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Today's Construction Economy

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Introduction

Today's Construction Economy captures key insight directly from leaders in the construction industry. The newsletter pulls from these observations to determine the market's message.

This quarter's edition highlights the recent phenomenon impacting every industry and citizen in the nation–explosive inflation. Compounding already strained construction supply chains and skilled labor pools, inflationary pressures are challenging construction owners and contractors with difficult decisions. Still, the industry is upbeat; forecasts are for continued spending increases and job growth. This edition makes an extra effort to highlight forecasts from industry leaders for the rest of 2022. Our focus continues to be on the primary drivers of selling price to owners.

Second Quarter 2022

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MOCA Systems, Inc., is a full-service Owner's Representative and software development firm serving the design and construction industry.





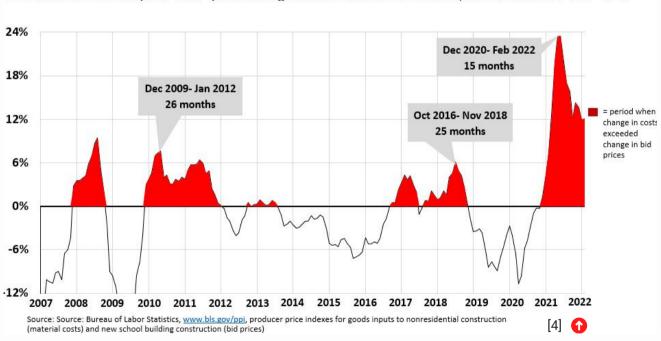


Volume, Spending, Selling Prices, and Market Trends

After accounting for inflation, construction spending has likely fallen over the past 12 months. As outlays from the infrastructure bill increase, construction spending will expand, exacerbating the chasm between supply and demand for labor. [1]

At the end of 2021, nonresidential construction has not yet experienced the maximum downward pressure from the pandemic. Volume, spending minus inflation, is expected to bottom (out) in mid-2022. That should impact jobs, but we have not seen jobs react to volume losses as would be expected. Jobs growth without volume growth to support those jobs is a productivity decline, increasing inflation. [2]

Volume declines should lead to lower inflation as firms compete for fewer new projects. However, aside from remarkable cost increases for materials, if jobs growth continues while volume declines, then productivity declines, and that will add to labor cost inflation. Since 2010, Construction Spending is up over 100%, but after adjusting for inflation, Volume is up only 28%. Jobs are up 41%. [3]



Cost squeeze on contractors can last two years or more

Difference between year-over-year change in materials costs vs. bid prices, Jan 2006-Feb 2022

SOURCES

[1] https://www.abc.org/News-Media/News-Releases/entryid/19255/abc-construction-industry-faces-workforce-

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- [2] https://edzarenski.com/ [3] Ibid

[3] Ibi

[4] Construction Inflation Alert, Associated General Contractors of America, Apr 2022, p. 7.

"It's inevitable at some point that demand is going to cool off, but at the moment, I still think it's full speed ahead," (AGC Chief Economist Ken) Simonson said. "When I see the strong condition of state and local governments in terms of their budgets, corporate balance sheets, (and) household balance sheets, all of these things suggest that there's still plenty of buying power. And presumably, some of that is going to translate into continued demand for construction." [5]

Construction input costs outpaced bid prices again in March, according to Bureau of Labor Statistics (BLS) data posted on Wednesday (Apr 13th). The producer price index (PPI) for material and service inputs to new nonresidential construction jumped 2.7% for the month and 21.5% year-over-year (y/y). The PPI for new nonresidential building construction—a measure of the price that contractors say they would bid to build a fixed set of buildings—increased 0.6% for the month and 17% y/y. [6]

"Bans on cryptocurrencies overseas have led to a surge of crypto- and Bitcoin-related construction in the U.S., adding more demand in the already booming data center sector, industry sources said," Construction Dive reported on Wednesday (Feb 16th). "The surge in Bitcoin mining centers mirrors the overall trend in the data center industry. Around 527.6 megawatts were under construction midway through 2021, an increase of 42% [y/y, according to commercial real estate services and investment firm CBRE]". [7]

"Research has demonstrated that government-mandated PLAs increase construction costs by 12% to 20%, which results in fewer construction projects and improvements to roads, bridges, utilities, schools, affordable housing and clean energy projects—and the creation of fewer jobs," said Brubeck. [8]

Nonresidential buildings inflation 10-year average (2011-2020) is 3.7%. In 2020 it dropped to 2.5%, but for the six years 2014-2019 it averaged 4.4%. In 2021 it jumped to 9%, the highest since 2006. [9]

Materials costs outran bid prices for as long as 26 months from late 2009 to early 2012 and for 25 months from late 2016 to late 2018. The current gap hasn't lasted as long—yet—but the peak was more than twice as high as in previous episodes, indicating the pain for contractors has been that much more intense. [10]

THE MARKET'S MESSAGE

Huge selling price increases are masking a reduction in construction volume. There is enough demand to continue significant spending despite increasing costs of the inputs to construction. It seems reasonable to expect selling price inflation that still does not keep up with persistent input price increases to eventually have a dampening impact on demand, but there's no evidence of that on the horizon.

