Construction & building materials

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Sector structure

Construction

Building materials producers
- CRH
- HeidelbergCement
- Holcim
- Kingspan
- Lafarge
- Saint-Gobain

Residential builders
- Barratt Developments
- Bellway
- Berkeley Group
- Bovis Homes
- Kaufman & Broad
- Persimmon
- Nexity
- Redrow
- Taylor Wimpey

Commercial real estate and public works contractors
- ACS
- Balfour Beatty
- Carillion
- FCC
- Hochtief
- Skanska
- Vinci

Source: HSBC
Cement consumption per capita versus GDP per capita (2010)

* Represents Cembureau estimates
Note: GDP per capita in constant USD 2000
Source: Cembureau, World Bank, HSBC
Cement consumption and construction output growth versus real GDP growth in the UK (1956-2009)

- Structural construction growth period, underpinned by infrastructure deployment and expansion of housing stock
- Urbanisation reaches high levels; infrastructure largely provided.
- Urbanisation cycle breaks down, undermining construction structural growth prospects

Cement consumption and construction output growth exceed real GDP growth (the cement/construction to GDP growth multiplier exceeds unity)

Construction is a highly cyclical industry

Cement consumption and construction output growth undershoots real GDP growth (the cement/construction to GDP growth)

Source: ONS, Cembureau, HSBC
Sector description

Producers of building materials and users, housebuilders and contractors

The construction sector is a vertical chain of sub-sectors that begins with the building materials companies, as shown in the sector structure chart.

Building materials

Building materials companies produce the materials used to build homes (by residential developers) and to build commercial real estate and infrastructure (by contractors). The companies can be divided into the heavy-side materials majors, Holcim, Lafarge, Cemex and HeidelbergCement, and the light-side materials manufacturers, for example, Saint Gobain and CRH.

Heavy-side materials (cement, aggregates ready-mix concrete and asphalt) are consumed by infrastructure projects like road expansion and utilities infrastructure, as well as the foundations stage of residential and non-residential buildings. Light-side materials (concrete products, wallboard, insulation, bricks, tiles, pipe and glass) are used predominantly in above-ground-level building construction. The heavy-side majors have about two-thirds of their cement capacity in fast-growing emerging markets that are benefiting from structural expansion in infrastructure. Light-side producers are predominantly exposed to weak and fragmented construction end-markets in debt-laden developed economies.

Housebuilders and contractors: the main customers of building materials companies

Residential developers combine land (which must have residential planning approval in the UK) and building materials to construct and sell houses. The UK is comfortably the most consolidated market in Europe, where approximately 35% of production is undertaken by the seven listed builders. About 80% of UK new-build homes are sold speculatively to individuals. The other 20% – called social units – are built for and sold to government bodies at low margins, often as a necessary concession for residential planning approval from the local planning authority (called Section 106 agreements).

The contractors deliver services essential to the creation and care of infrastructure and non-residential buildings assets, including project design, engineering and construction and facilities management.

Key themes

Urbanisation cycle underpins decades of robust EM construction growth

Our statistical regression analysis suggests that cement consumption is determined by real GDP per capita growth, as illustrated in the first graph above.

- Typically, GDP per capita of around USD1,000 to USD3,000 triggers population growth and urbanisation from a low base, underpinning cement-intensive mass infrastructure investment and real estate development. Urbanisation further perpetuates population growth, which enhances absolute GDP and growth thereof.

- This urbanisation cycle (see chart “The cement intensive urbanisation cycle” below) supports cement consumption and construction output growth in excess of real GDP growth, up to a saturation point, when infrastructure and the housing stock have largely been provided.
This saturation point is at around GDP per capita of USD13,000 (the top of the hump in the graph ‘Cement consumption per capita versus GDP per capita’ earlier in the section), after which the cement-demand-to-real-GDP multiplier falls below unity.

We expect emerging markets to deliver robust cement and construction growth for at least the next 30 years because:

- Our Global Economics team expects emerging markets to generate the highest-trend GDP per capita growth in the long term as these countries converge toward western levels.
- Our regression analysis concludes that cement/construction-to-GDP-growth multipliers are higher than unity in almost all EM.

High construction/cement-to-GDP-growth multipliers in emerging markets are explained by expectations of high population growth coupled with low infrastructure provision (see road and rail provision charts above) and urbanisation levels (see chart above).
Conversely, in developed countries such as the UK, demographics are less favourable and urbanisation is largely complete, so those countries have low long-term cement and construction growth potential (ie the cement/construction-output-to-GDP-growth multipliers are near zero).

**High household indebtedness and constrained finance availability to weigh on developed market construction growth for several years**

In developed economies, we expect the availability of finance to remain constrained for at least the next two years for the following reasons.

- Many western economies are suffering from record household indebtedness, high unemployment, weak earnings growth and stretched long-term housing affordability. Unsurprisingly, banks are unwilling to increase substantially the availability of cheap finance to households and businesses in this fragile economic climate.
- The banking industry continues to deleverage due to funding constraints and more stringent regulation.

