

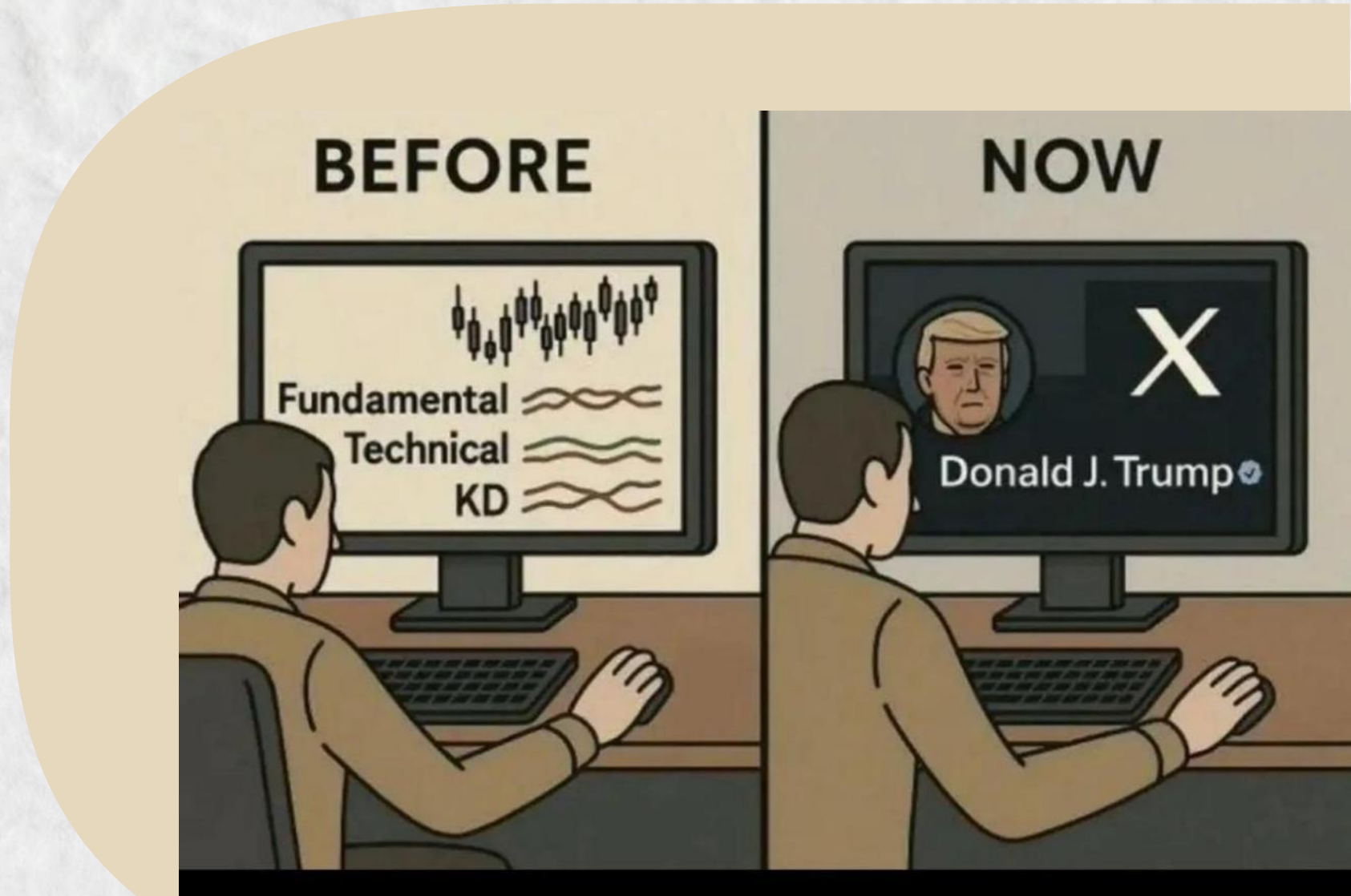
# **Structural Changes in the Market Pulp Landscape**

## **Milan Pulp Week**



**May 2025**

# Analysis at TTOBMA





# American Pope

BREAKING: Vatican to be remodeled after American pope selected



# Themes



**1. Global fiber furnishes are changing**



**2. Industry is consolidating, and power centers are shifting**



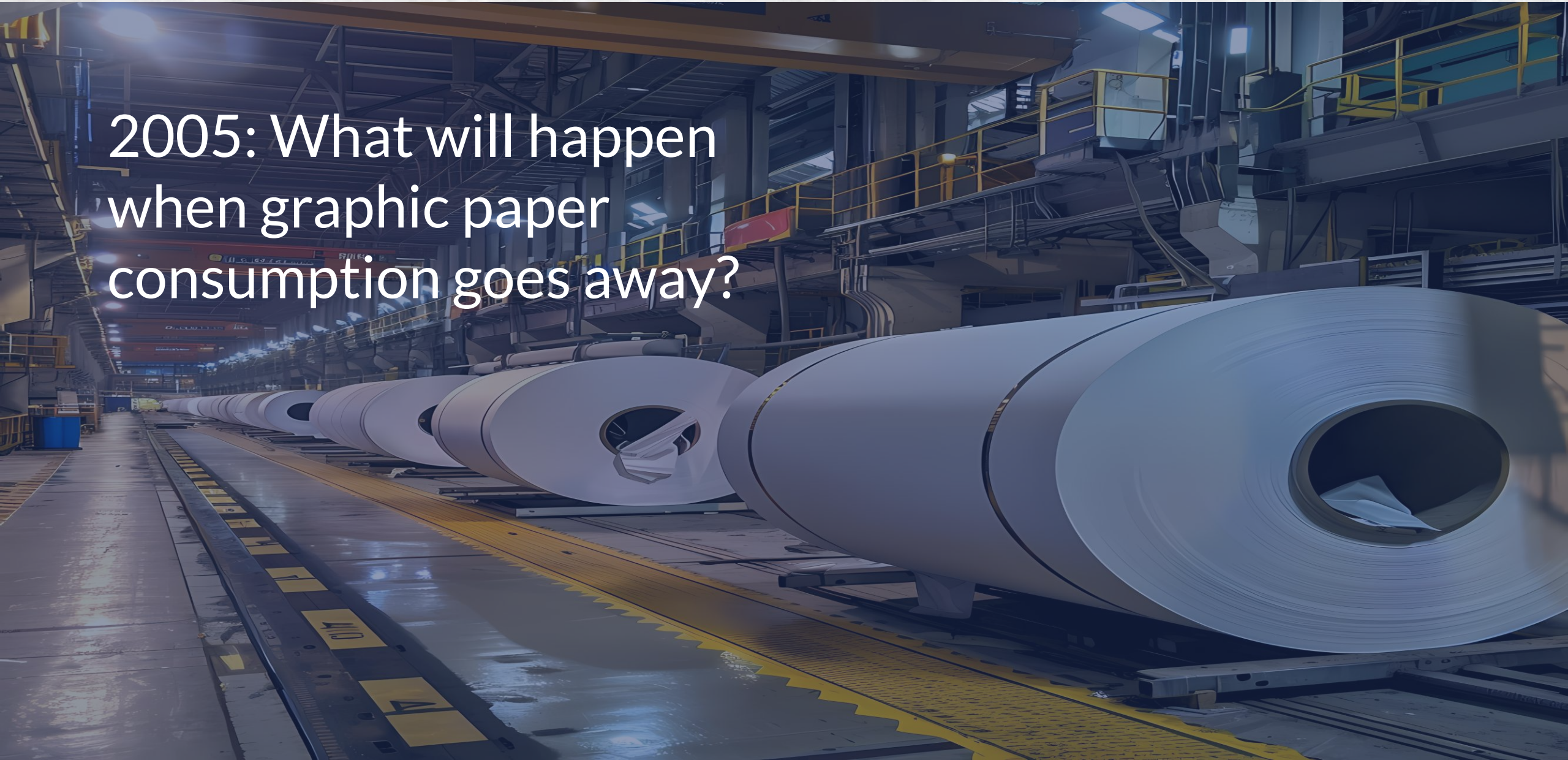
**3. Hardwood pulp is increasingly dominating share of paper furnish**



