

# LafargeHolcim Ltd LHN (XSWX) | ★★★

Last Price	Fair Value	Uncertainty	Economic Moat™	Moat Trend™	Stewardship	Industry Group
55.00 CHF	61.00 CHF	High	Narrow	Stable	Standard	Building Materials

## LafargeHolcim Hires Sika Head Jenisch as New CEO; No Impact to Forecasts or FVE

See Page 2 for the full Analyst Note from 22 May 2017

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The primary analyst covering this company does not own its stock.

Research as of 22 May 2017  
Estimates as of 03 May 2017  
Pricing data through 29 Jun 2017  
Rating updated as of 29 Jun 2017

Currency amounts expressed with "\$" are in U.S. dollars (USD) unless otherwise denoted.

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### Investment Thesis 02 Mar 2017

LafargeHolcim was formed in 2015 after the merger of the two largest cement producers in the world, Lafarge and Holcim. The company is one of the world's largest producers of cement, aggregates, and concrete. Because cement's low value/weight ratio creates localized markets, LafargeHolcim's segments depend entirely on regional dynamics, with minimal cross-border impacts.

Construction activity is largely a function of economic growth. We use GDP, investment share of GDP, and cement intensity to inform our regional demand outlooks.

For Asia, we forecast cement volume growth of roughly 4% annually through 2021 and expect rising utilization rates to support improved operating margins. We expect India to drive healthy demand growth via increased housing and infrastructure activity, buoyed by government spending. We expect tepid growth in China to partially offset higher-growth countries.

For Latin America, we expect slower cement volume growth of just 3% annually through 2021. We expect healthy demand growth in Mexico to offset weakness in Brazil, Ecuador, and Argentina. We expect slight improvement in utilization rates to drive some operating margin expansion over the next few years.

For Europe, we expect cement volume growth of roughly 3% annually through 2021. We expect healthy demand growth in Central and Eastern European countries to offset weakness in more developed countries. While we expect European cement capacity utilization to drive margins higher, we expect utilization rates to remain lower than other regions. Given cement's high degree of operating leverage, we expect operating margins to remain well below peak levels achieved before the recession.

We liked the rationale of the merger that created LafargeHolcim. We believe the transaction allowed the companies to accelerate the divestment of assets in Europe, where the predecessor companies struggled with underutilization. We think LafargeHolcim can now better focus strategy and capital on higher-growth emerging markets. We think EUR 880 million of cost synergies is

### Vital Statistics

Market Cap (CHF Mil)	33,317
52-Week High (CHF)	60.80
52-Week Low (CHF)	38.12
52-Week Total Return %	43.3
YTD Total Return %	6.2
Last Fiscal Year End	31 Dec 2016
5-Yr Forward Revenue CAGR %	5.3
5-Yr Forward EPS CAGR %	13.7
Price/Fair Value	0.90

### Valuation Summary and Forecasts

	Fiscal Year:	2015	2016	2017(E)	2018(E)
Price/Earnings	NM	19.0	18.3	15.5	
EV/EBITDA	6.6	8.8	8.0	7.3	
EV/EBIT	NM	17.3	15.1	13.6	
Free Cash Flow Yield %	2.1	4.7	9.6	7.9	
Dividend Yield %	2.5	2.8	3.7	3.7	

### Financial Summary and Forecasts (CHF Mil)

	Fiscal Year:	2015	2016	2017(E)	2018(E)
Revenue	23,584	26,904	27,952	29,475	
Revenue YoY %	25.3	14.1	3.9	5.5	
EBIT	-738	2,837	3,203	3,553	
EBIT YoY %	-132.9	-484.4	12.9	10.9	
Net Income, Adjusted	-1,572	1,748	1,824	2,161	
Net Income YoY %	-222.1	-211.2	4.4	18.5	
Diluted EPS	-3.33	2.82	3.00	3.55	
Diluted EPS YoY %	-191.6	-184.8	6.3	18.5	
Free Cash Flow	9,871	5,069	3,519	2,869	
Free Cash Flow YoY %	592.5	-48.7	-30.6	-18.5	

Historical/forecast data sources are Morningstar Estimates and may reflect adjustments.

### Profile

LafargeHolcim is a leading producer of cement, aggregates, and concrete, with operations in 80 countries. Cement is LafargeHolcim's main product, with 329 million metric tons of capacity worldwide. Geographic diversification is one of the firm's key strategies, as it focuses investment in emerging markets.

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## Morningstar Analysis

### **LafargeHolcim Hires Sika Head Jenisch as New CEO; No Impact to Forecasts or FVE** 22 May 2017

LafargeHolcim CEO Eric Olsen announced his resignation last month as the company attempts to move past the controversy surrounding its former Syria operations. On May 22, the company announced that current Sika CEO Jan Jenisch will replace Olsen effective Oct. 16.

We think the hiring of Jenisch makes sense. While Sika is a specialty chemical company, its products primarily go to the construction and automotive sectors. Having been with Sika for 21 years and serving as CEO since 2012, Jenisch has sufficient experience in construction, in our opinion. Sika has subsidiaries in 98 countries and operates over 190 factories, which we think gives Jenisch solid experience to run the cement giant. In addition, we think the hiring of an outsider makes sense for LafargeHolcim, as focus can return to operations.

Our forecasts are unchanged, so our fair value estimate of CHF 61 per share and narrow moat rating remain intact.

### **Valuation, Growth and Profitability** 03 May 2017

Our fair value estimate for LafargeHolcim is CHF 61 per share.

Cement sales volume is an important driver of earnings power, and we assume almost 4% average annual volume growth through our explicit forecast period. Although LafargeHolcim's ability to increase cement prices will vary across its markets, we forecast a roughly 2.5% average annual price increase on a companywide basis. Our long-term companywide operating EBITDA margin assumption is roughly 25%, compared with 21% in 2016. As struggling performance in many of LafargeHolcim's regions weighs on margins, we expect improving demand through the forecast period. We expect higher prices, cost reductions, merger-related synergies, and higher utilization

to drive margin expansion.

We assume an 11% cost of equity and a 9.1% weighted average cost of capital. We assume an exit multiple of 7 times enterprise value/EBITDA.

### **Scenario Analysis**

Given the wide range of valuation outcomes, we assign LafargeHolcim a high uncertainty rating.

In a bull-case scenario, which would entail robust growth in global demand for building materials driven by strong construction activity, LafargeHolcim would generate higher sales growth and margins. We forecast that long-term EBITDA margins reach 31%, driven by healthy growth in prices and volume. Our fair value estimate in this scenario is CHF 90 per share.

In a bear-case scenario, which would entail continued low levels of construction activity amid weak economic conditions, Holcim would generate slower sales growth and maintain stable margins, as cost-cutting efforts offset weak volume growth. We forecast long-term EBITDA margins to decline to roughly 18%, roughly 3% below 2016 margins. Our fair value estimate in this scenario is CHF 35 per share.

### **Economic Moat**

We assign LafargeHolcim a narrow economic moat based on a low-cost advantage and high barriers to entry. These competitive advantages stem from the low value/weight ratio of cement and the difficulty obtaining permits for cement plants. In addition, we believe LafargeHolcim's emerging-markets footprint will support its competitive position.

We believe incumbents in the cement industry generally possess competitive advantages. Cement has low value relative to its weight, which creates local markets rather than global markets, as high shipping costs relative to the

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value of the materials creates a low-cost advantage for local producers and high barriers to entry for outside competitors. The additional costs make it unlikely that imports will enter the local market, except in periods of excess demand. We believe this advantage is further supported by high barriers to entry: Permits for new quarries and cement plants are difficult to obtain. Local opposition from residents and regulations make it difficult to build new facilities close to populated areas, which are the primary sources of strong demand.

Asia-Pacific is a key segment for LafargeHolcim, with India representing one of its largest footprints in the region. Its presence in India comes from its 61% ownership stake in Ambuja Cement, one of the two largest cement companies in the country. We think LafargeHolcim's Indian assets are particularly moatworthy. In addition to the competitive advantages we think incumbents in the cement industry generally possess, any new entrant to the Indian cement industry faces significant hurdles. This includes government land approvals, limestone reserve linkages, coal supply linkages for captive power, and the costs of building a distribution network.

