

September 18, 2024

## MOMENTUM GLOBAL INVESTMENT MANAGEMENT LIMITED

Investing in Generative AI — The Fourth Era of Computing  
Global Equity Opportunities

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Global Equity Portfolio Manager

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## 1. YTD GEO representative portfolio returns were mostly driven by the same leadership from 2023 ^

- The “Magnificent 7” accounted for 31% of the MSCI ACWI return\*
- 63% of the Global Equity Opportunities representative portfolio’s alpha was attributed to this cluster^
- NVIDIA accounts for nearly one-fifth of the market return this year and 49% of our alpha

## 2. Areas of focus remain on secular growth markets we expect to weather the choppy macro environment, including:

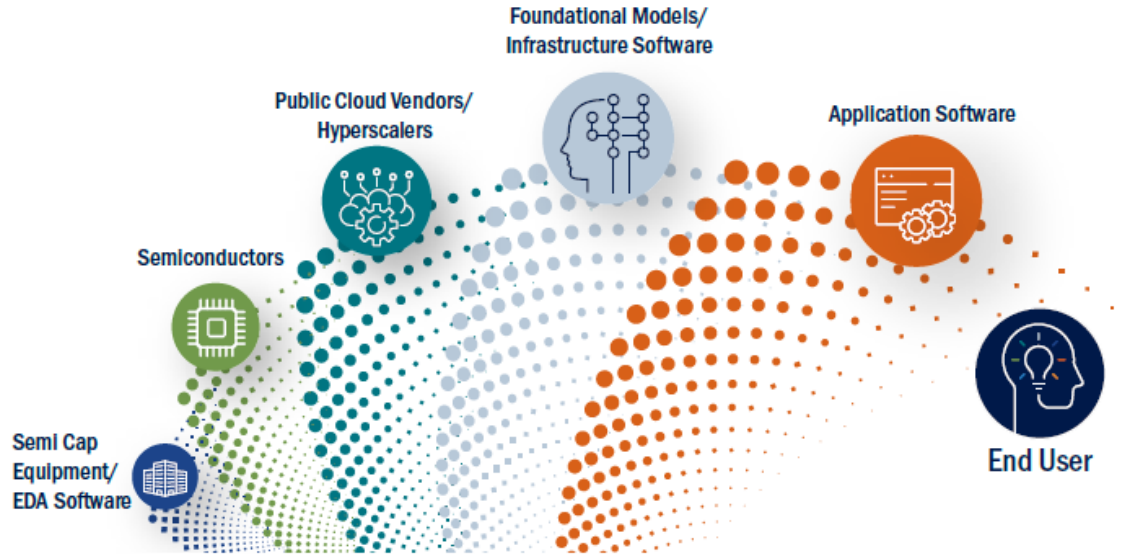
- Emerging new developments in Generative Artificial Intelligence for productivity enhancing business applications
- Strong global consumer brands serving unique customers with superior direct to consumer (DTC) omni-channel distribution models
- Industrial automation and electrification related to AI data centers, EVs, and the U.S. Chips Act
- Health care innovation with a focus on treatments for diabetes and rare diseases
- Emerging Market technology platforms focusing on consumer and financial services access
- US residential housing-related businesses benefiting from strong pent-up demand

As of 8/31/24.

\*Source: MSCI and FactSet. GEO = Global Equity Opportunities. MSCI ACWI = MSCI All Country World Index. The magnificent 7 stocks include Apple, Microsoft, Alphabet, Amazon, NVIDIA, Tesla, and Meta. They are among the most well-known companies in the world. ^Information is supplemental to the Global Equity Opportunities Composite presentation. Please visit <https://www.jennison.com/gips-global-equity-opportunities> for the Global Equity Opportunities Composite presentation. The views expressed herein are those of Jennison investment professionals at the time the comments were made. They may not be reflective of their current opinions, are subject to change without prior notice, and should not be considered investment advice. See Portfolio Notes in the Appendix. Past performance does not guarantee future results.

