

Samuel Weber, an independent wealth manager based in Zug, Switzerland, presented his in-depth investment thesis on LafargeHolcim (Switzerland: LHN) at European Investing Summit 2018.

*Thesis Summary:*

LafargeHolcim is the leading global construction materials and solutions company serving masons, builders, architects and engineers around the world. The company produces cement, aggregates and ready-mix concrete, which are used in building projects ranging from affordable, small, local housing to the biggest, most technically and architecturally challenging infrastructures.

Lifelong partnerships and the requirement to adapt products to specific customer needs enable LafargeHolcim to build-up a reputation for reliability and quality.

In 2017, LafargeHolcim generated CHF 26+ billion of revenue and almost CHF 6 billion of recurring EBITDA. The company plans to grow those figures by 3-5% and more than 5% per year, respectively and aims to generate a ratio of FCF to recurring EBITDA of at least 40%. If the company reaches those targets, it will generate recurring EBITDA of CHF 7.6+ billion and recurring FCF of CHF 3+ billion in 2022.

As FCF includes both growth and maintenance capex, it understates the company's true earnings. The investments needed to maintain the status-quo are shown in the footnotes of the annual report and based on these figures, LafargeHolcim's true earning power will be around CHF 4 billion in 2022.

Applying a P/E multiple of 15x suggests intrinsic value of CHF 60 billion, or CHF 41 billion discounted back to today with a discount rate of 8%. This looks attractive compared with a market cap of less than CHF 30 billion - even more so when considering the attractive dividend yield of 4% - and should compensate investors for the significant profit share of minority shareholders.

*The following transcript has been edited for space and clarity.*

I'm happy to present my favorite Swiss investment idea, LafargeHolcim. This is the leading global construction materials and solutions company. Based on its targets for the next five years, it trades at a discount to intrinsic value. Its current CEO has a strong track record of overdelivering on his targets, further strengthening the investment case.

Building materials is a fragmented CHF 2,500 billion market and is forecast to grow 2% to 3% per year. Excluding China, the size of the market is less than CHF 2,000 billion, of which cement and ready-mix concrete account for CHF 200 billion each and aggregates for CHF 220 billion. The other building materials market represents 65% of the total and is valued at over CHF 1,000 billion.

Today, the vast majority of cement and aggregates is used to produce concrete by mixing them with water. This is possible due to cement, which is a powdered mineral binder whose

hydration produces durable solids. Construction aggregates include sand, gravel, and crushed stone, which are the dominant materials in concrete, accounting for 60% to 75% of the initial mix. Water and cement make up 15% to 20%, and 10% to 15% of the initial mix, respectively. The difference between the aggregates sand and gravel is mainly size. Construction sand is abundant, not especially pure and easily found in virtually every country, often mixed with gravel.

Cement is typically made by crushing up clay, lime, and other minerals, firing them in a kiln at temperatures of up to 2,700 degrees, then milling the result into a silky, fine gray powder. You mix it with water so that the powder's molecules bond together via a process called hydration, meaning its chemical components grip each other tighter, making the resulting substance extremely strong. Reinforced with sand, that paste thickens into mortar, the stuff used to hold bricks together.

Sand mining is a relatively low-tech industry. The basic machinery involved hasn't changed much since the 1920s. On land, sand is usually quarried from open pits. The raw sand needs to be washed and run through a series of screens to sort it by size. Because sand is so common, there are sand mines all over the place in almost every country. Much of the extraction is carried out by relatively small regional companies. In the United States, for example, some 4,100 companies and government agencies harvest aggregate from about 3,600 locations in all 50 states. The breakdown is similar in Europe and other regions of the world. Concrete is made by adding aggregate, sand, and gravel to the mix of cement and water. As the cement cures, it binds to the aggregate, locking the grains together and hardening the ingredients into solid artificial stone.

The production of aggregates, cement, and concrete fluctuates with economic booms and downturns. During building slumps, it can contract rapidly and significantly. US cement consumption, for example, surpassed its 1973 high of 82 million tons only in 1986 and reached a new peak in 2005 with 128 million tons. Five years later, it dropped by 45% to just 71 million tons, a figure reached for the first time in 1968. In 1900 and 1928, those figures stood at 3 million and 30 million tons, a 10x increase in only 30 years.

