Citi Institute

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Exec-X

Ten Global Insights for Leaders

August 2025

Must-reads for busy executives

The volume of insights published every day can be overwhelming and no one person can read everything. Citi Institute's Exec-X is our selection of ten (X) insights from across the bank that we think you need to see.

The highlights of this issue include:

- The changing contours of global trade (I, II).
- The opportunities that public spending priorities create for private sector investment (IV, V).
- How a real-time world characterized by "instant information, instant action, and instant interactions" is impacting both consumers and corporate treasuries (VI, VII).
- Finally, we zoom in on digital progress, and innovation – in financial services and beyond (VIII, IX, and X).

Data highlights

Global Trade

25%

U.S. share of FDI, up from 15% before 2020[1]

Corporate Treasuries

575 billion

Projected number of real-time payments by 2028[2]

Public Spending

$30 trillion

Estimated size of a U.S. sovereign wealth fund[3]

Digital Progress

$1.6 trillion

Forecasted value of stablecoin market by 2030[4]

[1] Citi Research.
[2] ACI Worldwide, 2024 Prime Time for Real-Time Global Payments Report.
[3] Citi Research, Bureau of the Fiscal Service.
[4] Federal Reserve Bank, Bank of England, European Central Bank, PBOC, Citi Institute.

Contents

I

Invest USA: The Reshaping of Global Capital Flows

The dynamics of global capital flows have shifted in recent years. Before the COVID-19 pandemic, the European Union regularly received more foreign direct investment (FDI) than the United States. Since then, the U.S. has moved ahead, increasing its share of global FDI flows from 15% to 25%.

A new Citi GPS report, written in collaboration with Citi Research, [Invest USA: The Reshaping of Global Capital Flows], tracks the sources of FDI inflows to the U.S., explores the impact of the country's "America First" policy, and highlights the evolution of global trade.

U.S. FDI inflows boost Rust Belt manufacturing

The U.S. was the largest recipient of FDI in 2023, attracting $311 billion in inward investments.

In 2024, the U.S. scooped three of the ten largest announced greenfield projects, securing investment from Taiwan, South Korea and the UAE. These projects are worth an estimated $60 billion in capex, contributing to 13% growth in U.S. FDI receipts compared with 2023, in contrast to the declines in most other regions.

California was the top beneficiary at a state level in 2023, receiving 8.5% of total U.S. FDI inflows. But it is below the historical average: California's FDI receipts are declining after ten years of federal restrictions on investments from China.

By contrast, the Rust Belt states have seen an outsized injection of capital in the last decade, driven by FDI flows into manufacturing. While the manufacturing sector only accounts for 10% of U.S. GDP, it received about $380 billion in foreign investment between 2022 and 2024 – about 42% of total inbound FDI.

The U.S. also made the most foreign direct investments in 2023, at $404 billion. Three of the ten largest greenfield projects announced in 2024 were from U.S. companies investing abroad – two to the UK and one to Mexico.

Cautious optimism: drivers of increased U.S. FDI receipts may continue

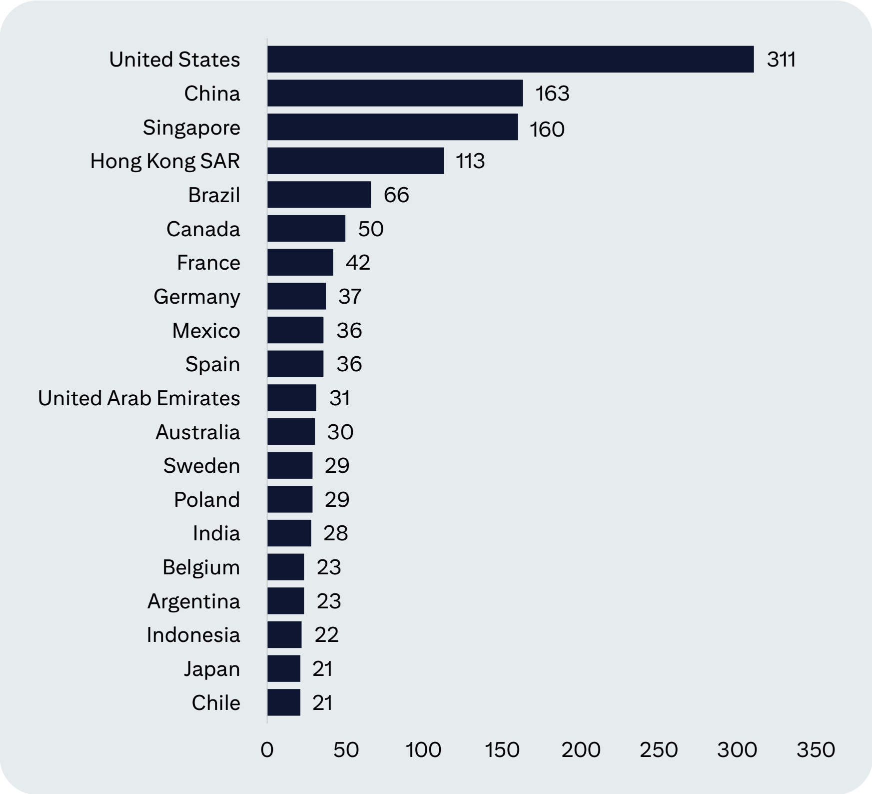
The report lists several factors that have driven U.S. gains in FDI receipts. The authors highlight that each factor might be expected to continue in some form under "America First" policies:

- The U.S. saw stronger economic growth between 2019 and 2024 than other major economies. Over this period, real GDP rose by 2.3% per year vs. less than 1% in the euro area. It is hard to know how recent shifts in U.S. policy will impact economic growth, but U.S. outperformance may continue as Germany and China continue to grapple with challenges.
- While energy uncertainty has weighed on investment into Europe, natural gas and electricity prices have been low and stable in the U.S.
- The U.S. has emerged as a leader in artificial intelligence with a continued growth trajectory in AI-related venture capital deals, even as deals plateaued in Europe and Asia. The U.S. is well positioned to benefit as demand for AI increases.
- Moreover, while access to lower cost labor has historically driven

FDI outflows from the U.S. and other higher income countries, "Industry 4.0" or the incorporation of digital technologies into industrial processes erodes some of the cost benefits of offshoring and makes manufacturing in traditionally higher cost locations increasingly feasible.
- Over the past years, federal and state level initiatives, such as the CHIPS and the Inflation Reduction acts aimed to attract more investment from overseas in support of domestic manufacturing. The Trump administration's strategies differ, but the theory of tariffs is that they will drive more business onshore.

Summarizing the Citi GPS report's expectations of resilience in FDI inflows to the U.S., Tasnim Ghiawadwala, the Global Head of Citi Commercial Bank, says: "Most companies across all global corridors continue to see the U.S. as their number one market to further expand and grow in the future due to its dynamism, strong demographics, and robust consumption."

