

Webinar

Global lumber markets

Navigating in uncertain times

Timber Exchange Webinar

June 2023



Introduction to O'Kelly Acumen



Market insights for the global forest product industries

- **Market reports + consulting**
- **Forestry, wood products, bioenergy, carbon**
- **Founded 2021 by Glen O'Kelly:**
 - **25 years** of experience in forest industry
 - **Forester, analyst, business consultant**
 - New Zealand, Sweden, worldwide

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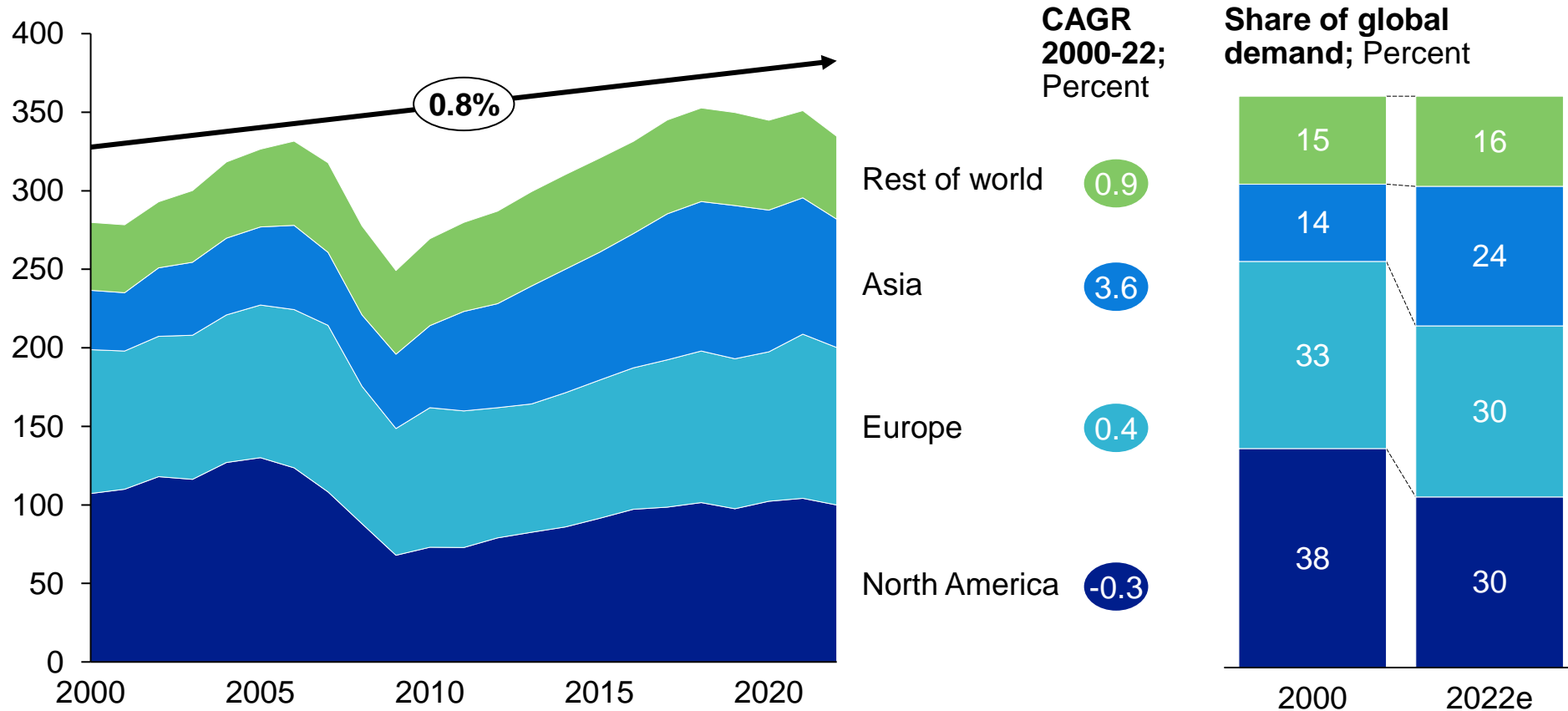
Agenda



1. Challenging global lumber markets
2. Sawmill strategies to adapt
3. Q&A

World softwood lumber demand has grown at 0.8%p.a. since 2000, with a strong shift towards Asia (mainly China)

