

# AI Wars

January, 2025

## Summary

- U.S. large-cap stocks gained 2.8% in the first month of 2025 while U.S. small-cap stocks rose by 2.6%. U.S. intermediate-term bonds rose by a modest 0.5%.
- Preliminary reports show the U.S. economy growing at a slower-than-expected pace in the fourth quarter of 2024. Headline inflation, driven by rising energy prices, rose to 2.9% in December.
- DeepSeek's open-sourced AI model rivals OpenAI's ChatGPT at a lower cost, potentially reshaping the landscape by making advanced Artificial Intelligence more accessible.
- Trump's return to the White House generated over 100 executive orders, including withdrawals from the WHO and Paris Agreement, major immigration changes, and the creation of the Department of Government Efficiency to address the U.S. fiscal deficit.

## Overview

Markets produced compelling gains in the first month of 2025. U.S. large-cap stocks, as represented by the S&P 500 Index, ended January up 2.8% while the U.S. small-cap Russell 2000 Index gained 2.6%. U.S. intermediate-term bonds, as represented by the Bloomberg U.S. Aggregate Bond Index, ended January up a modest 0.5%.

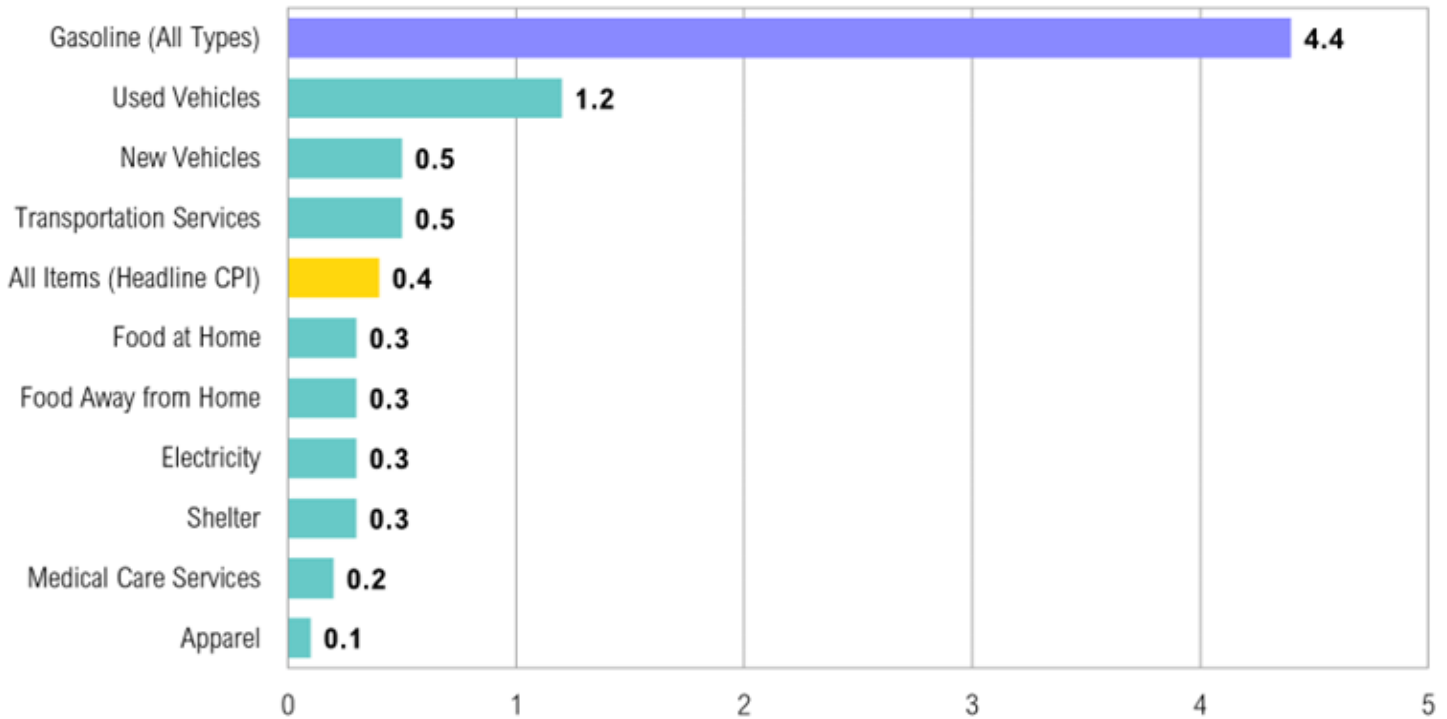
Preliminary estimates for the fourth-quarter GDP showed the U.S. economy growing at an annualized rate of 2.3% quarter-over-quarter, slightly below the expected 2.7%. This slowdown was largely due to a record-high trade deficit and an unexpected decline in inventories. Consumer spending posted its strongest quarter of the year, rising by an estimated 4.2%, while government spending increased by 2.5%.

