

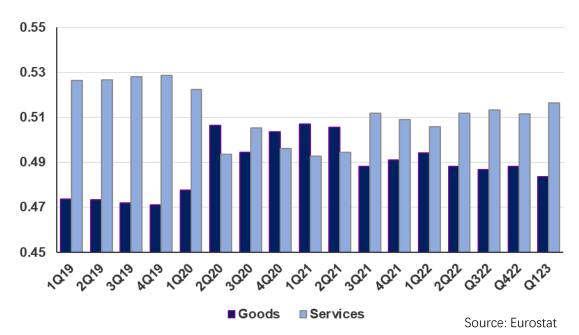


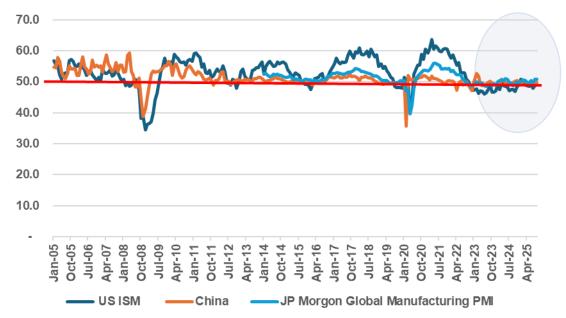
Disappointing Post - Pandemic Manufacturing Sector Recovery



HIGH INFLATION HAS REDUCED GOODS CONSUMPTION IN WESTERN COUNTRIES, WHILE CONSUMER CONFIDENCE IN CHINA HAS REMAINED SLUGGISH AFTER THE PANDEMIC

- Shift in consumption patterns after the exit from the pandemic
- Geopolitical conflicts, U.S. tariff policies, and the withdrawal of pandemic-era subsidies combined with inflation have led to a relative decline in consumers' real purchasing power
- China's economy has continued to face insufficient confidence, with a relatively slow recovery after pandemic

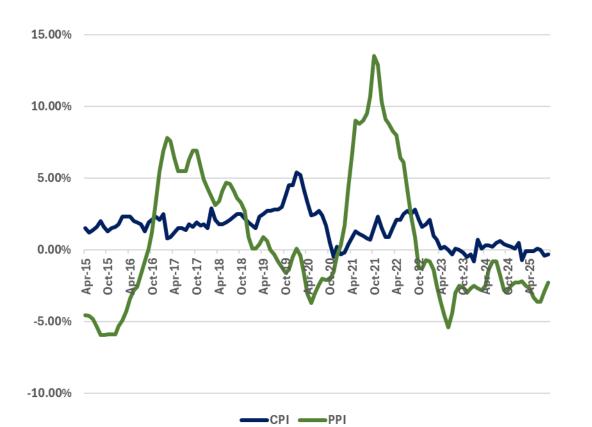




China Domestic Consumption Still Very Weak, but Seeing Signs of Improvement



Both China's CPI and PPI are in negative territory again, but an improvement in the PPI side in recent months has shown an impact of government's anti-involution rhetoric/compaign



China's consumer confidence index has not rebounded significantly since its sharp decline during the pandemic, but starting to edging up in recent months

