alinea knowledge

Market Report

The best of times, the worst of times

January 2018

Image - Matt Brown

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Executive summary

The best of times, the worst of times: it feels that way, given the mix of continued activity in construction and investment in property (certainly in London and its environs), amid the Brexit-induced gloom and political uncertainty.

As progress was made in the Brexit talks, Theresa May's comment that "nothing is agreed until everything is agreed" suggests that unambiguous clarity will not appear until 2019 - before which businesses will have some decisions to make, not least property ones.

Unease

The spectre of Grenfell Tower dominated the second half of 2017, acting as a dreadful reminder of lives lost, and surely a wake-up call for the construction industry to sort out some of its endemic problems. It also "epitomised the mood of an uneasy, fractured Britain", as The Economist put it, in some ways reflecting the issues of growing inequality, one of the drivers of a populist surge across Europe and elsewhere.

Financial worries

A period of low interest rates and money printing may have propped up economies, but it has also helped to create 'zombie' companies whose survival is ensured by low debt repayments. The possibility of increased interest rates is fuelling fears of insolvencies, something brought into sharp focus with Carillion's demise. The immediate story is of commercial over-reach, poor management and questionable accounting / payment practices. Another reminder, if one were needed, that our industry has some serious challenges to overcome.

The world versus the UK

The themes of 2017 will develop through 2018, but they could go one of many ways. A nervous construction industry will be watching Brexit negotiations like everyone else, but will be hopeful of the signals from international investors that they still view the UK as a stable and long-term place for their cash. Whilst the optimism of world markets – with IMF forecasts showing a synchronised global growth for 2018 and 2019 – is a counterpoint to the melancholy on home soil, UK PLC is beginning to show more balance as some of the regions – particularly in the north – are in full recovery mode.

Input cost pressures

The recovery of emerging economies is partly driven by a rebound in commodity prices, which is a reminder of how global dynamics can meaningfully contribute to UK construction prices (see page twelve). Construction's chronic skills shortage, exacerbated by worries over future free movement of people (and labour being pulled to the regions), together with material price increases, are putting real pressure on the supply chain's input costs, which will rise by 2-5% over the next twelve months. The extent to which they can be absorbed will be a key factor in determining tender prices.

Our view on tender prices

Our view reflects some consistent pressures, but a divergent ability to absorb cost pressures, and thus various responses across tiers and sub-sectors of the supply chain. **We are forecasting zero to +2% tender price inflation for 2018, with the possibility of something of a rebound in 2019** as input cost pressures endure but contractors' ability to trim margins does not (and nor will their desire, given the perilous state of finances in the sector).

%	2018	2019
alinea forecast	0 to 2	2.5
BCIS forecast	-1.3	4.2
Range of commentators	-3 to 2.7	0 to 3.3

Tender price inflation:
London and the South East

Our focussed engagement with the supply chain in the compilation of this report revealed some consistent themes from pressure on input costs to softening attitudes towards single stage procurement (provided the project / team is right).

But never mind inflation

Rising input costs, yet the need to maintain project viability; skills gaps, yet the criticality of addressing shortfalls in competencies highlighted by the Grenfell disaster; questionable payment practices, yet the importance of supporting financial health throughout the supply chain; these and other systemic challenges make it even more vital that focus is placed on what can be controlled, and that the simple things are done extremely well.

This is a mantra that we have repeated over the years but, from our experience, backed by the views of the market, it is something that remains depressingly elusive for too many. The only way to make construction more affordable for clients, and more rewarding for contractors, is to ensure that the whole business of building is more efficient and more effective. In these respects, tender price inflation is something of a red herring.

2017 | The year that was

A Dickens of a year

2017 was a 'Dickens of a year' in that it featured both positivity / progress (foreign investment in the UK; negotiating the first hurdle in Brexit talks) and negativity / tragedy (unrelenting fears over Brexit; the Grenfell Tower disaster). It is the reason for this report's title: The Best of Times, the Worst of Times, which is highlighted by a review of the year just passed, the themes featuring some bright spells amid the gloom.

Brexit

The snap general election in June created an embattled government. It raised the prospect of a further general election before Britain finally exits the European Union, and the possibility of a Labour government elected on a manifesto of higher taxes and the nationalisation of industry.

Mrs May's deal with Northern Ireland's Democratic Unionist Party (DUP) added complications to Brexit talks. Before the year was out a deal was secured to begin discussing the UK's future relationship with the EU, but only after the DUP agreed to amendments over the Irish border issue.

Semantics got it over the line as the phrase 'regulatory alignment' was replaced with 'no new regulatory barriers' (in other words, a difference in regulations between Northern Ireland and the rest of Britain will be possible provided Stormont agrees). Britain made a series of concessions, such as a divorce bill of £35-39bn, but gained a possible two-year transition period after it formally leaves the EU in March 2019. Although that represented progress, Mrs May's statement that "nothing is agreed until everything is agreed" does leave things open till the end.

