

BIG PICTURE Key Themes for 2026

BIG PICTURE | 1Q 2026

The world is broadening economically, geopolitically, technologically and monetarily. As we move into 2026, we see a shift from concentrated sources of growth and returns to a greater dispersion and wider set of opportunities, both within the U.S. and across global markets. The investment environment is being shaped by the interest rate regime, widening gap between tariff rhetoric and reality, divergent technological architectures, monetary fragmentation and renewed interest in real assets.

The Age of Capped Real Rates

Last year we noted that rates were likely to be “higher for no longer” because two powerful forces were consistently underestimated: supply-side resilience and the debt-driven limits that cap how restrictive monetary policy can be. Excess Chinese manufacturing capacity, and its deflationary spillovers, kept global goods inflation anchored. The assumption that tariffs → inflation → higher rates ignored how supply chains adapt, absorb or reroute cost pressures, and how Asia’s deflationary pull helps offset inflationary pressures elsewhere.

The deeper constraint is debt arithmetic. Global public debt has surged to levels historically associated with negative real rates. Across past episodes, from the U.S. Civil War to the World Wars, the Global Financial Crisis and the pandemic, high-debt environments have required negative or near-neutral real rates to stabilize (*Display 1*). Today, U.S. federal debt stands near 120% of GDP, double its 2000 level, with fiscal deficits projected at around 6% of GDP for the next decade. The October 2023 real-rate peak of 2.7% marked the upper boundary of what a high-debt system can absorb without destabilization.

The implication is clear: In a high-debt world, real rates cannot remain restrictive without triggering sovereign strain, fiscal accidents or recession. Market forces should cap real rates at neutral or negative.

Monetary policy may still tighten cyclically, but structurally, rates cannot rise above nominal growth without undermining the system they are meant to stabilize.

AUTHOR



JITANIA KANDHARI
*Deputy CIO, Solutions
& Multi-Asset Group
Portfolio Manager,
Passport Equity
Head of Macro &
Thematic Research,
Emerging Markets
Equity*

Key Themes for 2026

1. The Age of Capped Real Rates
2. End of One Money
3. Tariffs: Illusion Versus Reality
4. New China’s Pivot
5. The AI Boom, Cracks and Opportunity
6. Code Meets Cell
7. The Autonomy Stack
8. Artificial, but Surprisingly Empathetic
9. The EM Comeback Was Just the Beginning
10. The Great Broadening of 2026

End of One Money: The Rise of Many

Back in 2022, we wrote about China forming currency blocs and building alternative payment systems to challenge U.S. dollar (USD)-centric channels (*Big Picture – China’s Geopolitical Aspirations and Challenges*). Even then, countries were already making tactical yuan payments, such as India’s largest cement producer paying in renminbi (RMB) for Russian coal, while yuan-ruble trades surged after the Russia-Ukraine conflict.

That architecture is now materially more developed. Asia’s credit creation is increasingly dominated by RMB and local currency lending rather than by USD loans. More than 30% of China’s trade is settled in RMB, lifting it into the top three currencies used in global trade finance. Offshore clearing banks have been established in 33 markets to facilitate yuan payments, while a growing number of countries, including India, UAE, Brazil and ASEAN economies, are settling trades in their domestic currencies.

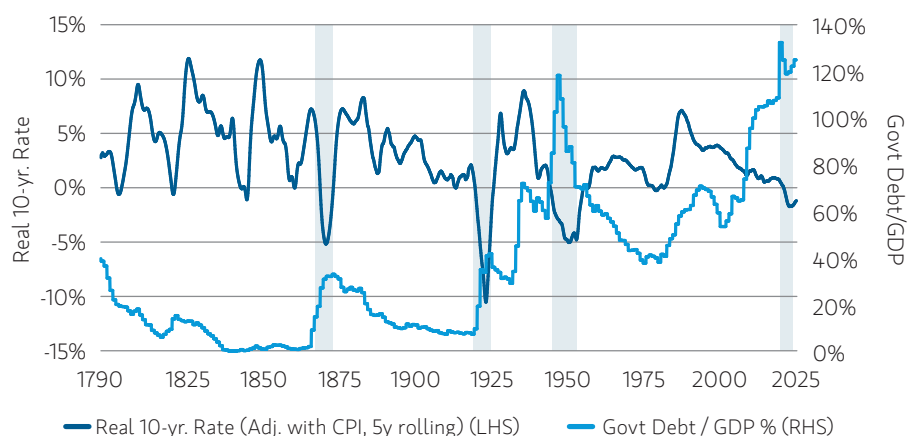
The U.S. dollar’s share of international reserves has fallen from 58% in 2015 to 42% today, while gold’s share has risen from 8% to 20%. We expect demand for non-dollar reserves to continue.

