24 April (Thursday)
9:30 – 10:30 am

A New Era of Globalization – Shifting Opportunities in a Dual-Track World

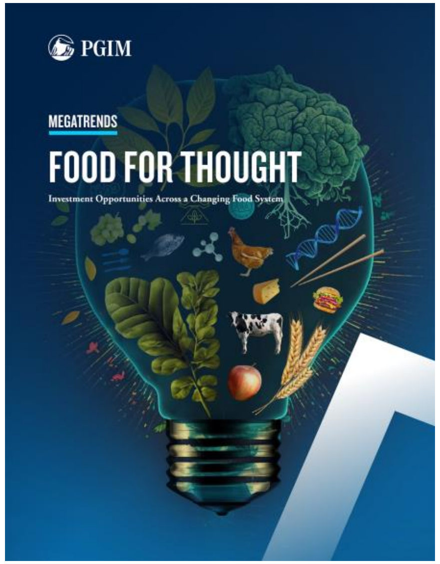
A NEW ERA OF GLOBALIZATION

PGIM Thematic Research

THE PURSUIT OF OUTPERFORMANCE

What is Thematic Research?

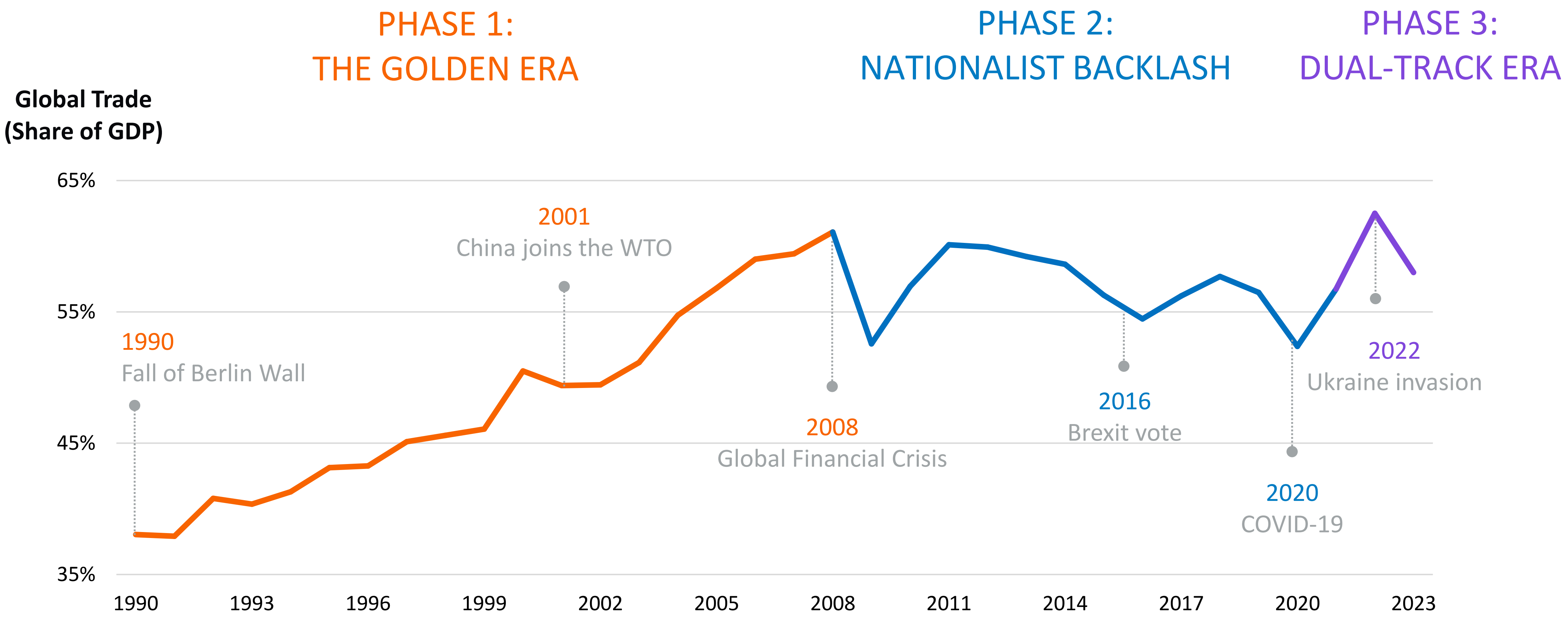
Megatrend reports examine global, secular trends that unfold over years