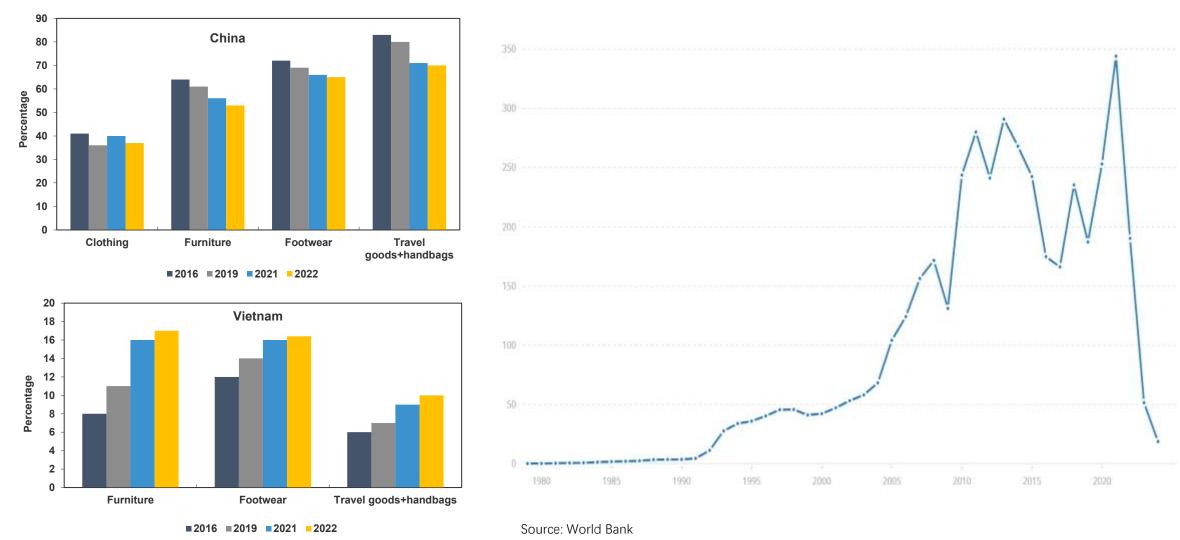


RUIZHIXIN Consulting 2nd APPS

Near- Shoring & Friend-shoring – Challenges to China



Two waves of supply chain migrations





However, led by NEVs, Deepseek, Nezha2, etc., indigenous innovation is now driving up confidence among investors

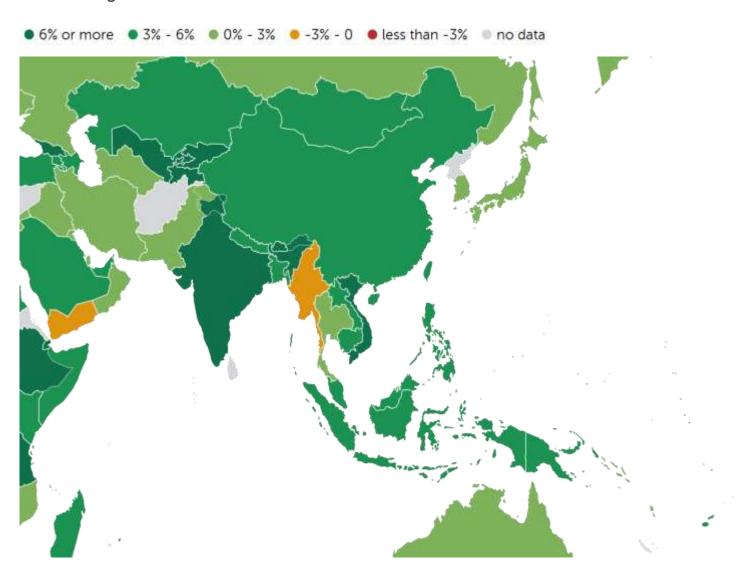
Key Take-away on China Macro Economy



- GDP growth faster than expected in 1H, but facing downwards pressure
- Structural challenges remain
 - Demographics: aging population + low fertility rate
 - Deflation: CPI barely positive in July while PPI negative for 33 consecutive months
 - High Debt/GDP ratio but not unprecedent
 - Weak domestic consumption
 - Intense geopolitical competition and higher tariffs in global trade system
- ...but the economy turns out to be more resilient than expected as well
 - Improving confidence both in the investors' sector and domestic financial market
 - Diversification on trade route seems working
 - Property market bubble has burst but not causing major financial crisis, at least so far
 - Tech sector resilient over US sanctions and indigenous innovation prospers
 - Smarter consumption stimulus packages: trade-in subsidy, childcare subsidy, etc.