Fragmentation, however, is not just geopolitical, it is also technological. Money itself is becoming modular. Central bank digital currencies are scaling across major economies. Stablecoins now settle more value daily than major credit card networks. Tokenized treasuries and blockchain-based collateral systems compress settlement times and release trapped liquidity. China’s digital currency, e-CNY, is advancing through regional pilots, while India’s UPI, Brazil’s PIX,

DISPLAY 1

High Debt Caps Real Rates

U.S. government debt as share of GDP against real 10-year rates



Source: Bloomberg, FactSet, Haver. As of September 30, 2025.

Singapore’s PayNow, and China’s CIPS are evolving into influential payment ecosystems.

The U.S. dollar remains the world’s anchor, but it now faces greater competition from alternative currencies, digital challengers and new payment infrastructures offering speed and regional liquidity. The direction of monetary multipolarity is clear, and these trends will help support compelling investment opportunities for years to come.

Tariffs: Illusion Versus Reality

As the global monetary system fragments, trade policy remains one of the few levers governments can still pull, often with misunderstood consequences.

The prevailing tariff playbook still assumes that trade can be reshaped neatly along national boundaries. In reality, the global economy is organized by sectors, not countries. Country-based tariffs raise costs for suppliers, businesses and consumers without meaningfully narrowing trade deficits. By contrast, sectoral tariffs have proven more effective

in promoting strategic onshoring, generating trade revenues and reducing deficits.

The U.S. lacks the trained labor force and capital stock required to rapidly replace complex imports. Nearly half of its imports consist of intermediate goods that American factories need to produce finished products. Tariffs on these components undermine competitiveness rather than protect them, particularly in sectors such as pharmaceuticals, aerospace, automobiles, computers and machinery (*Display 2*). Asia dominates electronics intermediate exports, while North American auto supply chains remain deeply integrated with Mexico and Canada, hence lowering tariff risk under the USMCA framework.

U.S. imports are no longer dominated by low-cost consumer goods. Machinery and electronics account for roughly 30% of imports, autos about 12% and pharmaceuticals around 5%, all categories that are difficult to reshore efficiently. By contrast, U.S. exports remain concentrated in lower-complexity commodities

such as oil and soybeans, which are easier to substitute. This asymmetry limits U.S. leverage in tariff disputes, particularly with China, which exports more complex goods to the U.S. than it imports in return.

The tariff debate remains framed around countries, but the economic reality is sectoral. Nowhere is the gap between tariff intent and economic reality clearer than in China.

Old to New China: The Manufacturing- Technology Pivot

Country-level tariffs have not derailed China's export engine. While the U.S. is experiencing an AI-led investment boom, China's growth is being driven by a resurgence in manufacturing and exports. China has transitioned from an economy once led by property and infrastructure towards one powered by high-value competitive manufacturing. This has produced a dual-track economy: "Old China" remains cyclically weak, while "New China" asserts growing global leadership.

Old China, rooted in real estate and low-cost manufacturing, faces excess capacity, deflationary pressures and a multi-year property correction that has weighed on private-sector confidence and nominal growth. In parallel, New China has undergone a technological and industrial transformation. China now accounts for 28% of global manufacturing output, up from just 5% in 2000, with a goods trade surplus exceeding a trillion dollars. As the U.S. share of China's exports has declined, shipments to emerging markets (EM) have risen to around 45% from 34% in 2016. This shift reflects a rerouting of goods previously destined for the U.S.

China has also increased investment and offshore production in several emerging markets, moving up the value chain in clean energy, electric vehicles (EVs), batteries, robotics, biotechnology and AI. A pivotal moment was the 2018 U.S. semiconductor export restrictions, which exposed China's strategic vulnerabilities. Beijing responded by accelerating the de-Westernization of