# P&W Consumption

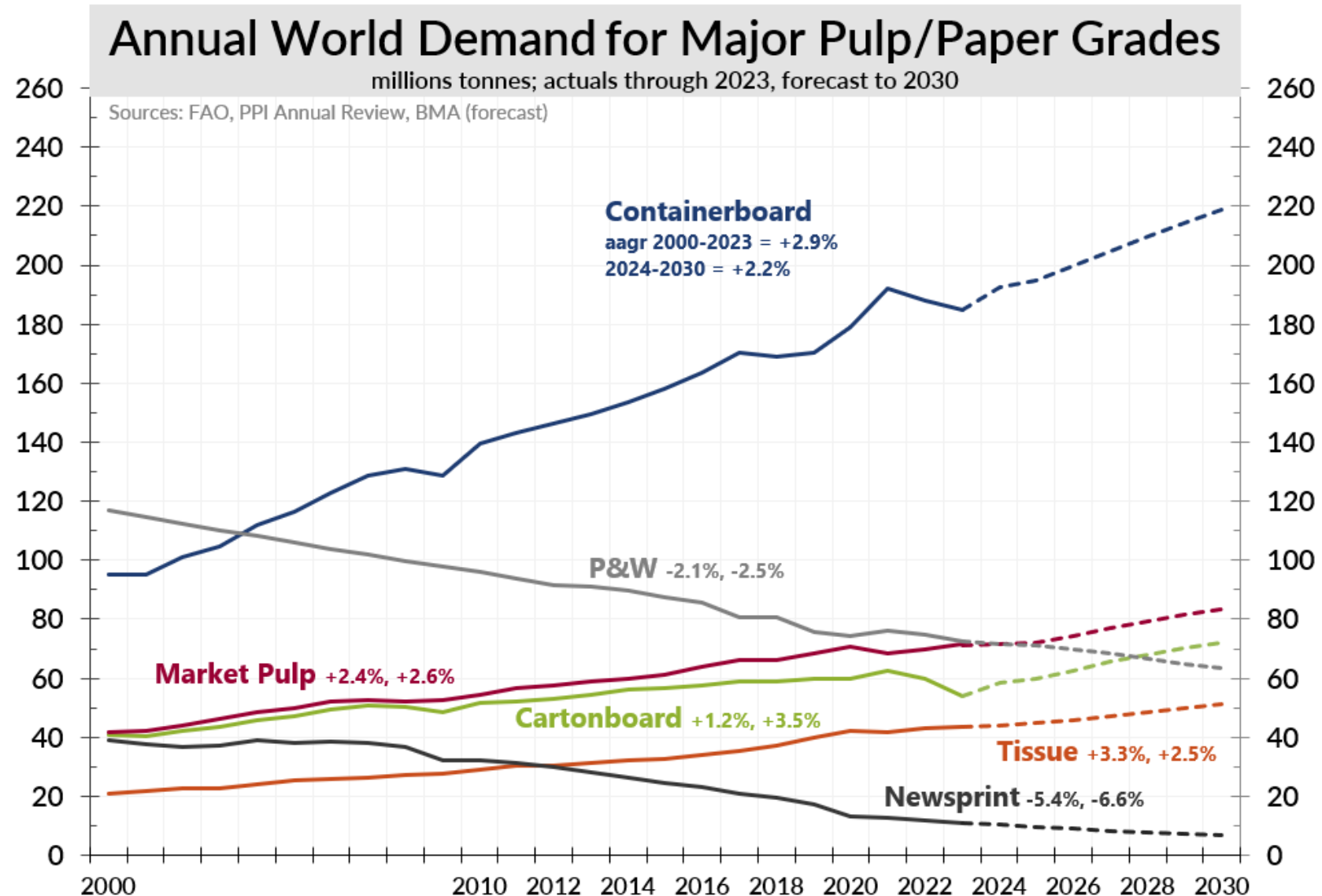
TTO BMA

2005: What will happen  
when graphic paper  
consumption goes away?



# Paper Demand Growth

- P&W has shrunk
- Containerboard and tissue have grown
- Market pulp has continued to grow



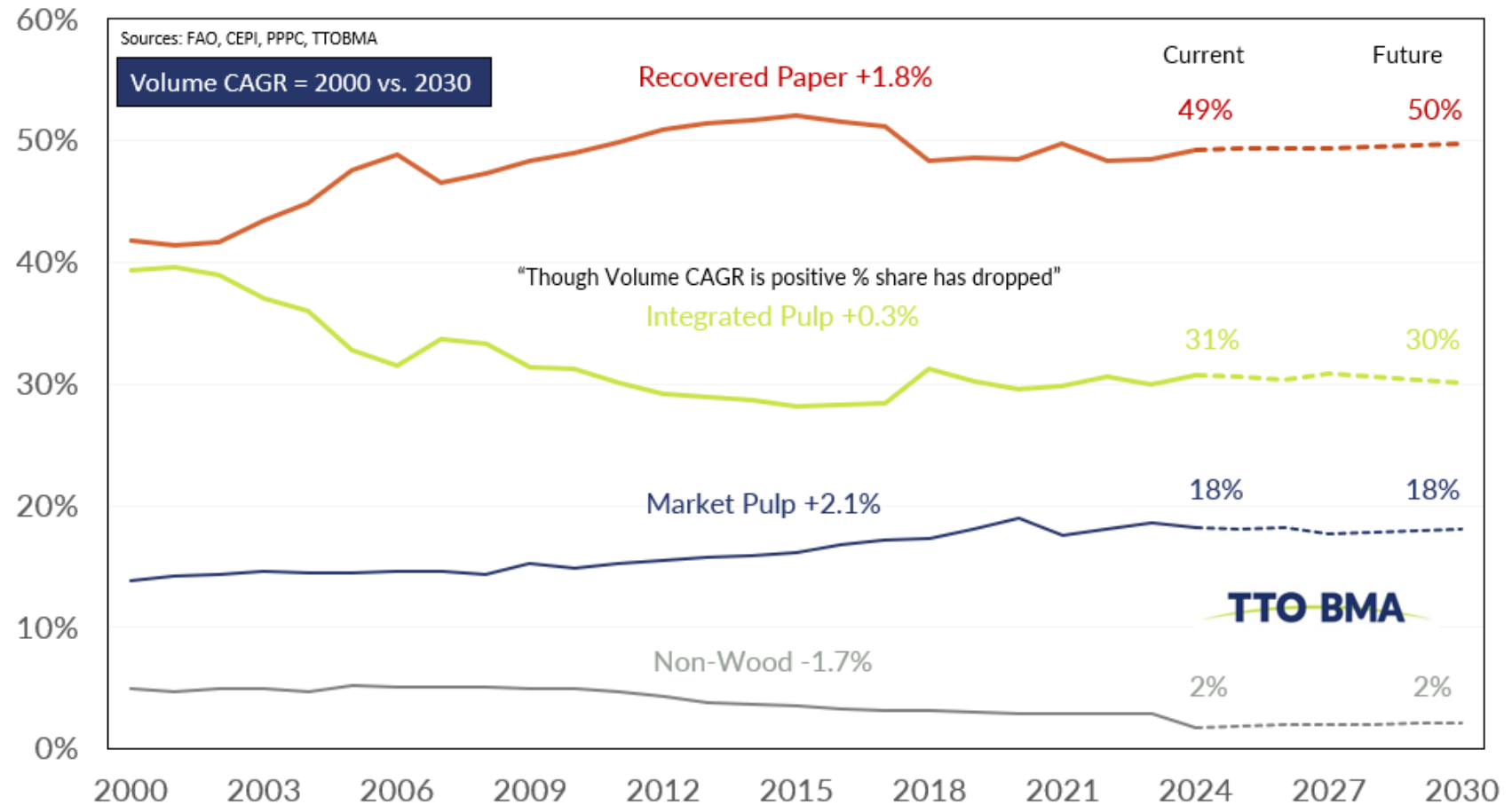


# Paper Furnish

- Recovered paper shrank after China ban
- Integrated pulp started increasing but likely to slow as wood supply becomes constraint

