

# 2025 THEMATIC OUTLOOK

iShares<sup>®</sup>  
by BlackRock

AI and geopolitics forge new paths

## Key takeaways

01

### MODEST RATE CUTS COULD SUPPORT SENSITIVE ASSETS

Recent U.S. Federal Reserve rate cuts could start to take pressure off interest rate sensitive companies and non-cash-flowing<sup>1</sup> assets. This presents potential tailwinds for biotech stocks, bitcoin, and gold.

02

### REBUILDING THE U.S. PHYSICAL ECONOMY

Themes centered around rebuilding the physical economy, like infrastructure, manufacturing, and homebuilding may be better poised to benefit in the post-U.S. election environment, as they sit at the intersection of policy tailwinds and structural changes.

03

### AI'S BUILD PHASE ACCELERATES

Massive investment in AI infrastructure as well as ever more powerful chips and models, are laying the groundwork for increased adoption.



**Jay Jacobs, CFA**

U.S. Head of Thematic  
and Active ETFs,  
at BlackRock

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**We believe AI and geopolitics will remain key themes for 2025, yet there are significant shifts in the underlying policies, demographics, and tech developments that will drive them forward. Ahead of the new year, investors should consider what exposure they have to these themes and how they may position their portfolios for these structural trends.”**

All dollar figures are in U.S. dollars unless otherwise indicated.

<sup>1</sup> Non-cash-flowing assets refer to assets that have no expectation of ever paying a dividend or coupon.

**01**

# MODEST RATE CUTS COULD SUPPORT RATE-SENSITIVE COMPANIES AND ASSETS

From March 2022 to September 2024, the U.S. markets entered a period of quickly rising and elevated interest rates, bringing the federal funds rate to its highest levels since 2001<sup>2</sup>. This environment punished rate-sensitive investments on two fronts:

1. Companies with long paths to profitability saw valuations contract given higher discount rates, and;
2. Firms dependent on floating rate debt or that had to roll over maturing debt were hurt by higher financing costs

Additionally, non-cash-flowing assets like bitcoin and gold faced pressure from rising opportunity costs compared to holding interest-paying assets like bonds. Now these headwinds could abate; The U.S. Federal Reserve (Fed) has cut rates by 75 basis points<sup>3</sup> as of November 2024, and while rates may not return to pre-pandemic levels, a path of additional modest rate cuts is anticipated by the market for 2025.<sup>4</sup>

## Medical innovation gets a shot in the arm

Higher rates have had a particularly negative impact on biotech firms by shrinking valuations and driving up borrowing costs, causing many companies to reduce R&D spending. Should rates continue to fall, it could reduce financing costs and potentially give biotech firms more confidence to expand R&D budgets. Increased spending combined with the potential introduction of AI to the discovery and trial process, could lead to a surge in drug development. AI is already being tested in drug discovery to predict protein structures and chemical reactions, as well as to conduct drug trials in automated labs and digital “in-silico” experiments. By 2025, over 30% of new drugs are expected to be discovered using generative AI techniques, potentially saving biotech companies 25% to 50% in time and costs from discovery to preclinical stages.<sup>5</sup>

**“**

**Structural demand in the healthcare sector, driven by an aging population, combined with rapid innovation in medical technology and drug development, provides a strong foundation for potential growth.”**

**Dr. Erin Xie**

Lead Portfolio Manager, Health Sciences,  
BlackRock Fundamental Equities

Such innovation couldn't come at a more critical time; ageing populations, particularly in developed markets, are bolstering demand for many drugs and treatments in categories that disproportionately impact seniors. Breakthroughs like personalized cancer vaccines,<sup>6</sup> treatments that could eliminate the need for insulin therapy in diabetics,<sup>7</sup> and intravenous antibody treatments that could slow the rate of cognitive decline with Alzheimer's patients<sup>8</sup> appear to be on the horizon. These revolutionary treatments could also drive a surge in mergers and acquisitions. Large pharmaceutical companies looking to refresh their product offerings amid an anticipated major patent cliff<sup>9</sup> for existing blockbuster drugs could further support biotech valuations.