Figure 1. Global FDI Inflows by country in 2023 (in billion US$) showing the U.S. leading the way from China



Source: [UNCTAD](), based on information from The Financial Times, fDi Markets and LSEG Data & Analytics

Citi Institute GPS

This section is a summary of a Citi GPS report that was first published in May 2025.

Source

[Invest USA: The Reshaping of Global Capital Flows]()

II

Global Trade in Flux: Politics, Policy and the Reconfiguration of Supply Chains

U.S. production onshoring has been one of the biggest global supply chain themes in recent years but two Citi GPS reports show that trends are more nuanced than a simple onshoring narrative.

In Supply Chain Financing, our data scientists apply a U.S.-China lens to onshoring and finds that while critical industries like computer supplies and semiconductors have moved to the U.S., there is less evidence of an economy-wide decoupling between the two countries.

Written in conjunction with Citi Research, Global Trade in Flux further complicates the story. We find that Southeast Asian nations and India have been the main beneficiaries of shifts in global trade so far, as nearshoring and friendshoring have been strong dynamics alongside onshoring. Latin America could also benefit from these shifts.

Tensions and tariffs drive onshoring of critical industries

Citi Institute analysis of supply chain data shows that the production of computer supplies and semiconductors has materially moved onshore to the U.S. in recent years.

Policies like the Building Chips in America Act intend to encourage onshoring as a strategic priority, following concerns over the concentration of computer supplies production in China and a near-total reliance on Taiwan for semiconductors. South Korea has introduced similar policies, with Citi data showing that payments for computer and electronic product manufacturing (among other sectors) is increasingly going onshore.

However, these reshoring trends do not extend across the wider economy and the U.S. remains the largest recipient of Chinese exports by some margin. But China as a percentage of total U.S. trade has decreased significantly.

India's friendshoring bonus

Citi Research economists highlight another structural shift in trade that has seen supply chains move to Southeast Asian countries and India.

Analysis of companies' announcements that they will relocate manufacturing shows that Vietnam benefited from early relocations away from China. Now the effect is spreading to other countries.

India has been a particular beneficiary. Between 2021 and 2024, 32% of company relocation announcements were to India, up from 9% between 2018 and 2020.

Relocation to India and Southeast Asian countries has centered on electronics production, capitalizing on a cost-competitive, skilled workforce. More than two thirds of relocation announcements between 2023 and 2024 concerned electronics and these relocations to India enabled a nine-fold growth in the country's mobile phone exports between 2019 and 2024.

Latin America opening up

Latin America is also benefiting from the reshaping of global trade. As China lost market share in U.S. imports between 2017 and 2024, Mexico benefited (figure 2).

There is currently less evidence of a structural shift toward Latin America. For example, in contrast to high expectations, foreign direct investment (FDI) into the region has remained almost constant in the last decade and FDI receipts into Mexico are below historical levels.

However, the GPS report Global Trade in Flux points out that competitive labor costs, geographical location and a raft of trade agreements mean that the region is well placed to benefit from "friendshoring".

Yet Latin America will also face headwinds in unlocking the friendshoring opportunity. For example, the region ranks low for infrastructure quality and laws are inconsistently enforced. In some countries, political instability and uncertainty also hinder foreign investment.

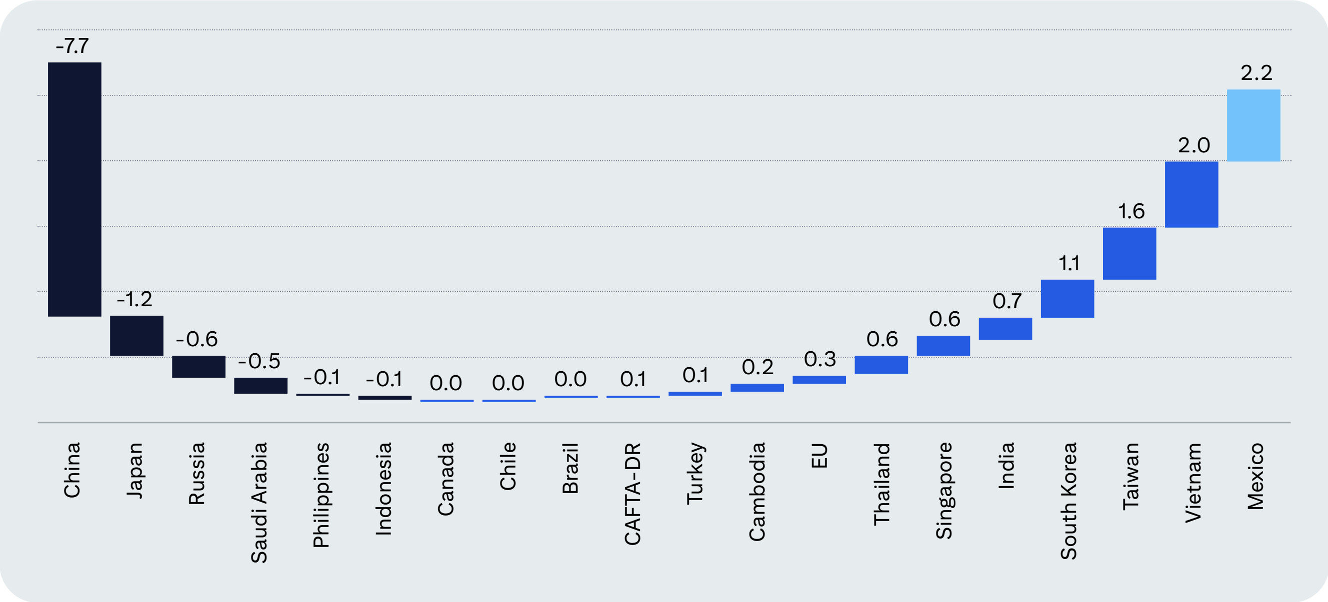
Emergence of new trade corridor

Perhaps recognizing these opportunities of relocating production to the region, a new trade corridor has opened up between China and Latin America.

Bilateral trade between the two has grown since 2000, when exports from Latin America to China were almost nothing; by 2023, the region exported almost $250 billion in goods to China, primarily in commodities. Citi's corporate payments data also shows that payments from China to Latin America increased by almost 30% in the last three years.

This reliance on trade with China might come to be a vulnerability. In Global Trade in Flux, Citi Research economists suggest that Latin American nations could leverage the opportunity of friendshoring efforts beyond China, extending their strategic relationships to the U.S., Europe, and the rest of Asia.

Figure 2. Gains and losses in U.S. import shares 2017 vs. 2024, percentage points



Source: U.S. Census Bureau, Citi Research

Citi Institute GPS

This section is a summary of two Citi GPS reports that were first published in November 2024 and May 2025 respectively.

Source

Global Trade in Flux: Politics, Policy and the Reconfiguration of Supply Chains

Supply Chain Financing: Resilience, Opportunity and the Shifting Winds of Trade

III

Money and Might: Financing the Future of Defense

Defense spending is on the rise globally as ongoing conflicts and geopolitical uncertainties sharpen policymakers' focus on national security.