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[5] https://www.constructiondive.com/news/diesel-material-supply-chain-drive-construction-inflation-

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7] Data Digest, Vol. 22, No. 8, Feb 12-18, 2022.

[8] https://www.abc.org/News-Media/News-Releases/entryid/19230/president-biden-s-pro-pla-executive-order-

will-increase-costs-to-taxpayers-and-exacerbate-skilled-labor-shortage-says-abc

[9] https://edzarenski.com

[10] Construction Inflation Alert, p. 6.

Inputs to Construction

"It will get worse before it gets better," said ABC Chief Economist Anirban Basu. "Not only has Russia's assault on democratic Ukraine created supply challenges in a number of categories, including oil and natural gas, but the reemergence of COVID-19 in parts of Asia and Europe is also poised to produce additional impacts." [1]

"Products that fell in late 2021/early 2022 are moving back up and may regain their peaks. Prices that had not fallen much but were expected to drop are now expected to move sideways or even increase," says (director of steel at S&P Global Market Intelligence John) Anton. "To put it simply, prices in 2022 will challenge the peak prices of 2021." [2]

The strong freight demand that has delivered bumper earnings for trucking companies during the pandemic appears to be waning, as inflation and sagging consumer sentiment slow an inventory restocking rush that has swamped distribution networks. [3] ②

"Engineering and construction costs rose for the 16th consecutive month in February," data firm IHS Markit and the Procurement Executive Group reported on Wednesday. "February also marks the eighteenth consecutive month of rising shipping costs. [4]

Materials cost increases continue to intensify in magnitude and suddenness, while availability of materials appears to be worsening. [5]



THE MARKET'S MESSAGE

Construction materials prices continue to increase at unprecedented levels. While there may be temporary relief, factors like shipping backlogs and manmade and natural disasters that drive materials prices are prevailing. Contractors are becoming bolder by increasing bids to cover huge cost increases in materials.

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- [3] O'Neal, Lydia, "Trucking Boom Hits the Brakes," Wall Street Journal (WSJ), Apr 14, 2022, p. B5.
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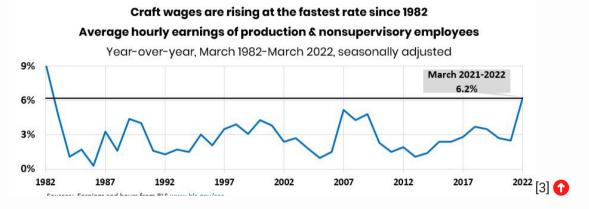
[5] Data Digest, Vol. 22, No. 14, Mar 29-Apr 1, 2022.

[6] Construction Inflation Alert, p. 6.

Construction Jobs and Wages

More than 40% of construction workforce growth over the past decade is comprised of low-skilled construction laborers, who represent just 19% of the workforce. [1]

Construction needs more than half a million workers above its current pace of hiring in order to meet demand in 2022, according to an analysis released Wednesday (Feb 23) by Associated Builders and Contractors. Predictive models from ABC indicate the industry needs 650,000 additional workers. [2] 🎧



After 23 months of recovery, construction employment has at last exceeded pre-pandemic levels. On a year-over-year basis, industry employment has expanded by 220,000 jobs, an increase of 3.0%. [4] 🚱

(As of February 1, 2022) Nonresidential employment has regained only 67% of the jobs it lost between February and April 2020, compared to 87% for total nonfarm payroll employment and 124% for residential construction. [5]

Since the pandemic began, other sectors have raised starting wages dramatically, offered signing and retention bonuses, and-for some jobs-flexible hours or work locations, inducements that are not possible for onsite construction jobs. These conditions imply construction firms are likely to have a harder time attracting and retaining workers or will have to raise pay even more. [6]

There were 364,000 job openings in construction, not seasonally adjusted, at the end of February, a jump of 125,000 (52%) from February 2021, BLS reported on Tuesday (Mar 31) in its latest Job Openings and Labor Turnover Survey (JOLTS) release. That was the largest February total, by far, in the 22-year history of the series.... The excess of openings over hires implies the industry would have hired at least twice as many workers if they had been available. [7]

"Interestingly, the unemployment rate for construction workers is well above the economy-wide rate," said Basu. "This is at odds with the notion of a severe worker shortage facing construction. The issue relates to skill sets. While many refer to the current circumstances as a labor or worker shortage, it is perhaps more properly characterized as a skills shortage." [8] 🞧

THE MARKET'S MESSAGE

Despite record growth in the number of construction jobs filled, the industry continues to be severely understaffed. Even record construction wage increases can't seem to keep up with demand. Contractors will have to get creative to attract and retain the right kind of construction skills.