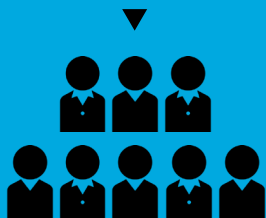
2. St. Louis Federal Reserve Bank. “FRED Economic Data-Federal Funds Effective Rate” As of 10/1/2024. 3. A basis point is one hundredth of one percent. Example one *basis point*= 0.01% 4. The Week, “What’s Next for US Interest Rates.” 11/8/2024 5. Gartner, “Beyond ChatGPT: The Future of Generative AI for Enterprises,” 01/26/2023. And BCG & Wellcome, “Unlocking the potential of AI in Drug Discovery,” June 2023. Forward-looking estimates may not come to pass. 6. World Economic Forum. “12 new breakthroughs in the fight against cancer.” October 21, 2024. 7. News Medical. “Promising new treatment strategy for type 2 diabetes.” October 14, 2024. 8. New York Presbyterian. “What to Know About New Alzheimer’s Disease Treatments.” July 2, 2024. 9. IQVIA “Biopharma M&A momentum returns but uncertainties remain” July 6, 2023.

## Modest rate cuts could support rate-sensitive assets

### Demographic trends are likely to continue regardless of the economic environment

#### Proportion of population 65 or older<sup>1</sup>

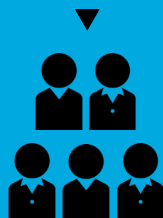
12% | 1985



3x

Spent on healthcare when +65 years vs <65 years<sup>2</sup>

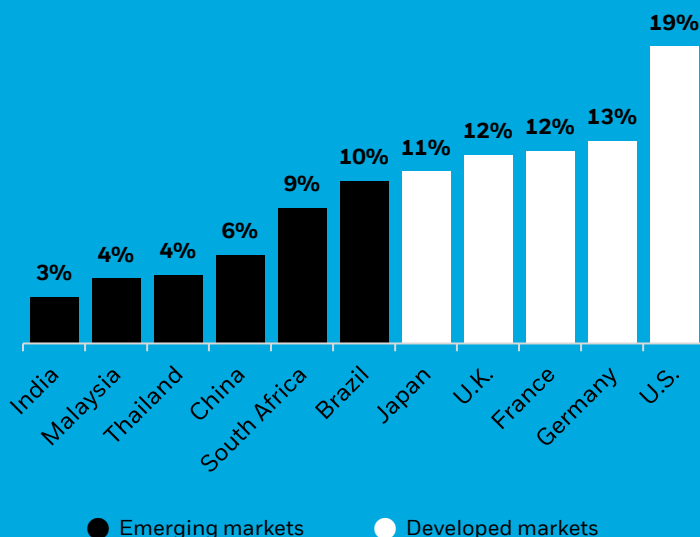
20% | 2030e



20%

Of the U.S. population will be +65 years by 2030<sup>1</sup>

#### Healthcare spending as a percentage of GDP<sup>3</sup>



Source: 1. World Bank data and estimates, current as of April 30, 2023 2. Deloitte 2019 Outlook for Healthcare 3. The World Bank, Current as of April 30, 2023, based on 2020 expenditures. For illustrative purposes only. There is no guarantee that forecasts made will come to pass.

### Lower interest rates may enhance bitcoin's near-term attractiveness

Bitcoin is an emerging asset with unique demand drivers stemming from its properties as a finite supply, alternative monetary asset that is digitally native, global, and detached from governments and their existing economic and monetary systems. Bitcoin remains a volatile asset in general, but we believe bitcoin's long-term fundamentals are largely distinct from the traditional macroeconomic indicators that drive equities and other "risk assets," and for certain risk factors may even be inverted.

However, in the more immediate term, changes in real interest rates (nominal interest rates minus inflation) do tend to impact non-interest paying assets like bitcoin and gold as they change the opportunity cost of these assets compared to income-paying investments like bonds.

For example, the sharp *increase* in real interest rates during 2022 was a contributing factor to the 67% correction in bitcoin that year. Now, amid rate cuts, real interest rates could fall. This could cause investors to view bitcoin as increasingly attractive relative to other assets.