Weak loan growth is likely to weigh on residential and non-residential construction because:

- Most home-buyers need mortgage support, so we expect housing demand to remain weak for some time.
- Private developers rely heavily on finance to fund their working capital requirements and for financial leverage to amplify their returns on capital.
- We expect UK housebuilders to suffer sluggish volume (and top-line growth) for several years, which implies weak demand for building materials.

**Fiscal austerity set to drive large cuts in European infrastructure construction**

European governments are suffering from record indebtedness and unsustainable budget deficits. The policy response has been austerity programmes to reduce fiscal deficits over the next four to five years. The US government has increased infrastructure spending, relying on reserve currency status to maintain a high budget deficit and indebtedness.

We expect European infrastructure budgets to suffer from public spending cuts as governments give priority to spending on front-line services. We forecast public construction spending will decline by 35% from the end of 2009 to 2013e in Spain and Ireland, and by 10% to 14% in other European countries. European contractors face a challenging market in the medium term and we expect demand for building materials from the European infrastructure end market to remain weak until 2013e.

**Robust cement volume growth in emerging markets during 2008-09 global crisis**

Lafarge serves as a proxy for the cement sector, and the performance of its operations in 70 countries is representative of the volume development in different regions since 2005. The period 2005-07 was characterised by a construction boom in emerging markets, with a more subdued growth rate in western Europe, and US cement volumes peaking in 2006.

Growth decelerated significantly during the 2008-09 crisis as contagion from the West impacted sentiment and funding flows, but emerging markets demonstrated significantly greater volume resilience than developed markets. Since 2010, emerging market volume growth has accelerated, although Lafarge has underperformed industry growth, particularly in Africa and the Middle East, where the company has lost market share to new regional competitors.
Lafarge’s cement volumes in Western Europe continued to slide in 2010-11, following the collapse of the construction industry in 2008-09, as austerity hit southern Europe, to which Lafarge has a heavy exposure. North American volumes have recovered slightly from a low base due to the stimulus spending in the US and a robust market in Canada.

<table>
<thead>
<tr>
<th>Lafarge cement volumes 2005-11 (compound annual growth rates)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005-07</td>
</tr>
<tr>
<td>Western Europe</td>
</tr>
<tr>
<td>Central and East Europe</td>
</tr>
<tr>
<td>North America</td>
</tr>
<tr>
<td>Africa Middle East</td>
</tr>
<tr>
<td>Latin America</td>
</tr>
<tr>
<td>Asia</td>
</tr>
<tr>
<td>Group</td>
</tr>
</tbody>
</table>

Source: Company data, HSBC

Cement markets less competitive than light-side materials in developed markets

<table>
<thead>
<tr>
<th>Comparison of heavy-side and light-side materials</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cement (heavy-side)</strong></td>
</tr>
<tr>
<td>Substitutability</td>
</tr>
<tr>
<td>Transportability</td>
</tr>
<tr>
<td>Market concentration</td>
</tr>
</tbody>
</table>

Source: HSBC

The table above shows that the heavy-side materials market benefits from several characteristics, such as high concentration, barriers to entry and low import penetration, that underpins more disciplined pricing than in light-side markets, which are generally fragmented and highly competitive.

**Sector drivers**

**Construction and building materials leading indicators**

Affordability and mortgage availability are key long-term leading indicators for residential construction. They determine the level of buyer enquiries and housing sales (proxies for short-term housing demand), which can usually be tracked on a monthly basis. High housing demand drives growth in building-permit applications and housing starts, which may lag if the housing inventory is high.

Vacancy rates show the demand/supply balance in commercial real estate markets. We track office employment, retail sales and manufacturing output as proxies for commercial real estate space demand. A combination of high space demand and low vacancy usually leads to rising rents, which should provide an incentive for development.
We use governments’ infrastructure budgets to determine future public construction wherever possible. Debt-to-GDP ratios and fiscal deficits also indicate the availability of future public finances.

**Valuation**

**Trading at significant discount to historical averages**

The building materials companies and contractors trade on traditional earnings metrics, namely forward-looking EV/EBITDA and price/earnings (PE) multiples.

The heavy-side building materials companies currently trade at EV/EBITDA multiples of 5.3-7.5x and PE of 7.1-13.2x on our 2013e estimates, representing discounts to the long-term sector averages of 7.0x and 12.5x, respectively. These discounts exist despite our expectation of a strong earnings rebound to 2015 for the cement majors on recovery in US construction activity, robust emerging-market growth and cost saving measures.

The only key accounting issues are the plant depreciation rates of building materials producers and the profit-recognition policies of contractors.

The housebuilders trade on forward price to tangible book multiples (TNAV). Using accounting TNAV, rather than adjusted TNAV, however, does not reflect that:

- the land write-downs taken to date (which determine reported NAV) have not been enough to restore profitability and returns to levels that an investor would deem acceptable on new investment; and
- each company has applied different assumptions to determine land write-downs, rendering cross-sector relative valuation difficult.

