbial-Control and Hygiene Solutions in Paints & Coatings, Industrial Material and Crop Protection

Coatings and Composites Offerings

- In-can preservatives systems
- Dry film protection
- Engineered wood protection
- Anti-fouling surface modification
- Product development and application support

Agricultural Offerings

- Molluscicides and other formulated crop protection and hygiene treatments
- Adjuvants and formulation ingredients and preservatives

Coatings and Composites Offerings

Lonza's coatings and composites businesses serve global markets with a wide array of specialty solutions for the protection, enhanced performance and modification of the end-use characteristics of various materials, including carbon fibers, fabrics, leather, metals, plastics, stone and wood.

15 markets served

>200 biocide formulations

30 composite resins systems

Our specialty biocide and non-biocide products are used to produce coatings that are applied superficially or by penetrating processes. They protect the materials from biological (e.g. insects, decay, algae, mold and mildew) degradation and physical-chemical (e.g. fire, moisture) degradation and are applied in paints, inks, sealants, adhesives, backing materials for bath mats and carpeting, shower curtains, wallboards, flooring and ceiling materials, wood preservatives and many other applications.

We also deliver specialty solutions for in-process or end-of-process application in the manufacture of various composite materials (e.g. wood-plastic composites, laminated veneer, wood-based products, etc.) Our composite thermoset resin systems are used in modern consumer electronics to help enhance performance, as well as in the production of lightweight, reliable structural and interior elements for passenger aircraft.

Agricultural Offerings

Our agricultural businesses provide highly effective products and contract manufacturing services designed to improve crop yields and food quality. These dedicated offerings include agro specialty solutions, custom manufacturing and animal nutrition. We supply products and services to industrial customers, as well as finished products for end use by agricultural enterprises and farmers.

>1,000 customers globally

>250 product offerings

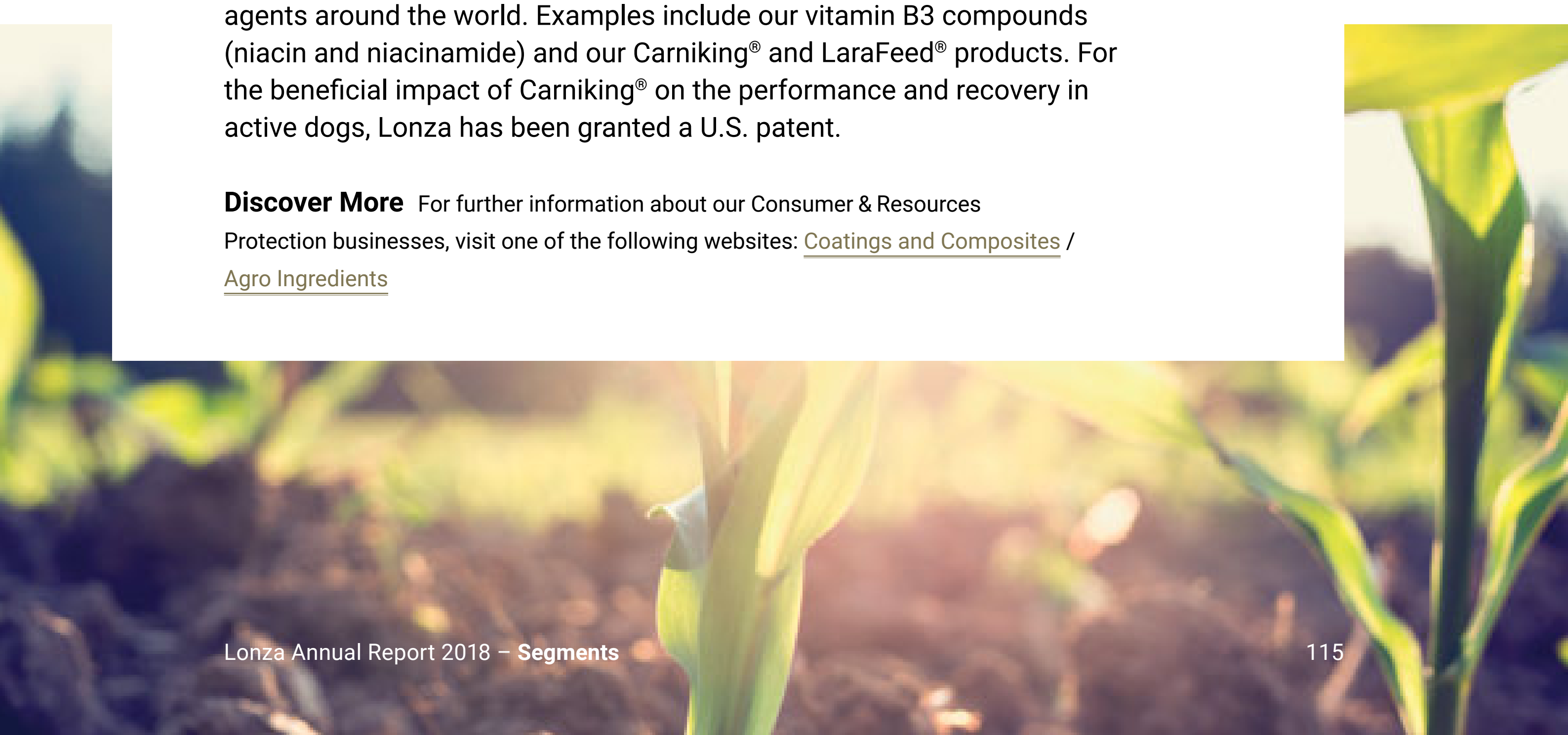
The world leader in Metaldehyde based Molluscicides

Lonza's offerings to the agricultural markets are derived from our unrelenting focus on customers' needs and requirements and are based on our expertise in chemical and biological technology. The agro solutions business includes industrial intermediates, preservatives and additives for agrochemical formulations in addition to a broad range of final crop-protection products.

Our state-of-the-art custom manufacturing supports customers in the production of modern herbicides, insecticides and fungicides, including biologically derived products, such as biopesticides, biostimulants and other microbial active ingredients and intermediates. Lonza's services also include full life-cycle management for customers' products.

The animal nutrition business offers animal feed additives and supports the production-animal sector by providing branded, high-quality ingredients with clear benefits that are reinforced by our distributors and agents around the world. Examples include our vitamin B3 compounds (niacin and niacinamide) and our Carniking® and LaraFeed® products. For the beneficial impact of Carniking® on the performance and recovery in active dogs, Lonza has been granted a U.S. patent.

Discover More For further information about our Consumer & Resources Protection businesses, visit one of the following websites: Coatings and Composites / Agro Ingredients



Highlights and Initiatives 2018

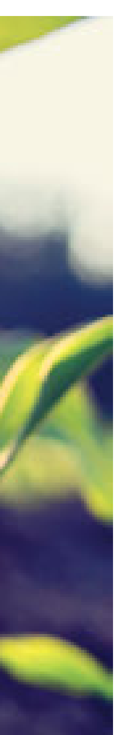
The specialty portfolios within Consumer & Resources Protection, especially in composites and material protection, reported ongoing positive demand and performed strongly as expected. We continued to leverage our leading position and expertise in microbial-control solutions to attain greater market penetration in various industrial applications.

Consumer & Resources Protection

million CHF	2018	Change in %	2017
Sales	1,320	1.2	1,304
CORE EBITDA	236	(21.3)	300
CORE EBITDA margin in %	17.9		23.0

Newly launched solutions to address regulatory changes and related market uncertainty resonated well with all major customers and generated strong customer interest. Feeding into the increasing global market demand for methylisothiazolinone (MIT)-free biocide formulations, the coatings and composites businesses announced the launch of a new addition to the Proxel® range of preservatives into the North American market, the Proxel Spektra™ Preservative. This dual-action, broad-spectrum preservative offers effective protection of industrial products against spoilage caused by bacteria, yeast and mold. This formulation benefits from the use of two complementary active ingredients, providing enhanced anti-microbial efficacy and long-term protection while being more beneficial for our environment.

Helping our customers meeting the Biocidal Products Regulation (BPR) in Europe, in 2018 we also introduced Tanalith® E9000, a BPR approved industrial and residential preservative for solid wood applications. Tanalith® E9000 contains the highest level of BARamine® that makes the preservative more robust against aggressive wood-destroying fungi. Growth initiatives in the innovative and highly specialized solutions portfolios of engineered wood and mold control further helped balance soft demand for and the effects of discontinuations within the basic materials and intermediates portfolio.



In our agricultural business, we are a leader in the molluscicide market and offer a number of solutions to help farmers protect their crops. Our active ingredient META® metaldehyde and our formulated products, generally marketed under the Axcela® brand, are now all sold globally. Slugs and snails can pose significant problems for both the professional grower of agricultural crops and gardeners. Molluscicidal baits that contain Lonza's Meta® active ingredient are an effective way of controlling slug and snail pests. In 2018 we successfully expanded our product offering through geographical and portfolio expansion in

New Zealand, South Korea, Taiwan, Turkey, Germany and France. With Celenco® AG+ we launched a compatibility adjuvant for crop protection, thus strengthening our position in Malaysia. Similarly, the launch of Pylon®, a pyrethrum-based insecticide for fruits and vegetables, bolstered our position in New Zealand.

Whereas our specialty offerings and customer-specific solutions in Consumer & Resources Protection continued to see high demand, several negative developments created headwinds for the division. A challenging environment for cyclical businesses in mature parts of the portfolio, like basic materials and intermediates, as well as raw material price increases and supply-chain constraints, had a negative impact in 2018.

Results were also influenced by the ongoing downward cycle for basic feed ingredients, especially for vitamin B3. It translated into significant lower prices and volumes for this part of the agricultural business. Our marine antifouling business remained soft, as expected, in line with lower demand in global shipbuilding and maintenance. Some positive momentum was obtained from tightened regulatory frameworks in emerging markets.

Operational and commercial excellence initiatives are ongoing. We also launched an initiative to supply a certain set of raw materials out of our multi-purpose plants in Visp (CH) that meets the highest levels of environmental standards. Customers have now started to switch to Lonza for certain raw materials as we offer proven reliability.

Despite these headwinds the division delivered CHF 1.3 billion sales for 2018 (1.2% organic growth versus prior year). CORE EBITDA was CHF 236 million (-21.3% versus prior year) with a CORE EBITDA margin of 17.9%.

The restructuring of the basic materials portfolio was ongoing in 2018, with discontinuation of non-core activities, such as the fertilizer business, while the emphasis on innovative offerings increased.

Discontinued Operations: Water Care Business Unit

9 locations in
4 countries

>1,000 product
offerings covering

40 brands

On 1 November 2018, Lonza announced that we had entered into a definitive agreement with Platinum Equity to sell Lonza's Water Care business. Therefore, Water Care is being reported in 2018 as discontinued operations. For more information, refer to Results from Discontinued Operations.

While the Water Care business unit contributed to our portfolio of delivering solutions for the Healthcare Continuum® through clean water for residential and commercial use, the business model does not fully fit with the overall Lonza portfolio. The residiential Water Care business follows a business-to-consumer approach whereas all other Lonza businesses follow a business-to-business approach. We believe that we have found the optimal partner for the business to develop as an independent company through investing in innovation and growth and with that give new perspectives to the global sites and its employees.

As a highly specialized service provider the Water Care business is one of the world's leading suppliers of sanitizers and other treatment chemicals for pools, spas and water parks. It is also rapidly growing sales in the treatment of surface waters, as well as water for drinking, agriculture, irrigation, food processing and industrial applications. For these types of applications, it offers oxidizing and non-oxidizing biocides, proprietary halogen stabilizers and innovative solutions that include proprietary feeder systems and controllers.

Water Care has strong leadership positions around the world. The business has a long heritage of providing clean-water solutions, with more than a century of experience in developing innovative water-treatment offerings.

The areas of application for Water Care products include residential and commercial swimming pool and spa water, as well as drinking water, process water, wastewater, irrigation, surface water and industrial water. The business builds customer relationships by offering technical customer support, research & technology, formulation expertise, regulatory excellence and powerful brand marketing, as well as product reliability and quality.The Water Care business is divided into two sections based on customer needs: Residential Water encompasses ProDealer and Mass channels and Industrial, Commercial, Municipal and Surface Water (ICMS) offers chemicals and services.

Overview Water Care Offerings

Water Care

Microbial-Control Solutions

Residential Water Offerings
- Innovative products for clean, clear pool and spa water
- Smart technologies for water testing and pool care
- Unit dose water soluble pods deliver toss-and-go convenience

ICMS Water Offerings
- Global water care solutions capitalizing on the growing need for clean water
- Solutions aligned with high-impact water threats
- Trusted brands and expertise

The Residential Water brands keep recreational water clean and free of algae and bacteria, while maintaining chlorine stabilizer and pH levels within the recommended ranges.

The ICMS business includes a broad portfolio of chemicals, formulations and innovative solutions to answer customer needs for water sanitization and treatment. As highly specialized service provider, Water Care offers a wide range of branded products to the market and provides onsite support for end-use customers. The ICMS business supplies products and automated feeder systems for commercial pools, including theme parks, hotels, public pools and camp parks. In addition to municipal drinking water and wastewater treatment facilities, it offers industrial water solutions for processes used in the pulp and paper, food and beverage, power, chemical and steel industries.

Highlights and Initiatives 2018

Throughout the year the Water Care business continued to implement commercial excellence initiatives and innovative new offerings but faced headwinds due to a late seasonal start in North America and Europe and higher transportation costs. However, new customer contracts were secured for the recreational and industrial water businesses; and the outlook for 2019 is positive while restructuring and business model redesign are ongoing. In addition, new business development efforts within the e-commerce space are fully on track and are expected to show accelerating growth momentum.

Significant investments in innovative new offerings and related brand restaging, supported by sales initiatives and expected new business in recreational water, are strengthening the mid-term outlook. We introduced the following new products and innovations, among others, within our residential businesses:

HTH® Text Strips help consumers by bringing smart technology to manual testing of pool and spa water. Consumers text an image of their test strip to a dedicated number and receive a text with recommended dosing and step-by-step care instructions.

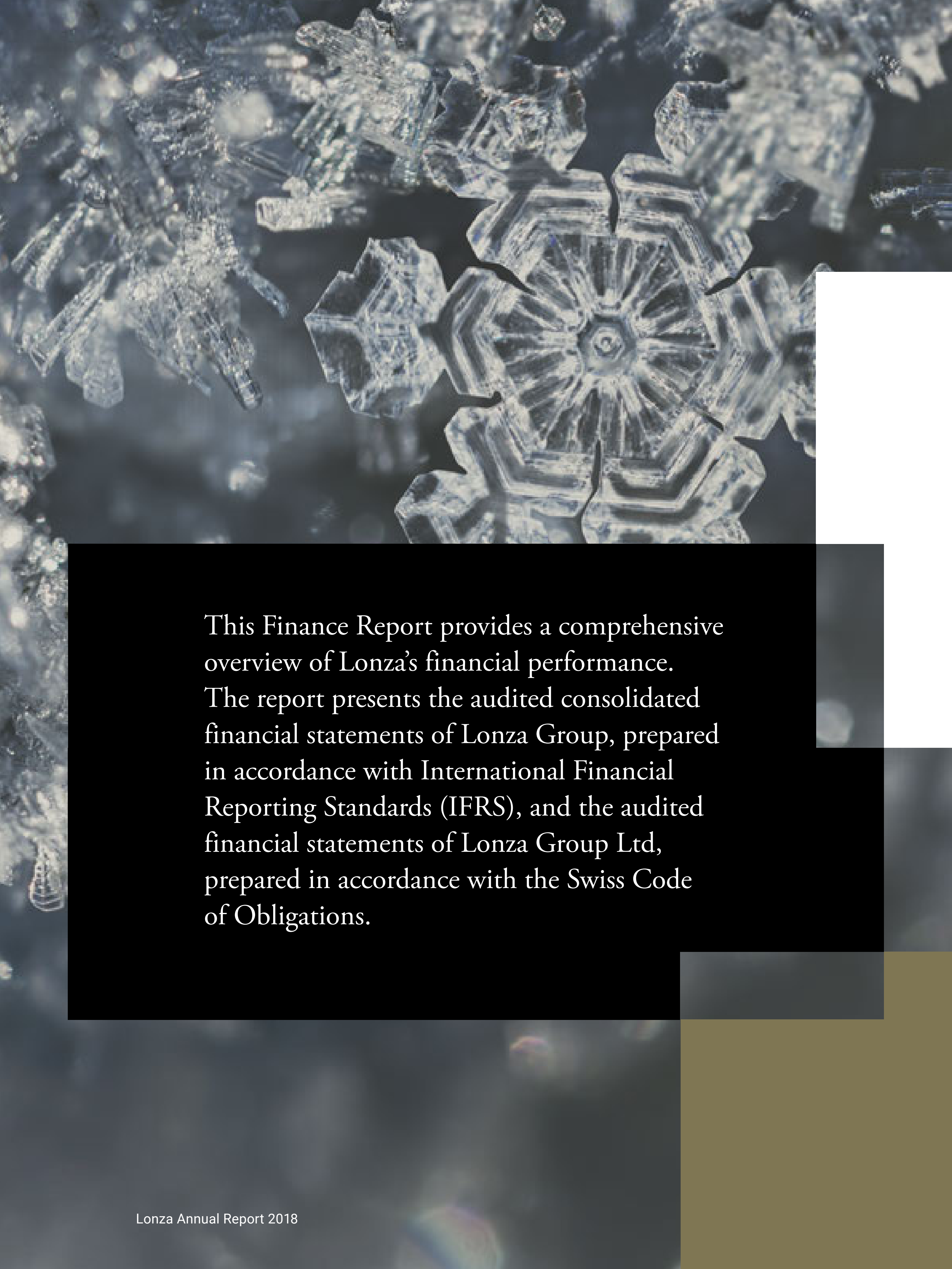
HTH® and Spa Selections® are bringing digital packaging to the pool and spa-water care space. Consumers scan the digitally enhanced packaging with their smartphone for at-shelf access to a broad range of information.

Pulsar® Infinity and CCH® Endurance Feeder Systems, a slow-dissolving calcium hypochlorite feeder system, gained wide acceptance and adoption by major dealers and pool operators alike within the commercial pool segment.

Pond-Klear™ is a fast-acting aquatic herbicide that produces visible results in a significantly reduced time.

In 2018 the Industrial, Commercial, Municipal and Surface Water (ICMS) business also continued to invest in innovative technologies and offerings under the BlueSense™ business platform, e.g. in technologies to convert chlorides naturally present in water into effective disinfection agents.

Another example is the Frexus® Granular offering. According to label instructions for applications such as hard-surface disinfection, washing of fruit and vegetables and carcass washing, the risk of potentially harmful organisms can be drastically reduced.



This Finance Report provides a comprehensive overview of Lonza's financial performance. The report presents the audited consolidated financial statements of Lonza Group, prepared in accordance with International Financial Reporting Standards (IFRS), and the audited financial statements of Lonza Group Ltd, prepared in accordance with the Swiss Code of Obligations.

Financial Statements

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Consolidated Balance Sheet

Assets[1] million CHF	Notes[2]	2018	[3]2017	[3]1 January 2017
Non-current assets				
Property, plant and equipment	7	3,152	3,198	2,412
Intangible assets	6	3,312	3,701	968
Goodwill	6	3,748	4,002	1,287
Other non-current assets	8	153	139	78
Non-current income tax receivables		13	15	0
Deferred tax assets	22	29	43	45
Total non-current assets		**10,407**	**11,098**	**4,790**
Current assets				
Inventories	10	1,250	1,177	897
Trade receivables	11	692	825	612
Current tax receivables		31	80	16
Other receivables, prepaid expenses and accrued income	12	256	172	175
Cash and cash equivalents	13	461	479	274
Assets held for sale[4]	5.2	824	0	91
Total current assets		**3,514**	**2,733**	**2,065**
Total assets		**13,921**	**13,831**	**6,855**

1 At 31 December
2 See the accompanying notes to the consolidated financial statements
3 Restated to reflect adoption of IFRS 15 (see note 1)
4 In 2018, thereof CHF 790 million related to discontinued operations (see note 5.2) and CHF 34 million related to the building of the Guangzhou (CN) site held for sale (see note 4)

Total Equity and Liabilities[1]

million CHF	Notes[2]	2018	[3]2017	[3]1 January 2017
Equity				
Share capital	26	74	74	53
Share premium		3,314	3,314	311
Treasury shares		(71)	(59)	(10)
Retained earnings and reserves		2,901	2,804	1,948
Total equity attributable to equity holders of the parent		**6,218**	**6,133**	**2,302**
Non-controlling interest		72	48	0
Total equity		**6,290**	**6,181**	**2,302**
Liabilities				
Non-current provisions	14	131	101	90
Employee benefit liabilities	24	507	578	717
Other non-current liabilities	16	281	262	214
Non-current debt	15	3,621	3,730	1,571
Non-current income tax payables	22	0	46	0
Deferred tax liabilities	22	711	760	329
Total non-current liabilities		**5,251**	**5,477**	**2,921**
Current provisions	14	56	69	49
Other current liabilities	16	1,112	992	882
Trade payables	17	428	400	284
Current debt	15	441	516	289
Current tax payables	22	150	196	88
Liabilities held for sale	5.2	193	0	40
Total current liabilities		**2,380**	**2,173**	**1,632**
Total liabilities		**7,631**	**7,650**	**4,553**
Total equity and liabilities		**13,921**	**13,831**	**6,855**

1 At 31 December
2 See the accompanying notes to the consolidated financial statements
3 Restated to reflect adoption of IFRS 15 (see note 1)

Consolidated Income Statement

Consolidated Income Statement[1] million CHF	Notes[2]	2018	[3]2017
Sales	3	5,542	4,548
Cost of goods sold		(3,449)	(2,893)
Gross profit		**2,093**	**1,655**
Marketing and distribution		(344)	(277)
Research and development	23	(110)	(95)
Administration and general overheads[4]		(732)	(609)
Other operating income	20	50	109
Other operating expenses	20	(115)	(110)
Result from operating activities (EBIT)[5]		**842**	**673**
Financial income	21.1	85	30
Financial expenses	21.2	(119)	(169)
Net financing costs		**(34)**	**(139)**
Share of profit / (loss) of associates / joint ventures	9	(1)	1
Profit before income taxes		**807**	**535**
Income taxes	22	(148)	[6]131
Profit from continuing operations		**659**	**666**
Profit / (loss) from discontinued operation, net of tax	5.2	(96)	43
Profit for the period		**563**	**709**
Attributable to:			
Equity holders of the parent		559	707
Non-controlling interest		4	2
Profit for the period		**563**	**709**
Earnings per share for profit from continuing operations attributable to equity holders of the parent:		CHF	CHF
Basic earnings per share – EPS basic	27	8.80	9.78
Diluted earnings per share – EPS diluted	27	8.77	9.70
Earnings per share for profit attributable to equity holders of the parent:		CHF	CHF
Basic earnings per share – EPS basic	27	7.51	10.42
Diluted earnings per share – EPS diluted	27	7.48	10.33

1 For the year ended 31 December
2 See the accompanying notes to the consolidated financial statements
3 Restated to reflect adoption of IFRS 15 (see note 1) and classification of Water Care business as discontinued operations (see note 5.2)
4 Includes the amortization of acquisition-related intangible assets (2018: CHF 164 million, 2017: CHF 100 million)
5 Result from operating activities (EBIT) excludes interest income and expenses as well as financial income and expenses that are not interest related (see note 21) and Lonza's share of profit / loss from associates and joint ventures
6 Includes favorable impacts from tax reforms in the United States and Belgium of CHF 187 million

Consolidated Statement of Comprehensive Income

Consolidated Statement of Comprehensive Income[1]

million CHF	Notes[2]		2018		[3]2017
Profit for the period			563		709
Other comprehensive income					
Items that will not be reclassified to profit or loss:					
Remeasurements of net defined benefit liability	24	7		119	
Income tax on items that will not be reclassified to profit or loss	22.2	(1)	6	[4](50)	69
Items that are or may be reclassified subsequently to profit or loss:					
Exchange differences on translating foreign operations		(222)		227	
Cash flow hedges – effective portion of changes in fair value		(16)		9	
Income tax on items that are or may be reclassified to profit or loss	22.2	3	(235)	(5)	231
Other comprehensive income for the period, net of tax			**(229)**		**300**
Total other comprehensive income for the period			**334**		**1,009**
Total comprehensive income attributable to:					
Equity holders of the parent			333		1,005
Non-controlling interest			1		4
Total comprehensive income for the period			**334**		**1,009**

1 At 31 December
2 See the accompanying notes to the consolidated financial statements
3 Restated to reflect adoption of IFRS 15 (see note 1)
4 Includes remeasurement of income taxes due to US tax reform

Consolidated Cash Flow Statement

Consolidated Cash Flow Statement[1]			
million CHF	Notes[2]	2018	[3]2017
Profit for the period		**563**	**709**
Adjustments for non-cash items:			
– Income taxes		146	(150)
– Net financing costs		43	142
– Share of loss of associates / joint ventures		2	0
– Depreciation of property, plant and equipment (excl. impairment)	7	333	285
– Amortization of intangibles	6	193	126
– Reversal of impairment	7	0	(2)
– Impairment losses on property, plant, equipment and intangibles	4, 6, 7	77	21
– Goodwill impairment		85	0
– Increase in provisions	14	61	58
– Increase in employee benefit liability		(3)	5
– Loss on disposal of property, plant and equipment		8	6
– Amortization of other liabilities / assets		(33)	(9)
– Share-based payments	25	29	29
– Recycling of accumulated foreign exchange losses	5.4	0	35
– Gain from Guangzhou (CN) land transaction		0	(74)
Income taxes paid		(143)	(102)
Interest paid		(82)	(62)
Total before change in net working capital		**1,279**	**1,017**
Increase in inventories		(207)	(22)
Increase in trade receivables		(5)	(45)
Increase trade payables		77	35
(Increase) / decrease other net working capital		106	(9)
Use of provisions	14	(45)	(28)
Decrease in other payables, net		(123)	(107)
Net cash provided by operating activities		**1,082**	**841**

1 For the year ended 31 December
2 See accompanying notes to the consolidated financial statements
3 Restated to reflect adoption of IFRS 15 (see note 1)

Purchase of property, plant and equipment	7	(528)	(427)
Purchase of intangible assets	6	(47)	(24)
Acquisition of subsidiaries, net of cash acquired	5	(28)	(3,310)
Disposal of subsidiaries, net of cash disposed of		(1)	0
Purchase of unconsolidated investments		(11)	0
Proceeds from unconsolidated investments		1	0
Proceeds from disposal of assets held for sale		0	20
Capitalized contract costs		(1)	(21)
Proceeds from sale of other assets		2	0
Increase in loans and advances		(41)	0
Interest received		1	10
Dividends received		1	4
Net cash used for investing activities		**(652)**	**(3,748)**
Increase of capital	26	0	[4]3,024
Repayment of straight bond	15	(340)	0
Proceeds from German private placements	15	0	1,085
Issue of term loans	15	0	955
Issue of straight bond	15	0	235
Issue of syndicated loan	15	29	225
Repayment of syndicated loan	15	0	(100)
Proceeds from acquisition bridge financing	15	0	1,380
Repayment of acquisition bridge financing	15	0	(1,399)
Repayment of acquired Capsugel debt	15	0	(1,952)
Repayment of US private placement	15	0	(156)
Increase in other debt	15	152	73
Increase in other non-current liabilities		30	66
Decrease in other non-current liabilities		(1)	(9)
Dividends paid[5]	27	(206)	(160)
Purchase of treasury shares		(77)	(71)
Sale of treasury shares		0	3
Net cash provided by / (used for) financing activities		**(413)**	**3,199**
Effect of currency translation on cash		(14)	[6](87)
Net increase in cash and cash equivalents		**3**	**205**
Cash and cash equivalents at 1 January		479	274
Cash and cash equivalents at 31 December		**482**	**479**
Cash and cash equivalents classified as held for sale	5.2	(21)	0
Cash and cash equivalents at 31 December (as reported)		**461**	**479**

4 Includes direct attributable expenses associated with the rights offering of CHF 99 million

5 Includes dividends of CHF 1 million (2017: CHF 1 million) paid to minority shareholders of a subsidiary

6 Includes exchange rate impact on USD cash balances to finance the Capsugel acquisition (resulting from the CHF proceeds from the capital increases, subsequently converted to USD)

Consolidated Statement of Changes in Equity

Consolidated Statement of Changes in Equity											
million CHF	Notes[1]	Attributable to equity holders of the parent									
		Share capital	Share premium	Retained earnings	Hedging reserve	Translation reserve	Treasury shares	Total	Non-controlling interest	Total equity
At 1 January 2017, as previously reported		**53**	**311**	**2,565**	**(5)**	**(559)**	**(10)**	**2,355**	**0**	**2,355**
Impact from change in accounting policies[2]	1	0	0	(53)	0	0	0	(53)	0	(53)
Restated balance at 1 January 2017		**53**	**311**	**2,512**	**(5)**	**(559)**	**(10)**	**2,302**	**0**	**2,302**
Profit for the period		0	0	707	0	0	0	707	2	709
– Remeasurement of defined benefit liability		0	0	69	0	0	0	69	0	69
– Exchange differences on translating foreign operations		0	0	0	0	221	0	221	2	223
– Cash flow hedges		0	0	0	8	0	0	8	0	8
Other comprehensive income, net of tax		0	0	69	8	221	0	298	2	300
Total comprehensive income for the period		**0**	**0**	**776**	**8**	**221**	**0**	**1,005**	**4**	**1,009**
Dividends	27	0	0	(159)	0	0	0	(159)	(1)	(160)
Recognition of share-based payments	25	0	0	26	0	0	0	26	0	26
Movements in treasury shares		0	0	(16)	0	0	(49)	(65)	0	(65)
Capital injection from owners of the parent		21	3,003	0	0	0	0	3,024	0	3,024
Acquisition of subsidiary with non-controlling interest		0	0	0	0	0	0	0	45	45
Restated balance at 31 December 2017		**74**	**3,314**	**3,139**	**3**	**(338)**	**(59)**	**6,133**	**48**	**6,181**

1 See the accompanying notes to the consolidated financial statements
2 Restatement to reflect adoption of IFRS 15 (see note 1)

Profit for the period		0	0	559	0	0	0	559	4	563
– Remeasurement of defined benefit liability		0	0	6	0	0	0	6	0	6
– Exchange differences on translating foreign operations		0	0	0	(16)	(218)	0	(234)	(3)	(237)
– Cash flow hedges		0	0	0	2	0	0	2	0	2
Other comprehensive income, net of tax		0	0	6	(14)	(218)	0	(226)	(3)	(229)
Total comprehensive income for the period		**0**	**0**	**565**	**(14)**	**(218)**	**0**	**333**	**1**	**334**
Dividends	27	0	0	(205)	0	0	0	(205)	(1)	(206)
Recognition of share-based payments	25	0	0	34	0	0	0	34	0	34
Movements in treasury shares		0	0	(65)	0	0	(12)	(77)	0	(77)
Acquisition of subsidiary with non-controlling interest		0	0	0	0	0	0	0	24	24
At 31 December 2018		**74**	**3,314**	**3,468**	**(11)**	**(556)**	**(71)**	**6,218**	**72**	**6,290**

Translation reserve The translation reserve of the consolidated statement of changes in equity comprises all foreign exchange differences arising from the translation of the financial statements of foreign entities including the impact on translating monetary items that form a net investment in a foreign operation.

Notes to the Consolidated Financial Statements

Note 1 • Accounting Principles

Lonza Group

Lonza Group Ltd and its subsidiaries (hereafter «the Group» or «Lonza») operate under the name Lonza. Lonza Group Ltd is a limited liability company incorporated and domiciled in Switzerland. The Group is headquartered in Basel, Switzerland. Lonza is one of the world's leading and most-trusted suppliers to the pharmaceutical, biotech and specialty ingredients markets. It harnesses science and technology to create products that support safer and healthier living and enhance the overall quality of life. Following the 2017 Capsugel S.A. («Capsugel») acquisition, Lonza offers products and services from the custom development and manufacture of active pharmaceutical ingredients through to innovative dosage forms for the pharma and consumer health and nutrition industries. Benefiting from its regulatory expertise, Lonza is able to transfer its know-how from pharma to hygiene and fast-moving consumer goods all the way to coatings and composites and the preservation and protection of agricultural goods and other natural resources.

Basis of Preparation

The consolidated financial statements for 2018 and 2017 are reported in Swiss francs (CHF), rounded to millions, and based on the annual accounts of Lonza Group Ltd (Company) and its subsidiaries at 31 December, which have been drawn up according to uniform Group accounting principles. The consolidated accounts are prepared in accordance with International Financial Reporting Standards (IFRS) and with Swiss law. They are prepared on the historical cost basis, except that derivative financial instruments and contingent considerations are stated at their fair values and the employee benefit liability is stated at the fair value of plan assets less the present value of the defined benefit obligation.

As a result of the acquisition of Capsugel in July 2017, the comparability of the consolidated income statements for 2018 and 2017 is limited.

Following the announcement on 1 November 2018 that Lonza had entered into a definitive agreement with Platinum Equity to sell Lonza's Water Care business and operations, the results of the Water Care business are disclosed separately in the consolidated income statement as discontinued operations. Therefore, income statement related notes do not include the results from the Water Care business for 2018 and 2017, and comparative information was adjusted accordingly. Refer to the notes for further information.

Changes in Accounting Standards

There are new or amended standards that became applicable for the current reporting period. The Group has incorporated these standards and amendments into its accounting policies and had to make certain retrospective adjustments as a result of adopting the following standards:

- *IFRS 15 Revenue from Contracts with Customers*
- *IFRS 9 Financial Instruments*
- *Amendments to IFRS 2 – Classification and Measurement of Share-based Payment Transactions*
- *IFRIC 22 – Foreign Currency Transactions and Advance Consideration*
- *Annual Improvements to IFRS Standards 2014–2016 Cycle*

Aside from IFRS 15, the adoption of the other standards had no significant impact on the Group's financial statements.

IFRS 15 Revenue from contracts with customers amends revenue recognition requirements and establishes principles for reporting information about the nature, amount, timing and uncertainty of revenue and cash flows arising from contracts with customers. Revenue is recognized when a customer obtains control of a good or service and thus has the ability to direct the use and obtain the benefits from the good or service. Based on the Group's assessment the adoption of the new standard has primarily impacted its long-term contracts in the custom manufacturing business and resulted in recognition of contract assets for costs incurred during the pre-manufacturing phase as well as additional deferred income related to payments from customers before supply of goods.

The Group has implemented IFRS 15 retrospectively and comparative information for the 2017 financial year has been restated. In summary, the following adjustments were made to the amounts recognized in the balance sheet at the date of initial application (1 January 2018). These adjustments are reflected entirely in the operational segment Pharma & Biotech.

Changes in Accounting Standards

million CHF	31 December 2017	IFRS 15 Restatement impacts	31 December 2017 restated	1 January 2017	IFRS 15 Restatement impacts	1 January 2017 restated
Property, plant and equipment	3,198	0	3,198	2,412	0	2,412
Intangible assets	3,701	0	3,701	968	0	968
Goodwill	4,002	0	4,002	1,287	0	1,287
Other non-current assets	108	31	139	58	20	78
Non-current income tax receivables	15	0	15	0	0	0
Deferred tax assets	33	10	43	38	7	45
Total non-current assets	**11,057**	**41**	**11,098**	**4,763**	**27**	**4,790**
Inventories	1,177	0	1,177	897	0	897
Trade receivables	825	0	825	612	0	612
Current tax receivables	80	0	80	16	0	16
Other receivables, prepaid expenses and accrued income	172	0	172	175	0	175
Cash and cash equivalents	479	0	479	274	0	274
Assets held for sale	0	0	0	91	0	91
Total current assets	**2,733**	**0**	**2,733**	**2,065**	**0**	**2,065**
Total assets	**13,790**	**41**	**13,831**	**6,828**	**27**	**6,855**
Share capital	74	0	74	53	0	53
Share premium	3,314	0	3,314	311	0	311
Treasury shares	(59)	0	(59)	(10)	0	(10)
Retained earnings and reserves	2,876	(72)	2,804	2,001	(53)	1,948
Equity attributable to equity holders of the parent	**6,205**	**(72)**	**6,133**	**2,355**	**(53)**	**2,302**
Non-controlling interest	48	0	48	0	0	0
Total equity	**6,253**	**(72)**	**6,181**	**2,355**	**(53)**	**2,302**
Non-current provisions	101	0	101	90	0	90
Employee benefit liabilities	578	0	578	717	0	717
Other non-current liabilities	149	113	262	134	80	214
Non-current debt	3,730	0	3,730	1,571	0	1,571
Non-current income tax payables	46	0	46	0	0	0
Deferred tax liabilities	760	0	760	329	0	329
Total non-current liabilities	**5,364**	**113**	**5,477**	**2,841**	**80**	**2,921**
Current provisions	69	0	69	49	0	49
Other current liabilities	992	0	992	882	0	882
Trade payables	400	0	400	284	0	284
Current debt	516	0	516	289	0	289
Current tax payables	196	0	196	88	0	88
Liabilities held for sale	0	0	0	40	0	40
Total current liabilities	**2,173**	**0**	**2,173**	**1,632**	**0**	**1,632**
Total equity and liabilities	**13,790**	**41**	**13,831**	**6,828**	**27**	**6,855**

The following IFRS 15 restatement adjustments were made to the consolidated income statement for the year ended 31 December:

million CHF	2017 as reported for continuing operations	IFRS 15 Restatement impacts	2017 restated for continuing operations
Sales	4,582	(34)	4,548
Cost of goods sold	(2,905)	12	(2,893)
Gross profit	**1,677**	**(22)**	**1,655**
Marketing and distribution	(277)	0	(277)
Research & development	(95)	0	(95)
Administration and general overheads	(609)	0	(609)
Other operating income	109	0	109
Other operating expenses	(110)	0	(110)
Result from operating activities (EBIT)	**695**	**(22)**	**673**
Financial income	30	0	30
Financial expenses	(169)	0	(169)
Net financing costs	**(139)**	**0**	**(139)**
Share of loss of associates / joint ventures	1	0	1
Profit before income taxes	**557**	**(22)**	**535**
Income taxes	128	3	131
Profit from continuing operations	**685**	**(19)**	**666**

The impact of IFRS 15 adoption on the Group's retained earnings as at 1 January 2018 and 1 January 2017 is as follows:

million CHF	2018	2017
Retained earnings as reported	**3,211**	**2,565**
Recognition of capitalized contract costs	31	20
Recognition of deferred contractual revenues	(113)	(80)
Increase of deferred tax assets	10	7
Adjustment to retained earnings from changes in accounting policies	(72)	(53)
Restated retained earnings	**3,139**	**2,512**

The following IFRS 15 restatement adjustments were made to the consolidated cash flow statement for the year ended 31 December:

million CHF	2017 as reported	IFRS 15 Restatement impacts	2017 restated
Profit for the period	**728**	**(19)**	**709**
Adjustment for non-cash items	475	(3)	472
Income tax and interest paid	(164)	0	(164)
Increase of net working capital	(41)	0	(41)
Use of provisions	(28)	0	(28)
Decrease of other payables, net	(107)	0	(107)
Net cash provided by operating activities	**863**	**(22)**	**841**
Purchase of property, plant & equipment and intangible assets	(451)	0	(451)
Acquisition of subsidiaries, net of cash acquired	(3,310)	0	(3,310)
Sale of assets held for sale	20	0	20
Net purchase of other assets and disposals	(9)	(12)	(21)
Interest and dividend received	14	0	14
Net cash used for investing activities	**(3,736)**	**(12)**	**(3,748)**
Increase of capital	3,024	0	3,024
Net increase in debt	346	0	346
Increase in other liabilities	23	34	57
Purchase of treasury shares	(71)	0	(71)
Sale of treasury shares	3	0	3
Dividends paid	(160)	0	(160)
Net cash provided by financing activities	**3,165**	**34**	**3,199**
Effect of currency translation on cash	(87)	0	(87)
Net increase in cash and cash equivalents	**205**	**0**	**205**
Cash and cash equivalents at 1 January	274	0	274
Cash and cash equivalents at 31 December	**479**	**0**	**479**

Accounting Standards Issued, but not yet Effective

The following new and revised standards have been issued, but are not yet effective. They have not been applied early in these consolidated financial statements. The current status of the expected effects is disclosed below.

Standard / Interpretation		Effective date	Planned application by Lonza
IFRS 16 – Leases	**	1 January 2019	Reporting year 2019
Long-term Interests in Associates and Joint Ventures – Amendments to IAS 28	*	1 January 2019	Reporting year 2019
IFRIC 23 – Uncertainty over Income Tax Treatments	*	1 January 2019	Reporting year 2019
Annual Improvements to IFRS® Standards 2015–2017 Cycle	*	1 January 2019	Reporting year 2019
Plan Amendment, Curtailment or Settlement – Amendments to IAS 19	*	1 January 2019	Reporting year 2019
Definition of a Business – Amendments to IFRS 3	*	1 January 2020	Reporting year 2020

* No or no significant impact is expected on the consolidated financial statements
** The Group's assessment of the impact of adopting these standards is outlined below

IFRS 16 *Leases* was issued in January 2016 and will become effective for the financial period beginning on 1 January 2019. IFRS 16 will replace existing leases guidance, including IAS 17 *Leases*, and sets out the principles for recognition and measurement of leases. The new standard will also result in an increased volume of disclosure information in the Annual Financial Statements.

IFRS 16 Leases became effective for the financial period beginning on 1 January 2019. Implementation of IFRS 16 will result in almost all leases being recognized on the balance sheet, as the distinction between operating and finance leases is removed. The standard will affect primarily the Group's accounting for operating leases.

As of 31 December 2018, the Group has non-cancellable operating lease commitments of CHF 249 million (2017: CHF 170 million), which are an appropriate indicator of the IFRS 16 implementation impact on the Group's consolidated balance sheet. The Group will implement the new standard effective 1 January 2019 and will apply the modified retrospective approach for the transition, meaning that the comparative 2018 results will not be restated when the new standard is applied.

Principles of Consolidation

The consolidated financial statements represent the accounts for the year ended 31 December of Lonza Group Ltd and its subsidiaries. Subsidiaries are those entities controlled, directly or indirectly, by Lonza Group Ltd. Control is achieved when the Group is exposed, or has rights, to variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. Consolidation of a subsidiary begins when the Group obtains control over the subsidiary and ceases when the Group loses control of the subsidiary. Changes in ownership interests in subsidiaries are accounted for as equity transactions if they occur after control has already been obtained and if they do not result in a loss of control. The significant subsidiaries included in the consolidated financial statements are shown in note 33.

The full consolidation method is used, whereby the assets, liabilities, income and expenses are incorporated in full, irrespective of the extent of any non-controlling interest. Payables, receivables, income and expenses between Lonza consolidated companies are eliminated. Intercompany profits included in year-end inventories of goods produced within Lonza are eliminated, as well as unrealized gains on transactions between subsidiaries. Unrealized losses are also eliminated unless the transaction provides evidence of an impairment of the asset transferred. The Group's interests in equity-accounted investees comprise interests in associates and joint ventures, as disclosed in note 9. Associates are those entities in which the Group has significant influence, but not control or joint control, over the financial and operating policies. A joint venture is an arrangement in which the Group has joint control, whereby the Group has rights to the net assets of the arrangement, rather than rights to its assets and obligations for its liabilities. Associates and interests in joint ventures are accounted for in the consolidated financial statements using the equity method of accounting. They are recognized initially at cost, which includes transaction costs.

Subsequent to the initial recognition, the consolidated financial statements include the Group's share of the profit and loss and other comprehensive income of equity-accounted investees, until the date on which significant influence or joint control ceases. Dividends paid during the year reduce the carrying value of the investments.

Segment Reporting

For the purpose of segment reporting, the Group's Executive Committee (EC) is considered to be the Group's Chief Operating Decision Maker. The determination of the Group's operating segments is based on the organizational units for which information is reported to the EC on a regular basis. The information provided is used as the basis of the segment revenue and profit disclosures reported in note 2. Selected segment balance sheet information and performance measures are also routinely provided to the EC.

In 2018, the Group has two segments, Pharma & Biotech and Specialty Ingredients. Revenues are primarily generated from the sale of products. The Pharma & Biotech segment also derives revenues from rendering of services as well as the sale or licensing of products or technology to third parties. Residual operating activities from certain global activities are reported as «Corporate.» These include the EC and global group functions for communications, human resources, finance (including treasury and taxes), legal, environmental and safety services. Transfer prices between operating segments are set on an arm's-length basis. Operating assets and liabilities consist of property, plant and equipment, goodwill and intangible assets, trade receivables / payables, inventories and other assets and liabilities, such as provisions, which can be reasonably attributed to the reported operating segments. Non-operating assets and liabilities mainly include current and deferred income tax balances, post-employment benefit assets / liabilities and financial assets / liabilities such as cash, investments and debt.

Revenue Recognition

Revenue is measured based on the consideration specified in the contract with a customer und excludes amounts collected on behalf of third parties. Revenues are recognized when a customer obtains control of a good or service and thus has the ability to direct the use and obtain the benefits from the good or service. In the custom manufacturing business, customer agreements may foresee payments at or near inception of contracts, which typically relate to setup efforts (e.g. system preparation, facility modification) for new customer-dedicated production facilities. Such setup efforts typically do not represent separate performance obligations, as no good or service is transferred to the customer. The payments for these setup efforts comprise part of the expected transaction price and are deferred as contract liabilities (non-current deferred income) until performance obligations are satisfied.
Product sales are recognized when control of the products has been transferred, i.e. when the products are delivered to the customer, the customer has full discretion over the sales channel and pricing of the products, and there is no unfulfilled obligation that could affect the customer's acceptance of the products. Delivery occurs when the products have been shipped to the specific location, the risks of obsolescence and loss have been transferred to the customer, and either the customer has accepted the products in accordance with the sales contract, the acceptance provisions have lapsed, or the Group has objective evidence that all criteria for acceptance have been satisfied.
Contracts with customers may include volume discounts based on aggregate sales over a specified period. Revenues from these sales are recognized based on the price specified in the contract, net of the estimated volume discounts. Accumulated experience is used to estimate and provide for such discounts, using the expected value method, and revenues are only recognized to the extent that it is highly probable that no significant reversal will occur. A contract liability is recognized for expected volume discounts payable to customers in relation to sales made until the end of the reporting period.
Revenues from providing services are recognized in the accounting period in which these services are rendered. For most services revenue recognition over time is appropriate. This is done with reference to output (i.e. analysis delivered) to measure the amount of revenue to be recognized. Revenue recognition over time is not applied for customer service contracts where the consideration depends on a defined outcome or result and its achievement cannot be estimated. In this case, revenues are only recognized at the point in time when the service has been completed and accepted by the customer.

Research & Development

Research & development costs are generally charged against income as incurred. Development costs are only capitalized when the related products meet the recognition criteria of an internally generated intangible asset, which mainly require the technical feasibility of completing the intangible asset, the probability of future economic benefits, the reliable measurement of costs and the ability and intention of the Group to use or sell the intangible asset. Fixed assets (buildings, machinery, plant, equipment) used for research purposes are valued similarly to other fixed assets. Such assets are capitalized and depreciated over their estimated useful lives.

Expenses for research & development include associated wages and salaries, material costs, depreciation on fixed assets, as well as overhead costs.

Other Operating Income and Other Operating Expenses

Other operating income and other operating expenses include items not assignable to other functions of the consolidated income statement. They mainly include gains and losses from the disposal of intangible assets, property, plant and equipment and other non-current assets, income and expenses from the release and recognition of provisions, income and expense related to restructuring, gains and losses from currency-related operating derivative instruments, as well as operating exchange rate gains and losses.

Net Financing Costs

Net financing costs comprise interest payable on borrowings calculated using the effective interest method, the interest expenses on the net defined-benefit liability, the finance charge for finance leases, dividend income, foreign exchange gains and losses arising on financial assets and liabilities, gains and losses on hedging instruments that are recognized in the income statement and gains / losses on sale of financial assets. Interest income / expense is recognized in the income statement as it accrues, taking into account the effective yield of the asset or liability or an applicable floating rate. Dividend income is recognized in the income statement on the date that the dividend is declared. Interest income and expense include the amortization of any discount or premium or other differences between the initial carrying amount of an interest-bearing instrument and its amount at maturity calculated on an effective interest rate basis.