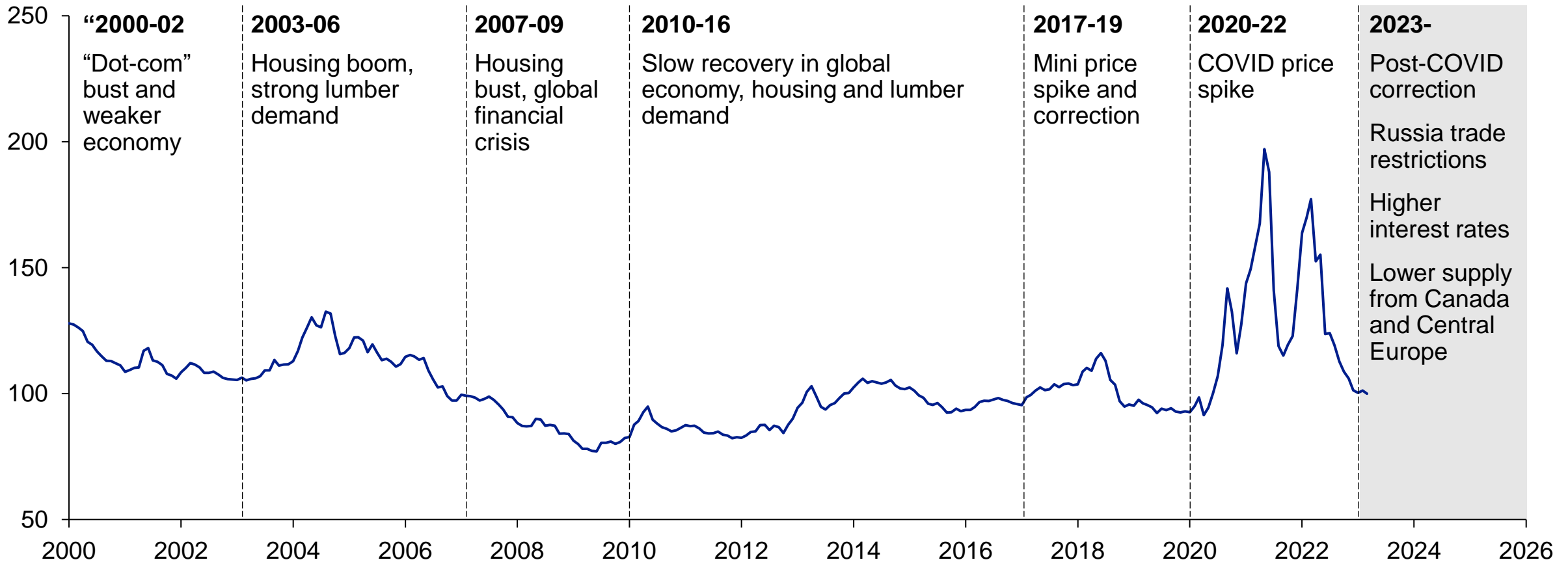
Global softwood lumber demand; Million m³



- Demand growth 0.8% p.a. 2000-22e.
- Rocky ride; 3-4% before great recession, 9% during recession, 3-4% since.
- Varies by region; 3.6%p.a. in Asia, decline in North America.
- Asia grown from 14 to 24% of global demand (mainly China (2 to 17%))

Global lumber markets are entering a new phase in 2023-25

US lumber price index, real terms; 100 = March 2023



SOURCE: FRED; OA analysis

Many leading indicators suggest lower lumber demand

Recent news about softwood lumber demand drivers and leading indicators

Strong headwinds ahead for South Korea's housing market

- ING Think, 24 May 2023

China's housing market teeters between boom and bust

- Financial Times, 5 Jan 2023

Construction slump shuts brick kilns

- Express Tribune (Pakistan), 4 Apr 2023

Brazil Retail Sales Fell in February With Clothing, Furniture Drop

- Dow Jones Newswire, 25 Apr 2023

US homebuilder sentiment improves further

- Reuters, 17 Apr 2023

Analysis: Sweden faces recession as housing market troubles take toll on economy

- Reuters, 15 Mar 2023

Heavy material sales slow as starts decline

- UK Construction Products Association, 6 Feb 2023

German Factory Orders Plummet, Raising Risk of Recession

- Bloomberg, 5 May 2023

New residential furniture orders continue year-over-year decline

- Woodworking Network (US), 31 Mar 2023

UK mortgage approvals beat forecasts to hit five-month high

- Financial Times, 4 May 2023

- Weaker outlook for construction activity, manufacturing and furniture sales
- Most data suggests weakening lumber demand in 2023 (at least)
- In some regions, data suggests the bottom has been reached.

