



Guide to Investing in Asia

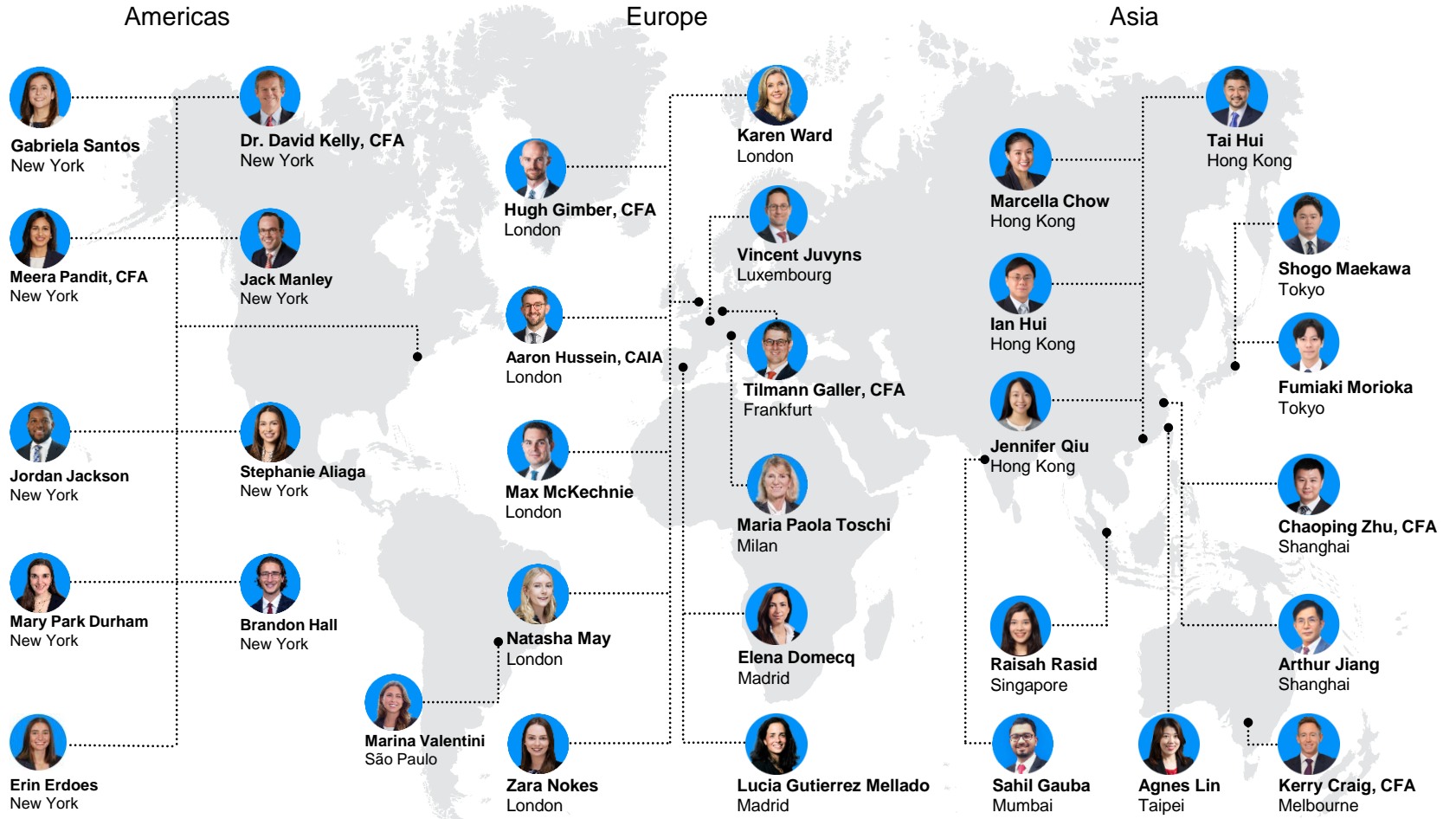
2Q 2024

As of April 30, 2024





Global Market Insights Strategy team





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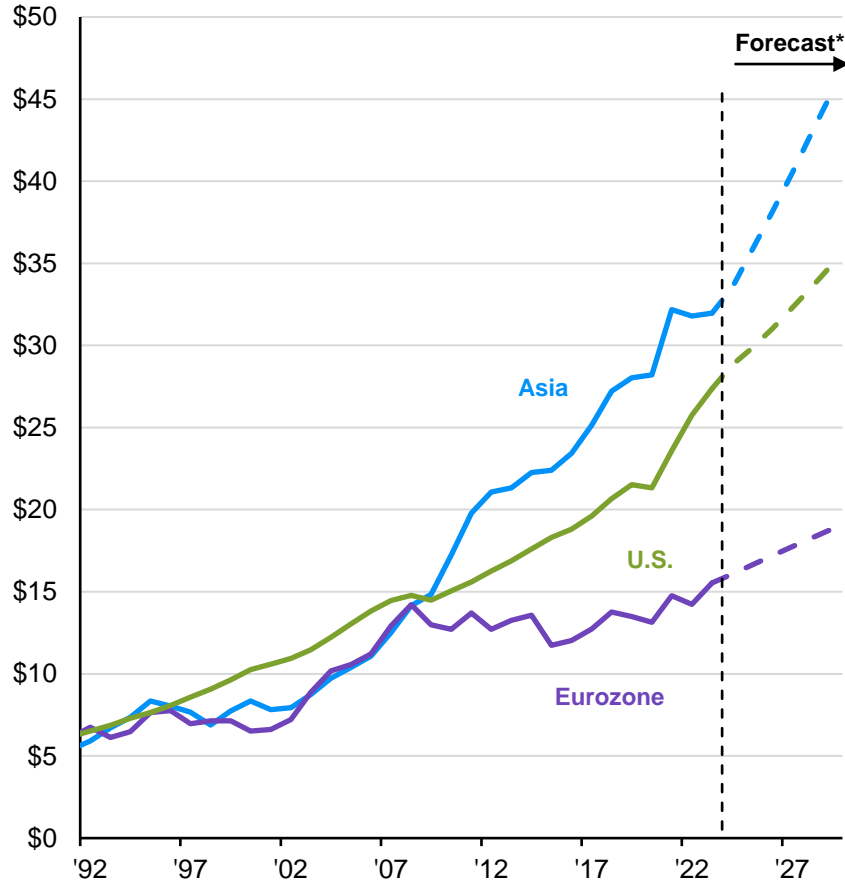


GDP: Size

Asia long-term drivers

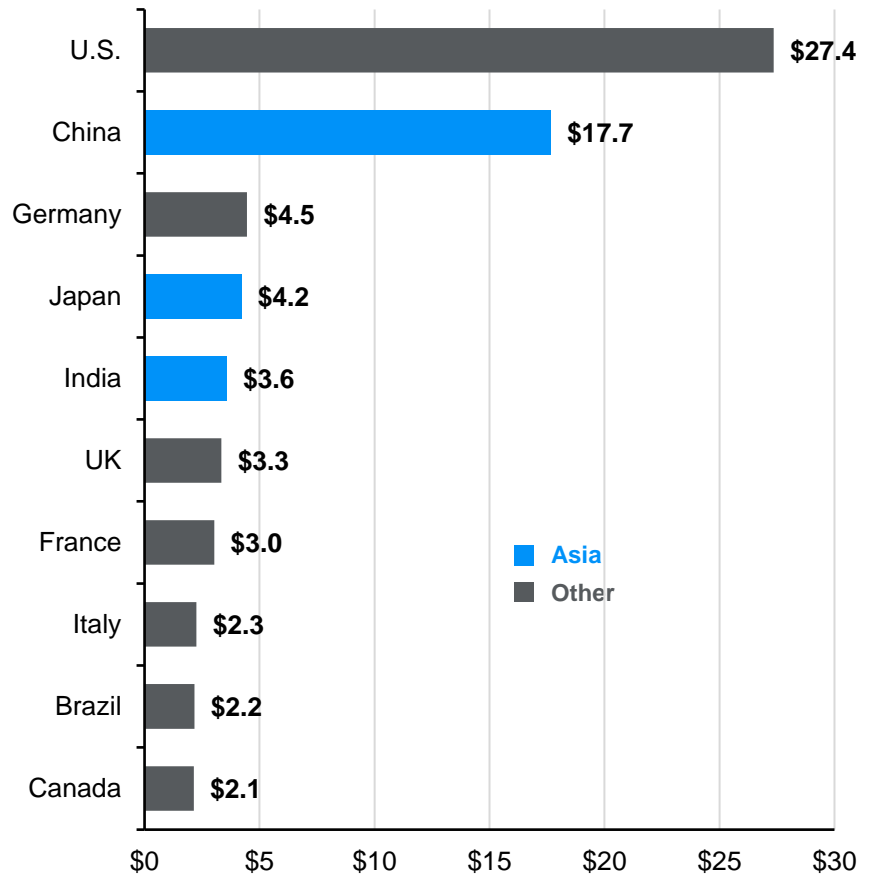
GDP size by region

USD trillions, nominal



10 biggest economies in the world

USD trillions, nominal, 2023



Source: International Monetary Fund - World Economic Outlook - April 2024, J.P. Morgan Asset Management. (Left) *Forecasts are from the IMF and go until 2028. "Asia" = China, Hong Kong, India, Indonesia, Japan, Malaysia, Philippines, Singapore, South Korea, Taiwan, Thailand and Vietnam. Guide to Investing in Asia. Data are as of April 30, 2024.

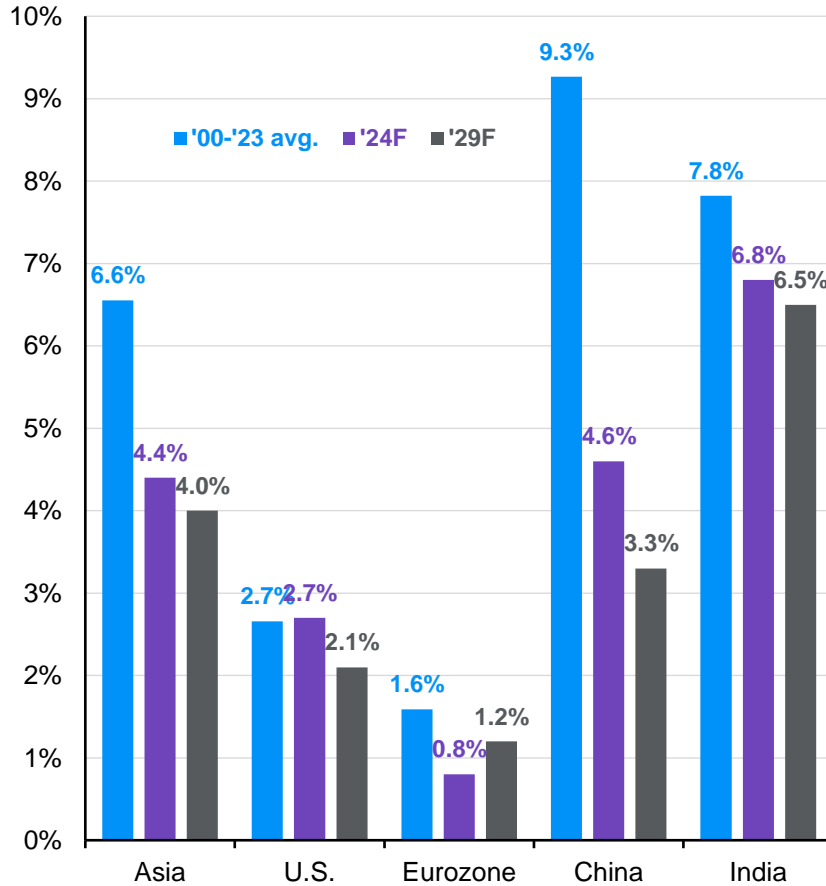


GDP: Growth and global contribution

Asia long-term drivers

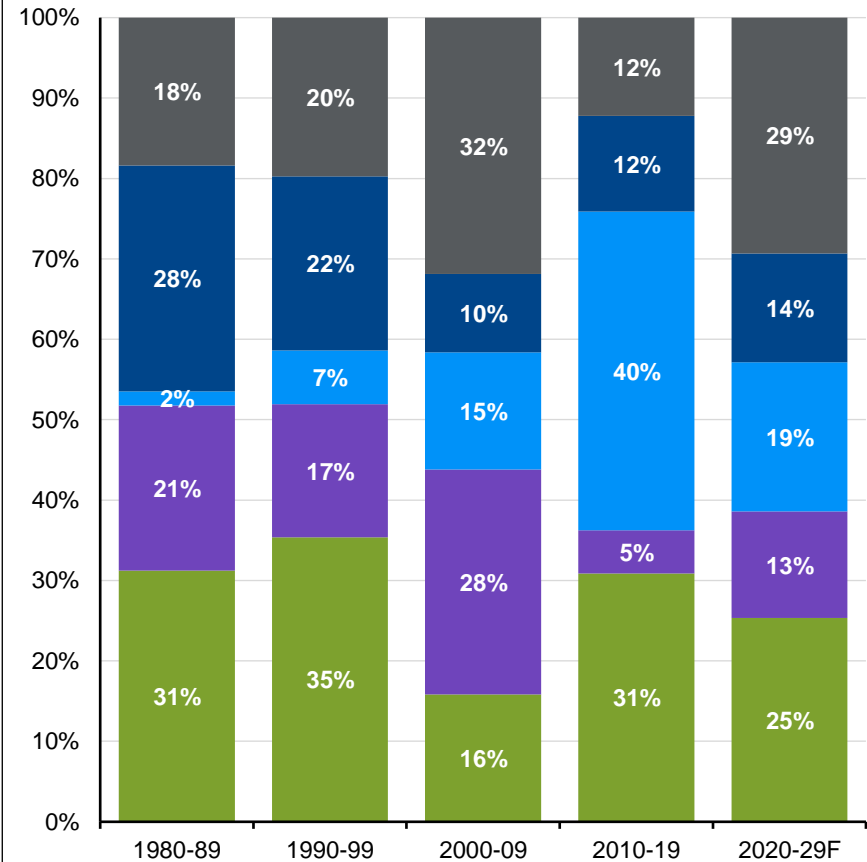
Real GDP growth

Annual % change



Contribution to global GDP growth

■ U.S. ■ Eurozone ■ China ■ Asia ex-China ■ Rest of world



Source: International Monetary Fund - World Economic Outlook – April 2024, J.P. Morgan Asset Management. (Left) The '00-'23 avg. is a compounded annual growth rate. Asia as defined by the IMF. (Right) "Asia ex-China" = Hong Kong, India, Indonesia, Japan, Malaysia, Philippines, Singapore, South Korea, Taiwan, Thailand and Vietnam. *Guide to Investing in Asia*. Data are as of April 30, 2024.

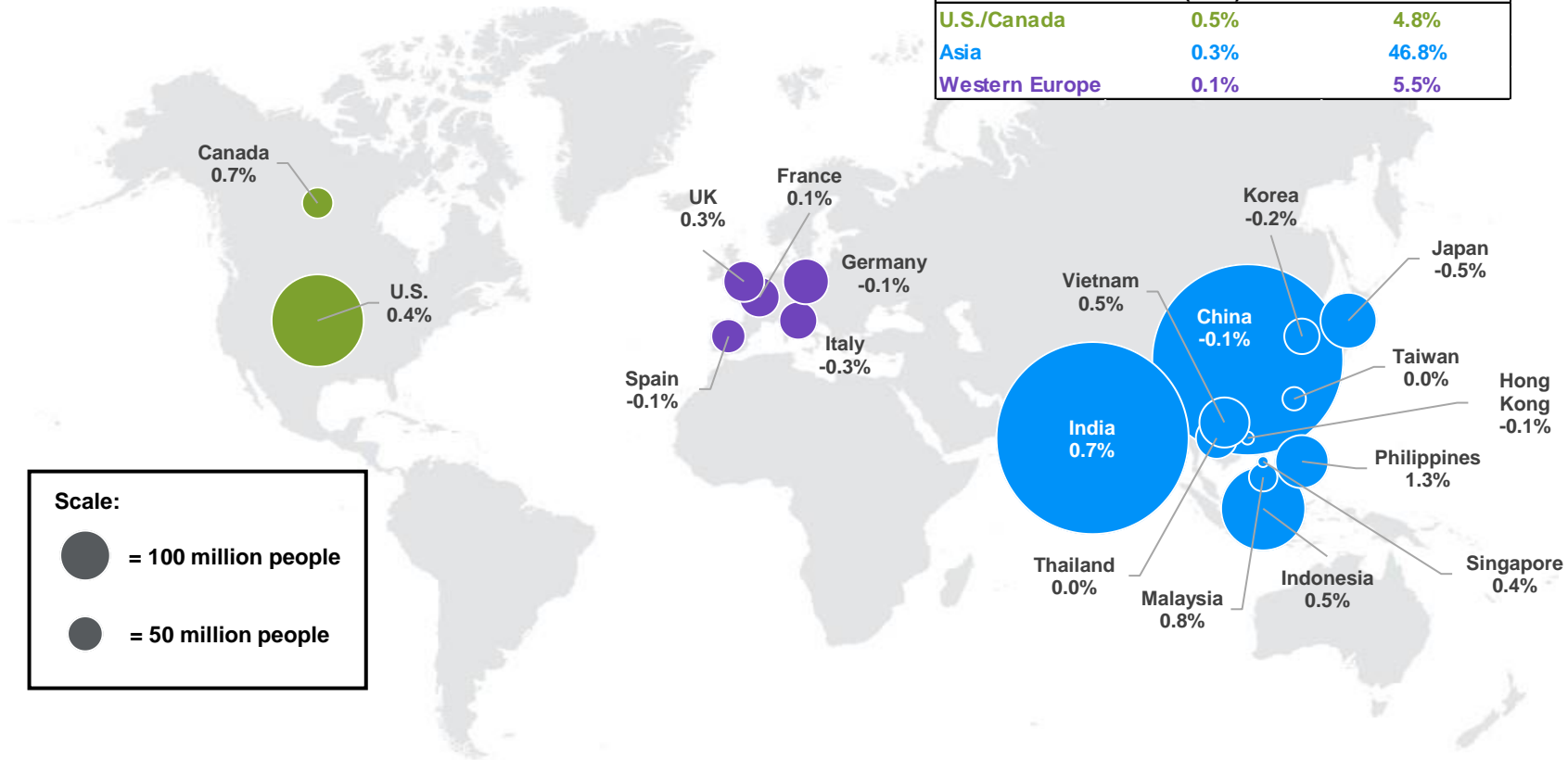


Demographics: Population growth

Population size and growth rate

Estimated % increase in population over the next 15 years, annualized, 2022

Region	Pop. growth rate over next 15 yrs (ann.)	World population share (2022)*
U.S./Canada	0.5%	4.8%
Asia	0.3%	46.8%
Western Europe	0.1%	5.5%



Source: IMF – World Economic Outlook – April 2024, United Nations World Population Prospects – 2022, J.P. Morgan Asset Management. “Asia” = China, Hong Kong, India, Indonesia, Japan, Malaysia, Philippines, Singapore, South Korea, Taiwan, Thailand and Vietnam. Pop. = Population. *World population share does not sum to 100% because it only includes the countries shown in the illustration. Guide to Investing in Asia. Data are as of April 30, 2024.

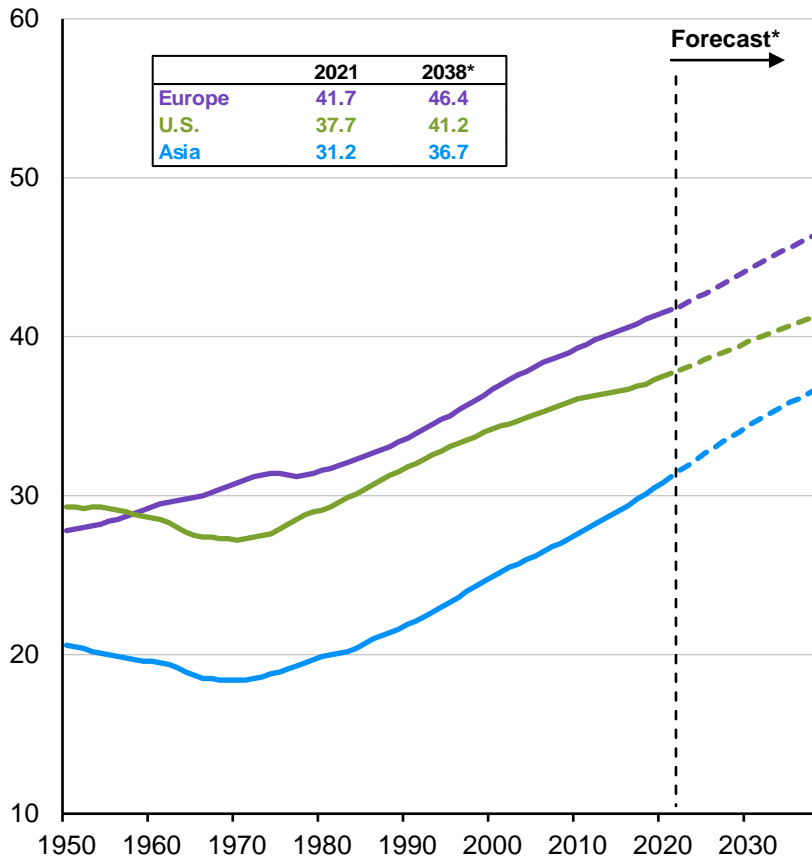


Demographics: Median age

Asia long-term drivers

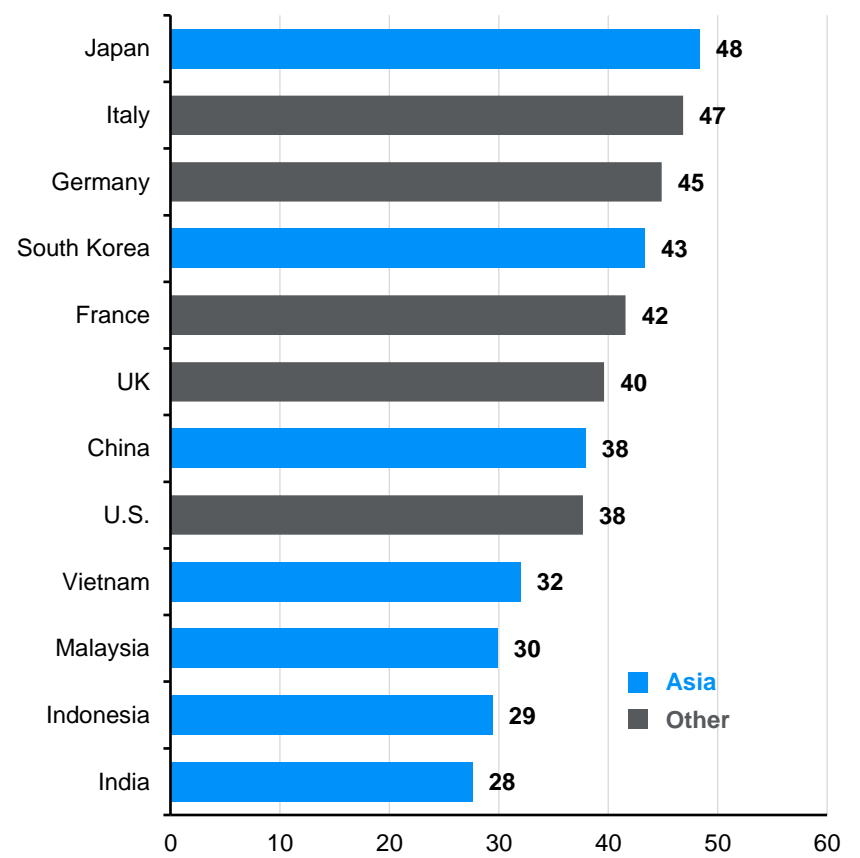
Median age

Number of years



Median age by country

Number of years, 2021



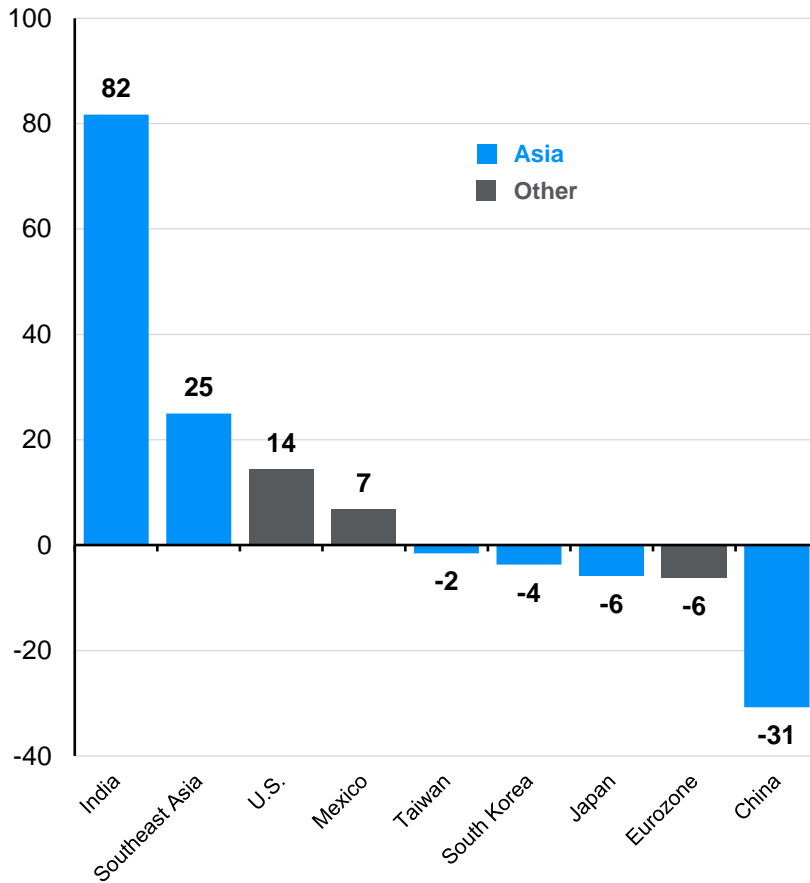
Source: United Nations – World Population Prospects 2022, J.P. Morgan Asset Management. (Left) Asia here represents the region as defined by the United Nations. *Forecasts are by the United Nations. *Guide to Investing in Asia*. Data are as of April 30, 2024.



Demographics: Working age population and wages

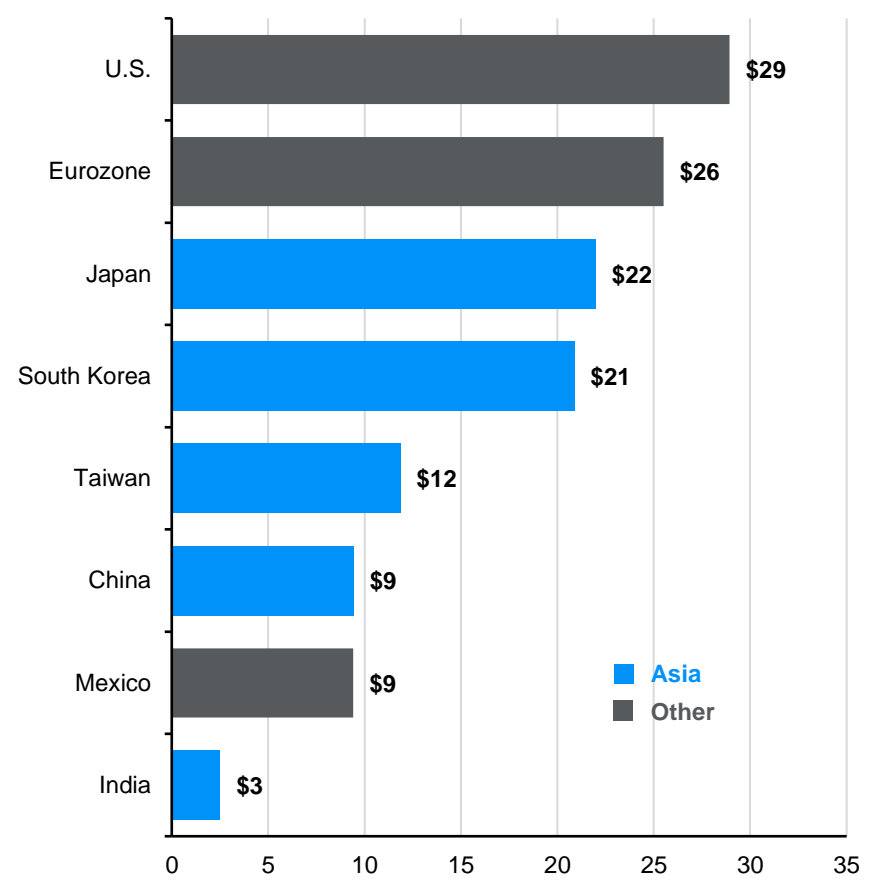
Working age population growth

Estimated change between 2024 and 2033*, millions of people



Average hourly wages by country

USD per hour, 2023 est.*



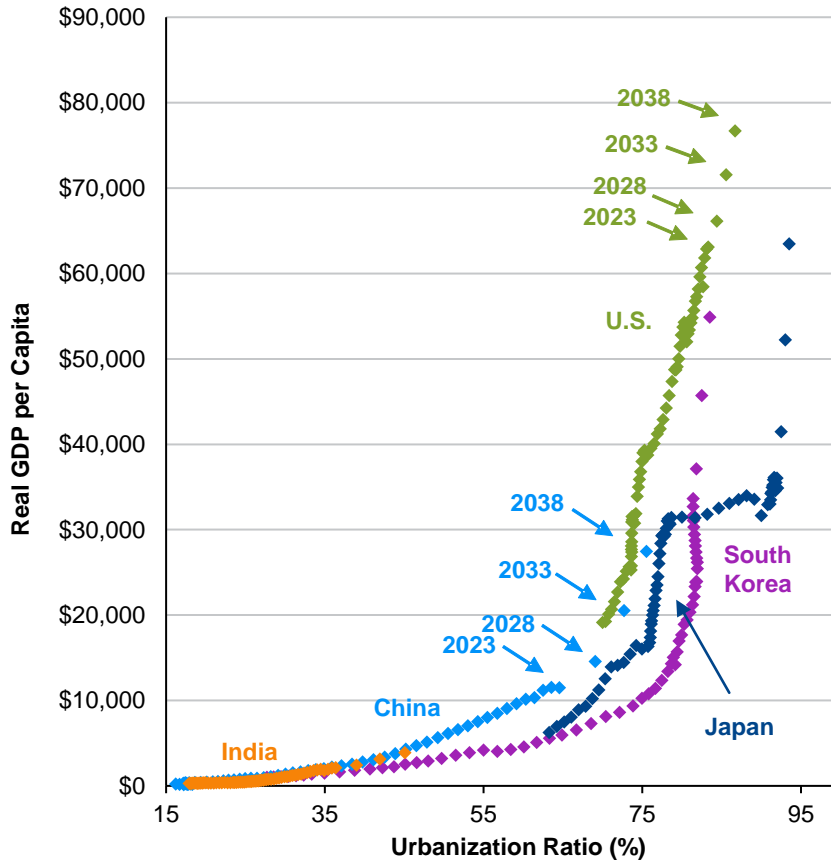
Source: FactSet, Oxford Economics, J.P. Morgan Asset Management. (Left) Southeast Asia includes Cambodia, Indonesia, Malaysia, Myanmar, Singapore, Thailand, and Vietnam. *Estimates are by Oxford Economics. Guide to Investing in Asia. Data are as of April 30, 2024.



GDP per capita and middle-class growth

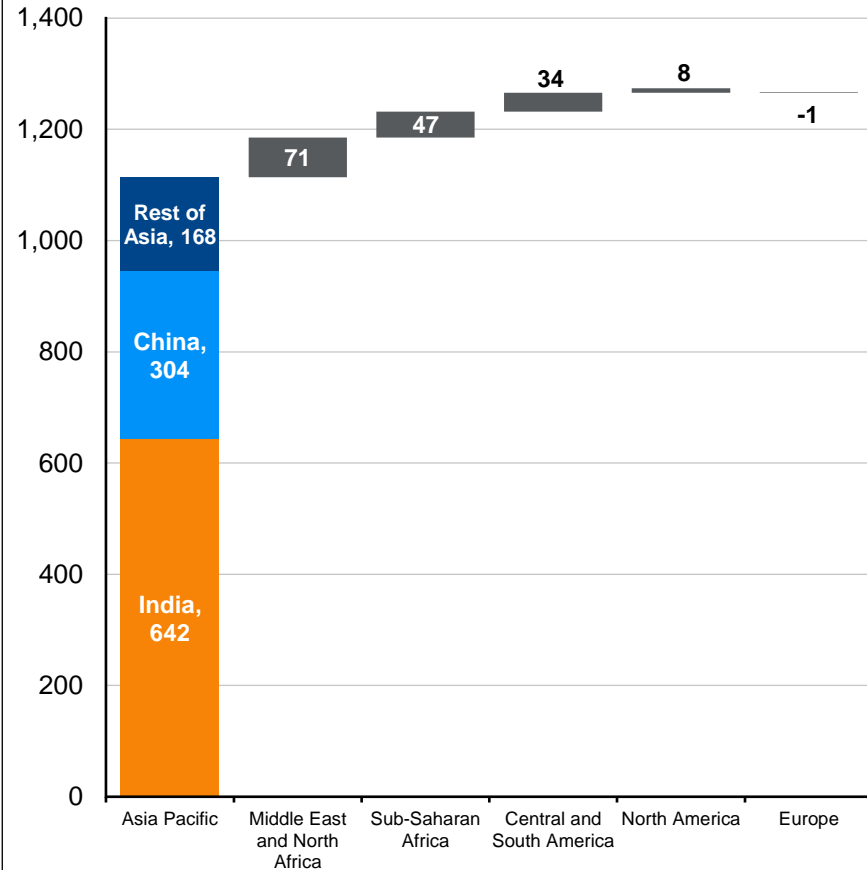
Real GDP per capita and urbanization ratios

USD, constant prices, 1960 – 2038*



Contribution to middle class growth: 2024 to 2030

Millions of people



Source: J.P. Morgan Asset Management. (Left) United Nations, World Bank. Includes long-term forecasts. 2023 and 2024 forecasts are J.P. Morgan Global Economic Research forecasts, and 2025-2038 forecasts are based on the J.P. Morgan 2024 Long-term Capital Market Assumptions (LTCMA) estimates. *Includes forecasts for 2028, 2033 and 2038 based on the 2024 LTCMAs, the United Nations population projections and the United Nations World Urbanization Prospects: 2018 Revision. (Right) Brookings Institution, Estimates for regional contribution are from Kharas, Homi. The Unprecedented Expansion of the Global Middle Class, An Update. Brookings Institution, 2017. Middle class is defined as households with per capita incomes between \$11 and \$110 per person per day in 2011 PPP terms. Forecasts, projections and other forward-looking statements are based upon current beliefs and expectations. They are for illustrative purposes only and serve as an indication of what may occur. Given the inherent uncertainties and risks associated with forecast, projections or other forward statements, actual events, results or performance may differ materially from those reflected or contemplated.

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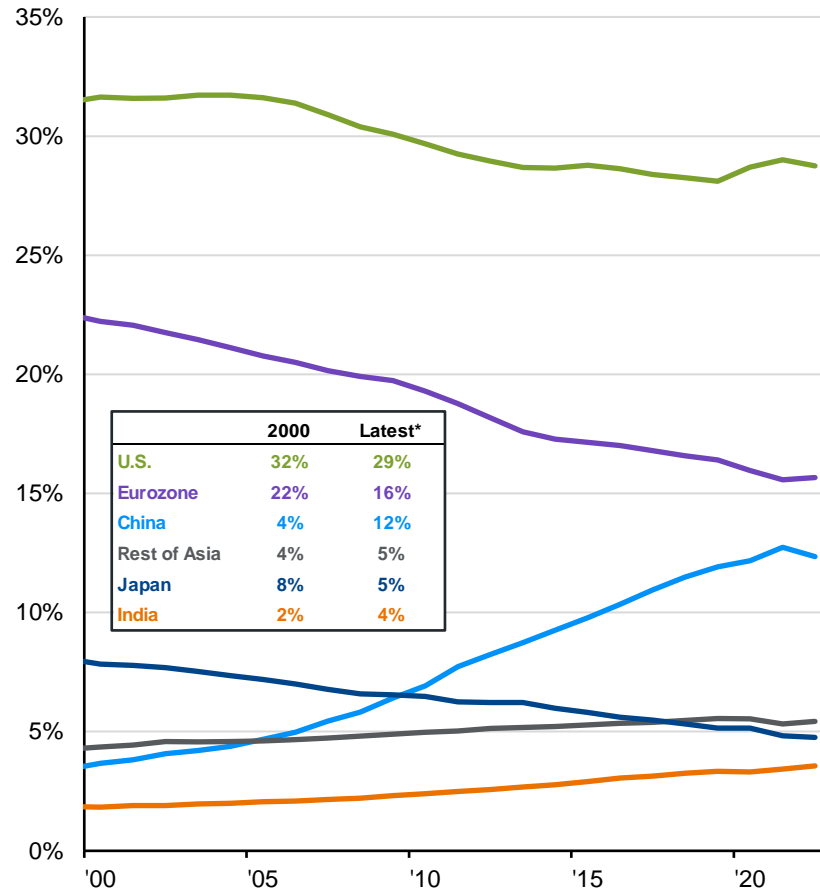


Global consumption and savings

Asia long-term drivers

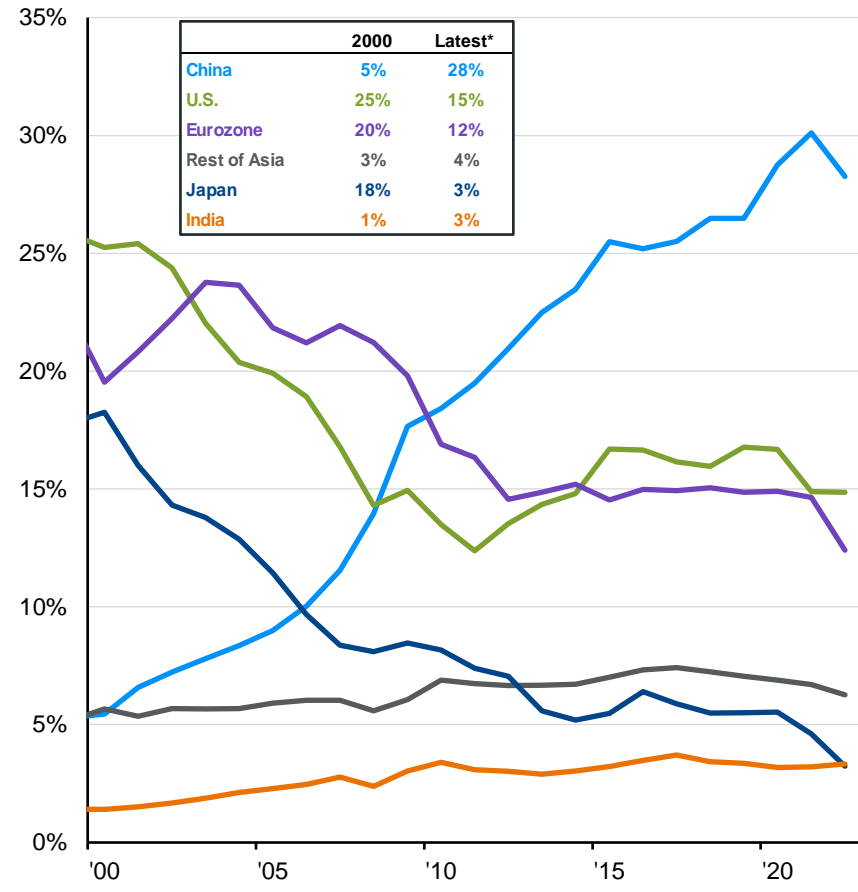
Contribution to global consumption growth

Household consumption as a % of total global consumption



Contribution to global savings

Gross domestic savings as a % of total global savings



Source: World Bank - World Development Indicators, J.P. Morgan Asset Management. Rest of Asia = Hong Kong, Indonesia, Malaysia, Philippines, Singapore, South Korea, Thailand and Vietnam. *Latest = 2022. Guide to Investing in Asia. Data are as of April 30, 2024.

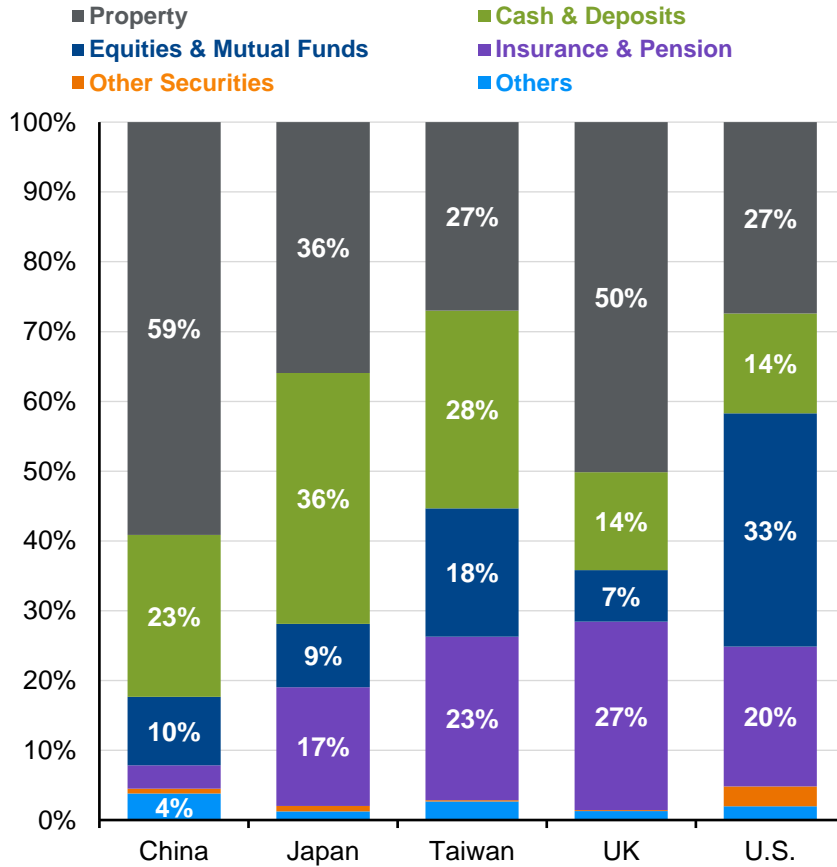


Household wealth and savings

Asia long-term drivers

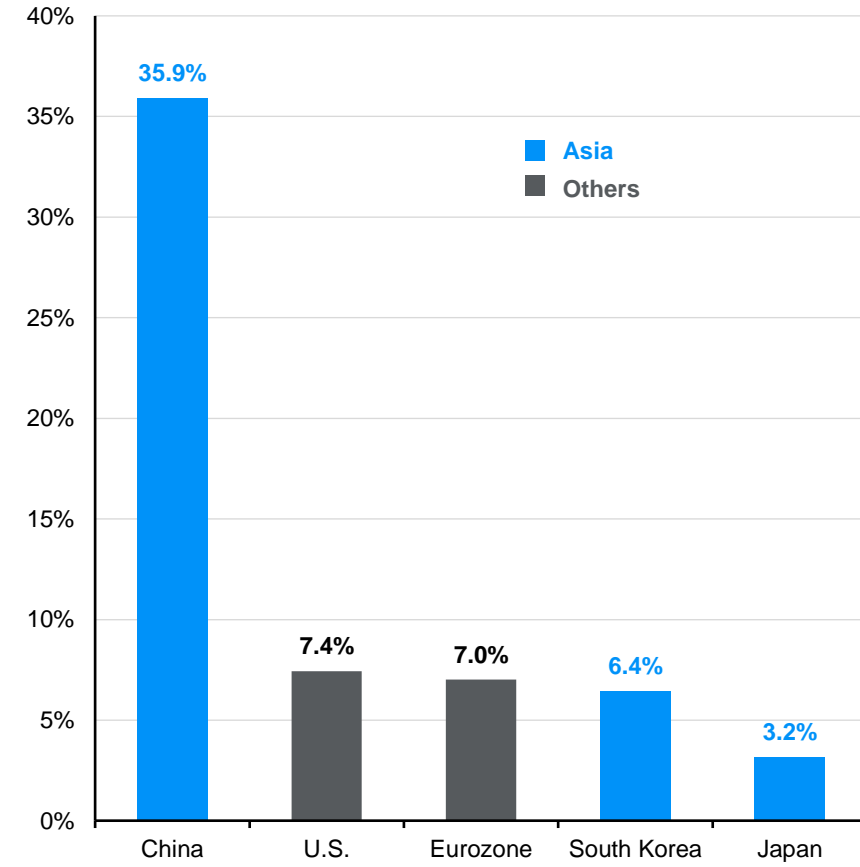
Household wealth by asset type

% of total, as of Dec. 2022



Average household savings rate

% of household disposable income, 2005 – latest available



Source: J.P. Morgan Asset Management. (Left) NIFD, CEIC, Wind, China Wealth, China Trust Association, Japan Cabinet Office, Halifax, Goldman Sachs Global Investment Research. (Right) OECD. The latest available data for each country/region is as follows: China – 2019, U.S. – 2021, South Korea – 2022, Japan – 2021, Euroarea – 2022. *Guide to Investing in Asia*. Data are as of April 30, 2024.

