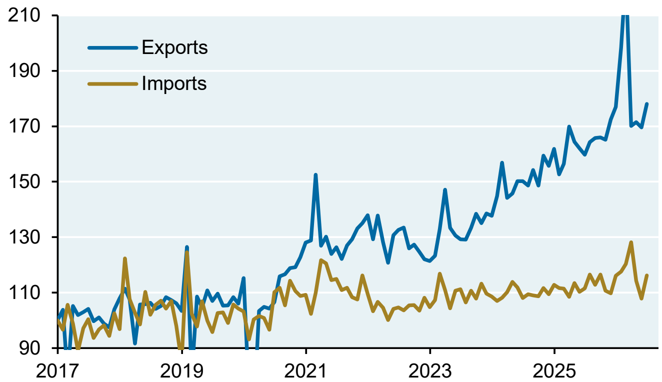
The Year of the Trojan Fire Horse: China's imbalanced economy and unrelenting mercantilism

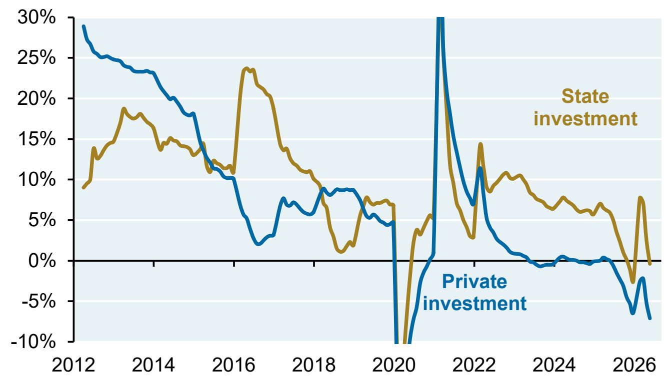
I read an article[1] in the FT recently regarding China's economy from Stephen Roach, currently of the Yale China Center and formerly Morgan Stanley's Chief Asia Economist. Roach argues that China's reliance on a production based, export-driven model is unsustainable, that weak Chinese domestic demand forces excess manufacturing supply onto global markets, thereby creating risks that resemble past financial crises. The main pillars of Roach's argument are clearly visible in China: soaring exports, weak private and state-driven investment, weak retail sales, a housing collapse and high levels of precautionary household savings due to an insufficient safety net.

China exports and imports
Index (100 = 2017)



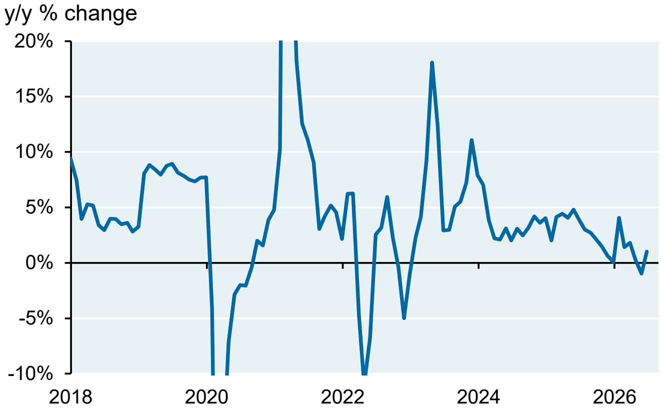
Source: Haver, General Administration of Customs, JPMAM, June 2026

China state vs private investment in fixed assets
y/y % change



Source: China National Bureau of Statistics, JPMAM, May 2026

China retail sales
y/y % change

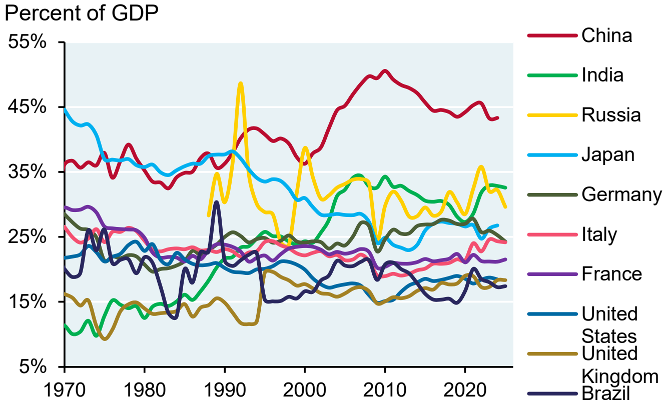


Source: Haver, China Customs, Bloomberg, JPMAM, July 2026

China real estate development investment
Index (100 = 2017)

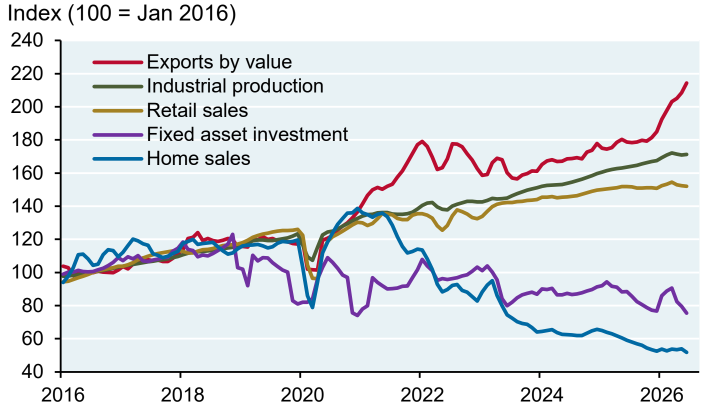
Source: Haver, China Customs, Bloomberg, JPMAM, July 2026

Gross domestic savings rate of the top 10 economies
Percent of GDP



Source: World Bank, JPMAM, 2025

China activity indicators
Index (100 = Jan 2016)

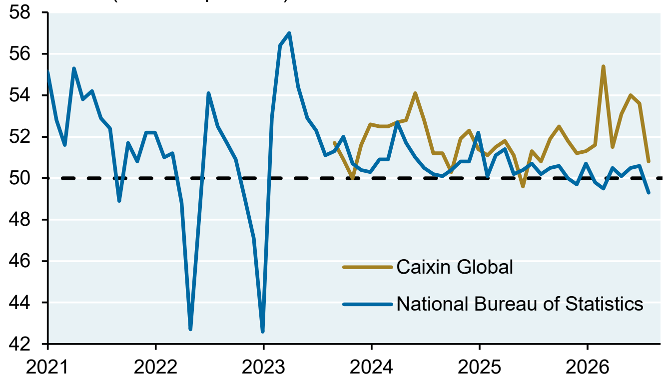


Source: China National Bureau of Statistics, GACC, JPMAM, June 2026

[1] "*How long can China defy history and logic with its imbalances?*", Stephen Roach, FT, July 22, 2026