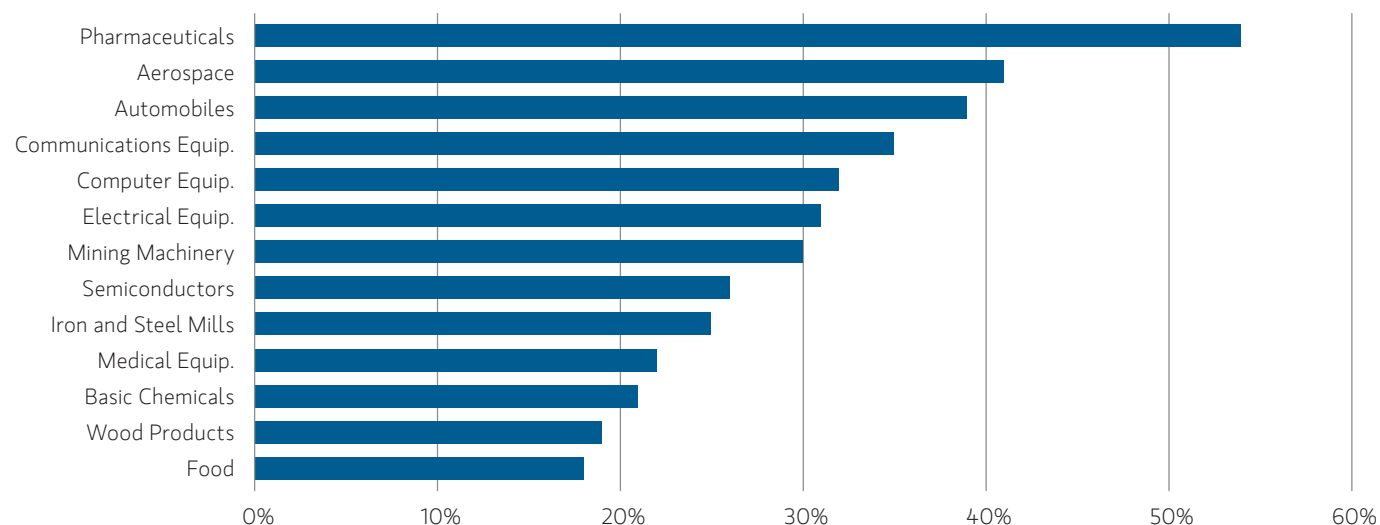
supply chains, directing capital toward priority industries while tightening leverage in property markets. This produced a dual shock: weakening domestic demand from real estate alongside a surge in capacity across advanced manufacturing. Export composition adjusted accordingly: batteries, EVs, solar products, ships and industrial robots now account for nearly half of the increase in China's trade surplus over the past seven years. China's structural advantages in electricity and 12 million annual STEM (Science, Technology, Engineering and Mathematics) graduates are difficult to replicate. Europe, Japan and Korea have ceded global market share across autos, chemicals, solar and industrial machinery. Its growing role in technology is also reflected in the release of DeepSeek's model in early 2025.

China's shift from low-cost manufacturing to advanced industrial capability sets the stage for the next frontier of global competition: artificial intelligence.

DISPLAY 2

The Hidden Import Dependence of U.S. Manufacturing

Import share of intermediate goods (%)



Source: MSIM, Bureau of Economic Analysis, Federal Reserve. As of December 31, 2019.

AI: The Boom, the Cracks, the Opportunity

Three years after the launch of ChatGPT, AI has reached adoption levels that are exceptional by historical standards. Nearly 800 million people have interacted with generative AI, a scale of engagement that took the internet more than a decade to achieve. At the same time, hyperscalers are committing substantial capital to support this expansion across GPUs (Graphics Processing Units), data centers, power infrastructure and networking. Beneath this spending, the technology itself continues to advance: task complexity is doubling roughly every seven months, multimodal use is increasing token intensity and unit token costs are falling at close to a ten-fold annual pace, creating favorable conditions for application development.

But cracks are appearing. Monetization continues to trail adoption, and many enterprise users remain in an experimental phase as they seek clearer productivity gains and return on investment. Physical constraints are also emerging. Power availability and networking bottlenecks are limiting utilization, leaving expensive computing capacity idle for significant portions of time. In addition, the growing use of leases, vendor financing and private credit introduces layers of opacity into the funding structure that warrants careful monitoring.

At the same time, the countervailing forces are equally powerful. While

capital intensity is rising, the largest platforms continue to generate substantial cash flow, allowing them to fund investment internally rather than through balance-sheet stress. History provides useful context. Previous infrastructure cycles, from telegraphy to telecommunications to the internet, were marked by periods of overbuilding that ultimately proved constructive. Excess capacity reduced costs, accelerated adoption and eventually led to productivity gains.

Today, two distinct AI ecosystems are emerging. The U.S. model is a *high-cost innovation engine*, fueled by massive capital expenditure, premium GPUs and broad commercial experimentation. Constrained by export controls, the Chinese model has evolved into a *low-cost efficiency system*, innovating around scarcity and achieving competitive benchmark performance at just 18% of U.S. hyperscaler expenditure. Its open-source ecosystem and deep partnerships across EM foundries, servers, memory and networking underpin a parallel AI supply chain. China's highly digitized economy is enabling even faster adoption and applications. The result is not one global AI future, but two architectures with different cost curves, capabilities and geopolitical implications.

AI remains a long-duration theme, but index-level exposure will increasingly mask widening dispersion. The next phase of value creation lies in vertical applications, particularly in some sectors such as health care, where AI is reshaping research and operations.

Code Meets Cell: The Birth of the Bio-Economy

Biology is becoming programmable. AI applications are embedded across both health care delivery and drug discovery, and the industry is deploying AI at more than twice the rate of the broader economy.