The macro-economic outlook varies significantly by region

Global macroeconomic outlook, 2023-25





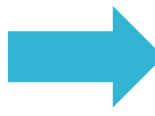















■ Strong
 ■ Average
 ■ Poor

	United States	Canada	LatAm	Europe	Russia	China	Japan	Other Asia	MENA	Other Africa	Oceania
GDP growth % p.a.	Average	Poor	Average	Average	Poor	Strong	Average	Strong	Poor	Strong	Poor
Investment % p.a.	Average	Poor	Strong	Average	Poor	Strong	Poor	Strong	Poor	Strong	Poor
Government spending % p.a.	Average	Poor	Average	Average	Poor	Strong	Poor	Average	Poor	Average	Poor
Unemployment %pt. change	Poor	Poor	Average	Strong	Poor	Average	Average	Strong	Strong	Average	Poor
Construction¹; % p.a.	Average	Average	Strong	Average	Poor	Strong	Poor	Strong	Strong	Strong	Average

1. 2020-2030

We expect US and China markets to rebound already in 2024, but Europe and MENA to take longer to recover

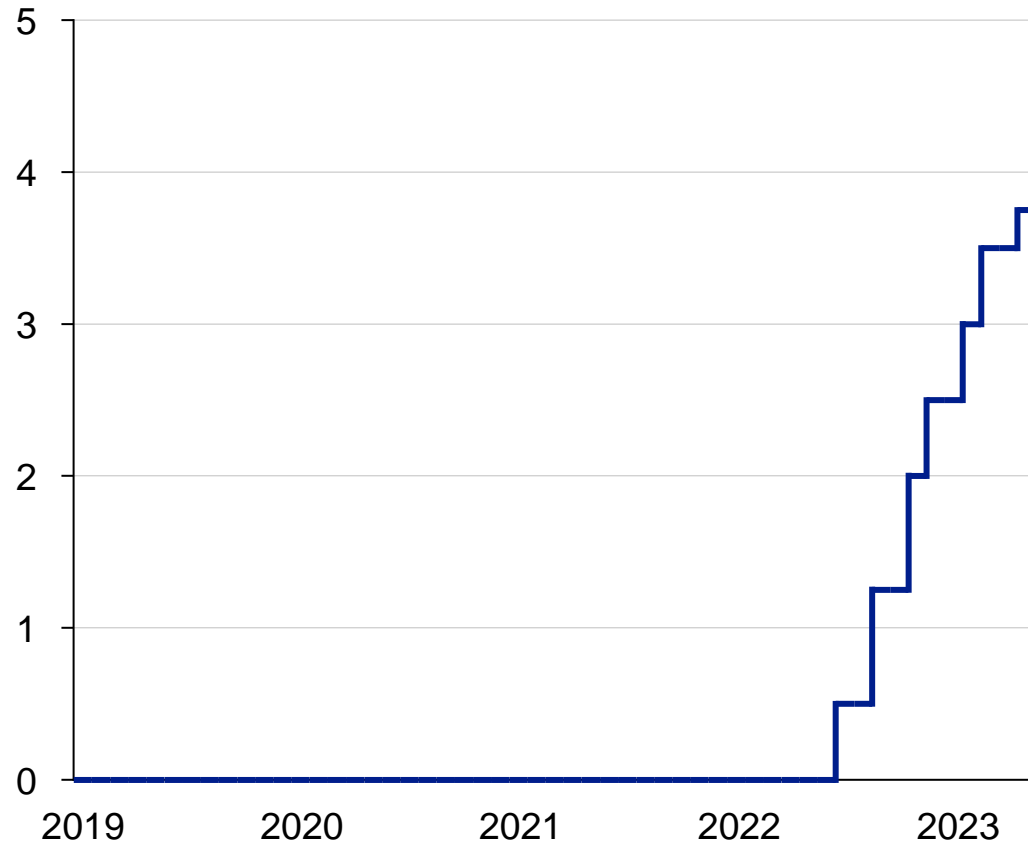
Softwood lumber market outlook to 2025 – Annual demand growth

	2021	2022	Forecast			Market dynamics
			2023	2024	2025	
Europe						High interest rates until 2025 Lower log availability High energy costs
US						Short drop in housing starts Quick economic recovery Capacity growth in US South
China						Re-opening after COVID Housing bust averted?
MENA						Economy stabilizing Higher-than usual oil prices Large construction projects

