

CONSTRUCTION COSTS UNDER PRESSURE AS TARIFFS HIT AND WAGES RISE

The American construction market is picking back up after somewhat of a slump in 2017, as promised infrastructure pipelines did not materialize and tariffs began to bite. However, with demand across the nation still strong, 2018 is seeing galloping growth rates, including significant recovery in many of the regions that were hardest hit by the financial crisis, such as Miami, Atlanta and Texas.

While the residential sector has expanded rapidly, we're beginning to see the rate slow down as capacity and demand limitations start to bite. As the growth rate in residential construction slows, we expect infrastructure to take its place, with spending from state-led initiatives and the FAST Act.

Inflationary impacts on materials have eased since the last report but we expect to see a renewed boost to inflation from the steel and aluminium tariffs imposed in June. Skills shortages continue to drive up wages, further contributing to inflation. In 2019, it will be necessary to work collaboratively with the design team and supply chain to ensure these risks are effectively managed and mitigated

"Material tariffs and a labor market creaking at the seams will drive an increase in 2019 prices with large contractors becoming increasingly selective both how and what they decide to bid."

James Harrison

Operations Director for Mace in North America

Construction added value grew...

↑ **5.7%**

in the three months to June 2018



In 2018, the residential sector is forecast to grow...



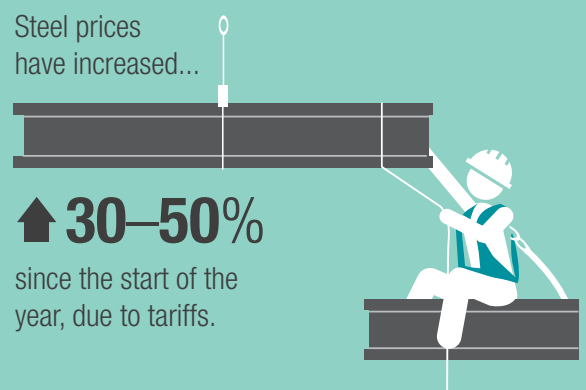
with non-residential growing by just...



Steel prices have increased...

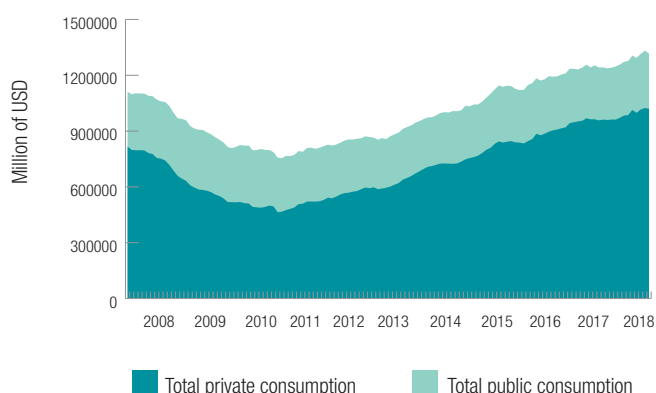
↑ **30–50%**

since the start of the year, due to tariffs.



CONSTRUCTION

Construction Value Added (USDm)



While the construction market slowed down in 2017, the peak anticipated in the market has not yet been reached, and 2018 so far has seen a significant pickup in construction value growth. In the three months to June 2018 construction value added growth averaged 5.7%. Real construction growth was disappointing in 2017 as anticipated state and local spending on transportation failed to materialize, and high inflation for building materials eroded real industry value. As a whole, the industry is estimated to have grown by only 0.5% in 2017.

The resilient residential sector is expected to be the principle driver of this pick-up in growth. Low borrowing costs and ongoing wage growth are continuing to support demand for additional housing, and the industry is still recovering back to the levels of activity seen before the financial crash. As such, residential construction will grow 4.3% in 2018, a slowdown from 2017's 9%, but fundamentally a strong growth nonetheless. Alongside this growth in the infrastructure sector, the FAST Act will provide government investment into surface transportation, recently passed ballot initiatives will direct public funding to infrastructure and state level gas tax will boost revenue.

However, there are challenges to this outlook. Many state governments continue to struggle with budget deficits, inhibiting anticipated public spending. Despite promises of an infrastructure bill by the Administration, no clear plan has taken shape, and the one proposed would not provide

limited benefits due to the heavy reliance on private funding, which is unlikely to materialize.

COST

Material inflation is slowing as the full impact of the lumber tariffs is worked through, and the new impact of additional tariffs, such as on steel, aluminium and Chinese imports has yet to be significantly felt. Looking forward, the tariffs introduced by Trump on steel and aluminium will have the most significant impact on construction costs in the US, increasing the cost of several key inputs. Import tariffs of 25% on steel and 10% on aluminium have been imposed, effective from June 1st 2018 tariffs will have two direct impacts on cost:

1. For private companies importing steel, they will face higher costs directly due to the tariff.
2. All remaining projects, including government sponsored projects required to purchase domestic steel, will experience shortages of domestic supply as demand increases faster than production can to avoid expensive imports.

