FMI Consulting

US and Texas Construction Outlook

Q1 2022

fmiconsulting.com

RISK AND REWARD

Recovery or Recession

Should we be optimistic or concerned about the overall market near-term?

Bulls and Bears Coexist at All Times

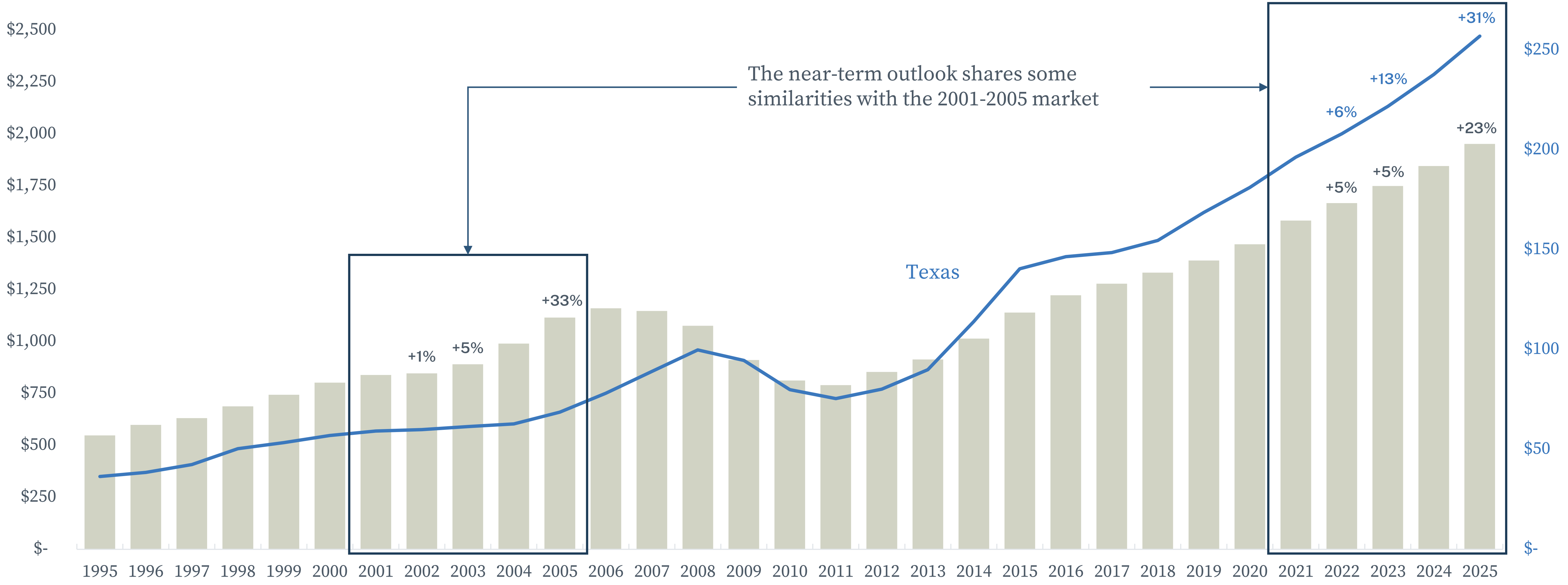
Where will the greatest opportunities present themselves?

Bigger, Faster, Better

How will evolving project characteristics define competitive advantage?