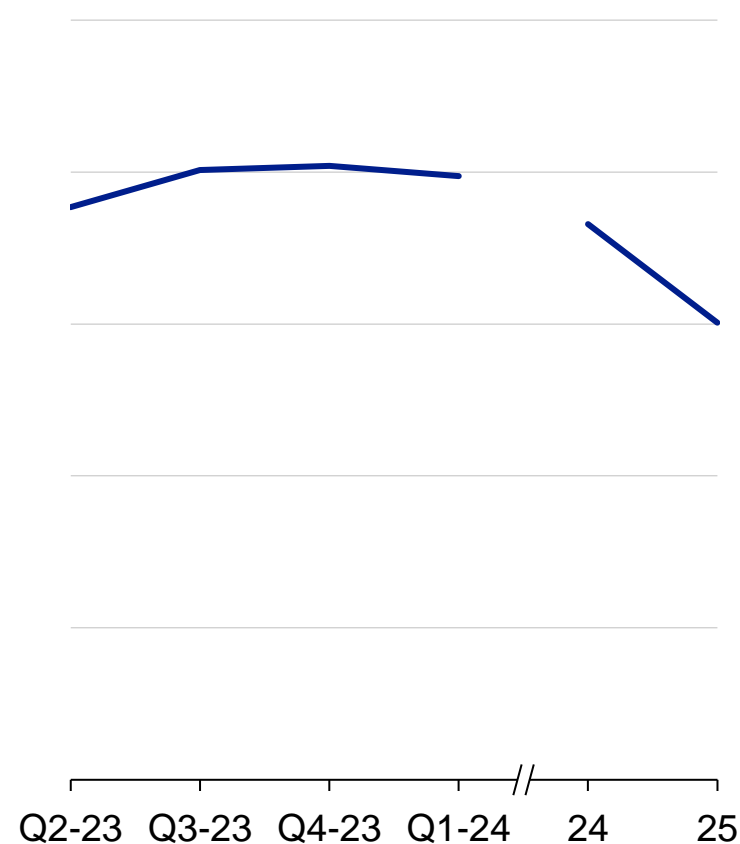
The rapid rise of interest rates has dampened demand in Europe, and they are expected to remain high until 2025

European interest rates (MRO¹)

Actual; Jan 2019 – May 2023



Survey of forecasters Q2'23-2025



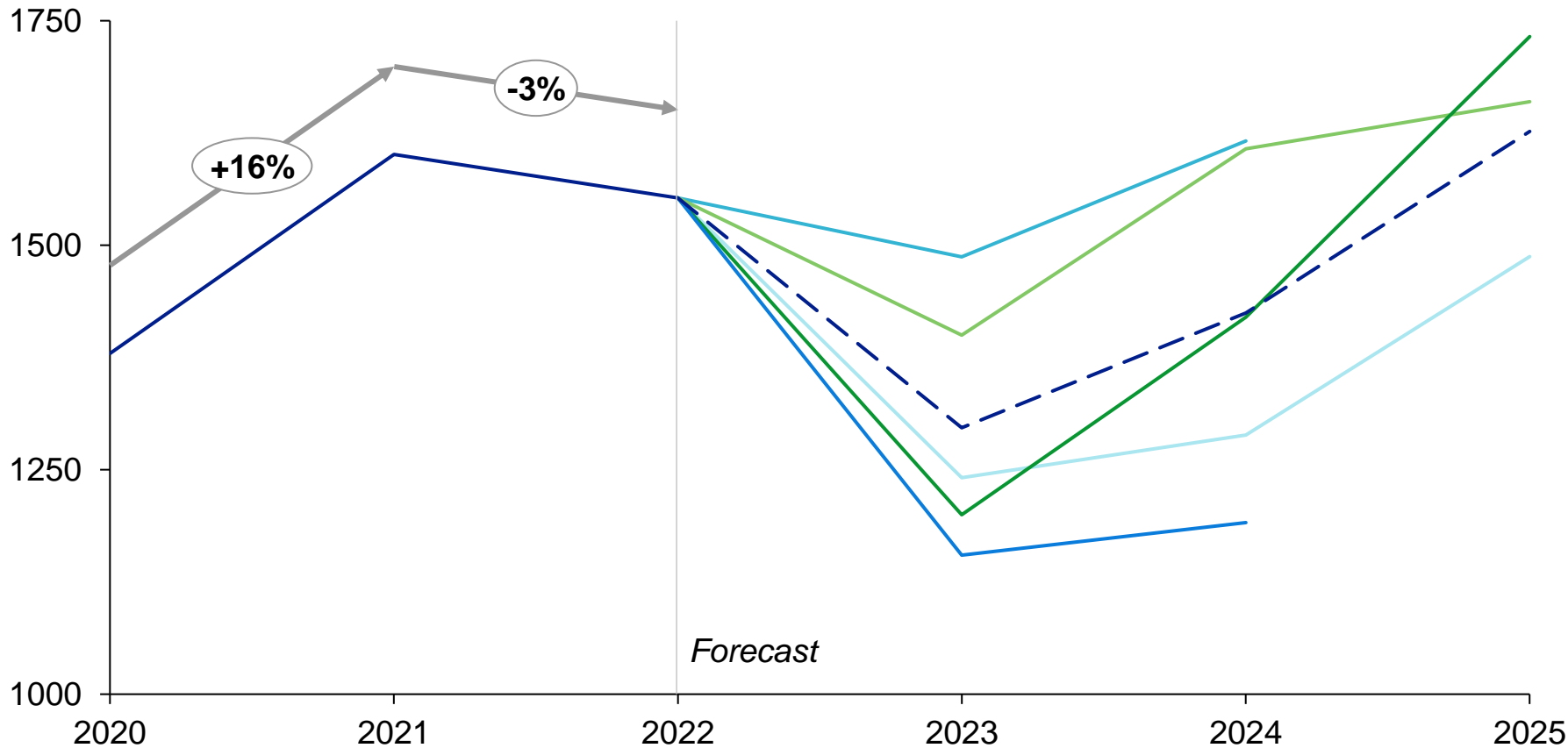
- Interest rates have risen sharply since mid-2022, as ECB tackles inflation.
- Has damped construction and lumber demand, with increased capital costs for construction projects, and consumers' lower spending power.
- Consensus among forecasters is for interest rates to peak in Q3-Q4 2023 then start to decline again.

