Independent Asset Management

May 2020

Lonza

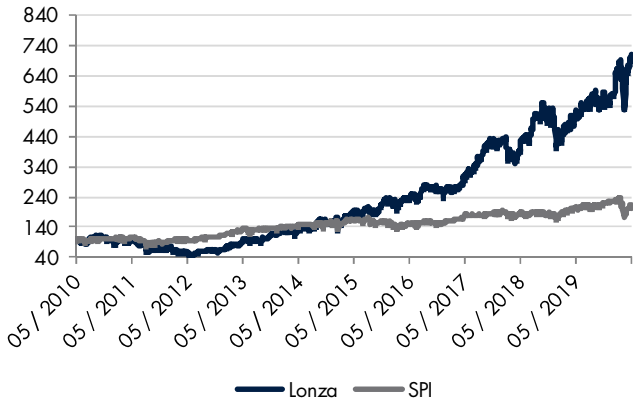
Market profile

Country	Switzerland
Sector	Consumer, Non-Cyclical
Market cap (CHF m)	32'223
52-week high / low (CHF)	436 / 300
Price per share (CHF)	433

Key metrics (CHF)

	2019	2020e	2021e
EPS	8.7	11.4	13.3
PE	40.7x	38.0x	32.5x
EV/EBITDA	14.9x	17.4x	15.3x
Dividend yield	0.8%	0.6%	0.7%

Evolution of stock price with respect to benchmark (rebased)
Source: IAM



Executive summary

Lonza partners with pharma and biotech companies in order to manufacture products. The technical term for such companies is called "contract development and manufacturing organizations" (CDMO). Lonza is part of the elite group of large-scale CDMOs providing one-stop-shop services across all different types of drugs. Lonza is in fact, the largest worldwide CDMO, and this is very important, as scale matters a lot more than low prices.

The CDMO business has huge barriers to entry: capital & time. A lot of capital is required to build a new green field manufacturing plant. On average, it takes two years to build a new operational facility, a further two years for the facility to break-even, and a further two to three years to reach peak sales. This long-term commitment of the client is the reason for high visibility.

Today Lonza represents a snapshot of biotechnology progress with little binary risk associated with individual clinical trials, as it is working on over 800 projects worldwide. Lonza's CDMO business is roughly 60% biologics, 35% small molecules, and 5% cell and gene therapies.

Competitors include large companies such as Boehringer Ingelheim and Samsung Biologics. Overall, the three have about equal market share of commercial manufacturing. Competitors are however much less interested in development projects. Over time, development projects should turn into commercial products, so Lonza will mechanically gain market share.

Partnerships with biotech companies are also very important, as they allow CDMOs to remain at the forefront of technology. Lonza is the leader in number of partnerships announced last year (19 contracts) vs 10 for the next competitor.

Long-term commercial contracts also guarantee a certain security in revenues with high visibility. Here once again, Lonza has the most long-term commercial contracts with 17, equal with Boehringer Ingelheim, while Samsung Biologics has 10 and WuXi Biologics has 2.

Lonza

Daniel Pfund, Senior Financial Analyst **May 2020**

Company description

Headquartered in Basel, Lonza is an integrated solutions provider that creates value along what the company calls "the Healthcare Continuum". This encompasses a large segment of different products dedicated towards healthcare and better living. Through their "Lonza Pharma Biotech & Nutrition (LPBN)" segment and their "Lonza Specialty Ingredients (LSI)" segment businesses, the company harnesses science and technology to serve markets along these segments. The company focuses on creating a healthy environment, promoting a healthier lifestyle and preventing illness through consumers' preventive healthcare, as well as improving patient healthcare by supporting their customers to deliver innovative medicines that help treat or even cure severe diseases.

Fig.1: Lonza mammalian fermentation lab
Source: Company data, IAM research

Patients and consumers benefit from Lonza's ability to transfer their pharma know-how to the healthcare, hygiene and fast-moving consumer goods environment and to the preservation and protection of the world we live in.