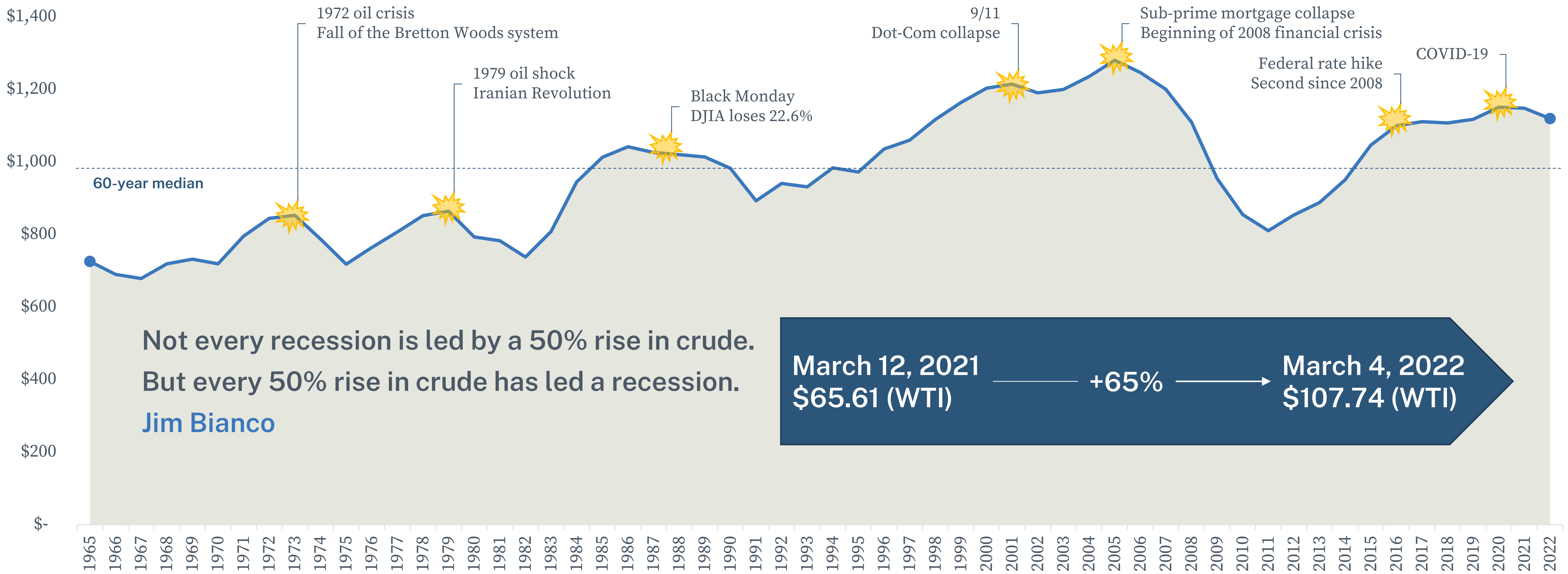
DEMAND IS TEMPERED NEAR TERM BY SUPPLY CONSTRAINTS

Total Construction Spending Put in Place (US)
Billions of current dollars



NO EXPANSION DIES OF AN OLD AGE

Inflation Adjusted Total Construction Spending Put in Place (US)
Billions of 2012 dollars



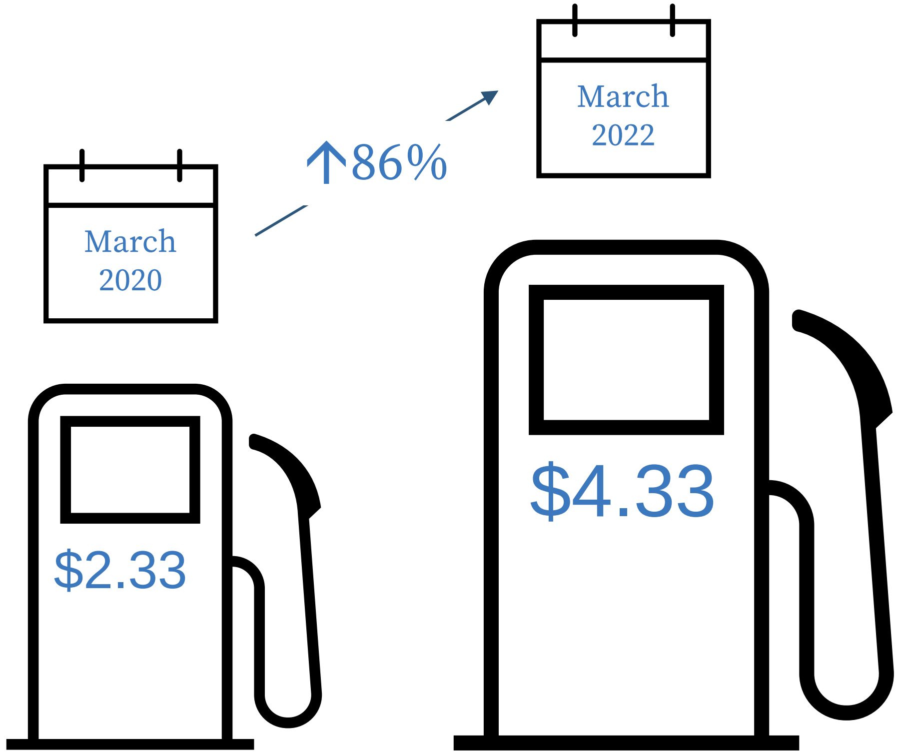
Not every recession is led by a 50% rise in crude.
But every 50% rise in crude has led a recession.
Jim Bianco

March 12, 2021
$65.61 (WTI)
+65%
March 4, 2022
$107.74 (WTI)