Foreign Currencies

Items included in the financial statements of each of the Group's entities are measured using the currency of the primary economic environment in which the entity operates («the functional currency»). The consolidated financial statements are presented in Swiss francs (CHF), which is the Group's presentation currency. For consolidation purposes the balance sheet of foreign consolidated companies is translated to CHF with the exchange rate on the balance sheet date. Income, expenses and cash flows of the foreign consolidated companies are translated into CHF using the monthly average exchange rates during the year (unless this average is not a reasonable approximation of the cumulative effect of the rates prevailing on the transaction dates, in which case income and expenses are translated at the dates of the transactions). Exchange rate differences arising from the different exchange rates applied in balance sheets and income statements are recognized in other comprehensive income. In the individual company's financial statements, transactions in foreign currencies are translated at the foreign exchange rate applicable at the date of the transaction. Monetary assets and liabilities denominated in foreign currencies at the balance sheet date are translated at the foreign exchange rate ruling at that date. All resulting foreign exchange gains and losses are recognized in the individual company's profit or loss statement, except when they arise on monetary items that form a part of the Group's net investment in a foreign entity. In such a case, the exchange gains and losses are recognized in other comprehensive income.

Hedge Accounting

The Group uses derivatives to manage its exposures to foreign currency, interest rate and commodity price risks. The instruments used may include interest rate swaps, commodity swaps, forward exchange contracts, FX swaps and options. The Group generally limits the use of hedge accounting to certain significant transactions. At inception of designated hedging relationships, the Group documents the risk management objective and strategy for undertaking the hedge. The Group also documents the economic relationship between the hedged item and the hedging instrument, including whether the changes in cash flows of the hedged item and hedging instrument are expected to offset each other.

Cash flow hedge This is a hedge of the exposure to variability in cash flows that is attributable to a particular risk associated with a recognized asset or liability or a highly probable forecast transaction and could affect profit or loss. The hedging instrument is recorded at fair value. The effective portion of the hedge is included in other comprehensive income and any ineffective portion is reported in cost of goods sold (instruments to manage the commodity price exposure), other operating income / expenses (instruments to manage the foreign currency exposure related to sales or purchases) or financial income / expenses (foreign currency exposure related to debt repayment or interest exposure on the Group's debt). If the hedging relationship is the hedge of the foreign currency risk of a firm commitment or highly probable forecasted transaction that results in the recognition of a non-financial item, the cumulative changes in the fair value of the hedging instrument that have been recorded in other comprehensive income are included in the initial carrying value of the non-financial item at the date of recognition. For all other cash flow hedges, the cumulative changes in the fair value of the hedging instrument that have been recorded in other comprehensive income are included in cost of goods sold, other operational income / expenses or other financial income / expense (based on the principles explained above) when the forecasted transaction affects net income.

Fair value hedge This is a hedge of the exposure to changes in fair value of a recognized asset or liability, or an unrecognized firm commitment, or an identified portion of such an asset, liability or firm commitment, that is attributable to a particular risk and could affect profit or loss. The hedging instrument is recorded at fair value and the hedged item is recorded at its previous carrying value, adjusted for any changes in fair value that are attributable to the hedged risk. Changes in the fair values are reported in cost of goods sold (instruments to manage the commodity price exposure), other operating income / expenses (instruments to manage the foreign currency exposure related to sales or purchases) or financial income / expenses (foreign currency exposure related to debt repayment or interest exposure on the Group's debt).

Capitalized Contract Cost

The Group recognizes contract assets mainly consisting of contract fulfillment costs that are incurred after a contract is obtained but before goods or services have been delivered to the customer. These costs arise from long-term contracts in the custom manufacturing business for customer specific production facility expansions or modifications on Lonza's premises. They typically include costs for commissioning, qualification and startup, as well as for activities relating to process development and technology transfer.

Property, Plant and Equipment

Property, plant and equipment are stated at cost less accumulated depreciation and accumulated impairment losses. The assets are depreciated on a component basis over their estimated useful lives, which vary from 10 to 50 years for buildings and structures, and 5 to 16 years for production facilities, machinery, plant, equipment and vehicles. Fixed assets are depreciated using the straight-line method over their estimated useful lives. Subsequent expenditure incurred to replace a component of an item of property, plant and equipment that is accounted for separately, including major inspection and overhaul expenditure, is capitalized. Other subsequent expenditure is capitalized only when it increases the future economic benefits embodied in the item of property, plant and equipment. Borrowing costs incurred with respect to qualifying assets are capitalized and included in the carrying value of the assets. All other expenditure is recognized in the income statement as an expense as incurred. The residual values and the useful life of items of property, plant and equipment are reviewed and adjusted, if appropriate, at each balance sheet date.

Leases

Financial leases, which effectively constitute assets purchased with long-term financing, are carried as fixed assets at their purchase price and are written off over their estimated useful lives if the leased assets are transferred to the lessee at the end of the lease term. If there is no reasonable certainty that the lessee will obtain ownership by the end of the lease term, the asset is fully depreciated over the shorter of the lease term and its useful life. The corresponding liabilities are included in non-current and current debt. The finance lease gives rise to a depreciation expense for depreciable assets as well as a finance expense for each accounting period. For the purpose of classifying a lease of land and buildings, lease of the land and of the buildings is evaluated separately. Lease payments under an operating lease are recognized as an expense in the income statement on a straight-line basis over the lease term.

Intangible Assets

Purchased intangible assets with a finite useful life are stated at cost less accumulated amortization and accumulated impairment losses. Intangible assets acquired in a business combination are recognized at their fair value. Intangibles include software, licenses, patents, trademarks and similar rights granted by third parties, capitalized product development costs and capitalized computer software development costs. Costs associated with internally developed or maintained computer software programs are recognized as an expense as incurred. Costs that are directly associated with the production of identifiable and unique software products controlled by the Group, and that will probably generate future economic benefits exceeding costs beyond one year, are recognized as intangible assets. Those direct costs include the software development employee costs and an appropriate portion of relevant overheads. Intangible assets are amortized using the straight-line method over their estimated useful lives, which is the lower of the legal duration and the economic useful life. Useful lives vary from 3 to 5 years for software, 5 to 35 years for patents, trademarks and similar rights and 4 to 16 years for development costs. All intangible assets in Lonza have finite useful lives, except for the Capsugel trade name acquired in 2017 and the trademarks acquired in 2011 through the Arch Chemicals business combination and 2007 through the Cambrex business combination. The Group considers that these trademarks have an indefinite useful life as they are well established in the respective markets and have a history of strong performance. The Group intends and has the ability to maintain these trademarks for the foreseeable future.

Goodwill and Business Combinations

Business combinations are accounted for using the acquisition method. The consideration transferred in a business combination is measured at fair value at the date of acquisition and includes the cash paid plus the fair value at the date of exchange of assets, liabilities incurred or assumed and equity instruments issued by the Group. The fair value of the consideration transferred also includes contingent consideration arrangements at fair value. Directly attributable acquisition-related costs are expensed in the period the costs are incurred and the services are received and reported within administration and general overhead expenses. At the date of acquisition, the Group recognizes the identifiable assets acquired, the liabilities assumed and any non-controlling interest in the acquired business. The identifiable assets acquired and the liabilities assumed are initially recognized at fair value. Where the Group does not acquire 100% ownership of the acquired business, non-controlling interests are recorded as the proportion of the fair value of the acquired net assets attributable to the non-controlling interest. Goodwill is recorded as the surplus of the consideration transferred over the Group's interest in the fair value of the acquired net assets. Any goodwill and fair value adjustments are recorded as assets / liabilities of the acquired business in the functional currency of that business.

When the initial accounting for a business combination is incomplete at the end of a reporting period, provisional amounts are recognized. During the measurement period, the provisional amounts are retrospectively adjusted and additional assets and liabilities may be recognized to reflect new information obtained about the facts and circumstances that existed at the acquisition date which, had they been known, would have affected the measurement of the amounts recognized at that date. The measurement period does not exceed 12 months from the date of acquisition. Goodwill is not amortized but is tested annually for impairment. Changes in ownership interests in subsidiaries are accounted for as equity transactions if they occur after control has already been obtained and if they do not result in a loss of control. Goodwill may also arise upon investments in associates and joint ventures, being the surplus of the cost of investment over the Group's share of the fair value of the net identifiable assets. Such goodwill is recorded within investments in associates and joint ventures.

Inventories

Inventories are reported at the lower of cost (purchase price or production cost) or market value (net realizable value). In determining net realizable value, any costs of completion and selling costs are deducted from the realizable value. The cost of inventories is calculated using the weighted average method. Prorated production overheads are included in the valuation of inventories. Adjustments are made for inventories with a lower market value or which are slow moving. Unsalable inventory is fully written off. Costs include all expenditures related directly to specific projects and an allocation of fixed and variable overheads incurred in the Group's contract activities based on normal operating capacity.

Receivables

Policy applicable from 1 January 2018

With the adoption of IFRS 9, receivables are carried at the original invoice amount less allowances made for doubtful accounts, volume rebates and similar allowances. A receivable represents a right to consideration that is unconditional and excludes contract assets. An allowance for doubtful accounts is recorded for expected credit losses over the term of the receivables. These estimates are based on specific indicators, such as the ageing of customer balances and specific credit circumstances. Expenses for doubtful trade receivables are recognized within the cost of goods sold. Volume rebates and similar allowances are recorded on an accrual basis consistent with the recognition of the related sales, using estimates based on existing contractual obligations, historical trends and the Group's experience. Receivables are written off (either partly or in full) when there is no reasonable expectation of recovery.

For trade receivables, the Group applies the simplified approach prescribed by IFRS 9, which requires / permits the use of the lifetime expected loss provision from initial recognition of the receivables. The Group measures an allowance for doubtful accounts equal to the credit losses expected over the lifetime of the trade receivables.

Policy applicable before 1 January 2018

Trade receivables are recognized at the original invoice amount less allowances made for doubtful accounts. An allowance for doubtful accounts is recorded for the difference between the carrying value and the estimated recoverable amount where there is objective evidence that the Group will not be able to collect all amounts due. These estimates are based on specific indicators, such as the aging of customer balances, specific credit circumstances and the Group's historical experience, also taking into account economic conditions. Expenses for doubtful trade receivables are recognized in the consolidated income statement within cost of goods sold. Long-term accounts receivable are discounted to take into account the time value of money, where material.

Financial Instruments

Policy applicable from 1 January 2018

Since 1 January 2018, with the adoption of IFRS 9 the Group has classified its financial assets in the following measurement categories, which are disclosed in note 29: amortized cost or fair value through profit or loss (including hedging instruments).

At initial recognition, the Group measures a financial asset at its fair value plus, in the case of a financial asset not at fair value through profit or loss, transaction costs that are directly attributable to the acquisition of the financial asset. Transaction costs of financial assets carried at fair value through profit or loss are expensed in profit or loss.

Amortized cost Assets that are held for collection of contractual cash flows where those cash flows represent solely payments of principal and interest are measured at amortized cost, less provision for impairment. Interest income from these financial assets is included in other financial income using the effective interest rate method. The Group derecognizes a financial asset when the contractual rights to the cash flows from the asset expire, or it transfers the rights to receive the contractual cash flows in a transaction in which substantially all the risk and rewards of ownership of the financial asset are transferred. Any interest in such transferred financial assets that is created or retained by the Group is recognized as a separate asset or liability. Assets at amortized cost are mainly comprised of accounts receivable, cash and cash equivalents and loans and advances.

Equity investments at fair value through profit or loss These are equity investments in non-quoted companies that are kept for strategic reason and in investment vehicles that invest in the Groups' target markets. These assets are subsequently measured at fair value. Dividends are recognized as financial income in profit or loss unless the dividend clearly represents a recovery of part of the cost of the investment. Other net gains and losses are recognized as a financial income or a financial expense in the income statement.

Fair value through profit or loss These are primarily contingent consideration assets (and liabilities) that are initially recorded and subsequently carried at fair value with changes in fair value recorded as a financial income or a financial expense in the income statement.

Fair value through profit or loss – hedging instruments These are derivative financial instruments that are used to manage the exposures to foreign currency, interest rates and commodity prices. These instruments are initially recorded and subsequently carried at fair value. Apart from those derivatives designated as qualifying cash flow hedging instruments, all changes in fair value are recorded as cost of goods sold (instruments to manage the commodity price exposure), other operating income / expenses (instruments to manage the foreign currency exposure related to sales or purchases) or financial income / expenses (foreign currency exposure related to debt repayment or interest exposure on the Group's debt).

The fair value of derivatives (forward exchange contract, FX swaps, commodity swaps and interest rate swaps) is estimated by discounting the difference between the contractual forward price and the current forward price for the residual maturity of the contract using a credit-adjusted risk-free rate. Current forward prices are provided by banks or other financial service providers.

Debt instruments These are initially recorded at cost, which is the proceeds received net of transaction costs. They are subsequently stated at amortized cost; any difference between the net proceeds and the redemption value is recognized in the income statement over the period of the debt instrument using the effective interest method.

Policy applicable before 1 January 2018

The Group has classified its financial assets in the following measurement categories: available for sale, loans and receivables, fair value – held for trading, fair value – designated and fair value – hedge accounting.

The measurement principles before 1 January 2018 were the same as described above, expect that investments in equity instruments that did not have a quoted price in an active market and whose fair value could not be reliably estimated were recorded at cost.

Cash and Cash Equivalents

Cash and cash equivalents include cash in hand, in postal and bank accounts, as well as short-term deposits and highly liquid funds that have an original maturity of less than three months.

Impairment

Assets that are subject to amortization and depreciation are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. Goodwill and intangible assets with indefinite useful lives are tested for impairment annually, and whenever there is an indication that the assets may be impaired. An impairment loss is recognized for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less cost of disposal and value in use. For the purposes of assessing impairment, assets are grouped at the lowest levels for which there are separately identifiable cash flows (cash-generating units).

Calculation of recoverable amount – In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset.

Reversal of impairment – An impairment loss is reversed if the subsequent increase in recoverable amount can be related objectively to an event occurring after the impairment loss was recognized. An impairment loss in respect of goodwill is not reversed. In respect of other assets, an impairment loss is reversed if there has been a change in the estimates used to determine the recoverable amount. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortization, if no impairment loss had been recognized.

Assets Held for Sale and Discontinued Operations

Disposal groups comprising assets and liabilities are classified as held-for-sale if it is highly probable that they will be recovered primarily through sale rather than through continuing use.

Such disposal groups are generally measured at the lower of their carrying amount and fair value less cost to sell. Any impairment loss on a disposal group is allocated first to goodwill and then to the remaining assets and liabilities on a pro rata bases, except that no loss is allocated to inventories, financial assets or deferred tax assets, which continue to be recognized in accordance with the Group's other accounting policies. Impairment losses on initial classification as held-for-sale and subsequent gains and losses on remeasurement are recognized in profit or loss. Once classified as held-for-sale, intangible assets and property, plant and equipment are no longer amortized or depreciated. A discontinued operation is a component of the entity that has been disposed of or is classified as held for sale and that represents a separate major line of business or geographical area of operations or is part of a single coordinated plan to dispose of such a line of business or area of operations. Classification as a discontinued operation occurs at the earlier of disposal or when the operation meets the criteria to be classified as held-for-sale. The income statement activity of the discontinued operations is presented separately in the consolidated income statement. The comparative consolidated income statement and consolidated statement of comprehensive income have been restated to show the discontinued operation separately from continuing operations. Balance sheet and cash flow information related to discontinued operations are disclosed separately in the notes.

Deferred Taxes

Tax expense is calculated using the balance-sheet liability method. Additional deferred taxes are provided wherever temporary differences exist between the tax base of an asset or liability and its carrying amount in the consolidated accounts for the year.

Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and, for deferred tax assets, operating loss and tax credit carry-forwards.

Deferred tax assets and liabilities are measured using enacted or substantially enacted tax rates in the respective jurisdictions in which Lonza operates that are expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. In assessing the recoverability of deferred tax assets, management considers whether it is probable that some portion or all of the deferred tax assets will not be realized. For transactions and other events recognized in other comprehensive income or directly in equity, any related tax effect is recognized in other comprehensive income or in equity. Liabilities for income taxes, mainly withholding taxes, which could arise on the remittance of retained earnings, principally relating to subsidiaries, are only recognized where it is probable that such earnings will be remitted in the foreseeable future.

Employee Benefits

Employee-benefit liabilities as stated in the consolidated balance sheet include obligations from defined-benefit pension plans, other post-employment benefits (medical plans) as well as other long-term employee-related liabilities, such as long-term vacation accounts.

Defined-Benefit Plans (Pension and Medical Plans)

Most of Lonza's subsidiaries operate their own pension plans. Generally, they are funded by employees' and employers' contributions. In addition, the Group operates three medical plans in the United States. The Group's net obligation in respect of defined-benefit plans is calculated separately for each plan by estimating the amount of future benefit that employees have earned in the current and prior periods, discounting that amount and deducting the fair value of any plan assets. The calculation of defined-benefit obligations is performed annually by a qualified external actuary using the projected unit credit method. When the calculation results in a potential asset for the Group, the recognized asset is limited to the present value of economic benefits available in the form of any future refunds from the plan or reductions in future contributions to the plan. To calculate the present value of economic benefits, consideration is given to any applicable minimum funding requirements. Remeasurements of the defined-benefit liability, which comprise actuarial gains and losses and the return on plan assets (excluding interest) and the effect of the asset ceiling (if any, excluding interest), are recognized immediately in other comprehensive income.

The Group determines the net interest expense on the net defined-benefit liabilities for the period by applying the discount rate used to measure the defined-benefit obligation at the beginning of the annual period to the net defined-benefit liability, taking into account any changes in the net defined-benefit liability during the period as a result of contributions and benefit payments. Net interest expense and other expenses related to defined-benefit plans are recognized in profit or loss. While the net interest expense is disclosed within financial expenses, the other expenses related to defined-benefit plans are allocated to the different functions of the operating activities. When the benefits of a plan are changed or when a plan is curtailed, the resulting change in benefit that related to past service or the gain or loss on curtailment is recognized immediately in profit or loss. The Group recognizes gains and losses on the settlement of a defined-benefit plan when the settlement occurs.

Provisions

A provision is recognized in the balance sheet when (i) the Group has a legal or constructive obligation as a result of a past event, (ii) it is probable that an outflow of economic benefits will be required to settle the obligation, and (iii) a reliable estimate of the amount of the obligation can be made. If the effect is material, provisions are determined by discounting the expected future cash flows at a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the liability. A provision for restructuring is recognized when the Group has approved a detailed and formal restructuring plan, and the restructuring has either commenced or been announced publicly. Future operating costs are not provided for.

Provisions for environmental liabilities are made when there is a legal or constructive obligation for the Group that will result in an outflow of economic resources. Provisions are made for remedial work where there is an obligation to remedy environmental damage, as well as for containment work where required by environmental regulations.

Share Capital

Ordinary shares are classified as equity. Incremental costs directly attributable to the issue of new shares or options are shown in equity as a deduction, net of tax, from the proceeds. Where any Group company purchases Lonza Group Ltd's equity share capital (treasury shares), the consideration paid, including any directly attributable incremental costs (net of income taxes), is deducted from equity attributable to the Group's equity holders until the shares are cancelled, reissued or disposed of.

Dividend

Dividend distribution to Lonza's shareholders is recognized as a liability in the Group's financial statements in the period in which the dividends are approved by the Lonza shareholders.

Share-Based Compensation

The Group operates various equity-settled, share-based compensation plans. The fair value of the employee services received in exchange for the grant of shares and other share-based compensations is recognized as an expense. The total amount to be expensed over the vesting period is determined by reference to the fair value of the shares granted. At each balance sheet date, the entity revises its estimates of the number of shares that are expected to become vested. It recognizes the impact of the revision of original estimates, if any, in the income statement, and a corresponding adjustment to equity over the remaining vesting period.

Significant Accounting Estimates and Judgments

Key assumptions and sources of estimation uncertainty

Use of Estimates The preparation of the financial statements and related disclosures in conformity with International Financial Reporting Standards requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue and expenses. Actual results could differ from those estimates. Estimates are used in impairment tests, accounting for allowances for doubtful receivables, inventory obsolescence, depreciation, employee benefits, taxes, restructuring provisions and contingencies. Estimates and assumptions are reviewed periodically and the effects of revisions are reflected in the financial statements in the period they are determined to be necessary. The key assumptions about the future key sources of estimation uncertainty that entail a significant risk of causing a material adjustment to the carrying value of assets and liabilities within the next financial year are described below.

Impairment Test of Property, Plant and Equipment, Intangible Assets and Goodwill The Group has carrying values with regard to property, plant and equipment of CHF 3,152 million (2017: CHF 3,198 million), goodwill of CHF 3,748 million (2017: CHF 4,002 million) and intangible assets of CHF 3,312 million (2017: CHF 3,701 million) (see notes 6 and 7). The intangible assets include trademarks acquired through business combinations with a carrying value of CHF 363 million (2017: CHF 630 million), which have an indefinite useful life and are not systematically amortized. Goodwill and intangible assets with indefinite useful lives are reviewed annually for impairment. To assess if any impairment exists, estimates are made of the future cash flows expected to result from the use of the asset and its possible disposal. Actual outcomes could vary significantly from such estimates of discounted future cash flows. Factors such as changes in the planned use of buildings, machinery or equipment, or closure of facilities, the presence or absence of competition, technical obsolescence or lower-than-anticipated sales of products with capitalized rights could result in shortened useful lives or impairment. The impairment analysis as explained in note 6 is most sensitive to the discount rate used for the discounted cash flow model, as well as the expected future cash-inflows and the growth rate used for calculation purposes. The key assumptions used to determine the recoverable amount for the different cash-generating units are further explained in note 6.2.

Pensions Many of the Group's employees participate in post-employment plans. The calculations of the recognized assets and liabilities from such plans are based upon statistical and actuarial calculations. In particular, the present value of the defined-benefit obligation is influenced by assumptions on discount rates used to arrive at the present value of future pension liabilities and assumptions on future increases in salaries and benefits.

Furthermore, the Group's independent external actuaries use statistically based assumptions, covering areas such as future withdrawals of participants from the plan and estimates of life expectancy. At 31 December 2018, the present value of the Group's defined-benefit obligation was CHF 3,132 million (2017: CHF 3,264 million). The plan assets at fair value amounted to CHF 2,664 million (2017: CHF 2,730 million), resulting, compared with the present value of the pension obligation, in a funded status deficit of CHF 468 million (2017: CHF 534 million) (see note 24.1). The actuarial assumptions used may differ materially from actual results due to changes in market and economic conditions, higher or lower withdrawal rates or longer or shorter lifespans of participants and other changes in the factors being assessed. These differences could affect the fair value of assets or liabilities recognized in the balance sheet in future periods.

Business Combinations Where the Group acquires control of another business, the identifiable assets acquired, the liabilities assumed and any non-controlling interest in the acquired business shall be recognized, separately from goodwill. The process of assessing fair values requires in particular management involvement and judgment in the recognition and measurement of the following items:

- Intellectual property, such as patents, licenses, trademarks, customer relations, technologies and similar rights
- Contingencies, such as legal and environmental matters
- Contingent consideration arrangements
- The recoverability of any accumulated tax losses previously incurred by the acquired company

In all cases, management makes an assessment based on the underlying economic substance of the items in order to fairly present these items.

Environmental Provisions Lonza is exposed to environmental liabilities and risks relating to its operations, principally in respect of provisions for remediation costs, which at 31 December 2018 amounted to CHF 139 million (2017: CHF 113 million), as disclosed in note 14. Provisions for non-recurring remediation costs are made when there is a legal or constructive obligation and the cost can be reliably estimated. It is difficult to estimate any future action required by Lonza to correct the effects on the environment of prior disposal or release of chemical substances by Lonza or other parties, and the associated costs, pursuant to environmental laws and regulations. The material components of the environmental provisions consist of costs to clean and refurbish contaminated sites and to treat and contain contamination at sites. The Group's future remediation expenses are affected by a number of uncertainties that include, but are not limited to, the method and extent of remediation and the responsibility attributable to Lonza at the remediation sites, relative to that attributable to other parties. The Group permanently monitors the various sites identified as at risk for environmental exposures. Lonza believes that its provisions are adequate, based upon currently available information; however, given the inherent difficulties in estimating liabilities in this area, there is no guarantee that additional costs will not be incurred beyond the amounts provided. Due to the uncertainty both of the amount and timing of future expenses, the provisions provided for environmental remediation costs could be affected in future periods.

Income Taxes At 31 December 2018, deferred tax assets of CHF 29 million (2017: CHF 43 million), non-current tax receivables of CHF 13 million (2018: CHF 15 million), current tax receivables of CHF 31 million (2017: CHF 80 million), deferred tax liabilities of CHF 711 million (2017: CHF 760 million), non-current tax payables of CHF 0 million (2017: 46 million) and current tax payables of CHF 150 million (2017: CHF 196 million) are included in the consolidated balance sheet. Significant estimates are required in determining the current and deferred assets and liabilities for income taxes. Some of these estimates are based on interpretations of existing tax laws or regulations. Management believes that the estimates are reasonable and that the recognized liabilities for income tax-related uncertainties are adequate. Various internal and external factors may have favorable or unfavorable effects on the actual amounts of estimated income tax assets and liabilities. These factors include, but are not limited to, changes in tax laws, regulations and / or rates, changing interpretations of existing tax laws or regulations and changes in overall levels of pre-tax earnings. Such changes that arise could affect the assets and liabilities recognized in the balance sheet in future periods. The enactment of the United States Tax Cuts and Jobs Act in December 2017 and certain internal tax restructuring initiatives required significant estimates to determine the adjustments of the Group's current tax payables and its deferred tax assets and liabilities. These significant estimates are disclosed in note 22.

Critical Accounting Judgments in Applying the Group's Accounting Policies

In the process of applying the Group's accounting policies, management has made the following judgments that have the most significant effect on the amounts recognized in the financial statements (apart from those involving estimations, which are dealt with above).

Revenue Recognition The Group has recognized revenues for sales of goods during 2018 to customers who have the right to rescind the sale if the goods do not meet the agreed quality. The Group believes that, based on past experience with similar transactions, the quality delivered will be accepted. Therefore, it is appropriate to recognize revenue on these transactions during 2018.

Revenues are recognized only when, according to management's judgment, performance obligations are satisfied, control over the assets have been transferred to the customer and no future performance obligation exists. For certain transactions, recognition of revenues is based on the performance of the conditions agreed in particular contracts, the verification of which requires evaluation and judgments by management.

The Group is required to determine the transaction price in respect of each of its contracts with customers. In making such judgment the Group assesses the impact of any variable consideration in the contract, due to potential refunds, contractual price changes, batch success fees, estimated breakage, discounts or penalties, additional commission paid by distributors, profit sharing and the existence of any significant financing components. In determining the impact of variable consideration the Group uses accumulated experience to estimate the impact of variable consideration.

The Group has various contractual agreements that contain several components promised to the customer. As these contracts may include multiple performance obligations, the transaction price must be allocated to the performance obligations on a relative stand-alone selling price basis. Management estimates the stand-alone selling price at contract inception based on observable prices of the type of product likely to be provided and the services rendered in similar circumstances to similar customers. If a discount is granted, it is allocated to both performance obligations based on their relative stand-alone selling prices. Contractually agreed upfront or other one-time payments are allocated to the performance obligation to which they relate.

Intangible Assets The Group considers the Capsugel trade name acquired through the business combination in 2017 as well as the trademarks acquired in 2011 through the Arch Chemicals business combination and in 2007 through the Cambrex business combination to have an indefinite useful life, as they are well established in the respective markets and have a history of strong performance. The Group intends and has the ability to maintain these trademarks for the foreseeable future. The assumption of an indefinite useful life is reassessed whenever there is an indication that a trademark may have a definite useful life. In addition, intangible assets with indefinite useful lives are tested for impairment on an annual basis (see note 6).

Note 2 • Operating Segments

2.1 General Information

According to the requirements of IFRS 8 «Operating Segments» Lonza identified the following two market-focused segments for 2018: Pharma & Biotech and Specialty Ingredients.

Following the acquisition of Capsugel in 2017 Lonza continued to maintain its two market segments, the Pharma & Biotech Segment as well as the Specialty Ingredients Segments (before and after the acquisition of Capsugel). Capsugel was not integrated into the two existing segments in 2017, but Capsugel was managed and operated as a separate segment until 31 December 2017. Lonza's Executive Committee decided to integrate Capsugel into Lonza's existing two operating segments as of 1 January 2018.

The two operating segments are described as follows:

Pharma & Biotech

In the Pharma & Biotech segment, Lonza is one of the world's leading providers of technology platforms along the value chain from pre-clinical to commercial, to scientific and regulatory expertise. This comprises development and manufacture of customized active pharmaceutical ingredients (APIs) and biopharmaceuticals as well as formulation services and delivery systems.

Lonza manufactures products that are at the forefront of powerful new treatments for cancer, diabetes, immune system disorders, heart conditions, Alzheimer's and Parkinson's diseases, inflammation and many other medical diseases and conditions. Lonza's customers cover a wide spectrum: from the world's largest pharmaceutical and biotechnology companies to medical research and testing organizations, as well as small startups pioneering breakthrough medical treatments. In 2018 the former biopharmaceutical business of Capsugel was integrated into the Small-Molecule Businesses.

Specialty Ingredients

In the Specialty Ingredients segment, Lonza is an innovative supplier of solutions that promote health, well-being, beauty, nutrition, hygiene and materials protection. This segment consists of two divisions, Consumer Health and Consumer Resources & Protection, as well as the Water Care business unit, which following Lonza Group's 1 November 2018 announcement of planned divestment, has been accounted for as discontinued operations.

Lonza's Consumer Health division provides health and well-being solutions as well as microbial control and hygiene solutions. These include science-backed ingredients (nutritional supplements) with formulation know-how and capsule and encapsulation technologies to create innovative solutions for consumer health and nutrition companies. In 2018 the former Consumer Health & Nutrition business of Capsugel was integrated into the Consumer Health division.

Lonza's Consumer Resources & Protection division addresses the coatings, composites and agricultural markets by offering products and specialty solutions for the protection, enhanced performance and modification of the end-use characteristics of various materials including carbon, fibers, fabrics, leather, metals, plastics, stone and wood, as well as for agricultural ingredients.

Corporate

Corporate includes mainly corporate functions, such as finance and accounting, legal, communication, information technology and human resources.

2.2 Information About Reportable Segment Profit or Loss, Assets and Liabilities Including Reconciliations

In the following table, revenues and profit or loss are disclosed by the two reportable segments and corporate, which include the costs of the corporate functions, including eliminations, and adds up to the Group total. Lonza does not allocate financing costs, income and expenses from associates and joint ventures as well as taxes to the reportable segments. The information disclosed by the operating segments is the same as that reported monthly to the Group's Executive Committee.

1 Intersegment sales were based on prevailing market prices
2 Excluding income / expenses related to restructuring and environmental measures
3 Net capital invested comprises all operating assets and goodwill less operating liabilities
4 Calculated at historical monthly average rates based on net capital invested excluding goodwill

Year ended 31 December 2018

million CHF	Pharma & Biotech	Specialty Ingredients	Total operating segments	Corporate / Eliminations	Continuing Operations
Sales third-party	3,113	2,391	5,504	38	5,542
Intersegment sales[1]	7	35	42	(42)	0
Total sales	**3,120**	**2,426**	**5,546**	**(4)**	**5,542**
Result from operating activities (EBIT)	**708**	**312**	**1,020**	**(178)**	**842**
– Percentage return on sales in %	22.7	13.0	18.5	n.a.	15.2
Included in result from operating activities (EBIT):					
Other operating income[2]	4	19	23	26	49
Other operating expenses[2]	(17)	(25)	(42)	(32)	(74)
Research & development	(116)	(44)	(160)	0	(160)
Depreciation and amortization	(268)	(198)	(466)	(44)	(510)
Impairment, net of reversal of impairment	(32)	(10)	(42)	(35)	(77)
Restructuring expenses	(3)	(1)	(4)	0	(4)
Environmental expenses	0	0	0	(41)	(41)
Total assets	8,687	6,441	15,128	(1,212)	13,916
Total liabilities	3,907	844	4,751	2,875	7,626
Total equity	4,780	5,597	10,377	(4,087)	6,290
Net financial liabilities	802	(462)	340	3,912	4,252
Net capital invested[3]	5,582	5,135	10,717	(175)	10,542
Return on net capital invested (RONOA)[4] in %	19.0	9.6	14.6	n.a.	12.1
Included in total assets:					
Total property, plant and equipment	2,096	955	3,051	101	3,152
– Additions to property, plant and equipment	359	101	460	51	511
Total goodwill and intangible assets	3,297	3,730	7,027	33	7,060
– Additions to intangible assets	31	4	35	12	47
– Additions to goodwill and intangible assets from acquisitions	89	0	89	0	89
Investments in associates / joint ventures	1	1	2	8	10
Headcount	8,684	4,841	13,525	1,850	15,375
Average headcount	8,170	4,939	13,109	1,888	14,997

Year ended 31 December 2017[1]

million CHF	Pharma & Biotech	Specialty Ingredients	Total operating segments	Corporate / Eliminations	Group total
Sales third-party	2,408	2,102	4,510	38	4,548
Intersegment sales[2]	5	28	33	(33)	0
Total sales	**2,413**	**2,130**	**4,543**	**5**	**4,548**
Result from operating activities (EBIT)	**471**	**304**	**775**	**(102)**	**673**
– Percentage return on sales in %	19.6	14.5	17.2	n.a.	14.8
Included in result from operating activities (EBIT):					
Other operating income[3]	12	12	24	85	109
Other operating expenses[3]	(20)	(29)	(49)	(50)	(99)
Research & development	(115)	(35)	(150)	0	(150)
Depreciation and amortization	(195)	(156)	(351)	(41)	(392)
Impairment, net of reversal of impairment	(17)	(2)	(19)	0	(19)
Restructuring expenses	(4)	0	(4)	0	(4)
Environmental expenses	0	0	0	(31)	(31)
Total assets	7,384	6,513	13,897	(66)	13,831
Total liabilities	3,021	614	3,635	4,015	7,650
Total equity	4,363	5,899	10,262	(4,081)	6,181
Net financial liabilities	1,033	125	1,158	4,048	5,206
Net capital invested[4]	5,396	6,024	11,420	(33)	11,387
Return on net capital invested (RONOA)[5] in %	13.1	9.2	11.2	n.a.	9.8
Included in total assets:					
Total property, plant and equipment	1,972	1,078	3,050	148	3,198
– Additions to property, plant and equipment	282	113	395	32	427
– Additions to property, plant and equipment from acquisitions	443	158	601	0	601
Total goodwill and intangible assets	3,291	4,379	7,670	33	7,703
– Additions to intangible assets	3	1	4	20	24
– Additions to goodwill and intangible assets from acquisitions	2,635	2,589	5,224	0	5,224
Investments in associates / joint ventures	2	8	10	10	20
Headcount	7,657	5,036	12,693	1,925	14,618
Average headcount	4,266	6,217	10,483	1,891	12,374

1 Restated to reflect adoption of IFRS 15 (see note 1) and classification of Water Care business as discontinued operations (see note 5.2)
2 Intersegment sales were based on prevailing market prices
3 Excluding income / expenses related to restructuring and environmental measures
4 Net capital invested comprises all operating assets and goodwill less operating liabilities
5 Calculated at historical monthly average rates based on net capital invested excluding goodwill

2.3 Measurement of Operating Segment Profit or Loss

The accounting principles applied to the operating segments are based on the same accounting principles used for the consolidated financial statements. Lonza evaluates the performance of its operating segments on the basis of the result from operating activities (EBIT) as well as the CORE result from operating activities.

2.4 Geographical Information

Year ended 31 December 2018 million CHF	Revenue from external customers (sales)	Non-current assets Property, plant and equipment	Intangible assets	Goodwill	Other non-current assets	Total
Switzerland	471	993	77	53	119	1,242
Germany	162	4	24	66	0	94
Ireland	246	0	0	0	0	0
United Kingdom	226	94	63	8	6	171
France	263	93	144	10	2	249
Netherlands	34	7	1	32	12	52
Belgium	29	82	1,565	2,549	0	4,196
Denmark	128	3	0	11	0	14
Sweden	272	0	0	0	0	0
Italy	23	0	0	10	0	10
Spain	5	120	0	0	0	120
Czech Republic	60	29	0	0	0	29
Rest of Europe	94	1	0	0	0	1
Europe	**2,013**	**1,426**	**1,874**	**2,739**	**139**	**6,178**
United States	2,490	1,102	937	968	5	3,012
Canada	70	0	174	27	0	201
Mexico	46	8	26	0	0	34
Rest of North and Central America	2	2	0	0	0	2
North and Central America	**2,608**	**1,112**	**1,137**	**995**	**5**	**3,249**
Brazil	62	8	21	0	0	28
Rest of Latin America	20	0	0	0	0	0
Latin America	**82**	**8**	**21**	**0**	**0**	**28**
China	235	238	84	4	1	327
Singapore	79	267	46	0	3	316
Japan	178	45	48	0	3	96
Indonesia	22	27	17	0	0	44
Thailand	28	0	33	0	0	33
India	78	19	28	2	1	50
Rest of Asia	126	3	0	0	0	3
Asia	**746**	**599**	**256**	**6**	**8**	**869**
South Africa	**10**	**2**	**1**	**0**	**0**	**3**
Australia & New Zealand	**78**	**5**	**24**	**8**	**1**	**38**
Other countries	**5**	**0**	**0**	**0**	**0**	**0**
Total	**5,542**	**3,152**	**3,312**	**3,748**	**153**	**10,365**

Year ended 31 December 2017 million CHF		Non-current assets				
	Revenue from external customers (sales)	Property, plant and equipment	Intangible assets	Goodwill	Other non-current assets	Total
Switzerland	448	911	55	53	88	1,107
Germany	209	3	28	68	0	99
Ireland	255	0	0	0	0	0
United Kingdom	157	91	72	9	2	174
France	138	99	158	10	0	267
Netherlands	21	7	3	33	5	48
Belgium	158	84	1,707	2,737	1	4,529
Sweden	174	0	0	0	0	0
Italy	22	0	0	11	0	11
Spain	18	126	0	0	0	126
Czech Republic	5	28	0	0	0	28
Denmark	30	3	0	11	0	14
Rest of Europe	60	2	0	0	0	2
Europe	**1,695**	**1,354**	**2,023**	**2,932**	**96**	**6,405**
United States	1,860	1,088	1,267	1,051	30	3,436
Canada	61	0	56	4	0	60
Mexico	16	8	26	0	0	34
Rest of North and Central America	5	2	0	0	0	2
North and Central America	**1,942**	**1,098**	**1,349**	**1,055**	**30**	**3,532**
Brazil	56	24	30	0	3	57
Rest of Latin America	20	0	0	0	2	2
Latin America	**76**	**24**	**30**	**0**	**5**	**59**
China	205	342	91	4	3	440
Singapore	178	275	47	0	3	325
Japan	162	41	48	0	0	89
India	64	23	32	2	0	57
Thailand	20	0	34	0	0	34
Indonesia	15	27	17	0	0	44
Rest of Asia	102	0	0	0	0	0
Asia	**746**	**708**	**269**	**6**	**6**	**989**
South Africa	**13**	**7**	**3**	**0**	**0**	**10**
Australia & New Zealand	**70**	**7**	**27**	**9**	**2**	**45**
Other countries	**6**	**0**	**0**	**0**	**0**	**0**
Total	**4,548**	**3,198**	**3,701**	**4,002**	**139**	**11,040**

2.5 Information About Major Customers

In 2018 Lonza's largest customer accounted for 5.0% and the second, third, fourth and fifth largest customers for 4.7%, 3.8%, 3.1% and 2.0% in relation to total Group sales, respectively. No other customer accounted for 2.0% or more of Lonza's total sales. Out of the five largest customers, the third-largest relates to the Specialty Ingredients segment, whereas the other largest customers relate to the Pharma & Biotech segment.

In 2017 Lonza's two largest customers accounted for 4.7% each and the third, fourth and fifth largest customers for 4.4%, 4.3% and 3.0% in relation to total Group sales, respectively. No other customer accounted for more than 2.9% of Lonza's total sales. The two largest customers related to the Pharma & Biotech segment and the Specialty Ingredients segment, while the third, fourth and fifth largest customers related to the Pharma & Biotech segment.

Note 3 • Revenues

Disaggregation of Third-Party Revenues

Lonza derives revenue in its business models of Contract Development and Manufacturing (primarily in the Pharma & Biotech segment) and sale of products (primarily in the Specialty Ingredients segment). These business models and the markets Lonza operates in are the basis for disaggregating revenue into categories that depict how the nature, amount, timing and uncertainty of revenue and cash flows are affected by economic factors.

The **Pharma & Biotech** business derives its revenues primarily from long-term supply agreements with pharmaceutical customers. This segment typically provides a range of product and manufacturing services, over the whole range from research to commercial supply. Lonza supports customer's research activities as well as the whole life cycle of a customer product from development of a drug substance to commercial supply. Lonza concluded that the revenues of the Pharma & Biotech segment shall not be further disaggregated.

The **Specialty Ingredients** segment focuses on product sales in the area of health, well-being, beauty, nutrition and materials protection. Within this segment, there is a very clear separation between divisions, due mostly to the fact that they serve different types of customers and sales channels, and the products are exposed to different economic and market factors:

1) The Consumer Health business includes nutrition and dietary supplement ingredients and delivery systems, hygiene and preservation products, and personal-care offerings. The revenues from these types of products are not cyclical in nature.

2) The Consumer & Resources Protection business provides specialty solutions for the protection, enhanced performance and modification of the end-use characteristics of various materials, including carbon fibers, fabrics, leather, metals, plastics, stone and wood, as well as products and custom agricultural manufacturing services designed to improve crop yields and food quality. The revenues from these products are exposed to the cyclicality of the customer's markets.

The table below shows the segment information provided to the Group's Executive Committee and also illustrates the disaggregation of recognized revenues for 2018 and 2017:

million CHF	2018	2017
Pharma & Biotech	**3,113**	**2,408**
Consumer Health	1,071	798
Consumer & Resources Protection	1,320	1,304
Specialty Ingredients	**2,391**	**2,102**
Other revenues	38	38
Total Group	**5,542**	**4,548**

Contract Assets and Liabilities

In adopting IFRS 15, the Group recognized contract assets mainly consisting of contract fulfillment costs that are incurred after a contract is obtained but before goods or services have been delivered to the customer. These costs arise from long-term contracts in the custom manufacturing business for customer-specific production facility expansions or modifications on Lonza's premises. They typically include costs for commissioning, qualification and startup, as well as for activities relating to process development and technology transfer. The assets are amortized on a straight-line basis over the term of the specific contract they relate to, consistent with the pattern of recognition of the associated revenue. Additionally, if services rendered by Lonza exceed the payment received, a contract asset is recognized.

Contract liabilities mainly consist of upfront and other one-time payments, typically resulting from long-term contracts in the custom manufacturing business. These payments make up part of the expected transaction price and are deferred until batches are released. Additionally, if the payments received exceed services rendered, a contract liability is recognized. The non-current portion of deferred revenue is included in other long-term liabilities in the consolidated balance sheet.

The Group has recognized the following revenue-related contract assets and liabilities:

million CHF	Note	2018	2017
Trade receivables	11	692	825
Total trade receivables		**692**	**825**

million CHF	2018	2017
Accrued income	159	63
Capitalized contract costs	31	31
Total contract assets	**190**	**94**

million CHF	2018	2017
Non-current deferred income	247	235
Current deferred income	412	312
Total contract liabilities	**659**	**547**

Movement in Capitalized Cost to Fulfil a Contract		
million CHF	2018	2017
At 1 January	**31**	**19**
Asset recognised from costs incurred to fulfil a contract at 31 December	1	12
Amortisation and impairment loss recognised as cost of providing services during the period	(1)	0
At 31 December	**31**	**31**

Movement in Contract Liabilities		
million CHF	2018	2017
At 1 January	**547**	**452**
Revenue recognized that was included in the contract liability balance at the beginning of the period	(342)	(279)
Increases due to cash received, excluding amounts recognised as revenue during the period	454	376
Acquisition of subsidiaries	0	3
Currency translation effects	0	(5)
At 31 December	**659**	**547**

Note 4 • Restructuring

Year ended 31 December 2018				
million CHF	Pharma & Biotech	Specialty Ingredients	Corporate	Total
Impairment of property, plant and equipment, intangible assets and goodwill[1]	32	10	35	77
Restructuring charges	6	5	0	11
Total	**38**	**15**	**35**	**88**

Year ended 31 December 2017				
million CHF	Pharma & Biotech	Specialty Ingredients	Corporate	Total
Impairment of property, plant and equipment, intangible assets and goodwill[1]	18	1	0	19
Restructuring charges	4	1	8	13
Total	**22**	**2**	**8**	**32**

1 Net of reversal of impairment (2018: CHF 0 million; 2017: CHF 2 million)

In 2018, Lonza recognized an impairment loss of CHF 29 million related to production facilities in Walkersville, MD (USA) in conection with the transfer of cell-therapy activities to Portsmouth, NH (USA) and Houston, TX (USA). The costs were included in cost of goods sold of the Pharma & Biotech segment.

The Special Ingredients segment recognized impairment losses of CHF 10 million for production assets in Nansha (CN) and Visp (CH). These costs were included in cost of goods sold.

The impairment losses of Corporate are related to the site in Guangzhou (CN). The local government requested Lonza to close its Guangzhou (CN) manufacturing site several years ago. In response, Lonza entered into an agreement with a third-party property development company to develop jointly the land into commercial properties. According to the agreement, Lonza provided the land and the property development company offered the funds and assumed construction responsibilities. In 2017, Lonza obtained its entitled portion of commercial properties based on the agreement. A non-cash gain of the property's estimated fair value was recognized in 2017 based on a valuation performed by an independent external property valuation specialist.

In 2018, Lonza made the decision to dispose of this property. In connection with this disposal effort, Lonza has classified this property as held for sale, and recorded an impairment in 2018 based on the estimated fair value less cost to sell. The related estimated impairment loss of CHF 35 million was included in other operating expense.

In 2017, Lonza recognized an impairment loss of Visp (CH) related property, plant and equipment of CHF 19 million, which was included within cost of goods sold.

Organizational changes of the Group's finance and information technology functions in 2017 resulted in restructuring charges of CHF 7 million. These costs are included within the Corporate administration and general overheads.

Note 5 • Business Combinations and Sale of Businesses

5.1 Acquisitions – 2018

Acquisition of Octane Biotech Inc.

Effective 31 October 2018, Lonza acquired 52% of the shares of Octane Biotech Inc. («Octane»). As a result, Lonza increased its equity interest in Octane to 80%, obtaining control of the company. The total consideration related to the 2018 acquisition amounts to USD 58 million (CHF 58 million), of which USD 28 million (CHF 28 million) was paid in cash in 2018 and USD 30 million (CHF 30 million) is related to a contingent consideration arrangement. The contingent payments are based on the achievement of performance-related and regulatory-related milestones and the range of undiscounted outcomes is between zero and USD 74 million (CHF 73 million).

Lonza and Octane have been collaborating since 2015 on the development of the Cocoon™ system, a patient-scale, closed and automated cell-therapy manufacturing system. The increase in ownership will allow Lonza to further develop the technology to support the growing need for scalable autologous manufacturing. Octane's 24 employees at the current site in Kingston, ON (CA) will continue to support activities as the Cocoon™ system is further developed.

The Octane business is reported within the Pharma & Biotech segment and did not have a significant impact on the consolidated financial statements for the year ended 31 December 2018, with the exception of the acquired goodwill and intangible assets and the related deferred tax liabilities.

The Octance identifiable assets acquired and liabilities assumed are set out in the table below and have been determined on a provisional basis:

Acquisition of Octane Biotech Inc.

million CHF	
Technology	132
Receivables	4
Deferred tax liabilities	(35)
Debt	(3)
Other operating payables	(4)
Net identifiable assets	**94**
Cash consideration	28
Contingent consideration	30
Total consideration transferred	**58**
Fair value of Lonza's previously held interest in Octane	36
Non-controlling interest	24
Fair value of net identifiable assets	(94)
Goodwill	**24**

The fair value of the technology was determined using an excess earning method. The method is based on management's forecasts and observable market data for discount rates, tax rates and foreign exchange rates. The present value of the forecasted cash flows was calculated using a risk-adjusted discount rate of 8.6%. The valuation of the acquired technology and contingent consideration of Octane was performed by an independent valuation expert.