Populism

On the other side of the Atlantic, following his surprise success in the US Presidential Election in November 2016, Donald Trump set about putting in place policies that supported his 'America First' pledge, establishing travel bans on citizens from several Muslim countries, pulling out of a Trans-Pacific trade deal, renegotiating NAFTA, and starting America's exit from the Paris accord on climate change.

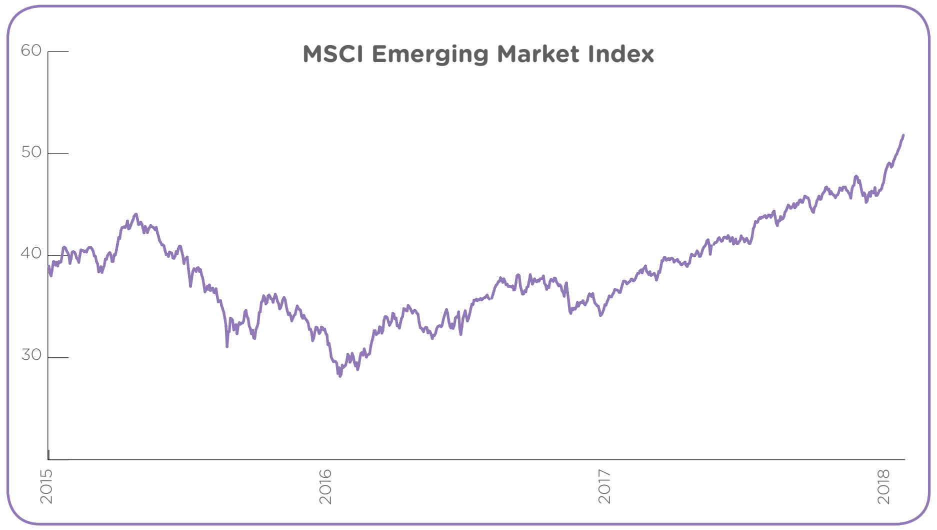
China's President Xi Jinping strengthened his grip on power as he was voted to continue for at least another five years, at the Communist Party's national congress in October – where his ideologies were also written into the constitution.

Elsewhere there were so-called 'populist' victories of a kind in German, Austrian and Czech general elections, yet Emmanuel Macron became President of France on the promise of a new social contract that boosts entrepreneurship through embracing globalisation.

Global economy

This populism has above all been driven by rising inequality within countries and across the globe, in a year which saw the world economy record its strongest performance since the start of the decade. Stock markets hit record highs on the back of a period of historically low interest rates and extensive money-printing. Global growth was helped by a rebound in the fortunes of developing economies: the benchmark MSCI Emerging Markets index jumped 60% during 2017.

Whilst the world's economic recovery accelerated during 2017, the UK's bumped along. So far the impact of Brexit has been benign, with consumer spending and business investment holding up, but GDP slowed markedly in the latter part of the year. Inflation peaked at 3% as the Bank of England raised interest rates in November for the first time in ten years, from 0.25% to 0.50%.



2017 | The year that was

A Dickens of a year

Foreign Direct Investment

Sterling was relatively stable following its 10% drop in value, which may have helped exporters and encouraged foreign investment but hit importers of goods and materials, not least across the construction industry. International money continued its flow into the UK and particularly London, where high-profile buildings such as The Gherkin, The Leadenhall Building and 20 Fenchurch Street were added to an increasingly long list of trophy assets in foreign ownership.

Whilst concerns lingered about the adverse effects of some of this foreign investment – especially the social disharmony (and aesthetic impact) of largely empty 'ghost towers' across the capital – a look at the UK's debt pile is a reminder of our need for such help.

Grenfell tower

Nowhere was the claim of social divide more starkly seen than in the grim remains of Grenfell Tower. The tragic deaths of 71 people in this catastrophe on 14 June instigated criminal investigations, an Independent Review of Building Regulations and Fire Safety led by Dame Judith Hackitt and a lot of soul-searching across the property and construction communities. The interim report of Dame Judith's body was published in December and under a damning conclusion that 'the current regulatory system for ensuring fire safety in high-rise and complex buildings is not fit for purpose' it cited as reasons, inter alia: regulations and guidance that is too complex and unclear; poor clarity of roles and responsibilities, inadequately-matched projects and competencies; weak compliance, enforcement and sanctions processes; unclear system of product testing, marketing and quality assurance.