## Moat Trend

We assign LafargeHolcim a stable moat trend rating. We expect the competitive dynamics for building materials to remain relatively unchanged, as their low value/weight ratio and importance in construction are unlikely to change. Furthermore, we do not think obtaining permits for new quarries or cement kilns will get any easier in the future due to increased environmental scrutiny and general aversion to new quarries near highly populated areas. However, while we believe incumbent cement companies will continue to hold pricing power based on high barriers to entry, we believe the companies' ability to raise prices will remain in check by transportation costs. Companies would not be able to increase prices to the point that the cost of materials begin to dwarf transportation costs, as this would erode the barriers that protect against competitors shipping into their markets.

We do not anticipate the completed merger of Lafarge and Holcim to materially affect the competitive advantages associated with either company's assets, for two main reasons. First, the two companies' assets in nonoverlapping regions should not see a change to their competitive positioning. Given the local-market nature of cement, combining assets in different countries will not increase the attractiveness of any individual asset, as there are minimal scale benefits. Second, regulators largely limited any potential gain in competitive advantage that the companies would have seen in overlapping markets. Lafarge and Holcim's overlapping markets would allow the company to enjoy a strengthening competitive advantage if the combined assets gave them a material gain in market share. However, these are also the countries where the companies sold assets to satisfy local regulators.

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## Bulls Say/Bears Say

### Bulls Say

- ▶ LafargeHolcim has a large footprint in emerging markets, with a meaningful presence in Asia-Pacific and Middle East-Africa.
- ▶ As a merger of equals, the combination that created LafargeHolcim avoided the large debt ramp-up that has been all too common in the building materials industry's consolidation.
- ▶ The merger gave Lafarge and Holcim the opportunity to divest assets in markets with overcapacity.

### Bears Say

- ▶ LafargeHolcim's European footprint operates at relatively lower utilization rates than those in other regions and will drag on operating margins.
- ▶ LafargeHolcim's emerging-market footprint may struggle if economic uncertainty lingers.
- ▶ LafargeHolcim's estimated synergies from the completed merger may be difficult to achieve, limiting the potential benefits of the combination.

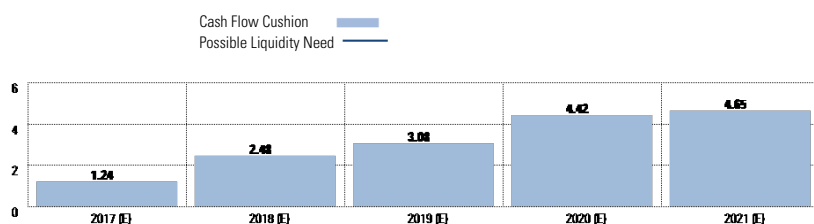
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## Five Year Adjusted Cash Flow Forecast (CHF Mil)

	2017(E)	2018(E)	2019(E)	2020(E)	2021(E)
Cash and Equivalents (beginning of period)	4,923	6,200	7,335	8,678	10,271
Adjusted Available Cash Flow	2,526	1,923	2,132	2,382	2,729
Total Cash Available before Debt Service	7,449	8,123	9,467	11,060	13,001
Principal Payments	-4,942	-2,191	-1,996	-1,424	-1,715
Interest Payments	-1,080	-1,080	-1,080	-1,080	-1,080
Other Cash Obligations and Commitments	—	—	—	—	—
Total Cash Obligations and Commitments	-6,022	-3,271	-3,076	-2,504	-2,795

## Cumulative Annual Cash Flow Cushion



## Adjusted Cash Flow Summary

	CHF Millions	% of Commitments
Beginning Cash Balance	4,923	27.9
Sum of 5-Year Adjusted Free Cash Flow	11,691	66.2
Sum of Cash and 5-Year Cash Generation	16,614	94.0
Revolver Availability	—	—
Asset Adjusted Borrowings (Repayment)	—	—
Sum of Cash, 5-Year Cash Generation, Revolver and Adjustments	16,614	94.0
Sum of 5-Year Cash Commitments	-17,668	—

## Financial Health

LafargeHolcim exhibits fair financial health, despite mixed construction materials demand. We attribute much of LafargeHolcim's relative balance sheet strength to the prudent merger and acquisition strategy of predecessor company Holcim. The same cannot be said of the other predecessor company, Lafarge, whose pricey acquisition of Orascom Cement in 2007 stretched the balance sheet. The merger of Lafarge and Holcim used no debt, which was beneficial to the combined company's balance sheet. As a merger of equals rather than an acquisition, Lafarge and Holcim were able to avoid the significant debt financing common in the prior industry consolidation. Further, the companies have largely used proceeds from regulation-driven divestitures to help further reduce debt. At the end of 2016, LafargeHolcim had CHF 19.7 billion in debt, compared with CHF 4.9 billion in cash and cash equivalents. We estimate net debt/adjusted EBITDA was roughly 2.6 times at the end of 2016 and expect it will fall in the coming years as the company directs free cash flow to debt reduction. The company is targeting net debt/adjusted EBITDA of roughly 2 times by the end of 2017, while we expect net leverage to fall to just 2.2 times.

## Enterprise Risk

Construction activity is the single most important driver of earnings power. Given that cement production has high fixed costs and roughly 80% of operating EBITDA comes from cement sales, downturns in construction demand are a significant risk to LafargeHolcim's earnings. Some key operating costs are largely beyond LafargeHolcim's control. Rising energy costs are a threat to margins. Kilns require significant energy to reach the extremely high temperatures necessary for cement production. Additionally, cement production is fairly pollutive, and new requirements for emissions control technologies at kilns could add additional costs for LafargeHolcim. Given its global footprint, LafargeHolcim also faces material currency risk. The

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company earns revenue in local currencies, although debt is denominated in a number of currencies, including Swiss francs, U.S. dollars, euros, and British pounds. Any depreciation in local currencies relative to the currencies of its debt could have a material impact on the company's ability to service its debt. In particular, depreciation of the Indian rupee could have a significant impact. Lastly, the company faces execution risk on the integration of assets from the completed merger of Lafarge and Holcim. Given the large scale of the two companies, integration will be complicated and costly. If the companies are unable to realize expected synergies, the merger may be dilutive to shareholders.

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## Management & Ownership

### Management Activity

Name	Position	Shares Held	Report Date*	InsiderActivity
NA	NA	NA	NA	NA

\*Represents the date on which the owner's name, position, and common shares held were reported by the holder or issuer.

### Fund Ownership

Top Owners	% of Shares Held	% of Fund Assets	Change (k)	Portfolio Date
Dodge & Cox International Stock Fund	2.58	1.59	-1,574	31 Mar 2017
Oakmark International Fund	1.57	1.90	-707	31 Mar 2017
Harbor International Fund	1.21	1.26	-1,493	31 Mar 2017
Vanguard Total Intl Stock Idx Fund	1.00	0.13	46	31 May 2017
Davis New York Venture Fund	0.89	2.47	-1,627	31 Jan 2017
Concentrated Holders				
iShares STOXX Europe 600 Cnstr & M (DE)	0.04	9.94	—	28 Jun 2017
Longleaf Partners International Fund	0.25	8.41	—	31 Mar 2017
Longleaf Partners U.S. UCITS Fund	—	7.26	—	31 Mar 2017
Longleaf Partners Global Fund	0.04	6.75	—	31 Mar 2017
Longleaf Partners Global UCITS Fund	0.03	6.17	—	31 Mar 2017

### Institutional Transactions

Top 5 Buyers	% of Shares Held	% of Fund Assets	Shares Bought/Sold (k)	Portfolio Date
Credit Suisse AG	0.99	1.88	358	31 May 2017
Vanguard Group Inc	1.77	0.14	215	31 May 2017
UBS Asset Mgmt, Basel and Zurich	0.87	1.40	197	30 Apr 2017
Union Investment Luxembourg SA	0.05	0.89	195	30 Apr 2017
Anima Sgr S.p.A	0.06	0.26	159	31 May 2017
Top 5 Sellers				
Dodge & Cox	2.85	1.49	-1,575	31 Mar 2017
Harbor Capital Advisors Inc	1.21	1.26	-1,493	31 Mar 2017
Davis Selected Advisers LP	1.33	2.66	-1,398	31 May 2017
Harris Associates L.P.	2.33	2.11	-995	30 Apr 2017
Vanguard Investments Australia Ltd	0.03	0.08	-868	31 May 2017

### Management 22 May 2017

We assign LafargeHolcim a Standard stewardship rating, though our rating depends on the company's successful handling of the ongoing investigation into illegal payments made in Syria, along with the achievement of previously announced merger synergy targets.