Early deployment has focused on workflows: clinical documentation, billing automation and patient engagement, all designed to reduce physician burnout, improve efficiency and deliver measurable productivity gains in a system under persistent cost pressure.

Beyond care delivery, AI is rewiring the entire life sciences value chain. AI is increasingly used to design proteins, discover drugs, edit genes and engineer cells in much the same way software engineers write code. What was once a sequential, labor-intensive process is becoming iterative, data-driven and computational, reducing development timelines from years to months.

The convergence of AI and biology is enabling advances in personalized medicine, gene therapies, bio-manufactured materials and next-generation agriculture. Faster drug discovery, new methods of producing food and chemicals and the emergence of "bio-factories" that complement or replace traditional manufacturing models are no longer theoretical. Longevity research is also becoming investable at scale.

As with previous technological revolutions, value will accrue not only to end products but to the enablers like data infrastructure, lab automation, sequencing technologies and bio-manufacturing capacity.

The shift from “code-to-cell” is emerging as a strategic priority with clear implications for health care systems, national competitiveness and capital allocation. For asset owners, it represents a potentially durable, long-duration investment theme.

The Autonomy Stack: From Factory Floors to Airspace to Space

NVIDIA’s CEO Jensen Huang has remarked that “everything that moves will be autonomous someday.” This means machines are no longer tools awaiting instruction, but systems capable of independent action across physical environments (*Display 3*).

It began on the factory floor. Early, industrial robots, such as Unimates introduced in the 1950s, were rigid machines designed for repetitive tasks. By 2023, more than four million industrial robots were in operation worldwide, yet most still depended on fixed programming and oversight. AI removes that constraint. It allows machines to interpret their surroundings, adjust behavior and coordinate with both humans and other machines.

DISPLAY 3

The Autonomy Stack

Factory Floors, Airspace, Space



Amazon’s deployment of more than 750,000 robots reflects not only incremental efficiency gains, but is a rethink of how labor is organized at scale. Emerging humanoid platforms, including those developed by Figure AI and Tesla, suggest that autonomy is moving beyond specialized tasks toward more general physical capabilities.

Above the factory lies the low-altitude economy. Drones are increasingly used for logistics, infrastructure monitoring and agriculture. These applications are most valuable where labor is scarce, geography is challenging or traditional infrastructure is costly, conditions common across many EMs.

Beyond airspace sits space, where autonomy is not optional, but

essential. Satellites, launch systems and space exploration vehicles operate in environments where human intervention is impossible. This is helping space systems develop into strategic capabilities.

The broader economic impact is substantial. Autonomous systems influence safety, cost structures and productivity in ways that software alone cannot.

Autonomy is not a niche vertical, it is a horizontal layer spanning hardware, software, sensors and power systems. It marks the moment when AI stops analyzing the economy and starts operating it: on the ground, in the air and in space.

Artificial, but Surprisingly Empathetic

AI is also reconfiguring human connections.

When New York State introduced a pilot program for seniors that provided AI companions, in the form of a robot capable of chatting about the news, telling jokes and reminding users to take their medication, the results were striking: a 95% reduction in loneliness alongside measurable improvements in well-being. What once sounded like science fiction is rapidly becoming everyday reality with AI companions, ranging from romantic chatbots to robotic pets.

Loneliness is not a fringe issue. Roughly half of adults globally report feeling lonely at least some of the time, driven by aging populations, declining fertility rates and the rise of single-person households (*Display 4*). AI companions are emerging as a non-judgmental response to this structural challenge. Nursing homes that once relied on therapy dogs now see residents lining up to hold a \$6,000 robotic seal, a scene that is both touching and revealing. For younger consumers, comfort tech is making solo living easier and more appealing, turning independence into a lifestyle choice rather than a compromise, as getting married and having children is not the norm for the younger generation.

Dedicated AI companion apps have surpassed 220 million downloads

DISPLAY 4

AI Companions for All Generations



globally, growing nearly 90% year-on-year. The companion robot market, worth about \$11 billion today, is projected to exceed \$90 billion by 2034. In Japan, demand for premium companion robots, equipped with advanced emotional interaction, has outpaced supply, even with price tags approaching \$3,000 per unit. Robot pets offer affection without the hassle: no walks, no vet bills and no mess.

From pets to pixels, AI is proving to be more tender and adaptive than we ever imagined. Beyond companionship, AI helps users practice job interviews, navigate social situations and manage stress. The booming comfort-tech economy is anchored in one of humanity's most enduring needs: connection. And if nothing else, your AI companion will never forget your birthday or chew the furniture.