CONSUMER SPENDING COMPRISES 70% OF US GDP

Affordable Home Price Based on $2,500 Monthly Payment
Assumes 20% down, a 30-year mortgage, 1.25% property tax rate, 0.5% homeowners' insurance rate, and no HOA dues

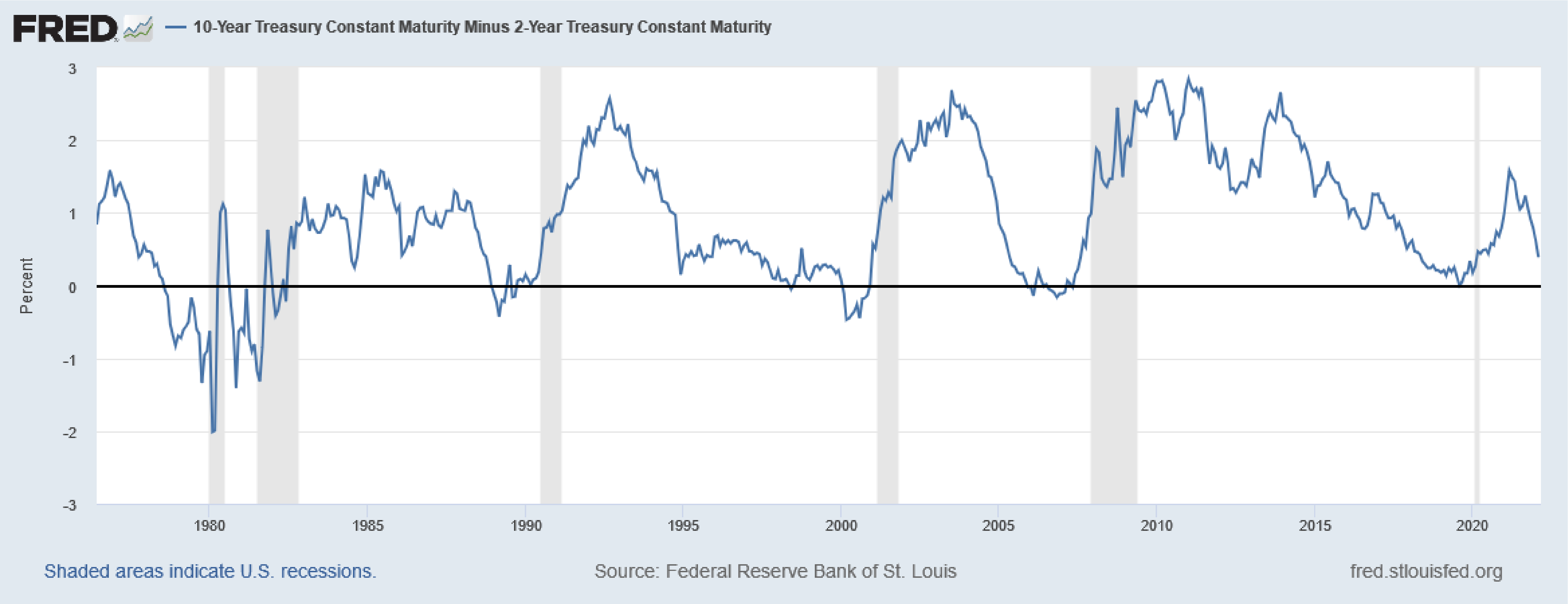
Average Price per Gallon Regular Unleaded Gas



More than 50% of the average household's monthly spending is on housing and transportation.

