



A combination of escalating construction materials prices, increasing energy costs and challenges with transport and logistics makes projects even more risky.

Following an increase of 2% in 2019, Spanish GDP fell by 10.8% in 2020 as a result of the Covid-19 pandemic. This is more significant than the average drop of -6.5% recorded across the euro area and is mainly due to the high reliance of the Spanish economy on the services sector (which contributes almost 68% to GDP).

- The recovery began in Q2 2021, with the gradual opening of the economy supported by a high uptake of vaccinations. By the end of September 2021 almost 80% of the Spanish population has been fully vaccinated. GDP increased in Q2 2021 by 1.1% and, according to "Banco de España", the economy is expected to return to pre-Covid levels by Q3 2022. The European Commission predicts an increase of 6.2% in GDP in 2021, followed by 6.3% in 2022.
- Similar to other recovering economies, Spain is also facing currently elevated levels of inflation, with an annual increase of 3.3% recorded in August. However, this is projected to stabilize at 2.1% by the end of 2021. This is mainly driven by the cost of energy, which increased by 37% on an annual basis, followed by an average 16% increase in industrial goods and 9% in transport. These products and



services categories are likely to impact the levels of construction inflation.

- Spain has historically experienced high levels of unemployment, peaking in 2013 at 26%. Since then, the situation has been improving and in Q4 2019 unemployment fell to 13.8%. The onset of Covid-19 caused a temporary spike to 16.2% but the latest data indicates that the situation is stabilizing, with a reading of 15.26% in Q2 2021. The levels of employment have been increasing across all sectors, and construction has recorded the biggest growth of 5% in employment compared to the previous quarter.
- After a significant dip in Q2 2020, salaries also began to recover and since Q3 2020 increased by an average of 2.8% across the economy. Salaries in the construction sector have historically remained relatively flat, with an increase of just 1.5% between Q4 2014 Q4 2019. However, between Q1 and Q2 2021 they increased by 2.4%, which although still slightly below the growth in the wider economy (which was 2.8%), indicates there may be a broader correction happening across the industry.
- Output in Spanish construction has been increasing at approximately 1.7% on an annual basis since 2015 and peaked in 2018. The beginning of 2020 brought a slowdown which was exacerbated by Covid-19 and led to a 14% decrease in work delivered that year. The recovery began in summer 2020, but so far has been irregular with output increasing significantly in December 2020, before subsequently falling in the first months of 2021. At the end of June 2021, total output delivered in the last 12 months has been almost 5% lower than output delivered in the same period a year before.
- New orders in construction are also recovering and the value of new contracts increased by 15% in Q2 2021, compared to the previous quarter. The total for the last 12 months, however, is still 5% below pre-Covid levels. While the building sector is recovering quickly, especially driven by warehousing and industrial facilities, infrastructure is still

- lagging, with high levels of activity observed only in the communications sector, which is busy laying foundations for digital infrastructure. This is likely to change following the European Commission's endorsement of Spain's Recovery and Resilience Plan, which took place in June 2021. The plan, totaling €69.5 billion over 2021-26, includes €14 billion of investment towards energy transition and increasing building's energy efficiency, both of which are going to involve significant construction activity.
- Demand is only now beginning to return to the Spanish construction market, and contractors are still in need of securing workload for the mid and long-term, which requires them to be competitive. At the same time, they are faced with multiple inflationary pressures, many of which are volatile and cannot easily be quantified. These are likely to drive risk premiums up. Clients wanting to proceed with projects in the near future need to be prepared to share some of the risks for the sake of getting certainty of delivery.



With prices and levels of activity rising hand in hand, how sustainable is the recovery?

# The gathering storm

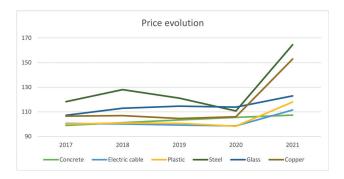
Availability issues and price hikes affecting construction materials have escalated rapidly over the last few months. Latest data from the Ministerio de Transportes, Movilidad y Agenda Urbana highlights inflation of up to 40% since January 2021 in some product categories. This perfect inflationary storm is further supported by a strong new orders intake that has taken away work-winning pressure from contractors, reducing competitiveness in the market. And while many ask, "how long will this last?" what we should also be exploring is, "Where could the next inflation trigger come from?". The V-shaped recovery has accelerated, and the window of opportunity has shut. Inflationary pressures have continued to grow during the summer and, as such, we are again upgrading our forecast for 2021, while maintaining the 2022 prognosis. Pressures related to the supply of construction materials may well ease in the beginning of next year, but there is plenty in store to keep prices rising - from the uncertainty of labour availability, through to rapidly increasing energy costs, including wholesale gas prices that have risen by over 70% to record levels since February. Clients willing to proceed with their projects in these conditions need to be increasingly vigilant and make sure there is always a negotiation table nearby.