Founded in 1897 in Gampel (Valais), Lonza today is a well-respected global company with more than 100 sites and offices and approximately 15'500 full-time employees worldwide at the end of 2019. The company generated yearly sales of CHF 5.9 billion at the end of 2019 with a CORE EBITDA of CHF 1.6 billion.

Revenues are split into 2 divisions:

- Pharma, Biotech & Nutrition
- Specialty Ingredients

Pharma, Biotech & Nutrition

The Pharma, Biotech & Nutrition 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 & Nutrition segment shall not be further disaggregated.

Specialty Ingredients

The Specialty Ingredients segment focuses on product sales in the area of health, well-being, beauty, and materials protection. Within this segment, there is a very clear

Fig.2: Lonza microbial fermentation laboratory
Source: Company data, IAM research

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.

Note that these divisions have been reshuffled in 2020. Lonza has decided to keep all the non-cyclical businesses. The remaining cyclical business (ex Consumer & Resources Protection, now called Lonza Specialty Ingredients, or LSI) will be divested as one company. The spin-off or divestment (preferred, as it would bring in cash) should be completed in 2020. For this reason, we will only focus on the remaining businesses in the rest of this report.

History of the company

Lonza was founded in 1897 in the small Swiss town of Gampel, situated in the canton of Valais, taking its name from the nearby river. Initially the company produced electricity used to manufacture chemicals such as calcium carbide. Lonza moved to neighbouring Visp (where it retains a large production site today) in 1909 and began manufacturing synthetic fertilisers, and moved into vitamins, acids, intermediates and additives followed. In 1974, the group merged with aluminium firm Alusuisse, after which the group moved into the biotechnology sector. Lonza de-merged from the Alusuisse-Lonza Group in 1999 and listed on the SWX Swiss Exchange.

The company expanded in the United States in 1969 and acquired smaller biopharmaceutical units in recent years. In 1996, Lonza acquired Celltech Biologics and began producing mammalian cell cultures and monoclonal antibodies. In October 2011, Lonza acquired American firm Arch Chemicals for $1.4 billion, as a result becoming the world's largest manufacturer of biocides. On 15 August 2016, the group announced its intention to acquire InterHealth Nutraceuticals, a leader in research, development, manufacture and marketing of value-added nutritional ingredients for use in dietary supplements. The acquisition of the US based company was done at a value of US$300 million. In December 2016, the company announced it would acquire Capsugel for US$5.5 billion, from private equity firm KKR, its largest acquisition ever. In 2019 Lonza divested its Water Care business to Platinum Equity, and announced its intention of getting out of its remaining Speciality Ingredients (Paints & Coatings, Industrial Material, and Crop Protection).

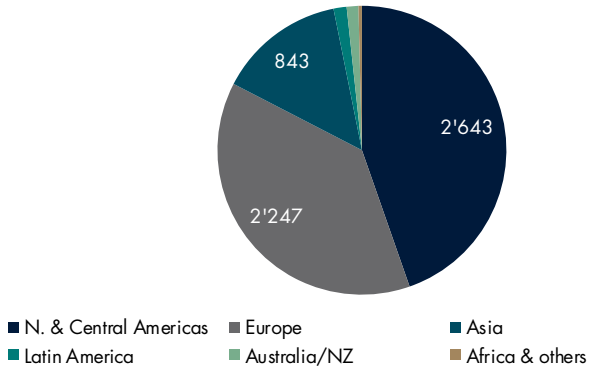
Geographic exposure

Almost half of the revenues stem from the North & Central Americas region, and more particularly the United

States (42.3% of Lonza's total revenues). Overall, the United States region is responsible for about half of the world's healthcare revenues, so this is inline with end-client's markets. The US market is so big because there is a willingness to pay for premium and innovative products. Some of the world's biggest pharma and biotech companies are headquartered there.

Europe is the next biggest region for Lonza's sales. Switzerland (9.7% of Lonza's total sales) makes up the biggest portion of Europe, followed by Sweden and France.