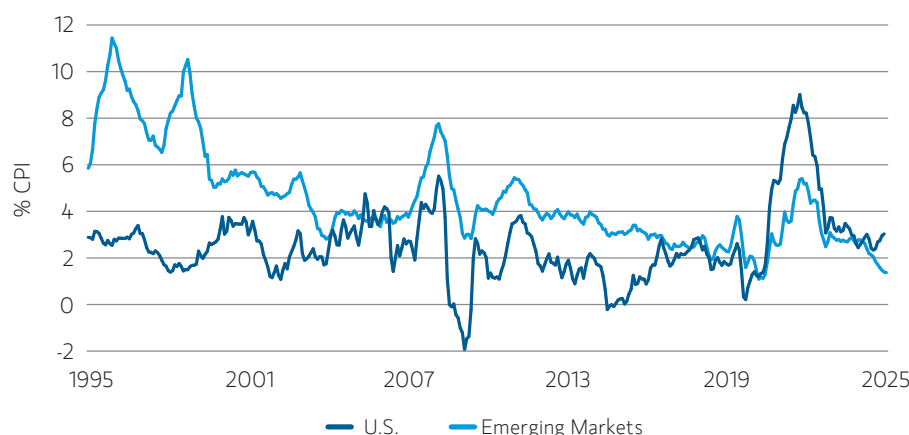
The EM Comeback Was Just the Beginning

In last year's *Key Themes*, we wrote that a set of structural forces was finally aligning in favor of EM: shifting supply chains, a revitalized financial sector, AI-driven demand for semiconductors, electrification and reform momentum across frontier markets. That thesis is now playing out. While the U.S. has leaned further into protectionism and tariffs, many EMs restored credibility through reforms, balanced budgets and tighter monetary discipline.

Fiscal and monetary credibility is now a competitive advantage. EMs carry substantially lower debt burdens than their developed peers, giving them greater room to manage external shocks. EM central banks also tightened policy preemptively during the inflation cycle, then eased only cautiously.

DISPLAY 5**Reversal in Inflation Fortunes**

Inflation in emerging markets is now lower than in the U.S.



Source: Bloomberg, Federal Reserve. As of September 30, 2025.

Tariffs act as a supply-side shock in developed markets, but largely as a demand-side shock for EM, which is easier to navigate. As U.S. tariffs ripple through global prices, EM inflation remains more subdued (*Display 5*), helped by softer food and energy costs, and by China's continued export of deflation. As a

result, several EM central banks now have the runway to ease, supporting domestic demand and credit growth.

EM growth will most likely be powered by digitalization, improving credit cycles, physical infrastructure, a commodity revival and AI supply chain investment. North Asia continues to benefit from demand

for semiconductors, datacenters and electrification. China's launch of DeepSeek and its hyper-digitized economy should accelerate consumer-facing AI adoption and its Belt and Road capital outflows remain a stabilizing force for partner economies.

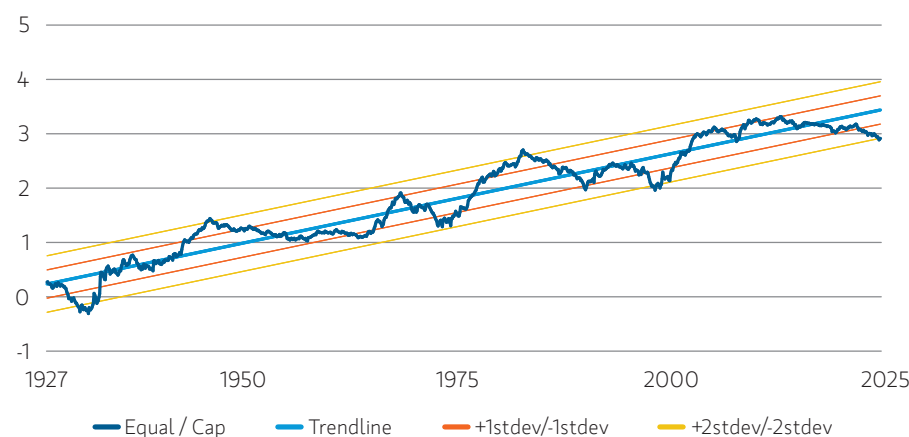
While governments across Korea, China and Japan are actively supporting shareholder value creation through various measures, Mexico, Malaysia and Vietnam continue to gain share of global trade.

Years of underinvestment in resources benefit commodity-driven economies in Latin America, now supported by a political shift to the right. Even historically fragile markets such as Argentina, Egypt, Nigeria and Pakistan have undergone significant post-crisis repair, with currency devaluations, inflation suppression, deficit reduction and balance-of-payments rebuilding.

EM market infrastructure has matured as well: Deeper local currency funding, larger domestic investor bases and flexible FX regimes create resilient equity markets and more durable cycles.

