

Are we in a Recession? Vermeulens Market Update

August 12, 2022

Presenter

→ Blair Tennant, Principal, Vermeulens

Macro to Micro Update, Vermeulens

- we are in a theoretical recession (based on two quarters of decline in GDP)
- NYSE reveals a 15% decline
- oddly there are currently more jobs in the economy
- large "tapering" aka decline in reserve assets to combat hyperinflation
- historically it takes 4-5 Quarters for construction costs to flatten
- commodity prices are coming down due to the increased value of the USD
- futures are showing a decline in the price of structural steel
- overhead and profit is the main driver of the price of steel
- finished product prices continue to skyrocket; we anticipate a reduction soon due to the reduction in demand
- AIA billings are still growing; decline in the northeast
- construction labor continues to grow (32k new jobs in July)
- put in place construction post 2020 is being driven by the residential sector
- carry 6-10% annual escalation to procurement in 2022 and early 2023
- carry 5-15% bidding contingency until volatility reduces to more normal levels
- design add/deduct alternates in the 10% of construction cost range
- prepurchase of long lead times

Round Table Q&A Discussion on the State of the Market

- it could cost more to prepurchase equipment; savings go into purchasing warranty
- discussion on infrastructure spending
- discussions on the impact of commodity pricing
- the mega projects in Houston will have a significant impact on the bidding market



Design and Construction Market Outlook Forum®

Blair Tennant, Principal, Vermeulens

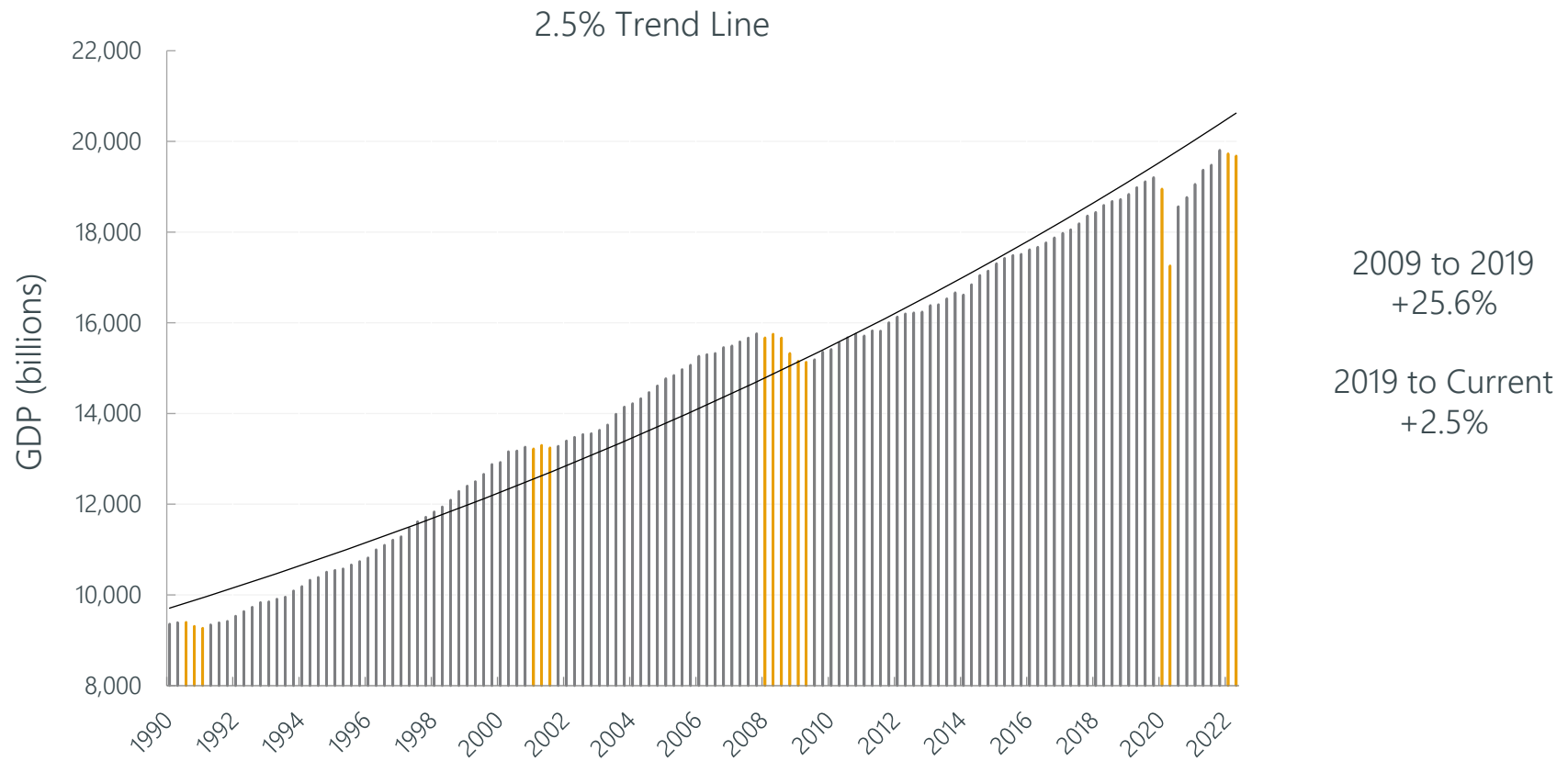
vermeulens.com

✓ construction economists

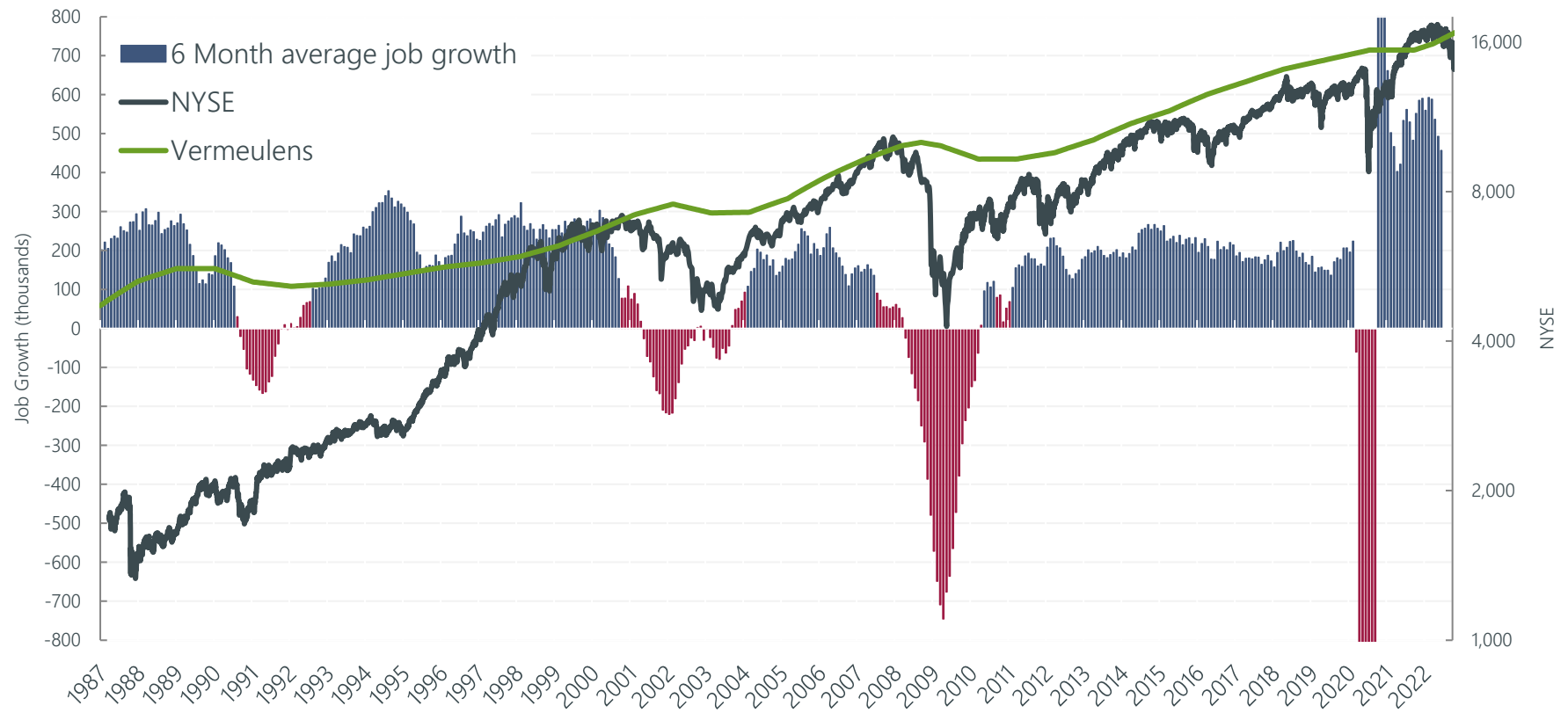
- interim questions and comments via chat
- slide deck, recording, summary notes; available on website
- 2022 forum dates will vary: minimum once per quarter