## World Paper & Paperboard % Share of Fiber Furnish

Million MT, 2000 to 2030





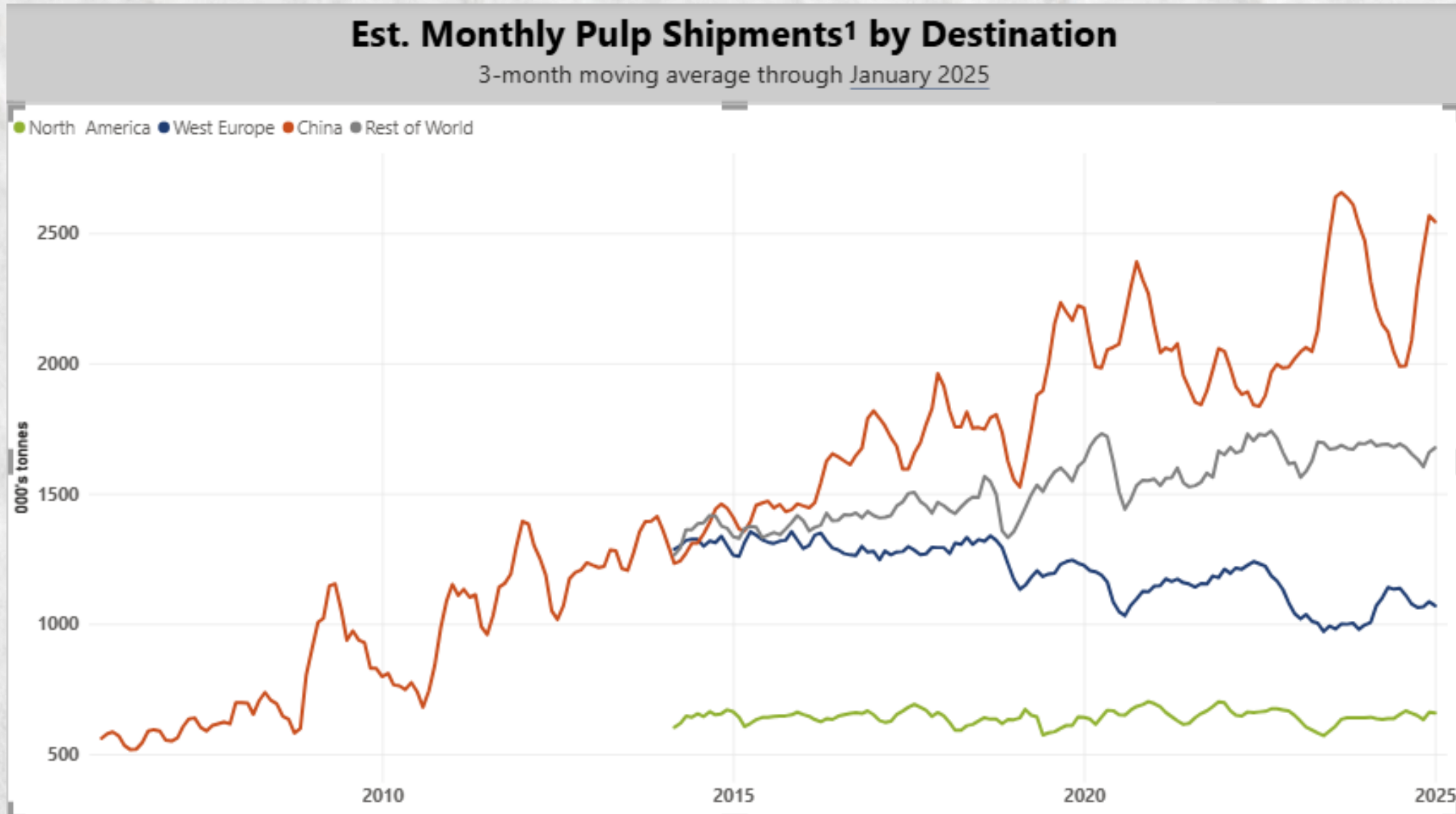
# New Pulp and Paper Capacity

Paper investment has  
been mostly in Asia





# China's market pulp growth

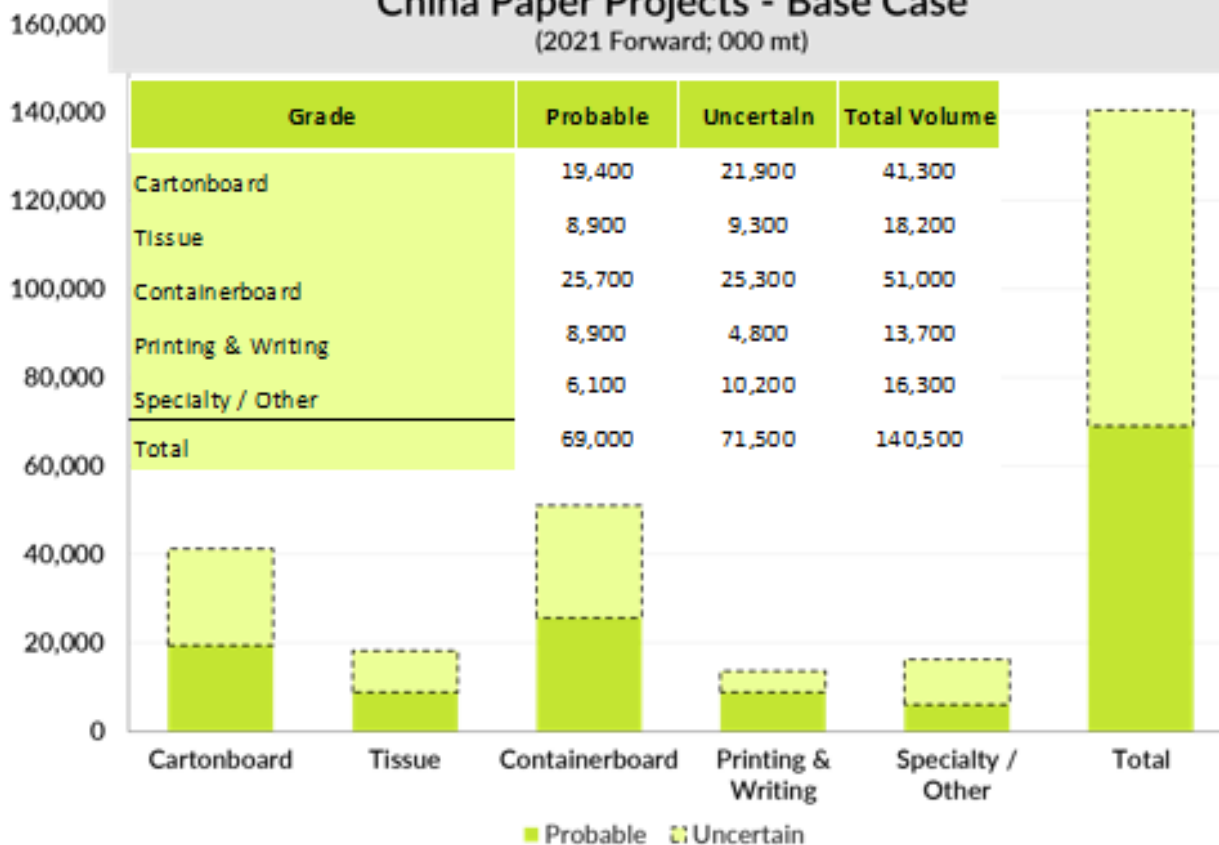


# China Pulp & Paper Growth

China has been building out a significant amount of new pulp & paper projects. Wood availability for domestic pulp production will determine market pulp growth

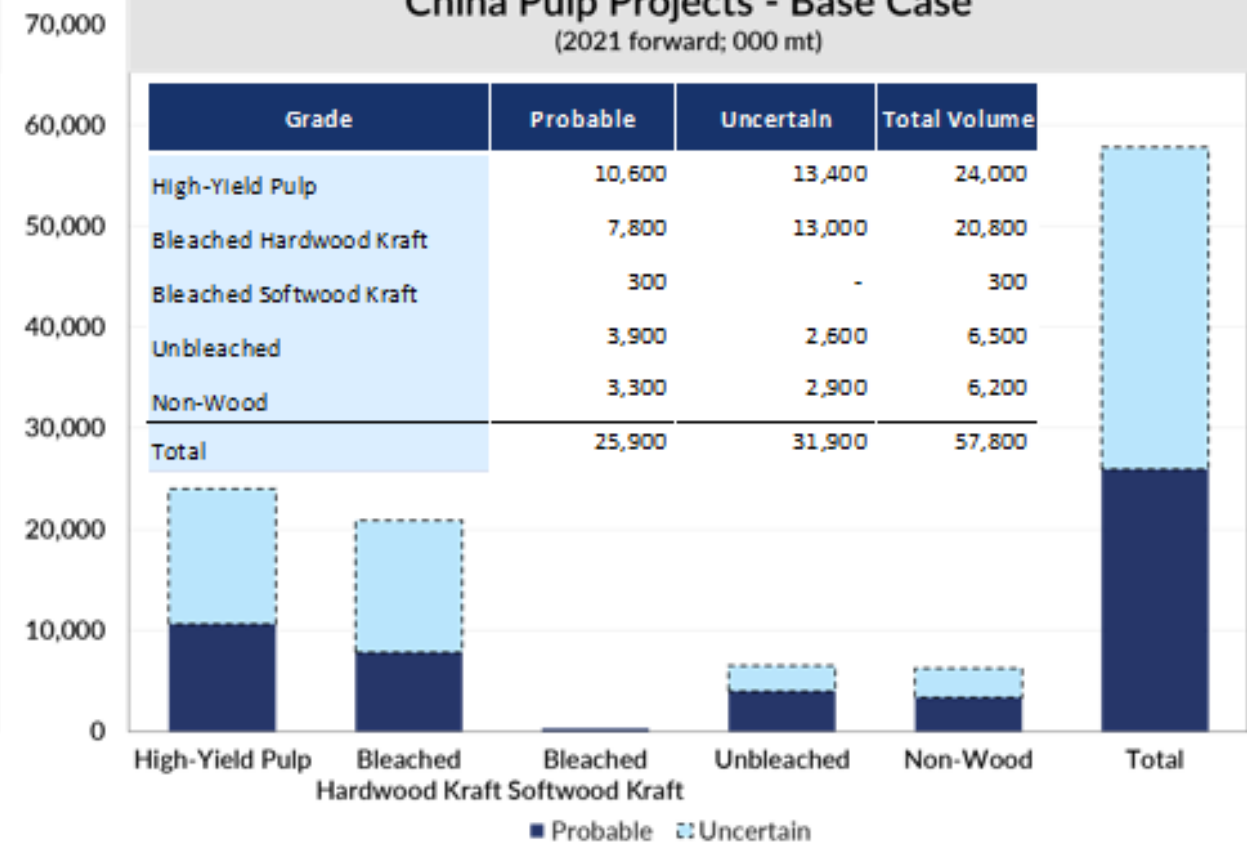
China Paper Projects - Base Case

(2021 Forward; 000 mt)



China Pulp Projects - Base Case

(2021 forward; 000 mt)

