ARCADIS

Market View
Autumn 2022

Energy Sapping

Introduction

Despite recent positive results from contractors and construction material producers, a peak in the market has now been reached. The Bank of England's recent and dramatic economic downgrade, driven by unprecedented energy price rises, suggests that market conditions are about to take a much darker turn.

Construction Continues to defy the gloom

Construction's strong rebound from Covid in the past year has been reflected during the reporting season for Tier 1 contractors and construction materials producers. The likes of Balfour Beatty, BAM and Morgan Sindall have all reported improved margins and profits for the first half of this year, while material producers such as Breedon and Ibstock have successfully passed price rises to customers whilst also securing future energy supplies.

The positive mood is evidenced further by just three profit warnings being issued by FTSE-listed Construction and Materials companies in the first half of the year. This is in marked contrast to the 23 recorded in the same period two years ago, during the first phase of pandemic. Employment in Construction has tended to keep pace with overall output growth in the past 12 months and is up by nearly 100,000 compared to this time last year. However, a recently reported small dip in vacancy numbers could be a sign that growth is peaking.

Signs of Strain

The Arcadis Summer 2022 Market View predicted that the construction market would slow and be 'bumpy' in the months ahead, and the evidence is now emerging to back up our viewpoint.

The August S&P Global/CIPS UK Construction PMI, for instance, posted its first figure below 50 since January 2021, pointing to a negative outlook among purchasing managers in the sector.

Meanwhile, recent ONS data shows that despite a second quarter 2022 increase in construction output of 2.3%, the figure for June 2022 saw a drop of 1.4%, representing the first monthly fall since October 2021.

More worrying and again in line with our projection was a fall in total construction new orders, which decreased by 10.4% in Q2 2022 compared with the previous three-month period. This is the largest quarterly fall in construction new orders since Q4 2020. ONS also noted that some construction companies are reporting a lack of new projects to replace completed contracts, due to economic uncertainty and inflation concerns. Such data backs up earlier commentary from the Bank of England Agents, whose contacts expected the pipeline of construction projects to slow as cost increases resulted in more projects being put on hold.

What's over the horizon?

Early warnings from the OECD and IMF that the energy crisis would curtail global growth have been overtaken in the UK by the Bank of England's (BoE) August 2022 forecast, which predicts that the UK is likely to be in a 5-quarter recession by Q4 2022. The cause of this dramatic reverse is inevitably the extreme escalation in energy costs which has continued since the forecast was published.

The BoE also forecast that Consumer Prices Index (CPI) inflation would reach 13% by November, up from an earlier prediction of 11%, and given that the July CPI figure has already reached 10.1%, it is likely that it could go higher still, as gas prices continue to soar.

The BoE's resultant increase in interest rates by 0.5% to 1.75% – the biggest single jump in 27 years – is likely to be just the start. A further 0.5% rate rise in September is forecast by most economists, with Swap market rates and Bond yields pointing to a 4% base rate by May 2023. High interest rates will further impact the housebuilding industry, which is already facing the withdrawal of Help to Buy support in 2023.

What might happen next?

The latest BoE forecast signals a big shift in outlook, but for the moment at least, is for a short and shallow recession. Indeed, it may be that the very downbeat forecast was intended to provide a short, sharp shock and could help to counter inflation. However, if the energy crisis escalates, inflation will stay higher for longer and the outlook could deteriorate further.

The number of insolvencies among construction firms has been rising steadily in the past 12 months, driven by an increase in the number of construction firms defaulting on Covid business support loans. The average monthly construction insolvencies in England & Wales in 2022 is currently 348. This compares with 215 in 2021 and just 172 in 2020 when Covid business protection measures were in place.

Another notable positive is the latest Agents' data from the Bank of England, which reports that companies were more optimistic than households about the economic outlook. This is also borne out by investment intentions scores, which since mid-2021 have remained at or around a high level not seen since 2014.

While the current market cycle is likely to have peaked, it can take a while for the construction sector to feel the impact of any downturn. Remember that the height of construction profit warnings in the last cycle did not come during the recession of 2008-9, but in the 2011-12 period, after austerity measures had been introduced.