The ISM Manufacturing PMI showed manufacturing sector activity moving into expansionary territory for the first time since October 2022, registering a reading of 50.9 in January. The ISM Services PMI showed services sector activity continuing to grow for the seventh consecutive month, with a reading of 52.8 in January.

After declining to 2.3% year-over-year in September, headline inflation rose to 2.9% in December. Housing inflation continues to be the main driver, while energy prices contributed 40% to the overall monthly increase in December. Gasoline prices also increased in December, rising by 4.4%.

## Rising Energy Prices Accounted For Over 40% of Rising Prices in December

Select Headline Inflation Components, M/M % Change



Source: Bloomberg. As of 12/31/2024.

Nearly 50% of S&P 500 companies have reported their fourth-quarter earnings results. As the earnings season has progressed, growth estimates have steadily increased, rising from 11.8% at the end of December to 13.2% in the last week of January. The financials sector contributed the most to earnings growth, increasing 51%, followed by the communication services sector at 29%, and the tech sector at 16%. Full-year 2024 earnings growth for the S&P 500 is projected to reach 9.4%, driven largely by significant contributions from these three sectors. For 2025, earnings growth estimates currently stand at 14.3%, which would be the highest growth rate since 2021 when it exceeded 35%. Notably, the proportion of S&P 500 members outperforming the broader index over the past month rose to 52% at the end of January, a significant improvement from 20% at the end of December.