1. "Main refinancing operations", the interest rate banks pay when they borrow money from the ECB for one week.

Most forecasters expect housing starts to fall in 2023 but recover already in 2024

US housing starts forecasts; 000s

— USDA — UCLA Anderson¹ — Fannie Mae
 — NAHB — UCLA Anderson² - - Consensus



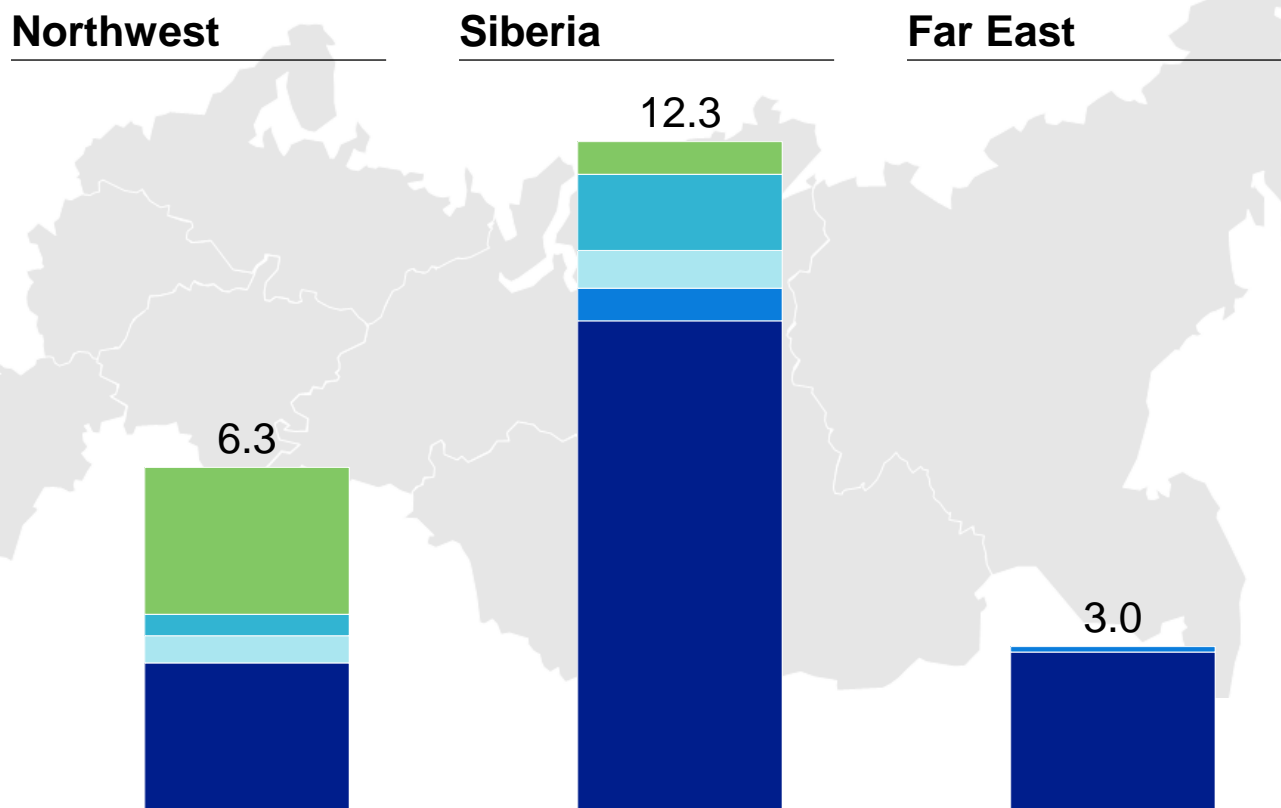
- Housing starts fell by 3% in 2022 YOY.
- Broad consensus will continue to fall in 2023.
- Divergent views on how much; down 4% to 26%, with an average of 17%.
- All forecasters expect an improvement in 2024 and recovery by 2025.