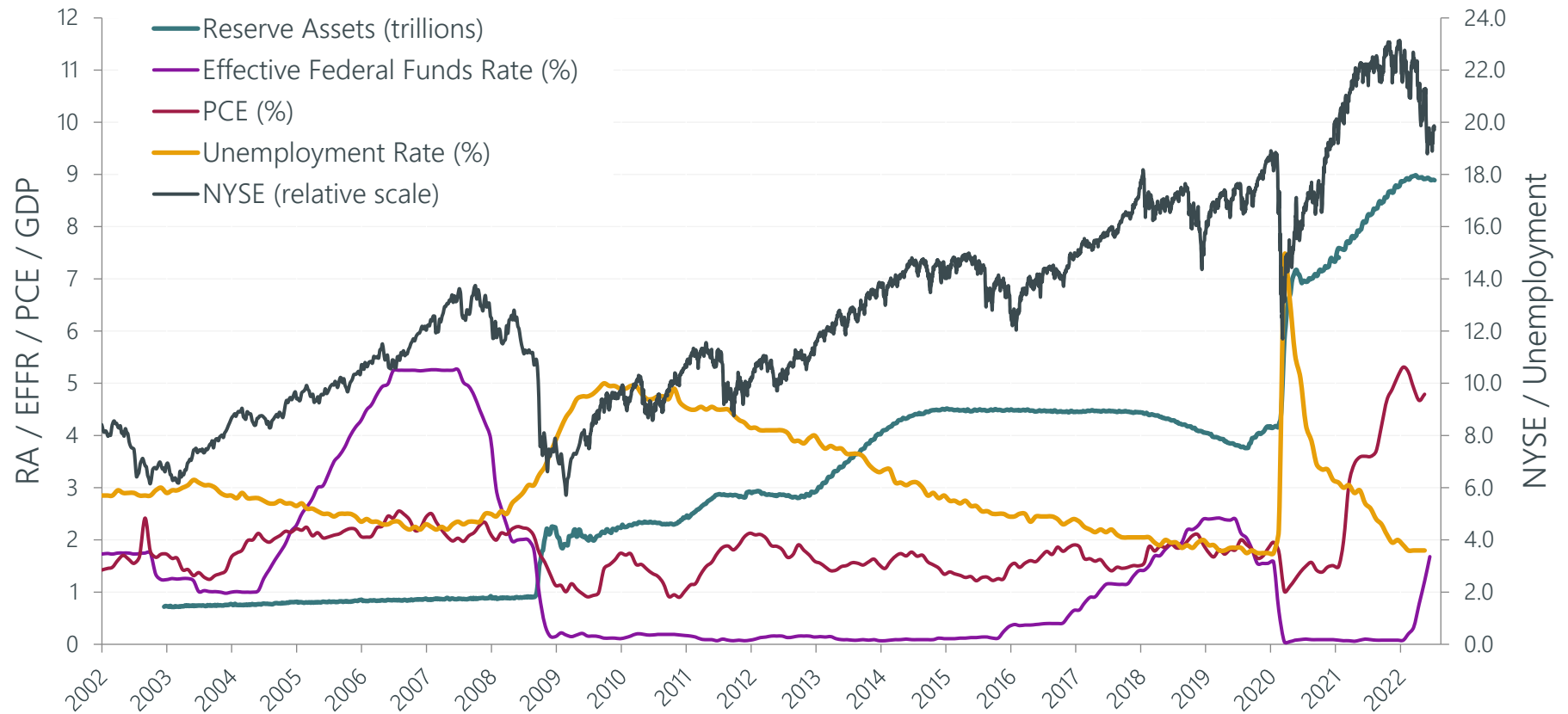
→ Vermeulens Economic Update

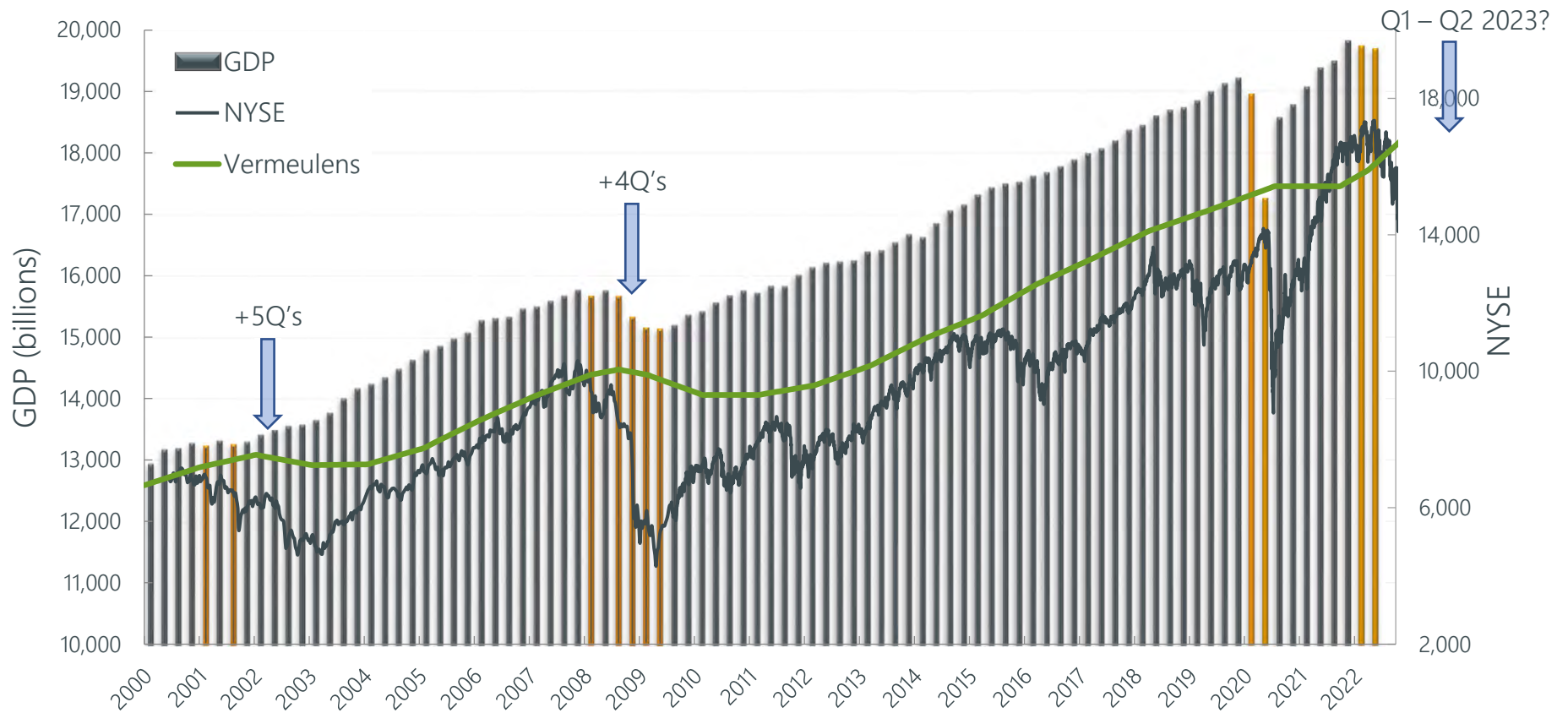
→ Round Table Discussion



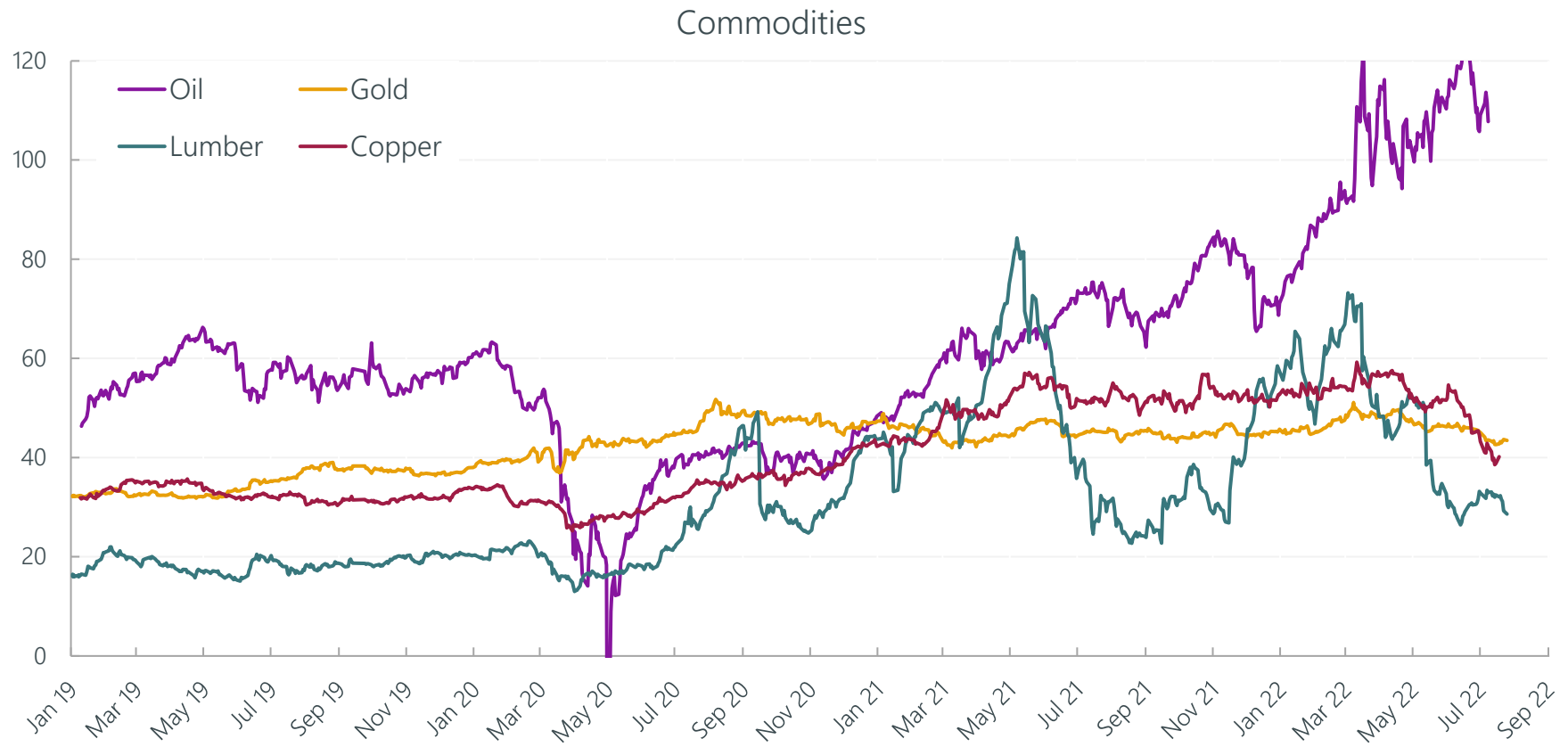


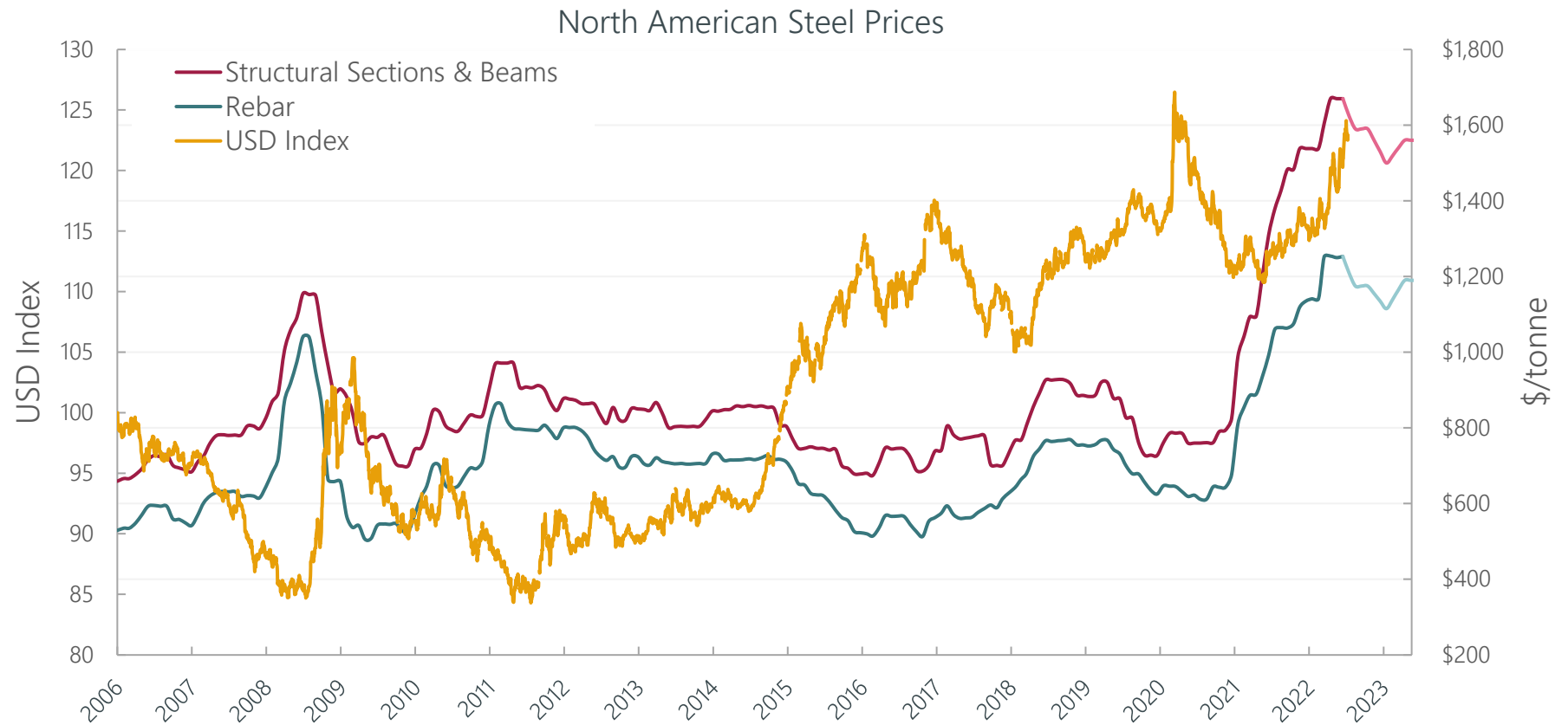


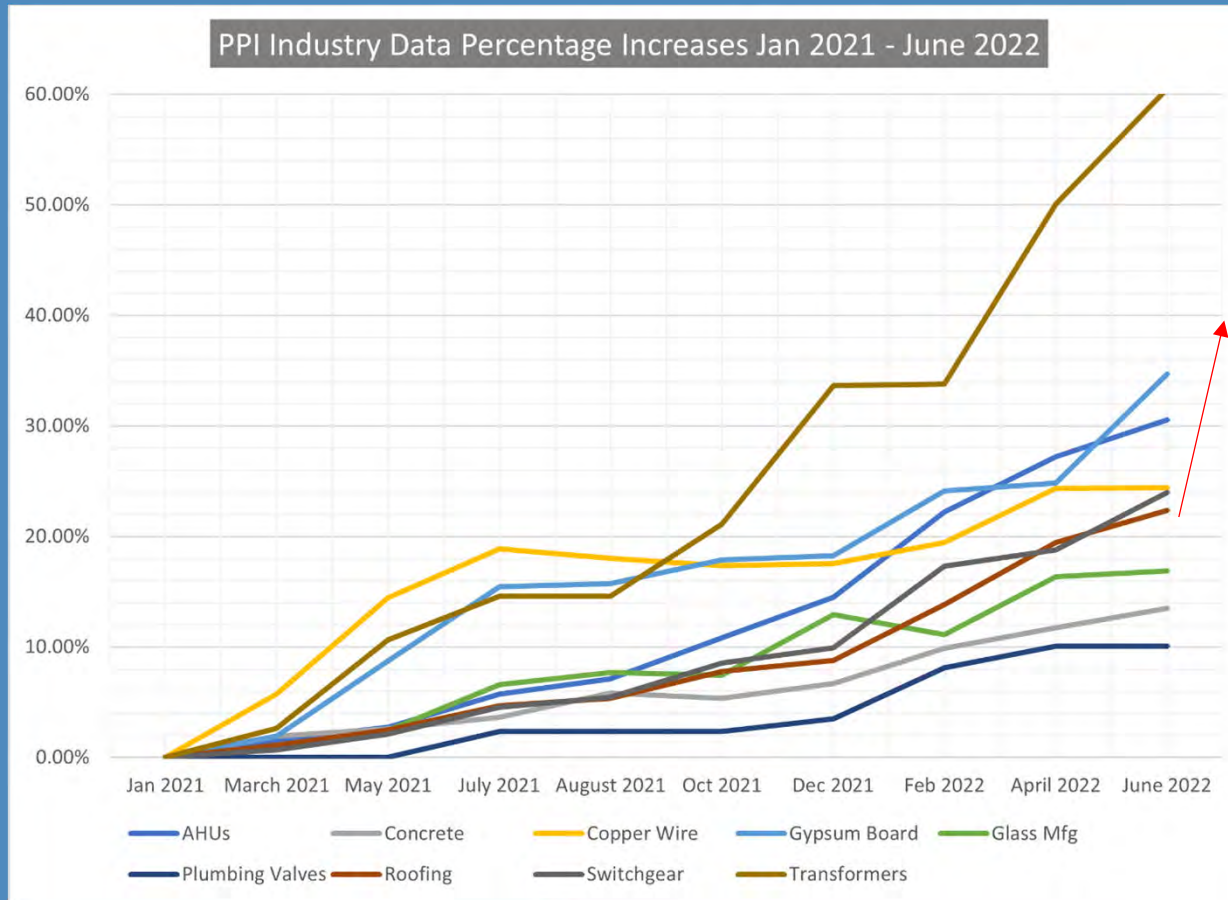




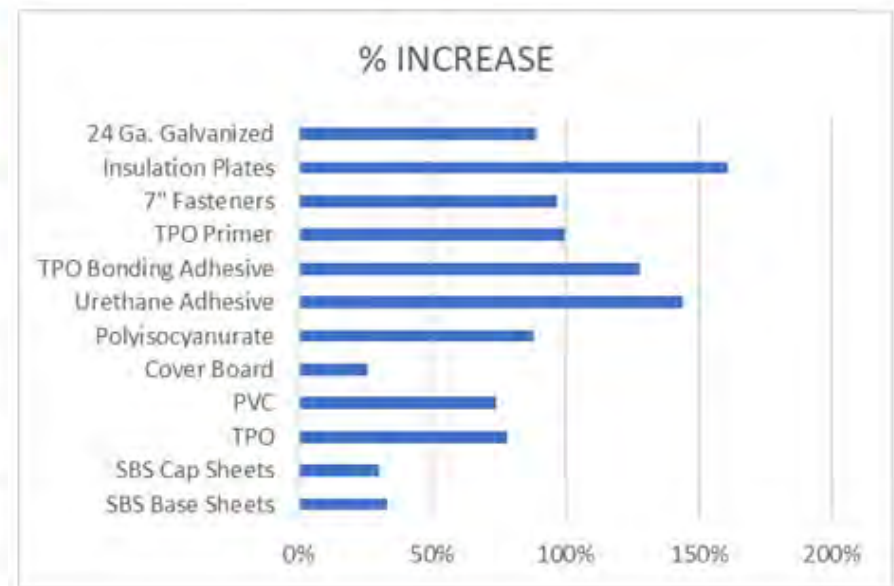






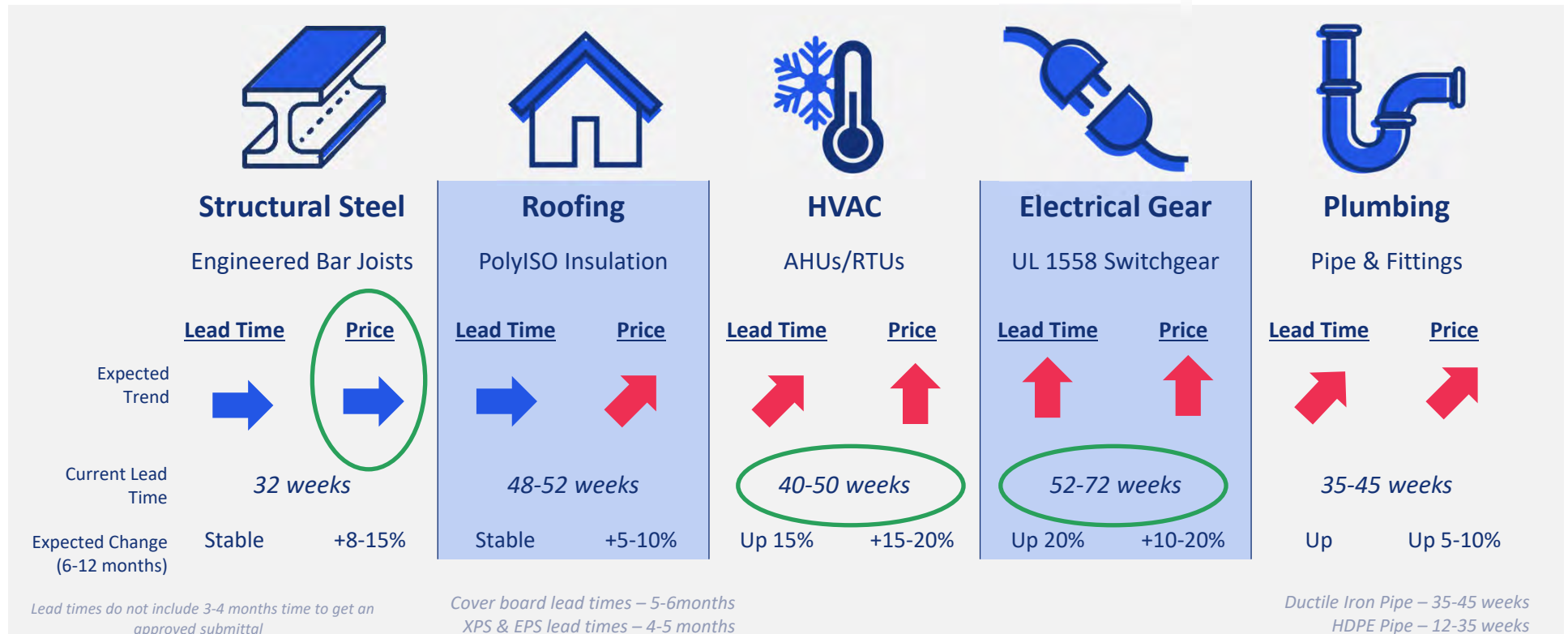


MATERIAL COST INCREASES	
PRODUCT NAME	% INCREASE
SBS Base Sheets	33%
SBS Cap Sheets	30%
TPO	78%
PVC	74%
Cover Board	26%
Polyisocyanurate	88%
Urethane Adhesive	144%
TPO Bonding Adhesive	128%
TPO Primer	100%
7" Fasteners	97%
Insulation Plates	161%
24 Ga. Galvanized	89%



2022 Material and Equipment Supply Chain Outlook

Most Troublesome Categories During 2021 & 2022



SKANSKA

Updated: 7/12/22

MEP Supply Chain Updates

Mechanical

- Trane – Announced 12% increase in January effective April 1st; Announced 18% increase on May 16th, effective May 16th -- 32% YTD
- Daikin – Struggling w/ semiconductor shortage affecting Skanska projects including; Scott's Run, Block 250, WTCC, ZT, Chamberlain (Letter dated June 16th)
- ECMs – Still running 70+ weeks – AHUs using these fans are experiencing the longest lead-times
- VRF – Some components are in short supply, i.e. refnets from Daikin North America