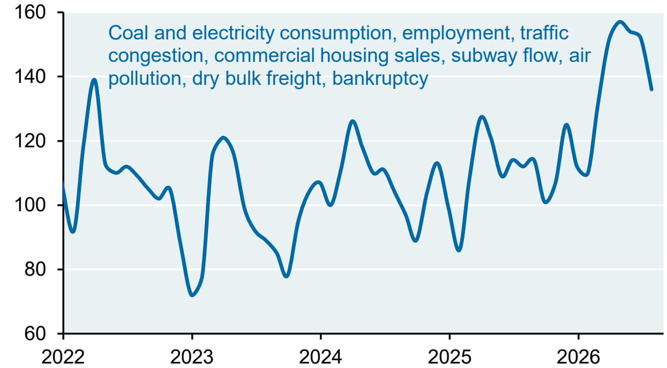
That said, higher frequency indicators we track in China are mostly stable. The charts below show some ups and downs in services/manufacturing surveys and different activity monitors, but nothing exceptionally weak. Also, China's GDP deflator is rising after a period of deflation. I don't sense an imminent crisis on tap for China's economy given the indicators below, even if there is no big-bang stimulus package this fall to revive domestic demand. **Unfortunately for equity investors, these trends are not enough to offset concerns about China's imbalanced economy, leading to yet another year in 2026 of Chinese equity underperformance after a very poor five year stretch.**

China composite services / manufacturing survey
PMI Index (50+ = expansion)



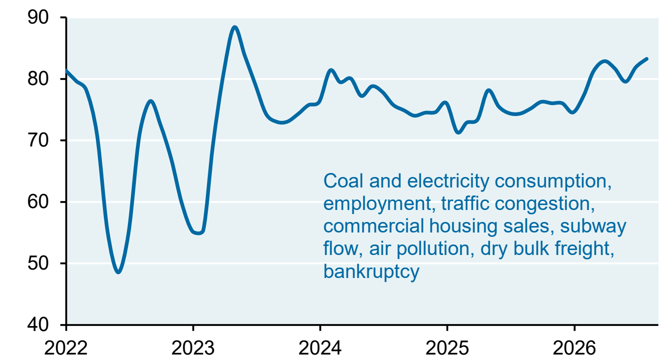
Source: Bloomberg, JPMAM, July 2026

China economic activity monitor (Yicai Index)
Index (100 = Jan 2020)



Source: Yicai Research Institute, JPMAM, July 2026

China economic activity monitor (Now Casting Index)
Index (100 = Mar 2000)

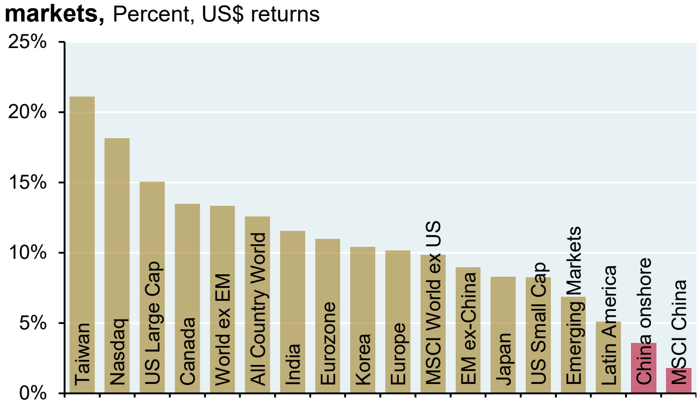


Source: Now-Casting Economics, JPMAM, July 2026

China GDP deflator
Nominal GDP y/y growth rate minus real GDP y/y growth rate

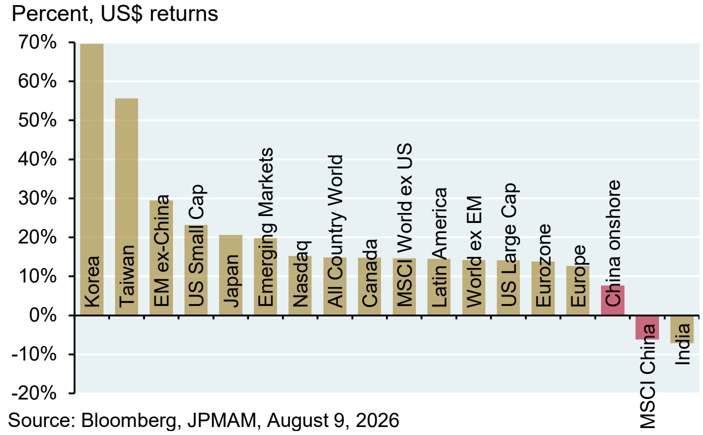
Source: Bloomberg, JPMAM, Q2 2026

2020-2025 annualized total returns for major equity markets, Percent, US$ returns



Source: Bloomberg, JPMAM, December 31, 2025

2026 ytd total returns for major equity markets
Percent, US$ returns



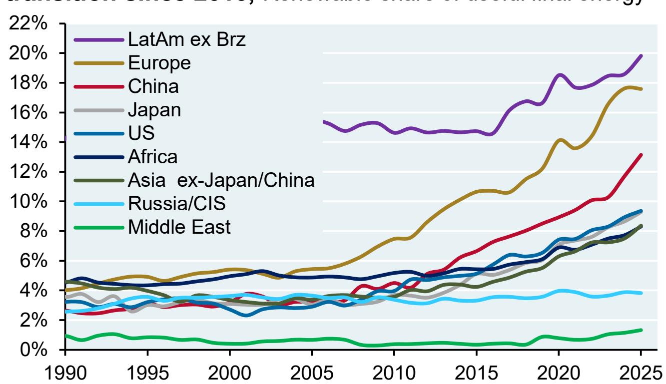
Source: Bloomberg, JPMAM, August 9, 2026

Despite ample evidence of China's malaise[2], China is living up to anthropomorphic characteristics of this year's zodiac, the Fire Horse, in at least one regard: bold moves, self-reliance, speed, action and innovation in energy.

Let's start with three energy barometers: the renewable share of useful final energy, a topic we discussed at length in the 2026 energy paper; the share of useful final energy that is electrified; and the self-sufficiency of energy consumption. On the first two, the rate of change in China is the fastest of all major countries, particularly vs the US. These two factors contributed to China's improved energy self-sufficiency which rose from 66% in 2019 to 81% in 2025.