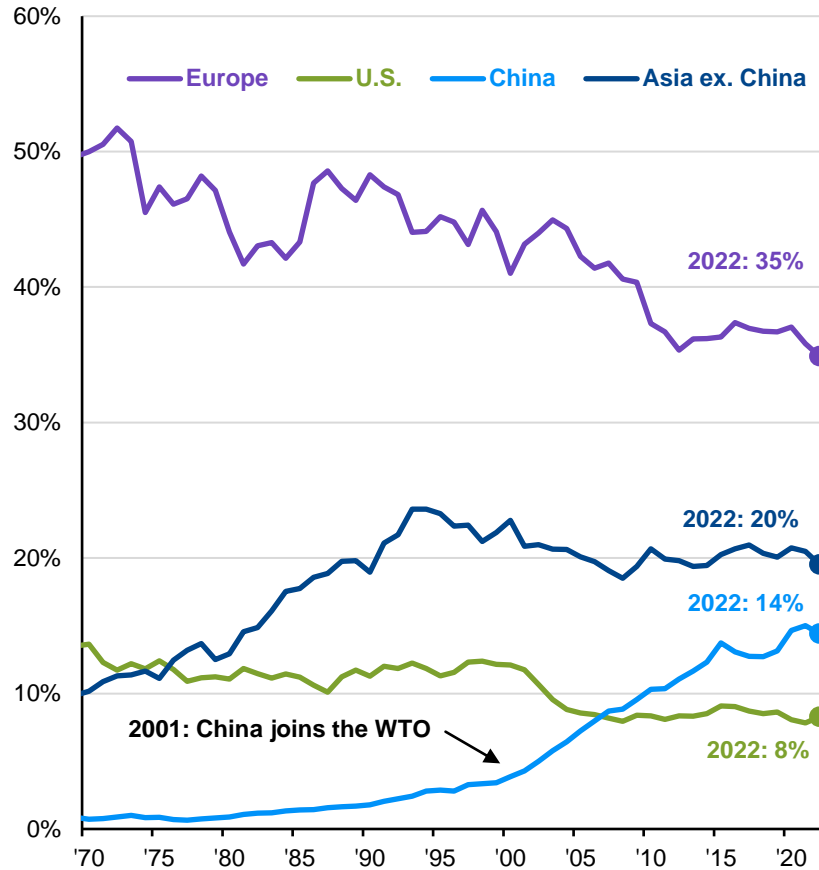


Trade: Share and balances

Asia long-term drivers

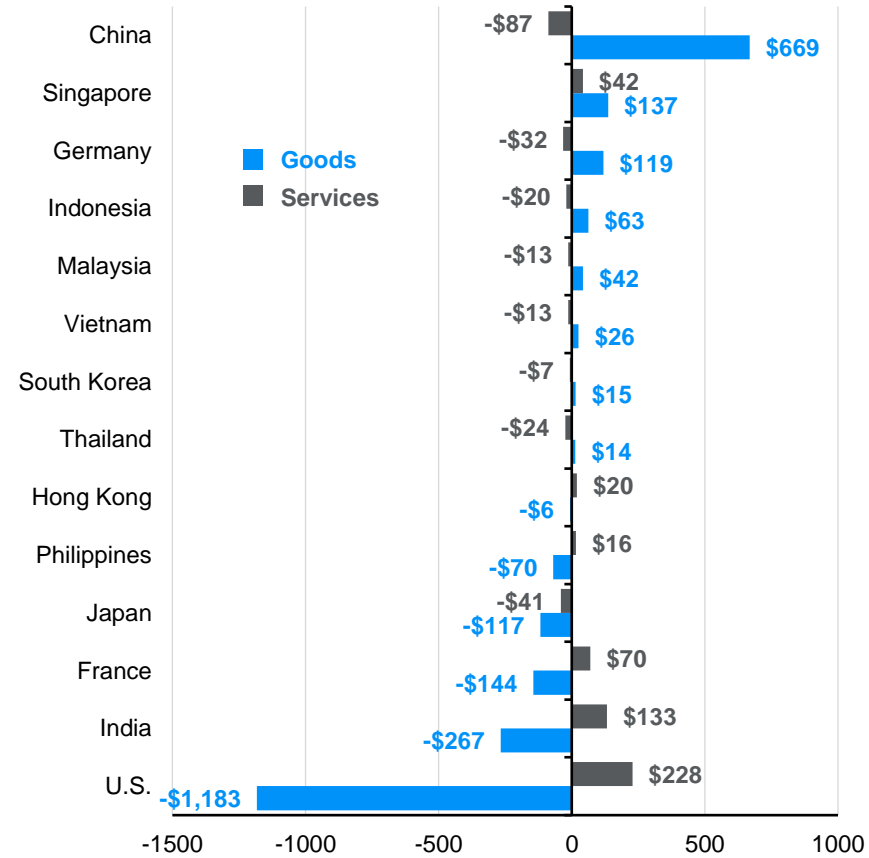
Global goods trade

% of global trade



Net trade in goods and services

Trade balance, 2022, USD billions



Source: J.P. Morgan Asset Management. (Left) World Trade Organization (WTO). (Right) World Bank – World Development Indicators. Oxford Economics. Net trade in services is calculated by subtracting nominal imports in USD from nominal exports in USD. *Guide to Investing in Asia*. Data are as of April 30, 2024.

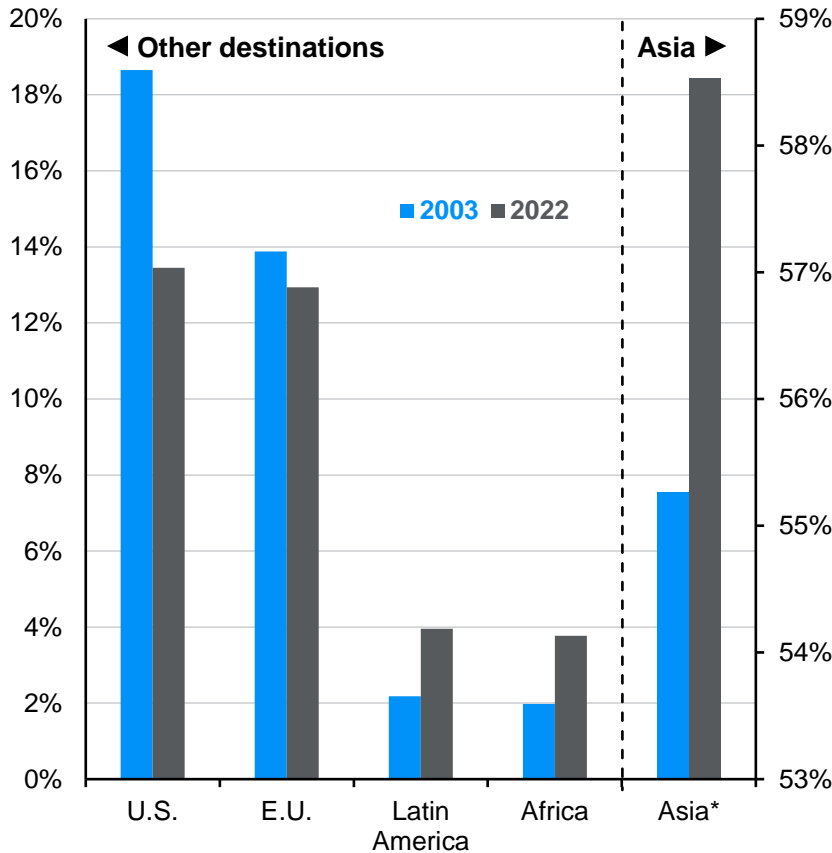


Trade: Destination and origin

Asia long-term drivers

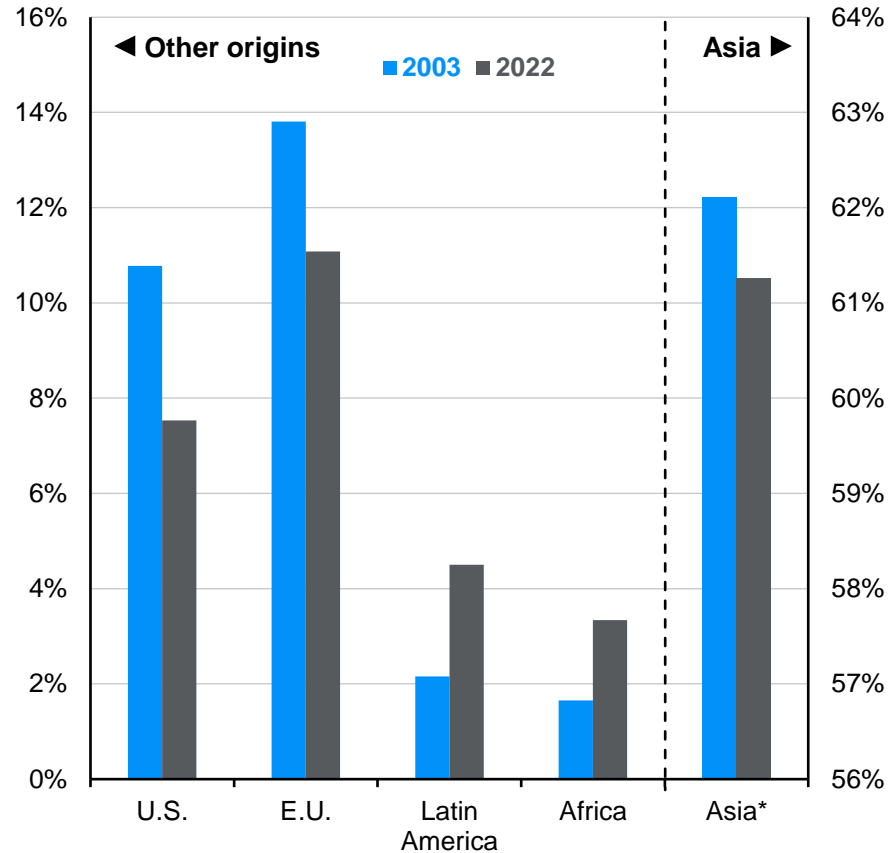
Asia's exports by destination

% of total exports



Asia's imports by origin

% of total imports



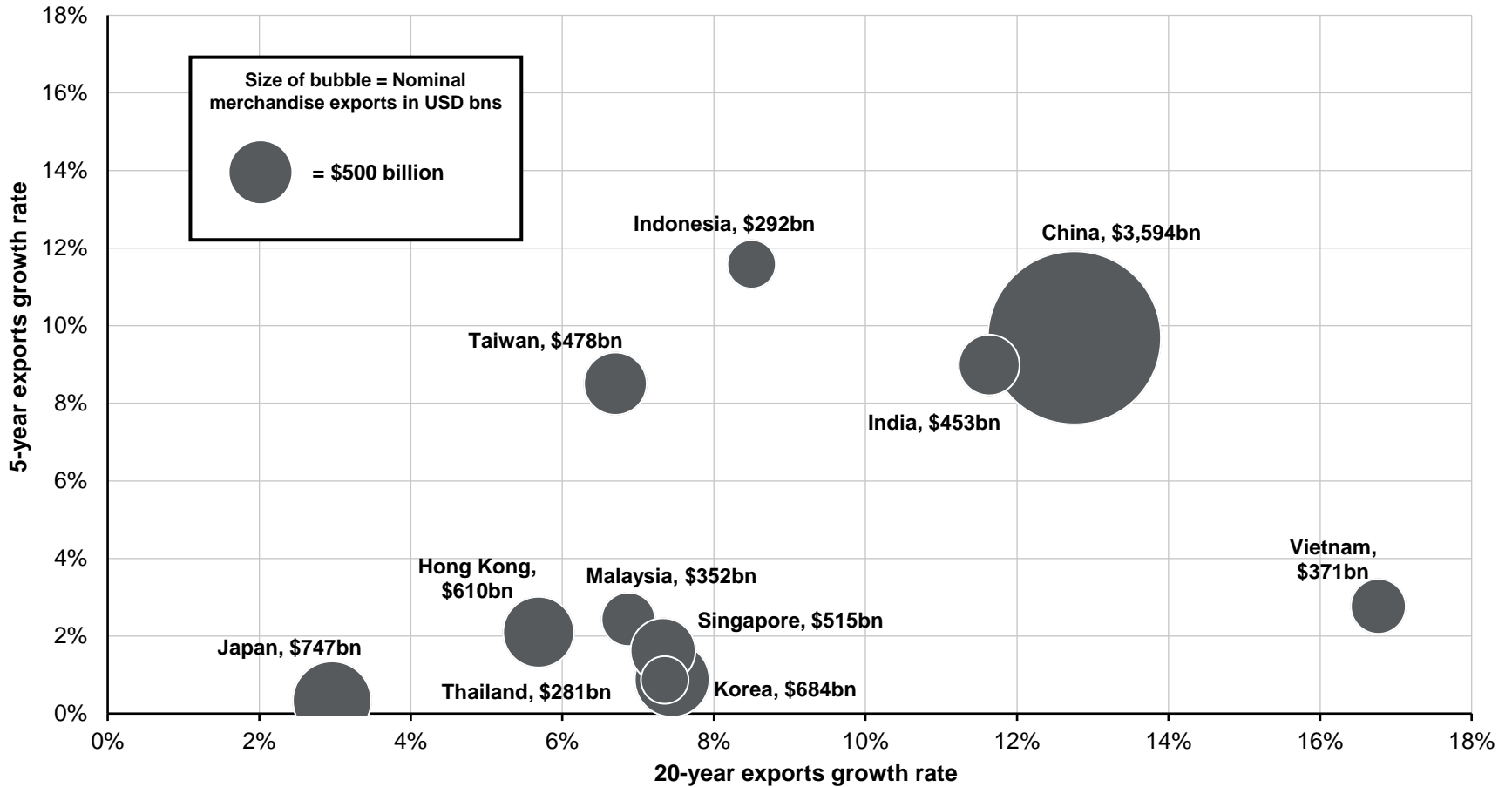
Source: UNCTAD, J.P. Morgan Asset Management. *Asia represents intra-continental trade in Asia. "Asia" = China, Hong Kong, India, Indonesia, Japan, Malaysia, Philippines, Singapore, South Korea, Taiwan, Thailand and Vietnam. *Guide to Investing in Asia*. Data are as of April 30, 2024.



Trade: Merchandise exports size and growth

Medium vs. long-term export growth rates

As of 2022



Source: UNCTAD, J.P. Morgan Asset Management. Exports growth rate is annualized. Guide to Investing in Asia. Data are as of April 30, 2024.

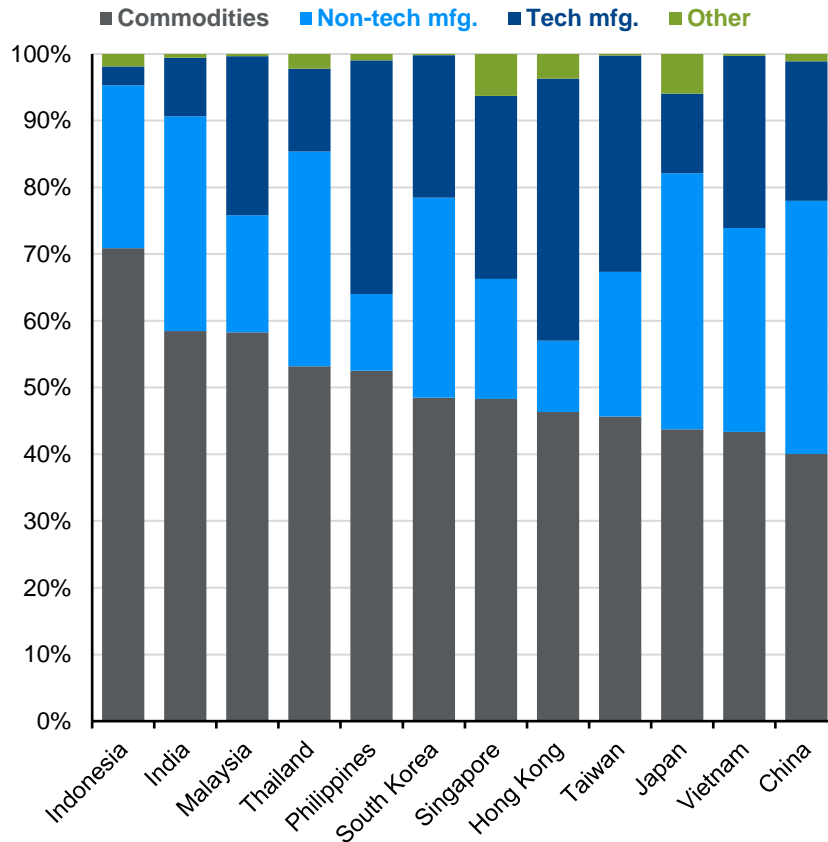


Trade: Merchandise exports by type

Asia long-term drivers

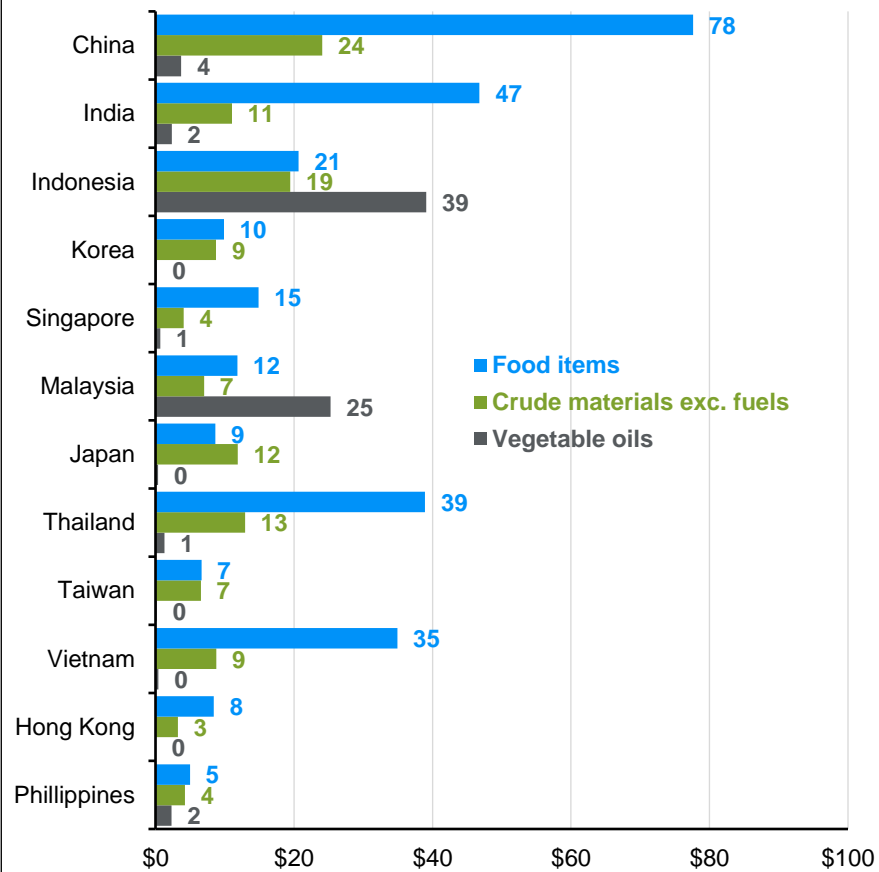
Merchandise exports

% of total merchandise exports by type, 2022



Commodity exports by type

USD billions, 2022



Source: UN – COMTRADE, J.P. Morgan Asset Management. (Left) Mfg. = Manufacturing. (Right) Excludes chemicals and mineral fuels. Food items include beverages. Crude materials are products that have not undergone any manufacturing, processing, or fabrication. Guide to Investing in Asia. Data are as of April 30, 2024.

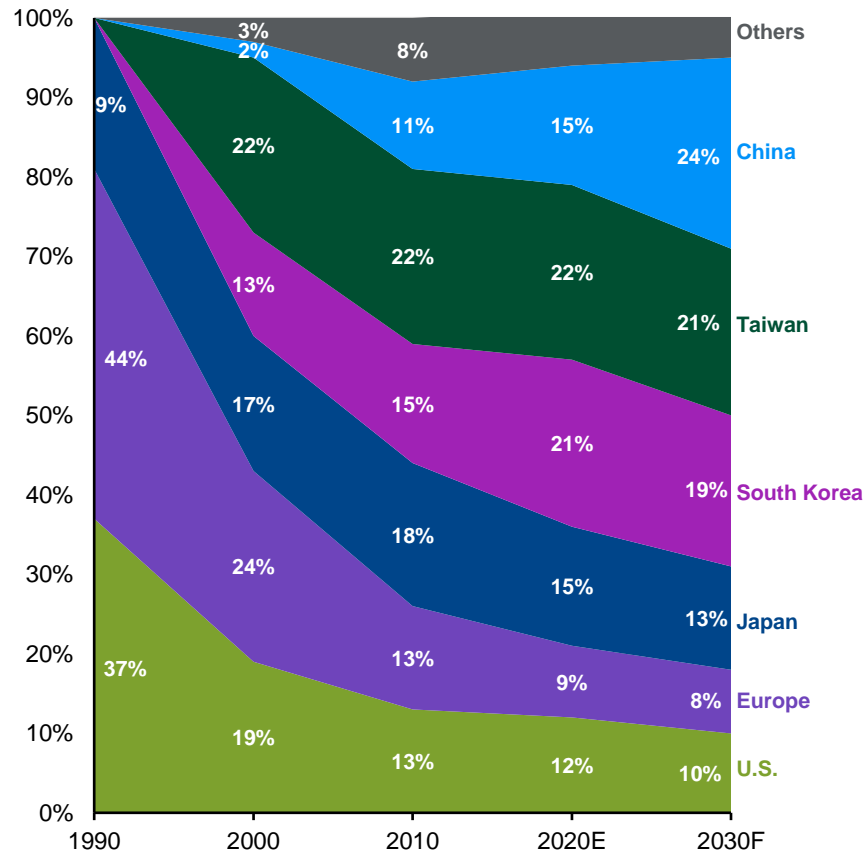


Semiconductor manufacturing

Asia long-term drivers

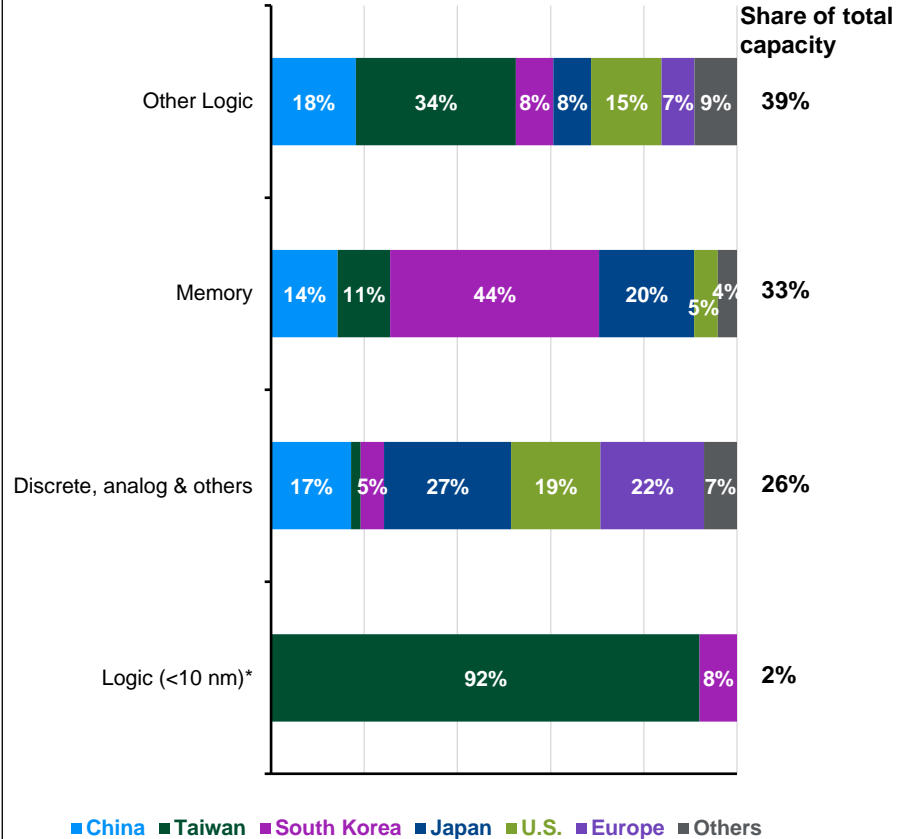
Semiconductor production by location

% global share



Semiconductor production by type

% share of global semiconductor wafer fabrication capacity, 2019

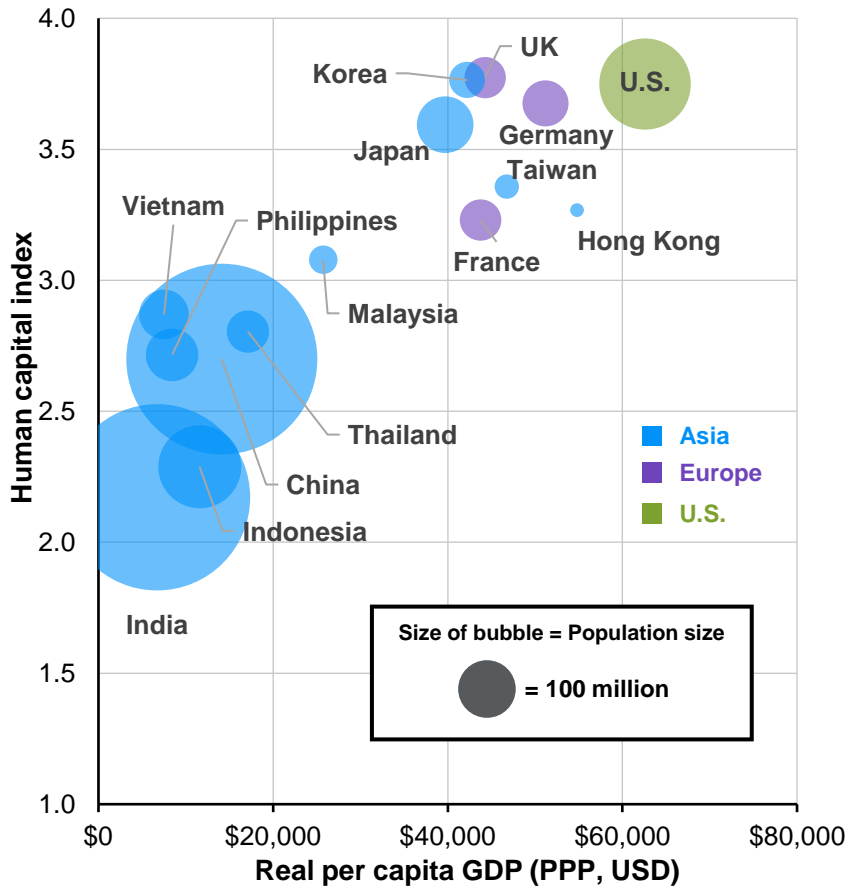


Source: J.P. Morgan Asset Management. (Left) VLSI Research Projection, SEMI second-quarter 2020 update, BCG analysis. All values shown in 8" equivalents; excludes capacity below 5 kwpm or less than 8". Other includes Israel, Singapore, and the rest of the world. Numbers may not add up to 100 due to rounding. (Right) Boston Consulting Group, SEMI Fab Database, J.P. Morgan Asset Management. *Newest generations of computing/processing wafer (since 2016), which are smaller, faster, and more power-efficient. Does not add up to 100 due to rounding. *Guide to Investing in Asia*. Data are as of April 30, 2024.

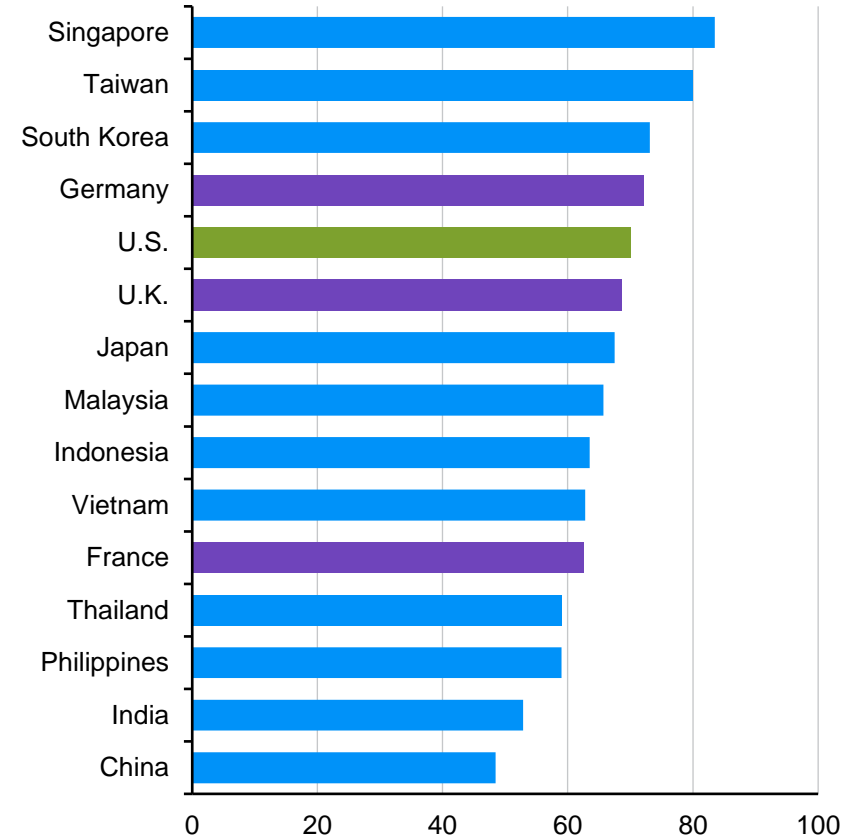


Economic competitiveness

Human capital index vs. real per capita GDP (PPP) 2019, USD



Index of economic freedom 2024, overall score



Source: J.P. Morgan Asset Management. (Left) Penn World Table. PPP = Purchasing Power Parity. Human capital index quantifies the contribution of health and education to the productivity of the next generation of workers. The size of the bubbles on the left chart represents the population of each market. Real per capita GDP is in chained 2017 USD. (Right) The Heritage Foundation. Index of economic freedom is a composite measure to evaluate degree of economic freedom in various countries. It is based on 12 factors grouped into four broad categories: Rule of law, government size, regulatory efficiency and open markets. The scores are grouped as follows: 80-100 = Free, 70-79.9 = Mostly Free, 60-69.9 = Moderately Free, 50-59.9 = Mostly Unfree, 0-49.9 = Repressed.

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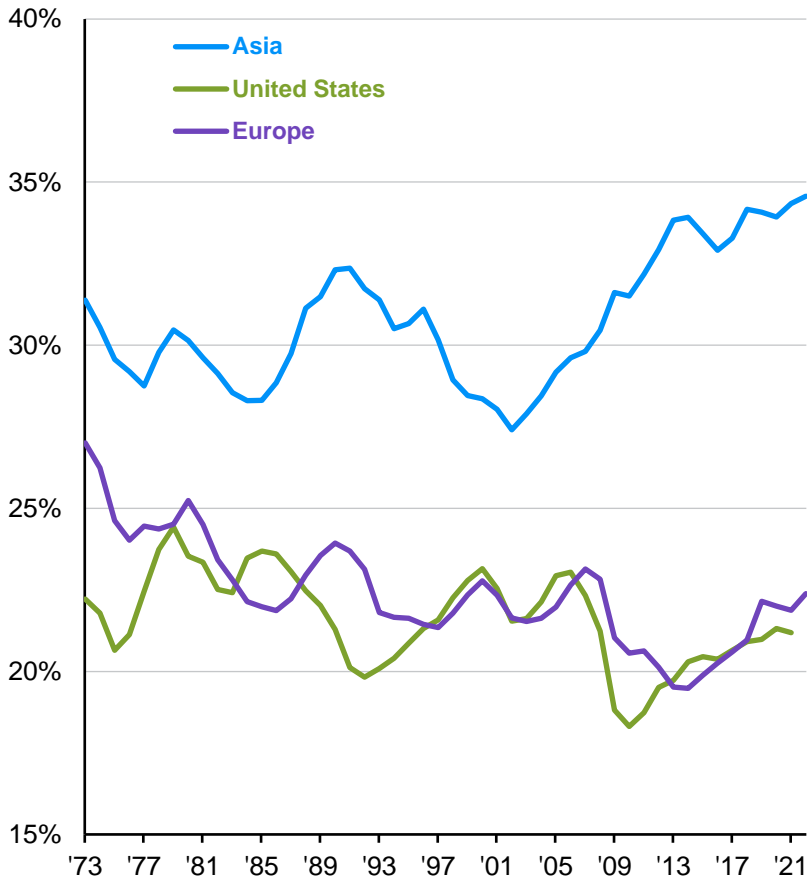


Infrastructure: Investments

Asia long-term drivers

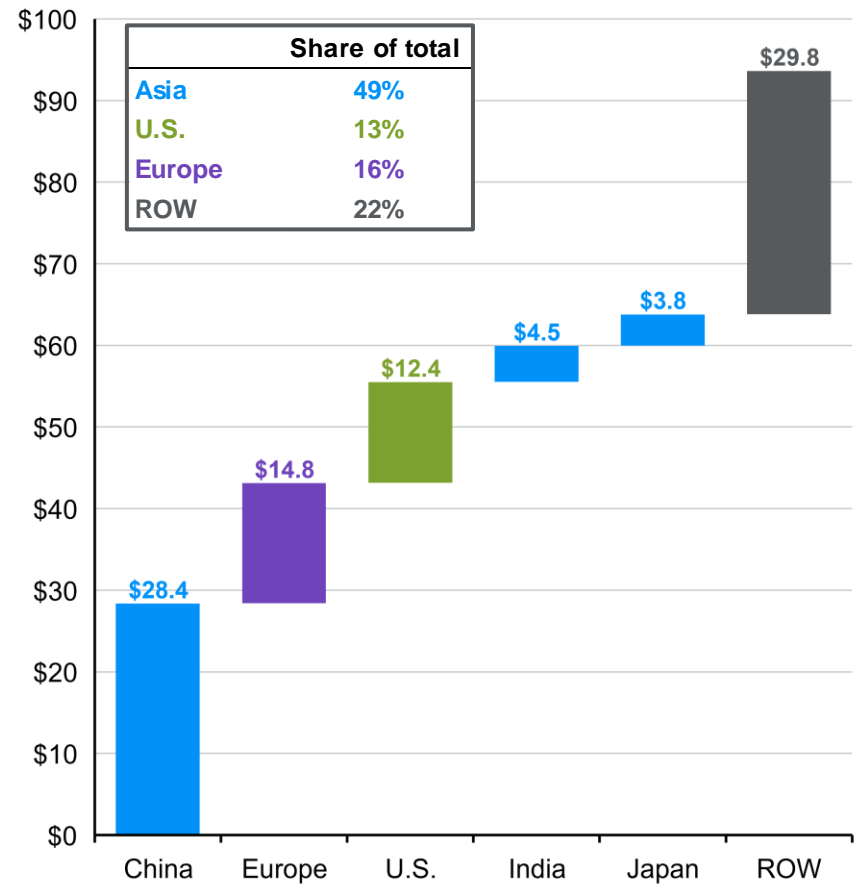
Gross fixed capital formation

Percentage of GDP, yearly



Infrastructure investment needs

USD trillions, 2016-2040



Source: J.P. Morgan Asset Management. Asia represents 37 countries within East Asia & Pacific and 8 countries within South Asia as defined by the World Bank. (Left) World Bank – World Development Indicators. (Right) Global Infrastructure Hub by G20. ROW = Rest of World. Guide to Investing in Asia. Data are as of April 30, 2024.

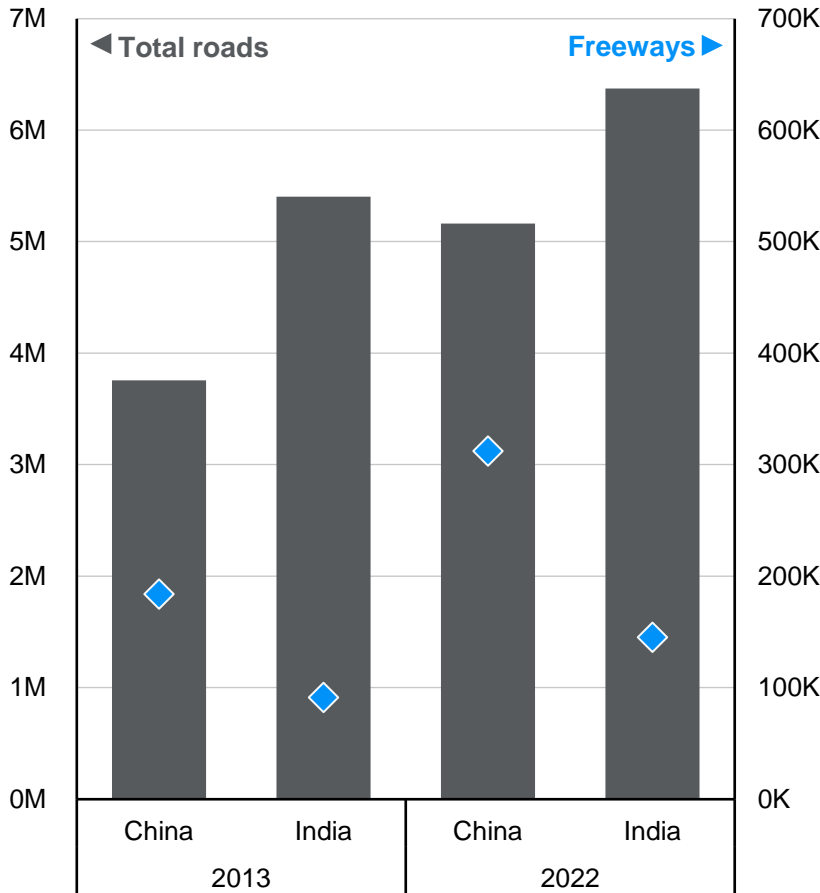


Infrastructure: Growth in China and India

Asia long-term drivers

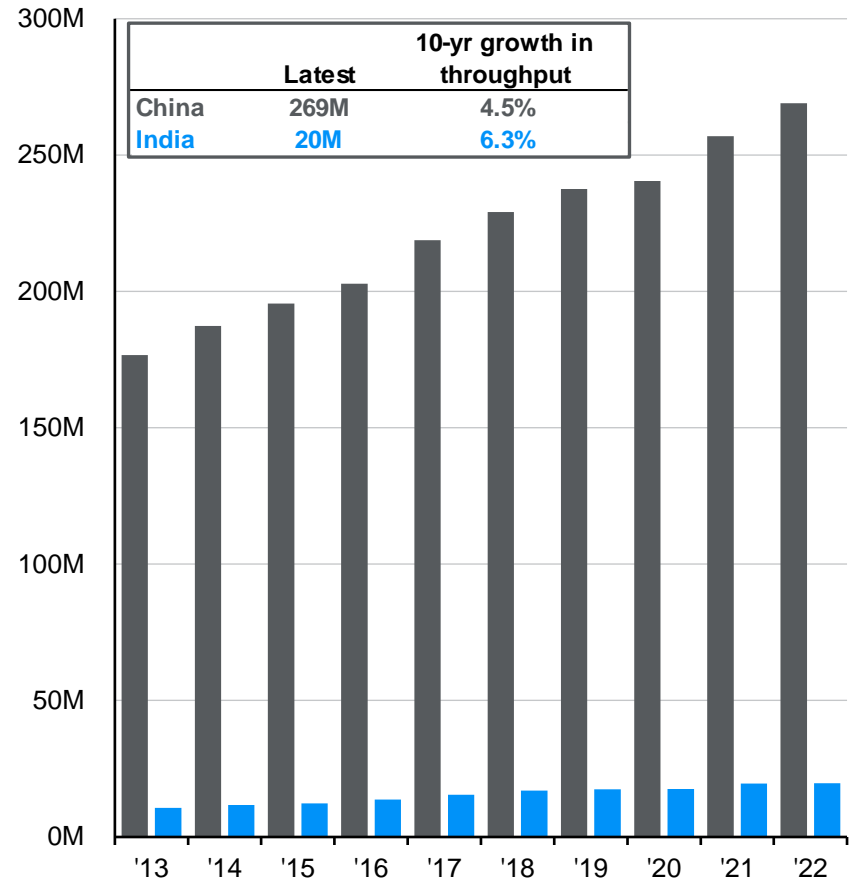
Length of road network

Kilometers



Volume of goods moved through ports

Container port throughput, TEU



Source: J.P. Morgan Asset Management. (Left) CTACLS, CEIC, Ministry of Road Transport and Highways, Government of India. Total road network and freeway network length is in kilometers (kms). 1 kilometer is equivalent to approximately 0.62 miles. For India, freeway network represents length of national highways whereas for China it represents total length of expressways and Class I highways. (Right) UNCTAD. Container port throughput is represented in twenty-foot equivalent units. TEU = Twenty-foot Equivalent Unit. *Guide to Investing in Asia*. Data are as of April 30, 2024.

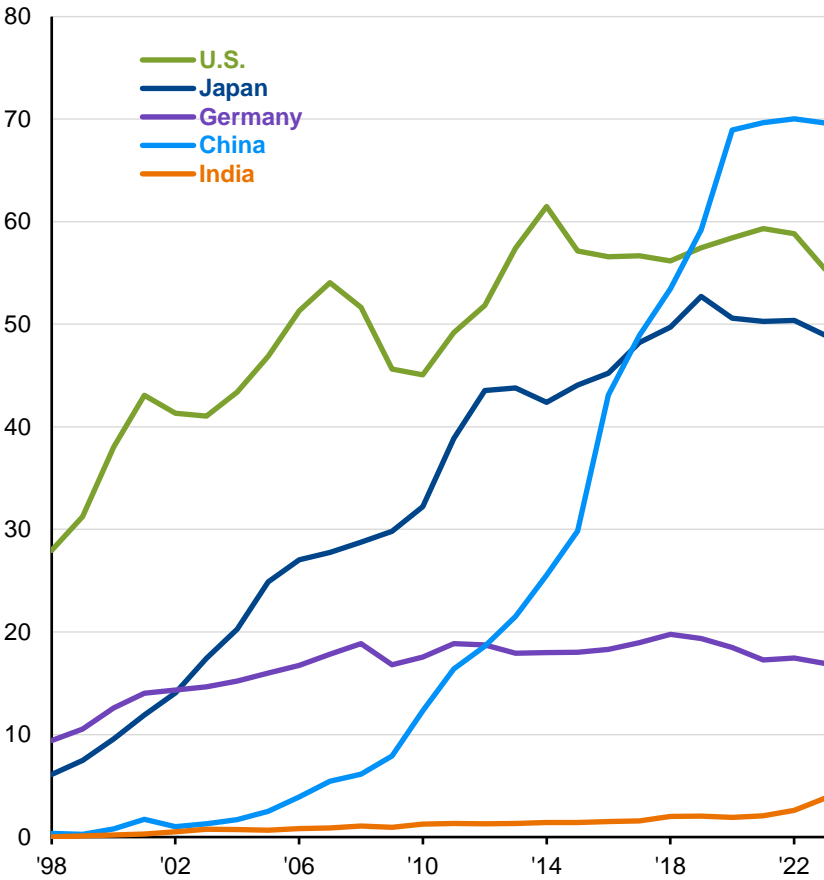


Innovation

Asia long-term drivers

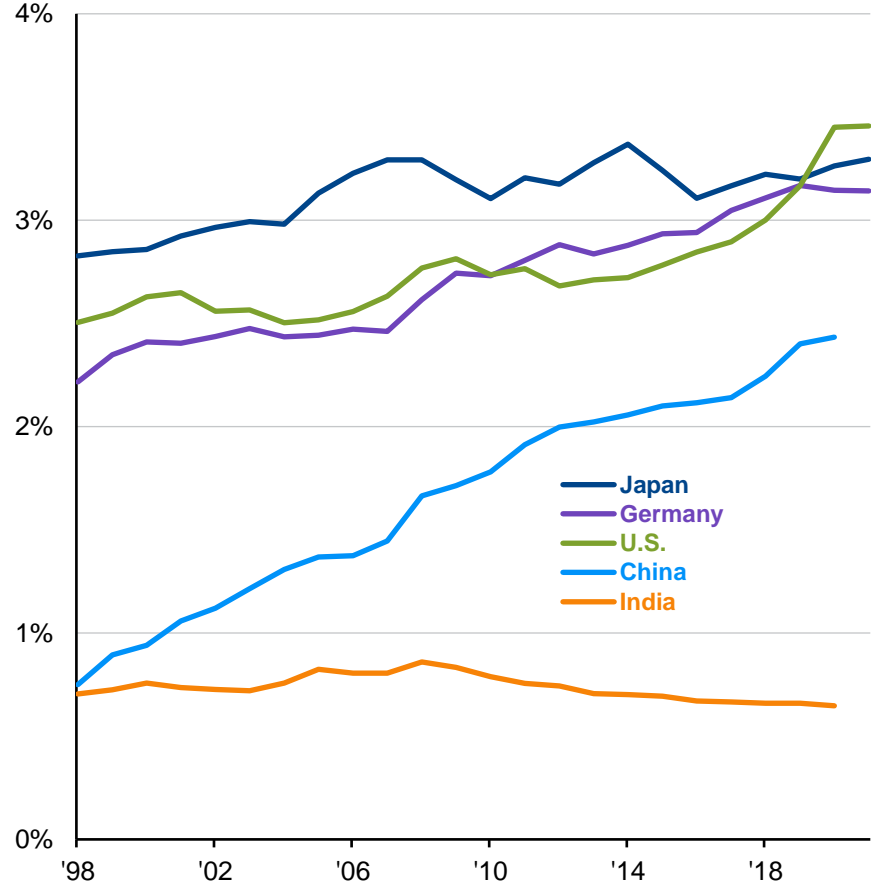
Patent applications

of PCT patent filings, thousands



Research and development expenditure

% of GDP



Source: J.P. Morgan Asset Management. (Left) Wind, World Intellectual Property Organization. PCT = Patent Cooperation Treaty. Patents filed under this treaty receive international patent protection. (Right) World Bank – World Development Indicators *Guide to Investing in Asia*. Data are as of April 30, 2024.

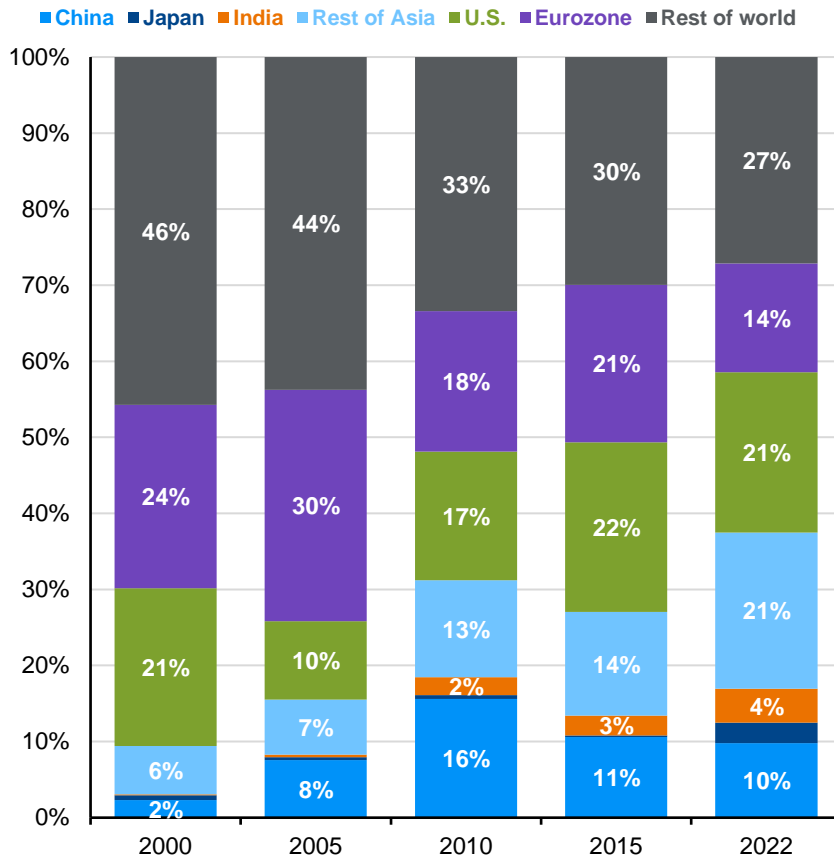


Foreign direct investment

Asia long-term drivers

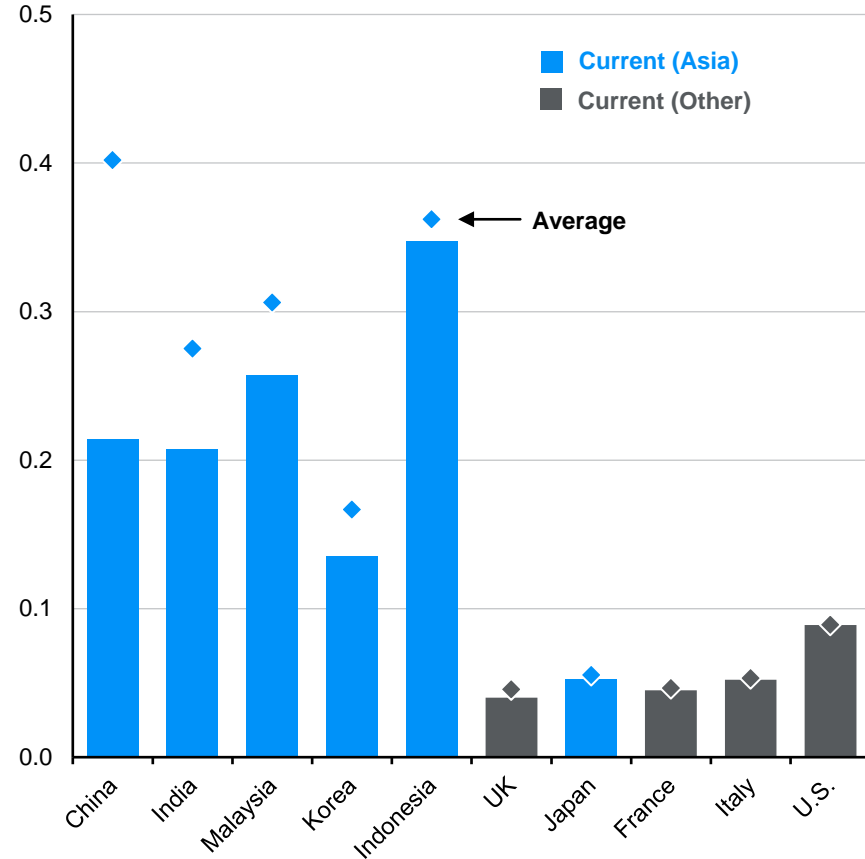
Global share of inward foreign direct investment

Inward FDI as % of global FDI



FDI restrictiveness

0 = open, 1 = closed, 2020 (current)



Source: J.P. Morgan Asset Management. (Left) World Bank – World Development Indicators. “Rest of Asia” = Hong Kong, Indonesia, Malaysia, Philippines, Singapore, South Korea, Taiwan, Thailand and Vietnam. (Right) Average is from 2000 to the latest available. Organization for Economic Co-Operation and Development (OECD). FDI restrictiveness is an OECD index gauging the restrictiveness of a country’s foreign direct investment (FDI) rules by looking at four main types of restrictions: foreign equity restrictions; discriminatory screening or approval mechanisms; restrictions on key foreign personnel and operational restrictions. Implementation issues are not addressed and factors such as the degree of transparency or discretion in granting approvals are not taken into account. The index here shows the total and nine component sectors taking values between 0 for open and 1 for closed.

