



Forest Economic Advisors

North American Lumber Markets

Will The US Residential Construction
Recession be Delayed or Denied?

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Forest NB Industry Forum

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Let's Revisit What I Said Last Year: March 2023 Forecast vs Actual

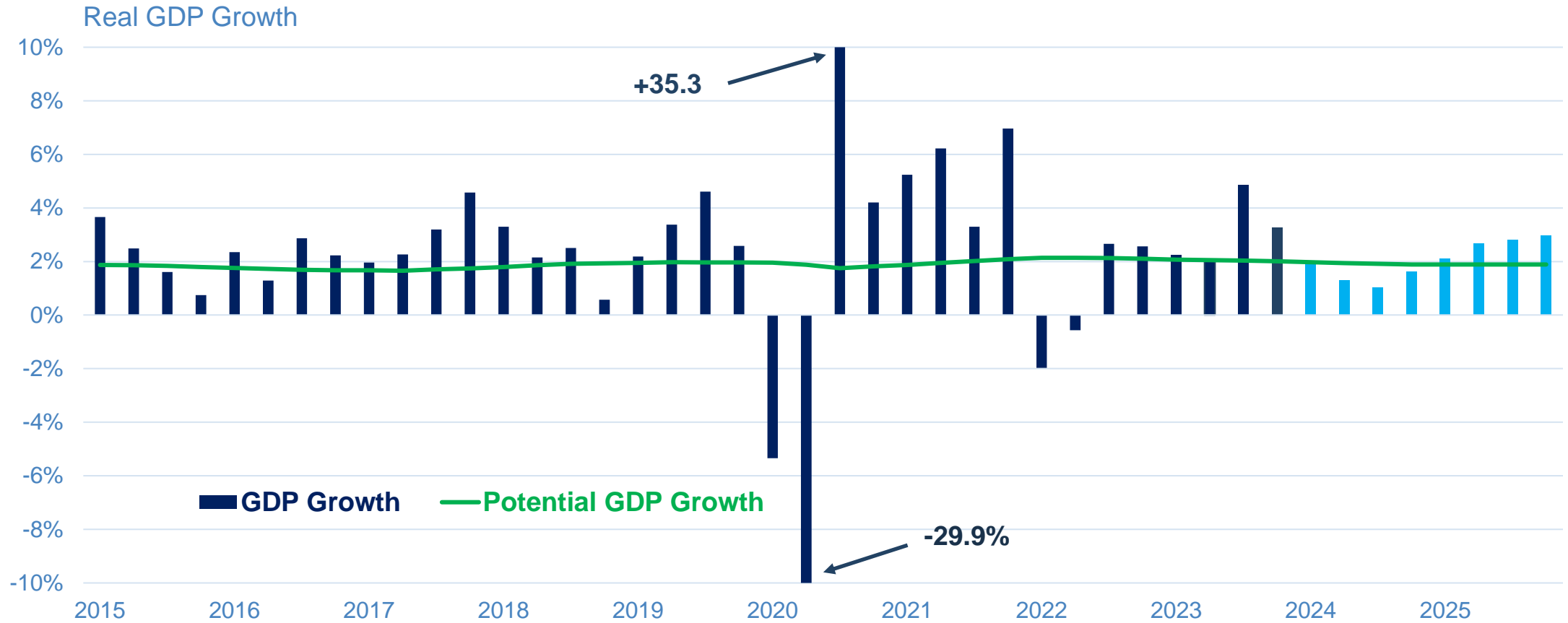
- US will see a recession in mid-2023, but it will be mild
- Inflation will fall sharply
- US households are in good shape which should bolster the economy
- Strong US households, extensive pent-up demand and demographic tailwinds will bolster residential construction
- British Columbia production will fall and US Southern production will not rise as quickly as capacity expansion indicates
- Exports will remain weak and imports strong.

	2023 Forecast	2023 Actual
30-Year Mortgage Rate	6.4%	6.8%
Housing Starts, 1,000,000 Units	1.32	1.41
Single-family Share	64%	67%
North American Lumber Consumption, MBF	56.43	58.42
Western SPF Lumber Price, \$US/MBF	\$392	\$389

Outline: Main Topics

- Overall Economy
 - Inflation
- End Use Markets
 - Residential Construction
 - Industrial Production
- Trade
 - Exports–China
 - Imports–Europe
- Supply
 - Regional Supply
- PricePulse

Our Base Case Forecast No Longer Shows a Recession

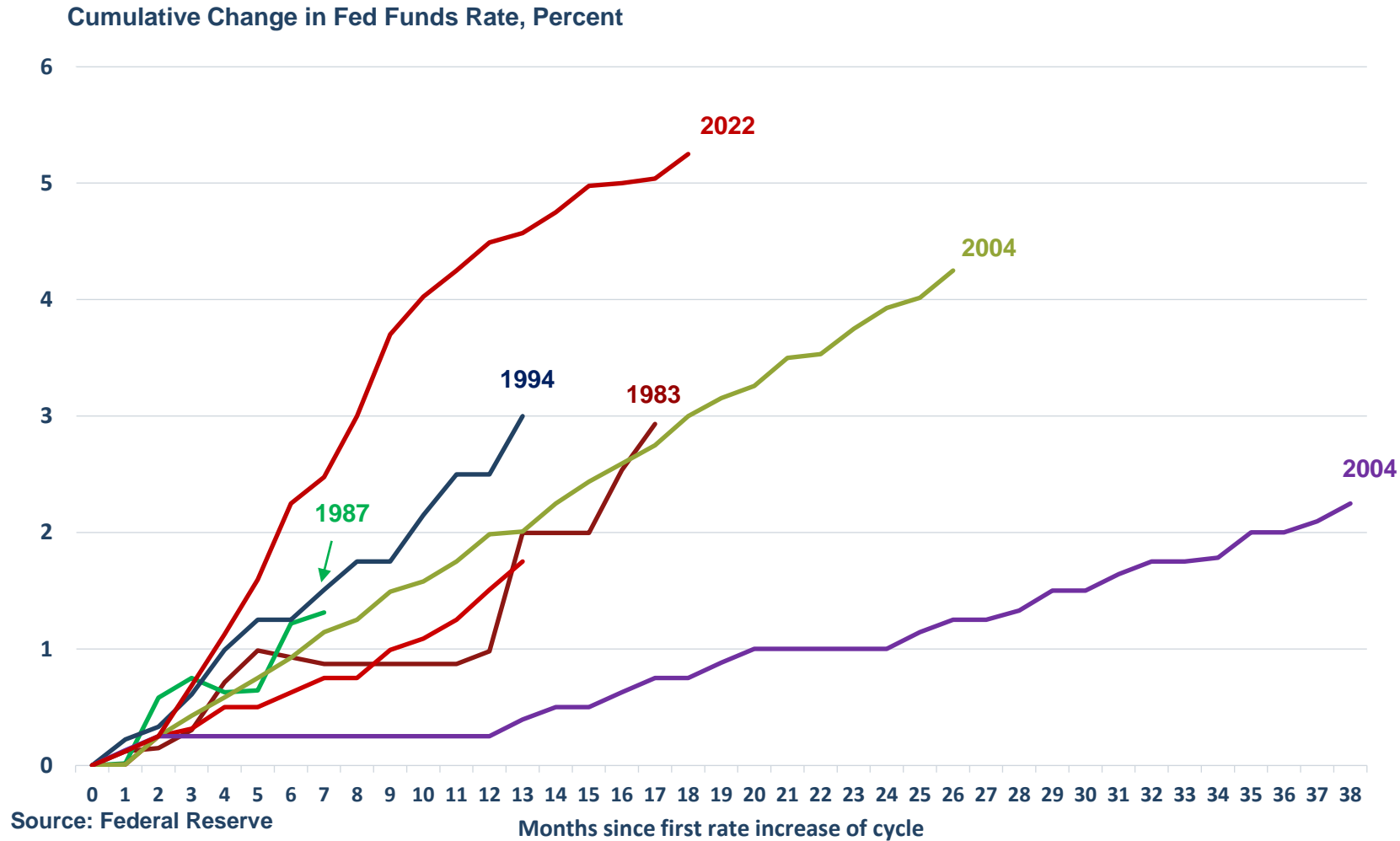


Inflation Rose To Its Highest Level In Decades

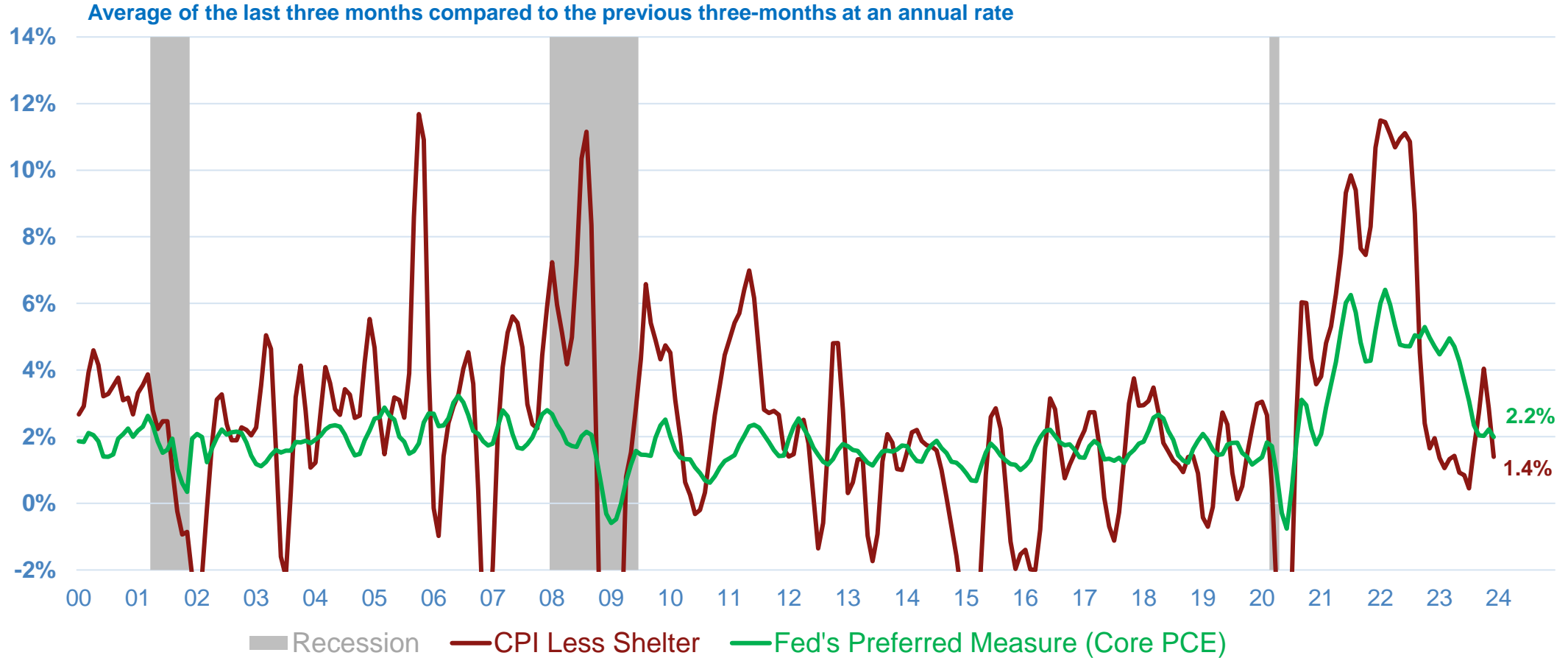
Year-over-Year Change in Consumer Price Index



The Recent Fed Rate Increases Were Fast and Furious

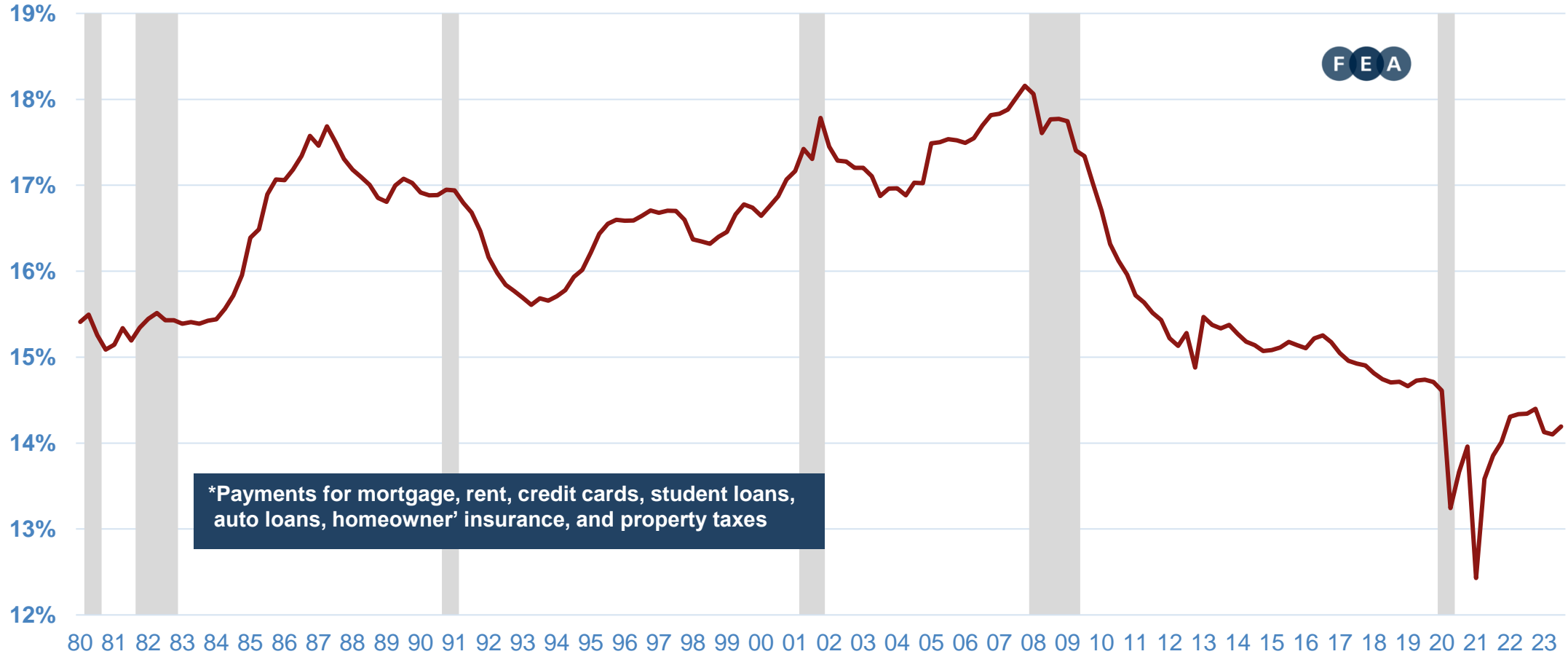


There is a Strong Case that the Inflation Dragon Has Been Slayed



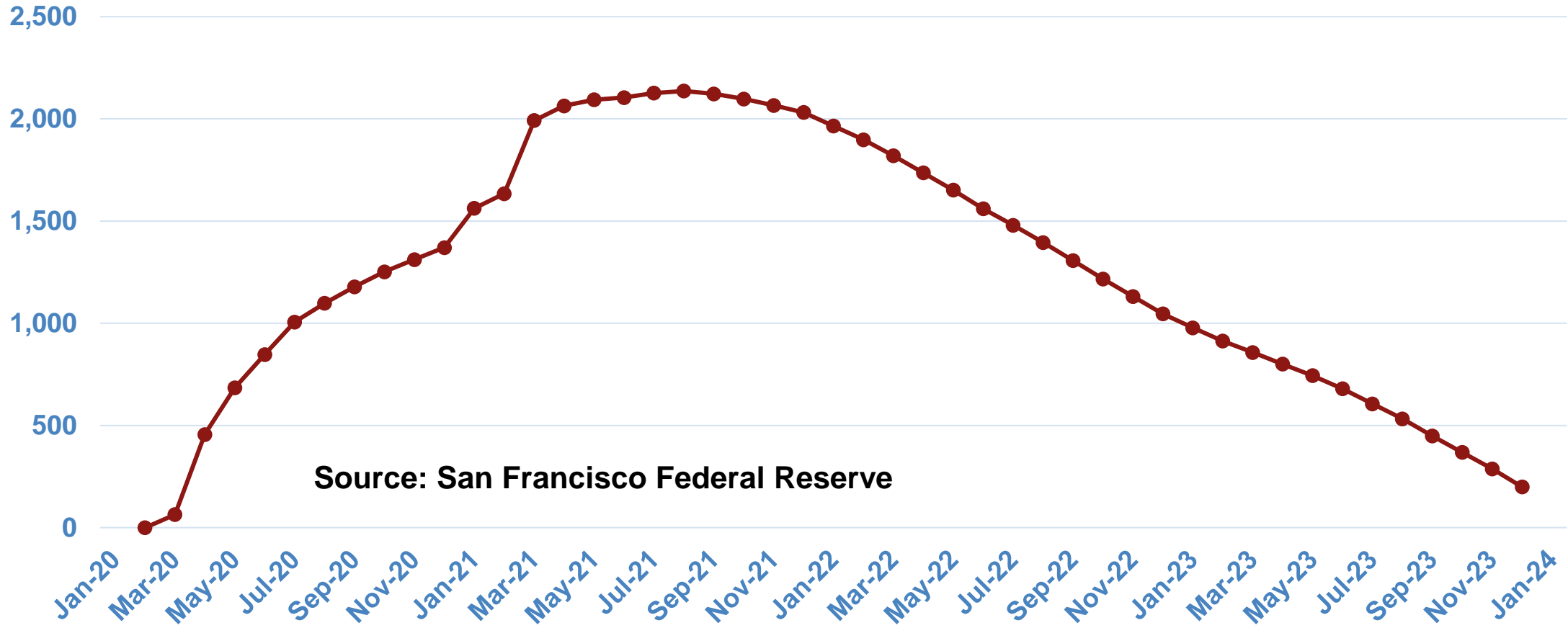
US Household Balance Sheets Are In Great Shape