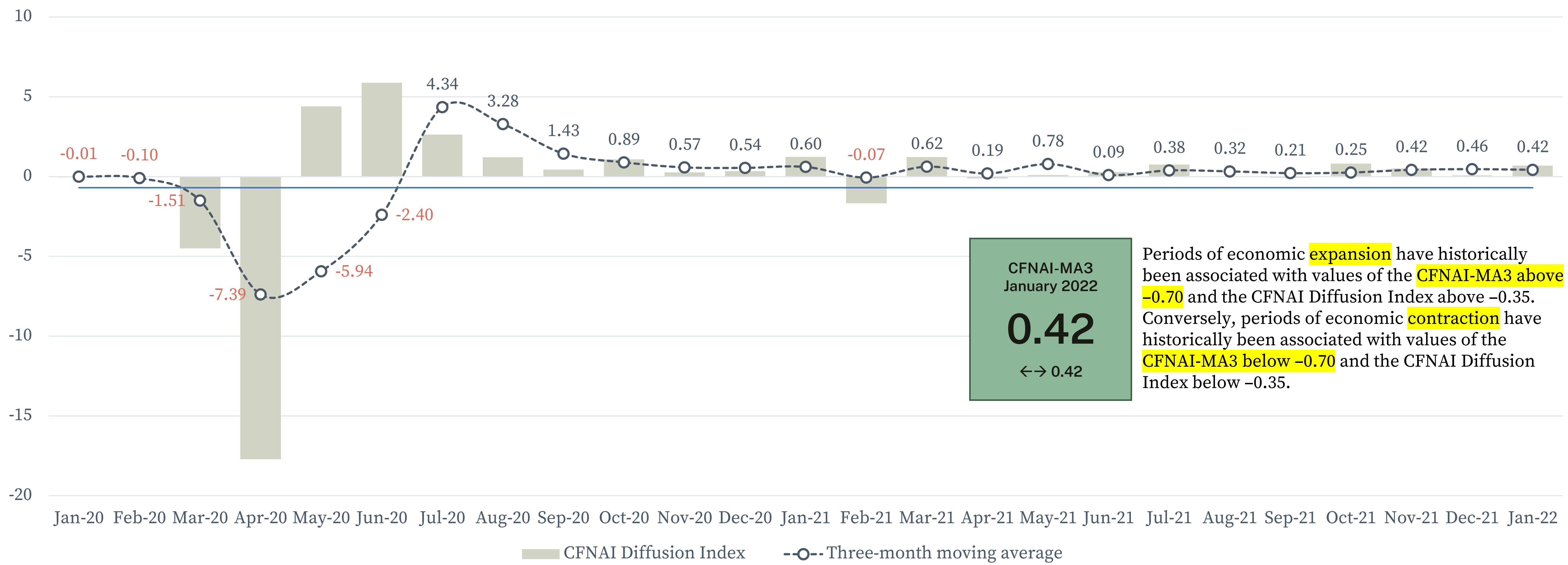
Redfin, EIA

THE BEST "PREDICTOR OF RECESSION"... THE YIELD CURVE



A REASON TO BE "CAUTIOUSLY" OPTIMISTIC?

Chicago Fed National Activity Index
Diffusion Index and three-month moving average



Periods of economic expansion have historically been associated with values of the CFNAI-MA3 above –0.70 and the CFNAI Diffusion Index above –0.35. Conversely, periods of economic contraction have historically been associated with values of the CFNAI-MA3 below –0.70 and the CFNAI Diffusion Index below –0.35.

Federal Reserve Bank of Chicago

THE INDUSTRY IS BULL-“ISH” ON EXPANSION

AEC Sentiment Indices

January 2022	Q1 2022	Q1 2022
51.0	54.8	73.2
↔ 51.0 last month	↑ 53.8 last quarter	↓ 74.9 last quarter
Architectural Billings Index (ABI)	Nonresidential Construction Index (NRCI)	CIRT Sentiment Index

AIA. FMI< CIRT

MORE BULLS THAN BEARS

Construction Segment Spending (2022) and Forecast (2022-2025) for Texas
Millions of current dollars (USD)

2022 Construction Spending (Millions)

High: $21,865

Low: $392

Median: $6,918

2022- 2025 Forecast Growth (CAGR)

High: 12%

Low: 5%

Median: 7%

Segment	2022 Construction Spending (Millions)	2022- 2025 Forecast Growth (CAGR)
Multifamily	$10,528	8%
Lodging	$2,775	9%
Office	$11,044	7%
Commercial	$11,751	6%
Health Care	$6,918	6%
Educational	$14,482	5%
Religious	$392	7%
Public Safety	$1,789	5%
Amusement and Recreation	$3,956	6%
Transportation	$7,982	9%
Communication	$3,234	7%
Manufacturing	$12,150	7%
Power	$21,865	6%
Highway and Street	$16,606	12%
Sewage and Waste Disposal	$5,859	11%
Water Supply	$4,068	10%
Conservation and Development	$1,958	10%

Largest Spending

Highway & Street

Power

Educational

Manufacturing

Highest Growth

Transportation

Highway & Street

Conservation & Development

Water/ Wastewater

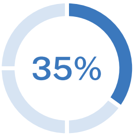
FMI Q1 2022 Forecast




MORE THAN ONE-IN-THREE CONSTRUCTION DOLLARS ARE SPENT IN JUST 12 MARKETS

Total Construction Spending Put in Place
Metropolitan Statistical Area (MSA); 2021-2025 sum

- Concentration of spending continues in fewer markets
- Old markets move down, and new markets move up
- Megapolitans can equal or rival metropolitans