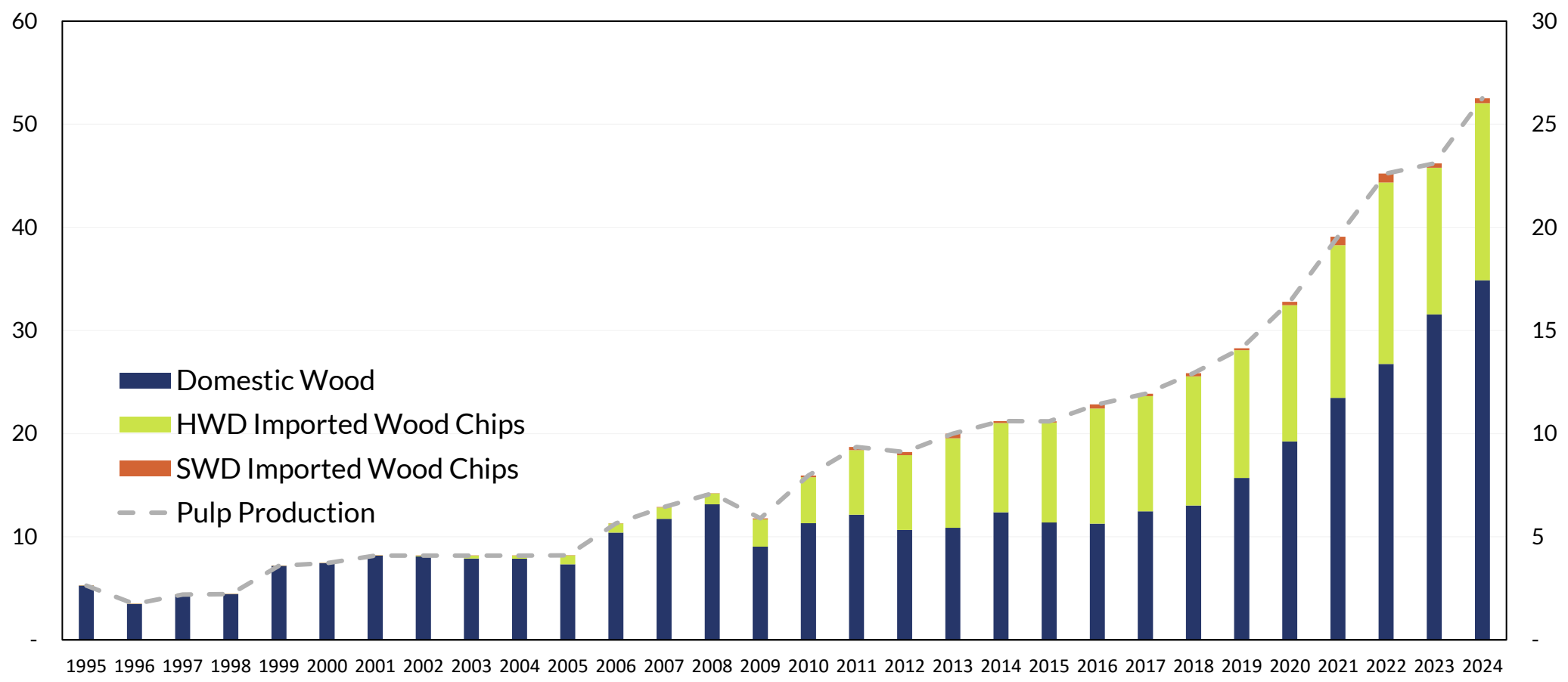




# China Pulp & Paper Growth

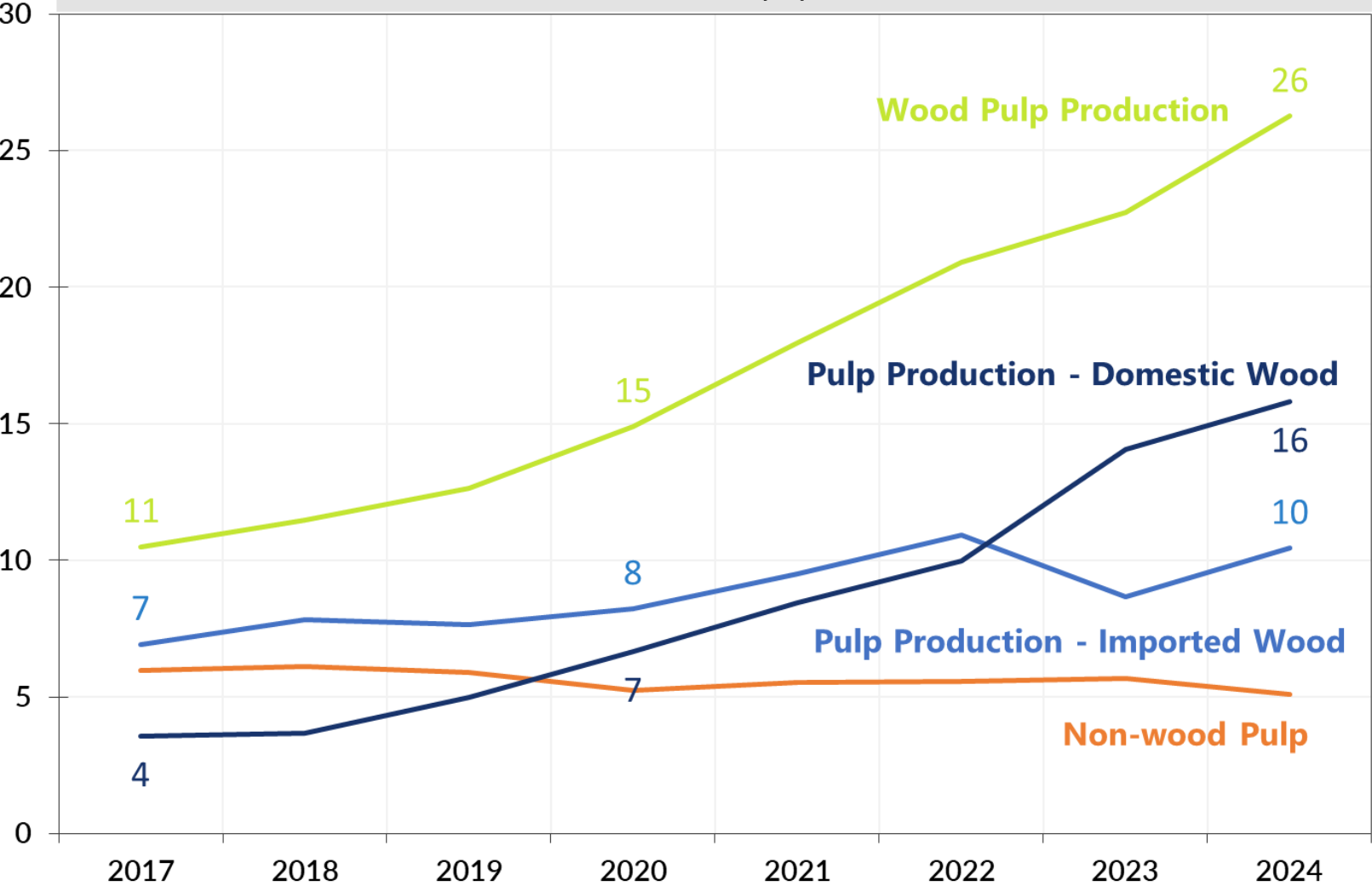
## Historical China Pulp Production & Wood Usage

Million BDMT/Y, 1995 to 2024



# China Pulp & Paper Growth

China's Annual Pulp Production & Wood Sources  
(million tonnes - finished pulp-tonne basis)



MM mt	2020	2024	2027 B	2027 H
Wood Pulp	15	26	27	32
Non-Wood	5	5	6	6
Imported Wood	13	18	18	20
Domestic Wood	11	27	28	35

Wood availability will drive ultimate production volumes in China.

11 MM mt incremental growth, 15% CAGR since 2020

2024 had 3 MM mt increase, driven in part by:

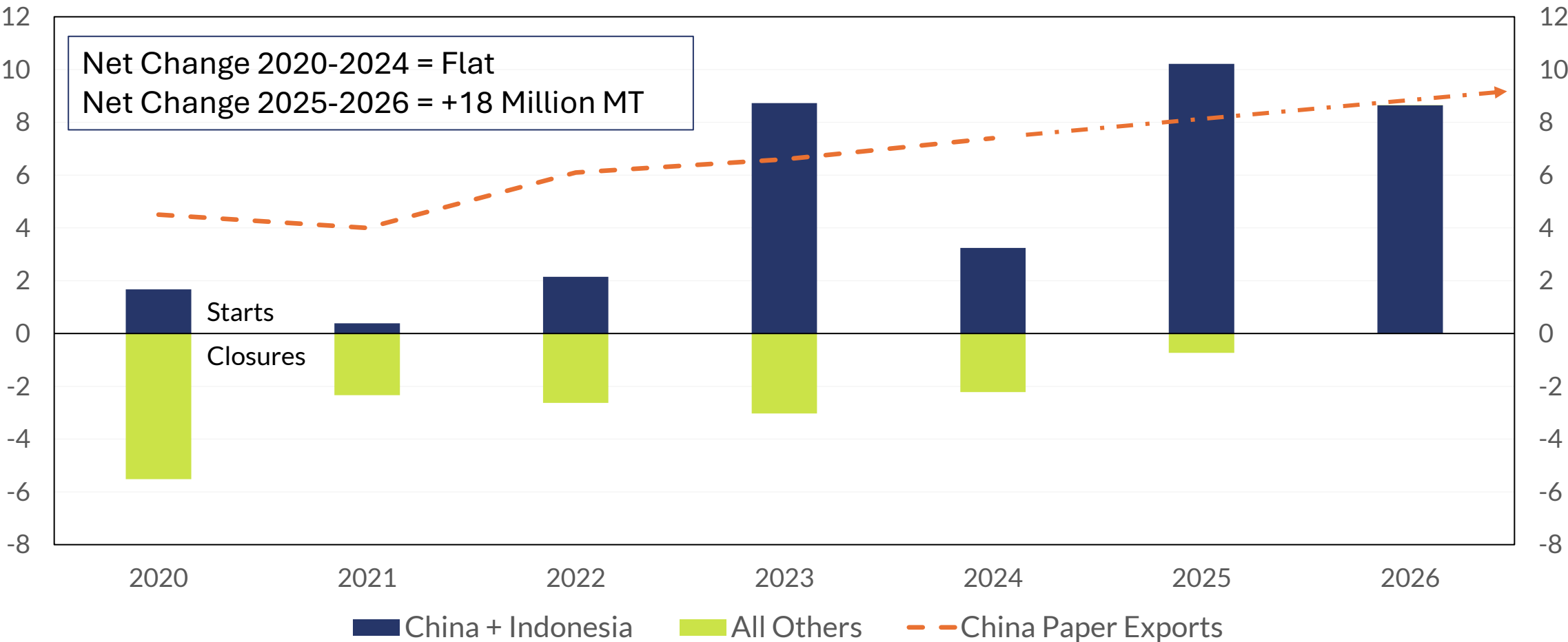
- Poor construction markets in both China and Vietnam
- Pulp prices above \$550/mt



# Integrated Pulp Growth

## Net Balance Integrated Pulp -> China + Indonesia vs. Rest of World

Million MT (Both Axes), 2020-2026



# Capital Requirements?

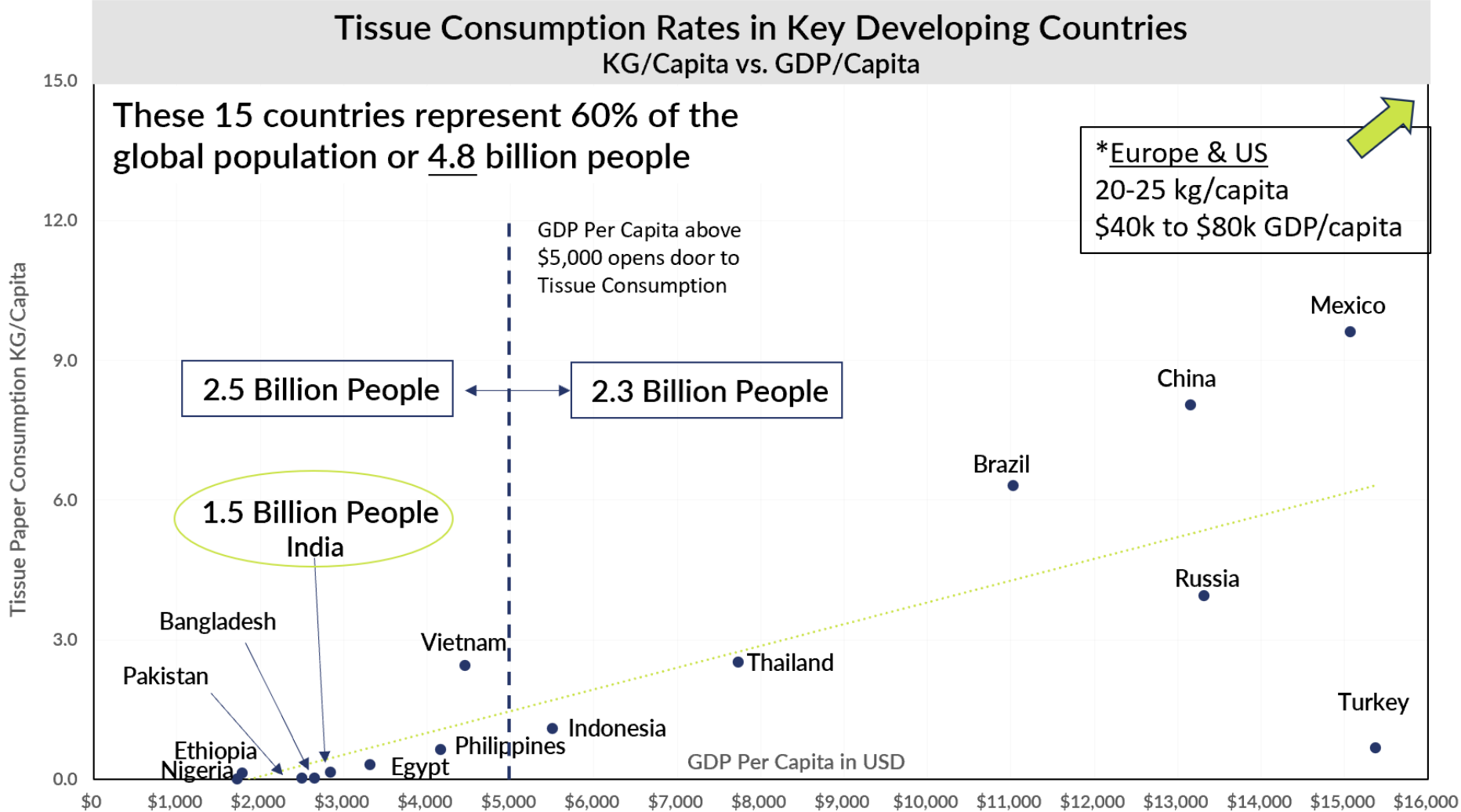
How much cheaper can China build mills for?

