

US Construction Outlook H2 2021

October 2021
Americas Research

Agenda



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01

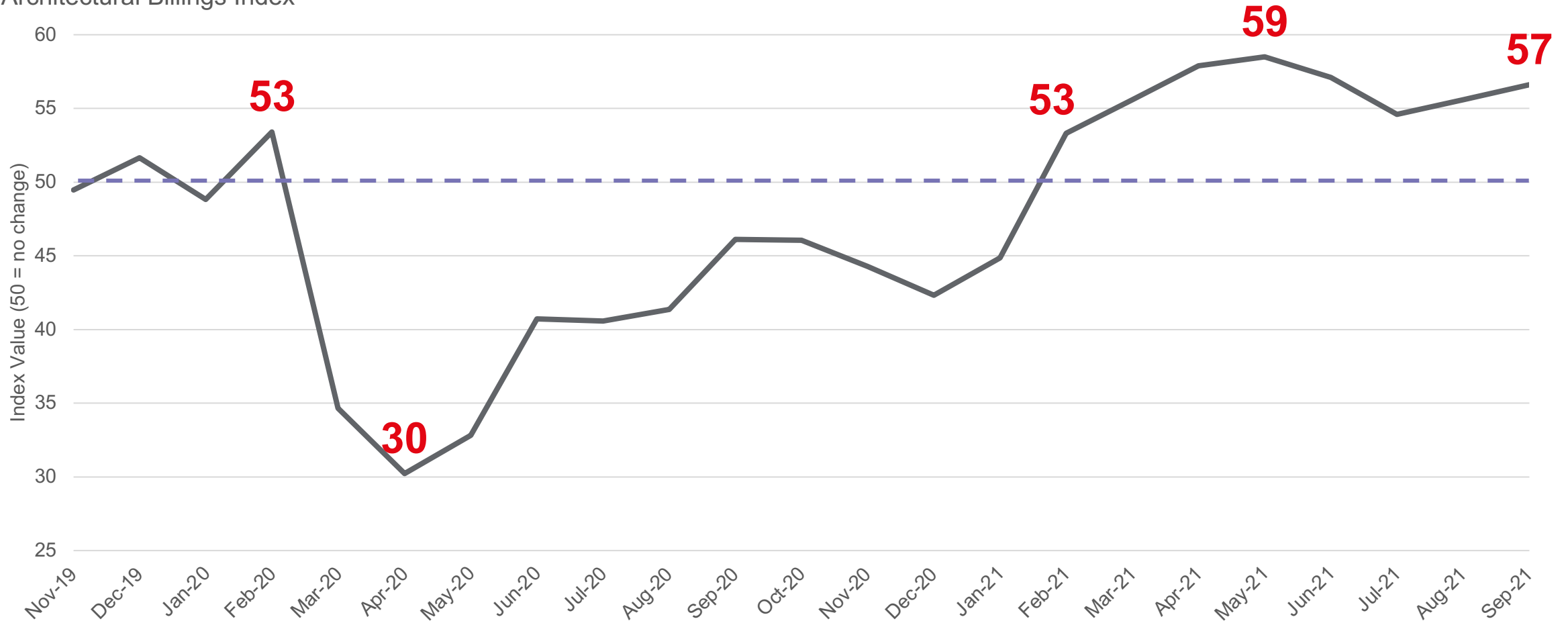
State of the industry



Architectural Billings Index holds steady in high-growth mode after returning to positive territory in February 2021



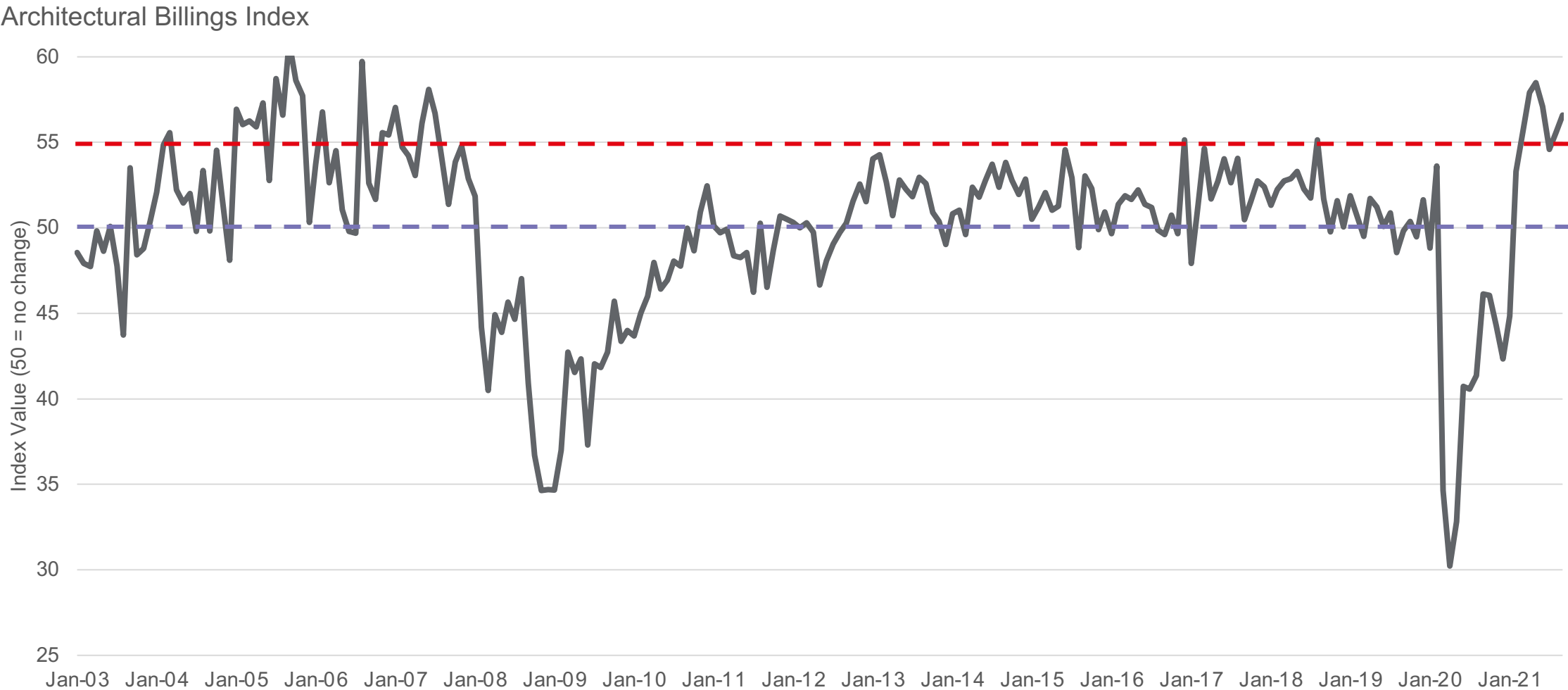
Architectural Billings Index



Source: American Institute of Architects

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Previous six months of Architectural Billings Index have remained at record highs, hitting levels last seen in 2007