# Material prices continue to drive inflation

Industry is currently facing near-record increases in the cost of construction materials. What began as an issue focused on steel and timber has recently spread into other product categories, resulting in an annual inflation of 20% (compared to the long-term trend of 3%). Plywood has seen most inflation, with an increase in price of 80%, and is closely followed by fabricated structural steel at 65%, imported sawn or planed wood at 64% and concrete reinforcing bars at 60%. Inflation for other categories is much lower, but the range of materials displaying an above average 5% annual increase has broadened to include sanitary ware, paint, and plastic doors and windows. Cement and concrete are now up by 4% in the year.

At the same time, some signs of returning sanity can be seen in the price trends for commodities; according to Nasdaq, lumber prices in the US returned to below \$500 per thousand board feet in mid-August, after having peaked at a May 2021 record of \$1,600. Rebar rates reported by the London Metal Exchange have dropped by 15% from their peak and are now close to January 2021 prices, and copper is back below \$9,500 after reaching \$10,700 in late Spring. It is, however, too early to herald the beginning of a 'return to normal' and there will likely be a delay before these price corrections reach the market of construction materials.

In the meantime, increases in material prices and availability issues have been the most often quoted reason for project delays, both on-site and in procurement, as contractors are unable to hold their prices. Re-negotiation - and in some cases even rebidding - is taking place, leading to delays. Difficulties in pricing risk have become a major threat to the viability of projects and a potential spanner in the wheels of recovery. Even once supply can be secured again and prices return to more reasonable levels, other factors that have emerged recently will continue to impact on the pace of recovery



#### Logistics challenges are a long-term issue

Costs related to logistics, especially container shipping, have escalated over the last few months too. In our Spring report, we quoted rates doubling compared to the end of 2020. At the time of writing, rates are five Arcadis UK Construction Market View | Summer 2021 5 times above pre-COVID levels. This is a consequence of continuing disruption at ports, including a shortage of containers and unloading capacity.

#### **Distribution by sectors**

The residential sector, which after the strongest rebound in 13 years, increasing by nearly 40% year-on-year, is now stabilising. New business models are being created around this sector, far removed from traditional family sales.

The logistics/industrial sector is being the main standard-bearer of the recovery. The change in consumer habits has caused logistics to expand, increasing the existing stock throughout the territory. Since 2015, the market in cities such as Madrid or Barcelona and surrounding areas has increased by 30-40%. An example of this boost is the tender held by Aena in Barajas to find a partner with which to develop a large expansion of logistics space in the vicinity of Madrid airport or the arrival of Huboo in Spain. These are some examples which, together with the increase in e-commerce, make this sector one of those with the greatest capacity for expansion in the coming years.

The technology sector which, after the pause due to the pandemic, a subsequent moderation, returns to rebound the investment momentum around 20% in the first half of the year, by carrying out the deployment of fibre and the increase of 5G areas in the country.

The office sector, badly hit by the pandemic, is returning to normal. Companies are adapting to the new situation, and it is predicted that by 2022, the number of operations will increase. The working model has changed and this is forcing many companies to reconfigure their offices or look for a new location that better suits today's needs. By 2021, some have already returned to the new normal, but many will return to normal operations by 2022, resulting in moderate market growth that will be stabilised by supply and demand.

Despite mounting inflationary pressures, recent new orders data shows plenty of appetite among clients to pursue projects. The levels of activity increased even further in Q2 2021, with an uptick of almost 20% compared with the previous quarter. It should be remembered that it is important that underlying growth is sustained. Latest PMI data suggests that growth is still healthy, albeit at a slowing pace.

# Everybody's talking inflation

Concerns regarding inflation and its impact on the pace and success of post-COVID recovery have been in the news for a while. Due to the situation with materials prices, the construction sector is now actively discussing this issue, and recent challenges around haulage are likely to only exacerbate the situation. Because there are currently so many cost drivers in place, inflation has been generally acknowledged and consequently the supply chain is far from being shy about making allowances for it. While wages have only recently recovered to pre-COVID levels, there are signs of shortages not only in highly specific skills but also among more common trades, such as bricklayers. The extent to which shortages will be fixed when the government's earnings support is removed at the end of September, remains to be seen. Then there is the price of energy, which is forecast to increase – Brent has already recovered to \$70 a barrel. Taken together, this has led us to bring forward some of the inflation and upgrade our forecast for 2021, while easing our forecast for 2023.

Inflationary drivers	Deflationary drivers	
Continued increases in construction materials costs	<ul> <li>Labour wages recovered but have not increased significantly</li> </ul>	
Improvement in order books and eased pressure on winning new work	Maintenance of ERTEs until the first quarter of 2022	
Logistics challenges around container costs	Euro still strong against USD	
The general awareness of highly inflationary circumstances		



Construction materials prices have been escalating rapidly in recent months, creating challenges for on-going projects and potentially threatening the viability of new schemes. What can clients do to avoid project delays and cancellations?