DISPLAY 6**2026 Will Be More Than Just the Magnificent 7 in the U.S.**

S&P equal-weight versus capitalization-weight index performance



Source: MSIM, Bloomberg, Haver. As of December 1, 2025. The Magnificent 7 are Alphabet, Amazon, Apple, Meta, Microsoft, Nvidia and Tesla.

The Great Broadening of 2026

Last year, we highlighted a shift away from a decade of U.S. concentration towards a broader international opportunity set ([Big Picture: The International Rebalance](#)). That move is now clearly visible. EMs, Europe and Japan all outperformed the U.S. (USD terms) in 2025, confirming the early stages of rebalancing. We expect this broadening of performance to deepen in 2026, both within the U.S. and across international markets. The era of narrow winners is giving way to a wider, more globally distributed opportunity set.

A critical macro tailwind is that we are entering the age of capped rates. With public debt at multi-decade highs, real rates simply cannot remain structurally restrictive without destabilizing sovereign balance sheets. This implicit ceiling on rates improves liquidity conditions, supports duration and broadens risk appetite. EM central banks, having tightened early and decisively, now have room to ease.

AI development is migrating from model building toward horizontal platforms, vertical solutions and application layers, where monetization and productivity gains will be realized. The emergence of two distinct AI systems, a U.S. high-cost innovation engine and a Chinese low-cost efficiency model, ensure

the AI cycle will not be monolithic. Dispersion, not direction, will define returns across companies and geographies.

Credit dynamics globally further reinforce the broadening theme. Years of margin compression, higher rates and tighter cost discipline are restoring profitability for European financials. As Europe and Japan emerge from deleveraging and EMs enjoy flush domestic liquidity, the conditions are falling into place for a new credit-fueled growth cycle.

Tariff fears remain more illusion than reality. Countries that have export overlap with China, namely Korea, Taiwan and Vietnam, should stand to benefit as preferred suppliers to the U.S., particularly in defense, shipbuilding and the AI supply chain.

Commodities are entering a multi-year tightening phase as reserve diversification, AI power demands and manufacturing revival collide with years of chronic underinvestment. In parallel, AI intelligent systems, like autonomy on factory floors, air and space and programmable biology, should unlock new investment opportunities. Even consumer behavior is evolving as digital companions reshape how people interact with technology.

Taken together, these shifts should define The Great Broadening of 2026 across the U.S., international markets, technologies and asset classes. Leadership is shifting from narrow dependence on mega-caps to a wider global opportunity set. To capture it, portfolios must broaden too.

Risk Considerations

Diversification does not eliminate the risk of loss. There is no assurance that a portfolio will achieve its investment objective. Portfolios are subject to market risk, which is the possibility that the market values of securities owned by a portfolio will decline and that the value of portfolio shares may therefore be less than what you paid for them. Market values can change daily due to economic and other events (e.g. natural disasters, health crises, terrorism, conflicts and social unrest) that affect markets, countries, companies or governments. It is difficult to predict the timing, duration, and potential adverse effects (e.g. portfolio liquidity) of events. Accordingly, you can lose money investing in a portfolio. Please be aware that a portfolio may be subject to certain additional risks. In general, **equities securities'** values also fluctuate in response to activities specific to a company. Investments in **foreign markets** entail special risks such as currency, political, economic, market and liquidity risks. The risks of investing in **emerging market countries** are greater than the risks generally associated with investments in foreign developed countries.

IMPORTANT DISCLOSURES

There is no guarantee that any investment strategy will work under all market conditions, and each investor should evaluate their ability to invest for the long term, especially during periods of downturn in the market.

A separately managed account may not be appropriate for all investors. Separate accounts managed according to the particular Strategy may include securities that may not necessarily track the performance of a particular index. Please consider the investment objectives, risks and fees of the Strategy carefully before investing. A minimum asset level is required.

For important information about the investment managers, please refer to Form ADV Part 2.

The views and opinions and/or analysis expressed are those of the author or the investment team as of the date of preparation of this material and are subject to change at any time without notice due to market or economic conditions and may not necessarily come to pass. Furthermore, the views will not be updated or otherwise revised to reflect information that subsequently becomes available

or circumstances existing, or changes occurring, after the date of publication. The views expressed do not reflect the opinions of all investment personnel at Morgan Stanley Investment Management (MSIM) and its subsidiaries and affiliates (collectively "the Firm"), and may not be reflected in all the strategies and products that the Firm offers.

Forecasts and/or estimates provided herein are subject to change and may not actually come to pass. Information regarding expected market returns and market outlooks is based on the research, analysis and opinions of the authors or the investment team. These conclusions are speculative in nature, may not come to pass and are not intended to predict the future performance of any specific strategy or product the Firm offers. Future results may differ significantly depending on factors such as changes in securities or financial markets or general economic conditions.

