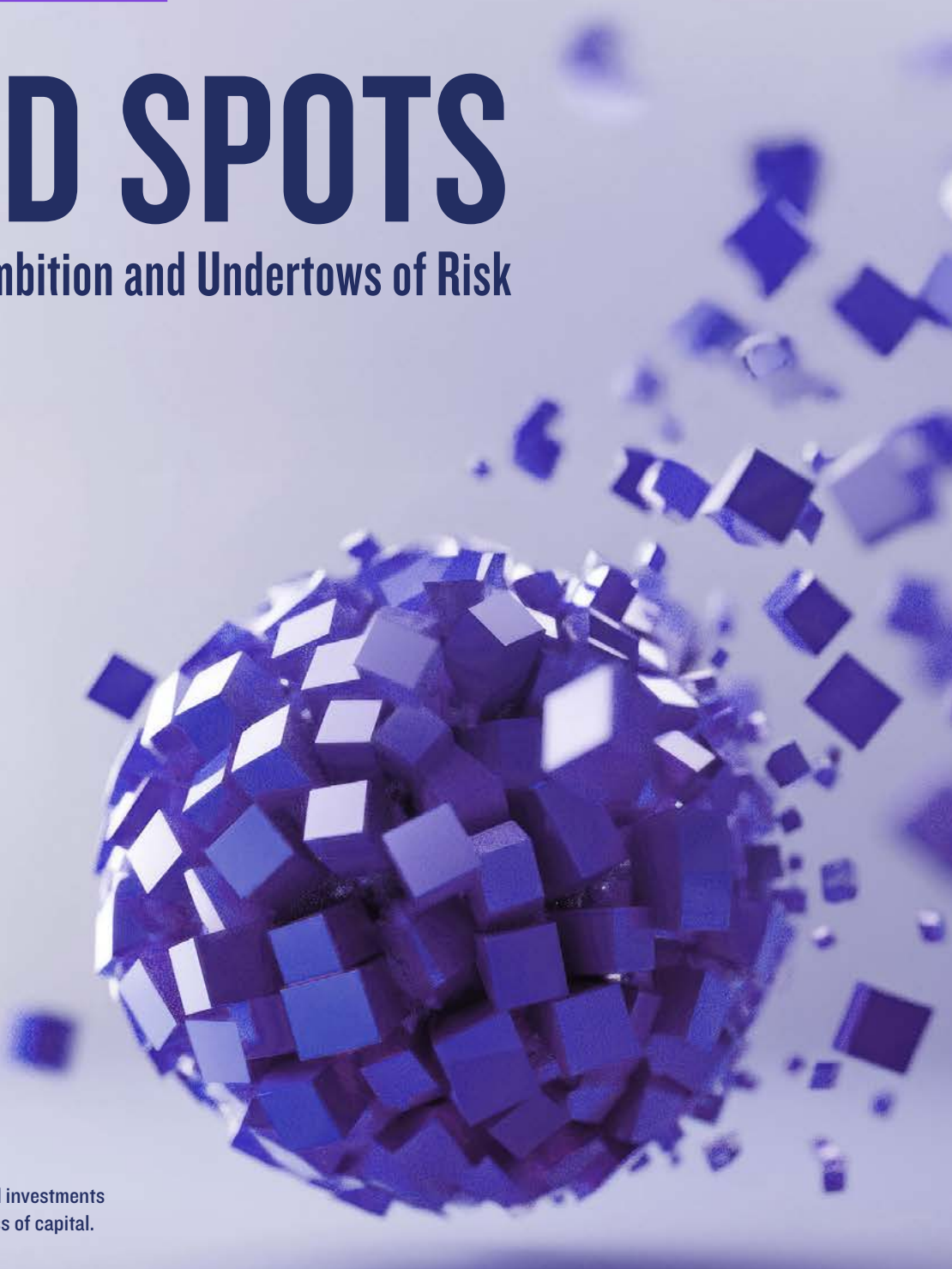




2025 GLOBAL RISK REPORT

BLIND SPOTS

High Tides of Ambition and Undertows of Risk



For professional investors only. All investments involve risk, including possible loss of capital.

ABOUT PGIM

PGIM, the global asset management business of Prudential Financial, Inc. is built on a 150-year legacy of strength, stability, and disciplined risk management through more than 30 market cycles. Managing more than \$1.44 trillion in assets*, PGIM offers clients deep expertise across public and private asset classes, delivering a diverse range of investment strategies and tailored solutions—including fixed income, equities, real estate and other retail investment vehicles. With 1,450+ investment professionals across 42 offices in 19 countries, we serve retail and institutional clients worldwide.

For more information, visit www.pgim.com.

* As of June 30, 2025. PFI is the 16th largest money manager by asset universe ranked by total worldwide assets under management as of 12/31/24 (out of 369 firms surveyed) based on Pensions & Investments Top Money Managers list published 06/16/25. Participation in the P&I ranking is voluntary and open to managers that have any kind of U.S. institutional tax-exempt assets managed internally. No compensation is required to participate in the ranking.

PGIM is the investment management business of Prudential Financial, Inc. (PFI). PFI of the United States is not affiliated in any manner with Prudential plc, incorporated in the United Kingdom or with Prudential Assurance Company, a subsidiary of M&G plc, incorporated in the United Kingdom.

CONTENTS



CHAPTER 1

IS THE AI INFRASTRUCTURE SPLURGE OVERDONE?

AI infrastructure investment is surging, yet rapid innovation risks stranding assets and compressing returns. Investors must focus on resilient, inference-capable data centers close to end users.

Page 3

CHAPTER 2

ARE ENERGY COSTS BOUND TO RISE?

Skyrocketing energy demand from tech and manufacturing is driving persistent cost increases. Long-term opportunities favor regions with strong fuel supply and robust energy networks.

Page 8

CHAPTER 3

CHINA'S INDUSTRIAL OVERCAPACITY AND ITS ROLE IN GLOBAL DEFLATION

China's industrial overcapacity threatens to export deflation. Trade barriers may shift this impact across markets, intensifying global competition and creating opportunity for those who anticipate shifting trade flows.

Page 11

The summary text above is AI-generated and has been reviewed for accuracy.

INTRODUCTION

Higher-for-longer. This is the scenario that economists and institutional investors have been preparing for with the global economy facing stubborn inflation, higher deficits, new tariffs, and shifting trade flows.