- Ingenia – Continue to struggle with supply chain and factory labor; currently delaying Virginia Hospital Center (VHC) project

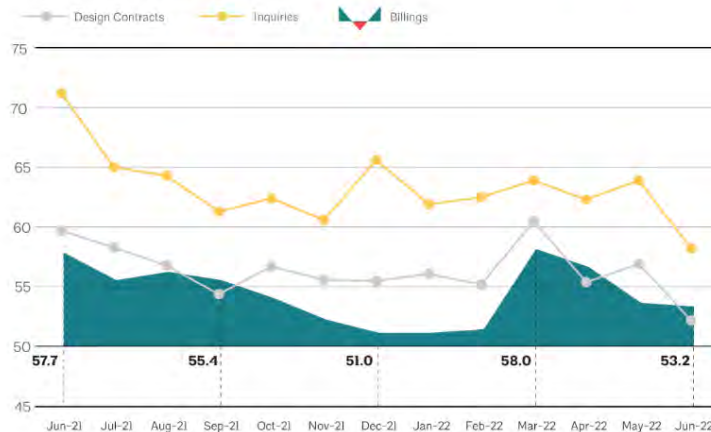
Electrical

- Switchgear – lead-times running as long at 80 weeks. Data center owners are securing capacity through 2025. Price escalation is 15-20% YTD.
- Eaton – are delay delivery of order by 4-6 months in some cases, VHC. Global shortage of circuit breakers due to semiconductor constraints.
- SquareD – Delaying TCCD in Texas 4 months; distribution panel released 9/21, committed 7/22, pushed to 11/22
- Panelboard – lead-time are running 40 weeks+
- ATS – lead-times are 51 weeks+

National

Most architecture firms continue to report billings growth in June

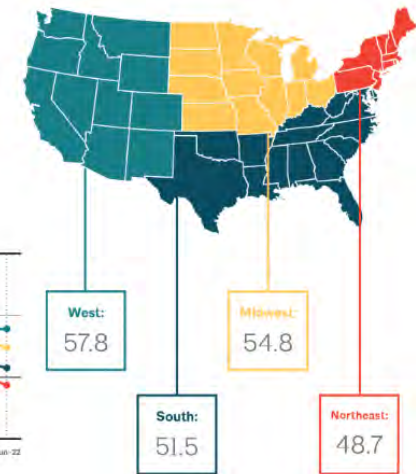
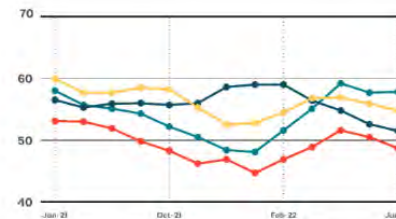
Graphs represent data from June 2021–June 2022.



Regional

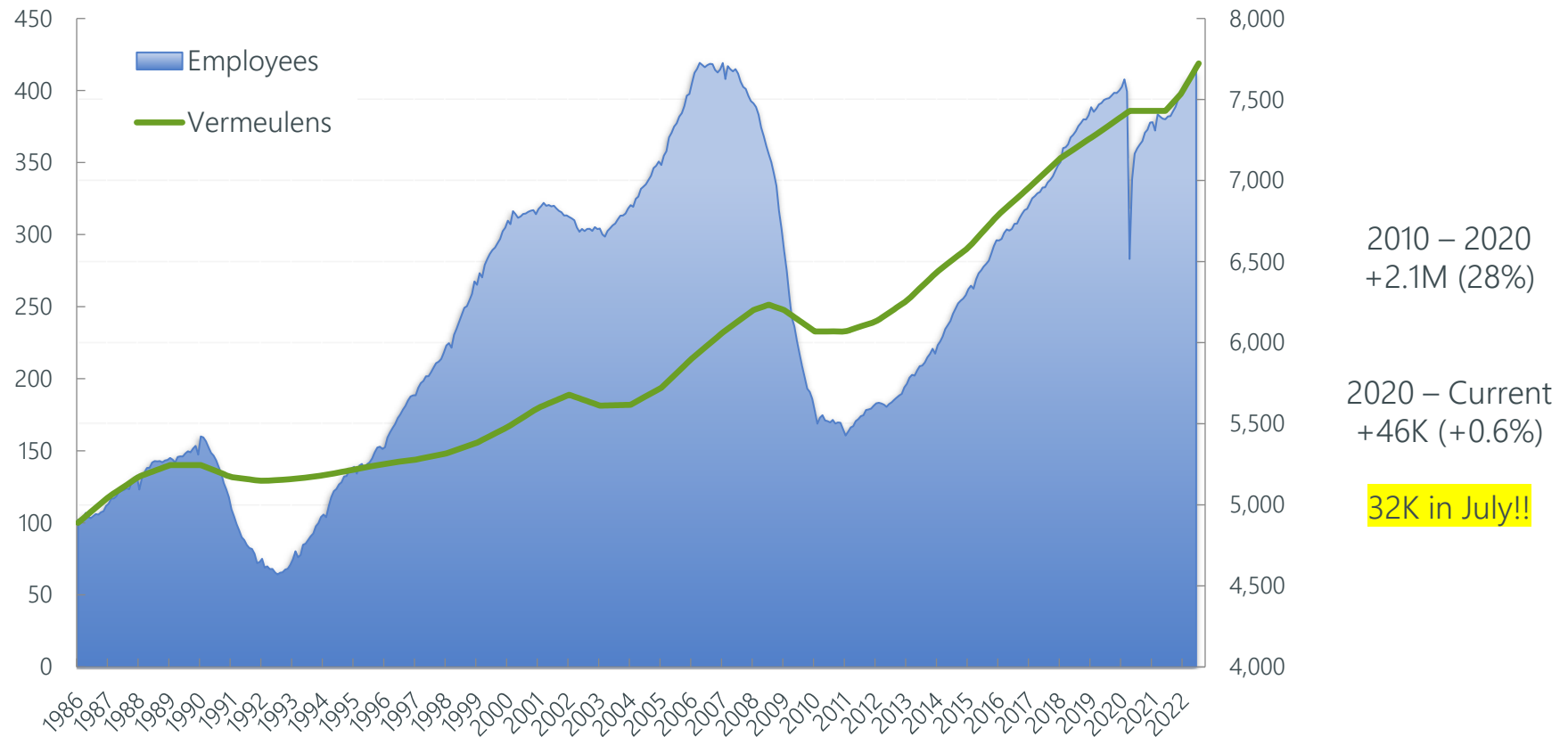
Business conditions soften at firms located in the Northeast

Graphs represent data from June 2021–June 2022 across the four regions. 50 represents the diffusion center. A score of 50 equals no change from the previous month. Above 50 shows increase; Below 50 shows decrease. 3-month moving average.