Goodwill includes the acquired workforce and the expected synergies from integrating Octane into Lonza's existing business. None of the goodwill recognized is expected to be deductible for income tax purposes. The acquisition has been accounted for using the acquisition method.

Lonza recognized a financial gain of CHF 32 million from fair valuing its interest in Octane held by the Group prior to the transaction. This gain is classified as financial income for 2018.

5.2 Discontinued Operations and Assets Held for Sale – 2018

On 1 November 2018 Lonza announced that it had entered into a definitive agreement with Platinum Equity to sell Lonza's Water Care business and operations for USD 630 million in cash.

With headquarters in Alpharetta, GA (USA), Water Care has six manufacturing facilities in key regions, including North America, South America, EMEA and South Africa, with sales locations in all regions globally and with approximately 1,200 employees. The business is a provider of innovative water treatment solutions and a global consumer brand in residential pool care and key positions in high-growth industrial and municipal water care markets. The divestment transaction is expected to close in the first quarter of 2019, subject to customary closing conditions.

As IFRS 5 held for sale criteria were met in 2018, the Water Care related assets and liabilities were classified as a disposal group in assets held for sale and liabilities held for sale in the 2018 consolidated balance sheet. The results of the Water Care business discontinued operations are disclosed separately in the consolidated income statement.

An impairment loss of CHF 85 million has been included in «Other operating expenses» of the discontinued operations for the write-down of the Water Care disposal group to its estimated fair value less cost to sell. The impairment loss was recorded to partially impair the Water Care related goodwill of CHF 184 million. In addition, costs of CHF 22 million were incured in 2018 related to the planned divestiture of the Water Care business, which are included in «Other operating expenses» of the discontinued operations.

The results from the Water Care business, which is presented as discontinued operations, are as follows:

Water Care million CHF	2018	2017
Sales	516	523
Cost of goods sold	(370)	(372)
Gross profit	**146**	**151**
Marketing and distribution	(70)	(68)
Research & development	(8)	(8)
Administration and general overheads	(47)	(50)
Other operating income	2	6
Other operating expenses	(111)	(3)
Result from operating activities (EBIT)	**(88)**	**28**
Net financing costs	(9)	(3)
Share of loss of associates / joint ventures	(1)	(1)
Profit before income taxes from discontinued operations	**(98)**	**24**
Income taxes	2	19
Profit from discontinued operations, net of tax	**(96)**	**43**
	CHF	CHF
Basic earnings per share	(1.29)	0.64
Diluted earnings per share	(1.29)	0.63

The loss from the discontinued operation of CHF 96 million (2017: profit of CHF 43 million) is attributable entirely to the equity holders of the parent.

The main elements of the cash flows of the Water Care discontinued operations are as follows:

million CHF	2018	2017
Net cash used for operating activities	(15)	(11)
Net cash used for investing activities	(11)	(28)
Net cash used for financing activities	0	(6)
Net cash flows for the year	**(26)**	**(45)**

At 31 December 2018, the assets and liabilities held for sale related to the Water Care disposal were the following:

million CHF	
Goodwill	99
Intangible assets	296
Property, plant & equipment	100
Other non-current assets	16
Inventories	118
Trade receivables	131
Other receivables	9
Cash and cash equivalents	21
Assets held for sale	**790**
Deferred tax liabilities	98
Employee benefit liability	3
Trade payables	34
Other current liabilities	55
Other liabilities	3
Liabilities directly associated with assets held for sale	**193**

The cumulative expense recognized in other comprehensive income related to the Water Care operations as of 31 December 2018 was as follows:

million CHF	
Remeasurements of net defined benefit liability, net of taxes	1
Exchange differences on translating foreign operations, net of taxes	15
Cumulative expense recognized in other comprehensive income	**16**

The accumulated exchange rate translation reserve losses at the time of the closing of the transaction will be reclassified to the income statement, which is expected to occur in the first quarter of 2019.

5.3 Acquisitions – 2017

Acquisition of Capsugel S.A.

Effective 5 July 2017, Lonza received all required regulatory approvals to complete the acquisition of 100% of the shares of Capsugel from KKR for a total consideration of USD 3.4 billion (CHF 3.3 billion at acquisition date rate) in cash. Upon acquisition, Lonza assumed existing Capsugel debt of USD 2.0 billion (CHF 1.96 billion at acquisition date rate). Lonza refinanced the assumed debt after the acquisition date. The acquisition was financed through a capital increase (see note 26) and additional debt (see note 15).

Capsugel designs, develops and manufactures a wide range of innovative dosage forms for the biopharmaceutical and consumer health and nutrition industries.

The Capsugel business operated and was reported as a separate operating segment in 2017 but was integrated into other Lonza businesses in 2018 (see note 2.1).

From 5 July to 31 December 2017, Capsugel contributed sales of CHF 543 million and a result from operating activities of CHF –5 million to the Group[1].

The Capsugel identifiable assets acquired and liabilities assumed are set out in the table below:

1 The result from operating activities for 2017 includes the impact of the fair value adjustment of acquired inventories (CHF 77 million increased cost of goods sold) as well as the amortization of the acquired technologies and customer relations (CHF 60 million)

Acquisition of Capsugel S.A.

million CHF	
Intangible assets	
– Customer relationships	1,234
– Technologies	1,210
– Capsugel corporate trade name	240
– Computer software	7
Property, plant & equipment	583
Inventories	253
Trade receivables	156
Cash & cash equivalents	120
Deferred tax liabilities	(662)
Debt	(1,964)
Employee benefit liabilities	(29)
Trade payables	(65)
Other net liabilities	(141)
Net identifiable assets	**942**
Goodwill	2,428
Non-controlling interest	(45)
Total consideration	**3,325**
Cash consideration	3,325
Total consideration transferred	**3,325**
Cash and cash equivalents acquired	(120)
Cash outflow on acquisition	**3,205**

The total goodwill resulting from the Capsugel acquisition amounted to CHF 2,519 million and included the effective portion of losses of CHF 91 million from cash flow hedges to manage the foreign exchange rate exposure that existed from 15 December 2016 until closing on 5 July 2017.

The fair value of the customer relationships was determined using an excess earning method while the fair value of the technologies as well as the Capsugel corporate trade name were determined using a relief from royalty method. Both methods are based on management forecasts and observable market data for discount rates, tax rates and foreign exchange rates. The present value was calculated using a risk-adjusted discount rate of 7.5%. The fair value of property, plant & equipment was determined based on market and cost methods. The fair value of inventories was determined based on the estimated selling price in the ordinary course of the business less the estimated costs of completion and sale, and a reasonable profit margin based on the effort required to complete and sell the inventories. Portions of the valuation of the acquired assets and liabilities of Capsugel were performed by an independent valuation expert.

Goodwill included the acquired workforce, expected synergies from integrating Capsugel into Lonza's existing business. None of the goodwill recognized is expected to be deductible for income tax purposes. The acquisition has been accounted for using the acquisition method.

The fair value of the trade receivables amounted to CHF 156 million. The gross amount of trade receivables was CHF 164 million. The fair value included a deduction of CHF 8 million for trade receivables for which it was expected that the full contractual amounts cannot be collected.

Directly attributable transaction costs of CHF 26 million were reported in the Corporate segment within administration and general overhead expenses.

Other Acquisitions

PharmaCell B.V. Effective 3 May 2017, Lonza Group acquired 100% of the shares of PharmaCell B.V. for a cash consideration of EUR 31 million (CHF 33 million). PharmaCell is a contract development and manufacturing organization specialized in the field of cell and gene therapy and regenerative medicine with employees in Maastricht and Geleen (NL).

The acquisition is reported within the Pharma & Biotech segment and did not have a significant impact on the consolidated financial statements for the twelve-month period ended 31 December 2017, with the exception of the acquired goodwill.

Micro-Macinazione S.A. On 26 July 2017, Lonza completed the acquisition of Micro-Macinazione S.A., a company specializing in the micronization of active ingredients for the pharmaceutical and fine chemical industries, based in Molinazzo di Monteggio (CH). The total cash consideration amounted to CHF 67 million.

The acquisition is reported within the Pharma & Biotech segment and did not have a significant impact on the consolidated financial statements for the year ended 31 December 2017, with the exception of the acquired goodwill and intangible assets.

The identifiable assets acquired and liabilities assumed of these 2017 acquisitions are set out in the table below:

Other Acquisitions

million CHF	PharmaCell	Micro-Macinazione	Other	**Total**
Intangible assets				
– Customer relationships	3	28	0	31
– Technologies	0	6	0	6
Property, plant & equipment	6	7	5	18
Inventories	2	2	0	4
Trade receivables	6	5	0	11
Cash & cash equivalents	0	0	0	0
Deferred tax liabilities	(1)	(7)	0	(8)
Debt	(7)	(7)	0	(14)
Trade payables	(6)	(2)	0	(8)
Other net liabilities	0	(3)	0	(3)
Net identifiable assets	**3**	**29**	**5**	**37**
Goodwill	30	38	0	68
Total consideration	**33**	**67**	**5**	**105**
Cash consideration	33	67	5	105
Total consideration transferred	**33**	**67**	**5**	**105**

Portions of the valuations of the acquired assets and liabilities of PharmaCell and Micro-Macinazione were performed by an independent valuation provider.

Impact from 2017 Acquisitions on Consolidated Income Statement

If the 2017 acquisitions had occurred on 1 January 2017, Group sales in 2017 would have been CHF 5,660 million (+ CHF 555 million) and the Group result from operating activities CHF 783 million (+ CHF 60 million). These amounts were calculated using the Group's accounting policies and by adjusting the results of the subsidiaries to reflect the full year amortization that would have been charged if the fair value adjustments to intangible assets had applied from January 2017.

5.4 Divestment – 2017

On 7 December 2016 Lonza announced that it had entered into a definitive agreement with PolyPeptide Laboratories Holding (PPL) to sell the peptides business and operations of Lonza in Braine-l'Alleud, Belgium. Lonza's Braine facility, with approximately 280 employees, is the center for peptide chemical development and manufacturing within Lonza. The agreement was subject to customary closing conditions and legally closed on 3 January 2017.

The sales price includes a one-time payment of CHF 20 million paid in 2017 as well as a defined percentage of the net sales of the disposed business for the financial years 2017–2021 (estimated to be CHF 31 million at year-end 2018 exchange rates). Lonza's estimate of the net present value of these future payments is reflected as a receivable in the consolidated balances sheet as of 31 December 2018 and 2017.

Note 6 • Intangible Assets and Goodwill

6.1 Cost and Accumulated Amortization and Impairment

Intangible assets include software purchased from third parties, related software implementation costs, as well as patents, trademarks, client relationships acquired and development costs. Their amortization is included in the line item «Administration and general overheads» of the consolidated income statement.

The Capsugel trade name acquired through the business combination in 2017 as well as the trademarks acquired through the acquistions of Arch Chemicals (2011) and Cambrex (2007) are considered to have indefinite useful lives. As a result, these intangible assets with a carrying amount of CHF 363 million as of 31 December 2018 (2017: CHF 630 million) are not systematically amortized.

Development costs as of 31 December 2018 predominantly include technologies acquired with the acquisitions of Capsugel, amounting to CHF 1,120 million (2017: CHF 1,243 million), Octane of CHF 123 million, and the Arch Chemical acquisition of CHF 34 million (2017: CHF 42 million). As part of the planned divestiture of the Water Care business, the related trade name of CHF 259 million and capitalized technologies of CHF 4 million have been reclassified to assets held for sale (see note 5.2).

Year ended 31 December 2018

million CHF	Goodwill	Capsugel trade name / Arch Chemicals and Cambrex trademarks	Patents, trademarks, client relationship	Computer software	Technologies / Development cost	Construction in progress	Total
Cost							
At 1 January	**4,002**	**631**	**2,025**	**155**	**1,388**	**2**	**8,203**
Additions	0	0	22	15	10	0	47
Disposals	0	0	(2)	(8)	(4)	0	(14)
Acquisition of subsidiaries	24	0	0	0	132	0	156
Reclassification to assets held for sale	(184)	(260)	(63)	0	(7)	0	(514)
Currency translation differences	(94)	(8)	(27)	1	(48)	0	(176)
At 31 December	**3,748**	**363**	**1,955**	**163**	**1,471**	**2**	**7,702**
Accumulated amortization and impairment							
At 1 January	**0**	**(1)**	**(289)**	**(120)**	**(90)**	**0**	**(500)**
Amortization	0	0	(80)	(19)	(94)	0	(193)
Disposals	0	0	2	8	1	0	11
Impairment losses	(85)	0	(1)	0	0	0	(86)
Reclassification to assets held for sale	85	1	30	1	3	0	120
Currency translation differences	0	0	3	0	3	0	6
At 31 December	**0**	**0**	**(335)**	**(130)**	**(177)**	**0**	**(642)**
Net carrying amount 31 December	**3,748**	**363**	**1,620**	**33**	**1,294**	**2**	**7,060**

Year ended 31 December 2017 million CHF	Goodwill	Capsugel trade name / Arch Chemicals and Cambrex trademarks	Patents, trademarks, client relationship	Computer software	Technologies / Development cost	Construction in progress	Total
Cost							
At 1 January	**1,287**	**388**	**733**	**138**	**95**	**1**	**2,642**
Additions	0	0	3	14	6	1	24
Disposals	0	0	(3)	(4)	0	0	(7)
Acquisition of subsidiaries	2,496	240	1,265	7	1,216	0	5,224
Currency translation differences	219	3	27	0	71	0	320
At 31 December	**4,002**	**631**	**2,025**	**155**	**1,388**	**2**	**8,203**
Accumulated amortization and impairment							
At 1 January	**0**	**(1)**	**(235)**	**(109)**	**(42)**	**0**	**(387)**
Amortization	0	0	(60)	(16)	(50)	0	(126)
Disposals	0	0	3	4	0	0	7
Currency translation differences	0	0	3	1	2	0	6
At 31 December	**0**	**(1)**	**(289)**	**(120)**	**(90)**	**0**	**(500)**
Net carrying amount 31 December	**4,002**	**630**	**1,736**	**35**	**1,298**	**2**	**7,703**

6.2 Impairment Tests for Cash-Generating Units Containing Goodwill and Intangible Assets with Indefinite Useful Lives

The Group has identified the following cash-generating units:

Pharma & Biotech

The various technologies (mammalian, chemical, etc.) applied within the segment are the cash-generating units used for the impairment testing of goodwill and intangibles assets with indefinite useful lives.

Specialty Ingredients

The segment’s business units are the cash-generating units used for the impairment testing of goodwill and intangible assets with indefinite useful lives, with the exception that the Wood Protection business continues to be considered as a separate cash-generating unit due to its independent cash flows.

The following cash-generating units maintain carrying amounts of goodwill as presented below (at year-end exchange rates):

million CHF	2018	2017
Capsugel (representing a group of cash-generating units)	0	2,679
Chemical – Development and Manufacturing (representing a group of cash-generating units)	1,563	38
Consumer Health & Nutrition	1,270	208
Specialty Ingredients (representing a group of cash-generating units)	[1]534	712
Bioscience Solutions / Cell Therapy / Viral Therapeutics (representing a group of cash-generating units)	319	324
Mammalian – Operations and Development Services	24	25
Cell Therapy / Viral Therapeutics (representing a group of cash-generating units)	[2]23	0
Agro Ingredients	7	12
Consumer Product Ingredients	4	0
Wood Protection	4	4
Total carrying amounts of goodwill	**3,748**	**4,002**

1 Water Care-related goodwill of CHF 184 million was transferred to assets held for sale (see note 5.2)
2 Amount reflects goodwill acquired in connection with the acquisition of Octane (see note 5.1)

The following cash-generating units maintain carrying amounts of intangible assets with indefinite useful lives as presented below (at year-end exchange rates):

million CHF	2018	2017
Capsugel (representing a group of cash-generating units)	0	256
Chemical – Development and Manufacturing (representing a group of cash-generating units)	148	0
Consumer Health & Nutrition	99	0
Specialty Ingredients (representing a group of cash-generating units)	[1]89	348
Bioscience Solutions / Cell Therapy / Viral Therapeutics (representing a group of cash-generating units)	27	26
Total carrying amounts of intangible assets with indefinite useful life	**363**	**630**

1 Water Care-related trademarks of CHF 259 million were transferred to assets held for sale (see note 5.2)

The recoverable amount of the above cash-generating units is based on the value-in-use calculation. The supporting cash flow projections for 2019 to 2023 are based on the Lonza business strategy review and exclude any future cash inflows and outflows expected to arise from the growth potential of future capital expenditures.

The cash flow projections beyond the five-year period, as stated in the respective paragraphs of the cash-generating units below, are based on the concept of perpetual growth rates, which do not necessarily reflect the Group's strategic objective targets for the future growth potential of the underlying businesses. The key assumptions and the approach to determining the value in use of the significant cash-generating units are based on the following:

The Chemical Development and Manufacturing business includes the cash-generating units of development and manufacturing of drug substances as well as development and manufacturing of drug products. This business includes Capsugel's Pharma sector and Micro-Macinazione (both acquired in 2017) as well as Lonza's legacy chemical development and manufacturing business. The cash flow projections for 2019–2023 are based on an 8.6% average sales growth with growing EBIT margins. The cash flow projections beyond the five-year period are based on a 1.5% growth rate. A pre-tax discount rate of 7.0% has been used in discounting the projected cash flows. Management believes that any reasonably possible change in the key assumptions on which the recoverable amount is based would not cause the carrying amount to exceed its recoverable amount.

The goodwill arising from the acquisitions of Capsugel in 2017 and InterHealth Nutraceuticals, acquired in 2016, is allocated to the Consumer Health & Nutrition cash-generating unit. The cash flow projections for 2019–2023 are based on a 6.9% average sales growth with increasing EBIT margins. The cash flow projections beyond the five-year period are based on 2.0% growth rate. A pre-tax discount rate of 7.9% has been used in discounting the projected cash flows. Management believes that any reasonably possible change in the key assumptions on which the recoverable amount is based would not cause the carrying amount to exceed its recoverable amount.

The Specialty Ingredients business includes the cash-generating units of Consumer Health & Nutrition, Consumer Product Ingredients, Agro Ingredients, Materials & Performance Protection and Wood Protection. These cash-generating units are the combination of the activities acquired through the Arch Chemicals acquisition in 2011, the former Life Science Ingredients activities from Lonza and the InterHealth Nutraceuticals acquisition in 2016. The cash flow projections for 2019–2023 are based on a 4.4% (2017: 4.8%) average sales growth. The cash flow projections beyond the five-year period are based on a 1.3% (2017: 1%) growth rate. A pre-tax discount rate of 7.6% (2017: 8.8%) has been used in discounting the projected cash flows. Management believes that any reasonably possible change in the key assumptions on which the recoverable amount is based would not cause the carrying amount to exceed its recoverable amount.

The Bioscience Solutions / Cell Therapy / Viral Therapeutics businesses include the Cambrex Corporation, acquired in 2007, the amaxa business, acquired in 2008, MODA Technology Partners and Vivante cGMP Solutions, acquired in 2010, Triangle Research Labs, acquired in 2016, as well as PharmaCell, acquired in 2017. The cash flow projections for 2019–2023 are based on an 8.3% (2017: 14.3%) average sales growth. The cash flow projections beyond the five-year period are extrapolated using a 0.5% (2017: 0.5%) growth rate. A pre-tax discount rate of 8.6% (2017: 8.1%) has been used in discounting the projected cash flows. Management believes that any reasonably possible change in the key assumptions on which the recoverable amount is based would not cause the carrying amount to exceed its recoverable amount.

In addition, the following table summarizes the assumptions applied for the other cash-generating units:

in %	2018	2017
Mammalian CGU		
Pre-tax discount rate	8.2	7.6
Sales growth rate during forecast period	5.1	1.4
Sales growth rate after forecast period	0.0	0.0
Consumer Product Ingredients		
Pre-tax discount rate	6.3	n.a.
Sales growth rate during forecast period	4.0	n.a.
Sales growth rate after forecast period	1.0	n.a.
Agro Ingredients CGU		
Pre-tax discount rate	5.5	7.8
Sales growth rate during forecast period	1.7	2.6
Sales growth rate after forecast period	1.0	1.0
Wood Protection CGU		
Pre-tax discount rate	10.1	10.3
Sales growth rate during forecast period	3.0	4.9
Sales growth rate after forecast period	1.0	1.0

Management believes that any reasonably possible change in the key assumptions on which the recoverable amount is based would not cause the carrying amount to exceed its recoverable amount.

Note 7 • Property, Plant and Equipment

Year ended 31 December 2018

million CHF	Notes	Land	Buildings and structures	Production facilities	Construction in progress	Total
Cost						
At 1 January		**96**	**2,023**	**4,588**	**406**	**7,113**
Additions		0	15	93	420	528
Disposals		0	(9)	(216)	0	(225)
Reclassification to asset held for sale[1]	5.2	0	(102)	(83)	(14)	(199)
Transfers / reclassification		3	67	190	(260)	0
Currency translation differences		0	(12)	(34)	(1)	(47)
At 31 December		**99**	**1,982**	**4,538**	**551**	**7,170**
Accumulated depreciation and impairment						
At 1 January		**(3)**	**(974)**	**(2,938)**	**0**	**(3,915)**
Depreciation charge		0	(66)	(267)	0	(333)
Disposals		0	9	209	0	218
Impairment losses	4	0	(67)	(9)	0	(76)
Reclassification to asset held for sale[1]	5.2	0	46	20	0	66
Transfers / reclassification		(1)	1	0	0	0
Currency translation differences		0	2	20	0	22
At 31 December		**(4)**	**(1,049)**	**(2,965)**	**0**	**(4,018)**
Net carrying amount 31 December		**95**	**933**	**1,573**	**551**	**3,152**

1 Includes the Water Care related assets with a net book value of CHF 100 million as well as the building of Lonza's former Guangzhou (CN) site

Year ended 31 December 2017

million CHF	Notes	Land	Buildings and structures	Production facilities	Construction in progress	Total
Cost						
At 1 January		**40**	**1,741**	**3,903**	**374**	**6,058**
Additions		7	37	147	236	427
Guangzhou (CN) land transaction[1]		0	74	0	0	74
Disposals		(2)	0	(58)	0	(60)
Acquisition of subsidiaries		52	134	381	34	601
Transfers / reclassification		0	25	204	(229)	0
Currency translation differences		(1)	12	11	(9)	13
At 31 December		**96**	**2,023**	**4,588**	**406**	**7,113**
Accumulated depreciation and impairment						
At 1 January		**(3)**	**(906)**	**(2,737)**	**0**	**(3,646)**
Depreciation charge		0	(62)	(223)	0	(285)
Disposals		0	0	50	0	50
Impairment losses	4	0	(5)	(16)	0	(21)
Reversal of impairment losses	4	0	1	1	0	2
Currency translation differences		0	(2)	(13)	0	(15)
At 31 December		**(3)**	**(974)**	**(2,938)**	**0**	**(3,915)**
Net carrying amount 31 December		**93**	**1,049**	**1,650**	**406**	**3,198**

Commitments for capital expenditure in property, plant and equipment amounted to CHF 407 million at year-end 2018 (2017: CHF 107 million), mainly related to capital expenditures at the Portsmouth site and for Lonza’s Swiss-based operations. The carrying amount of property, plant and equipment under finance lease contracts at year-end 2018 amounted to CHF 8 million (2017: CHF 9 million). Depreciation relating to property, plant and equipment under finance lease amounted to CHF 0.7 million (2017: CHF 0.7 million). No assets were pledged for security of own liabilities in 2018 and 2017. The Group’s obligation under finance leases is secured by the lessors’ title to the leased assets.

1 Several years ago local government authorities requested Lonza to close its Guangzhou (CN) manufacturing site. In response, Lonza entered into an agreement with a third-party property development company to develop jointly the original land into commercial properties. According to the agreement, Lonza provided the land and the property development company offered the funds and assumed construction responsibilities. In 2017, Lonza obtained its entitled portion of commercial properties based on the agreement. A non-cash gain of the property fair value was recognized in 2017. The fair value of the property was determined by an independent external property valuation specialist

Leases

Lessee

million CHF	2018	2017
Finance lease liabilities – minimum lease payments		
Not later than 1 year	2	2
Later than 1 year and not later than 5 years	5	6
Later than 5 years	8	9
Total future minimum finance lease payments	**15**	**17**
Future finance charges on finance lease payments	(4)	(5)
Present value of minimum finance lease payments	**11**	**12**
Present value of finance lease liabilities		
Not later than 1 year	1	1
Later than 1 year and not later than 5 years	4	4
Later than 5 years	6	7
Present value of minimum finance lease payments	**11**	**12**
Operating lease liabilities – minimum lease payments		
Not later than 1 year	31	36
Later than 1 year and not later than 5 years	97	75
Later than 5 years	121	59
Total future minimum operating lease payments	**249**	**170**

Lonza leases a number of vehicles, buildings, warehouses, factory and office facilities under operating leases. These leases run for periods between 1 and 20 years, all with an option to renew the lease after that date. None of the leases includes contingent rentals.

During the year ended 31 December 2018, CHF 42 million (2017: CHF 29 million) was recognized as an expense in the consolidated income statement in respect of operating leases.

The land and building elements of a lease of land and buildings were considered separately for the purpose of lease classification as outlined in IAS 17.

Lessor

There is an operating lease for which Lonza acts as lessor. This lease falls within the scope of IAS 17 and IFRIC 4 guidance. It consists primarily of a biopharmaceutical manufacturing facility in Visp. The future minimum lease payments under non-cancelable operating leases are zero, because the lease payments are pre-financed by the customer.

Note 8 • Other Non-Current Assets

million CHF	Notes	2018	2017[1]
Contingent consideration from disposal of Peptides business	5.4	31	40
Capitalized contract costs	3	31	31
Investments in associates / joint ventures	9	10	20
Other investments		12	16
Defined benefit pension plan asset	24.1	7	4
Loans and advances		46	5
Other assets		16	23
Total		**153**	**139**

1 Restated to reflect adoption of IFRS 15 (see note 1)

«Loans and advances» includes with CHF 44 million the loan to BioAtrium AG. This company is a strategic partnership between Sanofi and Lonza (see note 9).

Note 9 • Investment in Joint Ventures and Associates

The following table summarizes the carrying amounts of interests in joint ventures and associates, which are accounted for using the equity method.

million CHF	2018	2017
Balance sheet value		
Interests in joint ventures	2	4
Interests in associates	8	16
Total	**10**	**20**
Net income statement effect		
Share of profit / (loss) of joint ventures	(1)	0
Share of profit / (loss) of associates	0	1
Total	**(1)**	**1**

In February 2017 Lonza announced that it had entered into a strategic partnership with Sanofi to build and operate a large-scale mammalian cell culture facility for monoclonal antibody production in Visp (CH). The strategic partnership combines the strong biologics development pipeline of Sanofi with the expertise of Lonza to design, construct, start up and operate a state-of-the-art large-scale mammalian cell culture facility. The total investment of both partners is estimated to be CHF 290 million (EUR 270 million). The facility is expected to be operational by 2020.

Lonza accounts for its share in BioAtrium AG (the entity that was founded for this strategic partnership) as investment in associates in accordance with IAS 28. There has been no significant financial impact on Lonza's 2018 consolidated financial statements, except for the loan that Lonza granted to BioAtrium to commence construction of a production facility.

9.1 Joint Ventures

The Group has interests in three individually immaterial joint ventures. The following table analyzes, in aggregate, the carrying amount and share of profit and other comprehensive income of these joint ventures:

million CHF	2018	2017
Carrying amount of interests in joint ventures	2	4
Share of profit / (loss)	(1)	0
Share of other comprehensive income	0	0

In 2018 the Group did not receive dividends (2017: CHF 1 million) from joint ventures.

9.2 Associates

The Group has interests in six financially immaterial associates (including Lonza's share in BioAtrium AG), of which two investments are classified as held for sale. The following table analyzes, in aggregate, the carrying amount and share of profit and other comprehensive income of these associates:

million CHF	2018	2017
Carrying amount of interests in associates	8	16
Share of profit / (loss)	0	1
Share of other comprehensive income	0	0

In 2018 the Group did not receive dividends (2017: CHF 3 million) from associates.

Note 10 • Inventories

million CHF	2018	2017
Inventories	1,359	1,288
Value adjustments	(109)	(111)
Total	**1,250**	**1,177**

million CHF		2018		2017
Raw materials	25%	315	25%	292
Work in progress	9%	115	6%	67
Finished goods	51%	639	50%	594
Other	14%	181	19%	224
Total	**100%**	**1,250**	**100%**	**1,177**

By operating segments:

million CHF		2018		2017[1]
Pharma & Biotech	65%	816	54%	639
Specialty Ingredients	35%	434	46%	538
Total	**100%**	**1,250**	**100%**	**1,177**

1 Restated following the 2018 integration of the Capsugel segment into Lonza Pharma & Biotech and Lonza Specialty Ingredients.

Inventory Write-Downs

million CHF	Raw materials	Work in progress and finished goods	Other	Total 2018	Total 2017
At 1 January	**14**	**57**	**40**	**111**	**109**
Increase	7	194	4	205	295
Reversal / Utilization of write-downs	(5)	(193)	(3)	(201)	(292)
Reclassification to assets held for sale	0	(2)	(2)	(4)	0
Currency translation differences	0	(2)	0	(2)	(1)
At 31 December	**16**	**54**	**39**	**109**	**111**

The cost of inventories recognized as expenses during the period and included in «Cost of goods sold» amounted to CHF 3,599 million (2017: CHF 3,072 million).

Note 11 • Trade Receivables

million CHF	2018	2017
Receivables from customers	706	848
Allowances for credit losses	(14)	(23)
Total	**692**	**825**

The Group's credit risk is diversified due to the large number of entities comprising the Lonza customer base and the dispersion across many different industries and regions. Management has a credit policy in place and the exposure to credit risk is monitored on an ongoing basis. At 31 December 2018, there were no significant concentrations of credit risk. The maximum exposure to credit risk is equal to the carrying amounts.

Reconciliation of Changes in Allowance Accounts for Credit Losses		
million CHF	2018	2017
Balance at the beginning of the year	**23**	**11**
Write-offs	(5)	(4)
Increase in provision for credit losses	8	25
Disposal provision for credit losses	(10)	(9)
Reclassification to assets held for sale	(2)	0
Balance at the end of the year	**14**	**23**

In general, Lonza does not require collateral in respect of trade and other receivables, but uses credit insurance for country risk where appropriate.

Accounts Receivable Securitization Programs

In 2017 and 2018 Lonza maintained two securitization programs for its US businesses, one with PNC Bank, National Association and another with Wells Fargo Bank, N.A. In October 2018, Lonza did not renew the securitization program with PNC Bank and the contract was terminated.

Under the programs, Lonza sells certain U.S. and Canadian trade accounts receivable to Wells Fargo Bank, N.A. (for the Capsugel business) and used to sell trade accounts receivable to PNC Bank (for the Arch Chemicals business and Lonza Walkersville Inc.) through two wholly owned subsidiaries, Capsugel Funding LLC and Arch Chemicals Receivables LLC.

The amount of receivables that are eligible for funding under the programs is subject to change based upon the level of eligible receivables, with a maximum amount of USD 55 million (2017: USD 105 million) at 31 December 2018.

Under the programs, the payment by PNC Bank and Wells Fargo Bank, N.A. for a portion of the purchase price is deferred until the transferred underlying receivables have been completely settled. Lonza's maximum exposure related to the receivables sold is equal to the deferred purchase price component, which is substantially higher than the average expected credit loss on the receivables. As a result, Lonza continues to recognize all of the transferred receivables in the consolidated balance sheet.

As of 31 December 2018, the consolidated balance sheet includes receivables which Lonza sold to Wells Fargo Bank, N.A. for which it obtained funds of USD 55 million (2017: USD 69 million, including USD 17 million related to the PNC program). These are disclosed as other current liabilities (note 16).

Note 12 • Other Receivables, Prepaid Expenses and Accrued Income

million CHF	Notes	2018	2017
Other receivables		52	67
Prepaid taxes and social security payments		6	5
Prepaid expenses and accrued income		181	88
Derivative financial instruments	29.5	17	12
Total		**256**	**172**

«Other receivables» include accruals and receivables for taxes (other than income taxes).

Note 13 • Cash and Cash Equivalents

million CHF	2018	2017
Cash	401	458
Time deposits	60	21
Total	**461**	**479**

Note 14 • Provisions

million CHF	Environmental	Restructuring	Other	Total
Non-Current Provisions				
At 1 January 2018	**90**	**1**	**10**	**101**
Increase	38	0	6	44
Used	(4)	0	0	(4)
Discount effect	1	0	0	1
Reversed	(1)	0	(2)	(3)
Reclassification (to current provisions)	0	0	(7)	(7)
Currency translation differences	(1)	0	1	0
At 31 December 2018	**122**	**1**	**8**	**131**

million CHF	Environmental	Restructuring	Other	Total
Current Provisions				
At 1 January 2018	**23**	**28**	**18**	**69**
Increase	4	8	10	22
Used	(10)	(15)	(16)	(41)
Reversed	0	0	(2)	(2)
Reclassification (from non-current provisions)	0	0	7	7
Currency translation differences	0	0	1	1
At 31 December 2018	**17**	**21**	**18**	**56**

Environmental

The environmental provision comprises the estimated probable future expenses for environmental remediation and protection of CHF 118 million (2017: CHF 89 million) for the plant in Visp (CH) as well as for various other plants of the acquired legacy Arch Chemicals business. The provision is expected to be utilized within ten years. The legacy Arch related provisions include environmental risks for existing as well as divested plants.

Restructuring

The restructuring provision primarily reflects the expected lease termination costs related to the phasedown of the Hopkinton, MA (USA) site amounting to CHF 9 million (2017: CHF 16 million) as well as ongoing restructuring programs.

Other

Other provisions are predominately associated with customer claims, the asset retirement obligations of the Singapore-based operations, and costs related to the Capsugel integration.

Note 15 • Net Debt

The net debt comprises:

million CHF	Notes	2018	2017
Debt			
Non-current debt		3,621	3,730
Current debt		441	516
Total debt		**4,062**	**4,246**
Loans and advances (floating interest rates)			
Non-current loans and advances		(46)	(5)
Cash and cash equivalents		(461)	(479)
Cash and cash equivalents classified as held for sale	5.2	(21)	0
Total loans and advances and cash and cash equivalents		**(528)**	**(484)**
Net debt		**3,534**	**3,762**

Non-Current Debt				
million CHF		2018		2017
Straight bonds		914		1,213
Syndicated loan (2017–2023)		254		223
Term loans		982		993
German private placement		1,082		1,108
Other long-term debt				
– Banks and other financial institutions	197		0	
– Others	182	379	182	182
Finance lease liabilities		10		11
Total non-current debt		**3,621**		**3,730**

Straight Bonds – Fixed Interest Rates		
million CHF	2018	2017
3.125% CHF 140 million, 2011 / 2018, due 7 December 2018, issued at 100.56%	0	140
2% CHF 200 million, 2012 / 2018, due 11 October 2018, issued at 100.21%	0	200
3% CHF 105 million, 2012 / 2022, due 11 October 2022, issued at 100.74%	105	105
1.75% CHF 300 million, 2013 / 2019, due 10 April 2019, issued at 100.45%	300	299
0.625% CHF 150 million, 2015 / 2020, due 22 September 2020, issued at 100.135%	150	150
1.25% CHF 175 million, 2015 / 2023, due 22 September 2023, issued at 100.133%	175	175
0.125% CHF 250 million, 2016 / 2021, due 1 November 2021, issued at 100.037%	249	249
0.2% CHF 125 million, 2017 / 2021, due 12 July 2021, issued at 100.179%	125	125
0.7% CHF 110 million, 2017 / 2024, due 12 July 2024, issued at 100.222%	110	110
Total including current portion	**1,214**	**1,553**
Less current portion of straight bonds	(300)	(340)
Total non-current straight bonds	**914**	**1,213**

Term Loans

In 2017, Lonza issued term loans of EUR 450 million and USD 489 million tranches carrying floating interest rates and repayable in 2020 and 2022 (EUR 225 million and USD 245 million at the first maturity date), respectively. The net proceeds of the two term loan tranches received in 2017 totaled CHF 955 million.

German Private Placement

- Dual-currency German private placement (Schuldscheindarlehen) of EUR 700 million and USD 200 million tranches carry fixed and floating interest rates (LIBOR / EURIBOR + margin) respectively, and are repayable in 2021 (EUR 325 million), 2022 (USD 150 million), 2023 (EUR 375 million) and 2024 (USD 50 million). The net proceeds of the German private placement tranches in 2017 totaled CHF 986 million.
- Single-tranche German private placement (Schuldscheindarlehen) of USD 100 million carrying floating interest rates (LIBOR + margin) and repayable in 2024. The net proceeds in 2017 amounted to CHF 99 million.

Syndicated Loan

In 2017 Lonza signed a syndicated loan with a consortium of banks on the following terms: Credit facility of CHF 700 million, of which CHF 259 million was used as of 31 December 2018 (2017: CHF 230 million), due 2023, at floating interest rates (based on LIBOR). The syndicated loan agreement contains a financial covenant that is based on Lonza's net debt / EBITDA ratio. The Group was released in 2018 from this covenant as the net debt / EBITDA ratio fell below a defined threshold.

Others

Other non-current debt comprises industrial revenue bonds of USD 187 million issued by governmental institutions in the United States (repayable in 2020, 2022, 2025, 2030 and 2047) and a bank loan of USD 200 million, repayable in 2024. The private placement of senior notes amounting to USD 158 million with certain institutional investors was repaid in 2017.

Acquisition Bridge Financing

The 2017 acquisition of Capsugel was financed with a combination of debt and equity financing. Lonza had committed debt financing (bridge financing) for the full acquisition amount of USD 5.5 billion from Bank of America Merrill Lynch and UBS, of which USD 1,457 million was raised in July 2017. The net proceeds of the bridge financing received in 2017 amounted to CHF 1,380 million after considering up-front fees of CHF 19 million (an additional CHF 18 million was paid in 2016). The bridge financing was fully repaid in 2017 and consequently the related up-front fees of CHF 37 million were recorded in the income statement.

Current Debt

million CHF		2018		2017
Due to banks and other financial institutions		103		119
Others		37		56
Leases		1		1
Non-current debt due within one year				
– Straight bond (2013–2019)	300		0	
– Straight bond (2011–2018)	0		140	
– Straight bond (2012–2018)	0	300	200	340
Total current debt		**441**		**516**

Debt: Movements in Carrying Value of Recognized Liabilities

million CHF	2018	2017
At 1 January	**4,246**	**1,860**
Repayment of straight bond	(340)	0
Proceeds from German private placements	0	1,085
Issue of term loans	0	955
Issue of straight bond	0	235
Issue of syndicated loan	29	225
Repayment of syndicated loan	0	(100)
Proceeds from acquisition bridge financing	0	1,380
Repayment of acquisition bridge financing	0	(1,399)
Repayment of US private placement	0	(156)
Repayment of acquired Capsugel debt	0	(1,952)
Proceeds from borrowings	152	73
Changes from financing cash flows	**(159)**	**346**
Amortization of financing costs and discounts	**6**	**43**
Business combinations	**3**	**1,978**
Reclassification of fees related to Capsugel financing (prepaid in 2016) to debt	**0**	**(26)**
Net foreign currency transaction (gains) / losses	(41)	69
Currency translation effects	7	(24)
Changes in foreign exchanges rates	**(34)**	**45**
At 31 December	**4,062**	**4,246**

Breakdown of Total Debt by Currencies

million CHF	Average interest rate %	%	2018	Average interest rate %	%	2017
CHF	1.32	38	1,531	1.42	45	1,927
EUR	1.04	32	1,295	1.15	32	1,343
USD	3.03	30	1,236	2.57	23	976
Total		**100**	**4,062**		**100**	**4,246**

Note 16 • Other Current Liabilities

million CHF	Notes	2018	2017
Accrued liabilities and other payables		793	622
Derivative financial instruments	29.5	17	20
Liability related to securitization program	11	54	67
Other financial liabilities		238	268
Accrued interest payables		10	15
Total		**1,112**	**992**

Accrued liabilities and other payables primarily consist of accruals and deferred income, including down-payments from customers.

Note 17 • Trade Payables

million CHF	2018	2017
Payable to third parties	428	400
Total	**428**	**400**

Payables to third parties principally comprises amounts outstanding for trade purchases and ongoing costs. The carrying amount of trade payables approximates their fair value.

Note 18 • Material and Energy Costs

million CHF	2018	2017
Material costs	1,725	1,355
Energy costs	97	80
Total	**1,822**	**1,435**

Note 19 • Personnel Expenses

million CHF	Notes	2018	2017
Wages and salaries		1,221	1,026
Operating expenses defined benefit pension plans	24.1	46	47
Other social security contributions		277	213
Other personnel expenses		74	76
Total		**1,618**	**1,362**

Note 20 • Other Operating Income and Expenses

20.1 Other Operating Income

million CHF	2018	2017
Gain from foreign exchange rate differences and other operating derivative instruments	29	1
Research & development tax credits	3	3
Release of provisions	2	8
Gain from land sale transaction Guangzhou (CN)	0	74
Sundry income	16	23
Total	**50**	**109**

20.2 Other Operating Expense

million CHF	Notes	2018	2017
Loss from foreign exchange rate differences and other operating derivative instruments		41	9
Accumulated exchange rate translation reserve losses from sale of Peptides business		0	35
Loss from disposal of property, plant and equipment and other assets		9	9
Increase in provisions		6	17
Impairment of assets	4	35	0
Sundry expense		24	40
Total		**115**	**110**

Note 21 • Financial Results

21.1 Interest and Other Financial Income

million CHF	Notes	2018	[1]2017
Interest income		1	9
Fair value adjustment on Lonza's pre-acquisition investment in Octane	5.1	32	0
Foreign exchange rate differences, including impact from currency related financial derivative instruments		52	0
Favorable impact from fair value adjustment on contingent purchase price consideration	29.6	0	7
Interest related financial derivative instruments		0	14
Total		**85**	**30**

1 Presentation of the table has changed and 2017 comparative information was adjusted accordingly for consistency purposes

21.2 Interest and Other Financial Expenses

million CHF	2018	[1]2017
Interest expenses	(85)	(74)
Amortization of debt fees and discounts	(7)	(43)
Foreign exchange rate differences, including impact from currency related financial derivative instruments	0	(39)
Interest related financial derivative instruments	(13)	0
Net losses on equity investments at fair value through profit or loss	(5)	0
Other financial expenses	(9)	(13)
Total	**(119)**	**(169)**

Interest expenses comprise interest expenses on the Group's debt (refer to note 15), the net defined benefit liabilities (see note 24), the accounts receivable securitization program (see note 11) as well as other interest.

Note 22 • Taxes

22.1 Income Taxes

Major Components of Tax Expenses million CHF	2018	[1]2017
Current taxes	(114)	(152)
Deferred tax expense relating to the origination and reversal of temporary differences	(33)	99
Deferred tax income resulting from tax rate changes	(1)	184
Total	**(148)**	**131**

1 Restated to reflect the adoption of IFRS 15 (see note 1) and classification of the Water Care business as discontinued operation (see note 5.2)

Lonza Group Ltd and the operating company Lonza Ltd are domiciled in Switzerland. The maximum rate of all income taxes on companies domiciled in Switzerland is 8% (2017: 8%) for holding companies and 22% for operating companies in the Canton of Valais (2017: 22%).

Since the Group operates across the world, it is subject to income taxes in several different tax jurisdictions. Lonza uses, as the Group's tax rate, the ordinary tax rate for a legal entity in the Canton of Valais in Switzerland. The Group's effective tax rate for 2018 is 18% (2017: –25%). Capital taxes of CHF 23 million (2017: CHF 19 million) are included in administration and general overheads.

Reconciliation of Tax Expense million CHF	2018	[1]2017
Profit before income taxes	807	535
Tax at the group rate (2018: 22% / 2017: 22%)	176	118
Deviation from average group tax rate	(8)	(84)
Non-deductible expenses	4	3
Tax-free earnings	(25)	(29)
Deferred tax effect from tax rate changes	1	(184)
Changes in prior-year estimates (including valuation allowances)	15	28
Tax on unremitted earnings	(19)	12
Effect of non-recognition of deferred tax assets	3	6
Other	1	(1)
Total	**148**	**(131)**
Deferred tax expenses (charged) / credited directly to equity	**0**	**0**
Current tax expenses (charged) / credited directly to equity	**7**	**(5)**

The components of deferred income tax balances are included in the following captions in the consolidated balance sheet:

Components of Deferred Income Tax Balances				
million CHF		2018		[1]2017
	Assets	Liabilites	Assets	Liabilities
Current provisions	14	30	8	20
Non-current provisions / Employee benefit liabilities	211	72	270	80
Intangible assets	3	747	1	839
Inventories, net	4	46	9	41
Property, plant and equipment	18	214	14	217
Other assets	16	21	32	13
Tax loss carry-forwards and tax credits	182	0	159	0
Netting of deferred tax assets and deferred tax liabilities	(419)	(419)	(450)	(450)
Total	**29**	**711**	**43**	**760**

1 Restated to reflect the adoption of IFRS 15 (see note 1)

The development of deferred tax (expenses) / income can be explained as follows:

million CHF	2018	[1]2017
Deferred tax assets	29	43
Deferred tax liabilities	(711)	(760)
Net deferred tax liability, at 31 December	**(682)**	**(717)**
Less deferred tax liabilities net, at 1 January	717	284
(Increase) / decrease in deferred tax liabilities, net	**35**	**(433)**
Currency translation differences	(18)	36
Acquisition of subsidiaries	35	666
Movements of deferred (tax assets) / liabilities recognized in other comprehensive income	1	50
Deferred tax expense related to discontinued operations	1	(36)
Reclassification from current to deferred taxes	5	0
Reclassification to assets held for sale	(93)	0
(Expense) / income recognized in income statement	**(34)**	**283**

Unrecognized Tax Losses: Expiry		
million CHF	2018	2017
Within 1 year	0	0
From 2 to 5 years	14	11
After 5 years	216	146
Unlimited	335	320
Total	**565**	**477**

In assessing whether it is probable that future taxable profit will be available to utilize these tax loss carry- forwards, management considers whether such benefits are recoverable on the basis of the current situation of the company and the future economic benefits outlined in specific business plans for each relevant subsidiary.

Deferred tax liabilities have not been established for the withholding tax and other taxes that would be payable on the remittance of earnings of foreign subsidiaries, where such amounts are currently regarded as permanently reinvested. The total unremitted earnings of the Group, regarded as permanently reinvested, were CHF 689 million at 31 December 2018 (2017: CHF 416 million).

The 2017 enacted U.S. tax reform legislation (Tax Cuts and Jobs Act «TCJA») includes a provision that requires the U.S. parent company's foreign subsidiaries' unremitted earnings to be subject to an immediate toll tax on the qualifying amount of unremitted earnings (mandatory repatriation transition tax). Previously, these earnings were only taxable upon distribution to the U.S. parent company. As of 31 December 2017 Lonza recorded an estimate of CHF 50 million repatriation tax liability on accumulated post-1986 foreign earnings that was reported in taxes payable. The estimated tax payables for the mandatory repatriation transition tax were considered to be Lonza's best estimate at that point in time, based on information that was readily available as of 31 December 2017, and was based on several assumptions (e.g. earnings and profits in the Group's foreign subsidiaries (including the portion in cash), foreign tax credits and other foreign losses available, and assertions on any remaining outside basis differences as of 31 December 2017). The applicable tax returns for 2017 were completed and filed during 2018 based on additional information gathered, including available interpretation and clarification of the TCJA guidance through legislation, U.S. Treasury actions and other means which resulted in a tax benefit CHF 19 million recorded in 2018.