UK economy (and fake news)

The UK Treasury's prediction of an immediate recession following a vote for Brexit, with GDP forecast to fall by 1.4% in the second half of 2016 compared unfavourably to an actual growth of 1.2%. And the now infamous claim by the Vote Leave campaign of a windfall of £350m a week for the NHS has among other things been shown to reflect Britain's gross contribution, not the net available. Fake news stories started something of a backlash against those responsible for information and opinion circulated on social media – or a 'techlash' as it is being called.

Zombies

The UK's relatively poor productivity received persistent attention amongst commentators. A number of theories abounded but the spotlight fell on failing companies towards the end of the year. These so-called zombie companies, which are kept in business by low interest rates, use workers and capital that a cold economist would claim should go to more efficient operators. Whether 'zombies' or not (the definition being those that haven't earned enough to cover the interest on their debt for at least three years), the UK witnessed some large corporate failures in 2017, such as Toys 'R' Us.

The finances of the construction sector are always a concern, and last year saw the loss of Lakesmere, amongst others. Begbies Traynor's Red Flag Alert report revealed that the number of construction companies in 'financial distress' grew 31% in the final three months of 2017.

Little did we know what was to come in the new year...

2018 | The year that will be

Last year's themes to be played-out

Brexit

More than anything 2018 will be the crunch year for Brexit, no doubt punctuated by various crises and stories of political feuds, with the stakes getting higher as the year progresses, and the 30th March 2019 deadline for leaving looms closer. The government will be ever reliant on the DUP, and Theresa May will be tested as much by her own backbenchers as she will be by Mr Bernier's team, or indeed by the Labour opposition (though they seem to be doing a great job of turning an opportunity into a potential crisis as Momentum members draw up a hit-list of up to 50 Labour MPs that they wish to deselect for being too moderate).

For businesses though, decisions will need to be made sooner rather than later – not least property decisions, to act as an insurance policy against no deal, or the wrong kind of deal emerging. This is especially true for London's financial services sector, which is the world's pre-eminent financial centre according to the most recent Global Financial Centres Index, ahead of New York, Hong Kong and Singapore – with no EU city in the top 10. In his visit this month, Macron reiterated there would be no financial services deal for Britain, its firms losing their 'passporting' rights. This would seriously undermine the City's global standing, however, some commentators suggest that such an outcome would be equally damaging for the EU, as its businesses and banks would be cut off from London's markets.

Populism

Italy's general election in March is probably Europe's next test of the stamina of the populist movement. Some economists are suggesting that the inequality between the wealthy and the poor could cause a rebalancing between states and markets. The leader of the Scottish Conservatives, Ruth Davidson, has called for a need to remake the case for capitalism in 2018, specifically citing the parlous state of the UK housing market as evidence. She also points to the need to technically train our people, of which the construction industry is only too aware.

Global economy

The International Monetary Fund has upgraded its forecast for global growth in 2018 to 3.9%, driven by emerging markets at 4.9%, as advanced economies show a relatively slower growth of 2.3%. The Euro area is predicted to grow at 2.2% this year, with the UK set for a disappointing 1.5%.

China's growth is forecast by the IMF to slow to 6.6% this year, 6.4% next year, both around the annual rate of 6.5% targeted in its current five year plan.

Foreign Direct Investment

Away from Brexit – but very much related to it – lies the critical subject of foreign investment, and the question of whether international money will continue to flow into the UK. To date, it has shown no signs of abating.

Whilst there are obvious concerns about increasing nervousness among investors as Britain's political and trading future is uncertain, sentiment remains positive – particularly amongst Chinese investors. "London remains the most liquid real estate market in the world" Stephen Down, head of the central London investment team at Savills, was quoted as saying in China Daily this month, commenting that "We expect Asian investors, many of whom are looking to diversify capital and preserve wealth outside their domestic markets, will continue to target the relative safe haven of the UK." He did admit however that they were becoming more selective, not only because of changing market dynamics but also because of the new capital gains tax on foreign buyers of commercial property (to be introduced in 2019). Heightened discernment will surely also be

Theresa May and Arlene Foster meet to secure a confidence-and-supply agreement to support the Conservative minority government

2018 | The year that will be

Last year's themes to be played-out

associated with the difficulty that some Chinese investors will have in obtaining foreign exchange clearance.

Grenfell Tower

Contrast worries about the super-prime residential market in London with the recent claim by the Labour MP for Westminster North that 3m people have their health and safety compromised every day by substandard housing, and that there are 1m properties in the UK deemed unfit for human habitation. The feeling of inequality presented by such poles will be again brought into the spotlight when the Independent Review of Building Regulations and Fire Safety issues its final report in the spring.

UK Economy

A decade after the global financial crash, economies seem to be flourishing or recovering in many places, with the UK being a notable exception.

The UK government is set to continue on its austerity road, aiming to reduce the budget deficit by 1% of GDP in 2018 – through spending cuts and increased taxes.