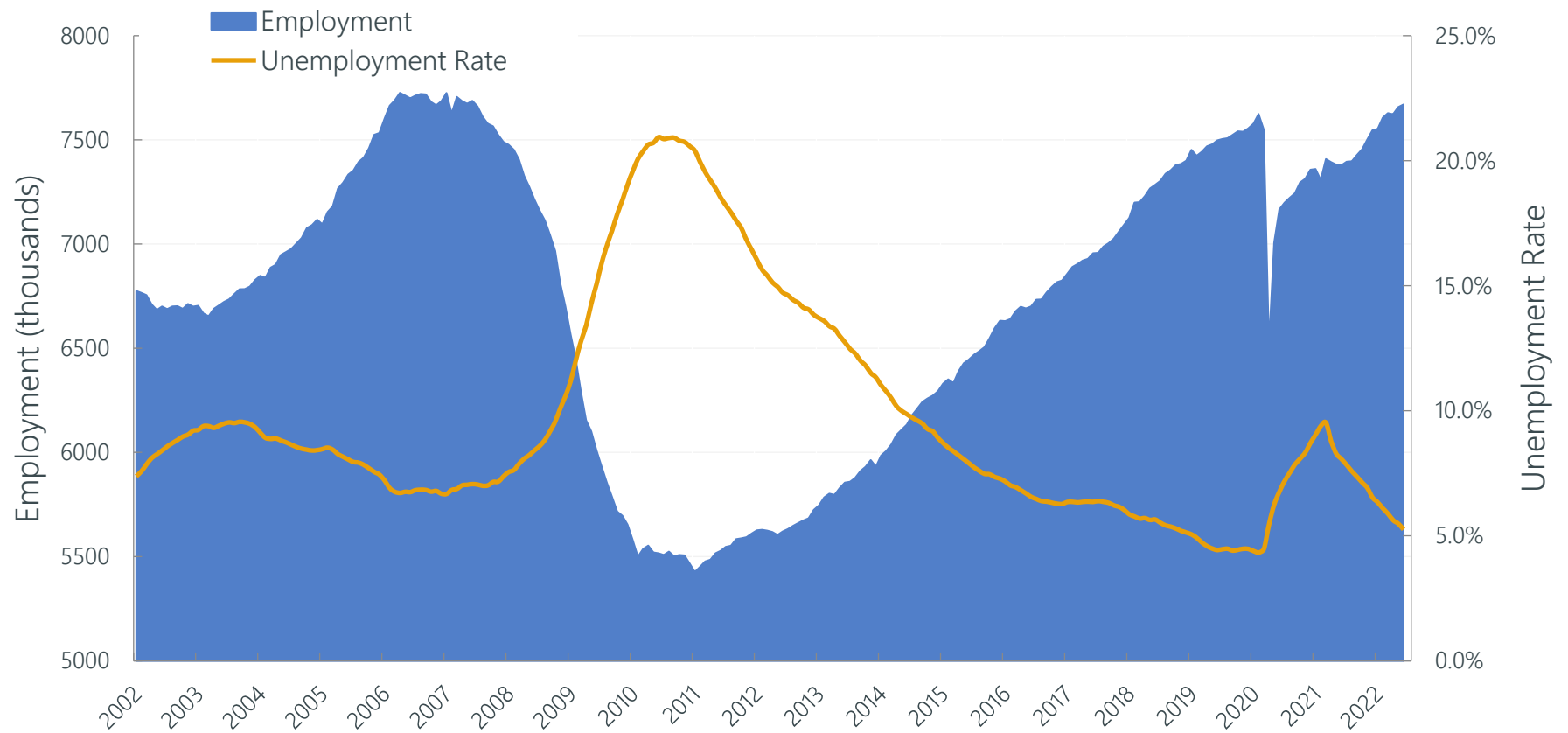


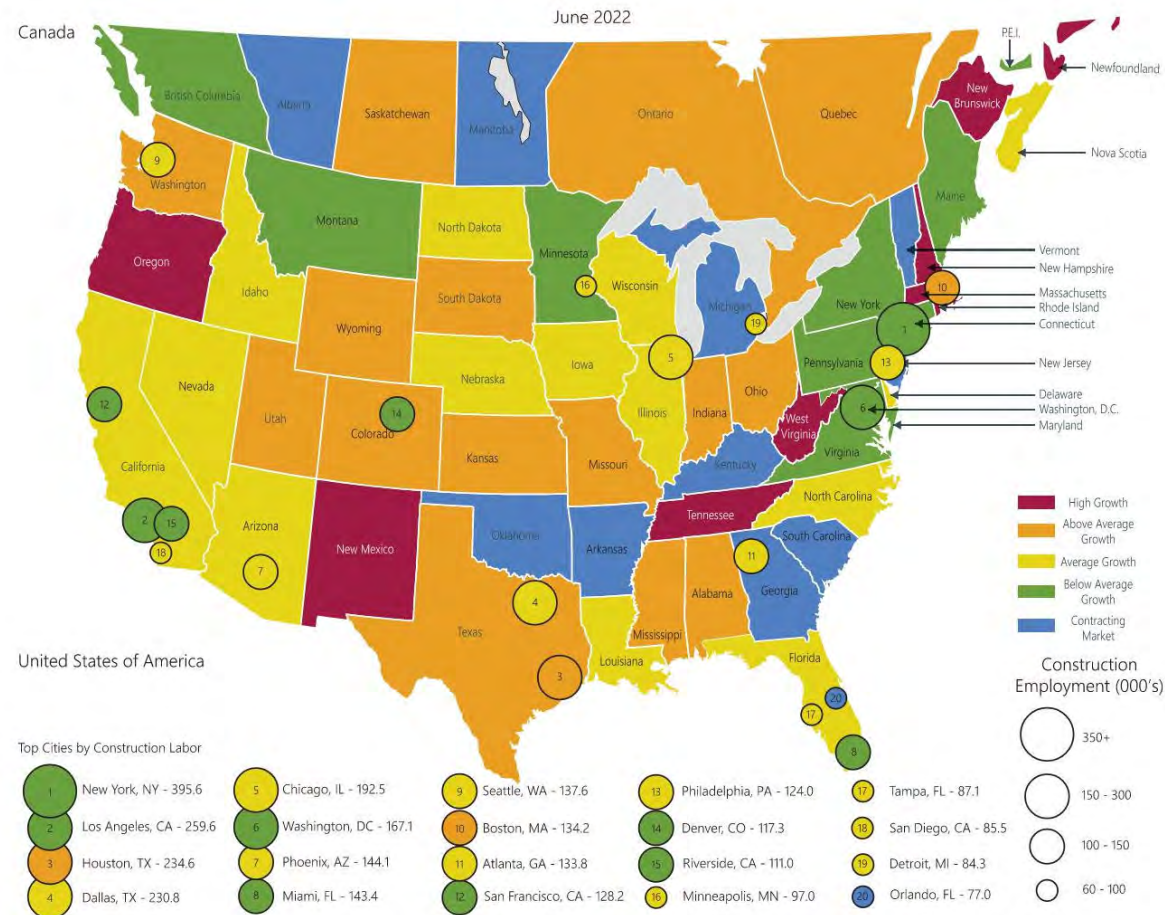
- The [Dodge Momentum Index](#) (DMI) inched up 0.3% in June to hit a 14-year high for the benchmark that measures nonresidential building planning.

US Construction Employment (thousands)



Construction Employment & Construction Unemployment Rate



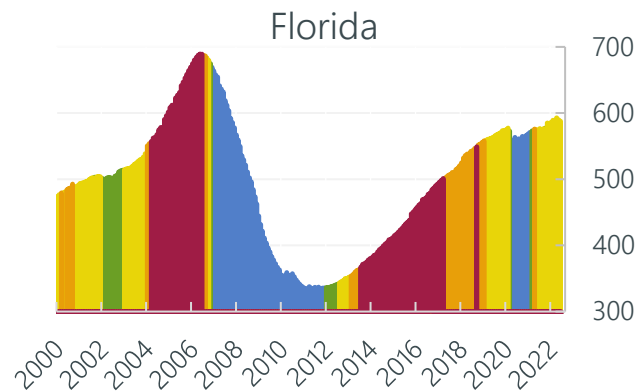
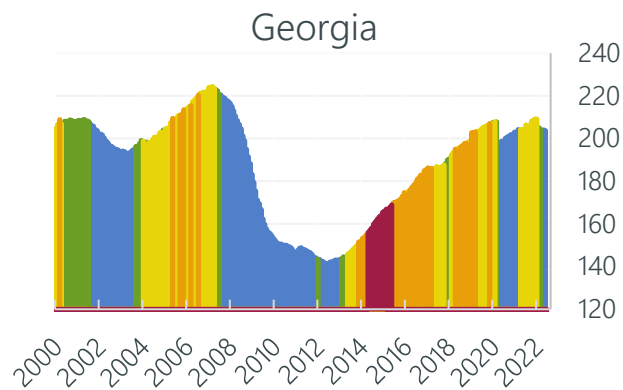
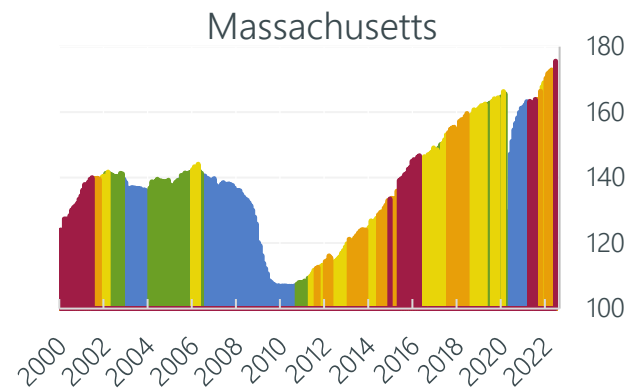
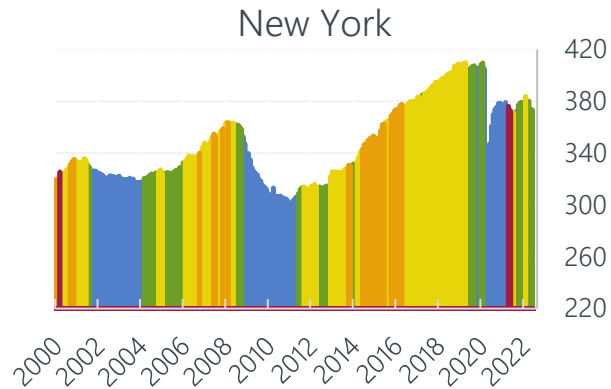


June 2022 State Construction YOY Growth

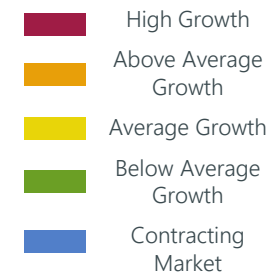
Rank		Feb-10	Peak 2020	Jun-22	Job Delta	% Delta
1	California	568.6	910.2	905.5	-4.7	-0.5%
2	Texas	560.1	781.1	779.9	-1.2	-0.5%
3	Florida	353.9	577.4	587.6	10.2	1.8%
4	New York	307.1	409.6	373.3	-36.3	-8.9%
5	Pennsylvania	210.4	266.7	257.2	-9.5	-3.6%
6	North Carolina	176.1	234.3	244.8	10.5	4.5%
7	Washington	143.6	223.5	234.7	11.2	5.0%
8	Ohio	167.9	232.7	234.1	1.4	0.6%
9	Illinois	200.6	227.9	230.1	2.2	0.0%
10	Virginia	177.6	207.3	206.1	-1.2	-0.6%
11	Georgia	152.0	208.0	203.7	-4.3	-2.1%
12	Colorado	118.0	179.4	185.6	6.2	2.8%
13	Arizona	112.4	175.8	182.3	6.5	3.7%
14	Massachusetts	106.9	166.3	175.6	9.3	5.6%
15	Michigan	119.1	177.8	175.1	-2.7	-1.7%
16	Maryland	136.2	167.3	161.9	-5.4	-3.3%
17	Indiana	113.6	150.1	158.7	8.6	5.7%
18	New Jersey	130.8	164.0	155.2	-8.8	-5.4%
19	Tennessee	97.7	132.2	148.1	15.9	11.7%
20	Missouri	106.5	129.0	139.8	10.8	8.4%
21	Minnesota	87.3	128.1	131.9	3.8	1.1%
22	Louisiana	120.9	137.3	131.8	-5.5	-12.0%
23	Utah	65.5	113.8	129.9	16.1	14.1%
24	Wisconsin	95.9	127.2	129.9	2.7	2.1%
25	Oregon	68.2	112.3	119.2	6.9	6.1%

June 2022 City Construction YOY Growth

Rank		Feb-10	Peak 2020	Jun-22	Job Delta	% Delta
1	New York	322.2	418.6	388.4	-30.2	-7.2%
2	Los Angeles	185.7	257.3	254.1	-3.2	-1.2%
3	Dallas/Fort Worth	167.4	228.7	224.4	-4.3	-1.9%
4	Houston	180.7	237.7	217.6	-20.1	-8.5%
5	Chicago	158.1	180.1	176.8	-3.3	-1.8%
6	Washington D.C.	146.2	165.5	162.4	-3.0	-1.8%
7	Miami	98.5	142.3	141.1	-1.2	-0.8%
8	Phoenix	91.5	135.6	140.6	5.0	3.7%
9	Atlanta	98.6	130.5	132.5	2.0	1.6%
10	Seattle	90.4	130.0	131.7	1.7	1.3%
11	Boston	79.9	122.9	126.8	3.9	3.2%
12	San Francisco	85.4	128.4	123.2	-5.2	-4.1%
13	Philadelphia	101.7	120.8	120.8	0.0	0.0%
14	Denver	74.6	112.3	110.0	-2.3	-2.0%
15	Riverside	65.8	107.2	109.2	2.0	1.9%
16	Minneapolis	58.6	87.4	87.9	0.5	0.6%
17	Tampa Bay	57.8	82.3	86.9	4.6	5.6%
18	San Diego	59.6	84.3	84.4	0.1	0.1%
19	Orlando	52.2	87.0	81.8	-5.2	-6.0%
20	Baltimore	70.4	81.8	80.5	-1.2	-1.5%
21	Detroit	51.2	76.7	80.1	3.4	4.5%
22	Portland	48.5	76.2	77.7	1.5	1.9%
23	Sacramento	42.5	70.4	76.5	6.2	8.8%
24	Austin	40.5	70.0	73.9	3.9	5.6%
25	St. Louis	63.0	68.6	71.7	3.2	4.6%