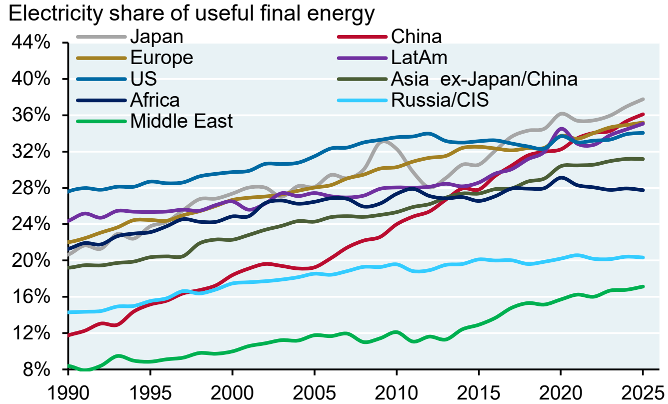
China's energy self-sufficiency is even higher in 2026. China has cut its oil imports by 30%-35% this year by some combination of (a) drawing down on strategic and commercial reserves that reportedly exceed 1 billion barrels, (b) increased gasification of domestic coal reserves to make petrochemicals (coal-to-olefins) and (c) increased electrification. The exact attributions are hard to derive since some figures are opaque. According to Michal Meidan, head of China Energy Research at the Oxford Institute for Energy Studies, the question of exactly how China slashed oil imports this year is the million dollar question: "there's a massive level of uncertainty because we don't fully understand what has happened".

Decarbonization has been a mostly linear industrial transition since 2010, Renewable share of useful final energy



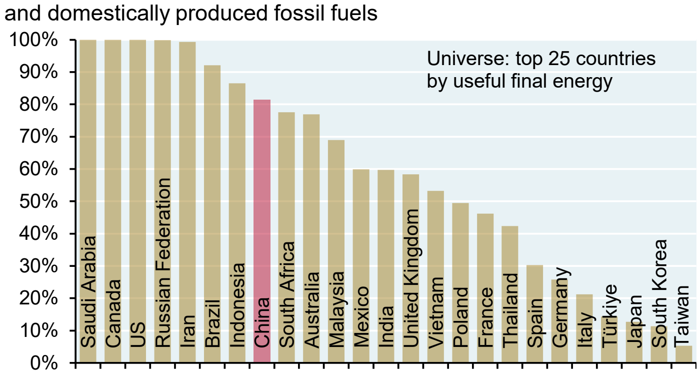
Source: Energy Institute, IEA, JPMAM, 2025

Electrification: China and Japan power ahead
Electricity share of useful final energy



Source: Energy Institute, IEA, JPMAM, 2025

Useful final energy self sufficiency
Percent of useful final energy consumption from renewables, nuclear and domestically produced fossil fuels

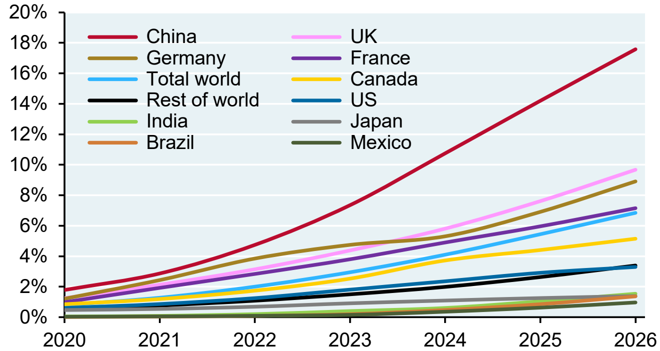


Source: Energy Institute, IEA, JPMAM, 2025

[2] While China official data shows 4.6% real GDP growth from 2022 – 2025, the Rhodium Group estimates that the more plausible range is 1.5% - 2.0%

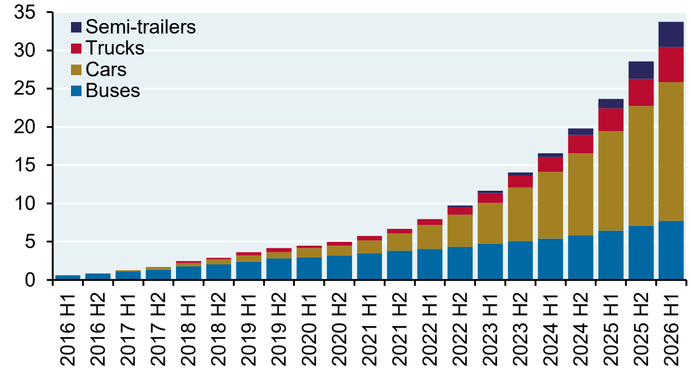
On electrification of transport, China is arguably the only major car market whose EV share of the existing fleet has reached escape velocity. As shown on the right, China's EV adoption has started to reshape global oil demand; EV's displaced 6% of China's oil imports in the first half of 2026[3].

EV share of passenger vehicle FLEET, largest car markets
Percent, BEV + PHEV + EREV



Source: BloombergNEF, JPMAM, June 2026. The top 10 countries above make up ~70% of global passenger vehicle sales

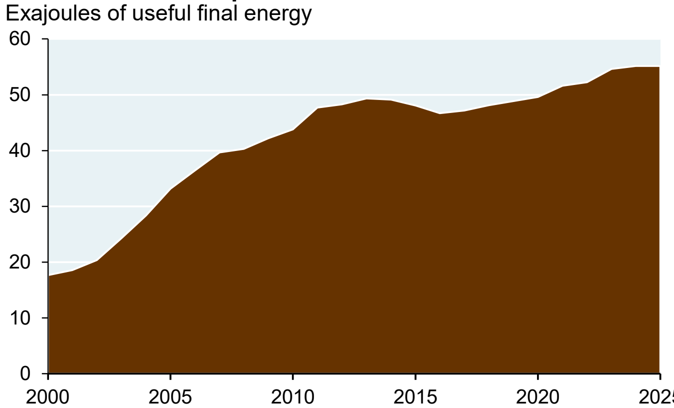
Chinese oil demand displaced by EVs
Million tonnes of oil equivalent