Forecast

With energy prices soaring, there is no immediate prospect of relief from high construction inflation. However, as the market turns downward, competitive pressure is likely to take the edge off future price rises.

Can the investment market avoid a slump?

The Arcadis Summer 2022 Market View focused on the risks of stagflation, which was last seen in the UK in the 1970s. Since June 2022, economic prospects have deteriorated markedly.

The UK's downturn is presently centred on the cost-of-living crisis. Consumer confidence fell to a new all-time low in August, and with Investment Bank Citi forecasting consumer price inflation at 18% by 1Q2023, sentiment is unlikely to improve. Whether investment sectors such as construction are affected as badly as the customer-facing economy will clearly influence future levels of workload and price movements.

It is a mixed picture. Prices of commodities linked to investment are falling from their post-Covid peak. However, gas and electricity prices in the UK and Europe have increased by more than 100% since mid-June. UK deflation is a distant prospect.

Weak demand has not been the only barrier to growth in 2022. Price and product availability risk triggered by the Ukraine conflict delayed many procurements. Our latest Arcadis Market View Survey records a 70% increase in the incidence of delays in procurement. However, blockages are easing, and contractors are increasingly able to secure fixed price offers from their supply chain.

Fixed price bids will help to unlock funding and client risk appetite. However, given recent changes to values and interest rates, viability has taken a further knock. Yields have increased by around 25 bps during 2Q 2022, meaning that capital values will have fallen, and with interest rates forecast to increase by 0.5% in September, borrowing costs will have increased by at least 2.25% in 9 months since December 2021.

In conclusion, whilst the economic cycle has clearly turned, there are some factors that are supportive of construction. Falling commodity prices and greater stability in materials markets has enabled suppliers to provide price fixity, which is helping to unlock stalled projects. Infrastructure schemes are continuing, albeit within the constraints of fixed budgets. However, there is no doubt that the cycle has turned and that events in Ukraine and wider markets will continue to influence opportunities in UK construction markets.

Market signals – cause for concern?

In the construction sector, price corrections are typically driven by changes in demand conditions. So far in 2022, demand is robust, albeit there are the first signs of slowdown. There is plenty of data to support this perspective:

• **Output forecasts.** Construction Products Association (CPA) downgraded its Summer 2022 forecast from 5.2% to 2.5% growth, reflecting significant decelerations in housebuilding and repair and maintenance. However, activity in the non-housing new build sector is still forecast to grow by over 6% pointing to wider resilience in contracting markets.

• **Output statistics**. Construction volumes hit an historic high in May 2022 before falling back by 1.4% in June. 2nd quarter was the busiest ever recorded, although new build work trails levels seen in 2019. Whilst it is too early to discern a pattern, infrastructure, and private housing R&M look to have peaked, whilst the industrial sector continues to race away with workload 80% higher than the long-term trend.

• **Construction orders.** Construction orders had been recovering briskly since 1Q 2021 but hit a bump in 2Q 2022, down by over 10% compared to Q1. Commercial, down by over 30% in the quarter disappointed after a very strong 6 months. Industrial remains strong despite very high inflation exposure over the past 12

months. The immediate cause of a slowdown could be uncertainty triggered by the Ukraine crisis, but there may be early signs of weakness in other sectors including residential and infrastructure.

Events during the summer will not have contributed to confidence. A hiatus in government and a leadership contest focused on tax cuts could hold back public sector investment, and there is growing evidence of delays affecting transport programmes. However, the slowdown is at an early stage, is starting from a high point and is likely to be a soft landing rather than a blow-out. In our view, unless the expected slowdown develops into a very hard landing, demand conditions are presently supporting a price floor.

Labour markets – short-term relief

The availability and performance of construction labour is the sector's long-term inflation driver. Our long-term forecast assumes that labour markets will remain tight into the future. CITB's Spring 2022 Construction Skills Network Industry Outlook forecasts requirements for an extra 266,000 workers by 2026, pointing to a long-term inflationary labour challenge.