## Pulp Mill Investment Comparison - LATAM vs. China

Company	Location	Timeline	Scale (Mmt/Y)	Estimated Mill Investment (\$Billion)	CAPEX Intensity (Investment/Capacity)	Equipment Supplier
Arauco, Paracel, CMPC, Bracell, etc...	Brazil & Paraguay	Future Projects	1.8-3.5	\$3.5 to \$5.0	~\$1500	Andritz or Valmet
Suzano, UPM, Arauco, Klabin, etc...	Brazil & Uruguay	Completed 2016-2024	1.5-2.5	\$2.0 to 3.0	~\$1300	Andritz or Valmet
Chenming, Sun Paper, Huatai, Nine Dragons, APP, etc...	China	Recently Completed	0.8-1.0	\$0.8 to \$1.2	~\$1000-\$1200	Valmet, Andritz, and Local China Supplier(s)

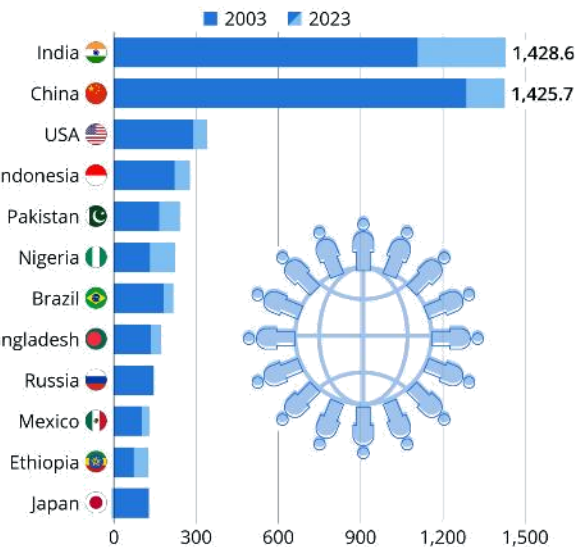


# Population Growth



## The Most Populous Nations on Earth

Estimated population by country (in million people) in 2003 and 2023\*



middle future estimate. As of July 1 of respective years.  
Source: UN Population Division

Nearly 40% of the global population does not use Tissue/Hygiene products  
Tissue at high penetration could grow from 40 Mmt to 100+, TTOBMA base case is 60 Mmt



# Less P&W Recovery

TTO BMA

Virgin pulp will help  
replace bleached  
recovered paper furnish





# Consolidation

- The largest companies are getting larger
- More of them are based in the Asia or Latin America
- Many of the largest have recently started new mills or have projects in the pipeline



# Industry Consolidation

- Smurfit / WestRock
- IP / DS Smith
- RGE / Vinda
- Suzano / Pactiv
- KC International?
- IP Pulp?

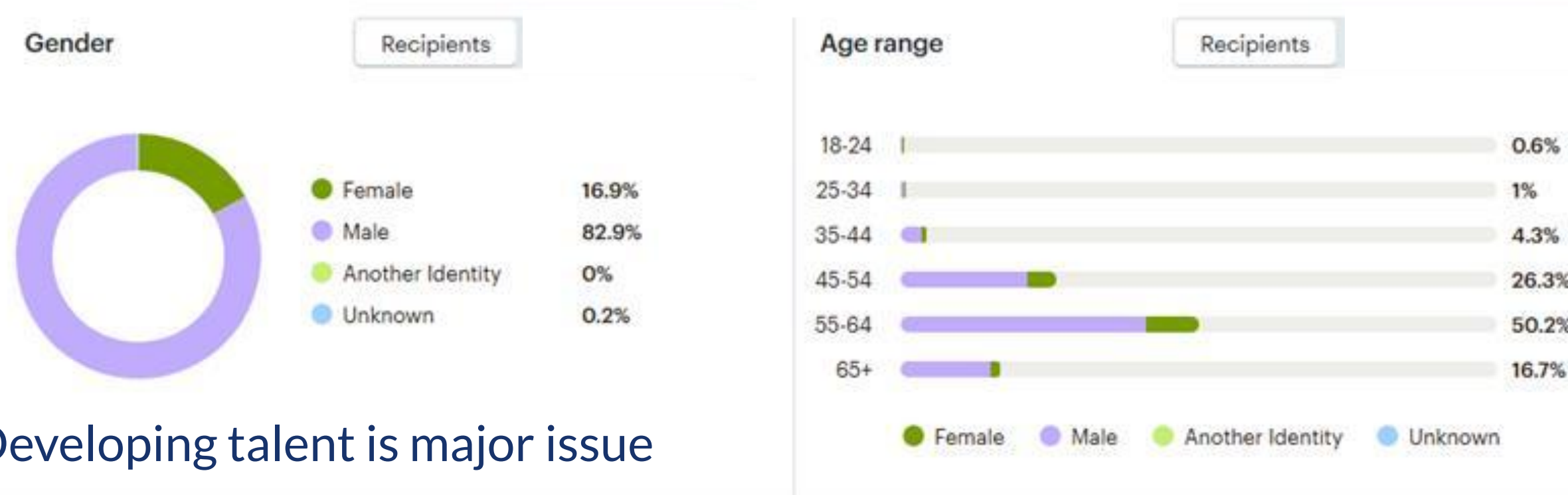




# Demographics

## Predicted demographics

May 6, 2025 - May 8, 2025 • Excludes Apple MPP



- Developing talent is major issue



# Furnish Trends

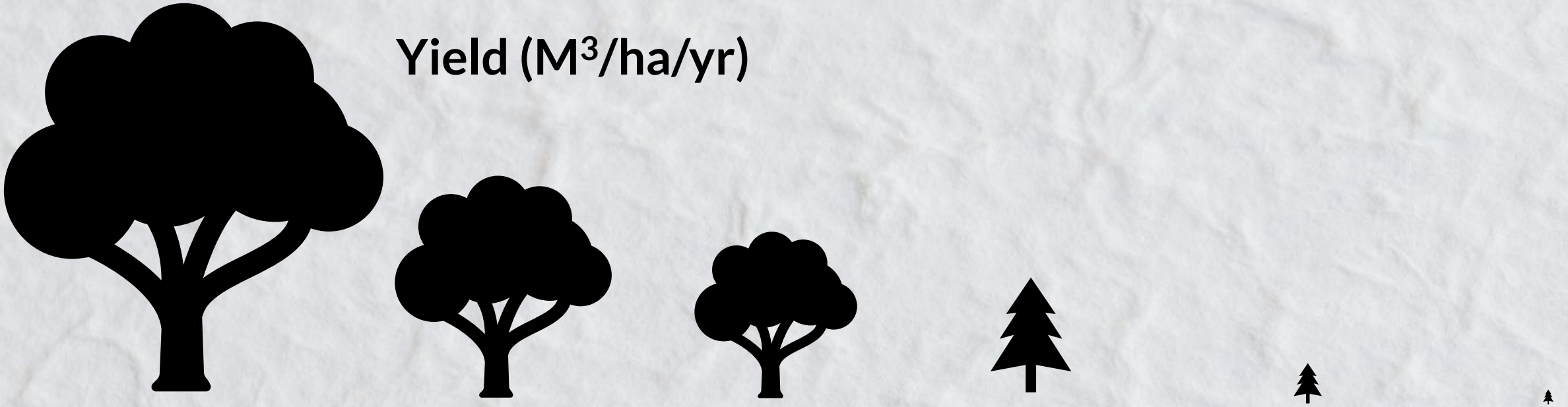
Hard to compete with  
hardwood pulp





# Regional Differences

Yield (M<sup>3</sup>/ha/yr)