Source: Center for Research on Energy and Clean Air, July 2026

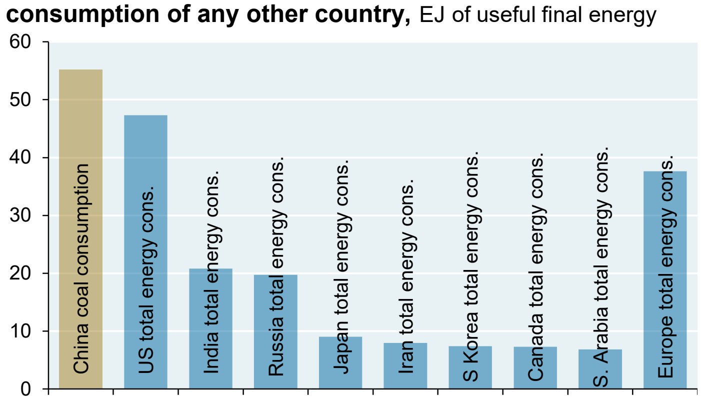
While China renewable and electrification *shares* of energy are rising, so is China's energy consumption and consumption of fossil fuels in absolute terms. As a result, Chinese CO_2 emissions are still on the rise. One pair of striking charts below. First, China's coal consumption is not declining yet despite China installing roughly half of the entire world's wind and solar power. A lot of energy commentary I read obsesses over China's use of coal for power generation, but that only represents ~55% of coal consumption; the rest is for thermal heat and feedstocks for petrochemicals and plastics. Second: China's consumption of coal actually exceeds the ENTIRE energy consumption of the countries/regions shown on the right (!!). But on a rate-of-change basis, China is the among the world leaders on deployment of renewable energy and electrification of transport.

China coal consumption
Exajoules of useful final energy



Source: Energy Institute, JPMAM, 2025

China COAL consumption exceeds TOTAL energy consumption of any other country, EJ of useful final energy



Source: Energy Institute, JPMAM, 2025

Note: these energy charts are all part of a broader midyear energy update slide deck that you can access **here**.

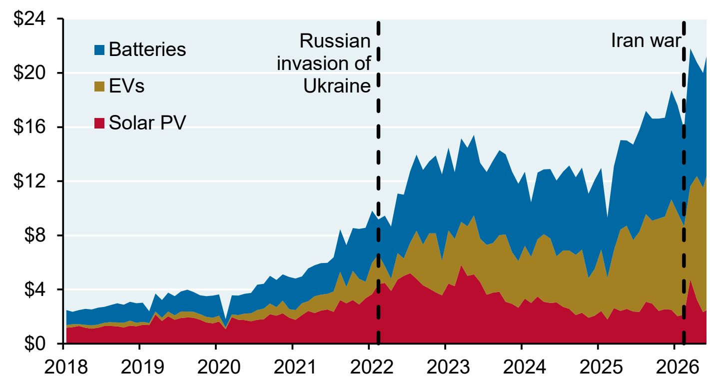
[3] "*EV-related oil cuts emerge as a new driver for China's clean air progress*", Center for Research on Energy and Clean Air, July 14, 2026

***The Year of the Trojan Fire Horse*. Like the Trojan Horse in the Odyssey, the gift of inexpensive Chinese exports is not always as beneficial as it seems; many come with supply chain dependencies and deindustrialization risks for countries receiving them**.

As shown below, Chinese exports of clean technology (batteries, solar PV and EVs) rose sharply after Russia's invasion of Ukraine, and rose again after the US invasion of Iran earlier this year. These exports are helping many countries increase their energy independence, reducing demand for imported oil and gas whose prices are linked to security conditions in the Gulf. **But Chinese EV imports come with a price for countries with their own auto industries**: Chinese competition could threaten 350,000 jobs in Europe by 2030 due to a 35% European cost disadvantage which is driven by rising European material, labor and energy costs[4]. Even the imposition of duties has not stopped the onslaught of EVs into Europe, as shown in the second chart[5]. These projected 350k job losses would follow on 104k European automotive jobs already eliminated in 2024 and 2025 by ZF Friedrichshafen, Bosch, Continental, Schaeffler and others. Around 50% of European automotive suppliers now indicate that they will reduce investments in Western Europe over the next 5 years.

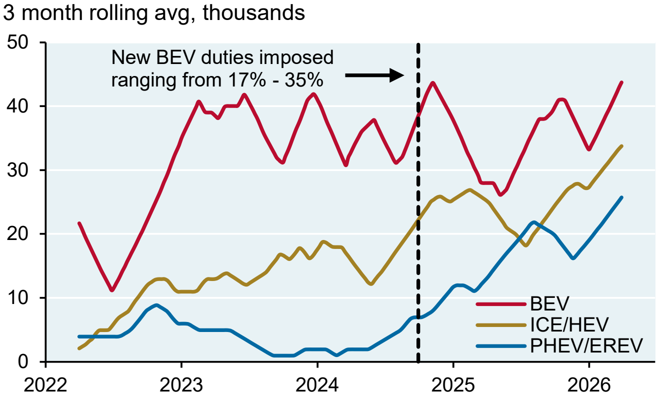
Europe has also struggled to build a homegrown battery industry, with 11 out of 16 planned battery factories delayed or canceled, making European automakers more dependent on Chinese and Korean alternatives.

China clean technology exports: batteries, EVs & solar PV
US$, billions



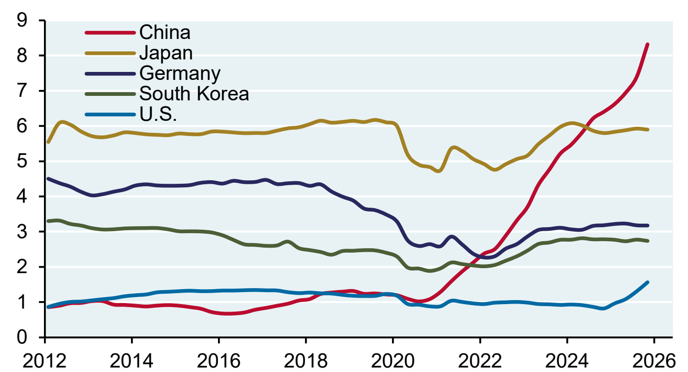
Source: EMBER, JPMAM, June 2026

Chinese car exports to EU
3 month rolling avg, thousands



Source: Rhodium Group, April 2026

Global auto exports
Units, millions



Source: Japan Ministry of Finance, BEA, GAC China, VDA Germany, Q2 2026

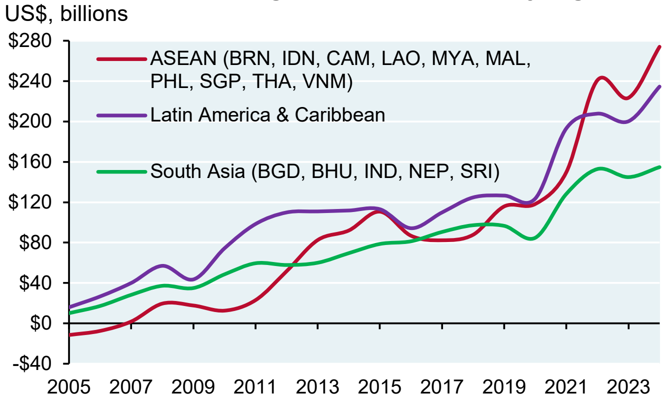
[4] "*Competitiveness gap: manufacturing in EU threatened by displacement*", CLEPA/Roland Berger, Nov 24, 2025

[5] Exports of EVs from China have increased much faster than sales of those imported EVs. According to the IEA, over 1 million electric car exports from China have not yet been registered as sales in importing countries. While it can take months for car-carrying vessels from China to reach destinations, it is likely that inventories of electric cars from China are building up in various export markets. Europe is debating policies that would restrict EV incentives to vehicles with 70% domestic content; no passage yet.