But in a fast-changing world, typified by heightened economic and technological competition between great powers, underappreciated risks could upend the investment outlook. Investors seeking to capture alpha while effectively managing risk must look beyond prevailing narratives, anticipating unexpected outcomes that aren't yet priced into markets.

PGIM joined forces with Bloomberg Media to uncover risk scenarios using its advanced AI tools, focusing on potential blind spots in the current environment. These AI tools scoured a wide range of sources—including earnings call transcripts, news trends on the Bloomberg terminal, and investment and policy research—to help identify regime-changing scenarios with deep implications for long-term portfolios.

In PGIM's fourth-annual Global Risk Report, we examine three risks that could alter the trajectory for interest rates, inflation, business investment, and the broader investment backdrop:

1. Does the AI-fueled spending splurge on digital infrastructure leave markets and economic growth vulnerable to obsolescence risk?
2. Will the rapid buildout in energy infrastructure lead to structurally higher energy costs, dampening consumer and business spending?
3. Could industrial overcapacity in China emerge as a deflationary force?

These risks hold the potential to ripple across asset classes, sectors and regions. Investors must therefore rethink their forecasts and fortify their portfolios to stay ahead of unexpected shifts in market regimes. To do this, institutional portfolios should leverage strategies that seek to mitigate risks and capitalize on opportunities that reveal themselves while the future of AI infrastructure, energy, and global trade takes shape.

BLOOMBERG PARTNERSHIP

PGIM partnered with Bloomberg Media Studios to create sponsored content to identify underappreciated risks in global markets, using AI in search of potential regime-changing scenarios. Innovative AI-powered tools scoured a wide range of sources — including earnings call transcripts, SEC filings, and Bloomberg Terminal real-time market data points. Through the use of this technology, PGIM's risk analysis looks beyond prevailing narratives to ignite imagination and help long-term investors manage risk in an ever-changing environment.

CHAPTER 1

IS THE AI INFRASTRUCTURE SPLURGE OVERDONE?

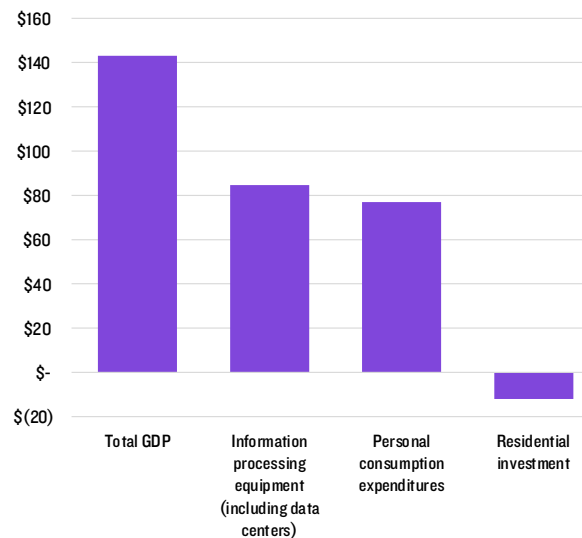
RISK INSIGHTS

The dot-com boom of the 1990s underpinned the U.S. economy. Business spending on computers, communications equipment and software contributed an annual average of more than three-quarters of a percentage point to GDP growth between 1995 and 2000, before a precipitous drop in IT investment in 2001.¹

More than two decades later, AI and cloud computing are fueling another tech investment frenzy. Digital infrastructure assets, such as fiber, towers, satellites and data centers, power the modern economy and are critical to the development and implementation of AI. Demand for new and updated digital infrastructure will require an estimated \$19 trillion in investments through 2040.² Data centers alone are expected to require \$6.7 trillion in capital by 2030 to provide the amount of compute power needed to handle AI processing loads as well as traditional IT applications.³ The AI boom has scooped up data centers' capacity across large campuses with demand spilling over to traditional cloud computing locations, fueling rental growth.

Memories of the boom and bust of the dot-com era could serve as a useful lesson for investors assessing the current risk landscape. Unlike the dot-com bubble when infrastructure such as fiber optic cables still proved useful over the long haul, much of the technology powering AI—from chips to data centers—could become obsolete as innovation accelerates. As

AI and Data Centers: A Boon to GDP Growth Change in U.S. GDP Q4 2024 to Q2 2025 (constant 2017 dollars, in billions)



Source: Bureau of Economic Analysis, Council on Foreign Relations

\$19T DIGITAL INFRASTRUCTURE INVESTMENTS NEEDED THROUGH 2040.

Source: McKinsey & Co.

chip density increases, developers and hyperscalers are attempting to future-proof data centers. One example would be integrating liquid-to-chip cooling systems into designs. Some end-users may not need this technology today but will likely need it in the future.

There also may be a disconnect between the hurried pace of AI infrastructure development and capital market expectations. Research from the Massachusetts Institute of Technology found that despite \$30-40 billion in generative AI enterprise investment, 95% of organizations had seen no returns to date. MIT said only 5% of integrated AI pilots are extracting millions in value, noting that tools such as ChatGPT and Microsoft Copilot primarily enhance individual productivity rather than P&L performance.⁴ Other studies indicate that some companies and functions are beginning to see results—a reminder that most enterprise users are still in the early stages of their AI work. A McKinsey & Company survey in March 2025 found that a growing number of companies were reporting both higher revenue and lower costs in the business units using AI, including strategy and corporate finance, supply chain and inventory management, marketing and sales, and service operations.

Even amidst rapid growth and the corresponding economic tailwinds, investors might be overestimating short-term returns from AI and underestimating long-term digital infrastructure needs. In contrast to a dot-com bubble plagued by overbuilding, the AI boom has faced severe chip, data center, and power supply constraints, while demand for AI inference applications is compounding across industries such as healthcare, finance, logistics, and defense.

Given these supply-demand dynamics, the AI tailwind appears to have plenty of runway. The potential portfolio implications will likely encompass a broad swath of the economy, with data center investments driving more than half of all U.S. real GDP growth from the fourth quarter of 2024 through the first half of 2025.

AI'S SWEEPING IMPACT ON THE GLOBAL ECONOMY

AI has established itself as a central force in the risk outlook. With its impact felt across nearly every facet of the global economy, AI will require that investors rethink the future of labor markets, manufacturing, energy, critical technologies, and digital infrastructure—as well as the downstream effects to inflation, productivity, consumption, and asset prices.