Household Financial Obligations* as a percent of Disposable Personal Income



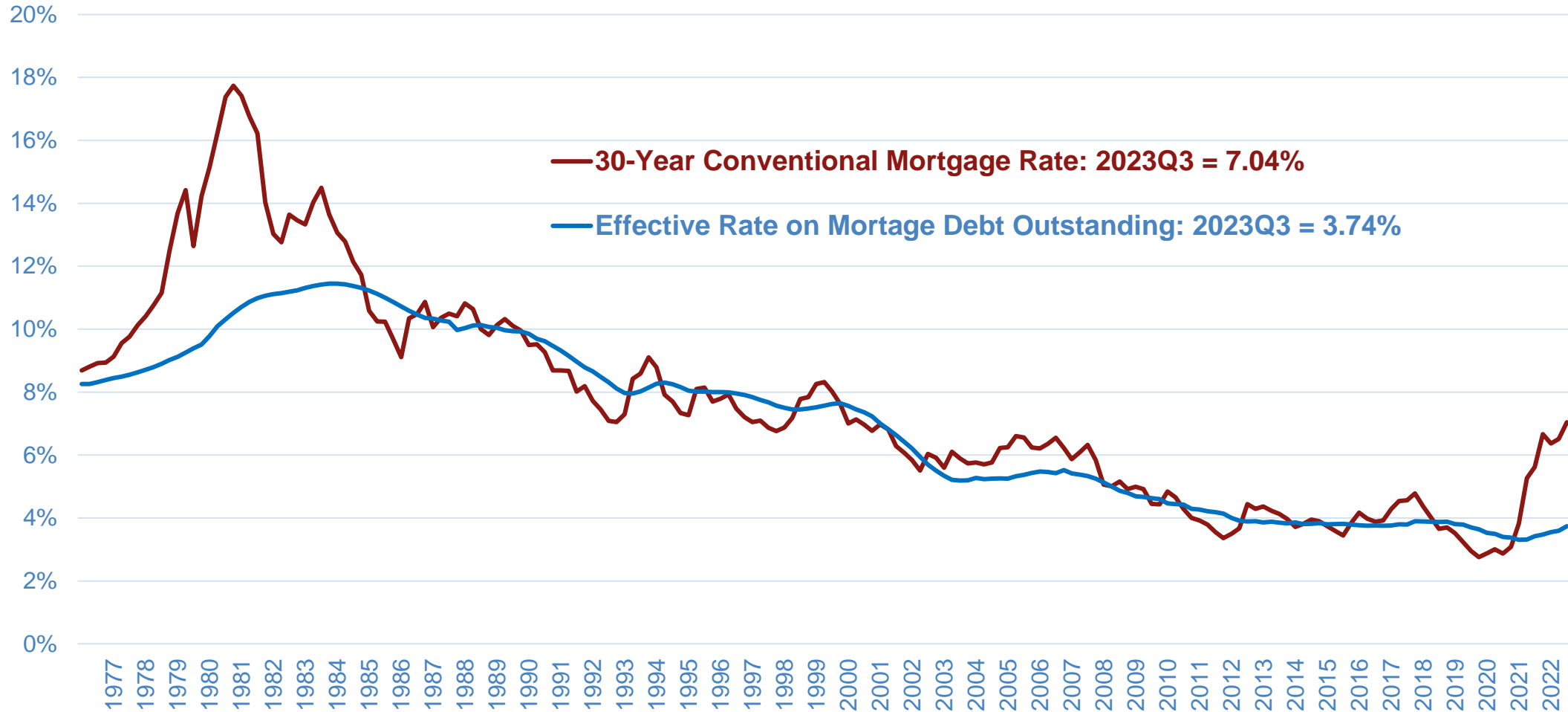
US Households Are Still Sitting on \$200B of Excess Savings

Stock of Excess Savings in Billions of USD



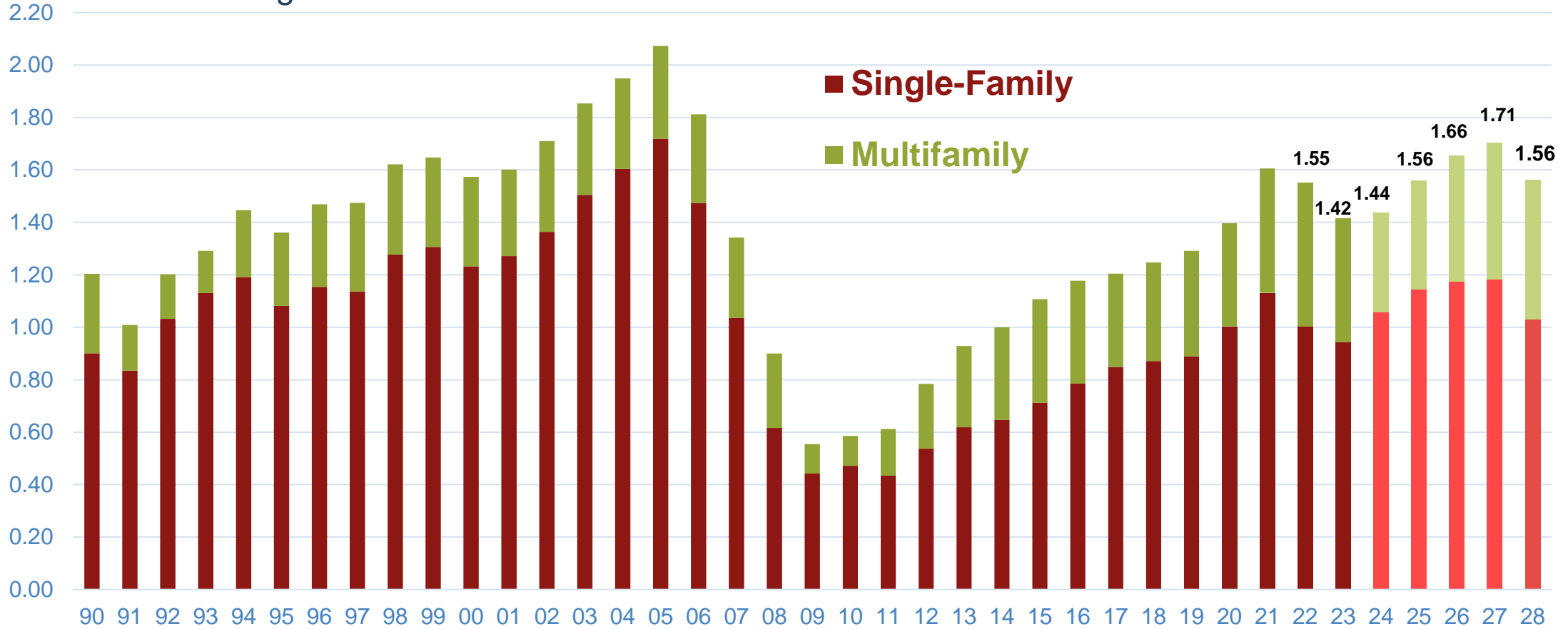
Source: San Francisco Federal Reserve

Higher Mortgage Rates Are Not Affecting Most Households



Housing Starts Declined by 9% in 2023 and Tick Up Slightly in 2024

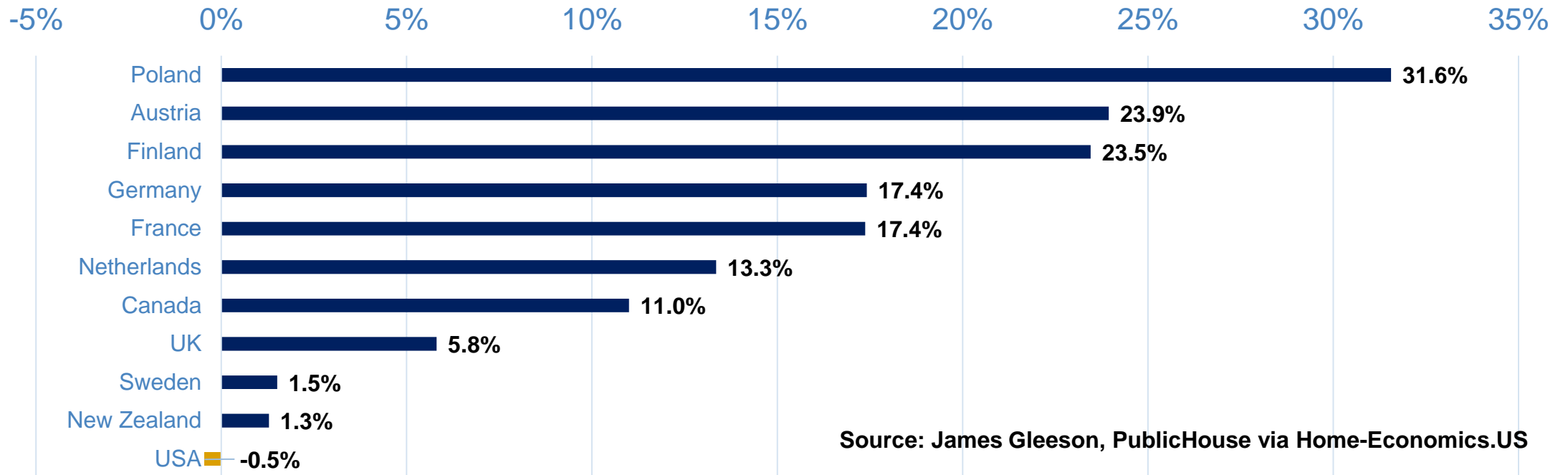
US Housing Starts in Millions



Source: Census Bureau, FEA Forecasts

US Home Construction Has Not Kept Pace With Population Growth

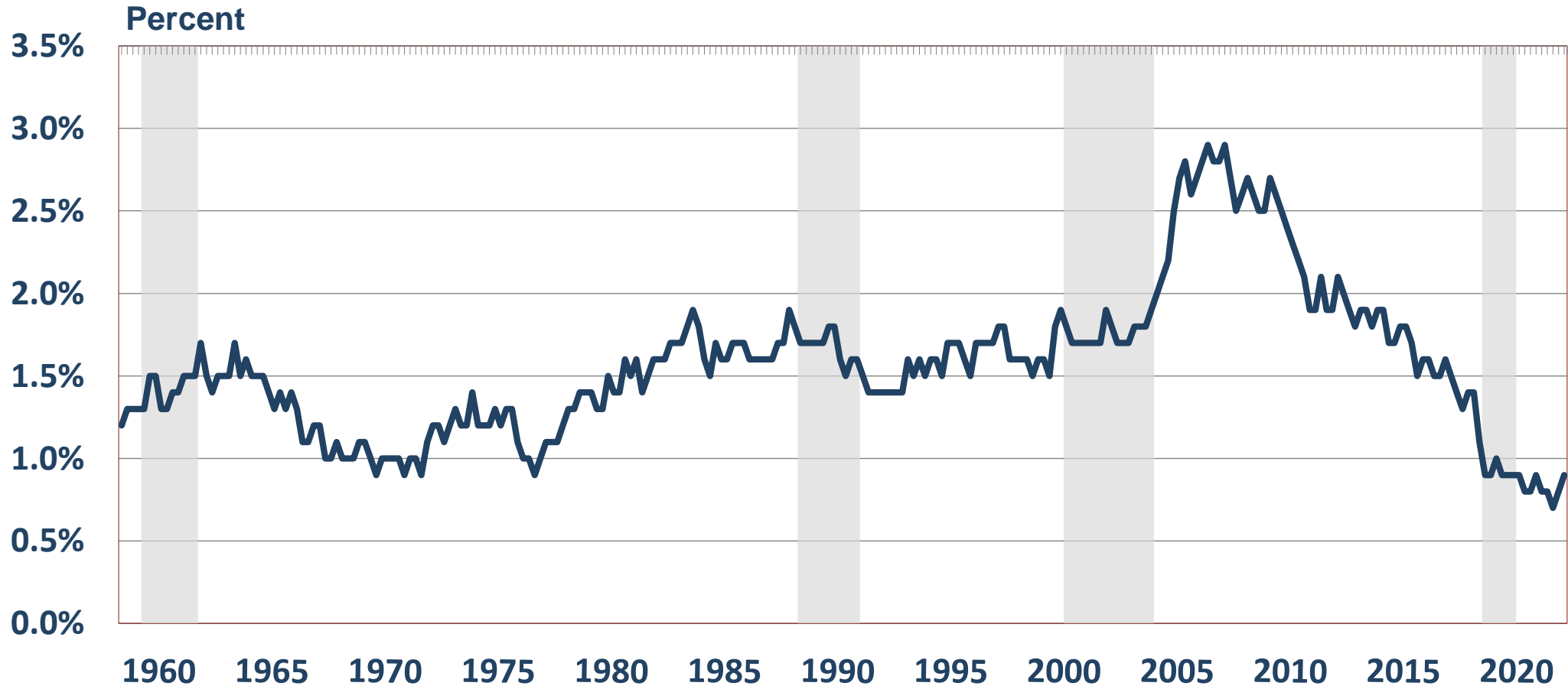
Growth in stock of dwellings minus population growth, 1995-2020



Source: James Gleeson, PublicHouse via Home-Economics.US

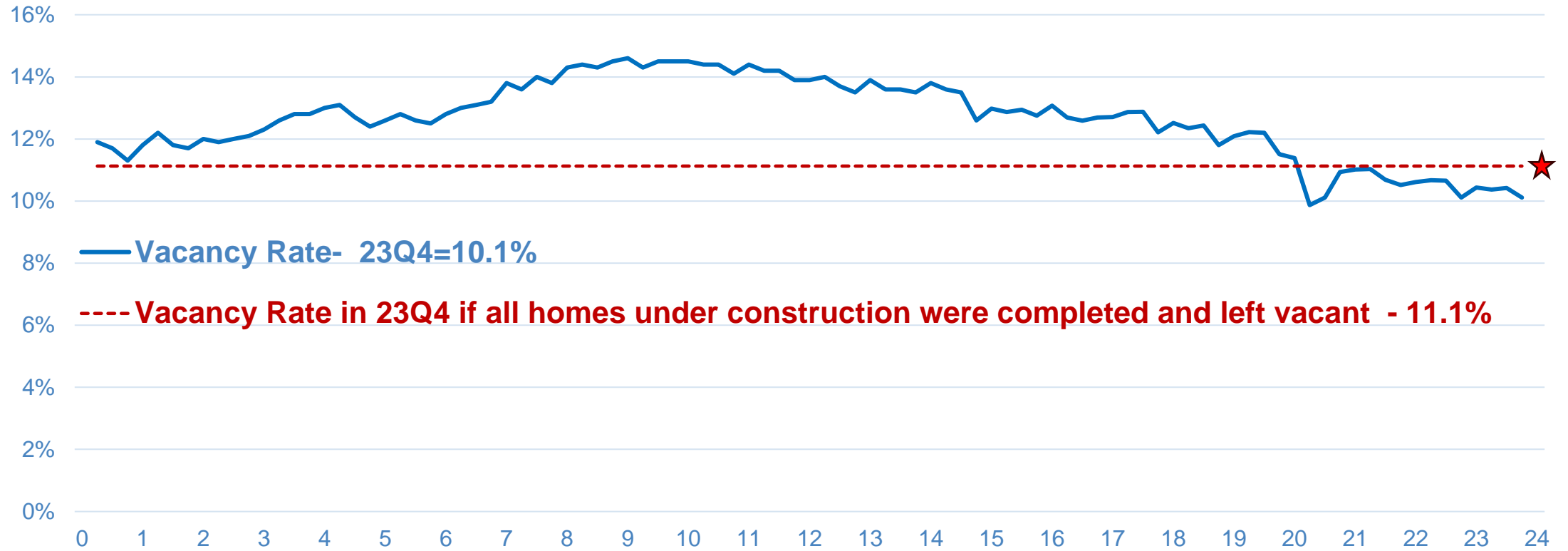
	<u>Poland</u>	<u>Austria</u>	<u>Finland</u>	<u>Germany</u>	<u>France</u>	<u>Holland</u>	<u>Canada</u>	<u>UK</u>	<u>Sweden</u>	<u>N. Zealand</u>	<u>USA</u>
Pop change	-0.9%	12.2%	8.1%	1.6%	13.0%	12.9%	30.5%	15.6%	17.4%	38.7%	24.4%
Home change	30.7%	36.1%	31.6%	19.1%	30.4%	26.2%	41.5%	21.4%	19.0%	40.0%	24.0%
Diff	31.6%	23.9%	23.5%	17.4%	17.4%	13.3%	11.0%	5.8%	1.5%	1.3%	-0.5%