Year-Over-Year Growth



Pandemic Impact

New York
(-8.9%)

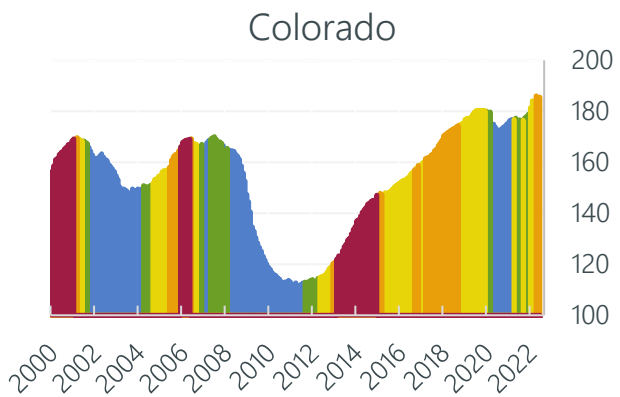
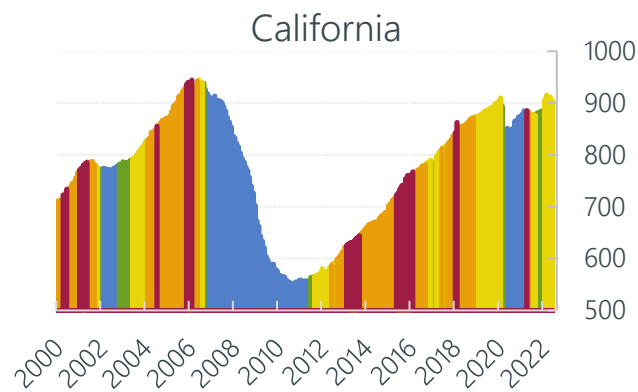
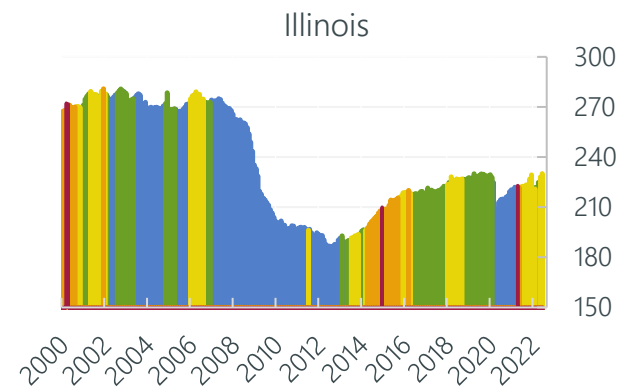
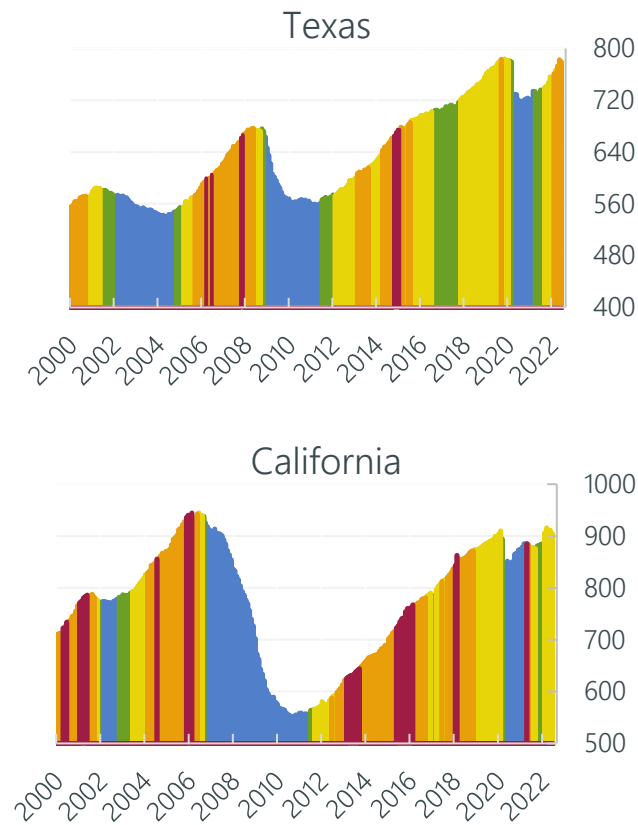
Massachusetts
(+5.6%)

Georgia
(-2.1%)

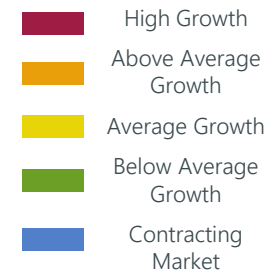
Florida
(+1.8%)

National
(-0.1%)

State Construction Labor (thousands)

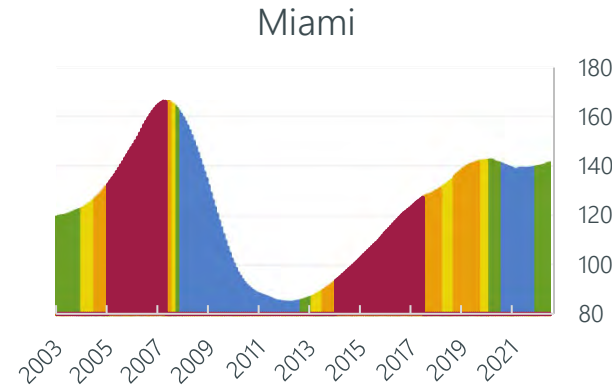
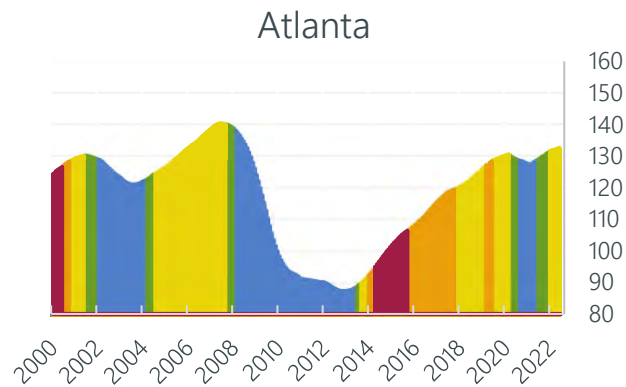
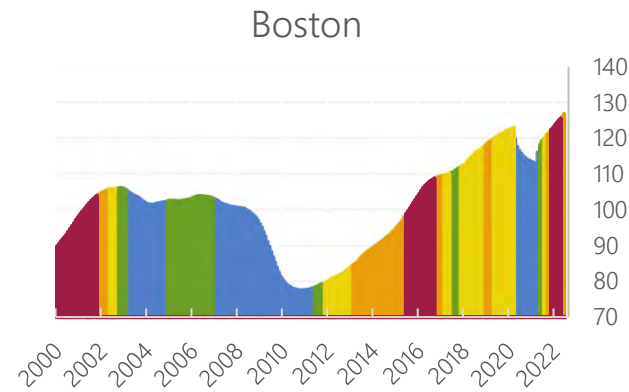
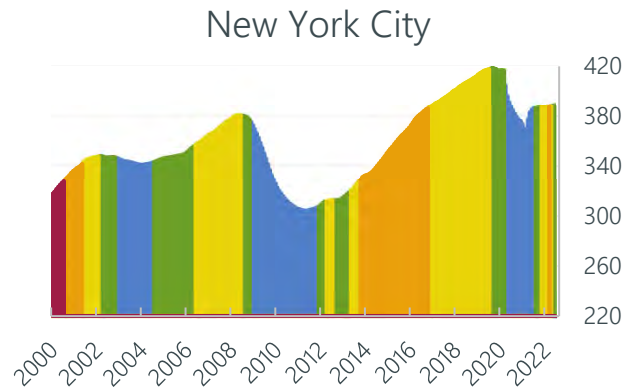


Year-Over-Year Growth

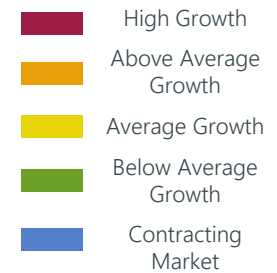


Pandemic Impact

Texas
(-0.5%)
Illinois
(0.0%)
California
(-0.5%)
Colorado
(+2.8%)
National
(-0.1%)

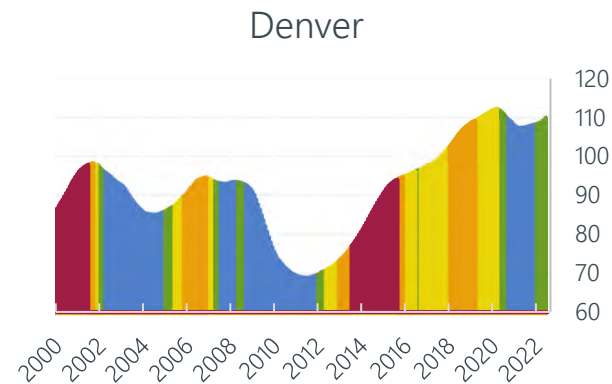
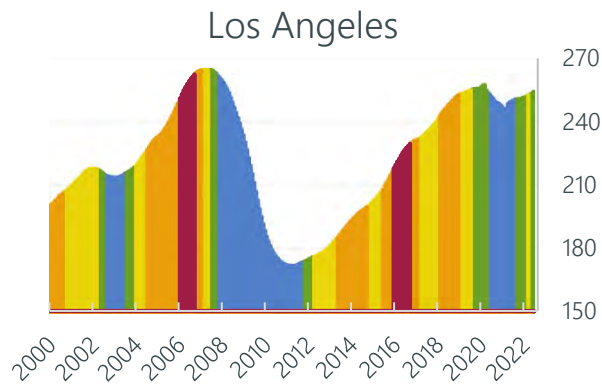
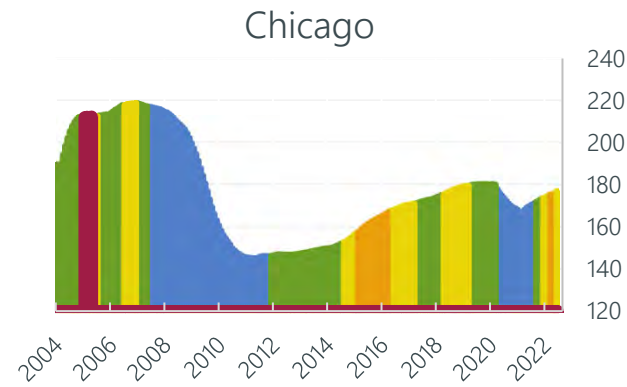
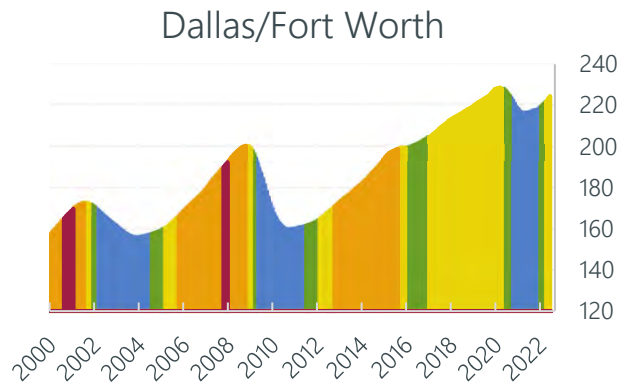


Year-Over-Year Growth

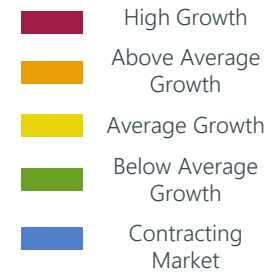


Pandemic Impact

New York City (-7.9%)
 Boston (+5.1%)
 Atlanta (+1.8%)
 Miami (-0.2%)
 National (-0.1%)