Here we highlight how AI could factor into our featured market risks:

1. Digital infrastructure spending:

Data center investments have been a major driver of GDP growth as AI-fueled demand for compute power outstrips supply. Even so, investors might be overestimating short-term returns from AI and underestimating long-term digital infrastructure needs.

2. Energy costs: If AI falls short of lofty expectations, consumers and businesses may bear the brunt of the costs—structurally higher electricity prices without the expected payoff from AI-driven productivity gains.

3. China's industrial overcapacity: AI threatens to exacerbate the overcapacity and labor challenges that China faces, thanks to the adoption of factory automation and AI applications that may make some jobs obsolete.

PORTFOLIO IMPLICATIONS

For investors, not all AI infrastructure is created equal. It is crucial to look under the hood and examine 1) where risks are more pronounced and 2) where growth stories offer long-term conviction.

Pinpointing risk exposure in digital infrastructure

AI risk may be concentrated in the training infrastructure for large language models (LLM). Advancements in the LLM segment could boost efficiency, reducing the amount of compute power required to train AI models. Moreover, LLM training infrastructure includes massive projects constructed in non-traditional data center locations, increasing the risk that these assets become stranded in the event demand subsides.

Three potential scenarios underscore the risks in the LLM infrastructure space:

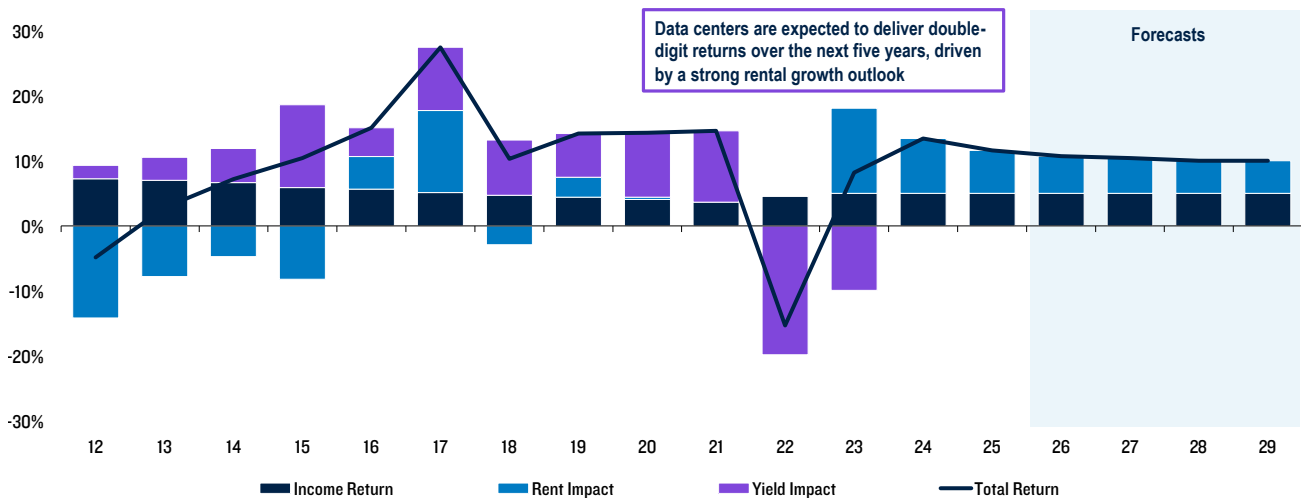
1. Training processes become more efficient:

Given how rapidly the space is evolving, it is reasonable to anticipate an impactful change in LLM training technology that makes the process more efficient from a compute power perspective. A corresponding decline in demand for data center capacity would conceivably follow, pushing down rents and leaving assets in non-traditional locations stranded unless other AI customers can fill the void. Market reactions to the January 2025 launch of DeepSeek illustrated how valuations could change if expectations for chip, energy, and data center demand in the AI era suddenly shift.

2. The AI developer universe consolidates:

The largest purveyors of LLMs may crowd out smaller

Prime Market Total Returns, Key European Data Center Markets FLAPD, Unlevered Powered Shell (% p.a.)

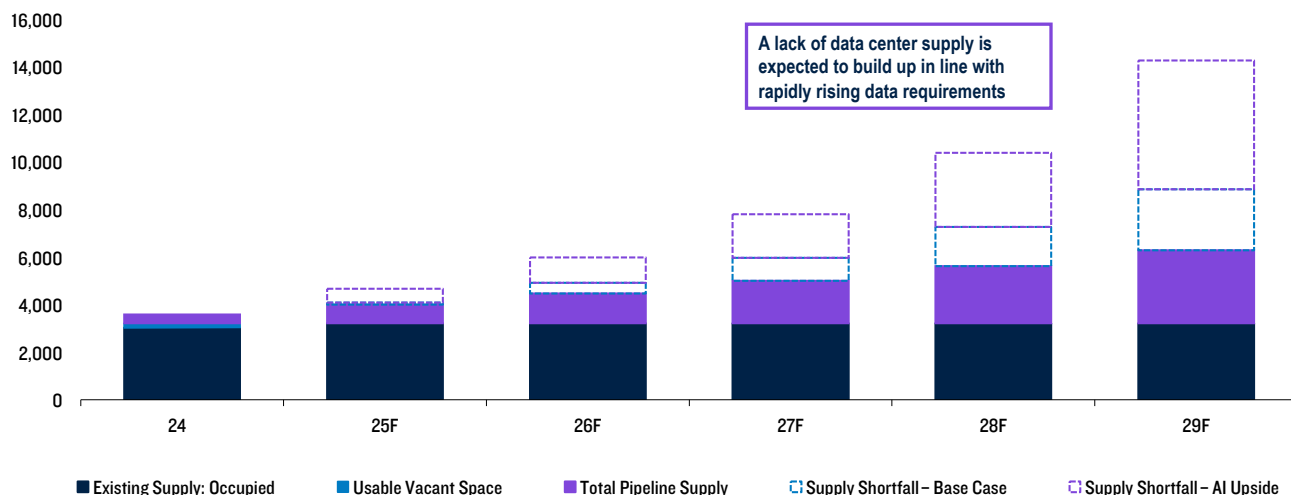


Sources: CBRE, Green Street, JLL, PGIM. As of September 2025. Forecasts may not be achieved and are not a guarantee or reliable indicator of future results.



While LLM training infrastructure could be vulnerable to emerging risks, low-latency cloud and inference-capable data centers represent a durable segment of the market.”