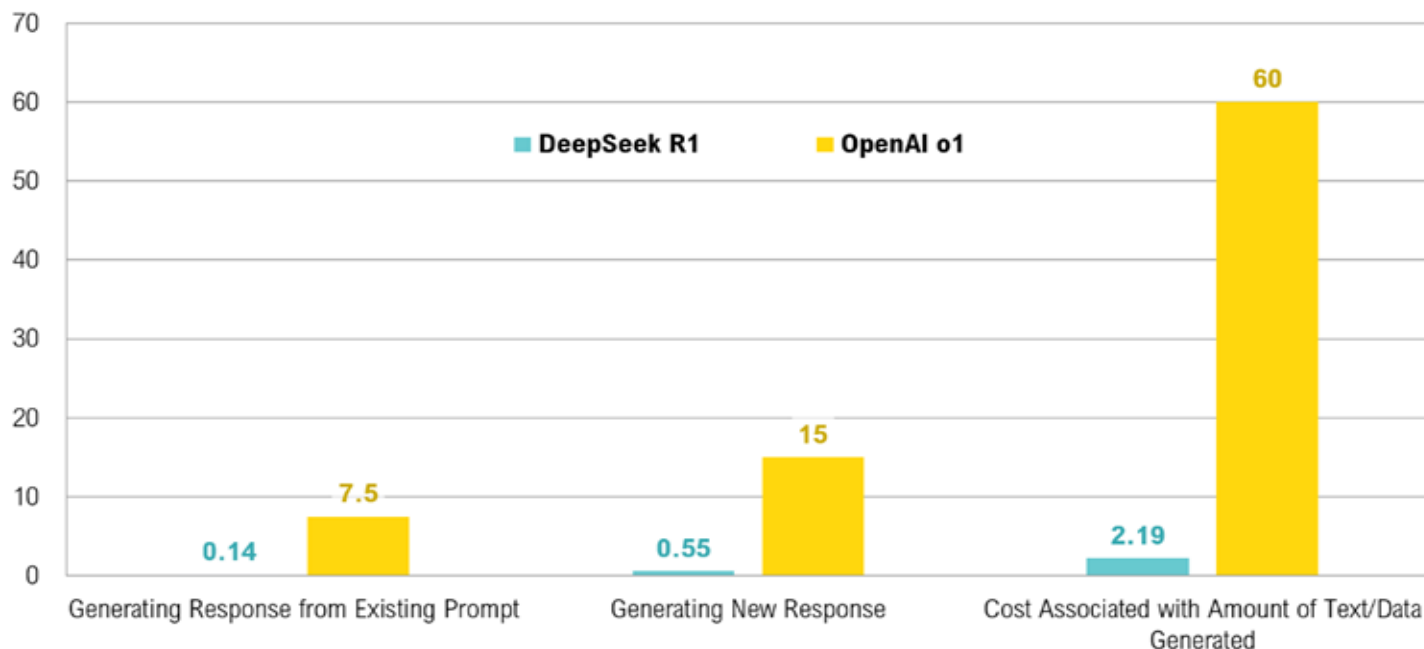
## AI Wars

2025 did not start quietly. January not only ushered in a new administration taking office (and over 100 executive orders being carried out) but also a potential shift in the future of artificial intelligence (AI).

On January 20, 2025, DeepSeek—a Chinese artificial intelligence (AI) startup—launched an advanced AI model that first caught the attention of Silicon Valley, and then broader global capital markets. DeepSeek’s new model, R1, demonstrated high performance in various benchmarks, making it competitive with top U.S. AI models such as OpenAI’s ChatGPT. More importantly, the company claimed that it trained its models at a fraction of the cost of incumbent models. Venture investor Marc Andreessen called it “AI’s Sputnik moment.”

## DeepSeek's Approach is Notably Cheaper than OpenAI's ChatGPT o1 Model

Cost per Token (Smallest Unit of Text), \$/Millions of Tokens



Source: DeepSeek

DeepSeek's R1 artificial intelligence model introduces several advancements over traditional AI models, enhancing efficiency and maintaining accuracy. It enhances efficiency by using less memory and processing text in phrases rather than word by word, achieving faster speeds with minimal loss in accuracy. A distinctive feature of the R1 model is its expert operating system. Instead of activating all 671 billion parameters at once, it uses only 37 million targeted parameters, making it far more efficient than traditional models that activate nearly 1.8 trillion parameters continuously. Additionally, DeepSeek made its code, papers, and methods available via open source, allowing public access for review or replication.

To quote Greek philosopher, Plato: *"Necessity is the mother of invention."* The U.S. ban on exporting chips to China (which was first implemented in October 2022 and has grown to include bans on many essential tools needed for producing advanced semiconductors) seems to have prompted DeepSeek to achieve results more efficiently and at a lower cost.

DeepSeek's R1 model triggered a sharp sell-off in equities on Monday, January 27, one week after its release. Nvidia, whose microchips make it a key industry leader in the AI space, dropped 17%, marking the largest one-day market cap loss for a single stock in history. Nvidia ended January down 13%.