Latest data points to growth in the workforce and continuing high levels of labour productivity. The workforce grew by 1% in the quarter and 4% year on year to 2.2 million. Productivity remains constant. The 2022 CIJC and BATJIC one-year national wage awards came in at 5%, and average earnings growth in the sector was slightly ahead of the national average @ 5.8% in June 2022.

Whilst the labour market appears to be steady, there is plenty of anecdotal evidence of labour shortages focused on specific trades. With an escalating cost-of-living crisis and 35% of the labour force self-employed, pressure on earnings could escalate rapidly.

In summary, the labour market is the industry's long-term headache. Improved productivity and good industrial relations have so far avoided a widespread inflationary spiral. However, if the market is about to turn, there is little fat to cut – either in terms of numbers of operatives or levels of earnings. As a result, the cost-of-living crisis will sustain upward pressure on labour costs which are likely to see catch-up pay demands in 2023 and beyond.

Forecast

Materials – raw materials vs. energy.

Material price inflation is currently the main driver of price increases. There is some evidence of greater price stability, indicated by steel prices falling from their peak and suppliers offering longer-term price fixes. There is no room for complacency. Manufacturers have succeeded in passing inflation to clients and all-important energy price markets remain highly volatile.

Our feature on the impact of energy costs on material production highlights the extent to which energy costs determine overall product prices . As energy costs are hedged, the timing of energy purchase deals is a significant source of uncertainty for both producers and purchasers.

Our analysis suggests that despite falling commodity prices, European energy cost increases that have taken place since we published the Summer Market view could potentially result in material cost increases for basic materials like glass and cement. As many manufacturers secure long-term energy deals, these increases could be passed on at any point in the economic cycle. This is a significant downside inflation risk.

In the short-term, scarcity could be more of a problem. Manufacturers are shutting down plants because they are uneconomic at current energy prices. Low water levels in European waterways are also disrupting manufacture and distribution, and with strikes at UK container ports, access to imported materials for UK contractors could become more difficult. Looking forward to the winter heating season, energy rationing could lead to a reduction in production rates.

Even as risks associated with project pricing subside, new risks associated with material availability are emerging.

Energy costs are unlikely to fall in the near future, meaning that high inflation that occurred in the first half of 2022 is likely to remain baked in.

Forecast

Our Summer 2022 forecast responded to the Ukraine crisis by increasing short-term inflation allowances for 2022 and by anticipating a slowdown in 2023. Although events since publication have validated these assumptions, the UK construction market has proved very resilient, and Q22022 saw the highest volume of output ever delivered.

Headwinds are gathering and although some pricing risks have eased in the past three months, construction most likely to have passed the peak of the post-Covid recovery cycle.