This material has been prepared on the basis of publicly available information, internally developed data and other third-party sources believed to be reliable. However, no assurances are provided regarding the reliability of such information and the Firm has not sought to independently verify information taken from public and third-party sources.

This material is a general communication, which is not impartial and all information provided has been prepared solely for informational and educational purposes and does not constitute an offer or a recommendation to buy or sell any particular security or to adopt any specific investment strategy. The information herein has not been based on a consideration of any individual investor circumstances and is not investment advice, nor should it be construed in any way as tax, accounting, legal or regulatory advice. To that end, investors should seek independent legal and financial advice, including advice as to tax consequences, before making any investment decision.

Charts and graphs are provided for illustrative purposes only. **Past performance is no guarantee of future results**

This material is not a product of Morgan Stanley's Research Department and should not be regarded as a research material or a recommendation.

The Firm has not authorised financial intermediaries to use and to distribute this material, unless such use and distribution is made in accordance with applicable law and regulation. Additionally, financial intermediaries are required to satisfy themselves that the information in this material is appropriate for any person to whom they provide this material in view of that person's circumstances and purpose. The Firm shall not be liable for, and accepts no liability for, the use or misuse of this material by any such financial intermediary.

This material may be translated into other languages. Where such a translation is made this English version remains definitive. If there are any discrepancies between the English version and any version of this material in another language, the English version shall prevail.

The whole or any part of this material may not be directly or indirectly reproduced, copied, modified, used to create a derivative work, performed, displayed, published, posted, licensed, framed, distributed or transmitted or any of its contents disclosed to third parties without the Firm's express written consent. This material may not be linked to unless such hyperlink is for personal and non-commercial use. All information contained herein is proprietary and is protected under copyright and other applicable law.

Eaton Vance is part of Morgan Stanley Investment Management. Morgan Stanley Investment Management is the asset management division of Morgan Stanley.

DISTRIBUTION

This material is only intended for and will only be distributed to persons resident in jurisdictions where such distribution or availability would not be contrary to local laws or regulations.

MSIM, the asset management division of Morgan Stanley (NYSE: MS), and its affiliates have arrangements in place to market each other's products and services. Each MSIM affiliate is regulated as appropriate in the jurisdiction it operates. MSIM's affiliates are: Calvert Research and Management, Eaton Vance Management, Parametric Portfolio Associates LLC, Parametric SAS, and Atlanta Capital Management LLC.

This material has been issued by any one or more of the following entities:

EMEA:

This material is for Professional Clients/Accredited Investors only.

In the EU, MSIM materials are issued by MSIM Fund Management (Ireland) Limited ("FMIL"). FMIL is regulated by the Central Bank of Ireland and is incorporated in Ireland as a private company limited by shares with company registration number 616661 and has its registered address at 24- 26 City Quay, Dublin 2, D02 NY19, Ireland.

Outside the EU, MSIM materials are issued by Morgan Stanley Investment Management Limited (MSIM Ltd) is authorised and regulated by the Financial Conduct Authority. Registered in England. Registered No. 1981121. Registered Office: 25 Cabot Square, Canary Wharf, London E14 4QA.

In Switzerland, MSIM materials are issued by Morgan Stanley & Co. International plc, London (Zurich Branch) Authorised and regulated by the Eidgenössische Finanzmarktaufsicht ("FINMA"). Registered Office: Beethovenstrasse 33, 8002 Zurich, Switzerland.

Italy: MSIM FMIL (Milan Branch), (Sede Secondaria di Milano) Palazzo Serbelloni Corso Venezia, 16 20121 Milano, Italy. **The Netherlands:** MSIM FMIL (Amsterdam Branch), Rembrandt Tower, 11th Floor Amstelplein 1 1096HA, Netherlands. **France:** MSIM FMIL (Paris Branch), 61 rue de Monceau 75008 Paris, France. **Spain:** MSIM FMIL (Madrid Branch), Calle Serrano 55, 28006, Madrid, Spain. **Germany:** MSIM FMIL, Frankfurt Branch, Grosse Gallusstrasse 18, 60312 Frankfurt am Main, Germany (Gattung: Zweigniederlassung (FDI) gem. § 53b KWG). **Denmark:** MSIM FMIL (Copenhagen Branch), Gorrissen Federspiel, Axel Towers, Axeltorv2, 1609 Copenhagen V, Denmark.

MIDDLE EAST:

Dubai International Financial Centre: This information does not constitute or form part of any offer to issue or sell, or any solicitation of any offer to subscribe for or purchase, any securities or investment products in the UAE (including the Dubai International Financial Centre and the Abu Dhabi Global Market) and accordingly should not be construed as such. Furthermore, this information is being made available on the basis that the recipient acknowledges and understands that the entities and securities to which it may relate have not been approved, licensed by or registered with the UAE Central Bank, the Dubai Financial Services Authority, the UAE Securities and Commodities Authority, the Financial Services Regulatory Authority or any other relevant licensing authority or government agency in the UAE. The content of this report has not been approved by or filed with the UAE Central Bank, the Dubai Financial Services Authority, the UAE Securities and Commodities Authority or the Financial Services Regulatory Authority.