To calculate adjusted TNAV, the builders’ landbanks are decomposed into tranches by age and region and the book value of each land tranche is then marked to today’s market value (one may also exclude goodwill). The mark-to-market adjustments restore the landbanks to full margin and returns on capital. In theory, therefore, the builders should trade at slight premiums to these adjusted TNAVs to reflect the potential economic value creation on building out of the land bank.

### European building materials: growth and profitability

<table>
<thead>
<tr>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012e</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Growth</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales</td>
<td>7.9%</td>
<td>-17.5%</td>
<td>4.3%</td>
<td>5.7%</td>
</tr>
<tr>
<td>EBITDA</td>
<td>1.1%</td>
<td>-23.1%</td>
<td>3.2%</td>
<td>-2.4%</td>
</tr>
<tr>
<td>EBIT</td>
<td>-4.1%</td>
<td>-32.5%</td>
<td>0.0%</td>
<td>-5.8%</td>
</tr>
<tr>
<td>Net profit</td>
<td>-19.1%</td>
<td>-55.1%</td>
<td>-11.2%</td>
<td>-23.8%</td>
</tr>
<tr>
<td><strong>Margins</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EBITDA</td>
<td>19.4%</td>
<td>18.1%</td>
<td>17.9%</td>
<td>16.5%</td>
</tr>
<tr>
<td>EBIT</td>
<td>13.8%</td>
<td>11.3%</td>
<td>10.8%</td>
<td>9.6%</td>
</tr>
<tr>
<td>Net profit</td>
<td>8.6%</td>
<td>4.7%</td>
<td>4.0%</td>
<td>2.9%</td>
</tr>
<tr>
<td><strong>Productivity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capex/sales</td>
<td>10.9%</td>
<td>7.5%</td>
<td>6.3%</td>
<td>6.2%</td>
</tr>
<tr>
<td>Asset turnover (x)</td>
<td>61.0%</td>
<td>49.7%</td>
<td>49.5%</td>
<td>51.8%</td>
</tr>
<tr>
<td>Net debt/Equity</td>
<td>1.15x</td>
<td>0.74x</td>
<td>0.66x</td>
<td>0.64x</td>
</tr>
<tr>
<td>ROE</td>
<td>16.2%</td>
<td>6.4%</td>
<td>4.9%</td>
<td>3.6%</td>
</tr>
</tbody>
</table>

Note: based on sector comprising CRH, HeidelbergCement, Holcim, Lafarge
Source: MSCI, HSBC estimates
### Sector snapshot

#### Key sector stats

<table>
<thead>
<tr>
<th>MSCI All Country Europe Construction Materials Dollar Index</th>
<th>0.7% of MSCI Europe US Dollar</th>
</tr>
</thead>
</table>

#### Trading data
- 5-yr ADTV (EUR) = 963
- Aggregated market cap (EURm) = 51

#### Performance since 1 Jan 2000
- Absolute: -18%
- Relative to MSCI Europe US Dollar: 3%

#### 3 largest stocks
- Holcim, CRH, Lafarge

#### Correlation (5-year) with MSCI Europe US Dollar
- 0.95

Source: MSCI, Thomson Reuters Datastream, HSBC

#### Top 6 stocks: MSCI All Country Europe Construction Materials Dollar Index *

<table>
<thead>
<tr>
<th>Stock rank</th>
<th>Stocks</th>
<th>Index weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Holcim</td>
<td>30%</td>
</tr>
<tr>
<td>2</td>
<td>CRH</td>
<td>22%</td>
</tr>
<tr>
<td>3</td>
<td>Lafarge</td>
<td>20%</td>
</tr>
<tr>
<td>4</td>
<td>HeidelbergCement</td>
<td>14%</td>
</tr>
<tr>
<td>5</td>
<td>Cimpor</td>
<td>8%</td>
</tr>
<tr>
<td>6</td>
<td>Imerys</td>
<td>6%</td>
</tr>
</tbody>
</table>

* There are only 6 stocks in this index

Source: MSCI, Thomson Reuters Datastream, HSBC

#### Country breakdown: MSCI All Country Europe Construction Materials Dollar Index

<table>
<thead>
<tr>
<th>Country</th>
<th>Weights (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switzerland</td>
<td>30%</td>
</tr>
<tr>
<td>France</td>
<td>26%</td>
</tr>
<tr>
<td>Ireland</td>
<td>22%</td>
</tr>
<tr>
<td>Germany</td>
<td>14%</td>
</tr>
<tr>
<td>Portugal</td>
<td>8%</td>
</tr>
</tbody>
</table>

Source: MSCI, Thomson Reuters Datastream, HSBC

#### US construction spending by end markets (USDbn)

Source: The United States Census Bureau, HSBC

#### PE band chart: MSCI All Country Europe Construction Materials Dollar Index

Source: MSCI, Thomson Reuters Datastream, HSBC

#### PB vs. ROE: MSCI All Country Europe Construction Materials Dollar Index

Source: MSCI, Thomson Reuters Datastream, HSBC