The UK economic weather is likely to appear persistently gloomy as dramas persist around Brexit negotiations, but with the odd bright spell, as positive news is also reported. Perhaps more than anything, any concern of a failure to secure a deal with the EU would see the storm clouds gather – risking a fall in Sterling, inflationary pressure, nervousness across British industry and perhaps even foreign investors.

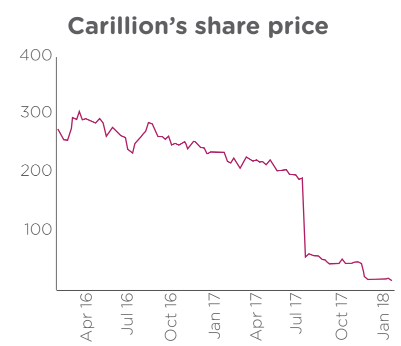
Despite Brexit-induced pessimism, there are other positive indicators. The UK's Purchasing Managers' Index (PMI) is at its highest level in four years. Regional PMIs have been displaying an upward trend too – which can be evidenced by visiting places such as Manchester and viewing the number of cranes on the skyline. Perhaps the government's Northern Powerhouse policies are having an effect, supported by foreign investment in the regions as well as the Capital.

Zombies

If the global economy's synchronised boom endures then inflation will rise, wages will rise and interest rates will rise. This will shake out the zombie companies, causing further insolvencies. But before such a scenario can be contemplated, the fragility of the UK construction sector's financial health was brought into sharp focus when Carillion went under this month (see box). It has also brought into relief the efficacy of British businesses, as well as its ethics, which provides an added dimension to the debates about capitalism.

Carillion

Carillion was the most shorted stock on the FTSE 350 for some time, so analysts apparently knew something that many others didn't grasp. Its demise seems to have been a result of a combination of: a series of dubious acquisitions as part of a rapid expansion; a diversified portfolio of services that were largely contracted out; a small number of high value problem projects; payment issues on certain Middle East contracts; various creative accounting measures; a high level of receivables i.e. money owed but not received (with much curiously not invoiced); the continued payment of dividends and rewards to management despite its poor finances; the tentative support of government that didn't follow through and dissuaded the banks from stepping forward.



All of which culminated in a debt pile of about £1bn and pension liabilities of almost as much again, leaving its 43,000 former employees looking for a job and putting a question mark against the cost to Carillion's JV partners and deep supply chain (including consultants who provided services to them on their design & build and PFI projects).

The year ahead
Some things to look out for

This year promises some interesting developments across the key themes of 2017, which could go any number of ways and which will no doubt throw up some surprises, mini-crises and hopefully meaningful progress.

Here are some things to look at for this year:
- Mifid II comes into force this month.
- Saudi Arabia and UAE introduced VAT on 1st January.
- Consultation on the draft London Plan ends on 2nd March.
- There is a General Election in Italy in March.
- April brings Earth Day, an annual event to demonstrate support for environmental protection which coordinates events in 193 countries.
- Whilst in the same month British companies with more than 250 people must publish male / female pay gaps.
- In May, the EU's General Data Protection Regulation comes into force.
- Austria takes over the EU Presidency in July.
- October sees the annual meeting of the World Bank and the IMF.
- USA mid-term elections take place in November.
- The first trains are due to start running on CrossRail in December.

And by the end of this year, we are promised:
- The test flight of Airbus's autonomous flying taxi.
- The opening of Eurostar's direct route from London to Amsterdam.
- Amazon's decision on which city it will choose as its second home.

And there are some notable anniversaries:
- Tata celebrates its 150th birthday in 2018.
- The European single market was founded 25 years ago.
- It is the centenary of the Royal Air Force.
- And Karl Marx's 200th birthday.
- It will be 50 years since Robert Kennedy was assassinated.
- And 50 years after Martin Luther King's assassination.
- China opened its doors to foreign businesses 40 years ago.
- Apple's App Store is 10 years old.
- Lehman Brothers became bankrupt 10 years ago, starting the global financial crash.
- And, of course, it is the centenary of Armistice, which ended fighting on the western front in World War I.

Our forecast
The formulation of our view

A mix of consistent themes and divergent views - particularly when it comes to putting numbers to sentiments - is a reflection of the continuing prevailing uncertainty, which resonates in the broad range of TPI forecasts suggested by commentators.

Our view of market dynamics, and our predictions for construction prices for 2018 and beyond, are formulated over a period of time using our relentless research of economic data and other information, our constant interactions with all parts of the market, and our dissemination of intelligence from a critical mass of diverse project work.

For this report we have additionally undertaken focussed and well-prepared engagement with a cross-section of the supply chain, arranging face-to-face meetings with over 20 main contractors, specialist contractors and trade contractors.