There are concerns about DeepSeek's true development costs and privacy policy. While DeepSeek claims its set-up involves only 10,000 Nvidia H100 chips, reports suggest the number may be closer to 50,000. If accurate, this would align initial training costs with those of other major AI models. Nevertheless, DeepSeek's pricing remains about 90% lower than that of OpenAI's ChatGPT. China's lax data privacy regulations and internet surveillance continue to draw attention, and they have become key issues for the future of the Chinese-owned social media app, TikTok, which was briefly banned in the U.S. in January. The U.S. Navy has already banned the use of DeepSeek "in any capacity" due to "potential security and ethical concerns."

Concerns aside, it is not DeepSeek itself, but rather its approach, that has disrupted the status quo and thrown into question the future of U.S. tech dominance. By cutting costs and enabling large-scale AI training on consumer-grade hardware, DeepSeek has lowered the barrier to entry for AI innovation. It also suggests that powerful and cost-effective AI models are achievable without the immense infrastructure traditionally associated with major tech companies. It has also increased the likelihood that lower-cost models are not only possible but may be just as powerful and effective as industry-leading models.

For now, mega-cap tech companies seem to have little interest in scaling down on AI-related spending. Both Meta and Microsoft in the last week of January announced plans to spend billions of dollars on artificial intelligence. After his company announced a \$65 billion spending plan on AI infrastructure expansion, Meta CEO Mark Zuckerberg said:

*"I continue to think that investing very heavily in CapEx and infrastructure is going to be a strategic advantage over time. It's possible that we'll learn otherwise at some point, but I just think it's way too early to call that."*

Microsoft plans to spend \$80 billion on AI in its current fiscal year. Microsoft CEO Satya Nadella noted in the company's fourth-quarter earnings call that ongoing spending would alleviate limitations that have thus far hindered the tech giant's ability to fully leverage AI.

On January 20, coincidentally the same day that DeepSeek released its R1 model to the world, the Trump administration returned to the White House. On his first day back in office, President Trump signed over 100 executive actions, including rescinding 78 Biden-era orders, withdrawing the United States from the World Health Organization and the Paris Agreement, implementing extensive changes to U.S. immigration policy, and establishing the Department of Government Efficiency (DOGE).

DOGE, which also commenced operations on January 20, was created to shed light on (and possibly lighten) the U.S. fiscal deficit, which is estimated to reach \$1.9 trillion in 2025. Unless addressed, the U.S. government may add over \$6 billion of debt every day for the next ten years—borrowing over \$268 million every hour.

DOGE has wasted no time in getting started. According to the department, they are already saving the federal government approximately \$1 billion per day, mostly from the federal hiring freeze, eliminating DEI initiatives, and preventing improper payments to foreign organizations. DOGE has also begun to scrutinize and clean up the federal real estate portfolio, which has more than 7,500 leases. According to the department, landlords in Washington, D.C. that rent to federal agencies are being paid a significant premium: the average General Services Administration (GSA) office rent per square foot in Washington is \$41, while the average broader D.C. office market sits at \$33. This follows a 2023 Public Buildings Reform Board report that found that nearly 90% of U.S. government agency space in D.C. is going unused. On January 21, the U.S. Debt Clock website introduced a DOGE section to monitor the department's efforts to cut back on federal spending.

Another executive order, effective January 20, put a hiring freeze on all federal government jobs. On January 28, the Trump administration sent out a voluntary resignation invitation to nearly every federal worker, offering employees continued payment until September 2025 if they resigned by February 6. The administration anticipates that between 5% and 10% of the federal workforce may quit, which could lead to approximately \$100 billion in savings. Over the past two years, the government sector has been the second-largest contributor to job growth, adding over 1.1 million new federal employees since January 2023.