This means those only buying domestic steel will also see price rises as demand for steel outstrips supply. These tariffs will therefore have a negative impact on the industry as a whole, but with particular impact in private commercial and infrastructure projects.

However, there is some optimism in the market that the tax cuts implemented last year, and the new tax cuts currently being discussed by Congress, could provide enough relief to contractors to counteract the impact of the increasing cost of construction due to tariffs. Following the midterms, all eyes will be on Congress to see what new policies can be pushed through.

For the most part, due to the high levels of demand on the market, contractors have been able to pass on growing costs to clients in the form of increasing tender prices. However, with costs expected to keep rising, the viability of projects may be revisited, potentially leading to some being downsized or scrapped altogether.

CITY	CONSTRUCTION COST INFLATION	BUILDING COST INFLATION	COMMON LABOR INFLATION	SKILLED LABOR INFLATION	MATERIALS INFLATION
NEW YORK	5.4%	3.9%	5.6%	4.1%	3.3%
PHILADELPHIA	0.7%	2.5%	0%	1.8%	4.4%
LOS ANGELES	0.4%	0.7%	0%	0%	2.1%
SAN FRANCISCO	0.6%	0.9%	0%	0%	3.1%
CHICAGO	3.2%	3.2%	3.1%	3%	3.7%
ATLANTA	1.9%	2.9%	0%	0%	6.1%
DALLAS	1.7%	2.3%	0%	0%	4.9%

LABOR

At a national level the tight labor market in the construction industry is contributing to rising wages, while also resulting in skills shortages in some particularly active markets. The sector is facing ongoing challenges to supply workers at a time when demand has been steadily rising. A number of factors are contributing to this challenge, including:

- Construction jobs have lost appeal among the younger generation
- A large portion of the workforce failed to return after leaving the industry in the recession
- Changes to immigration laws have created bottlenecks in certain skillsets/regions.

Unemployment in the sector has fallen to 4.4% (April 2018) and pushed wages higher, with wages growing on average by approximately 3.5%, compared to 2.6% in the wider non-farm private sector. These cost increases, coupled with the material cost inflation deriving from the tariffs, may be difficult for the industry to continue to absorb. As long as demand remains as strong as it has been, this will result in growing tender prices as opposed to cuts to margin. However, with some indications of a peak in previously active markets, such as New York and California we may see contractors losing the market power to pass on these costs, and cuts to margins impacting sector growth.

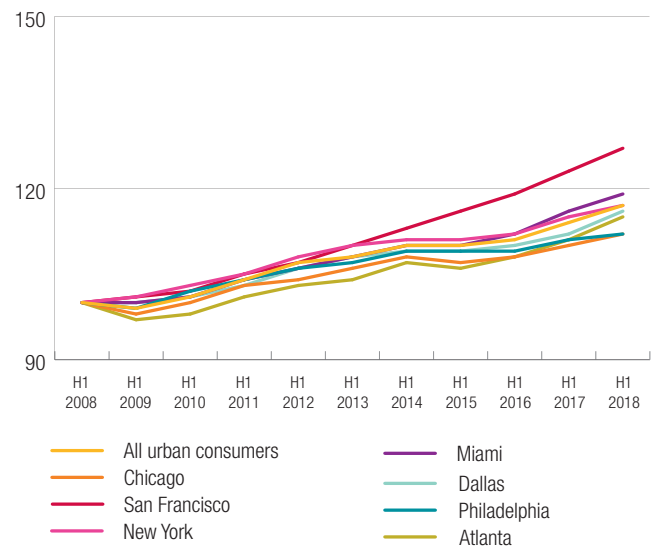
ECONOMICS

The strong economy from the past five years has grown by 3% in the year to September and shows little sign of slowing down. Strong demand across the economy has led to robust job growth, and strong consumer outlays, solid business investment, sturdy export growth and firming government outlays all remain supportive of growth. However, with risks to the bottom line increasing, from trade wars, to foreign policy threats, to the domestic impact of tariffs on consumption, analysts expect some slowdown to come by the end of the year, (predicted to be 2-2.5% growth).

Following the midterm elections, where the Democrats gained control of the House of Representatives but the Republicans retained their Senate majority, enacting major new policies is likely to become considerably harder. Where the Democrats made gains in state legislative elections, infrastructure spending might be increased. The changing political situation may act as a slight drag on economic growth but the US is still forecast to expand far faster than other developed countries in the short-term. As such the construction industry shouldn't be massively affected by the midterm elections.