In the building materials market, products do not travel well due to significant transportation costs. Therefore, the competitive dynamics and pricing are determined locally by supply and demand, input costs, and competitive behavior, and those dynamics differ materially between or even within countries and fluctuate significantly over time. While some markets face structural oversupply issues, others remain undersupplied.

LafargeHolcim employs over 80,000 people in more than 80 countries, serving masons, builders, architects, and engineers all over the world. The company produces cement, aggregates, and ready-mix concrete used in building projects ranging from affordable small local housing to the biggest, most technically and architecturally challenging infrastructures. A new building project takes many years to complete, and customers usually work on multiple projects. This is why LafargeHolcim often has lifelong partnerships with its clients.

There are hundreds of formulas for making cement, tailored to specific weather conditions,

project types, and other variables. You can add other materials, like gypsum, and play around with burning temperature and grain size to change the properties of cement. Still, it is mostly a commodity. In America, 95% of the roughly 83 million tons of cement manufactured is Portland cement.

Concrete production is also quite a sophisticated activity. There are thousands of different types and mixes of concrete, each with specific properties tailored to specific purposes. The strength required for a chunk of suburban sidewalk, for example, differs significantly from that required for a dam holding back a river. Adding chemicals or fibers can make concrete lighter, faster-curing, more flexible, resistant to corrosion, pretty to look at, and much more.

Of utmost important is deploying the right sand and gravel, the particles that make up the bulk of any concrete. Changing the size, shape, properties, and proportions of the aggregate in the mix gives you concrete of differing strength, durability, ease of use, and cost. To understand the company and the competitive dynamics, it is important to keep in mind that lifelong client partnerships and the requirement to adapt products to specific customer needs enable LafargeHolcim to build a reputation for reliability and quality.

In 2017, 66% of LafargeHolcim group sales came from cement, 15% from aggregates, and 22% from ready-mix concrete. The company sold 229 million tons of cement, 279 million tons of aggregate, and 51 million cubic meters of ready-mix concrete, with market shares (excluding China) of around 8%, 2%, and 3%, respectively. The small market shares show that the company, despite its size and small exposure to China, has much room to grow in each of its segments.

The group's total cement grinding capacity of 318 million tons is distributed around the globe - 117 million tons in the Asia-Pacific, 73 million tons in Europe, 39 million tons in Latin America, 55 million tons in Middle East-Africa, and 33 million tons in North America. India is by far the company's biggest market in the Asia-Pacific, with a cement production capacity of almost 70 million tons, which is more than half of its capacity in the region. The world's biggest market, China, is underrepresented, with a capacity of only 11 million tons despite this being the group's fifth biggest country ranked by capacity. LafargeHolcim also owns 41% of China's number five producer of cement.

Overall, the portfolio is equally balanced between developing and mature markets and broadly balanced across the world, with all five regions contributing at least CHF 1 billion to the CHF 6 billion of group-wide EBITDA. LafargeHolcim's capital-intensive business model is reflected in its balance sheet, which shows goodwill and intangible assets of more than CHF 15 billion; property, plants, and equipment of CHF 29 billion; and total assets of CHF 60 billion.

No other player in the building materials industry has a comparable asset base. If used in an agile way, this is one of the key competitive advantages. Most importantly, LafargeHolcim has strong regional market positions. It is number one in North American, number two in India, and among the top three players in 80% of its markets, with no single market contributing more than 15% of its revenues. LafargeHolcim, therefore, has the ability to react to local market conditions using its know-how to build multiple new factories

anywhere in the world while also having the strength to withstand local market downturns. The construction of a cement plant with a capacity of one million tons typically costs more than CHF 150 million. This represents around three years of sales, corresponding to an asset turnover of 33%. Such a low turnover makes it quite difficult for small local competitors to finance investments needed to meet growing local demand or withstand a prolonged local market downturn.

LafargeHolcim sales are almost as high as its fixed assets, corresponding to a turnover of 1. Due to its profitability, it can allocate capital to the most attractive regions, further strengthening its local competitive positions. Moreover, the company can locally integrate its cement, aggregate, and concrete businesses, increasing the scale of operations and helping to spread fixed costs over a larger number of produced tons. LafargeHolcim's size also allows it to spread best practices and secure access to raw materials.