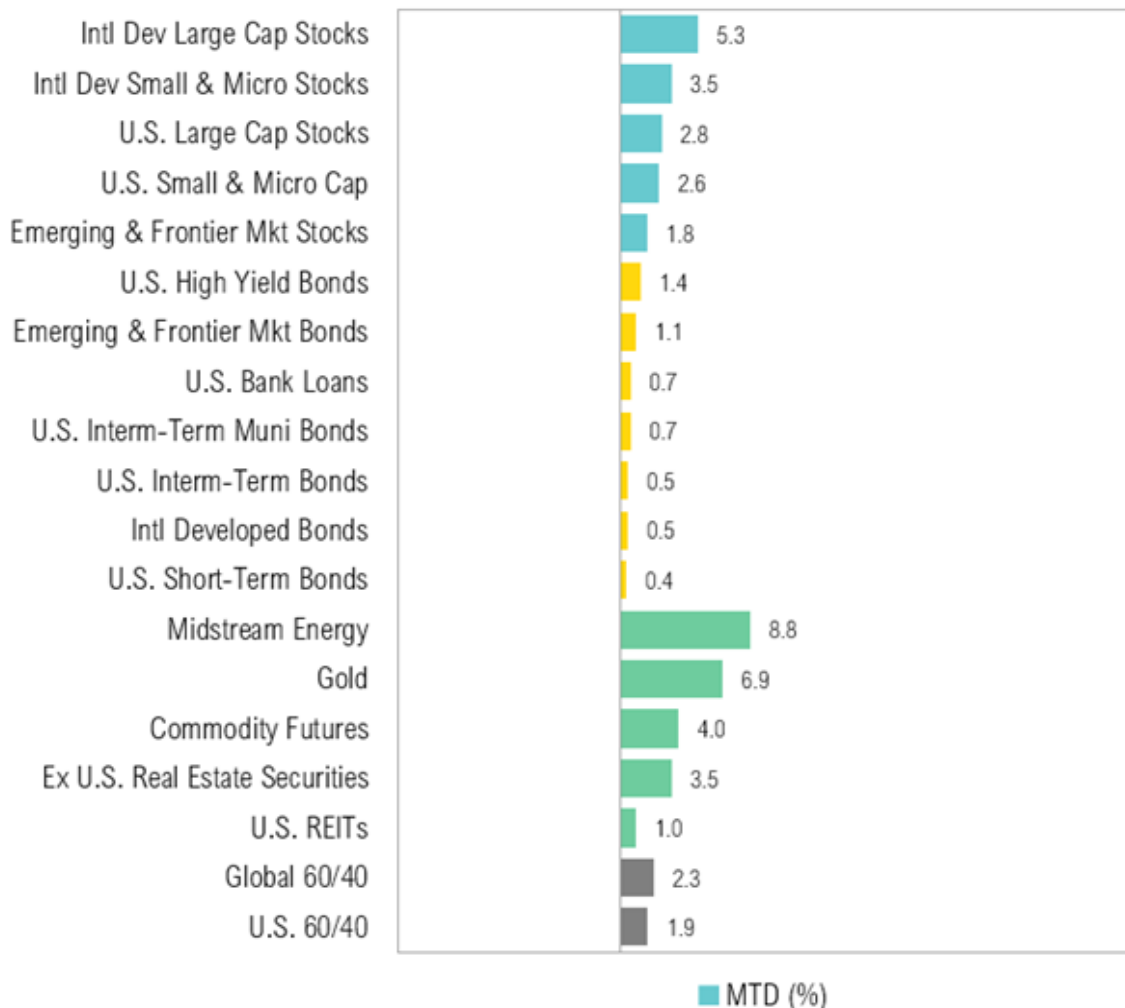
Recent reports have also revealed misspending in various government departments. For instance, the Government Accountability Office in December released a report that nearly \$100 billion in improper payments were made in the Medicare and Medicaid programs in 2023 while the Department of Justice also in December sued CVS and Walgreens for filing unlawful prescriptions of opioids and seeking reimbursements from federal healthcare programs. The Federal Trade Commission in January sued CVS and Cigna for failing to provide requested documents related to the case.

While these recent reports and DOGE's efforts are small changes in the context of a nearly \$2 trillion deficit, changes on the margin matter, and may eventually lead to a lightening of the U.S. fiscal burden.