If looking around the region...Emerging and developing Asia is still among the fastest growing regions in the world, with India and Vietnam the clear leaders on economic growth



World	3.2
Sub-Saharan Africa	4.
Other advanced economies	1.8
Middle East and Central Asia	3.5
Major advanced economies (G7)	1.4
Latin America and the Caribbean	2.4
European Union	1.4
Euro area	1.2
Emerging market and developing economies	4.2
Emerging and Developing Europe	1.8
Emerging and Developing Asia	5.7
ASEAN-5	4.2
Advanced economies	1.6

Source: WEO

But both opportunities and challenges loom in emerging and developing Asia (excluding China) region

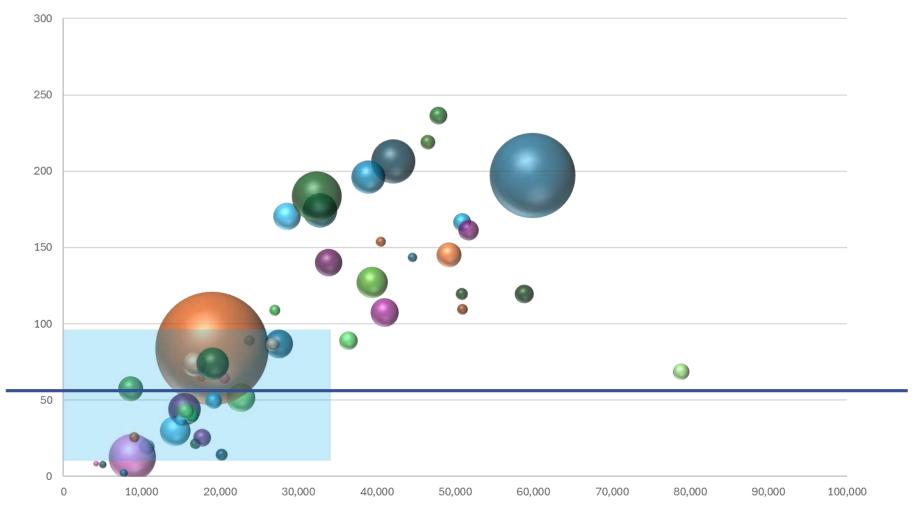


- Geopolitically both ASEAN countries and India are the biggest beneficiaries of a US-China competition
 - ...but also face a major challenge if the competition gets more fierce and countries will be forced to pick sides;
- Lots of structural advantages with similarity in both ASEAN & India economies
 - Large & young workforce plus a growing middle class;
 - ASEAN is a very diversified region while economically integrated through different trade agreements
 - Very competitive labor cost, even comparing to current-day China;
 - Growing urbanization

...but also facing challenges like infrastructure gap, inequality across and within countries, dependence on global demand, etc.

Most of the Asian regions still lagging behind on industry development



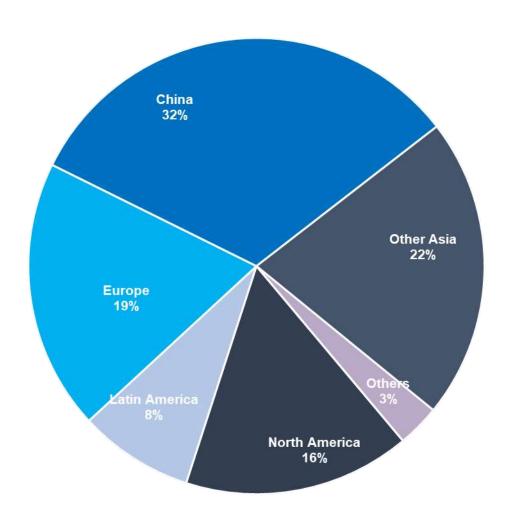


Asian countries per capita paper consumption varies quite a bit:

- From super developed Singapore, Japan, S. Korea, etc.;
- ...to one of the least developed regions – southern Asia (India, Bangladesh, Pakistan, etc.)
- China and ASEAN countries sitting in between