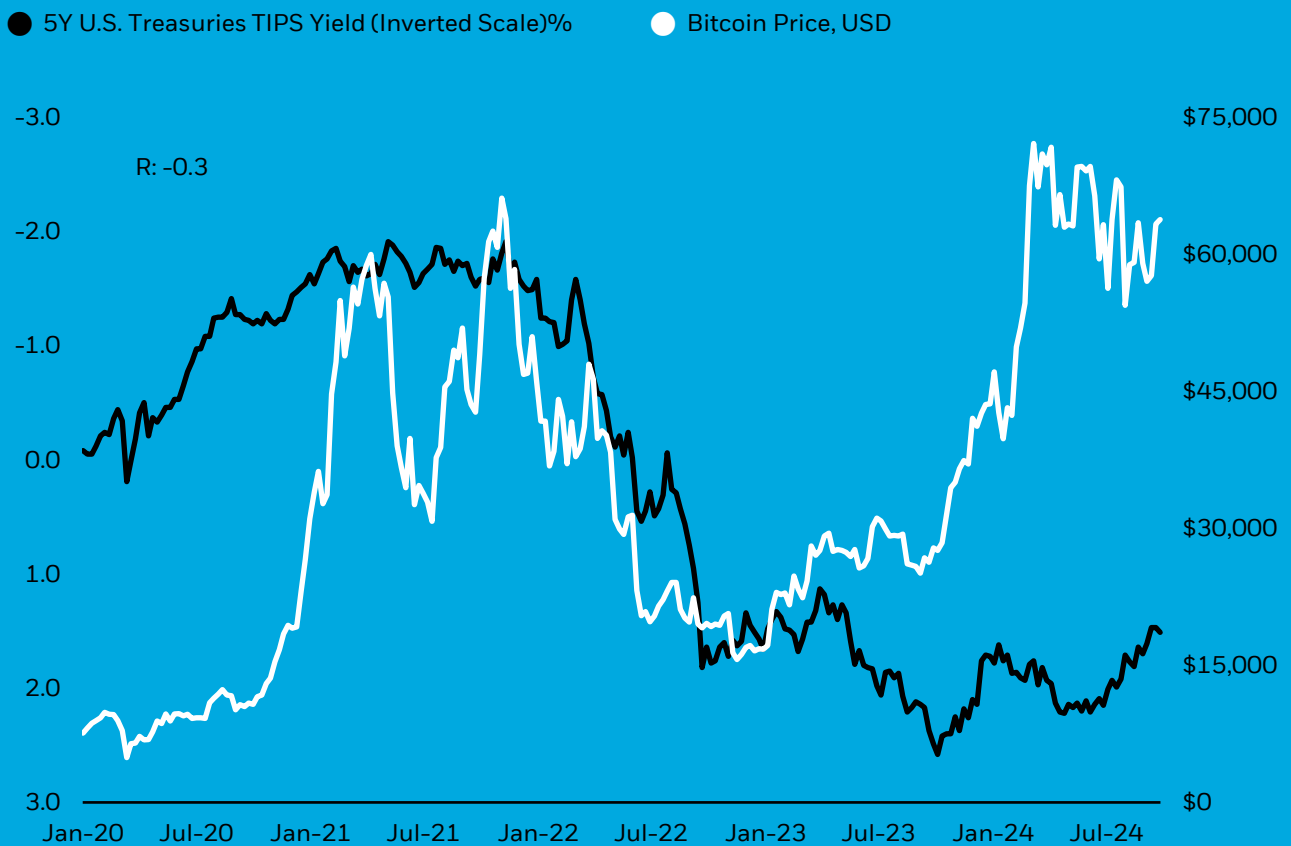
In addition to the macro environment, there is a renewed sense of optimism that regulatory clarity for bitcoin and digital assets more broadly may emerge following the U.S. election. President-elect Donald Trump campaigned on maintaining a strategic bitcoin reserve, while pro-crypto politicians in the House and Senate races from both sides of the aisle enjoyed electoral success. The macro environment combined with supportive policies could combine to accelerate and broaden bitcoin's adoption.

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**While we believe bitcoin’s long-term adoption trajectory will be primarily driven by its fundamental use-case as a global monetary alternative, declining real interest rates – whether through nominal rate cuts or an uptick in inflation – may serve as another catalyst.”**

Robbie Mitchnick  
Head of Digital Assets, BlackRock

### Bitcoin has shown strong inverse correlation with real interest rates



**Source:** Bloomberg Bitcoin Spot Price, St. Louis Fed, and BlackRock calculations, as of 9/30/24. Correlation of Bitcoin weekly returns to the weekly change in 5Y U.S. Treasuries TIPS yield over period displayed (Jan. 2020 to September 2024) is -0.3. Correlation measures how two securities move in relation to each other. Correlation ranges between +1 and -1. A correlation of +1 indicates returns move in tandem, -1 indicates returns move in opposite directions, and 0 indicates no correlation. **Index performance is for illustrative purposes only. Index performance does not reflect any management fees, transaction costs or expenses. Indexes are unmanaged and one cannot invest directly in an index. Past performance does not guarantee future results.**

# 02

# REBUILDING THE U.S. PHYSICAL ECONOMY: INFRASTRUCTURE, MANUFACTURING, AND HOUSING

Rebuilding the physical economy in the U.S.- including improving and repairing infrastructure, expanding manufacturing capacity, and accelerating homebuilding - has become a topic of increasing consensus across both the public and private sectors. We believe spending and policy changes will continue to accelerate this theme.