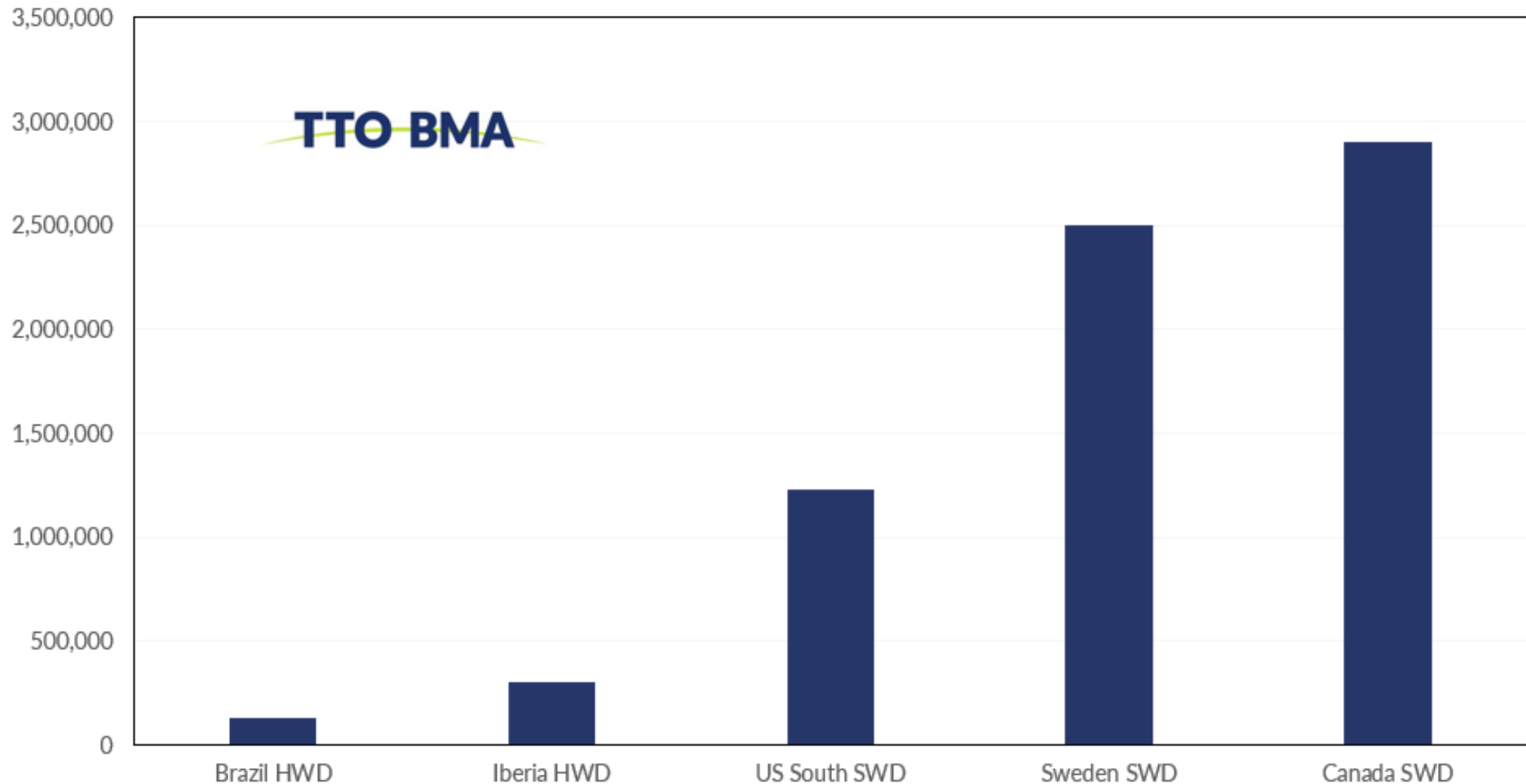


Time to harvest (years)



# Scale of Mills

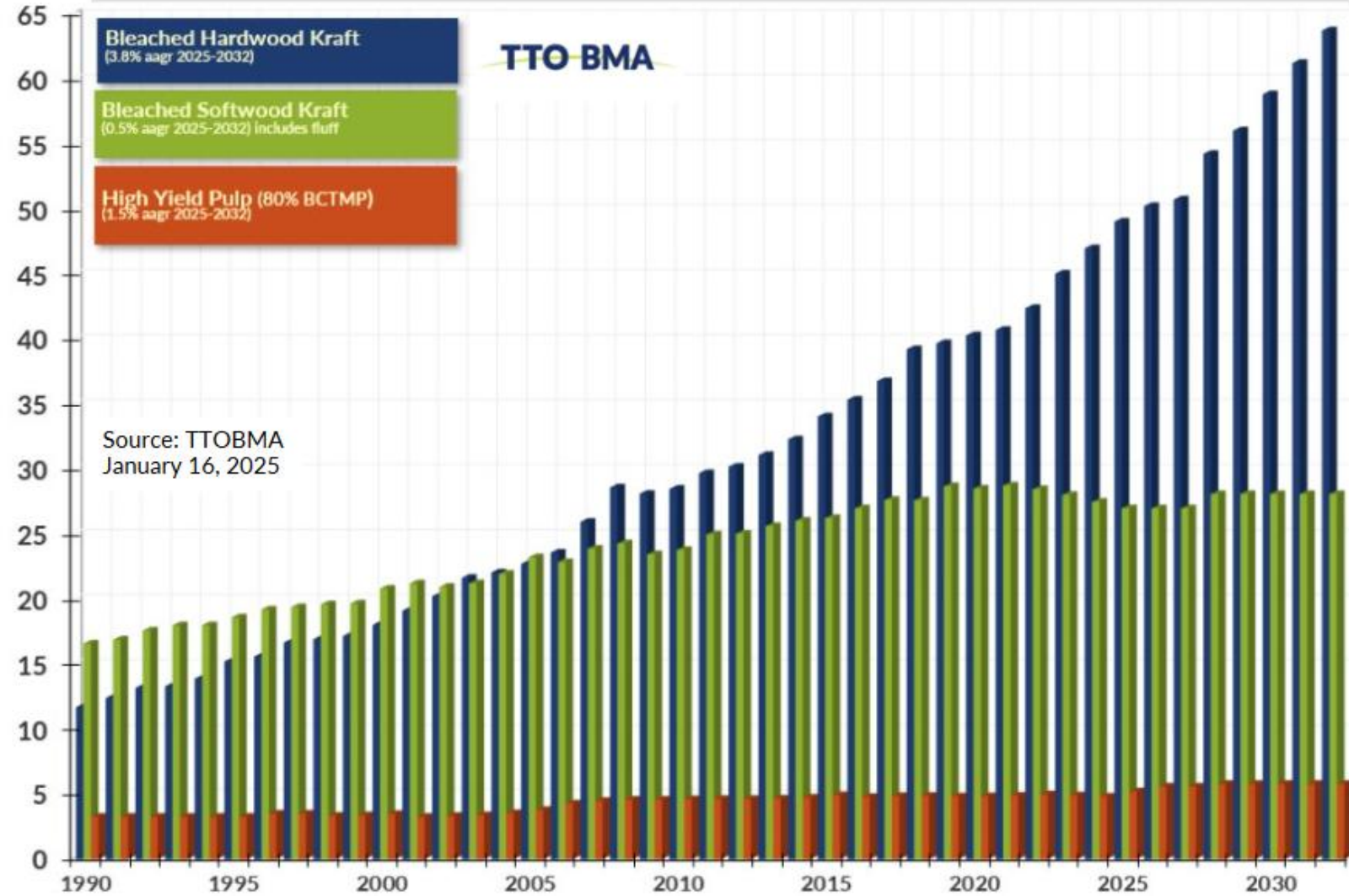
Exponential Difference in Land Area Required between Hardwood & Softwood





# BHK Expansion

Annual World Market Pulp Capacity through 2032  
millions of tonnes



- BHK has accounted for nearly all the market pulp growth since 2005

# SWD Cost Structure

## Composite Pulpwood Prices - Nordic Countries

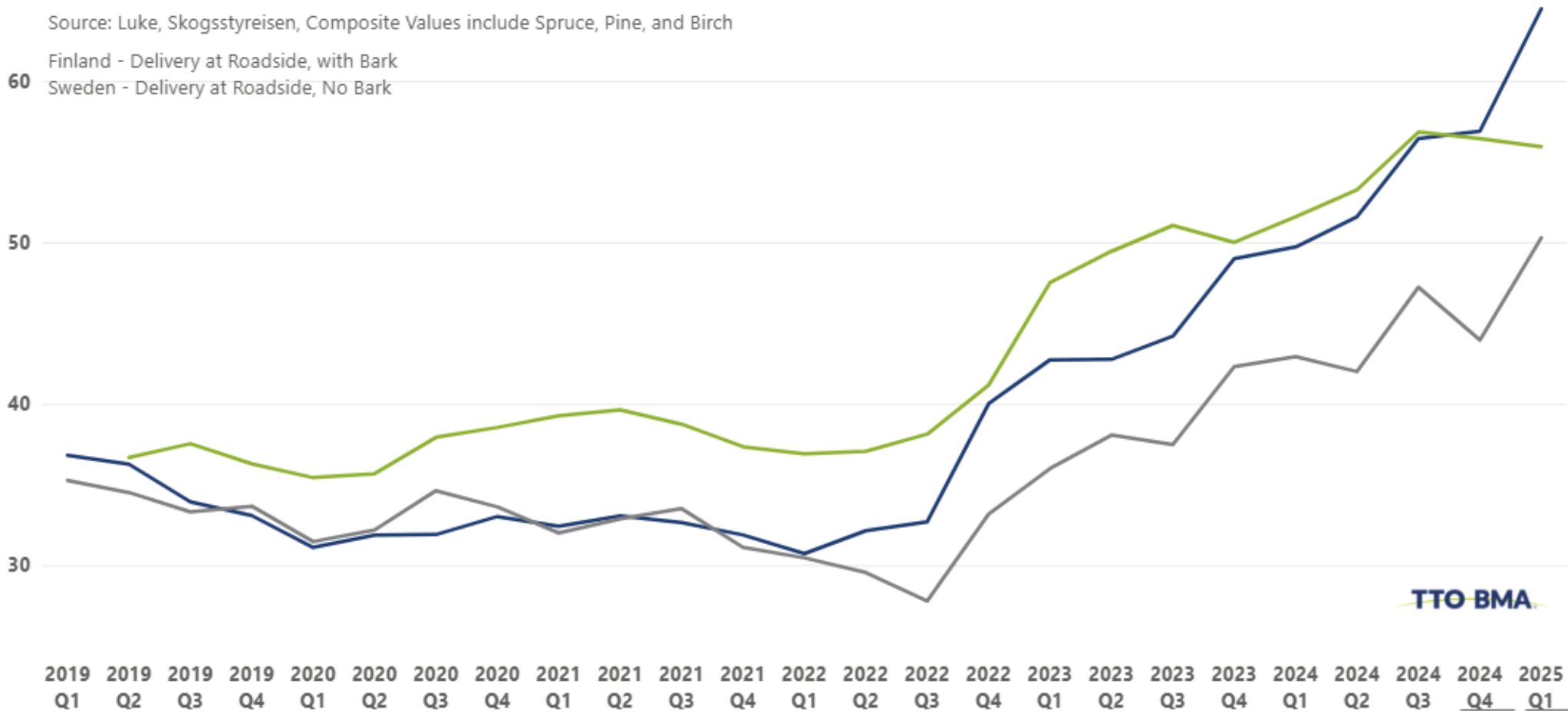
USD/m<sup>3</sup>, through Q1 2025

● Southern Sweden Pulpwood ● Northern Sweden Pulpwood ● Finland Roadside Roundwood