Abu Dhabi Global Market ("ADGM"): This material is sent strictly within the context of, and constitutes, an Exempt Communication. This material relates to content which is not subject to any form of regulation or approval by the Financial Services Regulatory Authority of the Abu Dhabi Global Market (the "FSRA").

Saudi Arabia: This financial promotion was issued and approved for use in Saudi Arabia by Morgan Stanley Saudi Arabia, Al Rashid Tower, Kings Sand Street, Riyadh, Saudi Arabia, authorized and regulated by the Capital Market Authority license number O6044-37.

U.S.: NOT FDIC INSURED. OFFER NO BANK GUARANTEE. MAY LOSE VALUE. NOT INSURED BY ANY FEDERAL GOVERNMENT AGENCY. NOT A DEPOSIT.

LATIN AMERICA (BRAZIL, CHILE COLOMBIA, MEXICO, PERU, AND URUGUAY)

This material is for use with an institutional investor or a qualified investor only. All information contained herein is confidential and is for the exclusive use and review of the intended addressee, and may not be passed on to any third party. This material is provided for informational purposes only and does not constitute a public offering, solicitation or recommendation to buy or sell for any product, service, security and/or strategy. A decision to invest should only be made after reading the strategy documentation and conducting in-depth and independent due diligence.

ASIA PACIFIC

Hong Kong: This material is disseminated by Morgan Stanley Asia Limited for use in Hong Kong and shall only be made available to "professional investors" as defined under the Securities and Futures Ordinance of Hong Kong (Cap 571). The contents of this material have not been reviewed nor approved by any regulatory authority including the Securities and Futures Commission in Hong Kong. Accordingly, save where an exemption is available under the relevant law, this material shall not be issued, circulated, distributed, directed at, or made available to, the public in Hong Kong. **Singapore:** This material is disseminated by Morgan Stanley Investment Management Company and should not be considered to be the subject of an invitation for subscription or purchase, whether directly or indirectly, to the public or any member of the public in Singapore other than (i) to an institutional investor under section 304 of the Securities and Futures Act, Chapter 289 of Singapore ("SFA"); (ii) to a "relevant person" (which includes an accredited investor) pursuant to section 305 of the SFA, and such distribution is in accordance with the conditions specified in section 305 of the SFA; or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA. This publication has not been reviewed by the Monetary Authority of Singapore. **Australia:** This material is provided by Morgan Stanley Investment Management (Australia) Pty Ltd ABN 22122040037, AFSL No. 314182 and its affiliates and does not constitute an offer of interests. Morgan Stanley Investment Management (Australia) Pty Limited arranges for MSIM affiliates to provide financial services to Australian wholesale clients. This material will not be lodged with the Australian Securities and Investments Commission.

Japan: For professional investors, this material is circulated or distributed for informational purposes only. For those who are not professional investors, this material is provided in relation to Morgan Stanley Investment Management (Japan) Co., Ltd. ("MSIMJ")'s business with respect to discretionary investment management agreements ("IMA") and investment advisory agreements ("IAA"). This is not for the purpose of a recommendation or solicitation of transactions or offers any particular financial instruments. Under an IMA, with respect to management of assets of a client, the client prescribes basic management policies in advance and commissions MSIMJ to make all investment decisions based on an analysis of the value, etc. of the securities, and MSIMJ accepts such commission. The client shall delegate

to MSIMJ the authorities necessary for making investment. MSIMJ exercises the delegated authorities based on investment decisions of MSIMJ, and the client shall not make individual instructions. All investment profits and losses belong to the clients; principal is not guaranteed. Please consider the investment objectives and nature of risks before investing. As an investment advisory fee for an IAA or an IMA, the amount of assets subject to the contract multiplied by a certain rate (the upper limit is 2.20% per annum (including tax)) shall be incurred in proportion to the contract period. For some strategies, a contingency fee may be incurred in addition to the fee mentioned above. Indirect charges also may be incurred, such as brokerage commissions

for incorporated securities. Since these charges and expenses are different depending on a contract and other factors, MSIMJ cannot present the rates, upper limits, etc. in advance. All clients should read the Documents Provided Prior to the Conclusion of a Contract carefully before executing an agreement. This material is disseminated in Japan by MSIMJ, Registered No. 410 (Director of Kanto Local Finance Bureau (Financial Instruments Firms)), Membership: the Japan Securities Dealers Association, The Investment Trusts Association, Japan, the Japan Investment Advisers Association and the Type II Financial Instruments Firms Association.