- Discussion of LT macro implications that impact multiple parts of investor portfolios
- Identify hidden risks and opportunities across public and private markets
- Primary audience: Global institutional investors and media

THREE PHASES OF GLOBALIZATION

The Recent Era of Globalization

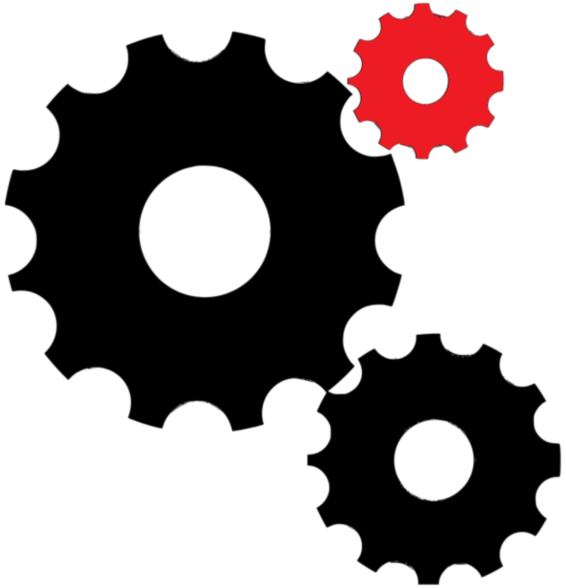


Note: Total trade is the sum of total exports and imports.
Source: PGIM Thematic Research, World Bank.

Dual-Track Era: Where deglobalization is happening

- **Self-reliance for economic and national security reasons**

- **Approx. 25% of global GDP**
    - AI & advanced semiconductors
    - 5G networks
    - Energy
    - Military technology
    - EVs



Today: Limited tariffs and many of these sectors have exemptions

Future: Lots of industrial policy and subsidies to support domestic production

Dual-Track Era: Most of the global economy remains unchanged

- **Economic imperative still prevails**
  - Production driven by highest efficiency and lowest cost producers

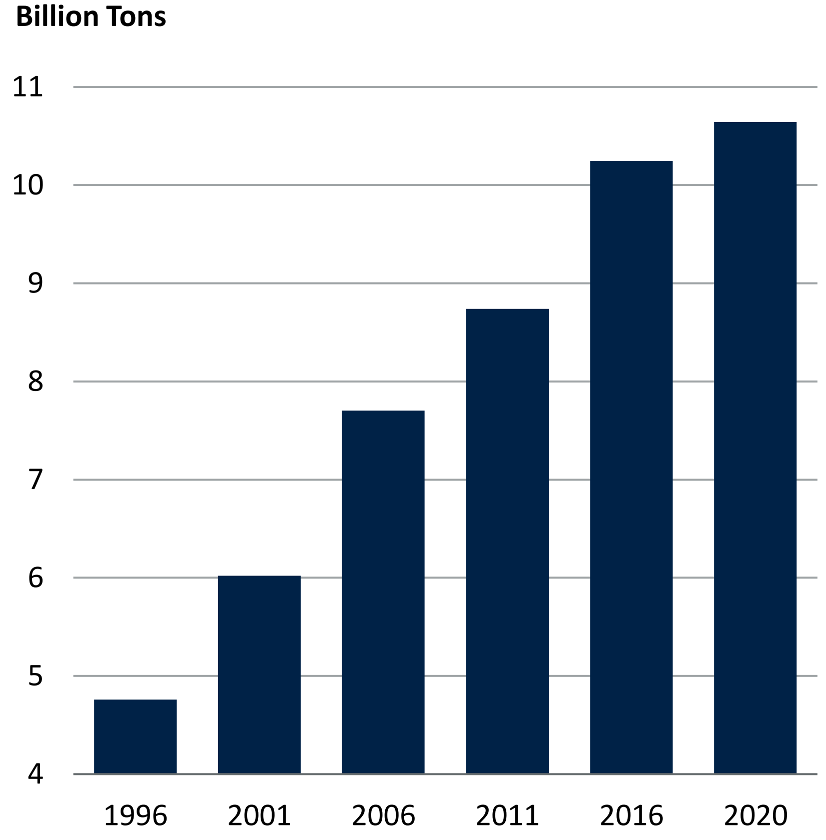
- **Approx. *75%* of global GDP**
  - Apparel
  - Consumer goods
  - Furniture
  - Household electronics
  - Basic business and IT services