Europe is not the only region struggling with Chinese excess production. As shown on the left, China runs massive trade surpluses with developing countries as well. When sourcing critical raw materials, chemicals and electronic component inputs, firms in developing countries are increasingly left with few options other than Chinese suppliers. Overcapacity is essentially the hallmark of China's impact on the global economy. As shown on the right, China's manufacturing *capacity* is often 2x or more than its current *production*, setting the stage for years of low-cost exports whether the rest of the world is prepared for it or not.

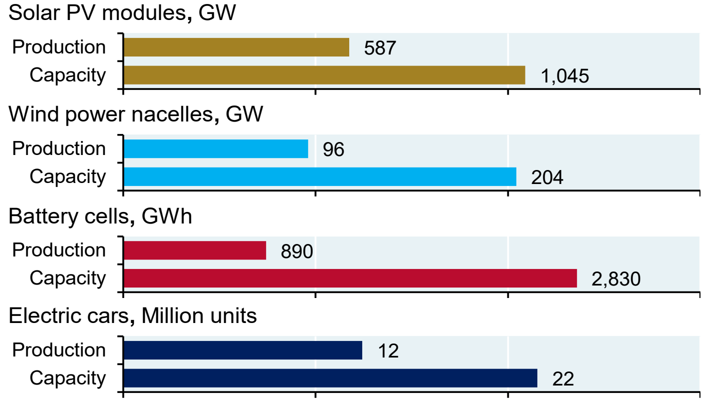
The third chart is also very telling: at the beginning of the 21st century, China's share of value added in global apparel, textiles, footwear and leather exports was ~35% of the low- and middle-income (LMI) country total. At the time, that figure was around the same as China's LMI population share. Today China's value added share is two thirds of the LMI total even as its population share has gone down.

China's manufactured goods trade surplus by region
US$, billions



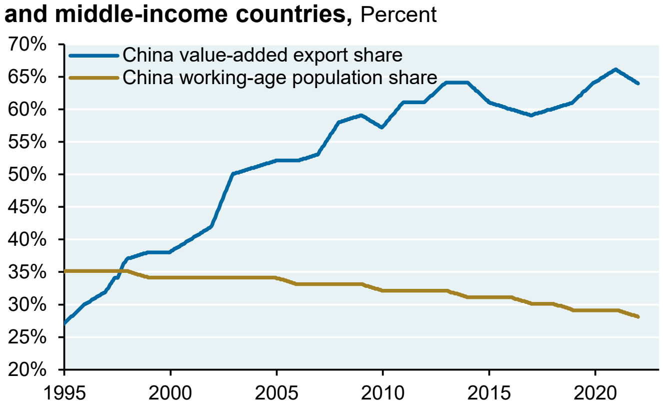
Source: World Bank WITS, UN Comtrade, JPMAM, 2024

China manufacturing capacity vs production, 2024



Source: IEA, 2025

Apparel, textiles, footwear and leather exports from low- and middle-income countries, Percent



Source: OECD, Foreign Affairs, June 18, 2026

What about Chinese FDI?

Chinese firms have used FDI to try and avoid targeted trade restrictions in Asia, the Middle East, Africa and other emerging manufacturing hubs. However: the presence of Chinese firms often fails to transfer significant benefits to local communities in areas like upskilling and technology transfer since Chinese firms typically prioritize vertical integration and rely on inputs made by other Chinese suppliers. Also: Chinese firms often bring in skilled labor and managers from China rather than hiring local workers, and encourage Chinese subsidiaries to continue producing key components in China and instead focus just on assembly and packaging in overseas facilities. Bottom line: fewer benefits for host countries.

Source: US-China Economic and Security Review Commission 2025 annual report to Congress; Part IV Exposure to China's Economic Distortions and Coercion; Chapter 8 China Shock 2.0

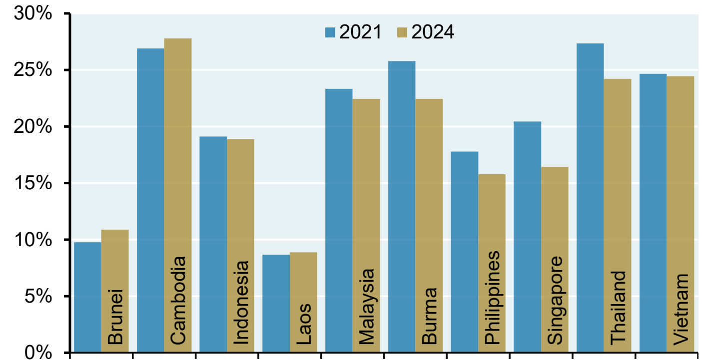
While China strenuously objects[6] to such descriptions of its mercantile approach, the story is pretty clear. Normally, a prolonged period of negative industrial producer prices would lead to competition and reduced capacity. Not in China, however; instead, **~30% of Chinese industrial companies are unprofitable zombies that survive due to a broad-based subsidy approach that dwarfs the rest of the world as shown below.**

To complete the picture, countries that experienced large increases in manufactured imports from China also experienced slowdowns in domestic manufacturing. From 2021 to 2024, as Chinese imports to the ASEAN region increased, every ASEAN country except for Brunei, Cambodia and Laos experienced a decline in their manufacturing share of GDP. Some consequences were outlined in the US-China Economic and Security Review Commission 2025 report to Congress: dozens of Indonesian textile and garment firms shuttered with 250,000 jobs lost in 2023 and 2024 with another 280,000 jobs at risk; and the closure of 4,000 small household appliance, furniture, electronics, garment, auto and steel factories in Thailand in 2023 and 2024.