The US Homeowner Vacancy Rate is Near Record Low



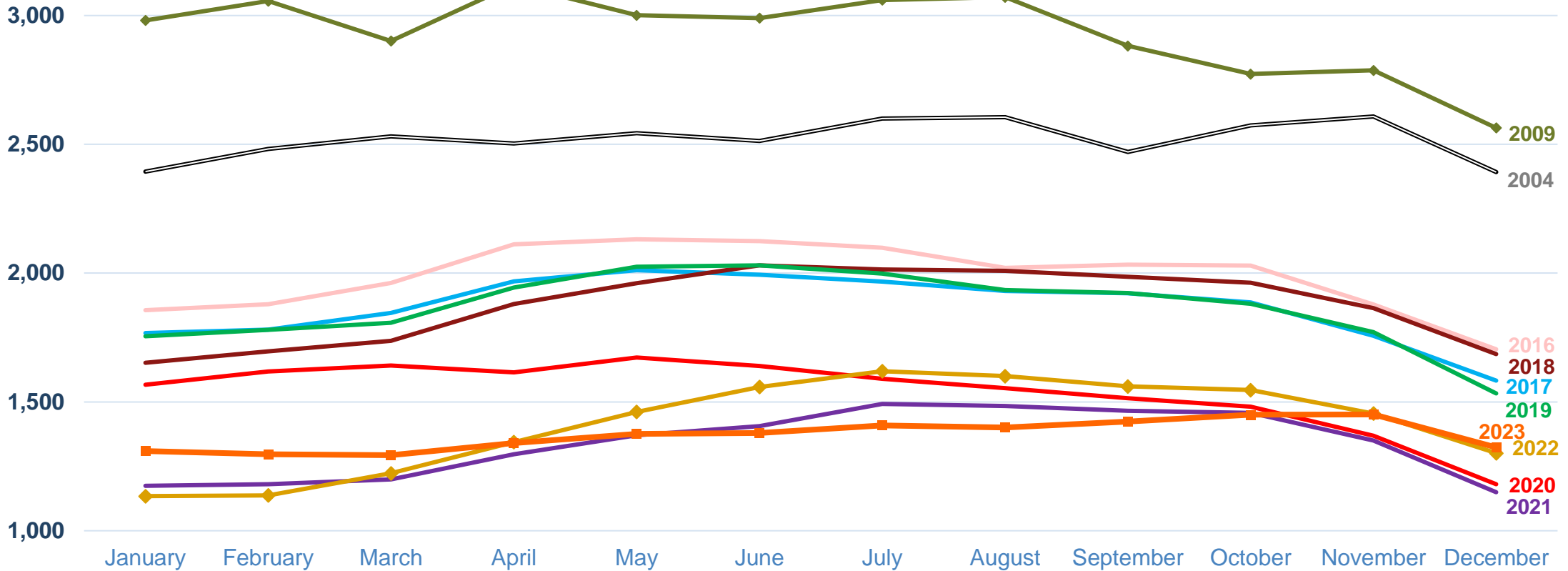
Source: Census Bureau's Home Vacancies and Homeownership Report

The Near-Record Number of Homes Under Construction Will Not Put a Dent in the Home Vacancy Rate



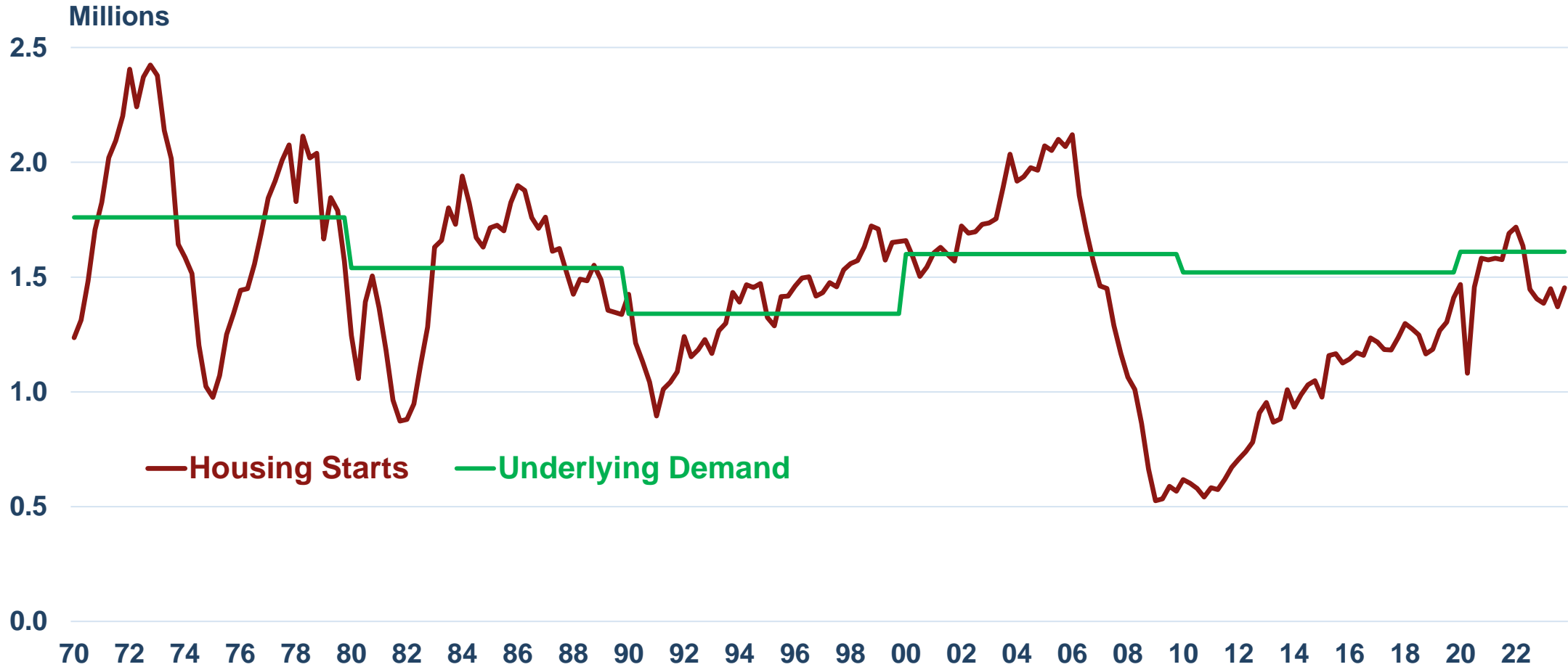
Home Inventories Are at Rock Bottom

Existing plus New Single-Family Homes for Sale, Thousands



Source: Census Bureau and National Association of Realtors

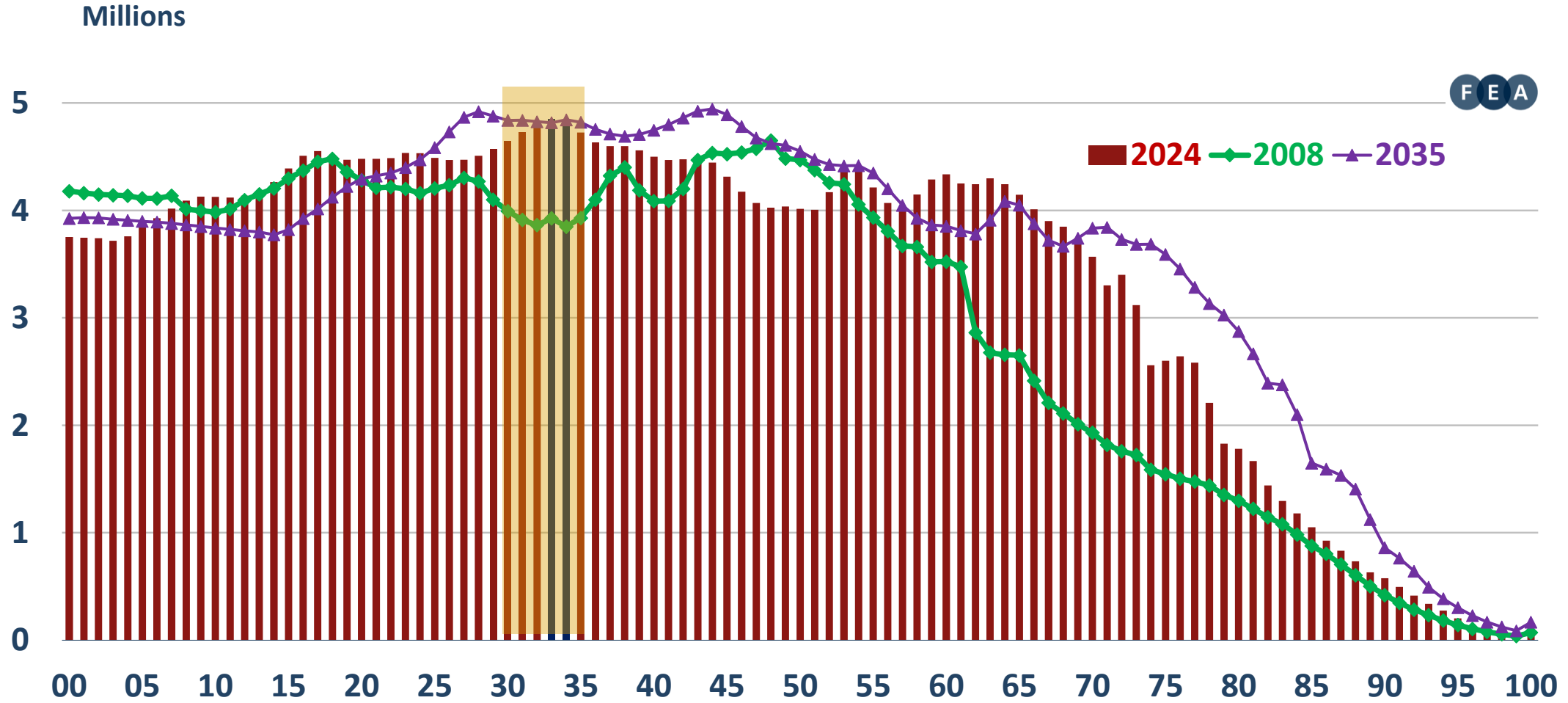
US Housing Starts Have Been Well Below Underlying Demand For More Than A Decade



2008 – Strong Demographic HEADWIND

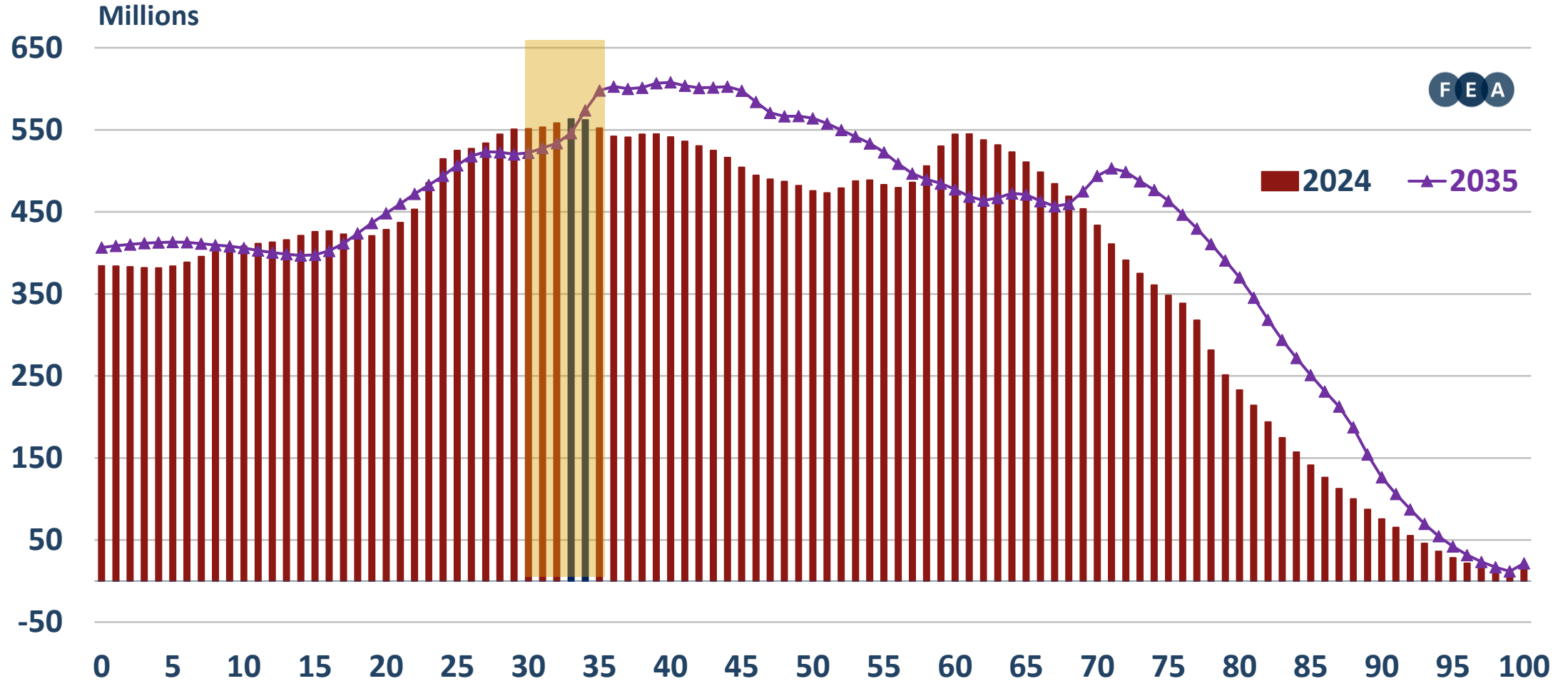
2024 – Strong Demographic TAILWIND

2035 = Swell of People Aged 25-45



Source: Census Bureau

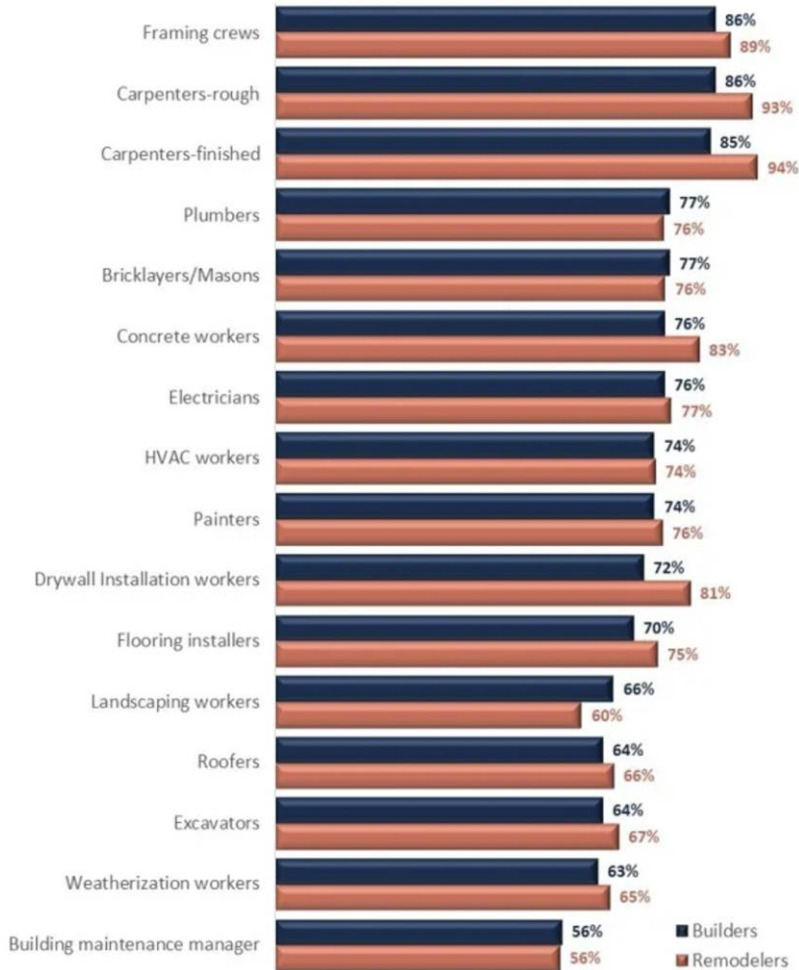
Demographics Providing Strong Tailwind to Canadian Residential Construction