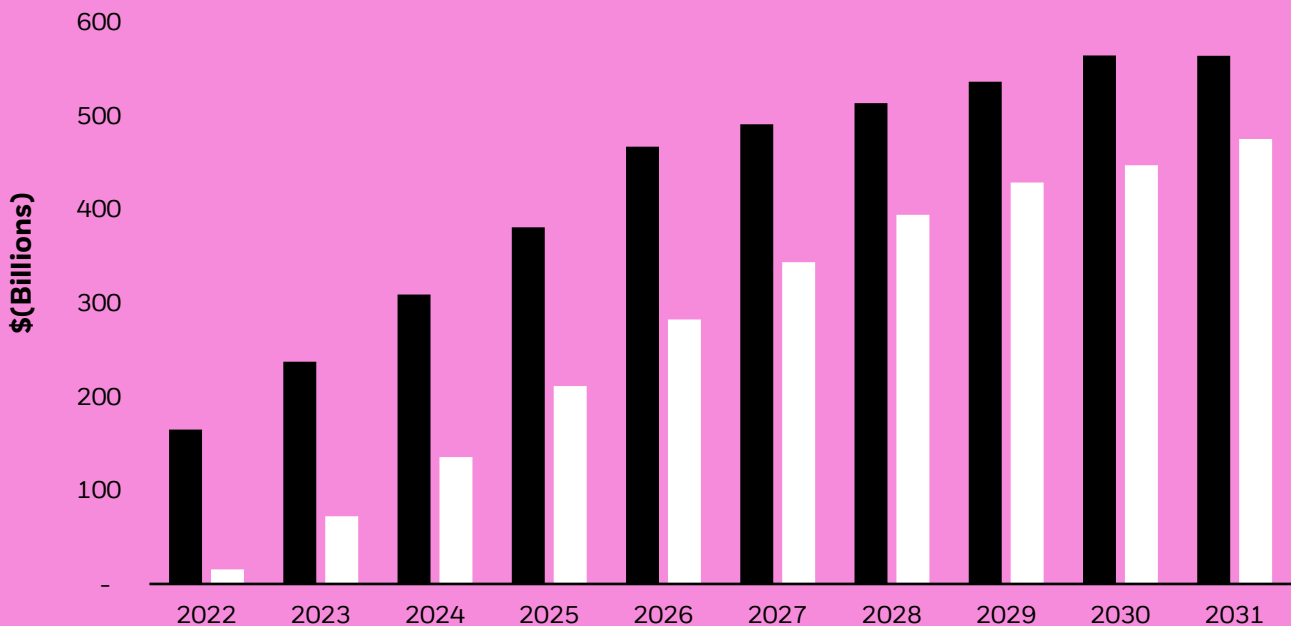
## Infrastructure investment to accelerate in the years ahead

2021's bipartisan Infrastructure Investment and Jobs Act (IIJA) marked the single largest infrastructure investment in U.S. history. The act allocated \$1.2 trillion to build and repair the nation's bridges, airports, waterways, public transit and more.<sup>10</sup> It takes time to get shovels in the ground and put the IIJA investments to work, as depicted in the chart below, but federal estimates for 2025 spending predict a significant increase over prior levels.

### Forecast of IIJA implementation supports an acceleration of infrastructure

● Budget Authority

● Est. Outlays



Source: BlackRock using data from Congressional Budget Office. As of October 15, 2024. For illustrative purposes only. Forward-looking estimates may not come to pass.

10. U.S. Department of Transportation. "Bipartisan Infrastructure (BIL) / Infrastructure Investment and Jobs Act (IIJA), November 15, 2021.

## Rebuilding the U.S. physical economy

Three years in, the impact of the IIJA is already visible: over 60,000 construction projects have advanced, 175,000 miles of roadway – enough to cross the U.S. 60 times – are being repaired, and over 10,200 bridge-modernization projects are underway, with many more progressing across the nation.<sup>11</sup>

Yet, with \$720 billion in IIJA funds still to be allocated, there is a significant potential runway ahead for infrastructure spending,<sup>12</sup> creating an opportunity for further investment as projects move from concept to construction. Further, private spending in infrastructure could help accelerate and support this trend. Over the past four years, private companies have announced nearly \$1 trillion in commitments across U.S. states and territories.<sup>13</sup> Private investment in infrastructure could further accelerate as growing government indebtedness requires new financing models to fund critical infrastructure needs.