In April, the company announced that Eric Olsen, who had served as LafargeHolcim's CEO since the closing of the merger of the two cement giants, would resign effective July 15. His resignation stems from the ongoing controversy surrounding predecessor company Lafarge's payments to sanctioned armed groups in Syria to protect its plant workers. At this time, the company has specified that while certain senior managers had been aware of the payments, Olsen was "not responsible for, nor thought to be aware of, any wrongdoings that have been identified as part of its review." We don't think similar activity is pervasive elsewhere in the company's footprint and view the additional third-party screening tools as reasons to leave our stewardship rating unchanged.

In May, LafargeHolcim announced the appointment of Sika CEO Jan Jenisch as Olsen's replacement, effective in October. We think the hiring of Jenisch makes sense. While Sika is a specialty chemical company, its products primarily go to the construction and automotive sectors. Having been with Sika for 21 years and serving as CEO since 2012, Jenisch has sufficient experience in construction, in our opinion. Sika has subsidiaries in 98 countries and operates over 190 factories, which we think gives Jenisch solid experience to run the cement giant. In addition, we think the hiring of an outsider makes sense for LafargeHolcim, as focus can return to operations.

Our stewardship rating is meant to assess a company's capital-allocation practices. Through that lens, we don't see the Syria issue as likely to affect our stewardship rating. However, we think any mishandling of the ongoing

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investigation could prove a distraction from execution on merger synergies and business optimization, which could affect our stewardship rating.

In 2014, Holcim and Lafarge announced their merger of equals. While we liked the strategic rationale of combining their attractive emerging footprints, arguments over an appropriate share exchange ratio caused some turbulence between the initial merger announcement and closing. While the companies were able to resolve their issues with a revised exchange ratio, we think the discrepancy could be a sign of the difficulties LafargeHolcim may face during ongoing integration. The Syria controversy and the company's struggles following the merger have only added to the pressure for better performance.



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Our forecasts are unchanged, so our fair value estimate of CHF 61 per share and narrow moat rating remain intact.

### **Our State-Level Road Spending Study Reveals Divergent Growth Prospects for Aggregates Firms** 09 May 2017

Over the past two years, U.S. aggregates and concrete stocks have rallied about 60%, far outpacing the S&P 500's 15% return and pricing in significant future profit growth. Industry leaders Martin Marietta and Vulcan Materials, for example, trade at 15 and 16 times estimated 2017 EBITDA, respectively, substantially higher than both historical and midcycle levels. As a result, value-conscious investors are questioning whether the runup has been justified and whether the market is appropriately distinguishing firms with very different geographic footprints.

To answer these questions, we've constructed a state-level assessment of future road spending that we roll up to a firm-

level view. The outlook for road spending differs considerably from state to state, and differences in population growth, road conditions, funding mechanisms, and overall state fiscal health influence spending.

Our analysis indicates that Martin Marietta and Vulcan Materials are well-positioned for growth, with footprints dominated by states that have significant spending needs and the fiscal strength to fulfill them. U.S. Concrete also boasts an attractive operating footprint. Summit Materials has the weakest growth prospects in the group.

After updating our forecasts for our analysis, we've increased Martin Marietta's fair value estimate to \$261 per share from \$239; increased Vulcan Materials' fair value estimate to \$139 per share from \$116; and reduced U.S. Concrete's fair value estimate to \$71 per share from \$73. We are maintaining Summit Materials' fair value estimate of \$30 per share. The moat ratings for all four companies are intact.

We see limited risk-adjusted upside in U.S. aggregates and concrete stocks at present. However, we think the group offers good relative value for investors seeking exposure to the materials sector—a sector we regard as overpriced and one in which economic moats are relatively scarce.

For more details on our state-by-state road work analysis, please see our May 2017 report "Aggregates Stocks Are Priced for Growth—Do They Deserve It?"

### **Decent Start to LafargeHolcim's 2017 on Like-for-Like Basis, but Risk-Adjusted Upside Still Limited** 03 May 2017

LafargeHolcim started 2017 with solid performance. On a like-for-like basis, cement volumes were flat, while aggregates shipments were up almost 4% over the prior-year quarter. On an as-reported basis, sales fell by 7% and adjusted operating EBITDA fell nearly 5%. However, much

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of this was driven by the divestment of Chinese assets, rather than a reflection of severe weakness in the business. On a like-for-like basis, sales were actually up more than 5%, and adjusted operating EBITDA was up nearly 15%, as margin expanded more than 100 basis points.

The company maintained its full-year 2017 outlook, including global cement demand growth of 2% to 4% and double-digit like-for-like adjusted operating EBITDA growth. We see no reason to change our forecast at this point. LafargeHolcim also announced a target net debt to adjusted operating EBITDA of around 2 times by the end of the year. We think the company will get to around 2.2 times, barring asset sales that help the company reduce its leverage.

Separately, we've lowered our long-term tax assumption to 27% from 29%, reflecting Morningstar's updated outlook on long-term U.S. tax rates and LafargeHolcim's geographic mix. We are raising our fair value estimate to CHF 61 per share from CHF 60, primarily due to the impact of the time value of money in our model. The company's narrow-moat rating remains intact.

Shares currently trade at about an 8% discount to our fair value estimate. Given the high uncertainty we place on the company based on the cyclical nature of construction activity and the high fixed costs of cement production, we think shares offer limited risk-adjusted opportunity at this time.

For more details on our country-by-country cement demand forecast, please see our November 2016 Basic Materials Observer, "Global Cement Outlook: Geographic Mix Makes Cemex Our Top Pick."

### **LafargeHolcim CEO Eric Olsen Out Amid Ongoing Syria Controversy, but No Impact to FVE** 24 Apr 2017

In March, LafargeHolcim announced that its internal investigation had confirmed allegations that it had paid sanctioned armed groups in Syria to guarantee the safety

of its factory and its workers as the country descended into civil war in 2013 and 2014. Following an extended investigation, on April 24, LafargeHolcim CEO Eric Olsen announced his resignation, effective July 15. While Olsen is the highest-profile casualty as the French government continues its investigations, the company specified that he "was not responsible for, nor thought to be aware of, any wrongdoings that have been identified as part of its review."

The payments occurred before the completion of the merger of the cement giants in 2015 at the Lafarge stand-alone company. At the time, Olsen was serving as Executive Vice President of Operations at Lafarge. Although the Syrian payments occurred under his watch, it appears that he was unaware of the activity, given the company's specific wording in today's announcement.

We are maintaining our fair value estimate of CHF 60 per share, along with our narrow moat rating and Standard stewardship rating. Despite the high-profile departure, our forecasts and ratings are unchanged for three reasons.

First, the Syrian cement plant has been closed since 2014, and had already been excluded from our explicit forecast. Second, even when it was open, the plant's capacity of 2.6 million tonnes would constitute less than 1% of LafargeHolcim's current companywide cement capacity, which means that its impact would have been minimal in any case. Third, the decision to pay sanctioned armed groups was made at the local level, though certain members of management had been aware. As a result, we don't see this as a potential pervasive company issue, and we think the firm's announcement of additional third-party screening tools will help prevent similar issues from arising elsewhere in the company's footprint.