China industrial producer prices & entities operating at a loss, y/y % change Percent

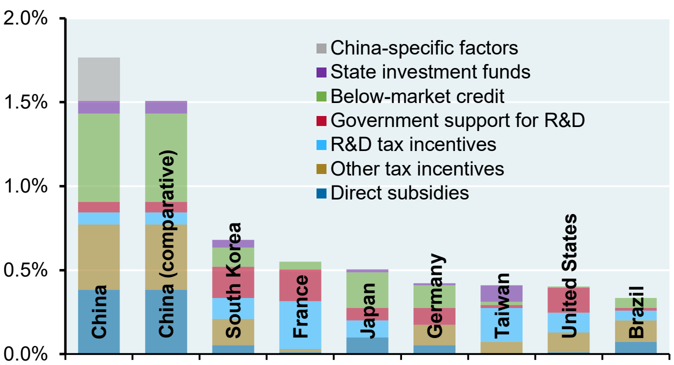
Source: China National Bureau of Statistics, Haver, JPMAM, June 2026

Manufacturing value added by ASEAN countries
Percent of GDP



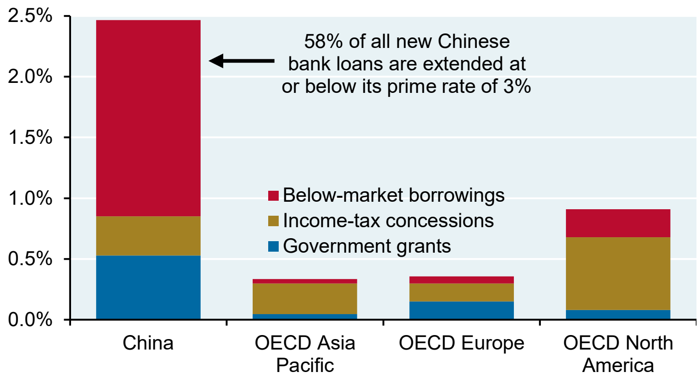
Source: World Bank, 2024

Industrial policy spending in key economies, 2022
Percent of GDP



Source: CSIS, 2022

Industrial subsidies, 2005 - 2024
Percent of annual firm revenue



Source: OECD MAGIC database, June 1, 2026

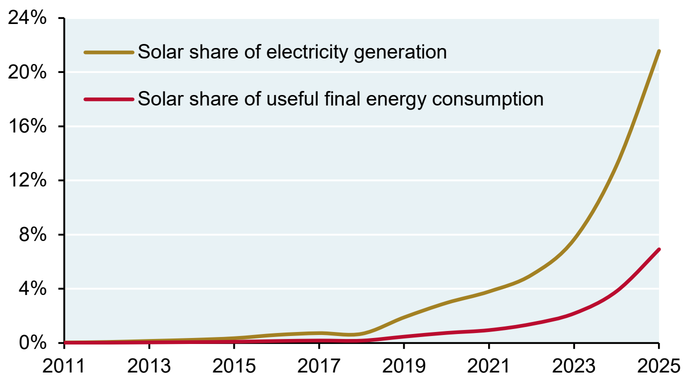
"China is pulling up the ladder behind it", Foreign Affairs, June 18, 2026
Many poorer countries fear that China's economic rise will not leave room for them to industrialize. Unlike the US and Europe, which in the past helped facilitate the industrialization of poorer countries (including China), Beijing is currently on track to have the opposite effect. China is not merely climbing the technological ladder; it is pulling up the ladder behind it. It dominates the new commanding heights of manufacturing (electric vehicles, solar panels, batteries, drones) but it has not vacated the older, labor-intensive sectors through which it and other rich and middle-income countries escaped poverty. In effect, China is trying to do what economic theory says no country should be able to do: retain comparative advantage in almost everything. [Shoumitro Chatterjee, Johns Hopkins and Arvind Subramanian, Peterson Institute]

[6] China's rebuttal is encapsulated in an article submitted to the World Trade Organization in July 2026: "*China's position on the So-called Excess Capacity Issue*". I read all of it and was convinced by none of it

As stated earlier, China's renewable energy exports contribute to decarbonization on a global scale. Countries like Pakistan are seeing rapid uptake of solar power in large part to cheap imports from China. But like the one-eyed Odyssey character Polyphemus, having a singular point of focus misses the big picture: **energy is just one sector of the economy, so cheap solar power and greater energy independence has to co-exist with a flood of Chinese imports across multiple sectors, not just energy**. Countries trying to navigate China's unprecedented global production surplus face a huge challenge, energy independence dividends notwithstanding. That may explain the surge in anti-dumping and countervailing duty investigations targeting China filed since 2023[7].

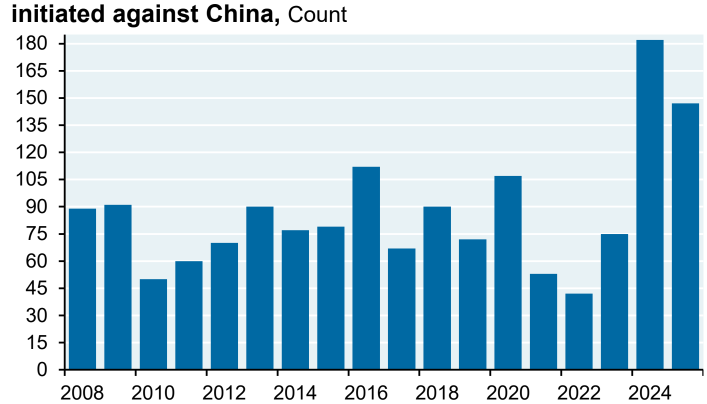
China is fighting back: after Europe announced the Industrial Accelerator Act to create incentives for EU-based procurement and production, Beijing threatened countermeasures against Europe. China also issued decrees authorizing retaliatory measures against foreign laws seen as "discriminatory" against China, and introduced new controls on outbound direct investments to provide the legal basis for punishing countries that restrict Chinese corporate investments. I'm not sure how that is going to work out: "an economy like China's that is so dependent on global demand for growth cannot remain in perpetual conflict with its customers" [8].

Solar shares of Pakistan electricity and useful final energy
Percent



Source: Energy Institute, IEA, JPMAM, 2025

Anti-dumping and countervailing duty investigations initiated against China, Count



Source: World Trade Organization, JPMAM, 2025

Michael Cembalest
JP Morgan Asset Management

The other Odyssey

So far, Nolan's Odyssey film has been criticized for unconventional casting choices, American accents, insufficient attention to details regarding interventions by Greek gods that were present in the original Homeric text, anachronistic themes of character introspection in the ancient world, filming in territorially disputed parts of Morocco, the insufficient depth of female characters, costume inaccuracies and the use of Norse longships instead of Bronze Age Greek vessels. As the film crosses $1 billion in worldwide box office revenues, most audiences are simply ignoring them. Two recent films I also recommend seeing: "The Tuner" and "It Was Just an Accident"

[7] On US tariffs: the US is moving toward a more diversified tariff regime. Section 301 will replace the expiring Section 122 levy, Section 338 has been invoked or threatened and further Section 232/301 actions are still in progress. This points to higher barriers alongside EU trade-defense actions, ASEAN transshipment scrutiny, etc

[8] "*China's moment of weakness*", Logan Wright, Foreign Affairs, July 23, 2026

IMPORTANT INFORMATION

This material is for information purposes only. The views, opinions, estimates and strategies expressed herein constitutes Michael Cembalest's judgment based on current market conditions and are subject to change without notice, and may differ from those expressed by other areas of JPMorgan Chase & Co. ("JPM"). **This information in no way constitutes J.P. Morgan Research and should not be treated as such.** Any companies referenced are shown for illustrative purposes only, and are not intended as a recommendation or endorsement by J.P. Morgan in this context.