Estimated Data Center Supply Shortfall (MW, FLAPD)



Sources: Arthur D. Little, PGIM. As of September 2025.

Forecasts may not be achieved and are not a guarantee or reliable indicator of future results.

rivals and drive consolidation in the space, leaving only a few major players. This would markedly reduce demand for compute power—assuming the remaining LLM developers don't take up the data center capacity left behind.

3. Data centers expand to new locations: There are a lot of places in the world that can generate—or already have—large amounts of power to accommodate latency-agnostic campuses. Greater adoption of small modular reactors would amplify this risk.

AI training breakthroughs and the elasticity in powered land locations raise valid questions about the sustainability of rents in the LLM segment, since supply could eventually surpass demand. Of these three scenarios, however, consolidation among AI developers could be the more likely trigger for a collapse in demand. (Intense demand for data centers has created a new and growing tenant category in the “neo-cloud” players that lease servers, build and lease data center space, and sell this AI compute capacity directly to enterprise customers.)

It will be challenging for all of the major AI developers to secure the digital infrastructure they need to advance their models to target levels. The costs—measured in capital as well as environmental and social inputs—would be extremely high. Some developers

may team up with competing companies to share these costs. Others could simply run out of funding before sustainably monetizing their models. In whatever form it may take, consolidation that takes out a major LLM developer could create immediate overcapacity in the space. However, it is possible that remaining players soak up this excess capacity to accelerate their own AI development programs.

AI inference applications driving growth

As the future of AI evolves, investors must seek out strategies where long-term conviction is emerging. The AI wave sweeping over the global economy will be a seismic shift for consumers, businesses, and the technology they use every day—creating investment opportunities in a fast-growing digital infrastructure sector that will form the backbone of a new technological revolution.

While the infrastructure supporting LLM training could be vulnerable to emerging risks, low-latency cloud and inference-capable data centers represent a durable segment of the market. Growth in AI-integrated products is stoking demand for inference-capable data centers, which can execute AI tasks in real time. This feeds into demand for compute power in traditional low-latency cloud markets. Data centers that are geographically located near population centers, cloud networks, and language models are

well positioned to support the implementation of AI tools. With a focus on low-latency markets that lack sufficient capacity, investors could mitigate risk exposure tied to possible LLM consolidation or technological breakthroughs that reduce the amount of data center capacity required to train AI models.

Markets where supply is most constrained tend to offer the most appealing opportunities. In Europe, for example, key data markets continue to see estimated supply shortfalls. Europe's most attractive data center locations are those close to connectivity infrastructure and end users, such as Frankfurt and London, where demand is outstripping supply.⁵

Demand for inference-capable, low-latency data centers is expected to more than offset any capacity freed up by LLM training shifting to core campuses that are cheaper to operate. Intense demand from hyperscale developers and operators is pressuring utilities and increasing land prices in top low-latency markets, which has pushed large campuses to more remote locations (e.g. Wisconsin and Wyoming) that are still suitable for LLM training. Power and water resources are constrained in metro areas where data centers can operate in close proximity to end users.

A shortage in low-latency data centers has thus persisted.

Amid these supply challenges and a strong demand backdrop, the outlook for rents is positive, even if growth abates from record levels observed in recent years. Meanwhile, despite the potential chokepoints slowing builds, data centers are increasingly viewed by governments as national critical infrastructure. AI and the secure flow of data are now matters of national security, supporting a wide range of digital infrastructure.

Advances in fiber optic technology could be a potential wildcard in the outlook for low-latency data centers in the future. If fiber optic speeds improve enough to enable data centers to achieve the same latency regardless of location, data centers near large economic centers would likely lose their advantage over those in more remote locations. It is neither cheap nor easy to replace existing fiber in the ground, so this is unlikely to become a near-term disruptor. However, investors should take note of innovations already making some headway. Hollow-core fiber, which is said to reduce latency by around 30% compared with conventional fiber, is being used to increase distances between data centers in the same cluster or city.

CHAPTER 2

ARE ENERGY COSTS BOUND TO RISE?

RISK INSIGHTS

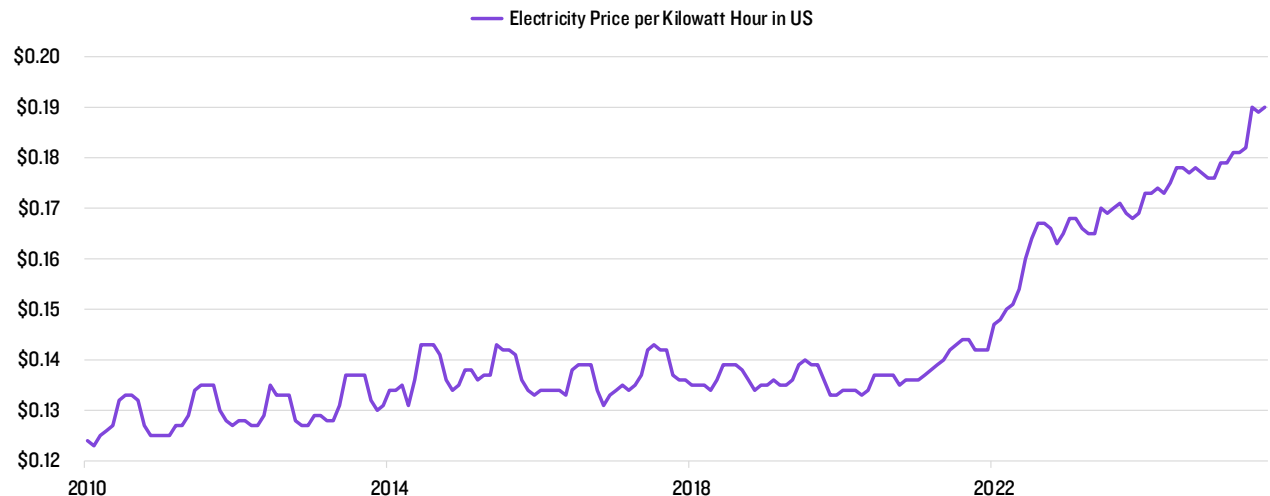
Residents of New Jersey have become all too familiar with the rising cost of energy this year. Household electricity prices were 22.2% higher in July than last summer,⁶ as the regional grid operator grapples with surging demand at the same time power plants are retiring.