Today: Many tariffs and few of these sectors have exemptions

Future: No subsidies or industrial policy to support domestic production

Global trade has slowed but is still chugging along

Total sea-born goods loaded



Source: United Nations Trade and Development and World Bank.
As of January 2025.

ALTERING THE MACRO LANDSCAPE

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Dual-Track Era: Shifting Macro Landscape for Investors

1	Commodities transmit geopolitical tensions to firms, households and markets	• Critical resources are prime candidates for geopolitical weaponization (e.g., energy, metals, grain). • Episodic disruptions of commodity supply chains can be transmitted more broadly to the global economy and markets.
2	Less efficiency and productivity in select sectors	• If globalization optimized for highest productivity and lowest cost, it follows that near-shoring and friend-shoring may be less efficient. • In the case of sophisticated manufacturing like advanced semiconductors, this redundant capacity in new locations is not likely to be as efficient.
3	Upward pressure on inflation and term premia	• Trade policy being weaponized limits growth and boosts inflation. • Changes in trade policy and supply shocks create an environment for higher baseline inflation with more episodic surges. • Higher inflation and increased government spending from industrial policy will lead to less compressed term premia than previously.

INVESTMENT IMPLICATIONS

Key Investment Themes by Sector

AI and Advanced Semiconductors	Export restrictions impact some parts of the value chain more than others
Winning the EV race	Global incumbents have growth opportunities and can thrive – despite tariffs.
Industrial Real Estate Opportunities along the US-Mexico Border	Manufacturing, logistics and warehousing demand on ***both*** sides of the border
Critical Metals and Minerals	Copper remains in the sweet spot for investors

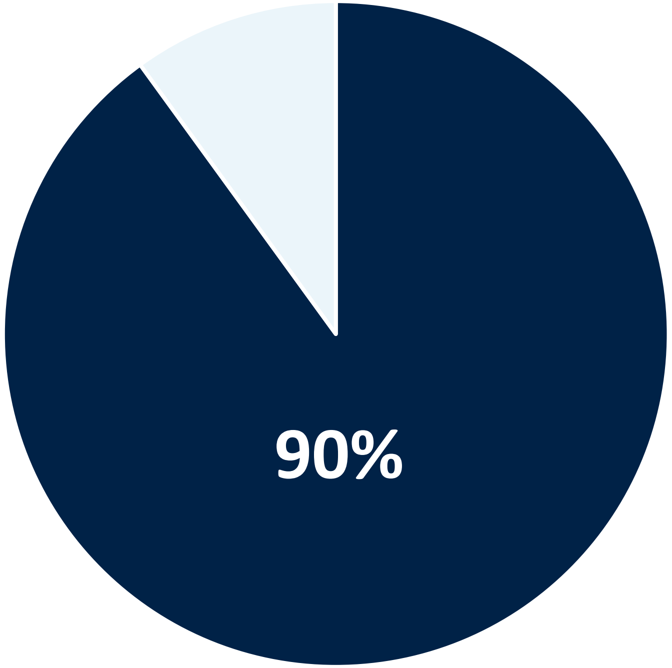
Semiconductors Caught Up in Great Power Rivalry

Two key factors that make chip manufacturing different:

1. It is all about capital and technology – not labor.
2. The industry has a "winner-take-all" dynamic with persistent advantages.