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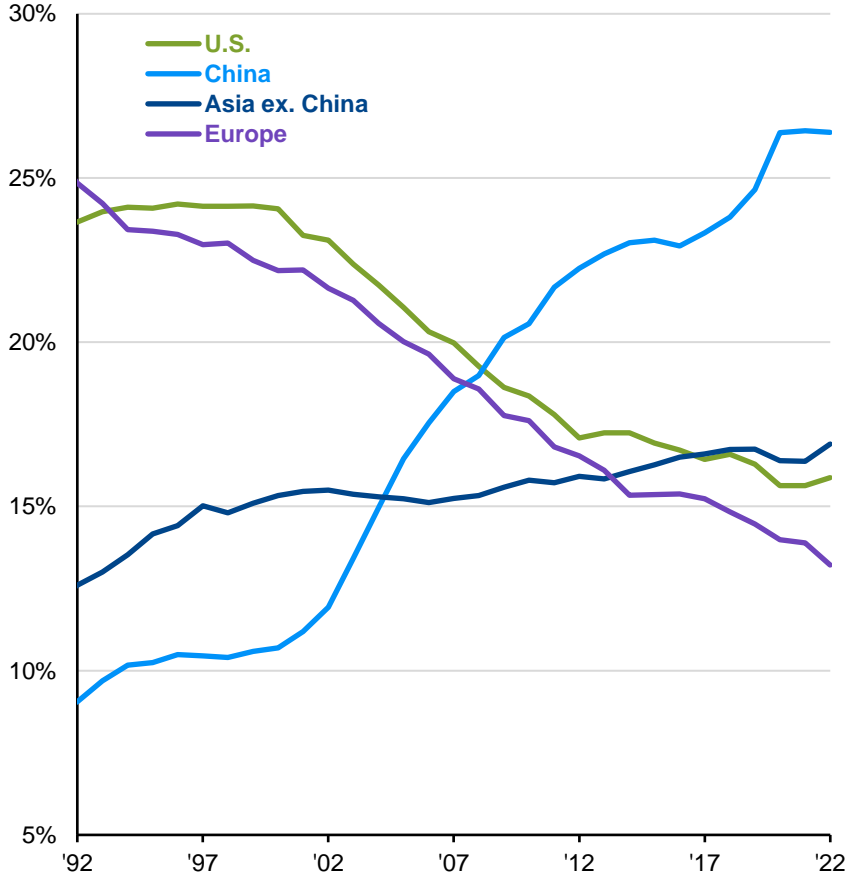


Energy consumption

Asia long-term drivers

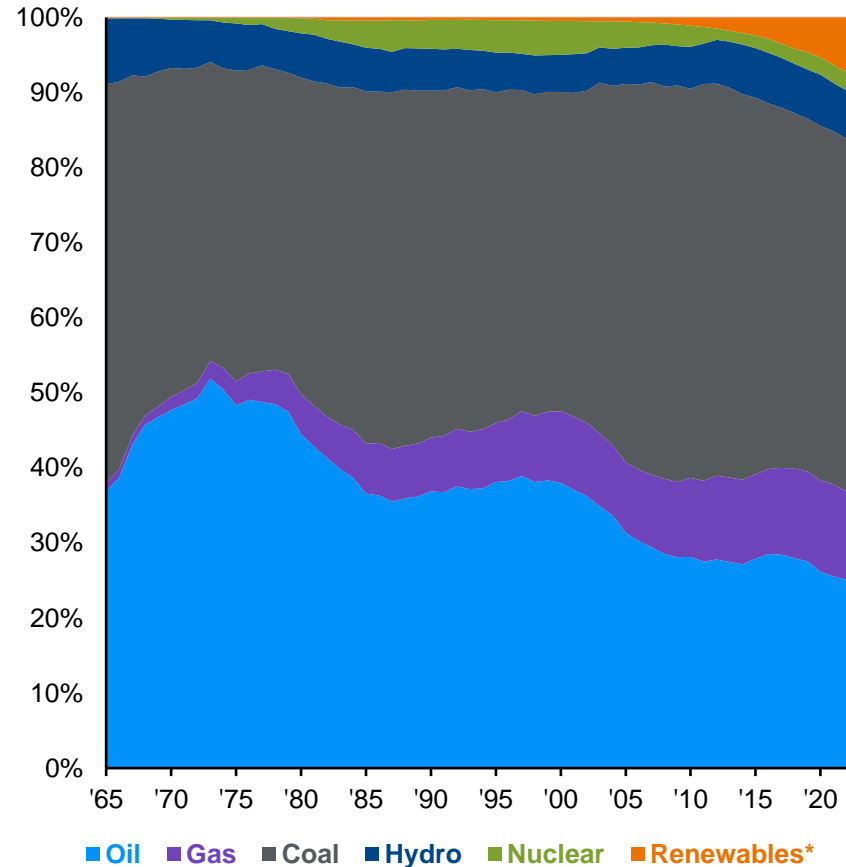
Energy consumption by region

% of global primary energy consumption



Asia's energy consumption by type

% of primary energy consumption



Source: Statistical Review of World Energy Data 2023 – Energy Institute, J.P. Morgan Asset Management. (Left) Does not sum to 100% due to exclusion of other regions. "Asia ex-China" = Hong Kong, India, Indonesia, Japan, Malaysia, Philippines, Singapore, South Korea, Taiwan, Thailand and Vietnam. (Right) *Renewables include Wind, solar, geothermal, biomass, biomethane and biofuels. "Asia" = China, Hong Kong, India, Indonesia, Japan, Malaysia, Philippines, Singapore, South Korea, Taiwan, Thailand and Vietnam. *Guide to Investing in Asia*. Data are as of April 30, 2024.

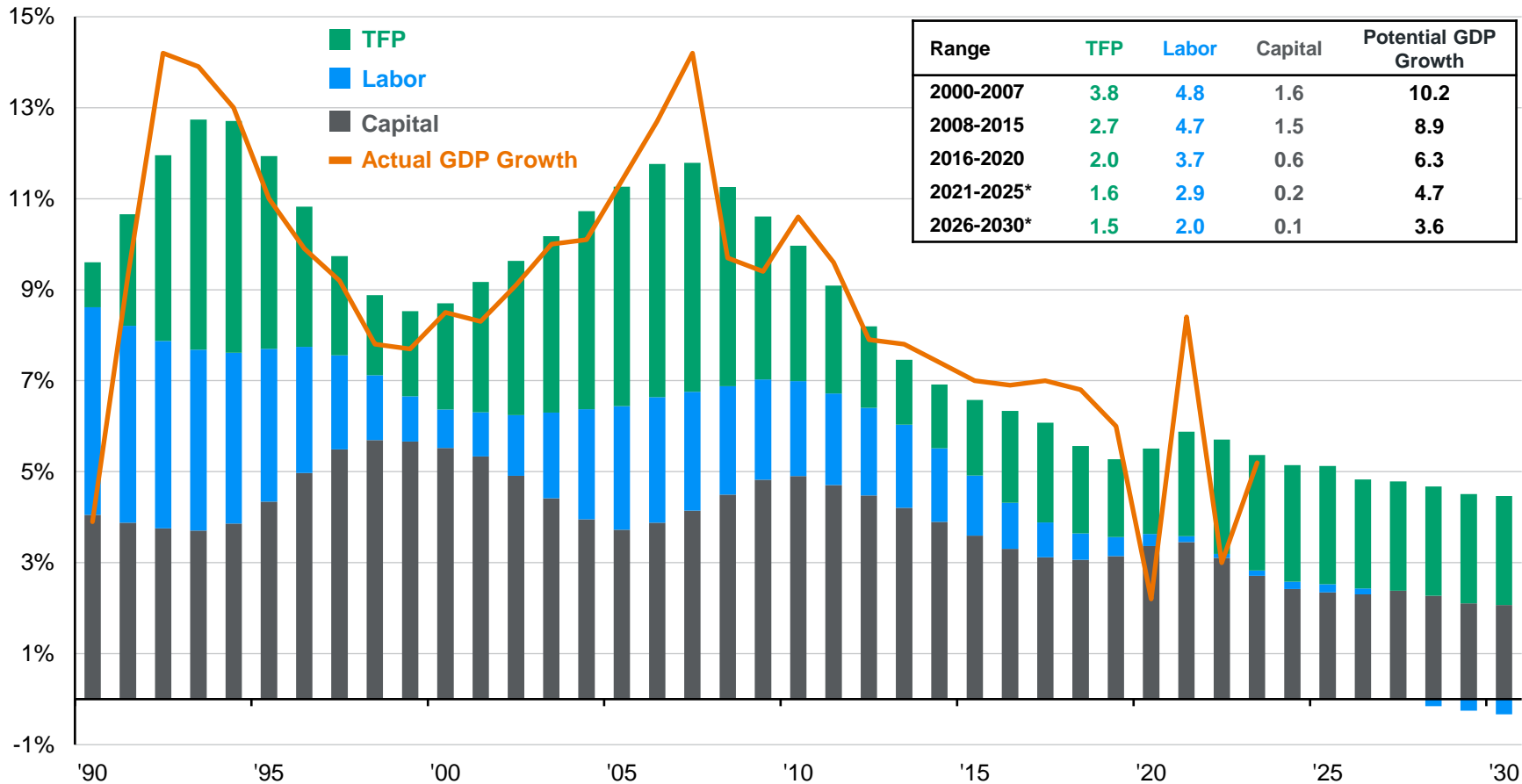


China's long-term growth potential

China

Contribution to potential growth

Percentage points, real growth rate



Source: J.P. Morgan Global Economic Research, J.P. Morgan Asset Management.

TFP refers to total factor productivity and includes education. *Forecasts, projections and other forward-looking statements are based upon current beliefs and expectations. They are for illustrative purposes only and serve as an indication of what may occur. Given the inherent uncertainties and risks associated with forecast, projections or other forward statements, actual events, results or performance may differ materially from those reflected or contemplated.

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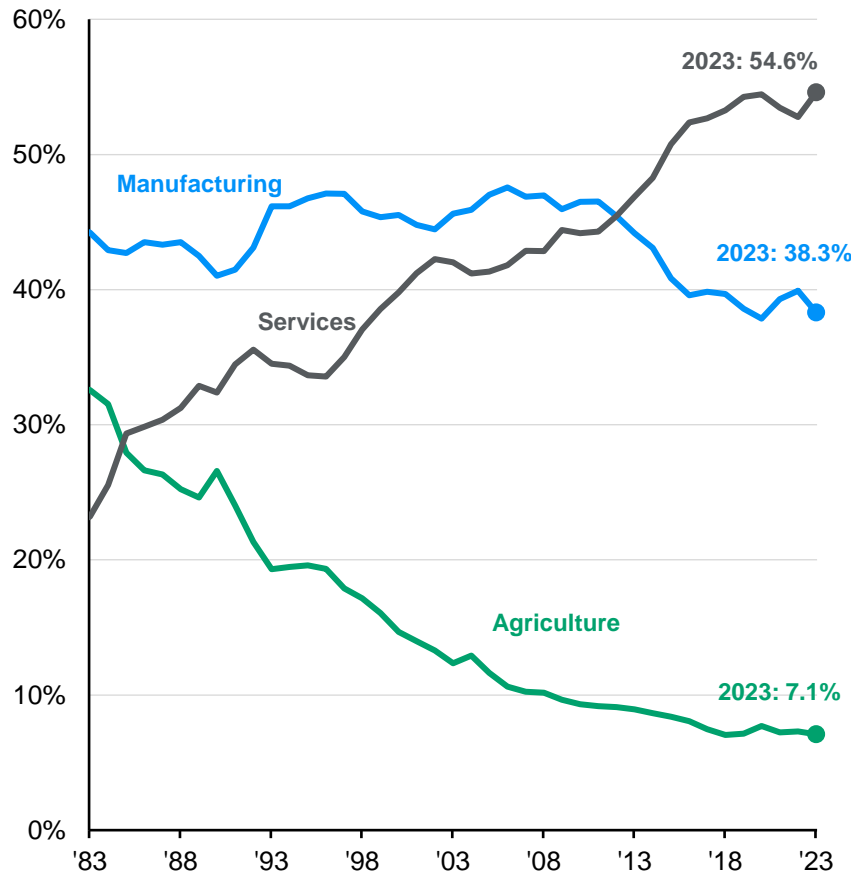


China's economic transition

China

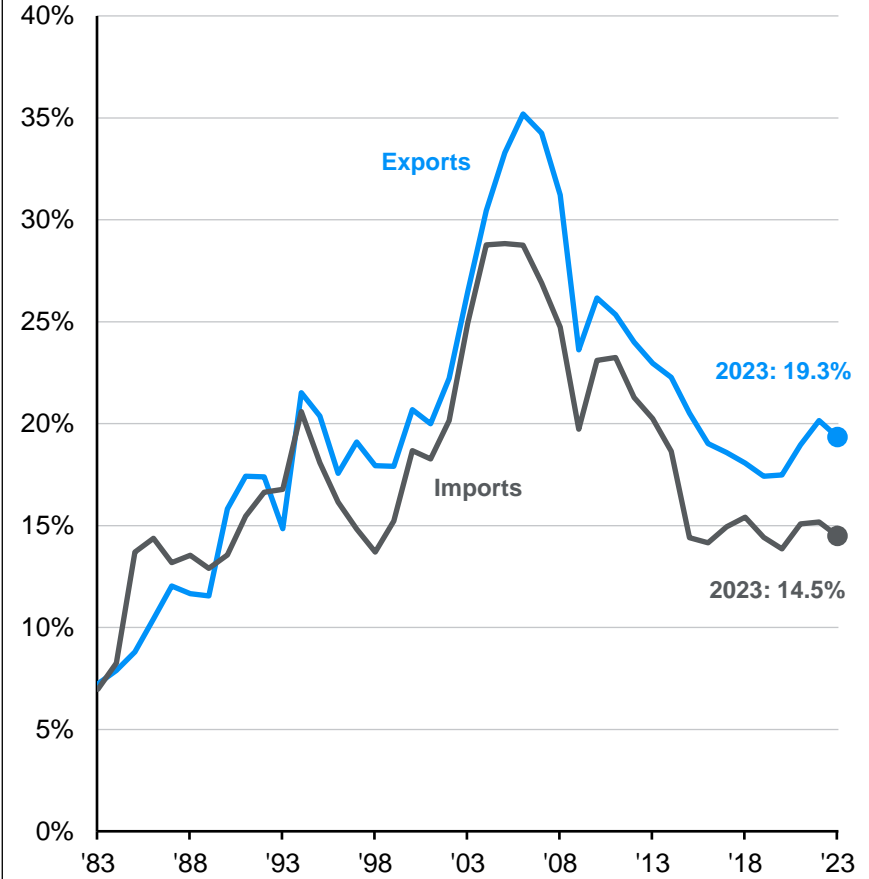
Share of GDP by sector

% of nominal GDP



Total exports and imports

% of GDP



Source: CEIC, IMF, National Bureau of Statistics, J.P. Morgan Asset Management. Guide to Investing in Asia. Data are as of April 30, 2024.

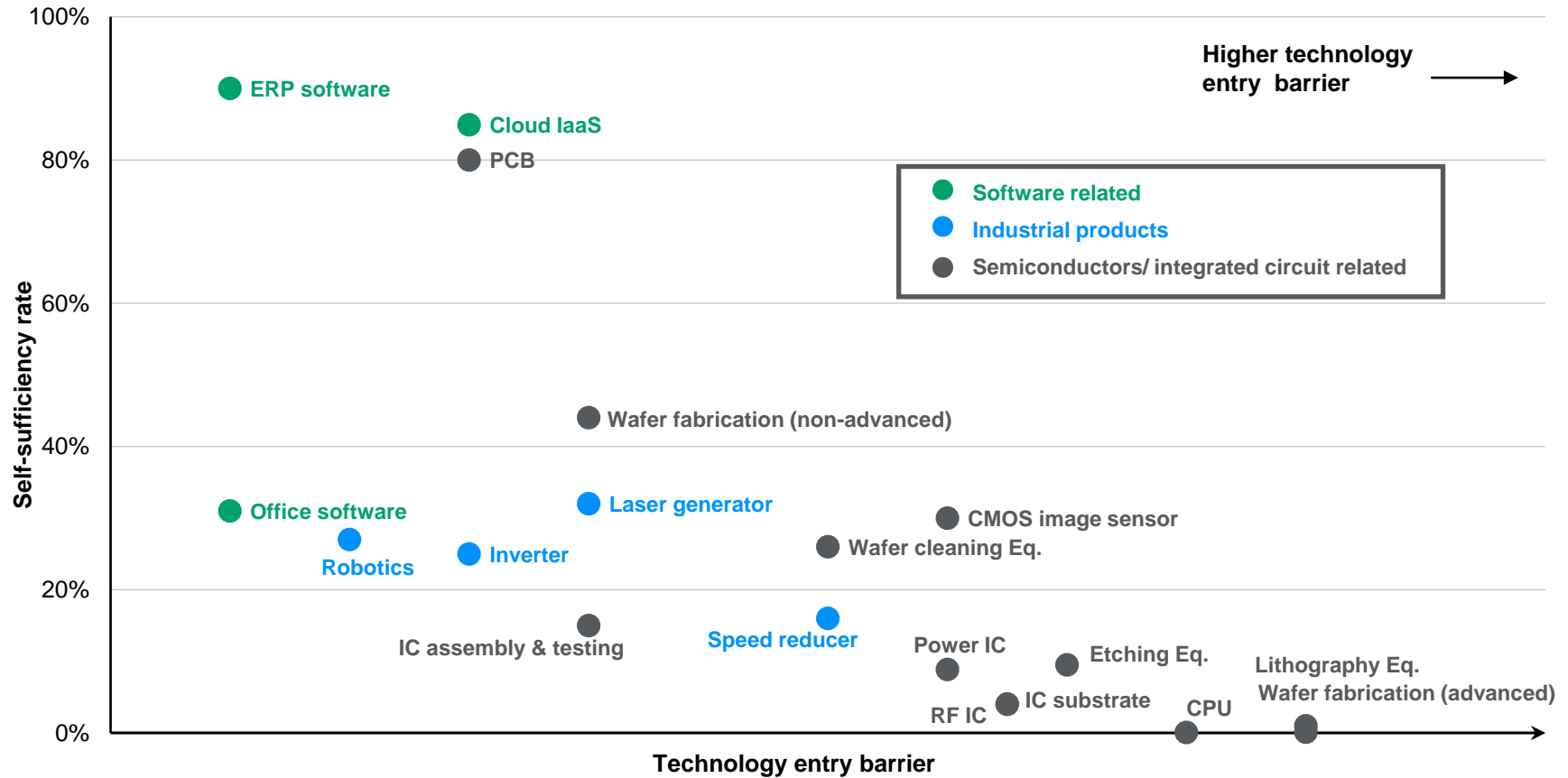


China's self-sufficiency rate for key technologies

China

Current self-sufficiency rate amongst different technology products

Percentage points



Source: J.P. Morgan Asset Management.
 ERP= Enterprise resource planning; IaaS = Infrastructure as a Service; IC= Integrated circuit; PCB = Printed circuit board; RF IC = Radio frequency integrated circuit. Based on J.P. Morgan Asset Management's estimates as of October 2022. Forecasts, projections and other forward-looking statements are based upon current beliefs and expectations. They are for illustrative purposes only and serve as an indication of what may occur. Given the inherent uncertainties and risks associated with forecast, projections or other forward statements, actual events, results or performance may differ materially from those reflected or contemplated.
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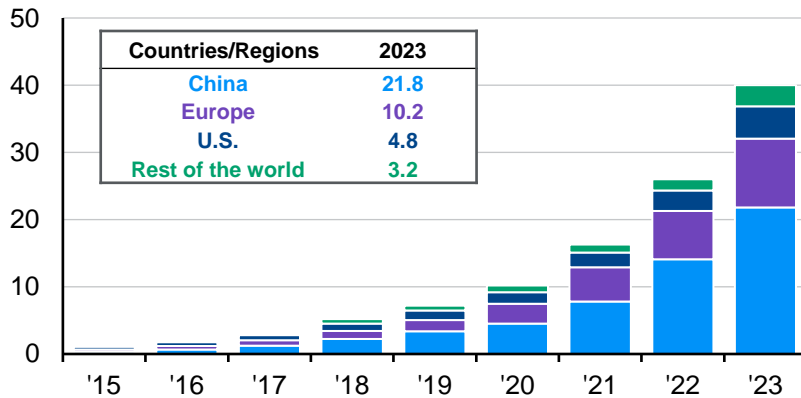


China: New energy vehicles

China

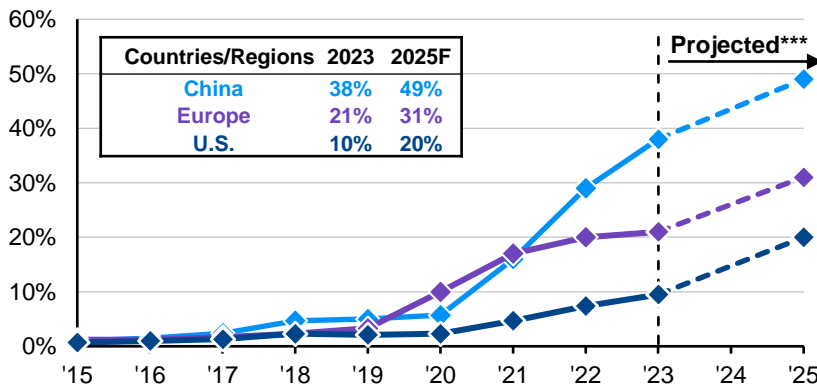
New energy vehicles (BEV* and PHEV**) in use

Millions



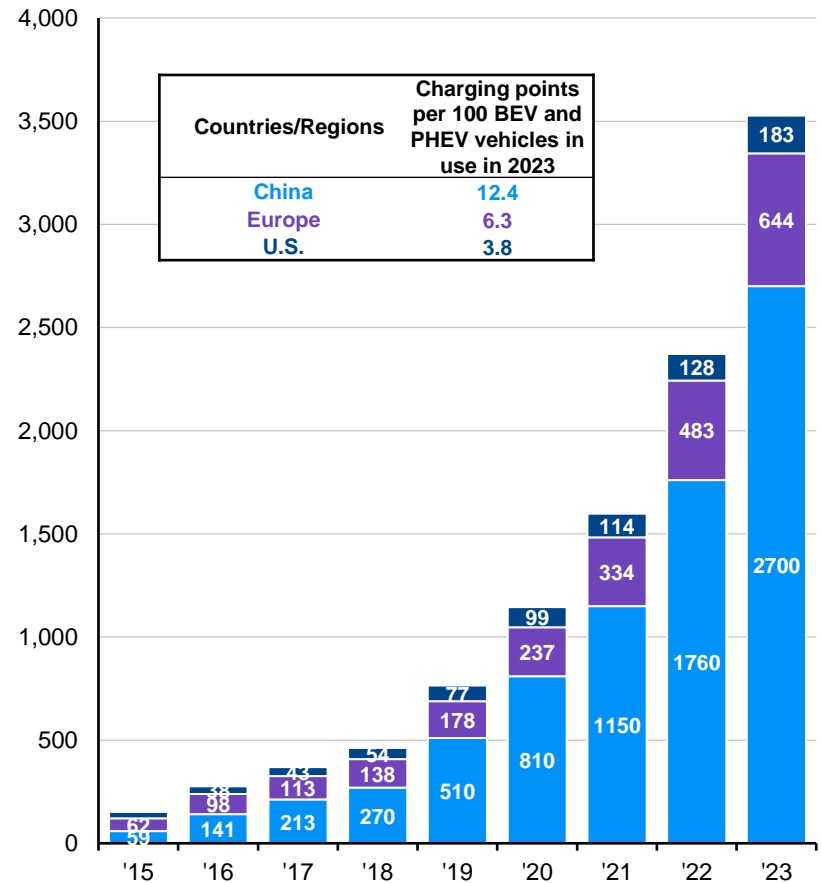
New energy vehicles (BEV* and PHEV**) sales

%, share of total car sales



Electric vehicle charging points

Thousands, publicly accessible



Source: International Energy Agency (IEA) – Global EV Outlook 2024, J.P. Morgan Asset Management.

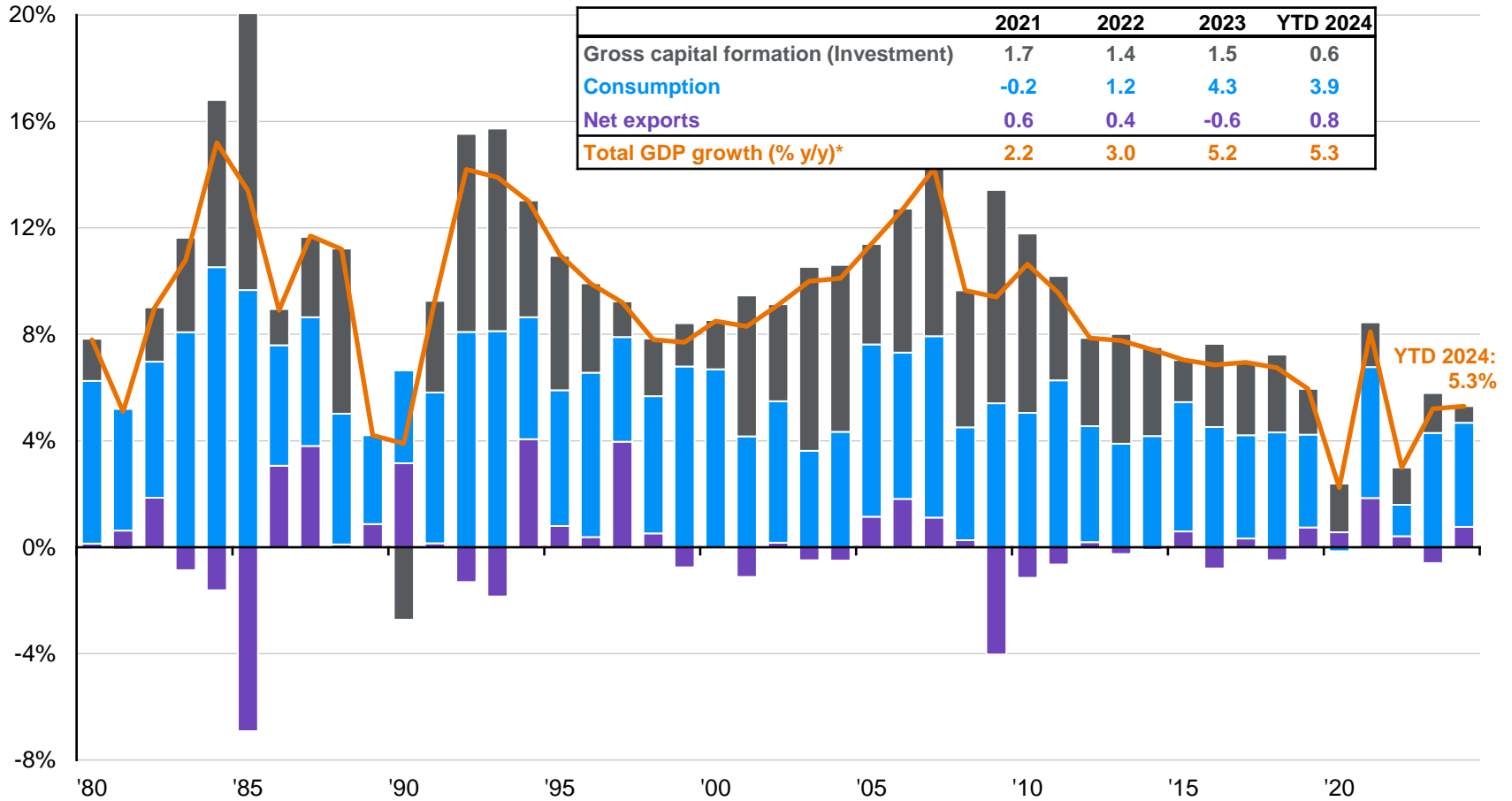
*BEV stands for battery electric vehicles. **PHEV stands for plug-in hybrid electric vehicles. ***Projected sales are based on the Stated Policies Scenario forecasted by the IEA which accounts for all existing policies, policy ambitions and targets that have been legislated for or announced by governments around the world. It includes current EV-related policies and regulations, as well as the expected effects of announced deployments and plans from industry stakeholders. They are for illustrative purposes only and serve as an indication of what may occur. Given the inherent uncertainties and risks associated with forecast, projections or other forward statements, actual events, results or performance may differ materially from those reflected or contemplated. Light duty vehicles are vehicles primarily used to transport passengers and cargo with a gross vehicle weight less than or equal to 10,000 pounds. *Guide to Investing in Asia*. Data are as of April 30, 2024.



China's real GDP growth by contribution

China

Contribution to real GDP growth Percent year-over-year change



Source: CEIC, National Bureau of Statistics, J.P. Morgan Asset Management.
 *Aggregate GDP growth may be different from sum of sub-items due to rounding.
 Guide to Investing in Asia. Data are as of April 30, 2024.

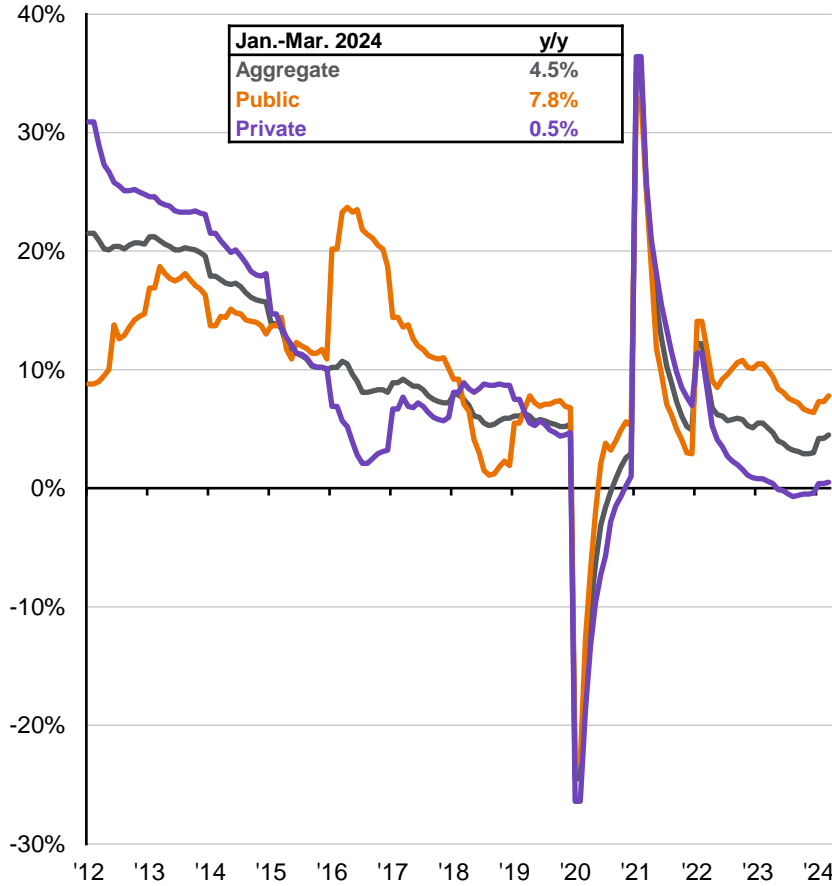


China: Fixed asset investment

China

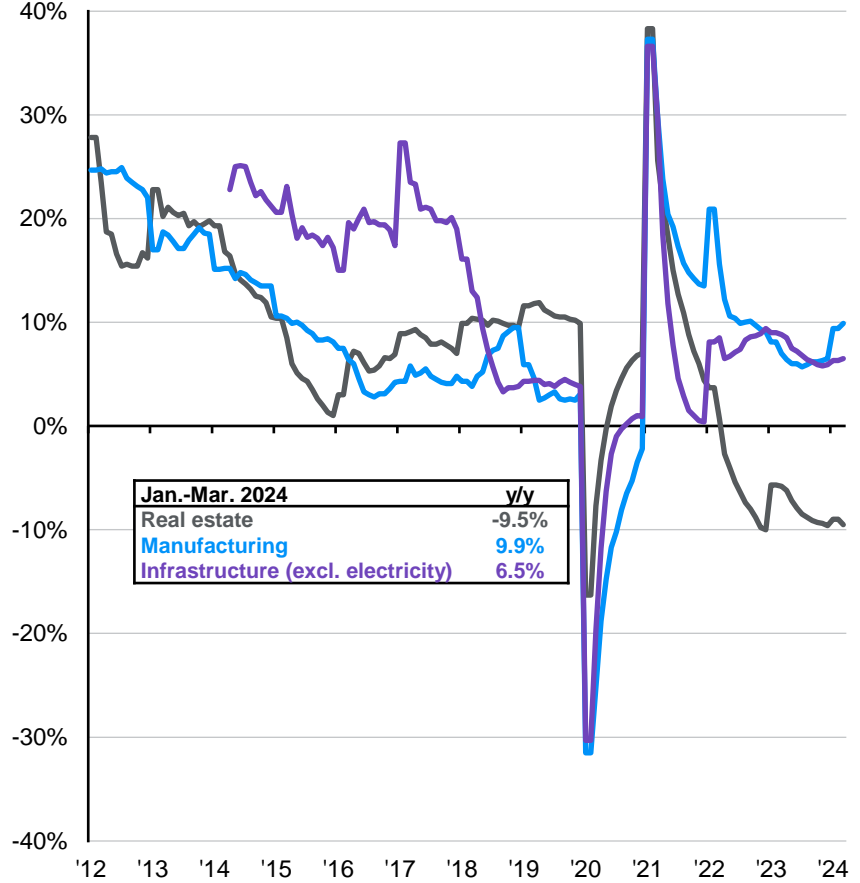
Fixed asset investment

Year-over-year change, year-to-date



Fixed asset investment by sector

Year-over-year change, year-to-date



Source: CEIC, National Bureau of Statistics of China, J.P. Morgan Asset Management. Guide to Investing in Asia. Data are as of April 30, 2024.

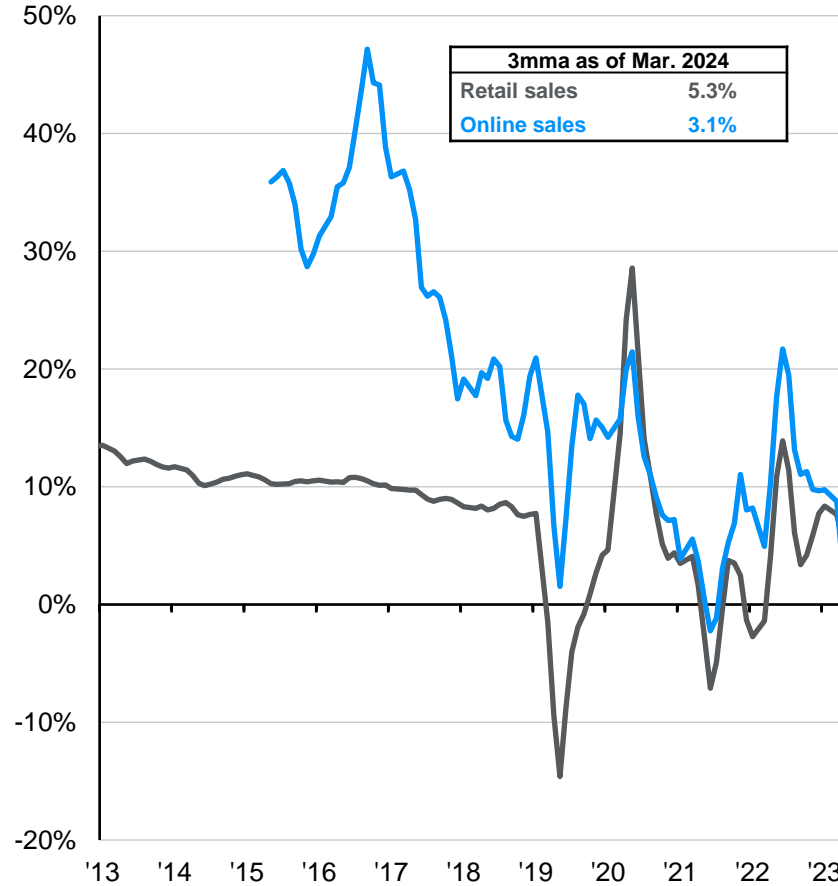


China: Consumption

China

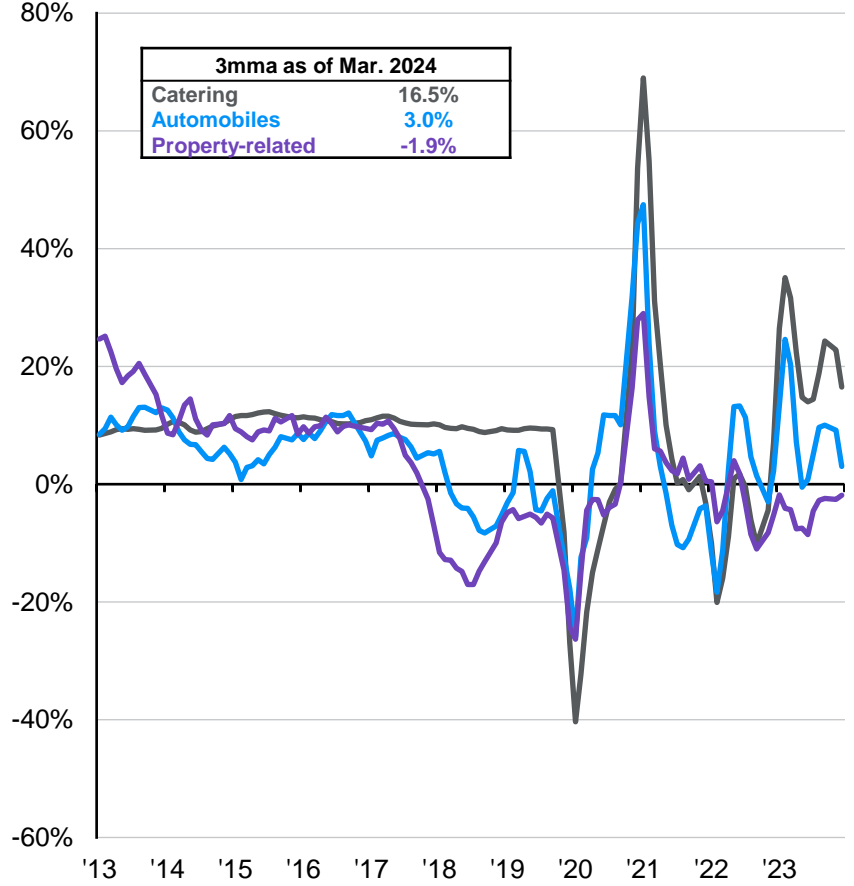
Consumption

Year-over-year change, 3-month moving average



Consumption in key categories*

Year-over-year change, 3-month moving average



Source: CEIC, National Bureau of Statistics of China, J.P. Morgan Asset Management.

*Catering refers to catering revenue in total retail sales of consumer goods. Data on automobiles and property-related products refer to sub-item indicators in the total retail sales of consumer goods. Property-related products include furniture, construction and decoration materials, electrical appliances and audio-visual equipment.

Guide to Investing in Asia. Data are as of April 30, 2024.

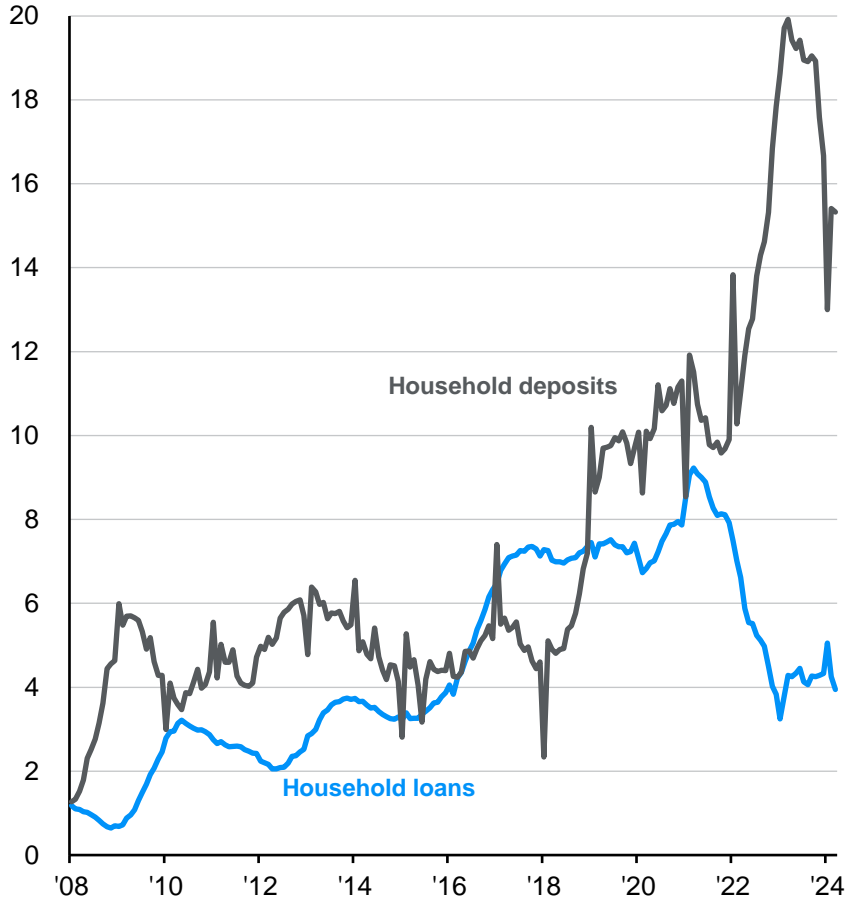


China: Consumer balance sheets

China

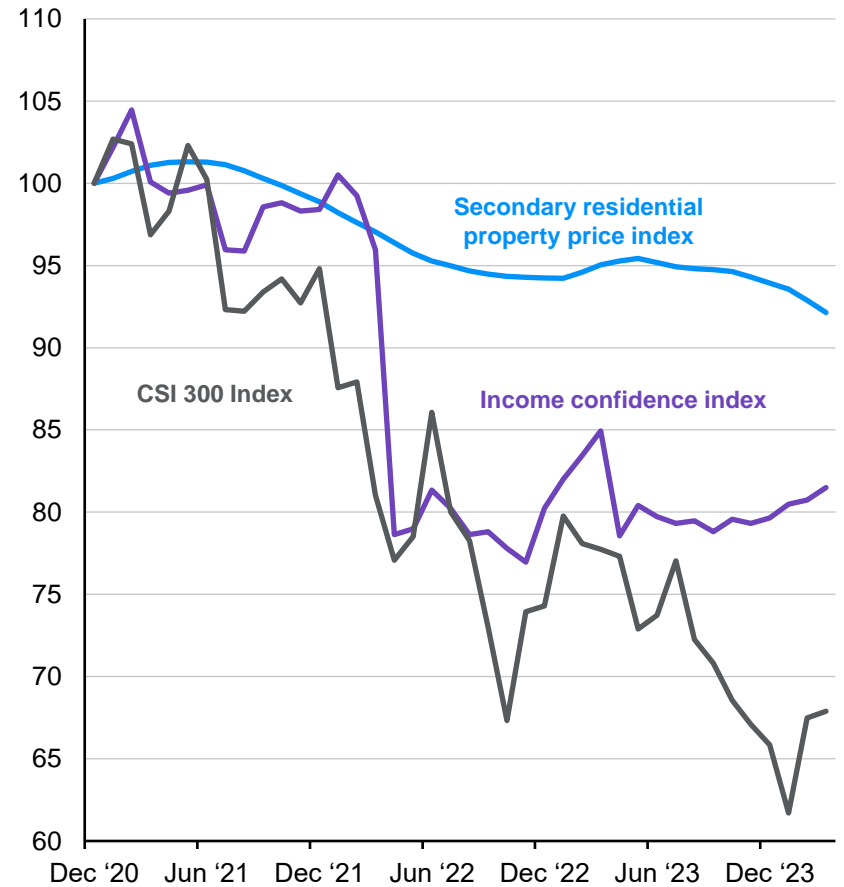
Household deposits and loans

CNY trillions, rolling 12 months



Consumer income and wealth effect

Dec. 2020 = 100



Source: J.P. Morgan Asset Management. (Left) PBoC, Wind. (Right) CEIC, FactSet, National Bureau Statistics of China. Guide to Investing in Asia. Data are as of April 30, 2024.