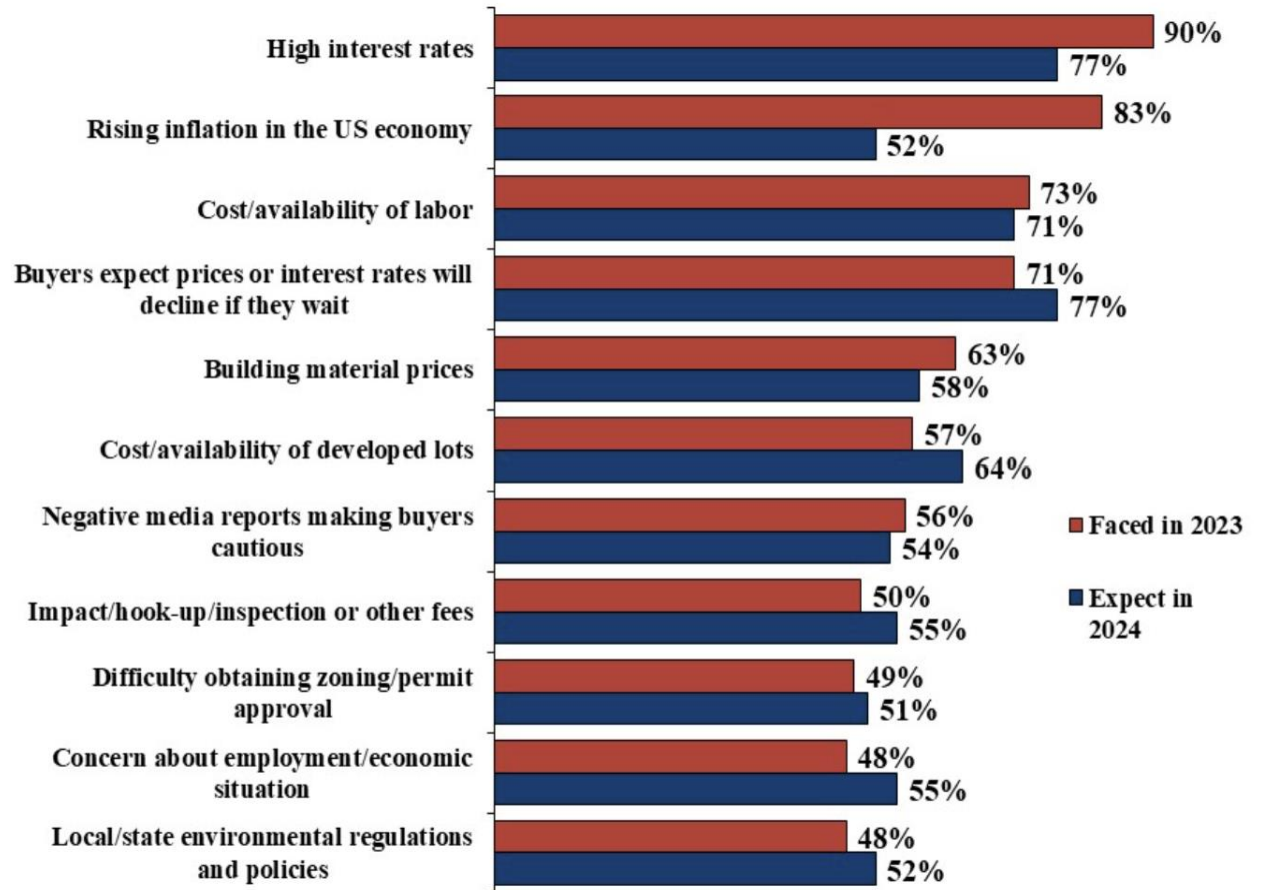
Source: UN Population Divisions; Medium Variant Forecast

Supply Side Constraints Will Prevent Housing Starts From Rising More

Percent of Builders & Remodelers Reporting Shortages of LABOR (Directly employed)

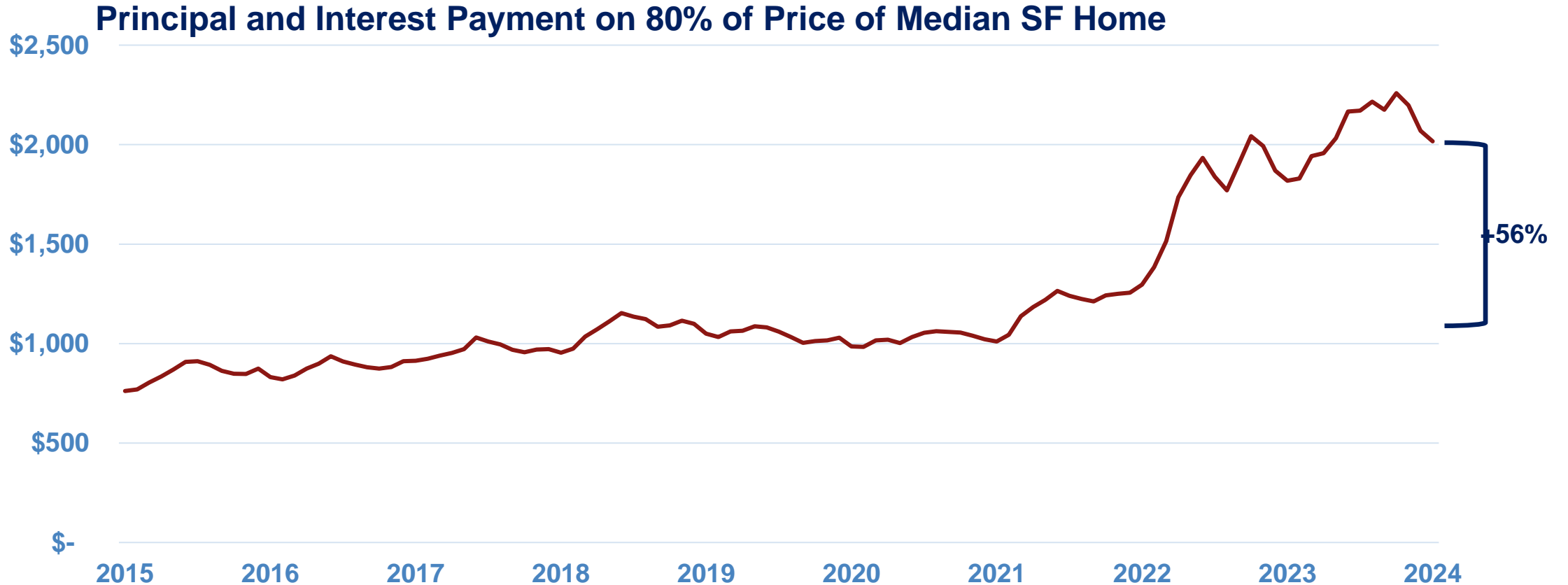


Key Problems of 2023 and Expected Issues for 2024



Source: HMI Special Survey, NAHB EChp.

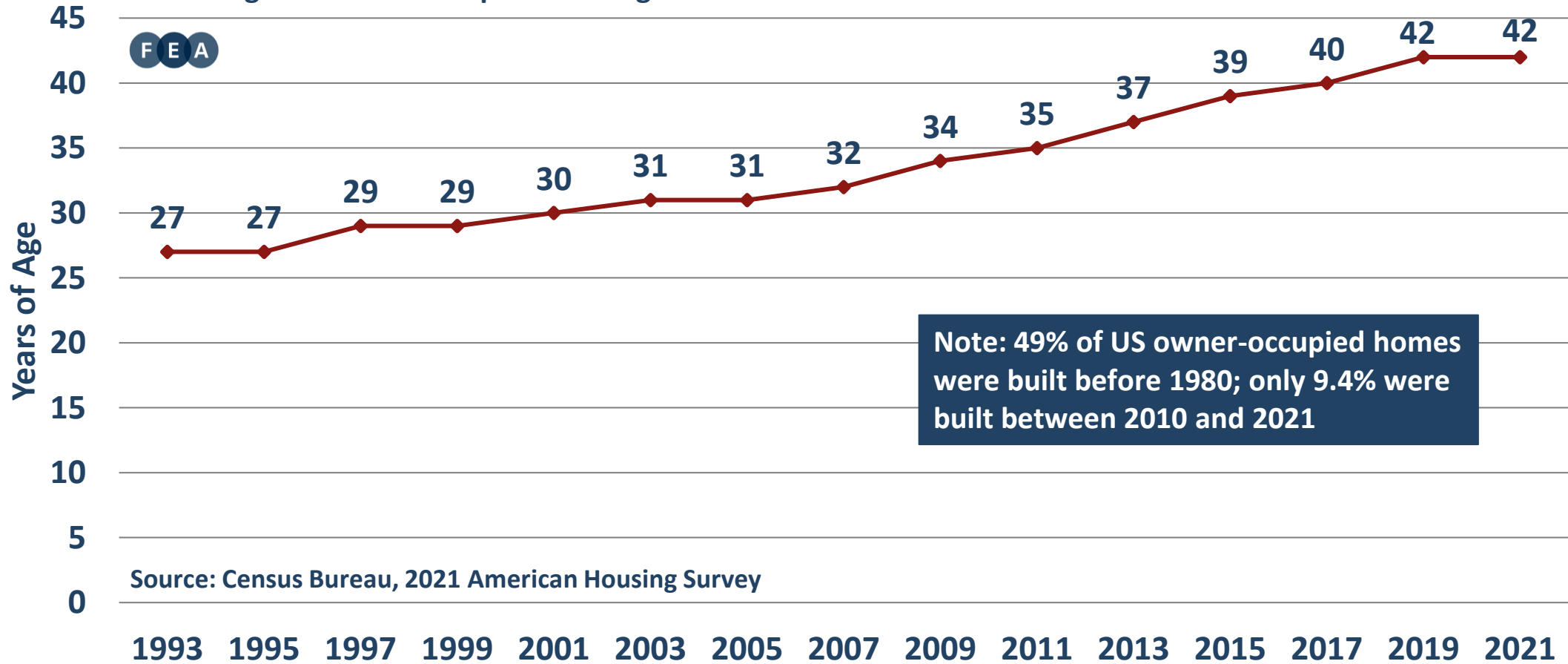
Homes Are Still Not Affordable



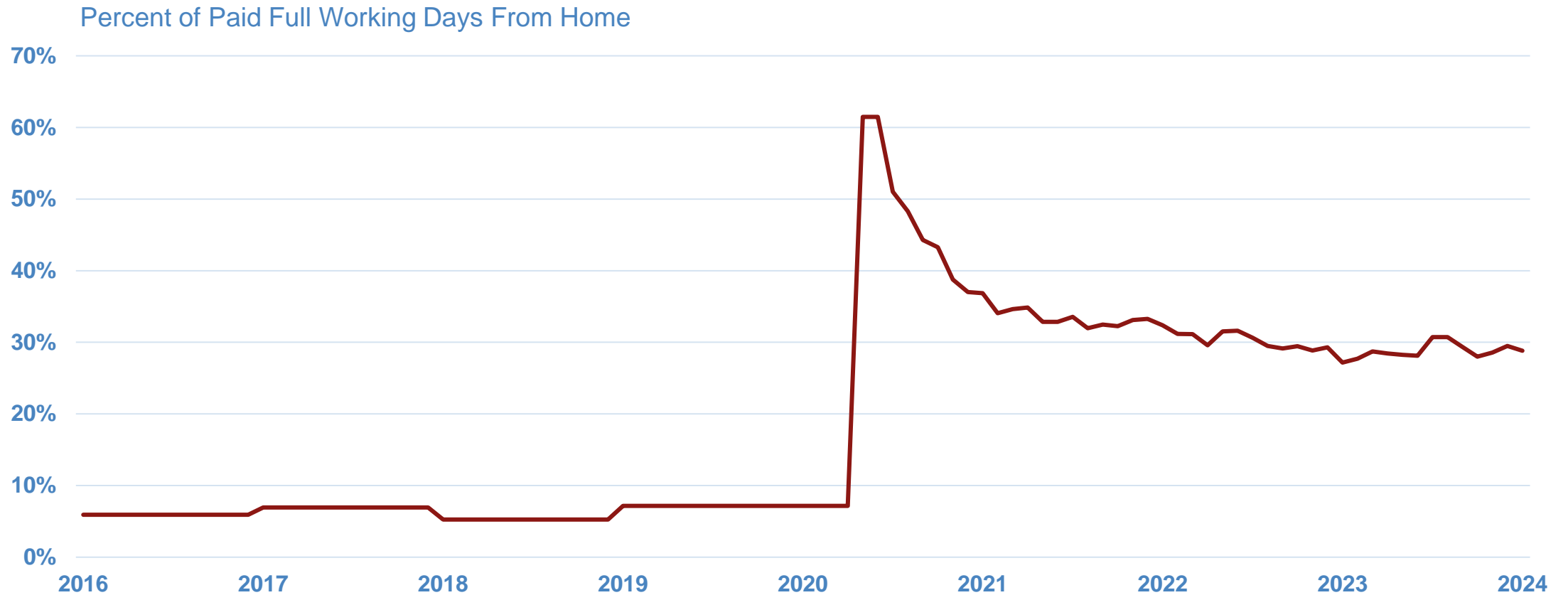
Source: National Association of Realtors, FEA estimates and calculations