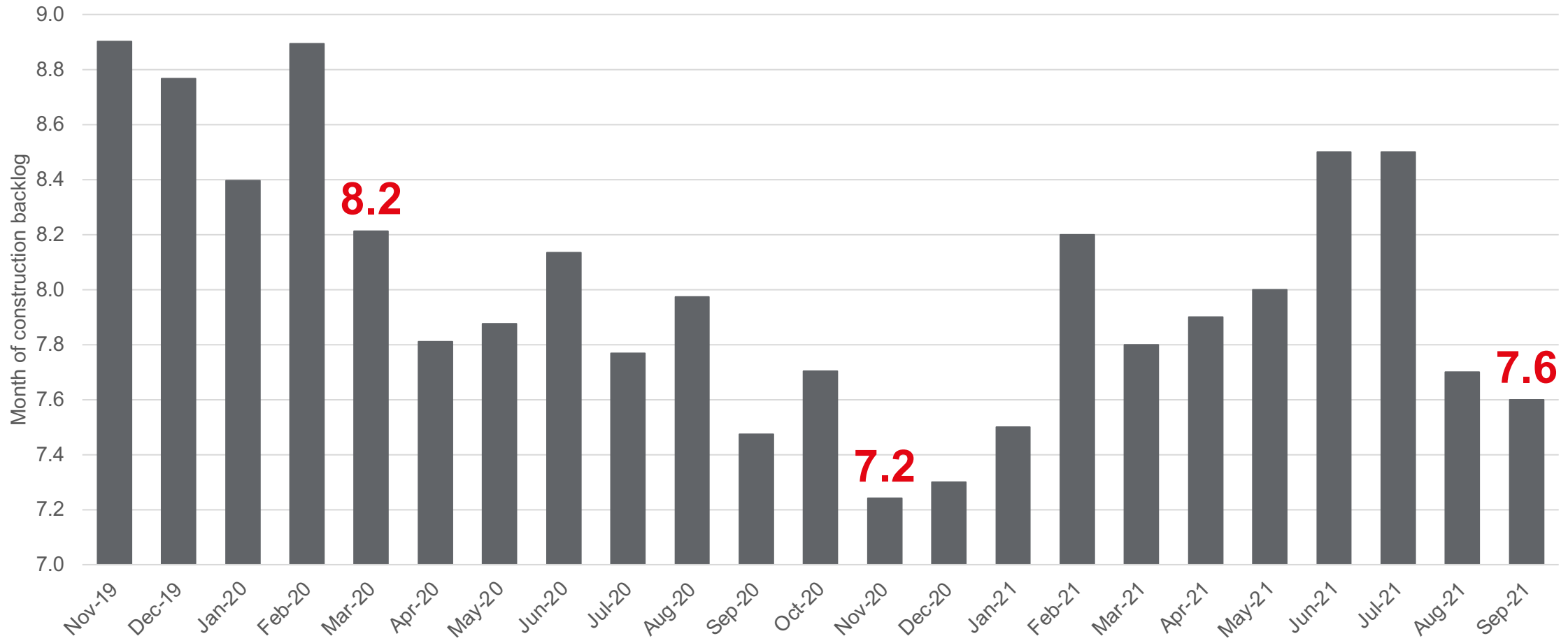


Source: American Institute of Architects
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Growth remains positive but some recovery cool off is evident in Construction Backlog as we move past summer highs



Construction Backlog Indicator



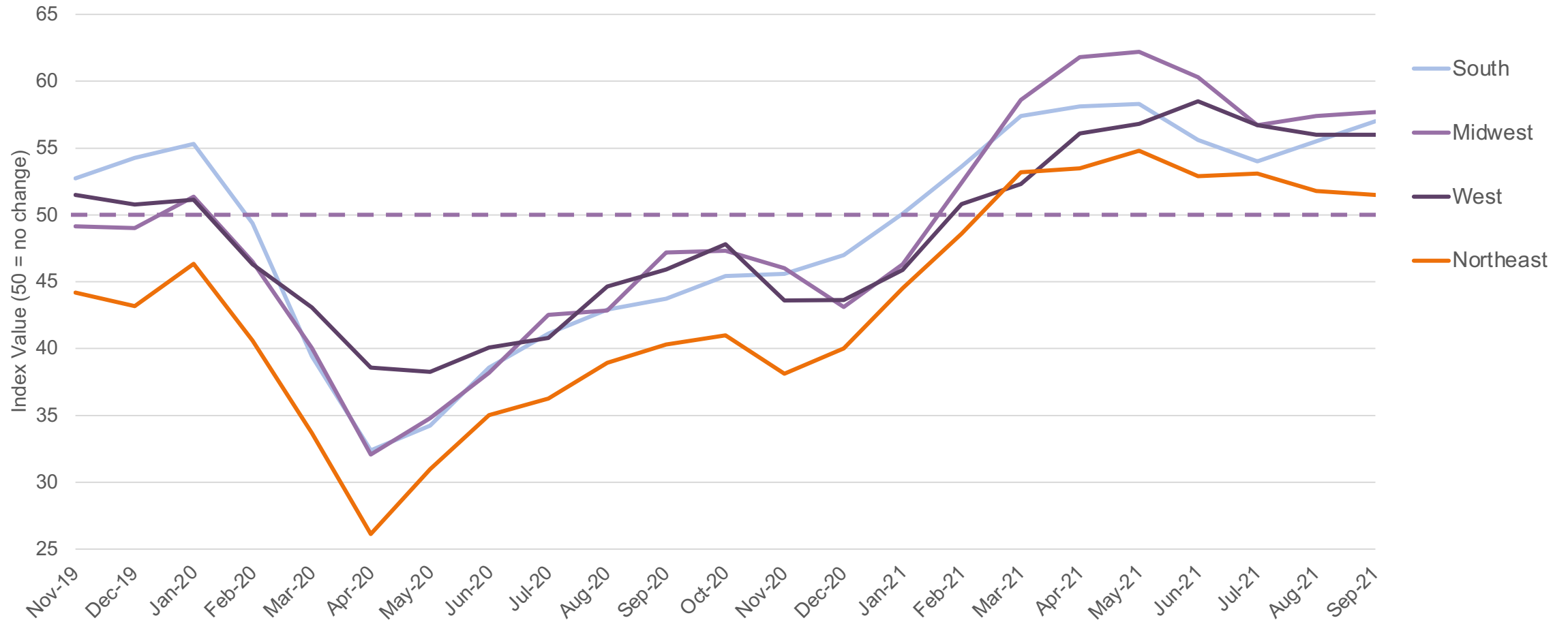
Source: JLL Research, Associated Builders and Contractors

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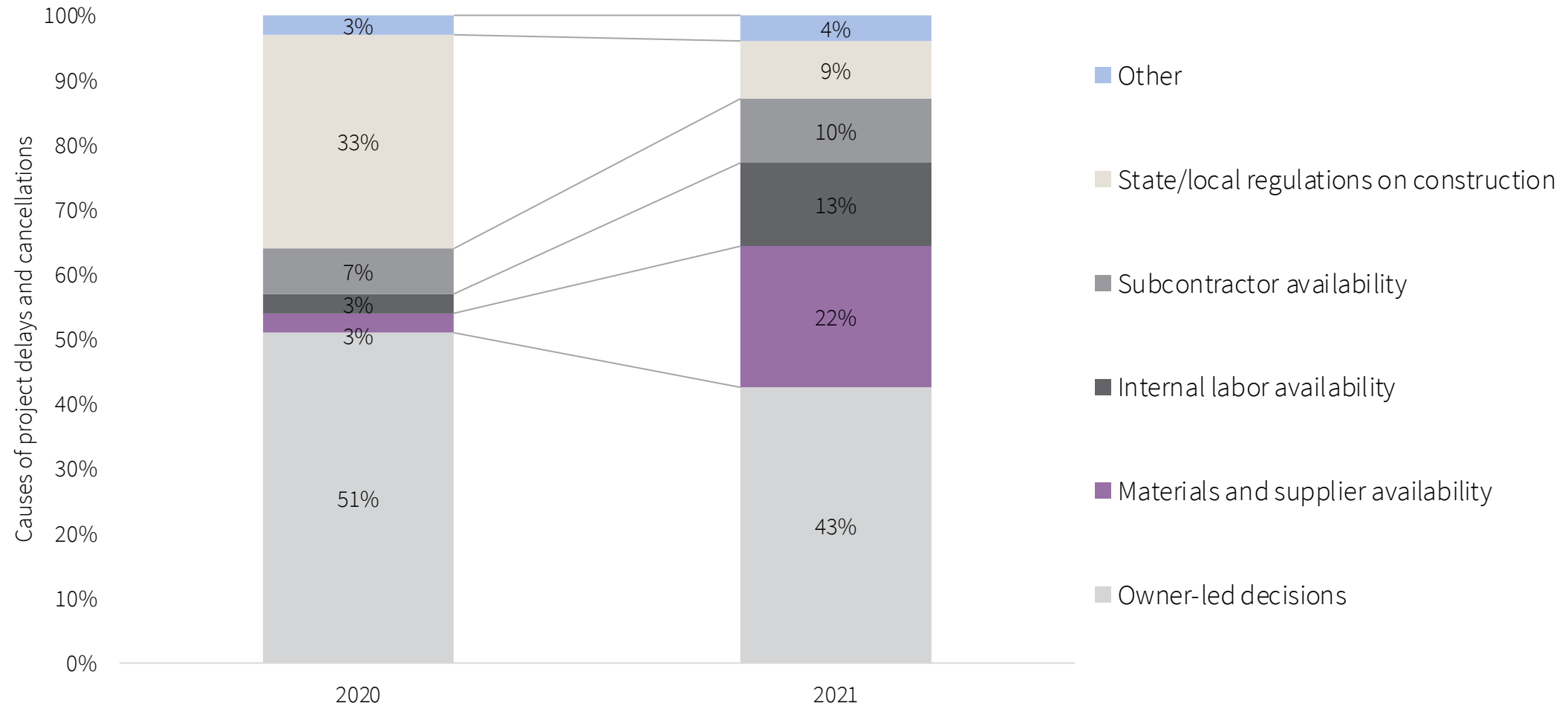
Regional breakdown of Architectural Billings shows a nationwide recovery, with Northeast the only region to consistently lag