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## Analyst Notes

### Cost Cuts and Synergies Deliver Margin Expansion for LafargeHolcim, but Long-Term Outlook Unchanged 02 Mar 2017

LafargeHolcim reported a strong end to 2016, as fourth-quarter adjusted operating EBITDA rose more than 30% on a like-for-like basis to CHF 1.6 billion. Full-year adjusted operating EBITDA rose nearly 9% on a like-for-like basis to CHF 5.8 billion. Yet given the heavy amount of portfolio modifications during the year, understanding like-for-like comparisons is a bit difficult. For example, adjusted operating EBITDA margin expanded a massive 600 basis points to 24.7% during the fourth quarter. Impressively, this margin expansion occurred while volume sales for all products declined in the mid-single-digits during the quarter. This appears to largely coming from cost-cutting and synergies, as volumes actually declined in the fourth quarter for cement, aggregates, and ready-mix concrete.

We've updated our model to account for the latest results. With margins ahead of our expectations, we are raising our fair value estimate to CHF 60 per share from CHF 52. Our narrow moat rating remains unchanged.

Cement demand seems to be turning across LafargeHolcim's footprint. Whereas volume declined nearly 2% in 2016, the company expects global demand (excluding China, which is accounted for as an equity investment) to grow 2% to 4% in 2017. This should help the company realize better pricing development than the roughly flat pricing it saw in 2016.

Our long-term view remains largely unchanged, as we continue to expect LafargeHolcim's sizable footprint in slower growth markets like Europe will weigh on cement growth relative to peers. In addition, while near term margin expansion has benefited from synergies and cost cuts, longer term margin expansion will be harder to come by, as weak demand growth weighs on operating leverage. Nevertheless, our fair value reflects more than 5% annual

average revenue growth and nearly 9% annual average operating EBITDA growth through 2021. We see limited risk-adjusted upside at this time, as we think shares are already pricing in solid growth similar to our expectations.

# LafargeHolcim Ltd LHN (XSWX) | ★★★

Last Price	Fair Value	Uncertainty	Economic Moat™	Moat Trend™	Stewardship	Industry Group
55.00 CHF	61.00 CHF	High	Narrow	Stable	Standard	Building Materials

## Morningstar Analyst Forecasts

### Financial Summary and Forecasts

Fiscal Year Ends in December

	3-Year Hist. CAGR	Forecast					
		2014	2015	2016	2017	2018	5-Year Proj. CAGR
Growth (% YoY)	—	—	—	—	—	—	—
Revenue	—	—	25.3	14.1	3.9	5.5	5.3
EBIT	—	—	-132.9	-484.4	12.9	10.9	11.5
EBITDA	—	—	-18.8	4.1	7.9	8.9	8.9
Net Income	—	—	-222.1	-211.2	4.4	18.5	13.3
Diluted EPS	—	—	-191.6	-184.8	6.3	18.5	13.7
Earnings Before Interest, after Tax	—	—	-55.0	190.7	-12.3	13.3	6.1
Free Cash Flow	—	—	592.5	-48.7	-30.6	-18.5	-7.1

	3-Year Hist. Avg	Forecast					
		2014	2015	2016	2017	2018	5-Year Proj. Avg
Profitability	—	—	—	—	—	—	—
Operating Margin %	6.5	11.9	-3.1	10.5	11.5	12.1	12.7
EBITDA Margin %	26.3	35.2	22.8	20.8	21.6	22.3	23.1
Net Margin %	2.2	6.8	-6.7	6.5	6.5	7.3	8.0
Free Cash Flow Margin %	22.8	7.6	41.9	18.8	12.6	9.7	10.4
ROIC %	—	—	3.3	5.6	5.0	5.6	6.4
Adjusted ROIC %	—	—	4.5	7.9	7.1	8.1	9.2
Return on Assets %	—	—	-2.8	2.5	2.6	3.1	3.5
Return on Equity %	2.3	7.7	-6.4	5.6	5.9	6.8	7.5

	3-Year Hist. Avg	Forecast					
		2014	2015	2016	2017	2018	5-Year Proj. Avg
Leverage	—	—	—	—	—	—	—
Debt/Capital	0.40	0.40	0.41	0.39	0.38	0.37	0.36
Total Debt/EBITDA	3.11	1.76	4.05	3.52	3.19	2.93	2.70
EBITDA/Interest Expense	7.04	10.97	5.07	5.07	5.59	6.09	6.72

### Valuation Summary and Forecasts

	2015	2016	2017(E)	2018(E)
Price/Fair Value	—	1.03	—	—
Price/Earnings	NM	19.0	18.3	15.5
EV/EBITDA	6.6	8.8	8.0	7.3
EV/EBIT	NM	17.3	15.1	13.6
Free Cash Flow Yield %	2.1	4.7	9.6	7.9
Dividend Yield %	2.5	2.8	3.7	3.7

### Key Valuation Drivers

Cost of Equity %	11.0
Pre-Tax Cost of Debt %	6.5
Weighted Average Cost of Capital %	9.1
Long-Run Tax Rate %	27.0
Stage II EBI Growth Rate %	8.0
Stage II Investment Rate %	20.0
Perpetuity Year	15

Additional estimates and scenarios available for download at <http://select.morningstar.com>.

### Discounted Cash Flow Valuation

	CHF Mil	Firm Value (%)	Per Share Value
Present Value Stage I	12,503	24.5	20.55
Present Value Stage II	38,624	75.6	63.49
Present Value Stage III	—	—	—
<b>Total Firm Value</b>	<b>51,127</b>	<b>100.0</b>	<b>84.04</b>
Cash and Equivalents	4,923	—	8.09
Debt	-19,720	—	-32.42
Preferred Stock	—	—	—
Other Adjustments	—	—	—
<b>Equity Value</b>	<b>36,330</b>	<b>—</b>	<b>59.72</b>
Projected Diluted Shares	608	—	—
<b>Fair Value per Share (CHF)</b>	<b>61.00</b>	—	—

The data in the table above represent base-case forecasts in the company's reporting currency as of the beginning of the current year. Our fair value estimate may differ from the equity value per share shown above due to our time value of money adjustment and in cases where probability-weighted scenario analysis is performed.

# LafargeHolcim Ltd LHN (XSWX) | ★★★

Last Price	Fair Value	Uncertainty	Economic Moat™	Moat Trend™	Stewardship	Industry Group
55.00 CHF	61.00 CHF	High	Narrow	Stable	Standard	Building Materials

## Morningstar Analyst Forecasts

### Income Statement (CHF Mil)

Fiscal Year Ends in December

	2014	2015	2016	Forecast	
				2017	2018
<b>Revenue</b>	<b>18,825</b>	<b>23,584</b>	<b>26,904</b>	<b>27,952</b>	<b>29,475</b>
Cost of Goods Sold	10,460	16,490	15,632	15,986	16,682
<b>Gross Profit</b>	<b>8,365</b>	<b>7,094</b>	<b>11,272</b>	<b>11,967</b>	<b>12,794</b>
Selling, General & Administrative Expenses	6,121	7,832	8,435	8,764	9,241
Other Operating Expense (Income)	—	—	—	—	—
Other Operating Expense (Income)	—	—	—	—	—
Depreciation & Amortization (if reported separately)	—	—	—	—	—
<b>Operating Income (ex charges)</b>	<b>2,244</b>	<b>-738</b>	<b>2,837</b>	<b>3,203</b>	<b>3,553</b>
Restructuring & Other Cash Charges	-375	-961	-961	-600	-657
Impairment Charges (if reported separately)	—	—	—	—	—
Other Non-Cash (Income)/Charges	—	—	—	—	—
<b>Operating Income (incl charges)</b>	<b>2,619</b>	<b>223</b>	<b>3,798</b>	<b>3,803</b>	<b>4,210</b>
Interest Expense	604	1,060	1,104	1,080	1,080
Interest Income	185	154	187	248	293
<b>Pre-Tax Income</b>	<b>2,200</b>	<b>-683</b>	<b>2,882</b>	<b>2,971</b>	<b>3,423</b>
Income Tax Expense	581	781	835	862	924
Other After-Tax Cash Gains (Losses)	—	—	—	—	—
Other After-Tax Non-Cash Gains (Losses)	—	—	—	—	—
(Minority Interest)	-332	-108	-299	-285	-337
(Preferred Dividends)	—	—	—	—	—
<b>Net Income</b>	<b>1,287</b>	<b>-1,572</b>	<b>1,748</b>	<b>1,824</b>	<b>2,161</b>
Weighted Average Diluted Shares Outstanding	355	473	620	608	608
<b>Diluted Earnings Per Share</b>	<b>3.63</b>	<b>-3.33</b>	<b>2.82</b>	<b>3.00</b>	<b>3.55</b>
Adjusted Net Income	1,287	-1,572	1,748	1,824	2,161
<b>Diluted Earnings Per Share (Adjusted)</b>	<b>3.63</b>	<b>-3.33</b>	<b>2.82</b>	<b>3.00</b>	<b>3.55</b>
Dividends Per Common Share	—	1.50	2.00	2.00	2.00
<b>EBITDA</b>	<b>4,021</b>	<b>4,644</b>	<b>6,203</b>	<b>6,195</b>	<b>6,688</b>
<b>Adjusted EBITDA</b>	<b>6,624</b>	<b>5,377</b>	<b>5,595</b>	<b>6,038</b>	<b>6,577</b>