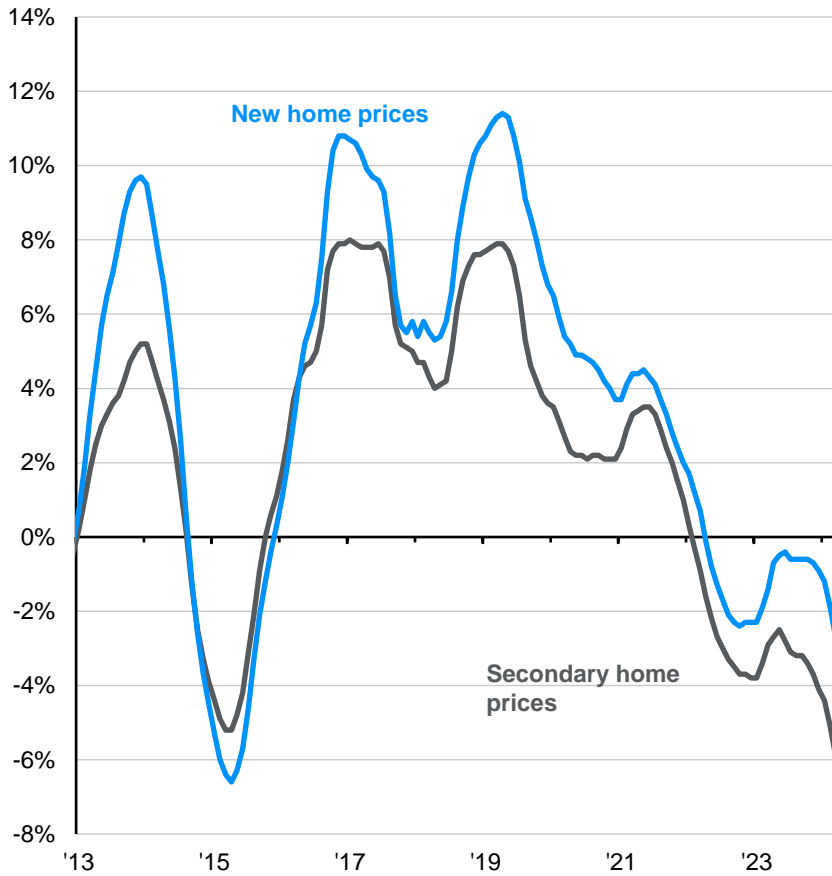


China: Property market

China

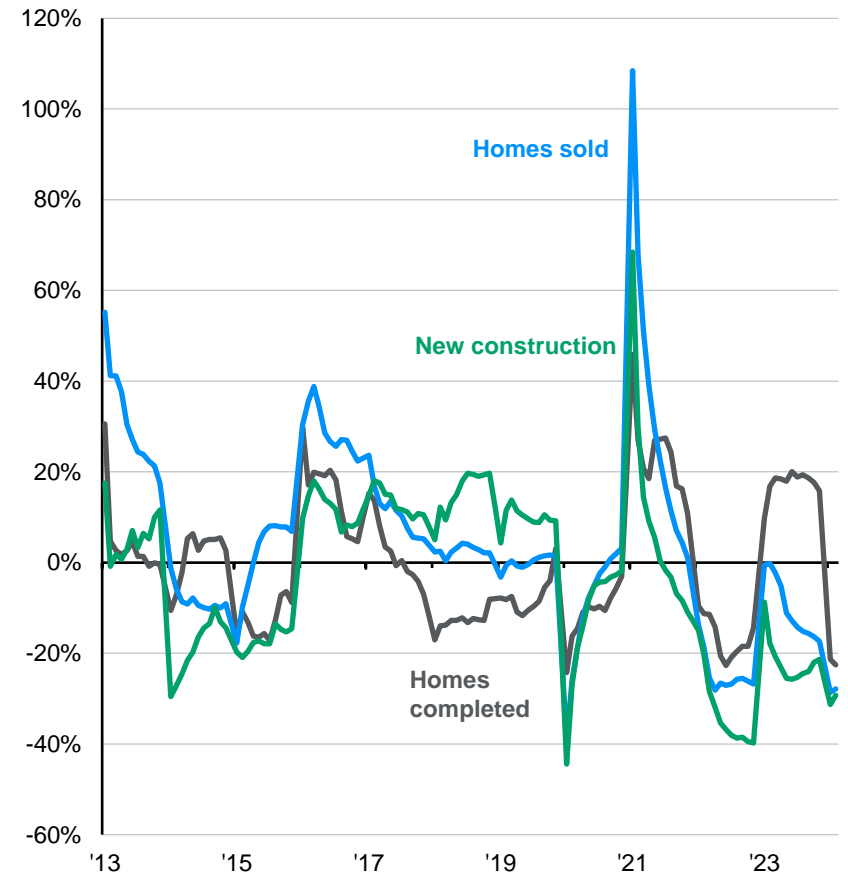
Residential property price

Year-over-year change



Residential floor space

Year-over-year change, 3-month moving average



Source: National Bureau of Statistics of China, WIND, J.P. Morgan Asset Management. (Left) Price indices refer to residential buildings in 70 large and medium-sized cities in China. Guide to Investing in Asia. Data are as of April 30, 2024.

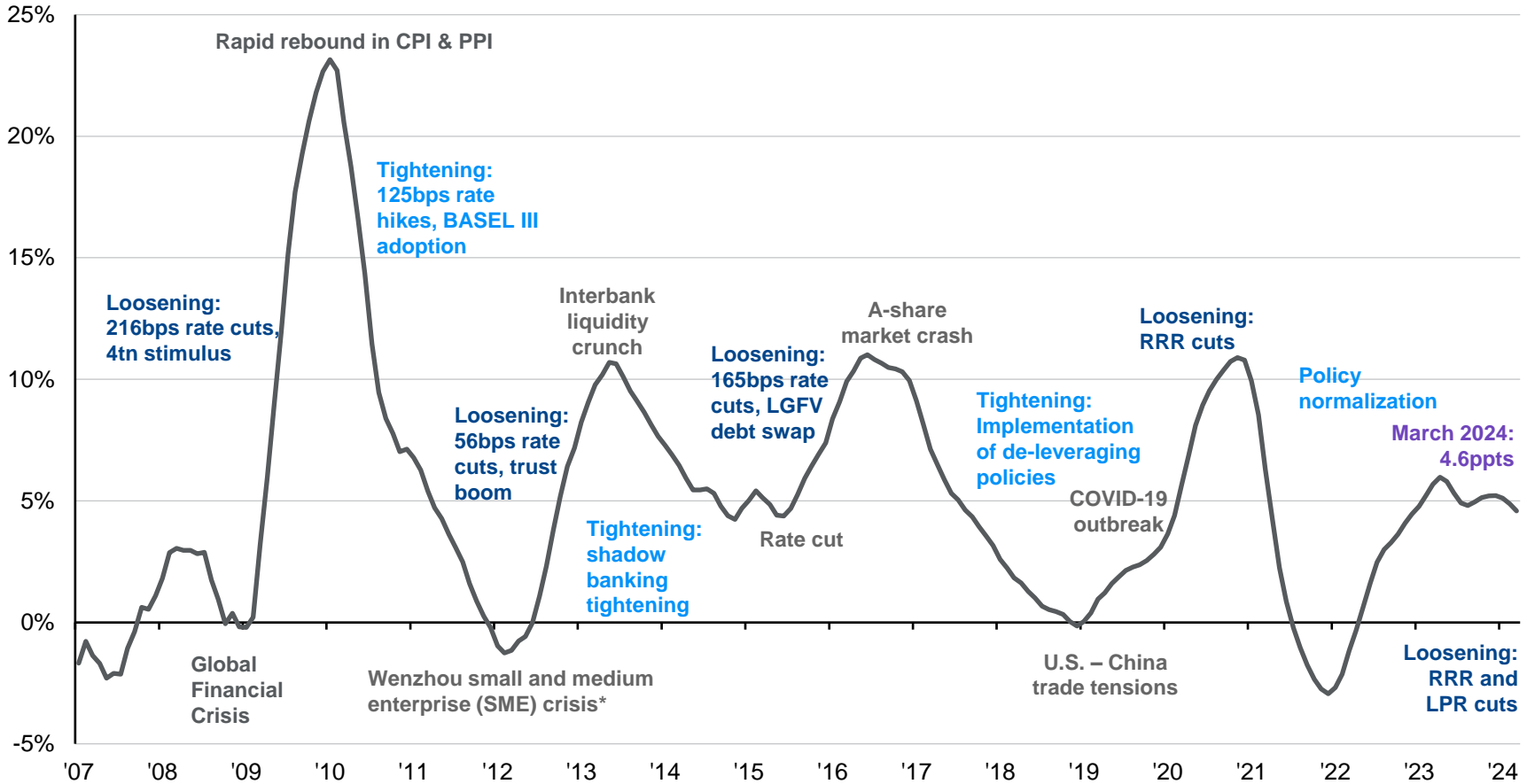


China: Credit conditions

China

Credit cycles

Percentage points, credit growth – nominal GDP growth, 3-month moving average



Source: CEIC, People’s Bank of China, J.P. Morgan Asset Management.
 Credit growth measures the year-over-year growth of outstanding total social financing. *Wenzhou SME crisis refers to the wave of bankruptcies and funding problems faced by a large number of SMEs in Wenzhou in 2011. “LGFV” = local government financing vehicle. “RRR” = Reserve requirement ratio. “LPR” = Loan Prime Rate.
Guide to Investing in Asia. Data are as of April 30, 2024.

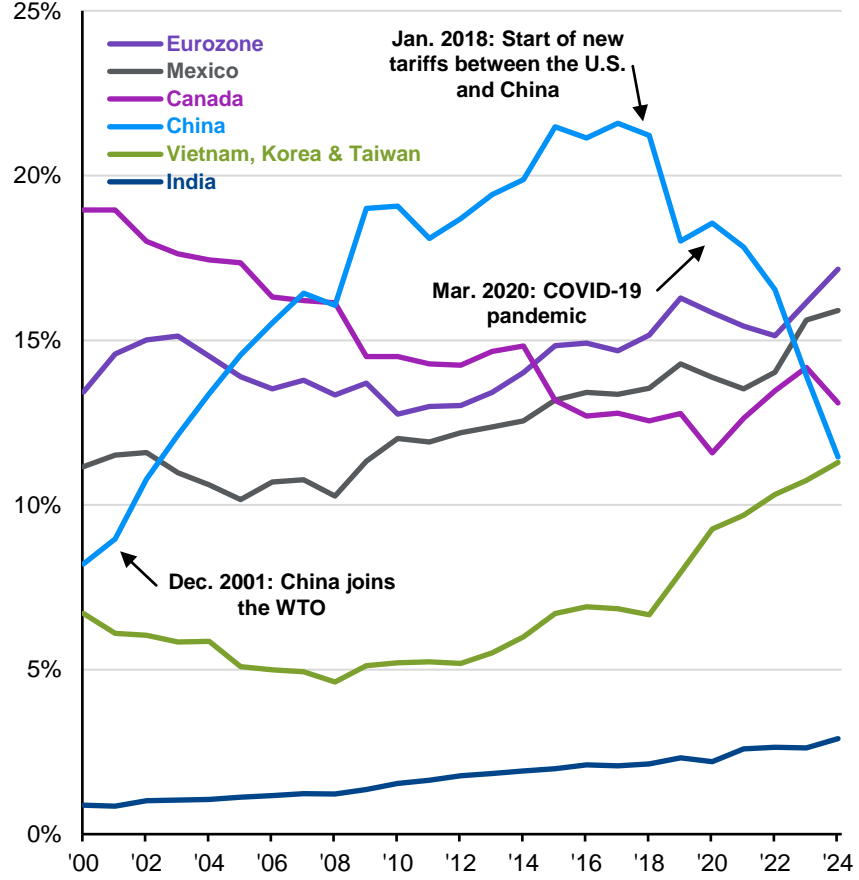


U.S.-China commercial relationships

China

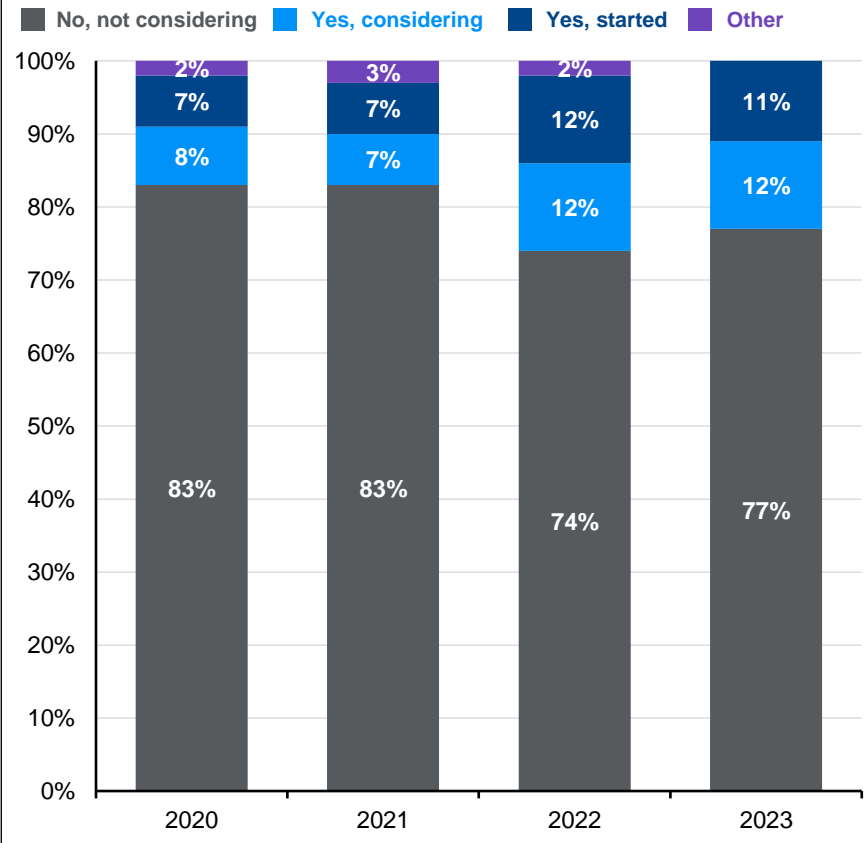
U.S. goods imports by location

% of total imports, yearly



Plans to relocate out of China

Is your company considering, or has it already begun relocating manufacturing or sourcing outside of China?*



Source: J.P. Morgan Asset Management; (Left) FactSet, U.S. Census Bureau. WTO = World Trade Organization. (Right) The American Chamber of Commerce in China 2024 China Business Climate Survey Report. *Survey conducted yearly between 2020-2023. Extended answers: 1) No, we are not considering relocating manufacturing or sourcing out of China, 2) Yes, we are considering relocating but have not taken active steps to relocate manufacturing or sourcing outside China yet, 3) Yes, we have started the process of relocating manufacturing or sourcing outside of China, 4) Other.
 Guide to Investing in Asia. Data are as of April 30, 2024.

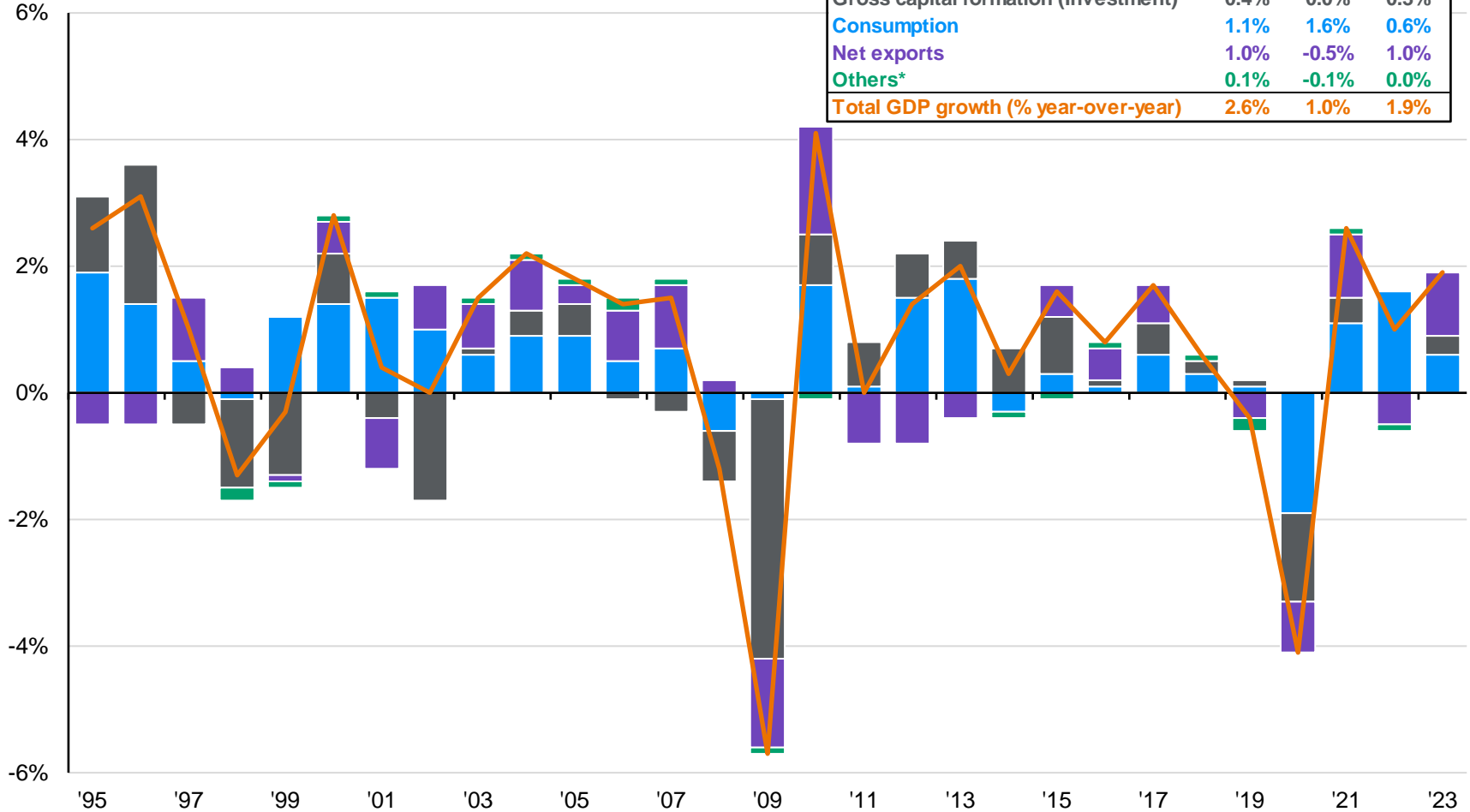


Japan's real GDP growth by contribution

Japan

Contribution to real GDP growth

Percent year-over-year change



Source: Japanese Cabinet Office, J.P. Morgan Asset Management. *Others includes statistical discrepancies. Guide to Investing in Asia. Data are as of April 30, 2024.

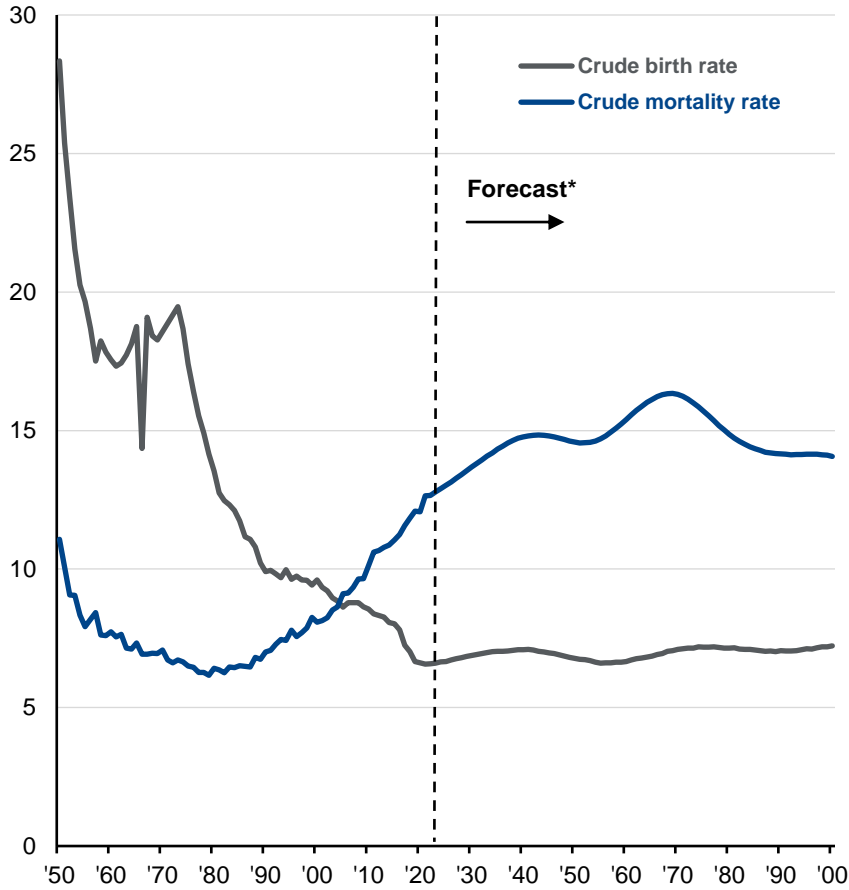


Japan: Demographics

Japan

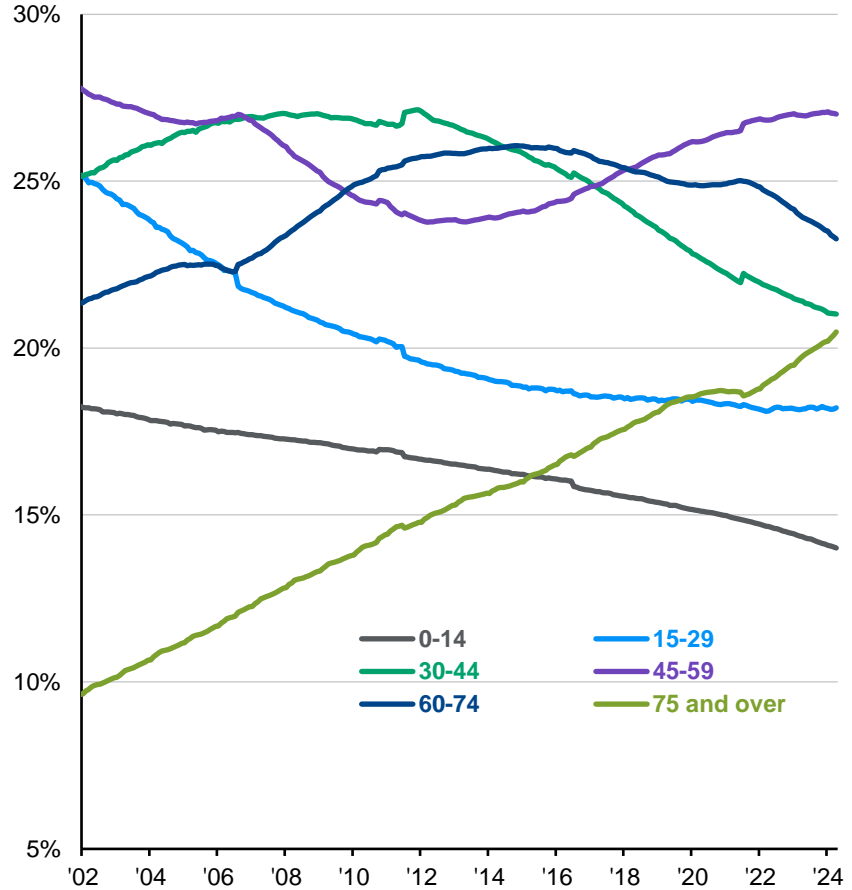
Birth and mortality rates

Per 1,000 people



Population by age group

% of total population



Source: J.P. Morgan Asset Management. (Left) United Nations – World Population Prospects 2022. *Forecast is by the United Nations. (Right) FactSet, Ministry of Internal Affairs and Communication. Guide to Investing in Asia. Data are as of April 30, 2024.

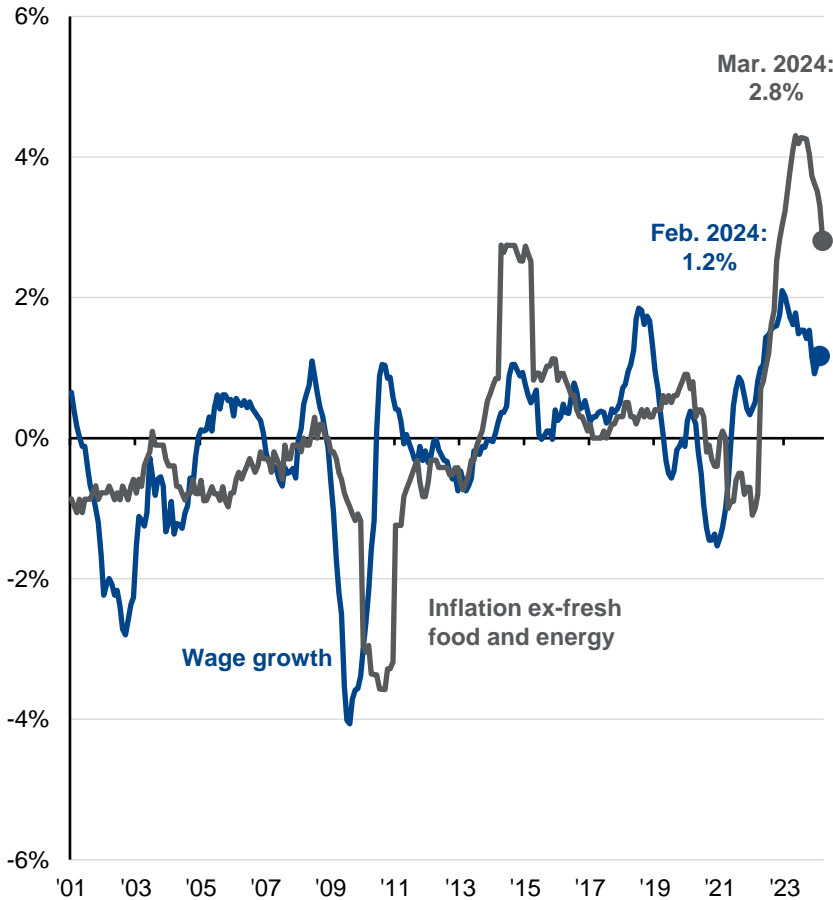


Japan: Inflation, growth and rate expectations

Japan

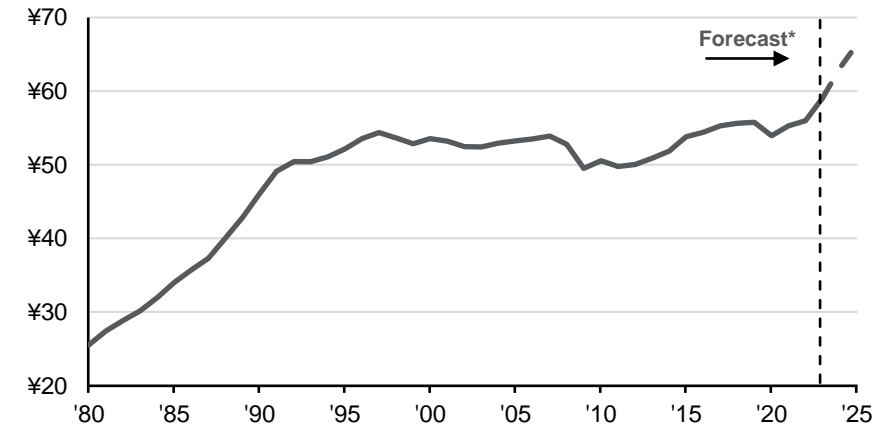
Inflation and wage growth

Year-over-year change



Nominal GDP

JPY trillions



Interest rate expectations

Based on 5y5y swaps



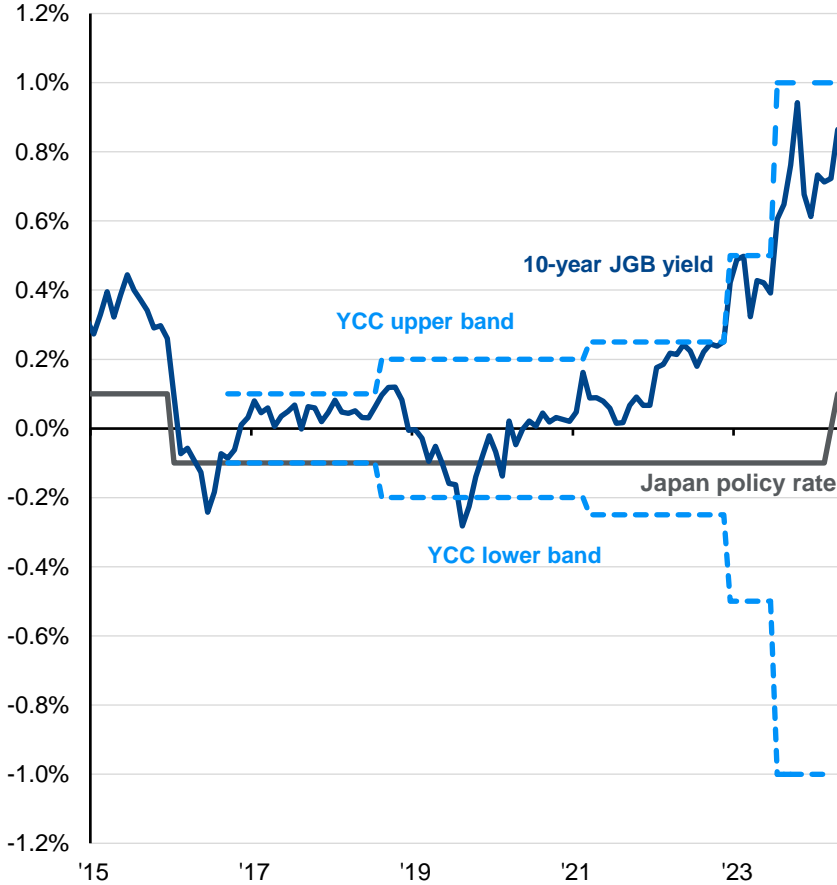
Source: J.P. Morgan Asset Management. (Left) Ministry of Economics. Wage growth is a 6-month rolling average. (Top right) J.P. Morgan Economic Research, Oxford Economics. *Forecasts are by J.P. Morgan Economic Research. (Bottom right) Bloomberg. Represents the expected interest rate over the five-year period that begins five years from today. *Guide to Investing in Asia*. Data are as of April 30, 2024.



Japan: Monetary policy and FX

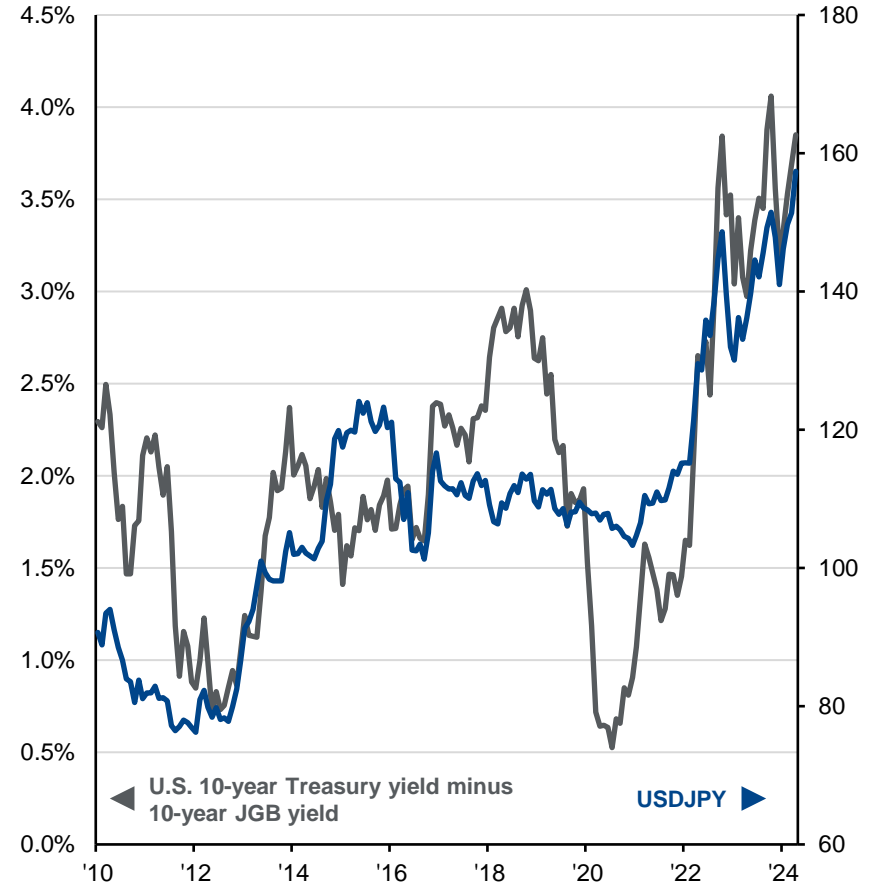
Japan

Key rates in Japan



U.S. – Japan interest rate differential and USDJPY

USD per JPY



Source: Bank of Japan, FactSet, J.P. Morgan Asset Management. (Left) YCC = yield curve control. YCC was used in Japan to control yields on government bonds, but the BoJ abolished YCC in March 2024. *Guide to Investing in Asia*. Data are as of April 30, 2024.

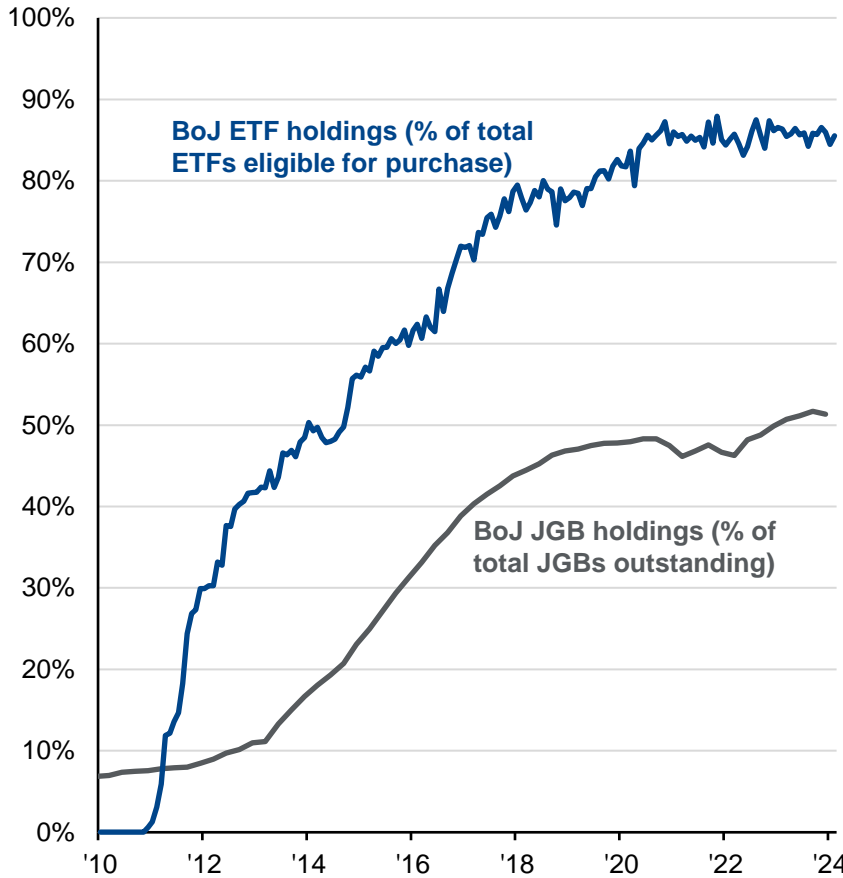


Bank of Japan balance sheet

Japan

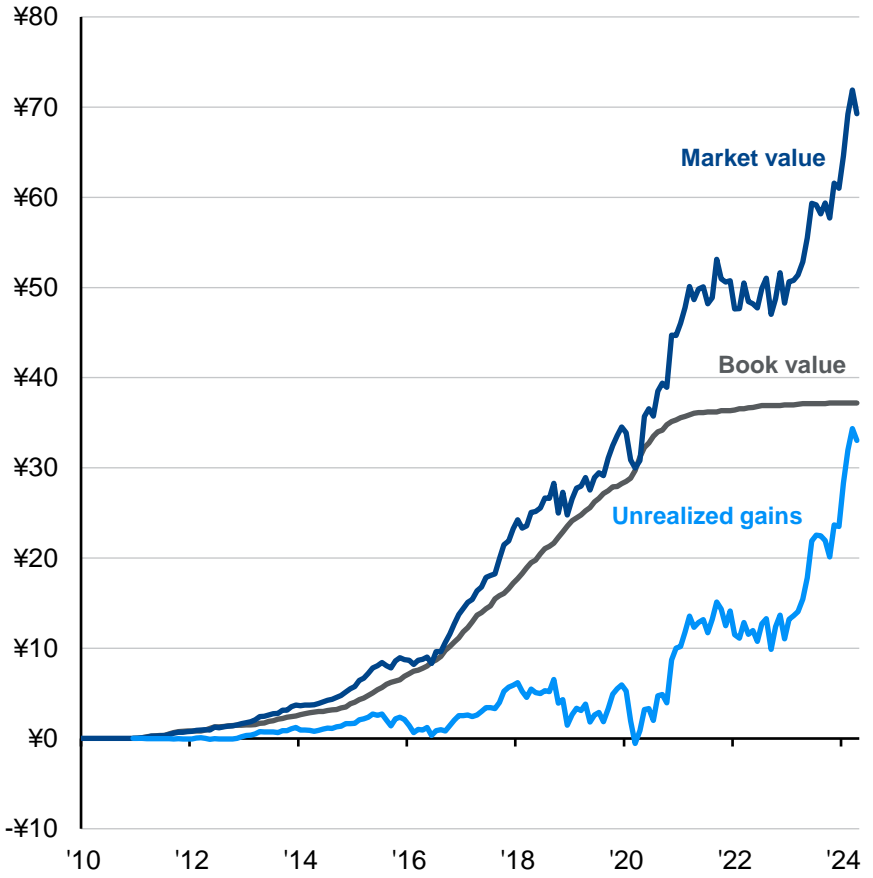
BoJ holdings of ETFs and JGBs

Percentage



BoJ ETF holdings

JPY trillions



Source: Bank of Japan, FactSet, J.P. Morgan Asset Management.
 BoJ = Bank of Japan, ETFs = exchange traded funds, and JGBs = Japanese government bonds.
 Guide to Investing in Asia. Data are as of April 30, 2024.

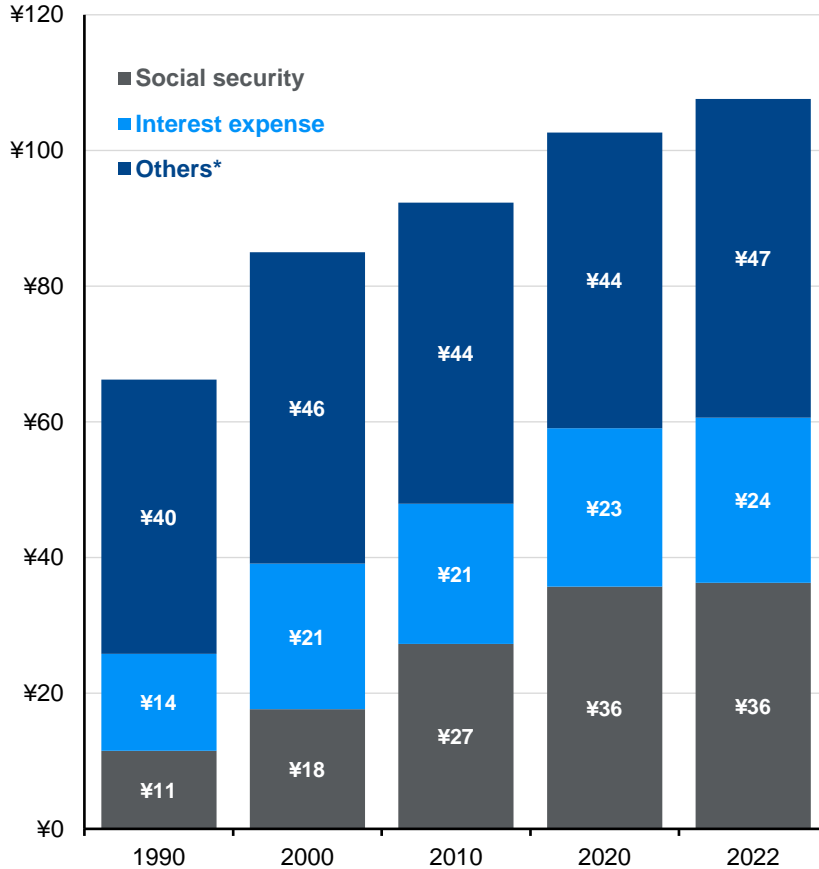


Japan: Government debt

Japan

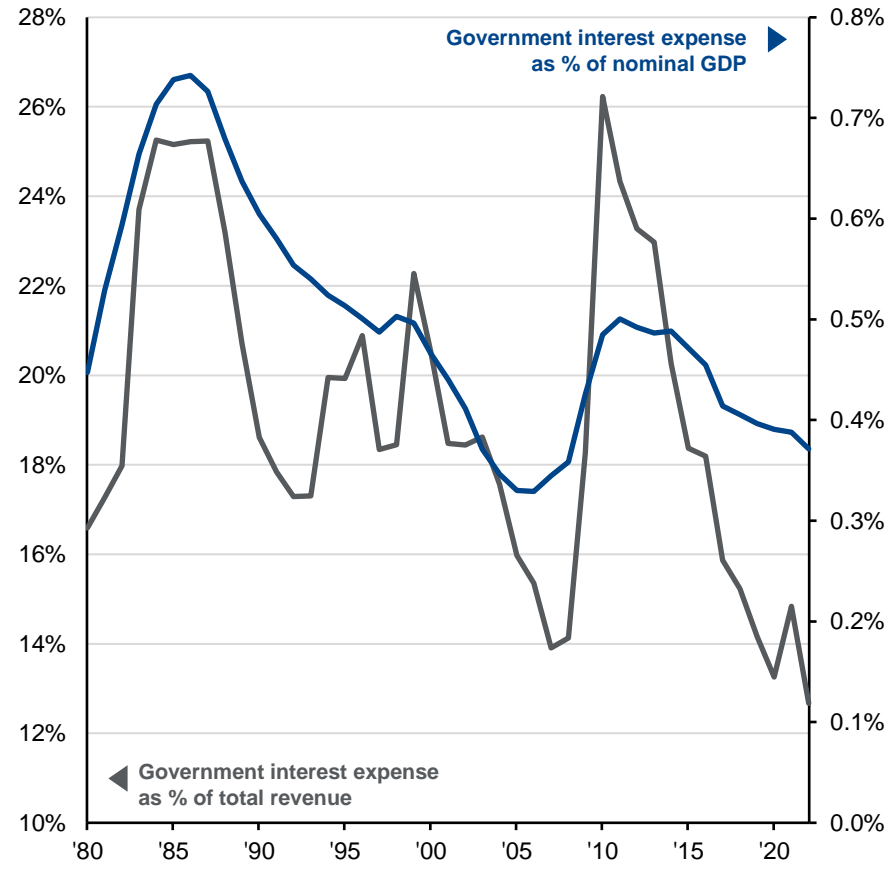
Government expenditures by type

JPY trillions



Interest expenses

Yearly



Source: FactSet, J.P. Morgan Asset Management. (Left) Ministry of Finance Japan. *Others include public works, education, defense, energy, and others. (Right) Japanese Cabinet Office. *Guide to Investing in Asia*. Data are as of April 30, 2024.

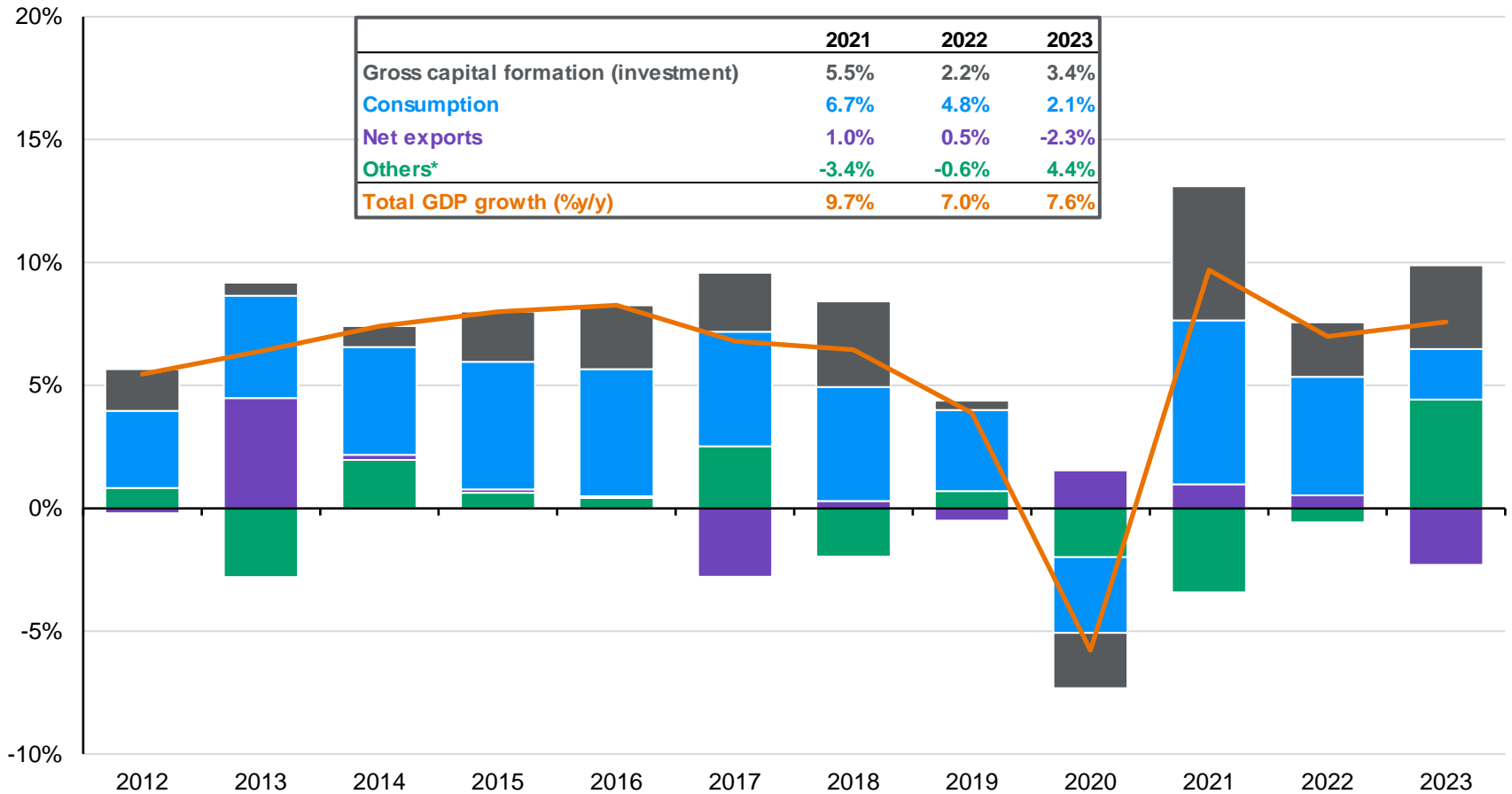


India's real GDP growth by contribution

India

Contribution to real GDP growth

Percent year-over-year change (fiscal year)



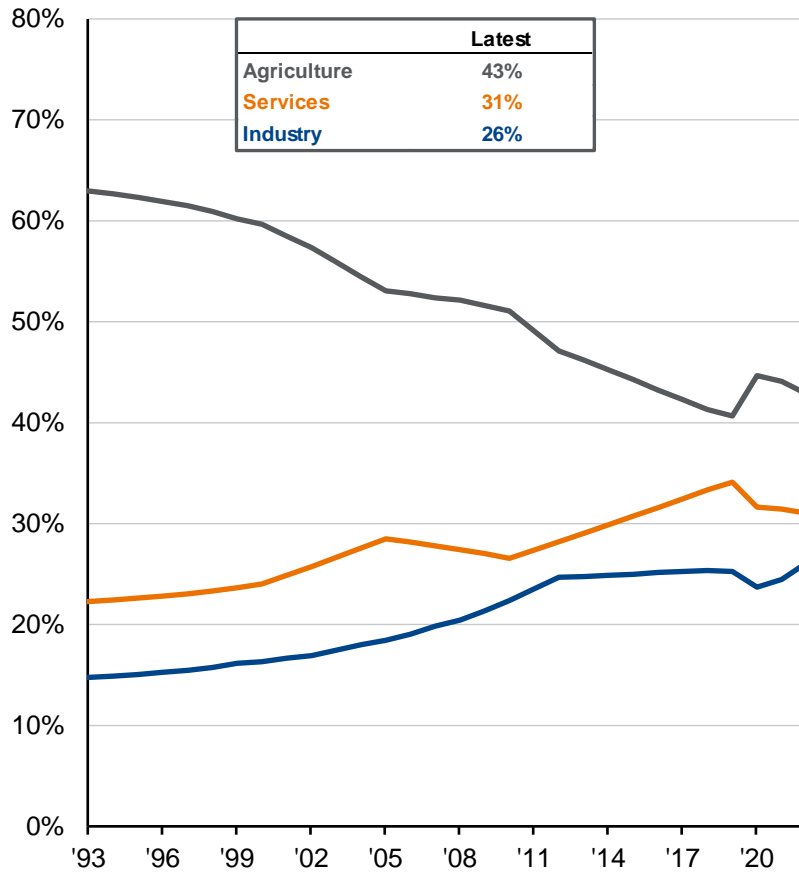
Source: FactSet, Ministry of Statistics and Program Implementation, J.P. Morgan Asset Management. Shows %y/y change for the fiscal year ending in March. *Other includes change in stocks, valuables, and statistical discrepancies. Guide to Investing in Asia. Data are as of April 30, 2024.