SOURCES

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Forecasts and Confidence

"It may seem naive given current data readings, but the expectation remains that, at some point later this year, construction materials prices will moderate." said Basu. "As the pandemic fades, supply chains will become more orderly. There are already indications that shipping costs are headed lower, and contractors remain optimistic, according to ABC's Construction Confidence Index. Undoubtedly, some project owners will choose to postpone start dates in the hope of securing lower bids during the months ahead. The question is how many months they will need to wait." [1] 🕔

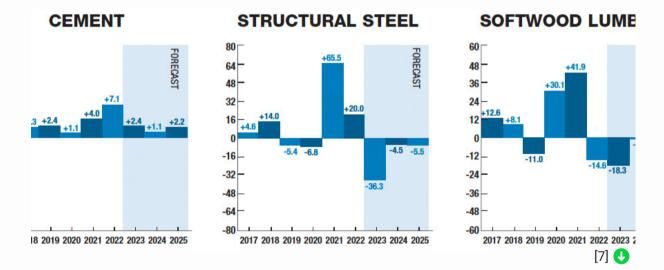
Commodity prices will come down before the end of 2022 but supply chain issues will persist for years and a recession is on the horizon in 2023, a leading construction economist predicted. [2] 🚺

The silver lining of the outlook came from commodity futures. Basy said projected economic weakness in China, paired with decreased commodities futures pricing due to anticipated interest rate hikes, likely mean some relief is in sight, "For many of these other commodities, like steel, I think these prices are going to fall significantly later this year," Basu said. In other words, for construction, right now is no time to buy. At least not vet. [3] 🚺

Nonetheless, construction confidence indicators continue to improve. Collectively, contractors expect sales and employment to expand over the next six months. But what is far more remarkable is the expectation that profit margins will expand, indicating that demand for construction services remains elevated enough to countervail cost increases as we head into the heart of 2022." [4] 🗛

According to a data center report from U.K.- based global real estate and infrastructure consultancy Turner & Townsend. 95% of respondents predict data center construction demand in 2022 will be greater than 2021. [5] 🗛

So it might be that several more months of rapid job growth, and falling unemployment, are pretty much baked into the economy right now. [6] 📀



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[6] Lahart, Justin, "It Will Take a While for Hiring to Get Ground Down," WSJ, Mar 30, 2022, p. B13.
[7] Zevin, Alissa, "Challenges Persist As Construction Starts Grow," ENR First Quarterly Cost Report, Apr 4-11, 2022, p.51.

The recent rise in interest rates could induce certain project owners to move forward with construction work to access affordable investment capital while it remains available. It is also conceivable that at some point private demand for construction services will decline as the cost of capital rises. [8]

"Between April 2021 and December 2021, total state tax revenues increased 26.3% in nominal terms compared to the same period one year earlier, Lucy Dadayan of the Urban Institute reported on Wednesday.... These gains should enable states to increase funding for construction. [9]

The Architecture Billings Index (ABI), which the American Institute of Architects calls "a leading economic indicator that leads nonresidential construction activity by approximately 9-12 months," edged up to 51.3 in February—the 13th consecutive reading above 50—after holding at 51.0 for two months, the Institute reported on Wednesday (Mar 23). [10]

"It is likely that, as bid prices continue to soar, more project owners will choose to delay project starts. The current state of affairs also creates complications for public agencies considering when to start large-scale infrastructure projects. It is a challenging time to begin such projects, given the workforce (Dodge Construction Network Chief Economist Richard) Branch notes that non-residential building projects are taking roughly six months longer to begin construction than in 2019, which he expects to continue." [11]

"I wish my crystal ball were clear enough to predict when this would be over, but if I've learned anything from this period, it's that there always seems to be something on the horizon that keeps us from getting back to so-called normal," Simonson said. [12] ③

"Even if COVID went away tomorrow and the Russia-Ukraine war ended, these supply chain troubles last into 2023 and in some cases 2024," he (Basu) said. "It takes a long time to build capacity." [13]

Terminal operators at the ports of Los Angeles and Long Beach say "containers have been moving more quickly through the ports and on to inland destinations recently," the Wall Street Journal reported today (Mar 11).... Import volumes are expected to pick up over the coming months, however. And operators say many of the underlying supply-chain issues that caused backlogs in 2021 persist. [14]

THE MARKET'S MESSAGE

It's getting harder to tell where we're headed. The potential easing of the supply chain, full state coffers, and the threat of continually rising inputs prices and increased interest rates in the future have contractors confident and owners ready to go ahead with projects now. Workforce shortages, already sky-high materials prices and supply constraints, and an impending recession have owners considering delaying starts until the situation gets clearer.

FINAL THOUGHTS

With all the commotion surrounding supply chain issues and inflation, the construction industry quietly returned to pre-pandemic employment levels. In some ways the recovery is complete, but volume is significantly down from March 2020 levels. While residential employment is well above pre-pandemic levels, non-residential is badly lagging. Still, contractors are able to raise prices and have owners absorb increasing portions of input price hikes. Forecasts have selling prices levelling off with some storm clouds on the horizon for 2023.

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- [11] Zevin.

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