### U.S. manufacturers benefiting from industrial policies

Reshoring—or the act of bringing manufacturing back to the U.S. domestic soil—gained prominence during the pandemic when global trade was severely impacted by supply chain bottlenecks. By increasing domestic production and shortening supply chains, governments and companies can exert more control and reduce risk over previously complex and fragile systems. Several recent pieces of legislation, like the IIJA, CHIPS+ Science Act, and Inflation Reduction Act, were designed to, among other things, accelerate reshoring by allocating billions of dollars to improve transportation and support semiconductor and EV manufacturing, respectively. Semiconductor firms have since announced over 80 new projects in the US, amounting to nearly \$450 billion in private investment,<sup>14</sup> a sign these policies are having an impact.

While the future of these Biden-era policies may be uncertain under the new Administration, we believe additional policies could emerge following the 2024 elections to further accelerate the reshoring theme.

Over

**60,000**

construction projects  
have advanced

**175,000**

miles of roadway

The previously mentioned spending bills took a ‘carrot’ approach at the federal level to incentivize reshoring, but an increase in tariffs or export bans could introduce a ‘stick’ approach to increasing U.S. manufacturing competitiveness versus foreign exporters. The new Administration and Congress could utilize both approaches in the near term. Further, at state and local levels, tax incentives and private investments could help accelerate the buildout of new factories.

U.S. manufacturing remains a clear area of political consensus, with both Democrats and Republicans indicating “net favorable,” meaning a larger percentage of both parties rated the manufacturing industry as favorable vs unfavorable; plus 27% for Democrats and plus 53% among Republicans.<sup>15</sup> In our view, the potential for supportive policies and bipartisan support at multiple levels of government leave U.S. manufacturing poised for continued growth.

<sup>11</sup>. U.S. Department of Transportation. “U.S. DoT Celebrates Biden Administration’s Progress Delivering on the Bipartisan Infrastructure Law”, 09/18/2024. <sup>12</sup>. U.S. Department of Transportation and Construction Dive. “\$720B in IIJA funds yet to be allocated”, 09/19/2024. <sup>13</sup>. The White House. “Investing In America.” Accessed on 10/30/2024. <sup>14</sup>. Electronic Design. “U.S. Fab Capacity Poised to Explode in the Next Decade.” May 21, 2024. <sup>15</sup>. Visual Capitalist. “How Do Democrats and Republicans Feel about Certain U.S. Industries?” February 19, 2024.

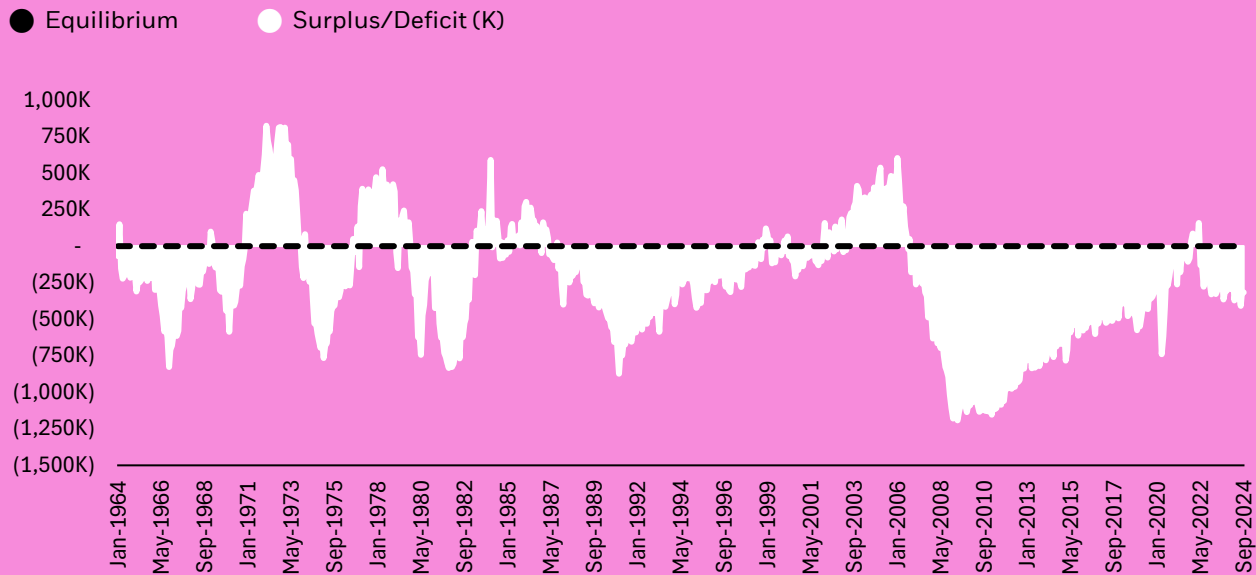
# Rebuilding the U.S. physical economy

## Homebuilding becomes a demographic necessity

Between 2012 and 2023, 17.2 million households were formed, yet only 10 million new single-family homes were built, resulting in a 7.2 million home gap. Housing demand is outpacing supply with

household growth outpacing single-family permits in 73 of the 100 U.S. metro areas.<sup>16</sup> For almost a decade, residential construction has lagged, as shown in the chart below.