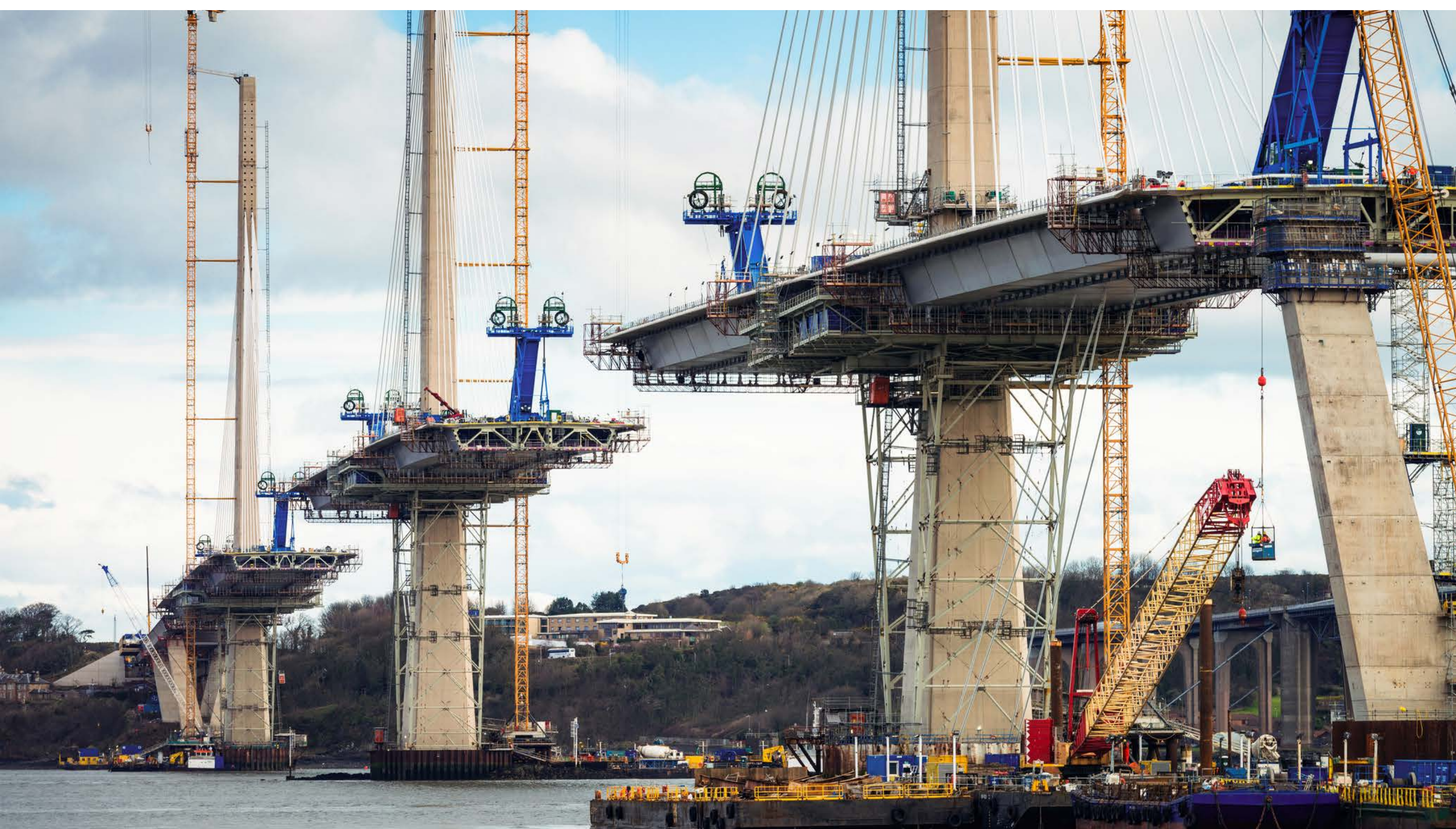
However, the coming downturn is unlikely to be deflationary. Based on the current trajectory, this construction slowdown is likely to be prolonged but shallow. Upwards price pressure will continue to be exerted by manufacturers and by labour, and the contractor supply chain is unlikely to relinquish hard-won margins secured since the pandemic.

Although deflationary pressures have increased in the past three months due to economic slowdown, in our view, the scale of downside risk associated with energy market disruption has increased. For sectors that have a high level of exposure to construction material inflation including some industrial sectors and infrastructure, this risk could manifest in even higher prices in both 2022 and 2023. The supply chains' ability to pass these costs to clients will be determined by supply and demand, and for this reason, we have downgraded our outlook for buildings and infrastructure inflation from 2024 onwards.

We confirm our 2022 forecast at 10% for buildings and 12% for infrastructure, the upper end of our range. Our 2023 forecast is unchanged for buildings but increased to 5% for infrastructure in recognition of high background demand and potentially greater exposure to basis material cost inflation. For 2024 and 2025, we have reduced inflation forecasts to account for greater levels of competition across all sectors. However, we still anticipate inflation pass through to continue despite the weaker outlook for workload.