The US Housing Stock Has Aged Considerably

Median Age of Owner-Occupied Housing

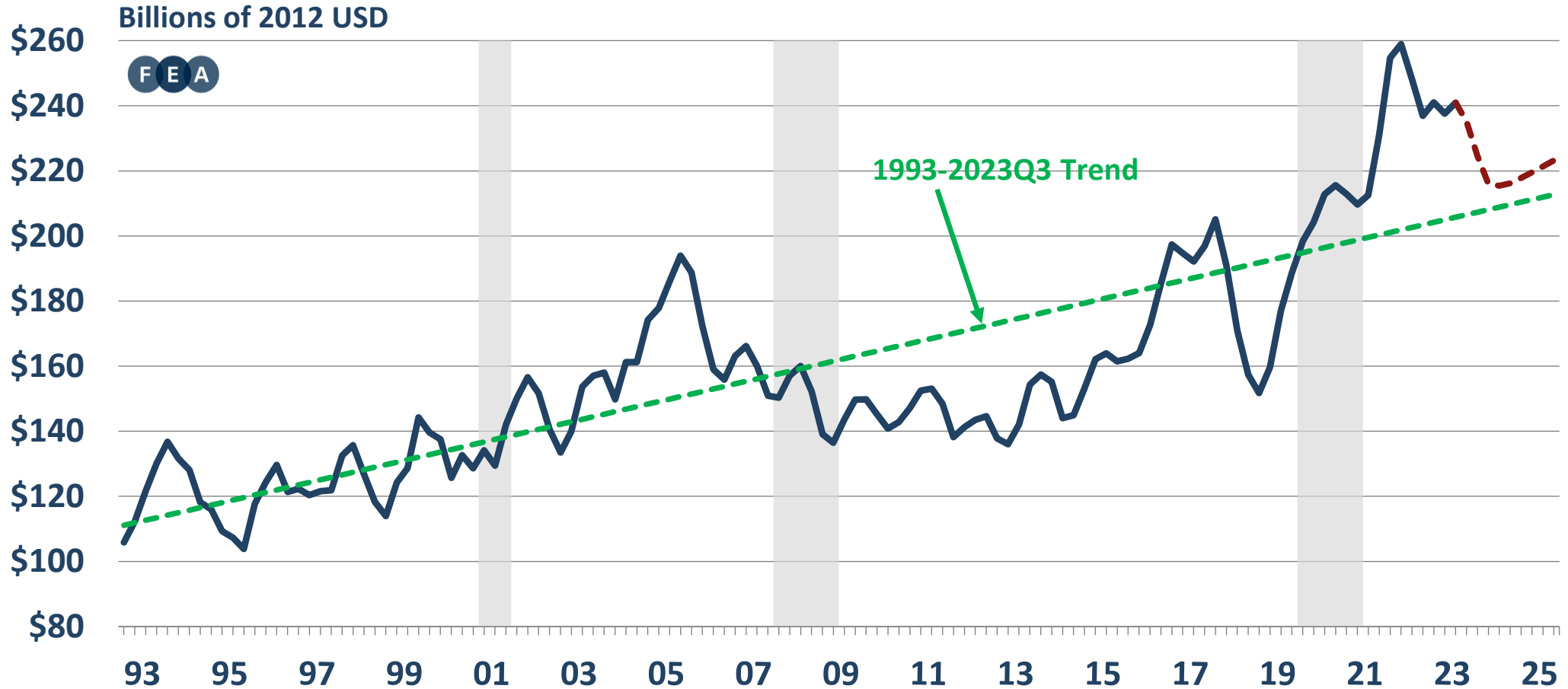


The Work From Home Trend Has Stuck



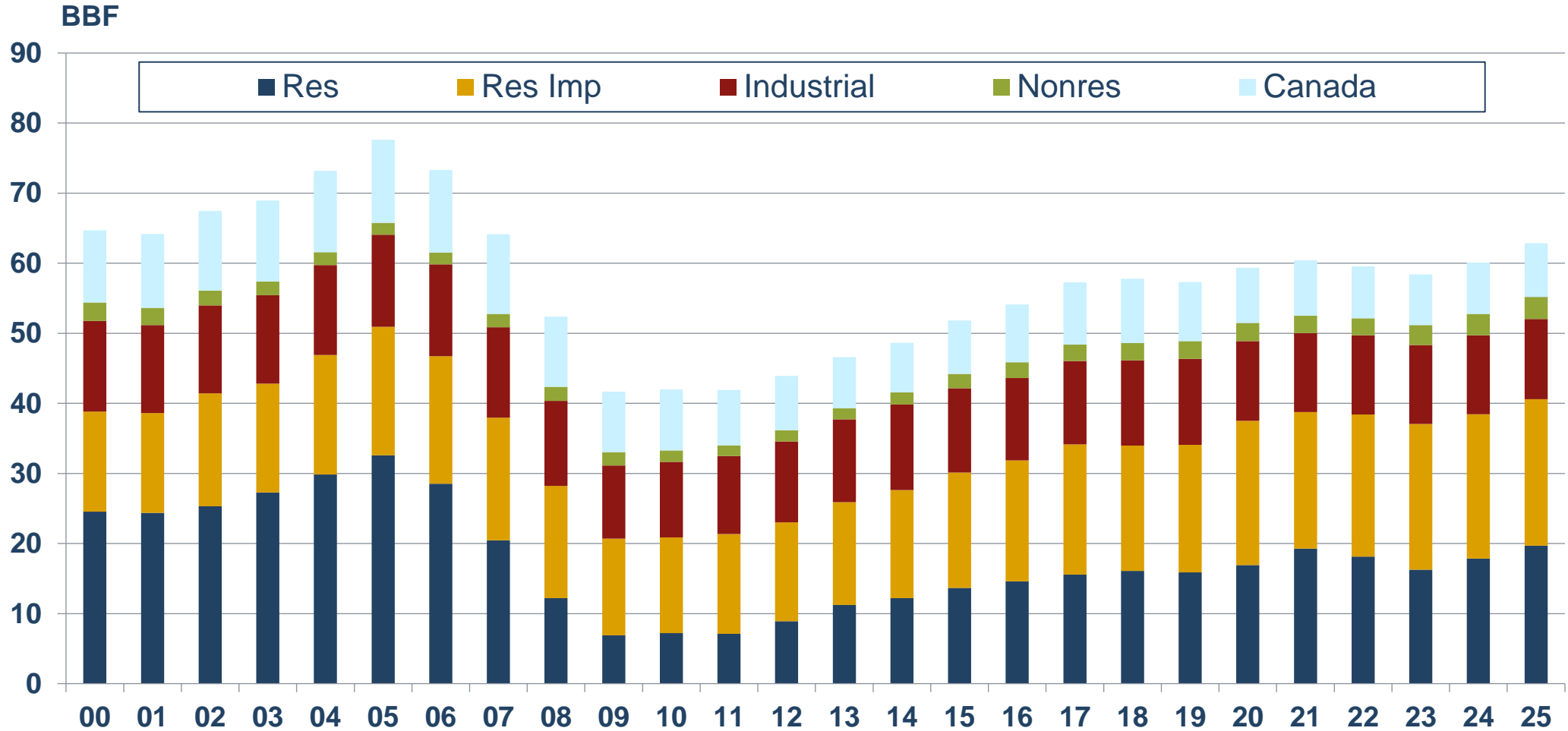
Source: www.wfhresearch.com

Improvement Expenditures Will Decline from High Level

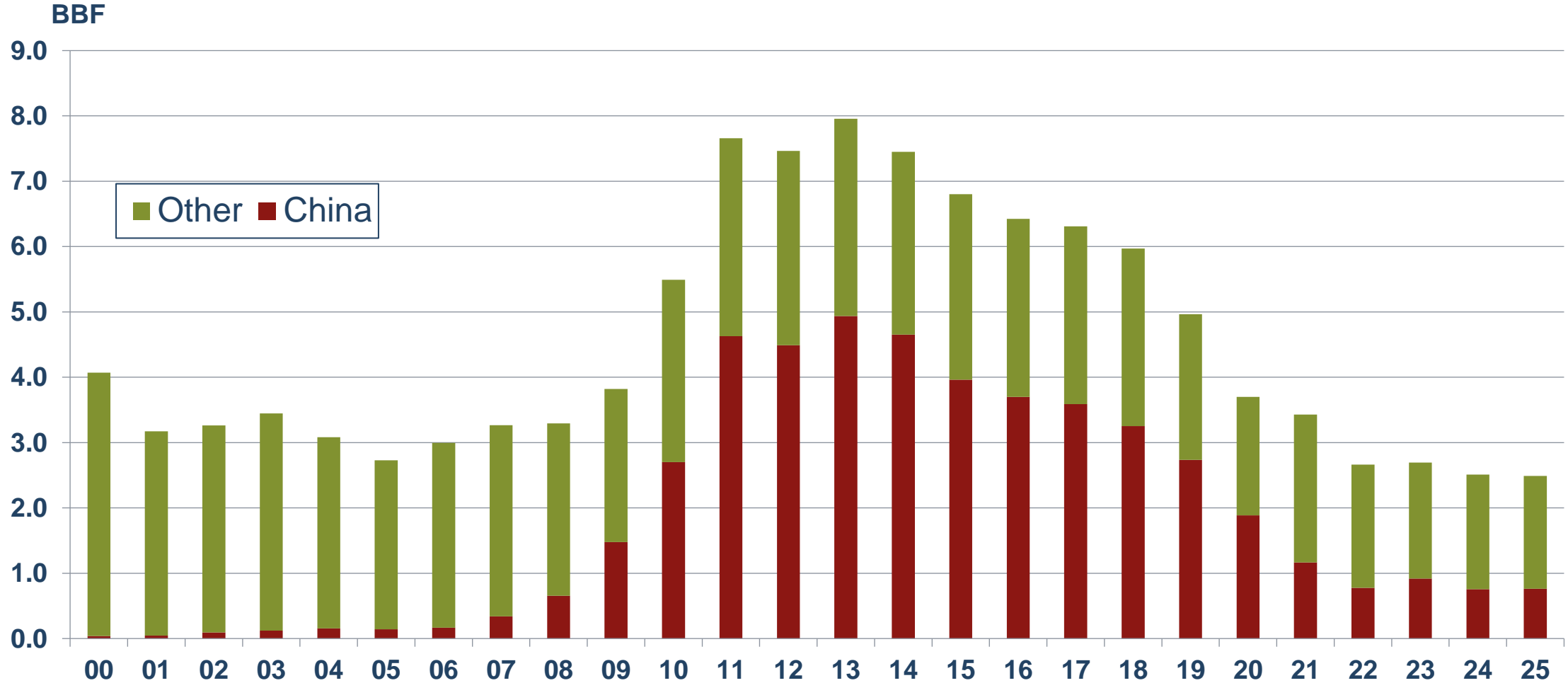


Source: Census Bureau, Bureau of Economic Analysis, FEA calculations

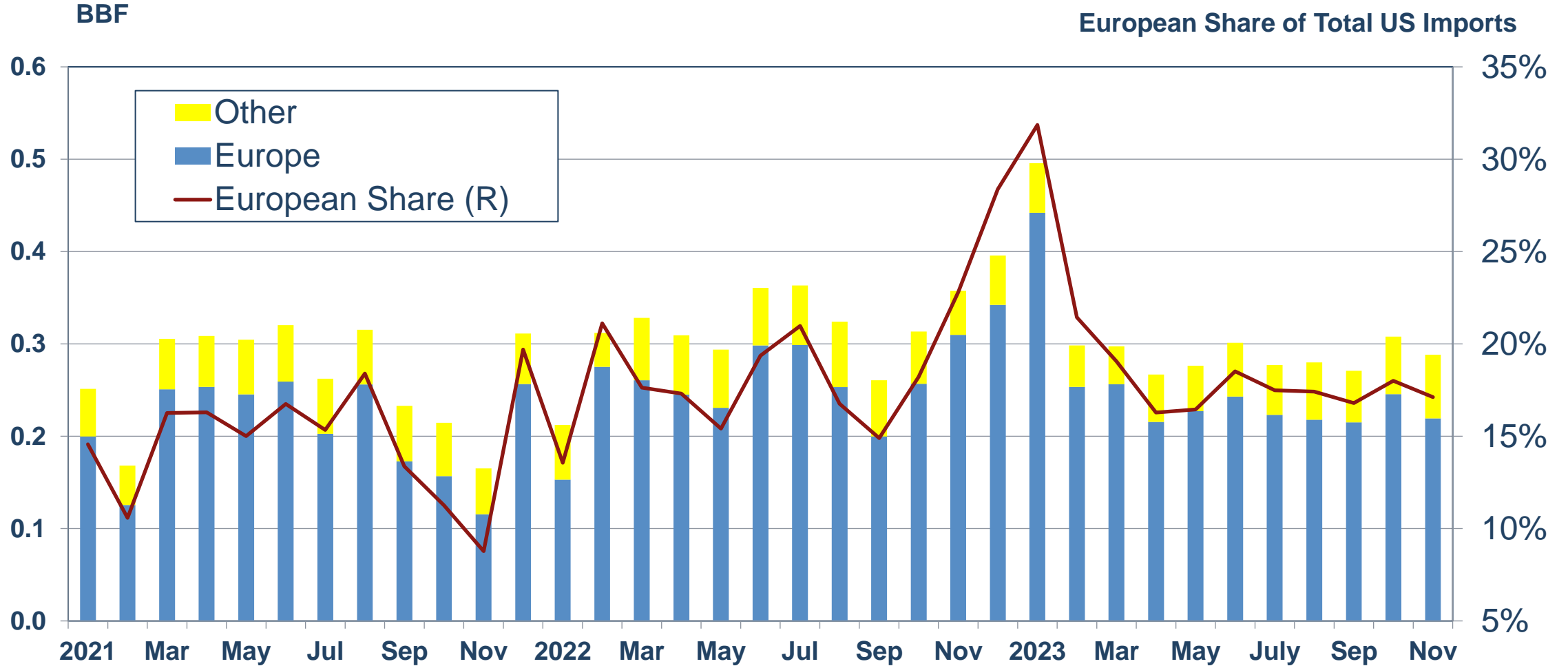
Lumber Consumption Will See Little Growth Until 2025



North American Lumber Exports Will Remain Weak

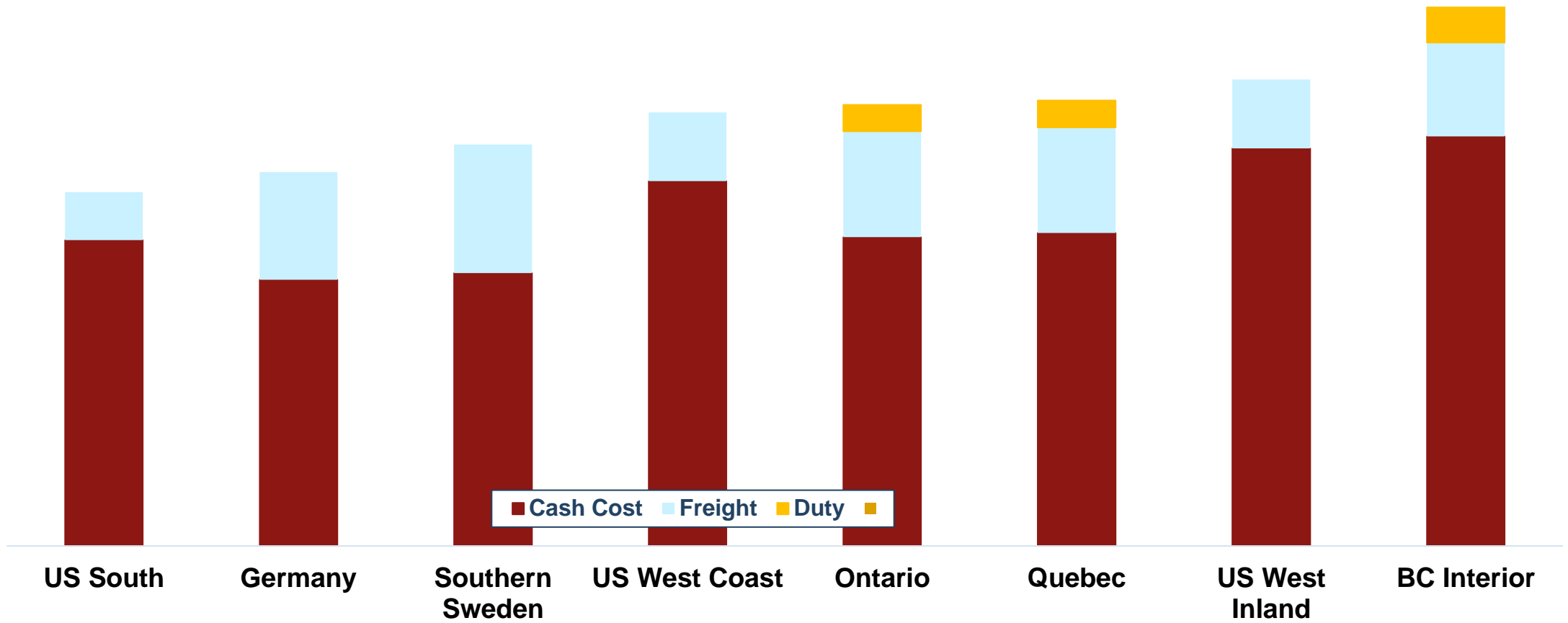


European Imports Have Fallen, But Will Remain Elevated



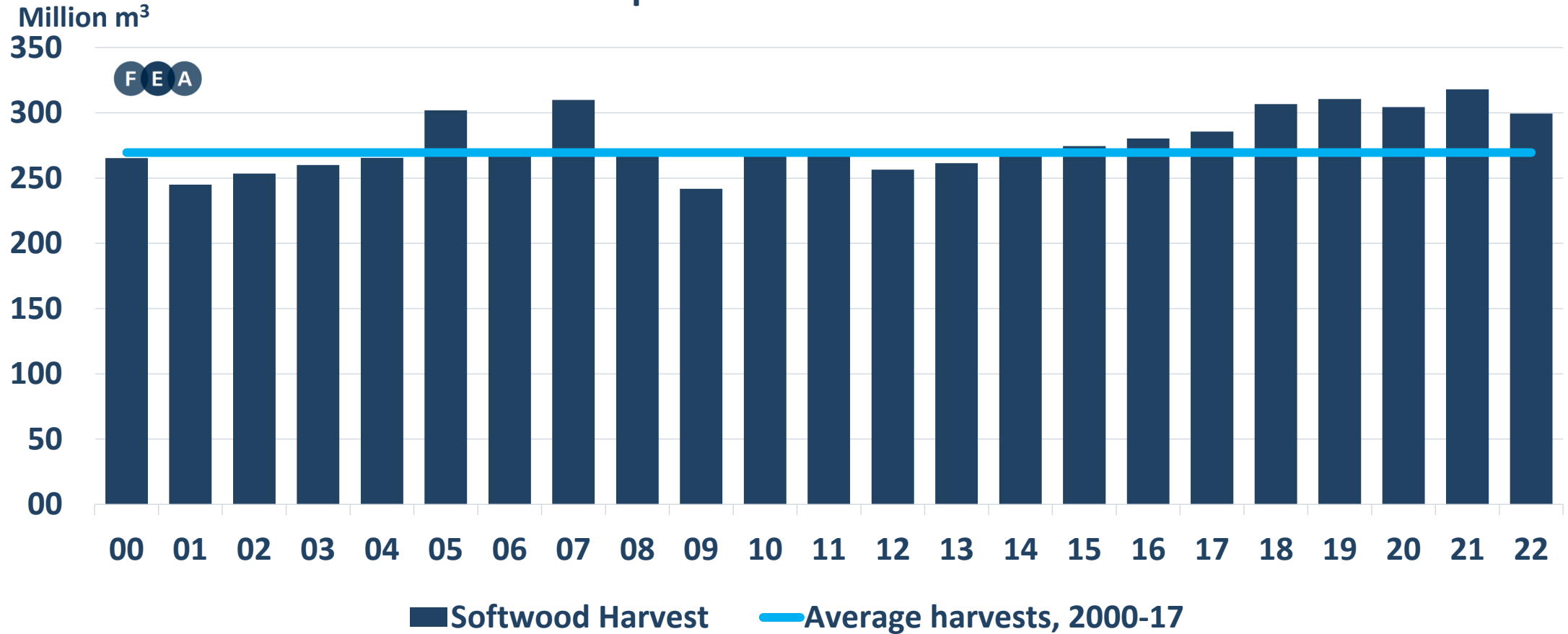
European Producers Are At The Low End Of The Cost Curve