### A lag in residential construction has led to supply and demand imbalance



Source: RSM Consultants. "Housing and Construction Industry Outlook" with data from U.S. Census.Gov- New Residential Construction chart from 1959 – 2024.

This lack of housing supply has been met with increased demand as more and more people are looking to buy homes. Demographics are playing a major role in driving this housing demand, especially with Millennials, who have overtaken Baby Boomers as America's largest generation.<sup>17</sup> Millennials are feeling the effects of housing shortages, which is causing affordability to be out of reach for many. In fact, 86% of American renters say they would like to buy a home but cannot afford one.<sup>18</sup>

While housing became a national topic, discussed by both major party candidates during their campaigns, increasing home construction is still highly dependent on factors like interest rates and state & local governments. A renewed focus on the policies needed to support and accelerate home construction - along with potentially lower interest rates that could support financing of homebuilding as well as make mortgages more affordable- support our view that homebuilding will accelerate.



**As reshoring initiatives continue to play out due to a combination of legislation, geopolitical tensions and a focus on enhancing resilience of supply chains, companies who specialize in areas such as building products and transportation equipment could benefit."**

**Tony DeSpirito**  
Global Chief Investment Officer of  
BlackRock Fundamental Equities

16.Realtor.com, "U.S. housing supply gap grows in 2023; growth outpaces permits in fast-growing sunbelt metros," 2/27/2024.

17. Pew Research Center "Millennials overtake Baby Boomers as America's largest generation." April 28, 2020. Pew Research Center "Millennials overtake Baby Boomers as America's largest generation." April 28, 2020. 18. CNN. "More than half of American renters who want to buy a home fear they'll never afford one." July 29, 2024.

# 03

# AI'S BUILD PHASE ACCELERATES INFRASTRUCTURE AND MODELS

## AI's insatiable demand

It has been just two years since the release of ChatGPT in November 2022, which ignited the generative AI revolution. Surging AI optimism, since then, including estimations of up to \$15.4 trillion<sup>19</sup> for the total annual value of AI and analytics across industries, has catalyzed massive investment in AI infrastructure in an arms race among hyperscalers. It is our belief that AI's continued infrastructure buildout, along with hardware and model upgrades, as highlighted below, will drive ever more powerful AI tools in the years ahead. Secondary impacts of AI's rise, including AI-politics and cybersecurity, may become increasingly relevant.

AI scaling laws suggest that AI performance scales with the size of the model and the data on which it trains. This scaling requires significantly higher computational power, which is fundamental to the AI revolution. Some estimates suggest that by 2030, future AI models could be trained with up to 10,000 times more computational power than models like GPT-4.<sup>20</sup>

While there has been skepticism around "If bigger is better" when it comes to AI<sup>21</sup>, we are entering the third year of AI's "Build Phase", which has witnessed a significant surge of investment in AI data centers, with the datacenter GPU and AI ASICs (custom-built chips) markets expected to reach a combined \$156 billion by 2025 and \$233 billion by 2029.<sup>22</sup>

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**We believe most of the growth is still ahead, with global IT spending predicted to jump upwards of 9% in 2025, marking one of the largest percent increases in this century.**<sup>23</sup>

## WE ARE HERE



### 1.

#### BUILD PHASE

Characterized by significant investment in AI structure, Particularly in AI data center, computing hardware and cloud.

### 2.

#### ADOPTION PHASE

This is when AI systems will be integrated into both consumer and enterprise applications.

### 3.

#### TRANSFORMATION PHASE

The final phase will see AI fundamentally reshape the global economy. New industries and business models will emerge.

Source: BlackRock as of October 2024. For illustrative purposes only. Views are subject to change..