TSMC dominates high-end chips

Market share of chips 7nm and below

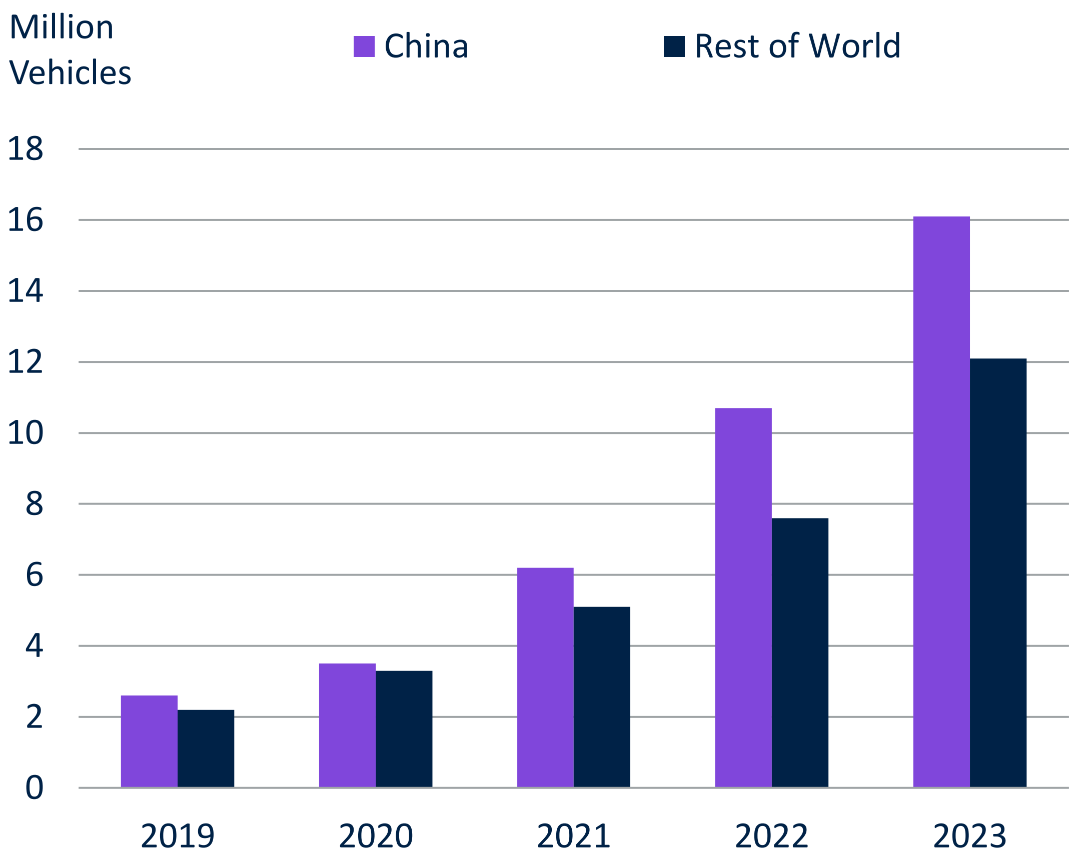


Source: Arete Research. As of January 2025.

Global Players Are Winning the EV Race

China's EV sales outpace the rest of the world

Annual EV sales ($US)



Note: EV refers to both electric vehicle and hybrid models.
Source: International Energy Association. As of January 2025.

BYD and Tesla are dominant global players

- Vertically integrated
- Global production capabilities
- Rarely compete directly today

Growth opportunities despite tariffs

- *Regions*: BYD margins are better abroad; Tesla has room to grow in SE Asia and LatAm
- *Broader range of vehicles*: BYD moving up in category; Tesla focusing on robotaxis