Asia dominates global containerboard market





- Asia represents roughly 55% of global containerboard market, while China mainland's 60%+ of Asian markets
- Product mix still differs dramatically, but recycled share have been growing substantially esp. in the developed world
 - Kraftliner products are still mainly produced in NA,
 Oceania, Russia, etc., with NA representing over 50%,
 but the its share has been in decline in recent years
 - As NA and EU turning recycled, China's moving the opposite direction, adding much more integrated new UKP lines, to balance the poor fiber quality of domestic RCP & a ban on imported RCP
 - With newly built integrated UKP lines, Chinese producers also starts to produce proper kraftliner products, since Sun Paper's first all virgin kraftliner line in Shandong in 2021

Source: Fastmarkets

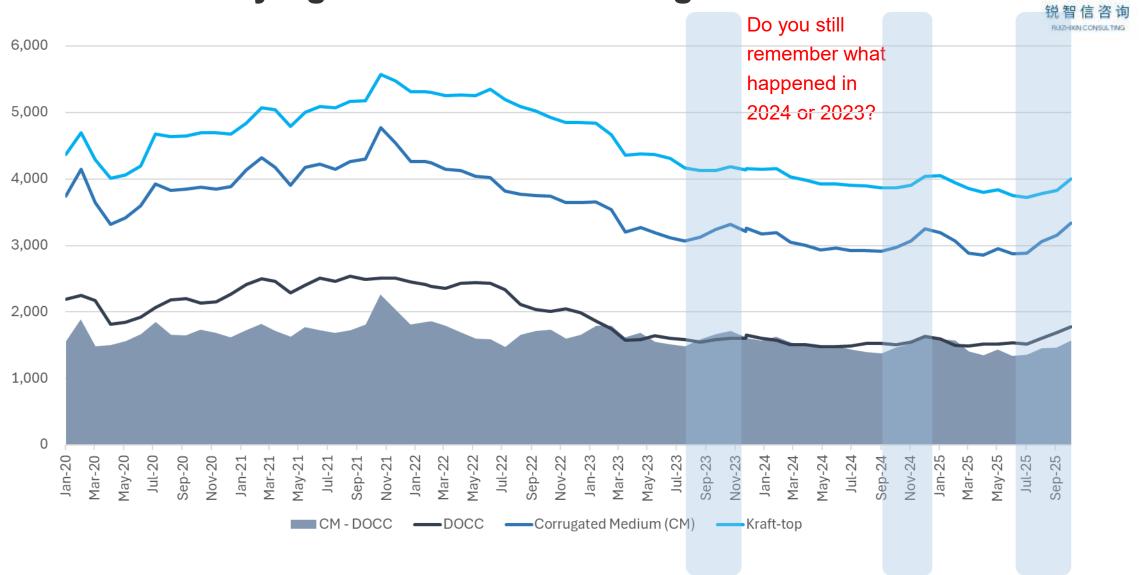




Perfect storm in 2021 coupled with a weak macroeconomic recovery drove domestic market into decline