Architectural Billings Index

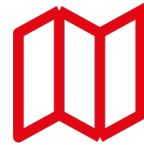


Project challenges diversified in 2021 as regulatory hurdles subsided, labor and material availability emerged as primary issues



Sources: JLL Research, CIRT

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Billings

Architectural billings hold steady as industry records strong close to 2021



Backlog

Early signs of a growth cool off emerge but backlogs stay healthy



Delays

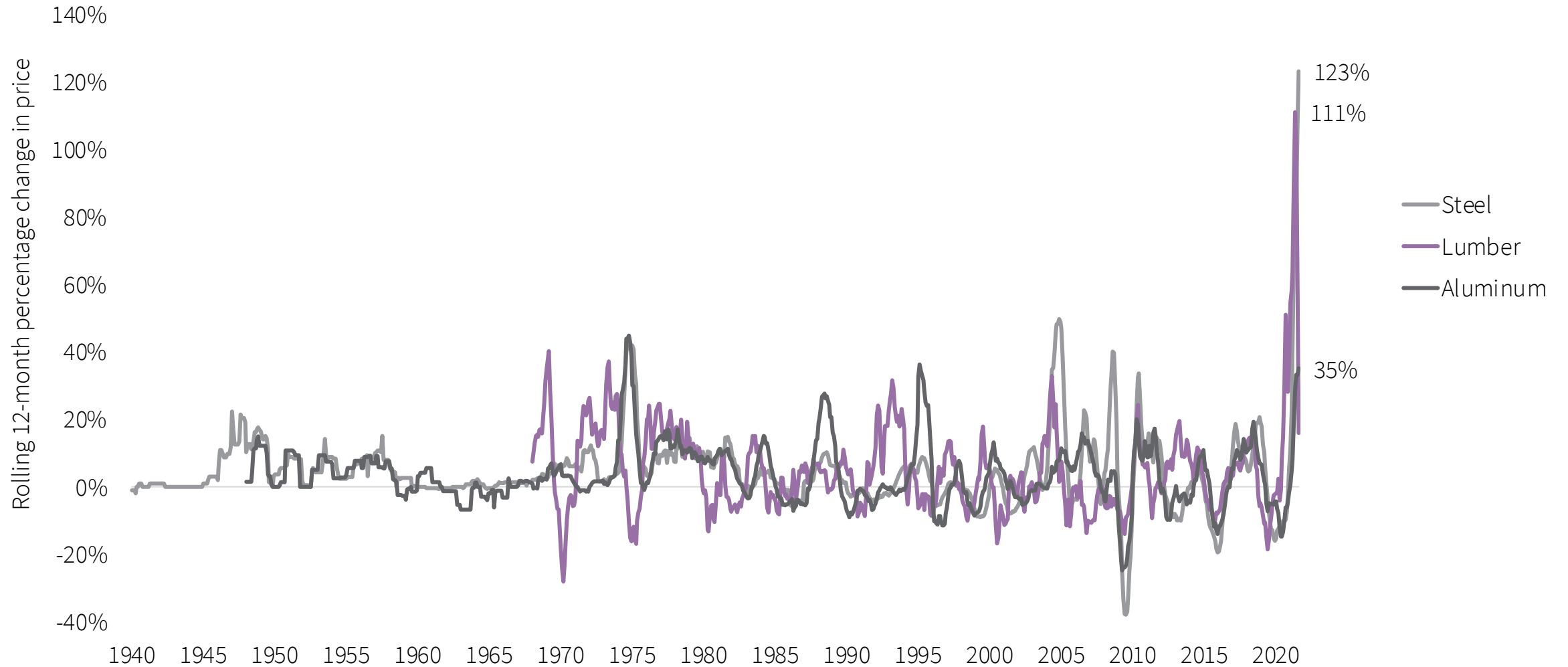
Labor and material shortages emerge as 2021's top cause of delays

02

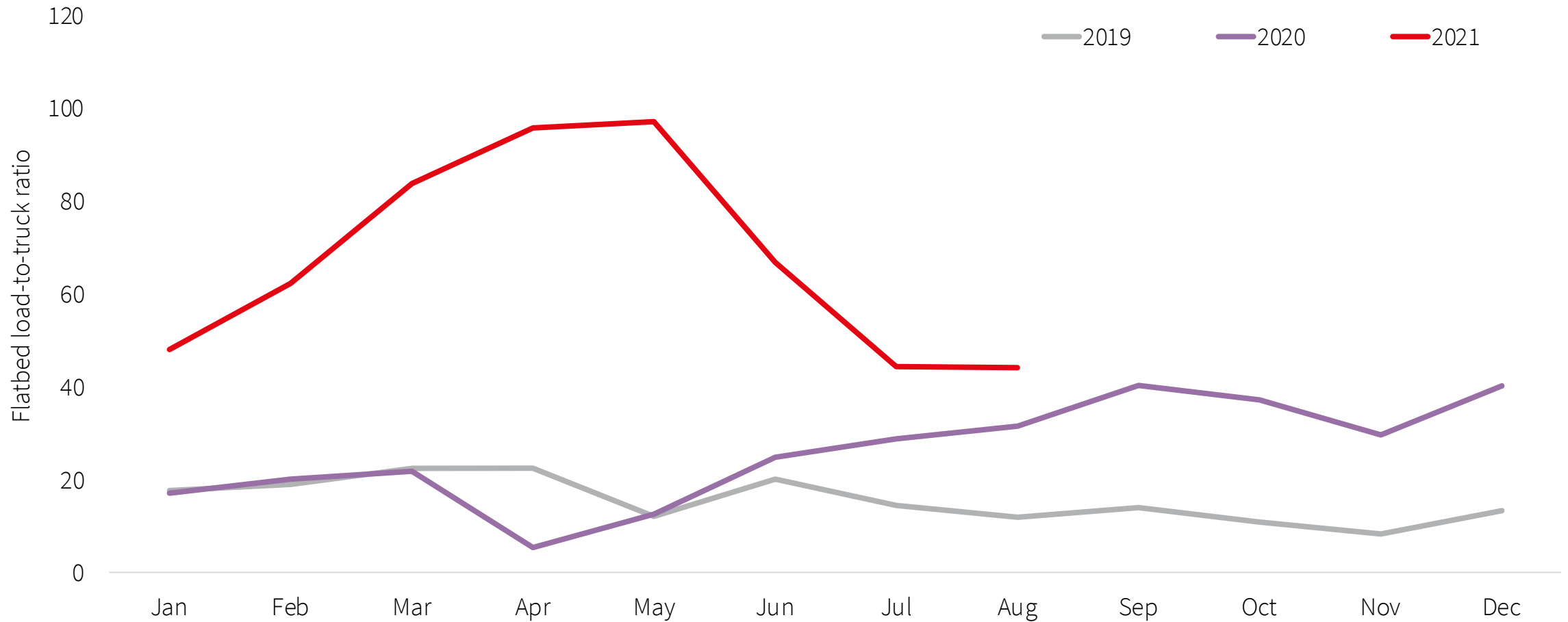
Construction materials



Looking back since WWII reveals how severe and unprecedented the current price spikes are from a historical perspective



Material shortages are one cause of rising prices, but supply chain delays and backups are even more volatile this year