# LafargeHolcim Ltd LHN (XSWX) | ★★★

Last Price	Fair Value	Uncertainty	Economic Moat™	Moat Trend™	Stewardship	Industry Group
55.00 CHF	61.00 CHF	High	Narrow	Stable	Standard	Building Materials

## Morningstar Analyst Forecasts

### Balance Sheet (CHF Mil)

Fiscal Year Ends in December				Forecast	
	2014	2015	2016	2017	2018
Cash and Equivalents	2,148	4,393	4,923	6,200	7,335
Investments	—	—	—	—	—
Accounts Receivable	2,648	4,222	4,074	3,446	3,634
Inventory	1,828	3,060	2,645	2,628	2,742
Deferred Tax Assets (Current)	—	—	—	—	—
Other Short Term Assets	606	1,656	2,793	2,793	2,793
<b>Current Assets</b>	<b>7,230</b>	<b>13,331</b>	<b>14,435</b>	<b>15,067</b>	<b>16,504</b>
Net Property Plant, and Equipment	21,086	36,747	32,052	31,634	31,332
Goodwill	7,130	16,490	16,247	16,224	16,224
Other Intangibles	601	1,416	1,017	1,017	1,017
Deferred Tax Assets (Long-Term)	527	764	1,060	1,060	1,060
Other Long-Term Operating Assets	2,387	3,780	3,994	3,994	3,994
Long-Term Non-Operating Assets	528	770	811	811	811
<b>Total Assets</b>	<b>39,489</b>	<b>73,298</b>	<b>69,616</b>	<b>69,808</b>	<b>70,942</b>
Accounts Payable	2,124	3,693	3,048	3,066	3,199
Short-Term Debt	2,472	6,866	4,976	4,752	4,752
Deferred Tax Liabilities (Current)	415	598	641	641	641
Other Short-Term Liabilities	1,836	3,676	3,844	3,844	3,844
<b>Current Liabilities</b>	<b>6,847</b>	<b>14,833</b>	<b>12,509</b>	<b>12,303</b>	<b>12,436</b>
Long-Term Debt	9,197	14,925	14,744	14,533	14,533
Deferred Tax Liabilities (Long-Term)	1,396	3,840	3,387	3,387	3,387
Other Long-Term Operating Liabilities	1,076	2,041	2,151	2,151	2,151
Long-Term Non-Operating Liabilities	863	1,939	2,079	2,079	2,079
<b>Total Liabilities</b>	<b>19,379</b>	<b>37,578</b>	<b>34,870</b>	<b>34,453</b>	<b>34,586</b>
Preferred Stock	—	—	—	—	—
Common Stock	654	1,214	1,214	1,214	1,214
Additional Paid-in Capital	7,776	26,430	25,536	25,536	25,536
Retained Earnings (Deficit)	9,082	3,807	4,144	4,752	5,696
(Treasury Stock)	-82	-86	-72	-72	-72
Other Equity	—	—	—	—	—
<b>Shareholder's Equity</b>	<b>17,430</b>	<b>31,365</b>	<b>30,822</b>	<b>31,430</b>	<b>32,374</b>
Minority Interest	2,682	4,357	3,925	3,925	3,981
<b>Total Equity</b>	<b>20,112</b>	<b>35,722</b>	<b>34,747</b>	<b>35,355</b>	<b>36,356</b>

# LafargeHolcim Ltd LHN (XSWX) | ★★★

Last Price	Fair Value	Uncertainty	Economic Moat™	Moat Trend™	Stewardship	Industry Group
55.00 CHF	61.00 CHF	High	Narrow	Stable	Standard	Building Materials

## Morningstar Analyst Forecasts

### Cash Flow (CHF Mil)

Fiscal Year Ends in December

	2014	2015	2016	Forecast	
				2017	2018
Net Income	950	-2,301	1,230	2,109	2,499
Depreciation	1,402	4,421	2,405	2,392	2,478
Amortization	—	—	—	—	—
Stock-Based Compensation	—	—	—	—	—
Impairment of Goodwill	—	—	—	—	—
Impairment of Other Intangibles	—	—	—	—	—
Deferred Taxes	581	781	835	—	—
Other Non-Cash Adjustments	-72	-204	-481	—	—
(Increase) Decrease in Accounts Receivable	-378	-232	-694	628	-188
(Increase) Decrease in Inventory	—	—	—	17	-114
Change in Other Short-Term Assets	—	—	—	—	—
Increase (Decrease) in Accounts Payable	—	—	—	18	133
Change in Other Short-Term Liabilities	—	—	—	—	—
<b>Cash From Operations</b>	<b>2,483</b>	<b>2,465</b>	<b>3,295</b>	<b>5,164</b>	<b>4,809</b>
(Capital Expenditures)	-1,945	-2,106	-1,773	-1,974	-2,176
Net (Acquisitions), Asset Sales, and Disposals	242	6,841	2,378	23	—
Net Sales (Purchases) of Investments	—	498	101	—	—
Other Investing Cash Flows	—	—	—	—	—
<b>Cash From Investing</b>	<b>-1,703</b>	<b>5,233</b>	<b>706</b>	<b>-1,951</b>	<b>-2,176</b>
Common Stock Issuance (or Repurchase)	11	-7	5	—	—
Common Stock (Dividends)	-424	-424	-909	-1,217	-1,217
Short-Term Debt Issuance (or Retirement)	314	516	-946	-224	—
Long-Term Debt Issuance (or Retirement)	-600	-5,069	-384	-211	—
Other Financing Cash Flows	-284	-961	-644	-285	-281
<b>Cash From Financing</b>	<b>-983</b>	<b>-5,945</b>	<b>-2,878</b>	<b>-1,937</b>	<b>-1,498</b>
Exchange Rates, Discontinued Ops, etc. (net)	150	131	-99	—	—
<b>Net Change in Cash</b>	<b>-53</b>	<b>1,884</b>	<b>1,024</b>	<b>1,276</b>	<b>1,135</b>

# LafargeHolcim Ltd LHN (XSWX) | ★★★

Last Price	Fair Value	Uncertainty	Economic Moat™	Moat Trend™	Stewardship	Industry Group
55.00 CHF	61.00 CHF	High	Narrow	Stable	Standard	Building Materials

## Comparable Company Analysis

These companies are chosen by the analyst and the data are shown by nearest calendar year in descending market capitalization order.