Source: Luke, Skogsstyrelsen, Composite Values include Spruce, Pine, and Birch

Finland - Delivery at Roadside, with Bark

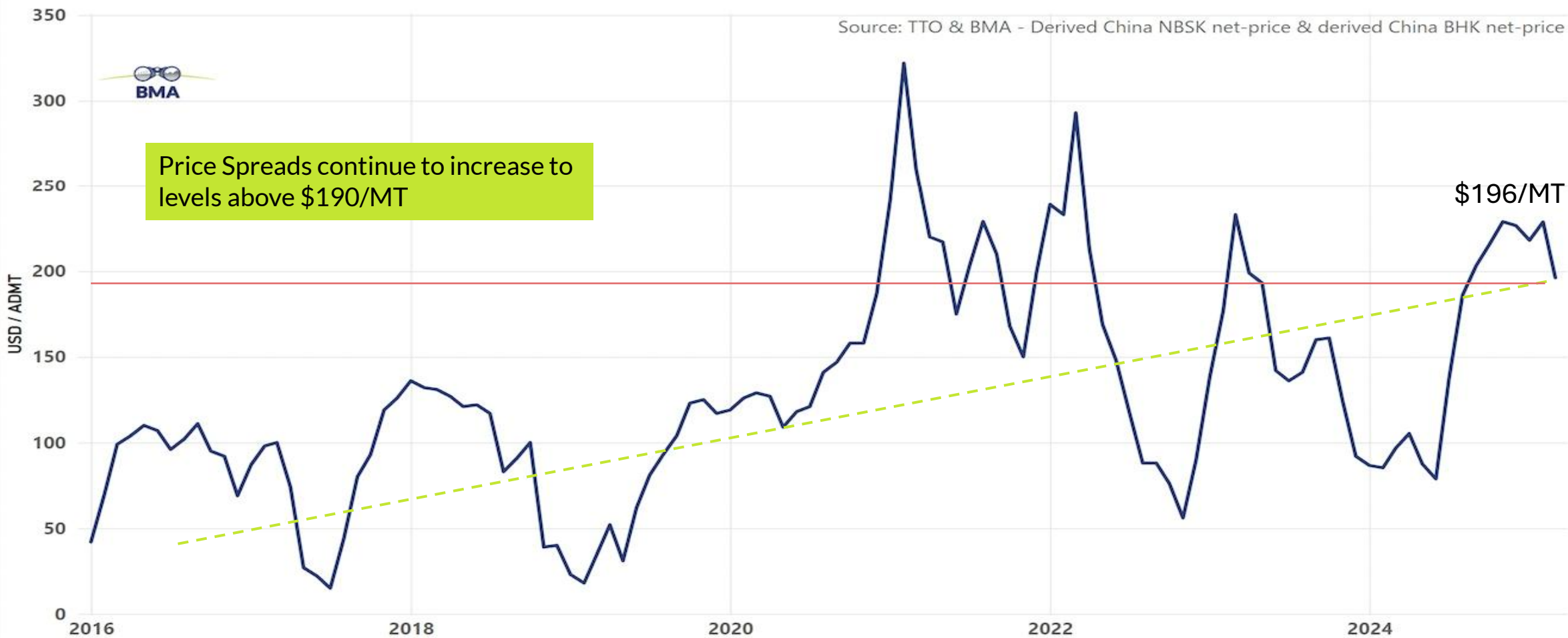
Sweden - Delivery at Roadside, No Bark



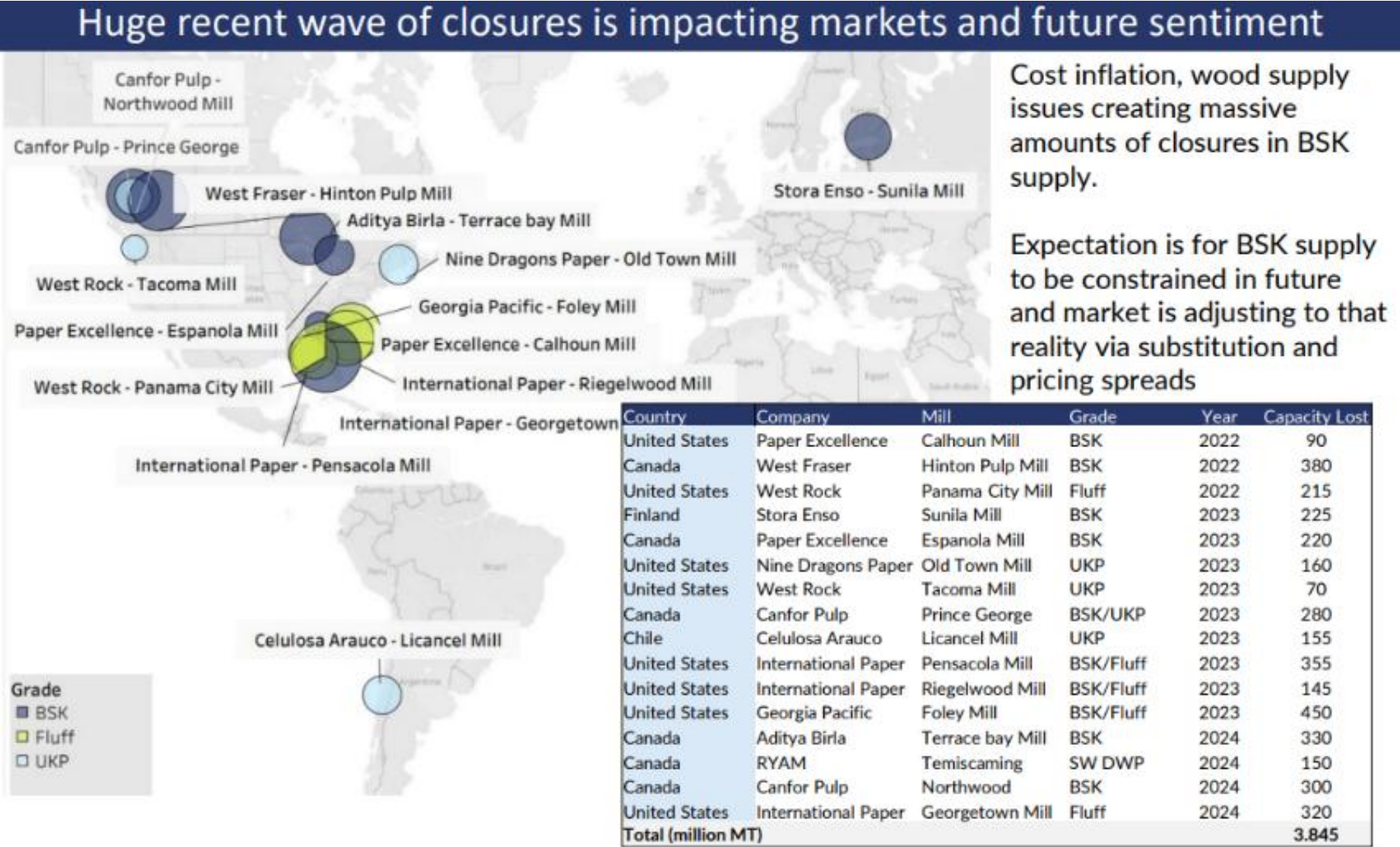


# BSK / BHK Spread

China NBSK / BHK - Historical Net-price Spread  
through March 2025

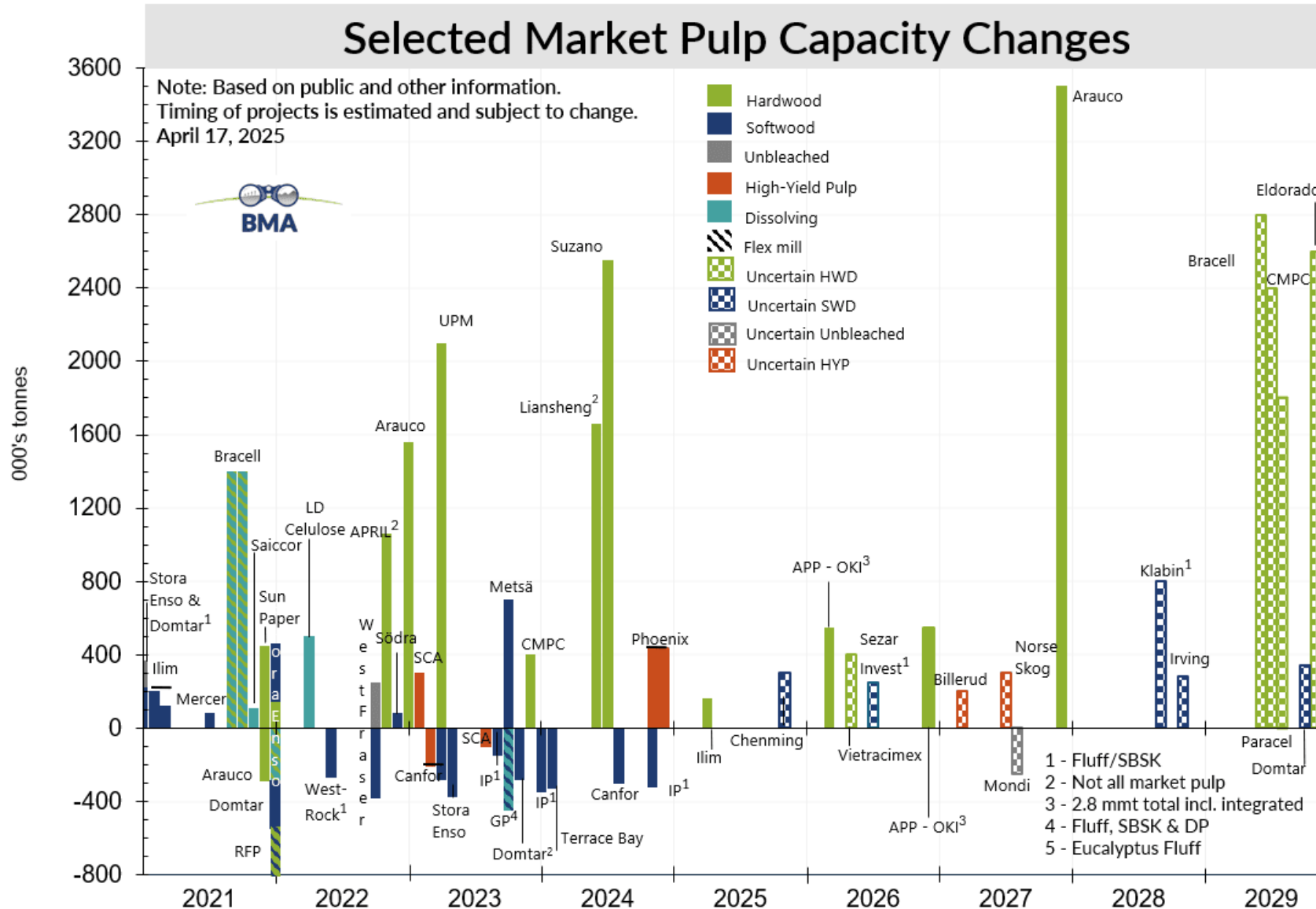


# BSK Closures





# Market Pulp Investment



- Most of the new market pulp investments are in Latin America based on modern Eucalyptus plantations

# BSK Producers left in the cold?

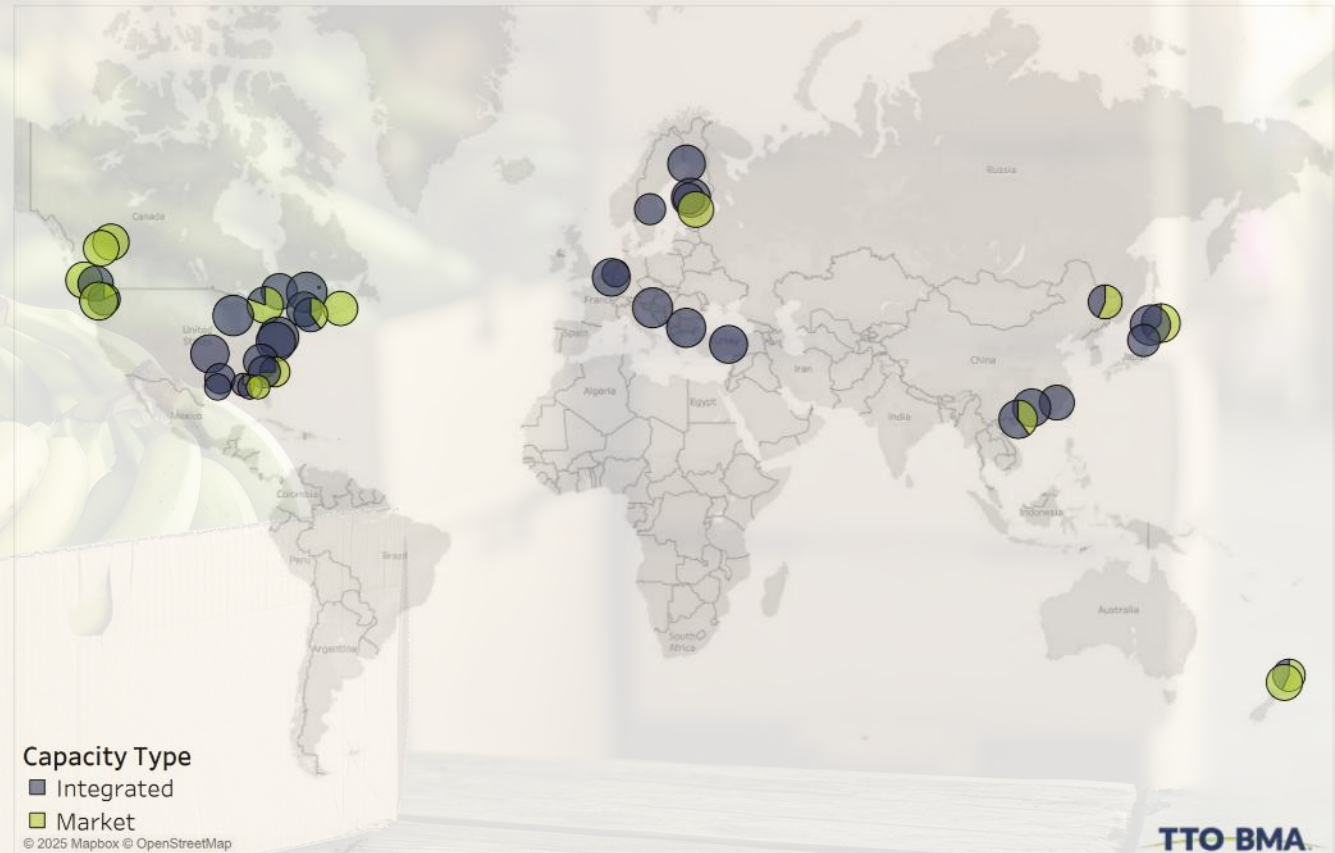




# BSK Still Needed



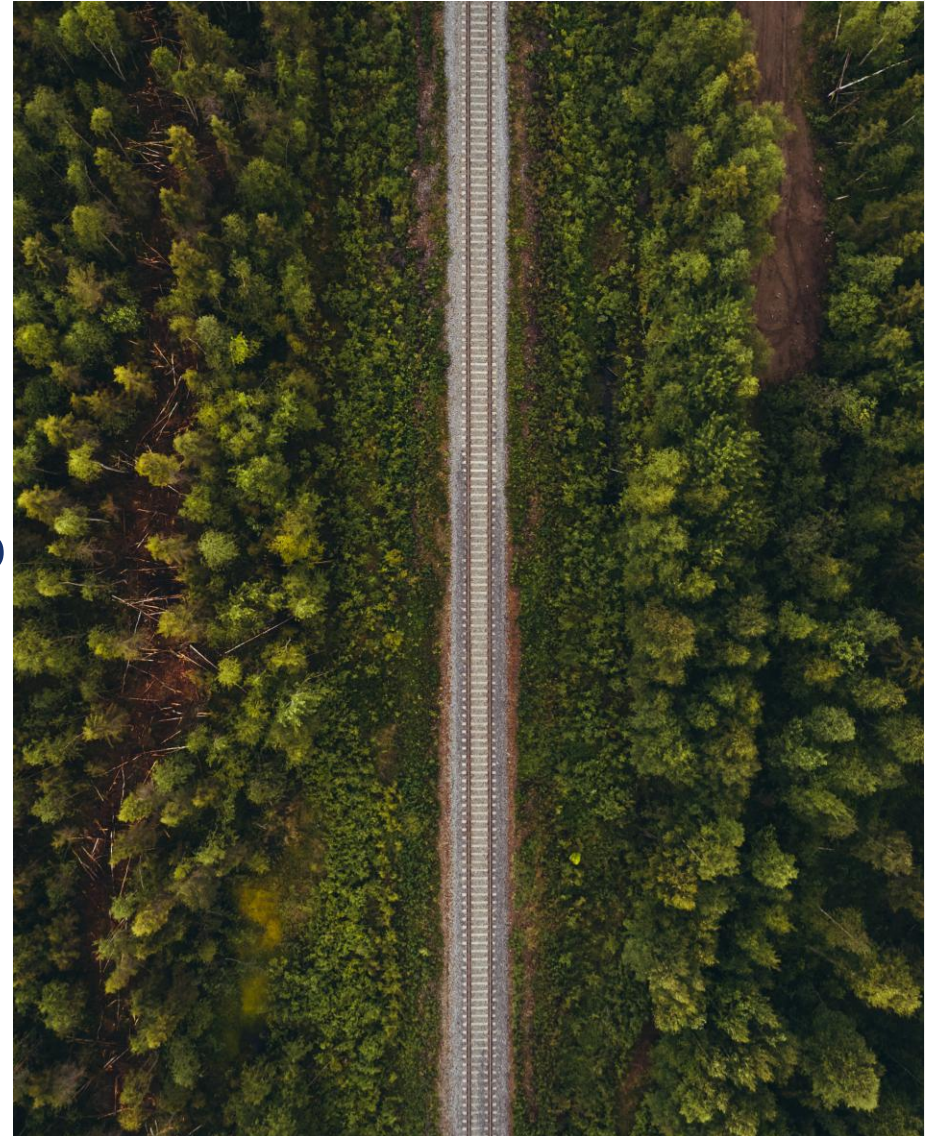
## Global BSK Closures since 2015





# BSK Survivors

- BSK increasingly niche grade
- Suppliers who maximize strength performance and help their customers use more HWD will have advantage
- Cost competitive





# American Pope

"It's called soccer now."





# Pulp & Paper Industry





# THANK YOU!

**TTO BMA**®



## Market Intelligence, Analysis, & Consulting

- Monthly reports and commentary covering the market pulp, recovered paper, and tissue markets
- Price forecasts and long-term outlook work
- Market presentations, infographics, and videos
- Market intelligence tools and database
- Management consulting including market research, strategy, and investment analysis

## Net Pricing Indices

- Open-market net-price indices
- Pulp price indices include: NBSK, BHK, SBSK, UKP, Fluff pulp, BCTMP and Dissolving pulp
- Recovered Paper North America including: OCC, SOP, Hard White, Light Print, and Mixed Paper
- Tissue North America including: Virgin Bath, Virgin Towel, Recycled Bath and Recycled Towel
- Downstream Tissue North America including: Ultra bath, premium bath, ultra towel, premium towel
- TTO Now real-time pricing – China, Latam, and Japan pulp and paper prices (more grades/regions being added!)