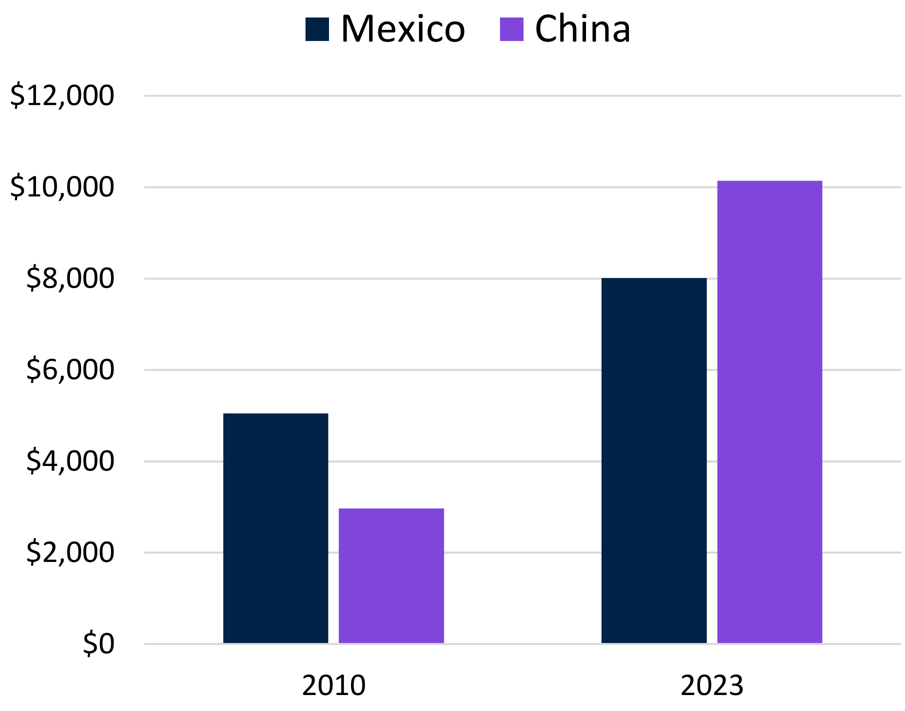
Persistent Tailwinds for Industrial Real Estate Along the US-Mexico Border

- **Manufacturing and warehousing facilities in Mexico**
  - Leases are denominated in US$
  - Tenants are often large multinational manufacturers

- **Logistics opportunities on the US side are often overlooked**
  - Need to re-freight cargo after it crosses the border

China no longer offers the cheapest labor

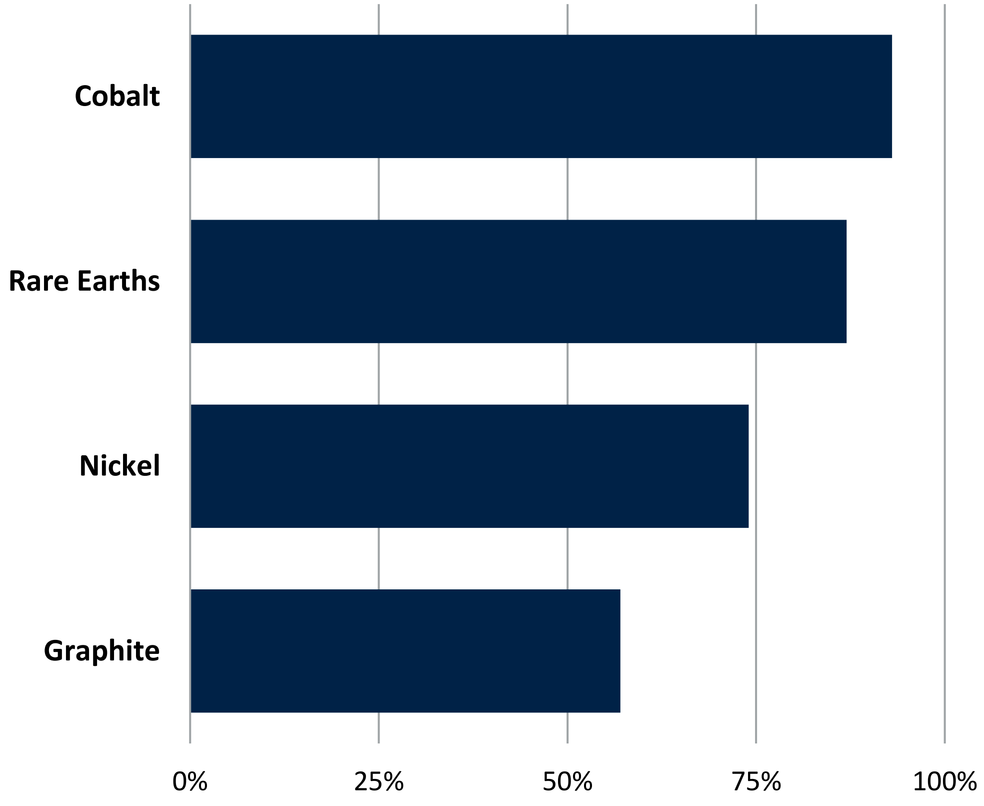
Annual salary for a manufacturing worker ($US)



Source: Mexican Ministry of Labor & Social Welfare and China National Bureau of Statistics. As of January 2025.