1. No-recession scenario; 2. Recession scenario

The Russian sawmill industry was already geared toward Chinese export, and even moreso following the invasion of Ukraine

Russian softwood lumber export by cluster¹, 2021; Mln m³

■ Europe
 ■ CIS
 ■ MENA
 ■ Other
 ■ China





1. Three main sawmill clusters representing ~80% of production and export; a further 6.4 million m³ export from other regions in 2021

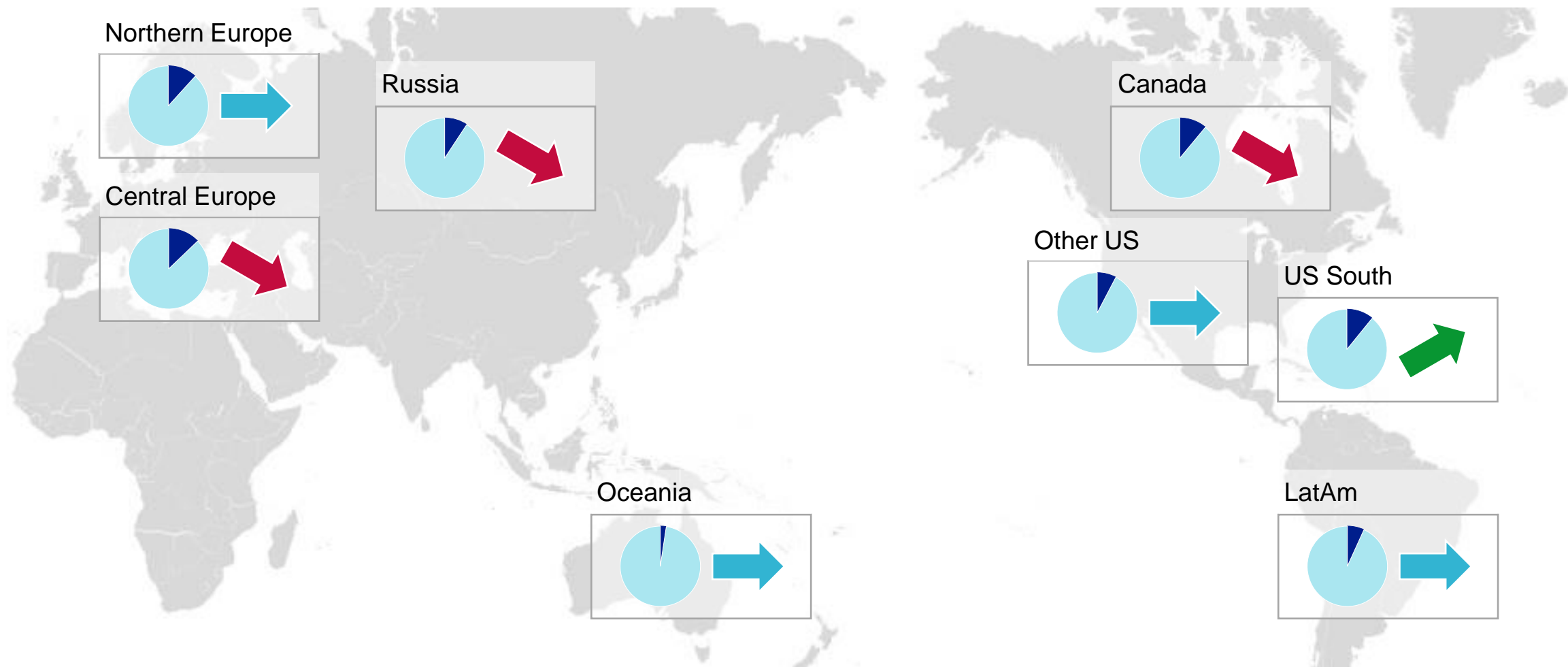
Implications of Western trade restrictions, 2022