## Markets

International equity markets fared better than their U.S. counterparts in January. U.S. large-cap stocks ended the month up 2.8% while international developed market large cap stocks gained 5.3%. Similarly, while U.S. small-cap stocks ended the month up 2.6%, international developed market small-cap stocks ended the month up 3.5%. Emerging market stocks ended January up 1.8%, driven by strong gains in South American markets, including Brazil (+12%) and Colombia (+21%). Both U.S. intermediate-term bonds and international developed market bonds gained 0.5%.

### January 2025 Key Market Total Returns



Source: Bloomberg

## Looking Forward

The incoming administration appears focused on bolstering economic growth while at the same time reducing the deficit. The most critical element of this endeavor will be curtailing the deficit and keeping longer-term yields contained. Although disruptive to the status quo in the short term, we view cost-saving advancements in global technology and any progress at reducing the deficit as constructive and healthy developments.

As always, if you have any questions or would like to schedule a meeting with one of our investment professionals, please don't hesitate to call us at 508-693-8850.

Sincerely,



Luke Murphy  
Managing Director,  
Martha's Vineyard Investment Advisors

## About Martha's Vineyard Investment Advisors

Martha's Vineyard investment Advisors (MVIA) is an SEC-registered investment advisor that offers comprehensive wealth management, financial planning and retirement solutions for individuals, businesses, and non-profit organizations. By engaging and collaborating with our trusted clients, we help simplify the complexities of managing wealth.

### MVIA's knowledgeable advisors offer financial solutions that include:

- Investment Management
- Financial Advisory
- Family Office Services
- Business Consulting
- Estate Planning
- Retirement Planning & Consulting
- Non-Profit Investing
- Comprehensive Financial Planning
- Charitable/Donor Advisement
- 529/Education Planning

Learn more: Visit [www.mvinvestmentadvisors.com](http://www.mvinvestmentadvisors.com)

## Martha's Vineyard Investment Advisors

496 State Road  
West Tisbury, MA 02575  
(508) 693-8850

[www.mvinvestmentadvisors.com](http://www.mvinvestmentadvisors.com)

January, 2025

## Performance Disclosures

All market pricing and performance data from Bloomberg, unless otherwise cited. Asset class and sector performance are gross of fees unless otherwise indicated.