For consistency, these discussions were framed by a common agenda, but they also allowed us to get beyond the written answers to 'cold' questions, to obtain a feel for current and developing themes (see below). These reinforced our own views on the drivers and pressures on tender prices, and their direction of travel.

alinea market engagement: the themes for 2018 onwards

Turnover
SMEs are growing; larger businesses are looking regionally (as the London commercial sector dips); residential enquiries endure.

Pipeline
Wide disparity in secured work will have a varying effect on bidding strategies.

Labour
Regional labour rates for management staff, bricklayers, reinforcement fixers and cladding fixers are the same as London.

Supply chain
Sub-contractors are being more selective; labour supply is a key constraint; estimating resources are stretched.

Financials
Insolvencies remain a worry; there is no appetite to underwrite losses and take on 'bad business' but amongst trades there will be opportunities for a dynamic reaction to prices. This is obviously brought into sharper focus by Carillion's collapse.

Business plans
Diversification strategies are being considered but currently it is more of a rebalancing of portfolios than a venturing into new sectors.

Input costs
Cost pressures are real (as our evidence confirms). Overall +2% to +5%p.a. increases over the next two years.

Margins
Flat / tightening for 2018 but more difficult to predict for 2019.

Tender prices
Contractors are looking to fill their order books for 2019 so there is some acceptance that margins may have to be squeezed for tender prices to remain stable (against cost increases) - but this will not be easy.

Uncertainty
The supply chain is struggling with inherent uncertainty like everyone else; there is an inability to get a fixed price on some materials.

Inconsistent sentiments
There will be a varying appetite for work and different attitudes to pricing in distinct tiers and sub-sectors of the supply chain.

Beyond this year
2019 could result in something of a 'rebound' in prices as input cost pressures continue and attitudes to risk alter, as the terms of Brexit become clearer.

Procurement
There are softening attitudes to single stage but contractors are looking keenly at the make-up of the team, plus other criteria. This means that project specific responses may not be the same as general sentiments.

Broader issues
These include client-side skills gaps, decision making, unrealistic programmes and the lack of BIM take up.

Our forecast
“Why aren’t tender prices falling?”

If we had a pound for every time we are asked this question....

Tender prices are not falling, but nor are they rising significantly, with no consistent theme of inflation. There are real pressures that the supply chain is struggling to absorb, but also instances where contractors are prepared to take a view: by trimming margin / risk, or by discounting elements, for example, providing plant to a project free of charge.

The spread of tender price forecasts from commentators reinforces the current difficulty in predicting the future of construction prices. **We anticipate that prices in 2018 will be relatively stable at 0% to 2%**, the range rather than a spot percentage reflecting our anticipation of some inconsistency in prices, the different commercial drivers across sectors and between contracting tiers, and thus, broad pricing spreads across tender returns.

Why is this?

Brexit appeared to cause a six to nine month vacuum in some contractors’ pipelines. However, this has now washed through with generally strong order books for 2018 and, for some, into 2019 and 2020. The secured work is patchy and the prolonged uncertainty will drive some businesses to be more keen in their pricing in 2018, to secure longer-term income.

Possible project stalls or stops could create supply-side capacity, which may, in turn, generate a more aggressive tender pricing strategy. However, this will not be a consistent theme and if this dictates a spot price which beats the market or our inflation assessment, we do not see this as grounds for deflation – this will be the exception rather than the norm.

On the whole, sustained pressure from materials and labour will offset any small discounts to margin and strategic short term tender pricing. Stable prices in 2018 may be followed by price pressures rebounding in 2019 and 2020 as input cost increases continue (or even accelerate) and margins cannot be squeezed any further. The only way we see prices being rationalised is if other efficiencies can be found (see the following section). It should be noted, however, that these figures are considerably less that the long term construction industry inflation average of 3.75%.

Moreover, we do not foresee contractors underwriting business at a loss (and nor would we want to see that): painful memories and generally stronger corporate governance to the that deployed in the last recession should generally ensure that risk is equitably priced, particularly in the aftermath of the Carillion debacle (which is a glaring exception to improving governance).

Rudi Klein, head of the Specialist Engineering Contractors Group, estimates that Carillion owed about £2bn to 30,000 or so firms (not including the unknown cost of retentions). The worry must be that many of these firms will never get their money, putting even more pressure on a supply chain that operates in an already perilous environment. A troubled industry will be put under further scrutiny (including questions over renationalisation), with every news story about finances and re-organisations adding to the increased nervousness.

Looking back to 2017

Last year, we forecast +2% for London / South East, and we have evidenced this average level of inflation across tenders. Key drivers of this were generally sustained, but rational, margin across the board, with an acceleration in commodity-based prices, the lag in price rises of imported materials becoming apparent amid further labour price pressures.