\$/MBF, Delivered Houston

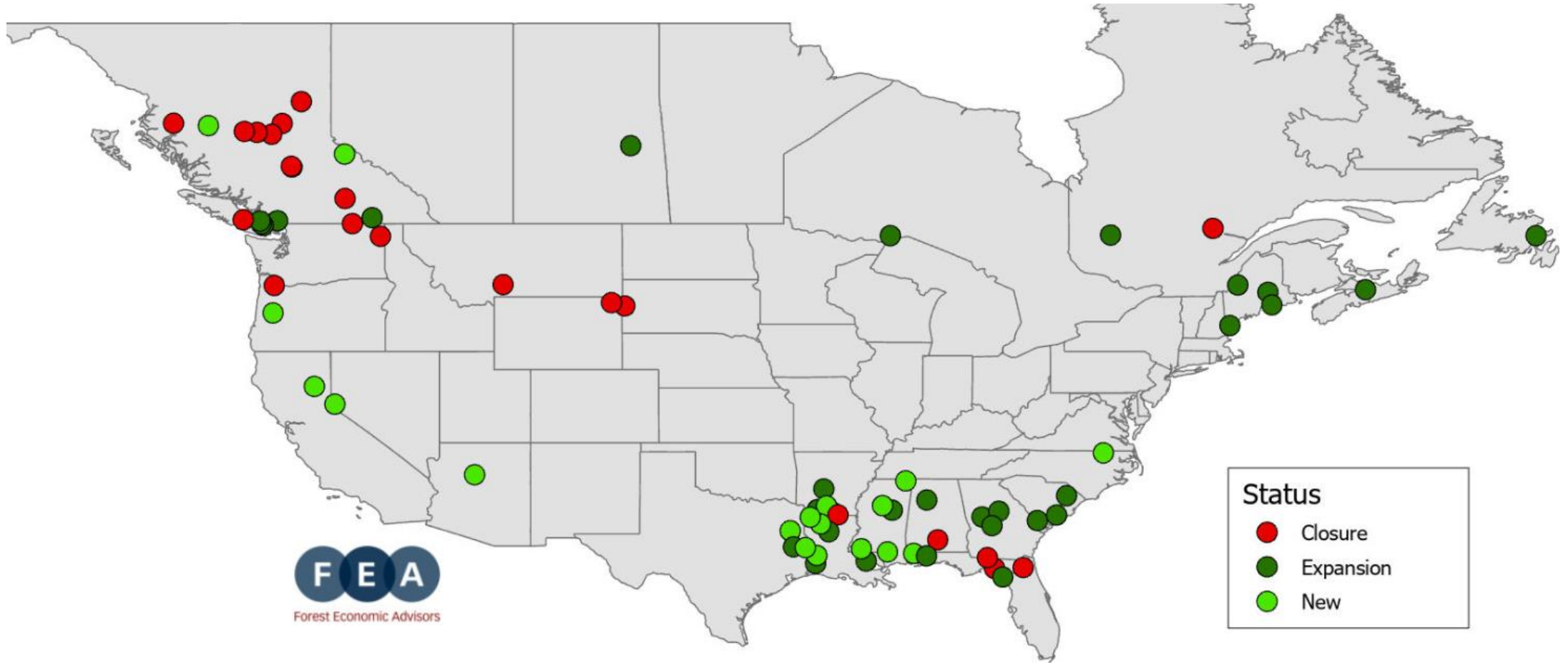


Europe's Ability to Maintain Elevated Harvest Levels Likely to Decline

European Softwood Harvest

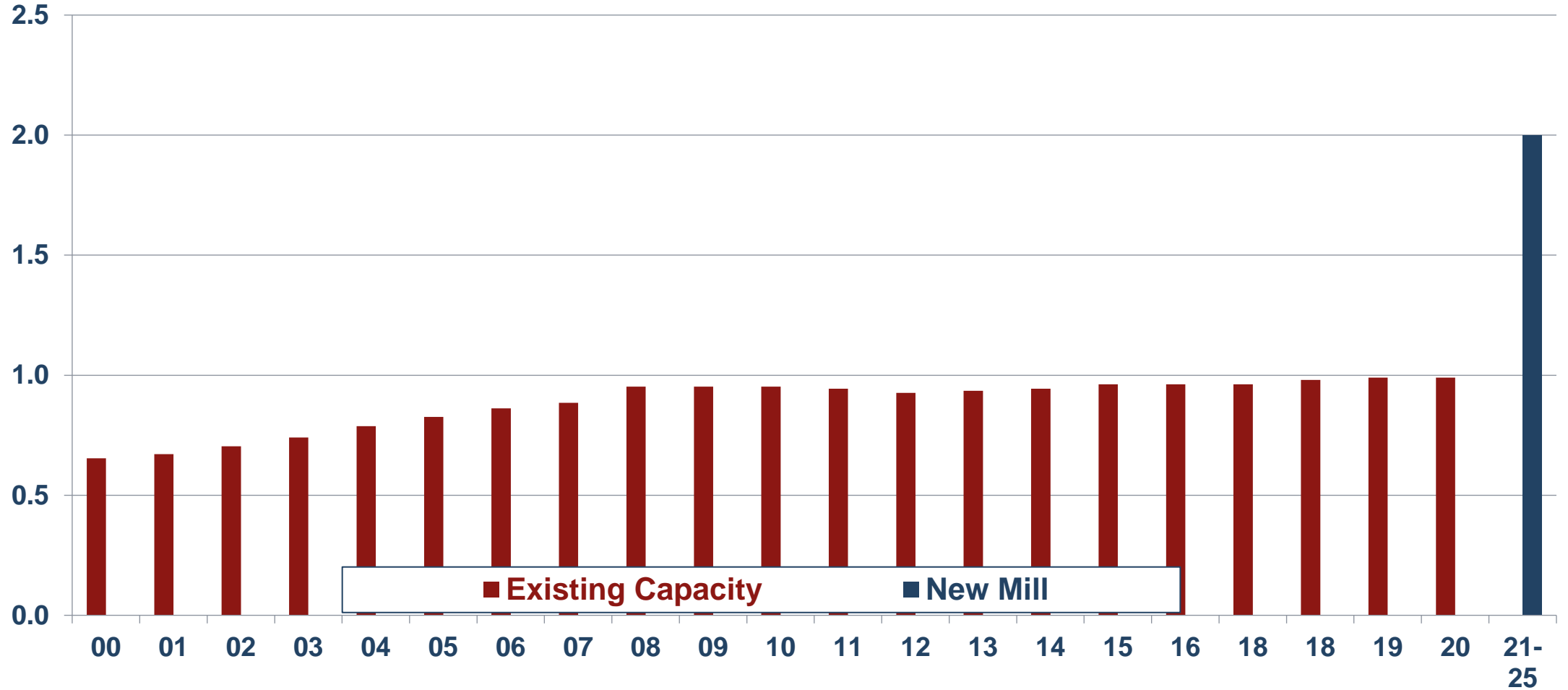


Softwood Lumber Capacity Changes Since 2022

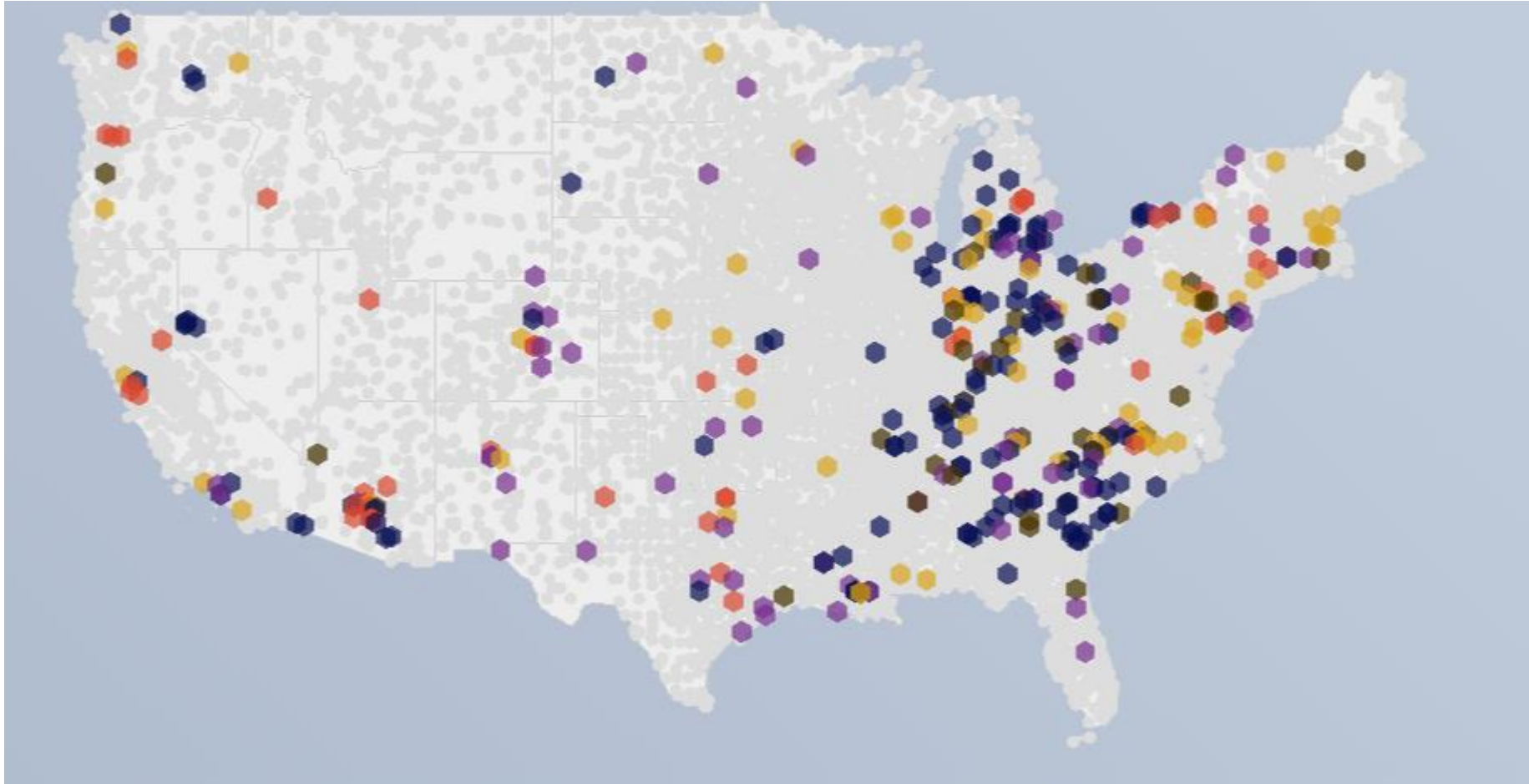


A Modern Sawmill Needs Skilled Labor

Output Per Worker, MMBF



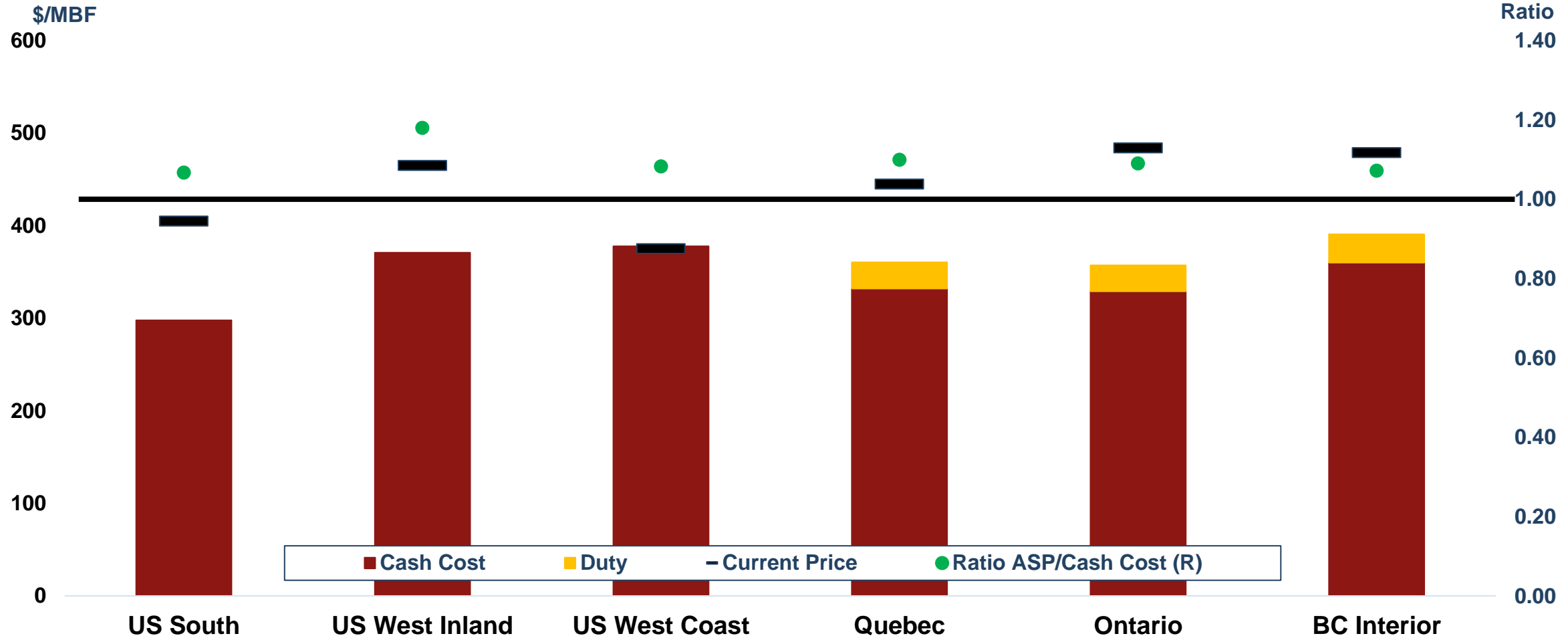
Private Industry Is Investing \$565 Billion In Advanced Manufacturing



 Semiconductors  Clean Energy  Batteries/EVs  Biomufacturing  Heavy Industry

Source: The White House

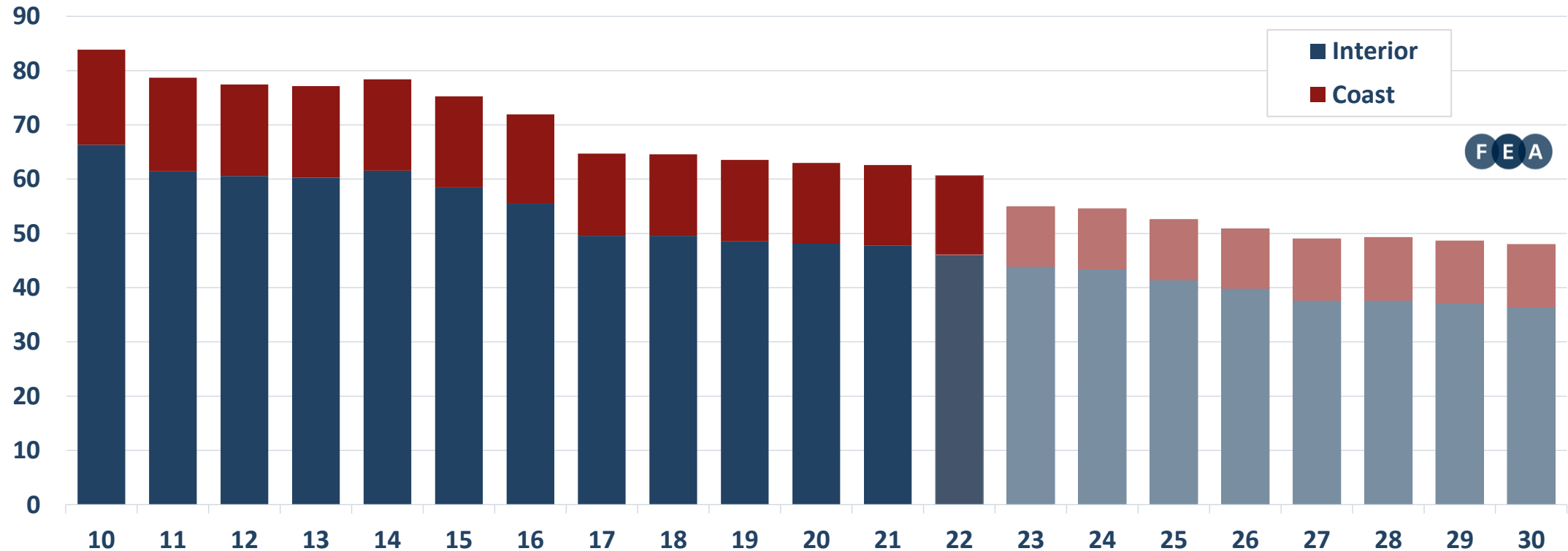
Margins Have Improved With Falling Costs and Rising Prices



Multiple Factors Will Constrain Timber Harvest and Lumber Production in British Columbia