Money and Might: Financing the Future of Defense, a Citi Research report, analyzes how governments might fund increased defense budgets and where they are likely to spend them.

The number of NATO countries meeting the standard of spending 2% of GDP on defense surged from six in 2021 to more than twenty in 2024, and the dial has been turned even higher with most NATO members pledging in mid-2025 to up their defense budgets to 5%. Until that happens, spending remains well below the historic peaks seen during the Cold War of the 1980s and the "War on Terror" in the early 2000s (figure 3).

Financing defense amid budget deficits

In theory, governments could increase taxes, cut other programs, or print money to pay for increases in defense spending.

In practice, increased defense spending tends to be absorbed into national budgets without any compensating actions, resulting in higher deficits. For many NATO countries, defense spending increases accompany increasing deficits in practically a 1:1 ratio.

Public debt levels are already elevated, presenting a challenge to increasing defense spending. The U.S., Italy, France, and the UK already have about 100% of their GDP in sovereign debt, traditionally considered a very high level of indebtedness. The International Monetary Fund (IMF) expects further increases in all four countries.

These high debt levels call into question the durability of defense spending increases.

Money and Might: Financing the Future of Defense notes that countries will not hesitate to increase spending should the need arise – for instance, if Russia were to expand its offensive beyond Ukraine. However, if threats dissipate, fiscal constraints might push countries to roll back their spending commitments.

Citi Research's European Economics team also highlights that in the context of high public debt levels, the decision to push increased defense spending into national budgets rather than a joint EU mechanism might mean that if the threat of war fades, spending could soon slow.

Spending focuses on next-generation equipment

A significant proportion of increased defense budgets is likely to be invested in military equipment, like weapons systems and deterrence tools.

The report also points out that:

- Countries that spend more on defense tend to allocate a greater share of it to capital goods.
- NATO commitments stipulate that 20% of defense spending should be allocated to capital goods.

Within this, governments can be expected to continue investing in traditional equipment systems – like fighter jets and aircraft carriers. Restocking munitions is likely to be a priority too.

But the report also points out that a decade of innovation combined with learnings from recent conflicts may also see countries invest in the "next generation" of defense technologies and capabilities, including the use of artificial intelligence in decision making and space as "the newest domain in warfare".

"Buy European" – defense spending as an engine of productivity

In the face of economic challenges to unlocking increased defense spending, where equipment is procured is arguably evolving as much as the kit that defense budgets buy.

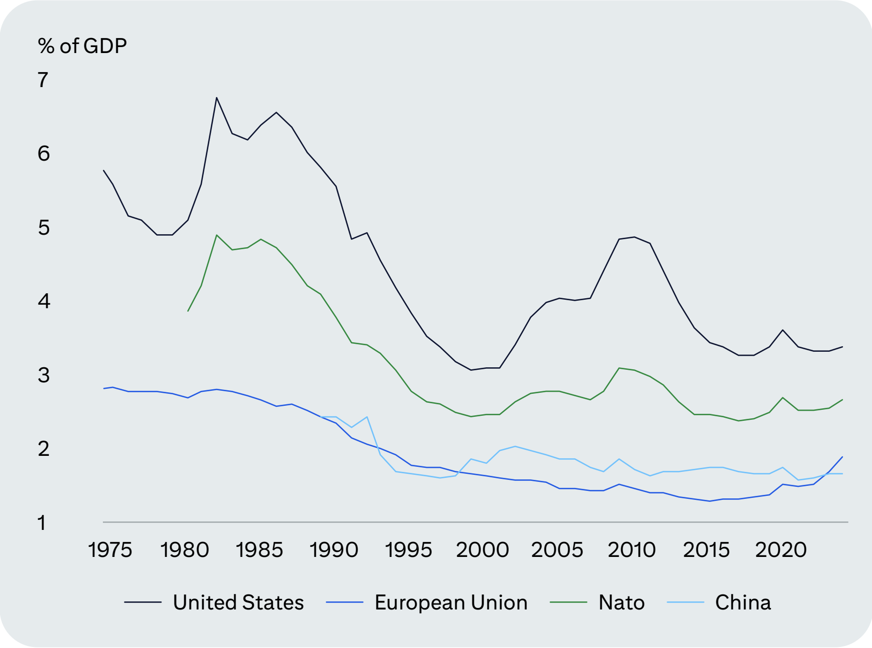
While there is an ongoing debate, some economists argue that increased defense spending can drive productivity gains by upskilling workers and spurring innovation across industries.

Countries that produce defense goods are the primary beneficiaries of economic gains, but in Europe, for example, EU defense budgets are primarily spent outside the block's borders. Before 2022, about 60% of the European Union's defense procurement came from non-EU countries, rising to 80% following Russia's invasion of Ukraine.

EU leaders, recognizing that defense budgets could benefit EU economic growth if they were spent in the region, have now set a target to spend 50% of their defense equipment budget on European kit by 2030, and 60% by 2035.

Despite the challenges of high public debt levels, policymakers seem increasingly attuned to ensuring their countries benefit from any economic spillovers of increased defense spending.

Figure 3. Defense spending in recent decades (% of GDP)



Source: Citi Research, SIPRI, World Bank, Haver Analytics

Citi Research

This section is a summary of a Citi Research report that was first published in October 2024.

Source

Must C. Money and Might: Financing the Future of Defense

IV

U.S. Infrastructure Investment: A Bigger Role for Private Funding

A recent Citi Research report, U.S. Infrastructure Investment: A Bigger Role for Private Funding, looks into the role of the private sector in driving capital towards U.S infrastructure. Government spending on infrastructure has been in decline for decades in the U.S., down from 90% of GDP to 60% in the last 50 years.

This has made even maintaining existing infrastructure a challenge. With budget deficits already large, it is doubtful that government spending will increase.

There is therefore an urgent need to apply new technologies to the advantage of infrastructure.

Recent infrastructure packages unlikely to be repeated any time soon

There have been some major infrastructure packages in the last 20 years. For example, the 2008 American Recovery and Reinvestment Act allocated $105 billion to infrastructure. More recently, a 2021 bill allocated $550 billion to transportation and other infrastructure, and the 2022 Inflation Reduction Act allocated $391 billion for energy production and electric vehicles.

However, ongoing government spending on new infrastructure is constrained by a high federal government deficit (6.4% of GDP). It will also be challenging to reroute spending from other areas such as defense, Medicaid or Social Security towards new infrastructure.

Some infrastructure needs are best met by the private sector

Governments have historically been the main provider of capital for infrastructure projects because such endeavors often have long time horizons and unique risks that make them less conducive to private investment.

However, infrastructure needs are changing, especially when it comes to new technologies like artificial intelligence. Far beyond rail roads and water supply, the infrastructure of the 2020s includes data centers and communications infrastructure. Citi Research estimates that AI could double demand for data centers by 2030.

This changing nature of infrastructure, combined with constraints on government spending, could open the door for private sector investment.