- From 2022, Russia can no longer export lumber to the EU, US and Japan
- EU an important market for Russia (17% of export)
- Sawmills in Russia’s Northwest are most impacted, because 40-45% of export was to Europe
- Russia must now expand export to markets without trade restrictions, e.g. China, CIS, MENA
- Challenging logistics from NW Russia to China; Long shipping route so mostly overland. Costs are high, even with Chinese subsidies on rail
- Scope for increasing export to CIS and MENA is limited
- Russia will also struggle with import restrictions on harvesting equipment, sawmill equipment, capital and know-how

The US South is the main (only) region where we expect significant capacity expansion in 2023-2025

Outlook for softwood lumber supply 2023-25

 Share of global production '22e
  Expected growth 22-25



The sawmill industry globally will face several difficult challenges over the next few years

Key challenges facing sawmill industry globally in 2023-25



Demand weakness

- Lower demand in most developed economies, including Europe
- US dip likely to be short, China will probably grow
- Normal cyclical dynamic, after a period of very strong growth – but painful
- Especially challenging for companies/regions that have expanded capacity in recent years.



Cost inflation

- 2022-23 has been a period of rapid cost inflation, e.g. energy, labour, sawlogs
- Many costs are now correcting, but will remain high in historic terms.
- Higher interest rates impact sawmills' cost of capital.



Price correction

- Lumber prices spiked in 2020-22 (supply chain constraints, unexpectedly high demand with COVID).
- Now a clear and sharp price correction, since 2022.
- Strain on sawmill margins, with lower prices and higher costs
- Requiring renewed focus on cost efficiency, potentially industry consolidation.



New trade patterns

- War in Ukraine and trade restrictions on Russia are redrawing global trade patterns.
- Russian exports to Europe are redirected to China
- Chinese market will become increasingly competitive
- Lower imports into Europe impact the region's ability to export to US and MENA.

We see 9 strategies that sawmill owners can pursue to weather challenging markets in the coming few years

Strategies sawmill industry can pursue to meet challenges – Examples from leading players

Cost efficiency

Digital and autonomous technology to reduce cost, improve yield and quality

Small-diameter logging technology to broaden supply base and reduce wood costs

Energy efficiency to reduce energy costs and improve environmental footprint

Supply management

Reduced production to improve supply-demand balance and costs

Consolidation to improve supply-demand balance and costs

Market diversification

Developing new export markets

Downstream integration into mass timber, e.g. CLT

Channel strategy

Developing new channels to market to more directly serve end-users

Adapting channel mix to changing structure of demand

- To meet the challenges currently facing sawmill industries globally, sawmill businesses can pursue various strategies to improve costs, manage supply, diversify markets and develop new channels to their customers.

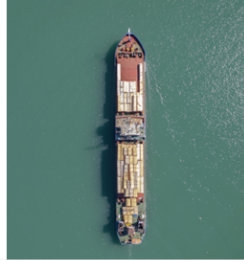
About the report: Global lumber markets

Special report

Global lumber markets

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June 2023



Global markets for softwood lumber are entering a new phase in 2023-25, with weaker demand and pricing in most regions, after years of growth. Supply is also evolving with harvest cuts in Canada BC and Central Europe, Russian trade barriers, and US South capacity growth. In this report we take stock of latest changes in softwood lumber markets globally, and with four regional deep dives (US, China, Europe, Middle East & North Africa) and recommend steps that the sawmill owners can take to face the challenging market environment ahead.

Contents

1. Global market overview

- Market size and growth by region 2000-22
- End-use applications and demand drivers
- Production, trade and pricing by region 2000-22

2. Market juncture in 2023

- Inflection point in 2023 in demand and pricing
- Early indications of cooling demand, weaker economy
- Regional supply-side dynamics in short and long term

3. Regional perspectives 2023-2025

- 4 regional deep-dives, each including:
 - Historical demand and supply 2000-22
 - Market segments and demand drivers
 - Macro-economic and demand outlook to 2025
 - Supply constraints and outlook to 2025
 - Market balance, export potential / import need
 - Analysis of key region-specific market dynamics

3.1 United States

3.2 China

3.3 Europe

3.4 Middle East & North Africa

4. Sawmill strategies

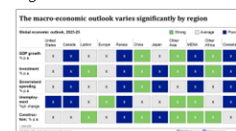
- Key challenges facing global industry 2023-25
- 9 strategies to address through cost efficiency, supply management, diversification and channel strategy