The discrepancy between supply and demand has been rapidly driving up the prices of many construction materials, with basic timber and steel products typically having increased by 30-50% on annual basis. The situation is similar across the world and has become a source of concern as high prices might hold back the pace of recovery.

Ongoing projects need to tackle price hikes and delays, as lead times for many products have extended and some materials are on allocation. This can result in additional costs for both contractors and clients, especially on time constrained projects, and in extreme cases could lead to contract dispute.

Increased nervousness and high levels of uncertainty are not good for the new projects either. Contractors and clients may both be put off by the elevated levels of risk and increased price of delivery can undermine a business case, leading to project suspension. However, pausing the activity until prices return to 'normal' in many cases is not possible. There are interventions, though, that could help limit the exposure. They are not a silver bullet, and come with pros and cons, but in the current conditions of heightened uncertainty, they can facilitate the decision making.

## **Procurement options**

With procurement, the key consideration is achieving a balance between competition and the attraction of the project to bidding contractors.

**Single stage tender** competitions are suitable for highly competitive sectors with quick turnaround needed but are increasingly less acceptable to bidders. It is advisable to undertake extensive supply chain engagement first to confirm continuing levels of interest.

**Two stage tender** competitions offer a possibility to delay or bring forward tendering for some work packages and can help avoid price peaks and mitigate some of delays. However, they present a particular risk in volatile markets such as today's, with the possibility of a last-minute upward price adjustment at the end of the second stage.

Reverse two stage tender competitions, where the client directly procures specialist packages as well as the main contract, could be an attractive option in the current market – providing greater transparency over pricing. This could facilitate early procurement of long-lead-in items. But the inability of the client to contract directly with specialists may mean that it is not possible to secure cost certainty prior to the agreement of the second stage bid.

**Construction Management**, where there is no cost certainty until all packages are procured, is likely to be riskier for clients but will enable the optimisation of the timing of procurement. This route will benefit most the clients with previous experience and access to appropriate resources, and capable of agreeing to sub-contract prices quickly to achieve cost certainty.

**Negotiation** in the current market is likely to result in full pass-through of inflation costs at the outset of a project, and hence is only recommended where there is not enough time for a competitive process.

**With any lump-sum procurement**, some flexibility can be built into the pricing using provisional sums, prime cost allowances or early procurement.

**Provisional sums** can be used to delay the procurement of later packages on a project – e.g., fit-out and avoid some of the inflationary 'fever' and risk-averse pricing seen in 2021. However, prices will continue to rise, and the contractor and project team will need to remain alert to material availability issues to manage the risk to the programme.

**Prime cost allowances** can be used to include costs against measured items where it is not desirable to fix the price at the point of tender. This option is beneficial in case of volatile prices but, the client will be 100% exposed to movements of the price of the material relative to the prime cost benchmark.

# Early procurement of bulk materials/production slots.

Clients can secure early orders for bulk materials with manufacturers either directly or through the supply chain. The advantages of early procurement are price and programme certainty. The disadvantage is the client's financial and physical commitment to the purchase.

# **Risk transfer options**

Another option for securing a competitive initial price from the market is to vary the terms of the risk transfer in the contract. The changes required in the current market are significant – increasing the scope for extensions of time with or without cost.

When introducing a change to the balance of risk transfer, the client is taking a calculated risk that the reduced bid price will justify taking the risk and that the full risk will not materialise. The upside of this approach is that the client will only ever pay if the risk occurs.

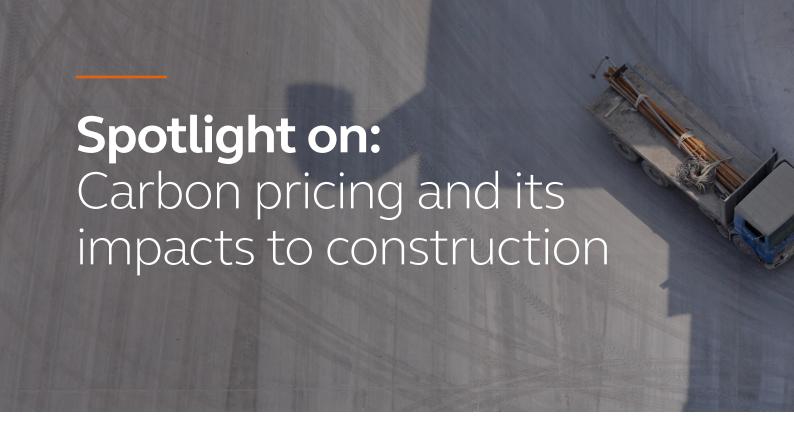
As a result, a relaxation in the balance of risk transfer should only be considered if bidders are keen to offer a discount in their bids.