This is an issue plaguing other parts of the U.S. and other countries whose power grids are coming under stress from data center consumption, electrification, and industrial reshoring. U.S. electricity prices for all customers rose 5% in July 2025 compared with

the same month a year earlier, outpacing inflation. Portugal, Finland, France and Poland saw household rates increase between 10% and 14% year-over-year in the second half of 2024.⁷

Is this merely a harbinger of a future energy crunch? AI demand, data centers, a resurgence in domestic factories, an increase in EV ownership, and other power-hungry endeavors are driving rapid capital expenditures to build out energy infrastructure. Electricity consumption from data centers alone is spurring significant investment from hyperscalers, data center operators, and asset managers. The International Energy Agency estimates that data center electricity

U.S. Electricity Prices Have Soared



Source: U.S. Bureau of Labor Statistics (Average Price, Electricity per Kilowatt-Hour in U.S. City Average). Federal Reserve Bank of St. Louis. Data as of Q2 2025.

+15%

ESTIMATED INCREASE IN DATA CENTER ELECTRICITY CONSUMPTION PER YEAR FROM 2024-2030.

Source: IEA

consumption will grow around 15% per year between 2024 and 2030, more than four times faster than all other sectors combined. Although data centers bring intense power needs to individual locations, their electricity growth would account for less than 10% of global demand growth overall. Industry output growth and electrification, the deployment of electric vehicles, and the adoption of air conditioning are bigger drivers.⁸

Growing demand for power and the raw materials supporting these investments threaten to reset energy costs at a structurally higher level, presenting a long-term risk for the economy and financial markets. The impact may become even more pronounced if AI fails to deliver on projections for a sizable productivity boost. Modernizing the grid requires upfront costs that will likely pull up electricity rates regardless of the economic payoff—whether in productivity or local employment opportunities—subjecting consumers and businesses to inflated utility bills.

To mitigate stranded asset risks if anticipated AI demand fails to materialize, utilities are negotiating contracts with new large load customers that require them to invest in new infrastructure. These contracts also can include minimum contract terms, committed load ramp schedules, minimum load payments, and early termination fees. Such contractual terms can reduce the knock-on effect from weaker-than-expected AI demand while allaying regulatory concerns pertaining to project approvals.

PORTFOLIO IMPLICATIONS

There are four key factors shaping today's energy landscape that will help set supply-demand dynamics and the investment outlook going forward:

- 1. Ample supply, constrained distribution:** Much of the world's natural gas reserves remain untapped. In the U.S. alone, there were 603.6 trillion cubic feet in proved reserves as of 2023,⁹ with massive shale gas plays like the Permian Basin in Texas and Marcellus Shale in West Virginia and Pennsylvania representing significant production opportunities. The challenge is getting this energy to market and distributing power to where it is needed, such as data center campuses. Political or regulatory roadblocks slow production and distribution of gas in certain markets. Further, while there's plenty of gas in the U.S., production costs vary dramatically. Should the Permian and Marcellus constraints persist, higher-cost gas may be required to fill the supply-demand gap and be passed along to the consumer. Development of the power grid faces several constraints related to permitting, interconnection, and the availability of equipment. Shortages are especially pronounced among the gas-fired turbines needed to generate electricity. Gas turbine manufacturers are reporting significant backlogs and quoting extended, years-long wait times for new orders.
- 2. Variable demand meets non-dispatchable generation:** The non-dispatchable nature of renewables such as wind and solar, which are not capable of ramping up supply during periods of higher demand and require grid improvements (i.e. increased costs) to accommodate them, as well as costs associated with grid-level storage help build the case that traditional fuel sources will continue to play a central role in the energy mix. Still, considering the bottleneck in gas turbine shipments and potential labor shortages, renewables might have the quickest path to coming on the grid. A mix of energy resources from renewables to traditional fuels will be needed for power generation, alongside the buildout of transmission to solve strained power grids.
- 3. Uneven impacts by region:** Areas that are rich in fuel and pipeline infrastructure will likely have a cost advantage on power. For example, southwestern U.S. states like Texas have both ample supply and distribution networks that are better equipped to

handle increasing power needs. Meanwhile, New Jersey and the rest of the U.S. northeast are getting squeezed by cost- and regulatory-related roadblocks to building up infrastructure.

- 4. A thriving LNG export market:** U.S. natural gas is abundant, but higher international pricing will likely send an increasing amount of that supply into the liquified natural gas (LNG) export market. One estimate suggests that gas demand will rise by 3 to 6.1 billion cubic feet per day (bcf/d) by 2030.¹⁰ LNG exports represent a market that is up to four-times larger, with the US—the world’s largest LNG supplier—exporting 11.9 bcf/d in 2024.¹¹ Competition between domestic consumption and thriving LNG exports could help boost gas prices over the long run. Short-term price spikes could accelerate a marshaling of capital to build out energy infrastructure and develop more energy-efficient technologies like graphics processing units (GPUs).

Macro risks in an energy crunch

A new regime of higher-for-longer energy costs—from raw materials to the electricity rates that end users pay—would raise implications for the macro outlook and a range of asset classes and sectors.

Who will pay for the costs associated with rising power consumption and the rapid buildout of energy infrastructure to support it? The risk outlook for the economy may hinge on the answer. Higher electricity pricing for consumers and businesses presents a headwind to economic growth with risks to employment, capital investment, and household balance sheets. Efficiency gains from the use of AI and optimizing grid usage with storage and sensors could partially offset energy demand from digital

infrastructure, easing some of the cost burden for rate payers.

Cheaper and more efficient AI may also serve to accelerate and broaden adoption for consumers, the tech industry, and other enterprises—thereby sustaining an increase in power consumption that is giving rise to a broad set of energy infrastructure opportunities for long-term investors.

Broad set of energy opportunities

Natural gas, renewable electricity such as utility-scale solar, nuclear, geothermal, an expansion of the power grid, and their related supply chains all play a role in the infrastructure buildout.¹² Data center cooling, equipment that improves energy efficiency in buildings (e.g. HVAC systems), industrial equipment providers for electricity grid upgrades, and sensors that improve power grid utilization stand to benefit from an energy transformation.

Gas producers and utilities are exploring colocation and direct gas supply arrangements. Retired thermal sites are ripe for upgrades, including colocation of renewable capacity, energy storage, and thermal energy networks that can support fast and flexible data center operation. Regulatory momentum and potential new FERC rules favor these projects, as legacy grid bottlenecks create a need for plug-and-play interconnection solutions. Abundant natural gas supplies can be tapped to meet future power consumption, but this will require new investments in the midstream energy market, including pipelines.