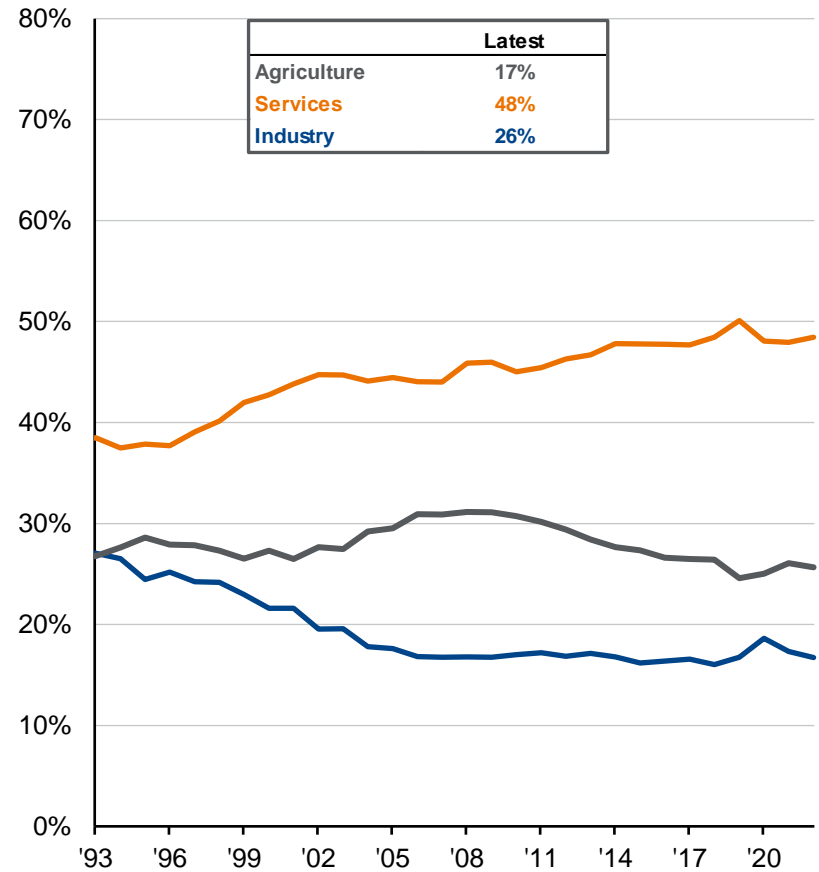
India's economic transition

India

Share of employment by sector 1993-2022



Share of GDP by sector 1993-2022



Source: World Development Indicators, World Bank, FactSet, J.P. Morgan Asset Management. Shows annual data. Industry includes construction activity while agriculture includes forest and fishery. (Right) The data represents gross value added by each sector as a % of GDP. The data does not add to 100% due to exclusion of indirect taxes in GVA calculations. *Guide to Investing in Asia*. Data are as of April 30, 2024.

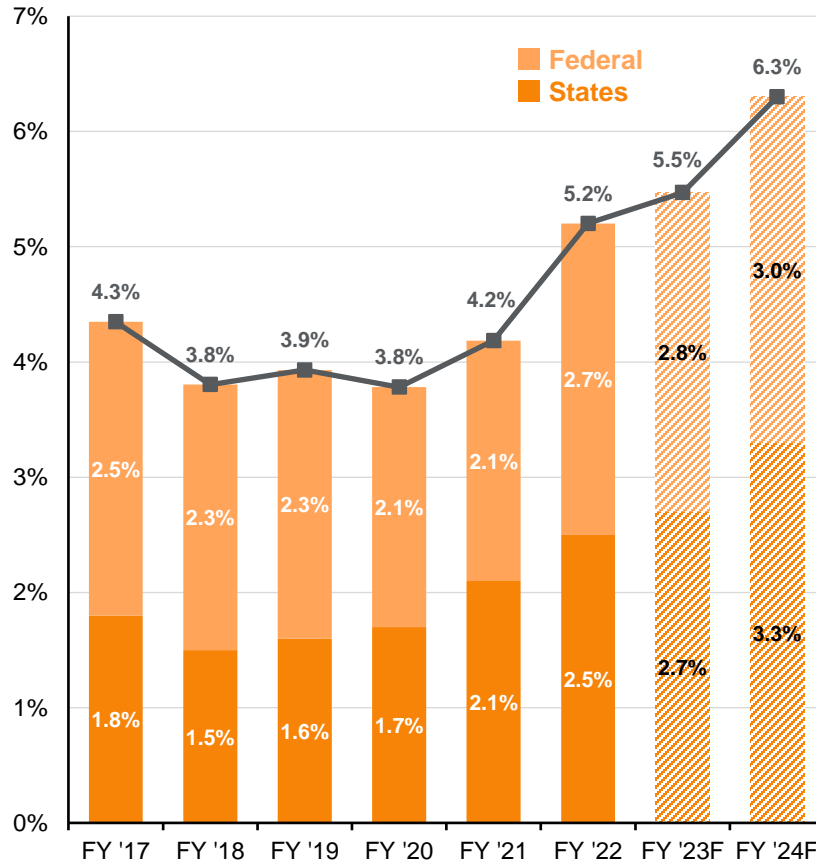


India: Key government initiatives

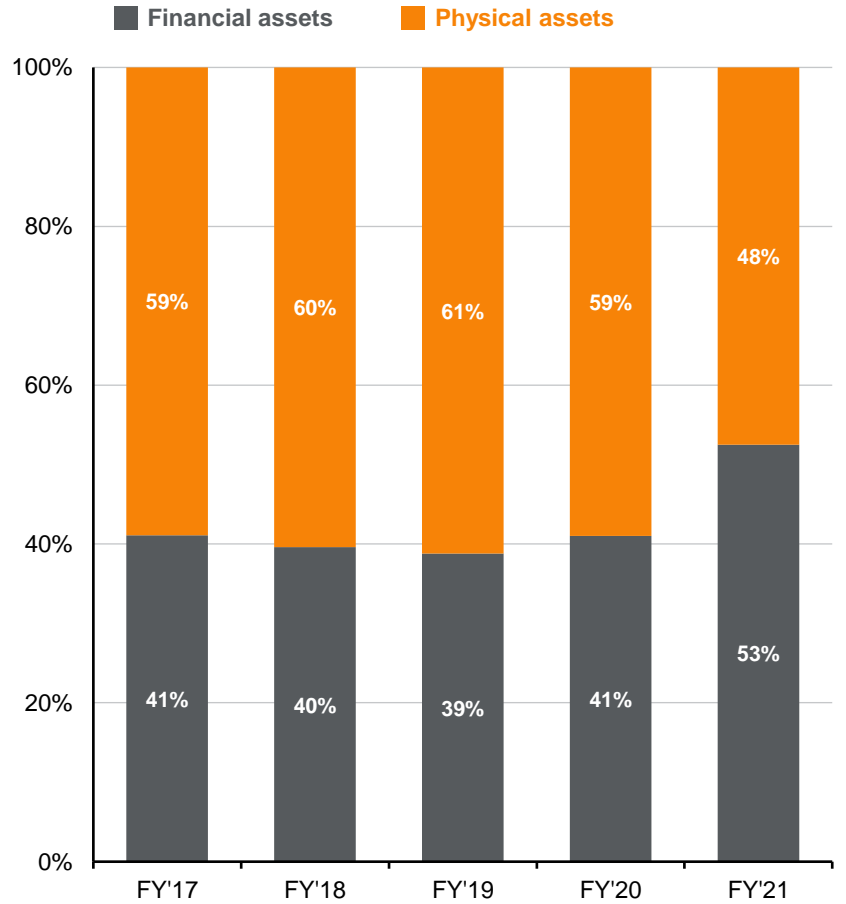
India

Public capital spending

% of GDP, current prices



Net household savings by asset type



Source: J.P. Morgan Asset Management. (Left) Ministry of Finance. Forecasts are by the Ministry of Finance for FY 2023 and FY 2024. The fiscal year in India runs from April to March. (Right) CRISIL, RBI. Physical assets include gold and real estate. *Guide to Investing in Asia*. Data are as of April 30, 2024.

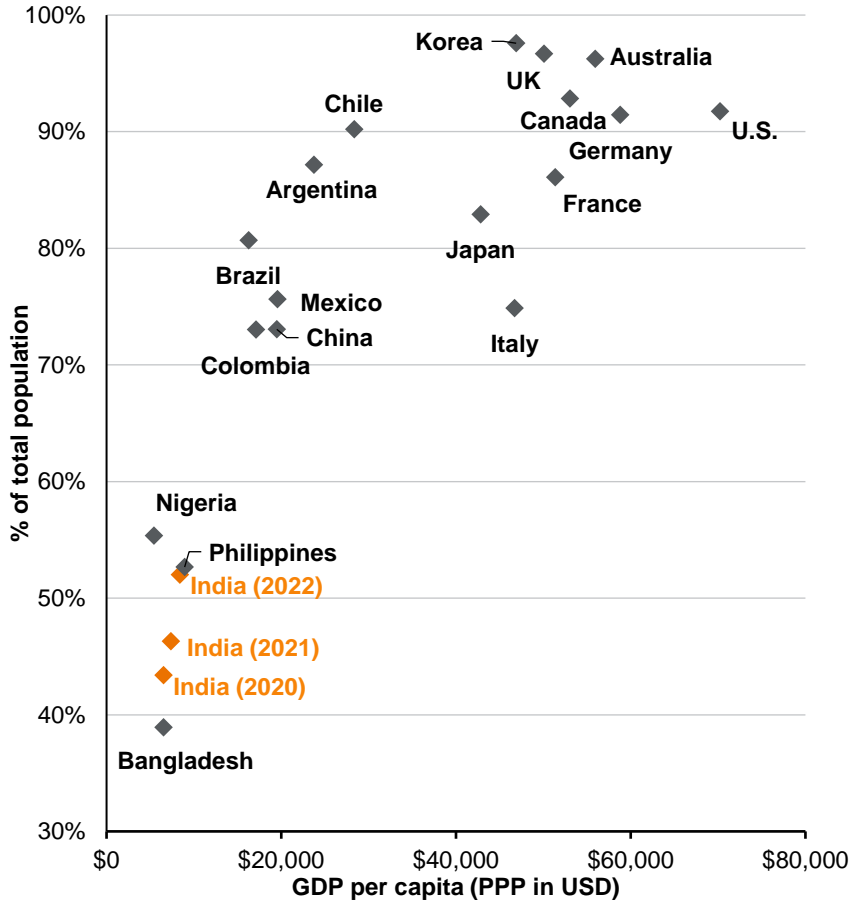


India: Digital transformation and infrastructure

India

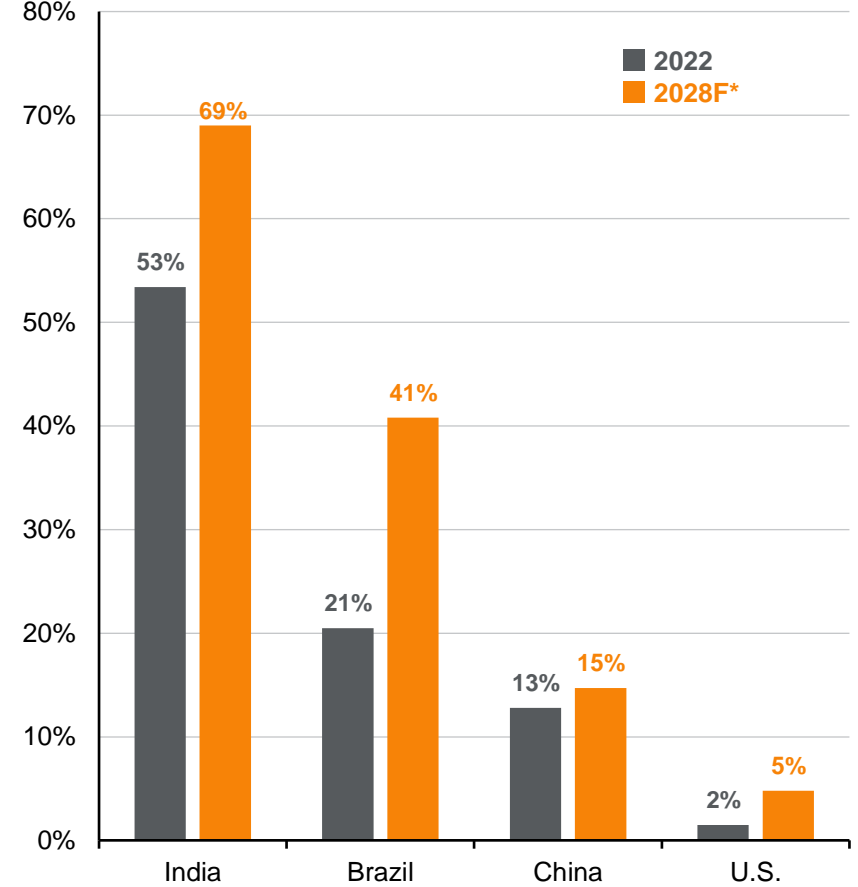
Internet penetration by country

% of total population, GDP per capita, PPP in USD



Digital public infrastructure (UPI*)

Number of real-time payments as a percent of total transactions



Source: J.P. Morgan Asset Management. (Left) World Bank, IAMAI, Kantar. 2022 Internet penetration figures are from IAMAI and Kantar whereas rest of the numbers are for 2021 and are from the World Bank. (Right) ACI Worldwide. *UPI: Unified Payments Interface is a system that powers multiple bank accounts into a single mobile application (of any participating bank) whereby banking features, fund routing and merchant payments are all merged together. *Forecasts are by ACI Worldwide. *Guide to Investing in Asia*. Data are as of April 30, 2024.

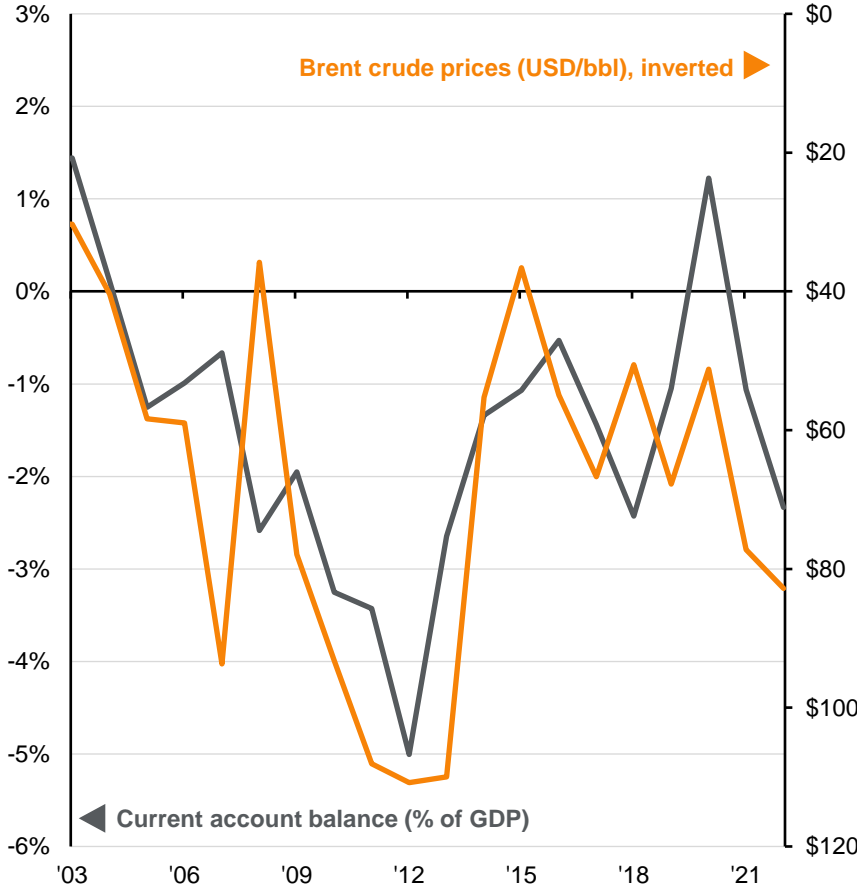


India: Current account and FX

India

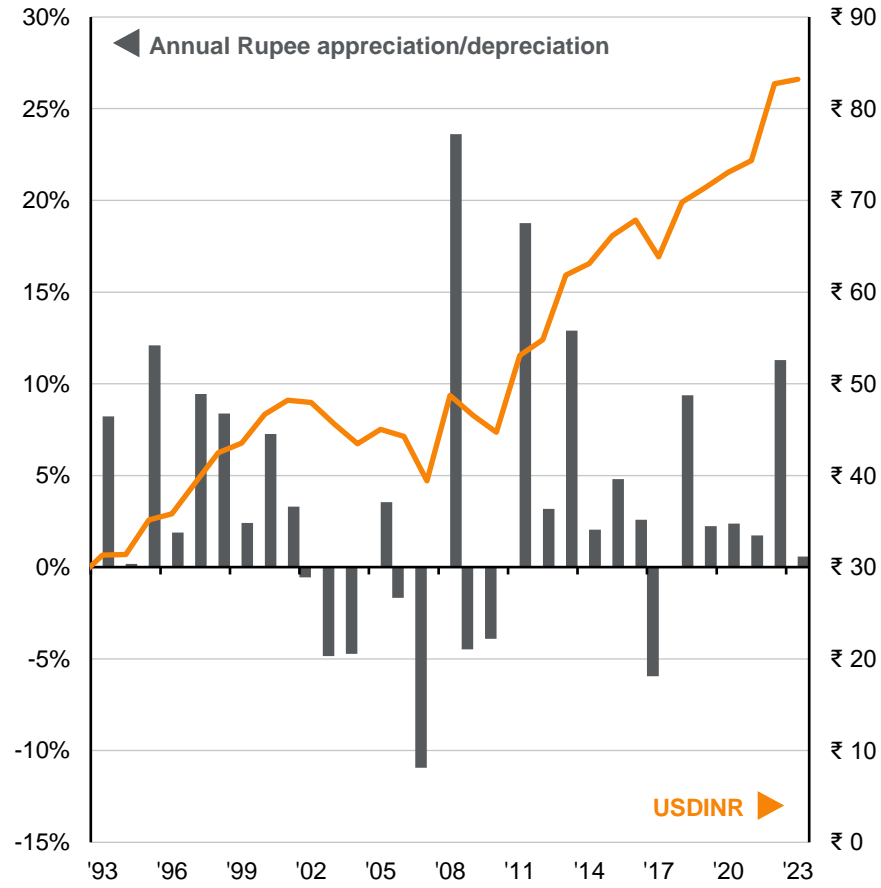
Current account balance and oil prices

Annual average



Change in Rupee value

Yearly, USDINR



Source: FactSet, J.P. Morgan Asset Management. (Left) CRB – Commodity Research Bureau, World Bank – World Development Indicators. (Right) International Monetary Fund, Ministry of Statistics and Program Implementation, Reserve Bank of India. *Guide to Investing in Asia*. Data are as of April 30, 2024.

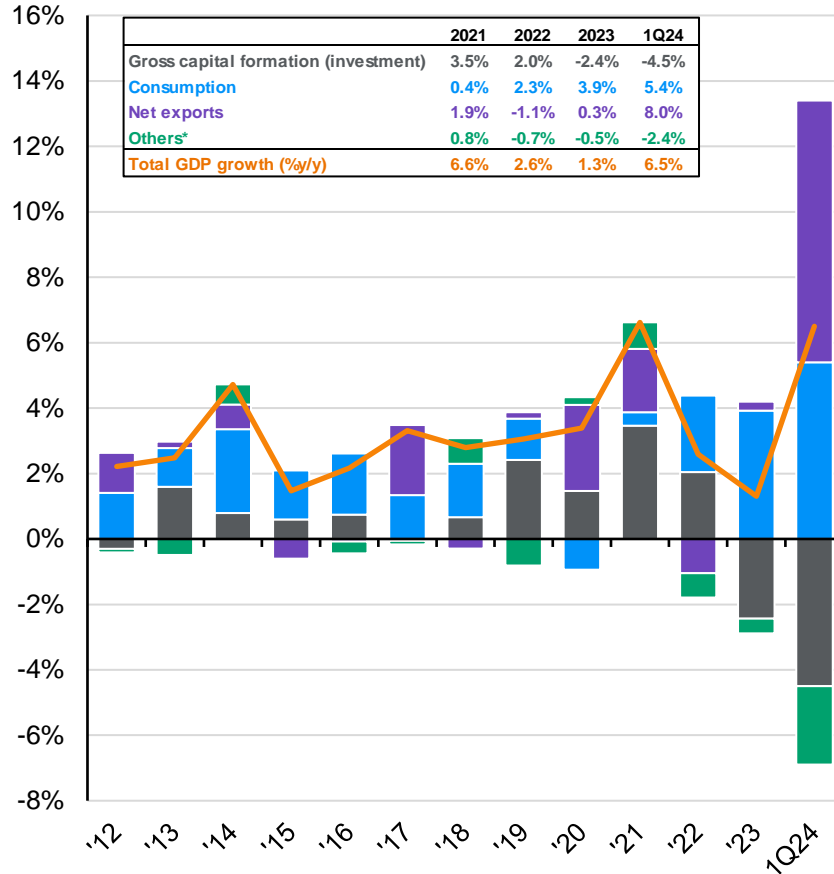


Taiwan: Economic snapshot

North & Southeast Asia

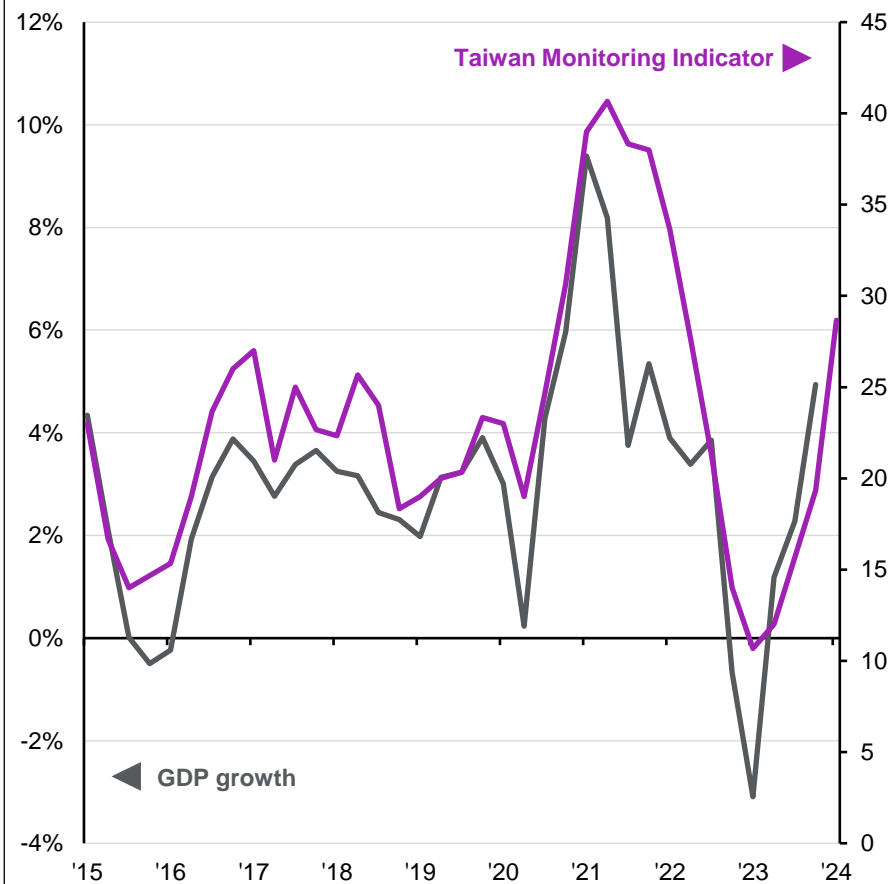
Contribution to real GDP growth

Year-over-year change, nsa



GDP growth and leading indicators

Year-over-year change, seasonally adjusted



Source: DGBAS Statistics Taiwan, FactSet, Markit Economics, Ministry of Economic Affairs Taiwan, J.P. Morgan Asset Management. (Left) *Others include statistical discrepancies. (Right) The Taiwan Monitoring Indicator is made up of nine indicators – the monetary aggregate M1B, the TAIEX average closing price, industrial production, nonagricultural sector employment, customs-cleared export value, import value of machinery and electrical equipment, index of producer's shipment for manufacturing, the TIER manufacturing sector composite indicator and sales in wholesale, retail and food service industries. The Monitoring Indicator by the National Development Council (NDC) provides a metric to assess economic outlook.

Guide to Investing in Asia. Data are as of April 30, 2024.

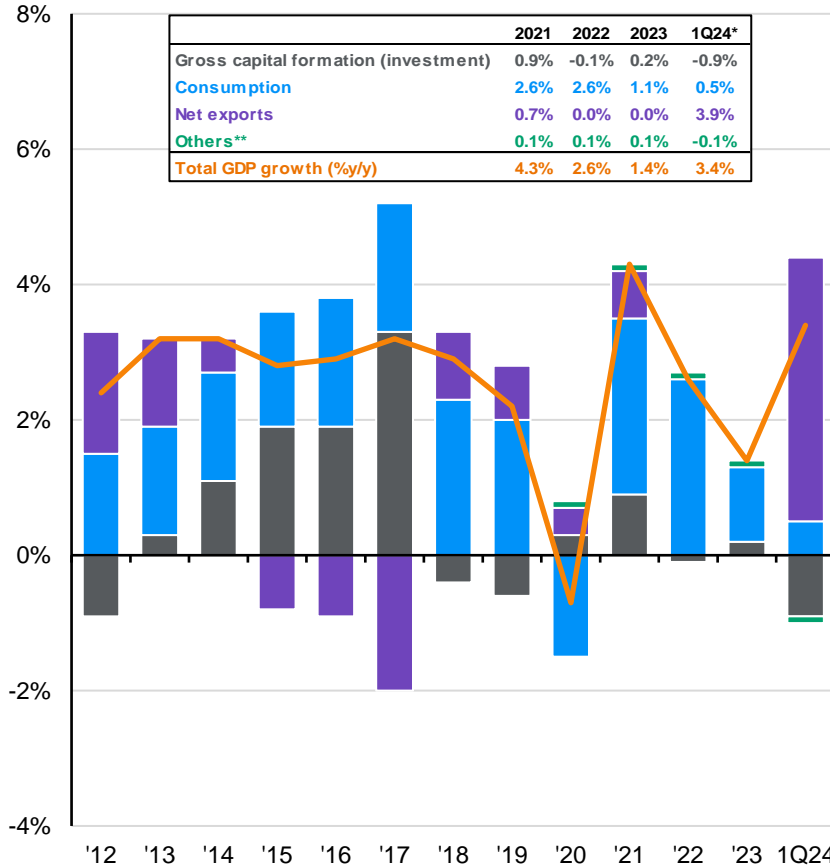


Korea: Economic snapshot

North & Southeast Asia

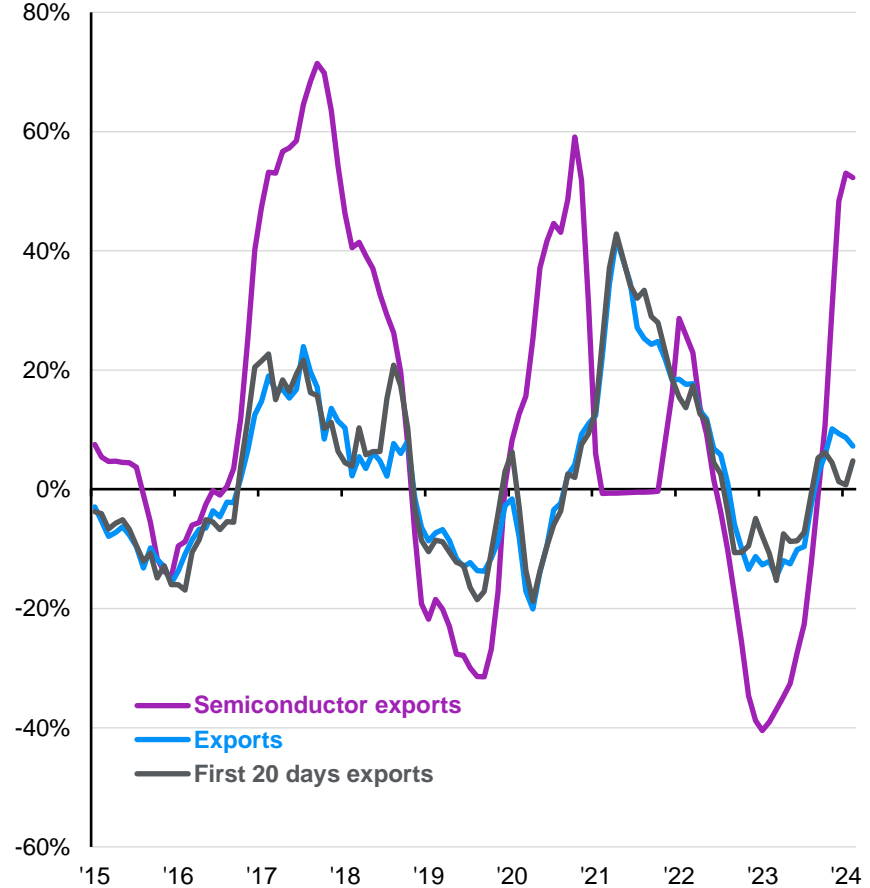
Contribution to real GDP growth

Year-over-year change, nsa



Exports

Year-over-year change, 3-month moving average



Source: Bank of Korea, FactSet, J.P. Morgan Asset Management. (Left) *1Q24 GDP growth q/q (seasonally adjusted annual rate) was 5.2%. **Others include statistical discrepancies. (Right) CEIC, Customs Service Korea, Ministry of Trade, Industry and Energy – Korea. Korea publishes the total value of exports in the first 20 days of each month. *Guide to Investing in Asia*. Data are as of April 30, 2024.

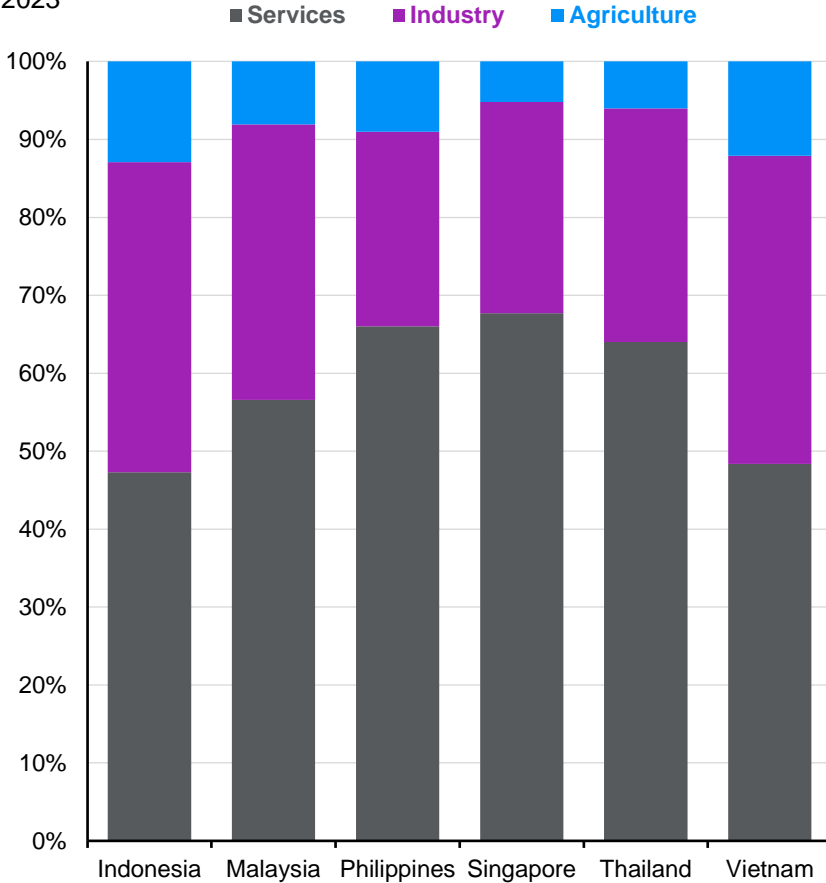


ASEAN: GDP growth

North & Southeast Asia

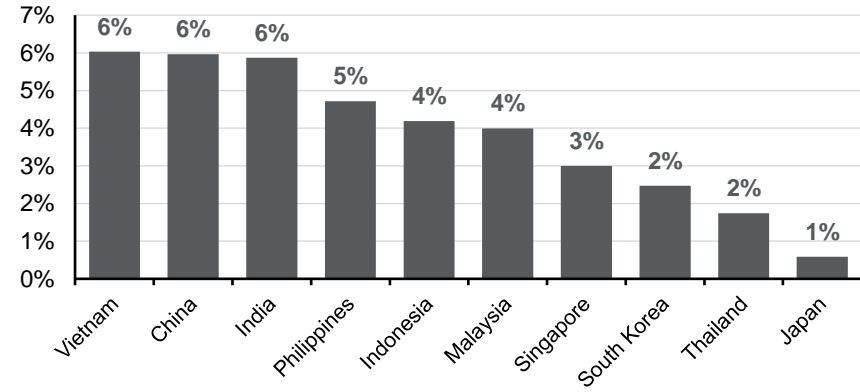
GDP breakdown by industry

2023



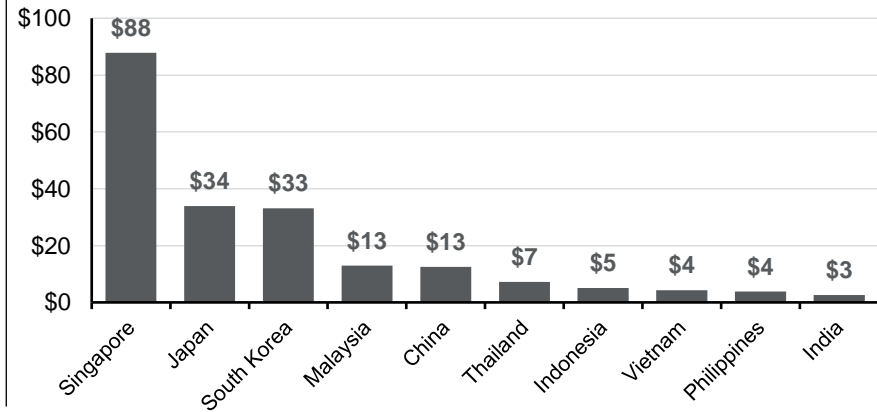
Real GDP growth

Compounded annual growth rate, 2014-2023



GDP per capita

Current prices, USD thousands



Source: FactSet, J.P. Morgan Asset Management. (Left) CEIC, World Bank, central bank websites, government websites. (Top and bottom right) International Monetary Fund – World Economic Outlook April 2024. ASEAN = Association of Southeast Asian Nations. Guide to Investing in Asia. Data are as of April 30, 2024.

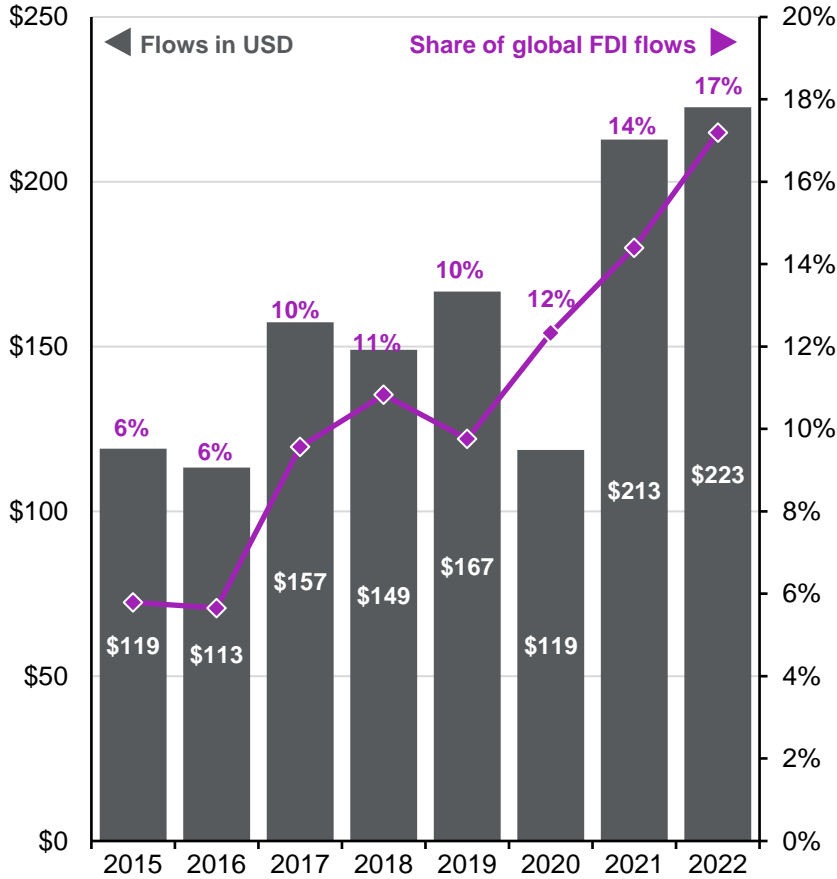


ASEAN: Foreign direct investment and tourism

North & Southeast Asia

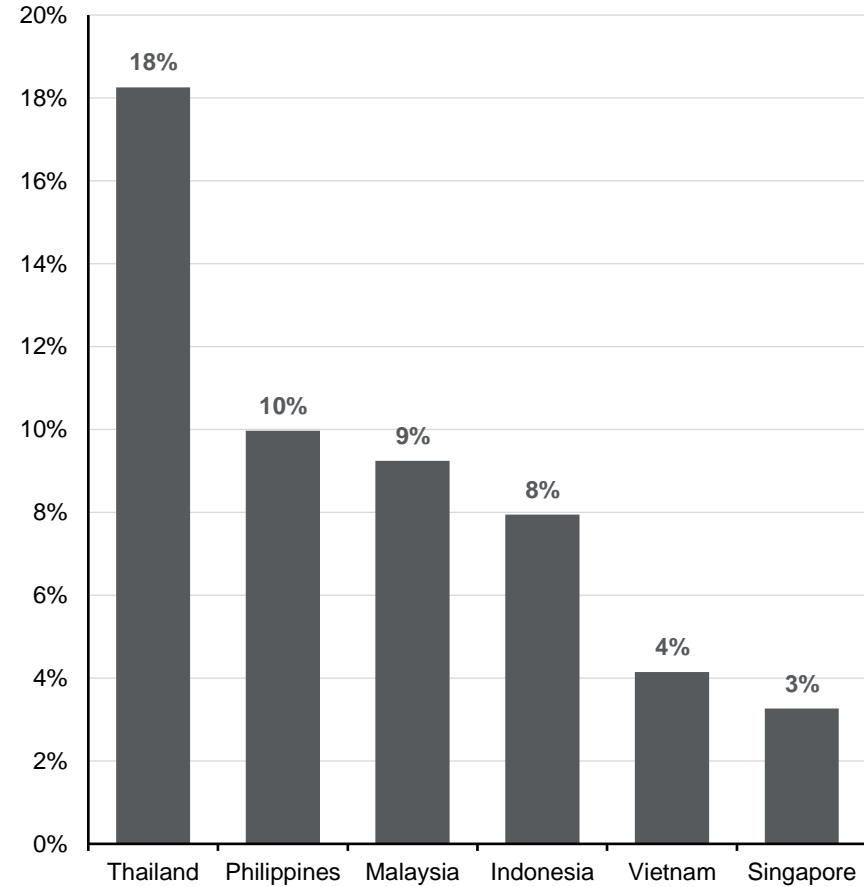
Share of global FDI flows

USD billions



Tourism revenues as a % of exports

% of total exports, 2015-2019 average



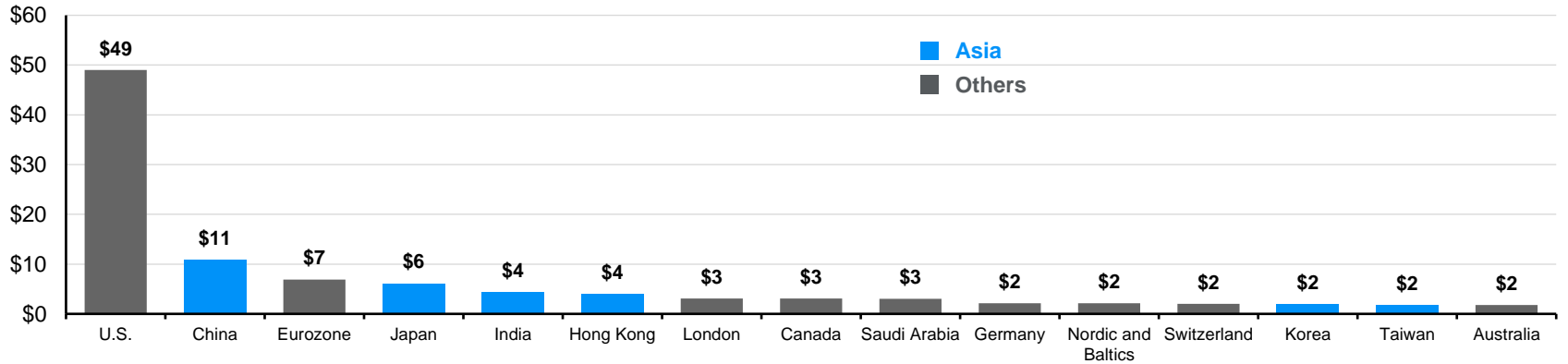
Source: J.P. Morgan Asset Management. (Left) UNCTAD. FDI = Foreign Direct Investment. (Right) World Bank – World Development Indicators.
 ASEAN = Association of Southeast Asian Nations.
 Guide to Investing in Asia. Data are as of April 30, 2024.



Global equity market size and index weight

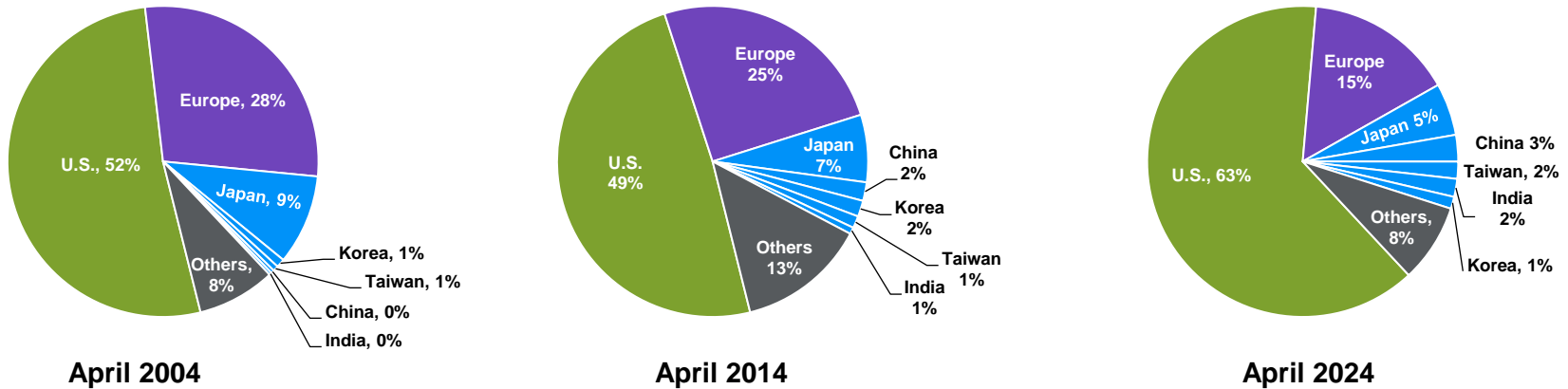
Top global equity markets by market cap

USD trillions, 2023*



MSCI All Country World Index weightings

% of total index market capitalization

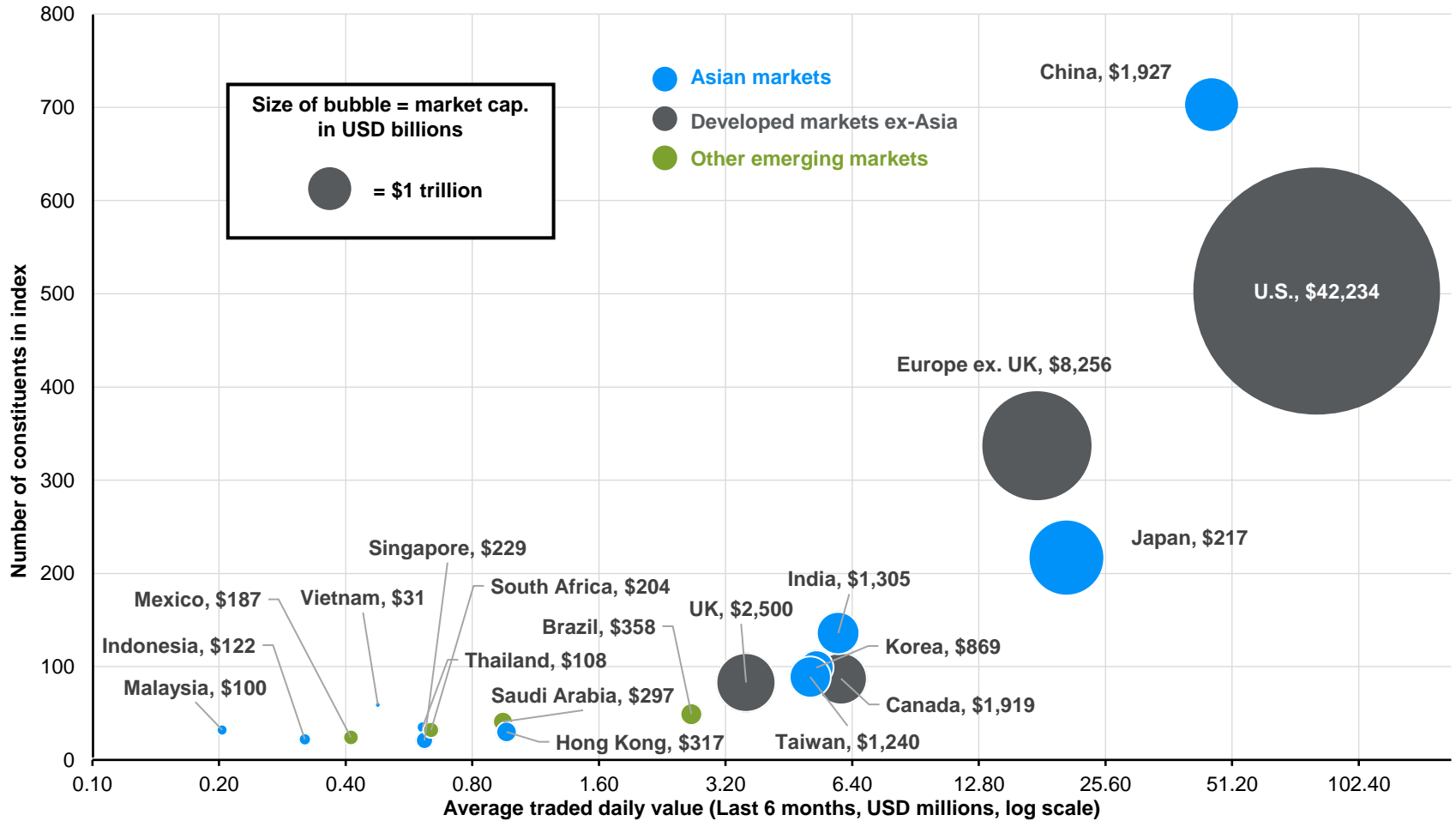


Source: J.P. Morgan Asset Management. (Top) World Federal of Exchanges. *All data are as of 2023 except for London which is as of 2022. U.S.: NYSE and Nasdaq, Eurozone: Euronext, China: Shenzhen and Shanghai Stock Exchanges, Japan: Japan Exchange Group, India: National Stock Exchange of India, Hong Kong: Hong Kong Exchanges and Clearing, London: LSE Group, Canada: TMX Group, Saudi Arabia: Saudi Exchange, Germany: Deutsche Boerse AG, Nordic and Baltics: Nasdaq Nordic and Baltics, Switzerland: SIX Swiss Exchange, Korea: Korea Exchange, Taiwan: Taiwan Stock Exchange, Australia: ASX Australian Securities Exchange. (Bottom) Countries/regions are represented by their respective MSCI country index. *Guide to Investing in Asia*. Data are as of April 30, 2024.