Example exhibits

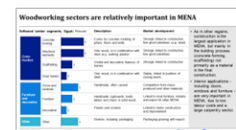
Global softwood lumber demand by region 2000-2022e



Macro-economic outlook for regional lumber demand 2023-25

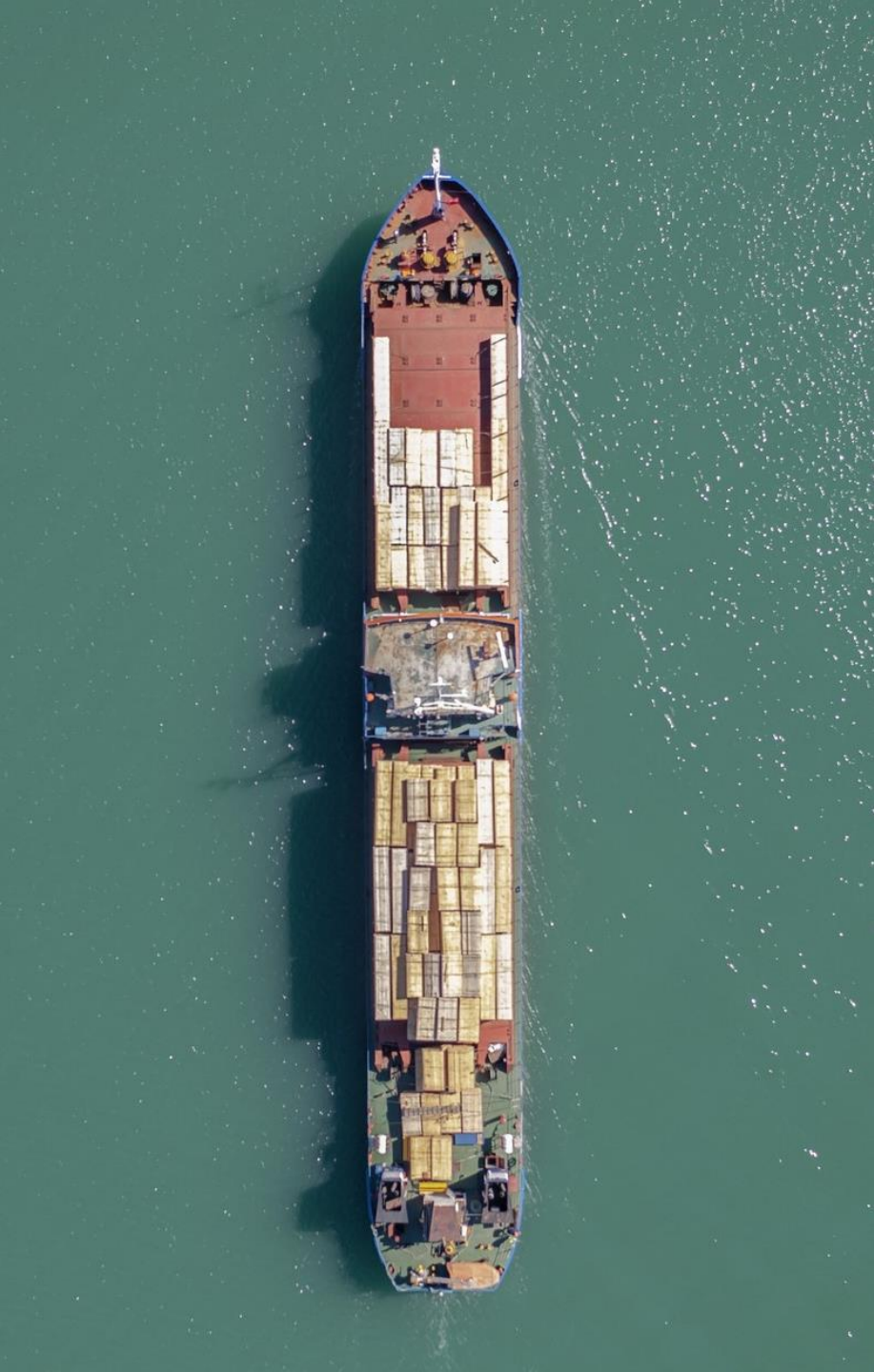


Market segments and demand trends for lumber in MENA



- Introduction to global softwood lumber market (size, growth, market segments, value chain)
- Changing outlook for demand in 2023-25
- 4x regional deep dives (demand, supply, trade)
 - US
 - China
 - EU
 - MENA
- Sawmill strategies

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Questions