There will be winning and losing countries as well. In the U.S., relatively cheap natural gas provides an advantage. Regions such as China and India could get priced out amid intense global competition, allowing coal to continue growing.



Higher electricity pricing for consumers and businesses presents a headwind to economic growth with risks to employment, capital investment, and household balance sheets.”

CHAPTER 3

CHINA'S INDUSTRIAL OVERCAPACITY AND ITS ROLE IN GLOBAL DEFLATION

RISK INSIGHTS

China is often referred to as the world's factory, long known as a global exporter of everything from electronics and cars to furniture and toys. It may be time to add another export to the list: deflation.

China is plagued by industrial overcapacity after substantial investments across its infrastructure and factory sectors. The country's excess capacity could serve as a significant deflationary force in the global economy and a threat to markets that face an excess supply of Chinese goods. These risks have concerned investors for some time despite more persistent fears that tariffs will create inflationary impulses, particularly in the U.S.

The current deflationary backdrop is so troublesome that China is in the midst of a wide-ranging "anti-involution" campaign, aimed at ending extreme price cutting by Chinese companies and avoiding a race to the bottom, resulting in lower profit margins and layoffs on top of deflationary pressures. Underscoring the concerns of falling prices, China's July reading on producer prices fell by 3.6% year-over-year, *the 33rd consecutive monthly drop*. The pullback in prices is happening in a wide swath of industries, including many of strategic importance to the Chinese, such as solar panels, batteries and electric vehicles.

There is historical precedence for the industrial overcapacity plaguing the country, including in the late 1990s when China unveiled a "spindle reduction campaign" to combat severe overcapacity in the textiles

industry. Likewise, in response to the Global Financial Crisis in 2008, China unleashed a major stimulus package focused on property construction, which ultimately led to the dramatic overcapacity that became evident about a decade later.

The impact of tariffs

While the export of Chinese industrial surplus may serve to have a deflationary effect on global markets, its impact depends on the scale of exports, and where those exports are landing. The U.S. and Europe have long been concerned about excess capacity in certain industries (EVs and solar, for example), but there are growing concerns that production has been expanded in many other sectors, potentially widening the scope of any potential trade disputes that may emerge.

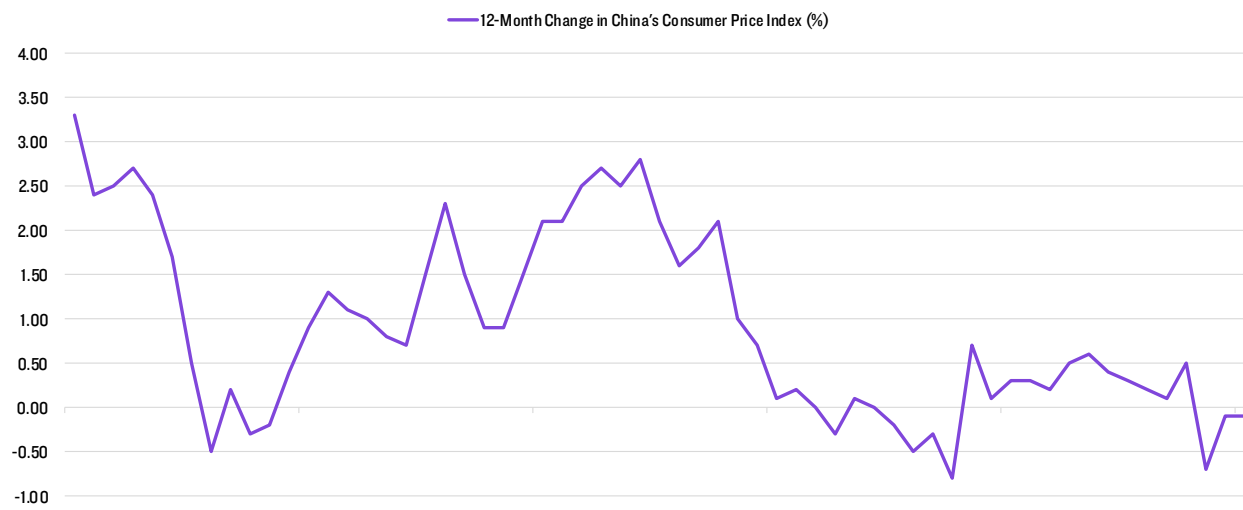
At the same time, the impact of U.S. and European tariffs has made a complicated issue even more thorny. With prices falling precipitously at home, Chinese

-3.6%

CHINA'S PRODUCER PRICES FELL BY 3.6% YEAR-OVER-YEAR IN JUNE, THE 33RD STRAIGHT MONTHLY DROP.

Source: China's National Bureau of Statistics

Deflationary Pressure in China



Source: Organization for Economic Co-Operation and Development. Federal Reserve Bank of St. Louis. Data as of April 2025.

manufacturers look to inundate overseas markets with their excess capacity, while other countries respond by imposing higher tariffs on those goods. With their export path blocked by those tariffs, and margins falling further, China's manufacturers will seek to export their excess capacity in countries less exposed to tariffs in Emerging Markets.

(For now, China's overall exports outside of the U.S. appear to be holding up well. From April to July 2025, China's reported exports to the United States fell 23% year on year, by \$41 billion, according to the [China Leadership Monitor](#). At the same time, its exports to other markets rose by 11%, or by \$117 billion.)

In late September, China said it was considering earmarking another \$70 billion for more government investment projects.¹³ The government is also slated to meet in October to consider its economic and social goals for the next five years, which may include a shift toward bolstering domestic consumption.

PORTFOLIO IMPLICATIONS

Simply put, Chinese companies produce far more than the country's domestic economy can absorb. Though anti-involution seeks to prioritize profitability and innovation over excessive competition, the program's success is by no means guaranteed, and building consumer demand in China will take time even in the best of scenarios.