Global index market cap and liquidity

Size and liquidity of different indices



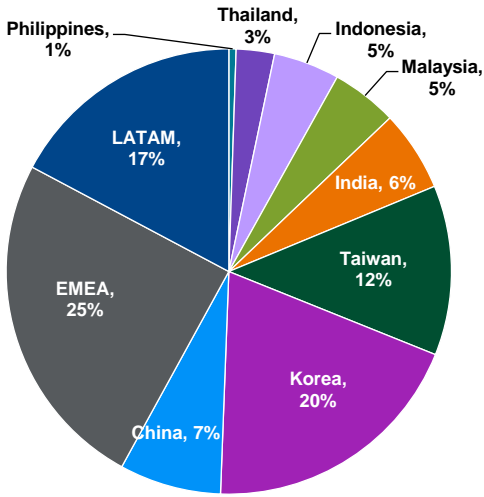
Source: Bloomberg, FactSet, MSCI, Standard & Poor's J.P. Morgan Asset Management. Each market is represented by its respective MSCI Index except for the U.S. which is represented by the S&P 500 Index. The x-axis shows the average traded daily value over the past six months. *Guide to Investing in Asia*. Data are as of April 30, 2024.



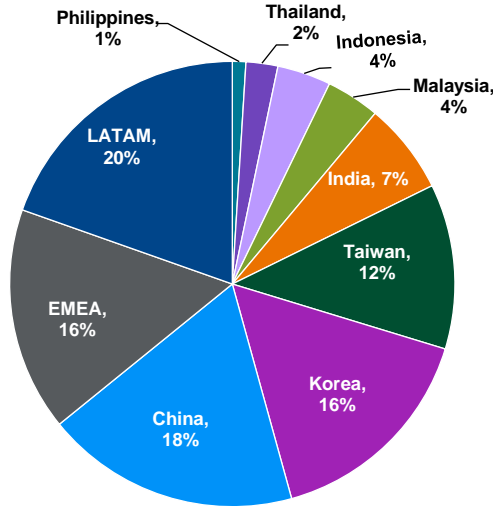
Emerging market index composition change

Asia equities

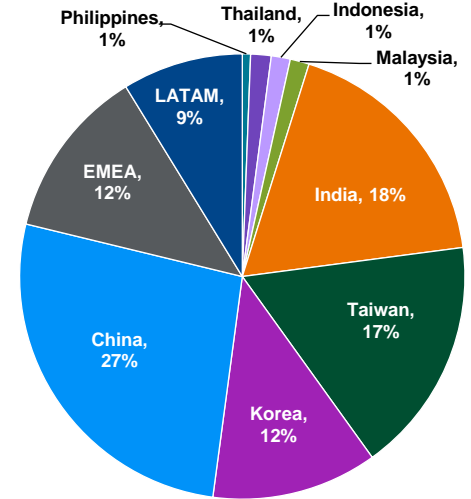
MSCI Emerging Markets Index



April 2004
Asia = 58%



April 2014
Asia = 64%



April 2024
Asia = 79%

Source: FactSet, MSCI, J.P. Morgan Asset Management. Guide to Investing in Asia. Data are as of April 30, 2024.

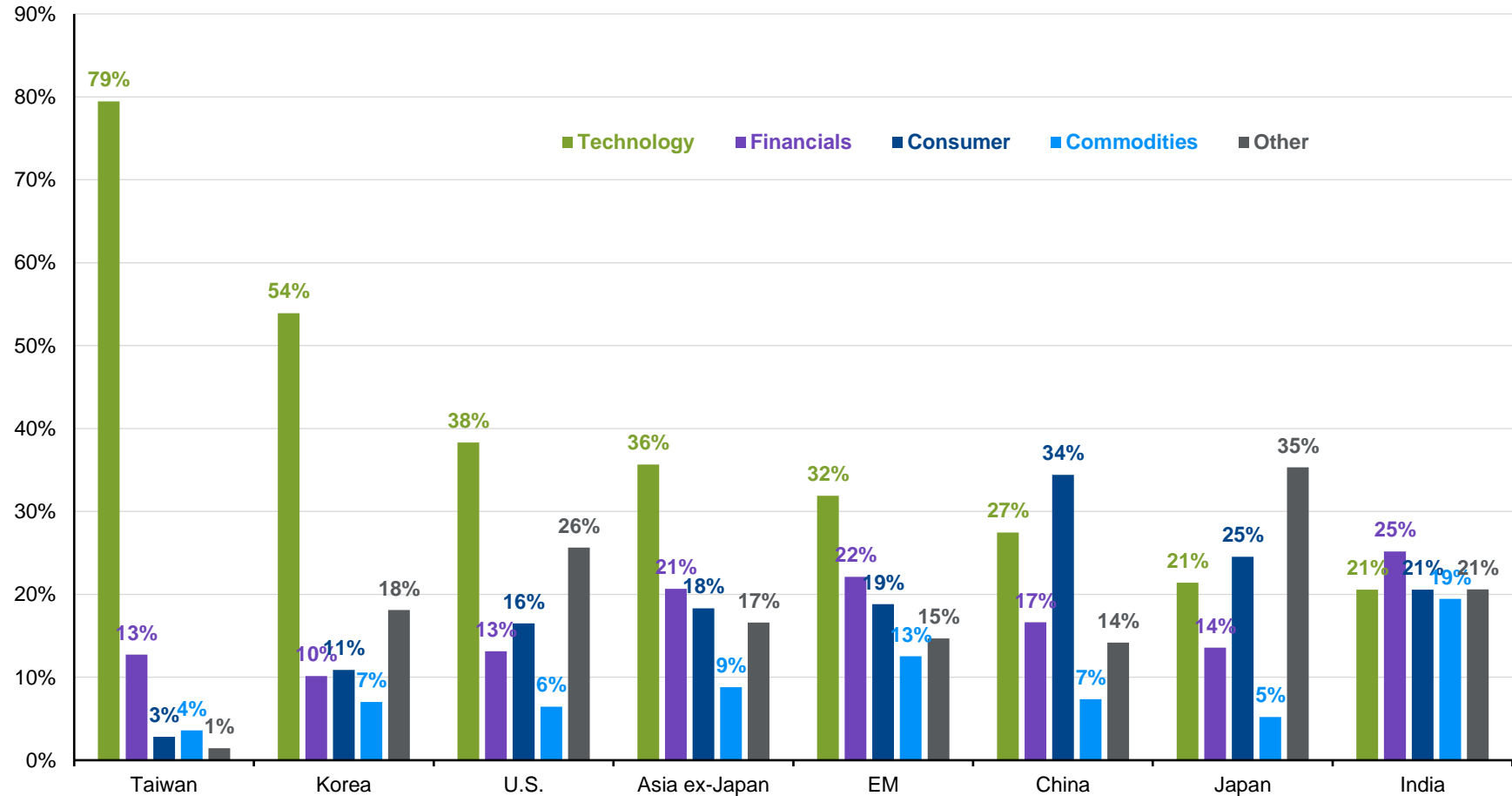


Sector composition

Asia equities

Sector weights

% of index market capitalization



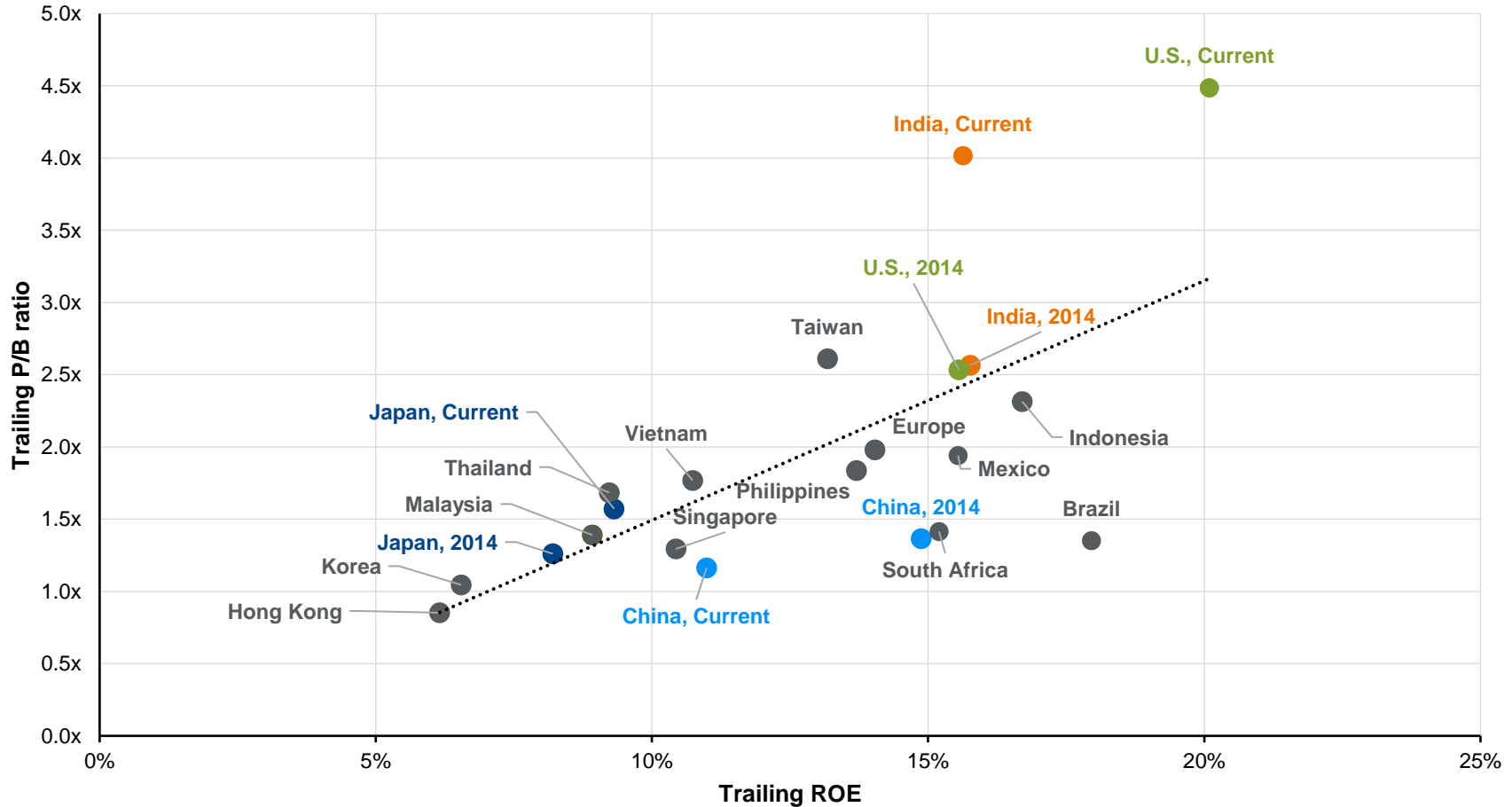
Source: FactSet, MSCI, Standard & Poor's, J.P. Morgan Asset Management. Each country is represented by their respective MSCI index except the U.S. which is represented by the S&P 500 Index. Consumer = Consumer staples and consumer discretionary, Technology = Information technology and communications, Financials = Financials, Commodities = Energy and materials. Other = Industrials, Healthcare, Utilities, and Real Estate. *Guide to Investing in Asia*. Data are as of April 30, 2024.



Return-on-equity and valuations

Return-on-equity and price-to-book ratio for different markets

Last 12 months



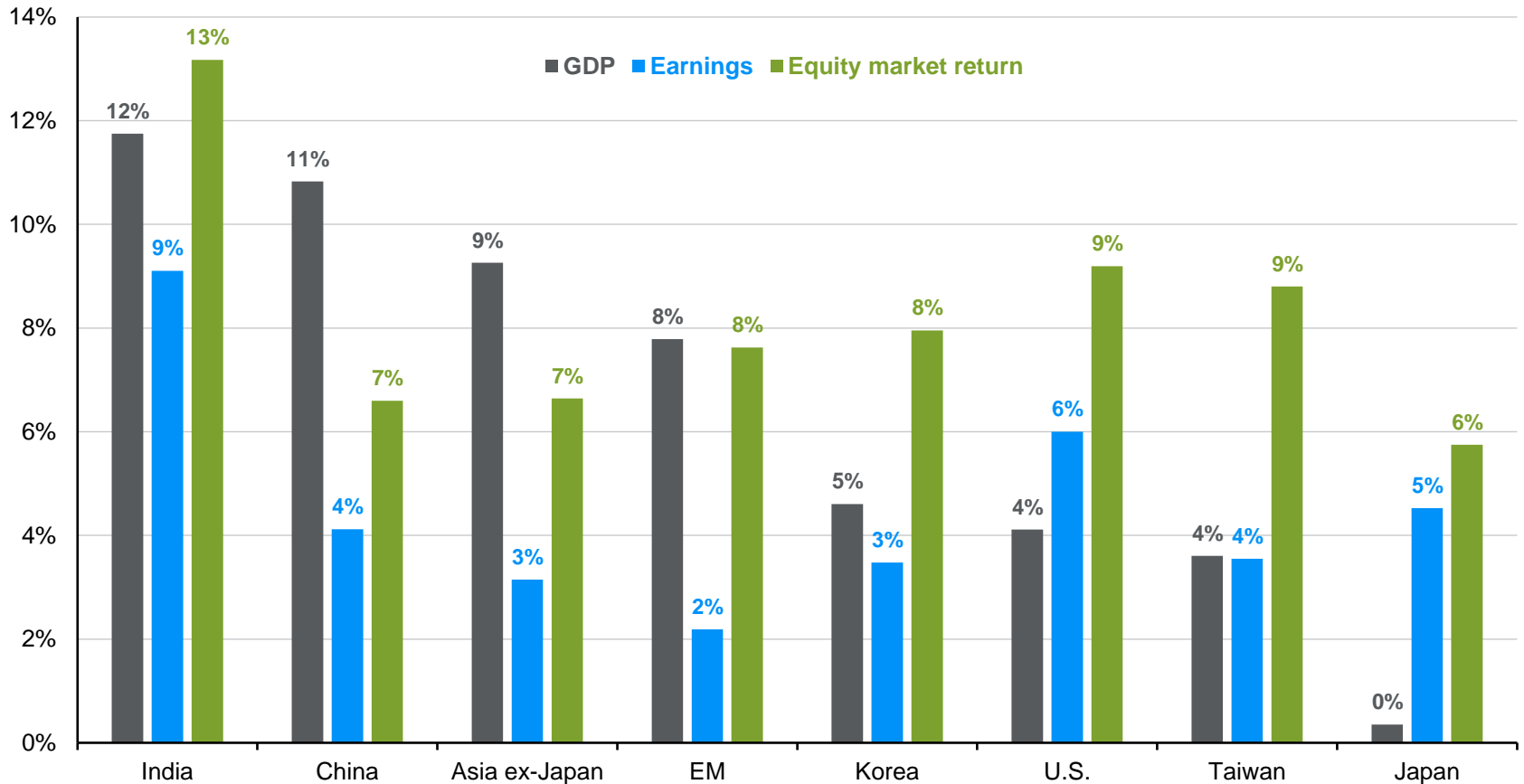
Source: FactSet, MSCI, J.P. Morgan Asset Management. Numbers are based on MSCI indices except for the U.S. which is based on the S&P 500 Index. ROE = return-on-equity and P/B = price-to-book. Guide to Investing in Asia. Data are as of April 30, 2024.



Economic growth, earnings and returns

Asia equities

Nominal GDP growth, earnings and equity market returns 2004-2023, annualized



Source: FactSet, MSCI, World Bank, J.P. Morgan Asset Management. Earnings and equity market returns are represented by each country/region's respective MSCI index. Nominal GDP growth, equity returns and earnings growth are calculated in local currency except for Asia ex-Japan and emerging markets, which is in U.S. dollars. GDP for Asia ex-Japan is calculated by adding up nominal GDP in USD for all the 10 countries which are tracked by MSCI Asia ex-Japan. GDP for EM is calculated by adding up nominal GDP in USD for all the 24 countries which are tracked by MSCI EM. Past performance is not indicative of current or future results. *Guide to Investing in Asia*. Data are as of April 30, 2024.



Correlation and volatility

Asia equities

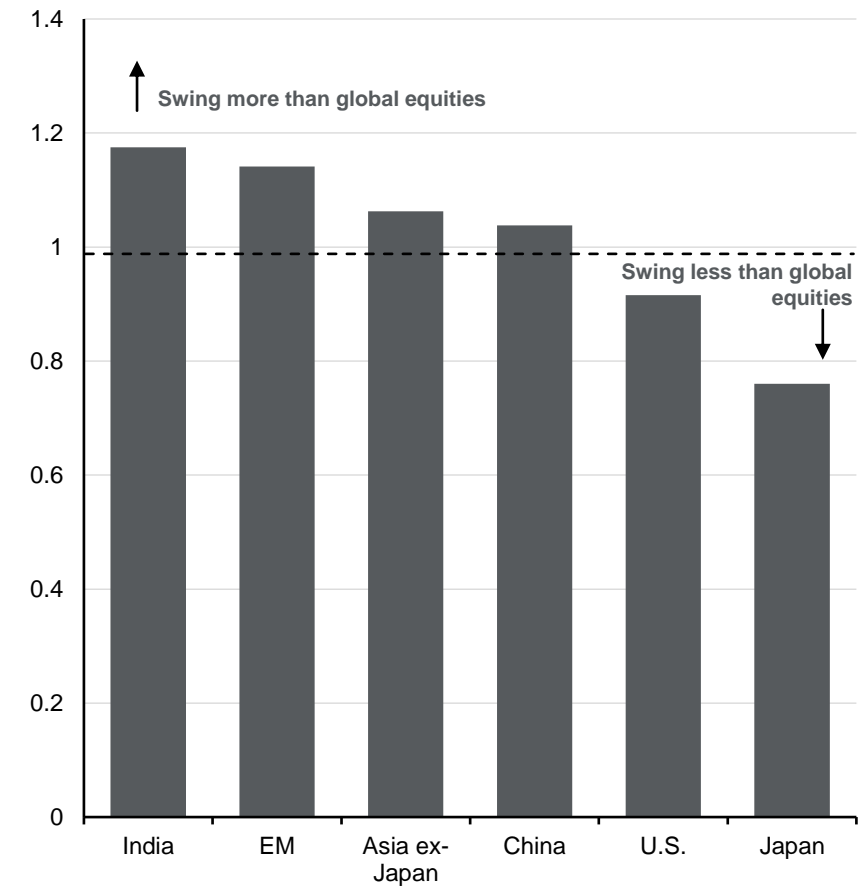
Correlation between Asian and global equities

U.S. dollars, monthly price returns

	S&P 500	MSCI ACWI	MSCI EM	MSCI EAFE	MSCI Asia ex-JP	MSCI China	MSCI Japan	MSCI India
S&P 500	1.00							
MSCI ACWI	0.96	1.00						
MSCI EM	0.74	0.87	1.00					
MSCI EAFE	0.88	0.97	0.86	1.00				
MSCI Asia ex-JP	0.71	0.83	0.97	0.82	1.00			
MSCI China	0.51	0.64	0.85	0.65	0.90	1.00		
MSCI Japan	0.72	0.80	0.69	0.84	0.66	0.51	1.00	
MSCI India	0.62	0.71	0.78	0.69	0.77	0.57	0.55	1.00

Beta of different equity markets to the MSCI AC World Index

U.S. dollars, monthly price returns



Source: MSCI, FactSet, Standard & Poor's, J.P. Morgan Asset Management. (Left) Correlations are based on monthly price return data in USD for the period 4/30/2004-4/30/2024. (Right) U.S., Japan, EM, Asia ex-Japan, India, and China are represented by the following indices: S&P 500 Index, MSCI Japan Index, MSCI Emerging Market Index, MSCI Asia ex-Japan Index, MSCI India Index, and MSCI China Index. Based on monthly price return data in USD for the period 4/30/2004-4/30/2024. Past performance is not indicative of current or future results. *Guide to Investing in Asia*. Data are as of April 30, 2024.



Equity market returns

Asia equities

2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	YTD '24	2014-2023	
											Ann.	Vol.
China A 52.1%	Japan 9.9%	Taiwan 19.6%	China 54.3%	U.S. -4.4%	Taiwan 37.7%	Korea 45.2%	U.S. 28.7%	ASEAN -4.1%	Taiwan 31.3%	Taiwan 9.9%	Taiwan 12.3%	China A 23.9%
India 23.9%	China A 2.4%	U.S. 12.0%	Korea 47.8%	India -7.3%	China A 37.2%	Taiwan 42.0%	Taiwan 26.8%	India -7.5%	U.S. 26.3%	India 8.6%	U.S. 12.0%	China 23.5%
U.S. 13.7%	U.S. 1.4%	EM 11.6%	Asia ex-JP 42.1%	Taiwan -8.2%	U.S. 31.5%	China A 38.4%	India 26.7%	Europe -14.5%	Korea 23.6%	U.S. 6.0%	India 10.1%	Korea 22.5%
Taiwan 10.1%	Europe -2.3%	Korea 9.2%	India 38.8%	ASEAN -8.4%	Europe 24.6%	China 29.7%	Europe 17.0%	Japan -16.3%	India 21.3%	Japan 5.8%	Japan 5.3%	Taiwan 20.0%
China 8.3%	India -6.1%	ASEAN 6.2%	EM 37.8%	Japan -12.6%	China 23.7%	Asia ex-JP 25.4%	Japan 2.0%	U.S. -18.1%	Japan 20.8%	China 4.3%	Europe 4.7%	India 19.2%
ASEAN 6.4%	Korea -6.3%	Asia ex-JP 5.8%	China A 32.6%	Asia ex-JP -14.1%	Japan 20.1%	EM 18.7%	ASEAN 0.2%	Asia ex-JP -19.4%	Europe 20.7%	Asia ex-JP 3.7%	China A 4.5%	EM 17.2%
Asia ex-JP 5.1%	China -7.6%	Japan 2.7%	ASEAN 30.1%	EM -14.2%	EM 18.9%	U.S. 18.4%	China A -1.0%	EM -19.7%	EM 10.3%	Europe 3.6%	Asia ex-JP 4.2%	Asia ex-JP 17.1%
EM -1.8%	Asia ex-JP -8.9%	China 1.1%	Taiwan 28.5%	Europe -14.3%	Asia ex-JP 18.5%	India 15.9%	EM -2.2%	China -21.8%	Asia ex-JP 6.3%	China A 3.0%	Korea 3.6%	Europe 16.5%
Japan -3.7%	Taiwan -11.0%	Europe 0.2%	Europe 26.2%	China -18.7%	Korea 13.1%	Japan 14.9%	Asia ex-JP -4.5%	China A -26.5%	ASEAN 0.8%	EM 2.9%	EM 3.0%	ASEAN 15.6%
Europe -5.7%	EM -14.6%	India -1.4%	Japan 24.4%	Korea -20.5%	ASEAN 8.8%	Europe 5.9%	Korea -7.9%	Korea -28.9%	China A -10.9%	ASEAN -0.9%	China 1.0%	U.S. 15.2%
Korea -10.7%	ASEAN -18.4%	China A -15.2%	U.S. 21.8%	China A -27.6%	India 7.6%	ASEAN -6.2%	China -21.6%	Taiwan -29.1%	China -11.0%	Korea -4.1%	ASEAN 0.8%	Japan 14.0%

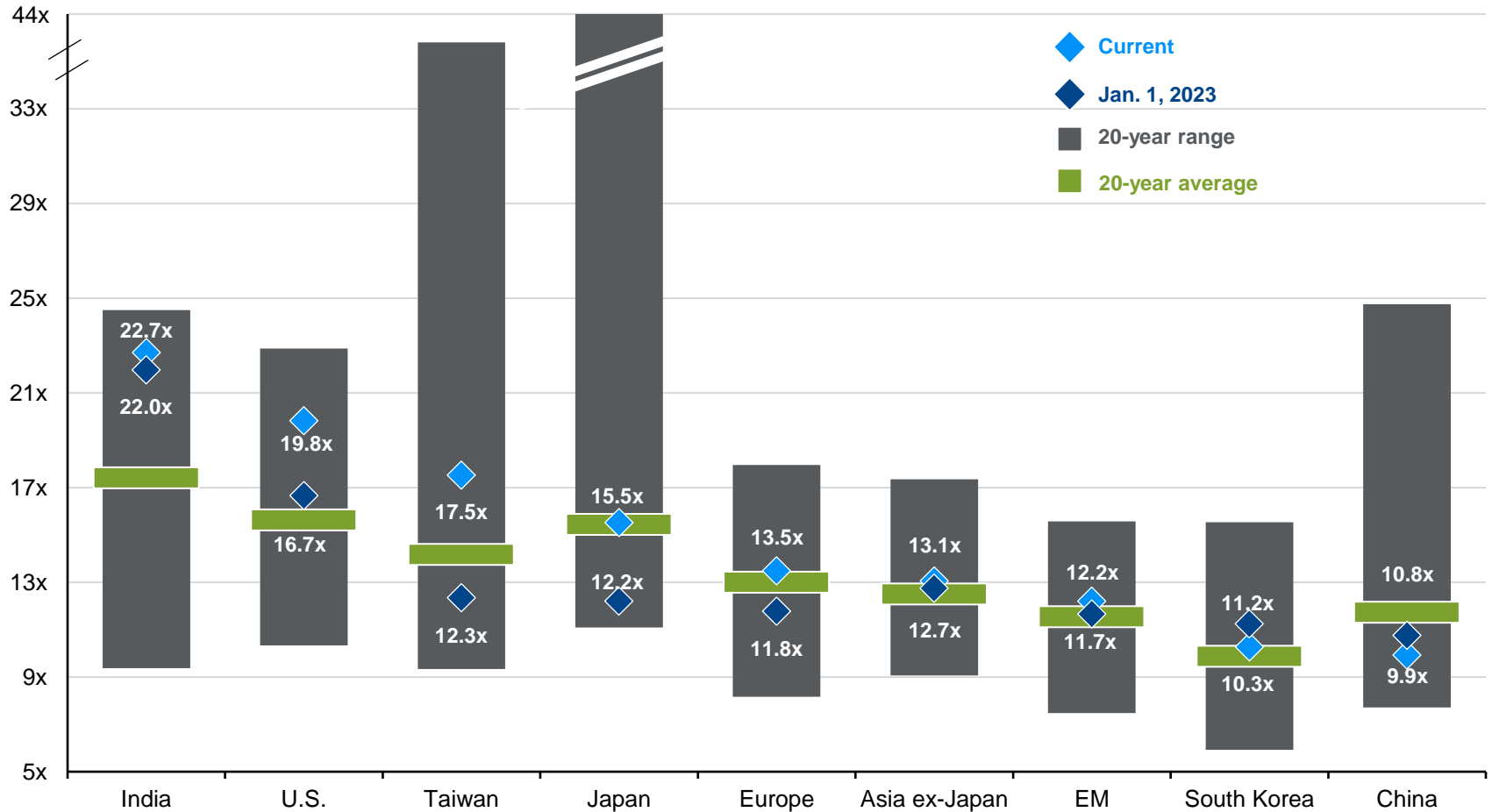
Source: FactSet, MSCI, Standard & Poor's, J.P. Morgan Asset Management. Returns are total returns in U.S. dollars based on MSCI indices, except the U.S., which is the S&P 500, and China A, which is the CSI 300 index in U.S. dollar terms. China return is based on the MSCI China index. 10-yr total (gross) return data is used to calculate annualized returns (Ann.) and annualized volatility (Vol.) and reflect the period 12/31/13 – 12/31/23. Past performance is not a reliable indicator of current and future results. *Guide to Investing in Asia*. Data are as of April 30, 2024.



Equity valuations

Global valuations

Current and 20-year price-to-earnings ratios, next 12 months



Asia equities

Source: FactSet, MSCI, Standard & Poor's, J.P. Morgan Asset Management. Valuation measures are based on MSCI indices except for the U.S. which is based on the S&P 500 Index. Guide to Investing in Asia. Data are as of April 30, 2024.

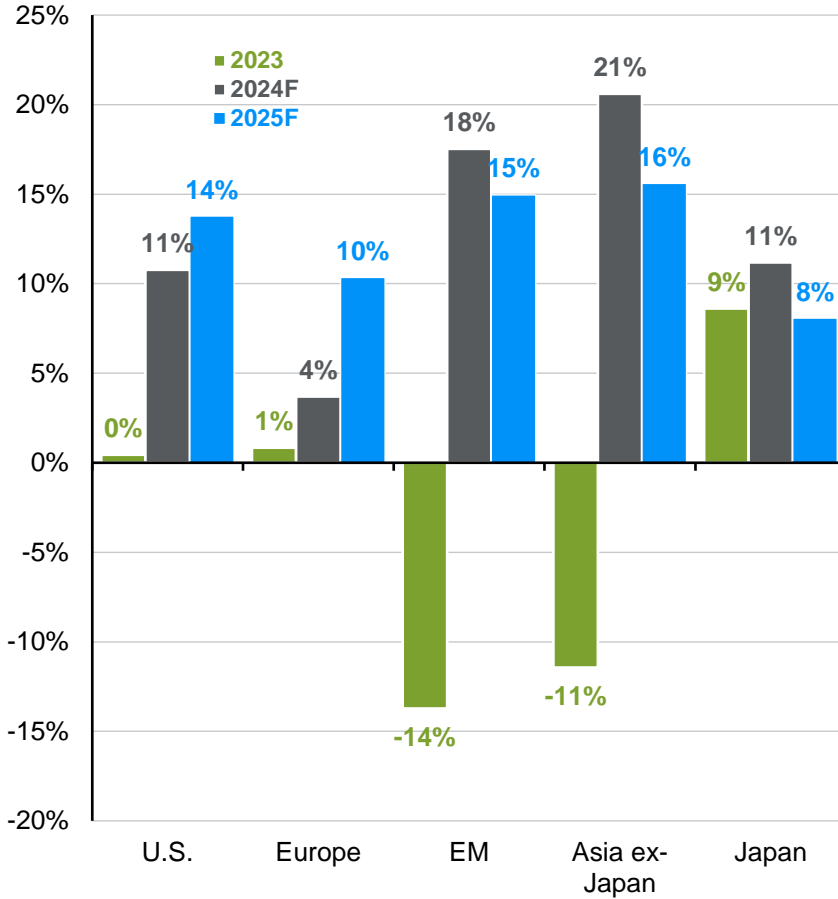


Earnings expectations and revisions

Asia equities

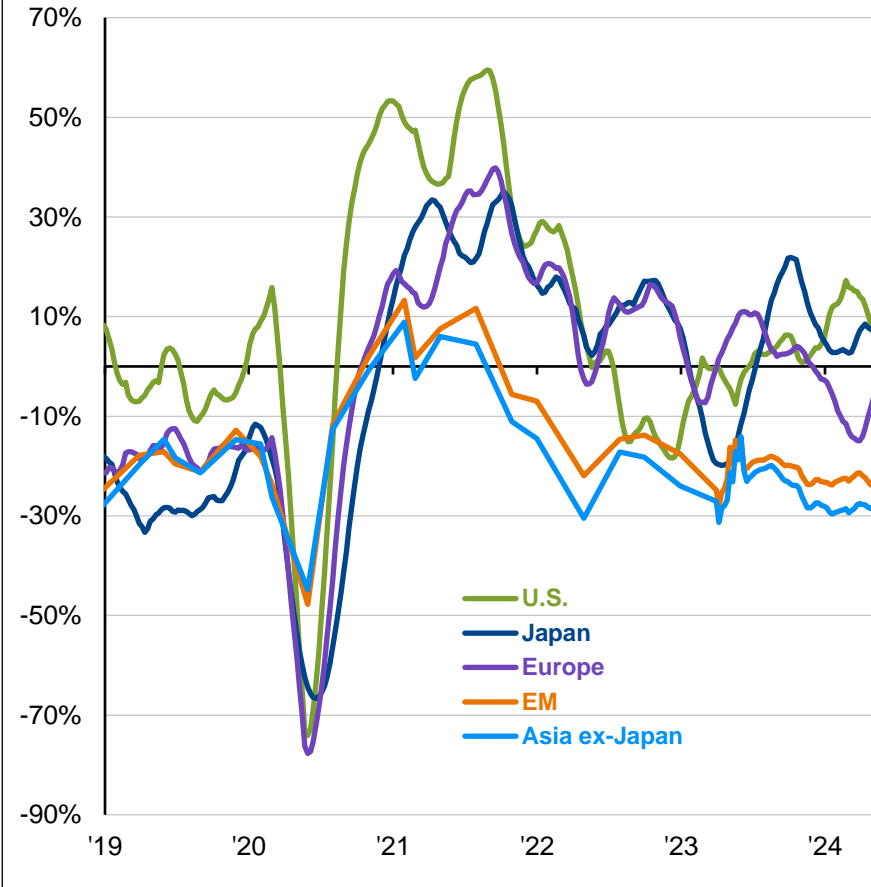
Earnings growth

Next 12 months earnings per share, y/y growth, consensus



Earnings revisions ratios

Net earnings revisions to consensus estimates, 12-week moving avg.



Source: FactSet, MSCI, J.P. Morgan Asset Management. (Right) Earnings revisions ratio is calculated by dividing total revisions by net revisions. All countries are represented by their MSCI country indices except the U.S. which is represented by the S&P 500 Index. *Guide to Investing in Asia*. Data are as of April 30, 2024.

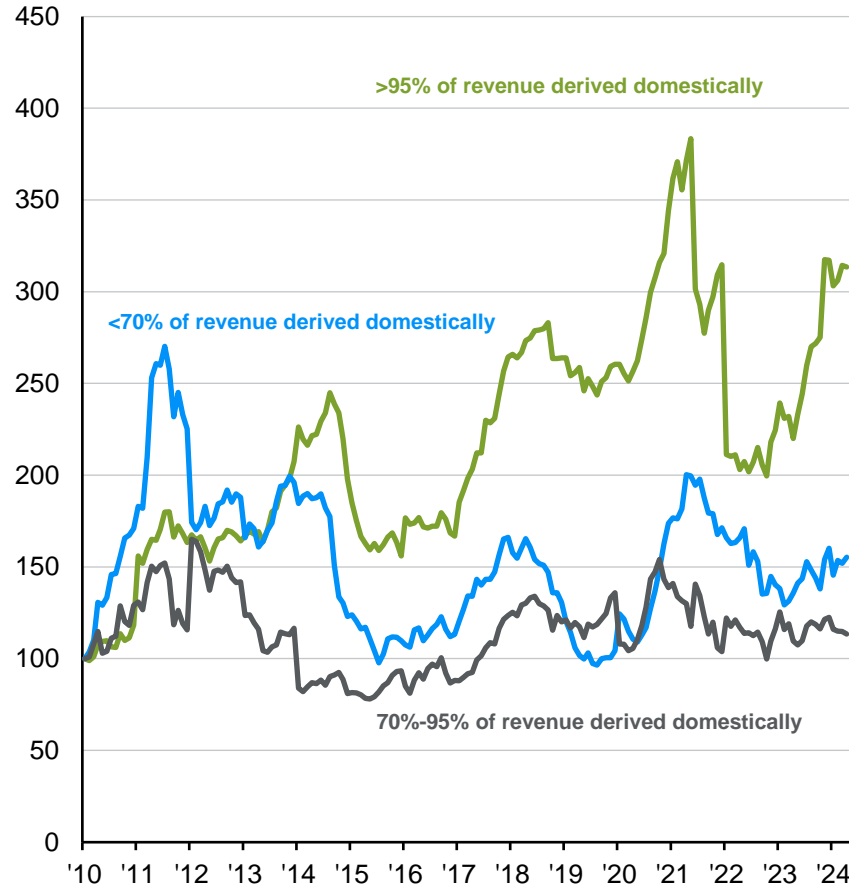


Asia ex-Japan: Earnings and revenue exposure

Asia equities

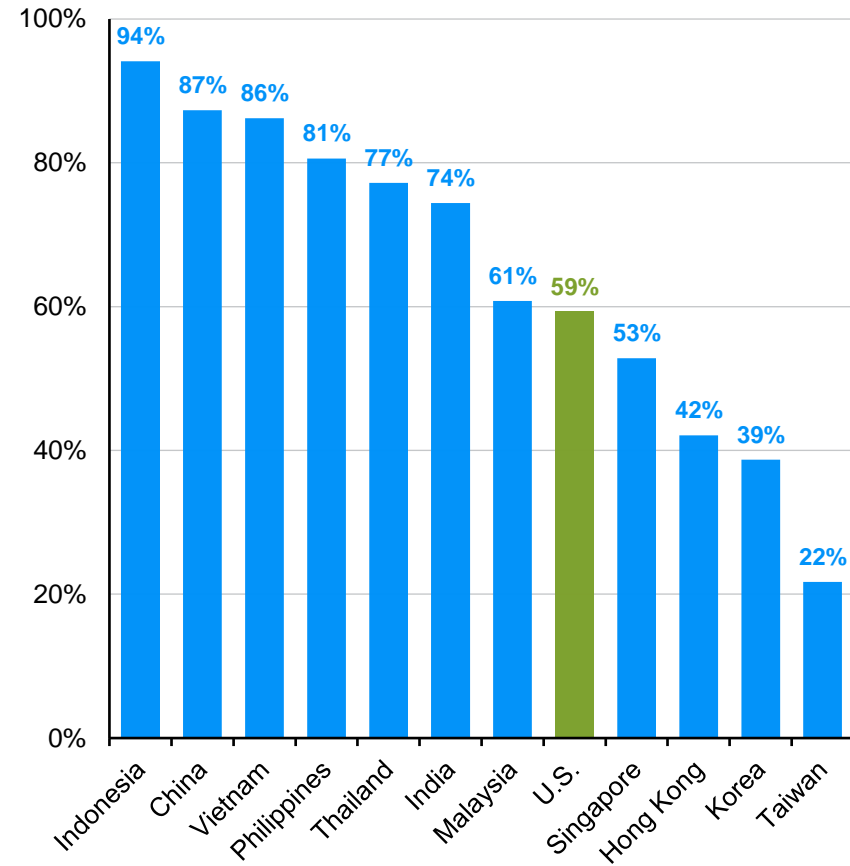
Domestic vs. export-oriented Asian companies*

MSCI Asia ex-Japan, earnings per share, Jan. 2010 = 100



Share of revenue derived domestically

Last 12 months



Source: FactSet, MSCI, J.P. Morgan Asset Management. (Left) Past performance is not a reliable indicator of current and future results. *Universe of stocks within the MSCI AC Asia ex-Japan index are split into three buckets depending on their revenue exposure to their domestic market. Over the time period examined (01/31/2010 – 04/30/2024), monthly adjustments are made to the buckets to reflect changes in a company's operations over time. Subsequently, EPS for each bucket is calculated by summing the market value-weighted EPS for each company monthly over the examined period. Each EPS series is then indexed to 100 on 01/31/2010. (Right) FactSet Geoviv. Countries are represented by their respective MSCI country index.

Guide to Investing in Asia. Data are as of April 30, 2024.



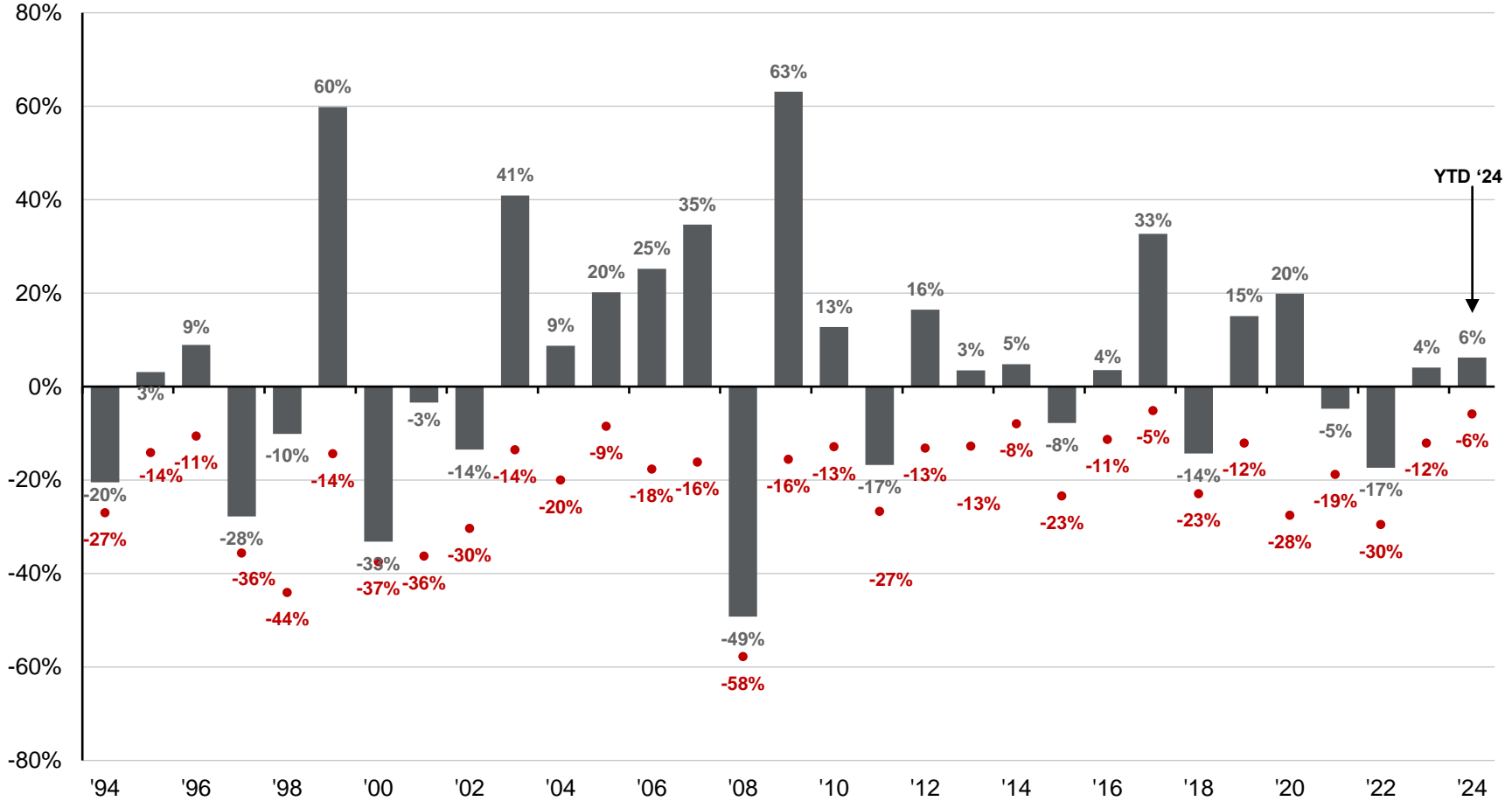
Asia ex-Japan: Annual returns and intra-year declines

MI | GTIA | 60

Asia equities

MSCI AC Asia ex. Japan intra-year declines vs. calendar year returns

Local currency, average intra-year drops of -21.2% (median: -16.9%) and annual returns positive in 18 of 30 years of an average of 5.3%



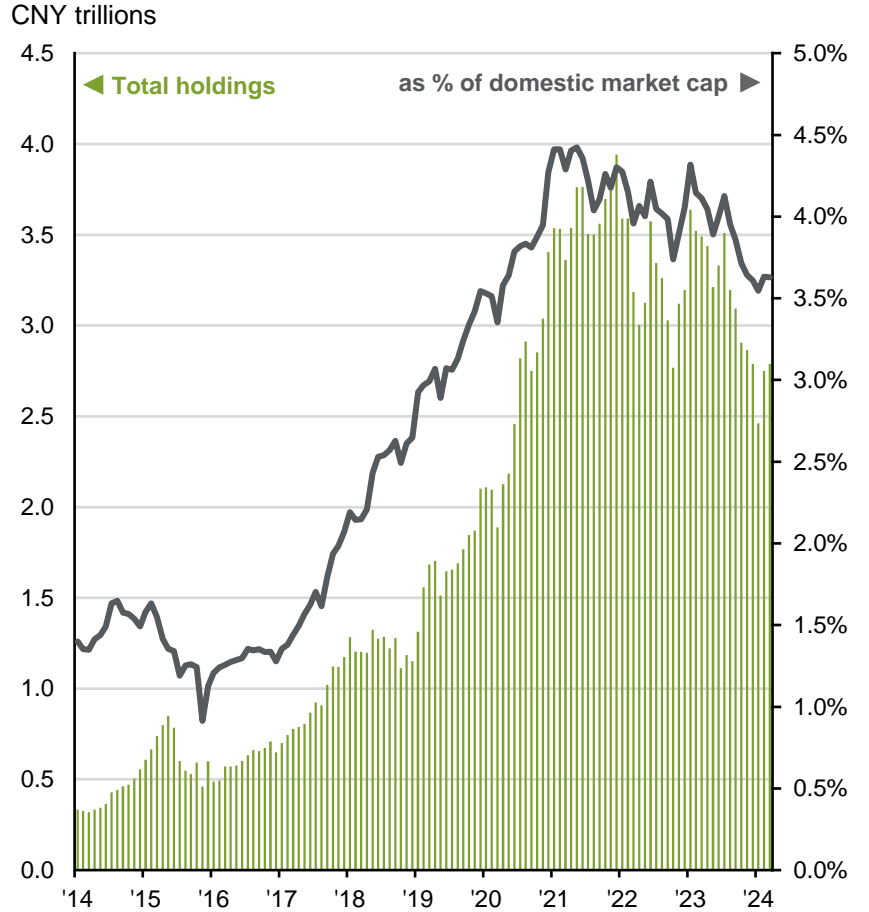
Source: FactSet, MSCI, J.P. Morgan Asset Management. Returns are based on price index only and do not include dividends. Intra-year drops refers to the largest market drops from a peak to a trough during the year (represented by the red dots). For illustrative purposes only. Past performance is not indicative of current or future results. Guide to Investing in Asia. Data are as of April 30, 2024.