1. New York

2. Los Angeles

3. Dallas

4. Houston

5. Phoenix

6. Washington, DC

7. San Francisco

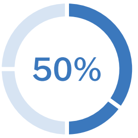
8. Atlanta

9. Seattle

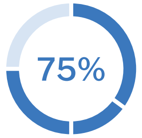
10. Miami

11. Chicago

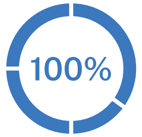
12. Denver

13. Riverside
14. Austin
15. Boston
16. Philadelphia
17. Orlando
18. Tampa
19. Minneapolis
20. Charlotte
21. Portland
22. San Diego



23. Sacramento
24. San Jose
25. Nashville
26. Las Vegas
27. Jacksonville
28. Detroit
29. San Antonio
30. Raleigh
31. Baltimore
32. Salt Lake City
33. Indianapolis
34. St. Louis
35. Columbus
36. Kansas City
37. Sarasota
38. Boise
39. Fort Myers
40. Cincinnati
41. Provo
42. Richmond
43. Virginia Beach
44. Pittsburgh
45. Cleveland
46. Charleston
47. Colorado Springs
48. Greenville
49. Ogden
50. Oklahoma City
51. Tucson
52. Milwaukee
53. Memphis
54. Naples
55. Lakeland
56. Providence
57. Louisville
58. Honolulu
59. Stockton
60. Myrtle Beach
61. Columbia
62. Grand Rapids
63. New Orleans
64. Daytona Beach
65. Fresno
66. Reno
67. Port St. Lucie