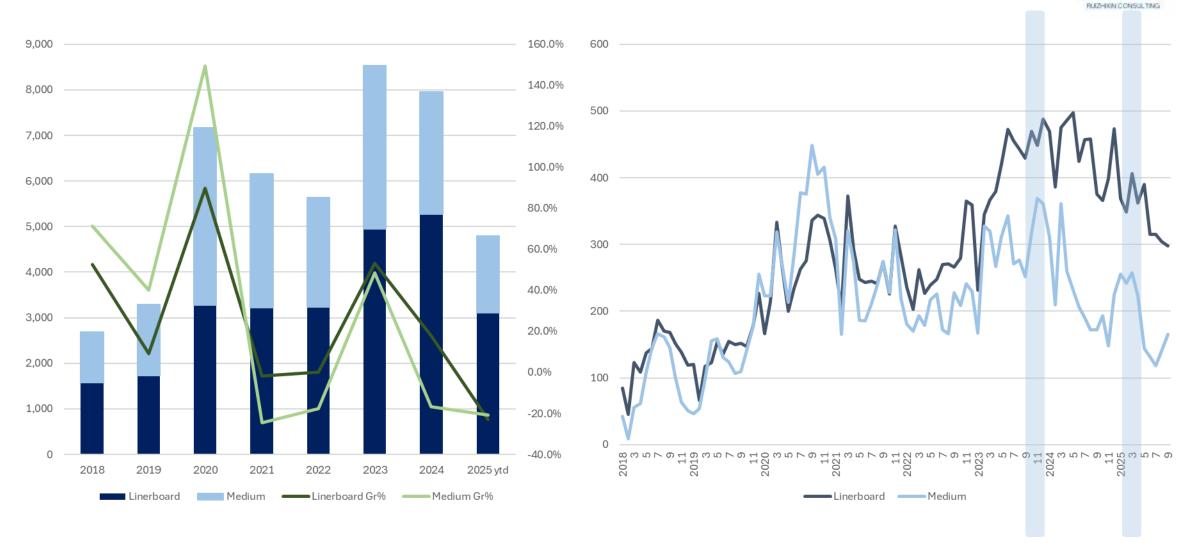
- Most of the paper grades face over-capacity challenges, and markets have been trending down ever since 2021, with small rebounds from time to time due to different factors but all proved short-term
- Domestic demand in 2025's even weaker, due to weak domestic consumption plus even though still resilient exports but shift of product structure
- Exports so far quite resilient, with major virgin grades like ivoryboard and tissue still growing
- Anti- involution still a concept needing specifics given the difference vs. 2015

But there's a rally right now – but how long will it last this time?



China & other Asian markets are now much more intertwined





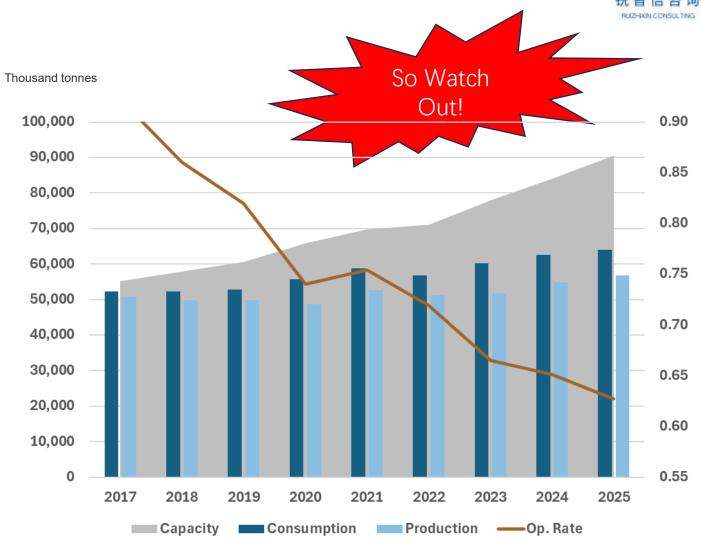
It's the demand & supply dynamics, Stupid!

Demand growth actually recovered a little bit in recent years

- Domestic consumption boosted by new government stimulus packages, which is more targeted, in the 1H
- 2H economic growth is expected to be somehow muted, but a truce between US and China trade war might help boost confidence
- E-commerce, awareness of sustainability, adoption of new technology, etc., will lead to further growth

Investment intensity will drop

- Around 4 million tonnes of new capacity has come into line till Nov. this year, followed by 5.6 million last year, and 6+ million in 2023
- Operating rate still trending down at low 60s