	Regional Building Construction TPI	London Building Construction TPI	National Infrastructure Construction TPI
2021	5% (5%)	6% (6%)	6% (6%)
2022	10%(8-10%)	10% (8-10%)	12% (10-12%)
2023	2-3% (2-3%)	2-3% (2-3%)	5% (4%)
2024	3% (4%)	3% (4%)	3% (5%)
2025	3% (5%)	3% (5%)	3% (5%)
2026	5% (5%)	5% (5%)	5% (5%)
Total	**28-29% (29-32%)**	**29-30% (30-33%)**	**34% (35-37%)**

Inflationary drivers	Deflationary drivers
• Energy and material prices	• Slowing order book replacement
• Core inflation	• Tax cuts and supply side changes
• Scarcity and disruption risk	• Risk attitude



Spotlight on: lessons learned from previous downturns

What can we learn about the likely direction of construction markets by examining previous cycles. Arcadis investigates.

Given high levels of inflation over the past two years and growing prospects of a market downturn, it is not surprising that some clients are starting to speculate as to whether there might be a repeat of the late noughties deflationary crash. In 2008 after the collapse of Lehman Brothers in the US and a large section of the Building Society sector in the UK, housing and commercial development markets went into reverse. During the subsequent austerity years, public investment was also deeply cut. One of the consequences was a collapse in construction prices. However, the price correction did little to stimulate demand because of wider chaos in finance markets.

The 2008 to 2012 crash did a huge amount of damage to the construction sector, not only because of loss of capacity but also a negative impact on the culture of collaboration within the industry. No one in the industry wants to see a return to such a dysfunctional market but at the same time, many clients are relying on a price correction to improve product viability.

Our forecast is for continuing price inflation, even as we expect activity levels to slow. Is the difference between the 2008 slowdown and today's challenging market so great that there will be an opposite outcome?

In this spotlight, we discuss how the events are so different and what this means for prices. We also conclude with some thoughts on actions that project teams can take to jointly improve project viability. The table below summarises some of the key characteristics of the two events, in particular the difference in market conditions during the lead-in to the trigger for the downturn.

Factor	2008 to 2012	2022 to 2023	Implication for 2023 downturn
Industry health	• Explosive growth in workload in 4 years to 2008. • Project procurement pipeline jammed by uncertainty for 12 months before the crash	• Workload levels like the long-term trend and diversified across multiple sectors. Recovery from Covid-19 underway.	• 2022 industry more 'right-sized' for future workload. • Incomplete recovery for Covid-19 means that the supply chain does not have ability to 'buy work'.
Stage in business cycle	• Over-extended housing, commercial and public sector markets.	• Housing and infrastructure-led market based on long-term fundamentals	• Potential for 'demand destruction' in both cycles. Lower exposure to financial markets in 2022
Long-term market conditions	• Above trend inflation from 2004 to 2008 driven by demand as well as input costs.	• Subdued market since 2016 due to Brexit, Covid-19 etc. Difficult trading conditions and below trend price recovery.	• Limited headroom for discounting
Labour markets	• 10%+ growth in the labour force and 6% annual wage growth to 2008	• 8% contraction in the workforce since 2019. 2-3% earnings growth post 2016 Brexit referendum	• Tight labour market and likely 'catch-up' pressure on earnings as part of cost-of-living crisis
Material markets	• Continuous growth (5%+) over multiple years followed by price correction.	• Two years of double-digit cost inflation driven by external factors	• Construction sector is a 'price taker' in the current market, so discounting opportunities are limited.
Trigger event	• Near failure of the global finance system blocking easy access to investment finance	• Cost of living crisis and supply chain disruption	• Supply-side constraint in 2022 rather than demand-side means that less capacity is chasing available opportunity

The analysis highlights that over the past 4-5 years, a sequence of events including the Brexit referendum, the Brexit deal itself, Covid-19 and the Covid recovery have created headwinds for industry. Peak activity levels in Q2 2022 came despite wider market conditions rather than because of them. As a result, although profitability has been improving for many firms, overall sector health leaves much to be desired. Industry is unlikely to have the 'headroom' to buy turnover and is more likely to consolidate activities in the face of falling turnover. This does not mean that markets won't be competitive, but that businesses have learned some of the lessons of the last downturn – in particular in ensuring that their commercial strategy provides protection from downside risks including price risk and supplier failure risk.