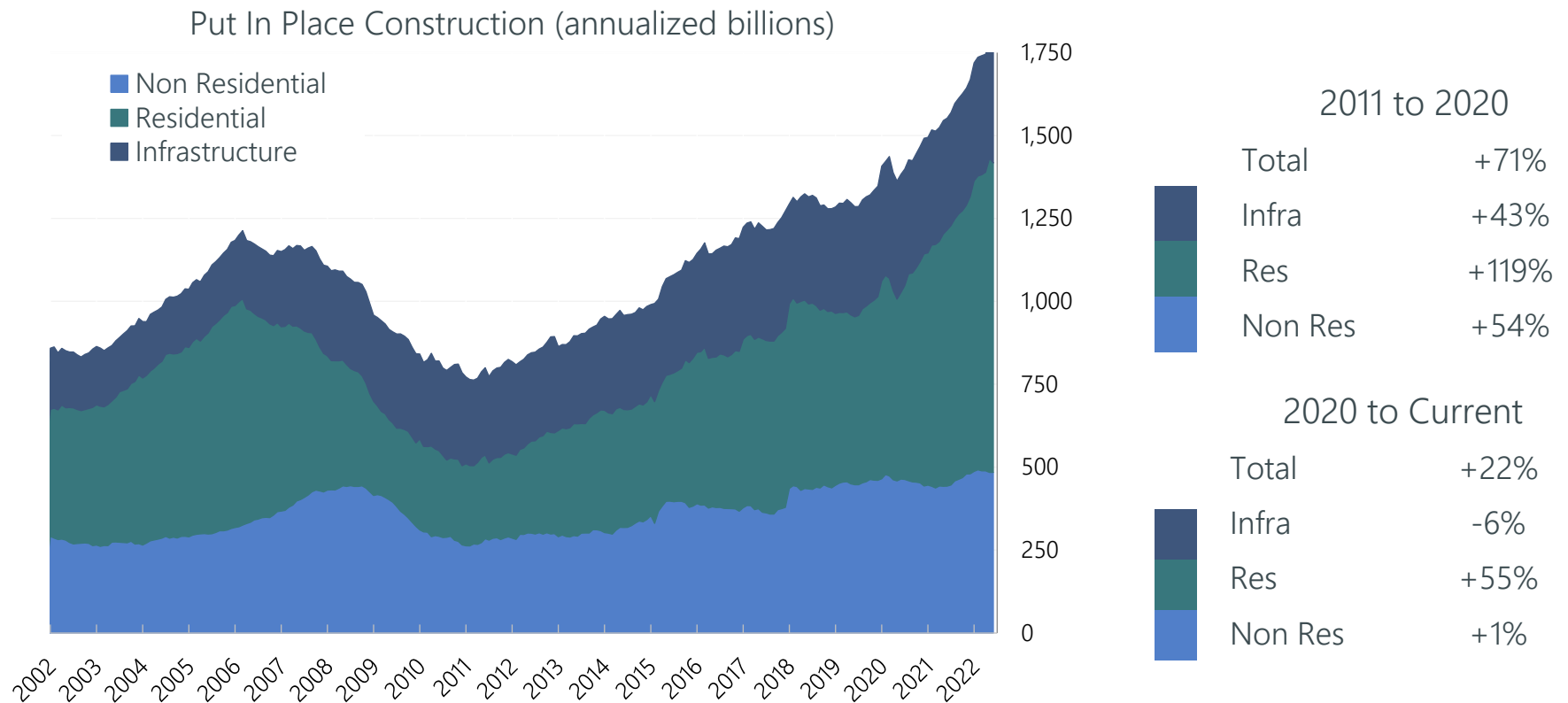


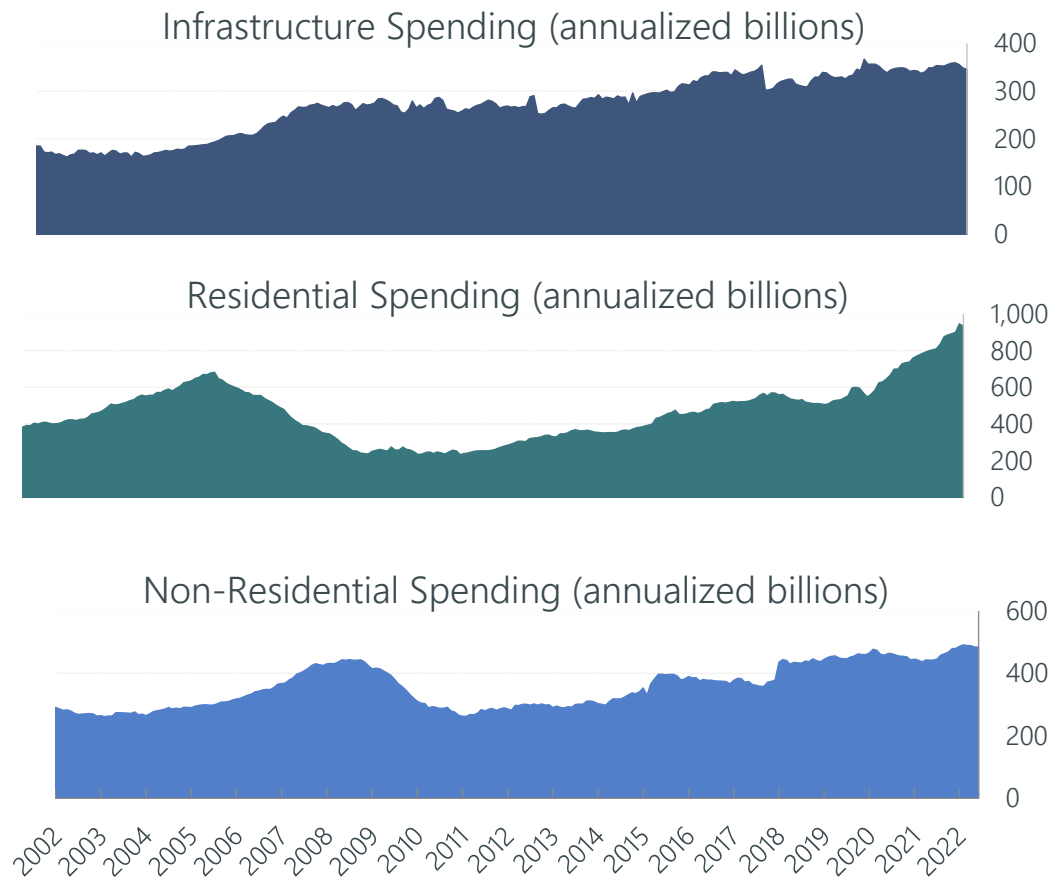
Year-Over-Year Growth



Pandemic Impact

Dallas
(-1.6%)
Chicago
(+0.7%)
Los Angeles
(-0.5%)
Denver
(+2.2%)
National
(-0.1%)





2011 to 2020

Total	+71%
Infra	+43%
Res	+119%
Non Res	+54%

2020 to Current

Total	+22%
Infra	-6%
Res	+55%
Non Res	+1%

City	% change	Total value
New York City area	Up 20%	\$15.3 billion
Dallas	Up 72%	\$8.1 billion
Washington, D.C., area	Up 35%	\$5.5 billion
Miami	Up 31%	\$4.5 billion
Austin, Texas	Up 70%	\$4.3 billion
Phoenix	Up 53%	\$4.2 billion
Atlanta	Up 68%	\$4.2 billion
Seattle	Down 10%	\$3.5 billion
Los Angeles	Down 14%	\$3.4 billion
Philadelphia	Down 3%	\$3.2 billion

June 2022 construction starts, millions of dollars

	June 2022	May 2022	Change
Nonresidential Building	\$300,977	\$351,408	-14%
Residential Building	\$428,306	\$453,730	-6%
Nonbuilding Construction	\$202,978	\$179,842	13%
Total Construction	\$932,261	\$984,979	-5%

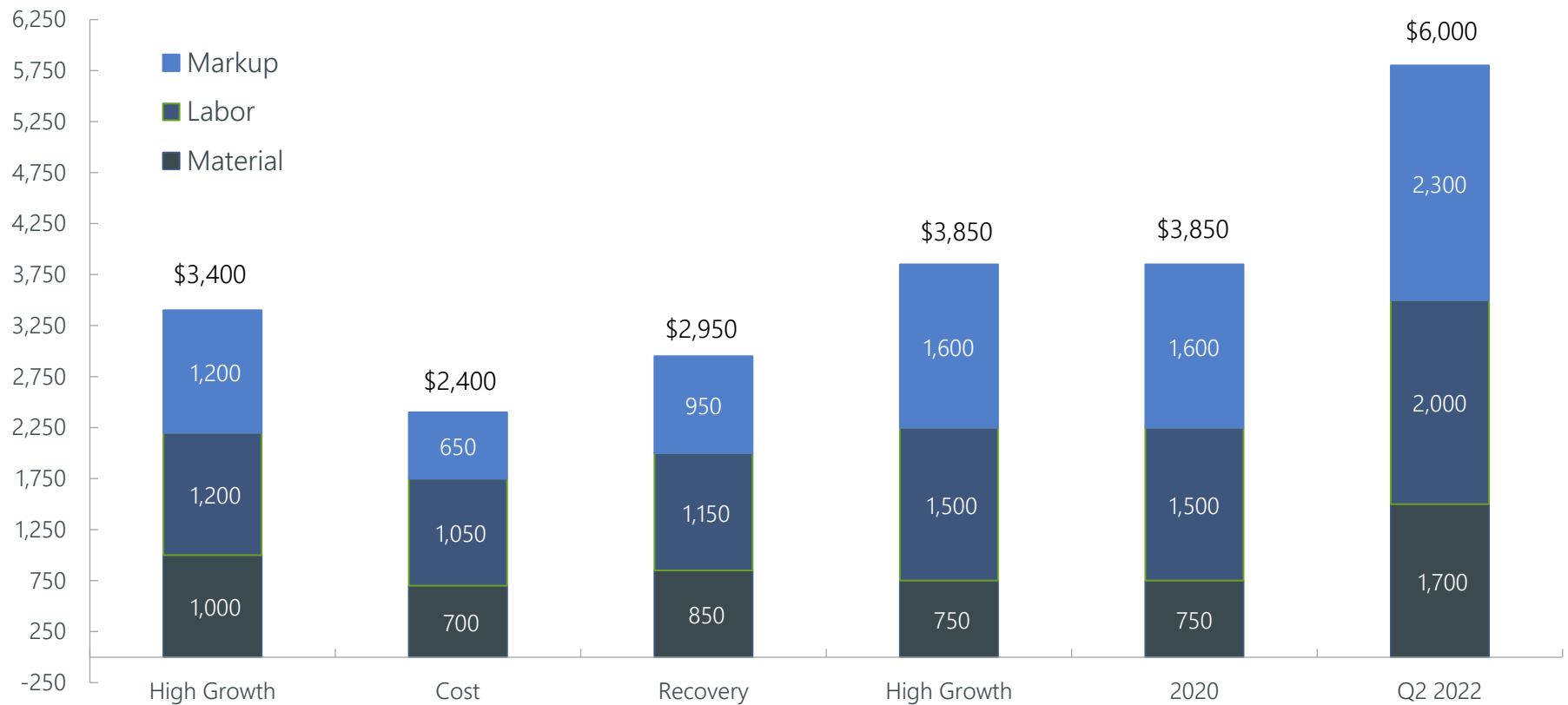
SOURCE: Dodge Data & Analytics

Construction Backlog Indicator

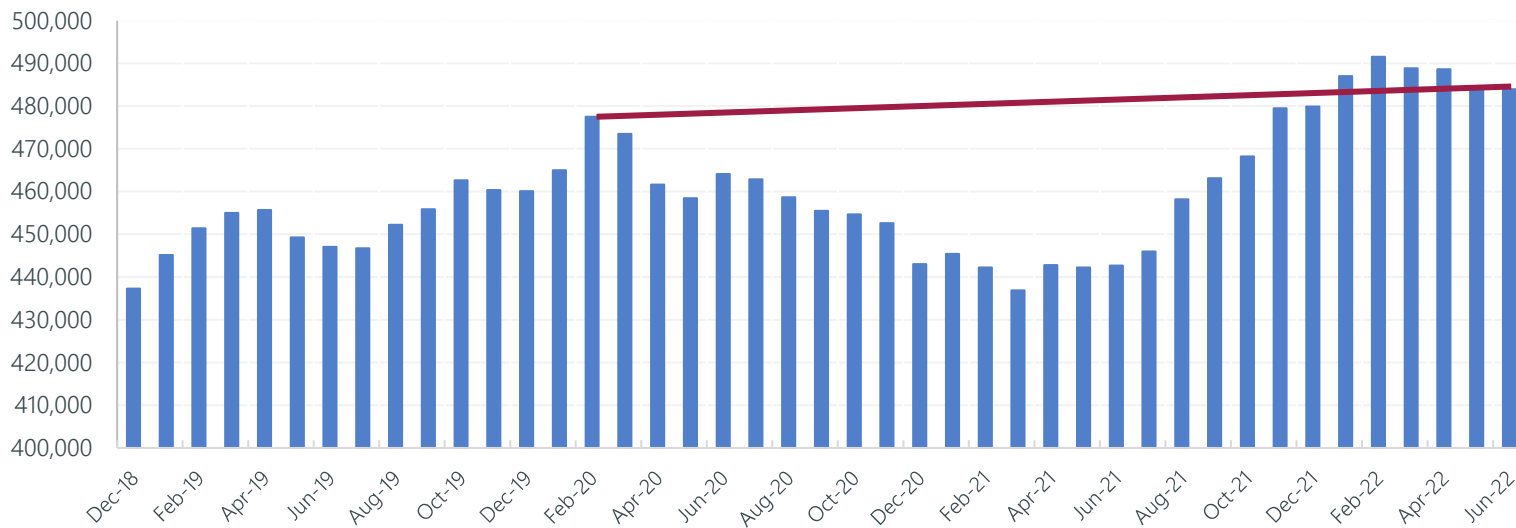
	July 2022	June 2022	July 2021	1-Month Net Change	12-Month Net Change
Total	8.7	8.9	8.5	-0.2	0.2
Industry					
Commercial & Institutional	8.9	9.4	8.3	-0.5	0.6
Heavy Industrial	6.6	7.7	8.1	-1.1	-1.5
Infrastructure	9.3	7.9	11.3	1.4	-2.0
Region					
Middle States	7.5	8.3	7.1	-0.8	0.4
Northeast	8.6	8.2	8.2	0.4	0.4
South	11.6	10.0	9.8	1.6	1.8
West	6.9	9.0	9.0	-2.1	-2.1
Company Size					
<\$30 Million	7.4	8.6	7.9	-1.2	-0.5
\$30-\$50 Million	10.8	8.0	8.6	2.8	2.2
\$50-\$100 Million	12.9	8.5	10.0	4.4	2.9
>\$100 Million	13.2	13.6	16.0	-0.4	-2.8

© Associated Builders and Contractors, Construction Backlog Indicator

AEC's Construction Confidence Index readings for sales, profit margins and staffing levels