The advantages of scale don't end here. For construction companies, which account for 40% of LafargeHolcim's revenues, roads, mines, ports, dams, data centers, stadiums, and wind farms are often complex projects. Building faster and more efficiently means increased productivity and additional business. Due to its large size, LafargeHolcim can fund research and development activities, creating innovative products and solutions that deliver more for customers and meet specific needs. It can also invest to make sure those products reach the market by creating networks of professionally trained partners. The company's international key account management team further supports major infrastructure players from the project design phase forward.

The other big client group, masons and individual homebuilders, account for 60% of the company's revenue. They need materials and solutions close to where they live and work. LafargeHolcim has built a network of 1,000 Disensa stores across Latin America and more than 600 similar stores in the Middle East and Africa and is planning to further expand this concept to India and Southeast Asia. The vision is to offer self-builders and smaller contractors a one-stop shop that not only supplies third-party materials but also supports its customers with micro credit, technical help, and complete kits for the different phases of homebuilding.

It is not the global scale but the local scale of the company's operations that creates all these competitive advantages in each of its markets and explains its profitability. In 2017, the cement business generated recurring EBITDA of almost CHF 5 billion on revenues of just over CHF 17 billion and an EBITDA margin of 28%. The aggregates and ready-mix concrete businesses were neglected by past management and lacked competitors' profitability, which is similar to that of LafargeHolcim's cement business. This substantial underperformance dragged down the average group EBITDA margin to 23%, which is still quite solid but can be a lot better.

Jan Jenisch, the new CEO, stepped into the role on September 1, 2017. He is a really hands-on manager focused on execution, spending 2/3 of his working time on production sites or traveling to them. Soon after starting on the job, he took impairment charges of CHF 1.7 billion on property, plant, and equipment and CHF 1.8 billion on goodwill and implemented major changes to fundamental business processes. The company aims to improve its

operating efficiency and reduce selling, general and administrative expenses by CHF 400 million per year from the second quarter of 2019 on. Overall, it aims to increase the return on invested capital to more than 8% by 2022. Jenisch has a strong track record of overdelivering on his targets. During his five years as the CEO of Sika, he revised his targets upwards twice and increased revenues by 26% and profits by 230%. This accomplishment was reflected in the company's share price, which jumped by over 300% during those five years.

At LafargeHolcim, Jenisch has dramatically simplified the business decision processes and reporting. Within a few months, he reduced the executive committee from nine to eight members, replaced six of those members, and eliminated a whole management level of 20 people situated directly below group management. The 35 biggest markets now report directly to group management. Furthermore, he closed subsidiaries in Singapore and Miami, reasoning that managers should spend time at production sites instead of headquarters and promised to implement similar changes on regional and country levels. He also terminated ongoing projects with McKinsey and BCG, arguing that internal employees should develop business concepts, not external consultants. Local markets were empowered and made fully profit and loss accountable to better reflect the local nature of the business, increasing transparency and fairness throughout the organization. Pricing decisions were delegated to local managers, who know most about local business conditions and thus have the highest competencies to make such decisions. The previous 40 to 50 key performance indicators were reduced to four (growth, cash conversion, operational profit, and capital returns), reducing the size of monthly reports from 140 to 5 pages and focusing managers on the most important key indicators. Last but not least, the two headquarters in Paris and Zurich were shut down and moved to a new office in Zug, Switzerland, reducing its size by more than 80%.

Importantly for investors, capital allocation will be focused on the most promising regions and projects, while the aggregates and ready-mix concrete businesses will be improved operationally to close the performance gap with competitors. Growth will be funded through the divestment of selected assets in 2019 worth at least CHF 2 billion, and excess free cash flow will be used to pay attractive dividends. Capex will be kept below CHF 2 billion per year. Agile country-based growth strategies will target value-enhancing bolt-on acquisitions to leverage local scale and margins. In 2018 alone, LafargeHolcim made four such acquisitions compared with zero in the past five years, so this reflects a shift in management thinking from extracting cash from the business to investing in growth and taking advantage of profitable business opportunities.