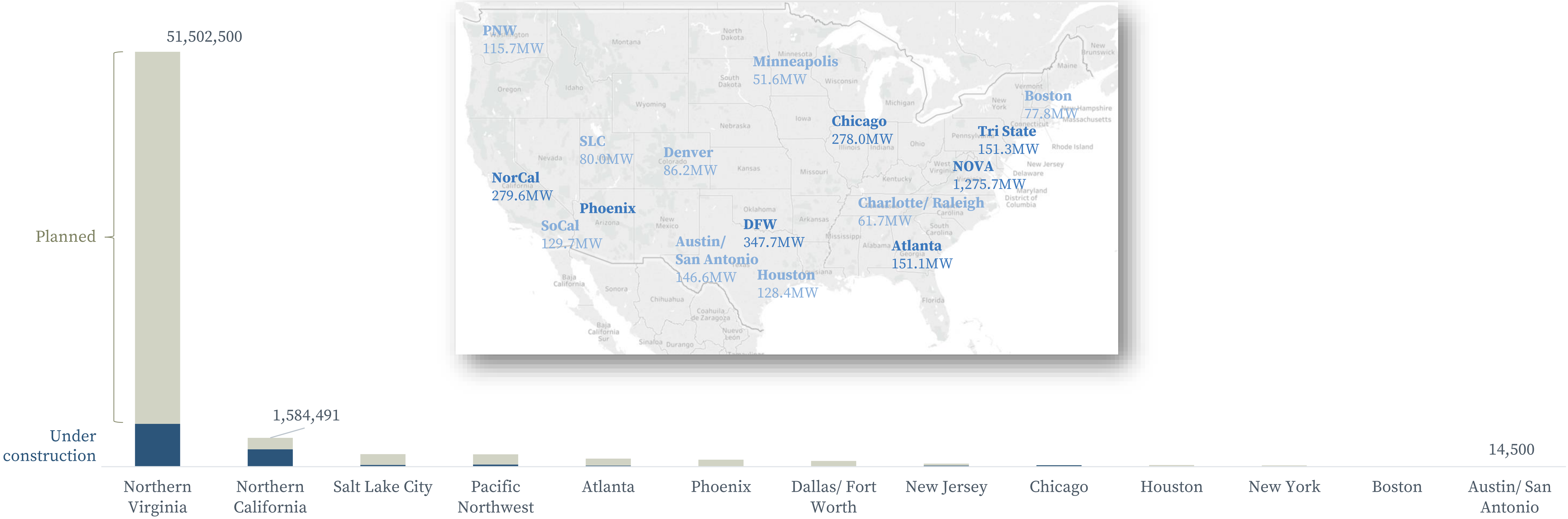


68. Knoxville
69. Birmingham
70. Palm Bay
71. Durham
72. Rochester
73. Omaha
74. Hartford
75. Fayetteville
76. Des Moines
77. Buffalo
78. Tulsa
79. Albany
80. Greensboro
81. Spokane
82. Baton Rouge
83. Bakersfield
84. Santa Rosa
85. Madison
86. Oxnard
87. Greeley
88. Albuquerque
89. Portland
90. Bridgeport
91. Winston
92. McAllen
93. El Paso
94. Worcester
95. Fort Collins
96. Allentown
97. Ocala
98. Salisbury
99. Asheville
100. Pensacola
101. Huntsville
102. Augusta
103. Harrisburg
104. Boulder
105. Little Rock
106. Chattanooga
107. Crestview
108. Savannah
109. New Haven
110. Wilmington
111. Bend
112. Vallejo
113. St. George
114. The Villages
115. Dayton
116. Spartanburg
117. Lexington
118. Bremerton
119. Syracuse
120. Killeen
121. Wichita
122. Salem
123. Tallahassee
124. Visalia
125. Akron
126. Springfield
127. Manchester
128. Eugene
129. Sioux Falls
130. Kennewick
131. Fort Wayne
132. Bellingham
133. Springfield
134. Olympia
135. Trenton
136. Punta Gorda
137. Corpus Christi
138. Santa Maria
139. Toledo
140. Lancaster
141. Jackson
142. Salinas
143. Lafayette
144. Scranton
145. Lubbock
146. Daphne
147. Prescott
148. Fargo
149. Anchorage
150. Modesto
151. Gainesville
152. Coeur d'Alene
153. Hickory
154. Green Bay
155. Ann Arbor
156. Lincoln
157. Hilton Head Island
158. San Luis Obispo
159. Clarksville
160. Sebastian
161. Brownsville
162. York
163. Mobile
164. Gulfport
165. Charlottesville
166. Beaumont
167. College Station
168. Laredo
169. Santa Cruz
170. Shreveport
171. Panama City
172. Roanoke
173. Kahului
174. Medford
175. Lansing
176. Midland
177. Amarillo
178. Rochester
179. Fayetteville
180. Idaho Falls
181. Montgomery
182. Gainesville
183. Grand Junction
184. Hagerstown
185. Lake Havasu City
186. Youngstown
187. Evansville
188. Cedar Rapids
189. Davenport
190. Waco
191. Dover
192. Yakima
193. Reading
194. Burlington
195. Canton
196. Tyler
197. Elkhart
198. Chico
199. Columbus
200. Logan
201. Madera
202. Appleton
203. Kingsport
204. Kalamazoo
205. South Bend
206. Billings
207. Atlantic City
208. Merced
209. Peoria
210. Pueblo
211. Athens
212. Jacksonville
213. Burlington
214. Missoula
215. Lynchburg
216. Duluth
217. St. Cloud
218. Napa
219. Yuba City
220. Flagstaff
221. Yuma
222. Homosassa Springs
223. Auburn
224. Tuscaloosa
225. Barnstable Town
226. Rockford
227. Fort Smith
228. Norwich
229. Mount Vernon
230. Wenatchee
231. Warner Robins
232. Columbia
233. Flint
234. Las Cruces
235. Lafayette
236. Rapid City
237. Greenville
238. Odessa
239. Macon (Home)
240. Iowa City
241. Florence
242. Eau Claire
243. Utica
244. Erie
245. Longview
246. Winchester
247. Huntington
248. Bowling Green
249. Lake Charles
250. Johnson City
251. Harrisonburg
252. Albany
253. Valdosta
254. Topeka
255. Oshkosh
256. Abilene
257. Redding
258. Houma
259. Bismarck
260. Binghamton
261. Sioux City
262. Blacksburg
263. Waterloo
264. Champaign
265. Longview
266. Joplin
267. California
268. Sherman
269. Dalton
270. Chambersburg
271. Bloomington
272. State College
273. Janesville
274. El Centro
275. Ocean City
276. La Crosse
277. Jonesboro
278. Hanford
279. Santa Fe
280. Cleveland
281. Racine
282. Wausau
283. New Bern
284. Staunton
285. Charleston
286. Monroe
287. Glens Falls
288. Jackson
289. Gettysburg
290. Rocky Mount
291. Springfield
292. Mankato
293. Morristown
294. Cheyenne
295. Lebanon
296. Bangor
297. Brunswick
298. Saginaw
299. Hammond
300. Pocatello
301. Bloomington
302. Jefferson City
303. Dothan AL
304. Sierra Vista
305. East Stroudsburg
306. San Angelo
307. Grand Forks
308. Vineland
309. Dubuque
310. Albany
311. Elizabethtown
312. Kingston
313. Goldsboro
314. Ithaca
315. Corvallis
316. Grants Pass
317. Alexandria
318. Decatur
319. Wichita Falls
320. Muskegon
321. Jackson
322. Florence
323. Sebring
324. Owensboro
325. Texarkana
326. Sumter
327. Pittsfield
328. Sheboygan
329. Columbus
330. Terre Haute
331. Monroe
332. Hattiesburg
333. St. Joseph
334. Victoria
335. Lewiston
336. Altoona
337. Lewiston
338. Lawrence
339. Niles
340. Walla Walla
341. Great Falls
342. Carson City
343. Ames
344. Morgantown
345. Fond du Lac
346. Rome
347. Casper
348. Watertown
349. Carbondale
350. Battle Creek
351. Bloomsburg
352. Hinesville
353. Springfield
354. Mansfield
355. Michigan City
356. Cape Girardeau
357. Williamsport
358. Wheeling
359. Lima
360. Kokomo
361. Grand Island
362. Johnstown
363. Anniston
364. Manhattan
365. Kankakee
366. Decatur
367. Farmington
368. Muncie
369. Hot Springs
370. Midland
371. Cumberland
372. Lawton
373. Elmira
374. Gadsden
375. Fairbanks
376. Weirton
377. Parkersburg
378. Bay City
379. Pine Bluff
380. Danville