No Way Around Critical Metals and Minerals

China dominates critical metals and minerals processing
Share of global processing capabilities (2023)



Source: Center for Strategic and International Studies. As of January 2025.

There are several reasons why copper presents an intriguing investment opportunity:

- Universal demand: essential for construction renewable energy and EVs
- Despite global demand, copper has not (yet) been caught up in great power rivalry.

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Investment Implications

1) Semiconductors & AI amidst great power rivalry	• Advanced computer chips are critical for cutting edge AI models and applications, but increased power rivalry will create a more fragmented market and increase uncertainty. • Incumbents, however, will be hard to replace and investors should stick with companies that have a diverse set of customers across multiple segments of technology while also expanding their geographic footprint to address regional fragmentation – such as TSMC.
2) Winning the EV race	• While the world is shifting towards EVs, many automakers have missed the start leaving pureplay EV manufacturers such as Tesla and BYD with a big advantage. • Despite facing steep tariffs in Europe and the US, BYD has growth opportunities in Southeast Asia, Latin America and the Middle East. They are also increasingly stepping into higher-margin luxury EVs. • Tesla also has export opportunities especially in Latin America. They are also leaning into self-driving taxis that have the potential of being the mass-market cars of the future.
3) Real estate opportunities on both sides of the US-Mexico border	• Despite temporary roadblocks, the near-shoring momentum creates a strong tailwind for industrial real estate on in Mexico. Importantly, leases are denominated in US dollar and tenants are often large multinational manufacturers. • A steady demand for industrial real estate in the US form near-shoring trends is often overlooked. Specifically, the need to re-freight cargo from Mexico once it arrive on US soil.
4) No way around critical minerals & metals	• Copper is critical to several major industries including EVs, semiconductors, renewable energy and construction. While long-term demand is robust, supply is more limited making the fundamentals intriguing for investors. • Two pure-play copper miners – Ivanhoe Mines and Ero Copper – may offer solid growth prospects for investors. Additionally, Southern Copper and Freeport-McMoRan are large producers with economies of scale.

PORTFOLIO IMPLICATIONS

Portfolio-wide Investment Implications

Key Portfolio-wide Considerations for CIOs			
1) The new era of globalization reshuffles national winners in manufacturing and mining	2) Energy and food present new import vulnerabilities for countries	3) Stress-test portfolios to ensure sufficient diversification and risk management	4) In an era of volatile inflation and asset correlations, investors should consider option-based hedging strategies

The new era of globalization creates national winners

A new set of national winners across two dimensions:

- **Manufacturing:** Easier to “upgrade” simple manufacturing than to start from scratch
  - Skilled labor
  - Supply chains and infrastructure in place
  - Ex. Costa Rica, Morocco and India

- **Minerals:** “Non-aligned” countries with rich resource endowments have access to a broad set of:
  - End markets
  - Pools of capital
  - Mining technology to support production

Potential national winners in the Dual-Track Era

	Manufacturing	Minerals & Metals
Asia	India Malaysia Thailand Vietnam	Australia Indonesia
EMEA	Czechia Hungary Morocco Poland	Morocco South Africa Zambia
Americas	Colombia Costa Rica Mexico	Brazil Chile Peru