Fig.3: Lonza revenues by geography (CHF mn)
Source: Company data, IAM research



Industry Overview & Competitive positioning

Lonza partners with pharma and biotech companies in order to manufacture products. The technical term for such companies is called "contract development and manufacturing organizations" (CDMO). Lonza is part of the elite group of large-scale CDMOs providing one-stop-shop services across all different types of drugs. Lonza is in fact, the largest worldwide CDMO, and this is very important, as scale matters a lot more than low prices. Drug companies want peace of mind and knowledge that their CDMO is reputable and dependable. Indeed, pricing is rather a second thought, as most of the time, the cost of goods sold for a pharma company is less than 5% of the drug's cost. But if there is a manufacturing problem, the whole chain is broken, so reliability is key. Arguably, Lonza has one of the longest history of CDMOs and is highly rated by everyone in the industry.

The CDMO business has huge barriers to entry: capital & time. A lot of capital is required to build a new green field manufacturing plant. On average, it takes two years to build a new operational facility, a further two years for the facility to break-even, and a further two to three years to reach peak sales. This long-term commitment of the client is the reason for high visibility.

To understand Lonza's competitive advantage, it is important to understand different drug manufacturing processes. Drugs can be classified into different types (technically called "modalities"):

- Small molecules
- Monoclonal anti-bodies (mAb)
- Antibody drug conjugates
- Bispecifics
- Gene therapy
- Cell therapy

Small molecules

Small molecules are the simplest and most common drug modality, representing over 70% of prescription and over the counter (OTC) sales globally, and half of the top 100 pharmaceutical products. These drugs generally have good toxicity, which means that, for example, they can kill cancer cells. However they often lack specificity, in that they cannot differentiate healthy cells from problematic ones. Due to their small size, small molecules have good permeability: they can easily cross cell membranes and travel inside cells.

In terms of manufacturing, small molecules are relatively easy to manufacture by chemical synthesis. This explains the steep sales decline of patented drugs once generics are approved. The type that is more difficult to produce is HPAPI (high-potency active pharmaceuticals ingredients, commonly used in cancer treatments), an area Lonza has decided to focus on, moving away from commodity products.

Monoclonal anti-bodies (mAbs)

Today, the term "biologics" largely refers to mAbs, on account of their huge success. MAbs are engineered antibodies that target a specific protein in our bodies; they mark the problematic cells for the immune system to destroy, while leaving healthy cells without those marker proteins intact. Structurally mAbs are thousands of times larger and more complex than small molecules. If a small molecule is the size of a basketball, and mAb would be the size of the basketball court.

Manufacturing mAbs is very complex and is done by fermentation, mostly mammalian cell fermentation. It is here that a CDMO can add value, as it can contribute to a faster development and manufacturing process, as well as FDA approval.

Antibody drug conjugates (ADCs)

ADCs represent the next step of mAbs. Antibodies have specificity, but they cannot kill. Small molecules can kill cells but they lack specificity. ADCs are a conjugation between a mAb and a small molecule, resulting in a drug modality with both toxicity and specificity.

ADCs are at relatively early-stage among biologics and only seven ADCs have received FDA approval so far.

Bispecifics

Bispecifics are another derivative of mAbs, where instead of recognizing only one specific antigen, bispecifics can recognize two different antigens.

Bispecifics are at an even earlier stage among biologics than ADCs, as only five bispecific drugs have received FDA approval.

Gene therapies

Treatments aimed at making genetic modifications in patients are collectively called gene therapies. Here researchers explore therapies that can "correct the wrong genes" and cure genetic diseases once and for all. While it is relatively easy to genetically modify a single cell in laboratory, an average human body contains over 30 trillion cells. The biggest challenge in gene therapy is how to safely deliver genetic modifications to so many cells in one go. The answer is viruses, whose inherent function is to insert genes in host cells. As a result, conventional gene therapies use engineered viruses such as retroviruses and adenoviruses to modify patients' genes.

Gene therapies are very new, and only one product is currently approved by the FDA (Luxturna, for a rare disease called Leber congenital amaurosis).

Cell therapies

Cell therapy is a form of gene therapy. Instead of delivering viral agents that will "correct the wrong gene", cell therapy delivers living cells with "corrected genes" into patients. Cell therapy can be either autologous (using cells that originate from the patient) or allogeneic (using cells originated from a donor).