22.2 Disclosure of Tax Effects on Each Component of Other Comprehensive Income

million CHF			2018			2017
	Before-tax amount	Tax (expense) benefit	Net-of-tax amount	Before-tax amount	Tax (expense) benefit	Net-of-tax amount
Exchange differences on translating foreign operations	(221)	0	(221)	227	(4)	223
Cash flow hedges	(16)	2	(14)	9	(1)	8
Remeasurement of defined-benefit liability	7	(1)	6	119	(50)	69
Other comprehensive income	**(230)**	**1**	**(229)**	**355**	**(55)**	**300**

Note 23 • Research & Development Costs

Research & development (R&D) costs include all primary costs directly related to this function, as well as internal services and imputed depreciation. These costs are incurred for:

- Development of new products and services
- Improvement of existing products and services
- Development of new production processes
- Improvement of existing production processes
- Cost for patents
- Purchase price for product and process know-how to the extent not capitalized

The R&D costs amounted to CHF 160 million (2017: CHF 150 million) and represent the full range of R&D activity. However, the consolidated income statement discloses research & development costs of only CHF 110 million (2017: CHF 95 million), as the remainder of such costs are absorbed in «Cost of goods sold» for R&D products and services sold.

Note 24 • Employee Benefit Liabilities

The tables below reconcile the Group's employee benefit liabilities in the balance sheet as well as the related remeasurement in the statement of other comprehensive income:

million CHF	Notes	2018	2017
Defined benefit pension plans	24.1	475	538
Post-employment medical benefits	24.2	28	36
Non-current vacation accrual (Swiss entities)		3	3
Other employee benefit liabilities		1	1
Total		**507**	**578**

million CHF	Notes	2018	2017
Remeasurement for:			
Defined-benefit pension plans	24.1	(5)	(120)
Post-employment medical benefits	24.2	(2)	1
Total		**(7)**	**(119)**

24.1 Defined-Benefit Pension Plans

The group operates defined-benefit pension plans in various countries, with the major plans being in Switzerland, Great Britain and the United States (as described below). For pension accounting purposes, these plans are considered as defined-benefit plans.

Pension Plan in Switzerland

The Group's Swiss pension plan is governed by the Swiss Federal Law on Occupational Retirement, Survivors and Disability Pension Plans (BVG), and is funded through a legally separate trustee-administered pension fund (Pensionskasse der Lonza). The Board of Trustees is responsible for the investment of the assets, which cannot revert to the Company. The cash funding of these plans, which may from time to time involve special payments, is designed to ensure that present and future contributions should be sufficient to meet future liabilities.

The plan contains a cash balance benefit formula, accounted for as a defined-benefit plan. Employer and employee contributions are defined in the pension fund rules in terms of an age-related sliding scale of percentages of pay. Under Swiss law, the company guarantees the vested benefit amount as confirmed annually to members. Interest may be added to member balances at the discretion of the Board of Trustees. The risks linked to retirement benefits (disability and death) have been reinsured until 31 December 2020. The investment risk is not reinsured.

Retirement benefits are based on the accumulated retirement capital (made up of yearly contributions and the interest thereon), which can either be drawn as a life-long annuity or as a lump-sum payment or a combination of both. The annuity is calculated by multiplying the retirement capital with the applicable conversion rate defined in the fund rules. The Board of Trustees may adjust the annuity at its discretion subject to the plan's funded status including sufficient free funds as determined according to Swiss statutory valuation rules. Retirement benefits and related plan assets of plan participants with a retirement date on or before 31 December 2007 were transferred to an insurance company. The insurance company guarantees these retirement benefits and bears the investment, death and disability risks.

Pension Plan in the UK

The Group operates two major plans in the UK, the Hickson UK Group Pension Scheme and the Lonza Biologics Pension Scheme. Both plans are closed to new entrants. In addition, both schemes are registered under UK legislation, are contracted out of the State Second Pension and are subject to the scheme funding requirements outlined in UK legislation. The plans are managed by corporate trustee bodies, which oversee investment strategy and general regulatory compliance.

The Hickson UK Group Pension Scheme is the defined-benefit pension plan of the UK Arch Chemicals business. Pensions are linked to final salaries and service, and statutory inflation increases apply, except where contractually different. Ongoing contributions are sufficient to fund current accrual rates, and a deficit recovery plan has been in place for a number of years to recover any shortfall in funding.

The Lonza Biologics Pension Scheme provides pensions in retirement and death benefits to members. Pension benefits are linked to a member's final salary at retirement and their length of service.

Pension Plans in the United States

Lonza currently sponsors three qualified defined-benefit pension plans in the United States. All of the defined-benefit pension plans are fully frozen with respect to future benefit accruals (with the exception of a small group of participants). All eligible U.S. employees currently participate in a defined-contribution retirement plan. Pension benefits for the majority of U.S. pension plan participants are generally based on final average pay and credited service as of the date of termination or as of the date benefit accruals were frozen (if earlier), and are payable as a lifetime pension. Participants in the Cash Balance formula under the Pension Plan of Arch Chemicals are covered under an account-based formula that is credited each year with interest based on the yield on ten-year U.S. Treasury securities. Participants in these plans may commence benefit payments upon attainment of normal retirement age or, if applicable, as of an early retirement age (usually age 55) provided the criteria for early retirement have been met as of the participant's termination of employment with the Company. Participants in the Cash Balance plan may elect to commence benefits upon termination of employment either in a single lump sum or as a lifetime annuity, or they may defer payment to a later date.

Pension benefit payments from the qualified pension plans are paid from a trustee-administered fund. The qualified defined-benefit plans, whose assets are held in a master trust, are subject to minimum funding requirements and are subject to further regulation under the Internal Revenue Code and the Employees Retirement Income Security Act of 1974 (ERISA). Responsibility for governance of these qualified plans lies with a committee of pension plan fiduciaries appointed by Lonza. Actuarial valuations are completed each year for each plan to determine the contribution requirement. The minimum annual contribution for each plan is equal to the present value of benefits accrued each year (if any), plus expected administrative expenses of the plan to be paid from the trust, plus a rolling amortization of any prior underfunding. The plan sponsor may elect to contribute more than the minimum, in which case the excess amounts may under certain circumstances be used to offset future funding requirements.

The movement in the net defined-benefit liability over 2017–2018 is as follows:

million CHF		Defined benefit obligation		Fair value of plan assets	Net defined benefit liability
At 1 January 2017		**3,145**		**(2,472)**	**673**
Included in profit or loss					
Current service cost		51		0	51
Gains on settlements		(4)		0	(4)
Interest expense / (income)		55		(42)	13
Included in other comprehensive income					
Actuarial loss / (gain) arising from:					
– Demographic assumptions	(63)		0		
– Financial assumptions	70		0		
– Experience adjustment	40	47	0	0	47
Return on plan assets excluding interest income		0		(167)	(167)
Remeasurements loss / (gain)		47		(167)	(120)
Effect of movements in exchange rates		19		(16)	3
Other					
Contributions paid:					
– Employers		0		(111)	(111)
– Plan participants		20		(20)	0
Benefits paid		(131)		131	0
Business combinations		62		(33)	29
At 31 December 2017		**[1]3,264**		**(2,730)**	**534**
Included in profit or loss					
Current service cost		53		0	53
Past service credit		(7)		0	(7)
Interest expense / (income)		51		(42)	9
Included in other comprehensive income					
Actuarial loss / (gain) arising from:					
– Demographic assumptions	(14)		0		
– Financial assumptions	(121)		0		
– Experience adjustment	32	(103)	0	0	(103)
Return on plan assets excluding interest income		0		98	98
Remeasurements loss / (gain)		(103)		98	(5)
Effect of movements in exchange rates		(33)		28	(5)
Other					
Contributions paid:					
– Employers		0		(109)	(109)
– Plan participants		22		(22)	0
Benefits paid		(111)		111	0
Reclassification to liabilities held for sale		(4)		2	(2)
At 31 December 2018		**[2]3,132**		**(2,664)**	**468**

1 Thereof present value of funded defined-benefit obligation of CHF 3,236 million and present value of unfunded defined-benefit obligation of CHF 28 million

2 Thereof present value of funded defined-benefit obligation of CHF 3,108 million and present value of unfunded defined-benefit obligation of CHF 24 million

The defined-benefit pension plans are reported as follows in the balance sheet:

million CHF	2018 Total	2017 Total
Defined benefit pension plan asset	7	4
Defined benefit pension plan liability	(475)	(538)
Defined benefit pension plan liability classified as held for sale	(2)	0

As a result of a plan amendment of the Swiss plan in 2018 (reduction of the conversion rate), the Group recognized a past service credit of CHF 10 million.

In 2017, Lonza offered a one-time «window» program to deferred vested participants in the U.S. pensions plans, permitting them to elect a one-time immediate lump sum payment (or immediate annuity) of their retirement benefit in lieu of a lifetime annuity beginning at retirement age, which resulted in a gain on settlement of CHF 4 million.

The Group expects to pay CHF 84 million in contributions to defined-benefit pension plans in 2019.

The defined benefit obligation and plan assets are disaggregated by country as follows:

million CHF					2018					2017
	CH	US	UK	Rest of the world	Total	CH	US	UK	Rest of the world	Total
Present value of defined-benefit obligation	1,888	504	664	76	3,132	1,887	551	743	83	3,264
Fair value of plan assets	(1,642)	(397)	(588)	(37)	(2,664)	(1,634)	(417)	(639)	(40)	(2,730)
Total net defined-benefit liability	**246**	**107**	**76**	**39**	**468**	**253**	**134**	**104**	**43**	**534**

The significant actuarial assumptions at the reporting date (expressed as weighted averages) were as follows:

in %			2018			2017
	CH	US	UK	CH	US	UK
Discount rate	0.83	4.20	2.86	0.66	3.50	2.52
Future salary increases	1.00	0.00	3.41	1.00	0.00	3.35
Future pension increases	n.a.	0.00	2.47	n.a.	0.00	2.44

Assumptions regarding future mortality are based on actuarial advice in accordance with published statistics and experience in each territory[1]. These assumptions translate into an average life expectancy in years for a pensioner retiring at age 65:

1 For the Pension Plan in Switzerland BVG 2015 mortality tables were applied.

in years			2018			2017
	CH	US	UK	CH	US	UK
Retiring at the end of the reporting period						
– Male	21.7	21.0	21.4	21.6	21.6	21.6
– Female	23.5	23.0	24.1	23.4	24.2	24.2
Retiring 20 years after the end of the reporting period						
– Male	23.2	22.0	23.1	23.1	23.4	23.4
– Female	25.0	24.0	25.8	24.9	26.0	26.0

The sensitivity of the defined-benefit obligation to changes in the relevant actuarial assumptions is:

effect in million CHF			31 12 2018		31 12 2017
	Change in assumption	Increase	Decrease	Increase	Decrease
Discount rate	0.25%	(113)	121	(125)	134
Future salary	0.25%	13	(13)	17	(17)
Life expectancy	1 year	109	(110)	114	(116)

The above sensitivity analyses are based on a change in an assumption while keeping all other assumptions constant. In practice, this is unlikely to occur, and changes in some of the assumptions may be correlated. When calculating the sensitivity of the defined-benefit obligation to significant actuarial assumptions the same method (present value of the defined-benefit obligation calculated with the projected unit credit method at the end of the reporting period) has been applied as when calculating the pension liability recognized within the balance sheet.

The methods and types of assumptions used in preparing the sensitivity analyses did not change compared with the previous period.

At 31 December the weighted average duration of the defined-benefit obligation for the major plans as well as the Group in total is:

in years	2018	2017
Group	15.2	15.9
CH	15.1	15.3
UK	18.9	19.7
US	11.0	12.2

Plan assets comprise:

million CHF				2018				2017
	Quoted	Unquoted	Total	%	Quoted	Unquoted	Total	%
Equity instruments	652	0	652	24	755	0	755	28
Debt instruments								
– Investment-grade (AAA to BBB)	1,146	0	1,146		1,149	0	1,149	
– Non-investment-grade (below BBB)	37	0	37		33	0	33	
Total debt instruments	1,183	0	1,183	44	1,182	0	1,182	43
Real estate	122	106	228	9	111	95	206	8
Cash and cash equivalents	77	0	77	3	68	0	68	2
Other	496	28	524	20	493	26	519	19
Total	**2,530**	**134**	**2,664**	**100**	**2,609**	**121**	**2,730**	**100**

24.2 Post-Employment Medical Benefits

Lonza's post-employment medical benefit plans are not funded and are provided under defined-benefit plans. They consist of post-retirement healthcare benefits in the United States, such as drug coverage and other medical benefits, as well as limited death benefits.

The post-retirement healthcare plans are not open to new members and grandfathered participants must meet specific age / service requirements to participate.

The movements in the defined-benefit obligation are as follows:

million CHF	2018	2017
At 1 January	**36**	**40**
Included in profit or loss		
Current service cost	1	1
Past service credit	(4)	(3)
Interest expense	1	1
Included in other comprehensive income		
Remeasurements loss / (gain)		
Actuarial loss / (gain) arising from:		
– Demographic assumptions	0	0
– Financial assumptions	(2)	2
– Experience adjustment	0	(1)
Total remeasurements loss / (gain)	(2)	1
Effect of movements in exchange rates	0	(1)
Other		
Contributions paid by:		
– Employers	0	0
– Plan participants	0	0
Benefits paid	(3)	(3)
Reclassification to liabilities held for sale	(1)	0
At 31 December	**28**	**36**

In 2018 and 2017, the plans were amended. Following the elimination of certain benefits, the Group recognized a past service credit of CHF 4 million (2017: CHF 3 million).

The significant actuarial assumptions were as follows:

in %	2018	2017
Discount rate	4.20	3.50
Medical-cost trend rate	7.00	6.20

The sensitivity of the defined-benefit obligation to changes in the relevant actuarial assumptions is:

effect in million CHF		31 12 2018		31 12 2017	
	Change in assumption	Increase	Decrease	Increase	Decrease
Discount rate	0.25%	(1)	1	(1)	1
Medical-cost trend rate	1.00%	1	(1)	3	(3)
Life expectancy	1 year	0	0	1	(1)

For the medical plan the same mortality assumptions are applied as for the pension plans in the United States (see 24.1). In addition, the sensitivity analyses are based on the same methodology as for the pension plans.

Note 25 • Share-Based Payments

Long-Term Incentive Plan (LTIP)

History and Participation

The LTIP is an equity-based plan introduced in 2006 for the Executive Committee and a segment of key employees.

Objective

The LTIP has been designed to align the interests of participants with those of Lonza's shareholders and to serve as a retention tool. LTIP participants are eligible to receive a number of Lonza shares at the end of the vesting period, provided that certain challenging performance conditions are met at the end of the three-year performance period.

Equity Awards

Under the LTIP, participants are awarded the right to receive a number of Lonza registered shares in the future. Depending on the level of the job, the target equity award grant is between 10% and 150% of the annual base salary. The grant is made at target and the payout level can be between 0% and 200%.

The Executive Committee members have a target of 125% and the CEO has a target of 150% of base salary with payout levels between 0% and 200% maximum. Any proration is applied in relation to the entire length of the three-year performance period.

The LTIP plan design and target setting is determined at the beginning of the three-year performance period. For 2018 the plan design included minimum, target and stretch goals. The 2018 LTIP budget value for the Executive Committee was approved as submitted at the AGM 2018 and administered in accordance with this approval.

Vesting will depend on achievement of the performance conditions and cannot exceed the maximum amount (200%) of granted equity awards.

Restriction and Vesting

The central feature of the plan is that key participants will only receive title and ownership of the shares after a three-year vesting period and only if the performance metrics required for vesting are partially or fully met.

Vesting Targets

For the 2018 LTIP the performance metrics were CORE earnings per share (EPS) and return on invested capital (ROIC) with 50% weight for each measure.

With the payout value directly linked to these key financial metrics, these two measures focus on Lonza's financial performance that will drive the valuation of Lonza with investors. The value of the LTIP will be ultimately driven by the share price at the time of payout, further linking the LTIP to the interests of the shareholders.

Overview of Vesting Conditions for LTIP

For the year 2018, the vesting of up to 50% of the granted equity awards depends on growth of CORE EPS achieved during Lonza's three fiscal years and the vesting of up to 50% of the granted equity awards depends on growth of ROIC achieved during Lonza's three fiscal years.

For the year 2017, the vesting of up to 50% of the granted equity awards depends on growth of CORE EPS achieved during Lonza's three fiscal years and the vesting of up to 50% of the granted equity awards depends on growth of CORE RONOA achieved during Lonza's three fiscal years.

Performance Metrics for CORE EPS Approved at AGM 2018 (LTIP 2018):

CORE EPS is an internal, sensitive financial target. For competitive and ad hoc publicity reasons, Lonza does not disclose at this stage the absolute CORE EPS target at year-end 2020. The target was recommended by the Nomination and Compensation Committee and approved by the Board of Directors on 7 March 2018 to approximate the CORE EPS required to meet Lonza's challenging strategic goals and support Lonza's mid-term plan.

- The minimum threshold to be reached at year-end 2020 as determined by the Nomination and Compensation Committee, is approved by the Board of Directors, and is set at a higher level than the CORE EPS basic achieved on 31 December 2017. If the minimum threshold is not reached at year-end 2020, the pay-out will be 0. If the threshold is reached, 50% of the equity awards granted under the CORE EPS vesting condition will vest.
- The threshold was determined to approximate 109% of the CORE EPS of the threshold set for the performance target for the LTIP 2017-2019. If such level of CORE EPS is reached, 50% of the equity awards granted under the CORE EPS vesting conditions will vest.
- If the target is reached, 100% of the equity awards granted under the CORE EPS vesting condition will vest. In the event that the maximum defined target level were to be achieved, 200% of the equity awards granted under the CORE EPS vesting conditions would vest.

- The maximum was determined to be above the prorated 2022 Mid-Term Guidance and is a double-digit figure above the threshold. In the event that the maximum defined target level were to be achieved, 200% of the equity awards granted under the CORE EPS vesting conditions would vest.

Performance Metrics for CORE ROIC Approved at AGM 2018 (LTIP 2018):

- Following consultations during the fall of 2017, investors indicated a preference to replace CORE RONOA, return on net operating assets, with another return measure as long-term performance indicator. This change is driven mainly by Lonza's acquisitions in recent years.
- ROIC, return on invested capital, is defined as adjusted operating profit divided by invested capital. This measures the return the company generates on its investments both organic (e.g. capital projects such as the biological manufacturing in Ibex™ Solutions in Visp, (CH) expansions in single-use bioreactors in Singapore and cell and gene therapy in Portsmouth, NH and Houston, TX (USA) and inorganic (e.g. goodwill and intangibles from acquisitions). The measure is a reflection of the results from decisions taken by EC members and senior management over the course of the LTIP plan period.
- The minimum threshold to be reached at year-end 2020 is determined by the Nomination and Compensation Committee and is approved by the Board of Directors at a higher level than at year-end 2017.
- If the minimum threshold is not reached, 0% of the equity awards granted under the ROIC vesting conditions will vest. In the event that the maximum defined target level were to be achieved, 200% of the equity awards granted under the ROIC vesting conditions would vest.

A potential vesting of 200% of the LTIP equity awards granted would require the achievement at year-end 2020 of CORE EPS and ROIC at challenging levels versus our 2022 Mid-Term Guidance (pro rata). As shown in the past, Lonza has consistently set challenging LTIP targets in application of the pay-for-performance principle. The performance required for maximum vesting for both criteria is set above the prorated mid-term guidance and is a double-digit figure above the threshold performance. Targets and target achievement will be fully disclosed in the 2020 Remuneration Report.

Treatment of LTIP in Change of Control Situations

Under the LTIP rules, if a Change of Control occurs, all unvested granted shares shall immediately vest and the granted price shall be the price at which the shares are sold in the transaction resulting in the Change of Control.

Actual Performance and Payout for the LTIP 2016

The total 2015 LTIP payout equaled 200%.

Performance under the 2016 LTIP exceeded the target for CORE EPS, generating a 200% payout on 50% of the total award. Performance under the 2016 LTIP exceeded also the target for CORE RONOA, generating a 200% payout on the remaining 50% of the total award. The total 2016 LTIP payout equaled 200%. The financial impact of the Capsugel integration was excluded from the CORE results ,which are relevant for the LTIP payout.

2016 LTIP

	Actual performance	Payout in %
CORE EPS (earnings per share)[1]	CHF 11.23	200
CORE RONOA (return on net operating assets)[1]	28.01%	200
Total payout		**200**

1 CORE results exclude exceptional items such as restructuring charges, impairments and amortization of acquisition-related intangible assets, which can differ from year to year. CORE metrics are not IFRS metrics, but are used by management in addition to IFRS to assess performance

Details of Long-Term Incentive Plans

	Grant date	Share price CHF	Granted equity awards CHF	Fair value at grant date CHF	Vesting date
LTIP 2015	01 02 2015	109.20	116,907	12,766,244	31 01 2018
LTIP 2016	01 02 2016	156.30	108,744	24,730,180	31 01 2019
LTIP 2017	01 02 2017	180.90	106,578	17,353,964	31 01 2020
LTIP 2017 Capsugel	27 07 2017	233.10	76,641	16,078,516	31 01 2020
LTIP 2018	01 02 2018	258.90	106,893	29,888,566	31 01 2021

Vesting Conditions at Grant Date

	Market price CHF	Granted equity awards	Fair value of equity awards CHF	Expected EPS / RONOA / ROIC at grant date	Probability minimum targets	Volatility employees	Total probability	Total cost at grant date CHF
LTIP 2015 CORE RONOA	109.20	58,453	109.20	100%	100%	3%	97%	6,191,576
LTIP 2015 CORE EPS	109.20	58,454	109.20	100%	100%	3%	97%	6,191,681
LTIP 2016 CORE RONOA	156.30	54,372	156.30	150%	150%	3%	97%	12,365,090
LTIP 2016 CORE EPS	156.30	54,372	156.30	150%	150%	3%	97%	12,365,090
LTIP 2017 CORE RONOA	180.90	53,289	180.90	100%	100%	10%	90%	8,676,982
LTIP 2017 CORE EPS	180.90	53,289	180.90	100%	100%	10%	90%	8,676,982
LTIP 2017 CAPSUGEL CORE RONOA	233.10	38,321	233.10	100%	100%	10%	90%	8,039,363
LTIP 2017 CAPSUGEL CORE EPS	233.10	38,320	233.10	100%	100%	10%	90%	8,039,153
LTIP 2018 ROIC	258.90	53,447	258.90	120%	100%	10%	90%	14,944,423
LTIP 2018 CORE EPS	258.90	53,446	258.90	120%	100%	10%	90%	14,944,143

Development within 2018 of the LTIP	Equity awards outstanding 01 01 2018	Equity awards granted during 2018	Equity awards forfeited during 2018	Vested equity awards during 2018	Equity awards lapsed during 2018	Equity awards outstanding 31 12 2018
LTIP 2015	103,223	0	0	(103,113)	(110)	0
LTIP 2016	104,667	0	(6,142)	0	0	98,525
LTIP 2017	106,578	0	(3,603)	0	0	102,975
LTIP 2017 Capsugel	76,641	0	(5,847)	0	0	70,794
LTIP 2018	0	106,893	(636)	0	0	106,257
Total equity awards	**391,109**	**106,893**	**(16,228)**	**(103,113)**	**(110)**	**378,551**

Development within 2017 of the LTIP	Equity awards outstanding 01 01 2017	Equity awards granted during 2017	Equity awards forfeited during 2017	Vested equity awards during 2017	Equity awards lapsed during 2017	Equity awards outstanding 31 12 2017
LTIP 2014	124,680	0	0	(108,682)	(15,998)	0
LTIP 2015	114,909	0	(11,686)	0	0	103,223
LTIP 2016	108,744	3,051	(7,128)	0	0	104,667
LTIP 2017	0	106,578	0	0	0	106,578
LTIP 2017 Capsugel	0	76,641	0	0	0	76,641
Total equity awards	**348,333**	**186,270**	**(18,814)**	**(108,682)**	**(15,998)**	**391,109**

The estimated fair value of the granted equity awards in 2018 was CHF 279.61 (2017: CHF 182.47). The weighted average share price of the vested shares in 2018 was CHF 109.20 (2017: CHF 91.15). The outstanding granted equity awards on 31 December 2018 had a weighted average share price of CHF 221.20 (2017: CHF 175.16) and a remaining weighted average contractual life of 19 months (2017: 15 months). The costs were calculated using the market price at grant date, including probabilities as per conditions of vesting. The amounts for equity awards are expensed on a straight-line basis over the vesting period, based on estimates of equity awards that will eventually vest.

Extended Short-Term Incentive Plan (E-STIP)

Relationship to STIP

For the year 2014, the company provided the members of the Executive Committee and Senior Management with Short-Term Incentive Plans, of which two-thirds is paid in cash (Cash STIP) and one-third in restriced share units (RSUs) (E-STIP) which vest after three years. Performance metrics are defined for each financial year; achievement determines the payout of STIP. The performance metrics for the STIP (Cash STIP and E-STIP) are the same.

E-STIP	
Targeted E-STIP amount as % of base salary	– 26.7% for the Chief Executive Officer – 25% for other Executive Committee members – 10% to 20 % for Senior Management
E-STIP targets weighting	– 50% CORE EBIT (financial) – 15% Lonza sales (financial) – 15% operational free cash flow (financial) – 20% personal targets are linked back to the financial targets (10% weighting for CORE EBIT, 5% weighting for sales and 5% weighting for operational free cash flow)
Maximum potential payout	Depending on the financial results achieved, the Cash STIP payout may range between 0% and 200% for the financial targets and 0% and 150% for personal targets. Total maximum payout opportunity is 190% (80% financial × 200% + 20% personal × 150% = 190%)

Alignment on Share Price

The value of the plan is strongly dependent on Lonza's future share price, thereby further reinforcing the link to shareholders' interests. The E-STIP is awarded in the form of RSUs, which are subject to a three-year vesting requirement.

Grant Timing

The grant of the RSUs under the E-STIP 2014 took place in April 2015 following shareholder approval at the AGM (E-STIP 2013 on 31 March 2014), on which date the number of RSUs was determined based on the closing stock price of the last business day in March. These RSUs vest after three years.

Dividend and Voting Rights

The E-STIP RSUs, do not qualify for dividends and voting rights until vested.

Treatment of E-STIP RSUs in Change of Control Situation

Under the outstanding E-STIP plan rules, if a change of control occurs, all unvested RSUs shall immediately vest and the granted price shall be the price at which the shares are sold in the transaction resulting in the change of control.

Non-Vested RSUs	Grant date	Share price CHF	Granted share units	Vesting date
E-STIP 2014	31 03 2015	121.50	20,418	31 03 2018

Development Within 2018 of E-STIP	Share units outstanding 01 01 2018	Share units granted during 2018	Share units forfeited during 2018	Share units vested during 2018	Share units lapsed during 2018	Share units outstanding 31 12 2018
E-STIP 2014	17,465	0	0	(17,103)	(362)	0
Total	**17,465**	**0**	**0**	**(17,103)**	**(362)**	**0**

Development Within 2017 of E-STIP	Share units outstanding 01 01 2017	Share units granted during 2017	Share units forfeited during 2017	Share units vested during 2017	Share units lapsed during 2017	Share units outstanding 31 12 2017
E-STIP 2013	16,919	0	0	(16,379)	(540)	0
E-STIP 2014	18,957	0	(892)	(600)	0	17,465
Total	**35,876**	**0**	**(892)**	**(16,979)**	**(540)**	**17,465**

No RSUs were granted in 2018. The weighted average share price of the vested share unit in 2018 was CHF 121.50 (2017: CHF 91.26). No outstanding share units on 31 December 2018.

Fair Value at Grant Date	
CHF	
E-STIP 2014	2,406,363

Compensation of the Board of Directors

Objective and Benchmarks

The 2017 benchmark data that the NCC reviewed and applied for the Board of Directors' compensation assessment was based on Swiss companies (various sectors) that are comparable in type of business, complexity, size and global presence to Lonza. Lonza's objective is to pay the members of the Board of Directors at the median of this benchmark group in accordance with their respective duties and responsibilities. The NCC and Board of Directors amended in 2017 the peer group to reflect Lonza's inclusion in the SMI (Swiss Market Index for the Twenty Largest Listed Swiss Companies). The amended peer group more directly reflects our strategic business direction along the healthcare continuum as well as the transformational organic and inorganic growth of the Company.

For the period from the AGM 2018 to the AGM 2019, the members of the Board of Directors receive fixed gross compensation for Board of Directors membership and additional compensation for committee chairperson and committee memberships as described in the table below.

Compensation Board of Directors AGM 2018 to 2019[1]

CHF	Annual fee	Additional committee membership fee	Additional committee chairperson fee
Board of Directors member	200,000	40,000	80,000
Chairperson of the Board of Directors	600,000		

1 Refer to section 3.3 of the Remuneration Report regarding total compensation (including national employer social contributions) provided to the Board of Directors in the 2018 financial year. The table above represents the period from AGM 2018 to AGM 2019 and does not include social contributions of the employer.

The compensation of the Chairperson of the Board of Directors includes his remuneration as a member of the Innovation and Technology Committee of the Board of Directors.

The total compensation of the committee chairpersons amounts to CHF 280,000 and includes the committee membership fee.

Board of Directors' compensation for 2018 is paid quarterly; 50% of the compensation is paid in cash and 50% in Lonza restricted shares. The number of shares granted for Board of Directors' compensation is based on the average closing share price of the last five business days of each quarter. Share restrictions lapse after three years from the grant date. Shares are eligible for a dividend. This structure of Board of Directors compensation is closely aligned with our shareholders' interests.

The members of the Board of Directors do not receive variable compensation. The members of the Board of Directors are reimbursed for travel and other related expenses associated with their responsibilities as members of the Board of Directors of Lonza.

Development of Compensation for Board of Directors in 2018	Grant date	Total number of shares	Share price CHF	Fair values of shares CHF	[1]Cash CHF	Total CHF	Blocked until
	31 03 2018	1,537	225.84	347,116	348,750	695,866	31 03 2021
	30 06 2018	1,368	262.58	359,209	360,000	719,209	30 06 2021
	30 09 2018	1,091	329.54	359,528	360,000	719,528	30 09 2021
	31 12 2018	1,369	261.62	358,158	360,000	718,158	31 12 2021
Total		**5,365**	**265.43**	**1,424,011**	**1,428,750**	**2,852,761**	

1 Excluding social security and withholding tax

The amount of CHF 2,862,338 was recognized as an expense in the year 2018.

Development of Compensation for Board of Directors in 2017	Grant date	Total number of shares	Share price CHF	Fair values of shares CHF	[1]Cash CHF	Total CHF	Blocked until
	31 03 2017	1,832	185.72	340,239	341,250	681,489	31 03 2020
	30 06 2017	1,679	207.06	347,654	348,750	696,404	30 06 2020
	30 09 2017	1,380	252.04	347,815	348,750	696,565	30 09 2020
	31 12 2017	1,325	262.68	348,051	348,750	696,801	31 12 2020
Total		**6,216**	**222.61**	**1,383,759**	**1,387,500**	**2,771,259**	

The amount of CHF 2,771,259 was recognized as an expense in the year 2017.

Development of Compensation for Board of Directors in 2016	Grant date	Total number of shares	Share price CHF	Fair values of shares CHF	[1]Cash CHF	Total CHF	Blocked until
	31 03 2016	1,930	160.98	310,690	311,250	621,940	31 03 2019
	30 06 2016	2,149	158.38	340,359	341,250	681,609	30 06 2019
	30 09 2016	1,847	184.14	340,107	341,250	681,357	30 09 2019
	31 12 2016	1,937	175.48	339,905	341,250	681,155	31 12 2019
Total		**7,863**	**169.28**	**1,331,061**	**1,335,000**	**2,666,061**	

The amount of CHF 2,666,061 was recognized as an expense in the year 2016.

Development of Compensation for Board of Directors in 2015	Grant date	Total number of shares	Share price CHF	Fair values of shares CHF	Cash[1] CHF	Total CHF	Blocked until
	31 03 2015	2,600	122.08	317,408	311,250	628,658	31 03 2018
	30 06 2015	2,316	126.96	294,039	311,250	605,289	30 06 2018
	30 09 2015	2,409	128.86	310,424	311,250	621,674	30 09 2018
	31 12 2015	1,939	160.32	310,860	311,250	622,110	31 12 2018
Total		**9,264**	**133.07**	**1,232,731**	**1,245,000**	**2,477,731**	

1 Excluding social security and withholding tax

The amount of CHF 2,477,731 was recognized as an expense in the year 2015.

Recognition in the Consolidated Financial Statements

All of the equity-settled share-based payments had an impact on the 2018 «Profit before income taxes» amounting to an expense of CHF 29 million (2017: CHF 29 million).

Note 26 • Changes in Shares and Share Capital Movements

effect in million CHF	31 12 2018	Change in year	31 12 2017	Change in year	31 12 2016
Total number of shares	**74,468,752**	**0**	**74,468,752**	**21,548,612**	**52,920,140**
Treasury shares					
Free shares	(222,595)	3,325	(225,920)	(97,029)	(128,891)
Total treasury shares	**(222,595)**	**3,325**	**(225,920)**	**(97,029)**	**(128,891)**
Total shares ranking for dividend at 31 December	**74,246,157**	**3,325**	**74,242,832**	**21,451,583**	**52,791,249**
Share capital movements					
Share capital in CHF	**74,468,752**	**0**	**74,468,752**	**21,548,612**	**52,920,140**

The share capital on 31 December 2018 comprised 74,468,752 registered shares (2017: 74,468,752) with a par value of CHF 1 each, amounting to CHF 74,468,752 (2017: CHF 74,468,752).

In February 2017 Lonza Group Ltd issued 5 million new shares (from Lonza Group Ltd's authorized capital) by way of an accelerated book building procedure with selected investors in Switzerland (private placement) and outside of Switzerland to institutional investors and qualified institutional buyers.

On 25 April 2017 the Annual General Meeting of Lonza Group Ltd approved an ordinary capital increase by the issuance of up to 22,000,000 fully paid-in registered shares by way of a rights offering and authorized the Board of Directors to determine the final number of offered shares to be newly issued and the offer price per offered share. The Board of Directors decided to offer 16,548,612 newly issued shares with a nominal value of CHF 1 each at an offer price of CHF 136 per share.

The total gross proceeds of CHF 3.123 billion, net of certain costs and expenses associated with the capital increases (CHF 99 million), resulting in net proceeds of CHF 3.024 billion, were used to partially finance the acquisition of Capsugel S.A.

Contingent and Authorized Capital

Contingent Capital: The share capital of Lonza Group Ltd may be increased through the issuance of a maximum of 7,500,000 fully paid-in registered shares with a par value of CHF 1 each up to a maximum aggregate amount of CHF 7,500,000.

Authorized Capital: The Board of Directors shall be authorized to increase, at any time until 25 April 2019, the share capital of Lonza Group Ltd through the issuance of a maximum of 7,500,000 fully paid-in registered shares with a par value of CHF 1 each up to a maximum aggregate amount of CHF 7,500,000. The capital increases in the form of contingent capital and authorized capital may increase the share capital of Lonza Group Ltd by a maximum aggregate amount of CHF 7,500,000. The details and conditions are set out in Articles 4^{bis} to 4^{quater} of the Company’s Articles of Association.

At 31 December 2018, Lonza Group Ltd had a fully paid-in registered capital of CHF 74,468,752 and a contingent capital of CHF 7,500,000. Reserves in the amount of CHF 26,460,070 (2017: CHF 26,460,070) included in the financial statements of the parent company cannot be distributed.

Dividend

On 4 May 2018, at the Annual General Meeting, shareholders approved the distribution of a dividend of CHF 2.75 per share in respect of the 2017 financial year (financial year 2016: CHF 2.75). The dividend distribution totaled CHF 205 million (2017: CHF 159 million).

A dividend payment per share of CHF 2.75 (2017: CHF 2.75) is proposed by the Board of Directors to be made after the 31 December 2018 balance sheet date, subject to approval by the shareholders at the Annual General Meeting on 18 April 2019.

Note 27 • Earnings Per Share

million CHF	2018	2017
Weighted average number of outstanding shares (basic)		
Weighted average number of outstanding shares	74,408,243	67,878,060
Weighted average number of outstanding shares (diluted)		
Weighted average number of outstanding shares	74,408,243	67,878,060
– Adjustments for dilutive share units and shares	314,902	582,174
Weighted average number of shares for diluted earnings per share	74,723,145	68,460,234

million CHF			2018			2017
	Continuing operations	Discountinued operations	Total	Continuing operations	Discountinued operations	Total
Profit for the period (equity holders of the parent)	655	(96)	559	664	43	707
– Impact from dilution	0	0	0	0	0	0
Diluted profit for the period	655	(96)	559	664	43	707
Basic earnings per share in CHF	**8.80**	**(1.29)**	**7.51**	**9.78**	**0.64**	**10.42**
Diluted earnings per share in CHF	**8.77**	**(1.29)**	**7.48**	**9.70**	**0.63**	**10.33**
Dividends paid for the period			**205**			**159**
Dividends per share for the period in CHF			**2.75**			**2.75**
Dividends declared after the balance sheet date			**204**			**204**
Dividends per share declared after the balance sheet date in CHF			**2.75**			**2.75**

The nominal amount of Lonza Group Ltd's issued share capital increased from CHF 52,920,140 as of 31 December 2016 to CHF 74,468,752 as of 31 December 2017. The 2017 weighted average number of shares considered the additional shares only for the period subsequent to their issuance.

Note 28 • Related Parties

Identity of Related Parties

The Group has a related-party relationship with associates, joint ventures (see note 9), pension and other post-retirement plans (see note 24) as well as with the Board of Directors and the members of the Executive Committee.

Transactions with Key Management Personnel

Board of Directors

In 2018 payments to acting members of the Board of Directors of Lonza Group Ltd totaled CHF 3.034 million[1] (2017: CHF 2.884 million[1]), 46.93% (2017: 47.99%) of which was received in the form of shares. The Director fees are paid 50% in cash and 50% in shares; the value of the employer's social security contributions is added to the cash payments. The value of the granted shares is determined at the relevant market price at grant date. The shares vest three years after the date of grant and are eligible for a dividend. Members of the Board of Directors and their immediate relatives control 62,245 (2017: 166,736) or 0.08% (2017: 0.22%) of the voting shares of Lonza Group Ltd. None of the Directors owns shares in the Group's subsidiaries or associates.

1 Including social security and withholding tax

Executive Committee Compensation

The acting members of the Executive Committee received, for their contributions and time served in 2018, CHF 10.502 million[1] (2017: CHF 9.511 million[1]) in cash and additional benefits. Share-based compensation includes 18,925 LTIP shares granted (2017: 17,805 shares), the value of share-based STIP payments, equivalent to a total value of CHF 4.900 million (2017: CHF 4.459 million). No termination benefits were paid out in 2017 or 2018.

The compensation for the Board of Directors and the Executive Committee was as follows:

million CHF	2018	2017
Short-term benefits[2]	10.062	9.469
Post-employment benefits and other benefits[3]	2.051	1.542
Share-based payments	6.324	5.843
Total	**18.437**	**16.854**

2 Including incentive payout in March of the following year
3 Including contribution for social security and pension fund

The remuneration is included in «Personnel expenses» (see note 19). For additional information please refer to the 2018 Lonza Remuneration Report.

Note 29 • Financial Risk Management

29.1 Overall Risk Management Policy

Lonza is exposed in particular to credit and liquidity risk, as well as to risks from movements in foreign currency exchange rates, interest rates and market prices that affect its assets, liabilities, and forecasted transactions.

Lonza's overall risk management policy aims to limit these risks through operational and finance activities.

The Board of Directors has overall responsibility for the establishment and oversight of Lonza's risk management framework. Financial risk management is carried out by a central treasury department (Group Treasury). Group Treasury is responsible for implementing the policy, and identifies, evaluates and hedges financial risks in close cooperation with Lonza's business units. Group Treasury also has the sole responsibility for carrying out foreign exchange transactions and executing financial derivative transactions with third parties.

Lonza's risk management policies are established to identify and analyze the risks faced by Lonza, to set appropriate risk limits and controls, and to monitor risks and adherence to limits. Risk management policies and systems are reviewed regularly to reflect changes in market conditions and Lonza's activities.

The Lonza Audit Committee oversees how management monitors compliance with Lonza's risk management policies and procedures and reviews the adequacy of the risk management framework in relation to the risks faced by Lonza. The Lonza Audit Committee is assisted in its oversight role by Internal Audit (Lonza Audit Services). Internal Audit undertakes both regular and ad hoc reviews of risk management controls and procedures, the results of which are reported to the Audit Committee.

29.2 Credit Risk

Credit risk is the risk of financial loss to Lonza if a customer or counterparty to a financial instrument fails to meet its contractual obligations, and mainly arises from Lonza's receivables from customers.

Accounts Receivable

Lonza's exposure to credit risk is influenced mainly by the individual characteristics of each customer. Risk control assesses the credit quality of the customer, taking into account its financial position, past experience and other factors. In monitoring customer credit risk, customers are grouped according to their credit characteristics, including geographic location, industry, and existence of previous financial difficulties.

Purchase limits are established for each customer, which are reviewed regularly. For customers domiciled in specific countries with high risk, Lonza has credit risk insurance covering the maximum exposure. The maximum credit risk is equal to the carrying amount of the respective assets. There are no commitments that could increase this exposure to more than the carrying amounts. In general, Lonza does not require collateral in respect of trade and other receivables, but uses credit insurance for country risk where appropriate.

Lonza has a history of low credit losses on accounts receivable. Credit losses that occurred in the past were primarily related to very few single customers. Furthermore, none of Lonza's businesses had a heightened exposure to credit losses in the past and based on Lonza's best estimate this is not expected to change in the foreseeable future.

Consequently, the bad debt allowance (as disclosed in note 11) represents primarily the credit risk of specific customers.

Ageing of Trade Receivables

million CHF	2018	2017
Not past due	521	644
Past due 1–30 days	113	124
Past due 31–120 days	53	51
Past due more than 120 days	19	29
Total	**706**	**848**

Financial Instruments and Cash Deposits

Credit risk from balances with banks and financial institutions is managed by the Group's treasury department. Counterparty credit ratings are reviewed regularly. The carrying amount of financial assets represents the maximum credit exposure.

The maximum exposure to credit risk at the reporting date was as follows:

million CHF	Notes	2018	2017
Financial assets at amortized cost			
Trade receivables, net		692	825
Other receivables		52	67
Accrued income	3	159	63
Non-current loans and advances	8	46	5
Cash and cash equivalents		461	479
Total financial assets at amortized cost		**1,410**	**1,439**
Financial assets at fair value			
Derivative financial instruments			
– Currency-related instruments[1]		16	5
– Interest-related instruments[1]		1	3
– Commodity-related instruments[1]		0	4
Contingent consideration from sale of business		31	40
Total financial assets at fair value		**48**	**52**
Total		**1,458**	**1,491**

1 Included in «Other receivables, prepaid expenses and accrued income» (see note 12)

29.3 Liquidity Risk

Liquidity risk is the risk that Lonza will not be able to meet its financial obligations as they fall due. Lonza's approach to managing liquidity is to ensure that it will always have sufficient liquidity to meet its liabilities when due, under both normal and stressed conditions, without incurring unacceptable losses or risking damage to Lonza's reputation. Group Treasury maintains flexibility in funding also using bilateral and syndicated credit lines. Lonza has concluded the following lines of credit: Committed credit lines of CHF 1,137 million (CHF 536 million used as of 31 December 2018), which are committed for up to five years and uncommitted credit lines of CHF 60 million (CHF 0 used as of 31 December 2018).

The table below analyzes the Group's financial liabilities and derivative financial liabilities in relevant maturity groupings, based on the remaining period at the balance sheet date to the contractual maturity date. The amounts disclosed in the table are the contractual undiscounted cash flows, including interest payments. Balances due within 12 months are equal to their carrying balances, as the impact of discounting is not significant.

Year ended 31 December 2018

million CHF	Carrying amount	[1]Contracual cash flows	Between 0 and 6 months	Between 7 and 12 months	Between 1 and 2 years	Between 2 and 3 years	Between 3 and 5 years	Over 5 years
Straight bond (2012–2022)	105	118	0	3	3	3	109	0
Straight bond (2013–2019)	300	305	305	0	0	0	0	0
Straight bond (2015–2020)	150	152	0	1	151	0	0	0
Straight bond (2015–2023)	175	186	0	2	2	2	180	0
Straight bond (2016–2021)	249	251	0	0	0	251	0	0
Straight bond (2017–2021)	125	126	0	0	0	126	0	0
Straight bond (2017–2024)	110	115	0	1	1	1	2	110
Syndicated loan (2017–2023)	254	269	1	1	3	3	261	0
German private placement	1,082	1,176	7	14	21	386	595	153
Term loans	982	1,045	11	11	511	12	500	0
Other debt due to banks and financial institutions	300	338	107	4	7	7	14	199
Other debt due to others	219	289	40	3	39	4	30	173
Finance lease liabilities	11	15	1	1	1	1	3	8
Total debt	**4,062**	**4,385**	**472**	**41**	**739**	**796**	**1,694**	**643**
Trade payables	428	428	428	0	0	0	0	0
Other current liabilities	618	618	618	0	0	0	0	0
Derivative financial instruments	17	17	7	4	0	0	3	3
Contingent consideration	30	30	0	2	5	4	18	1
Total financial liabilities	**5,155**	**5,478**	**1,525**	**47**	**744**	**800**	**1,715**	**647**

1 Including interest payments

Year ended 31 December 2017 million CHF	Carrying amount	[1]Contracual cash flows	Between 0 and 6 months	Between 7 and 12 months	Between 1 and 2 years	Between 2 and 3 years	Between 3 and 5 years	Over 5 years
Straight bond (2011–2018)	140	144	0	144	0	0	0	0
Straight bond (2012–2018)	200	204	0	204	0	0	0	0
Straight bond (2012–2022)	105	121	0	3	3	3	112	0
Straight bond (2013–2019)	299	311	5	0	306	0	0	0
Straight bond (2015–2020)	150	153	0	1	1	151	0	0
Straight bond (2015–2023)	175	188	0	2	2	2	4	178
Straight bond (2016–2021)	249	251	0	0	0	0	251	0
Straight bond (2017–2021)	125	126	0	0	0	0	126	0
Straight bond (2017–2024)	110	116	0	1	1	1	2	111
Syndicated loan (2017–2022)	223	242	1	1	2	2	236	0
German private placement	1,108	1,234	8	15	23	23	565	600
Term loans	993	1,088	12	12	24	519	521	0
Other debt due to banks and financial institutions	119	119	119	0	0	0	0	0
Other debt due to others	238	305	58	3	5	38	30	171
Finance lease liabilities	12	16	1	1	1	1	3	9
Total debt	**4,246**	**4,618**	**204**	**387**	**368**	**740**	**1,850**	**1,069**
Trade payables	400	400	400	0	0	0	0	0
Other current liabilities	595	595	595	0	0	0	0	0
Derivative financial instruments	20	20	7	13	0	0	0	0
Total financial liabilities	**5,261**	**5,633**	**1,206**	**400**	**368**	**740**	**1,850**	**1,069**

1 Including interest payments

29.4 Market Risk

Market risk is the risk that changes in market prices will affect Lonza's income or the value of its holdings of financial instruments. Lonza is exposed to market risk from changes in currency exchange and interest rates and commodities. The objective of market risk management is to manage and control market risk exposures within acceptable parameters, while optimizing the return on risk. Lonza has established a treasury policy of which the objective is to reduce the volatility relating to these exposures. Lonza enters into various derivative transactions based on Lonza's treasury policy that establishes guidelines in areas such as counterparty exposure and hedging practices. Counterparties to agreements are major international financial institutions with at least investment grade rating. Positions are monitored using techniques such as market value and sensitivity analyses. All such transactions are carried out within the guidelines set by the Audit Committee.

Foreign Exchange Risk

The Group operates across the world and is exposed to movements in foreign currencies affecting the Group financial result and the value of Group equity. Foreign exchange risk arises because the amount of local currency paid or received for transactions denominated in foreign currencies may vary due to changes in exchange rates («transaction exposures») and because the foreign currency denominated financial statements of the Group's foreign subsidiaries may vary upon consolidation into the Swiss-franc-denominated Group Financial Statements («translation exposures»). Foreign exchange risks arise primarily on transactions that are denominated in USD, EUR and GBP.

In managing its exposure regarding the fluctuation in foreign currency exchange rates, Lonza has entered into a variety of currency swaps and forward contracts. These agreements generally include the exchange of one currency against another currency at a future date. Lonza adopts a policy of considering hedging for all the committed contractual exposure. The planned exposure is hedged within certain ranges. Hedge ratios are determined by the risk committee and depend on market expectation, risk bearing ability and risk appetite.