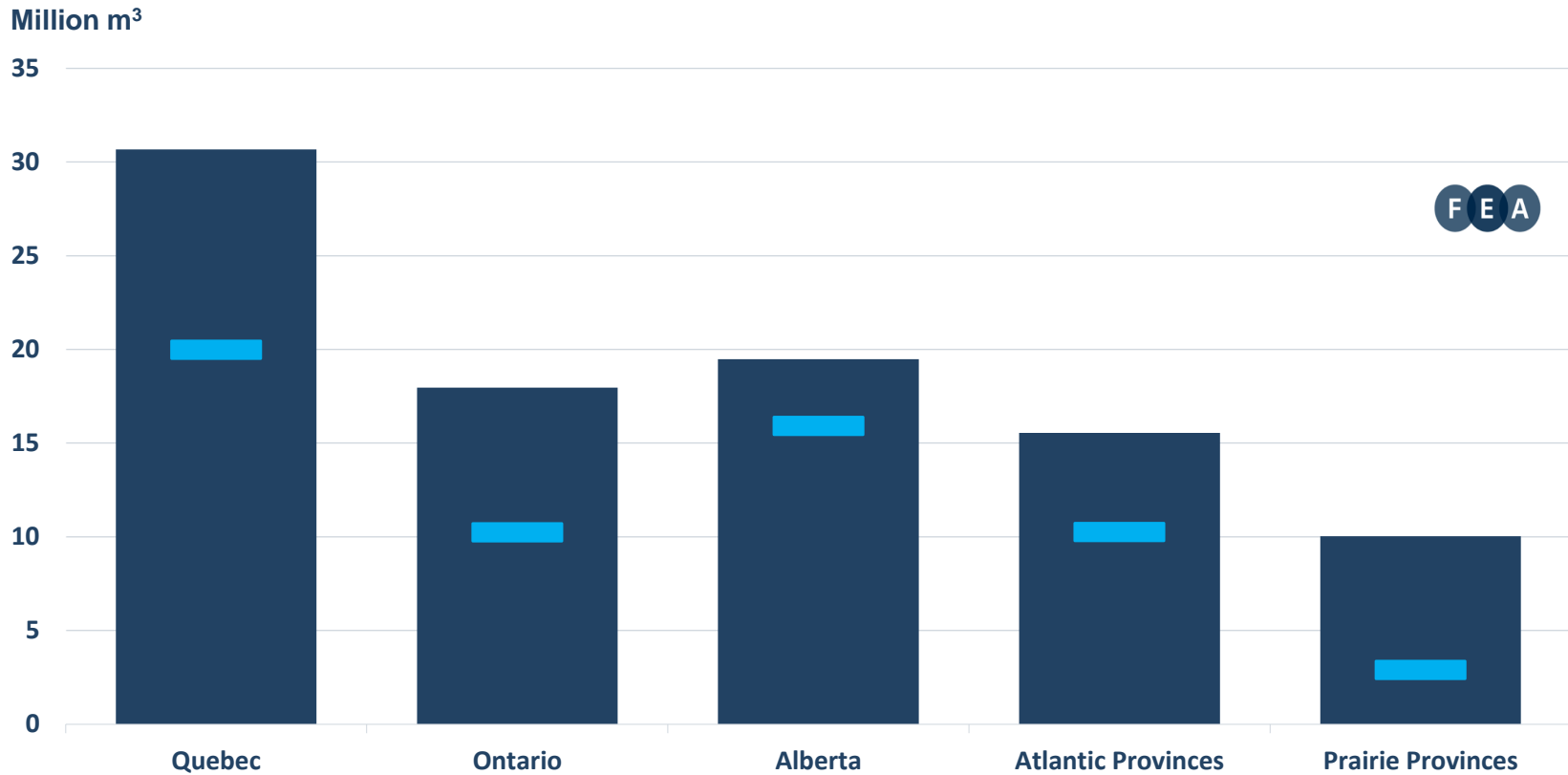
Annual Allowable Cut, British Columbia

Million m³



Source: BC Ministry of Forests, Land, Natural Resource Operations and Rural Development, FEA

Opportunities to Increase Harvest Levels in Eastern Canada Will Be Increasingly Limited



Source: FEA

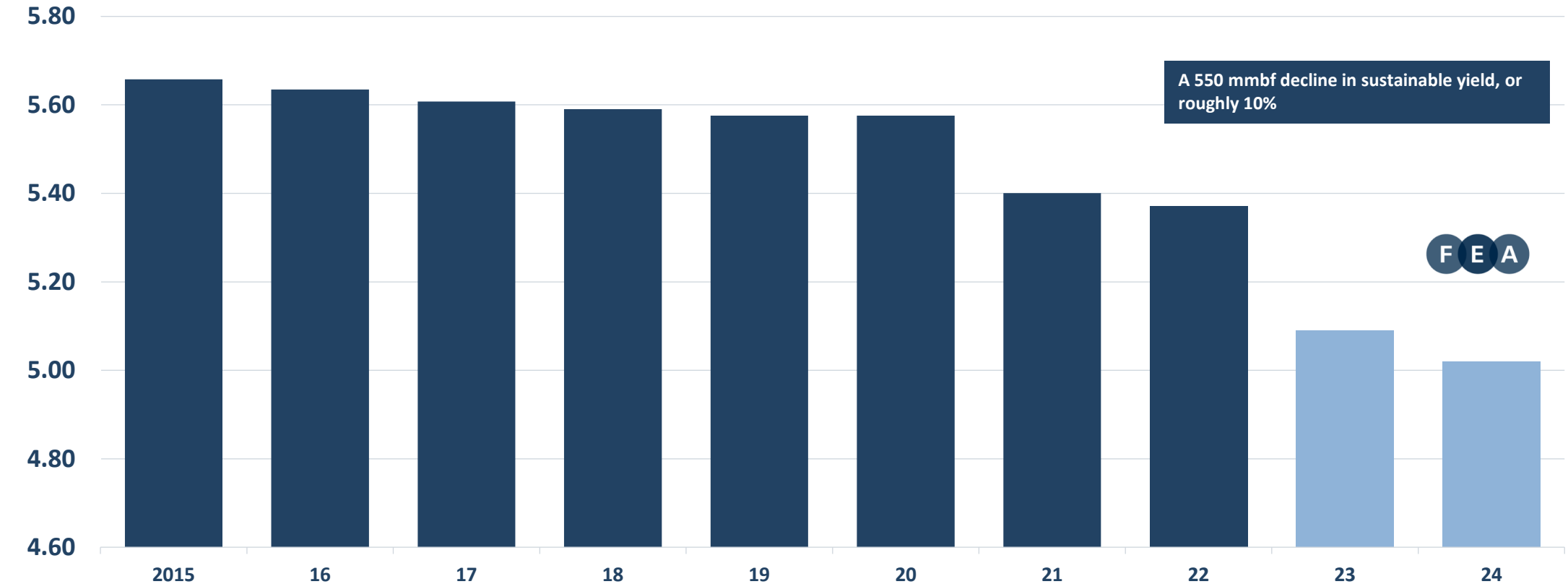
■ Current AAC — 2023 Estimated Harvests

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The Outlook for Available Log Supply in the US West Coast Continues to Erode

Private Softwood Sawtimber Sustainable Yield, US West Coast

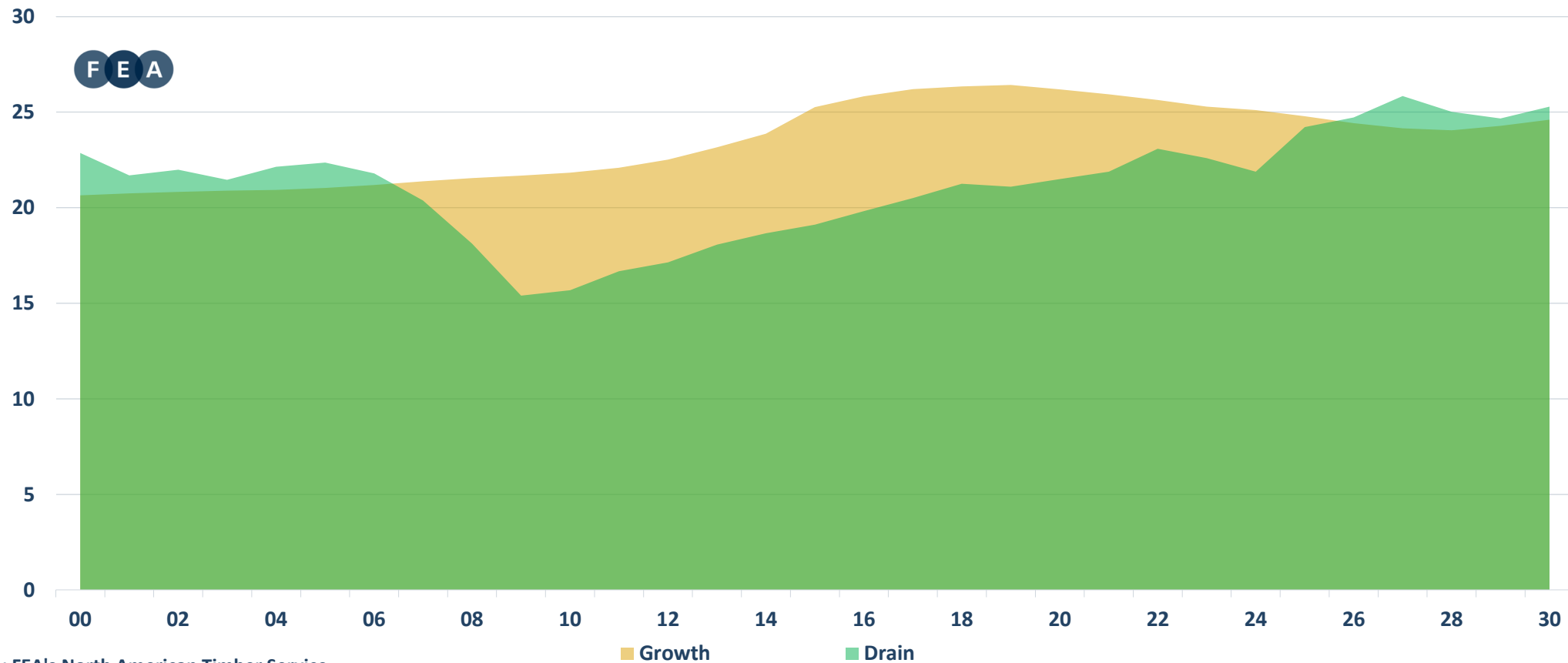
BBF, Int'l 1/4"



Source: FEA's North American Timber Service, 23Q4

The Softwood Sawtimber Supply Conditions in the US South Is Much Different

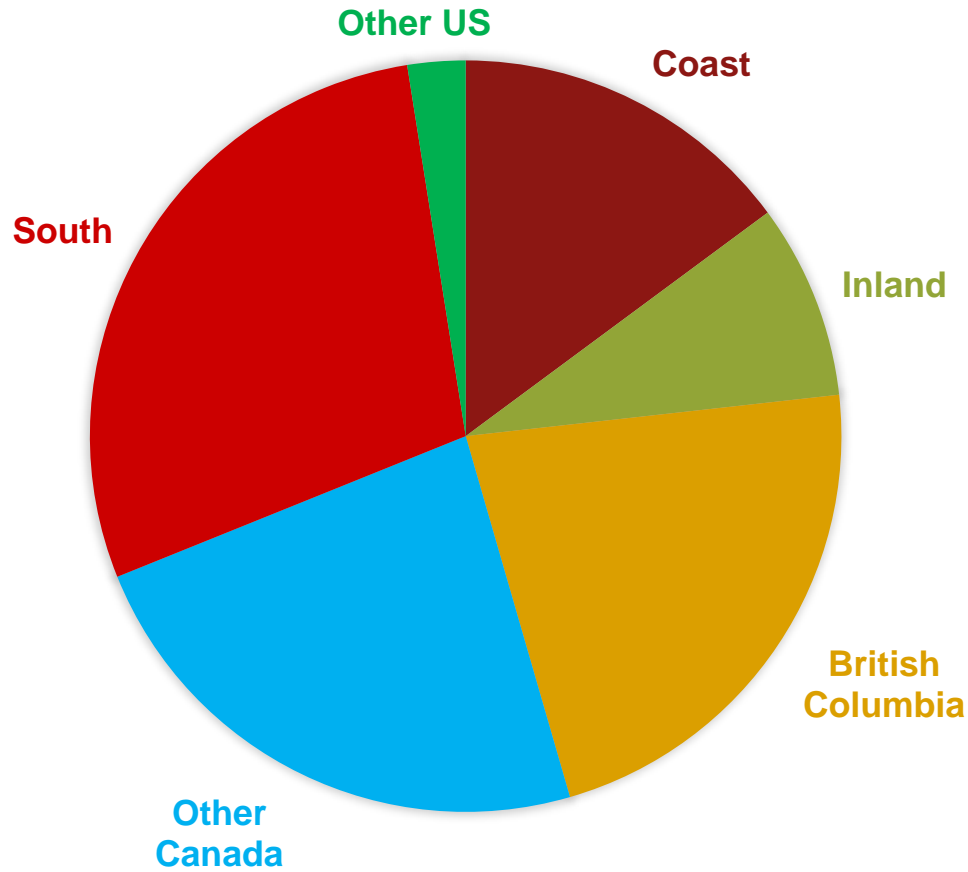
Growth and Drain, BBF Intl 1/4"



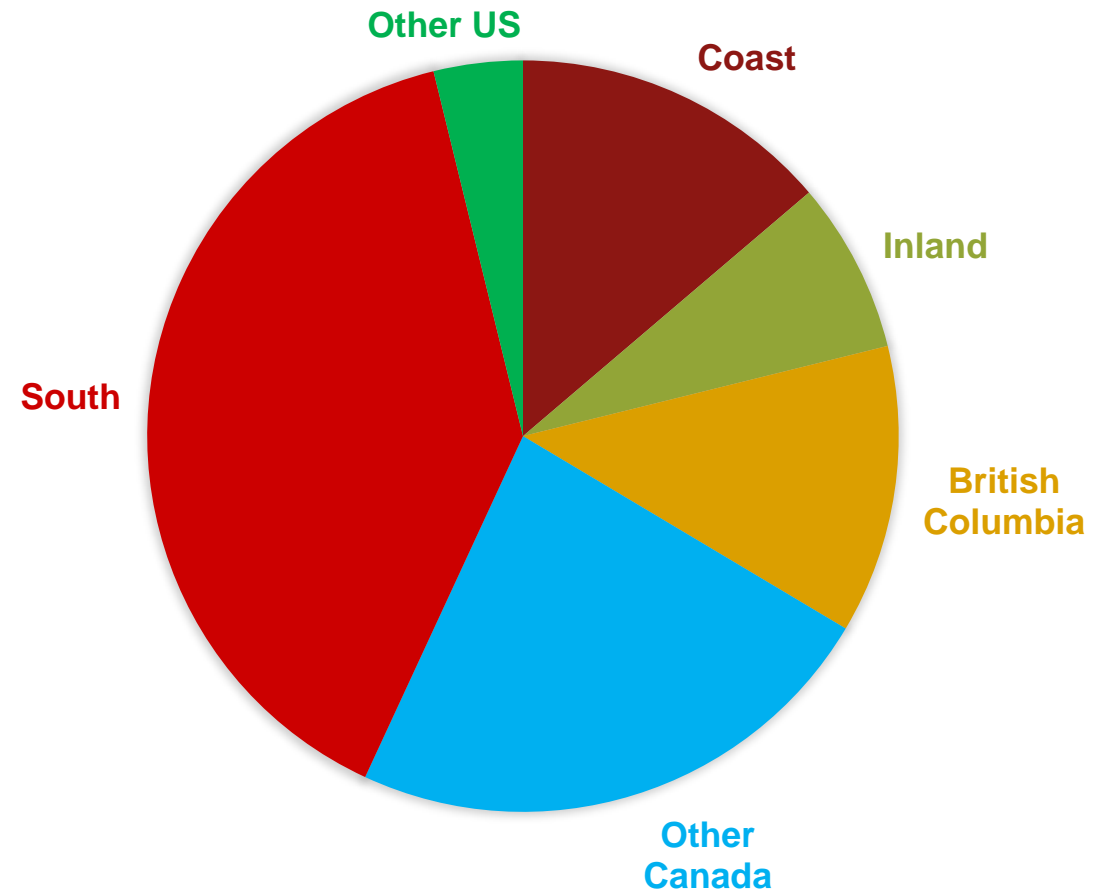
Source: FEA's North American Timber Service