INFLATION

Urban Consumer price inflation by Metropolitan area



Consumer price inflation is picking up in many of the areas seeing a boom in construction work, including Dallas, San Francisco, Atlanta and Miami. This reflects an increase in activity levels which are simultaneously driving increased demand for construction, as well as growth in prices.

REGIONS

New York

New York State continues to invest in infrastructure, with Governor Cuomo announcing in June 2018 detailed plans to invest \$150bn into developing transportation, parks, and clean energy projects. This investment will boost construction in infrastructure and social infrastructure for five years from 2019. This will go a long way to boosting the already strong construction market in the region: by some estimates the State is seeing record highs in construction activity.

Developers are increasingly focusing on office building development as well as seeking alternative residential market places outside of New York City, as the residential market becomes increasingly saturated. Density is increasingly important, given the high cost of land and the need to accommodate a growing population into limited space. This has resulted in an unprecedented boom in projects greater than £1bn, both in commercial and residential sectors. This is only set to continue, as new zoning laws mean Midtown East NYC will grow ever taller, with a 500% increase in supertall towers under construction in the last four years alone. The flip side of this densification is that high land prices are holding back construction in higher education and private institutions as well as retail.

New York is facing ongoing challenges in dealing with union versus non-unionized labor disputes. This has resulted in the city hitting a new high for worker costs, with average hourly wages growing to \$90.30 for skilled

union labor (North American average - \$71.40). In general the city remains the most expensive place in the world to build, and the impact of tariffs will be particularly felt in this market where projects make extensive use of steel across the commercial, infrastructure and multifamily residential sectors. An additional challenge facing the city is the lack of subcontractor capacity. Subcontractors are spread thin, giving them extra market power, and consequently driving up local tender prices.

Philadelphia

Construction is proceeding at a fast pace in the mid-Atlantic region, with a recent flurry of senior living projects in urban areas. Public work is also supporting construction in the region, including water projects and the release of delayed federal projects after Congress approved a major spending bill in March 2018. This delayed release includes surface transport projects in and around Philadelphia which are contributing to the national level growth of highway and bridge construction this year. One noteworthy project is rehabilitating the nation's oldest active vehicular structure, a bridge built in 1697 and renovated in 1893.

But after a year of strong growth in construction spending in 2017, total spend is now projected to decline by nearly 20% in Philadelphia this year. While total spending will remain high by historical standards at nearly \$10bn, the pace of 2017 couldn't be sustained, and non-residential building in particular will see a drop of 28%. Residential construction spending, after several years of strong growth, has slipped back marginally, and the trend for slowing multifamily starts is expected to continue. There remains some significant opportunities however, in K12 higher education, corporate, health care and hospitality sectors, which is expected to remain solid into 2019.

California

As construction activity in California continues to rise, contractors are riding a wave of opportunities, with the top 10 companies in the region posting 8% growth in construction work value over the last year. The availability of financing and the ongoing demand for infrastructure investment is perpetuating the building boom in the State, and this is not expected to slow down any time soon, with ballot measures for further investment coming to fruition over the coming year. Transportation in particular will continue to present significant construction opportunities across California, with the caveat of unreliable federal funding creating uncertainty for some pipelines. The State's aging power sector is also in need of renewal, which is driving investment and opportunities for contractors. The healthcare market is a source of strong demand which will sustain construction work in the region through the next year, as well as residential, hospitality and sports construction. With so many sectors presenting opportunities, the slight slowdown in commercial and multifamily construction in San Francisco will not unduly affect the positive market.

San Francisco has seen so much recent construction growth that the market is now beginning to deflate as pipelines are worked through and the number of new projects slow down. This has resulted in a 13% reduction in construction spending forecast for 2018, as the market refocuses on non-building construction. Decreasing numbers of starts in commercial multifamily and manufacturing sectors are a major driver behind this deflation as demand in these markets eases.

Los Angeles is continuing to boom, with construction employment forecast to grow by a huge 6.4% in 2019, and nearly 4% this year. Unique growth drivers for the city include demand from a diverse range of industries for investment and construction, including entertainment, biotech, transportation, defence, finance and healthcare industries. On top of this private sector demand sits an ambitious urban revitalization plan, which includes preparations for the 2028 Olympic and Paralympic Games.

However, due to the ongoing high levels of activity, construction costs will continue to grow and remain high relative to the rest of the country. In fact, it is estimated that San Francisco is the second most expensive city to build in globally, second only to New York. As contractors' order books remain full, and new work continues to trickle through California, albeit at a slower pace, we anticipate growing costs as resources and capacity dwindle, putting upward pressure on tender prices.