The table below shows the impact on post-tax profit if at 31 December a currency had strengthened (+) or weakened (–) versus the Swiss franc, with all other variables held constant as a result of the currency exposures outlined in the tables below:

million CHF		Post-tax profit 2018		Post-tax profit 2017		Other comprehensive income 2018		Other comprehensive income 2017	
	Sensitivity	+	–	+	–	+	–	+	–
USD	+/–10%	8.7	(8.7)	261.5	(261.5)	0	0	0	0
EUR	+/–10%	(5.5)	5.5	(39.0)	39.0	0	0	0	0
GBP	+/–10%	3.3	(3.3)	2.9	(2.9)	0	0	0	0

The summary quantitative data relating to the Group's exposure to currency risks as reported to the management of the Group is as follows:

Year ended 31 December 2018

million CHF	USD	GBP	EUR	SGD	DKK	Other	Total
Other investments	10	0	0	0	0	1	11
Non-current financial assets	0	0	31	0	0	0	31
Trade receivables, net	113	35	55	0	2	1	206
Other receivables, prepaid expenses and accrued income	5	20	3	4	0	1	33
Cash and cash equivalents	100	15	31	3	1	22	172
Assets held for sale	2	0	2	0	0	0	4
Non-current debt	(841)	0	(1,296)	0	0	0	(2,137)
Other non-current liabilities	(1)	0	0	(5)	0	(1)	(7)
Other current liabilities	(27)	(1)	(2)	(14)	0	(2)	(46)
Trade payables	(30)	(2)	(32)	(14)	0	(3)	(81)
Group internal loans	1,307	0	1,049	0	0	0	2,356
Gross balance sheet exposure	**638**	**67**	**(159)**	**(26)**	**3**	**19**	**542**
Currency-related instruments	(531)	(27)	92	0	0	0	(466)
Net exposure	**107**	**40**	**(67)**	**(26)**	**3**	**19**	**76**

Year ended 31 December 2017

million CHF	USD	GBP	EUR	SGD	DKK	Other	Total
Non-current financial assets	0	0	42	0	0	0	42
Trade receivables, net	120	37	53	2	3	1	216
Other receivables, prepaid expenses and accrued income	2	12	12	1	0	2	29
Current advances and financial assets	5	0	0	0	0	0	5
Cash and cash equivalents	146	5	27	1	0	2	181
Non-current debt	(770)	0	(1,344)	0	0	0	(2,114)
Other non-current liabilities	(2)	0	0	(4)	0	0	(6)
Other current liabilities	(56)	0	(17)	(10)	0	(3)	(86)
Trade payables	(26)	(2)	(36)	(13)	0	(4)	(81)
Group internal loans	3,703	0	743	0	0	0	4,446
Gross balance sheet exposure	**3,122**	**52**	**(520)**	**(23)**	**3**	**(2)**	**2,632**
Currency-related instruments	29	(17)	50	0	0	0	62
Net exposure	**3,151**	**35**	**(470)**	**(23)**	**3**	**(2)**	**2,694**

The following exchange rates were applied during the year:

Balance Sheet Year-End Rates		2018	2017
EU	Euro	1.1267	1.1683
USA	Dollar	0.9852	0.9758
Great Britain	Pound sterling	1.2546	1.3178
Singapore	Singapore dollar	0.7230	0.7305
China	Renminbi	0.1432	0.1499

Income Statement Year-Average Rates		2018	2017
EU	Euro	1.1550	1.1119
USA	Dollar	0.9786	0.9846
Great Britain	Pound sterling	1.3057	1.2686
Singapore	Singapore dollar	0.7253	0.7132
China	Renminbi	0.1480	0.1458

Interest Rate

Risk arises from movements in interest rates which could affect the Group financial result or the value of Group equity. Changes in interest rates may cause variations in interest income and expense. In addition, they may affect the market value of certain financial assets, liabilities and hedging instruments. The primary objective of the Group's interest rate management is to protect the net interest result.

Lonza's policy is to manage interest cost using a mix of fixed and variable rate debt. Group policy is to maintain at least 50% of its borrowings in fixed-rate instruments. In order to manage this mix in a cost-efficient manner, Lonza enters into interest rate swaps and cross-currency interest rate swaps to exchange at specified intervals, the difference between fixed and variable interest amounts calculated by reference to a corresponding notional principal amount. Lonza adopts a policy of having one-third of the debt on a short-term basis and two-thirds of the debt on a long-term basis. The mix between floating and fixed rates depends on the market view of Lonza.

Lonza's exposure to interest rate risk was as follows:

million CHF	Notes	2018	2017
Net debt	15	3,534	3,762
Net debt at fixed interest rates[1]		(2,523)	(2,396)
Interest risk exposure		1,011	1,366

1 Including effects from cross currency interest rate swaps and pension fund

If the interest rates had increased / decreased by 1% in 2018, with all other variables held constant, post-tax profit would have been CHF 8.3 million lower / higher (2017: CHF 11.3 million lower / higher).

Commodity Price Risk

Lonza needs liquefied petroleum gas (LPG) as raw material for a cracker in Visp. Butane, naphtha or propane can be used as feedstock for the cracker. The raw material ultimately used depends on its availability and specifications. The annual demand is approximately 110,000 metric tons. In order to minimize the risk of higher raw material prices, Lonza hedges the commodity price risk via swaps. At 31 December 2018, if the propane / naphtha price had weakened / strengthened by 10%, with all other variables held constant, other comprehensive income would have been CHF 2 million lower / higher (2017: CHF 2 million lower / higher).

29.5 Overview of Derivative Financial Instruments

The following table shows the contract or underlying principal amounts and fair values of derivative financial instruments by type of contract at 31 December 2018 and 2017. Contract or underlying principal amounts indicate the volume of business outstanding at the balance sheet date and do not represent amounts at risk. The fair values are determined by using the difference of the prices fixed in the outstanding derivative contracts from the actual market conditions which would have been applied at the year-end if we had to recover these trades.

Financial Instruments at Fair Value Through Profit or Loss								
million CHF	Contract or underlying principal amount		Positive fair values		Negative fair values		Total net fair values	
	2018	2017	2018	2017	2018	2017	2018	2017
Currency-related instruments								
– Forward foreign exchange rate contracts	400	40	7	0	0	0	7	0
– Currency swaps	753	734	9	5	(4)	(7)	5	(2)
Total currency-related instruments	**1,153**	**774**	**16**	**5**	**(4)**	**(7)**	**12**	**(2)**
Interest-related instruments								
– Cross currency interest rate swaps	75	407	1	3	0	(13)	1	(10)
Total interest-related instruments	**75**	**407**	**1**	**3**	**0**	**(13)**	**1**	**(10)**
Total financial instruments at fair value through profit or loss – held for trading	**1,228**	**1,181**	**17**	**8**	**(4)**	**(20)**	**13**	**(12)**

Financial Instruments Effective for Hedge-Accounting Purposes								
million CHF	Contract or underlying principal amount		Positive fair values		Negative fair values		Total net fair values	
	2018	2017	2018	2017	2018	2017	2018	2017
Interest-related instruments								
– Interest rate swaps	433	0	0	0	(6)	0	(6)	0
Total currency-related instruments	**433**	**0**	**0**	**0**	**(6)**	**0**	**(6)**	**0**
Commodity-related instruments								
– Naphtha swap	20	5	0	2	(5)	0	(5)	2
– Propane swap	11	9	0	2	(2)	0	(2)	2
Total commodity-related instruments	**31**	**14**	**0**	**4**	**(7)**	**0**	**(7)**	**4**
Total financial instruments effective for hedge-accounting purposes	**464**	**14**	**0**	**4**	**(13)**	**0**	**(13)**	**4**

Offsetting of Financial Asset and Financial Liabilities

The Group enters into derivative transactions under International Swaps and Derivatives Association (ISDA) master netting agreements with the respective counterparties in order to mitigate counterparty risk. Under such agreements the amounts owed by each counterparty on a single day in respect of all transactions outstanding in the same currency are aggregated into a single net amount that is payable by one party to the other. The ISDA agreements do not meet the criteria for offsetting in the balance sheet as the Group does not have a currently enforceable right to offset recognized amounts, because the right to offset is only enforceable on the occurrence of future events, such as a default or other credit events.

The following table sets out the carrying value of derivative financial instruments and the amounts that are subject to master netting agreements.

million CHF	2018 Assets	2017 Assets	2018 Liabilities	2017 Liabilities
Forward foreign exchange rate contracts	7	0	0	0
Currency swaps	9	5	(4)	(7)
Interest rate swaps	0	0	(6)	0
Cross currency interest rate swaps	1	3	0	(13)
Commodity-related instruments	0	4	(7)	0
Carrying value of derivative financial instruments	**17**	**12**	**(17)**	**(20)**
Derivatives subject to master netting agreements	(4)	(5)	4	5
Collateral arrangements[1]	0	0	0	0
Net amount	**13**	**7**	**(13)**	**(15)**

1 The Group has not entered into any collateral arrangements

Financial Instruments by Type / Currency

million CHF	2018	2017
Forward foreign exchange rate contracts, currency swaps and FX options		
USD	847	552
EUR	175	128
GBP	65	26
JPY	26	5
AUD	14	1
SGD	10	10
CAD	3	10
DKK	5	3
CZK	4	34
ILS	4	3
NZD	0	2
Total	**1,153**	**774**
Commodity swap	31	14
Cross currency interest rate swap	75	407
Interest rate swap	433	0
Total financial instruments	**1,692**	**1,195**

Positive fair values of derivatives are included as part of «Other receivables, prepaid expenses and accrued income». Negative fair values of derivatives are included as part of «Other current liabilities». Hedge accounting was applied to cash flow hedges on highly probable payments in foreign currencies and for raw materials (naphtha / propane).

29.6 Financial Instruments Carrried at Fair Value

The Group applied the following hierarchy for determining and disclosing the fair value of financial instruments by valuation technique:

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

million CHF				2018				2017
	Level 1	Level 2	Level 3	Total fair value	Level 1	Level 2	Level 3	Total fair value
Assets								
Other investments	0	12	0	12	0	0	0	0
Derivative financial instruments	0	17	0	17	0	12	0	12
Contingent consideration related to sale of business	0	0	31	31	0	0	40	40
Liabilities								
Derivative financial instruments	0	(17)	0	(17)	0	(20)	0	(20)
Contingent consideration	0	0	(30)	(30)	0	0	0	0
Net assets and liabilities measured at fair value	**0**	**12**	**1**	**13**	**0**	**(8)**	**40**	**32**

In 2018 there were no transfers between Level 1 and Level 2 fair value measurements. Details of the determination of Level 3 fair value measurements are set out below.

Contingent Consideration Arrangements Related to Sale of Business	2018	2017
At 1 January	**40**	**0**
Arising from sale of business	0	37
Used for settlements	(8)	0
Currency translation effects	(1)	3
At 31 December	**31**	**40**

The agreement to sell the Peptides business (see note 5.4) includes a contingent consideration arrangement under which Lonza will receive a defined percentage of the net sales of the disposed business for the financial years 2017–2021 (estimated to be CHF 31 million at year-end 2018 exchange rates). Lonza's estimate of the net present value of these future payments is reflected as a receivable in the consolidated balance sheet as of 31 December 2018.

Contingent Consideration Arrangements

	2018	2017
At 1 January	**0**	**18**
Arising from business combinations	30	0
Used for settlements	0	(11)
Gains and losses included in the income statement	0	(7)
Currency translation effects	0	0
At 31 December	**30**	**0**

Lonza is party to certain contingent consideration arrangements arising from business combinations. The fair values are determined considering the expected payments. The expected payments are determined by considering the possible scenarios of regulatory approvals and forecast sales, which are the most significant unobservable inputs. The estimated fair value would increase if the forecast sales were higher or if the likelihood of obtaining regulatory approval was higher. At 31 December 2018 the total potential payments under contingent consideration arrangements could be up to CHF 73 million (2017: CHF 19 million primarily related to the InterHealth acquisition), primarily related to the Octane acquisition (see note 5.1). The estimated future payments amount to CHF 30 million at 31 December 2018. Based on InterHealth's 2017 performance no payment was required and the contingent consideration liability has been adjusted accordingly in 2017.

29.7 Carrying Amounts and Fair Values of Financial Instruments by Category

The carrying values less impairment provision of trade receivables are assumed to approximate to their fair values due to the short-term nature of trade receivables. The fair value of financial liabilities for disclosure purposes is estimated by discounting the future contractual cash flows at the current market interest rate that is available to the Group for similar financial instruments.

The fair value of interest rate swaps is calculated as the present value of the estimated future cash flows. The fair value of forward foreign exchange contracts is determined using quoted forward exchange rates at the balance sheet date. The table below shows the carrying amounts and fair values of financial instruments by category.

1 The fair value of straight bonds for disclosure purposes is Level 1 and is calculated based on the observable market prices of the debt instruments

Carrying Amounts and Fair Values of Financial Instruments by Category – 2018 (IFRS 9)

million CHF	Financial instruments mandatorily at fair value through profit or loss	Fair value – hedging instruments	Financial assets at amortized cost	Financial liabilities at amortized cost	Total carrying amount	Fair value
At 31 December 2018						
Other investments	12	0	0	0	12	12
Trade receivables, net	0	0	692	0	692	692
Other receivables	0	0	52	0	52	52
Accrued income	0	0	159	0	159	159
Non-current loans	0	0	46	0	46	46
Cash and cash equivalents	0	0	461	0	461	461
Contingent consideration from sale of business	31	0	0	0	31	31
Derivative financial instruments:						
– Currency-related instruments	0	16	0	0	16	16
– Interest-related instruments	0	1	0	0	1	1
– Commodity-related instruments	0	0	0	0	0	0
Total financial assets	**43**	**17**	**1,410**	**0**	**1,470**	**1,470**
Debt:						
– Straight bonds[1]	0	0	0	1,214	1,214	1,231
– Other debt	0	0	0	2,848	2,848	2,848
Current liabilities	0	0	0	618	618	618
Trade payables	0	0	0	428	428	428
Contingent consideration	30	0	0	0	30	30
Derivative financial instruments:						
– Currency-related instruments	0	4	0	0	4	4
– Interest-related instruments	0	6	0	0	6	6
– Commodity-related instruments	0	7	0	0	7	7
Total financial liabilties	**30**	**17**	**0**	**5,108**	**5,155**	**5,172**

Carrying Amounts and Fair Values of Financial Instruments by Category – 2017 (IAS 39)

million CHF	Available for sale	Fair value – hedging instruments	Fair value – designated	Loans and receivables	Financial liabilities at amortized cost	Total carrying amount	Fair value
At 31 December 2017							
Other investments – available for sale – carried at cost	16	0	0	0	0	16	16
Trade receivables, net	0	0	0	825	0	825	825
Other receivables	0	0	0	67	0	67	67
Accrued income	0	0	0	63	0	63	63
Non-current loans	0	0	0	5	0	5	5
Cash and cash equivalents	0	0	0	479	0	479	479
Contingent consideration from sale of business	0	0	40	0	0	40	40
Derivative financial instruments:							
– Currency-related instruments	0	5	0	0	0	5	5
– Interest-related instruments	0	3	0	0	0	3	3
– Commodity-related instruments	0	4	0	0	0	4	4
Total financial assets	**16**	**12**	**40**	**1,439**	**0**	**1,507**	**1,507**
Debt:							
– Straight bonds[1]	0	0	0	0	1,553	1,553	1,590
– Other debt	0	0	0	0	2,693	2,693	2,693
Current liabilities	0	0	0	0	595	595	595
Trade payables	0	0	0	0	400	400	400
Derivative financial instruments:							
– Currency-related instruments	0	7	0	0	0	7	7
– Interest-related instruments	0	13	0	0	0	13	13
– Commodity-related instruments	0	0	0	0	0	0	0
Total financial liabilties	**0**	**20**	**0**	**0**	**5,241**	**5,261**	**5,298**

1 The fair value of straight bonds for disclosure purposes is Level 1 and is calculated based on the observable market prices of the debt instruments

29.8 Capital Management

The Board's policy is to maintain a strong capital base so as to retain investor, creditor and market confidence and to sustain future development of the business. The Board of Directors monitors both the demographic spread of shareholders and the return on capital, which Lonza defines as total shareholders' equity, excluding non-controlling interest, and the level of dividends to ordinary shareholders.

The Board seeks to maintain a balance between the higher returns that might be possible with higher levels of borrowing and the advantages and security afforded by a sound capital position. Lonza's target is to achieve a return on invested capital in excess of 10% by 2022. In 2018, the return was 8% (2017: 8.4%). In comparison, the weighted average interest expense on interest-bearing borrowings (excluding liabilities with imputed interest) was 1.75% (2017: 1.6%).

From time to time, Lonza purchases its own shares on the market; the timing of these purchases depends on market prices. Primarily, the shares are intended to be used for issuing shares under Lonza's share programs. Lonza does not have a defined share buy-back plan. Neither Lonza Group Ltd nor any of its subsidiaries is subject to externally imposed capital requirements.

Note 30 • Share of Ownership of the Members of the Board of Directors and the Executive Committee

Based on information available to Lonza, the members of the Board of Directors and parties closely associated with them[1] held, as of 31 December 2018, a total of 62,245 (2017: 166,736) registered shares in Lonza Group Ltd and controlled 0.08% (2017: 0.22%) of the share capital. None of the members of the Board of Directors or Executive Committee owns shares in the Group's subsidiaries or associates.

1 Spouse, children below 18, any legal entities that they own or otherwise control, or any legal or natural person who is acting as their fiduciary

The Company feels strongly that our Executive Committee and other senior managers should have a defined shareholding in Lonza to strengthen their alignment with our shareholders' interests. Starting in 2016 Lonza established minimum shareholding requirements for the Executive Committee and other senior managers based on level in the organization, and specified a five-year period to achieve these minimum requirements. Shareholding levels were reviewed annually beginning in January 2016. The NCC may periodically review the minimum shareholding requirements.

The members of the Executive Committee and parties closely associated with them[1] held 107,572 (2017: 93,728) shares and controlled 0.14% (2017: 0.13%) of the share capital. The individual control rights are proportional to the holdings shown below.

Share ownership of acting members of the Board of Directors and Executive Committee as of 31 December:

Board of Directors number of Lonza shares	2018	2017
Albert M. Baehny, Chairperson from May 2018 on	1,149	329
Rolf Soiron, Chairperson until May 2018	n.a.	85,649
Patrick Aebischer, Vice Chairman	5,889	11,464
Werner Bauer	25,801	25,350
Jean-Daniel Gerber	n.a	17,312
Angelica Kohlmann	205	n.a.
Christoph Mäder	2,692	2,207
Barbara Richmond	3,947	3,496
Margot Scheltema	9,781	9,255
Jürgen Steinemann	6,043	5,592
Antonio Trius	6,533	6,082
Olivier Verscheure	205	n.a.

Executive Committee number of Lonza shares	2018	2017
Richard Ridinger, CEO	53,351	52,446
Sven Abend	10,000	5,000
Marc Funk	36,353	35,046
Fridtjof Helemann	1,752	n.a.
Rodolfo Savitzky	6,116	1,263

Note 31 • Enterprise Risk Management

The Enterprise Risk Management (ERM) program is a critical platform for Lonza's global organization and business as it provides a mechanism and structure for prudently addressing risk responsibility and management in each and every organization. Lonza pursues a comprehensive risk management program as an essential element of sound corporate governance and is committed to continuously embedding risk management in its daily culture.

Lonza's ERM process is performed in four steps: Step 1: Identification (through risk workshops with Executive Committee members and their leadership teams), assessment and assignment of risks; Step 2: Consolidation, review and prioritization of risks; Step 3: Presentation of consolidated risk overview to the Executive Committee and Board of Directors; and Step 4: Follow-up on high-priority risks. Through this process, Lonza has identified and focuses on 12 high-level thematic risk categories.

Each identified risk category is assessed according to its probability of occurrence and its negative impact on the Group:

- The probability of occurrence is assessed for the period until year-end 2020, with a risk range from unlikely to highly probable.
- Any potential negative effect of a risk is assessed according to its impact on the annual Group's EBIT, the Group's reputation and the Group's operations.

Risks have been identified for each segment and for the corporate functions, and they are tracked if there is a year-on-year increase or decrease. The risk scenarios identified in 2018 were presented to the Executive Committee and to the Board of Directors at their meetings in January 2019. Financial risk management is disclosed in note 29.

Note 32 • Events After Balance Sheet Date

On 25 February 2019 Lonza announced that it will realign its operating segments structure, whereby the Consumer Health & Nutrition business, reported as part of the Specialty Ingredients operating segment in 2017 and 2018, will be integrated into the Pharma & Biotech operating segment.

From 2019 onwards, the company will operate two operating segments– one dedicated to Lonza Specialty Ingredients (LSI) that will retain Consumer & Resources Protection and Consumer Product Ingredients and a second to Lonza Pharma Biotech & Nutrition (LPBN), combining Pharma & Biotech and Consumer Health & Nutrition.

Lonza will align the revised operating segment structure for the six-month period ending 30 June 2019. Prior period operating segment information will be restated to reflect the new structure.

The Consolidated Financial Statements for 2018 were approved for issue by the Board of Directors on 26 February 2019 and are subject to approval by the Annual General Meeting on 18 April 2019.

Note 33 • Principal Subsidiaries and Joint Ventures

Principal Subsidiaries and Joint Ventures

Name	Town / country	Currency[1]	Share capital	Holding direct	Holding indirect
Arch Acquisition LLC	Wilmington US	USD	n.a.		[4]100%
Arch Chemicals Canada, Inc.	Toronto CA	CAD	n.a.		[4]100%
Arch Chemicals Limited	Castleford GB	GPB	1,000,100		100%
Arch Chemicals, Inc.	Richmond US	USD	1,000		100%
Arch Chemicals Receivables LLC	Wilmington US	USD	n.a.		[4]100%
Arch Chemicals SAS	Aubergenville FR	EUR	442,260		100%
Arch Personal Care Products, L.P.	Cherry Hill US	USD	1,000		[3]100%
Arch Protection Chemicals Private Limited	Mumbai IN	INR	1,300,000		100%
Arch Quimica Argentina S.R.L.	Buenos Aires AR	ARS	[8]7,635,090		100%
Arch Quimica Brasil Ltda.	Salto BR	BRL	[9]266,587,135		100%
Arch Timber Protection B.V.	Wijchen NL	EUR	27,300		100%
Arch Treatment Technologies, Inc.	Richmond US	USD	n.a.		[4]100%
Arch UK Biocides Limited	Castleford GB	GBP	1,644,236		100%
Arch Water Products France S.A.S.	Amboise FR	EUR	460,000		100%
Arch Water Products South Africa (Pty) Ltd	Kempton Park	ZAR	n.a.		[4]100%
Arch Wood Protection (Aust) Pty Ltd	Trentham AU	AUD	100		100%
Arch Wood Protection (M) Sdn. Bhd.	Kuala Lumpur MY	MYR	500,000		100%
Arch Wood Protection (NZ) Limited	Auckland NZ	NZD	6,099,999		100%
Arch Wood Protection (SA) Pty Ltd	Port Shepstone	ZAR	3,000		100%
Arch Wood Protection Canada Corp.	Mississauga CA	CAD	n.a.		[4]100%
Arch Wood Protection, Inc	Wilmington US	USD	100		100%
Bend Research, Inc.	Portland US	USD	1,000		100%
BioAtrium AG	Visp CH	CHF	100,000		50%
Capsugel (Thailand) Co. Ltd	Bangkok TH	THB	170,000,000		100%
Capsugel Australia Pty Ltd	Sydney AU	AUD	6,368,270		100%
Capsugel Belgium NV	Bornem BE	EUR	301,801,345		100%
Capsugel Brasil Importação e Distribuição de Insumos Farmacêuticos e Alimentos Ltda.	Rio de Janeiro BR	BRL	29,776,852		100%
Capsugel Canada Corp.	Vancouver CA	CAD	n.a.		[4]100%
Capsugel de México, S. de R.L. de C.V.	Puebla ME	MXN	870,004,052		100%
Capsugel Distribucion, S. de R.L. de C.V.	Puebla ME	MXN	20,000,000		100%
Capsugel FinanceCo II S.à r.l.	Luxembourg LU	EUR	12,000		100%
Capsugel FinanceCo S.à r.l	Luxembourg LU	EUR	12,500		100%
Capsugel FinanceCo S.C.A.	Luxembourg LU	EUR	32,328		100%
Capsugel France Holdings SAS	Colmar FR	EUR	100,536,900		100%
Capsugel France SAS	Colmar FR	EUR	1,280,000		100%
Capsugel Funding, LLC	Wilmington US	USD	n.a.		[4]100%
Capsugel Germany GmbH	Frankfurt am Main DE	EUR	25,000		100%
Capsugel Healthcare Private Limited	Haryana IN	INR	2,985,075,930		100%
Capsugel Holdings (Hong Kong) Limited	Hong Kong CN	HKD	1		100%

Capsugel Holdings S.à r.l.	Luxembourg LU	EUR	78,025,412.15	100%	
Capsugel Holdings US, Inc.	Wilmington US	USD	10		100%
Capsugel Hungary Kft	Budapest HU	HUF	3,000,000		100%
Capsugel Italy S.R.L.	Milano IT	EUR	10,000		100%
Capsugel Japan Inc.	Sagamihara JP	JPY	100,000,000		100%
Capsugel Manufacturing, Inc.	Wilmington US	USD	10		100%
Capsugel Middle East Sàrl	Beirut LB	LPB	5,000,000.00		100%
Capsugel New Zealand Limited	Wellington NZ	NZD	4,598,329		100%
Capsugel Pharmaceutical and Health Products Marketing Ltd	Istanbul TR	TRY	10,000		100%
Capsugel Philippines, Inc.	Manila PH	PHP	10,000		[5]100%
Capsugel Ploermel SAS	Ploërmel FR	EUR	42,674,272		100%
Capsugel S.à r.l.	Luxembourg LU	EUR	113,159,695		100%
Capsugel Spain, S.L.	Madrid ES	EUR	3,000		100%
Capsugel US, LLC	Wilmington US	USD	n.a.		[4]100%
Capsugel, Inc.	Wilmington US	USD	10		100%
CH Capsules Malaysia SDN BHD	Petaling Jaya MY	MYR	100,000		100%
Diacon Technologies Limited	Richmond CA	CAD	n.a.		[4]100%
Hickson Ltd	Castleford GB	GBP	108,161,500		100%
InterHealth Nutraceuticals Incorporated	Los Angeles US	USD	15,200		100%
LLC Capsugel	Domodedovo (Moscow Region) RU	RUB	150,000		100%
Lonza (China) Investments Co. Ltd.	Guangzhou CN	USD	84,000,000		
Lonza AG	Visp CH	CHF	60,000,000	100%	
Lonza America, Inc.	Wilmington US	USD	8,306	100%	
Lonza Argentina S.A.[7]	Buenos Aires AR	ARS	100,000		100%
Lonza Biologics Inc.	Wilmington US	USD	1,000		100%
Lonza Biologics plc	Slough GB	GBP	14,500,000		100%
Lonza Biologics Porriño S.L.	Porriño ES	EUR	10,295,797.11		100%
Lonza Biologics Tuas Pte. Ltd.	Singapore SG	USD	USD 25,000,000		100%
Lonza Bioscience SARL	Saint-Beauzire FR	EUR	8,848,695		100%
Lonza Bioscience Singapore Pte Ltd	Singapore SG	USD	1		100%
Lonza Biotec s.r.o.	Kourim CZ	CZK	282,100,000		100%
Lonza Cologne GmbH	Cologne DE	EUR	1,502,000		100%
Lonza Colombia S.A.S[6]	Bogota CO	COP	10,000,00		100%
Lonza Copenhagen ApS	Vallensbaek Strand DK	DKK	150,000		100%
Lonza Costa Rica, S.A.	Heredia CR	CRC	10,000		100%
Lonza do Brasil Especialidades Quimicas Ltda.	Sao Paolo BR	BRL	18,386,580	[2]99.9%	[2]0.1%
Lonza Geleen B.V.	Geleen NL	EUR	18,000		100%
Lonza Guangzhou Ltd	Guangzhou CN	USD	12,000,000		100%
Lonza Guangzhou Nansha Ltd	Guangzhou CN	USD	139,600,000		100%
Lonza Houston, Inc.	Wilmington US	USD	2,899		[4]100%
Lonza Inc.	Allendale US	USD	696,865		100%

Lonza India Private Limited	Mumbai IN	INR	23,458,580		[4]100%
Lonza Israel Ltd	Haifa IS	NIS	1,000		100%
Lonza Japan Ltd (Lonza Japan Kabushiki Kaisha)	Tokyo JP	JPY	[8]100,000,000	100%	
Lonza Luxembourg S.à r.l.	Luxembourg LU	EUR	12,000		100%
Lonza Microbial Control Asia Pacific Pte Ltd	Singapore SG	USD	183,085		100%
Lonza Milano, S.r.l.	Milano IT	EUR	52,000		100%
Lonza Nanjing Ltd	Nanjing CN	USD	14,000,000		100%
Lonza Netherlands B.V.	Maastricht NL	EUR	2,115,232		100%
Lonza NZ Limited	New Plymouth NZ	NZD	1,000,000		100%
Lonza Rockland, Inc.	Wilmington US	USD	100		100%
Lonza Sales AG	Basel CH	CHF	2,000,000	100%	
Lonza Shanghai International Trading Ltd	Shanghai CN	USD	200,000		100%
Lonza Suzhou Ltd	Suzhou CN	USD	19,000,000		100%
Lonza Swiss Finanz AG (Lonza Swiss Finance Ltd)	Basel CH	CHF	100,000	100%	
Lonza Swiss Licences AG	Basel CH	CHF	100,000	100%	
Lonza Verviers SPRL	Verviers BE	EUR	18,750		100%
Lonza Walkersville, Inc.	Wilmington US	USD	10		100%
Micro-Macinazione SA	Monteggio TI	CHF	1,000,000		100%
MW Encap (Holdings) Limited	London GB	GBP	146,615		100%
MW Encap Limited	London GB	GBP	301,000		100%
Octane Biotech, Inc[10]	Kingston CA	CAD	n.a.		[4]80%
P.T. Capsugel Indonesia	Cibinong Bogor Jawa Barat IN	IDR	634,524,459,200		100%
Powdersize, LLC	Wilmington US	USD	n.a.		[4]100%
Suzhou Capsugel Limited (JV)	Suzhou CN	USD	29,700,000		75%
Xcelience Clinical Services Ltd	London GB	GBP	1		100%
Xcelience, LLC	Wilmington US	USD	n.a.		[4]100%

1 Abbreviation of currencies in accordance with ISO standards
2 Rounded amount
3 Limited partnership
4 No par value
5 The shares are held in trust for Capsugel Belguim NV by Philippine nationals
6 Formerly Capsugel Colombia S.A.S. (change of name in 2018)
7 Founded in 2018
8 Capital reduction
9 Capital increase
10 See also note 5.1 for details of the acquisition

Statutory Auditor's Report

To the General Meeting of Lonza Group Ltd, Basel

Report on the Audit of the Consolidated Financial Statements

Opinion

We have audited the consolidated financial statements of Lonza Group Ltd and its subsidiaries (the Group), which comprise the consolidated balance sheet as at 31 December 2018 and the consolidated income statement, statement of comprehensive income, consolidated cash flow statement and consolidated statement of changes in equity for the year then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion the accompanying consolidated financial statements give a true and fair view of the consolidated financial position of the Group as at 31 December 2018, and its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with International Financial Reporting Standards (IFRS) and comply with Swiss law.

Basis for Opinion

We conducted our audit in accordance with Swiss law, International Standards on Auditing (ISAs) and Swiss Auditing Standards. Our responsibilities under those provisions and standards are further described in the Auditor's Responsibilities for the Audit of the Consolidated Financial Statements section of our report. We are independent of the Group in accordance with the provisions of Swiss law and the requirements of the Swiss audit profession, as well as the IESBA Code of Ethics for Professional Accountants, 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.

Key Audit Matters

Revenue recognition

Recoverability of goodwill and intangible assets

Income taxes

Presentation of discontinued operations: Water Care Business

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

KPMG

Revenue recognition

Key Audit Matter

The Group's recognition of revenue in a complete and accurate manner is exposed to various risks. There are two distinct risk factors that trigger revenue recognition as a key audit matter:

- custom manufacturing agreements in the Pharma & Biotech segment, and
- linkage of certain of management's incentive compensation to annual revenue targets.

Due to current market forces, the relevance of long-term product supply agreements with the Group's Pharma & Biotech customers continues to increase. Under these agreements, the Group constructs and launches new or reworked suites dedicated to client specific manufacturing, which are owned and operated by the Group. Extending over multiple periods such agreements often combine milestone and upfront payments during a construction phase, the rendering of project management services and the delivery of goods. To a certain degree the identification and measurement of these different components as separable revenue streams and performance obligations is subject to management's judgment and interpretation of the customer contract.

This gives rise to the risk that revenue could be misstated due to the incorrect identification, separation and valuation of contractual components and related performance obligations, resulting in an inappropriate timing of revenue recognition.

Performance targets embedded in management's compensation incentive plans based on targeted results and achievement of such targets are partially contingent on the timing of revenue recognition. There is a risk of fraud in revenue recognition due to the incentives management may feel to achieve the targeted results.

The Group assessed the required 2018 implementation of IFRS 15 *Revenue from Contracts with Customers*, and concluded the most significant impacts are related to its custom manufacturing business, which resulted in a restatement of the 2017 comparative information primarily due to the deferral of certain revenues. The Group applied the full retrospective transition method under IFRS 15.

Our response

In connection with the Group's adoption of IFRS 15, for significant new and amended customer manufacturing agreements in the Pharma & Biotech segment, we assessed the appropriateness of the identification, separation and valuation of contract elements and the timing of revenue recognition by making our own independent assessment. Furthermore, we challenged and assessed the qualification of performance obligations of significant new and amended contracts and their valuation by management.

We performed inquiries of management to obtain an understanding of their IFRS 15 implementation process. We evaluated the design and implementation of internal controls surrounding the recording of adjustments arising from IFRS 15 adoption. We analyzed existing customer contracts and considered the appropriateness of the Group's revenue recognition policy in respect of significant revenue streams. This included obtaining a schedule of customer contracts to evaluate the existence and completeness of that population, subject to transition adjustments, based on our knowledge of the Group and experience of the industry in which it operates.

As a response to the risk of fraud in revenue recognition, we performed sample testing of revenue recorded during the year and focused on revenue transactions taking place before and after year-end as well as deferred revenue transactions to determine that revenue is recognized in the correct period. We tested the accuracy of revenues recorded, based on inspection of customer acceptance certificates, shipping documents and delivery notes. Furthermore, we tested manual journal entries on a sample basis and tested controls over the recording of revenue in the relevant IT systems.

We also performed audit procedures to assess the adequacy and accuracy of the Group's revenue recognition disclosures, including the full retrospective transition methodology adopted for IFRS 15, as presented in the Group's consolidated financial statements.

For further information on revenue recognition refer to the following:

- Note 1 Accounting Principles
- Note 3 Revenues

Recoverability of goodwill and intangible assets

Key Audit Matter

As a result of previous acquisitions, including the 2017 Capsugel acquisition, the Group maintains significant amounts of goodwill and acquired intangible assets on the consolidated balance sheet (approximately 50% of total assets).

There is uncertainty in estimating the recoverable amount of cash generating units (CGU) in which goodwill and intangible assets are included, which principally arises from the inputs used in both forecasting and discounting future cash flows. A combination of the significance of the asset balances and the inherent judgment and uncertainty in the assumptions used by management to:

— identify the appropriate CGUs;

— allocate goodwill and intangible assets to the CGUs appropriately;

— estimate accurately the related future cash flows; and

— determine appropriate discount rates and long term growth rates,

means that an assessment of recoverability of carrying value is an area of key judgment in preparing the consolidated financial statements.

A potential risk of impairment exists due to several factors, including:

— Dependency on certain significant capital intensive technologies and customers;

— Market demand and competition.

Under IFRS, the Group is required to at least annually test goodwill for impairment and assess if impairment triggers for intangible assets exist.

Our response

Our audit procedures included, but were not limited to, evaluating the appropriateness of management's identification of the Group's CGUs, the allocation of goodwill to CGUs and testing the design and implementation of key controls embedded in the Group's impairment assessment process. We also performed an assessment over triggering events for impairment of material intangible assets.

We evaluated the process and controls by which future cash flow forecasts were prepared by management, including testing underlying calculations and reconciling them to the latest Board of Directors approved financial targets. We analyzed the Group's previous ability to forecast cash flows accurately and challenged the reasonableness of current forecasts by comparing key assumptions to historical results, economic and industry forecasts (external market assumptions) and internal planning data.

We also assessed the appropriateness of the Group's valuation methodology applied and its derivation of discount rates and long-term growth rates by using our own valuation specialists. We ascertained the extent of change in the assumptions that either individually or collectively would be required for the goodwill and intangible assets to be potentially impaired.

Furthermore, we performed a sensitivity analysis around the key estimates of the Group's recoverability analysis calculations, in particular discount rates and long-term growth rates, and discussed potential shifts in key estimates with management. We assessed the likelihood of such a movement in those key assumptions and the related disclosures of the sensitivity analyses in the Group's consolidated financial statements.

For further information on the recoverability of goodwill and intangible assets refer to the following:

— Note 1 Accounting Principles

— Note 5 Business Combinations and Sale of Businesses

— Note 6 Intangible Assets and Goodwill

KPMG

Income taxes

Key Audit Matter

Lonza Group operates across a number of different tax jurisdictions (primarily Europe, the US and China) giving rise to a high level of cross-border transactions and complex taxation arrangements being subject to various country specific tax laws. During the normal course of business local tax authorities may challenge financing arrangements between Group entities, transfer-pricing arrangements relating to the Group's manufacturing and supply chain and the ownership of intellectual property rights.

The Group recorded the estimated impacts of the U.S. Tax Cuts & Jobs Act of 2017 (U.S. Tax Reform) in 2017. The short time period available, due to the late December 2017 enactment, to implement the U.S. Tax Reform required assumptions and estimates of certain input factors, which involved judgment by management to determine the 2017 U.S. tax provision. These judgments and estimates included accounting for the estimated U.S. tax on deemed repatriated earnings of the Group's non-U.S. subsidiaries, the adjustment of deferred tax items at the lower enacted corporate tax rates and other estimated effects of a territorial tax based system. Based on the additional information gathered by management and additional guidance published by the IRS in 2018, these judgements and estimates were updated and reflected in the Group's 2017 tax return filings and changes in judgements and estimates are reflected in the 2018 consolidated financial statements.

During 2017 and 2018, the Group executed certain international tax restructuring initiatives following the acquisition of Capsugel S.A. Execution of the restructuring introduced additional complexity in determining the income tax related financial statement effects. The Group has also recognized provisions against uncertain tax positions, the estimation of which is subject to management's judgement. Judgment is also required in the recognition and measurement of deferred tax assets, which result from losses brought forward.

Based on these complexities, uncertainties and management's judgment involved, we identified the accounting of income taxes as a key audit matter.

Our response

Our audit approach included the use of local tax specialists in all key jurisdictions to evaluate tax provisions and potential exposures as of 31 December 2018. In response to the 2017 U.S. Tax Reform, we assessed the Group's 2018 estimates including consideration of key calculations and amounts on its 2017 tax returns. As part of these procedures, we agreed taxes paid and other inputs to previously filed tax forms or returns and reviewed the Group's assumptions and methodology used in determining its estimates relative to the provisions of the enacted tax law. We challenged management's assumptions and judgments through our knowledge of the Group's tax status circumstances and the enacted laws. This included obtaining and considering the formal tax opinions provided by the Group's external tax advisors related to the international tax restructuring.

We obtained explanations from management regarding the known uncertain tax positions and analyzed existing correspondence with taxation authorities to identify uncertain tax positions. We assessed the adequacy of management's taxation provisions by considering country specific direct tax risks, transfer-pricing risks, compliance risks and potential penalties and fines. We challenged and evaluated the judgements made by management in assessing the quantification and probability of significant exposures and the level of liability required for specific cases.

In respect of deferred tax assets, we considered the appropriateness of management's assumptions and estimates. We assessed management's view of the likelihood of generating suitable future taxable profits to support the recognition of deferred tax assets. This included our consideration of whether internal budgets and management assumptions for concerned legal entities support the related conclusions.

Furthermore, we evaluated whether income tax related items were appropriately disclosed in the Group's consolidated financial statements.

For further information on discontinued operations refer to the following:

- Note 1 Accounting Principles
- Note 22 Taxes

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Presentation of discontinued operations: Water Care Business

Key Audit Matter

On 1 November 2018, Lonza Group entered into a definitive agreement with Platinum Equity Partners for the sale of the Lonza Water Care Business. The Water Care business generated revenue of CHF 516 million for the year ending 31 December 2018. The divestment is expected to be completed in the first quarter of 2019.

Non-current assets and disposal groups should be classified as held-for-sale if their carrying value will be recovered principally through a sales transaction rather than through continuing use. One of the conditions that must be satisfied for classification as held-for-sale is that the sale is highly probable within one year. In addition, assets held for sale should be measured at the lower of carrying value and estimated fair value less costs to sell. Assets held-for-sale should be disclosed as discontinued operations if they represent a separate major line of business.

Based on these considerations, management determined the criteria of IFRS 5 were met and the activities should be presented as held-for-sale and discontinued operations. We considered the accounting treatment in the Group's consolidated financial statements as a key audit matter due to:

— the size and complexity of the transaction;

— the risk that the accounting and presentation of discontinued operations and assets held for sale are inappropriate.

Our response

We read the relevant agreements and management's documented accounting position analysis to evaluate and determine the appropriate accounting treatment of the transaction.

We performed inquiries with Lonza management to obtain an understanding of the disposal process as well as of the terms and contingencies of the agreements.

We performed procedures to assess the completeness, accuracy and valuation of the assets and liabilities reflected as held-for-sale and on the results presented as discontinued operations. Our procedures included, but were not limited to:

— reconciling the Water Care Business assets and liabilities classified as held for sale to the underlying business unit reporting available in the Group's financial reporting systems;

— evaluation of management´s assumptions and calculation to estimate the fair value less costs of disposal;

— assessing management's estimate of the disposal result.

Furthermore, we evaluated whether these discontinued operations and held for sale related items were appropriately presented and disclosed in the Group's consolidated financial statements.

For further information on discontinued operations refer to the following:

— Note 1 Accounting Principles

— Note 5 Business Combinations and Sale of Businesses

Other Information in the Annual Report

The Board of Directors is responsible for the other information in the annual report. The other information comprises all information included in the annual report, but does not include the consolidated financial statements, the stand-alone financial statements of the Company, the remuneration report and our auditor's reports thereon.

Our opinion on the consolidated financial statements does not cover the other information in the annual report and we do not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information in the annual report and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibility of the Board of Directors for the Consolidated Financial Statements

The Board of Directors is responsible for the preparation of the consolidated financial statements that give a true and fair view in accordance with IFRS and the provisions of Swiss law, and for such internal control as the Board of Directors determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, the Board of Directors is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Board of Directors either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated 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 Swiss law, ISAs and Swiss Auditing Standards 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 consolidated financial statements.

As part of an audit in accordance with Swiss law, ISAs and Swiss Auditing Standards, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated 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 internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made.
- Conclude on the appropriateness of the Board of Directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated 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 to cease to continue as a going concern.

— Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

— 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 the Board of Directors or its relevant committee 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.

We also provide the Board of Directors or its relevant committee with a statement that we have complied with relevant ethical requirements regarding independence, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with the Board of Directors or its relevant committee, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report, unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Report on Other Legal and Regulatory Requirements

In accordance with article 728a para. 1 item 3 CO and the Swiss Auditing Standard 890, we confirm that an internal control system exists, which has been designed for the preparation of consolidated financial statements according to the instructions of the Board of Directors.

We recommend that the consolidated financial statements submitted to you be approved.

KPMG AG

Michael Blume Licensed Audit Expert Auditor in Charge	Cyrill Kaufmann Licensed Audit Expert

Zurich, 26 February 2019

Financial Statements of Lonza Group Ltd

Balance Sheet – Lonza Group Ltd

Assets[1]			
CHF	Notes	2018	2017
Non-current assets			
Long-term financial assets:			
– from subsidiaries and associates	2.2	3,674,129,333	6,050,679,989
Investments	2.1	5,542,478,046	2,509,069,671
Property, plant and equipment		412,130	589,781
Prepaid expenses and accrued income:			
– from third parties		9,638,290	14,676,512
Total non-current assets		**9,226,657,799**	**8,575,015,953**
Current assets			
Cash and cash equivalents		19,880,760	15,585,640
Short term financial assets:			
– from subsidiaries and associates		15,445,556	540,052
Other short-term receivables:			
– from third parties		565	4,505
– from subsidiaries and associates		31,804,261	12,945,713
Prepaid expenses and accrued income:			
– from third parties		22,290,629	14,118,775
– from subsidiaries and associates		36,448,006	48,090,577
Total current assets		**125,869,777**	**91,285,262**
Total assets		**9,352,527,576**	**8,666,301,215**

1 At 31 December

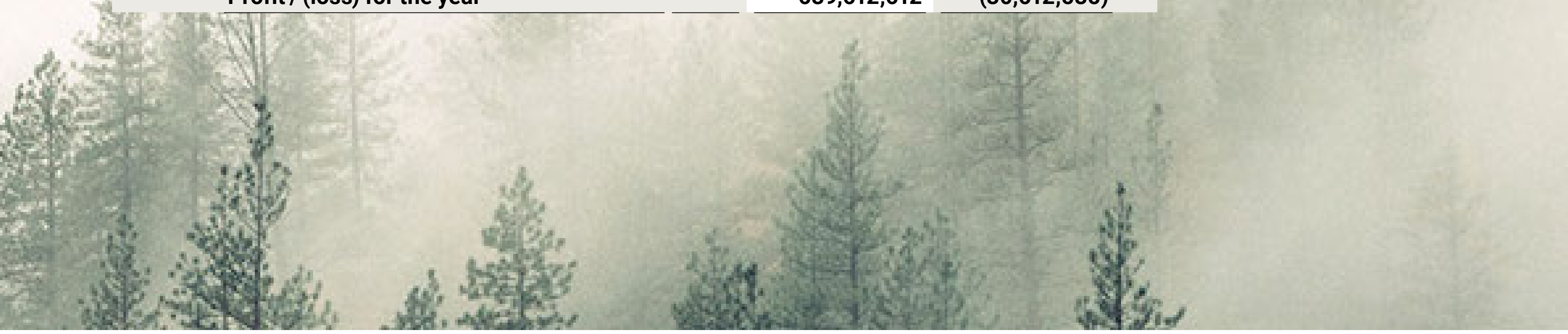
Liabilities and Shareholders' Equity[1]

CHF	Notes	2018	2017
Shareholders' equity			
Share capital	2.6	74,468,752	74,468,752
Legal capital reserves:			
– Reserves from capital contributions	2.7	2,882,051,469	3,086,833,393
Legal retained earnings reserves:			
– General legal retained earnings		37,234,376	26,460,070
Voluntary retained earnings:			
– Available earnings:			
– Profit brought forward		1,562,511,342	1,603,898,183
– Profit / (loss) for the year		639,612,612	(30,612,535)
Treasury shares	2.8	(71,170,859)	(59,188,365)
Total shareholders' equity		**5,124,707,692**	**4,701,859,498**
Non-current liabilities			
Long-term interest-bearing liabilities:			
– from third parties	2.5	2,331,849,070	2,343,228,100
– from subsidiaries and associates		235,000,000	238,285,295
Long-term provisions:			
– from third parties		214,599	3,367,279
Total non-current liabilities		**2,567,063,669**	**2,584,880,674**
Current liabilities			
Trade accounts payables:			
– from third parties	2.3	3,242,847	2,183,797
– from subsidiaries and associates		6,511,789	116,630
Short-term interest-bearing liabilities:			
– from third parties	2.4	90,164,000	95,042,412
– from subsidiaries and associates		1,380,743,701	1,150,440,779
Short-term provisions:			
– from third parties		14,067,507	1,974,681
Accrued expenses and deferred income:			
– from third parties		156,913,038	126,052,021
– from subsidiaries and associates		9,113,333	3,750,723
Total current liabilities		**1,660,756,215**	**1,379,561,043**
Total liabilities		**4,227,819,884**	**3,964,441,717**
Total liabilities and shareholders' equity		**9,352,527,576**	**8,666,301,215**

1 At 31 December

Income Statement – Lonza Group Ltd

Income Statement – Lonza Group Ltd CHF	Notes	2018	2017
Income			
Dividend income	2.9	1,682,141,585	20,000,000
Royalties income		156,275,700	132,681,423
Other financial income	2.10	457,957,079	124,678,979
Other operating income		1,164,879	1,166,096
Total income		**2,297,539,243**	**278,526,498**
Expenses			
Other financial expenses	2.11	89,596,230	234,052,215
Personnel expenses		27,161,328	30,666,116
Other operating expenses	2.12	60,843,531	43,918,049
Impairment losses on investments	2.9	1,479,719,563	81,180
Depreciation on equipment		159,104	173,706
Direct taxes		446,875	247,767
Total expenses		**1,657,926,631**	**309,139,033**
Profit / (loss) for the year		**639,612,612**	**(30,612,535)**



Notes to the Financial Statements – Lonza Group Ltd

Note 1 • Principles

1.1 General Aspects

These financial statements were prepared according to the provisions of the Swiss Law on Accounting and Financial Reporting (32nd title of the Swiss Code of Obligations). Where not prescribed by law, the significant accounting and valuation principles applied are described below.