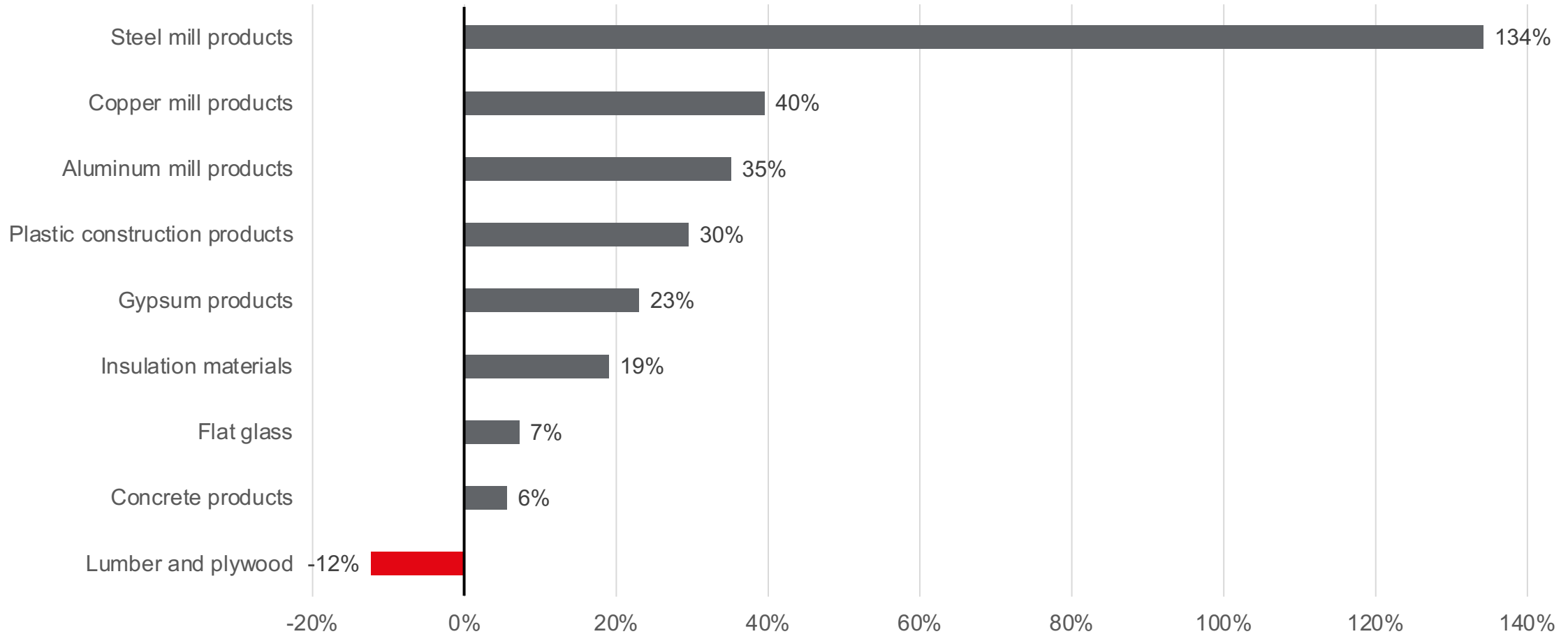
Source: DAT Freight and Analytics

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Steel price jump is attention grabbing, but greater issue rearing up is that even non-volatile materials are up 6% to 23%



Construction commodity price change, Sept. 2020 to Sept. 2021



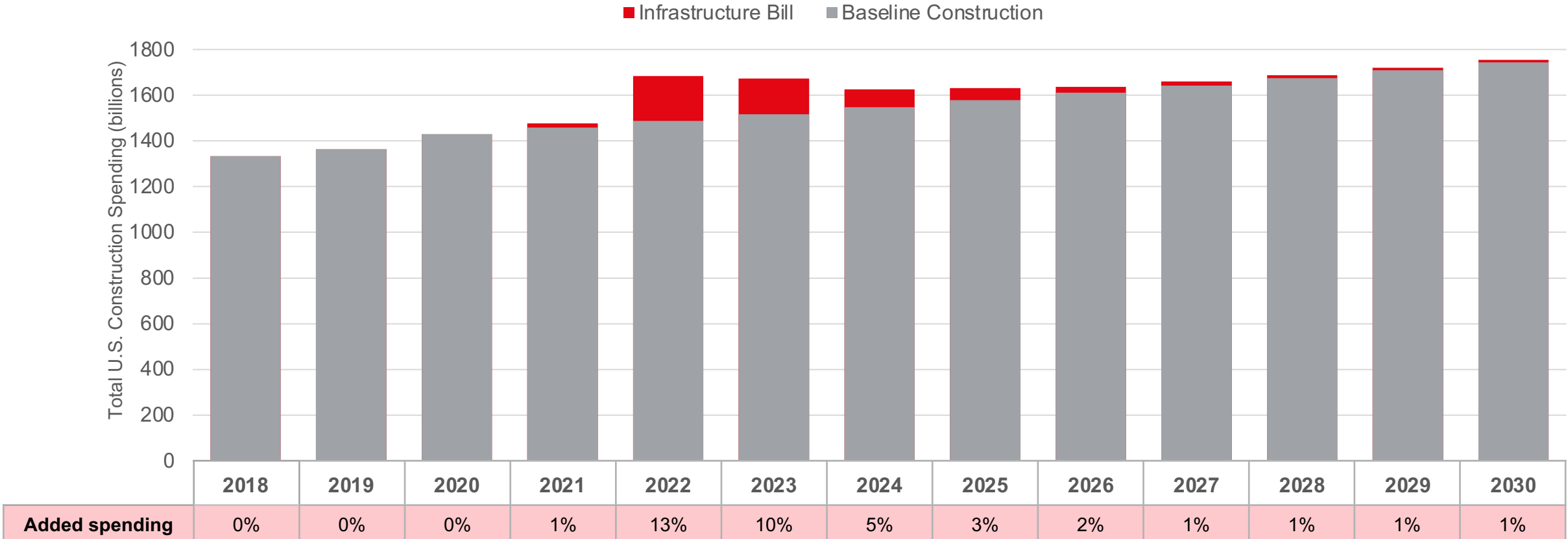
Sources: JLL Research, Bureau of Labor Statistics

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Record infrastructure spending in the current proposal could increase construction demand over 10% for the first two years



U.S. Construction Spending: Baseline + Infrastructure projected, 2018-2030



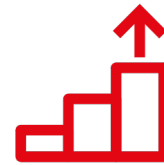
Sources: JLL Research, White House, Congressional Research Service, Census Bureau
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*2021-2030 construction spending forecast at 2% annual growth rate
 Methodology note: AJP and BIF spending forecasts are based on spending velocity of ARRA funds specific to the Dept. of Transportation from 2009-2018. Forecast for AJP and BIF spending assumes similar spending velocity from date of bill passage. Other portions of ARRA funding (Dept. of Education, SSA, Medicaid, etc.) were spent at a similar or faster velocity.



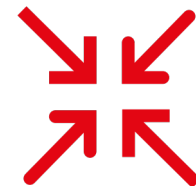
+5-11% *increase*

Average material costs for a typical commercial building project



Broad growth

Unusual macroeconomic dynamics will continue large cost swings



Specific risk

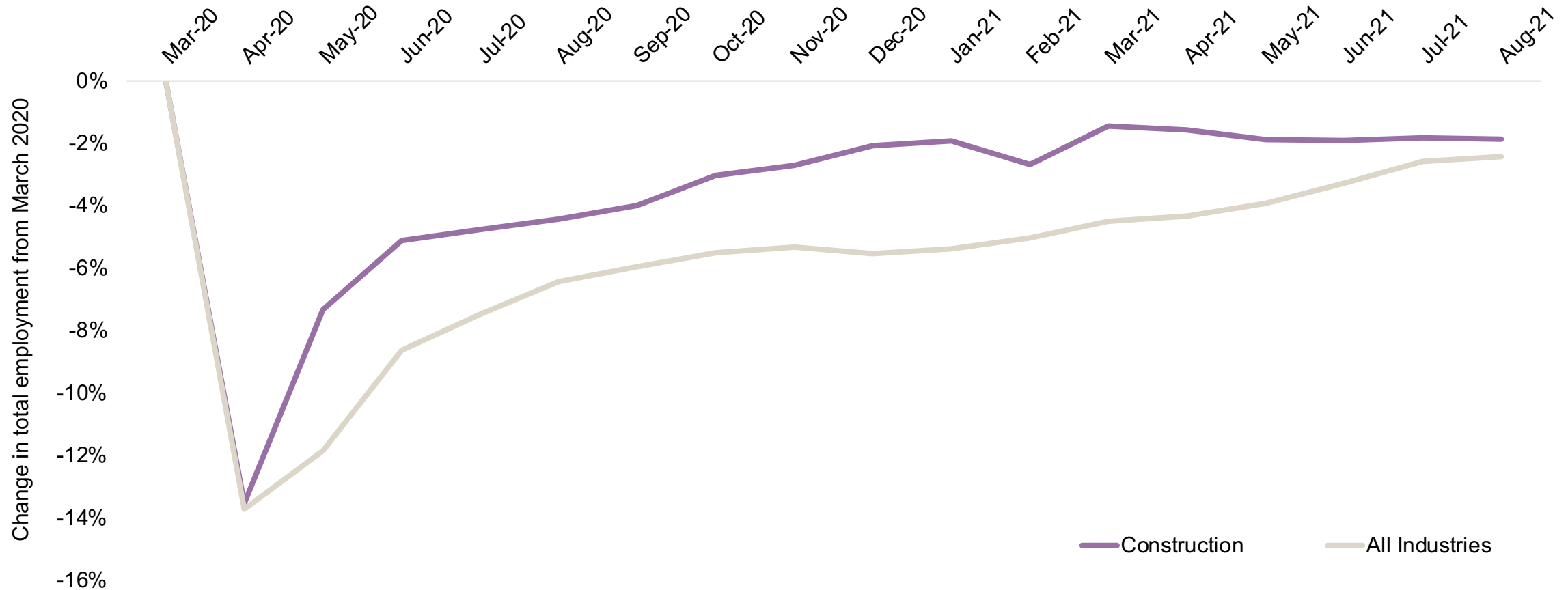
For delays as supply chain challenges continue