19. McKinsey, "the Executives AI playbook." Accessed on 11/13/2024. 20. Singularity Hub, "AI Models Scaled Up 10,000x Are Possible by 2030, Report Says," August 29, 2024. Forward-looking estimates may not come to pass. 21. Reuters "Open AI and others seek new path to smarter AI as current methods hit limitations. November 11, 2024. 22. Yole Group "Datacenter GPU and AI ASIC revenue could reach \$156 billion by 2025 and 233 billion by 2029. April 12, 2024. Forward-looking estimates may not come to pass. 23. Gartner. "Gartner projects major IT spending increases for 2025." October 24, 2024. Forward-looking estimates may not come to pass.



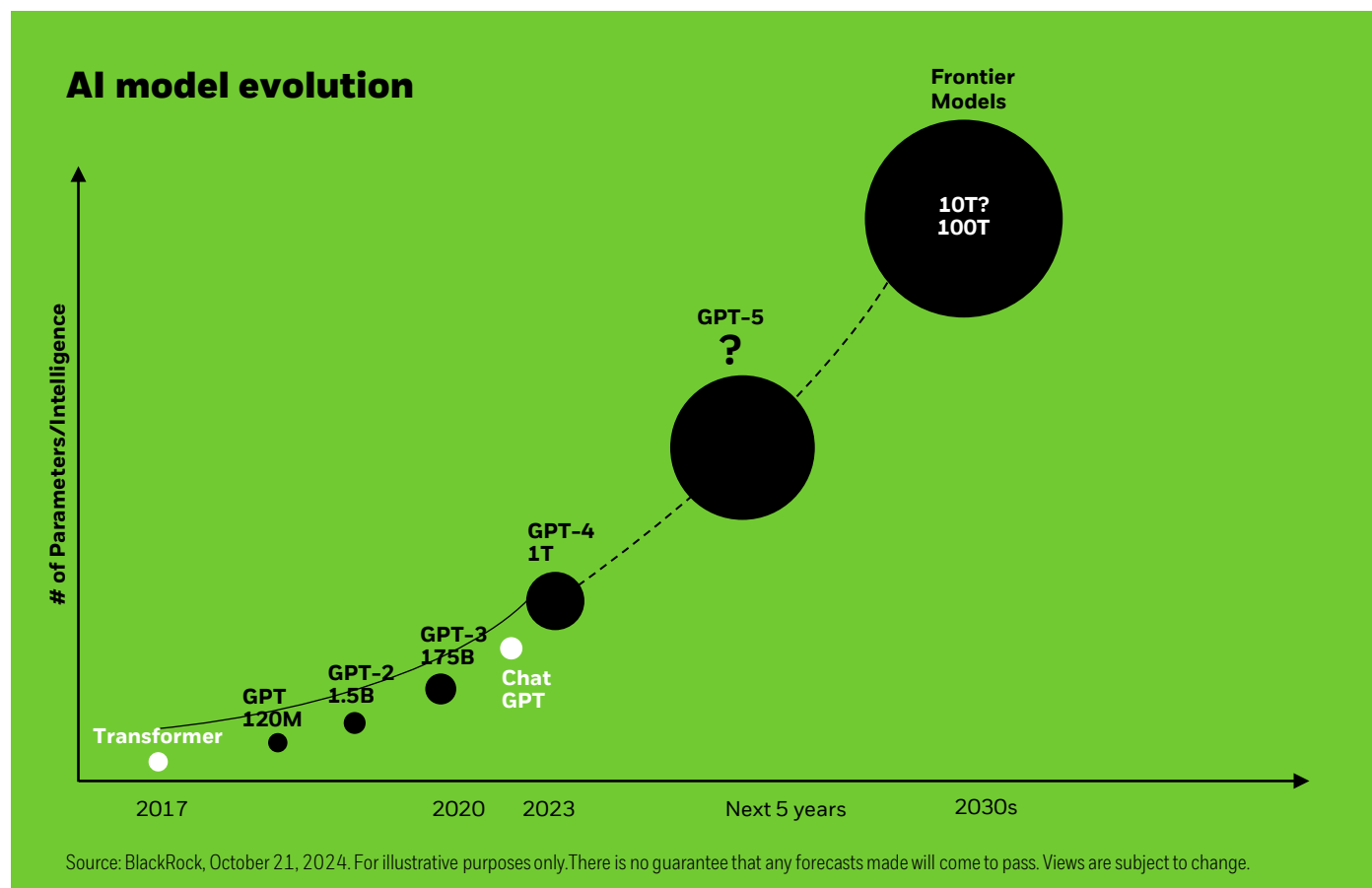
## AI's Build Phase accelerates

The GPUs at the heart of these data centers are getting a significant upgrade in 2025. Nvidia's Blackwell GB200 GPUs are expected to ship at scale in 2025. Leading tech firms have already put in orders with for this superchip, which is 25 times more power efficient and 30 times faster than its predecessor H100 GPU.<sup>24</sup> It is important to underscore that this leap in both speed and efficiency may allow more businesses beyond just mega-cap tech firms to integrate advanced AI capabilities in real-time applications on an unprecedented scale.