More of Your Supply Will Come From The US South

2015 Production

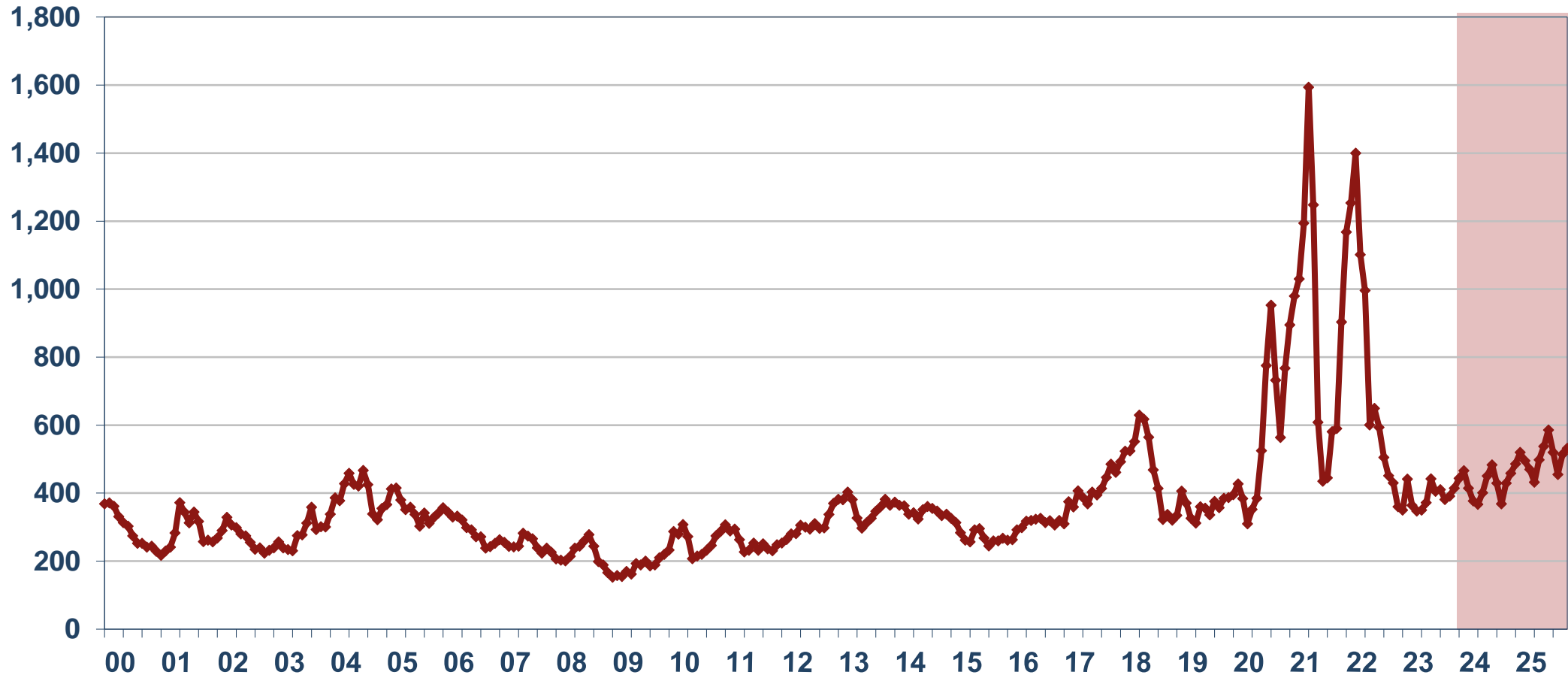


2025 Production



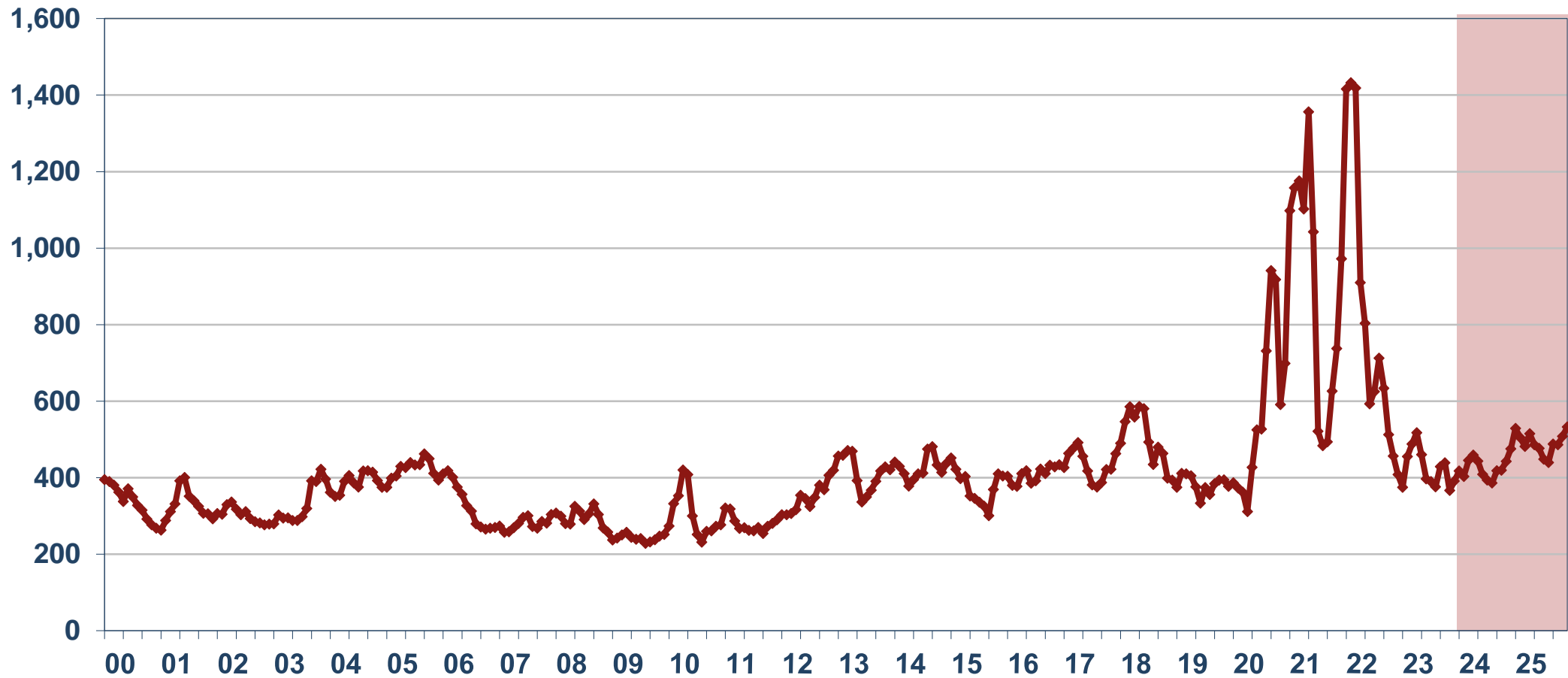
Western SPF Prices Will Rise As Supply Contracts

W.SPF 2x4, \$US/MBF



SYP Prices Will Remain Under Pressure As Production Increases

SYP Westside 2x4, \$US/MBF



Lumber Take Home Points

- Lumber markets will see little growth over the next 12-15 months.
- Capacity is expanding rapidly, but achieving nameplate output is difficult.
- Exports will remain weak.
- Costs are elevated, and will hold markets higher.



NORTH AMERICA'S
FIRST TRANSACTION
PRICE REPORT FOR
WOOD PRODUCTS





Current Price Collection Methodology is Outdated

- No innovation
 - Prices collected the same way they were 60+ years ago
- Allows individuals to talk up (down) their position
- Has potential for human error
- Leaves participants open to accusations of anticompetitive behavior
 - This has happened in several other industries
- Cannot react quickly to changing products in the marketplace
 - We can spot changes as they occur

Lumber market participants need a better system.



FEA is Working to Deliver a Better System

- Actual transactions
- Direct send from company ERP to price collection database
 - No human contact with data after setup
- Volume weighted average of reported prices
- Participants are anonymous
 - Defined minimum number of companies per price reported
 - No individual company's prices can be deduced
- Annual training for staff to ensure compliance, confidentiality, and data security
- Subjected to regular compliance verification

JANUARY 29, 2025

NC = not yet calculated

LUMBER | DELIVERED PRICES

Kiln-Dried | US\$ per Thousand Board Feet (MBF) | Unless Otherwise Noted

STATE	DIMENSION	SOUTHERN YELLOW PINE			SPRUCE-PINE-FIR		WESTERN SPRUCE		WESTERN LARCH	
		WEST	CENTRAL	EAST	WESTERN	EASTERN	WESTERN	EASTERN	WESTERN	EASTERN
Alabama, AL	2x4	---	---	---	---	---	---	---	---	---
	2x6	---	---	---	---	---	---	---	---	---
Massachusetts, MA	2x4	---	---	---	---	---	---	---	---	---
	2x6	---	---	---	---	---	---	---	---	---
Delaware, DE	2x4	---	---	---	---	---	---	---	---	---
	2x6	---	---	---	---	---	---	---	---	---
Los Angeles, CA	2x4	---	---	---	---	---	---	---	---	---
	2x6	---	---	---	---	---	---	---	---	---
Phoenix, AZ	2x4	---	---	---	---	---	---	---	---	---
	2x6	---	---	---	---	---	---	---	---	---
Portland, OR	2x4	---	---	---	---	---	---	---	---	---
	2x6	---	---	---	---	---	---	---	---	---
Salt Lake City, UT	2x4	---	---	---	---	---	---	---	---	---
	2x6	---	---	---	---	---	---	---	---	---
Indianapolis, IN	2x4	400	400	400	---	---	---	---	---	---
	2x6	400	400	400	---	---	---	---	---	---
Chicago, IL	2x4	400	400	400	---	---	---	---	---	---
	2x6	400	400	400	---	---	---	---	---	---
Columbus, OH	2x4	400	400	400	---	---	---	---	---	---
	2x6	400	400	400	---	---	---	---	---	---
Kansas City, MO	2x4	400	400	400	---	---	---	---	---	---
	2x6	400	400	400	---	---	---	---	---	---
Minneapolis, MN	2x4	400	400	400	---	---	---	---	---	---
	2x6	400	400	400	---	---	---	---	---	---
Dallas, TX	2x4	400	400	400	---	---	---	---	---	---
	2x6	400	400	400	---	---	---	---	---	---
Little Rock, AR	2x4	400	400	400	---	---	---	---	---	---
	2x6	400	400	400	---	---	---	---	---	---
Birmingham, AL	2x4	400	400	400	---	---	---	---	---	---
	2x6	400	400	400	---	---	---	---	---	---
Jackson, MS	2x4	400	400	400	---	---	---	---	---	---
	2x6	400	400	400	---	---	---	---	---	---
Memphis, TN	2x4	400	400	400	---	---	---	---	---	---
	2x6	400	400	400	---	---	---	---	---	---
New Orleans, LA	2x4	400	400	400	---	---	---	---	---	---
	2x6	400	400	400	---	---	---	---	---	---
New York, NY	2x4	400	400	400	---	---	---	---	---	---
	2x6	400	400	400	---	---	---	---	---	---
Philadelphia, PA	2x4	400	400	400	---	---	---	---	---	---
	2x6	400	400	400	---	---	---	---	---	---
Washington, DC	2x4	---	---	---	---	---	---	---	---	---
	2x6	---	---	---	---	---	---	---	---	---
Cincinnati, OH	2x4	---	---	---	---	---	---	---	---	---
	2x6	---	---	---	---	---	---	---	---	---

suppliers; NC = not yet calculated

PANELS | STRUCTURAL

FOB Mill | US\$ per Thousand Square Feet (MSF) | Unless Otherwise Noted

SOUTHERN PLYWOOD

	3/8"	3-PLY	15/32"	4-PLY	19/32"	5-PLY	23/32"	5-PLY
Sheathing, CD	412	598	614	664	681	693	759	
Sheathing, CC	420	609	625	676	693	773		
Sanded, BC	519	753	772	837	858			

WESTERN PLYWOOD

	3/8"	3-PLY	1/2"	4-PLY	5-PLY	5/8" 19/32"	5-PLY	3/4" 23/32"	5-PLY
Sheathing, CD	467	486	538	644	644	591	692	727	745
Sheathing, Rated	---	---	556	---	---	585	---	---	702
									1,480

LUMBER PRICES

SPRUCE & STUDS

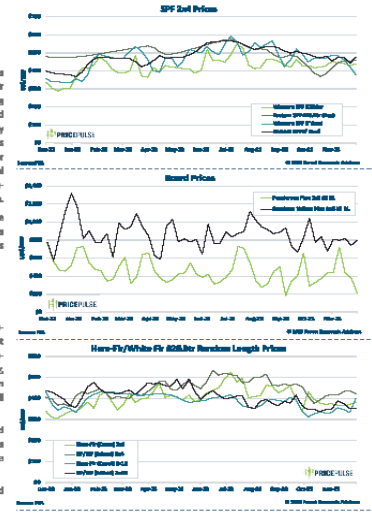
Trading in the Eastern and Western #2&3tr SPF markets moderated further this week. Most mills had already sold their production up to or beyond their holiday downtime, quoting most items at steady to higher prices and offering limited consideration to counteroffers on excess ground inventory items. Steady to higher prices were also quoted on items scheduled for production in the new year. Buyers looking for prompt shipment on highly specified calls turned to local distribution for out-of-warehouse units, making distribution-center buyers the most active participants in the marketplace. Industrial sales remain subdued. Producers quoted low-grade items at or below last week's levels and managed counteroffers on a case-by-case basis. Stud firm sales remained sluggish; mills responded by offering steady to lower prices in many cases. SPF mills quoted shipment the week of January 5.

BOARDS

Considering that it is typically quiet at this time of year, one-inch board markets exceeded producers' expectations, but activity varied from one species to another. The lack of on-ground inventory, and in some cases near-term unavailability, caused mills to quote prices steady to higher. The exception was a sudden surplus of cabinet grade pine and California mill ponderosa pine that fetched discounts while supplies lasted. Buyers with mid-January-to-early February needs approached mills with replacement bids and the caveat that shipments be delayed until January. Most one-inch board mills were scheduled for holiday downtime and accepted these terms. Depending on the specific tally, one-inch board mills quoted shipment in a range from prompt to the week of January 11.

HEMLOCK/WHITE FIR

Trading activity in the kiln-dried (KD) hemlock/white fir #2&3tr and #2&4tr markets was described as "traditional" for this time of year. Mills had production schedules beyond their holiday shutdown times and offered mixed prices. Buyers in need of prompt shipments turned to local distribution for out-of-warehouse units. Industrial sales remained occasional and mills quoted steady prices. Activity in the hemlock/white fir stud markets slowed and buyers remained focused on 2x4-9" trims. Mills quoted mixed prices for studs. KD hemlock/white fir mills offered shipment for the week of January 8.



JANUARY 19, 2024

NC = not enough suppliers; NC = not yet calculated

LUMBER | COMPOSITES & PRICE CHANGES

Kiln-Dried | FOB Mill | US\$ per Thousand Board Feet (MBF) | Unless Otherwise Noted

FRAMING LUMBER COMPOSITES

	THIS WEEK	LAST WEEK	W/W CHG	4 WKS AVG	YEAR AGO	Y/Y CHG
Framing Lumber	411	417	-6	413	421	-2%
Stud	438	441	-3	433	412	6%
Western SPF	451	451	0	449	467	-3%
Eastern SPF	474	485	-11	470	434	9%
Douglas-Fir (Green)	418	417	+1	420	351	18%
Inland	462	456	+6	469	484	-5%
SPY	374	379	-5	379	406	-8%

SPRUCE-PINE-FIR

	THIS WEEK	LAST WEEK	W/W CHG	4 WKS AVG	YEAR AGO	Y/Y CHG
WESTERN SPF MILL	450	452	-2	456	367	25%
2x4 #2&3tr, RL	455	458	-2	446	366	24%
2x4-9" Stud	---	---	---	---	---	---
EASTERN SPF DELIVERED BOSTON	---	---	---	---	---	---
2x4 #2&3tr, RL	460	516	-56	466	478	-4%
2x4-9" Stud	669	648	+21	642	387	23%
EASTERN SPF DELIVERED GREAT LAKES	---	---	---	---	---	---
2x4 #2&3tr, RL	449	486	-37	469	381	18%
2x4-9" Stud	---	---	---	---	---	---
EASTERN SPF DELIVERED TORONTO, CANADIAN DOLLARS	---	---	---	---	---	---
2x4 #2&3tr, RL	604	679	-75	603	---	---
2x4-9" Stud	---	---	---	---	---	---
EASTERN SPF DELIVERED MONTREAL, CANADIAN DOLLARS	---	---	---	---	---	---
2x4 #2&3tr, RL	509	574	-65	532	481	6%
2x4-9" Stud	---	---	---	---	---	---

SOUTHERN YELLOW PINE

	THIS WEEK	LAST WEEK	W/W CHG	4 WKS AVG	YEAR AGO	Y/Y CHG
WESTSIDE	417	414	+3	409	399	5%
CENTRAL	---	---	---	---	---	---
2x4 #2, RL	392	416	-24	412	409	-6%
EASTSIDE	---	---	---	---	---	---
2x4 #2, RL	411	429	-18	427	455	-10%
SOUTH	---	---	---	---	---	---
2x4-9" Stud	407	433	-26	433	561	-27%

US WESTERN SPRUCE

	THIS WEEK	LAST WEEK	W/W CHG	4 WKS AVG	YEAR AGO	Y/Y CHG
DOUGLAS-FIR (COAST)	489	439	+50	434	412	15%
2x4 #2&3tr, RL	519	536	-17	519	466	11%
2x4-9" #2&3tr Stud	---	---	---	---	---	---
DOUGLAS-FIR, GREEN (COAST)	452	422	+29	428	352	20%
2x4 #2&3tr, RL	646	653	-6	644	519	25%
2x4-9" #2&3tr Stud	---	---	---	---	---	---
HEM-FIR (COAST)	---	---	---	---	---	---
2x4 #2&3tr, RL	379	387	-7	379	337	13%
2x4-9" Stud	409	411	-2	405	361	13%
HEM-FIR/WHITE FIR (INLAND)	---	---	---	---	---	---
2x4 #2&3tr, RL	447	440	+6	452	411	9%
2x4-9" Stud	482	486	-4	484	476	1%
FIR & LARCH (INLAND)	---	---	---	---	---	---
2x4 #2&3tr, RL	490	496	-6	499	462	6%
2x4-9" Stud	518	539	-21	524	496	4%

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Why Get Involved Today?

- Access to the report for **free** during testing
- Opportunity to provide feedback on
 - the prices included in the report
 - the layout of the report
 - the methodology behind certain calculations
 - regional definitions/grouping of prices
- Make your sales count: know your transactions are part of the published price
 - with transaction-based pricing, prices will be based off your competitors if you do not participate
- Supporting competition in price reporting, thereby increasing innovation and **lowering the fees you pay.**
- No long-term commitment
 - can decide not to continue to supply us with your data before we launch

We look forward to your support!



Questions?

If you have questions or comments, please don't hesitate to contact me at:

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