Three models

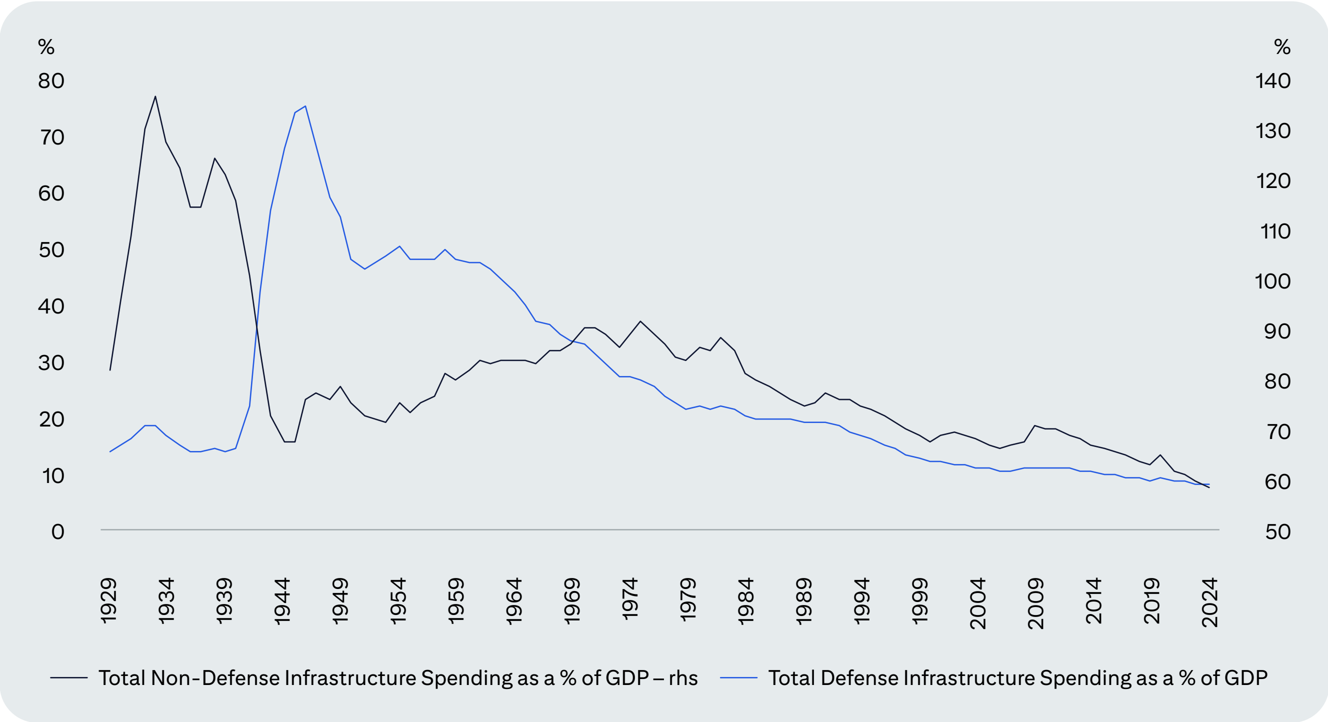
Citi Research's report U.S. Infrastructure Investment outlines three ways that the private sector can participate:

- **Public private partnerships (PPPs)** is one option. In these partnerships, the private sector takes on some of the risk of a project and receives the projects' revenue, such as toll charges. PPPs may grow, but they have so far been difficult to scale up.
- **Privately owned infrastructure** could include private ownership of assets like electric vehicle charging stations and data centers.

Historical data suggests that there is scope for spending on privately owned infrastructure to increase.

- A **U.S. Sovereign Wealth Fund (SWF)** could unlock private capital for infrastructure investment. The Trump administration has announced plans for such a fund. The U.S. Treasury holds about $3 trillion in assets that would be suitable for a SWF. By issuing debt to borrow against these assets – as has been done by the European Investment Bank – a U.S. SWF could control about $30 trillion, which could be channeled to strategic domestic and international infrastructure.

Figure 4. U.S. government spending on infrastructure has been declining for over 50 years



Source: Citi Research, Ray C. Fair

Citi Research

This section is a summary of a Citi Research report that was first published in May 2025.

Source

Must C: U.S. Infrastructure Investment — A Bigger Role for Private Funding

V

The Fundraising Journey: Navigating Private Placements

Companies are choosing to stay private for longer. Ten years ago, companies worth $10 billion+ would have listed on a stock exchange before reaching that size. Now, they are tapping a growing pool of capital available through private placements.

In the Citi institute podcast [The Fundraising Journey: Navigating Private Placements](), John Collmer, Head of Equity Capital Markets Private Placements at Citi, and Kelly Ahuja, CEO of Versa Networks, dissect the landscape of private capital and the strategies that companies can take as they navigate each stage of their fundraising journeys.

In contrast to a public listing, private placements do not require companies to publicly disclose information that their competitors and customers could see. They can also withdraw from a deal without penalty.

From FOMO to JOMO: raising the bar for entrepreneurs

There was a time when investors had a fear of missing out (FOMO) on opportunities to back new, early-stage companies. If a company had a large total addressable market and a credible team in place, investors would often be willing to back them.

As interest rates increased, investors' cost of capital increased. As a result, investors have come to seek greater certainty that every dollar they deploy will generate the return that they expect. As a result, they now prefer to back later-stage companies that have demonstrated their viability, proven that they can make a solid return, and are now looking to scale.

At this stage there is also more information available about the companies. Investors can question the company's model and speak to customers. All this can deliver greater insight into whether a company can reach the magic number of $500 million in revenue, where there are different possible exits.

In the Citi Institute podcast, Kelly Ahuja describes a shift in Versa Networks' later stage fundraising as investors wanted to know not only how much they spent, but how efficiently. He says the dynamic changed "from growth at all costs to growth with a path to profitability".

Far from their old fear of missing out, investors now have a joy of missing out (JOMO) on the early stages or, as Citi's John Collmer says in the podcast, they have "the pleasure of waiting".

This is evident in current average deal sizes. Collmer says that while growth capital – which includes transactions worth between $50 million and $500 million – still hits about $10 billion in volume per month, the average deal size is now $265 million. Later and mid-stage deals now make up a larger share of growth capital transaction volumes.

Companies need the right partner

Investment in later-stage companies is not just about money – deeper strategic partnerships are equally important. Companies need to choose the right partner at each stage of their journey, not just a provider of capital.

For early-stage companies, the name and brand of an investor can be a consideration. At the later stages, partnership with investors can unlock go-to-market opportunities, insights on trends in the wider sector, and connections to companies within the investor's network.

Trust is vital, as Collmer points out: "You really need a capital provider that, when things don't go your way, will stick with you."

Early engagement with investors is the key

A common pitfall for companies seeking to raise capital in the private markets is unrealistic expectations of the timeline for fundraising.

Collmer says that fundraising can take 16 to 20 weeks, sometimes longer, and a timeline of just 12 weeks without preparation can be "a recipe for disaster".