1.2 Financial Assets

Financial assets include short- and long-term loans to subsidiaries and associates. Loans granted in foreign currencies are translated at the rate at the balance sheet date.

1.3 Treasury Shares

Treasury shares are recognized at acquisition cost and deducted from shareholders' equity at the time of acquisition. In case of a resale, the gain or loss is recognized through the shareholders' equity as increase or decrease of available earnings brought forward.

1.4 Share-Based Payments

When treasury shares are used for share-based payment programs, the difference between the acquisition costs and any consideration paid by the employees at grant date is recognized as other financial expenses or income.

1.5 Short- / Long-Term Interest-Bearing Liabilities

Interest-bearing liabilities are recognized in the balance sheet at nominal value. Discounts and issue costs for bonds or syndicate loans are recognized as prepaid expenses and amortized on a straight-line basis over the principal's maturity period. Premiums are recognized as accrued expenses and amortized on a straight-line basis over the principal's maturity period.

1.6 Currency- and Interest-Related Instruments

Currency- and interest-related instruments with a short-term holding period are valued at their fair value as at the balance sheet date.
A valuation adjustment reserve has not been accounted for.

1.7 Presentation of a Cash Flow Statement and Additional Disclosures in the Notes

As Lonza Group Ltd has prepared its consolidated financial statements in accordance with a recognized accounting standard (International Financial Reporting Standards IFRS), it has decided to forgo presentation of a cash flow statement, information on interest-bearing liabilities and audit fees in the note disclosures as would be required by Swiss law.

Note 2 • Information on Balance Sheet and Income Statement Items

2.1 Investments

Lonza Group Ltd holds the following direct subsidiaries as of 31 December 2018. For indirect principal subsidiaries, please see the list in note 33.

		Capital in CHF 1,000		Share in capital and voting rights in %	
		31 12 2018	31 12 2017	31 12 2018	31 12 2017
Arch Quimica, S.A. de C.V.	Mexico, MX	MXN 109	MXN 109	28%	28%
Capsugel Holdings S.à.r.l	Luxembourg, LU	EUR 78,025	EUR 0	100%	0%
Lonza AG	Visp, CH	CHF 60,000	CHF 60,000	100%	100%
Lonza America Inc.	Allendale, US	USD 8	USD 8	100%	100%
Lonza Bioproducts AG	Basel, CH	CHF 100	CHF 100	100%	100%
Lonza do Brasil Especialidades Quimicas Ltda.	Sao Paulo, BR	BRL 18,387	BRL 18 387	99.9%	99.9%
Lonza (China) Investments Co. Ltd	Guangzhou, CN	USD 75,500	USD 75,500	100%	100%
Lonza Europe BV	Breda, NL	EUR 0	EUR 21	0%	68%
Lonza Holding Singapore Pte Ltd	Singapore, SG	USD 100,000	USD 100,000	100%	100%
Lonza Japan Ltd	Tokyo, JP	JPY 200,000	JPY 200,000	100%	100%
Lonza Licences AG	Basel, CH	CHF 100	CHF 100	100%	100%
Lonza Sales AG	Basel, CH	CHF 2,000	CHF 2,000	100%	100%
Lonza Swiss Finanz AG	Basel, CH	CHF 100	CHF 100	100%	100%
Lonza Swiss Licences AG	Basel, CH	CHF 100	CHF 100	100%	100%
Aravis Venture 1, L.P.	Grand Cayman, Cayman Islands	USD 58,824	USD 58,824	31%	31%
International School of Basel AG	Reinach, CH	CHF 20,525	CHF 20,525	1.6%	1.6%
Seed Fund Cycle-C3E (A), L.P.	Montreal, CA	CAD 42,000	CAD 42,000	2.4%	2.4%

In 2018, Lonza Europe BV was sold to the indirect subsidiary Capsugel Belgium NV. The purchase price was EUR 406,068,293. The transaction gain of CHF 298,166,268 was recorded to other financial income.

2.2 Long-Term Financial Assets

Lonza Group Ltd issued subordination agreements of CHF 95 million (2017: CHF 190 million) on loans to subsidiaries and associates.

2.3 Trade Accounts Payables

Trade accounts payables include liabilities to personnel welfare institutions of CHF 755,518 at 31 December 2018 (2017: CHF 250,909).

2.4 Short-Term Interest-Bearing Liabilities

CHF	31 12 2018	31 12 2017
Bank loans	90,164,000	95,042,412

2.5 Long-Term Interest-Bearing Liabilities

Term Loans Lonza Group Ltd issued in 2017 term loans of EUR 450 million and USD 489 million tranches carrying floating interest rates and repayable in 2020 and 2022 (EUR 225 million and USD 245 million at the first maturity date), respectively.

German Private Placement issued in 2017:

- Dual-currency German private placement (Schuldscheindarlehen) of EUR 700 million and USD 200 million tranches carry fixed and floating interest rates (LIBOR / EURIBOR + margin) respectively, and are repayable in 2021 (EUR 325 million), 2022 (USD 150 million), 2023 (EUR 375 million) and 2024 (USD 50 million).
- Single-tranche German private placement (Schuldscheindarlehen) of USD 100 million carrying floating interest rates (LIBOR + margin) and repayable in 2024.

Syndicated Loan In 2017 Lonza signed a syndicated loan with a consortium of banks on the following terms: Credit facility of CHF 700 million, of which CHF 259 million was used as of 31 December 2018 (2017: CHF 230 million), due 2023, at floating interest rates (based on LIBOR). The syndicated loan agreement contains a financial covenant that is based on Lonza's net debt / EBITDA ratio. The Group was released in 2018 from this covenant as the net debt / EBITDA ratio fell below a defined threshold.

CHF	31 12 2018	31 12 2017
Long-term interest-bearing liabilities	2,331,849,070	2,343,228,100

2.6 Share Capital and Authorized Capital

The share capital on 31 December 2018 comprised 74,468,752 registered shares (2017: 74,468,752) with a par value of CHF 1 each, amounting to CHF 74,468,752 (2017: CHF 74,468,752).

Contingent Capital The share capital of Lonza Group Ltd may be increased through the issuance of a maximum of 7,500,000 fully paid-in registered shares with a par value of CHF 1 each up to a maximum aggregate amount of CHF 7,500,000.

Authorized Capital The Board of Directors shall be authorized to increase, at any time until 25 April 2019, the share capital of Lonza Group Ltd through the issuance of a maximum of 7,500,000 fully paid-in registered shares with a par value of CHF 1 each up to a maximum aggregate amount of CHF 7,500,000. The capital increases in the form of contingent capital and authorized capital may increase the share capital of Lonza Group Ltd by a maximum aggregate amount of CHF 7,500,000. The details and conditions are set out in Articles 4^{bis} to 4^{quater} of the Company's Articles of Association.

At 31 December 2018, Lonza Group Ltd had a fully paid-in registered capital of CHF 74,468,752 and a contingent capital of CHF 7,500,000.

Reserves in the amount of CHF 37,234,376 (2017: CHF 26,460,070) included in the financial statements of the parent company cannot be distributed.

2.7 Reserves from Capital Contributions

Reserves from Capital Contributions	
CHF	
Reserves from Capital Contributions at 1 1 2017	243,393,025
Agio capital injection of 5,000,000 shares in February 2017	844,665,610
Dividend payout May 2017	(159,280,385)
Agio capital injection of 16,548,612 shares in May 2017	2,158,055,143
Reserves from Capital Contributions at 31 12 2017	**3,086,833,393**
Dividend payout May 2018	(204,781,924)
Reserves from Capital Contributions at 31 12 2018	**2,882,051,469**

2.8 Treasury Shares

	Total shares	Average rate in CHF	Number of transaction
Treasury shares at 1 1 2017, weighted average price	**128,891**	**79.26**	
Acquisitions 2017	288,789	247.06	7
Distribution to board members	(6,828)	201.47	4
Distribution to E-STIP share plans	(16,979)	184.31	3
Distribution to LTIP share plans	(108,682)	183.42	2
Distribution to ESPP share plans	(39,700)	206.63	2
Distribution to other share plans	(1,263)	205.40	1
Sale treasury shares	(18,308)	180.28	1
Treasury shares at 31 12 2017, weighted average price	**225,920**	**261.99**	
Treasury shares at 1 1 2018, weighted average price	**225,920**	**261.99**	
Acquisitions 2018	246,039	311.38	10
Distribution to board members	(5,321)	266.63	4
Distribution to E-STIP share plans	(17,103)	226.40	1
Distribution to LTIP share plans	(223,357)	270.29	2
Distribution to other share plans	(3,583)	264.00	1
Treasury shares at 31 12 2018, weighted average price	**222,595**	**319.73**	

2.9 Dividend Income / Impairment Losses on Investments

Dividend income in 2018 includes a dividend distribution from Capsugel Holdings S.à.r.l. of EUR 1,265,000,000 (CHF 1,479,597,560) considered as a capital repayment and at the same time an impairment loss on Capsugel Holdings S.à.r.l. of CHF 1,479,597,560.

2.10 Other Financial Income

Other financial income in 2018 includes interest income from loans to subsidiaries and associates of CHF 118,562,375 (2017: CHF 121,627,865) and the realized gain on sale of Lonza Europe BV of CHF 298,166,268 to Lonza Group Ltd’s indirect subsidiary Capsugel Belgium NV.

2.11 Other Financial Expenses

CHF	2018	2017
Bank interest and fees	46,525,631	31,328,344
Interest on deposits subsidiaries	9,884,381	1,951,438
Amortization of discounts and issue costs	4,948,909	41,381,248
Premium paid on finance instruments	0	18,651,430
Loss on treasury shares	28,237,309	[1]8,656,646
Net exchange rate loss	0	132,083,109
Total financial expenses	**89,596,230**	**234,052,215**

1 Represents the reclassification from personnel expenses to other financial expenses of the loss on treasury shares to consistently state the 2017 comparative period with 2018 presentation

2.12 Other Operating Expenses

CHF	2018	2017
Consulting expenses	17,107,848	13,691,678
Administrative expenses	5,244,963	5,404,116
Other operating expenses	38,490,720	24,822,255
Total other operating expenses	**60,843,531**	**43,918,049**

Other operating expenses include transaction-related costs incurred for integration of Capsugel and disinvestment.

Note 3 • Other Information

3.1 Full-Time Equivalents

At 31 December 2018, Lonza Group Ltd had 75 employees (2017: 63).

3.2 Contingent Liabilites, Guarantees and Pledges

At 31 December 2018, indemnity liabilities, guarantees and pledges in favor of third parties totaled CHF 1,601,661,688 (2017: CHF 1,702,772,154). The company is a member of the Lonza Group value-added-tax group in Switzerland and is thereby jointly and severally liable to the federal tax authorities for value-added-tax debts of the group.

3.3 Major Shareholders

In accordance with Art. 663c of the Swiss Code of Obligations: See Significant Shareholders section in the Corporate Governance Report.

3.4 Share Ownership of the Members of the Board of Directors and the Executive Committee

In accordance with Art. 663c para. 3 of the Swiss Code of Obligations: See note 30 in the Consolidated Financial Statements and Remuneration Report.

3.5 Shares for Members of the Board and Employees

According to the share-based payments (see note 25), Lonza Group Ltd allocates treasury shares as follows:

		2018		2017
	Number of shares	Value in CHF 1	Number of shares	Value in CHF 1
Allocated to members of the Board of Directors	5,321	1,418,718	6,828	1,375,637
Allocated to members of the Executive Committee	25,128	6,709,536	19,202	3,551,697
Allocated to other employees	60,173	16,021,273	20,268	3,738,377
Total	**90,622**	**24,149,527**	**46,298**	**8,665,711**

In 2018 Lonza Group Ltd employed two members of the Executive Committee (2017: 2).

3.6 Significant Events after the Balance Sheet Date

There are no significant events after the balance sheet date which could impact the book value of the assets or liabilities or which should be disclosed here.

Proposal of the Board of Directors

Concerning the Appropriation of Available Earnings and Reserves from Capital Contributions

CHF	2018
Available earnings brought forward	1,562,511,342
Profit for the year	639,612,612
Available earnings at the disposal of the Annual General Meeting	**2,202,123,954**
Available earnings carry-forward	**2,202,123,954**

CHF	2018
Legal capital reserves qualified as reserves from capital contributions	2,882,051,469
Reserves from capital contributions	**2,882,051,469**
Payment of a dividend (out of reserves from capital contributions) in 2018 of CHF 2.75 (2017: CHF 2.75) per share on the share capital eligible for dividend of CHF 74,246,157 (2017: CHF 74,466,154)	(204,176,932)
Available reserves from capital contributions carry-forward	**2,677,874,537**

If the General Annual Meeting approves the above proposal from the Board of Directors, a dividend of CHF 2.75 per registered share, net of withholding tax (as per Article 5 Abs 1bis VStG), will be paid as of 26 April 2019.

Basel, 26 February 2019

Albert Baehny
Chairperson of the Board of Directors

Richard Ridinger
Chief Executive Officer

KPMG

Statutory Auditor's Report

To the General Meeting of Lonza Group Ltd, Basel

Report on the Audit of the Financial Statements

Opinion

We have audited the financial statements of Lonza Group Ltd, which comprise the balance sheet as at 31 December 2018, and the income statement for the year then ended, and notes to the financial statements, including a summary of significant accounting policies.

In our opinion the financial statements for the year ended 31 December 2018 comply with Swiss law and the company's articles of incorporation.

Basis for Opinion

We conducted our audit in accordance with Swiss law and Swiss Auditing Standards. Our responsibilities under those provisions and standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are independent of the entity in accordance with the provisions of Swiss law and the requirements of the Swiss audit profession 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.

Report on Key Audit Matters based on the circular 1/2015 of the Federal Audit Oversight Authority

We have determined that there are no key audit matters to communicate in our report.

Responsibility of the Board of Directors for the Financial Statements

The Board of Directors is responsible for the preparation of the financial statements in accordance with the provisions of Swiss law and the company's articles of incorporation, and for such internal control as the Board of Directors 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, the Board of Directors is responsible for assessing the entity's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Board of Directors either intends to liquidate the entity 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 Swiss law and Swiss Auditing Standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with Swiss law and Swiss Auditing Standards, 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 internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made.
- Conclude on the appropriateness of the Board of Directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the entity'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 entity to cease to continue as a going concern.

We communicate with the Board of Directors or its relevant committee 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.

We also provide the Board of Directors or its relevant committee with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with the Board of Directors or its relevant committee, we determine those matters that were of most significance in the audit of the financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report, unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Report on Other Legal and Regulatory Requirements

In accordance with article 728a para. 1 item 3 CO and the Swiss Auditing Standard 890, we confirm that an internal control system exists, which has been designed for the preparation of financial statements according to the instructions of the Board of Directors.

We further confirm that the proposed appropriation of available earnings complies with Swiss law and the company's articles of incorporation. We recommend that the financial statements submitted to you be approved.

KPMG AG

Michael Blume
Licensed Audit Expert
Auditor in Charge

Cyrill Kaufmann
Licensed Audit Expert

Zürich, 26 February 2019

Supplementary Financial Information

Operational Free Cash Flow

In 2018 and 2017, the development of operational free cash flow by component was as follows:

Components of Operational Free Cash Flow

million CHF	2018	[1]2017
Earnings before interests, taxes and depreciation (EBITDA)	**1,442**	**1,131**
Change of operating net working capital	(29)	(41)
Capital expenditures in tangible and intangible assets	(575)	(451)
Disposal of tangible and intangible assets	8	8
Change of other assets and liabilities	2	46
Gain from Guangzhou (CN) land transaction[2]	0	(74)
Operational free cash flow (before acquisitions / disposals)	**848**	**619**
Acquisition of subsidiaries	(28)	(3,310)
Operational free cash flow	**820**	**(2,691)**

1 Restated to reflect adoption of IFRS 15 (see note 1)

2 Gain from Guangzhou, CN land transaction: The local government requested Lonza to close its Guangzhou (CN) manufacturing site several years ago. In response, Lonza entered into an agreement with a third-party property development company to jointly develop the original land into commercial properties. According to the agreement, Lonza provided the land and the property development company offered the funds and assumed construction responsibilities. In 2017 Lonza obtained its entitled portion of commercial properties based on the agreement. A non-cash gain of the property's estimated fair value was recognized in 2017 based on a valuation performed by an independent external property valuation specialist. In 2018, Lonza made the decision to dispose of this property. In connection with this disposal efforts, Lonza has classified this property as held for sale, and recorded an impairment in 2018 based on estimated fair value less cost to sell. The impairment loss has been included in «Other operating expense»

Statement of Value Added

1 Results represent total Lonza Group, including Water Care
2 Restated to reflect adoption of IFRS 15

Statement of Value Added[1]

		2018			[2]2017	
		million CHF	%		million CHF	%
Origin of value added						
Income from production		6,233			5,112	
Dividend earned		0			0	
Total income		**6,233**	**100**		**5,112**	**100.0**
Services bought from third parties						
Material costs		(1,959)			(1,575)	
Energy costs		(106)			(88)	
Other operating expenses excl. capital taxes		(996)			(841)	
Gross value added		**3,172**			**2,608**	
Depreciation on property, plant and equipment as well as amortization on intangibles, impairment / reversal of impairment		(688)			(430)	
Income from application of the equity method		(2)			0	
Total net value added		**2,482**	**39.8**		**2,178**	**42.6**
Distribution of value added						
To staff:						
– Wages and salaries		1,285			1,091	
– Pensions		46			47	
– Other social security contributions		298			234	
– Other personnel expenses		78			86	
Total personnel cost		**1,707**	**68.8**		**1,458**	**66.9**
To public authorities:						
– Income and capital taxes		169	6.8		(131)	(6.0)
To lenders:						
– Financial expenses net		43	1.7		142	6.5
To shareholders:						
– Dividends paid		206	8.3		160	7.3
To the company:						
– Profit for the period	559			707		
– Dividends paid	(205)	354	14.3	(159)	548	25.2
To non-controlling interest:						
– Profit for the period	4			2		
– Dividends paid	(1)	3	0.1	(1)	1	0.0
Total		**2,482**	**100.0**		**2,178**	**100.0**
Distribution of value added per employee		CHF			CHF	
Wages and salaries		85,684			88,176	
Pensions		3,067			3,799	
Other social security contributions		19,871			18,912	
Other personnel expenses		5,201			6,951	
Total per employee		**113,823**			**117,837**	

CORE Results

Reconciliation of IFRS Results to CORE Results 2018

million CHF	IFRS results	Amortization of intangible assets from acquisitions	[1]Impairments	Restructuring costs / income	[2]Income / expense from acquisition and divestures
Sales	**5,542**	**0**	**0**	**0**	**0**
Cost of goods sold	(3,449)	0	42	5	0
Gross profit	**2,093**	**0**	**42**	**5**	**0**
Marketing and distribution	(344)	0	0	0	0
Research and development	(110)	0	0	0	0
Administration and general overheads	(732)	164	0	3	30
Other operating income	50	0	0	0	0
Other operating expenses	(115)	0	35	3	0
Result from operating activities (EBIT)	**842**	**164**	**77**	**11**	**30**
Financial income	85	0	0	0	(32)
Financial expenses	(119)	0	0	0	0
Net financing costs	**(34)**	**0**	**0**	**0**	**(32)**
Share of profit / (loss) of associates / joint ventures	(1)	0	0	0	0
Profit before income taxes	**807**	**164**	**77**	**11**	**(2)**
Income taxes[3]	(148)	(30)	(14)	(2)	0
Profit from continuing operations	**659**	**134**	**63**	9	**(2)**
Loss from discontinued operations, net of income taxes	(96)	3	69	1	18
Profit for the period	**563**	**137**	**132**	**10**	**16**
Non-controlling interests	(4)	0	0	0	0
Profit for the period, attributable to the equity holders of the parent	**559**	**137**	**132**	**10**	**16**
Number of shares basic	74,408,243				
Number of shares diluted	74,723,145				
Earnings per share for profit from continuing operations attributable to equity holders of the parent:	CHF				
Basic earnings per share – EPS basic	8.80				
Diluted earnings per share – EPS diluted	8.77				
Earnings per share for profit attributable to equity holders of the parent:	CHF				
Basic earnings per share – EPS basic	7.51				
Diluted earnings per share – EPS diluted	7.48				

Environ-mental-related expenses	Other	CORE results
0	**0**	**5,542**
39	0	(3,363)
39	**0**	**2,179**
0	0	(344)
0	0	(110)
0	0	(535)
0	0	50
2	0	(75)
41	**0**	**1,165**
0	0	53
0	1	(118)
0	**1**	**(65)**
0	1	0
41	**2**	**1,100**
(7)	0	(201)
34	**2**	**899**
0	1	(4)
34	**3**	**895**
0	0	(4)
34	**3**	**891**
		74,408,243
		74,723,145
		CHF
		12.03
		11.98
		CHF
		11.97
		11.92

1 Impairment charges relate to the market revaluation of land in Guangzhou (CHF 35 million), the production facilities in Walkersville subsequent to the transfer of the cell-therapy activities to Portsmouth and Houston (CHF 29 million) as well as other production assets in Nansha and Visp

2 Income / expense resulting from acquisition and divestitures.

Result from operating activities (EBIT):
– Integration cost resulting from the acquisition of Capsugel (CHF 28 Million) and other acquisitions

Net financing costs:
– Fair value adjustment on Lonza's pre-acqisition investment in Octane

Discontinued operations:
– Water Care related divestiture expenses

3 Tax impact calculated based on the estimated average Group tax rate of: 18.3%

CORE Results as Defined by Lonza

Lonza believes that disclosing CORE results of the Group's performance enhances the financial markets' understanding of the company because the CORE results enable better comparison across years. CORE results exclude exceptional expenses and income related to e.g. restructuring, environmental-remediation, acquisitions and divestitures, impairments and amortization of acquisition-related intangible assets, which can differ significantly from year to year. For this same reason, Lonza uses these CORE results in addition to IFRS as important factors in internally assessing the Group's performance.

Reconciliation of IFRS Results to CORE Results 2017[1]

million CHF	IFRS results	Impact from tax reform in US / Belgium	Results after US / Belgium tax reforms	Amortization of intangible assets from acquisitions	Impairments
Sales	**4,548**	**0**	**4,548**	**0**	**0**
Cost of goods sold	(2,893)	0	(2,893)	0	21
Gross profit	**1,655**	**0**	**1,655**	**0**	**21**
Marketing and distribution	(277)	0	(277)	0	0
Research and development	(95)	0	(95)	0	0
Administration and general overheads	(609)	0	(609)	100	0
Other operating income	109	0	109	0	0
Other operating expenses	(110)	0	(110)	0	0
Result from operating activities (EBIT)	**673**	**0**	**673**	**100**	**21**
Financial income	30	0	30	0	0
Financial expenses	(169)	0	(169)	0	0
Net financing costs	**(139)**	**0**	**(139)**	**0**	**0**
Share of profit / (loss) of associates / joint ventures	1	0	1	0	0
Profit before income taxes	**535**	**0**	**535**	**100**	**21**
Income taxes[4]	131	(187)	(56)	(7)	(1)
Profit from continuing operations	**666**	**(187)**	**479**	**93**	**20**
Loss on sale of discontinued operations, net of income taxes	43	0	43	4	0
Profit for the period	**709**	**(187)**	**522**	**97**	**20**
Non-controlling interests	(2)	0	(2)	0	0
Profit for the period, attributable to the equity holders of the parent	**707**	**(187)**	**520**	**97**	**20**
Number of shares basic	67,878,060				
Number of shares diluted	68,460,234				
Earnings per share for profit from continuing operations attributable to equity holders of the parent:	CHF				
Basic earnings per share – EPS basic	9.78				
Diluted earnings per share – EPS diluted	9.70				
Earnings per share for profit attributable to equity holders of the parent:	CHF				
Basic earnings per share – EPS basic	10.42				
Diluted earnings per share – EPS diluted	10.33				

Reversal of impairments	Restructuring costs / income	[2]Income / expense from acquisition and divestures	Environmental-related expenses	[3]Gain from Guangzhou (CN) land transaction	Other	CORE results
0	**0**	**0**	**0**	**0**	**0**	**4,548**
(2)	0	77	27	0	0	(2,770)
(2)	**0**	**77**	**27**	**0**	**0**	**1,778**
0	0	0	0	0	0	(277)
0	0	0	0	0	0	(95)
0	7	29	0	0	0	(473)
0	0	0	0	(74)	0	35
0	6	35	5	0	0	(64)
(2)	**13**	**141**	**32**	**(74)**	**0**	**904**
0	0	0	0	0	0	30
0	0	49	0	0	1	(119)
0	**0**	**49**	**0**	**0**	**1**	**(89)**
0	0	0	0	0	(1)	0
(2)	**13**	**190**	**32**	**(74)**	**0**	**815**
0	(1)	(13)	(2)	5	0	(75)
(2)	12	177	30	**(69)**	**0**	**740**
0	0	0	0	0	0	47
(2)	**12**	**177**	**30**	**(69)**	**0**	**787**
0	0	0	0	0	0	(2)
(2)	**12**	**177**	**30**	**(69)**	**0**	**785**
						67,878,060
						68,460,234
						CHF
						10.87
						10.78
						CHF
						11.56
						11.47

1 Restated to reflect adoption of IFRS 15 (see note 1) and classification of Water Care business as discontinued operations (see note 5.2).

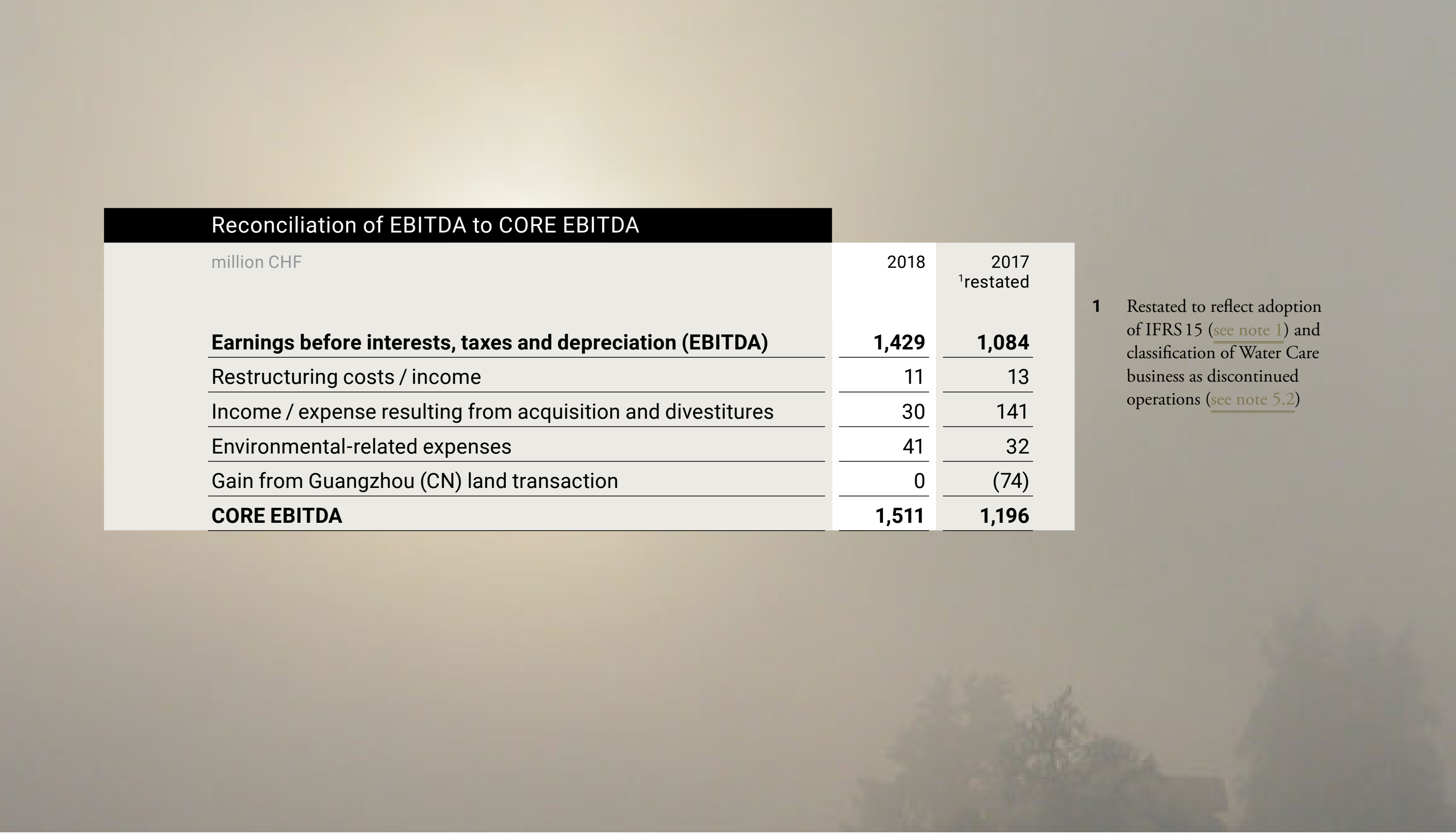
2 Income / expense resulting from acquisition and divestitures.

Result from operating activities (EBIT):
- Capsugel: CHF 77 Million related to the fair value step-up of acquired Capsugel inventories as well as CHF 27 million for acquisition and integration-related costs
- Peptides business: accumulated exchange rate translation reserve losses of CHF 35 million
- Other acquisitions: acquisition and integration costs of CHF 2 million

Net financing costs:
- Capsugel: Amortization of fees on bridge financing (see note 5) of CHF 37 million as well as option premium paid of CHF 19 million for derivative financial instrument to manage foreign currency exposure
- InterHealth: Favorable impact from fair value adjustment on contingent purchase price consideration of CHF 7 million

3 See note to Operational Free Cash Flow.

4 Excluding the impact from tax reform in United States / Belgium, an average Group tax rate of 6.6% results, which is used for the calculation of income taxes on CORE reconciliation items.



Reconciliation of EBITDA to CORE EBITDA

million CHF	2018	2017 [1]restated
Earnings before interests, taxes and depreciation (EBITDA)	**1,429**	**1,084**
Restructuring costs / income	11	13
Income / expense resulting from acquisition and divestitures	30	141
Environmental-related expenses	41	32
Gain from Guangzhou (CN) land transaction	0	(74)
CORE EBITDA	**1,511**	**1,196**

1 Restated to reflect adoption of IFRS 15 (see note 1) and classification of Water Care business as discontinued operations (see note 5.2)

Return on Invested Capital

Lonza's return on invested capital (ROIC) is defined as net operating profit after taxes (NOPAT) divided by the average invested capital of Lonza Group.

In 2018 and 2017, the development of ROIC by component was as follows:

Components of net operating profit after taxes for the year ended 31 December:

million CHF	2018	2017 [1]restated
CORE result from operating activities (CORE EBIT)	**1,165**	**904**
Amortization of acquisition-related intangibles assets	(164)	(100)
Share of result of associates / joint ventures and interest on operating leases	(1)	1
Debt impact of operating leases (ROIC)	4	3
Net operating profit before taxes	**1,004**	**808**
Taxes[2]	(184)	(53)
Net operating profit after taxes (NOPAT)	**820**	**755**
Net operating profit after taxes (NOPAT), pro-forma[3]	**820**	**824**
Average invested capital	**10,254**	**9,849**
ROIC (in %)	**8.0**	**8.4**

1 Restated to reflect adoption of IFRS 15 (see note 1) and classification of Water Care business as discontinued operations (see note 5.2)
2 Group tax rate of 18.3% for 2018 and 6.6% for 2017 (restated for IFRS 15 adoption and excluding the favorable impacts from the estimated US and Belgian tax reforms)
3 Pro-forma reflects Capsugel Capsugel full-year 2017 financial results

The invested capital represent the average of the monthly balances of the following components:

Components of average invested capital for the year ended 31 December:

million CHF	2018	2017
CORE net operating assets	**3,713**	**3,448**
Goodwill	3,786	3,756
Acquisition-related intangible assets	3,244	3,356
Other assets[1]	320	265
Net current and deferred tax liabilities	(809)	(976)
Average invested capital	**10,254**	**9,849**

1 Investments in associates / joint ventures, operating cash, present value of operating leases

Results from Discontinued Operations

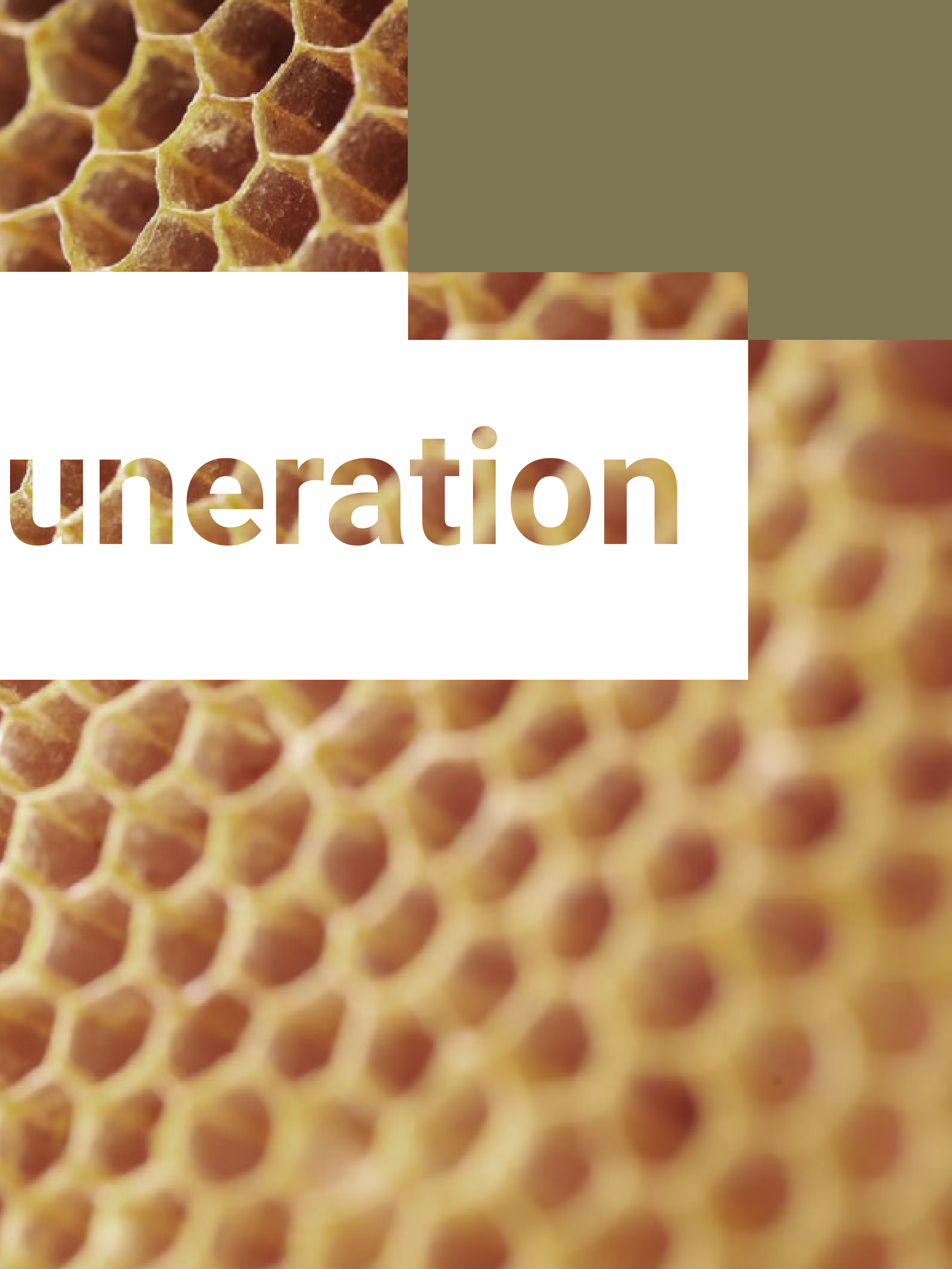
Income Statement[1]

million CHF	Notes[2]	2018 Continuing operations	2018 Discountinued Operations	2018 Total	[3]2017 Continuing operations	[3]2017 Discountinued Operations	[3]2017 Total
Sales	2	5,542	516	6,058	4,548	523	5,071
Cost of goods sold		(3,449)	(370)	(3,819)	(2,893)	(372)	(3,265)
Gross profit		**2,093**	**146**	**2,239**	**1,655**	**151**	**1,806**
Marketing and distribution		(344)	(70)	(414)	(277)	(68)	(345)
Research and development	23	(110)	(8)	(118)	(95)	(8)	(103)
Administration and general overheads[4]		(732)	(47)	(779)	(609)	(50)	(659)
Other operating income	20	50	2	52	109	6	115
Other operating expenses	20	(115)	(111)	(226)	(110)	(3)	(113)
Result from operating activities (EBIT)[5]		**842**	**(88)**	**754**	**673**	**28**	**701**
Financial income	21.1	85	0	85	30	1	31
Financial expenses	21.2	(119)	(9)	(128)	(169)	(4)	(173)
Net financing costs		**(34)**	**(9)**	**(43)**	**(139)**	**(3)**	**(142)**
Share of loss of associates / joint ventures	9	(1)	(1)	(2)	1	(1)	0
Profit before income taxes		**807**	**(98)**	**709**	**535**	**24**	**559**
Income taxes	22	(148)	2	(146)	131	19	150
Profit for the period		**659**	**(96)**	**563**	**666**	**43**	**709**
Attributable to:							
Equity holders of the parent		655	(96)	559	664	43	707
Non-controlling interest		4	0	4	2	0	2
Profit for the period		**659**	**(96)**	**563**	**666**	**43**	**709**
		CHF	CHF	CHF	CHF	CHF	CHF
Basic earnings per share	27	8.80	(1.29)	7.51	9.78	0.64	10.42
Diluted earnings per share	27	8.77	(1.29)	7.48	9.70	0.63	10.33

1 For the year ended 31 December
2 See the accompanying notes to the consolidated financial statements
3 Restated to reflect changes from IFRS 15 (see note 1)
4 Includes the amortization of acquisition-related intangible assets (Continung operations 2018: CHF 164 million, 2017: CHF 100 million; discontinued operations: 2018: CHF 4 million, 2017: CHF 4 million)
5 Result from operating activities (EBIT) excludes interest income and expenses as well as financial income and expenses that are not interest related (see note 21) and Lonza's share of profit / loss from associates and joint ventures

Rem

This Remuneration Report provides a comprehensive overview of Lonza's compensation philosophy, principles and components. The report presents, in accordance with the applicable SIX Swiss Exchange regulations and reporting standards, the structure, governance and details of Board of Directors and Executive Committee members' compensation.



uneration

Compensation and Performance Overview 2018

Lonza's compensation philosophy is designed to attract and retain talent through competitive compensation programs. Lonza's compensation programs are performance-based, linking employee rewards with company and individual performance. Executive compensation is aligned with the short-term and long-term objectives of Lonza; results are measured based on achievement of specific goals that are aligned with the short-term and long-term objectives. Our performance goals are selected to achieve a balance between desired short-term and long-term outcomes. In this way, we encourage strategic decisions for competitive advantage and discourage executives from taking unnecessary or excessive risks that would threaten the reputation or sustainability of the Company. The financial impact of the Capsugel integration was excluded from the CORE results which are relevant for the short-term incentive plan (STIP) payout and long-term incentive plan (LTIP) vesting.

During 2018 Lonza actively engaged with shareholders to address matters raised at last year's Annual General Meeting (AGM) and to present and discuss the planned changes to Executive Committee compensation which were approved by the shareholders at the 2018 AGM. These changes were required to reflect the transformative changes in the Company and resulting changes to the level of responsibility and complexity of the roles of the Executive Committee as a result of a number of acquisitions, most notably Capsugel in 2017; including significant organic growth and the global presence of operations, as well as sustained performance delivery. A further consideration was to ensure market competitiveness with the Mid-Term Guidance outlining the development of a CHF 7.5-billion global revenue organization by 2022.

In addition to the changes in compensation, the Board of Directors also confirmed three key additions to the terms of compensation for the Executive Committee and CEO: 1) that base salaries would be frozen at 2018 levels for three years, except in the case of a promotion or substantive business expansion; 2) expanding the clawback provisions to be in line with emerging best practices aimed at covering all aspects of compensation in instances of misconduct, material misstatement of performance and error in calculation of performance; and 3) increase the minimum shareholding requirements for the CEO and EC members. In response to shareholder feedback, the Board of Directors also reviewed Lonza's disclosure practice regarding the performance targets of the LTIP. Investors broadly confirmed the relevance of ROIC and CORE EPS as performance criteria. In contrast to other potential, but less relevant, criteria for the LTIP, such as total shareholder return (TSR), the strategic nature of both criteria does not allow a prospective disclosure of exact targets. However, the Board of Directors understands the importance of providing reassurance to investors that these targets are challenging and therefore decided to provide enhanced transparency in regard to LTIP targets in advance, commit to targets exceeding market guidance, as well as to a comprehensive and exact disclosure of targets and target achievement on a retrospective basis (see section 4.6). Lonza remains committed to actively engaging with all stakeholders to ensure our compensation approach rewards sustained strong performance, ensures market competitiveness and aligns with the shareholder interests.

For 2018 Lonza's overall financial performance vs. STIP targets was as follows:

2018 STIP Payout[1]: Financial Targets[2]

million CHF	2018 Actual performance	Target weighting in %	Achieved in %	Proposed 2018 payout in % (weighted)
CORE EBITDA	1,547.4	50.0	148.8	74.4
Sales (at target FX rates)	5,805.7	15.0	172.2	25.8
Operational cash flow	844.9	15.0	81.9	12.3

Lonza's overall financial performance in 2018 vs. LTIP targets for 2016 was determined by the Nomination and Compensation Committee (NCC) to approximate the financial performance required to meet Lonza's challenging strategic goals and support Lonza's three-year plan. The 2016 LTIP performance was as follows (plan vested on 31 January 2019):

2016 LTIP Financial Performance[3]

	Actual performance	Payout in %
CORE EPS (earnings per share)	CHF 11.97	200
CORE RONOA (return on net operating assets)	28.01%	200

1 See section 4.3 – Performance-Related vs. Fixed Compensation
2 Financial targets account for 80% of the total STIP weighting; individual performance accounts for the remaining 20% weight. For Executive Committee members only financial targets apply, the overall target achievement in 2018 was 140.1% (2017: 200%)
3 Three-year cycle completed 31 December 2018. See section 4.6 – Long-Term Incentive (LTIP) for more details

1 Compensation-Setting Process

1.1 Rules in the Articles of Association

Lonza's Articles of Association contain rules regarding the approval of compensation by the Shareholders' Meeting (Article 22), the supplementary amount in the event of changes in the Executive Committee (Article 23), compensation of the members of the Board of Directors and the Executive Committee, including the principles applicable to performance-related compensation (Article 24), the agreements with members of the Board of Directors and the Executive Committee (Article 25) and loans to members of the Board of Directors and the Executive Committee (Article 27).

1.2 Responsibilities of Company Bodies

Board of Directors

As outlined in the Organizational Regulations (Article 2.8), the Board of Directors takes decisions on the following matters:

1. The determination of the compensation for the members of the Board of Directors in accordance with the Articles of Association, subject to approval of the compensation of the Board by the Shareholders' Meeting pursuant to the Articles of Association;
2. The proposals to the Shareholders' Meeting regarding approval of the compensation of the Board of Directors and the Executive Committee; and
3. The preparation of the Remuneration Report.

Nomination and Compensation Committee

The Nomination and Compensation Committee (NCC) has the following roles and responsibilities as outlined in the Nomination and Compensation Committee Charter:

1. To recommend and review compensation policies and plans for approval by the full Board of Directors;
2. To review periodically and make recommendations to the Board of Directors regarding any variable incentive and the extent to which the plans meet their objectives;
3. To advise the Board of Directors on the compensation of its members;

4. To review and approve the objectives relevant to the CEO's compensation, to evaluate the performance on a regular basis and to determine the CEO's compensation based on performance, subject to approval of the compensation of the Executive Committee by the Shareholders' Meeting pursuant to the Articles of Association;
5. To review and approve the compensation proposals for members of the Executive Committee subject to approval by the Shareholders' Meeting pursuant to the Articles of Association;
6. To recommend to the Board of Directors proposals to be submitted to the Annual Shareholders' Meeting for approval regarding total amounts of compensation of the Board and the Executive Committee pursuant to the Articles of Association;
7. To support the Board of Directors in preparing the Remuneration Report;
8. To inform the Board of Directors about compensation policies and programs as well as benchmark compensation of key peer companies; and
9. To inform the Board of Directors about the terms of employment for the members of the Executive Committee.

The NCC continuously reviews the aspects of executive compensation and compliance with good governance standards. As a result of the continuous growth, transformation of the Company and inclusion in the Swiss Market Index (SMI) in 2017, Lonza reviewed its approach to executive compensation in order to remain competitive to retain talent but at the same time apply governance best-practice positioning. Within this review and analysis, feedback from shareholders, members of the investment community, policy recommendations provided by institutional shareholder advisory organizations and the Swiss Ordinance Against Excessive Compensation for Stock-Exchange-Listed Companies were considered.

The Chief Human Resources Officer and the relevant HR specialists prepare the NCC meeting materials and provide the related materials for such meetings. These individuals have an advisory function without voting rights.

Shareholders' Meeting

The Shareholders' Meeting approves annually the compensation of the Board of Directors and the Executive Committee in accordance with Article 22 of Lonza's Articles of Association.

1.3 Nomination and Compensation Committee and Board of Directors Meetings

The 2018 meetings of the NCC and the Board of Directors relating to compensation took place in January, March, April, July, October and December. An additional meeting dealing with 2018 company performance and overall target achievement related to compensation matters was held in January 2019.

At these meetings the NCC and/or the Board of Directors finalized: plan provisions, grants, financial targets and target achievements for the STIP and LTIP plans; progress report outlining interim ownership guidelines achievement for the Executive Committee; recommendations relating to compensation motions to be submitted to the Annual General Meeting; reviewing senior and executive management succession planning and talent development.

At the AGM in May 2018, Christoph Mäder replaced Jean-Daniel Gerber as the Chairperson of the NCC. Besides Christoph Mäder and Jürgen Steinemann, Angelica Kohlmann was elected as a member of the NCC. The NCC held six meetings in 2018. Attendance at the NCC meetings was 89%. For additional details see Corporate Governance Report.

The Chairperson of the NCC informs the Board of Directors on a regular basis about its activities and decisions. The discussions and decisions of the Board of Directors and the NCC regarding compensation of the members of the Executive Committee are resolved in the absence of the affected members of the Executive Committee. All members of the Board of Directors are independent non-executive members.

1.4 External Advisers and Benchmarks

Lonza reviews the competitive environment and compensation for all employees, including the Board of Directors and Executive Committee, through regular competitive benchmarking. For the Board of Directors and Executive Committee a comprehensive review was conducted in 2017. In view of the changes approved by the AGM in 2017 and associated commitments relating to a freeze of the compensation levels, no detailed benchmarking was conducted in 2018. Lonza continues to engage with New Bridge Street (NBS)[1] as needed.

The peer companies used for compensation and benefits reviews of the Board of Directors and the Executive Committee are described in greater detail in Section 3.1 and Section 4.1.