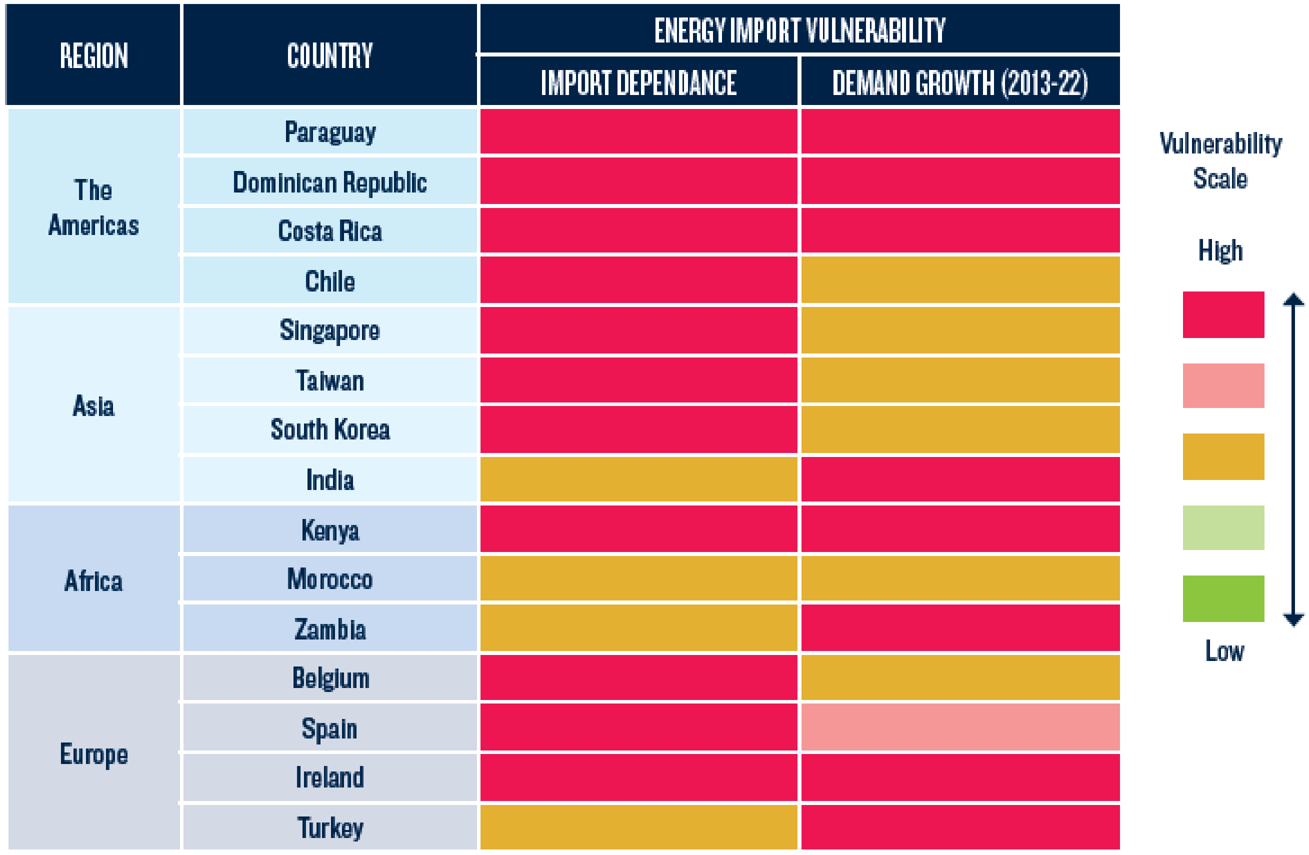
Source: PGIM Thematic Research. As of January 2025.

Assessing energy import vulnerabilities

- Energy price shocks can quickly reverberate across an economy and effect on profit margins, consumer spending and inflation.

- For investors, countries with strong demand growth *and* high import needs compared to regional peers **are especially vulnerable** to energy price shocks.