Cultivating the trust that is the hallmark of successful strategic partnerships in the private markets takes time. Companies are well-positioned to raise funds when they have existing strong relationships with investors and a network of trusted advisors that they have educated on their business, the market it operates within, and the customers it serves.

For entrepreneurs and business leaders, this means investing time in building relationships with investors on an ongoing basis and long before commencing a fundraising round. As Ahuja puts it in the Citi Institute podcast: "You don't wake up one day and say, let me talk to investors."

For early-stage fundraising, it often falls to the founder to build a network of investors and make decisions while raising funds. But this becomes more complex as companies grow because there are many more stakeholders.

First there must be a degree of internal alignment within the management team. Then a company's board must be consulted, and existing investors need to be comfortable with the new investors. If the company is working with a partner, then they will need to align too.

Companies will find private placements much easier if they already know who to call when the time for fundraising comes.

> "You really need a capital provider that, when things don't go your way, will stick with you."

John Collmer, Head of Equity Capital Markets Private Placements, Citi

Citi Institute Podcast

This section is a summary of a Citi Institute podcast that was first published in June 2025.

Source

The Fundraising Journey: Navigating Private Placements and Strategic Partnerships

VI

Real Time: 24x7 Finance in an Always-On World

From ordering groceries online and paying instantly to posting restaurant reviews during a meal, the world today functions in real time – and consumers and businesses increasingly expect the same from their financial services.

Citi Institute's GPS report Real Time: 24x7 Finance in an Always-On World explores how real-time payments is keeping pace with our always-on world, and highlights the opportunity and risks of real-time finance.

Real-time finance is the default for many, especially in emerging markets

Real-time payments facilitate the immediate transfer of funds to a beneficiary at any time of the day or night and on any day of the year. Already a consumer expectation, a real-time mindset is also emerging in leading corporate treasuries.

The volume of real-time payments is increasing. About 266 billion were processed in 2023, a 42% increase on the year before. Volumes are expected to reach 575 billion by 2028 as financial inclusion improves and cash-heavy economies transition.

More than 80 jurisdictions have real-time domestic payment systems, up from about 60 in the last decade. Emerging markets have led the way as early adopters, and four of the five highest volume markets for real-time transactions are in Asia Pacific. India's Unified Payment Interface (UPI), launched in 2016, accounted for 118 billion transactions in 2023 – over 40% of the world's total volume that year.

Boosts for economic efficiency and financial inclusion

Governments invest in real-time payments in part because they can drive economic growth. The Center for Economic and Business Research puts the value of real-time payments at $286 billion in additional GDP by 2028, with large gains in emerging markets (figure 5). This comes from reducing the inefficiency of cash and increasing tax compliance, among other mechanisms.

Real-time payments can also catalyze financial inclusion. Instant payments result in quicker access to income, which can reduce consumers' need for expensive credit like payday loans.

It has also been suggested that real-time payments could support unbanked people to open bank accounts, benefitting especially women, young people and low earners.

Real-time finance can give criminals an advantage

But there are risks too. When money moves almost instantly, there is a small window to prevent fraud. The traditional mechanisms – like human interventions to spot and stop fraudulent transactions before they settle – are often insufficient.

Half of consumers report experiencing an attempted scam at least weekly. Automated push payment fraud, where scammers deceive their victims into thinking that a payment is legitimate, accounts for about 40% of payment fraud in the UK.

The situation risks worsening as technologies like artificial intelligence make scams more sophisticated and therefore harder to detect.

Yet the same innovations that pose a threat might also help prevent fraud. For example, AI can recognize patterns across millions of transactions, spotting fraud more efficiently than humans.

Financial institutions have to adopt technologies faster than potential fraudsters. As the authors of Real Time point out: to address fraud in a real-time world, "we will need AI to fight AI".

Figure 5. How real-time payments can impact GDP by 2028

#	TOP 5 MARKETS (RANKED BY IMPACT VALUE)	GDP IMPACT ($ BILLION)	IMPACT AS PERCENT OF GDP	#	TOP 5 MARKETS (RANKED BY GDP % IMPACT)	GDP IMPACT ($ BILLION)	IMPACT AS PERCENT OF GDP
1	India	77	1.4%	1	Nigeria	15	6.4%
2	Brazil	50	2.1%	2	Thailand	16	2.7%
3	China	33	0.1%	3	Argentina	19	2.7%
4	Thailand	16	2.7%	4	Brazil	50	2.1%
5	Mexico	13	0.7%	5	India	77	1.4%
Aggregate of Top 5 Markets		**188**	**0.6%**	**Aggregate of Top 5 Markets**		**177**	**1.9%**
Aggregate of Top 5 Markets (ex-China)		**156**	**1.5%**				

Source: CEBR, ACI Worldwide, International Monetary Fund, Citi Institute

Citi Institute GPS

This section is a summary of a Citi GPS report that was first published in June 2025.

Source

Real Time: 24x7 Finance in an Always-On World

VII

Treasury 2030: Modernize or Risk Irrelevance

Corporate treasurers have an opportunity to build on their role as risk and liquidity managers to become strategic partners to their business. This would see the treasury shift from a reactive function that responds to business decisions to proactively contributing to business growth.

Treasury 2030: Modernize or Risk Irrelevance explores what corporate treasurers need to prioritize in the next five years to realize that vision. Technology is key, but the authors of the report note that partnerships – within a business and with providers – really unlock tech's value.

Technology enables treasury modernization

Cash management today is often inefficient, with payments processed in batches and flows of information both lacking and lagging. Tomorrow's treasury will have a real-time mindset where cash moves faster and insights are available live.

The report authors note that "this will require a fundamental re-engineering of treasury processes and how treasuries consume and harness data".

There are two technology components: new opportunities from innovation and improved implementation of existing tech services.

First, advancements in technology – like automation and artificial intelligence – can significantly boost efficiency when it comes to repetitive processes and increase the velocity of payments. AI could also manage currency risk and forecast cash flows more consistently in the future.

In a survey of corporate treasurers conducted in August 2024, AI features as one of the top five technology impacts for treasurers (figure 6). Advancements in data strategies were expected to be the single most impactful innovation.

Netta Christensen, the head of global cash management, treasury and risk at Maersk, says in the report: "AI will be a part of the way we work in the future using it as a 'good friend' that helps to automate work and help free up time for staff to do more value-add work."

Many treasuries operate across service providers that are disconnected from one another and whose technologies may not be interoperable. This fractured landscape leaves treasury functions without the high-quality data that could drive growth-enabling business decisions.