Projects are being let that will straddle the conclusion of the Brexit negotiations and the UK leaving the EU (assuming the March 2019 deadline is met). There are a number of significant issues that will impact construction, most notably: the regulation of labour movements; the ability to trade with the EU zone; the impact of tariffs on imports; the assumption that in the days following the exit, importing products and materials will be as streamlined as it is now. Contractors, particularly EU-located contractors, are clearly excluding the implications of Brexit on a project. That is a considerable risk to be assessed and potentially to be held by a client.

%	2018	2019
alinea forecast	0 to 2	2.5
BCIS forecast	-1.3	4.2
Range of commentators	-3 to 2.7	0 to 3.3

Tender price inflation:
London and the South East

Our forecast
“Why aren’t tender prices falling?”

Materials

Commodity based prices surged in 2017, but we hope we are nearing the peak (see following section). The concern is to what extent a resurgent China and Eurozone impact this. In particular, we have seen double digit rises in structural steel and bar reinforcement.

Real macro-economic price pressures exist, as detailed on the following pages, as well as smaller demand-driven pressures. Putting aside the impact of Brexit on imports, the economic recovery of the Eurozone, in particular factory gate inflation in Germany and France, is having a significant impact on material prices. It is very difficult to insulate a project from this: to some extent on a project, either the raw materials are manufactured in the UK or sourced from the Eurozone at currency risk.

We have evidenced a surge in the supply chain published price rises at the start of 2018; like most years, not all of these will stick, but the widespread level of significant increases is a concern and we believe a good proportion could push through to clients.

Labour

Labour capacity constraints are no more evident than around construction, which has received significant and sustained focus since the vote for Brexit. The shortage of labour is evident in many facets: the skills shortage is not just about securing labour for a project. If one is close to site operations, it is evident that the level of churn of labour and the requirement for a continuous stream of inducting labour is a real challenge – all of which of course, will be paid by clients via a contractor’s preliminaries and overhead. Projects no longer seem to be able to call upon an injection of labour as a project moves towards completion and commissioning to give a scheme a final and achievable snag-free practical completion.

A lack of labour is as much a risk to a project as something more tangible in design or site constraints. Contractors are having to return to historic practices of employing direct labour and procuring packages on a traditional labour and materials basis.

Labour cost pressures are evident in skilled trades, with particular pressure on façade installers, dry liners and mechanical trades. The surge in construction activity in the regions, particularly the north west is a draw on labour, pushing up labour and driving prices even higher in the south east.

There is also a call for better planning of labour: with so much non-UK labour, contractors need to ensure they plan better for the distribution of labour through a project, as EU labour returns back to the continent for long holidays during summer and winter. This will come into greater focus as 500,000 workers are set to retire over the next 10 years, as shown in the graph below.

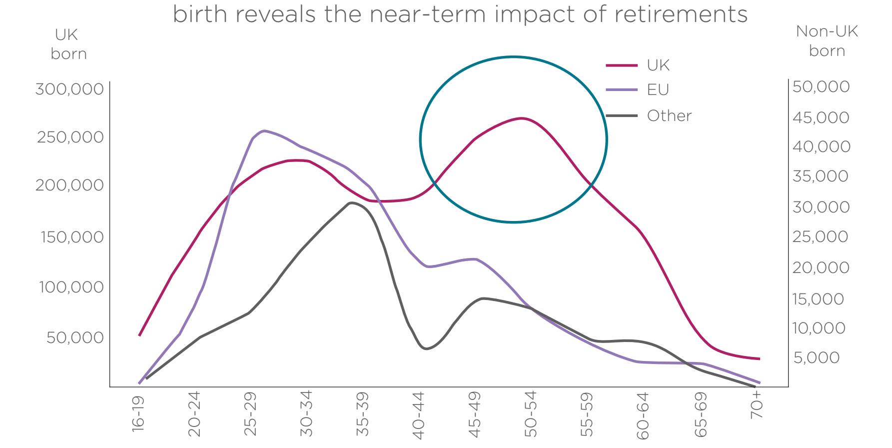
The need for better preparations could also extend to the planning of people and materials across a project: we are aware of certain trades that invariably suffer significant price escalation because they are repeatedly employed inefficiently. This is a challenge for all involved and is a reminder that sufficient time needs to be allowed for pre-construction activities.

Margins

Contractors are on the whole not making significant profit, particularly when considered against the context of the risk that is underwritten for a construction project. The skills shortage extends to contractors’ management teams. Most organisations are still awarding salary rises to retain staff, which is inflation for which an increase in overhead will also be required. We are aware of project managers being paid the same in the North West as in London; this will drive inflation outside London but equally, further inflation in London, as companies move to secure people by offering further package increases.