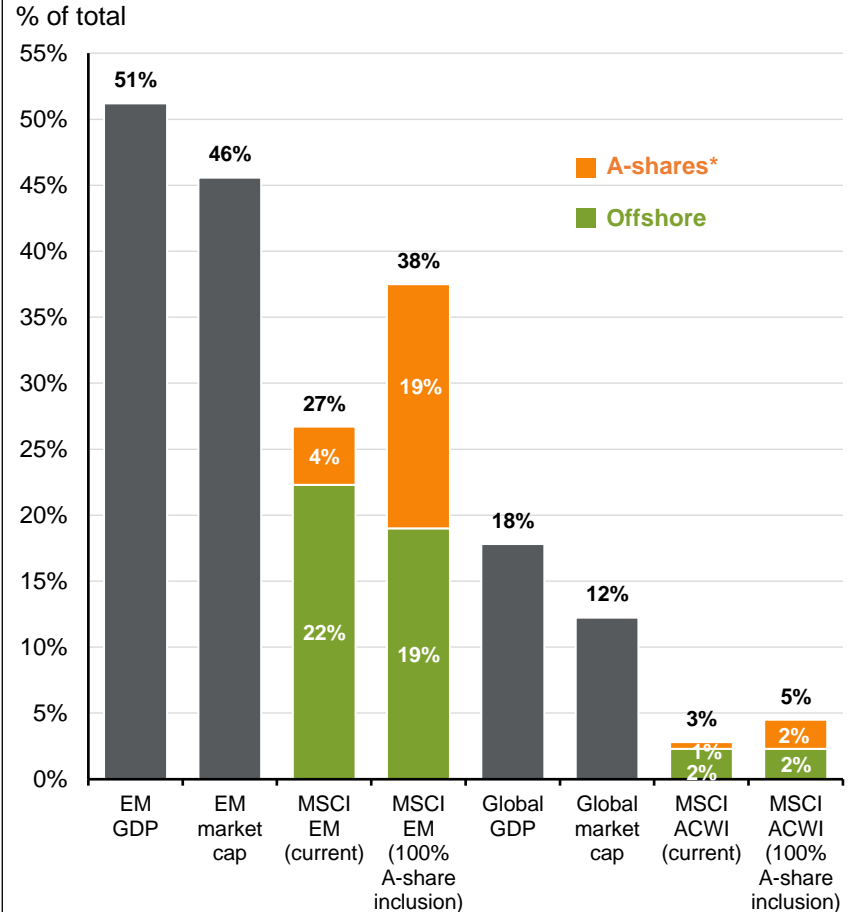
China: Onshore equities

Asia equities

Foreign investors' holdings of onshore Chinese equities



China's weight in selected indicators



Source: J.P. Morgan Asset Management; (Left) CEIC, People's Bank of China, Shanghai Stock Exchange, Shenzhen Stock Exchange. (Right) Bloomberg L.P., MSCI, World Bank. Share of EM GDP is for 2022 and is calculated as Chinese nominal GDP in U.S. dollars as a percentage of all emerging markets within the MSCI EM index and as a percentage of the global GDP. Share of EM market cap is for 2022 and is calculated as China's market capitalization of listed domestic companies as a percentage of all emerging markets' capitalization of listed domestic companies within the MSCI EM index and as a percentage of global market capitalization. *An index inclusion factor (IIF) of 20% is applied to China A Large Cap, ChiNext Large Cap and China A Mid Cap (including eligible ChiNext shares) within MSCI ACWI and MSCI EM Index. 100% A-share inclusion is shown for illustrative purposes only. *Guide to Investing in Asia*. Data are as of April 30, 2024.

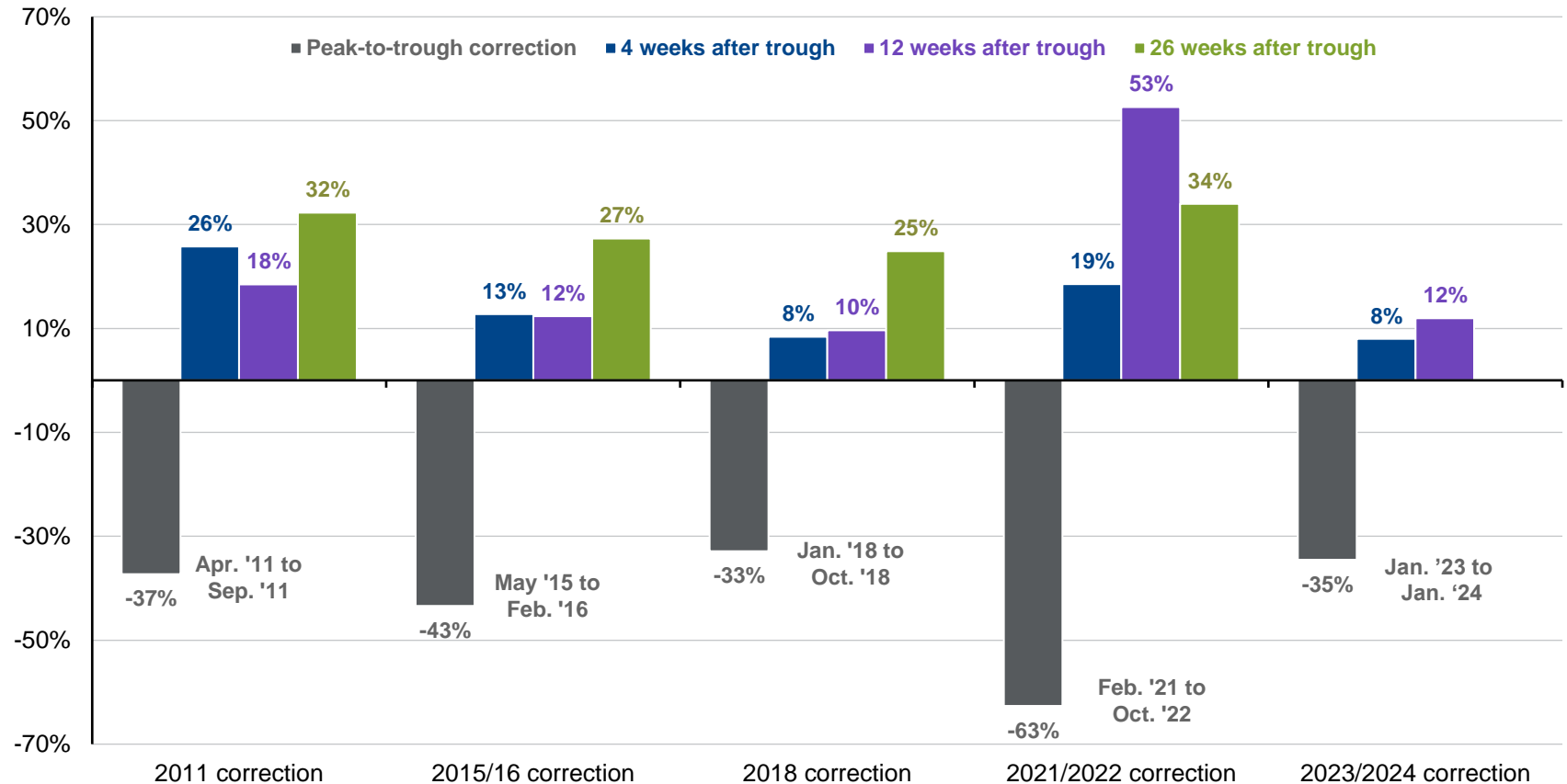


China: Equity market corrections and subsequent performance

Asia equities

Chinese equity market corrections and subsequent performance

MSCI China Index, USD, price returns



Source: Bloomberg L.P., J.P. Morgan Asset Management.

Chinese market performance is based on the MSCI China price index only and do not include dividends.

The periods above were chosen to illustrate market moving events in China and the recovery 4, 12, and 26 weeks after market trough. Past performance is not indicative of current or future results. There is no 26 weeks after trough bar for the latest correction because 26 weeks have not passed yet since the January 2024 low.

Guide to Investing in Asia. Data are as of April 30, 2024.



India: Equity market size and evolution

Asia equities

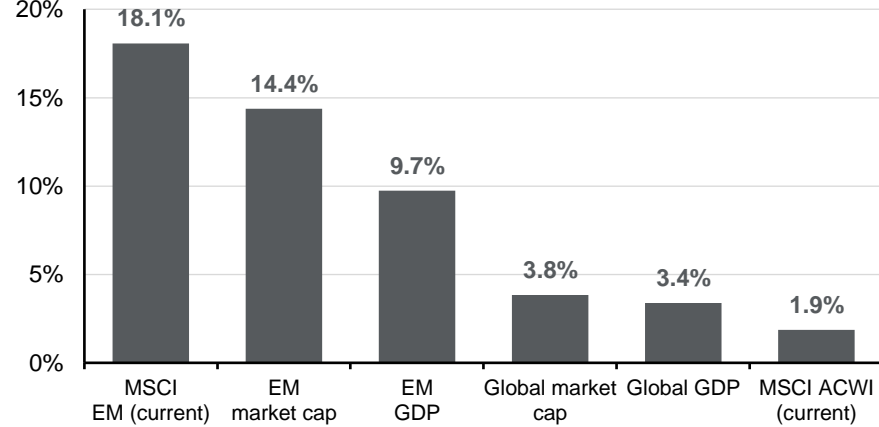
Weighting of India in the MSCI EM Index

Monthly



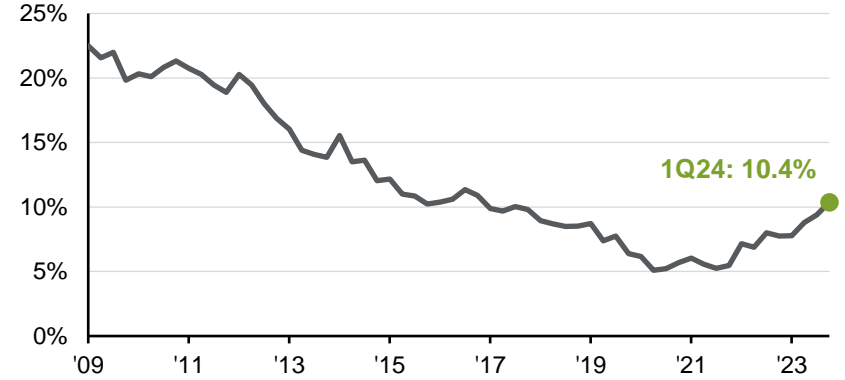
India's weight in selected indicators

% of total



State-owned enterprises

% of market cap of all stock exchange-listed companies, quarterly



Source: FactSet, MSCI, J.P. Morgan Asset Management. (Top right) World Bank – World Development Indicators. EM = Emerging Markets. Global GDP figures are as of 2022. (Bottom right) National Stock Exchange of India Limited. Primeinfobase.com. Guide to Investing in Asia. Data are as of April 30, 2024.

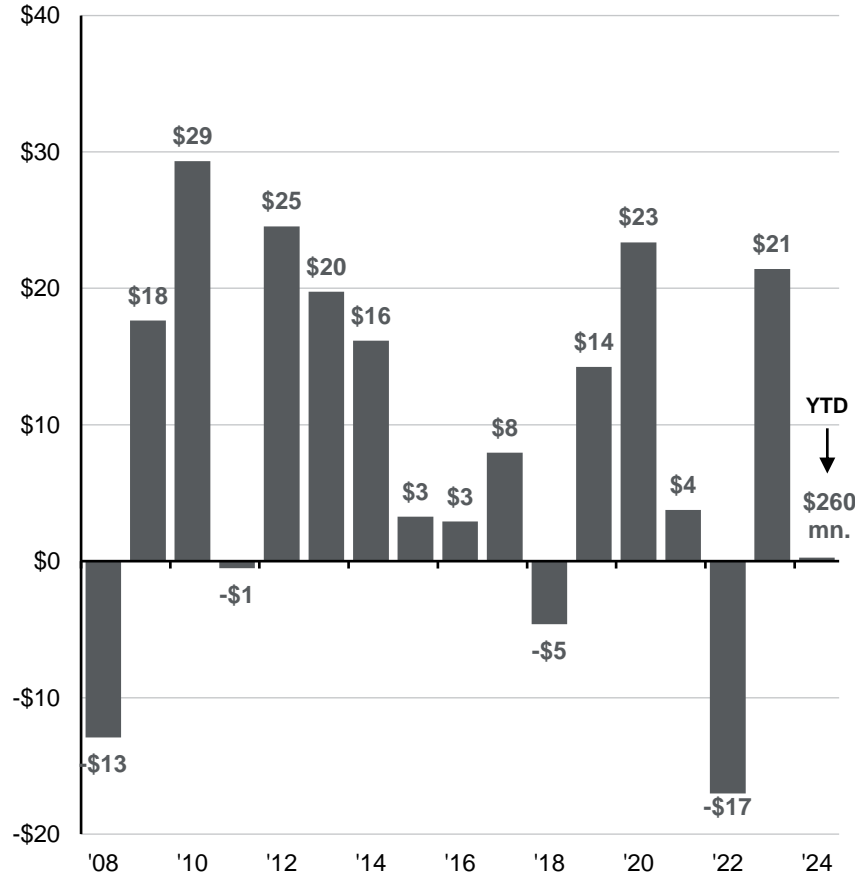


India: Foreign investor flows and positioning

Asia equities

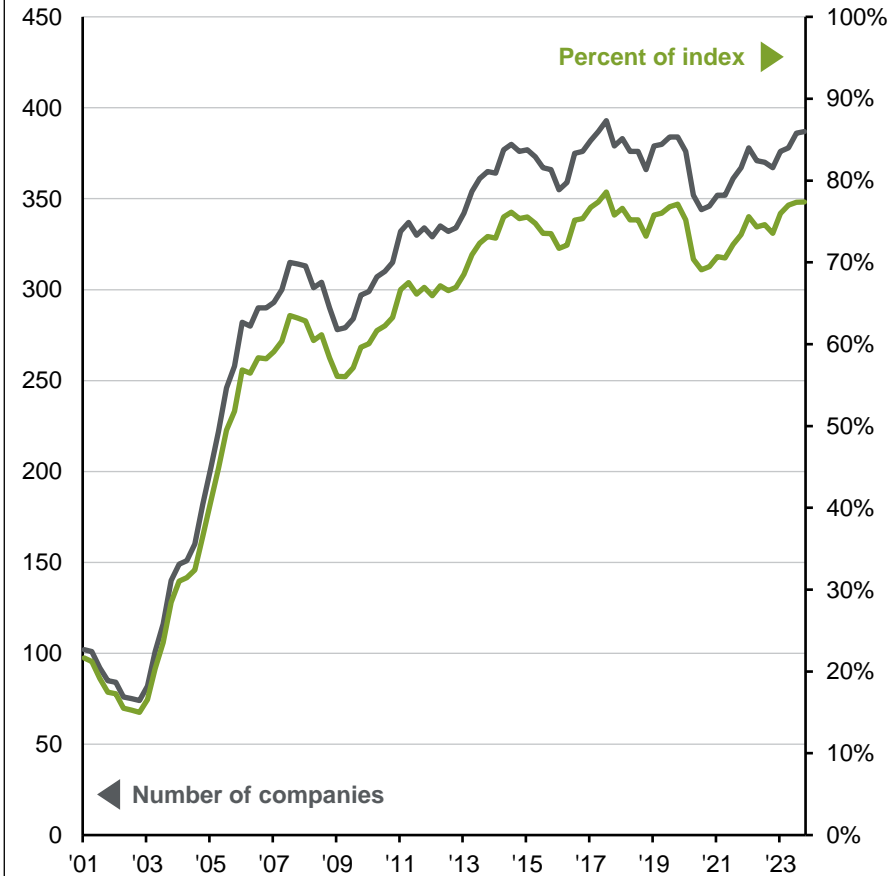
Net foreign portfolio flows into equities

USD billions



Foreign market participation

Nifty 500 companies with foreign institutional investors holdings >5%



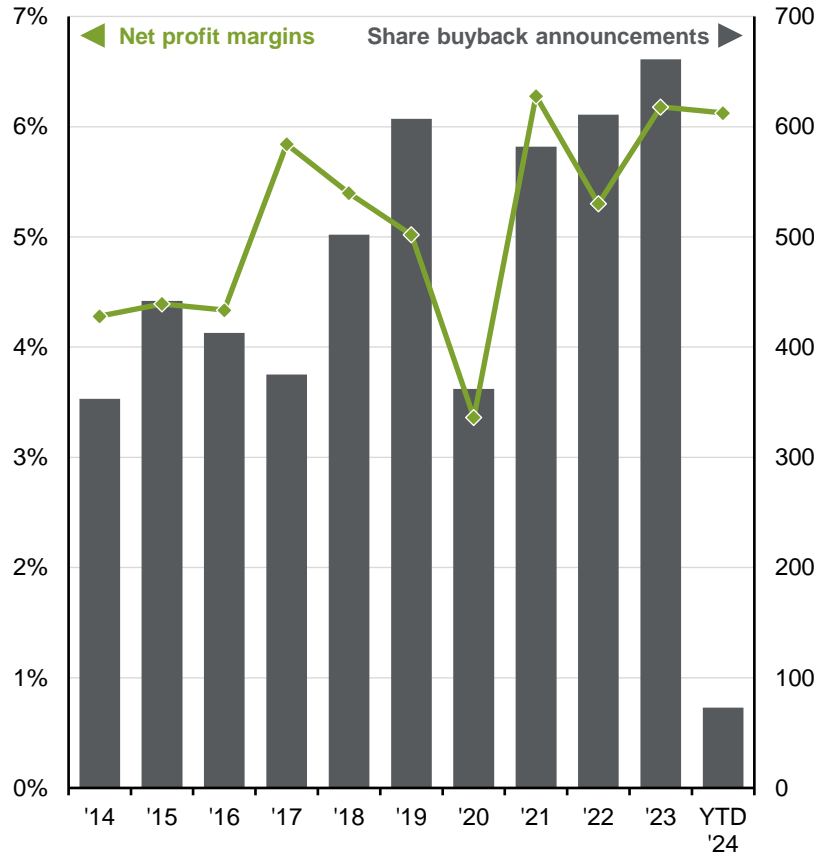
Source: J.P. Morgan Asset Management. (Left) CDSL, Bloomberg. Industry includes construction activity while agriculture includes forest and fishery as well. (Right) National Stock Exchange of India Limited (NSE). FIIL stands for Foreign Institutional Investor, which is an investor or investment fund investing in a country outside of the one in which it is registered or headquartered. The Nifty 500 is a stock market index comprised of the top 500 listed companies on the National Stock Exchange of India. *Guide to Investing in Asia*. Data are as of April 30, 2024.



Japan: Corporate governance reforms

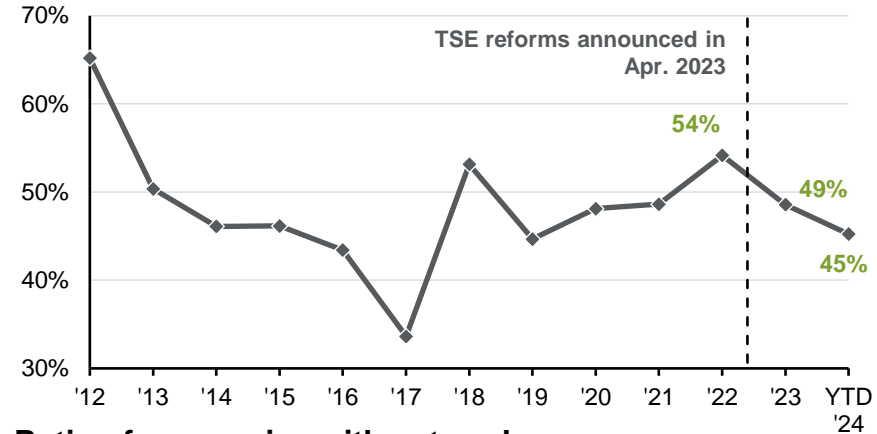
Asia equities

TOPIX share buyback announcements and net profit margins



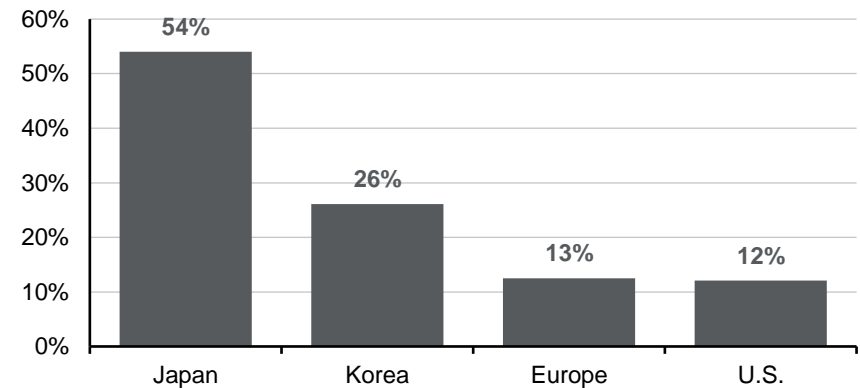
Price-to-book ratio

Percent of companies with P/B ratios less than 1x, TOPIX Index



Ratio of companies with net cash

Share of index constituents



Source: J.P. Morgan Asset Management. (Left) Bank of America Global Research – Japan Equity Strategy, Bloomberg, QUICK. Based on TOPIX constituents. Shows fiscal year data going from Apr.-Mar. for each year. YTD '24 represents April 1, 2024 – May 8, 2024. Shows trailing 12-month profit margins. (Top right) Bloomberg, TOPIX. TSE stands for Tokyo Stock Exchange. The Tokyo Stock Exchange announced in April 2023 that listed companies that trade below book value must outline a plan to maximize shareholder value and comply with shareholder, liquidity and outside director reforms or face delisting. (Bottom right) FactSet, MSCI, Korea Exchange, Tokyo Exchange, Standard & Poor's. Net cash is calculated by subtracting total liabilities from total cash holdings of a company. Europe, Japan, Korea, and U.S. equity indices used are the MSCI Europe, TOPIX, KOSPI and S&P 500, respectively. *Guide to Investing in Asia*. Data are as of April 30, 2024.

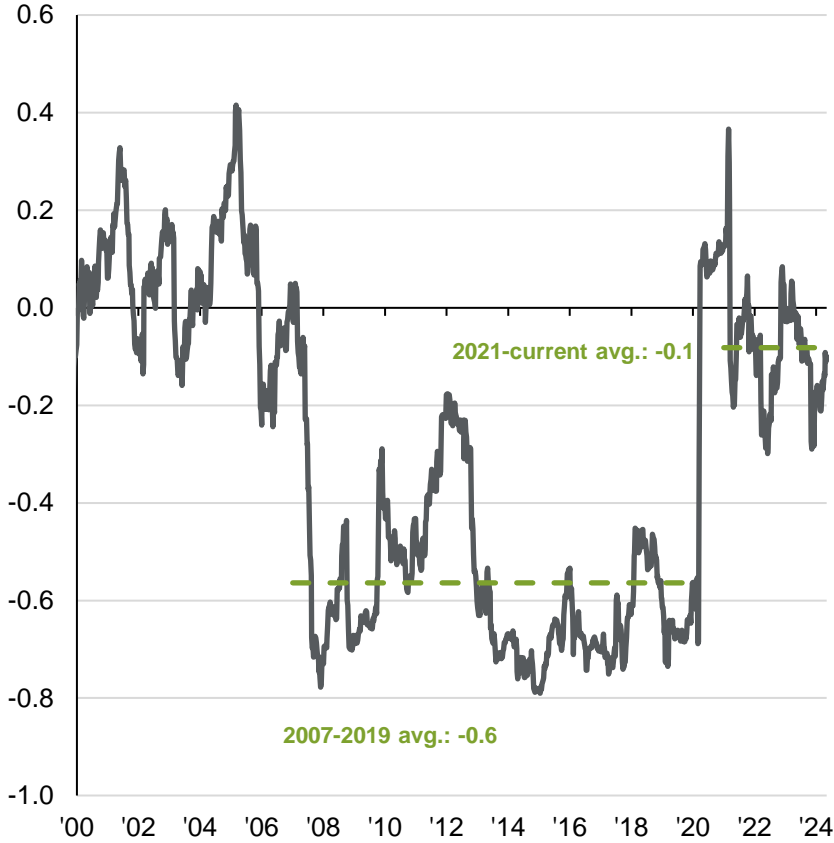


Japan: Performance drivers

Asia equities

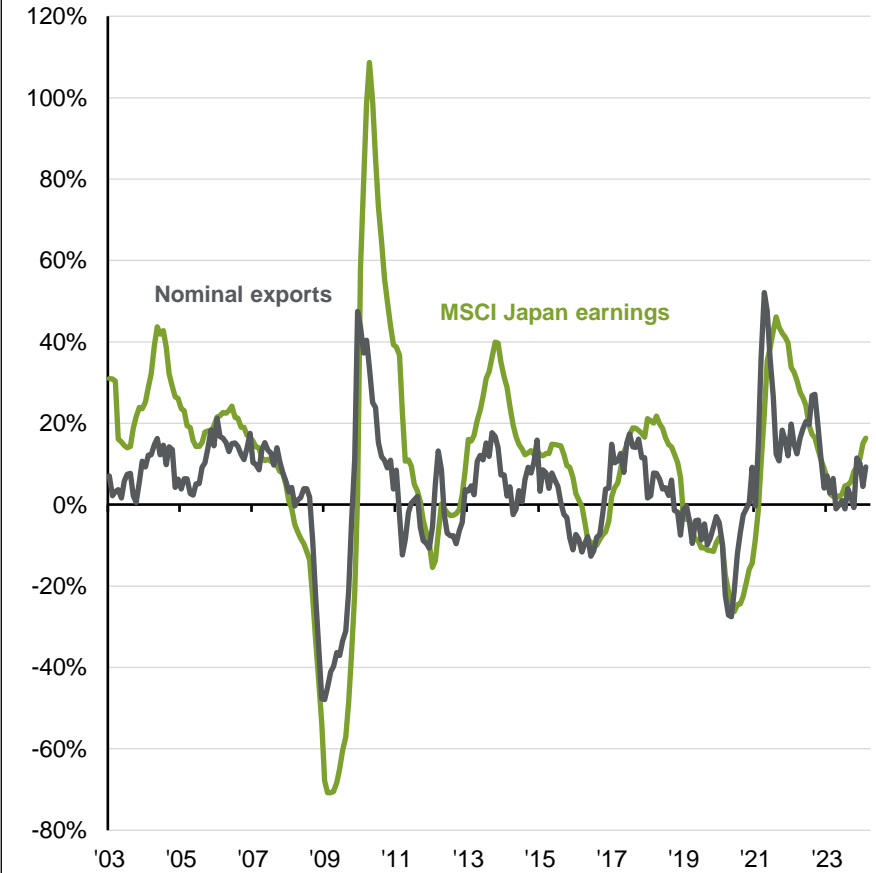
Correlation between the yen and Japanese equities

Rolling 1yr. correlation between weekly movement in JPY per USD spot rate and the Nikkei 225 Index



Growth in nominal exports and earnings per share

Year-over-year change, seasonally-adjusted



Source: FactSet, J.P. Morgan Asset Management. (Left) Nikkei, Reuters. Nikkei 225 performance calculated using local currency index. (Right) Ministry of Finance – Japan, MSCI. Past performance is not indicative of current or future results. *Guide to Investing in Asia*. Data are as of April 30, 2024.

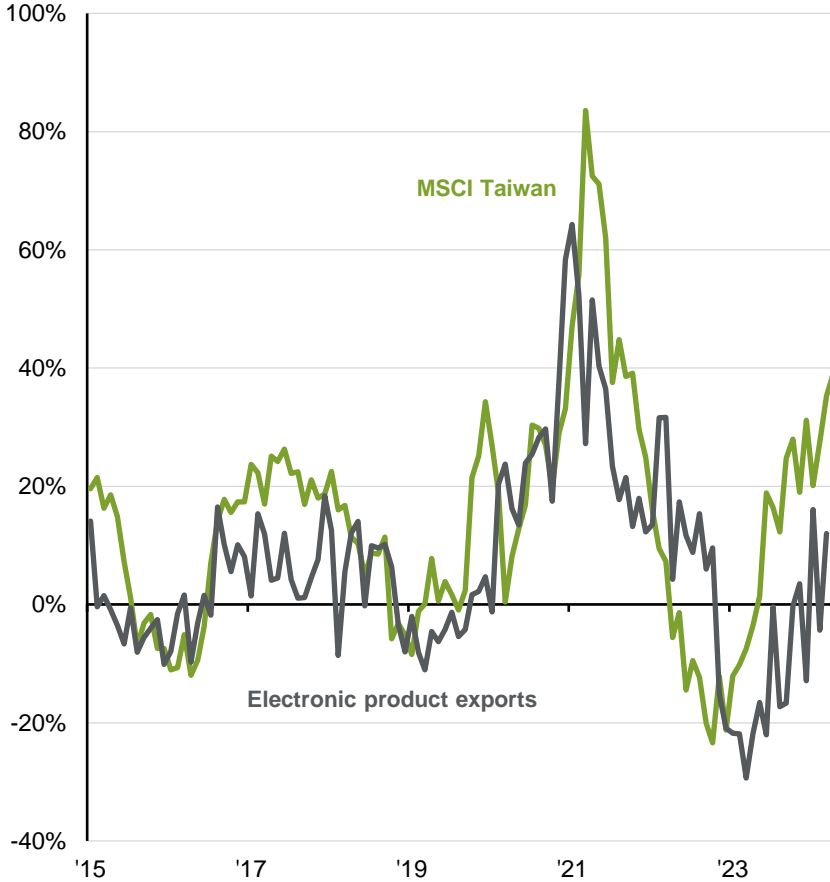


Taiwan: Market snapshot

Asia equities

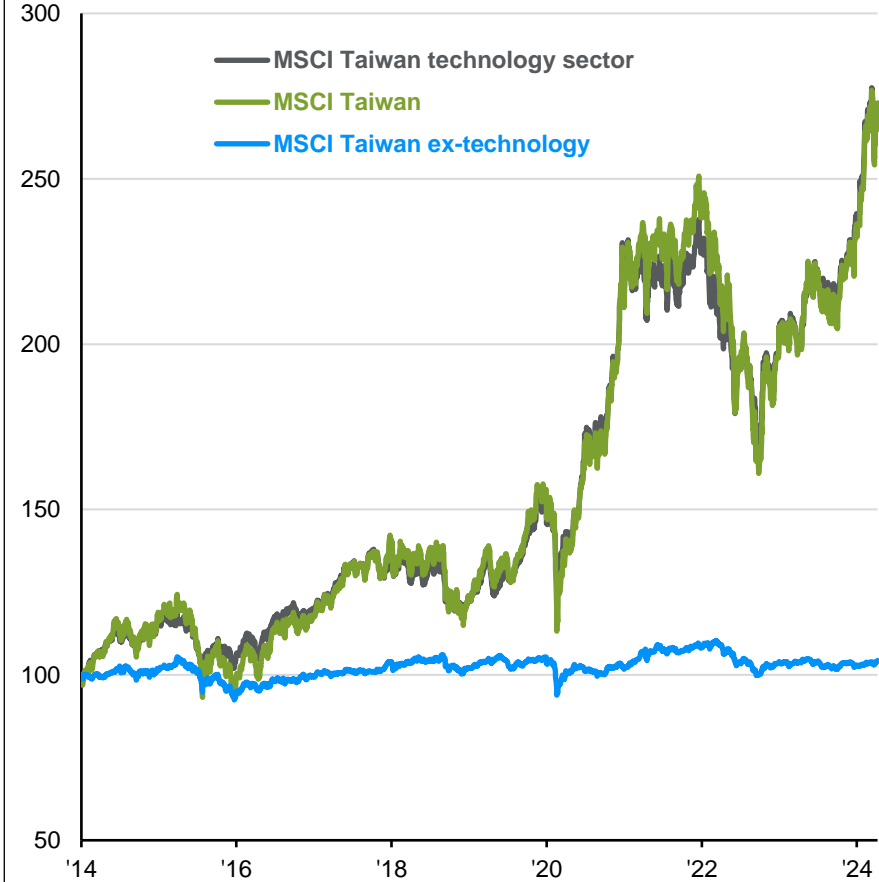
Electronic product exports and equity returns

Year-over-year % change



Tech vs. non-tech performance

Jan. 1, 2014 = 100, price return, local currency



Source: FactSet, MSCI, J.P. Morgan Asset Management. (Left) Ministry of Economic Affairs Taiwan. Past performance is not indicative of current or future results. *Guide to Investing in Asia*. Data are as of April 30, 2024.

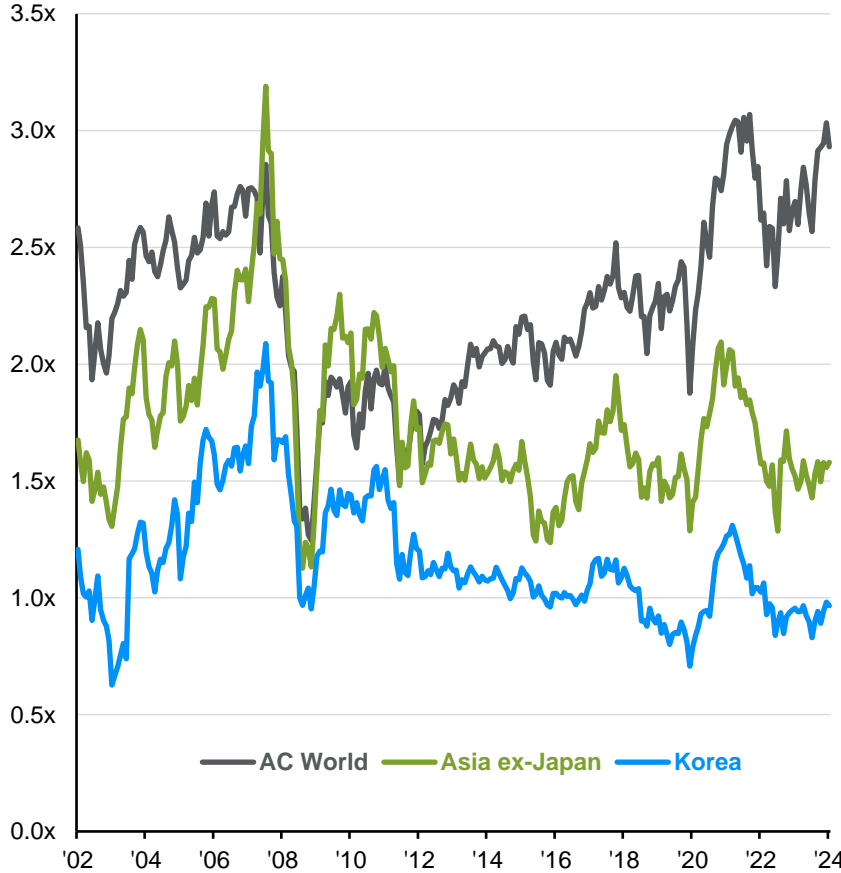


Korea: Market snapshot

Asia equities

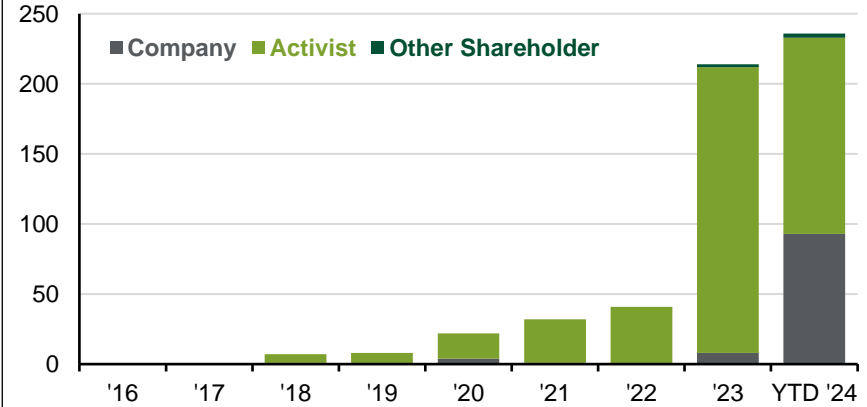
Price-to-book ratio

Monthly



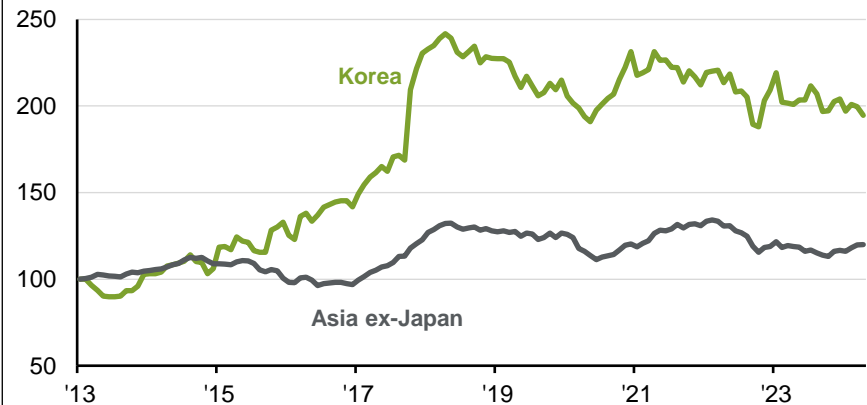
Number of company and activist proposals

All publicly-listed companies in Korea



Dividend per share growth

Jan. 2013 = 100, USD, monthly

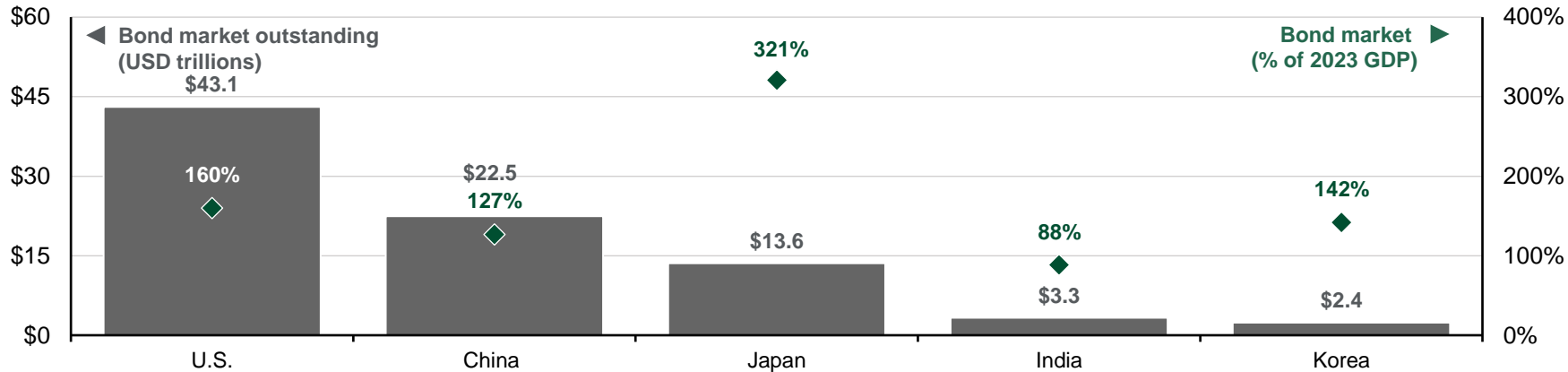


Source: J.P. Morgan Asset Management. (Left) Bloomberg, KOSPI, MSCI. AC World = MSCI AC World Index, Asia ex-Japan = MSCI AC Asia ex-Japan, Korea = KOSPI Index. (Top right) Bloomberg. Includes all proposals, not just those that were passed. (Bottom right) FactSet, MSCI. Korea = MSCI Korea Index. Asia ex-Japan = MSCI AC Asia ex-Japan Index. *Guide to Investing in Asia*. Data are as of April 30, 2024.



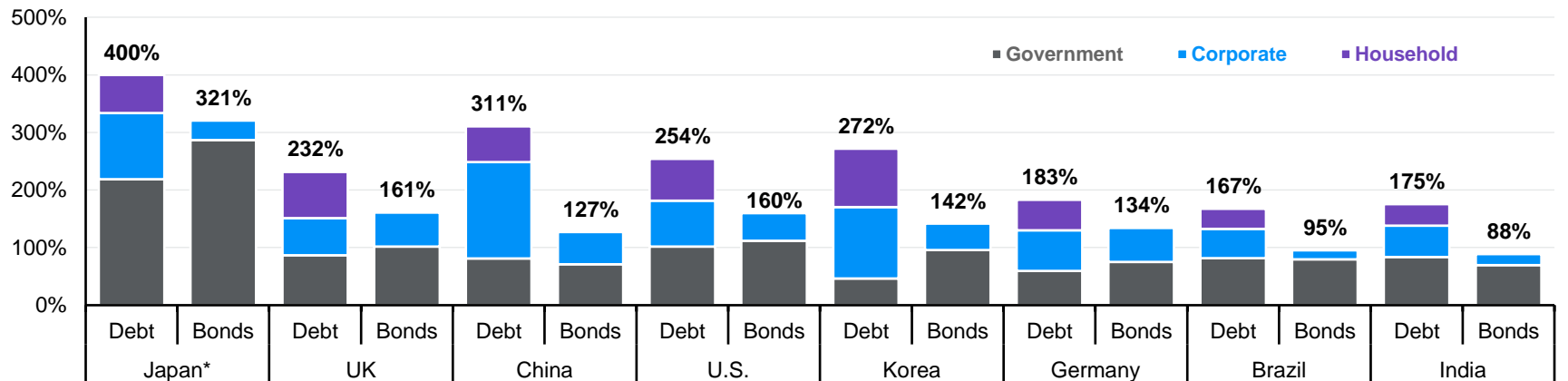
Global debt and bond market size

Bond market size in value and as % of GDP



Debt and bonds as % of GDP

Total market value of total debt and bonds* as % of nominal GDP, 2023



Source: BIS, Bloomberg L.P., IMF, World Federation of Exchanges, J.P. Morgan Asset Management. Debt valuation is as of 3Q23, bond valuation is as of April 30, 2024. Bond market outstanding refers to the total U.S. dollar value of bonds (corporate and government) in the market and does not reflect mandatory prepayment. *The difference in Japan's government borrowing in debt and in bonds is due to the differing valuation dates. Government bonds include onshore listed central and local government bonds for all countries. Corporate debt is borrowing by non-financial corporations; Corporate bonds are all onshore listed corporate bonds. Household borrowing is only accounted for in total debt as individuals do not issue bonds. Guide to Investing in Asia. Data are as of April 30, 2024.

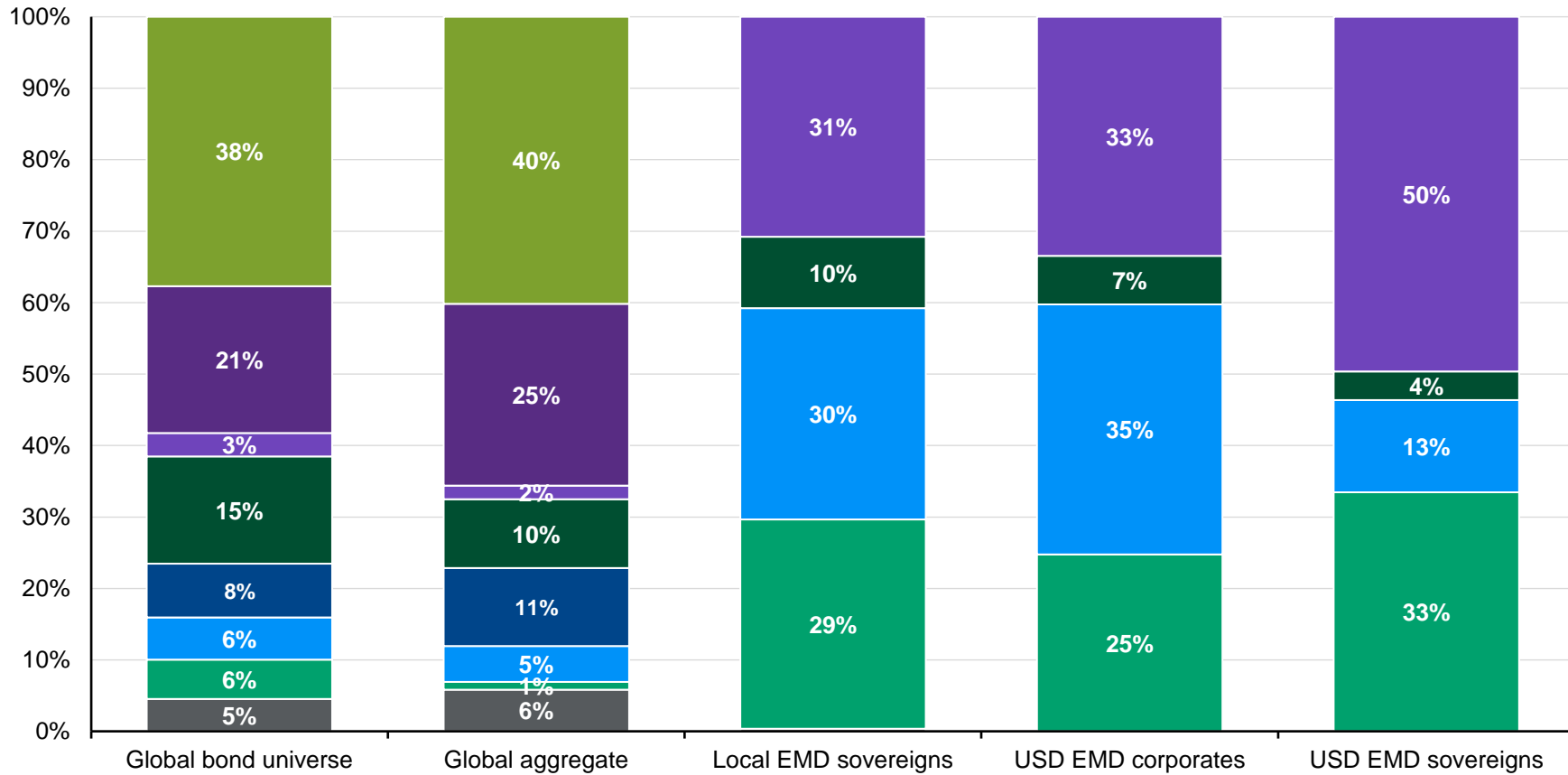
Asia fixed income



Global bond index weightings

Weightings in different bond universes and indices

■ U.S. ■ Europe ■ EM Europe, Mid. East and Africa ■ China ■ Japan ■ Asia exc. China & Japan ■ Latin America ■ Other



Asia fixed income

Source: BIS, Bloomberg L.P., FactSet, J.P. Morgan Economic Research, J.P. Morgan Asset Management. Based on J.P. Morgan CEMBI Broad Index (USD EMD corporates), J.P. Morgan EMBIG Broad Diversified Index (USD EMD sovereigns), J.P. Morgan GBI-EM Global Diversified Index (Local EMD sovereigns), Bloomberg Global Aggregate (Global Aggregate). Global bond universe data from the BIS are as of 3Q23. If the total debt figure was not available, international debt + domestic debt was used as a proxy. Guide to Investing in Asia. Data are as of April 30, 2024.