WHAT IS A MARKET?

Square Feet of Data Center Under Construction and Planned

Top Data Center Markets by MW Inventory (2020)



TEXAS CONTINUES TO OUTPACE THE US

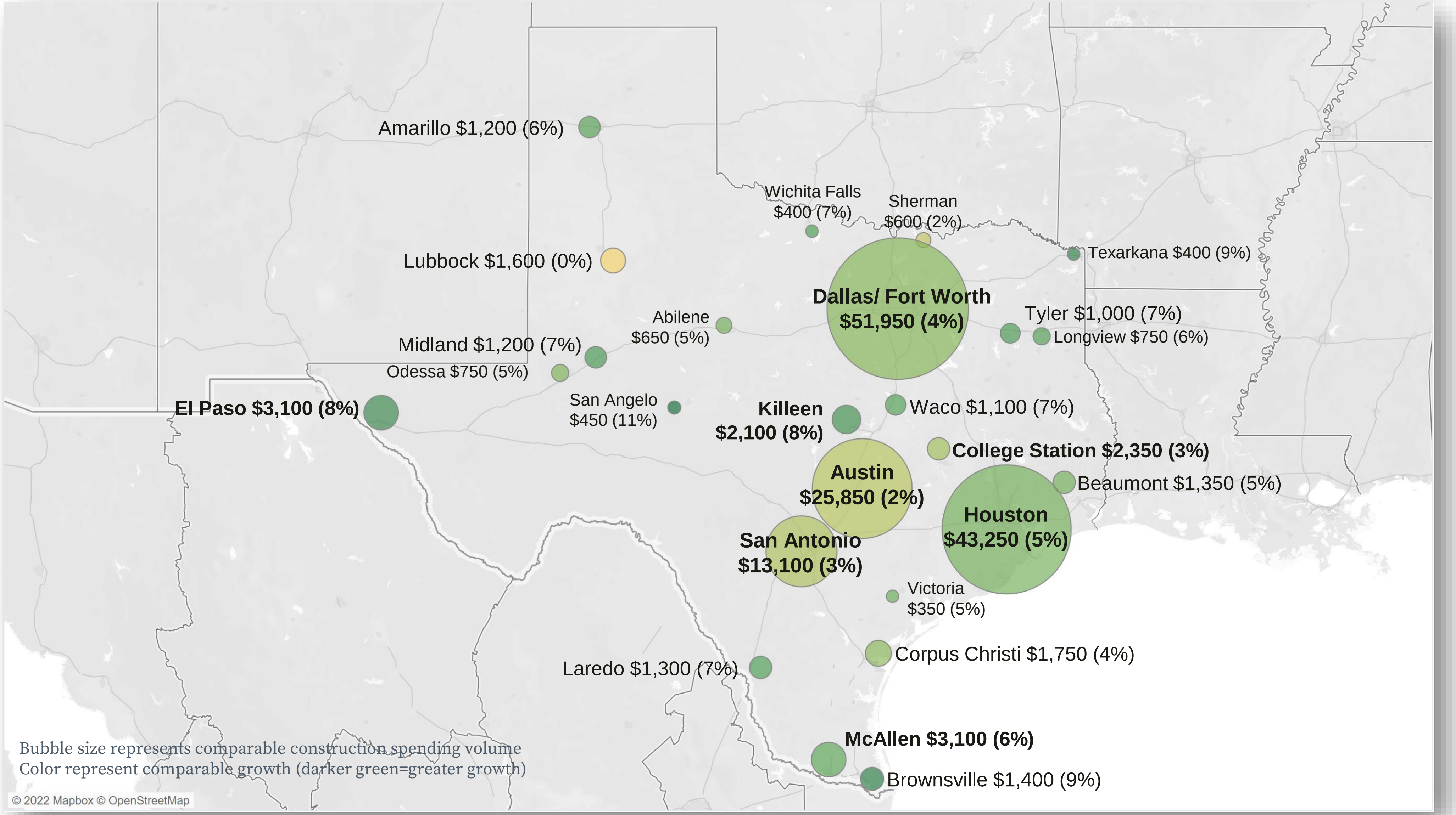
Total Construction Spending Put in Place (2022)
Forecast Growth (2022- 2025)
MSA; Millions of current dollars