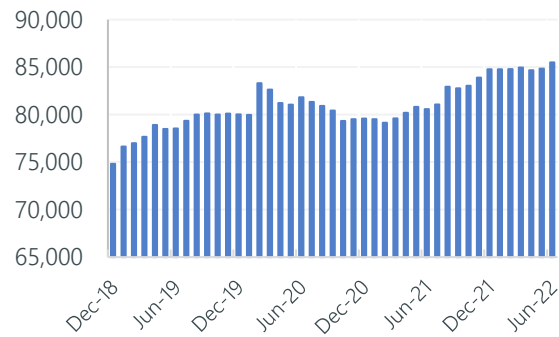


Total Non-Residential Spending (\$millions)

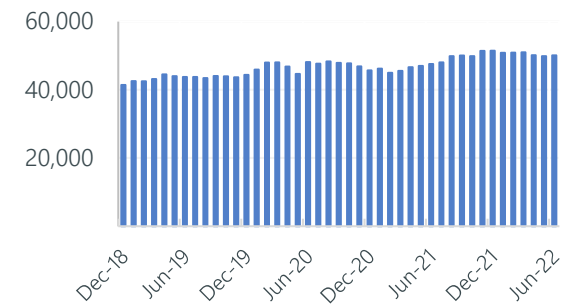


US Construction Volume – Non Residential Spending

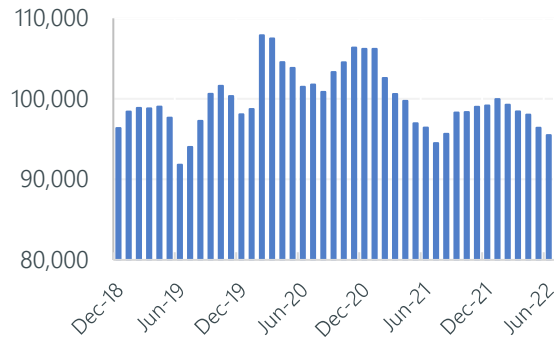
Office Spending (\$millions)



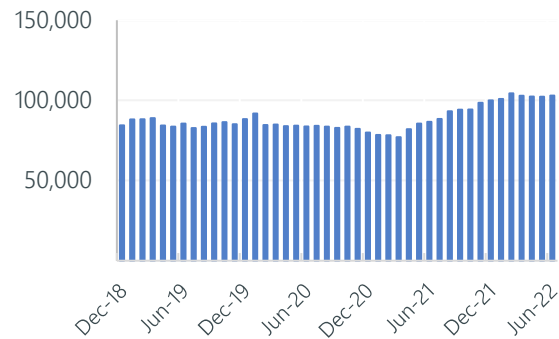
Health Care Spending (\$millions)



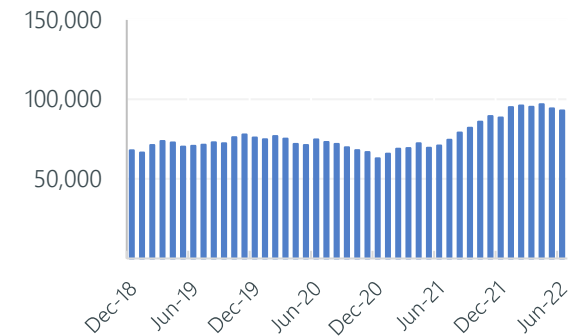
Educational Spending (\$millions)



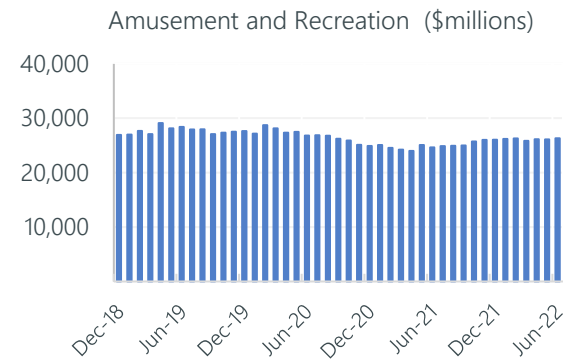
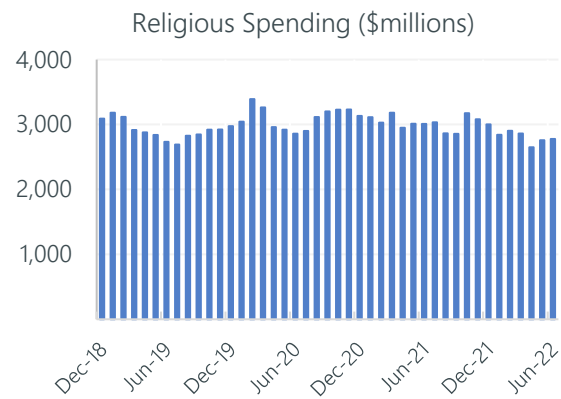
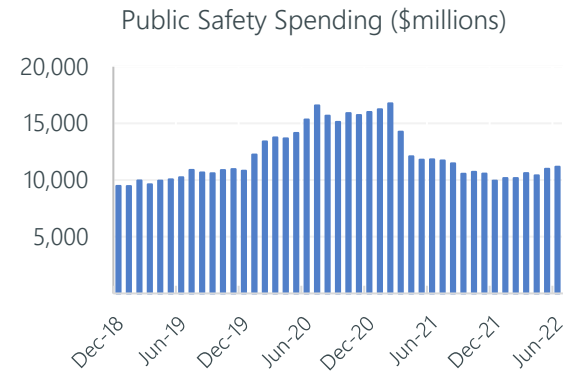
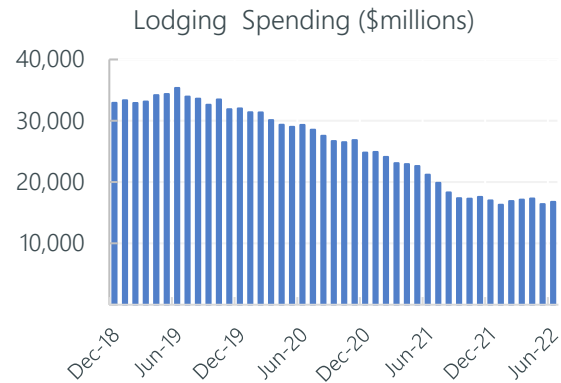
Commercial Spending (\$millions)



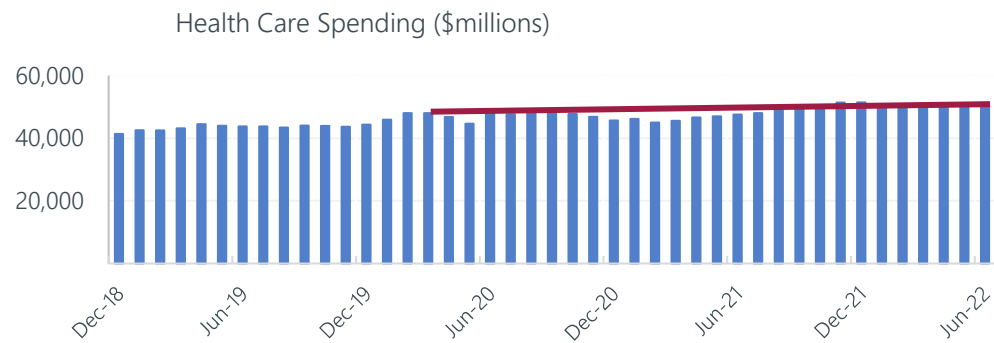
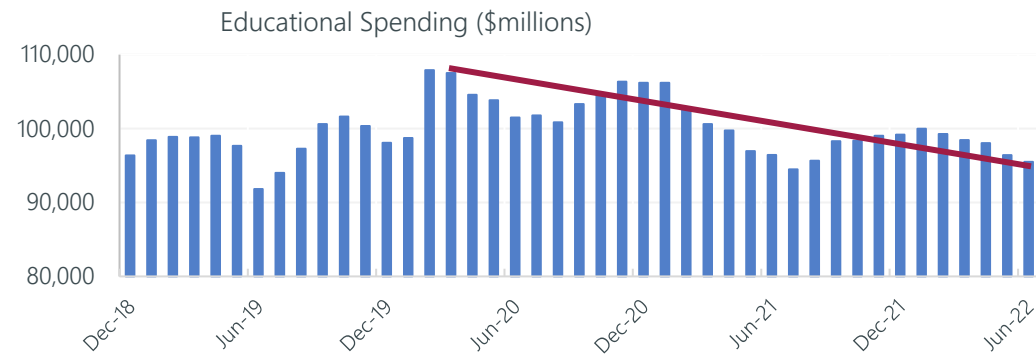
Manufacturing Spending (\$millions)