Materials availability. With availability of materials being a particular problem at the moment, clients who have some flexibility on completion dates might consider including materials availability as a permitted trigger for a compensation event/extension of time. Awarded on a time-only basis, this step will eliminate one source of contractor risk (i.e. cost of Liquidated and Ascertained Damages) without exposing the client to full inflation risk.

Fluctuating price contracts include the provision for a monthly calculation of inflation based on published indices. Relevant contract clauses are available for JCT and NEC, even though they have not been widely used since the early 1990s. Fluctuations are calculated monthly and added to the valuation. Provisions for fluctuating prices are embedded in the main contract. Clients should take steps to ensure that similar measures are embedded in subcontracts.

It is difficult to predict how long construction materials price increases and associated shortages will persist. The situation is not likely to stabilise before Q1 2022 and some sectors, such as infrastructure, are likely to continue to be exposed to materials-related risks in the longer-term. Implementing the above steps will not make clients and contractors immune to cost hikes, but enhanced transparency and a more equitable sharing of these risks, when they occur, will help manage price increases and mitigate the consequences.





One of the biggest challenges in meeting net zero targets will be decarbonising hard to abate sectors such as steel or cement.

Carbon taxes related to the emissions trading scheme (ETS) will play a crucial role in reducing consumption and incentivising new technologies. Here, we describe how ETS operates, how it is likely to evolve over time, and what the impacts of both UK and EU ETS schemes are on the construction sector.

# What is ETS and how relevant is it to construction?

ETS has been designed to encourage decarbonisation of the largest CO2 emitters, such as power generators and carbon intense industries – this includes production of steel, cement and aluminium. The scheme includes two parts; a cap on allowed emissions and a carbon tax paid through the purchase of carbon credits that are auctioned and then traded on the open market. The UK initiated its auctions in May 2021 and the price currently oscillates around £50/tonne CO2.

How does this impact construction? The answer is through an additional cost, which depends on the CO2 emissions generated in the production process. We provide a few examples in the table below but, looking at developments in both UK and EU ETS, these numbers are only likely to increase.

Material	Cost of carbon at carbon tax rate €56/CO2 tonne	Cost of material including carbon tax	% carbon tax in total price
Rebar	109€	1.573 €	7%
Aluminium	354€	2.565 €	14%
Cement	37 €	158€	23%

<sup>\*</sup> Source: https://ember-climate.org/data/carbon-price-viewer/



### What is next for ETS?

The amount of carbon credits available in the market will be gradually reducing, through the following:

- Market stability reserve a mechanism put in place to avoid oversupply of carbon credits and its too low price is on track to limit the surplus to 400Mt by 2023.
- Emission cap reduction: the EU ETS emissions cap is decreasing by 2.2% per year, but new proposals could increase this to 4.2%.
- Emission benchmarks are established for each industry and the remaining free allocation will be slashed from 30% in 2020 to 0% in 2030.

All these interventions will result in smaller supply of carbon credits and will stimulate further carbon price hikes. Multiple forecasts are available, and the cost ranges presented therein are €65-€90 for 2030 and €70-€190 by 2040 per tonne CO2 emitted. These increases may seem shocking, but one must remember that the prices of CO2 already increased by 70% since January'21, and further increases are very likely.

In addition, costs related to carbon are likely to be further increased by the introduction of so-called Carbon Boarder Adjustment Mechanism. Its objective is to create a fairer playing field for the EU businesses which need to compete with companies from territories where carbon pricing is not present. A CBAM will apply a carbon price to materials and goods imported into the EU, based on the cost of allowances current in the EU. Credit will be given for carbon taxes levied elsewhere. The scheme will be phased out from 2023 and will apply to aluminium, cement, fertilizer, iron and steel industries. As a result, an increase in prices of steel imported to the EU can be expected.

### What does this mean for clients?

Clients have very little control over their exposure to carbon pricing. The price of the credits will be set by the market, and the amount of emissions will be determined by the manufacturer's process. Looking further ahead, the impact that carbon pricing will have on the construction costs will depend both on the pace of reducing CO2 emissions and the pace of the expansion of the scheme. Emissions reduction can be achieved either by transitioning to innovative processes and products or implementing the carbon capture and storage. But we must acknowledge the enormous size of the decarbonisation challenge which will require new processes and products to be developed. The change will not happen overnight. There is a lot of work to do, and clients have their role to play in the process. The first step is to understand the carbon content of products so that low-carbon alternatives can be considered. What initially seems unfeasible, may turn out to be suitable after a modification to the design or to the delivery programme. Clients also have a role in creating the market for low-carbon products, and the faster they make the switch, the sooner economies of scale will be achieved. Otherwise, net-zero will remain a costly and niche option... almost as costly as carbon.



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