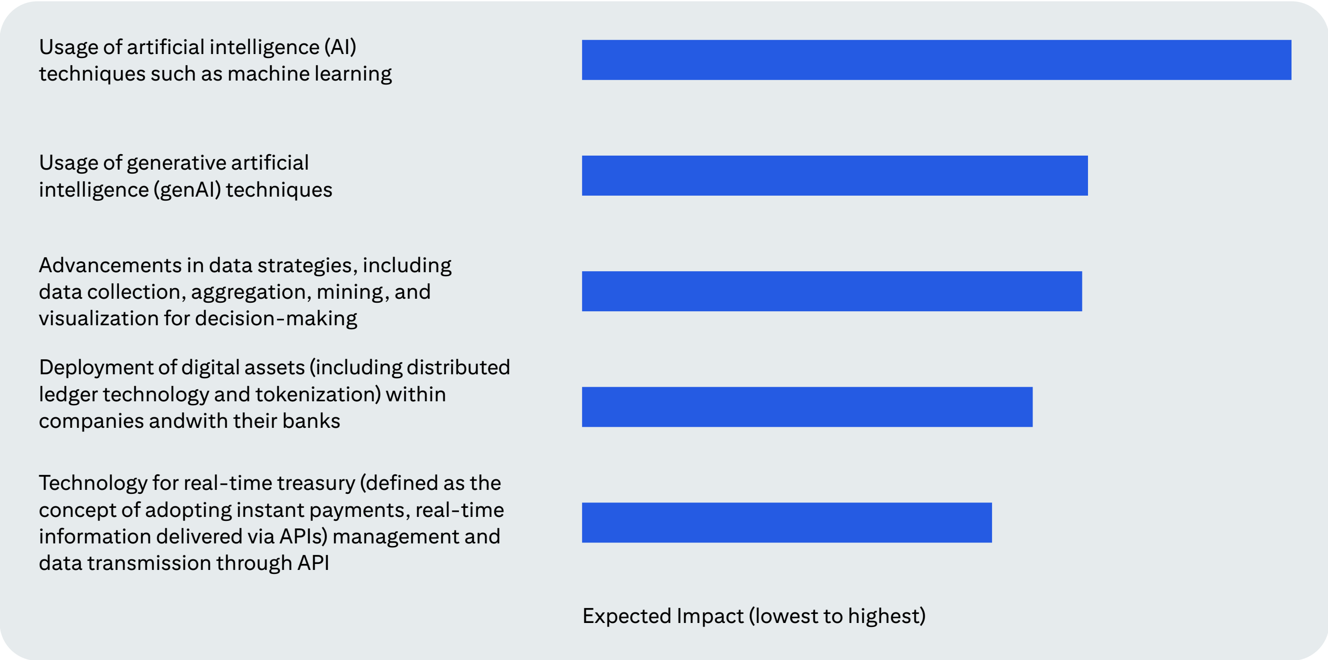
Collaborative ecosystems create a growth-enabling treasury

The same survey of corporate treasurers in 2024 highlighted that legacy technology infrastructure is perceived as the biggest hurdle to overcome. Deeper partnerships – rather than tech innovation – is key between treasuries and their current technology providers. This might result in an alternative tech stack, moving away from monolithic platforms toward interoperability and an experience akin to how retail consumers interact with financial technology.

Technology providers will need to position themselves as long-term partners with a lifecycle approach, focused on the implementation and business-as-usual stages of engagement. Banks can likewise integrate more closely into corporations' processes and supply chains.

Corporate treasurers could strengthen their engagement with IT counterparts to ensure that treasury requirements and opportunities are incorporated into their firm's data architecture. Another call is for treasury teams to build their involvement in their companies' associated functions, such as procurement.

Figure 6. Technology innovations that corporate treasurers expect to be most impactful



Source: Citi Client Advisory Group, Client Survey (Conducted August 2024)

Citi Institute GPS

This section is a summary of a Citi GPS report that was first published in December 2024.

Source

Treasury 2030: Modernize or Risk Irrelevance

VIII

Digital Dollars: Banks and Public Sector Drive Blockchain Adoption

Digital Dollars: Banks and Public Sector Drive Blockchain Adoption, a recent GPS report, argues that a supportive U.S. regulatory stance – combined with a growing emphasis globally on transparency and accountability – could make 2025 a game changing year for blockchain adoption. Ledger technology also holds the potential to improve efficiency and data protection and combat fraud in the publish sector.

Regulatory clarity could boost stablecoin usage

The U.S. GENIUS Act could catalyze the adoption of blockchain-based money. It aims to establish a regulatory framework for stablecoins, which are cryptocurrencies pegged to a fiat currency or reference asset like the U.S. dollar or gold.

Regulatory clarity would support the integration of stablecoins into mainstream finance. Use cases include making B2B payments more efficient and predictable (especially in lower income countries) and making consumer remittances cheaper.

Erin McCune, founder of Forte Fintech, highlights in Digital Dollars that stablecoins can also play a role in institutional trading and capital markets, for example to settle trades more quickly.

Realizing these use cases could grow the stablecoin market. The GPS report forecasts that the value of stablecoins could reach $1.6 trillion by 2030, with a $3.7 trillion bull case and $0.5 trillion bear case (figure 7).

The base case estimates an almost sevenfold increase in the next five years: according to analytics platform DeFiLlama, the total value of stablecoins was $230 billion in April 2025, already 30x larger than five years ago.

Boosting demand for U.S. Treasuries

A key component of the stablecoin system is collateralization. Stablecoin issuers need to buy liquid, low-risk assets – like cash or short-term government securities – against stablecoins as reserves to ensure that each token can be redeemed for its pegged value.

Increasing issuance of stablecoins would therefore increase demand for liquid, low-risk assets like U.S. Treasury bonds.

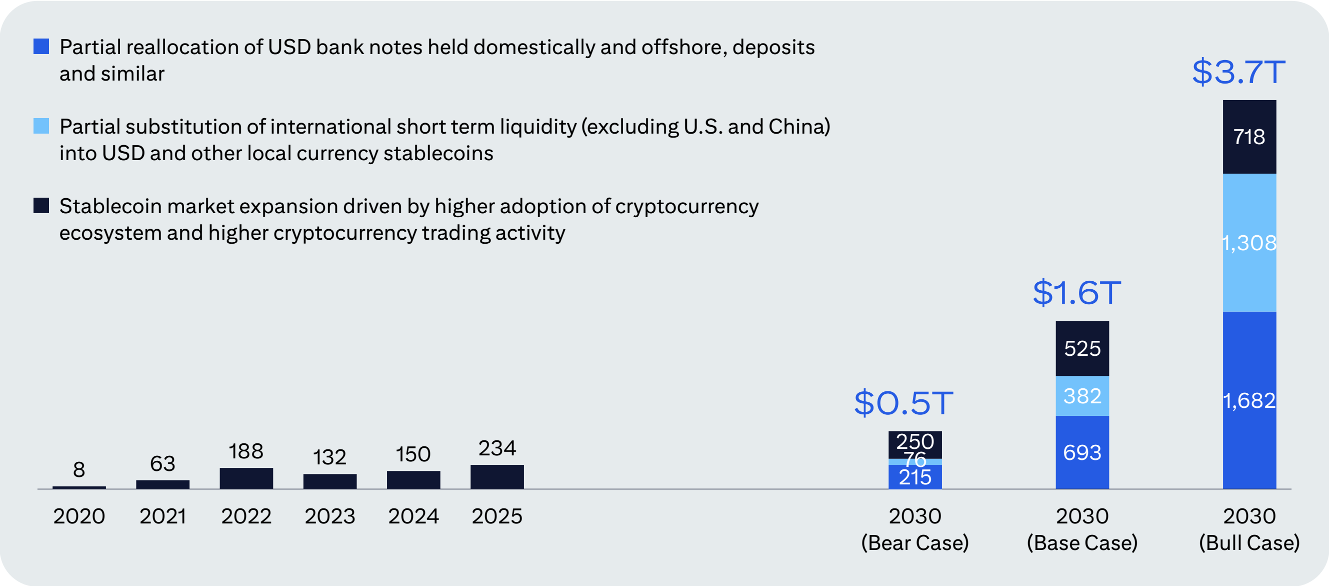
On the GPS report's base case estimates, stablecoin issuance could create an additional $1 trillion of U.S. Treasury purchases. This would make stablecoin issuers the largest holder of U.S. Treasury bonds, owning more than any single jurisdiction today.