The increasing importance of the aggregates and concrete businesses for the group's profitability will reduce overall capital intensity and increase cash conversion to over 40%. Out of capital expenditures of CHF 1,387 million in 2017, the cement business consumed over CHF 1,100 million. The aggregates business consumed less than CHF 170 million of capex even though it sold more tons than the cement business and employed 650 plants compared to 220 cement plants. The ready-mix concrete business employed over 1,400 plants but consumed less than CHF 80 million of capex. A newly created fourth business segment called solutions and products, which currently includes precast concrete products,

asphalt, mortar and contracting and services, generates net sales of a little over CHF 2 billion and is expected to quickly grow to CHF 4 billion. This segment reflects an attempt to go closer to customers and provide them with product and solutions where the value provided, not the competitive situation, determines the asking price.

To understand the attractiveness of this investment case, we can consider a 2015 McKinsey study, which shows that the cement industry, LafargeHolcim's biggest business segment, has exhibited quite a strong return profile as expressed in total shareholder returns. From 1985 to 2015, the sector beat the MSCI market index with an average total shareholder return of 11% per year versus 9%. However, all five large multiregional players, including LafargeHolcim, belong to the bottom quintile of companies, substantially underperforming regional players. Somehow, multiregional players, unlike regional ones, didn't manage to reap the benefits of the locally attractive business opportunities. The study identified overspending on capital expenditures and acquisitions as the main factors explaining the comparative underperformance. In my view, the centralized overhead heavy structure also played a major role. It has negatively impacted those groups' performance as centralized decision-making just doesn't allow companies to take advantage of the attractive local business opportunities, especially if the headquarters are mainly interested in extracting cash from the business instead of investing it in such opportunities.

Trust in management must be a key pillar of this investment thesis. Value-destroying capex and acquisitions have been the norm and must be avoided if shareholders want to get an attractive return on their investment. Due to the local nature of the businesses and the different stages of the building cycle they go through at any given point in time, the company is in a constant battle to use its global scale advantages while maintaining local agility. This investment case can be highly attractive if LafargeHolcim reaps local benefits while having a global diversification that ensures an overall stable development of the company's profitability.

In industry downturns, attractive local returns can quickly disappear. On a global basis, however, we can count on growing demand for building materials to power the company's business model. Despite severe local disruptions, global cement demand increased in quite a predictable and stable fashion during the past 20 years, only decreasing a bit during the financial crisis of 2008. Betting on LafargeHolcim is a bet that this global development will continue. Without such stable demand, we couldn't count on the company's revenues to increase, which will be detrimental to this capital-intensive business model.

To better understand why future demand will increase substantially from today's level, let's consider the historical global development of building materials. Concrete is an ancient building material, but for more than 1,000 years, no concrete structures were built after the Romans stopped making it. Before the dawn of the 20th century, almost all of the world's large structures, apartment blocks, office buildings, churches, palaces, fortresses, etc. were made from stone, brick, clay, or wood. The tallest buildings on Earth stood fewer than 10 stories high, and roads were mostly paved with broken stone or more likely not paved at all. The mass manufacture and deployment of concrete changed it all, reshaping how and where people lived. Concrete enabled the build-up of advanced structures, thereby increasing the

qualitative demands on building materials, which also increased demand for aggregates and cement. On its own, concrete is basically artificial stone, but reinforced with iron or steel, it becomes a building material unlike anything found in nature, one that combines the strength of both metal and stone.

There are good reasons why there should be more concrete on the ground. For example, concrete is very easy to use - a single person can mix a batch of basic concrete and slap together a serviceable shelter in a short time. It can also be used by a well-financed contractor that can pour the foundation of a towering building in a matter of days. Concrete is the foundation for the massive expansion of urban areas, which is a big factor in cutting the rate of extreme poverty. Replacing mud floors with concrete floors in the hundreds of millions of the world's poorest dwellings would reduce the incidence of parasitic diseases, while paving the streets boosts land and rental values, agricultural wages, school enrollment, and overall economic activity. It even improves access to credit.