Contractors’ declared margins are broad. Looking ahead, the uncertainty and need to secure pipeline, should alleviate further upward pressure on margins and potentially a trimming (but not discounting).

Construction workforce: Age profiles by country of birth reveals the near-term impact of retirements



After Brickonomics, Labour Force Survey and ONS

Materials on the rise : a focus on steel

Construction material production prices increased 4.1% in 2017, reaching their highest point in our tracker, which has run since 2013 (see chart on the right). The main driver of this rise has been fabricated structural steel, which saw a 12.8% increase in the last 12 months, followed by timber and concrete at 6.8% and 6.0% respectively.

We have also seen marked increases in the traded price of rebar and several vital commodity prices. Copper had a well documented surge in 2017, rising just over 20%, albeit with some periodic falls due to concerns over rising stockpiles.

Notwithstanding protectionist rhetoric, domestic material markets have scarcely been more impacted by global forces.

The Baltic Dry Index, an indicator of global shipping volumes, reached a four-year high owing to increased shipments of iron ore and coal; vital ingredients for steel. Shipments are expected to increase by over 5% this year, with half the cargo heading to China.

The impact of China

Citigroup predicts that the iron ore market, in addition to other “China sensitive” commodities, will be bullish through the first quarter of 2018, and prices will rise through to 2019 as stock piles of steel and iron ore are depleted.

China’s growth will continue to outpace the majority of developed nations and as a proportionally large consumer, this growth has been intrinsically linked to commodity prices. Coupled with President Xi’s target of an average 6.5% GDP growth is a need to clean up the quality of the country’s environment.

Strict pollution curbs are in place in China, and a key target for the winter cuts is the coal-powered industry around Beijing and Tianjin, which will see strict curtailments until the middle of March.

The number of Chinese iron ore mines has fallen from over 3,000 to 1,900, with more set to close. A number of steel mills will shut down during the winter period too, although this will be offset by reduced construction in Beijing, Tianjin and Hebei province. CRU Group estimates that there will be a 1-2 million tonne tightening in the Chinese steel market which is small, but due to the recent crackdown on illegal steel capacity over recent years, will stretch already busy mills outside of the pollution ring in China.

The obvious commodities such as iron ore, steel and aluminium are not the only ones affected. The increased reliance on imported materials, such as high quality iron ore has pushed up the recently low shipping index, creating price pressures for other commodities and goods.

A hidden driver: graphite electrodes

There is another reason for steel’s substantial rise last year, one that many will not appreciate. Graphite electrodes, a key component of electric arc furnaces, have seen their spot price increase ten-fold in 2017. This increase is partly due to a lack of capacity in the market but also due to demand, for both the electrodes themselves and their core components.

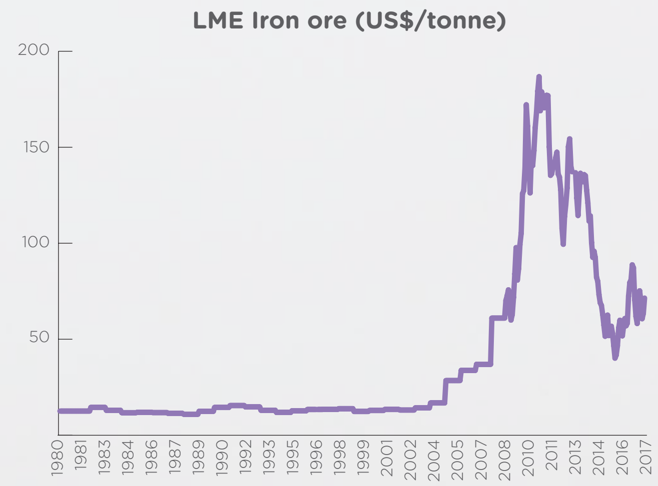
Electric arc furnaces (EAF) differ from traditional blast furnaces as they use electricity, passed through electrodes placed in the roof of the oven which heat to 3000 degrees Celsius. The benefits are they they can utilise scrap metal, require less land and energy than blast furnaces and are more flexible as they can be stopped and started quicker than a traditional furnace.