### Valuation Analysis

Company/Ticker	Price/Fair Value	Price/Earnings			EV/EBITDA			Price/Free Cash Flow			Price/Book			Price/Sales		
		2016	2017(E)	2018(E)	2016	2017(E)	2018(E)	2016	2017(E)	2018(E)	2016	2017(E)	2018(E)	2016	2017(E)	2018(E)
CRH PLC CRH USA	0.86	21.9	12.7	10.9	11.0	8.7	7.7	18.3	14.5	12.3	2.0	1.7	1.5	1.0	0.9	0.9
HeidelbergCement AG HEI DEU	0.95	21.7	17.2	13.5	9.7	7.7	6.8	20.4	41.7	16.1	1.1	1.0	1.0	1.2	0.9	0.9
Cemex SAB de CV CX USA	0.78	22.7	22.4	12.9	4.1	8.7	7.1	6.5	13.8	9.5	1.3	1.3	1.2	0.9	0.9	0.8
Average		22.1	17.4	12.4	8.3	8.4	7.2	15.1	23.3	12.6	1.5	1.3	1.2	1.0	0.9	0.9
<b>LafargeHolcim Ltd LHN CH</b>	<b>0.90</b>	<b>19.0</b>	<b>18.3</b>	<b>15.5</b>	<b>8.8</b>	<b>8.0</b>	<b>7.3</b>	<b>21.3</b>	<b>10.4</b>	<b>12.7</b>	<b>1.1</b>	<b>1.1</b>	<b>1.0</b>	<b>1.2</b>	<b>1.2</b>	<b>1.1</b>

### Returns Analysis

Company/Ticker	Last Historical Year Total Assets (Mil)	ROIC %			Adjusted ROIC %			Return on Equity %			Return on Assets %			Dividend Yield %		
		2016	2017(E)	2018(E)	2016	2017(E)	2018(E)	2016	2017(E)	2018(E)	2016	2017(E)	2018(E)	2016	2017(E)	2018(E)
CRH PLC CRH USA	31,594 EUR	7.4	10.2	11.4	7.4	10.2	11.4	9.2	14.8	15.4	3.9	6.7	7.3	1.3	2.0	2.0
HeidelbergCement AG HEI DEU	37,154 EUR	5.2	6.2	7.1	9.3	10.6	11.9	4.6	5.4	6.7	2.2	2.3	2.9	1.4	1.8	1.8
Cemex SAB de CV CX USA	599,728 MXN	5.7	5.9	7.6	11.7	12.4	16.1	9.0	8.2	11.8	2.5	2.4	3.7	—	—	—
Average		6.1	7.4	8.7	9.5	11.1	13.1	7.6	9.5	11.3	2.9	3.8	4.6	1.4	1.9	1.9
<b>LafargeHolcim Ltd LHN CH</b>	<b>69,616 CHF</b>	<b>5.6</b>	<b>5.0</b>	<b>5.6</b>	<b>7.9</b>	<b>7.1</b>	<b>8.1</b>	<b>5.6</b>	<b>5.9</b>	<b>6.8</b>	<b>2.5</b>	<b>2.6</b>	<b>3.1</b>	<b>2.8</b>	<b>3.7</b>	<b>3.7</b>

### Growth Analysis

Company/Ticker	Last Historical Year Revenue (Mil)	Revenue Growth %			EBIT Growth %			EPS Growth %			Free Cash Flow Growth %			Dividend/Share Growth %		
		2016	2017(E)	2018(E)	2016	2017(E)	2018(E)	2016	2017(E)	2018(E)	2016	2017(E)	2018(E)	2016	2017(E)	2018(E)
CRH PLC CRH USA	27,104 EUR	14.7	6.2	6.7	58.7	45.1	13.8	80.3	81.0	16.8	-119.2	73.6	15.8	0.5	—	—
HeidelbergCement AG HEI DEU	15,166 EUR	12.6	18.2	7.7	-8.9	17.1	18.7	-16.7	21.8	27.1	-291.8	-133.4	123.4	23.1	—	—
Cemex SAB de CV CX USA	250,909 MXN	11.2	4.8	10.1	41.7	8.3	30.4	554.9	25.9	72.1	191.0	-50.0	38.5	—	—	—
Average		12.8	9.7	8.2	30.5	23.5	21.0	206.2	42.9	38.7	-73.3	-36.6	59.2	11.8	—	—
<b>LafargeHolcim Ltd LHN CH</b>	<b>26,904 CHF</b>	<b>14.1</b>	<b>3.9</b>	<b>5.5</b>	<b>-484.4</b>	<b>12.9</b>	<b>10.9</b>	<b>-184.8</b>	<b>6.3</b>	<b>18.5</b>	<b>-48.7</b>	<b>-30.6</b>	<b>-18.5</b>	<b>33.3</b>	<b>—</b>	<b>—</b>



# LafargeHolcim Ltd LHN (XSWX) | ★★★

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## Comparable Company Analysis

These companies are chosen by the analyst and the data are shown by nearest calendar year in descending market capitalization order.

### Profitability Analysis

Company/Ticker	Last Historical Year Net Income (Mil)	Gross Margin %			EBITDA Margin %			Operating Margin %			Net Margin %			Free Cash Flow Margin %		
		2016	2017(E)	2018(E)	2016	2017(E)	2018(E)	2016	2017(E)	2018(E)	2016	2017(E)	2018(E)	2016	2017(E)	2018(E)
CRH PLC CRH USA	1,203 EUR	32.6	32.7	33.2	11.6	12.7	13.4	7.5	10.2	10.9	4.4	7.6	8.3	5.5	6.3	6.9
HeidelbergCement AG HEI DEU	787 EUR	43.7	44.0	44.7	18.0	18.4	19.4	11.2	11.1	12.2	5.2	5.4	6.3	5.7	2.3	5.5
Cemex SAB de CV CX USA	10,167 MXN	35.5	36.0	37.4	20.5	21.4	23.9	13.4	13.9	16.4	4.1	4.9	7.6	13.8	6.5	8.6
Average		37.3	37.6	38.4	16.7	17.5	18.9	10.7	11.7	13.2	4.6	6.0	7.4	8.3	5.0	7.0
<b>LafargeHolcim Ltd LHN CH</b>	<b>1,748 CHF</b>	<b>41.9</b>	<b>42.8</b>	<b>43.4</b>	<b>20.8</b>	<b>21.6</b>	<b>22.3</b>	<b>10.5</b>	<b>11.5</b>	<b>12.1</b>	<b>6.5</b>	<b>6.5</b>	<b>7.3</b>	<b>5.7</b>	<b>11.4</b>	<b>8.9</b>

### Leverage Analysis

Company/Ticker	Last Historical Year Total Debt (Mil)	Debt/Equity %			Debt/Total Cap %			EBITDA/Interest Exp.			Total Debt/EBITDA			Assets/Equity		
		2016	2017(E)	2018(E)	2016	2017(E)	2018(E)	2016	2017(E)	2018(E)	2016	2017(E)	2018(E)	2016	2017(E)	2018(E)
CRH PLC CRH USA	7,790 EUR	56.1	50.1	44.4	35.9	33.4	30.7	8.0	10.4	11.7	2.5	2.1	1.9	2.3	2.2	2.0
HeidelbergCement AG HEI DEU	10,977 EUR	68.2	68.6	65.3	40.6	40.7	39.5	6.0	7.0	7.9	4.0	3.5	3.1	2.3	2.3	2.3
Cemex SAB de CV CX USA	273,862 MXN	163.2	150.4	126.4	62.0	60.1	55.8	2.4	3.3	4.3	5.3	4.9	3.7	3.6	3.4	3.1
Average		95.8	89.7	78.7	46.2	44.7	42.0	5.5	6.9	8.0	3.9	3.5	2.9	2.7	2.6	2.5
<b>LafargeHolcim Ltd LHN CH</b>	<b>19,720 CHF</b>	<b>64.0</b>	<b>61.4</b>	<b>59.6</b>	<b>39.0</b>	<b>38.0</b>	<b>37.3</b>	<b>5.1</b>	<b>5.6</b>	<b>6.1</b>	<b>3.5</b>	<b>3.2</b>	<b>2.9</b>	<b>2.3</b>	<b>2.2</b>	<b>2.2</b>