As with everything in this world, such advantages don't come without costs. Concrete can inflict physical harm on people and the planet. It soaks up heat and raises the ambient temperature of cities. Heat exposure can be lethal to children, the elderly, and other vulnerable people, and it boosts the formation of air pollutants. Furthermore, the cement industry is one of the world's leading sources of greenhouse gases. Cement is made in at least 150 countries and produces between 5% and 10% of the total carbon dioxide emissions worldwide. This puts it in the top three sources, behind only coal-fueled power plants and automobiles. Last but not least, concrete fails and fractures in dozens of ways. Since it is microscopically porous, a little water always seeps in, and as this water expands when it freezes, it can crack the concrete. Heat, cold, chemicals, and moisture all attack that seemingly solid artificial stone. Reinforced concrete is also made vulnerable by the very component making it strong because the steel rods inside it rust.

Despite the significant disadvantages, the many advantages of concrete, particularly its reinforced form, have made it the most important human-made material both in terms of global annual production and cumulatively emplaced mass. Between 1945 and 2010, about 500 billion tons of concrete were integrated into structures, with 60% of the total put in place between 1990 and 2010. An estimated 30 billion tons of concrete were consumed in 2006 versus only 2 billion tons in 1950. Twice as much concrete is produced every year as steel, aluminum, plastic, and wood combined, and 70% of the world population lives in structures made at least partly out of concrete. This huge demand drives the demand for cement and aggregates. Between 1945 and 2010, some 70 billion tons of cement were produced worldwide and around 4,000 tons are produced every year. Humans are estimated to consume nearly 50 billion tons of sand and gravel every year, twice as much as we were using just a decade ago.

The global trend is one of increasing volume demand. Huge amounts of this material have been consumed during the past decades, and this can be expected to continue in the future. Every year, the number of people on the planet grows and more of them move to cities, especially in the developing world. The scale of this migration is enormous. In 1950, some 746 million people, or less than 1/3 of the world's population at that time, lived in cities.

Today, the number is almost 4 billion, more than half of all the people on Earth. The United Nations predicts that another 2.5 billion will join them in the next three decades. The global urban population is rising by about 65 million people annually, and from 2015 to 2045, 24 million more Africans will be living in cities each year compared with 11 million in India, 9 million in China, and 21 million people in the rest of the world, according to McKinsey.

Not only the number but also the size of cities is increasing. In 1990, there were only 10 cities in the world with more than 10 million inhabitants, and by 2014, there were 28 of them with a total of over 450 million people. The United Nations estimates that 1.6 billion people around the world live in inadequate shelters, which is why there is a huge unmet need to build more housing. Over 100 million have no homes at all. By 2030, the world will need to add 4,000 new affordable housing units every hour to meet the demand. India alone will need housing and urban infrastructure for more than 400 million people by 2050.

A massive amount of building materials has been consumed and put into buildings in the past 100 years, and this trend can be expected to continue due to urbanization. The volume of urban construction for housing office space and transport services over the next 40 years could roughly equal the entire volume of such construction to date in world history, according to the US National Intelligence Council.

World demand will be dominated by China as there are more than 220 Chinese cities with over 1 million inhabitants compared to Europe's 35. Upwards of 500 million Chinese now live in urban areas, triple the total of 60 years ago. Chinese cement production in 2010 was around 1.9 billion tons and accounted for 55% of global output. This also shows that the small exposure of LafargeHolcim to China is one of the main weaknesses of its business model.

Maintenance is also driving global demand for construction materials as there is a huge need to maintain existing installed infrastructures. Slow, gradual degradation often isn't noticed or addressed and can lead to the collapse of concrete structures, as it happened with the bridge in Genoa. A fifth of America's highways and one-third of its urban roads are in poor condition, inflicting over \$100 billion worth of extra repair and operating costs on American drivers. According to the Federal Highway Administration, nearly 1/4 of all American bridges are structurally deficient or functionally obsolete. The American Society of Civil Engineers estimated that as of 2015, some 15,000 dams out of the total 84,000 should be considered high hazard potential, meaning a failure would cause death. This has led Larry Summers, a famous American economist, to argue that the cost of neglected infrastructure investments compound at a much higher rate than the interest rate on US debt, which is why the US should debt finance a big infrastructure program amounting to over \$1 trillion. The sheer volume we need to build our cities makes it all but impossible to replace concrete on a large scale as no other materials can be found that provide hundreds of billions of tons each year.