GENERAL RISKS & CONSIDERATIONS Any views, strategies or products discussed in this material may not be appropriate for all individuals and are subject to risks. Investors may get back less than they invested, and **past performance is not a reliable indicator of future result**s. Asset allocation/diversification does not guarantee a profit or protect against loss. Nothing in this material should be relied upon in isolation for the purpose of making an investment decision.

NON-RELIANCE Certain information contained in this material is believed to be reliable; however, JPM does not represent or warrant its accuracy, reliability or completeness, or accept any liability for any loss or damage (whether direct or indirect) arising out of the use of all or any part of this material. No representation or warranty should be made with regard to any computations, graphs, tables, diagrams or commentary in this material, which are provided for illustration/ reference purposes only. Any projected results and risks are based solely on hypothetical examples cited, and actual results and risks will vary depending on specific circumstances. Forward-looking statements should not be considered as guarantees or predictions of future events. Nothing in this document shall be construed as giving rise to any duty of care owed to, or advisory relationship with, you or any third party. Nothing in this document shall be regarded as an offer, solicitation, recommendation or advice (whether financial, accounting, legal, tax or other) given by J.P. Morgan and/or its officers or employees~~,~~. J.P. Morgan and its affiliates and employees do not provide tax, legal or accounting advice. You should consult your own tax, legal and accounting advisors before engaging in any financial transactions.

For J.P. Morgan Asset Management Clients:

J.P. Morgan Asset Management is the brand for the asset management business of JPMorgan Chase & Co. and its affiliates worldwide.

To the extent permitted by applicable law, we may record telephone calls and monitor electronic communications to comply with our legal and regulatory obligations and internal policies. Personal data will be collected, stored and processed by J.P. Morgan Asset Management in accordance with our privacy policies at https://am.jpmorgan.com/global/privacy.

ACCESSIBILITY
For U.S. only: If you are a person with a disability and need additional support in viewing the material, please call us at 1-800-343-1113 for assistance.

This communication is issued by the following entities: In the United States, by J.P. Morgan Investment Management Inc. or J.P. Morgan Alternative Asset Management, Inc., both regulated by the Securities and Exchange Commission; in Latin America, for intended recipients' use only, by local J.P. Morgan entities, as the case may be.; in Canada, for institutional clients' use only, by JPMorgan Asset Management (Canada) Inc., which is a registered Portfolio Manager and Exempt Market Dealer in all Canadian provinces and territories except the Yukon and is also registered as an Investment Fund Manager in British Columbia, Ontario, Quebec and Newfoundland and Labrador. In the United Kingdom, by JPMorgan Asset Management (UK) Limited, which is authorized and regulated by the Financial Conduct Authority; in other European jurisdictions, by JPMorgan Asset Management (Europe) S.à r.l. In Asia Pacific ("APAC"), by the following issuing entities and in the respective jurisdictions in which they are primarily regulated: JPMorgan Asset Management (Asia Pacific) Limited, or JPMorgan Funds (Asia) Limited, or JPMorgan Asset Management Real Assets (Asia) Limited, each of which is regulated by the Securities and Futures Commission of Hong Kong; JPMorgan Asset Management (Singapore) Limited (Co. Reg. No. 197601586K), which this advertisement or publication has not been reviewed by the Monetary Authority of Singapore; JPMorgan Asset Management (Taiwan) Limited; JPMorgan Asset Management (Japan) Limited, which is a member of the Investment Trusts Association, Japan, the Japan Investment Advisers Association, Type II Financial Instruments Firms Association and the Japan Securities Dealers Association and is regulated by the Financial Services Agency (registration number "Kanto Local Finance Bureau (Financial Instruments Firm) No. 330"); in Australia, to wholesale clients only as defined in section 761A and 761G of the Corporations Act 2001 (Commonwealth), by JPMorgan Asset Management (Australia) Limited (ABN 55143832080) (AFSL 376919). For all other markets in APAC, to intended recipients only.

For J.P. Morgan Private Bank Clients:

ACCESSIBILITY

J.P. Morgan is committed to making our products and services accessible to meet the financial services needs of all our clients. Please direct any accessibility issues to the Private Bank Client Service Center at 1-866-265-1727

LEGAL ENTITY, BRAND & REGULATORY INFORMATION

In the **United States**, **JPMorgan Chase Bank, N.A.** and its affiliates (collectively "**JPMCB**") offer investment products, which may include bank managed investment accounts and custody, as part of its trust and fiduciary services. Other investment products and services, such as brokerage and advisory accounts, are offered through **J.P. Morgan Securities LLC ("JPMS")**, a member of FINRA and SIPC. JPMCB and JPMS are affiliated companies under the common control of JPM.