Source: Fastmarkets

Major Projects in China 2024 - 2025

Company	Region	Grade	Capacity	Time
Shanying International	Jilin	Corrugated Medium	300	Q1, 2024
Renfeng	Shandong	Corrugated Medium	300	Q1, 2024
Han'gao	Hebei	Corrugated Medium	150	Q1, 2024
Hongqi	Ganshu	Linerboard/Medium	200	Q2, 2024
Dongfang Zhihui	Shaanxi	Linerboard/Medium	250	Q2, 2024
Wuzhou	Hubei	Linerboard	450	Q2, 2024
Jinbaoshi	Hebei	Linerboard	400	Q3, 2024
Chenguang	Hebei	Linerboard	300	Q3, 2024
Dawei	Shanxi	Corrugated Medium	150	Q3, 2024
Dongfang Zhihui	Shaanxi	Corrugated Medium	350	Q3, 2024
Longyuan	Henan	Linerboard/Medium	350	Q3, 2024
Wuzhou	Hubei	Corrugated Medium	350	Q3, 2024
Yadu	Henan	Linerboard/Medium	350	Q4, 2024
Pingfeng	Jiangxi	Corrugated Medium	200	Q4, 2024
Pengsheng	Guizhou	Corrugated Medium	250	Q4, 2024
Jianhui	Guangxi	Linerboard/Medium	400	Q4, 2024
Jianhui	Guangxi	Linerboard/Medium	300	Q4, 2024
Pengsheng	Guizhou	Linerboard	350	Q4, 2024
Zhongxiang	Yunna	Linerboard	200	Q4, 2024
Xiangyang	Anhui	Linerboard/Medium	200	Q1, 2025
Shengyuan	Hebei	Corrugated Medium	250	Q1, 2025
Wuzhou	Hubei	Linerboard	550	Q2, 2025
Dayu	Zhejiang	Corrugated Medium	100	Q2, 2025
Shanying International	Anhui	Corrugated Medium	450	Q2, 2025
Yongrun	Anhui	Corrugated Medium	250	Q2, 2025
Hongtu Paper	Anhui	Corrugated Medium	100	Q3, 2025
Guida Paper	Guangxi	Linerboard/Medium	150	Q3, 2025
Dongsheng	Yunnan	Linerboard/Medium	300	Q3, 2025
Hongxin Ronghe	Yunnan	Linerboard	250	Q3, 2025
Shanying International	Anhui	Corrugated Medium	350	Q3, 2025
Sun Paper	Guangxi	Linerboard	500	Q3, 2025
Sun Paper	Guangxi	Linerboard	500	Q4, 2025



CAPEX still at high level, but differed dramatically with the 2017 rally

- Investments from top producers slowed down dramatically. ND stopped expansion in containerboard sector since last year, while L&M hasn't built a single line in China since 2017.
- Only Shanying & Sun Paper are still investing, but in Shanying's case these were all legacy projects.
- Many new comers into the industry, some are from other paper grades, the others are simply from other businesses
- Domestic machinery have been adopted much more with the new joiners coming in the industry

Southeast Asian markets has also been crowded, esp. after China announced its ban on RCP imports in 2017

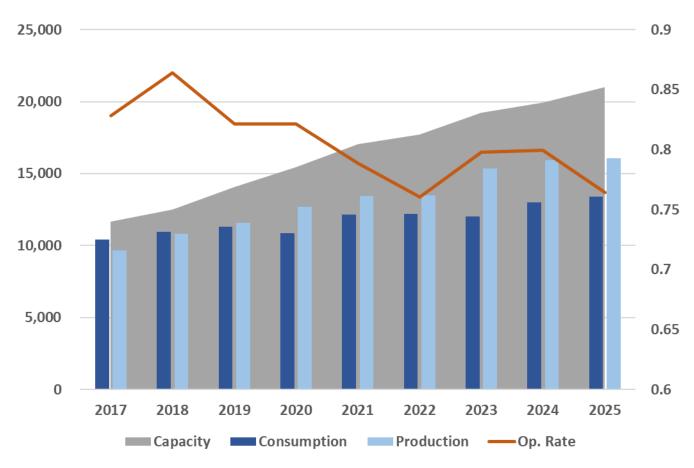


Vietnam, Thailand & Indonesia led the demand volume growth in the past decade

... while investment intensified dramatically

- APP's conversion in Indonesia + APP Karawang (2025);
- Major Chinese companies' investment in SE Asia (Sun: 1 million, Laos; Lee & Man: 1.4 million, Malaysia; Nine Dragon: around 1 million, Malaysia)
- Vietnam's mega investment, esp. right now after the country closed hundreds of small mills in the north.