Meanwhile, global investors are left with a host of considerations:

- 1. Tariff dynamism:** While China's overcapacity could prove to be a significant deflationary force in the global economy (particularly for markets that face an excess supply of Chinese goods), some countries may try to limit the imports of Chinese goods via tariffs, reducing the deflationary impact. But such moves could also increase the risk that China targets non-tariff markets (ASEAN or Latin America), which could then end up bearing the brunt of deflationary pressures.
- 2. Consumption surprises:** Investors should also prepare for the possibility that China's long-slumping domestic consumption might actually surprise to the upside. Initiatives aimed at boosting household spending and confidence are part of a broader strategy to shift the economy toward consumption-led growth specifically to counter challenges like deflation, a sluggish property market, and trade uncertainties. Although some argue for faster implementation and bolder steps, the Chinese government seems to be aiming for a more measured and fundamental approach than the liquidity "sugar rush" efforts it adopted post-GFC.
- 3. Intensifying competition:** European and Asian exporters are increasingly linked to and in direct competition with Chinese goods on global markets.



Anti-involution in and of itself is not going to be the fix. It's a necessary step in addressing excess capacity but needs to be augmented with continued demand upgrading. We think that Beijing will cut back excess capacity in sectors that have achieved self-sufficiency and moderate the pace of capacity building in sectors that are strategic, but not yet at scale.”

Shikeb Farooqui
Vice President & Lead Economist for Asia, PGIM

For instance, Chinese auto companies have continued to gain significant market share in Europe.

- 4. A widening trade war:** Investors might also consider whether other countries aside from the U.S. and the EU will respond to China's overcapacity, especially if there is redirection of trade from the U.S. Some countries are already responding by targeting small packages, for example, but others are wondering what policies to implement to counteract trends that go beyond the impact of U.S. tariffs, such as steady growth in imports of gas-powered and electric cars from China.
- 5. Steeper U.S. tariffs:** Chinese overcapacity may be so large and its price advantage so great that the U.S. will have to impose extremely high tariffs to make Chinese goods more expensive than U.S.-produced alternatives. A country such as Mexico could benefit from deeper US-China trade tensions, given that much of Mexico's trade with

its neighbor to the north is duty-free under the USMCA trade agreement. This could bode well for Mexico's industrial sector, including real estate near the U.S. border that supports logistics and e-commerce operations.

WHAT IS ANTI-INVOLUTION?

The term “involution” (or “neijuan” in Chinese) refers to excessive, unsustainable competition that eats into profit margins. China's anti-involution strategy seeks to combat this through regulatory tools such as production caps and reduced subsidies for unprofitable firms. The measures are expected to phase out weaker players and emphasize higher-quality products, giving stronger companies room to grow.

CONCLUSION

A rapid transformation in AI infrastructure, energy, and global trade calls for investors to reimagine the macro and portfolio implications of unforeseen regime shifts. To complement qualitative scenario analysis, investors can also monitor the likelihood of different economic environments using a probability-based framework. This approach provides an early signal when the odds of a regime shift—such as from expansion to slowdown—are rising, helping investors prepare for transitions before they become consensus. When studying these blind spots in the outlook, investors can seek to improve risk management by employing strategies that anticipate undertows of risk while seizing long-term opportunities across asset classes.

ACKNOWLEDGEMENTS

PGIM gratefully acknowledges the contributions of the following individuals:

Marco Aiolfi

Managing Director, Head of Multi-Asset Research,
Quantitative Solutions,
PGIM

Wendy Carlson

Managing Director, Head of Power & Renewables,
Private Credit,
PGIM

Shikeb Farooqui

Lead Economist for Asia,
Fixed Income,
PGIM

Jim Footh

Managing Director, Global Data Center Investments,
Real Estate,
PGIM

Maxwell Hausle

Credit Analyst, U.S. Investment Grade Credit
Research Team,
Fixed Income,
PGIM

Stuart Jarvis

Managing Director, Portfolio Research,
Multi-Asset Solutions,
PGIM

Morgan Laughlin

Managing Director, Global Head of Data
Center Investments,
Real Estate,
PGIM

Mehill Marku

Lead Geopolitical Analyst,
Fixed Income,
PGIM

Magdalena Polan

Head of Emerging Market Macroeconomic Research,
Fixed Income,
PGIM

Jay Saunders

Managing Director, Global Natural Resources Equity
Co-Portfolio Manager & Research Analyst,
Jennison

Brian Thomas

Executive Managing Director, Real Assets,
Private Credit,
PGIM

Di Wang, PhD

Vice President, Multi-Asset Research,
Quantitative Solutions,
PGIM

Eduard Wehry

Managing Director, Head of Hong Kong &
Asia Pacific Business Development,
Real Estate,
PGIM

David Winans

Credit Analyst, U.S. Investment
Grade Credit Research Team,
Fixed Income,
PGIM

INVESTMENT TAKEAWAYS

AI INFRASTRUCTURE

Risk Analysis in AI Training Infrastructure

- Advancements in LLM training could reduce demand for data center capacity, potentially stranding assets in non-traditional locations.
- Consolidation among AI developers may reduce demand for compute power, also creating excess capacity.
- Remaining players could soak up available capacity to accelerate their own AI development programs.

Opportunities in Inference-Capable Data Centers

- Growth in AI-integrated products is driving demand for inference-capable data centers in low-latency markets.
- Investors should focus on markets with constrained supply, such as key European locations like Frankfurt and London.

ENERGY COSTS

Higher Electricity Costs

- Rising electricity prices due to AI demand, data centers, and electrification could strain consumers and businesses.
- Capital-intensive efforts to modernize the grid and build out energy infrastructure threaten to reset utility rates at structurally higher levels.

Energy Infrastructure Opportunities

- Investments in natural gas, geothermal, utility-scale solar, nuclear, and related supply chains are critical.
- Data center cooling, energy-efficient building equipment, and grid upgrades present growth areas.

Regional Variations

- Regions with ample energy supply and robust infrastructure (e.g. U.S. Southwest) may have a cost advantage.
- Areas with regulatory and distribution challenges (e.g. the U.S. Northeast) could face higher costs.

CHINA'S INDUSTRIAL OVERCAPACITY

Deflationary Risks

- China's overproduction could flood global markets, driving down prices.
- Tariffs may limit imports of Chinese goods but could redirect deflationary impacts to other regions.
- Efforts to boost domestic consumption in China could shift the economy toward consumption-led growth, reducing overcapacity risks.

Global Trade Dynamics

- Global markets face intensifying competition with Chinese goods, particularly in Europe and Asia.
- U.S.-China tensions could favor countries like Mexico, where the industrial sector—including real estate near the U.S. border—is likely to benefit from duty-free trade agreements.