Transparency in the public sector

Governments and other public bodies that have been suffering from a lack of trust and confidence are increasingly turning to blockchain to introduce transparency and reduce corruption in public finances. Take-up is initially likely to be modest compared to the private sector, but the prospects of a decentralized, trust-based, and paperless approach to managing public sector data holds huge potential. Key use cases include:

- **Public spending and finance:** Blockchains can help track expenditures, reducing the risk of corruption and fraud. Ledger-based technology also makes auditing of public finance easier as records cannot be altered.
- **Disbursement of subsidies and aid:** Blockchain-based payments can channel government aid and public subsidies, such as social security benefits, unemployment aid, or agricultural grants, direct to the intended recipients without intermediaries siphoning off funds. Aid organizations can track donations and distributions in real-time.
- **Public records management:** Blockchains can help secure vast amounts of data, including identity, medical history, and land records.
- **Digital identity:** Blockchain-based digital identity systems can provide tamper-proof verification for citizens for seamless access to public services, healthcare, education, and agriculture.

Figure 7. Citi Institute's estimates of stablecoin market size by 2030



Source: Federal Reserve Bank, Bank of England, European Central Bank, PBOC, Citi Institute

Citi Institute GPS

This section is a summary of a Citi GPS report that was first published in April 2025.

Source

[Digital Dollars: Banks and Public Sector Drive Blockchain Adoption]

IX

Agentic AI: Finance & the 'Do It For Me' Economy

The internet revolutionized information, launching a "Show It To Me" economy. A Citi Institute report, Agentic AI: Finance & the 'Do It For Me' Economy, argues that agentic artificial intelligence – systems that imitate human agency through autonomous decision making and actions – marks an evolution to a "Do It For Me" economy.

This could mean AI agents become our co-workers and assistants to take care of every facet of our lives – personal butlers to serve, chauffeurs to drive, and tutors to teach.

Discussion is growing and capital is flowing

Technological breakthroughs put AI agents on the agenda in 2024. In that year, references to agentic AI in tech firms' corporate statements and press articles increased 17x (figure 8).

At the same time, BCG research found that 32% of companies are planning to integrate agentic AI into their core strategies this year.

The taps of investment capital have switched on too. 37% of venture capital funding and 17% of venture capital deal activity was to AI start-ups in 2024.

Autonomous agents and digital co-workers also saw the biggest growth in VC deal activity, from eight deals in 2023 to 20 a year later. GenAI deals increased from five to 15 over the same period.

Vibhor Rastogi, Global Head of AI and ML Investments at Citi Ventures, describes autonomous AI agents as "the hottest new area of venture investment".

But where are the opportunities for financial services to make use of agentic AI?

Labor and data intensive jobs are ripe for innovation

The financial services industry is already a leader in AI adoption. Kevin Levitt, who heads up business development for the financial services industry at NVIDIA, notes that the industry's reliance on data makes it particularly rich with AI use cases.

As financial services firms move beyond deploying AI tools to boost staff productivity, there are opportunities to find efficiencies in labor and data intensive operations.

Transactions that have been flagged for sanctions must be evaluated, requiring data from a variety of structured and unstructured sources. These include transaction records and international company registers. Currently humans do this work, making it a big cost base for banks. Simon Taylor, the head of strategy and content at fintech firm Sardine, reckons that about 95% of sanctions alerts across the industry are false positives, representing a large waste of cost and effort.

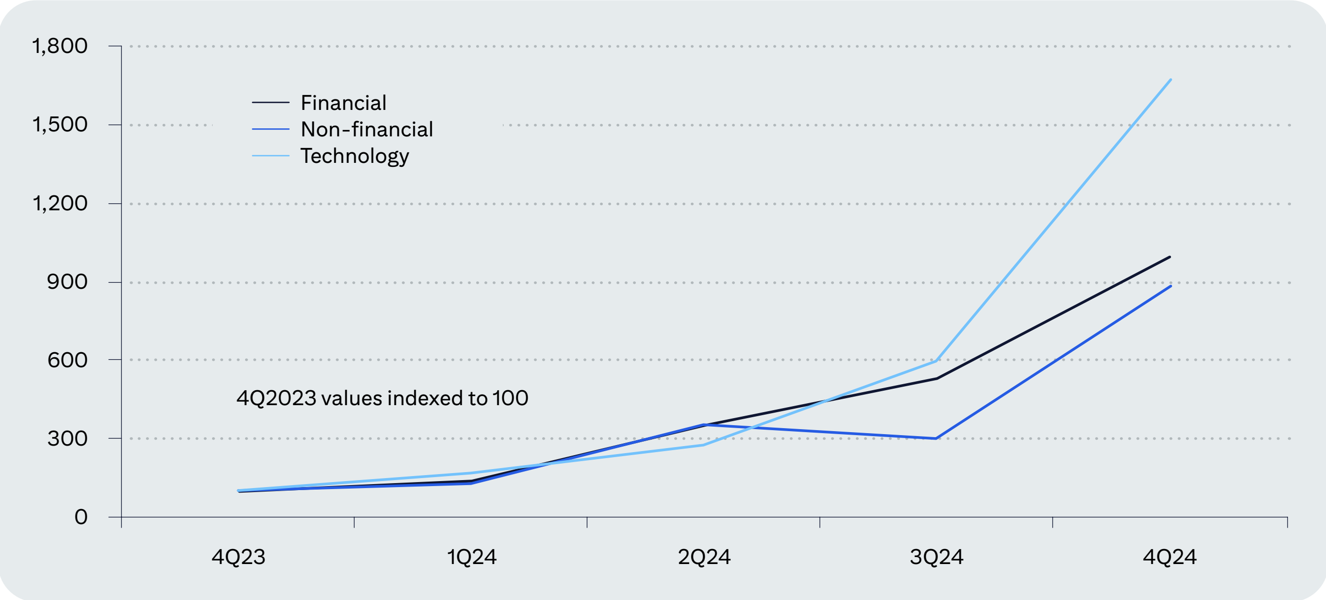
AI agents could change things by processing and analyzing complex data sets in a fraction of the time it takes humans. They could recommend whether humans should block or allow a transaction far more efficiently.