Fixed income returns

Asia fixed income

											2014-2023	
2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	YTD '24	Ann.	Vol.
India 13.7%	Asia HY 5.2%	U.S. HY 17.1%	Local EMD 15.2%	Cash 1.8%	U.S. IG 14.5%	U.S. IG 9.9%	U.S. HY 5.3%	Cash 1.5%	U.S. HY 13.4%	Asia HY 3.4%	U.S. HY 4.6%	Local EMD 11.3%
China 9.4%	India 3.8%	Asia HY 11.2%	USD EMD 9.3%	U.S. Treas 0.9%	USD EMD 14.4%	India 9.0%	China 1.4%	China -8.2%	Local EMD 12.7%	Cash 1.3%	India 4.2%	Asia HY 10.1%
USD Asian 8.3%	China 2.9%	USD EMD 10.2%	U.S. HY 7.5%	China 0.8%	U.S. HY 14.3%	U.S. Treas 8.0%	Cash 0.0%	India -8.3%	USD EMD 10.5%	USD EMD 0.5%	China 3.6%	USD EMD 8.7%
U.S. IG 7.5%	USD Asian 2.8%	Local EMD 9.9%	Asia HY 6.9%	India -0.5%	Local EMD 13.5%	U.S. HY 7.1%	India -0.2%	USD Asian -11.0%	U.S. IG 8.5%	U.S. HY 0.5%	USD Asian 3.1%	U.S. HY 7.6%
Asia HY 6.1%	USD EMD 1.2%	U.S. IG 6.1%	U.S. IG 6.4%	USD Asian -0.8%	Asia HY 12.8%	USD Asian 6.3%	U.S. IG -1.0%	U.S. HY -11.2%	India 8.1%	USD Asian 0.0%	USD EMD 3.1%	U.S. IG 6.8%
USD EMD 5.5%	U.S. Treas 0.8%	USD Asian 5.8%	USD Asian 5.8%	U.S. HY -2.1%	India 11.6%	China 6.3%	USD EMD -1.5%	Local EMD -11.7%	USD Asian 7.0%	China -0.9%	U.S. IG 3.0%	India 5.6%
U.S. Treas 5.1%	Cash 0.0%	China 3.7%	India 4.9%	U.S. IG -2.5%	USD Asian 11.3%	USD EMD 5.9%	U.S. Treas -2.3%	U.S. Treas -12.5%	China 6.5%	India -1.5%	Asia HY 1.9%	USD Asian 4.8%
U.S. HY 2.5%	U.S. IG -0.7%	India 2.0%	China 4.6%	Asia HY -3.2%	China 9.6%	Asia HY 4.9%	USD Asian -2.4%	Asia HY -15.1%	Cash 5.1%	Local EMD -2.7%	U.S. Treas 1.3%	U.S. Treas 4.7%
Cash 0.0%	U.S. HY -4.5%	U.S. Treas 1.0%	U.S. Treas 2.3%	USD EMD -4.6%	U.S. Treas 6.9%	Local EMD 2.7%	Local EMD -8.7%	U.S. IG -15.8%	Asia HY 4.8%	U.S. IG -2.8%	Cash 1.2%	China 3.6%
Local EMD -5.7%	Local EMD -14.9%	Cash 0.3%	Cash 0.8%	Local EMD -6.2%	Cash 2.2%	Cash 0.5%	Asia HY -11.0%	USD EMD -16.5%	U.S. Treas 4.1%	U.S. Treas -3.0%	Local EMD 0.1%	Cash 0.5%

Source: Bloomberg, J.P. Morgan Economic Research, J.P. Morgan Asset Management. All returns are total return in USD. U.S. HY: Bloomberg U.S. Aggregate Credit Index – Corporate High Yield, Local EMD: JP Morgan GBI-EM Global Diversified Composite Index, USD EMD: JP Morgan EMBI Global Index, U.S. IG: Bloomberg U.S. Corporate Index – Investment Grade, China: JP Morgan EMBI China Index, USD Asian: JP Morgan JACI, India: MSCI EMBI India Index, Asia HY: JP Morgan JACI Non-Investment Grade, U.S. Treas: Bloomberg Global U.S. Treasury Index, Cash: Bloomberg U.S. Treasury Index – Bills (1-3 months). Past performance is not indicative of current or future results.
Guide to Investing in Asia. Data are as of April 30, 2024.

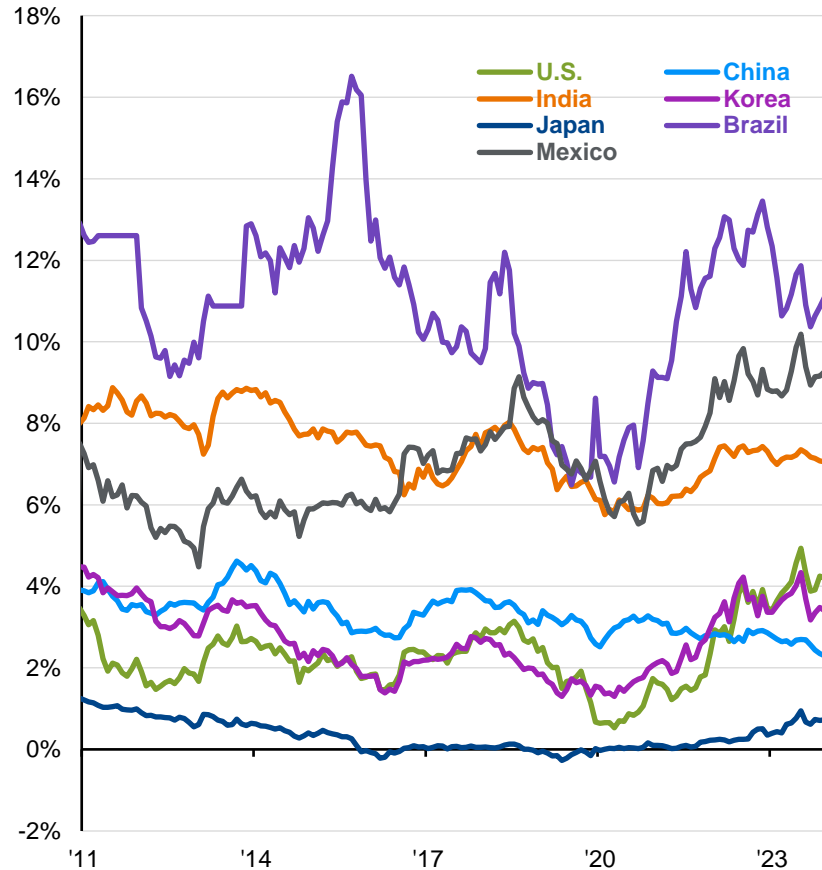


Sovereign bonds

Asia fixed income

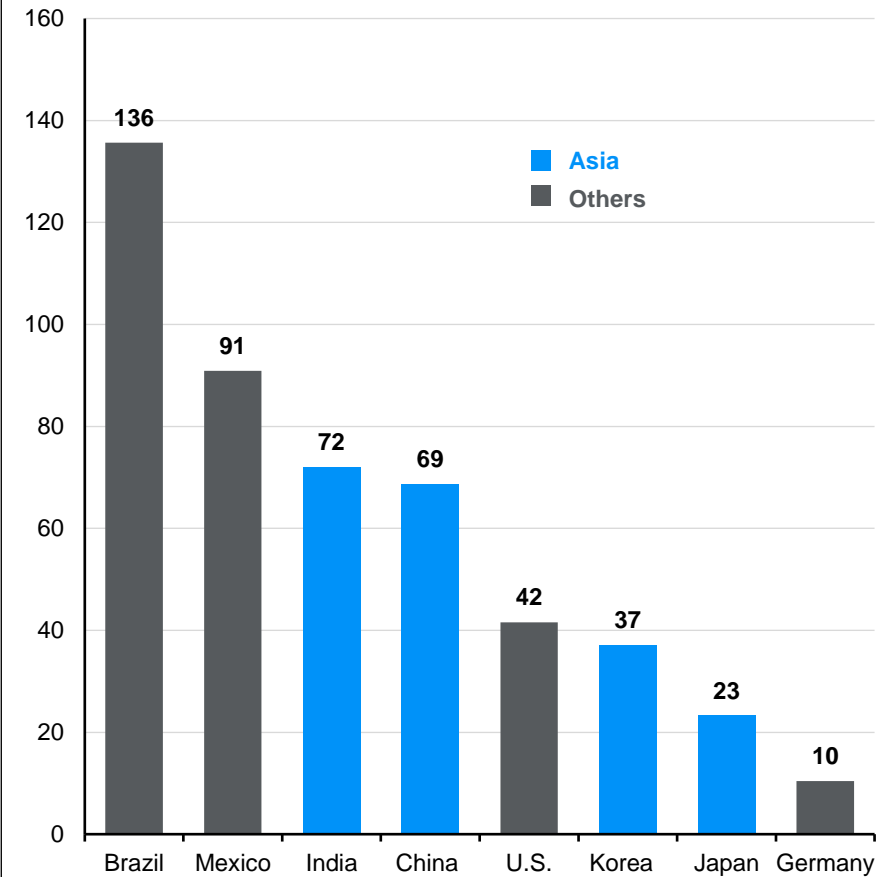
Sovereign bond yields

10-year maturity, monthly



Current credit default swap spreads

Basis points, 5-year USD sovereign bond



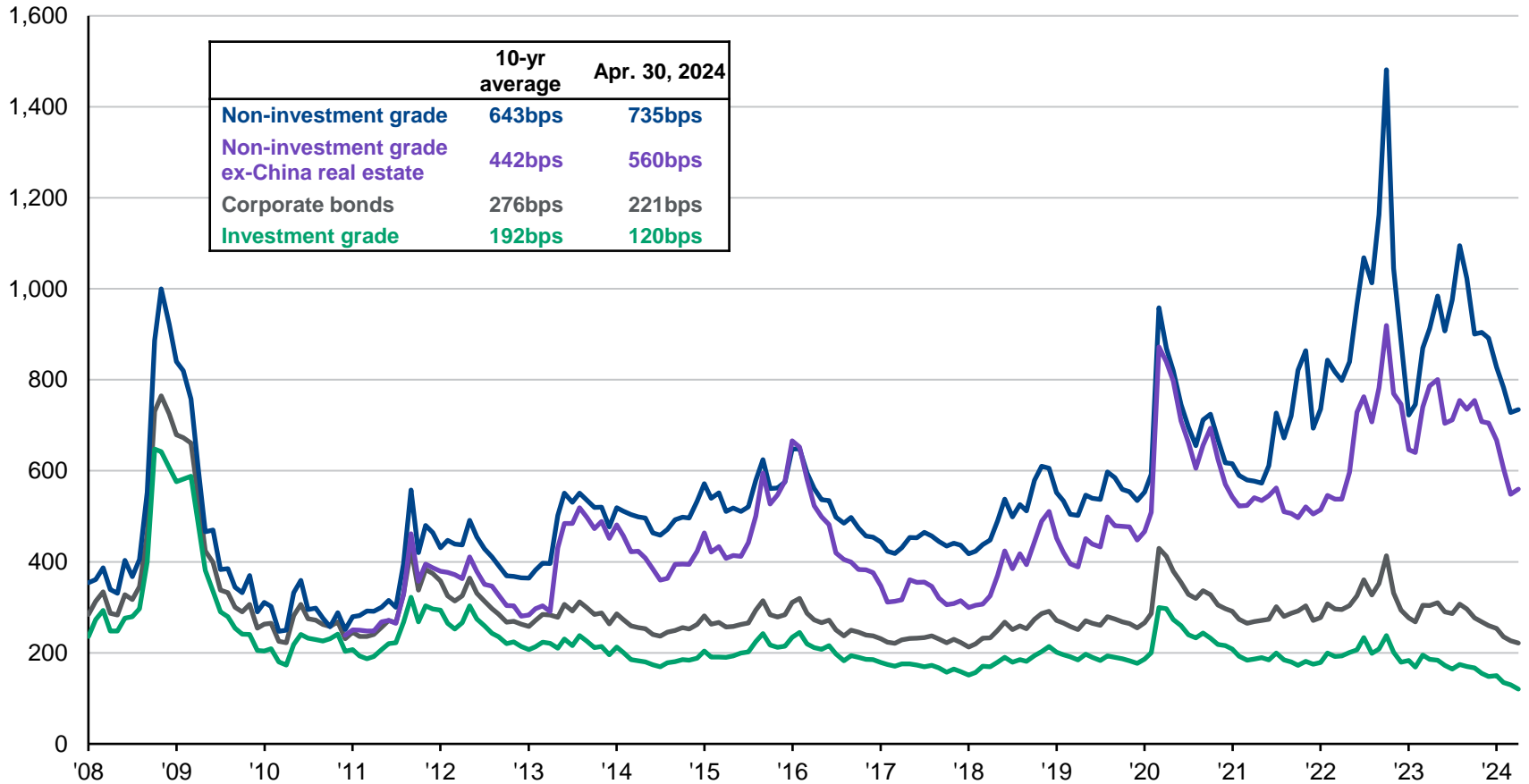
Source: J.P. Morgan Asset Management. (Left) Bloomberg. (Right) FactSet. Guide to Investing in Asia. Data are as of April 30, 2024.



Asia corporate bonds

Asia corporate spreads

Basis points over U.S. Treasuries



Asia fixed income

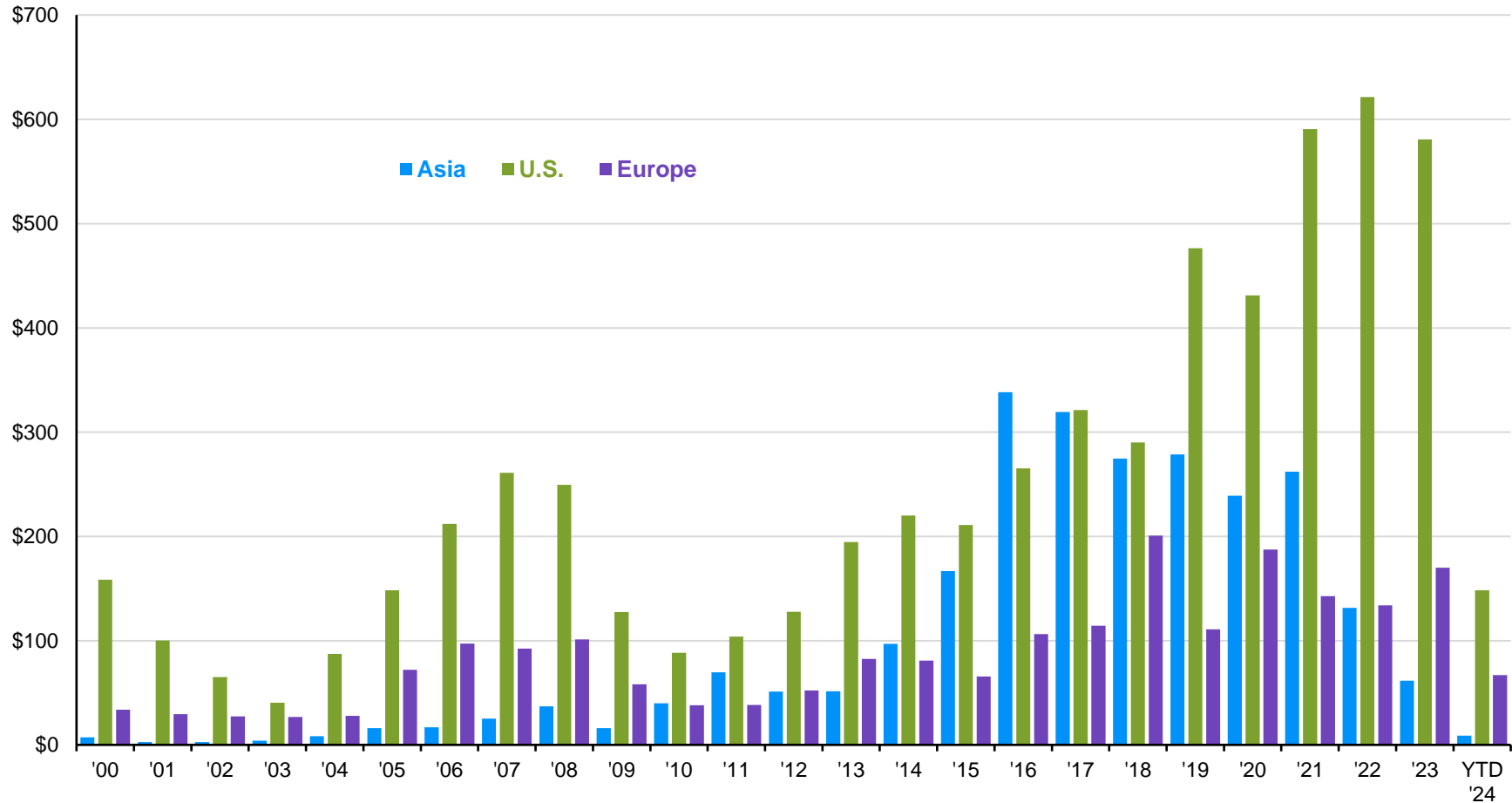
Source: J.P. Morgan Economic Research, J.P. Morgan Asset Management. Non-investment grade: JP Morgan JACI Non-Investment Grade, Non-investment grade ex-China real estate: JP Morgan JACI Non-Investment Grade ex-China Real Estate, Corporate bonds: JP Morgan JACI, Investment grade: JP Morgan JACI Investment Grade.
 Guide to Investing in Asia. Data are as of April 30, 2024.



Private equity: Global fundraising

Private equity fundraising

USD billions



Source: Preqin, J.P. Morgan Asset Management. "Asia" = China, Hong Kong, India, Indonesia, Japan, Malaysia, Philippines, Singapore, South Korea, Taiwan, Thailand and Vietnam. "Europe" = Western European countries. *Guide to Investing in Asia*. Data are as of April 30, 2024.

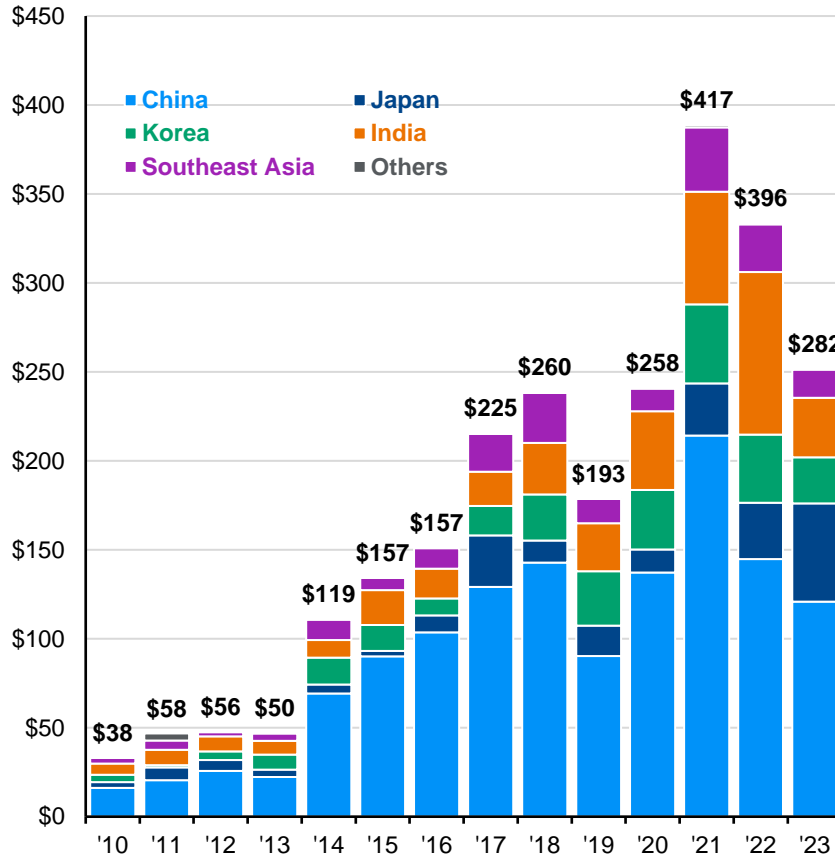


Private equity: Deals by market and industry

Asia alternatives

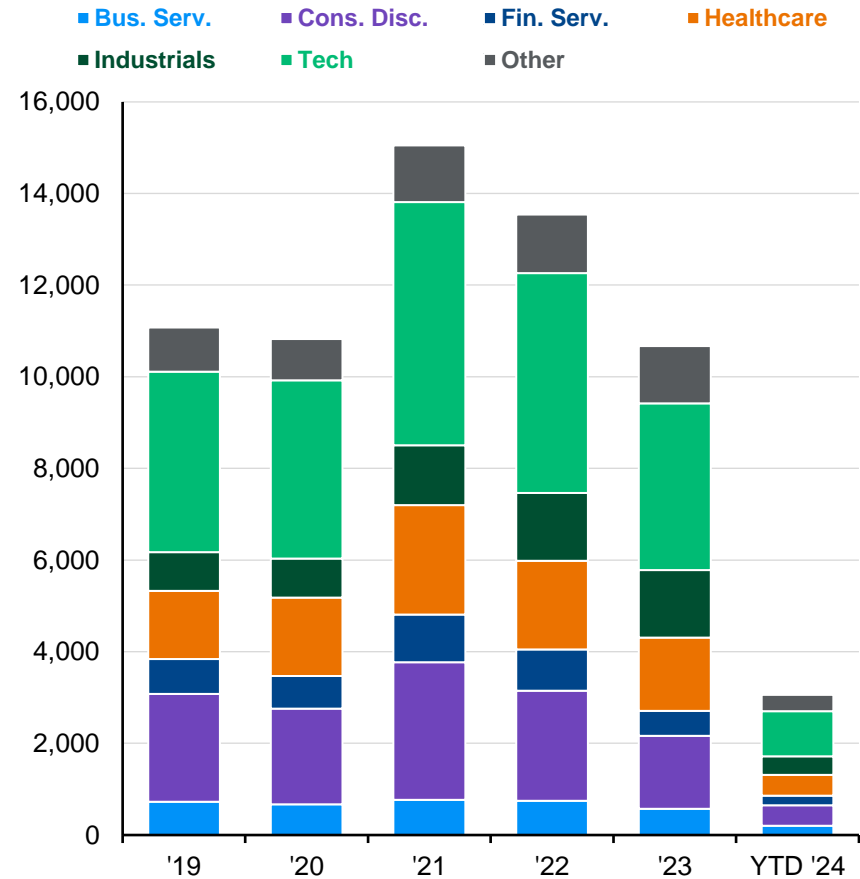
Private equity deal value by market

USD billions



Private equity deals by industry

Number of deals



Source: Preqin, J.P. Morgan Asset Management. (Left) Others includes other Asian countries. (Right) Data from the following countries are included: China, Hong Kong, India, Indonesia, Japan, Malaysia, Philippines, Singapore, South Korea, Taiwan, Thailand and Vietnam. Other includes Energy & Utilities, Raw Materials & Natural Resources, Real Estate and Telecoms & Media. *Guide to Investing in Asia*. Data are as of April 30, 2024.

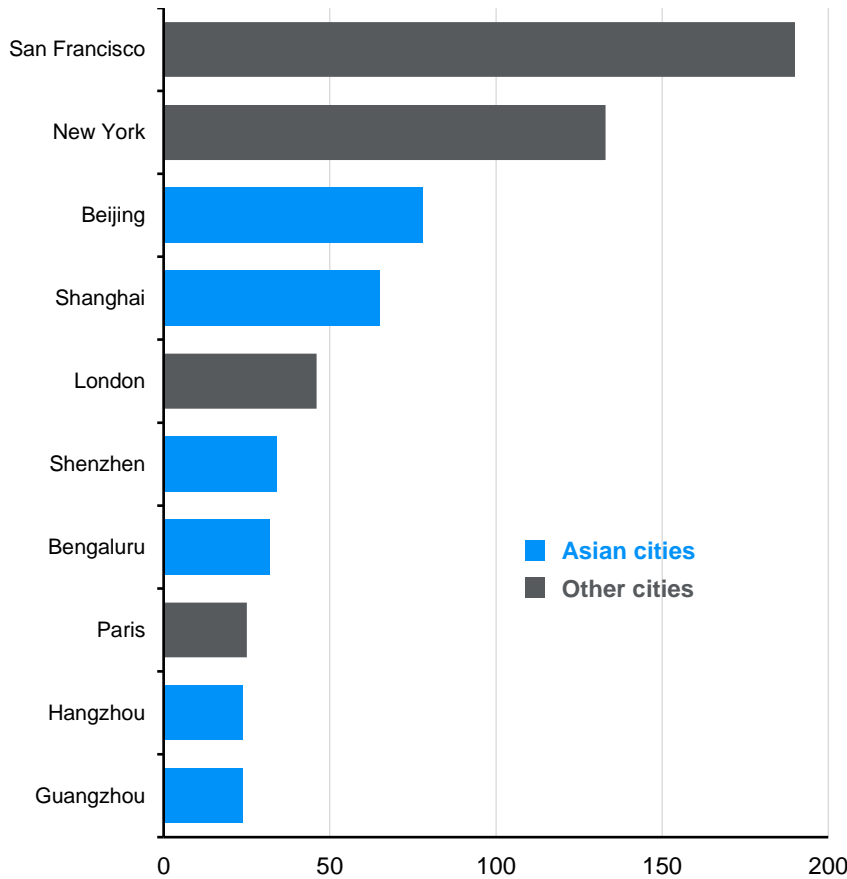


Venture capital by market and industry

Asia alternatives

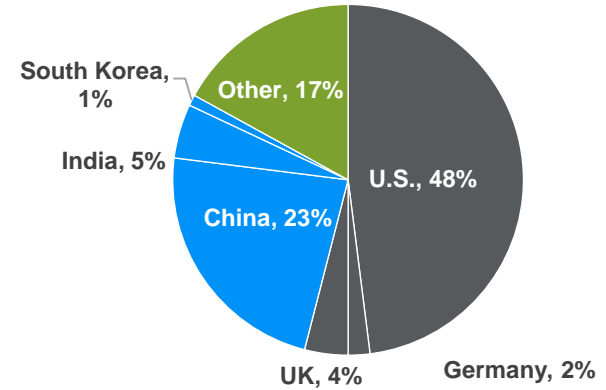
Number of unicorns by city

Top 10 cities in the world with the most unicorns

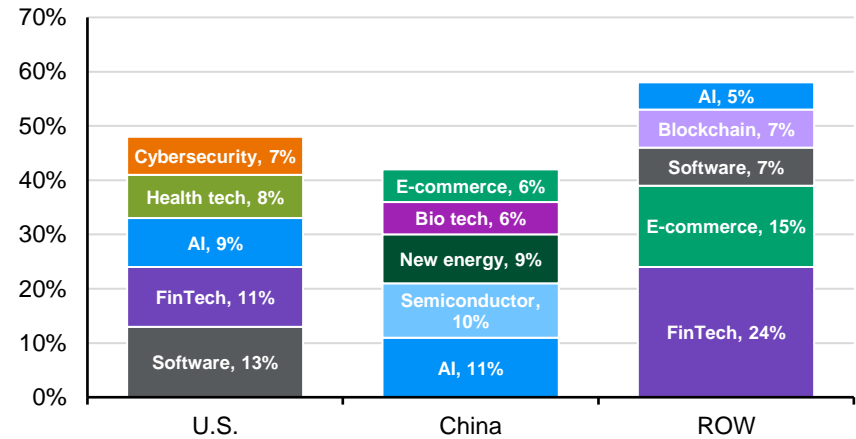


Number of unicorns by location

% of total unicorns worldwide



Share of top five industries for unicorns by location

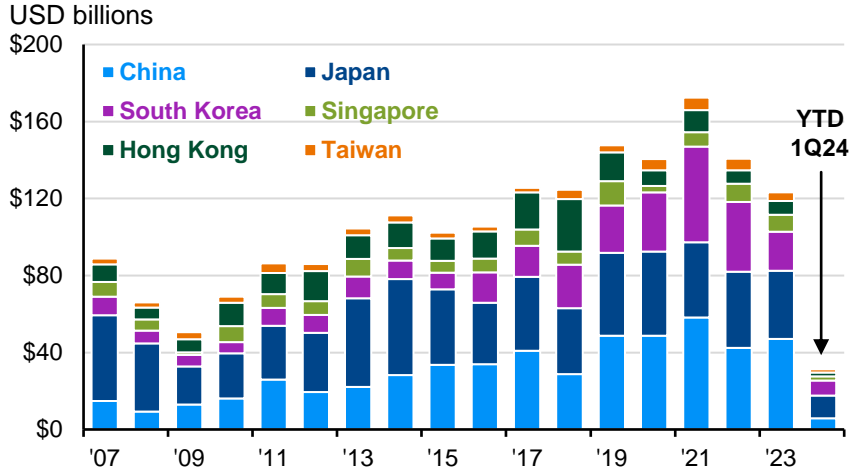


Source: Hurun Research Institute, Hurun Global Unicorn Index 2024 Report, J.P. Morgan Asset Management. Unicorns defined as companies worth at least a billion dollars and are not yet listed on a public exchange. *Guide to Investing in Asia*. Data are as of April 30, 2024.

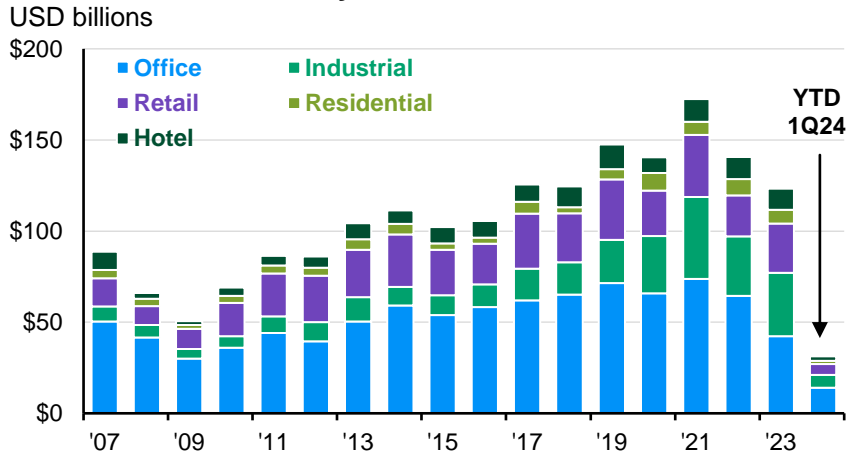


Real estate: Transaction volumes and performance

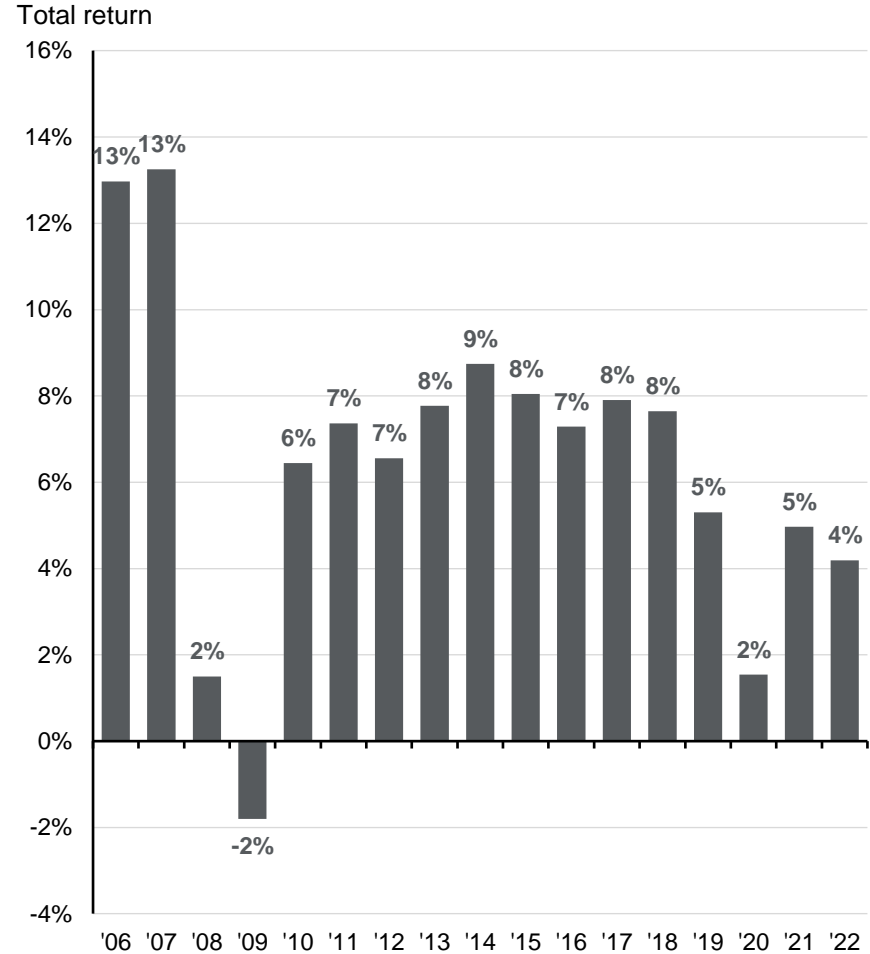
Transaction volume by country



Transaction volume by real estate sector



Performance of MSCI Asia Property Index



Asia alternatives

Source: J.P. Morgan Asset Management – Real Estate Asia Pacific. (Top and bottom left) MSCI-Real Capital Analytics. Data shown for YTD 2024 are preliminary. Includes investments greater than or equal to USD 10 million and excludes development sites. Figures are not frozen and subject to updates by RCA. (Bottom left) Includes data for China, Japan, South Korea, Singapore, Hong Kong and Taiwan. (Right) The MSCI Asia Property Index includes China, Hong Kong, Japan, Korea, Singapore, Taiwan, Indonesia, Malaysia and Thailand. Past performance is not indicative of current or future results.

Guide to Investing in Asia. Data are as of April 30, 2024.



Appendix: Key information

Country	Demographics		Economy and government		Equity market size (2023, USD)	Markets	
	Population (2023 est.)	Type of economy	Next general election date	Monetary policy objective		Foreign investor access	Restrictions/Notes
China	1.3bn	Socialist market economy	N/A	Maintain stability currency, control money supply and credit to promote econ. growth	\$11tn	FMLs by sectors, access via Qualified Investor program or Stock/Bond connect	Stock lending and short selling allowed with restrictions but not established practices; undergoing regulatory changes
Japan	125mm	Mixed economy	Oct. 2025	Price stability target of 2.0%	\$6tn	No FML except for certain sectors	Undergoing corporate governance reforms
India	1.4bn	Mixed economy	Apr. 2024-Jun. 2024	Targets inflation of 4.0%/+-2.0%, while promoting econ. growth	\$4tn	FMLs by sectors, access via a Foreign Portfolio Investor program and with obtainment of a Permanent Account Number.	No offshore currency market and constraints on the onshore market
Hong Kong	8mm	Highly developed, largely free market economy	Expected: 2027	Maintain currency stability within the framework of the Linked Exchange Rate system	\$4tn	Foreign investors can acquire shares of Chinese companies listed on the Hong Kong Stock exchange, but access to Chinese companies is generally limited	N/A
South Korea	52mm	Mixed economy	Mar. 2027	Price stability targeting 2.0% over the medium term	\$2tn	No FML with exceptions for certain sectors	No offshore currency market and constraints on the onshore market; exchange-wide short selling ban in place until June 2024; undergoing corporate governance reforms
Taiwan	23mm	Free market economy	Expected: Jan. 2028	Promote financial stability, ensure sound banking operations, and foster econ. dev.	\$2tn	No FML except for certain sectors, access with a Foreign Institutional Investor or Foreign Individual Investor qualification	Currency is not freely convertible, and there is no offshore currency market; short selling allowed with some restrictions
Indonesia	277mm	Mixed economy	Expected: 2029	Maintain currency stability, target inflation within the range of 1.5-3.5%	\$758bn	No FML except for certain sectors	No offshore currency market and constraints on the onshore market; overdraft facilities prohibited for foreign investors; some short selling bans in place
Singapore	6mm	Mixed economy	Expected: Nov. 2025	Ensure price stability for the sustainable growth of the economy	\$608bn	No FML except for certain sectors	N/A
Thailand	70mm	Mixed economy	Jun. 2027	Maintain inflation rate of 1.0-3.0% per annum to ensure price stability	\$520bn	FMLs by sectors; Non-Voting Depository Receipts also available for most stocks	No offshore currency markets and some restrictions on the foreign exchange market; stock lending and short selling on stocks in the SET 100 Index; Further short selling restrictions introduced in 2024
Malaysia	22mm	Mixed economy	Feb. 2028	Targets low and stable inflation generally under 3.0%	\$378bn	No FML except for certain sectors	No efficient offshore currency market and constraints on the onshore market. Short selling allowed but restricted for stocks
Philippines	133mm	Mixed economy	Expected: May 2025	Price stability targeting an average inflation of 3.0% +/-1.0%	\$236bn	FMLs by sectors, certain sectors have lower FOIs. Foreign investors may only purchase B-shares, but newly listed companies now offer 1 share class with the level of foreign ownership being monitored	No offshore currency market and constraints on the onshore market; due to the lack of SBL facility, short selling remains dismal and is mostly used to cover failed trades
Vietnam	100mm	Socialist-oriented market economy	Expected: May 2026	Stabilize the currency and target inflation of 4.0-4.5% to ensure macro econ. stability	\$188bn	No FML except for certain sectors	No offshore currency market and constraints on the onshore market

Source: MSCI, J.P. Morgan Asset Management. FML = Foreign Ownership Limit. The information in the “foreign investor access” and “restrictions/notes” columns comes from the MSCI Global Market Accessibility Review – June 2023. *Guide to Investing in Asia*. Data are as of latest available.



J.P. Morgan Asset Management: Index Definitions

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All indexes are unmanaged and an individual cannot invest directly in an index. Index returns do not include fees or expenses.

Equities:

The **S&P 500 Index** is widely regarded as the best single gauge of the U.S. equities market. The index includes a representative sample of 500 leading companies in leading industries of the U.S. economy. The **S&P 500 Index** focuses on the large-cap segment of the market; however, since it includes a significant portion of the total value of the market, it also represents the market.

The **MSCI® EAFE** (Europe, Australia, Far East) Net Index is recognized as the pre-eminent benchmark in the United States to measure international equity performance. It comprises 21 MSCI country indexes, representing the developed markets outside of North America.

The **MSCI Europe Index**SM is a free float-adjusted market capitalization index that is designed to measure developed market equity performance in Europe. As of June 2007, the MSCI Europe Index consisted of the following 16 developed market country indices: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

The **MSCI ACWI (All Country World Index) Index** is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed and emerging markets. As of June 2009 the **MSCI ACWI** consisted of 45 country indices comprising 23 developed and 22 emerging market country indices.

The **MSCI ACWI ex USA Index** captures large and mid cap representation across 22 of 23 Developed Markets (DM) countries (excluding the US) and 27 Emerging Markets (EM) countries*. With 2,357 constituents, the index covers approximately 85% of the global equity opportunity set outside the US.

The **MSCI Emerging Markets Index**SM is a free float-adjusted market capitalization index that is designed to measure equity market performance in the global emerging markets. As of June 2007, the MSCI Emerging Markets Index consisted of the following 25 emerging market indices: Argentina, Brazil, Chile, China, Colombia, Czech Republic, Egypt, Hungary, India, Indonesia, Israel, Jordan, Korea, Malaysia, Mexico, Morocco, Pakistan, Peru, Philippines, Poland, Russia, South Africa, Taiwan, Thailand, and Turkey.

The **MSCI China Index**SM captures large and mid cap representation across China H shares, B shares, Red chips and P chips. With 148 constituents, the index covers about 84% of this China equity universe. The MSCI China Index was launched on December 31, 1992.

The **MSCI China A Index** captures large and mid-cap representation across China securities listed on the Shanghai and Shenzhen exchanges. The index covers only those securities that are accessible through "Stock Connect". The index is designed for international investors and is calculated using China A Stock Connect listings based on the offshore CNY exchange rate (CNH).

The **MSCI China Growth Index** captures large and mid cap securities exhibiting overall growth style characteristics across the Chinese equity markets. The growth investment style characteristics for index construction are defined using five variables: long-term forward EPS growth rate, short-term forward EPS growth rate, current internal growth rate and long-term historical EPS growth trend and long-term historical sales per share growth trend.

The **MSCI China Value Index** captures large and mid-cap Chinese securities exhibiting overall value style characteristics. The value investment style characteristics for index construction are defined using three variables: book value to price, 12-month forward earnings to price and dividend yield.

The **Shanghai Stock Exchange Composite Index** is a capitalization-weighted index. The index tracks the daily price performance of all A-shares and B-shares listed on the Shanghai Stock Exchange. The index was developed on December 19, 1990 with a base value of 100.

The **China Shenzhen Composite Index** is an actual market-cap weighted index that tracks the stock performance of all the A-share and B-share lists on Shenzhen Stock Exchange. The index was developed on April 3, 1991 with a base price of 100.

The **Hang Seng Index** ("HSI") is the most widely quoted gauge of the Hong Kong stock market. It includes the largest and most liquid stocks listed on the Main Board of the Stock Exchange of Hong Kong. Stocks are free-float-adjusted for investability representation, and a 10% capping is applied to avoid single stock domination. The index was developed on November 24, 1969 with a base price of 100.

The **Shanghai Shenzhen CSI 300 Index** ("CSI Index") is a free-float weighted index that consists of 300 A-share stocks listed on the Shanghai or Shenzhen Stock Exchanges. The Index has been calculated since April 8, 2005, with a base level of 1000 on 12/31/2004.

The **SZSE Composite Index** is a stock market index of Shenzhen Stock Exchange. It includes all companies listed on the exchange.

The **Hang Seng China Enterprises Index** ("HSCIEI") serves as a benchmark that reflects the overall performance of Mainland securities listed in Hong Kong. The index comprises the largest and most liquid Mainland securities listed in Hong Kong. Stocks are free float-adjusted for investability representation, with a 10% capping to avoid single stock domination. The index was launched on August 8, 1994.

The **SME Index** comprises the 100 largest and most liquid A-share stocks listed and trading on the SME Board Market. The index aims to reflect the performance of the Small and Medium Enterprise (SME) Board level. The index is free-floating, with a base date of May 31, 2010.

The **ChiNext Index** comprises the 100 largest and most liquid A-share stocks listed and trading on the ChiNext Market of the Shenzhen Stock Exchange. The index aims to reflect the performance of ChiNext Market level. The index free-float capitalization-weighted. The index has a base value of 1000 on May 31, 2010.

Fixed income:

The **Bloomberg Global Aggregate Index** is a flagship measure of global investment grade debt from twenty-four local currency markets. This multi-currency benchmark includes treasury, government-related, corporate and securitized fixed-rate bonds from both developed and emerging markets issuers.

The **J.P. Morgan Corporate Emerging Markets Bond Index (CEMBI)**: The CEMBI tracks total returns of US dollar-denominated debt instruments issued by corporate entities in Emerging Markets countries, and consists of an investable universe of corporate bonds.

The **J.P. Morgan GBI EM Global Diversified** tracks the performance of local currency debt issued by emerging market governments, whose debt is accessible by most of the international investor base.

The **J.P. Morgan Emerging Markets Bond Index Global Diversified (EMBI Global Diversified)** tracks total returns for U.S. dollar-denominated debt instruments issued by emerging market sovereign and quasi-sovereign entities: Brady bonds, loans, Eurobonds. The index limits the exposure of some of the larger countries.

The **FTSE Chinese (Onshore CNY) Broad Bond Index** measures the performance of a subset of bonds from the FTSE Chinese (Onshore CNY) Broad Bond Index (CNYBBI) which tracks onshore Chinese yuan-denominated fixed-rate governments, agencies, and corporations debt issued in mainland China. The index includes bonds that are traded on the China Interbank Bond Market (CIBM).

The **J.P. Morgan Asia Credit Index Core (JACI Core)** consists of liquid US-dollar denominated debt instruments issued out of Asia ex-Japan. The JACI Core is based on the composition and established methodology of the J.P. Morgan Asia Credit Index (JACI), which is market capitalization weighted. JACI Core includes the most liquid bonds from the JACI by requiring a minimum \$350 million in notional outstanding and a minimum remaining maturity of 2 years. JACI Core also implements a country diversification methodology. Historical returns and statistics for the JACI Core are available from December 30, 2005.



J.P. Morgan Asset Management: Index Definitions

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Fixed income cont.:

The **J.P. Morgan Asia Diversified (JADE) Indices** track local currency government bonds issued by countries within the Asia region (excluding Japan). The two main composite series are the JADE Broad and the JADE Global which provide Diversified exposure to the countries within the region. The JADE Global excludes countries with capital controls and those not accessible by foreign investors. Launched in March 2016, the JADE Broad/Global indices have daily historical index levels and statistics starting from Dec 31, 2004.

The **Bloomberg Global Aggregate - Corporate Index** is a flagship measure of global investment grade, fixed-rate corporate debt. This multi-currency benchmark includes bonds from developed and emerging markets issuers within the industrial, utility and financial sectors.

The **Bloomberg Global Treasury Index** tracks fixed-rate, local currency government debt of investment grade countries, including both developed and emerging markets. The index represents the treasury sector of the Global Aggregate Index and contains issues from 37 countries denominated in 24 currencies.

The **CSI Corporate Bond Index** selects eligible corporate bonds listed at Shanghai Stock Exchange and Shenzhen Stock Exchange, with remaining term to final maturity over 1 year. The index was launched on June 9, 2003 and is based at 100 to Dec 31, 2002.

Other asset classes:

The Bloomberg Industrial Metals Subindex is composed of futures contracts on aluminum, copper, nickel and zinc. It reflects the return of underlying commodity futures price movements only. It is quoted in USD.

Definitions:

Price to forward earnings is a measure of the price-to-earnings ratio (P/E) using forecasted earnings. **Price to book value** compares a stock's market value to its book value. **Price to cash flow** is a measure of the market's expectations of a firm's future financial health. **Price to dividends** is the ratio of the price of a share on a stock exchange to the dividends per share paid in the previous year, used as a measure of a company's potential as an investment.

Bonds are subject to interest rate risks. Bond prices generally fall when interest rates rise.

The price of **equity** securities may rise, or fall because of changes in the broad market or changes in a company's financial condition, sometimes rapidly or unpredictably. These price movements may result from factors affecting individual companies, sectors or industries, or the securities market as a whole, such as changes in economic or political conditions. Equity securities are subject to "stock market risk" meaning that stock prices in general may decline over short or extended periods of time.

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International investing involves a greater degree of risk and increased volatility. Changes in currency exchange rates and differences in accounting and taxation policies can raise or lower returns. Also, some markets may not be as politically and economically stable as other nations. Investments in **emerging markets** can be more volatile. The normal risks of international investing are heightened when investing in emerging markets. In addition, the small size of securities markets and the low trading volume may lead to a lack of liquidity, which leads to increased volatility. Also, emerging markets may not provide adequate legal protection for private or foreign investment or private property.

Investments in **commodities** may have greater volatility than investments in traditional securities, particularly if the instruments involve leverage. The value of commodity-linked derivative instruments may be affected by changes in overall market movements, commodity index volatility, changes in interest rates, or factors affecting a particular industry or commodity, such as drought, floods, weather, livestock disease, embargoes, tariffs and international economic, political and regulatory developments. Use of leveraged commodity-linked derivatives creates an opportunity for increased return but, at the same time, creates the possibility for greater loss.

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J.P. Morgan Asset Management – Risks & disclosures

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Unless otherwise stated, all data are as of April 30, 2024, or most recently available.

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