ENDNOTES

- 1 Federal Reserve Bank of San Francisco. (2004). The Boom and Bust in Information Technology Investment. <https://www.frbsf.org/wp-content/uploads/er19-34bk.pdf>. Accessed Sept. 2025.
- 2 McKinsey & Co. (2025, Sept. 9). The Infrastructure Moment. <https://www.mckinsey.com/industries/infrastructure/our-insights/the-infrastructure-moment>. Accessed Sept. 2025.
- 3 McKinsey & Co. (2025, April 28). The Cost of Compute: A \$7 Trillion Race to Scale Data Centers. <https://www.mckinsey.com/industries/technology-media-and-telecommunications/our-insights/the-cost-of-compute-a-7-trillion-dollar-race-to-scale-data-centers>. Accessed Sept. 2025.
- 4 Massachusetts Institute of Technology. (2025, July). The GenAI Divide: State of AI in Business 2025. https://mlq.ai/media/quarterly_decks/v0.1_State_of_AI_in_Business_2025_Report.pdf. Accessed Sept. 2025.
- 5 PGIM. (2025, July 1). Europe Regional Spotlight. <https://www.pgim.com/us/en/institutional/insights/asset-class/real-estate/regional-spotlights/europe-2025>. Accessed September 2025.
- 6 Energy Information Administration. (July 2025). Electric Power Monthly. https://www.eia.gov/electricity/monthly/epm_table_grapher.php?t=epmt_5_6_a. Accessed September 2025.
- 7 Eurostat. (April 2025). Electricity Price Statistics. https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Electricity_price_statistics. Accessed September 2025.
- 8 International Energy Agency. (2025, April). Energy and AI. <https://www.iea.org/reports/energy-and-ai>. Accessed Sept. 2025.
- 9 U.S. Energy Information Administration. (2025, June 25). U.S. Crude Oil and Natural Gas Proved Reserves, Year-End 2023. <https://www.eia.gov/naturalgas/crudeoilreserves/>. Accessed Sept. 2025.
- 10 Hamm Institute for American Energy at Oklahoma State University. (2025, July). Powering AI with American Energy: Natural Gas. <https://hamminstitute.org/site-files/documents/naturalgasdemand.pdf>. Accessed Sept. 2025.
- 11 U.S. Energy Information Administration. (2025, March 27). The United States Remained the World's Largest Liquefied Natural Gas Exporter in 2024. <https://www.eia.gov/todayinenergy/detail.php?id=64844#>. Accessed Sept. 2025.
- 12 Jennison. (2025, Sept. 9). Investing in AI's Growing Energy Needs. <https://www.jennison.com/us/en/institutional/perspectives/investing-ai-growing-energy-needs>. Accessed Sept. 2025.
- 13 The Wall Street Journal. (2025, Sept. 30). China's Factory Activity Gauges Show Signs of Improvement. <https://www.wsj.com/economy/chinas-manufacturing-activity-contracts-again-fe61b6ff?mod=Searchre-sults&pos=1&page=1>. Accessed October 2025.

IMPORTANT INFORMATION

Professional Investor Use Only. All investments involve risks, including possible loss of principal. Past performance is not indicative of future results.

The information contained herein is provided by PGIM, Inc., the principal asset management business of Prudential Financial, Inc. (PFI), and a trading name of PGIM, Inc. and its global subsidiaries. PGIM, Inc. is an investment adviser registered with the U.S. Securities and Exchange Commission (SEC). Registration with the SEC does not imply a certain level of skill or training.

These materials are for informational or educational purposes only. The information is not intended as investment advice and is not a recommendation about managing or investing assets or an offer or solicitation in respect of any products or services to any persons who are prohibited from receiving such information under the laws applicable to their place of citizenship, domicile or residence. In providing these materials, PGIM is not acting as your fiduciary. These materials represent the views, opinions and recommendations of the author(s) regarding the economic conditions, asset classes, securities, issuers or financial instruments referenced herein. Distribution of this information to any person other than the person to whom it was originally delivered and to such person's advisers is unauthorized, and any reproduction of these materials, in whole or in part, or the divulgence of any of the contents hereof, without prior consent of PGIM is prohibited. Certain information contained herein has been obtained from sources that PGIM believes to be reliable as of the date presented; however, PGIM cannot guarantee the accuracy of such information, assure its completeness, or warrant such information will not be changed. The information contained herein is current as of the date of issuance (or such earlier date as referenced herein) and is subject to change without notice. PGIM has no obligation to update any or all of such information; nor do we make any express or implied warranties or representations as to the completeness or accuracy or accept responsibility for errors. These materials are not intended as an offer or solicitation with respect to the purchase or sale of any security or other financial instrument or any investment management services and should not be used as the basis for any investment decision. No risk management technique can guarantee the mitigation or elimination of risk in any market environment. Past performance is not a guarantee or a reliable indicator of future results and an investment could lose value. No liability whatsoever is accepted for any loss (whether direct, indirect, or consequential) that may arise from any use of the information contained in or derived from this report. PGIM and its affiliates may make investment decisions that are inconsistent with the recommendations or views expressed herein, including for proprietary accounts of PGIM or its affiliates. Any projections or forecasts presented herein are as of the date of this presentation and are subject to change without notice. Actual data will vary and may not be reflected here. Projections and forecasts are subject to high levels of uncertainty. Accordingly, any projections or forecasts should be viewed as merely representative of a broad range of possible outcomes. Projections or forecasts are estimated, based on assumptions, and are subject to significant revision and may change materially as economic and market conditions change. PGIM has no obligation to provide updates or changes to any projections or forecasts.

PGIM and its affiliates may develop and publish research that is independent of, and different than, the recommendations contained herein. PGIM's personnel other than the author(s), such as sales, marketing and trading personnel, may provide oral or written market commentary or ideas to PGIM's clients or prospects or proprietary investment ideas that differ from the views expressed herein.

PFI of the United States is not affiliated in any manner with Prudential plc, incorporated in the United Kingdom or with Prudential Assurance Company, a subsidiary of M&G plc, incorporated in the United Kingdom.

© 2025 PFI and its related entities, registered in many jurisdictions worldwide.

4888970

EXPLORE THE SERIES AT [PGIM.COM/RISK](https://www.pgim.com/risk)

PGIM's annual Global Risk Report explores potential regime-changing scenarios to help investors capture opportunities while managing risk across public and private markets.





For media and other inquiries, please contact thought.leadership@pgim.com.

Visit us online at www.pgim.com.

Follow us @PGIM on LinkedIn, Instagram
and YouTube for the latest news and content.