Client onboarding and Know-Your-Customer processes are also labor-intensive, requiring document verification and manual cross-referencing with external databases. Users also often dislike these time-consuming onboarding processes.

Document verification can be automated and AI agents can gather data to support dynamic risk profiling of customers and to ensure compliance with regulations like anti-money laundering rules.

AI agents could also be used to detect fraud. Deepfakes can already pass nine of the ten leading "liveness detection tests", which exist to ensure a customer is a real person. AI agents offer a more robust form of defense by analyzing contextual data, like how a device is being held, and detecting unauthorized systems.

Figure 8. Big-tech references to agentic AI up 17x in 12 months



Notes: 1. Based on keyword searches in company documents, transcripts, and press articles for "agentic AI", "AI agents" and "AI bots"; 2. Non-financial sector reference above refers to all sectors excluding the financials and the technology sector.

Source: AlphaSense, Citi Global Insights

Citi Institute GPS

This section is a summary of a Citi GPS report that was first published in January 2025.

Source

[Agentic AI: Finance & the 'Do It For Me' Economy]

X

The Rise of AI Robots: Physical AI is Coming for You

We saw in the previous article that AI agents could revolutionize financial services, by evaluating transactions for sanctions or even managing customer onboarding. The Rise of Robots: Physical AI is Coming for You focuses on robots that leverage advances in AI technologies to see, move, talk, learn, and act.

The authors estimate that there could be 1.3 billion such AI robots by 2035 and more than 4 billion by 2050. These could even be underestimates because they only account for nine use cases – including transport, healthcare and security – and there are likely to be many more.

Many humanoid robots are already under development

Humanoid robots look like humans and fit into their surroundings like humans – at work and at home. Ben Reed, chief marketing officer at Sanctuary AI, a company building humanoid robots, says in the report that for his company, the ultimate humanoid robots will be "machines that understand and act in the same way people do, in order to do work".

This might sound like science fiction (and even the most advanced are still prototypes), but up to 50 humanoid robots are already being developed.

They have a growing range of capabilities. The report highlights humanoid robots under development that can dance, do backflips and parkour, fold itself into a cupboard, and one that can learn complex tasks in less than 24 hours.

Industrial sector expected to lead, followed by homes

The report authors expect 648 million humanoids by 2050, (figure 9) accounting for 16% of their total forecast for AI robots by the same year.

The industrial sector will drive early adoption for both technological and economic reasons.

Dr Harry Kloor, founder and CEO of Beyond Imagination, which develops general purpose AI for use in physical work, says in the report that one of the biggest challenges is robots' "ability to safely perform a wide range of real-world tasks across diverse and dynamic environments".

Industrial settings like manufacturing lines and warehouses are contained and predictable compared with other places, especially homes. Early use cases for humanoids in industrial settings include lifting, transporting, restocking, and checking for defects.

By 2050 though, even accounting for slower uptake, more than 400 million humanoids are expected to be working in the home.

It has been a criticism that recent advances in AI have focused on cognitive tasks, while it is mundane physical tasks that people really want to hand over. As science fiction and fantasy author Joanna Maciejewska famously said: "I want AI to do my laundry and dishes so that I can do art and writing, not for AI to do my art and writing so that I can do my laundry and dishes".

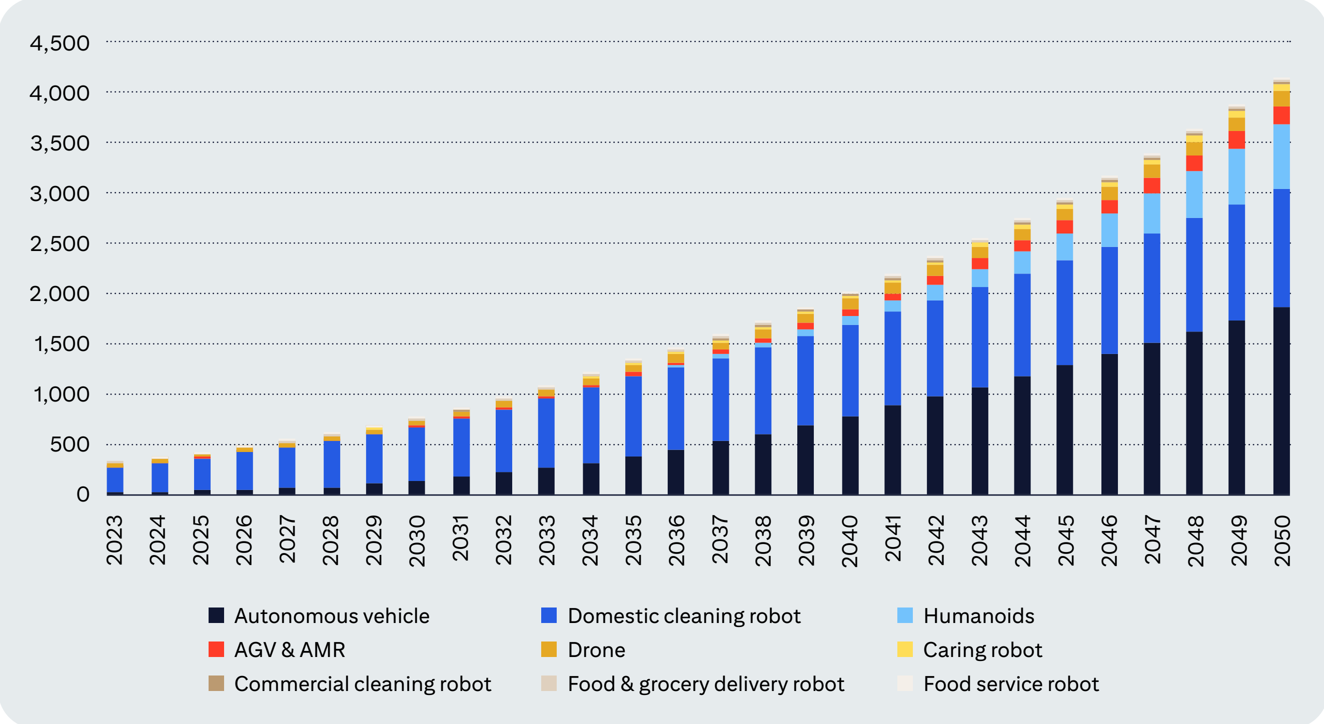
A humanoid workforce could also alleviate unmet care needs for an aging population.

Overcoming barriers

There will, however, be hurdles to overcome before humanoids walk alongside us.

First, even the most advanced humanoids are still at the prototype stage. Second, while costs will come down, for now, humanoids are very expensive. There is also no specialized supply chain: most developers create their own parts, and this could limit production volumes.

Figure 9. Forecasted number of humanoids by type



Source: Citi GPS

Citi Institute GPS

This section is a summary of a Citi GPS report that was first published in December 2024.

Source

[The Rise of Robots: Physical AI is Coming for You]

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IMPORTANT DISCLOSURES

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