AI models could evolve in 2025, too. Open AI has announced the upcoming GPT-5 large language model is currently in training, which could push multi-model AI even further<sup>25</sup>. GPT-5 could introduce advanced reasoning, improved reliability, and autonomous AI agents capable of managing real-world tasks without human supervision. These

features aim to make AI more effective in complex, nuanced environments, from dynamic problem-solving to seamless process automation. OpenAI CEO Sam Altman hinted at the leap forward, saying, "GPT-4 is the dumbest model any of you will ever have to use again by a lot."<sup>26</sup>

Models aren't just getting smarter and more complex. In some instances, they are getting smaller. More efficient Small Language Models (SLMs) are cheaper and require less training data and energy than large language models (LLMs). SLMs, which focus on specific datasets and use fewer parameters, can be between five and 29 times less expensive.<sup>27</sup> These models are running on the "edge"—devices like smartphones or sensors that process data locally, rather than relying on distant servers. Many SLMs are now powering new AI applications directly on these edge devices, and the number is growing fast.



<sup>24</sup>. Nvidia, "GB200 NVL72," Accessed November 6, 2024. <sup>25</sup>. OpenAI, "OpenAI Board Forms Safety and Security Committee," May 2024. <sup>26</sup>. Medium, "Dumbest Model" In OpenAI's AI Evolution." May 2024. <sup>27</sup>. A Trade-off Analysis of Replacing Proprietary LLMs with Open Source SLMs in Production. arXiv, 2023.

## AI's Build Phase accelerates

### Implications of the AI revolution

AI's economic potential has two notable consequences:

1. the importance of this technology may mean inconsistent global regulation and protectionist policies.
2. AI could make proprietary data more valuable, requiring commensurate investment in cybersecurity to protect what may become companies' best asset.

The U.S. tech sector is highly global, deriving 60% of its revenues from overseas.<sup>28</sup> With AI becoming such an important potential economic growth engine, various jurisdictions are weighing more protectionist policies that balance supporting their national champions, with securing data and intellectual property, and ensuring national security. U.S. tech firms may find themselves particularly vulnerable to these regulations, creating a divergence between firms with a more domestic focus on hiring and sales versus those that are more globally dependent.

Cybersecurity is another area that may stand to benefit from AI's rise. At the heart of AI is data, which can be used to train language models or drive insights for machine learning tools. Like the combustion engine's impact on oil, the rise of AI may make proprietary data an increasingly valuable resource.

Yet having a more valuable resource requires more investment in protecting that resource. Cyberattacks are rising alarmingly, with significant global attacks expected to double by 2024 compared to 2020.<sup>29</sup> The number of attacks rose 28% from 4Q2023 to the first three months of 2024.<sup>30</sup> The financial impact is also escalating, with global cybercrime costs projected to reach \$10.5 trillion annually by 2025, more than tripling from \$3 trillion in 2015.<sup>31</sup> In response to rising threats, cybersecurity investments have surged. Global spending is projected to reach \$215 billion in 2024, a 14.3% increase from 2023.<sup>32</sup> As the AI mega force evolves, investments in cybersecurity could grow commensurately.

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**AI's rise has geopolitical implications as fragmented regulation and desire to control the technology may lead to divergence between US-focused AI names and those with more global exposure.”**

<sup>28</sup>. BlackRock, Aladdin Explore, using revenue breakdowns from the S&P 500 index as of 4/30/2024. <sup>29</sup>. Tech Republic. "Global Cyber Attacks to Double from 2020 to 2024. October 1, 2024. <sup>30</sup>. Astra "160 Cybersecurity Statistic 2024." November 14, 2024. <sup>31</sup>. Cobalt. "Top Cybersecurity Statistics for 2024." December 8, 2023. Forward-looking estimates may not come to pass. <sup>32</sup>. Gartner Forecasts Global Security and Risk Management Spending to Grow 14% in 2024. Forward-looking estimates may not come to pass.

## Conclusion

Thematic narratives drove markets in 2024 and could continue to do so in 2025 - though the landscape has shifted meaningfully. With falling rates, public policy tailwinds, and AI's infrastructure buildout, there are select thematic opportunities for investors to potentially capture as they look to position their portfolios. Ahead of the new year, investors should consider what exposure they have to these themes and how they may position their portfolios for these structural trends.

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