The most famous cell therapy today, CAR T-cell therapy, is derived from immune cells, which are extracted from a patient, genetically modified with enhanced cancer-killing capability, and then injected back into the same patient.

As this is a highly personalized therapy, manufacturing cannot be done on a large scale. Lonza has invented small "Cocoon" systems for automated CAR T manufacturing, and is currently the only CDMO with such a technology.

Cell therapies are still very new today and only two products have obtained FDA approval (Kymriah for leukaemia, and Yescarta for lymphoma).

Fig.4: Lonza's innovative Cocoon closed automated processing platform
Source: Company data, IAM research

Why is Lonza the best CDMO?

Today Lonza represents a snapshot of biotechnology progress with little binary risk associated with individual clinical trials, as it is working on over 800 projects worldwide. Lonza's CDMO business is roughly 60% biologics, 35% small molecules, and 5% cell and gene therapies.

Competitors include large companies such as Boehringer Ingelheim and Samsung Biologics. Overall, the three have about equal market share of mAbs commercial manufacturing. Competitors are however much less interested in development projects. Over time, development projects should turn into commercial products, so Lonza will mechanically gain market share.

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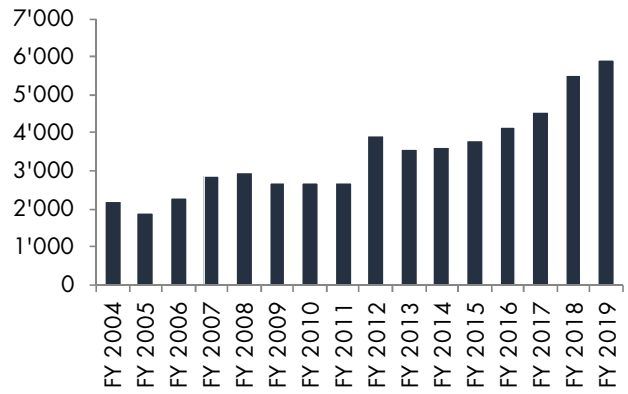
Financial analysis

Growth

The following figure depicts Lonza's top-line growth in millions of CHF.

Fig.5: Revenues
Source: Company data, IAM research

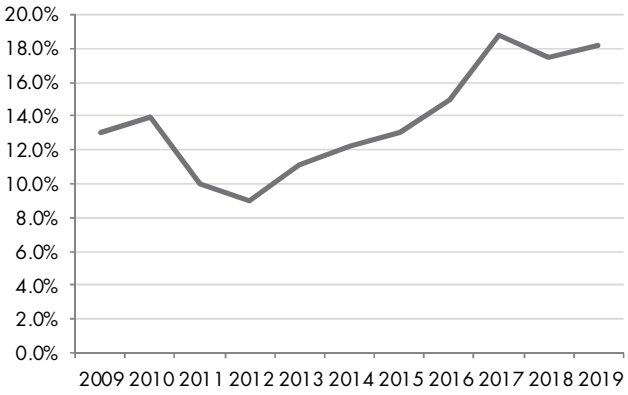


The 15 year compound annual growth rate is 6.9% per annum. But more interestingly, the recent 5 years growth has been stronger, at 10.2% per annum. This higher growth rate is more relevant because Lonza has transformed itself and is progressively getting out of lower margin, lower growth, cyclical businesses. We think future growth should be closer to 10%.

Margins

Operating margins (adjusted EBIT) are shown in the following graph.