In a downturn, many clients will instinctively turn to single-stage tender competition as the most direct means of harnessing downward price pressure. Repeated experience over many cycles demonstrates that the 'race to the bottom' of overly competitive bidding is often effective in securing a low starting price, but also runs the risk of delivering sub-optimal outcomes due to misaligned contractor incentives, sub-optimal working practice and a lack of team focus on the clients' key drivers and objectives. Whilst issues of integration are increasingly understood in the infrastructure sector, they are much less embedded with buildings clients outside of the public sector.

Whatever the shape of the forthcoming downturn, it is likely to create some unique challenges for both clients and supply chains. Well established ways of engineering project viability through competition may not be quite as potent this time around. Instead of considering whether market forces can come to the rescue, clients should perhaps consider whether a collaborative approach to ensuring project viability might deliver a better overall outcome.

Zoom into: Energy Crisis

Wholesale energy costs have more than doubled since June. Energy costs are the main driver of inflation in the wider economy, as evidenced by the recent 80% increase in the retail energy price cap announced by Ofgem. Here we investigate likely impacts on construction materials costs and whether there are there any factors that will reduce inflation.

Energy cost model

To examine the impact of energy inflation, we have developed a model for the manufacturing input costs of steel, glass, and cement. The model is based on a typical manufacturing process and uses a combination of input constants and UK price data. Energy costs are based on daily quoted wholesale prices. The model does not account for transport and distribution costs and cannot account for the hedging and pricing strategies undertaken by individual manufacturers.

The analysis suggests that the manufacture of construction materials with relatively low-cost, locally sourced commodity inputs, such as glass and cement, are most at risk from continued energy price rises. Results highlighting this finding are summarised in Table 1.

Analysis of impacts of energy price increases

Table 1 plots price increases as an index. It shows the dramatic changes in the overall production costs for float glass and cement since the start of the year and particularly during August as wholesale energy prices soared.

For example, our cost assessment for cement calculates a rise of 95% between the end of January and our latest calculation for August[1] , while for Float Glass, the rise was 45%. By comparison, steel production using an Electric Arc Furnace rose by only 11% during the same period, while for steel produced using the more common Basic Oxygen Furnace (BOF) method, the overall costs have fallen by 8% since the start of the year.

To understand the disparity between overall production costs for these materials during this timeframe, we need to look more closely at what has happened to the cost of raw material and energy inputs during recent months.

Whilst global prices of metals and minerals have fallen by 24% since February 2022, energy prices overall have increased by 28%. Although the global economic slowdown is driving down most commodity prices, disruption caused by the Ukraine War continues to drive gas prices to extreme levels.

Steel manufacture involves globally traded commodities including iron ore, metallurgical coal and scrap steel that are subject to other supply and demand factors. For Electric Arc steel production, steel scrap represents a major input and costs for this has fallen by 19% since January.

However, it is when modelling steel production using the Basic Oxygen Furnace (BOF) process that we can really see the impact that recent major reductions in the price of key raw material inputs can have on overall costs. Iron ore and metallurgical coal costs are down 16% and 34% respectively since early 2022, leading to an overall 8% decrease in costs of BOF-produced steel.

Manufacturing process	Cost - January 2022 (Index - Jan 2022 = 100)	Cost - July 2022 (Index - Jan 2022 = 100)	Cost - August 2022 (Index - Jan 2022 = 100)
Cement	100	158	195
Float Glass	100	122	145
Steel - Electric Arc Furnace	100	98	111
Steel - Basic Oxygen Furnace	100	80	92

Table 1 – Changes in construction material production costs during 2022

Evidence from the marketplace

Our assessments need to be treated with care, because so far there is little evidence of the cost increases evidenced by our models being reflected in list prices and official data.

Steel prices in the UK increased dramatically when supply chains were disrupted by the Ukraine war, and these impacts cannot be captured in the modelling. The modelling does however help to explain the recent easing in steel prices and suggests that this is a steel-specific development rather than a trend that can be read across all material categories.

In other segments, even if list prices have not increased, energy price surcharges have become more common and more unpredictable. We are aware of reports of one float glass manufacturer, quoting a surcharge of £6,500 on a 20-tonne lorry load of glass in March this year, up from £350 a week earlier.