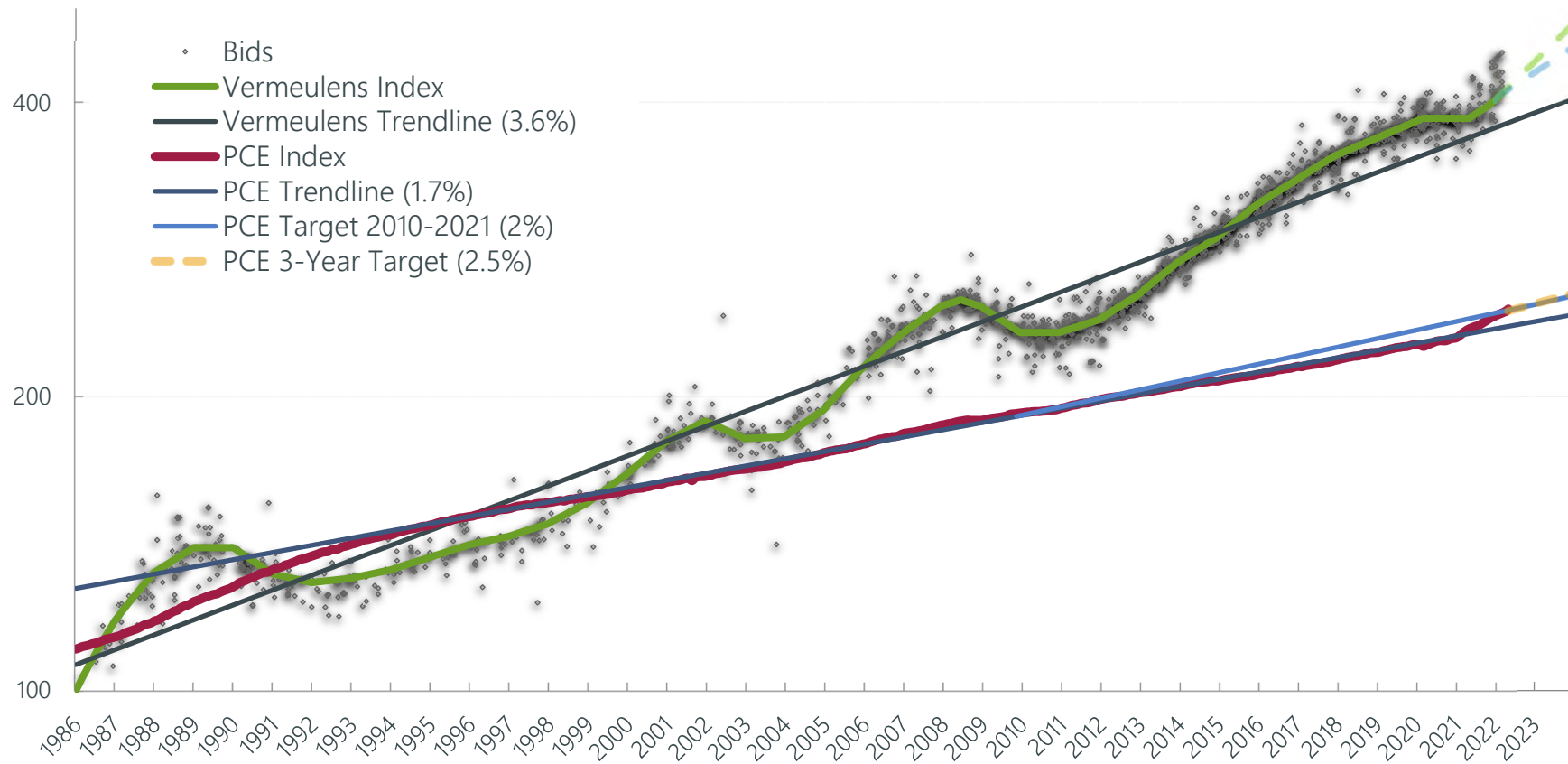


US Construction Volume – Non Residential Spending

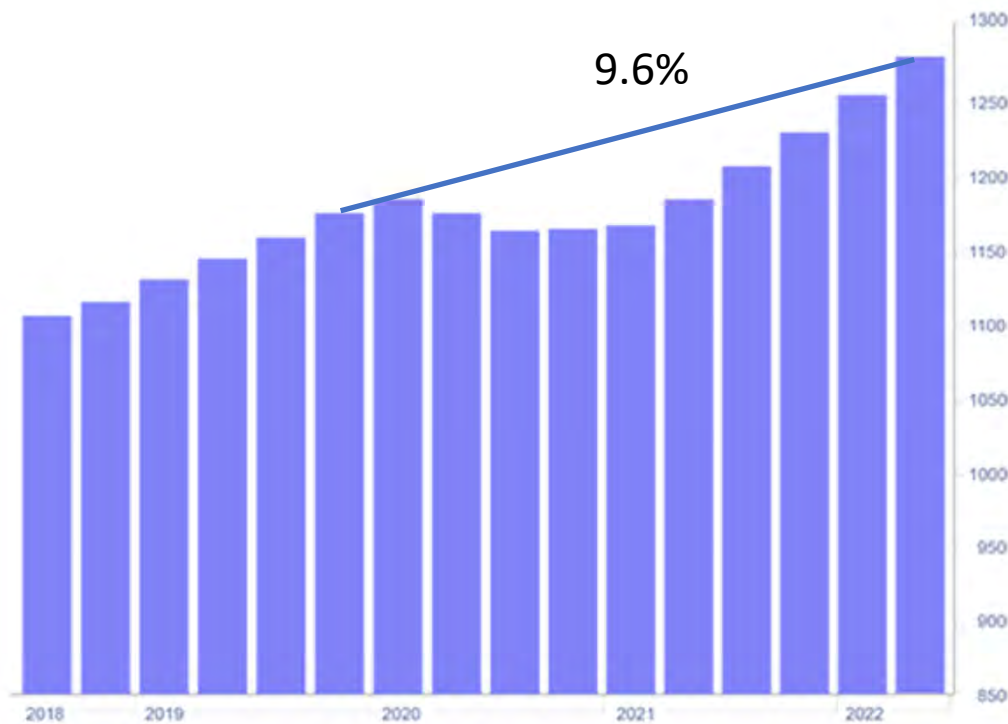


US Construction Volume – Non Residential Spending

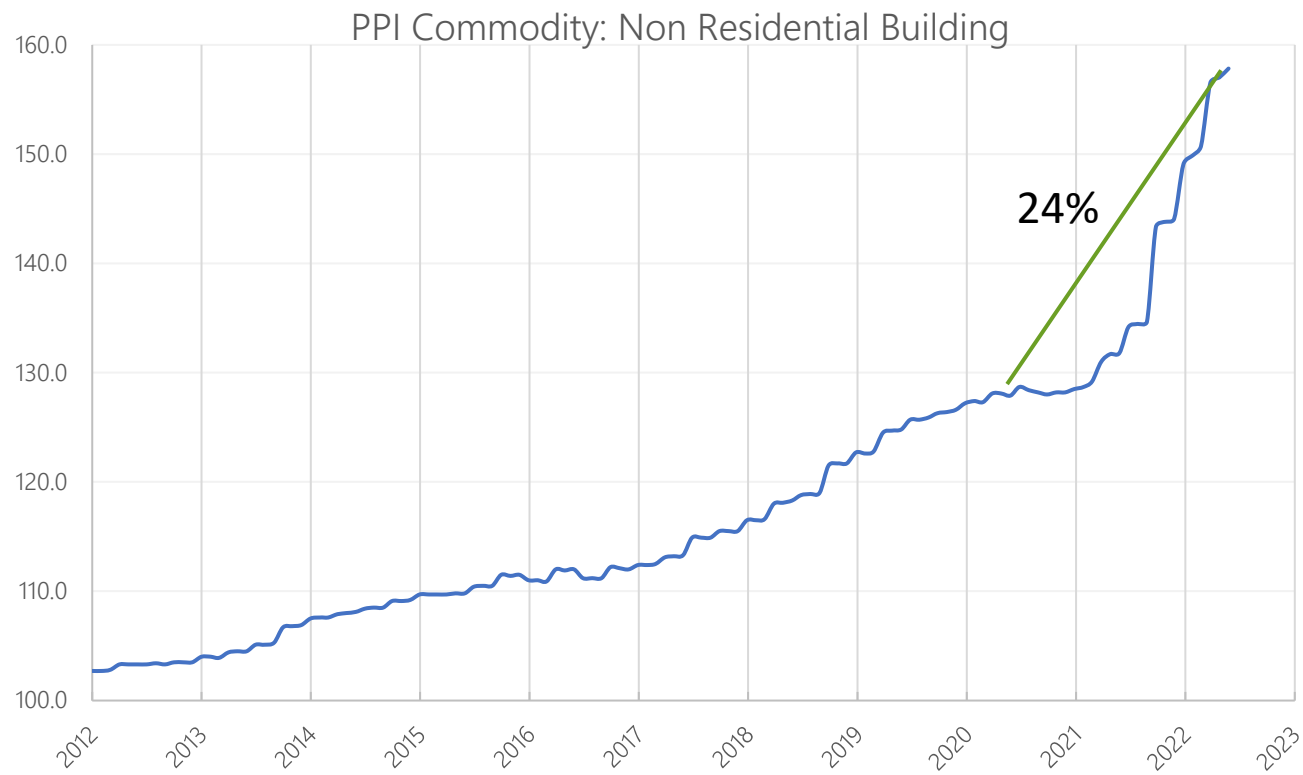


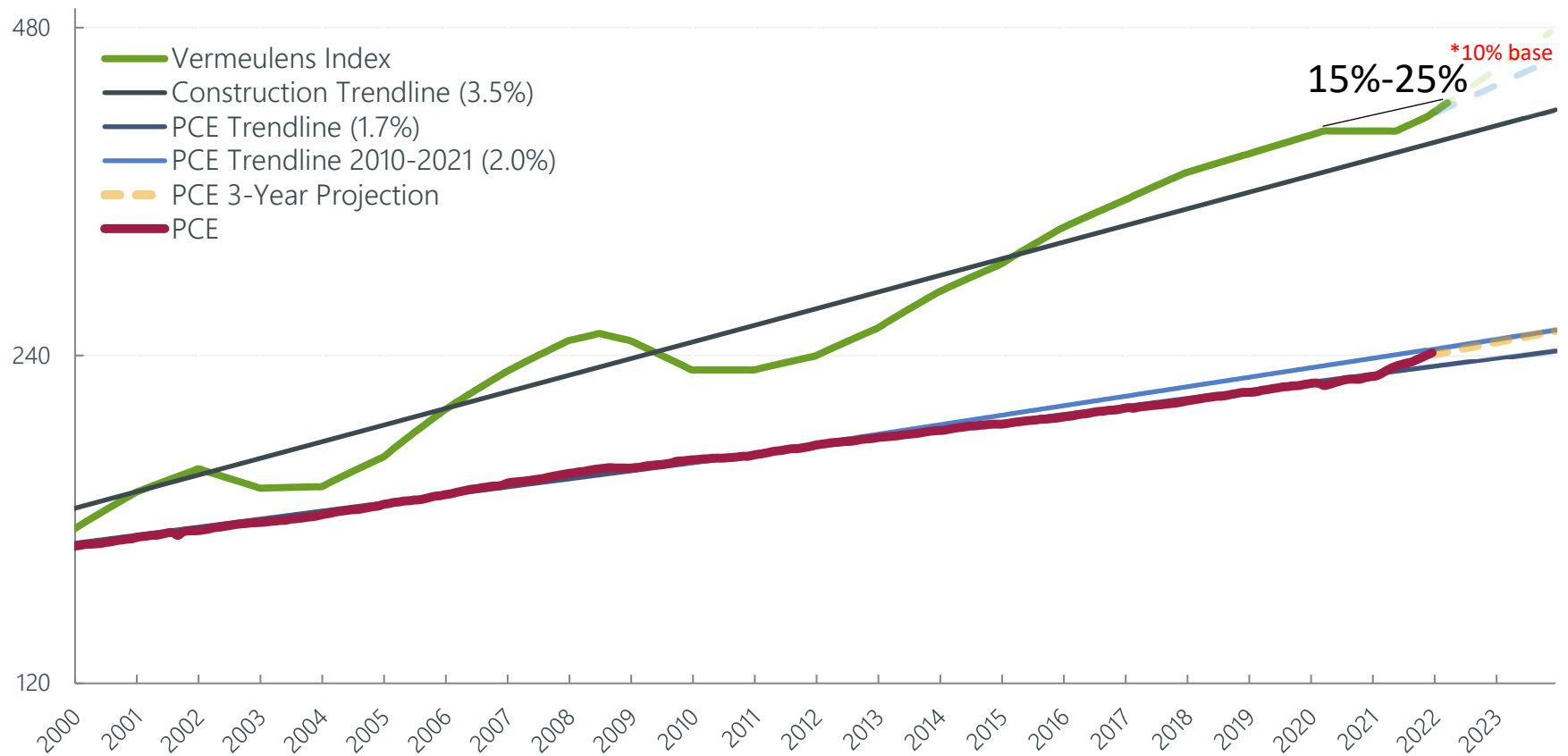


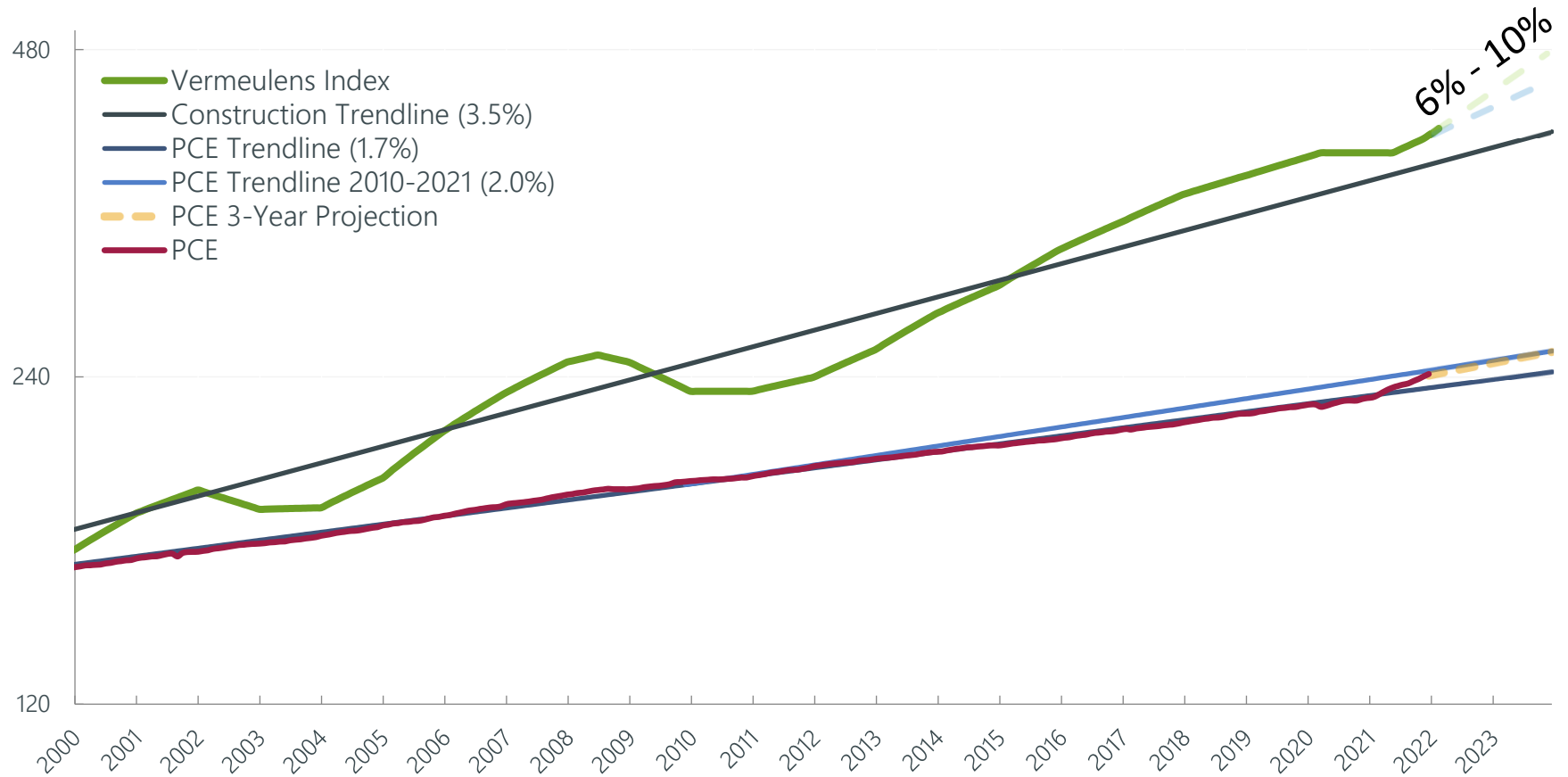
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Quarter	Index	% Change
2 nd Quarter 2022	1283	2.23
1 st Quarter 2022	1255	2.03
4 th Quarter 2021	1230	1.91
3 rd Quarter 2021	1207	1.68
2 nd Quarter 2021	1187	1.28
1 st Quarter 2021	1172	0.09
4 th Quarter 2020	1171	0.00
3 rd Quarter 2020	1171	-0.51







- 2022 volatility remains high as we are building nationally near all-time highs
- Supply chains continue to be stressed with construction demand soon to exceed all-time highs
- Carry 6% - 10% annual escalation to procurement in 2022, and early 2023
- Second half of 2023 may have lower inflation rate
- Carry 5% - 15% bidding contingency until volatility reduces to more normal levels
- Design add/deduct alternates in the 10% of construction cost range
- Continue design and get shovel ready
- Continue to monitor Fed policies (interest rates) designed to reduce demand
- Prepurchase of long lead items
- Leverage strategic early procurement packages to reduce construction escalation impact

Project Contingency and Escalation Recommendations

design contingency

→ preliminary design	10% - 15%
→ schematic design	6% - 9%
→ design development documents	3% - 6%
→ contract documents	0% - 3%
→ design alternates	10% - 15%

construction contingency	3% - 5%
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escalation, based on market outlook and local index	6% - 9%
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bidding contingency	5% - 15%
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project contingency (owner)	5% - 15%
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Design and Construction Market Outlook®

Thank you!

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