## Citations

1. BEA: <https://www.bea.gov/sites/default/files/2025-01/gdp4q24-adv.pdf>
2. Reuters: <https://www.reuters.com/markets/us/us-goods-trade-deficit-widens-sharply-december-imports-2025-01-29/>
3. ISM: <https://www.ismworld.org/supply-management-news-and-reports/reports/ism-report-on-business/pmi/january/>
4. ISM: <https://www.ismworld.org/supply-management-news-and-reports/reports/ism-report-on-business/services/january/>
5. BLS: <https://www.bls.gov/news.release/cpi.nr0.htm>
6. FactSet: [https://advantage.factset.com/hubfs/Website/Resources%20Section/Research%20Desk/Earnings%20Insight/EarningsInsight\\_013125.pdf](https://advantage.factset.com/hubfs/Website/Resources%20Section/Research%20Desk/Earnings%20Insight/EarningsInsight_013125.pdf)
7. Liz-Ann Sonders via X: <https://x.com/LizAnnSonders/status/1885310214498385943/photo/2>
8. Bloomberg: <https://www.bloomberg.com/news/articles/2025-01-27/what-is-deepseek-r1-and-how-does-china-s-ai-model-compare-to-openai>
9. Reuters: <https://www.reuters.com/technology/us-looking-into-whether-deepseek-used-restricted-ai-chips-source-says-2025-01-31/>
10. Arxiv: <https://arxiv.org/html/2412.19437v1>
11. Marc Andreessen via X: <https://x.com/pmarca/status/1883640142591853011>
12. CNN: <https://edition.cnn.com/2024/12/02/tech/china-us-chips-new-restrictions-intl-hnk/index.html>
13. CNBC: <https://www.cnbc.com/2025/01/24/how-chinas-new-ai-model-deepseek-is-threatening-us-dominance.html>
14. CNBC: <https://www.cnbc.com/2025/01/28/us-navy-restricts-use-of-deepseek-ai-imperative-to-avoid-using.html>
15. Meta Earnings Call: [https://s21.q4cdn.com/399680738/files/doc\\_financials/2024/q4/META-Q4-2024-Earnings-Call-Transcript.pdf](https://s21.q4cdn.com/399680738/files/doc_financials/2024/q4/META-Q4-2024-Earnings-Call-Transcript.pdf)
16. Reuters: <https://www.reuters.com/technology/artificial-intelligence/microsoft-meta-ceos-defend-hefty-ai-spending-after-deepseek-stuns-tech->
17. TheWhite House: <https://www.whitehouse.gov/presidential-actions/2025/01/the-first-100-hours-historic-action-to-kick-off-americas-golden->
18. CBO: <https://www.cbo.gov/system/files/2024-06/60039-By-the-Numbers.pdf>
19. Committee on Homeland Security & Governmental Affairs: <https://www.hsgac.senate.gov/wp-content/uploads/FESTIVUS-REPORT-2024.pdf>
20. Department of Government Efficiency via X: <https://x.com/DOGE/status/1884396041786524032>
21. Department of Government Efficiency via X: <https://x.com/DOGE/status/1886273522214813785>
22. Trepp: <https://www.trepp.com/trepptalk/doge-looks-to-cut-gsa-leased-office-space-quantifying-impact-on-key-msas>
23. Washington Times: <https://www.washingtontimes.com/news/2024/apr/11/government-report-finds-just-12-of-federal-offices/>
24. U.S. National Debt Clock: <https://usdebtclock.org/#>
25. BBC: <https://www.bbc.com/news/articles/cnvqe3le3z4o>
26. NBC News: <https://www.nbcnews.com/politics/white-house/trump-administration-offer-federal-workers-buyouts-resign-rcna189661>
27. GAO: <https://www.gao.gov/products/gao-24-107487>
28. Reuters: <https://www.reuters.com/business/healthcare-pharmaceuticals/us-ftc-sues-drug-gatekeepers-over-high-insulin-prices-2024-09-20/>
29. Fortune: <https://fortune.com/2024/12/19/doj-cvs-filling-unlawful-prescriptions-opioids/>
30. Bloomberg Law: <https://news.bloomberglaw.com/pharma-and-life-sciences/ftc-says-it-sued-cvs-cigna-over-drug-documents-for-pbm-probe>



January, 2025

## Disclaimer and Terms of Use

Past performance is no guarantee of future performance. Any opinions expressed are current only as of the time made and are subject to change without notice. This report may include estimates, projections or other forward-looking statements, however, due to numerous factors, actual events may differ substantially from those presented. The graphs and tables making up this report have been based on unaudited, third-party data and performance information provided to us by one or more commercial databases. Additionally, please be aware that past performance is not a guide to the future performance of any manager or strategy, and that the performance results and historical information provided displayed herein may have been adversely or favorably impacted by events and economic conditions that will not prevail in the future. While we believe this information to be reliable, Martha's Vineyard Investment Advisors ("MVIA") bears no responsibility whatsoever for any errors or omissions. Index benchmarks contained in this report are provided so that performance can be compared with the performance of well-known and widely recognized indices. Moreover, the information provided is not intended to be, and should not be construed as, investment, legal or tax advice. Nothing contained herein should be construed as a recommendation or advice to purchase or sell any security, investment, or portfolio allocation. This presentation is not meant as a general guide to investing, or as a source of any specific investment recommendations, and makes no implied or express recommendations concerning the manner in which any client's accounts should or would be handled, as appropriate investment decisions depend upon the client's specific investment objectives.