Accordingly, even if the official data is not showing the increases, energy cost inflation is in the system, and if futures markets are to be believed, they will eventually feed through to finished material prices. Current forward price curves from Business Wise Solutions[2] show prices for gas reaching a peak of over 700 pence per therm (p/th) in early 2023 and staying above 400 p/th until March 2024.

What are the likely impacts on construction?

Currently, the price of a basket of construction materials tracked by the Department of Business, Energy, and Industrial Strategy (BEIS) is up by 31% in the past 12 months. The biggest price rises by far recorded by BEIS have been in structural steel and rebar. Lower cost products like cement have increased at a low rate in 2022, but according to our analysis, are more exposed to future inflation.

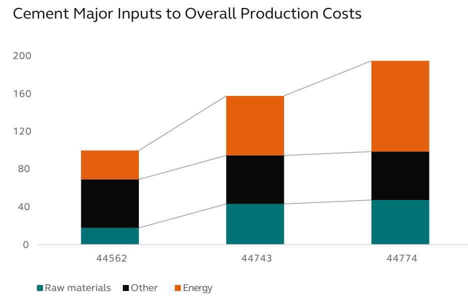
Up until now, it is noticeable that while some producers have been able to pass on energy costs to their customers through higher prices, others, such as cement manufacturer Heidelberg, are having to absorb some of the rises, with consequent impacts on their bottom line. With energy having increased by 2.5x since June, it is unlikely that all costs can be absorbed either by manufacturers or projects. Everyone from suppliers to clients are likely to feel further pain.

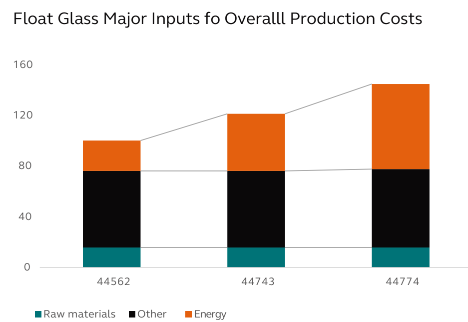
Conclusion

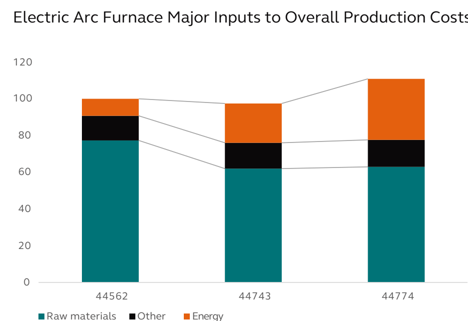
Against the backdrop of an economic slowdown, the pressure for further construction product price rises has been baked in by continuing energy price hikes. With no immediate prospects for cheaper energy, our modelling has revealed that as other commodity prices fall due to a global slowdown, basic materials with a high energy content like cement will likely become ever more sensitive to inflationary pressure.

Energy price hikes will have other, unforeseen consequences too. Less low carbon recycled steel will be produced as Electric Arc furnaces are mothballed due to high energy costs. Materials including zinc and aluminium may become scarce as over half of European manufacturing capacity is curtailed.

So, even as markets slow, there is an increasing downside risk that material price inflation could grow, either related to input costs or scarcity. What is clear is that the current energy crisis looks set to continue for several more months at least and the signs are that it will have a further sapping effect on construction markets.







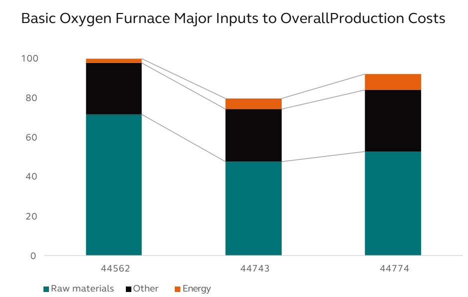


Figure 1 - Relationship between the costs of energy and raw materials for production of selected construction materials

[1] The August assessment is based on wholesale energy and commodity prices current on 22nd August 2022

[2] Energy Market Snapshot (businesswisesolutions.co.uk)

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Arcadis

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