Overall, local operating rates are also at its lows



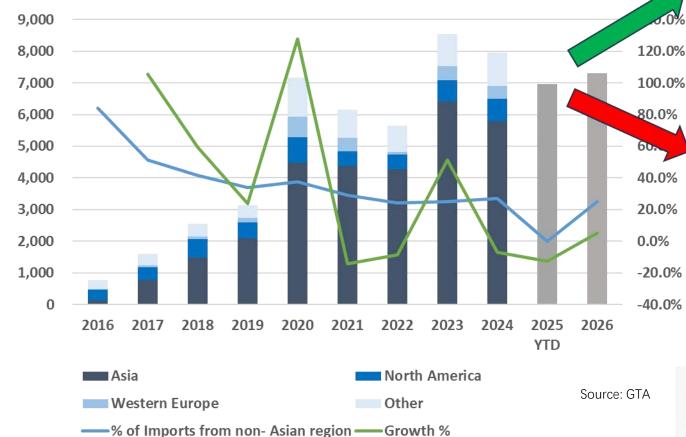
Source: Fastmarkets

How shall we see the trade between ASEAN countries & China?



Two schools of answers to the question here:

- With China's new investment in the region slowing down, but still there, share of Asian exports back to China will stay at very high level;
- With Chinese mills investing on integrated virgin pulp, demand for stronger fiber will eventually fade, and therefore local mills shall be more focusing on local markets or other markets





Some key factors driving global containerboard industry



Macro- economy facing uncertainty caused by Trump 2.0 trade policies

Growth, inflation, trade...

E-commerce

• E-commerce will be one of the main drivers for global paper packaging demand, both on the volume and quality requirements

New technology, such as Al, etc., and its adoption in the packaging sector: a double-edged sword

Sustainability

- Just like new technology adoption, sustainability is also a double-edged sword;
- EU undoubtedly leads on green regulations, such as EUDR, PPWR, WSR, etc.

Recovered paper trade policy & its demand – supply dynamics

- Demand & supply dynamics in the traditional recovered paper supply regions US, Europe, Japan, etc.;
- New trade or sustainability regulations from both selling and buying countries, and don't' forget China[©]



WORLD ECONOMIC OUTLOOK OCTOBER 2025

GROWTH PROJECTIONS BY REGION

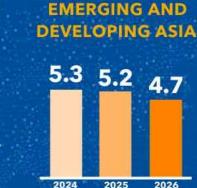
(REAL GDP GROWTH, PERCENT CHANGE)





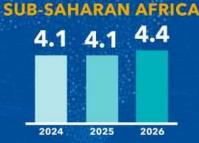












IMF.org/pubs

Source: IMF, World Economic Outlook, October 2025.

Note: Order of bars for each group indicates (left to right): 2024, 2025 projections, and 2026 projections.

Let me try to find my crystal ball...



Structural changes will happen in China's paper packaging market

- Demand in the paper packaging sector will keep growing, but at a much lower rate than the earlier days;
- Structural changes will happen, on terms of fiber & integration, product & quality, competition, etc.;
- Imports will stay at an elevated level, but dependence on stronger fiber from overseas will eventually fade;
- Industry consolidation & mill closure need to happen but on what terms?

Fast growth will be the main theme in ex- China Emerging & Developing Asian markets

- The sector will enjoy fastest growth across grades and among all world regions, with major economies in this group like Vietnam, Indonesia, and India leading the tide;
- Focusing on SPEED (decision-making, execution, everything) is what I think the right strategy, but does
 differ from country to country;

Start to plan your fiber supply chain ahead – how to make it strong and resilient

- Recovered paper
- Eventually pulp market & integrated?

Keep an eye on other products/opportunities looming



Thank

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