03

Construction labor



Total employment in construction bounced back quickly from the pandemic but has stagnated as labor markets across the economy picked up and hiring challenges expanded



Source: JLL Research, Bureau of Labor Statistics

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Two measures of the labor shortage, one from the employee perspective and one from the employer, align on continued shortage



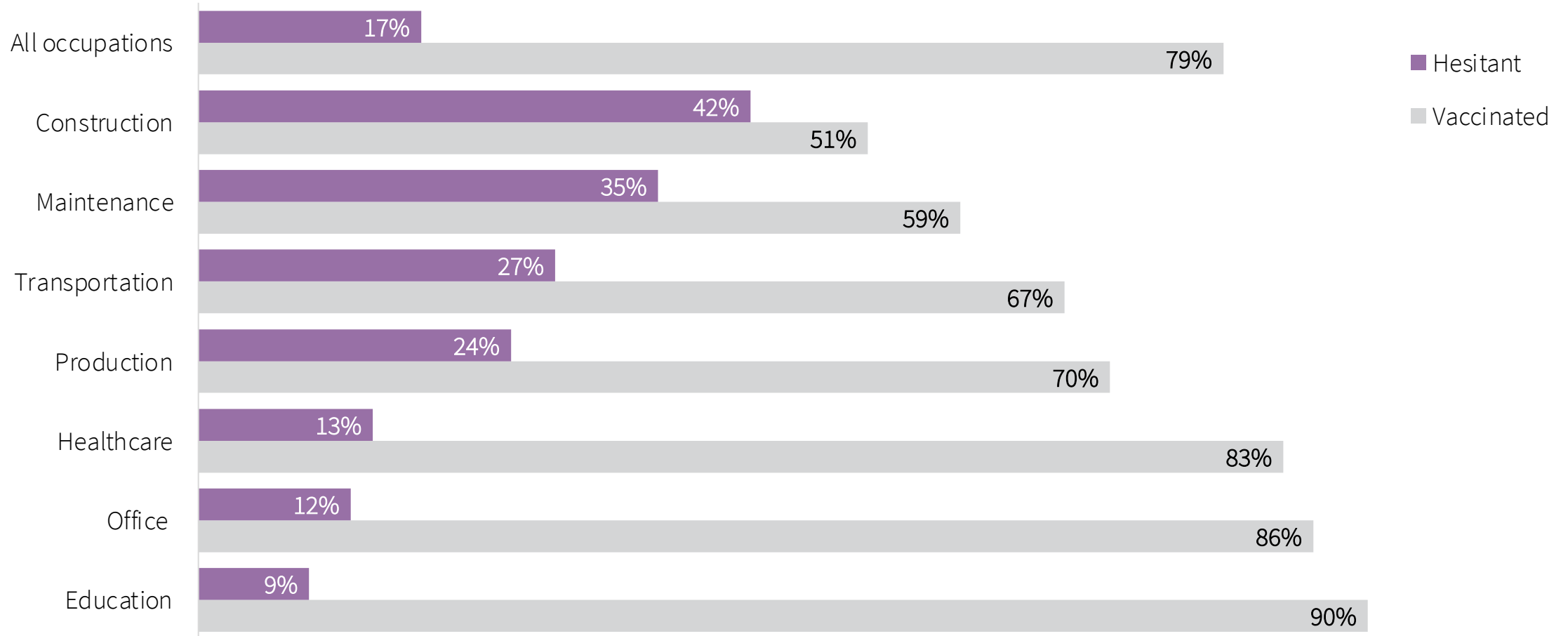
Sources: JLL Research, Bureau of Labor Statistics

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Low vaccination rates and high hesitancy in construction industry only add to labor struggles as we push to move past pandemic



Vaccination rates and hesitancy by industry, Summer 2021



Source: Carnegie Mellon University

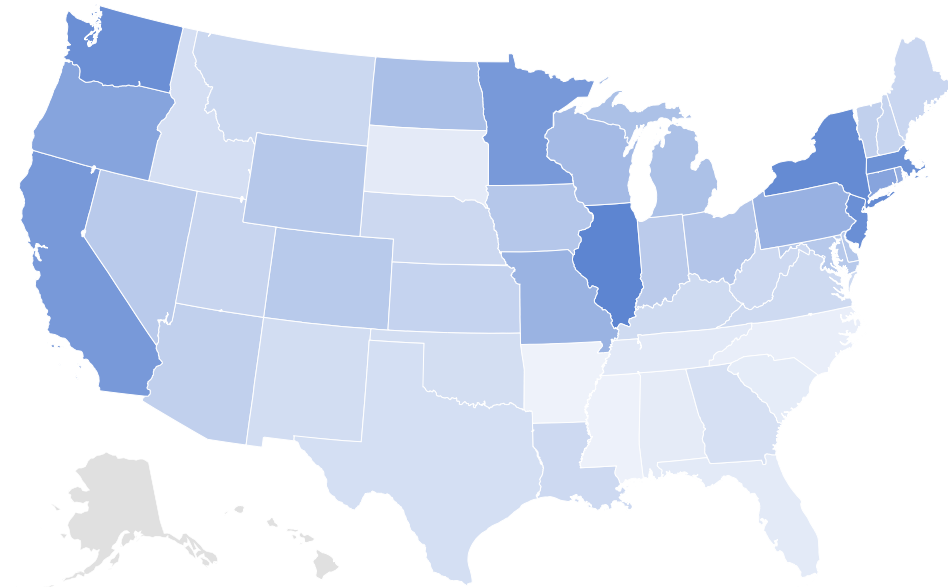
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Current wage differences reflect cost of living, but wage growth over the past five years has been higher in lower wages states



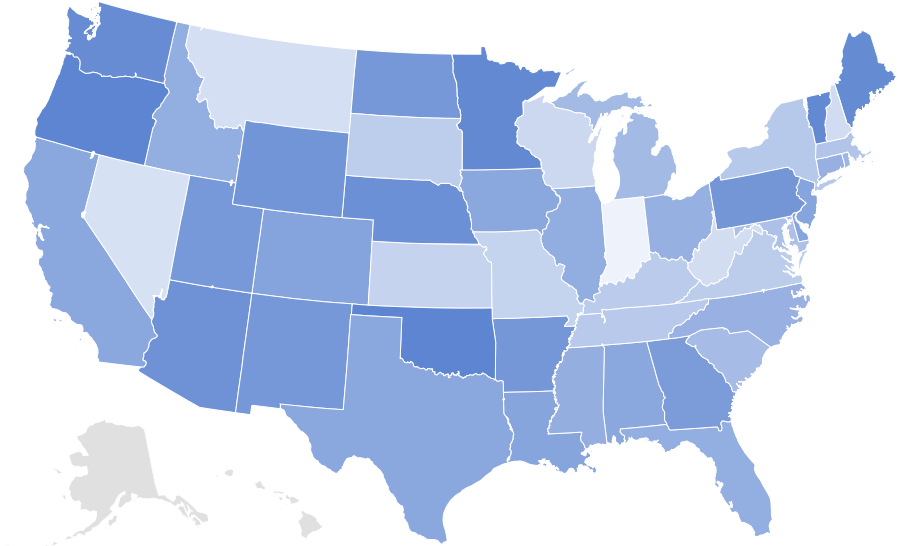
Average construction salary by state, 2020