In **Germany**, this material is issued by **J.P. Morgan SE**, with its registered office at Taunustor 1 (TaunusTurm), 60310 Frankfurt am Main, Germany, authorized by the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin) and jointly supervised by the BaFin, the German Central Bank (Deutsche Bundesbank) and the European Central Bank (ECB). In **Luxembourg**, this material is issued by **J.P. Morgan SE – Luxembourg Branch**, with registered office at European Bank and Business Centre, 6 route de Treves, L-2633, Senningerberg, Luxembourg, authorized by the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin) and jointly supervised by the BaFin, the German Central Bank (Deutsche Bundesbank) and the European Central Bank (ECB); J.P. Morgan SE – Luxembourg Branch is also supervised by the Commission de Surveillance du Secteur Financier (CSSF); registered under R.C.S Luxembourg B255938. In the **United Kingdom**, this material is issued by **J.P. Morgan SE – London Branch**, registered office at 25 Bank Street, Canary Wharf, London E14 5JP, authorized by the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin) and jointly supervised by the BaFin, the German Central Bank (Deutsche Bundesbank) and the European Central Bank (ECB); J.P. Morgan SE – London Branch is also supervised by the Financial Conduct Authority and Prudential Regulation Authority. In **Spain**, this material is distributed by **J.P. Morgan SE, Sucursal en España**, with registered office at Paseo de la Castellana, 31, 28046 Madrid, Spain, authorized by the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin) and jointly supervised by the BaFin, the German Central Bank (Deutsche Bundesbank) and the European Central Bank (ECB); J.P. Morgan SE, Sucursal en España is also supervised by the Spanish Securities Market Commission (CNMV); registered with Bank of Spain as a branch of J.P. Morgan SE under code 1567. In **Italy**, this material is distributed by **J.P. Morgan SE – Milan Branch**, with its registered office at Via Cordusio, n.3, Milan 20123, Italy, authorized by the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin) and jointly supervised by the BaFin, the German Central Bank (Deutsche Bundesbank) and the European Central Bank (ECB); J.P. Morgan SE – Milan Branch is also supervised by Bank of Italy and the Commissione Nazionale per le Società e la Borsa (CONSOB); registered with Bank of Italy as a branch of J.P. Morgan SE under code 8076; Milan Chamber of Commerce Registered Number: REA MI 2536325. In the **Netherlands**, this material is distributed by **J.P. Morgan SE – Amsterdam Branch**, with registered office at World Trade Centre, Tower B, Strawinskylaan

1135, 1077 XX, Amsterdam, The Netherlands, authorized by the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin) and jointly supervised by the BaFin, the German Central Bank (Deutsche Bundesbank) and the European Central Bank (ECB); J.P. Morgan SE – Amsterdam Branch is also supervised by De Nederlandsche Bank (DNB) and the Autoriteit Financiële Markten (AFM) in the Netherlands. Registered with the Kamer van Koophandel as a branch of J.P. Morgan SE under registration number 72610220. In **Denmark**, this material is distributed by **J.P. Morgan SE – Copenhagen Branch, filial af J.P. Morgan SE, Tyskland**, with registered office at Kalvebod Brygge 39-41, 1560 København V, Denmark, authorized by the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin) and jointly supervised by the BaFin, the German Central Bank (Deutsche Bundesbank) and the European Central Bank (ECB); J.P. Morgan SE – Copenhagen Branch, filial af J.P. Morgan SE, Tyskland is also supervised by Finanstilsynet (Danish FSA) and is registered with Finanstilsynet as a branch of J.P. Morgan SE under code 29010. In **Sweden**, this material is distributed by **J.P. Morgan SE – Stockholm Bankfilial**, with registered office at Hamngatan 15, Stockholm, 11147, Sweden, authorized by the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin) and jointly supervised by the BaFin, the German Central Bank (Deutsche Bundesbank) and the European Central Bank (ECB); J.P. Morgan SE – Stockholm Bankfilial is also supervised by Finansinspektionen (Swedish FSA); registered with Finansinspektionen as a branch of J.P. Morgan SE. In **Belgium**, this material is distributed by **J.P. Morgan SE – Brussels Branch** with registered office at 35 Boulevard du Régent, 1000, Brussels, Belgium, authorized by the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin) and jointly supervised by the BaFin, the German Central Bank (Deutsche Bundesbank) and the European Central Bank (ECB); J.P. Morgan SE Brussels Branch is also supervised by the National Bank of Belgium (NBB) and the Financial Services and Markets Authority (FSMA) in Belgium; registered with the NBB under registration number 0715.622.844. In **Greece**, this material is distributed by **J.P. Morgan SE – Athens Branch**, with its registered office at 3 Haritos Street, Athens, 10675, Greece, authorized by the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin) and jointly supervised by the BaFin, the German Central Bank (Deutsche Bundesbank) and the European Central Bank (ECB); J.P. Morgan SE – Athens Branch is also supervised by Bank of Greece; registered with Bank of Greece as a branch of J.P. Morgan SE under code 124; Athens Chamber of Commerce Registered Number 158683760001; VAT Number 99676577. In **France**, this material is distributed by **J.P. Morgan SE – Paris Branch**, with its registered office at 14, Place Vendôme 75001 Paris, France, authorized by the Bundesanstaltfür Finanzdienstleistungsaufsicht(BaFin) and jointly supervised by the BaFin, the German Central Bank (Deutsche Bundesbank) and the European Central Bank (ECB) under code 842 422 972; J.P. Morgan SE – Paris Branch is also supervised by the French banking authorities the Autorité de Contrôle Prudentiel et de Résolution (ACPR) and the Autorité des Marchés Financiers (AMF). In **Switzerland**, this material is distributed by **J.P. Morgan (Suisse) SA**, with registered address at rue du Rhône, 35, 1204, Geneva, Switzerland, which is authorised and supervised by the Swiss Financial Market Supervisory Authority (FINMA) as a bank and a securities dealer in Switzerland.

In **Hong Kong**, this material is distributed by **JPMCB, Hong Kong branch**. JPMCB, Hong Kong branch is regulated by the Hong Kong Monetary Authority and the Securities and Futures Commission of Hong Kong. In Hong Kong, we will cease to use your personal data for our marketing purposes without charge if you so request. In **Singapore**, this material is distributed by **JPMCB, Singapore branch**. JPMCB, Singapore branch is regulated by the Monetary Authority of Singapore. Dealing and advisory services and discretionary investment management services are provided to you by JPMCB, Hong Kong/Singapore branch (as notified to you). Banking and custody services are provided to you by JPMCB Singapore Branch. The contents of this document have not been reviewed by any regulatory authority in Hong Kong, Singapore or any other jurisdictions. You are advised to exercise caution in relation to this document. If you are in any doubt about any of the contents of this document, you should obtain independent professional advice. For materials which constitute product advertisement under the Securities and Futures Act and the Financial Advisers Act, this advertisement has not been reviewed by the Monetary Authority of Singapore. JPMorgan Chase Bank, N.A., a national banking association chartered under the laws of the United States, and as a body corporate, its shareholder's liability is limited.

With respect to countries in **Latin America**, the distribution of this material may be restricted in certain jurisdictions.

*Issued in **Australia** by JPMorgan Chase Bank, N.A. (ABN 43 074 112 011/AFS Licence No: 238367) and J.P. Morgan Securities LLC (ARBN 109293610)*.

References to "J.P. Morgan" are to JPM, its subsidiaries and affiliates worldwide. "J.P. Morgan Private Bank" is the brand name for the private banking business conducted by JPM. This material is intended for your personal use and should not be circulated to or used by any other person, or duplicated for non-personal use, without our permission. If you have any questions or no longer wish to receive these communications, please contact your J.P. Morgan team.