Fig.6: GAAP EBIT margin
Source: Company data, IAM research

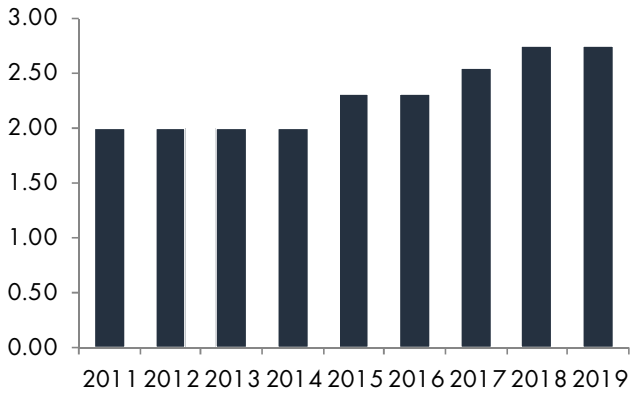


Lonza's management has been proactive to increase operating margin over time, as we witnessed from 2012-2017. The 2018 drop is due to the Capsugel integration, which we believe is only temporary.

Dividend

The following figure shows Lonza's dividend history (CHF/share).

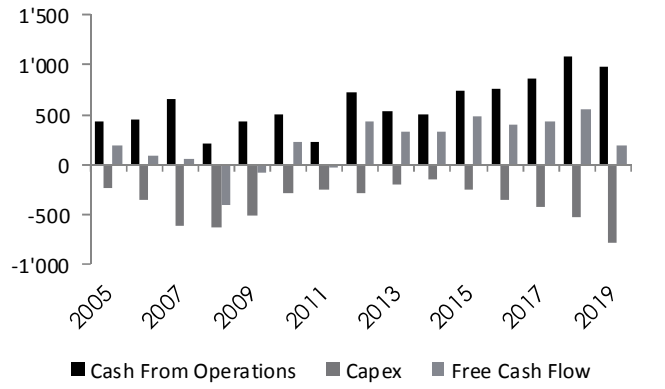
Fig.7: Dividend per share
Source: Company data, IAM research



Lonza is clearly not an attractive dividend play, with a sub 1% yield. Obviously the company prefers to keep the cash inhouse to make further acquisitions and grow future revenues. This makes sense, as Lonza must be seen

as a growth company, not a value play. Nevertheless, in the distant future, the company could clearly increase its dividend, as the payout ratio is very low (under 40%). But this is unlikely to happen before the big capex plans are terminated.

Fig.8: Operating cash flow, capex and free cash flow
Source: Company data, IAM research



Free Cash Flow

The following figure shows Lonza's operating cash flows, capex and free cash flow over time.

As we can see, the company's Free Cash Flow has not always been positive in the last decade. This was due to Lonza's cyclical businesses, which required high fixed investments (capex). Since the arrival of Richard Ridinger as CEO in 2012, the company has been gradually moving towards less cyclical and faster growing and value added businesses. The switch is clearly seen from 2012 onwards, as Free Cash Flow has remained positive ever since.

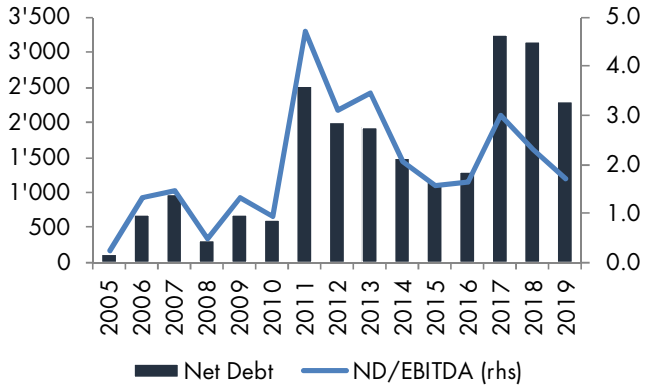
Lonza has communicated that capex requirements are currently running high (13.5% of sales), in order to increase capacity in manufacturing in the biologics segment, as required by new and exisiting customers. Once these facilities will be fully utilized (2021), capex should progressively fall (as a percentage of sales to 8-10%).

Balance Sheet

The following figure shows Lonza's net debt (ND) as well as a common indebtness ratio (ND/EBITDA).

The 2017 jump in net debt was the result of the Capsugel acquisition (cash outflow of CHF 3.2 bn). The debt had tripled that year, but in relationship to Equity, the ratio has remained stable (because Equity was also issued). The Net Debt to EBITDA ratio remains reasonable at 1.7x, and should fall further when Lonza sells its legacy chemical business (LSI). Also, most of the debt (two thirds) is at fixed interest rates, so the company is fairly immune to a rise in rates.