Average salary, 2020



Change in average construction salary by state, 2015 to 2020

Increase 2015 to 2020



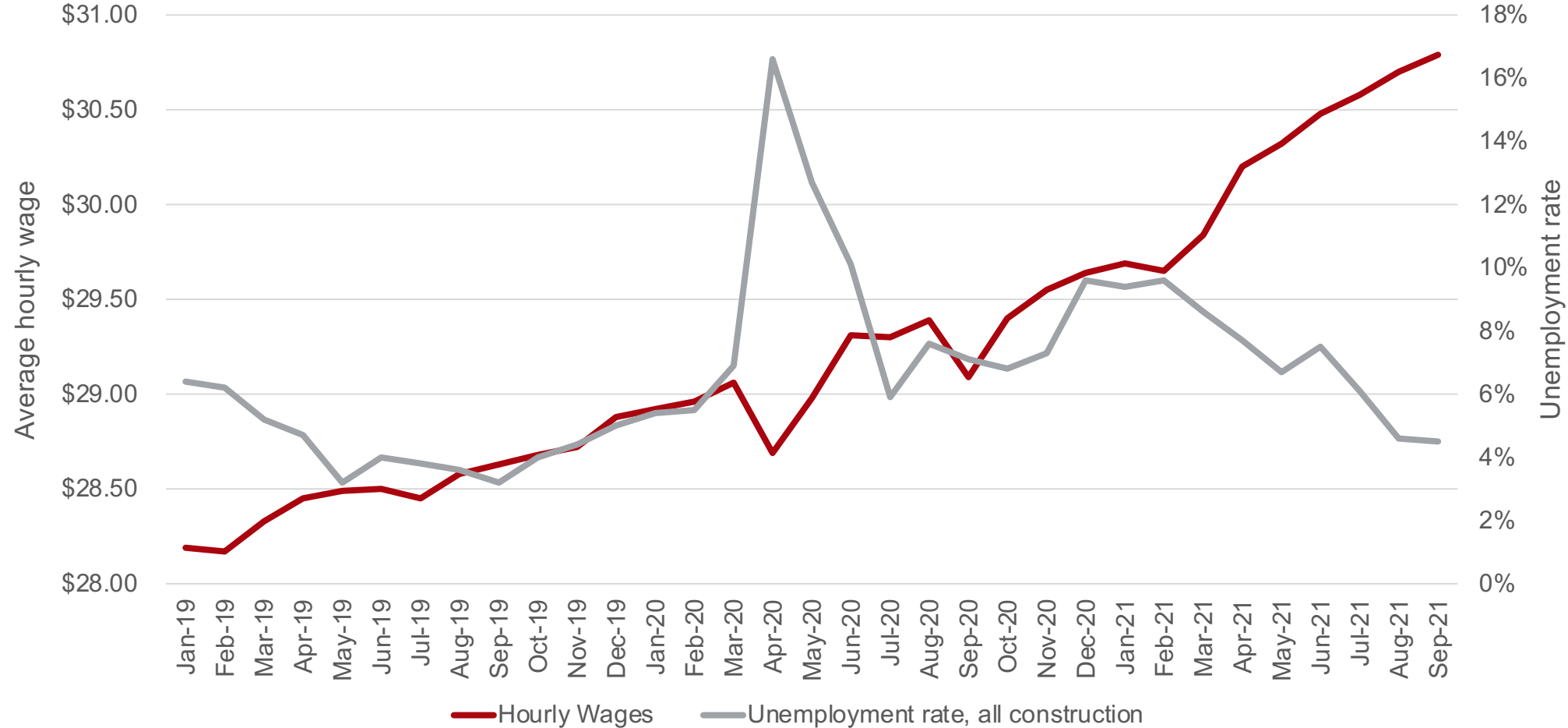
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Escalated wage growth which kicked into high gear in March 2021 has continued unabated for the past six months



Construction wages and unemployment, U.S.



Source: JLL Research, Bureau of Labor Statistics

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+3-6% *increase*

In average labor costs for a typical commercial building project



Operations relief

Relaxation of safety protocols will ease operational burden



Shortage continues

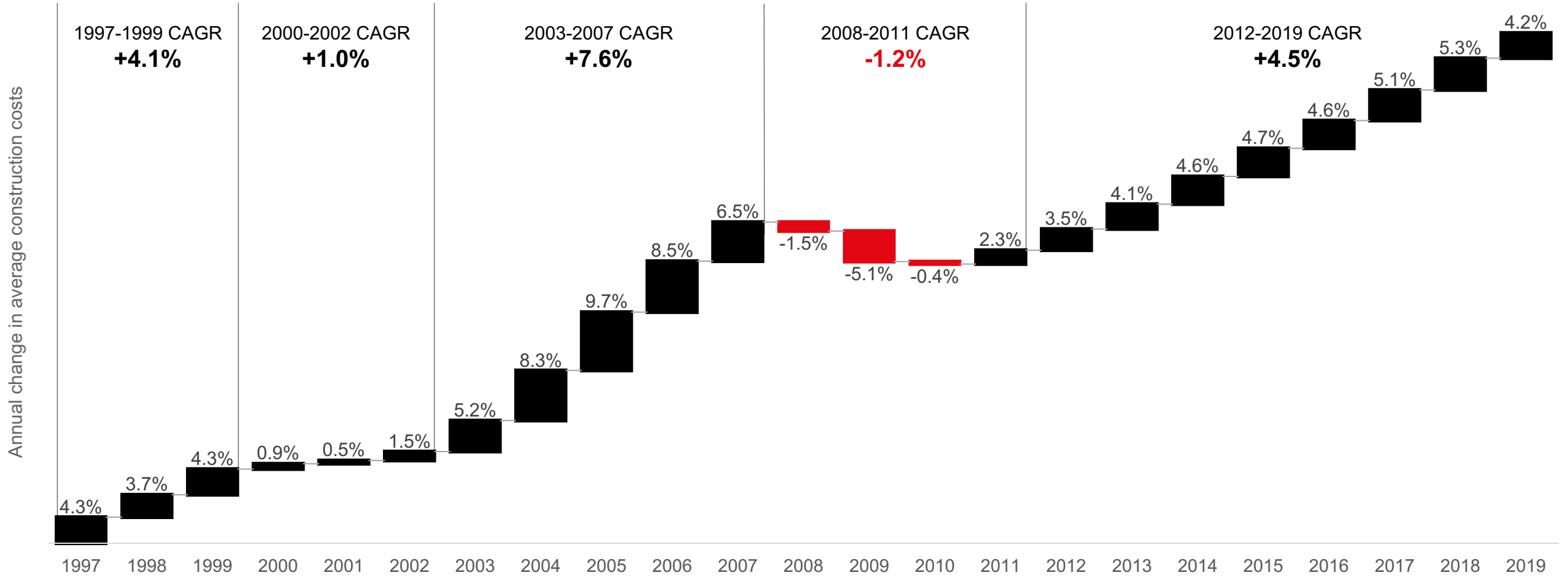
No end in sight for skilled labor shortage as competition picks up in all sectors of the economy