### Liquidity Analysis

Company/Ticker	Market Cap (Mil)	Cash per Share			Current Ratio			Quick Ratio			Cash/Short-Term Debt			Payout Ratio %		
		2016	2017(E)	2018(E)	2016	2017(E)	2018(E)	2016	2017(E)	2018(E)	2016	2017(E)	2018(E)	2016	2017(E)	2018(E)
CRH PLC CRH USA	29,866 USD	2.94	4.18	5.81	1.59	1.75	1.95	1.09	1.25	1.44	8.91	12.68	17.61	42.1	24.1	20.6
HeidelbergCement AG HEI DEU	16,937 EUR	10.32	12.69	15.92	0.96	0.99	1.09	0.66	0.68	0.77	0.80	0.77	0.96	43.7	34.8	27.0
Cemex SAB de CV CX USA	13,203 USD	0.24	0.58	0.76	1.12	1.32	1.43	0.90	1.10	1.20	0.90	2.14	2.82	—	—	—
Average		4.50	5.82	7.50	1.22	1.35	1.49	0.88	1.01	1.14	3.54	5.20	7.13	42.9	29.5	23.8
<b>LafargeHolcim Ltd LHN CH</b>	<b>33,317 CHF</b>	<b>7.94</b>	<b>10.19</b>	<b>12.06</b>	<b>1.15</b>	<b>1.22</b>	<b>1.33</b>	<b>0.94</b>	<b>1.01</b>	<b>1.11</b>	<b>0.99</b>	<b>1.30</b>	<b>1.54</b>	<b>70.9</b>	<b>66.7</b>	<b>56.3</b>

# Research Methodology for Valuing Companies

## Overview

At the heart of our valuation system is a detailed projection of a company's future cash flows, resulting from our analysts' research. Analysts create custom industry and company assumptions to feed income statement, balance sheet, and capital investment assumptions into our globally standardized, proprietary discounted cash flow, or DCF, modeling templates. We use scenario analysis, in-depth competitive advantage analysis, and a variety of other analytical tools to augment this process. Moreover, we think analyzing valuation through discounted cash flows presents a better lens for viewing cyclical companies, high-growth firms, businesses with finite lives (e.g., mines), or companies expected to generate negative earnings over the next few years. That said, we don't dismiss multiples altogether but rather use them as supporting cross-checks for our DCF-based fair value estimates. We also acknowledge that DCF models offer their own challenges (including a potential proliferation of estimated inputs and the possibility that the method may miss short-term market-price movements), but we believe these negatives are mitigated by deep analysis and our long-term approach.

Morningstar's equity research group ("we", "our") believes that a company's intrinsic worth results from the future cash flows it can generate. The Morningstar Rating for stocks identifies stocks trading at a discount or premium to their intrinsic worth—or fair value estimate, in Morningstar terminology. Five-star stocks sell for the biggest risk-adjusted discount to their fair values, whereas 1-star stocks trade at premiums to their intrinsic worth.

Four key components drive the Morningstar rating: (1) our assessment of the firm's economic moat, (2) our estimate of the stock's fair value, (3) our uncertainty around that fair value estimate

and (4) the current market price. This process ultimately culminates in our single-point star rating.

## 1. Economic Moat

The concept of an economic moat plays a vital role not only in our qualitative assessment of a firm's long-term investment potential, but also in the actual calculation of our fair value estimates. An economic moat is a structural feature that allows a firm to sustain excess profits over a long period of time. We define economic profits as returns on invested capital (or ROIC) over and above our estimate of a firm's cost of capital, or weighted average cost of capital (or WACC). Without a moat, profits are more susceptible to competition. We have identified five sources of economic moats: intangible assets, switching costs, network effect, cost advantage, and efficient scale.

Companies with a narrow moat are those we believe are more likely than not to achieve normalized excess returns for at least the next 10 years. Wide-moat companies are those in which we have very high confidence that excess returns will remain for 10 years, with excess returns more likely than not to remain for at least 20 years. The longer a firm generates economic profits, the higher its intrinsic value. We believe low-quality, no-moat companies will see their normalized returns gravitate toward the firm's cost of capital more quickly than companies with moats.

To assess the sustainability of excess profits, analysts perform ongoing assessments of the moat trend. A firm's moat trend is positive in cases where we think its sources of competitive advantage are growing stronger; stable where we don't anticipate changes to competitive advantages over the next several years; or negative when we see signs of deterioration.

## 2. Estimated Fair Value

Combining our analysts' financial forecasts with the firm's economic moat helps us assess how long returns on invested capital are likely to exceed the firm's cost of

capital. Returns of firms with a wide economic moat rating are assumed to fade to the perpetuity period over a longer period of time than the returns of narrow-moat firms, and both will fade slower than no-moat firms, increasing our estimate of their intrinsic value.

Our model is divided into three distinct stages:

### Stage I: Explicit Forecast

In this stage, which can last five to 10 years, analysts make full financial statement forecasts, including items such as revenue, profit margins, tax rates, changes in working-capital accounts, and capital spending. Based on these projections, we calculate earnings before interest, after taxes (EBI) and the net new investment (NNI) to derive our annual free cash flow forecast.

### Stage II: Fade

The second stage of our model is the period it will take the company's return on new invested capital—the return on capital of the next dollar invested ("RONIC")—to decline (or rise) to its cost of capital. During the Stage II period, we use a formula to approximate cash flows in lieu of explicitly modeling the income statement, balance sheet, and cash flow statement as we do in Stage I. The length of the second stage depends on the strength of the company's economic moat. We forecast this period to last anywhere from one year (for companies with no economic moat) to 10–15 years or more (for wide-moat companies). During this period, cash flows are forecast using four assumptions: an average growth rate for EBI over the period, a normalized investment rate, average return on new invested capital (RONIC), and the number of years until perpetuity, when excess returns cease. The investment rate and return on new invested capital decline until a perpetuity value is calculated. In the case of firms that do not earn their cost of capital, we assume marginal ROICs rise to the firm's cost of capital (usually attributable to less reinvestment), and we may truncate the second stage.

### Stage III: Perpetuity

Once a company's marginal ROIC hits its cost of capital, we calculate a continuing value, using a standard perpetuity formula. At perpetuity, we assume that any growth or decline or investment in the business neither creates nor destroys value and that any new investment provides a return in line with estimated WACC.

Because a dollar earned today is worth more than a dollar earned tomorrow, we discount our projections of cash flows in stages I, II, and III to arrive at a total pres-

## Morningstar Research Methodology for Valuing Companies



# Research Methodology for Valuing Companies

ent value of expected future cash flows. Because we are modeling free cash flow to the firm—representing cash available to provide a return to all capital providers—we discount future cash flows using the WACC, which is a weighted average of the costs of equity, debt, and preferred stock (and any other funding sources), using expected future proportionate long-term, market-value weights.

### 3. Uncertainty around that fair value estimate

Morningstar's Uncertainty Rating captures a range of likely potential intrinsic values for a company and uses it to assign the margin of safety required before investing, which in turn explicitly drives our stock star rating system. The Uncertainty Rating represents the analysts' ability to bound the estimated value of the shares in a company around the Fair Value Estimate, based on the characteristics of the business underlying the stock, including operating and financial leverage, sales sensitivity to the overall economy, product concentration, pricing power, and other company-specific factors.

Analysts consider at least two scenarios in addition to their base case: a bull case and a bear case. Assumptions are chosen such that the analyst believes there is a 25% probability that the company will perform better than the bull case, and a 25% probability that the company will perform worse than the bear case. The distance between the bull and bear cases is an important indicator of the uncertainty underlying the fair value estimate.

Our recommended margin of safety widens as our uncertainty of the estimated value of the equity increases. The more uncertain we are about the estimated value of the equity, the greater the discount we require relative to our estimate of the value of the firm before we would recommend the purchase of the shares. In addition, the uncertainty rating provides guidance in portfolio construction based on risk tolerance.

Our uncertainty ratings for our qualitative analysis are low, medium, high, very high, and extreme.

► **Low:** margin of safety for 5-star rating is a 20% discount and for 1-star rating is 25% premium.

- **Medium:** margin of safety for 5-star rating is a 30% discount and for 1-star rating is 35% premium.
- **High:** margin of safety for 5-star rating is a 40% discount and for 1-star rating is 55% premium.
- **Very High:** margin of safety for 5-star rating is a 50% discount and for 1-star rating is 75% premium.
- **Extreme:** Stock's uncertainty exceeds the parameters we have set for assigning the appropriate margin of safety.