Chicago and the Midwest

Chicago has seen the benefit of the 2018 upswing in construction as well, with the developer/private construction market especially strong. Construction employment in the city has risen 17% since 2013, and wages have grown 12%. By the end of 2017 Chicago's crane count stood at 60, beaten only by Seattle in terms of activity levels, and showing vast growth from 2010's 12 cranes. The city is also experiencing a five year high for building permits, demonstrating the sheer volume of work available for contractors in the city and the wider region. Symbolizing the recovery is the pick-up of a decade old construction hole, the former Chicago Spire Site. Now called 400 Lake Shore Drive, the new towers will provide both residential and hotel space.

Major projects are planned for the region, most notably the US\$8.5bn expansion of O'Hare International Airport over the next eight years. In addition, there are dozens of new towers reshaping the city's famous skyline (49 under construction in August 2018). Much of this high rise construction is centered on rental apartments, but office towers, hotels, condominiums and educational projects are also well represented. Aside from high-rise developments, opportunities also exist for data centers, industrial projects, airport terminals and stadiums. Investment in transportation is ongoing, even experimenting with innovative designs and technologies, for example through Musk's Boring Company contract to construct and operate a high speed underground

passenger transport system between the downtown Loop area and O'Hare Airport.

While the level of activity has not yet fed into labor shortages, contractors are beginning to express concern this may soon come, as strong construction employment growth looks set to continue into 2019.

Southeast – Miami and Atlanta

Miami has recently experienced a challenging few years in terms of real estate, with a long recovery time from the economic crisis, in part because of how hard hit the city was at the time. The intensification of construction at the Worldcenter mixed-use development site, which had been delayed by 12 years, is a sign that the city is experiencing a turnaround. This US\$2bn site is the second largest urban development underway in the country. Pent up demand in the city is now being responded to, and contracting volumes are set to reach a five year high. Recovery in residential construction is expected to continue as house prices grow, and the non-building sector is also expected to make healthy gains following state-wide investment in infrastructure. Real estate construction will further be supported by hospitality and office projects moving forward. This positive outlook could, however, be negatively impacted by rising steel prices, and most notably, increased costs for reinforcing steel and framing. The volume of work in the State has reduced competition between specialty firms, and is resulting in increased tender prices, especially for skillsets in strong demand.

In Atlanta, contractors are mostly shrugging off concerns over rising material prices, tariff impacts and the tight labor market as they continue to build pipelines in a very active market. The breadth and depth of the 2018 construction market across the Southeast is notable. This is largely down to the healthy mix of market sectors that are presenting opportunities, including healthcare, office, heavy manufacturing, light industrial and power projects.

Tariffs are driving up prices significantly in the Southeast. For example, steel fabrication seeing raw material prices jump 30-50% so far this year. However, across the region we are not seeing margins decrease, meaning these higher costs are simply being passed on, and in some cases competition for subcontractors is such that margins are even being boosted. With no slowdown in activity across the Atlanta and Southeast market, we expect this trend to continue.

Texas

Construction in Texas is currently vibrant, with no slowdown visible on the horizon. All the sectors are robust, and population growth is driving further demand for infrastructure, residential and commercial development, with the State expected to reach a population of 50 million by 2040. Across the State, the biggest projects over the past year have been in infrastructure and energy, with some large scale work in sport and healthcare. Recently enacted tax cuts are also particularly beneficial for Texas and are serving to boost demand for private sector construction.

Construction growth is benefiting from the influx of funding for repair and resilience works following the damage caused by Hurricane Harvey in 2017. More than US\$3bn in flood risk reduction and repair projects have been authorized to move forward on the back of a US\$2.5bn bond program. This program of works includes 237 projects, including everything from large detention basins to basic repair work. With federal, as well as State funding, backing a significant amount of resilience and repair work (US\$4bn in total available funding), there will be plenty of opportunity for contractors over the next five years

Dallas is seeing fewer multifamily and commercial construction starts. Houston, on the other hand, is seeing construction starts grow off the back of strength in the residential construction markets, as well as moderate growth in non-residential and non-building construction. Transportation infrastructure is seeing investment in the region, notably with a US\$15-18bn project to connect Dallas and Houston via High Speed Rail.

The Government immigration policy is directly impacting construction in the region in two significant ways. We discussed in the last report the impacts of the recent crackdown on immigration on construction labor, which disproportionately relies on immigrant labor, especially in Texas. The State is feeling the squeeze on labor capacity at the same time as seeing significant growth in demand for construction labor. On the other hand, the changes to policy also present an opportunity for construction in Texas, with multiple government agencies looking into an immediate and indefinite demand for new US detention facilities. Building and operating these facilities could result in billions of dollars of new spending, in Texas and elsewhere.

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