1 NBS is part of AON's Performance, Reward and Talent Group. AON has further consulting arrangements with Lonza Human Resources

2 Compensation Components

The compensation of Lonza employees includes the following components (total compensation):

Base Pay

The base pay of Lonza employees is established by assessing the scope of the job within the context of the relevant market, as well as individual performance. The base pay should be in general comparable with the median of similar positions in the pharmaceutical, chemical and general industries. Potential increases in base pay are evaluated on a regular basis and are typically based on relevant market economic developments, benchmarks and the employee’s performance.

Variable Compensation

The variable compensation is designed to provide employees with the opportunity to participate in the company’s overall success and earn a competitive level of total compensation. The majority of employees participate in a short-term incentive plan (STIP). Senior management and key employees also participate in a long-term incentive plan (LTIP). The guiding principle for these plans is to motivate, reward and retain employees for the company’s short-term and long-term financial success.

Benefits

The benefits programs are specified by country, taking into consideration local legislation as well as competitive market practices within our industry. Benefit packages are reviewed on a regular basis.

3 Compensation of the Board of Directors

3.1 Principles

Objective and Benchmarks

The 2017 benchmark data which the NCC reviewed and applied for the Board of Directors' compensation assessment was based on Swiss companies (various sectors) that are comparable in type of business, complexity, size and global presence to Lonza. Lonza's objective is to pay the members of the Board of Directors at the median of this benchmark group in accordance with their respective duties and responsibilities. In 2017, the NCC and Board of Directors amended the peer group to reflect Lonza's inclusion in the SMI (Swiss Market Index of the Twenty Largest Listed Swiss Companies). The amended peer group more directly reflects our strategic business direction along the healthcare continuum as well as the transformational organic and inorganic growth of the Company.

Overall Structure and Level of Compensation

The position and associated compensation of the Chairperson of the Board of Directors was approved by the 2018 AGM. For all other members of the Board of Directors, fees have remained unchanged since 2016, with the exception of the Vice-Chairperson, who no longer received additional fees.

3.2 Compensation Components

For the period from the AGM 2018 to the AGM 2019, the members of the Board of Directors receive fixed gross compensation for Board of Directors membership and additional compensation for committee chairpersons and committee members as described in the table below.

Compensation Board of Directors AGM 2018 to 2019[1]

CHF	Annual fee	Additional committee membership fee	Additional committee chairperson fee
Board of Directors member	200,000	40,000	80,000
Chairperson of the Board of Directors	600,000		

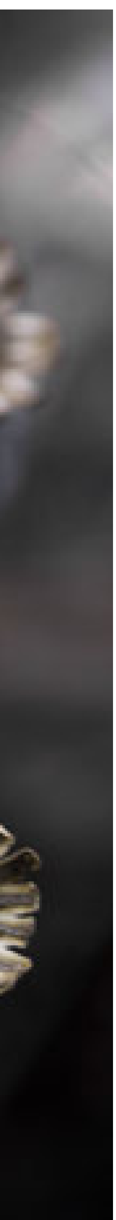
1 Refer to section 3.3 regarding total compensation (including national employer social contributions) provided to the Board of Directors in the 2018 financial year. The table above represents the period from AGM 2018 to AGM 2019 and does not include social contributions of the employer

The compensation of the Chairperson of the Board of Directors includes his compensation as a member of the Innovation and Technology Committee of the Board of Directors.

The total compensation of the committee chairpersons amounts to CHF 280,000 and includes the committee membership fee.

Board of Directors' compensation for 2018 is paid quarterly; 50% of the compensation is paid in cash and 50% in Lonza restricted shares. The number of shares granted for Board of Directors' compensation is based on the average closing share price of the last five business days of each quarter. Share restrictions lapse after three years from the grant date. Shares are eligible for a dividend. This structure of Board of Directors compensation is closely aligned with our shareholders' interests.

The members of the Board of Directors do not receive variable compensation. The members of the Board of Directors are reimbursed for travel and other related expenses associated with their responsibilities as members of the Board of Directors of Lonza.



3.3 Aggregate Compensation of the Board of Directors

Board of Directors Compensation

CHF					2018					2017
	Net cash payment	Number of shares	[2] Value of shares	[3]Social security and taxes	[4]Total	Net cash payment	Number of shares	[2] Value of shares	[3]Social security and taxes	[4]Total
Rolf Soiron Chairperson[1]	51,163	249	56,234	10,175	117,572	204,657	1,010	224,619	40,686	469,962
Albert Baehny[5] Chairperson / Vice-Chairperson	238,636	964	261,954	47,728	548,318	101,631	471	112,081	21,170	234,882
Patrick Aebischer[6]	124,651	526	139,429	28,524	292,604	124,638	628	139,626	28,549	292,813
Werner Bauer	109,566	451	119,558	20,868	249,992	109,558	538	119,656	20,884	250,098
Thomas Ebeling[7]						26,599	161	29,901	6,229	62,729
Jean-Daniel Gerber[7]	31,925	154	34,779	6,150	72,854	127,674	628	139,626	24,651	291,951
Angelica Kohlmann[8]	38,694	319	89,747	59,780	188,221					
Christoph Mäder[6]	120,167	504	134,461	27,537	282,165	106,705	538	119,656	24,598	250,959
Barbara Richmond	60,104	451	119,558	91,412	271,074	60,063	538	119,656	91,454	271,173
Margot Scheltema[6]	75,733	526	139,429	64,267	279,429	75,674	628	139,626	64,328	279,628
Jürgen Steinemann	64,904	451	119,558	55,096	239,558	64,863	538	119,656	55,137	239,656
Antonio Trius	54,936	451	119,558	129,538[9]	304,032	64,863	538	119,656	55,137	239,656
Olivier Verscheure[8]	38,694	319	89,747	59,780	188,221					
Total	**1,009,173**	**5,365**	**1,424,012**	**600,855**	**3,034,040**	**1,066,925**	**6,216**	**1,383,759**	**432,823**	**2,883,507**

The reasons for the increase in Board compensation in 2018 were the alignment of the fee for the chairperson of the Board of Directors based on the overall growth of Lonza during 2016 and 2017 (e.g. acquisition of Capsugel); the resulting increase in the complexity and obligations of the role; the inclusion of Lonza in the Swiss Market Index (SMI); and to ensure competitiveness of the chairpersonship fee versus market rates. This increase of the compensation of the Chairperson of the Board of Directors was approved by the AGM shareholders' vote in May 2018.

No loans or credits were outstanding as of 31 December 2018. During 2018, no payments (or waiver of claims) were made to current or former Board members nor to persons closely linked to them. No member of the Board of Directors benefits materially from any contract between a Lonza company and a third party.

For a full review of the historical development of compensation for the Board of Directors, see note 25 in the Lonza Financial Report.

1 Rolf Soiron chose not to stand for re-election at the AGM 2018
2 The fair values were calculated using the average closing share price of the last five business days of each quarter, see note 25 in the Financial Report
3 The social security amounts disclosed in this column represent the full costs of the employer and employee social security contributions and withholding tax
4 Total compensation amounts refer to gross payments, including social security and withholding tax, except where stated otherwise
5 This compensation includes Albert Baehny's committee membership. Albert Baehny is also a member of the Innovation and Technology Committee
6 Patrick Aebischer, Christoph Mäder and Margot Scheltema are Chairpersons of a Board of Directors Committee
7 Thomas Ebeling did not stand for re-election at the AGM 2017 Jean-Daniel Gerber did not stand for re-election at the AGM 2018
8 Angelica Kohlmann and Olivier Verscheure were elected to the Board of Directors at the AGM 2018
9 Includes additional social security provision for Antonio Trius in 2018

4 Compensation of the Executive Committee

4.1 Principles

Objective and Benchmarks

Lonza's objective is to pay the members of the Executive Committee (EC) a base salary in line with the median for the market as described below, with the potential for executives to earn above-median compensation through a combination of competitive short-term and long-term incentive programs if the company outperforms its financial targets. These incentive plans are designed to align the Executive Committee's objectives with the interests of our shareholders. The total compensation (base salary, variable elements and fringe benefits) of the members of the Executive Committee is benchmarked on a regular basis against a peer group of the relevant industry and reflects the defined Healthcare Continuum® strategy of Lonza.

The following peer groups were used in 2017 to assess total compensation for the Executive Committee. In an effort to reflect sufficient relevant data as well as to ensure competitiveness for talent, the primary peer group served as the essential base. The Swiss market data of the secondary peer group was used to validate the conclusions. The US market peer group was used solely for information purposes. No further amendments were made in 2018.

Peer Groups

Primary peer group	Secondary peer group
European pharmaceutical / chemical sector businesses (all data adjusted to reflect differences in revenue and market value)[1]	Swiss companies similar in size to Lonza in other sectors[2]
	US pharmaceutical[3] or chemical[4] companies similar in size to Lonza

For the alignments made to the base salary of the EC and the CEO please refer to the applicable charts in Section 4.3 and Section 4.4.

1 Arkema, Astra Zeneca, BASF, Bayer, Beiersdorf, Clariant, Croda International, DSM Koninklijke, Evonik Industries, Givaudan, Henkel, Hikma Pharmaceuticals, Lanxess, Merck, Novartis, Qiagen, Reckitt Benckiser, Roche Holdings, Sonova, Symrise, UCB, Umicore, Wacker Chemie

2 ARYZTA AG, Barry Callebaut AG, Emmi AG, Forbo Holding AG, Geberit AG, Georg Fischer AG, Logitech International S.A., OC Oerlikon Corporation AG, Panalpina Welttransport (Holding) AG, Sonova Holding AG, Sulzer

3 Alere, Allergan plc, Baxter BioPharma Solutions, Becton Dickinson Bioscience, Bristol Myers Squibb, Catalent, Mylan Inc., 3M Drug Delivery Systems, Parexel, Perrigo Company, Pfizer CentreOne, Thermo Fischer Clinical Services, West Pharmaceutical Services, Zoetis Inc.

4 Ashland, Celanese Corporation, Danaher, Estee Lauder, Eastman Chemical Company, FMC Corporation, International Flavors and Fragrances Inc., Westlake Chemical Corporation

4.2 Compensation Components

The compensation of the members of the Executive Committee consists of the following components:

Base Salary

The base salary is paid in cash and determined for each position considering the responsibilities of the position and performance of each member of the Executive Committee.

Short-Term Incentive Plan (STIP)

The company provides the members of the Executive Committee with a Short-Term Incentive Plan. Performance metrics are defined for each financial year; achievement determines the payout of STIP. The STIP in principle pays out in cash, though it is converted to 50% shares when shareholding requirements are not met. For details regarding the STIP, please refer to Section 4.6 – Short-Term Incentive Plan (STIP).

Long-Term Incentive Plan (LTIP)

The LTIP is designed to align the interests of the Executive Committee with those of Lonza's shareholders and to serve as a retention incentive for the executives. The LTIP is a 100% equity-based plan with conditional equity awards vesting after three years according to performance conditions. Executive Committee members are awarded the right to receive a number of shares in Lonza in the future, provided that certain performance-related conditions are achieved. For more details regarding the LTIP, please refer to Section 4.6 – Long-Term Incentive Plan (LTIP).

Benefits

The Executive Committee's compensation package also includes certain benefits, e.g. pension plans and other benefits, such as a car, expenses allowance, health insurance and (if applicable) tuition fees.

4.3 Aggregate Compensation of the Executive Committee

The table below shows the breakout of the Executive Committee Compensation.

Executive Committee's Compensation[1]		
million CHF	2018	2017
Cash payments and benefits		
Base salary	3.800	3.312
Short-term incentive (cash)[2]	4.833	4.458
Post-employment benefits / other benefits[3]	1.870	1.741
Share-based payments		
Value of STIP paid out in shares[4]	0	1.238
Value of LTIP equity at market value[5] (number of equity awards 2018: 18 925, 2017: 17 805)	4.900	3.221
Total	**15.403**	**13.970**
Ratio of fixed compensation to the performance-related components of compensation	49.41%	47.45%

1 Average of 5.0 members in 2018 and average of 4.9 members in 2017. Fridtjof Helemann was appointed to the Executive Committee effective 1 February 2017
2 The achievement for 2018 was 140.1% (2017: 200%) and will be paid out in April 2019 after and subject to the approval of the Shareholder's Meeting
3 Social security, pension fund and other benefits (see section 4.2). The social security and pension fund amounts disclosed on this line represent the full costs of the employer contributions for 2017 and 2018. The table shows the fair value of the other benefits
4 All EC members meet the minimum shareholding requirement in 2018 (see section 4.6)
5 The fair value in 2018 and 2017 was calculated using the market value at grant date. It is possible that the eventual value at vesting will be higher or lower (or even zero)

The increase of the base salaries resulted from adjustments made in line with the AGM shareholders' vote in May 2018. Principal reasons for these adjustments of the base salary and the LTIP are the following:

- The organic and inorganic growth of Lonza over the last two years resulted in an increase of more than 50% in the workforce combined with sustained increasing performance;
- The transformative acquisition and integration of Capsugel, in addition to several bolt-on acquisitions, has resulted in a global presence as well as an increase in major manufacturing and R&D sites spanning three continents (Americas, EMEA and APAC);
- As a result of the growth in the last two years and also Lonza's inclusion in the Swiss Market Index (SMI), all EC members have expanded responsibilities. With the greater recognition and enhanced reputation of Lonza, the turnaround capabilities and sustained performance delivery of its EC members are also increasingly recognized externally.

The overarching driver of the changes was to strengthen the strategic focus on the long-term company direction along the Healthcare Continuum® and aligning with shareholder interests.

The proposed STIP payment for 2018 reflects Lonza's results across all key performance indicators. Compared with the STIP payout for the 2017 financial year, the proposed STIP amount for the 2018 financial year represents a decrease of 15.2%. This decrease is as a result of the lower target achievement of 140.1% versus 200% for 2017. Note that for 2018 (including the vesting of LTIP 2016 in January 2019) all EC members fulfilled the minimum shareholding requirements and therefore no STIP was paid out in shares (2017: CHF 1.238 million was paid out in shares).

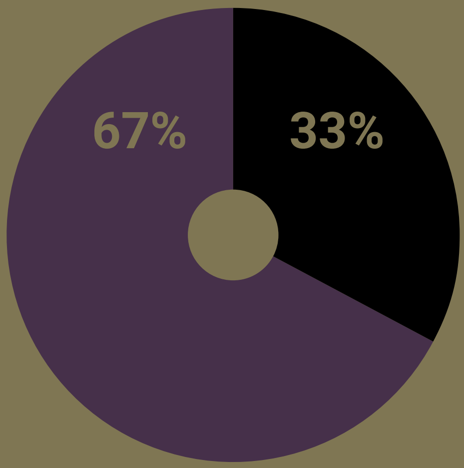
The number of LTIP Equity Awards increased in 2018 (2018: 18,925 versus 2017: 17,805) due to an increase in the base salaries and the increase of the percentage targets for the CEO from 100% to 150% and for the EC members from 100% to 125% – as approved by shareholders at the 2018 AGM. The value of LTIP Equity Awards in CHF increased from CHF 3.221 million in 2017 to CHF 4.900 million in 2018 accordingly.

No loans or credits were outstanding as of 31 December 2018. During 2018, no payments (or waiver of claims) were made to current or former Executive Committee members nor to persons closely linked to them. No member of the Executive Committee benefits materially from any contract between a Lonza company and a third party.

Performance-Related vs. Fixed Compensation

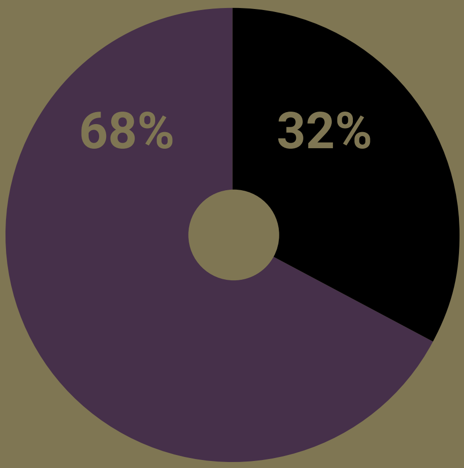
As illustrated below (in million CHF), Lonza's strong financial performance has largely maintained the ratio of performance-related to fixed compensation.

2018



Fixed 5.094
Performance-related 10.309

2017



Fixed 4.495
Performance-related 9.475

4.4 Highest Compensation Paid to a Member of the Executive Committee

The table below shows the breakout of the compensation of the highest-paid individual.

Compensation of the Highest-Paid Individual[1]

milliion CHF	2018	2017
Cash payments and benefits		
Base salary	1.150	1.055
Short-term incentive (cash)[1]	1.681	2.200
Post-employment benefits / other benefits[2]	0.527	0.514
Share-based payments		
Value of LTIP equity at market value[3] (number of equity awards 2018: 6 373, 2017: 5 583)	1.650	1.010
Total	**5.008**	**4.779**
Ratio of fixed compensation to the performance-related components of compensation	43.02%	41.61%

1 Incentive (STIP) for the reporting year. The 2017 STIP was paid in May 2018; the 2018 STIP will be paid in April 2019 after and subject to AGM shareholders' approval. The CEO already meets the shareholding requirement and will therefore receive full cash payout of STIP 2018. The STIP was calculated using base salary of 31 December 2018
2 Social security and pension fund as well as company car and health insurance. The social security and pension fund amounts disclosed on this line represent the full costs of the employer contributions for 2017 and 2018. The table shows the fair value of the other benefits
3 The fair value in 2018 and 2017 was calculated using base salary and market value at grant date (31 January 2018). It is possible that the eventual value will be higher or lower (or even zero)

The 2018 increase of base salary and the LTIP Equity Award budget was approved by shareholders at the AGM in May 2018.

The proposed STIP amount for the 2018 financial year represents a decrease of 23.6%.

4.5 Compensation for Departing Members of the Executive Committee

There were no departing members of the Executive Committee in 2018 or 2017.

4.6 Details of Incentive Plans

This subsection describes the plan details of the Short-Term Incentive Plan (STIP) and the Long-Term Incentive Plan (LTIP):

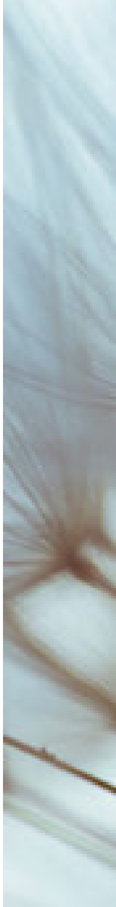
Short-Term Incentive (STIP)

History and Participation

The Board of Directors implemented the current STIP for the majority of the Group's employees, including the members of the Executive Committee. More than 95% of our employees participate in short-term incentive plans, either in the STIP program or in a local bonus or profit-sharing program.

Effective 2018 the NCC took the decision to increase shareholding requirements for the Executive Committee and further align the Executive Committee with the interests of shareholders. The shareholding requirements from 2 to 3 times base salary for the CEO and from 1 to 2 times base salary for the other EC members. To support this strategy, the STIP will pay out in cash or in shares based on the Executive's individual holdings of Lonza shares.

The 2018 STIP Program operates for Executive Committee members as follows:



Objective

The STIP provides the potential for an annual incentive based on the financial performance of the Group and the performance of the participant.

Definition of Targets

The performance criteria are set ahead of the annual bonus cycle and based on the company's short-term objectives and assessed for achievement at the end of the year against the defined financial performance results. Defined financial performance results are derived from the audited 2018 financial results. Note: the financial impact of the Capsugel integration was excluded from the CORE results which are relevant for the STIP payout.

STIP	CEO & other Executive Committee Members
Base salary STIP target as % of base salary[1]	100%–75%
Performance targets	– 50% CORE EBITDA[2] – 15% Lonza sales – 15% operational free cash flow – 20% individual targets for Executive Committee members – For 2018: CORE EBITDA 10%, sales 5% and operational free cash flow 5%
Form of payout	100% in cash if CEO holds shares equivalent to 3 times base salary (CEO) and other Executive Committee members 2 times base salary[3] in Lonza shares
	50% in cash and 50% in Lonza shares if Executive Committee member does not meet minimum requirements
Payment timing	The STIP is paid to the executive in April 2019 after and subject to the approval of the Shareholders' Meeting

1 Payout range equals 0%–200%
2 CORE results exclude exceptional items such as restructuring charges, impairments and amortization of acquisition-related intangible assets, which can differ from year to year
3 As measured on 31 December of the plan year

Long-Term Incentive Plan (LTIP)

History and Participation

The LTIP is an equity-based plan introduced in 2006 for the Executive Committee and a segment of key employees.

Objective

The LTIP has been designed to align the interests of participants with those of Lonza's shareholders and to serve as a retention tool. LTIP participants are eligible to receive a number of Lonza shares at the end of the vesting period, provided that certain challenging performance conditions are met at the end of the three-year performance period.

Equity Awards

Under the LTIP, participants are awarded the right to receive a number of Lonza registered shares in the future. Depending on the level of the job, the target equity award grant is between 10% and 150% of the annual base salary. The grant is made at target and the payout level can be between 0% and 200%.

The Executive Committee members have a target of 125% and the CEO has a target of 150% of base salary with payout levels between 0% and 200% maximum. Any proration is applied in relation to the entire three-year performance period.

The LTIP plan design and target setting is determined at the beginning of the three-year performance period. For 2018 the plan design included minimum, target and stretch goals. The 2018 LTIP budget value for the Executive Committee was approved as submitted at the AGM 2018 and administered in accordance with this approval.

Vesting will depend on achievement of the performance conditions and cannot exceed the maximum amount (200%) of granted equity awards.

Restriction and Vesting

The central feature of the plan is that key participants will only receive title and ownership of the shares after a three-year vesting period and only if the performance metrics required for vesting are partially or fully met.

Vesting Targets

For the 2018 LTIP the performance metrics were CORE earnings per share (EPS) and return on invested capital (ROIC), with 50% weight for each measure. For more details, see note 25 in the Financial Report (CORE EPS and CORE RONOA for the year 2017).

With the payout value directly linked to these key financial metrics, these two measures focus on Lonza's financial performance that will drive the valuation of Lonza with investors. The value of the LTIP will be ultimately driven by the share price at the time of payout, further linking the LTIP to the interests of the shareholders.

Overview of Vesting Conditions for LTIP

For the year 2018, the vesting of up to 50% of the granted equity awards depends on growth of CORE EPS achieved during Lonza's three fiscal years and the vesting of up to 50% of the granted equity awards depends on growth of ROIC achieved during Lonza's three fiscal years.

For the year 2017, the vesting of up to 50% of the granted equity awards depends on growth of CORE EPS achieved during Lonza's three fiscal years and the vesting of up to 50% of the granted equity awards depends on growth of CORE RONOA achieved during Lonza's three fiscal years.

Performance Metrics for CORE EPS Approved at AGM 2018 (LTIP 2018):

CORE EPS is an internal, sensitive financial target. For competitive and ad hoc publicity reasons, Lonza does not disclose at this stage the absolute CORE EPS target at year-end 2020. The target was recommended by the Nomination and Compensation Committee and approved by the Board of Directors on 7 March 2018 to approximate the CORE EPS required to meet Lonza's challenging strategic goals and support Lonza's mid-term plan.

- The minimum threshold to be reached at year-end 2020, as determined by the Nomination and Compensation Committee, is approved by the Board of Directors and set at a higher level than the CORE EPS basic achieved on 31 December 2017. If the minimum threshold is not reached at year-end 2020, the pay-out will be 0. If the threshold is reached, 50% of the equity awards granted under the CORE EPS vesting condition will vest.

- The threshold was determined to approximate 109% of the CORE EPS of the threshold set for the performance target for the LTIP 2017-2019. If that level of CORE EPS is reached, 50% of the equity awards granted under the CORE EPS vesting conditions will vest.
- If the target is reached, 100% of the equity awards granted under the CORE EPS vesting condition will vest. In the event that the maximum defined target level were to be achieved, 200% of the equity awards granted under the CORE EPS vesting conditions would vest.
- The maximum was determined to be above the prorated 2022 Mid-Term Guidance and is a double-digit figure above the threshold. In the event that the maximum defined target level were to be achieved, 200% of the equity awards granted under the CORE EPS vesting conditions would vest.

Performance Metrics for CORE ROIC Approved at AGM 2018 (LTIP 2018):

- Following extensive consultations during the fall of 2017, investors indicated a preference to replace CORE RONOA, return on net operating assets, with another return measure as long-term performance indicator. This change is driven mainly by Lonza's acquisitions in recent years.
- ROIC, return on invested capital, is defined as adjusted operating profit divided by invested capital. This measures the return the company generates on its investments both organic (e.g. capital projects such as the biological manufacturing of Ibex™ Solutions in Visp, (CH) expansion of single-use bioreactors in Singapore and cell and gene therapy in Portsmouth, NH and Houston, TX (USA)) and inorganic (e.g. goodwill and intangibles from acquisitions). The measure is a reflection of the effect of decisions taken by EC members and senior management over the course of the LTIP plan period.
- The minimum threshold to be reached at year-end 2020 is determined by the Nomination and Compensation Committee and is approved by the Board of Directors at a higher level than at year-end 2017.
- If the minimum threshold is not reached, 0% of the equity awards granted under the ROIC vesting conditions will vest. In the event that the maximum defined target level were to be achieved, 200% of the equity awards granted under the ROIC vesting conditions would vest.

Vesting of 200% of the LTIP equity awards granted would require the achievement at year-end 2020 of CORE EPS and ROIC at challenging levels compared with our 2022 Mid-Term Guidance (pro rata). As shown in the past, Lonza has consistently set challenging LTIP targets in application of the pay-for-performance principle. The performance required for maximum vesting for both criteria is set above the prorated mid-term guidance and is a double-digit figure above the threshold performance. Targets and target achievement will be fully disclosed in the 2020 Remuneration Report.

Treatment of LTIP in Change of Control Situations

Under the LTIP rules, if a Change of Control occurs, all unvested granted shares shall immediately vest and the granted price shall be the price at which the shares are sold in the transaction resulting in the Change of Control.

Actual Performance and Payout for the LTIP 2016

The total 2015 LTIP payout equaled 200%.

Performance under the 2016 LTIP exceeded the target for CORE EPS, generating a 200% payout on 50% of the total award. Performance under the 2016 LTIP also exceeded the target for CORE RONOA, generating a 200% payout on the remaining 50% of the total award. The total 2016 LTIP payout therefore equaled 200%. The financial impact of the Capsugel integration was excluded from the CORE results which are relevant for the LTIP payout.

2016 LTIP	Actual performance	Payout in %
CORE EPS (earnings per share)[1]	CHF 11.97	200
CORE RONOA (return on net operating assets)[1]	28.01%	200
Total payout		**200**

1 CORE results exclude exceptional items such as restructuring charges, impairments and amortization of acquisition-related intangible assets, which can differ from year to year

2 Cases such as death, disability and retirement are not covered in this section

4.7 Compensation in Case of Termination[2]

All executive agreements comply with the Swiss Ordinance Against Excessive Pay for Stock-Exchange-Listed Companies. The following outlines the specific termination-related topics included in the agreements of the Executive Committee members and the STIP and LTIP rules and administrative guidelines and practices.

Notice Period

All members of the Executive Committee are subject to a 12-month notice period.

Base Pay and Benefits

All members of the Executive Committee who terminate their employment will receive their base pay during the 12-month notice period and will be eligible for the benefits relating to the 12-month notice period, such as lump-sum expenses, pension fund plans, health and accident insurance, company car, family / children allowances according to their respective employment agreement.

STIP Payouts in the Event of Termination[1]

Resignation by the Executive Subject to applicable law, if a member of the Executive Committee resigns at any time prior to distribution of STIP awards, such member will not be entitled to any award with respect to the plan year in which their employment is terminated, except if (i) the termination as a result of such resignation occurs after 31 December of the plan year and (ii) the executive was not released from his obligation to work.

Termination by the Company Without Cause Any member of the Executive Committee whose employment is terminated by the Company without cause will be entitled to a prorated STIP payment relating to the notice period.

Termination by the Company for Cause Any member of the Executive Committee whose employment is terminated by the Company for cause will not be entitled to the STIP payment relating to the current year (year of termination).

STIP in Change of Control Any member of the Executive Committee whose employment is terminated by the Company without cause or who terminates the employment due to good reason (such as his function/duties/responsibilities being altered or the Company or the successor to Lonza Group Ltd failing to confirm to the executive in writing that no such alteration is intended) within 18 months following a change of control will be entitled to an STIP payment during the termination notice period (pro-rata), based on actual (to the extent that it may be determined) or presumed achievement and, if and to the extent that the executive is released from an obligation to work, based on assumed target achievement (100%).

LTIP Payouts in the Event of Termination

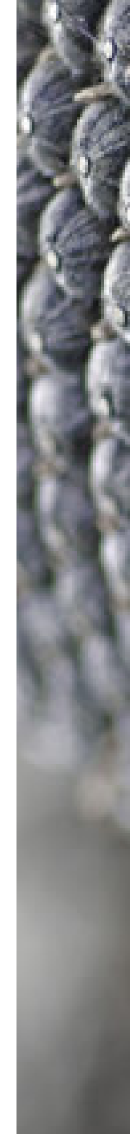
Resignation by the Executive Any member of the Executive Committee who resigns will forfeit the right to receive a transfer of any unvested LTIP awards.

1 This summary of consequences in case of termination is based on plan rules applicable to STIP 2018

Termination by the Company Without Cause Any member of the Executive Committee whose employment is terminated by the Company without cause will have unvested shares vest on a pro rata basis based on the number of months worked (including the notice period) during the 36-month performance period for the 2017 and 2018 grants.

Termination by the Company for Cause Any member of the Executive Committee whose employment is terminated by the Company for cause will forfeit the right to receive a transfer of any unvested LTIP shares.

LTIP in Change of Control Under the LTIP rules, if a Change of Control occurs, all unvested granted shares shall vest immediately and the granted price shall be the price at which the shares are sold in the transaction resulting in the Change of Control.



Non-Compete Clause

Under the terms of the employment agreement of the Executive Committee, members whose employment is terminated agree that they will not, for a period of six months following the end of the notice period, be partially or fully employed by any entity that materially competes with the Company or any of its business segments. In case of a breach of the non-competition clause, the executive shall pay damages to the Company. As compensation for the period of non-competition, the executive will receive a monthly consideration equal to the executive's last monthly base salary minus any new income the executive earns in the relevant month.

The Company may elect to fully or partially release the departing Executive Committee member from this non-competition obligation no later than ten (10) months prior to the end of the notice period.

Clawback

Any compensation (including fringe benefits) under the employment agreement of the Executive Committee members is subject to clawback or forfeiture if the compensation is not approved at the AGM. In an effort to bring clawback provisions into line with emerging best practice the clawback principle was extended in 2018 to cover the annual bonus and long-term incentive in instances of misconduct, material misstatement of performance and error in calculation of performance.

5 Share Ownership of the Members of the Board of Directors and the Executive Committee

Based on information available to Lonza, the members of the Board of Directors and parties closely associated with them held, as of 31 December 2018: 62,245 (2017: 166,736)[1] registered shares of Lonza Group Ltd and controlled 0.08% (2017: 0.22%) of the share capital. None of the members of the Board of Directors or Executive Committee owns shares in the Group's subsidiaries or associates.

The Company feels strongly that our Executive Committee and other senior managers should have a defined shareholding in Lonza to strengthen their alignment with our shareholders' interests. Starting in 2016 Lonza established minimum shareholding requirements for the Executive Committee and other senior managers based on their level in the organization and specified a five-year period to achieve these minimum requirements. Shareholding levels were reviewed annually beginning in January 2016. The NCC may periodically review the minimum shareholding requirements.

As approved during the 2018 AGM, the shareholding requirements for EC members and the CEO were increased.

1 Spouse, children below 18, any legal entities that they own or otherwise control, or any legal or natural person who is acting as their fiduciary

The members of the Executive Committee and parties closely associated with them held 107,572 (2017: 93,728) shares and controlled 0.14% (2017: 0.13%) of the share capital. The individual control rights are proportional to the holdings shown below.

Board of Directors Lonza shares (numbers)	2018	2017
Albert Baehny Chairperson from May 2018 on	1,149	329
Rolf Soiron Chairperson until May 2018	n/a	85,649
Patrick Aebischer Vice-Chairperson	5,889	11,464
Werner Bauer	25,801	25,350
Jean-Daniel Gerber	n/a	17,312
Angelica Kohlmann	205	n/a
Christoph Mäder	2,692	2,207
Barbara Richmond	3,947	3,496
Margot Scheltema	9,781	9,255
Jürgen Steinemann	6,043	5,592
Antonio Trius	6,533	6,082
Olivier Verscheure	205	n/a
Total	**62,245**	**166,736**

Executive Committee Lonza shares (numbers)	2018	2017
Richard Ridinger, CEO	53,351	52,446
Sven Abend	10,000	5,000
Marc Funk	36,353	35,046
Fridtjof Helemann	1,752	0
Rodolfo Savitzky	6,116	1,263
Total	**107,572**	**93,728**

Minimum shareholding requirements from 2018 on:

- CEO – 3 times base salary (previously 2 times)
- Other Executive Committee members – 2 times base salary (previously 1 time)
- Other senior managers– annual LTIP grant value
- Shareholdings measured at the end of January in each calendar year
- Five years to achieve minimum requirements

KPMG

Report of the Statutory Auditor

To the General Meeting of Lonza Group Ltd, Basel

We have audited the accompanying remuneration report dated 31 December 2018 of Lonza Group Ltd for the year ended 31 December 2018. The audit was limited to the information according to articles 14-16 of the Ordinance against Excessive compensation in Stock Exchange Listed Companies (Ordinance) contained in the sections 3.3, 4.3, 4.4 and 4.5 of the remuneration report.

Responsibility of the Board of Directors

The Board of Directors is responsible for the preparation and overall fair presentation of the remuneration report in accordance with Swiss law and the Ordinance against Excessive compensation in Stock Exchange Listed Companies (Ordinance). The Board of Directors is also responsible for designing the remuneration system and defining individual remuneration packages.

Auditor's Responsibility

Our responsibility is to express an opinion on the accompanying remuneration report. We conducted our audit in accordance with Swiss Auditing Standards. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the remuneration report complies with Swiss law and articles 14 – 16 of the Ordinance.

An audit involves performing procedures to obtain audit evidence on the disclosures made in the remuneration report with regard to compensation, loans and credits in accordance with articles 14 – 16 of the Ordinance. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatements in the remuneration report, whether due to fraud or error. This audit also includes evaluating the reasonableness of the methods applied to value components of remuneration, as well as assessing the overall presentation of the remuneration report.

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

Opinion

In our opinion, the remuneration report for the year ended 31 December 2018 of Lonza Group Ltd complies with Swiss law and articles 14 – 16 of the Ordinance.

KPMG AG

Michael Blume
Licensed Audit Expert
Auditor in Charge

Cyrill Kaufmann
Licensed Audit Expert

Zurich, 26 February 2019

KPMG AG, Badenerstrasse 172, PO Box, CH-8036 Zurich

This Corporate Governance Report presents the structure, rules and processes that form the basis of Lonza's corporate governance. The Report follows the structure of the SIX Swiss Exchange's Directive on Information relating to Corporate Governance. The principles and rules of Lonza's corporate governance are laid down in the Lonza Articles of Association and in the Regulations Governing Internal Organization and Board Committees, including their Charters. In the implementation of its corporate governance, Lonza follows the Swiss Code of Best Practice for Corporate Governance issued by the Swiss Business Federation economiesuisse.

Corporate Governance

Group Structure and Shareholders

Operational Group Structure

Board of Directors

Audit and Compliance Committee

Nomination and Compensation Committee

Innovation and Technology Committee

Executive Committee

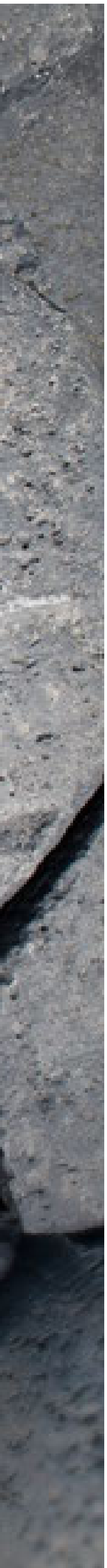
Segments[1] Pharma & Biotech, Specialty Ingredients

Corporate Functions

Global Business Services Organization

Richard Ridinger CEO			
Rodolfo Savitzky CFO	**Marc Funk** COO LPB	**Sven Abend** COO LSI	**Fridtjof Helemann** CHRO

1 As of 1 January 2018, the Capsugel operating segment was fully integrated into Lonza's Pharma & Biotech and Specialty Ingredients segments



Segments[1]

In 2018 Lonza's activities were organized in the following segments:

The Pharma & Biotech[2] market-focused segment comprised the following offerings:

- Clinical development services and manufacturing in biologics and small-molecule businesses
- Commercial manufacturing in biologics and small-molecule businesses
- Consumables and research tools

The Specialty Ingredients[3] consumer-focused segment operated in:

- a Consumer Health division
- a Consumer & Resources Protection division
- a Water Care business unit[4]

Corporate Functions

The Corporate Functions include Human Resources, Finance & Controlling, Tax, Treasury, Corporate Development, Procurement, Quality, Environment, Health and Safety, Corporate Communications, Investor Relations, Legal / Ethics & Compliance / IP, Engineering and IT.

Global Business Services Organization

Our Global Business Services Organization (GBSO) supports our segments, operational units and corporate functions with transactional services in financial, customer service, HR and IT. The GBSO focuses on standardization and automation of processes to drive productivity and higher quality services.

Service delivery through the GBSO is being centralized in Manchester (UK) to support EMEA markets and in San Jose (CR) for the Americas.

1 As of 1 January 2018, Capsugel operating segment was fully integrated into Lonza's Pharma & Biotech and Specialty Ingredients segments

2 As of 1 January 2018, former Capsugel's pharma capsules business, as well as dosage forms and delivery systems services, were integrated into Pharma & Biotech's small-molecule businesses

3 As of 1 January 2018, the Specialty Ingredients segment is operating in: a Consumer Health division, a Consumer & Resources Protection division and a Water Care business unit. The former Consumer Health & Nutrition business of Capsugel has been integrated within the Consumer Health division of Lonza's Specialty Ingredients segment. Coatings & Composites and Agro Ingredients are continuing to operate in their current structures under the new umbrella of a Consumer & Resources Protection division. As of 1 November 2018, the Water Care business unit has been classified as discontinuing operations

4 On 1 November 2018 Lonza announced that it had entered into a definitive agreement with Platinum Equity to sell Lonza's Water Care business

Holding Company and Listed Companies

Lonza Group Ltd, with our registered office in Basel (CH), is the ultimate parent company of the Lonza Group. Except for Lonza Group Ltd, no company belonging to the Lonza Group is listed. Please refer to the Shares and Participation Certificates section for information on the listed shares, the stock exchanges on which Lonza Group Ltd is listed and the market capitalization.

Principal Subsidiaries and Joint Ventures

The principal subsidiaries and joint ventures of the Lonza Group are shown in note 33: Principal Subsidiaries and Joint Ventures.

Significant Shareholders

According to disclosure notifications filed with Lonza, the following shareholders held more than 3% of the Lonza share capital as of 31 December 2018.

Principal Shareholders

%	2018
BlackRock, Inc., New York, NY (USA)	9.67
Artisan Partners Limited Partnership	3.02

Cross-Shareholdings

Lonza Group Ltd has not entered into any cross-shareholdings.

Capital Structure

Share Capital

As of 31 December 2018, Lonza's share capital amounted to CHF 74,468,752 fully paid-in and divided into 74,468,752 registered shares with a par value of CHF 1 each.

Shareholder Structure

	31 12 2018		31 12 2017	
	Shareholders in %	Shares in %	Shareholders in %	Shares in %
Switzerland	89.26	18.18	88.05	18.47
United Kingdom	0.65	22.77	0.74	18.96
USA	2.3	10.69	2.84	5.80
Others	7.78	5.82	8.36	10.60
Shares in transit		42.25		45.87
Treasury shares without voting rights	0.01	0.29	0.01	0.30
Total	**100**	**100**	**100**	**100**
Total number of shares		74,468,752		74,468,752

Share Register

	31 12 2018	31 12 2017
Registered shareholders	16,273	15,110
Registered shares with voting rights	29,198,985	38,321,348
Share distribution:		
1-100	8,224	5,868
101–1,000	6,821	7,844
1,001-10,000	973	1,121
10,001–100,000	209	229
100,001–1,000,000	42	44
over 1,000,000	4	4
Total registered shareholders	**16,273**	**15,110**

Authorized Conditional Capital

The Board of Directors is authorized to increase, at any time until 25 April 2019, the share capital of Lonza through the issuance of a maximum of 7,500,000 fully paid-in registered shares with a par value of CHF 1 each up to a maximum aggregate amount of CHF 7,500,000. This authorized capital was created by the Annual General Meeting held on 25 April 2017. The additional terms and conditions of the authorized capital (including the group of beneficiaries who have the right to subscribe for this additional capital) are set out in Article 4^{ter} of the Lonza Articles of Association.

Contingent Capital: Lonza's share capital may be increased through the issuance of a maximum of 7,500,000 fully paid-in registered shares with a par value of CHF 1 each up to a maximum aggregate amount of CHF 7,500,000. This contingent capital (also called conditional capital) was created by the Annual General Meeting on 25 April 2017. The additional terms and conditions of the conditional capital (including the group of beneficiaries who have the right to subscribe for this additional capital) are set out in Article 4^{bis} of the Lonza Articles of Association.

According to Article 4^{quater} of the Lonza Articles of Association, the capital increases in the form of contingent capital and authorized capital may increase Lonza's share capital by a maximum aggregate amount of CHF 7,500,000.

Changes in Capital

As of 31 December	2018	2017	2016	2015
Share capital in CHF	74,468,752	74,468,752	52,920,140	52,920,140
Registered shares	74,468,752	74,468,752	52,920,140	52,920,140
Par value in CHF / share	1	1	1	1

Shares and Participation Certificates

Lonza registered shares, with a par value of CHF 1 each, are listed on the SIX Swiss Exchange (SIX), with secondary listing on the SGX Singapore Exchange. In Switzerland they have been included in the Swiss Market Index (SMI) since 3 May 2017.

Lonza has not issued any participation certificates (Partizipationscheine, non-voting shares).

Stock Exchange Listing / Trading:	SIX Swiss Exchange SGX Singapore Exchange
Common Stock Symbols:	Bloomberg LONN SW Reuters LONN.S SIX Financial Information LONN SGX O6Z
Security Number:	Valor 001384101 ISIN CH0013841017

On 31 December 2018, Lonza had a market capitalization of CHF 18,967 million (2017: CHF 19,607 million).

Profit-Sharing Certificates

Lonza has not issued any non-voting equity security (Genussscheine, profit-sharing certificates).

Limitations on Transferability and Nominee Registrations

Purchasers of registered shares declaring that they have acquired these shares in their own name and for their own account will be entered without limitation as shareholders with voting rights in the share register. Persons who do not declare to have acquired the respective shares in their own name and for their own account are considered «nominees» and will be entered with voting rights in the share register up to a maximum of 2% of the share capital, unless the actually entitled persons are revealed. The details are set out in Article 6 of the Lonza Articles of Association. This restriction may only be removed by a resolution of the Shareholders' Meeting with a quorum in accordance with Swiss law.

Convertible Bonds

Neither Lonza Group Ltd nor any of its subsidiaries has outstanding convertible bonds.

Options

As of 31 December 2018, no options or warrants to acquire shares issued by or on behalf of Lonza Group Ltd were outstanding.

Board of Directors

The Board of Directors is made up of 10 non-executive members.

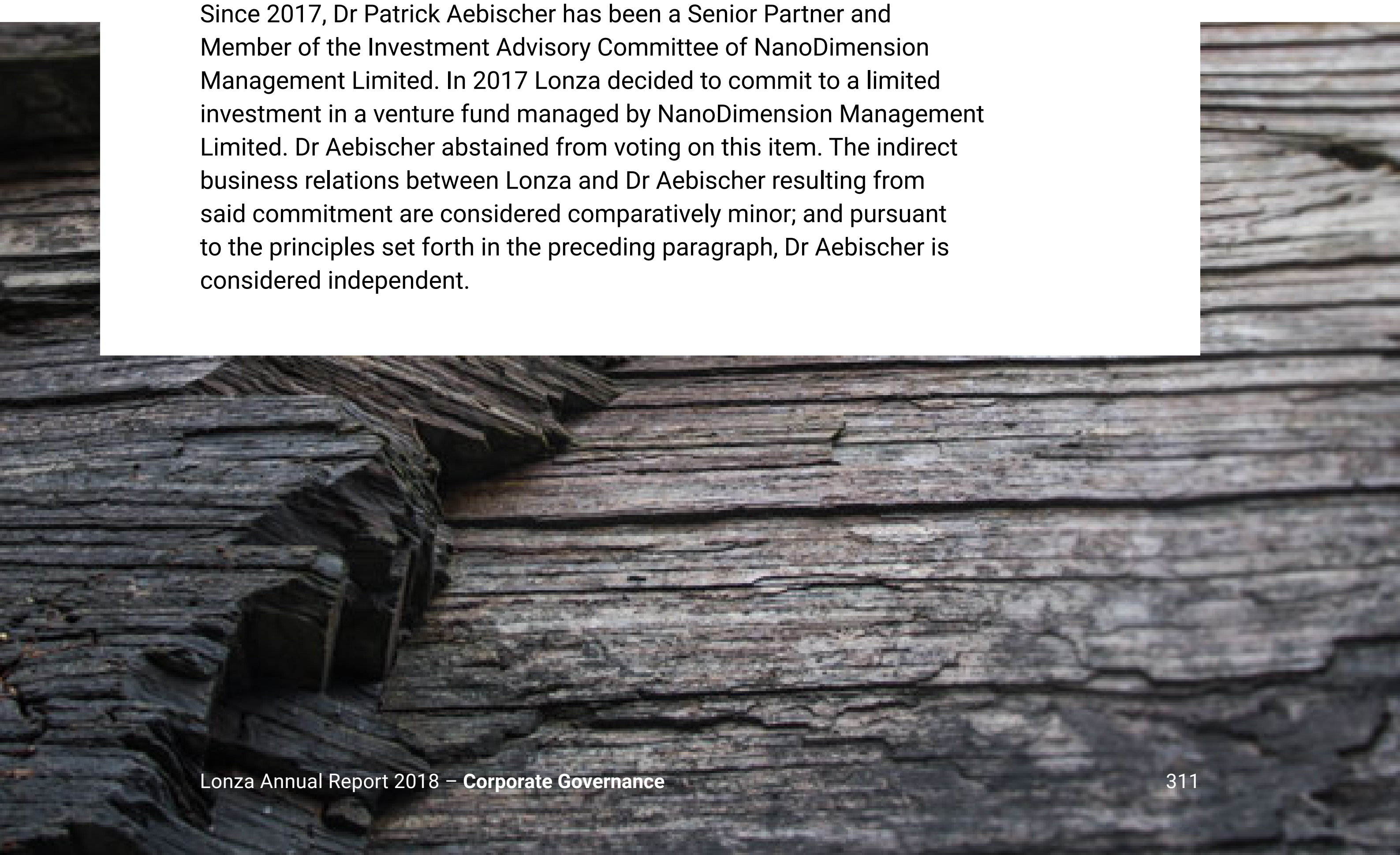
Name	Nationality	Year of birth	Year of initial appointment	Expiration of current term of office	Independence
Albert M. Baehny[1]	Swiss	1952	2017	2019	Independent
Patrick Aebischer	Swiss	1954	2008	2019	Independent
Werner Bauer	Swiss	1950	2013	2019	Independent
Angelica Kohlmann[2]	German-Brazilian	1960	2018	2019	Independent
Christoph Mäder	Swiss	1959	2016	2019	Independent
Barbara Richmond	British	1960	2014	2019	Independent
Margot Scheltema	Dutch	1954	2012	2019	Independent
Jürgen Steinemann	German	1958	2014	2019	Independent
Antonio Trius	Spanish	1955	2013	2019	Independent
Olivier Verscheure[2]	Belgian	1972	2018	2019	Independent

The assessment of the independence of the members of the Board of Directors is made pursuant to Article 14 of the Swiss Code of Best Practice for Corporate Governance. Independent members shall mean non-executive members of the Board of Directors who have never been members of the Executive Committee, or were members there of more than three years ago, and who have no or comparatively minor business relations with the company.