### 4. Market Price

The market prices used in this analysis and noted in the report come from exchange on which the stock is listed which we believe is a reliable source.

For more detail information about our methodology, please go to <http://global.morningstar.com/equitydisclosures>

### Morningstar Star Rating for Stocks

Once we determine the fair value estimate of a stock, we compare it with the stock's current market price on a daily basis, and the star rating is automatically recalculated at the market close on every day the market on which the stock is listed is open. Our analysts keep close tabs on the companies they follow, and, based on thorough and ongoing analysis, raise or lower their fair value estimates as warranted.

Please note, there is no predefined distribution of stars. That is, the percentage of stocks that earn 5 stars can fluctuate daily, so the star ratings, in the aggregate, can serve as a gauge of the broader market's valuation. When there are many 5-star stocks, the stock market as

a whole is more undervalued, in our opinion, than when very few companies garner our highest rating.

We expect that if our base-case assumptions are true the market price will converge on our fair value estimate over time, generally within three years (although it is impossible to predict the exact time frame in which market prices may adjust).

Our star ratings are guideposts to a broad audience and individuals must consider their own specific investment goals, risk tolerance, tax situation, time horizon, income needs, and complete investment portfolio, among other factors.

The Morningstar Star Ratings for stocks are defined below:

### Five Stars ★★★★★

We believe appreciation beyond a fair risk-adjusted return is highly likely over a multiyear time frame. Scenario analysis developed by our analysts indicates that the current market price represents an excessively pessimistic outlook, limiting downside risk and maximizing upside potential.

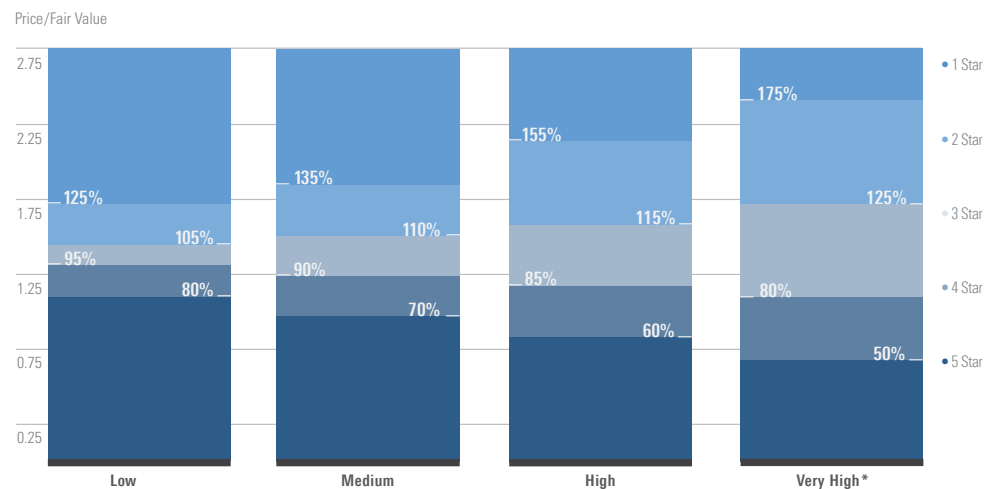
### Four Stars ★★★★

We believe appreciation beyond a fair risk-adjusted return is likely.

### Three Stars ★★★

Indicates our belief that investors are likely to receive a fair risk-adjusted return (approximately cost of equity).

## Morningstar Research Methodology for Valuing Companies



\* Occasionally a stock's uncertainty will be too high for us to estimate, in which case we label it Extreme.

# Research Methodology for Valuing Companies

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## Two Stars ★★

We believe investors are likely to receive a less than fair risk-adjusted return.

## One Star ★

Indicates a high probability of undesirable risk-adjusted returns from the current market price over a multiyear time frame, based on our analysis. Scenario analysis by our analysts indicates that the market is pricing in an excessively optimistic outlook, limiting upside potential and leaving the investor exposed to Capital loss.

Other Definitions:

**Last Price:** Price of the stock as of the close of the market of the last trading day before date of the report.

**Stewardship Rating:** Represents our assessment of management's stewardship of shareholder capital, with particular emphasis on capital allocation decisions. Analysts consider companies' investment strategy and valuation, financial leverage, dividend and share buyback policies, execution, compensation, related party transactions, and accounting practices. Corporate governance practices are only considered if they've had a demonstrated impact on shareholder value. Analysts assign one of three ratings: "Exemplary," "Standard," and "Poor." Analysts judge stewardship from an equity holder's perspective. Ratings are determined on an absolute basis. Most companies will receive a Standard rating, and this is the default rating in the absence of evidence that managers have made exceptionally strong or poor capital allocation decisions.

**Quantitative Valuation:** Using the below terms, intended to denote the relationship between the security's Last Price and Morningstar's quantitative fair value estimate for that security.

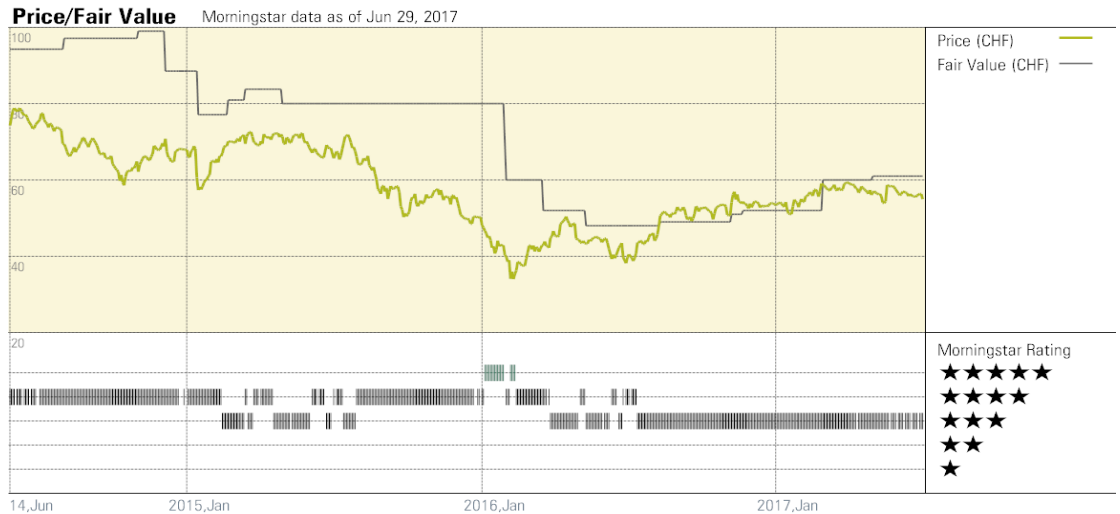
- ▶ **Undervalued:** Last Price is below Morningstar's quantitative fair value estimate.
- ▶ **Fairly Valued:** Last Price is in line with Morningstar's quantitative fair value estimate.
- ▶ **Overvalued:** Last Price is above Morningstar's quantitative fair value estimate.

## Risk Warning

Please note that investments in securities are subject to market and other risks and there is no assurance or guarantee that the intended investment objectives will be achieved. Past performance of a security may or may not be sustained in future and is no indication of future performance. A security investment return and an investor's principal value will fluctuate so that, when redeemed, an investor's shares may be worth more or less than their original cost. A security's current investment performance may be lower or higher than the investment performance noted within the report. Morningstar's Uncertainty Rating serves as a useful data point with respect to sensitivity analysis of the assumptions used in our determining a fair value price.

# LafargeHolcim Ltd LHN (XSWX) | ★★★

Last Price	Fair Value	Uncertainty	Economic Moat™	Moat Trend™	Stewardship	Industry Group
55.00 CHF	61.00 CHF	High	Narrow	Stable	Standard	Building Materials



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Last Price	Fair Value	Uncertainty	Economic Moat™	Moat Trend™	Stewardship	Industry Group
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Last Price	Fair Value	Uncertainty	Economic Moat™	Moat Trend™	Stewardship	Industry Group
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