Fig.9: Net debt and Net debt/EBITDA
Source: Company data, IAM research



Investment case

Lonza is part of a few select companies that publicly disclosed medium-term (5 year) objectives. This guidance calls for 2022 sales of CHF 7.1 bn, a core EBITDA margin of 30.5%, core RONOA of 35%, and double-digit ROIC.

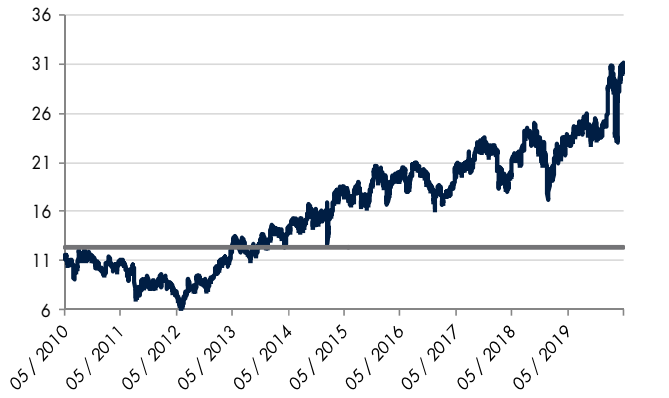
In 2019, Lonza had a core EBITDA margin of 32.9% and guides for a stable margin in 2020, which implies a large ramp up in 2021 and 2022 to achieve the mid-term guidance.

The reason for this back-end loading is that 2019 and 2020 represent big investment years, in terms of capex as well as employee hiring (1000 new employees in 2019 alone, and a further 600 planned for 2020, which will impact operating margins). Lonza is investing in order to have enough capacity for contracted business, but is also investing extra capacity for the first time without firm contracted business. This could be a risk in the medium-term (after 2022) as several competitors are also investing in capacity without committed business contracts to fill this capacity. Per Lonza's guidance, new projects are expected to reach peak sales on average five years after start of operations, although there is a wide range of variation, depending on technology.

Valuation

The following chart depicts Lonza's next 12 months forward P/E multiple over the last decade.

Fig.10: 12M forward P/E over last decade
Source: IAM research



The P/E ratio until 2012 should be compared to that of a chemicals company. We can clearly see the rise in the multiple since the arrival of the former CEO (Richard Ridlinger), and the change of strategy. Since then, the valuation has risen due to better visibility, less cyclicality, better margins and higher growth. We think the company is clearly on the right pathway to profit from future profitable growth, and the high multiple is here to stay.

Risks

Legacy chemical risks

From 1930 to 1976, Lonza discharged mercury into a nearby canal in Visp. The mercury accumulated in the sediment and sludge, which people often gathered to use as fertilizer. This is in turn led to a massive ground contamination, only apparent in 2011. 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.

CEO changes

In March 2019, Marc Funk, formerly Chief Operating Officer of Lonza Pharma & Biotech, became the new CEO of Lonza (succeeding Richard Ridlinger). In November of the same year, Mr. Funk resigned as CEO, citing personal reasons. This sudden and incomprehensible change of CEO seems strange and requires great scrutinity of the future CEO, which should be announced current 2020. In the interim, is the chairman, Albert Baehny, who took the CEO role. While a brilliant man, it may have been his overreaching character that has pushed the CEO aside and is hindering the new hiring process. It has been several months now that the company has no CEO, a period typically much longer than what could be expected for a company Lonza's size (maybe out of apprehension of a third clash, which would be a hard blow to the company's governance structure).

Coronavirus

The COVID-19 pandemic will also impact Lonza, even if the company is relatively more immune than others due to its good visibility. Nevertheless, it is likely that small biotech companies will face financial issues, and this will feed down the value chain and impact Lonza. At best, revenues could simply be deferred to a further date due to late clinical trials, while in the worst case scenario, the revenues could be totally lost due to bankruptcies. On the other hand, Lonza could benefit from increased demand for sanitizers, which it manufacturers.

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