Since 2017, Dr Patrick Aebischer has been a Senior Partner and Member of the Investment Advisory Committee of NanoDimension Management Limited. In 2017 Lonza decided to commit to a limited investment in a venture fund managed by NanoDimension Management Limited. Dr Aebischer abstained from voting on this item. The indirect business relations between Lonza and Dr Aebischer resulting from said commitment are considered comparatively minor; and pursuant to the principles set forth in the preceding paragraph, Dr Aebischer is considered independent.

1 Albert M. Baehny was elected to the Board of Directors by the AGM 2017 and holds the position of Chairperson of the Board of Directors

2 Angelica Kohlmann and Olivier Verscheure were elected to the Board of Directors by the AGM 2018



Limitation of Number of Mandates

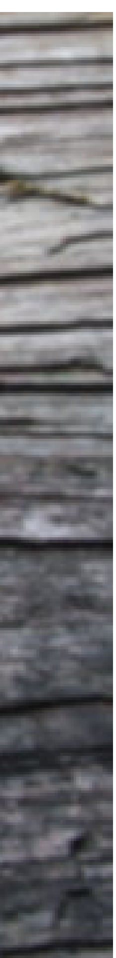
According to Article 26 of Lonza's Articles of Association, no member of the Board of Directors may hold more than:

- Eight additional mandates in listed and non-listed companies, out of which not more than four mandates may be in listed companies;
- Five mandates held at the request of Lonza or companies controlled by it;
- Ten mandates in associations, charitable foundations, trusts and employee welfare foundations.

The Chairperson of the Board of Directors may not hold more than eight additional mandates in listed and non-listed companies, out of which no more than three may be in listed companies.

Mandates shall mean mandates in the supreme governing body of a legal entity that is required to be registered in the commercial register or a comparable foreign register. Mandates in different legal entities that are under joint control or in the same beneficial ownership are deemed to be a single mandate. Mandates in companies that are controlled by Lonza or that control Lonza are not subject to the limitation set forth above.

All Board members comply with the provisions regarding their mandates. This is verified by Lonza on a regular basis.



Elections and Terms of Office

Each member of the Board of Directors is individually elected by the Annual General Meeting for a term of office of one year until the end of the next Annual General Meeting. Board members may not serve more than nine complete terms of office on the Board of Directors. If deemed in the best interest of the Company, the Board of Directors can extend this limit.

The Chairperson of the Board of Directors is elected by the Shareholders' Meeting. The Vice-Chairperson is appointed by the Board of Directors. The members of the Nomination and Compensation Committee are elected by the Shareholders' Meeting on an annual basis. The members of the other Board Committees are appointed by the Board of Directors. The Chairpersons of the Board Committees are nominated by the members of the respective Board Committees, except the Chairperson of the Nomination and Compensation Committee that is elected by the Board in corpore.

Internal Organizational Structure

The Board of Directors consists of the Chairperson, the Vice-Chairperson and the other Board members. In accordance with Lonza's Articles of Association, the number of members must be at least five.

The members of the Board of Directors sat on the following committees in 2018:

Name	Audit and Compliance Committee	Nomination and Compensation Committee	Innovation and Technology Committee
Albert M. Baehny			Member
Patrick Aebischer			Chairperson
Werner Bauer			Member
Christoph Mäder		Chairperson	
Barbara Richmond	Member		
Margot Scheltema	Chairperson		
Jürgen Steinemann		Member	
Antonio Trius	Member		
Angelica Kohlmann		Member	Member
Olivier Verscheure			Member

The Board of Directors strives to select the committee members based on their professional background and experience.

Audit and Compliance Committee

The Audit and Compliance Committee meets and consults regularly with the Executive Committee, the Lonza Audit Services and the independant external auditors to review the scope and results of their work and their performance, according to the Audit and Compliance Committee Charter. Among other responsibilities, the Audit and Compliance Committee reviews (i) the external auditors' independence, (ii) the systems of internal control and financial reporting, (iii) the risk management system, (iv) compliance with laws, regulations and policies and (v) Lonza's financial statements and results (including releases). The Audit and Compliance Committee is empowered to decide the tasks assigned to it and regularly informs the full Board of Directors on all matters discussed and decided in its meetings. The members of the ACC benefit from their broad professional backgrounds and experience as finance director, CFO and CEO for their committee work. Internal and external auditors have full and free access to the Audit and Compliance Committee, which also oversees the Lonza Audit Services. The Lonza Audit Services have a direct reporting line to the Chairperson of the Audit and Compliance Committee.

Nomination and Compensation Committee

The Nomination and Compensation Committee is entrusted with responsibilities that include the review and recommendation of compensation policies and plans (e.g. incentive compensation and equity plans) and the compensation of the members of the Executive Committee. This committee also makes an assessment to ensure that the area of nomination and compensation is in compliance with the standards set forth in the associated charter. Further, the Nomination and Compensation Committee evaluates potential members of the Board of Directors. The Nomination and Compensation Committee is empowered to decide the tasks assigned to it and regularly informs the full Board of Directors on matters discussed in its meetings and submits proposals for Board decision in accordance with the Nomination and Compensation Committee Charter.

Innovation and Technology Committee

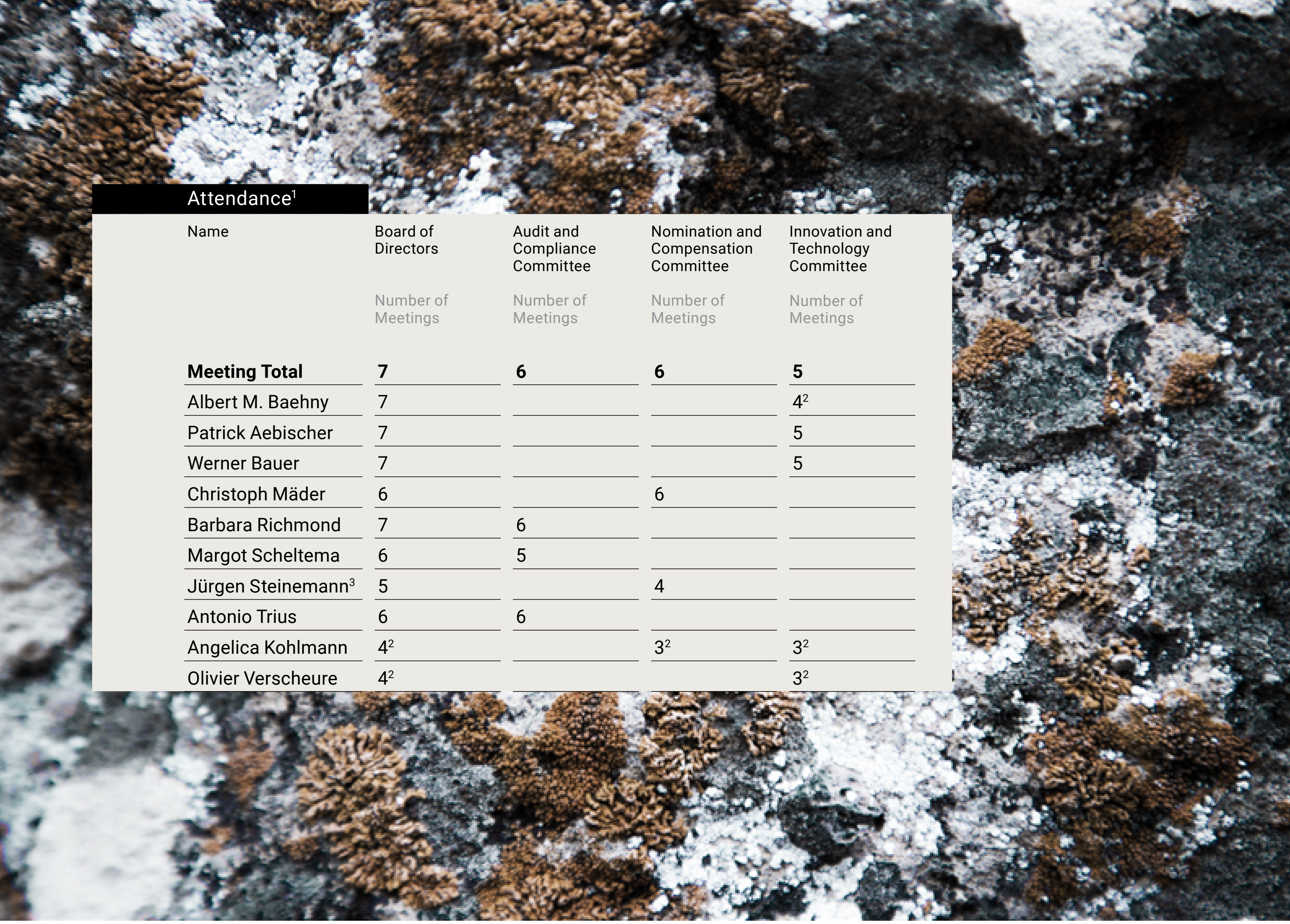
The Innovation and Technology Committee monitors potential technology breakthroughs, supports management in driving innovation projects and provides and facilitates contacts, e.g. with academia and research institutions. With regard to the tasks assigned to it, the Innovation and Technology Committee regularly informs the full Board of Directors on all matters discussed and decided in its meetings, in accordance with the Innovation and Technology Committee Charter.

Number of Meetings, Duration and Attendance

	Board of Directors	Audit and Compliance Committee	Nomination and Compensation Committee	Innovation and Technology Committee
Number of meetings	7[1]	6[2]	6[3]	5[3]
Average duration	Conference calls: 1 hour Ordinary meetings: 6:30 hours	3:00 hours	2:15 hours	2 hours
Overall attendance	93%	94%	89%[3]	100%[3]

1 5 ordinary meetings, 1 ordinary conference call and 1 extraordinary conference call
2 5 ordinary and 1 extraordinary conference call
3 This has been included post publication of the Annual Report on 28 March 2019 as correction to the original version

The Regulations Governing Internal Organization and Board Committees set out in detail the powers and responsibilities of the Board of Directors, its Committees and the Executive Committee. These standing Board Committees provide support to the Board of Directors in their respective areas of responsibility. The Board of Directors meets with all members of the Executive Committee at each ordinary Board meeting for business updates and decisions to be taken. The CEO is a permanent guest of the Innovation and Technology Committee and is regularly invited to the meetings of the Nomination and Compensation Committee. The CFO attends all meetings of the Audit and Compliance Committee.



Attendance[1]

Name	Board of Directors Number of Meetings	Audit and Compliance Committee Number of Meetings	Nomination and Compensation Committee Number of Meetings	Innovation and Technology Committee Number of Meetings
Meeting Total	**7**	**6**	**6**	**5**
Albert M. Baehny	7			4[2]
Patrick Aebischer	7			5
Werner Bauer	7			5
Christoph Mäder	6		6	
Barbara Richmond	7	6		
Margot Scheltema	6	5		
Jürgen Steinemann[3]	5		4	
Antonio Trius	6	6		
Angelica Kohlmann	4[2]		3[2]	3[2]
Olivier Verscheure	4[2]			3[2]

Areas of Responsibility

In accordance with the law and the Lonza Articles of Association, the Board of Directors is the supreme governance body of the Group. The Board of Directors is responsible for the tasks assigned to it according to (i) Article 18 of the Lonza Articles of Association and (ii) the Regulations Governing Internal Organization and Board Committees (Article 2.8). The Board of Directors defines the strategic direction and is responsible for the ultimate management of Lonza as well as the supervision of the persons entrusted with Group management. It is responsible for issuing the necessary instructions especially with regard to compliance with the law, the Articles of Association, and the regulations and directives. In compliance with the law and the Articles of Association, the Board of Directors has – with the exception of non-delegable and inalienable duties – delegated the management of the company to the Executive Committee. The Board of Directors commits itself to maintaining the highest standards of integrity and transparency in its governance of Lonza. On an annual basis, the Board undertakes a self-assessment process. The aim is to achieve continuous improvement in the functioning of the Board.

1 Missed Board meetings primarily relate to Board calls arranged on short notice (only 7 days prior to call), as opposed to regular, scheduled physical meetings
2 Attendance at all meetings post appointment. This has been included post publication of the Annual Report on 28 March 2019 as correction to the original version
3 Board member Jürgen Steinemann had to cancel his attendance at one Board and one NCC meeting due to an external mandatory request beyond his control and could not attend a second Board meeting (call) that had been arranged at 7 day notice; other members of the Board also could not attend this call at short notice

All sustainability-related matters are with the Chairperson of the Board. Sustainability includes environmental, social and governance-related matters of importance for Lonza and its stakeholders. A sustainability council headed by the Lonza Group General Counsel and Company Secretary manages as material identified topics and is responsible for the sustainability reporting.

Lonza's Sustainability Report is discussed by the Nomination and Compensation Committee (NCC) and Audit and Compliance Committee (ACC) in accordance with Lonza's financial reporting and ultimately approved by the Board of Directors.

Information and Control Instruments

The Board of Directors ensures that it receives sufficient information from the Executive Committee to perform its supervisory duty and to make the decisions that are reserved for the Board of Directors through several means.

Board Information

The Regulations Governing Internal Organization and Board Committees confer on the CEO the duty to inform the Executive Committee and – together with the Chairperson – the Board of Directors on the business activities and all important business transactions, including risk issues. In addition, during Board meetings, each member of the Board may request information from the other members of the Board, as well as from the members of the Executive Committee present on all affairs of the Company and the Group. Outside of Board meetings, each member of the Board may request from the members of the Executive Committee information concerning the course of business of the Company and the Group.

Regular Reports to the Board

In addition to the documents required to pass resolutions, the Board of Directors receives the following reports:

- Monthly reports on the sales and earnings performance of the Group structured by segments.
- Reports on the cash flows, debt and debt-equity ratio, plus other relevant key figures for the Group on a quarterly basis.
- Qualitative assessments of the segments on a quarterly basis.
- Reports of the external audit for the full-year results and procedures performed on the half-year results (through the Audit and Compliance Committee).
- In cases involving extraordinary events of considerable commercial relevance, the Board of Directors receives direct, immediate information.
- Risk assessment reports submitted at least once per year; they are designed to provide the Board with a consistent, Group-wide perspective of key risks.

Internal Audit

The Board of Directors, through the Audit and Compliance Committee, is supported by Lonza Audit Services. The Lonza Audit Services group comprises 12 internal audit positions, reviewing financial, operational and information technology-related activities of the entire Lonza Group with a risk-based audit program.

They continually evaluate the adequacy and effectiveness of the system of internal controls as well as compliance with company policies and procedures, and they recommend appropriate actions to correct deficiencies identified. In 2018, they delivered 28 internal audit reports to the Audit and Compliance Committee.

Internal Control System

Lonza has a system of internal financial and accounting policies, procedures and controls to provide a reasonable assurance – given the inherent limitations of all internal control systems to be implemented at an appropriate cost – that transactions are executed in accordance with company authorization, that they are properly recorded and reported in the financial statements, and that assets are properly safeguarded.

Compliance Instruments

In addition to the above-mentioned control instruments, Lonza has implemented various other measures to improve compliance within the Group. The implementation of these measures is supervised by the Audit and Compliance Committee. One of these measures is the issuance of a Code of Conduct that expresses Lonza's core principles and values in regard to professional business behavior. It also provides assistance in recognizing, understanding and complying with the laws and ethical standards that govern Lonza's business activities.

The Code of Conduct is available to all employees and information about it has been widely circulated within the Group. Lonza employees have to pass iComply tests in online training courses, dealing with topics such as those addressed by the Code of Conduct, in particular antibribery, competition law, and conflicts of interest. In addition to these measures, Lonza offers a «whistleblower» hotline (known as «Lonza Ethics Hotline»), which is operated by an external company. Cases disclosed through the «whistleblower» hotline are ultimately reported to the Audit and Compliance Committee. Lonza periodically reviews and updates its policies to address changes in laws and regulations and strengthen compliance.

Risk Assessment

The Board of Directors carries out risk assessments at least on an annual basis. The objective of the risk assessments is to make the principal risks to which Lonza is exposed more transparent and to improve risk mitigation. In its risk assessment for 2018, the Board of Directors of Lonza identified inter alia cybersecurity, commercial and operational risks for which corresponding risk mitigation measures have been adopted.

For more details on risk management policy, financial risks (credit, liquidity and market risks) and enterprise risk management, please refer to financial note 29 and note 31 of the Consolidated Financial Statements.

CVs Board of Directors

Albert M. Baehny

Albert M. Baehny, a Swiss citizen, holds a degree in biology from the University of Fribourg (CH).

Chairperson of the Board of Directors of Lonza Group Ltd (since 2018)
Member of the Board of Directors (since April 2017)

Current Activities and Functions
Public Company Boards:
- Member of the Board of Investis Group Holding SA (since 2016)
- Chairman of the Board of Directors of Geberit (since 2011)

Former Activities and Functions
- CEO of Geberit Group (2005–2014)
- Head of Group Division Marketing and Sales Europe for Geberit Group (2003–2004)
- Senior Vice-President at Wacker Chemie AG (2001–2002)
- Various Marketing, Sales, Strategic Planning and Global Management Positions with:
  - Vantico (2000–2001)
  - Ciba-Geigy / Ciba Specialty Chemicals (1994–2000)
  - Dow Chemicals Europe (1981–1993)
  - Serono-Hypolab (1979–1981)

Patrick Aebischer

Patrick Aebischer holds a doctorate in medicine from the University of Geneva (CH). He has received numerous honors, including the Robert Bing Prize of the Swiss Academy of Medicine and the Pfizer Foundation Prize for Clinical Neurosciences.

Member of the Board of Directors of Lonza Group Ltd (since March 2008), Vice-Chairperson

Current Activities and Functions
Public Company Boards:
- Member of the Board of Directors of Logitech SA (since 2016)
- Member of the Board of Directors of Nestlé SA (since 2015)

Further Appointments:
- Senior Partner of NanoDimension Management Limited (since 2017)
- Senate member of the Deutsches Zentrum für Neurodegenerative Erkrankungen (DZNE) (since 2016)
- Scientific technical committee member of the Italian Institute of Technology (since 2015)
- Chairman of the Board of the Novartis Venture Fund (since 2014)
- Member of the Singapore Biomedical Sciences International Advisory Council (since 2013)
- Chairman of the Board of Amazentis SA (since 2007)
- Professor of Neurosciences, Swiss Federal Institute of Technology Lausanne (EPFL) (since 2000)

Former Activities and Functions
- Representative of the EPFL on the boards of various Swiss foundations
- President of the Swiss Federal Institute of Technology of Lausanne (EPFL) (2000–2016)
- Member of the Foundation Board of the World Economic Forum (2013–2016)

Werner Bauer

Werner Bauer holds a diploma and PhD in chemical engineering from the University of Erlangen-Nürnberg (DE). He has received several scientific honors, including the BioAlps Award 2011 and Honorary Senator from the Technical University of Munich (DE).

Member of the Board of Directors of Lonza Group Ltd (since April 2013)

Current Activities and Functions
Public Company Boards:
- Vice-Chairman of the Board of Directors of Givaudan SA (since 2014)

Further Appointments:
- Vice-Chairman of the Supervisory Board of Bertelsmann SE & Co. KGaA (since 2012) and Chairman of the Board of Trustees of the Bertelsmann Foundation (since 2011)
- Member of the Supervisory Board of SIG Combibloc Group AG (since 2018)

Former Activities and Functions
- Member of the Supervisory Board of GEA Group AG (2011–2018)
- Chairman of the Supervisory Board of Nestlé Deutschland AG (2007–2017)
- Executive Vice-President of Nestlé SA, Head of Innovation, Technology, Research and Development (2007–2013)
- Executive Vice-President of Nestlé SA, Head of Technical, Production, Environment, Research & Development (2002–2007)
- Various managerial positions of increasing responsibility at Nestlé (1990–2002)
- Chairman of the Board of Directors of Galderma Pharma SA (2011–2014)
- Member of the Board of Directors of L'OREAL, France (2005–2012)
- Member of the Board of Directors of Alcon Inc., Switzerland (2002–2010)
- Director of the Fraunhofer Institute for Food Technology & Packaging and Professor in Bioprocess Technology at Technical University Munich (1985–1990)
- Professor of Chemical Engineering at the Technical University of Hamburg (1980–1985)

Angelica Kohlmann

Angelica Kohlmann, a German-Brazilian citizen, holds a MD and doctorate in medicine from Hamburg University (DE).

Member of the Board of Directors of Lonza Group Ltd (since May 2018)

Current Activities and Functions
(No Public Company Boards)

- Member International Advisory Board IE University and Business School, Madrid (since 2017)
- Chairman Board of Directors, Bloom Diagnostics AG (since 2014)
- Chairman Board of Directors, Kohlmann & Co AG (since 2013)
- International investor in biotech and tech, based in Switzerland (since 2014)
- Board Observer Teralytics AG (since 2017)
- Chairman Advisory Board Peter Drucker Society Europe / Global Peter Drucker Forum, Vienna (since 2009)

Former Activities and Functions

- Member Advisory Board UBS Unique (2017–2018)
- Director Trinnacle Fund Ltd (2016–2017)
- Member Board of Directors Teralytics AG (2013–2016)
- Founder & CEO Ifitech GmbH, Germany (2010–2017)
- International investor in biotech and tech, based in Germany (2000–2013)
- International consultant for strategy, management, investments and restructuring (1992–1999)
- Head global restructuring Behringwerke AG, Germany (1990–1992)
- Member Board Staff Hoechst AG, Germany (1988–1990)
- International Marketing Group Leader at Behringwerke AG (1986–1988)
- MD Anderson Cancer Center, Houston and Memorial Sloan Kettering Cancer Center, New York, USA – various cancer research functions

Christoph Mäder

Christoph Mäder holds a Master's degree in law from the University of Basel (CH) and is admitted to the Swiss Bar.

Member of the Board of Directors of Lonza Group Ltd (since April 2016)

Current Activities and Functions
Public Company Boards:
- Member of the Board of EMS Chemie Holding AG (since 2018)

Further Appointments:
- Member of the Board Committee of economiesuisse (since 2017)
- Member of the Council of Schweizer Jugend forscht (since 2018)

Former Activities and Functions
- Member of the Group of Executive Committee of Syngenta (2000–2018)
- Vice-Chairman of economiesuisse (2011–2017)
- Member of the Executive Board of the Business and Industry Advisory Committee (BIAC) for the Organization for Economic Co-operation and Development (OECD) (2012–2016)
- Head of Legal & Public Affairs for Novartis Crop Protection AG (1999–2000)
- Senior Corporate Counsel for Novartis International AG (1992–1998)
- Member of the Board of scienceindustries (since 2003)
- Member of the Board of the Basel Chamber of Commerce (since 2002)

Barbara Richmond

Barbara Richmond holds a first-class degree in management science from the University of Manchester Institute of Science and Technology in England. Barbara Richmond has substantial knowledge as a financial expert, demonstrated by her roles as CFO for various companies. She is a Fellow of the Institute of Chartered Accountants in England and Wales.

Member of the Board of Directors of Lonza Group Ltd (since April 2014)

Current Activities and Functions

Public Company Boards:

- Group CFO of Redrow plc (since 2010)

Former Activities and Functions

- Group CFO of Inchcape plc (2006–2009)
- Non-Executive Director and Audit Committee Chair of Scarborough Building Society until its merger with The Skipton Building Society (2005–2009)
- Non-Executive Director, Senior Independent Director and Audit Committee Chair of Carclo Group plc (2000–2006)
- Group CFO of Croda International plc (1997–2006) with dual role as Group CFO and President of Active Ingredients and Industrial Chemicals from 2002 to 2006
- Group CFO of Whessoe plc in 1993 (1993–1997)
- Various financial roles in Alstom Group SA (1987–1992)
- Auditor and management consultant for Arthur Andersen (1981–1984)

Margot Scheltema

Margot Scheltema holds a doctorate in international law from the University of Amsterdam and a master of international affairs (MIA) from Columbia University in New York, NY (USA). Margot Scheltema has substantial knowledge as a finance, corporate governance and risk management expert, demonstrated by her operative roles in finance and management and supervisory roles in the financial sector (bank, central bank, insurance and pension funds).

Member of the Board of Directors of Lonza Group Ltd (since April 2012)

Current Activities and Functions
(No Public Company Boards)

- NEDAP (NE Director) NV (since 2018)
- Vice-chair of the Supervisory Board of the Dutch Central Bank (since 2015) (financial institution)
- Member of the Central Plan Committee Dutch Planning Bureau (since 2014)
- Chair of the Monitoring Committee of the Dutch Pension Fund Code (since 2014)
- Council to the Enterprise Chamber of the Amsterdam Court of Appeal (since 2013)
- Member of the Supervisory Board of Warmtebedrijf Rotterdam (since 2011)
- Member of the Supervisory Board of TNT Express (since 2011)

Former Activities and Functions

- Vice-Chair of the Supervisory Board of Triodos Bank (2006–2015)
- Member of the Supervisory Board of ASR NV (2008–2015)
- External Member of the Audit Committee of the Dutch pension fund ABP (2010 to July 2014) (financial institution)
- Member of the Supervisory Board of the Rijksmuseum (2007–2015)
- Member of the AFM External Reporting Committee (2006–2012)
- Finance Director of Shell Nederland BV (2004–2008)
- Various managerial positions in finance within the Shell Group (1985–2004) including Senior M&A Adviser for Shell Oil Products Latin America

Jürgen Steinemann

Jürgen Steinemann holds a degree in economics and business management from the European Business School in Wiesbaden (DE), London (UK) and Paris (FR).

Member of the Board of Directors of Lonza Group Ltd (since April 2014)

Current Activities and Functions
Public Company Boards:
- Member of the Board of Directors of Barry Callebaut AG (since 2015)
- Chairman of the Supervisory Board of Metro AG (since 2015)

Further Appointments:
- Investor in food and agro businesses
- Managing Director of JBS Holding GmbH (since 2017)
- Chairman of the Supervisory Board of Bankiva B.V. (since 2017)
- Member of the Advisory Board of Tower Brook Capital Partners LP (since 2017)
- Member of the Supervisory Board of Big Dutchman AG (since 2015)

Former Activities and Functions
- Chief Executive Officer of Barry Callebaut Ltd (2009–2015)
- Member of the Board of the Swiss-American Chamber of Commerce (2011–2015)
- Member of the Executive Board and Chief Operating Officer of Nutreco (2001–2009)
- Chief Executive Officer of Loders Croklaan (1999–2001)
- Various senior positions in business-to-business marketing and sales with the former Eridania Béghin-Say Group, ultimately in the «Corporate Plan et Stratégie» unit at the head office in Paris (1990–1998)

Antonio Trius

Antonio Trius holds a Bachelor's degree in organic chemistry from the University of Barcelona (ES), a PhD in chemistry from the Autonomous University of Barcelona and a PDD in business administration from the IESE Barcelona. Antonio Trius has substantial knowledge in the operational and financial management and supervision of companies in the chemical and pharmaceutical industry.

Member of the Board of Directors of Lonza Group Ltd
(since April 2013)

Current Activities and Functions
(No Public Company Boards)

- Member of the Advisory Board of Naturally Scientific Technologies Ltd (since 2017)
- Member of the Board of Directors of Cuantum Medical Cosmetics SL (since 2015)
- Member of the Board of Directors of MaxamCorp Holding SL (since 2014)
- Member of the Board of Directors of Azelis SA (since 2014)
- Member of the Supervisory Board of Altana AG (since 2012)

Former Activities and Functions

- Member of the Board of Directors of Mauser Group BV (2015–2017)
- Member of the Board of Directors of Nubiola SL (2011–2015)
- CEO of Cognis GmbH (2001–2010)
- Executive Vice-President Care Chemicals North America Cognis BV (1999–2001)
- Vice-President Care Chemicals at Henkel KGa A (1997–1999)

Olivier Verscheure

Olivier Verscheure holds a PhD in computer science from the Swiss Federal Institute of Technology, Lausanne (CH) (EPFL, July 1999).

Member of the Board of Directors of Lonza Group Ltd (since May 2018)

Current Activities and Functions
(No Public Company Boards)
- Expert in the Strategy Working Group on Data, Computing and Digital Research Infrastructures in the State Secretariat for Education, Research and Innovation (SERI) (since 2019)
- Executive Director of the Swiss Data Science Center, a joint venture between EPFL and ETH Zürich (since 2016)
- Member of the Executive Committee of Personalized Health and Related Technologies (PHRT), an ETH Domain Strategic Focus Area (since 2017)
- Co-academic Director, Certificate of Advanced Studies (CAS), Data Science and Management, HEC Lausanne and EPFL (since 2018)

Former Activities and Functions
- Lab Program Director and Senior Research Manager at IBM Research Ireland (2010–2016)
- Research Manager and Senior Member of the Research Staff at the IBM T.J. Watson Research Center (1999–2010)

Executive Committee

The members of the Executive Committee are appointed by the Board of Directors. Lonza's Executive Committee performs the duties assigned to it by the Board of Directors under the terms of the Regulations Governing Internal Organization and Board Committees. It is responsible for managing Lonza worldwide and for implementing policies and strategies as defined by the Board of Directors. The Executive Committee supports and coordinates the activities of the segments, the corporate functions and the global business service organization. The Executive Committee is also responsible for leadership development.

Members of the Executive Committee

Name	Nationality	Year of Birth	Function
Richard Ridinger	German	1958	Chief Executive Officer
Rodolfo Savitzky	Swiss	1962	Chief Financial Officer
Marc Funk	Swiss	1960	Chief Operating Officer Pharma & Biotech Segment
Sven Abend	German	1968	Chief Operating Officer Specialty Ingredients Segment
Fridtjof Helemann	German	1954	Chief Human Resources Officer

Limitation of Number of Mandates

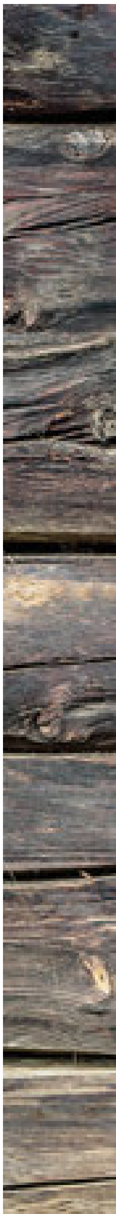
According to Article 26 of the Lonza Articles of Association, no member of the Executive Committee may hold more than:

- One additional mandate in a listed company;
- Two additional mandates in non-listed companies;
- Five mandates held at the request of Lonza or companies controlled by it;
- Ten mandates in associations, charitable foundations, trusts and employee welfare foundations.

Mandates shall mean mandates in the supreme governing body of a legal entity that is required to be registered in the commercial register or a comparable foreign register. Mandates in different legal entities that are under joint control or in the same beneficial ownership are deemed to be a single mandate. Mandates in companies that are controlled by Lonza or that control Lonza are not subject to the limitation set forth above.

Management Contracts

Lonza Group Ltd has not entered into management contracts with companies or natural persons not belonging to the Group.



CVs Executive Committee

Richard Ridinger

Richard Ridinger holds a degree in chemical engineering from the University of Karlsruhe (DE).

Chief Executive Officer (CEO) and Member of the Executive Committee (since May 2012)

Current Activities and Functions
- Member of the Board of Directors of Firmenich International SA (since October 2016)

Former Activities and Functions
- Transfer and integration of Cognis GmbH into BASF (2011)
- Member of the Management Board and Executive Vice-President «Care Chemicals» of Cognis GmbH (2006–2010)
- SBU Head of «Cognis Care Chemicals» and member of the Cognis Executive Committee (2002–2006)
- Vice-President of the global «Care Chemicals Specialties» business of Cognis GmbH (2000–2002)
- Director of the global Skin Care Ingredients business at Henkel KGaA / Cognis GmbH (1999–2000)
- Various positions at Henkel KGaA in R&D, Engineering and Production Management (1986–1999)

Rodolfo Savitzky

Rodolfo Savitzky holds a degree in industrial and systems engineering from the Monterrey Institute of Technology and an MBA in finance and economics from the University of Chicago, IL (USA).

Chief Financial Officer (CFO) and Member of the Executive Committee (since October 2016)

Former Activities and Functions

- Vice-President, Controller Lonza Pharma & Biotech (2015–2016)
- Division CFO, Novartis Animal Health (2011–2015)
- Business Unit Head of Finance Novartis Animal Health (2006–2011)
- Head of Strategy Planning and Analysis, Novartis Pharmaceuticals (2004–2005)
- Head of Business Planning and Analysis, Novartis Pharmaceuticals (2003–2004)
- Head of Finance Ophthalmic Business Unit, Novartis Pharmaceuticals (2002–2003)
- Various positions at Procter & Gamble (1990–2001)

Marc Funk

Marc Funk holds a Master of Law from the University of Geneva (CH) and a Master of Law and Diplomacy from the Fletcher School - Tufts University, MA (USA).

Chief Operating Officer (COO) Pharma & Biotech Segment (since May 2014) and Member of the Executive Committee (since April 2012)

Former Activities and Functions

- Group General Counsel and Board Secretary Lonza Group Ltd (2009–2014)
- Associate General Counsel of Merck Serono (formerly Serono) (2004–2008)
- Co-CEO and General Counsel of GeneProt (2000–2004)

Sven Abend

Sven Abend holds a PhD in chemistry from the Christian-Albrechts-Universität in Kiel and a post-doctorate from the Department of Physics & Astronomy at the University of New York in Stony Brook, NY (USA).

Chief Operating Officer (COO) Specialty Ingredients Segment (since January 2016) and Member of the Executive Committee (since July 2014)

Former Activities and Functions

- CEO of Kolb Ltd in Hedingen (CH) (2012–2014)
- Business Manager for Kolb's divisions focusing on specialty surfactants and custom manufacturing (2010–2012)
- Several senior positions in Global Product Management and ultimately as Director of Corporate Key Account Management at Cognis GmbH in Germany (2003–2010)
- Project Scientist for the R&D Home & Personal Care business at Unilever in the UK (2000–2003)

Fridtjof Helemann

Fridtjof Helemann holds a degree in engineering from the University of Siegen (DE).

Chief Human Resource Officer (CHRO) (since 2016) and Member of the Executive Committee (since February 2017)

Former Activities and Functions

- Managing Partner and President of Oxford Leadership (2014–2016)
- Partner and CEO Mercer Inc. Central Europe (2011–2014)
- Vice-President and General Manager Central and Eastern Europe at Right Management (2010–2011)
- Corporate Vice-President HR Henkel AG (2003–2009)
- Various HR consulting roles: Partner Hay Group and MD Kienbaum

Compensation, Shareholdings and Loans

Details of Board and Executive Committee compensation are contained in the Remuneration Report.

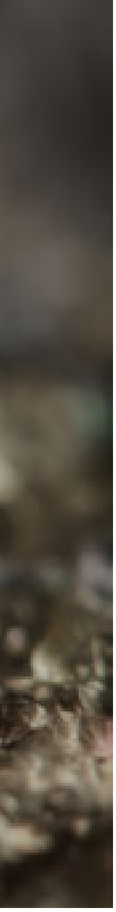
Shareholders' Participation Rights

Voting-Rights Restrictions and Representation

Only persons with valid entries in the share register are recognized as shareholders or usufructuaries. A shareholder may only be represented at the Annual General Meeting by a legal representative, another shareholder entitled to vote or the independent proxy. Persons who do not declare to have acquired their shares in their own name and for their own account are considered «nominees» and will only be entered with voting rights in the share register up to a maximum of 2% of the share capital, unless the actually entitled persons are revealed. The details are set out in Article 6 of the Lonza Articles of Association. This restriction may only be removed by a resolution of a Shareholders' Meeting with a quorum in accordance with Swiss law.

Each share has the right to one vote. The shares held by Lonza are not entitled to vote at the Annual General Meeting and bear no dividend.

Lonza may use an electronic voting system for all the resolutions to be taken at its Annual General Meetings. The Lonza Articles of Association do not contain any other rules on electronic participation in the Shareholders' Meeting, nor specific rules on the issue of instructions to the independent proxy.



Statutory Quora

Except as otherwise stipulated by law, an absolute majority of the votes represented at the Annual General Meeting is required for resolutions and elections.

For certain important matters such as a change of the company purpose and domicile, the dissolution of the company without liquidation, and certain matters relating to capital changes, Article 704 of the Swiss Code of Obligations requires at least two-thirds of the voting rights represented and an absolute majority of the nominal value of shares represented.

Convocation of Shareholders' Meetings

Ordinary Shareholders' Meetings are called in accordance with the law and the Lonza Articles of Association. Extraordinary Shareholders' Meetings must be called upon resolution of a Shareholders' Meeting or if demanded by one or more shareholders representing at least 5% of the share capital. Lonza posts the invitation to shareholders at least 20 days before the Annual General Meeting and publishes it on its website, as well as in the Swiss Official Gazette of Commerce.

Agenda

One or more shareholders representing together shares with a par value of CHF 100,000 may request an item to be included in the agenda of a Shareholders' Meeting. The request to include an item must be submitted in writing at least 40 days before the meeting, stating the item to be included and the motions.

Entry in the Share Register

Purchasers of Lonza shares may submit a request to be entered, without limitation, as shareholders with voting rights in the share register, provided they expressly declare that they have acquired these shares in their own name and on their own account. Special rules exist for persons who do not expressly declare in the entry application that they hold the shares on their own account (nominees) (see Limitations on Transferability and Nominee Registrations).

There are no special rules in the Lonza Articles of Association concerning a deadline for entry in the share register. The share register will this year be closed on 4 April 2019 at 5:00pm CEST.

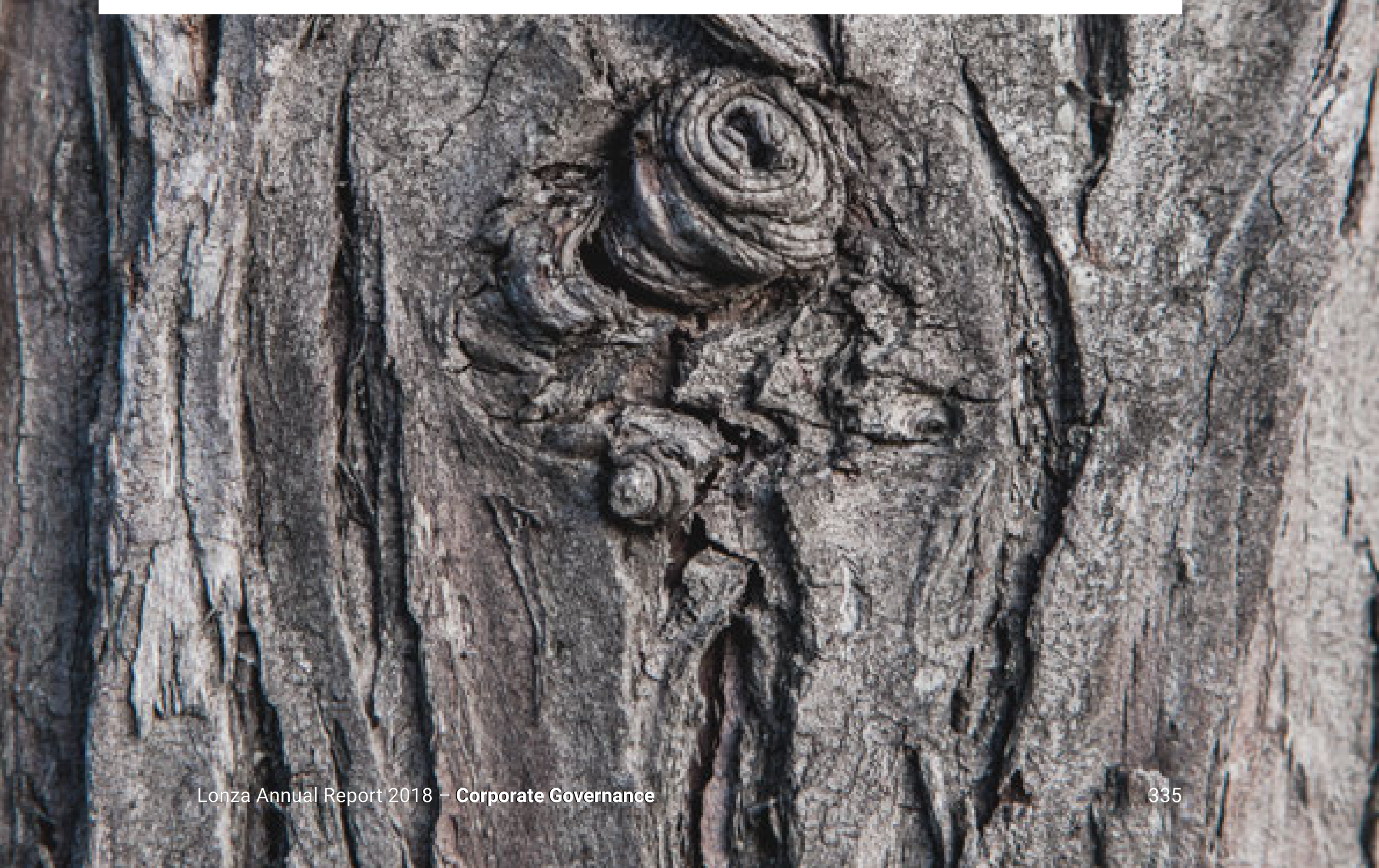
Changes of Control and Defense Measures

Duty to Make an Offer

According to the Swiss Federal Act on Financial Infrastructures and Market Conduct in Securities and Derivatives Trading (Financial Market Infrastructure Act, FMIA), an investor who acquires more than 33⅓% of all voting rights (directly, indirectly or in concert with third parties) whether they are exercisable or not, is required to submit a takeover offer for all shares outstanding. No special opting-out or opting-up dispositions are contained in the Lonza Articles of Association.

Clauses on Change of Control

The employment agreements of the Executive Committee members contain certain clauses on change of control, which are outlined in the Compensation of the Executive Committee section of the Remuneration Report. In addition, Lonza's share-based compensation programs - Extended Short-Term Incentive Plan (E-STIP) and Long-Term Incentive (LTIP) provide that unvested awards / blocked shares unconditionally vest upon change of control (see Compensation of the Executive Committee section of the Remuneration Report).



Auditors

Duration of the Mandate and Term of Office of the Auditor in Charge

The Auditor in Charge, KPMG Ltd, Badenerstrasse 172, 8026 Zurich 4, Switzerland, has held the mandate as the external statutory auditors of Lonza Group Ltd and the Group since 1999.

The auditing company is elected for a term of one year. Michael Blume from KPMG Ltd has been the auditor in charge since April 2014. The Board of Directors proposes that KPMG Ltd be re-elected as auditors for the 2019 business year.

Auditing Honorarium

Lonza Group paid KPMG Ltd CHF 6.9 million in 2018 (2017: CHF 5.3 million) for professional services rendered in connection with the audit of the Group's annual financial statements and other audit-related activities.

Additional Honorarium

KPMG Ltd received a total fee of CHF 0.1 million in 2018 (2017: CHF 0.1 million) for services not related to the audit of the Group's annual financial statements. These services related to tax and other consulting.

Supervisory and Control Instruments vis-à-vis the Auditors

The Audit and Compliance Committee is responsible for evaluating the performance and independence of the external auditors on behalf of the Board of Directors. This evaluation occurs at least once a year. The criteria applied for the assessment include professional competence, sufficiency of resources, the ability to provide effective and practical recommendations and coordination of the external auditors with the Audit and Compliance Committee and senior management. In the reporting year, KPMG Ltd attended six Audit and Compliance meetings. In those meetings, the external auditors presented the 2018 audit strategy and their 2018 results. The Comprehensive Auditor's Report to the Board of Directors prepared by KPMG summarizes the reports presented to the Audit and Compliance Committee throughout the year.

Within the yearly approved budget, there is an amount permissible for non-audit services that the external auditors may perform. Within the scope of the approved and budgeted amount, the Chief Financial Officer can delegate non-audit-related mandates to the external auditors, subject to all applicable auditor independence regulations.

The Board of Directors has determined the rotation interval for the auditor in charge to be seven years, as defined by the Swiss Code of Obligations.

The Audit and Compliance Committee reviews Lonza's financial reporting process on behalf of the Board of Directors. Lonza's management is responsible for preparing the financial statements and the reporting process, including the system of internal controls. The Audit and Compliance Committee is also responsible for overseeing the conduct of the activities by Lonza management and the external auditors.

The external auditor, KPMG Ltd, is responsible for expressing an opinion on the accounting records and the financial statements prepared in accordance with Swiss law and the Lonza Articles of Association. KPMG Ltd is also responsible for expressing an opinion on the consolidated financial statements (balance sheet, income statement, statement of comprehensive income, cash flow statement, statement of changes in equity and notes) prepared in accordance with the International Financial Reporting Standards (IFRS), which is issued by the International Accounting Standards Board (IASB), and with Swiss law.

KPMG also audited the Lonza Remuneration Report 2018 with respect to the information required by Articles 14 to 16 of the Swiss Ordinance Against Excessive Compensation in Stock-Exchange-Listed Companies.

Information Policy and Key Reporting Dates

Lonza pursues a proactive and professional communication policy. Lonza publishes price-sensitive information in accordance with the obligation to disclose price-sensitive facts as required by the SIX Swiss Exchange. Ad hoc notices are made available on its news site. Lonza's website also provides a news and subscription service that allows interested parties to receive, via e-mail distribution, free and timely notification of price-sensitive facts.

Corporate Communications reports directly to the Chief Human Resources Officer, while Investor Relations reports to the Chief Financial Officer. On basic matters of general corporate policy, Corporate Communications receives its directives from the Executive Committee. Lonza makes the Annual Report, the Half-Year Results and Full-Year Results available to all interested parties as a PDF download. The invitation to the Annual General Meeting is published on Lonza's website and in the Swiss Official Gazette of Commerce. It is also sent by mail to the shareholders entered in the share register.

Lonza's website is regularly updated and provides relevant information such as share-price development, news releases and presentations. Media conferences and analyst meetings generally take place at Lonza's headquarters or by conference call. Lonza manages an annual program of investor meetings. Shareholders, potential investors and financial analysts are also welcomed at Lonza's headquarters in Basel, Switzerland.

Anticipated Key Reporting Dates

The list of all corporate events of special interest is subject to change during the year as dates are adjusted and added. Updated information is found on the Investor Relations page of Lonza's website.

Upcoming Financial Events

Date	Event
4 April 2019, 5:00 pm CEST	Closing of the Share Register
18 April 2019, 10:00 am CEST	Annual General Meeting for the Financial Year 2018 Congress Center Basel, Switzerland
18 April 2019	Q1 2019 Qualitative Business Update
24 April 2019	Ex-Dividend Date
25 April 2019	Record-Dividend Date
26 April 2019	Dividend-Payment Date
24 July 2019	Half-Year Results 2019
28 April 2020, 10:00 am CEST	Annual General Meeting for the Financial Year 2019 Congress Center Basel, Switzerland

Lonza Forward Looking Statements

Forward-looking statements contained herein are qualified in their entirety as there are certain factors that could cause results to differ materially from those anticipated. Any statements contained herein that are not statements of historical fact (including statements containing the words «outlook,» «guidance,» «believes,» «plans,» «anticipates,» «expects,» «estimates» and similar expressions) should be considered to be forward-looking statements. Investors are cautioned that all forward-looking statements involve risks and uncertainty. There are a number of important factors that could cause actual results or events to differ materially from those indicated by such forward-looking statements, including the timing and strength of new product offerings; pricing strategies of competitors; the company's ability to continue to receive adequate products from its vendors on acceptable terms, or at all, and to continue to obtain sufficient financing to meet its liquidity needs; difficulty to maintain relationships with employees, customers and other business partners; and changes in the political, social and regulatory framework in which the company operates, or in economic or technological trends or conditions, including currency fluctuations, inflation and consumer confidence, on a global, regional or national basis. In particular, the assumptions underlying the Outlook 2019 and Mid-Term Guidance 2022 herein may not prove to be correct. The statements in the section on Outlook 2019 and Mid-Term Guidance 2022 constitute forward-looking statements and are not guarantees of future financial performance. Lonza's actual results of operations could deviate materially from those set forth in the section on Outlook 2019 and Mid-Term Guidance 2022 as a result of the factors described above or other factors. Investors should not place undue reliance on the statements in the section on Outlook 2019 and MidTerm Guidance 2022. Except as otherwise required by law, Lonza disclaims any intention or obligation to update any forward-looking statements as a result of developments occurring after this report was published.

No Warranty and No Liability

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