Select countries with elevated energy import vulnerability

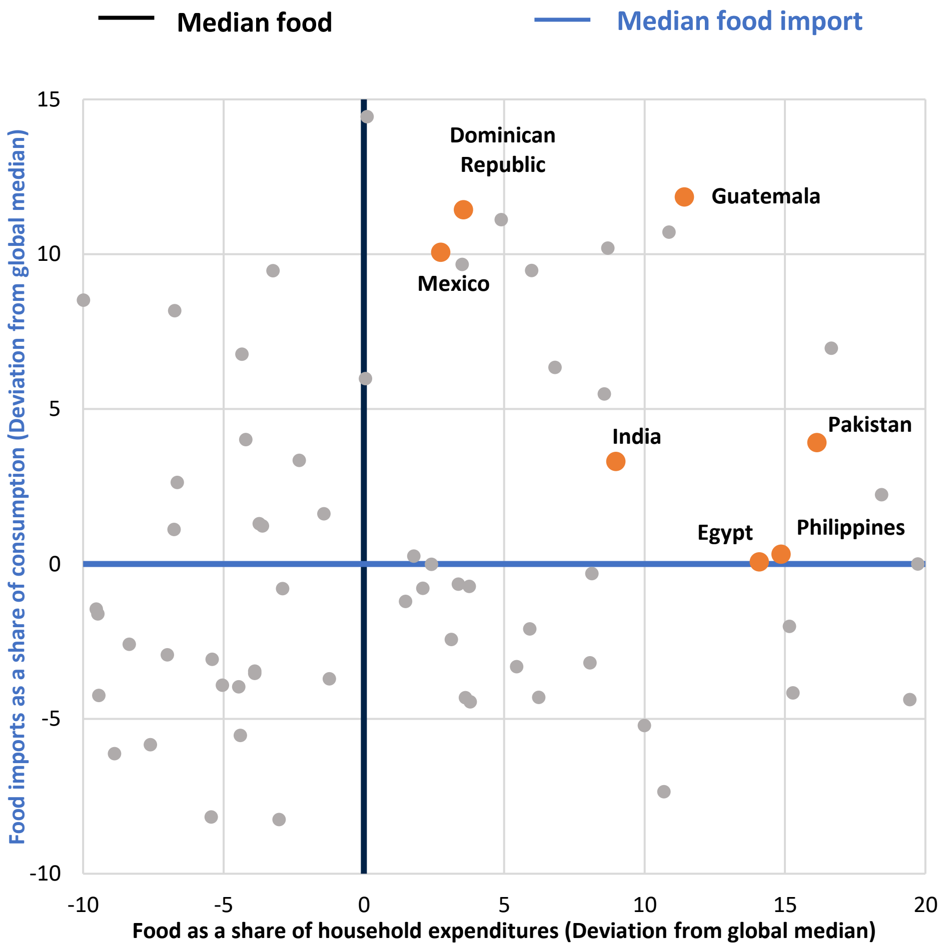


Source: International Energy Association, US Energy Information Association and World Bank. As of January 2025.

Few macro factors impact economies quite like food

Investors should consider a risk framework that evaluates countries along two important dimensions:

- Greater **dependence on food imports** means higher exposure to surges in food prices from disruptions in supply chains.
- The share of **household spending on food** and the potential for economic and social disruption caused by a surge in food prices.



Note: Our analysis considered the top 30 component countries of either the J.P. Morgan EMB Index or GBIEM Index.
Source: PGIM Thematic Research, World Bank, UN Food and Agriculture Organization and J.P. Morgan. As of January 2025.

Portfolio Implications

1) The new era of globalization is changing national winners	• Countries that already have some manufacturing capabilities in place today are often more attractive as friend- or near-shoring candidates in the future. Investors should consider industrial real estate as well as transport and power providers in these countries. • Investors should focus on countries with privileged access to free-trade zones such as Poland and Mexico, or countries with comparative advantages in business environment or labor cost like India or Vietnam.
2) Energy and food present new import vulnerabilities for countries	• Investors need to ensure their risk framework evaluates a country's vulnerability to price shocks arising from disruptions to food or energy supply chains. • Current risk methodologies may not fully account for the rising import vulnerabilities and investors should consider a top-down risk framework to identify countries with elevated vulnerabilities to commodity price shocks.
3) Dual-track economy requires a tweak of stress-testing portfolios	• Investors should consider conducting geopolitical stress-tests on their portfolios – or asking their asset managers to do so – as the new phase of globalization has the potential to lead to divergent outcomes across both sectors and countries. • A stress-test would enable investors to (1) understand the magnitude and breadth of their exposure to at-risk sectors and countries; (2) assess whether they are adequately compensated for that exposure and (3) take action accordingly.
4) Consider option-based portfolio strategies in an era of volatile inflation and markets	• To counter the rising geopolitical risk, CIOs should consider additional approaches to protect their portfolios from the idiosyncratic risks around a fragmenting global economy. • While option-based strategies are not alpha-generating they can help CIOs by providing a more granular way of managing risk exposure.

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