Let's now take a look at LafargeHolcim's valuation. First, we consider the case where minimum targets are reached. In 2017, the company generated more than CHF 26 billion of revenues and almost CHF 6 billion of recurring EBITDA. It plans to grow those figures by 3% to 5% and more than 5% per year, respectively. It further aims to generate a ratio of

free cash flow to recurring EBITDA of at least 40%, implying significant operational improvements. If the company reaches those targets, it will have recurring EBITDA of more than CHF 7.6 billion and recurring free cash flow of at least CHF 3 billion in 2022. As free cash flow includes both growth and maintenance capex, it understates the company's true earnings. Based on the investments needed to maintain the status quo, LafargeHolcim true owner earnings will be around CHF 3.5 billion in 2022 in the conservative scenario, assuming net sales growth of 3% and EBITDA growth of 5%. Applying a PE multiple of 15 shows an intrinsic value of CHF 53 billion in 2022 or CHF 39 billion discounted back to the present at a rate of 8%. This looks quite attractive compared with a market cap of less than CHF 30 billion, even more so when considering the dividend yield of more than 4%. This should also compensate investors for the significant profit share of minority shareholders, which is currently around 10% to 11%. If this scenario plays out, investors can expect a yearly return of 21% in Swiss francs provided they hold the investment until 2022.

Personally, I value LafargeHolcim more optimistically as Jenisch has a strong track record in overdelivering on his targets. A more likely scenario is one where the company generates EBITDA growth of 7% instead of 5% and reaches a cash conversion rate of 50% instead of 40%. In case those assumptions play out, investors can expect yearly returns of 28% in Swiss francs if they hold the investment until 2022. The expected returns are significantly higher for shorter holding periods as the catch-up to intrinsic value usually proceeds quite quickly once Mr. Market becomes aware of his undervaluation. But this can take quite a bit of time to play out. Once it happens, it happens fast, but until then, many years can go by.

*The following are excerpts of the Q&A session with Samuel Weber:*

**Q:** Could you comment some more on the cyclical nature of the business? If there is some sort of an economic downturn, how would you think about the downside risk?

**A:** That's central to this investment thesis. LafargeHolcim is active in many different markets, which provides quite a good basis for stable development. If you consider the financial crisis of 2008, it didn't really affect the building materials markets in China or India or Asia, for example. Furthermore, crises certainly affect the building materials market as much as they do the financial markets, right? Investors or financial people like myself tend to overestimate the impact of financial developments on real building material developments. You have broad diversification across the world markets of LafargeHolcim and the fact that building materials are in high demand and will remain so for the next 50-100 years. Even though local markets can experience fundamental shifts in volume demand, that shouldn't be a great danger for the company on a global basis. If it happens, there will be a catch-up in the years that follow.

**Q:** What would be some key data points someone could keep an eye on over time to either validate or challenge your thesis?

**A:** I think the most important data points are the volume sold, the tons of cement and aggregates, and the cubic meters of ready-mix concrete sold by the company. They have to go up. If this investment thesis is correct, you will see increasing volumes sold by the company and also by its competitors on a worldwide basis. In my opinion, that's the single

most important predictor of future revenues and profitability.

**Q:** In terms of capital allocation, would you like to see the management team prioritize anything differently?

**A:** I've been following the company for a few years, and I recognize that in the past, the management was focused on promising dividends to investors and making sure it extracts the cash from the businesses. Also, some people inside the company told me it was quite tough to always take the cash out of the business when you want to reinvest it to grow and to compete for the future. The new management team has changed that focus, so I think it prioritized just right. It's a big change in the span of only one year. The current focus is on reinvesting in attractive growth opportunities, not on extracting cash from the business.

*About the instructor:*

Samuel S. Weber is an independent wealth manager based in Zug, Switzerland. He is a passionate value investor, who is focused on generating long-term, market beating returns by investing in high-quality opportunities in the stock market and providing patient capital to SMEs with the overall aim of fostering productive investments in Switzerland and Europe. To achieve the latter, he founded the SW Kapitalpartner GmbH ([www.swkapitalpartner.com](http://www.swkapitalpartner.com)). Samuel holds a master's degree in strategy and international management from the University of St. Gallen.