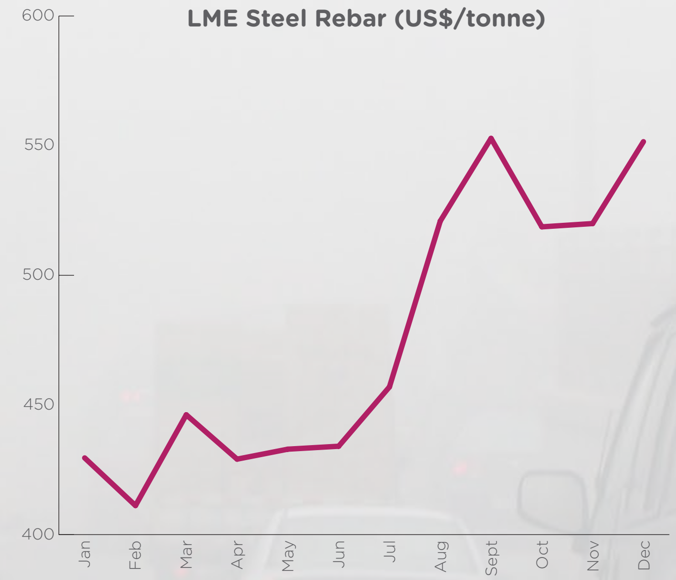
Central to the manufacture of graphite electrodes is needle coke, which makes up around 60% of input costs. Prices have risen up to 20 times in the last year owing to its use in lithium-ion batteries as well as its contribution to aluminium smelting. Production is limited to a few suppliers so whilst demand is rising quickly, supply is constrained.

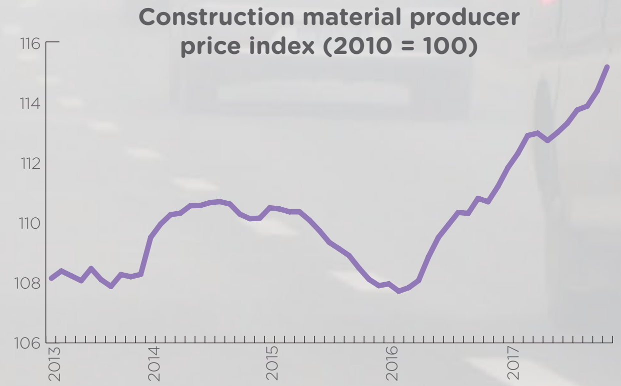
Again, China’s pollution crackdown is relevant in explaining the reduced supply. Around 60% of the UK’s smaller electrodes come from China. Eurofer (Europe’s steel lobby group) claims that the country’s limitations on heavy industry has caused shortages of electrodes, reducing capacity by around 30%. The group said, “with Chinese supplies of needle coke and graphite out of the market, there’s a clear shortage of both materials.”

Due to the limited availability of base materials, electrode producers are unable to fix prices for very long and some are expected to only offer spot, quarterly or half-yearly deals to steel mills.

Meanwhile, shares of graphite electrode companies have boomed during the supply pinch, with shares rising more than 400% in 12 months. The graphite electrode market was valued at $5.04bn in 2016 and is expected to reach $27.5bn by 2022.







alinea’s materials tracker

Air Contamination in Ningbo, China. Until recently, economic growth in the world’s second largest economy has been at the expense of the environment.

What does it all mean?

An industry under pressure

The construction industry is under severe pressure: from input cost increases; skills shortages; doubts over long-term pipelines of work; inefficiently-run projects; underlying political uncertainty; the inherent challenges of a low-margin environment; and working in an industry with a poor record of technological progress.

All this makes it an increasingly precarious existence, brought to light by the demise of Britain's second largest contractor, Carillion, following other high-profile losses in recent years.

Prices are set to stabilise, with possibly some uptick in tender prices, making it more of a struggle for developers and investors to get their projects to stack up.

So it would seem that something has to give; but what? Contractors cannot put their financial health at risk by squeezing margins too far, and for the same reason suppliers have to pass at least some of the material cost increases up the supply chain. Surely, the whole business of design and construction has to be made more effective so that scarce resources are employed more efficiently.

A good start would be to address the things that we can control, ensuring a project is set up correctly, with objectives, timescales, roles, responsibilities, working practices agreed and communicated clearly, and early.

We can insist on the implementation of BIM which is not yet universally employed by any means. Anyone outside the industry would rightly ask "why ever not?".

We can also endeavour to make contract terms fair, with equitable allocations of risk – and insist that all through the supply chain are paid promptly on reasonable timescales. We can also look to protect the supply chain in the event of corporate failure, through alternatives to traditional retentions and by other means.

And we can all do our utmost to strive for excellence, whatever our discipline.

That way, projects will have a good chance of success, with decent rewards for all...even before the inevitable advent of drones, artificial intelligence, additive engineering, robotics and material advances ultimately change things forever.

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A culture of constant learning

Applying learning from both live projects and research studies, and feeding them into each other, is how we try to ensure that our clients and their teams get the best possible advice from us. This is why we have been committed to research from the day we launched.

Whilst data and information are the lifeblood of our business, we understand that they alone do not represent knowledge – which requires analysis, insight and questioning.

For these reasons we involve everyone at alinea, and we share our desire to innovate across borders: of discipline, geography and perspective. That way, we can learn from each other.

We also like to hear what you think and welcome any views you might have. Do please feel free to contact any of us.

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