04

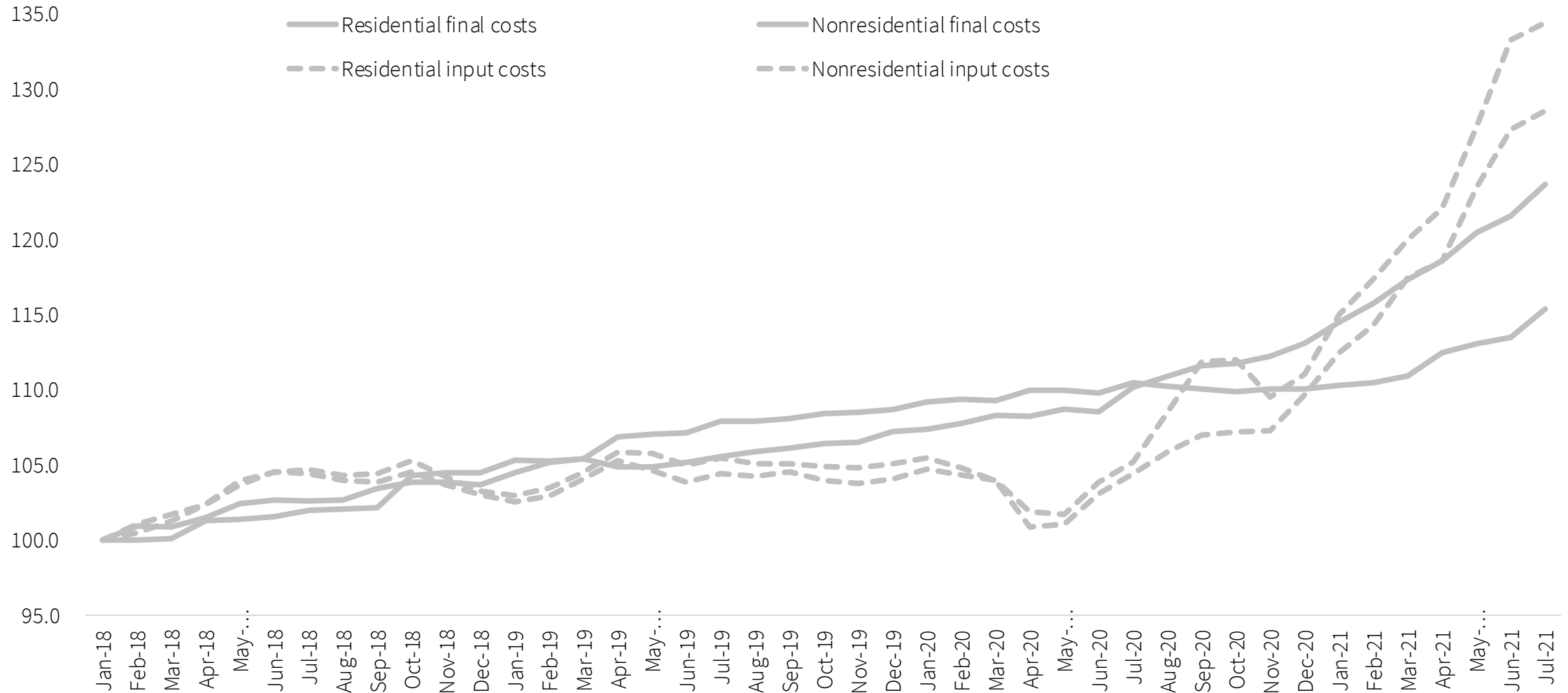
Total cost forecast



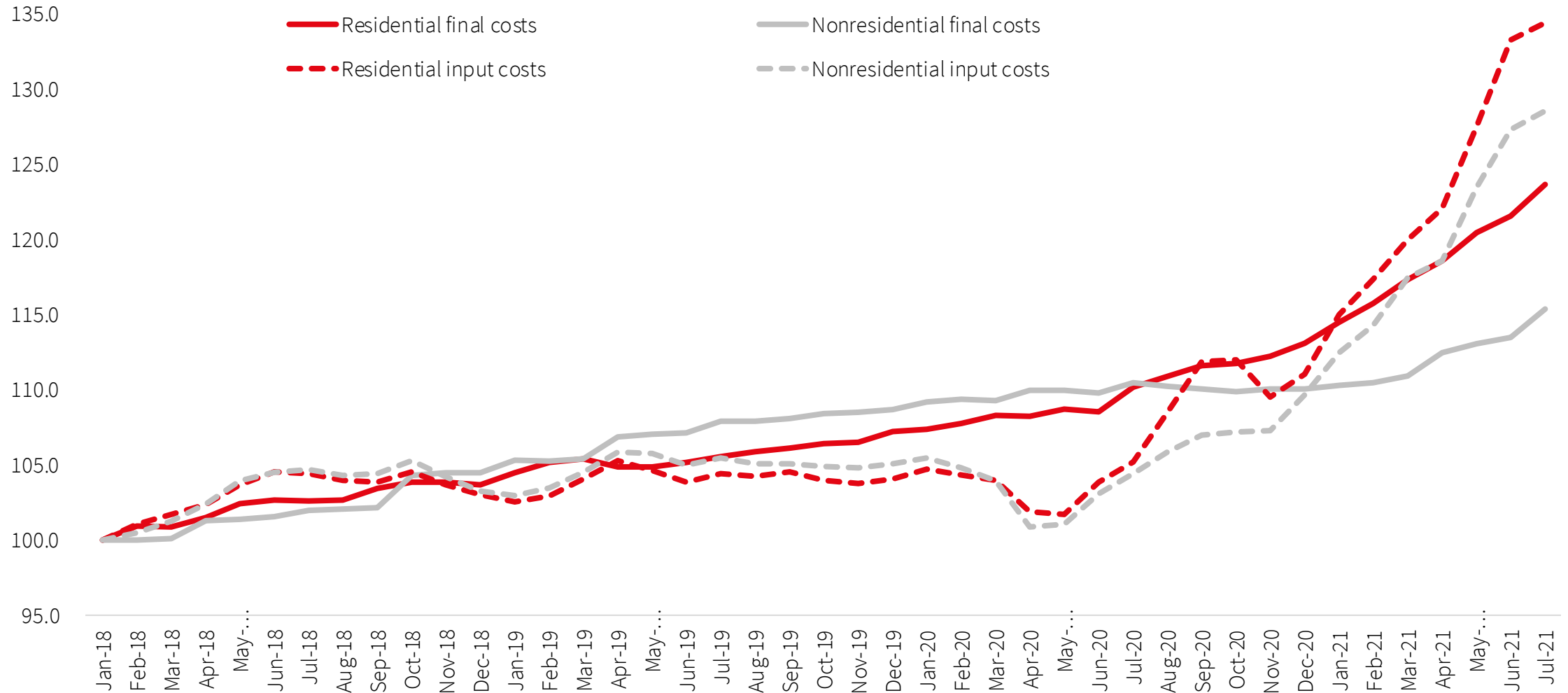
Cycle of construction costs over the past 24 years



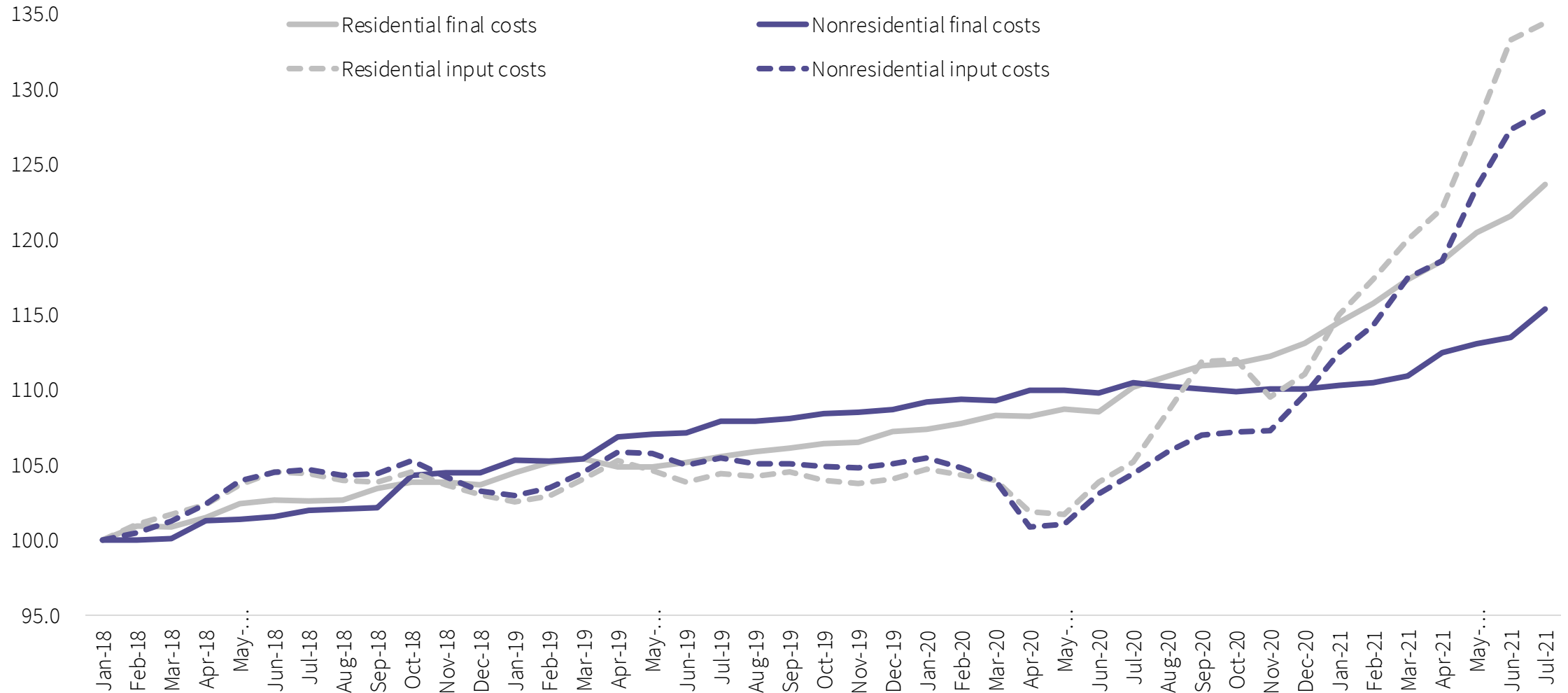
With labor and material costs on the rise, the gap between input prices and final prices may be reaching unsustainable levels