What contributes most to recent and forecast growth?

- Population growth
- Well educated labor force
- Corporate headquarters/ relocations
- Oil and gas dominance
- Logistical hub

What are the greatest risks to continued expansion?

- Global trade
- High tech industry volatility
- Political unpredictability (e.g., military, oil & gas)
- Affordability



BIGGER, FASTER, BETTER

What project characteristics should we expect over the next several years?

Bigger	Faster	Better
Megaprojects consume an increasing share of construction spending	Project schedules continue to compress	When alternative delivery becomes normal delivery
• **Annual megaproject CPiP is expected to increase almost 500% over the next five years,** growing from slightly more than $50 billion to just almost $300 billion. Over the next decade, annual megaproject spending is expected to increase nearly 600%, reaching just over $350 billion. • **Total annual megaproject spend as a percent of total CPiP** is expected to increase from 10% in 2020 to **just over 20% by 2023** and remain stable between 20% and 25% through end of the decade. • **More than $2.5 trillion in megaprojects are currently in planning or design through 2050**	• **Accelerated schedule and schedule certainty are increasingly influencing contractor selections**. This is particularly true in mission critical and time sensitive industries. • For nonresidential building projects valued over $25 million, the **average schedule has shortened by over a year** during the past decade.	• Alternative delivery methods have experienced continued growth since 2015; up 67%. • It is anticipated that **alternative delivery methods will increase at a compound annual growth rate of 8% CAGR over the next five years**. • As **legislation has enabled greater use of alternative methods**, and familiarity with these methods has grown, these methods are **anticipated to represent over 60% of spending** over the forecast period. • Industry stakeholders consistently identify the **ability to deliver a project in an expedited manner as a main driver of alternative delivery method utilization**.

FMI analysis of multiple sources

WHAT ELSE SHOULD WE BE CONSIDERING?

1. Adopt a product agnostic mindset
2. Recruit the people you have
3. Buy out as early as possible
4. Develop scenarios based on sustained 10% to 15% increase in cost
5. Leverage technology to mitigate, supplement, and eliminate
6. Build your network
7. Remember what’s not going change in the next five to 10 years

Thank you

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Jay Bowman, Partner & Managing Director of Research & Analytics

As a Partner with FMI, Jay Bowman assists a broad range of stakeholders in the construction industry, from program managers and general contractors to specialty trades and materials producers, with the identification and assessment of the risks influencing the strategic and tactical decisions they face. In this role, Jay's primary responsibilities include research design and interpretation, based on developing an understanding of the context within which these organizations operate. These draw upon many of the research services he oversees, including market sizing and forecasting, buying practices and preferences and competitive behaviors and response.

Publications to Jay's credit include: FMI's annual U.S. Markets Construction Overview, "Influencers in Construction," "Assessing Your Alternatives: Should we expand the business?," "Incorporating Customer Perceptions in Strategy Development" and "Conditions Ripe for Increased Use of Program Management.

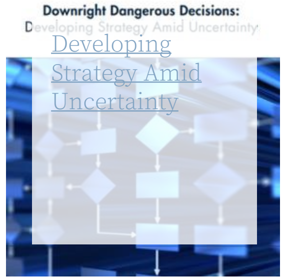
Jay earned his master of business administration degree from East Carolina University. He received undergraduate degrees from the University of Georgia in risk management and insurance. Prior to joining FMI, he worked with Aon Risk Services in Atlanta, Georgia.

Thought Leadership

The Changing Game of Strategy

The Last Normal Day

Downright Dangerous Decisions



Our Latest Construction Outlook – Download

FMI Consulting

FMI is a leading consulting and investment banking firm dedicated exclusively to the built environment. We serve as the industry's trusted advisor, providing current market insights, deep industry research and key relationships that deliver tangible results for our clients.

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