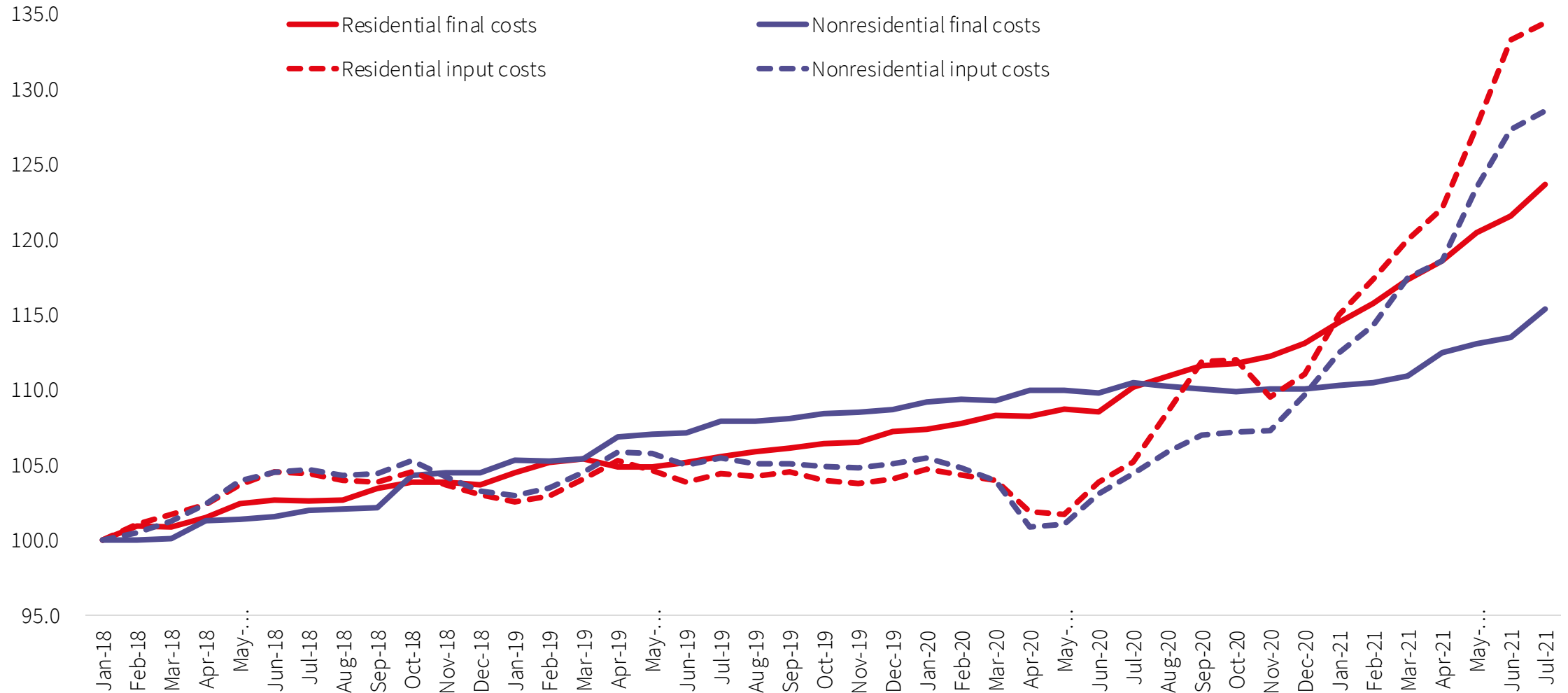
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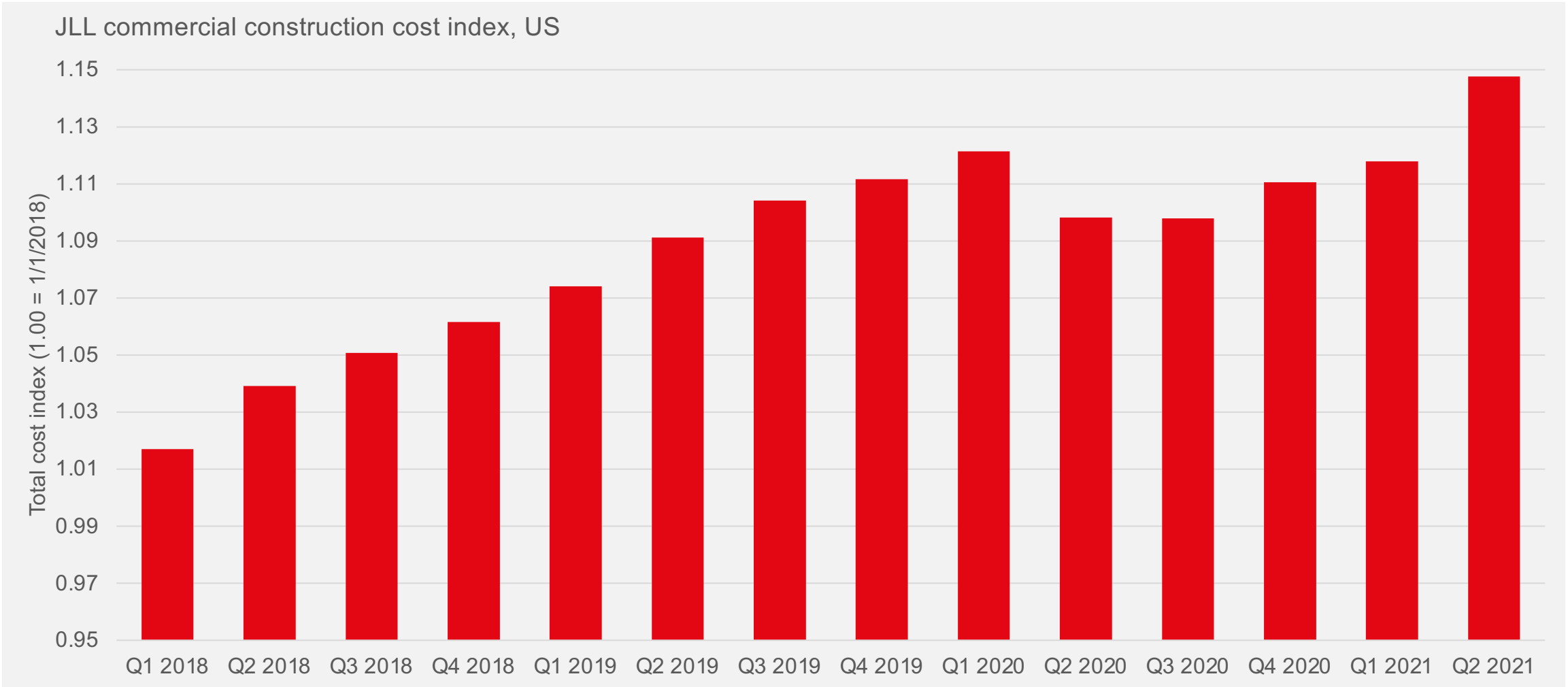
With labor and material costs on the rise, the gap between input prices and final prices may be reaching unsustainable levels



With labor and material costs on the rise, the gap between input prices and final prices may be reaching unsustainable levels



National construction cost index kicks into high gear in Q2 as costs start to be passed on to owners



Source: JLL Research, Bureau of Labor Statistics, IHS Markit

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Comprehensive cost forecast for the next 12 months calls for elevated cost increases with materials as primary driver



+4-7%

Total construction costs

+5-11%

Construction material costs

+3-6%

Construction labor costs

Thank you

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