# Investing in Generative AI – The Fourth Era of Computing

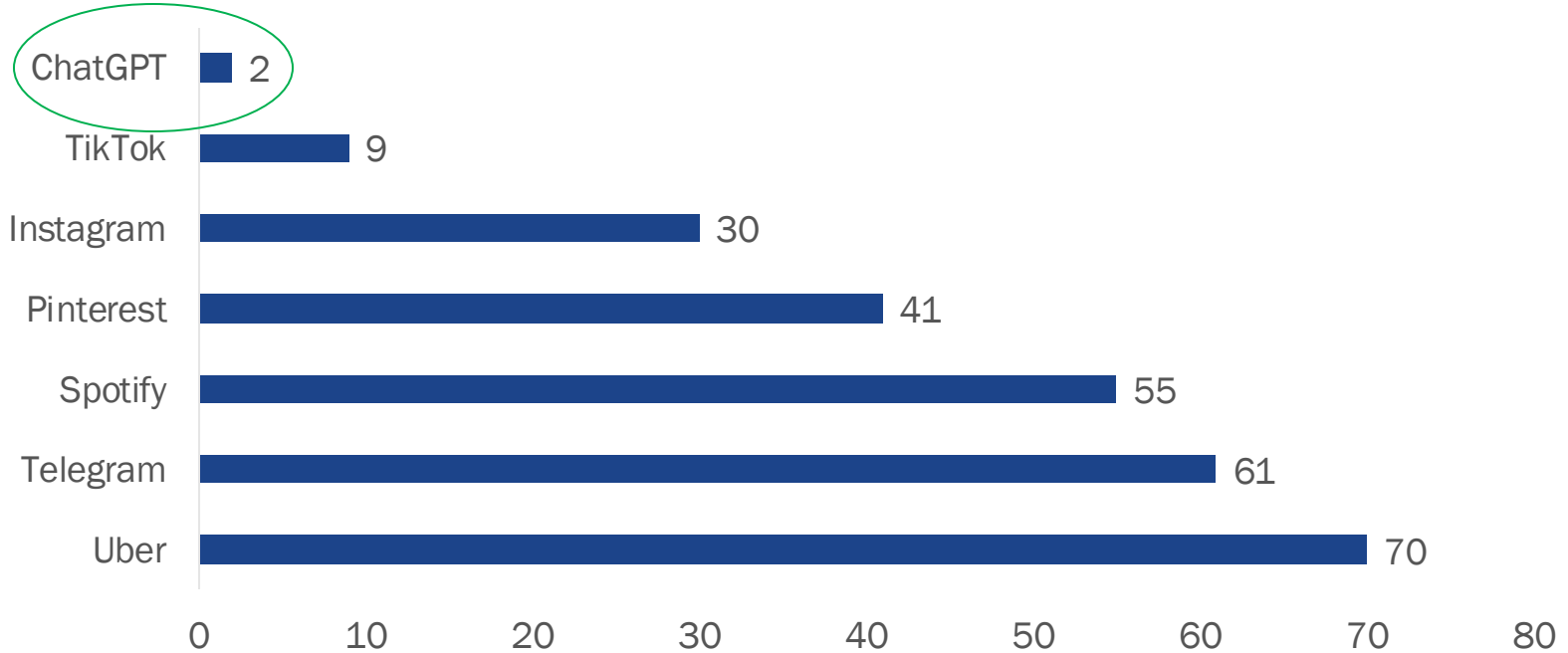
- Generative AI can create new and unique content, including text, images, video, music, and computer code.
- Traditional or predictive AI systems are predominantly deterministic and rule based.
- Demand for the infrastructure components necessary to support generative AI models has already soared, and we expect the full impact of generative AI will be like a wave sweeping through the economy:



As of 10/31/23.

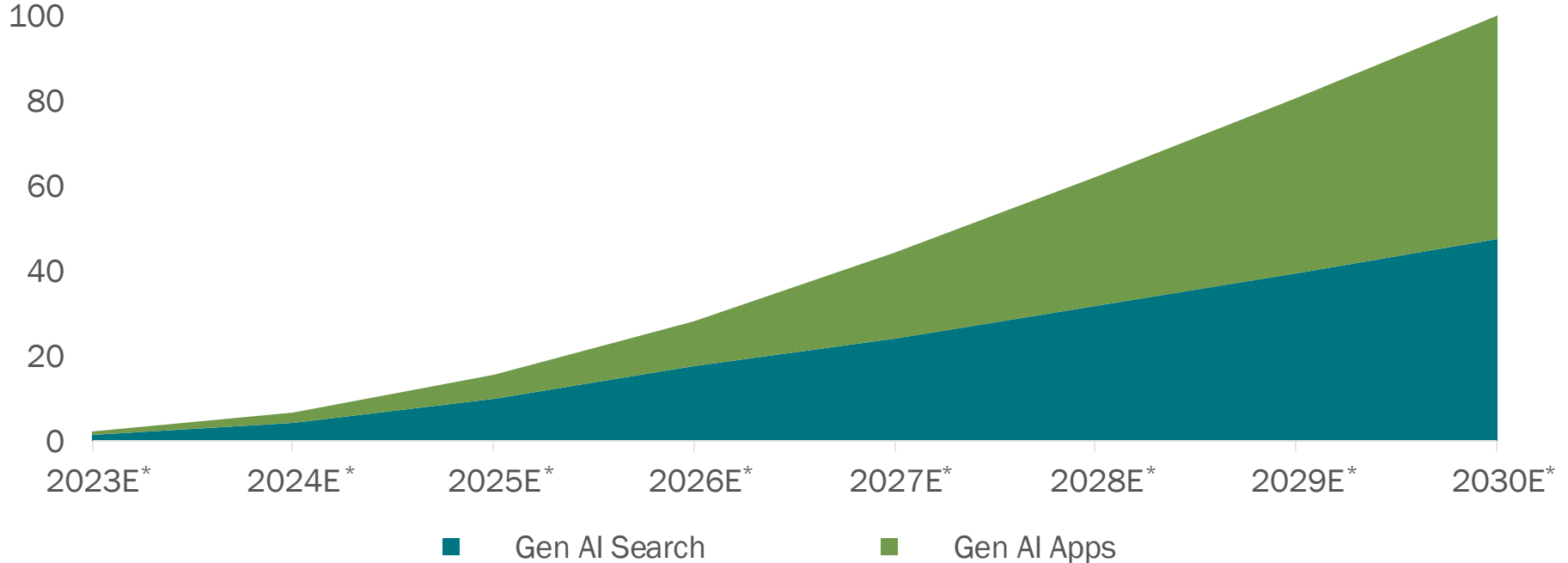
Source: Morgan Stanley; used with permission. The information is provided for illustrative and educational purposes only and should not be considered investment advice. See Portfolio Notes in the Appendix.

## Months it Took Selected Apps to Reach 100 Million Monthly Users



As of 7/31/23.  
Source: Reuters, used with permission. The examples above are for illustrative and educational purposes only and should not be considered investment advice. ChatGPT was the example selected as we believe it is a good example of the growing opportunity in datacenter and AI. See Portfolio Notes in the Appendix.

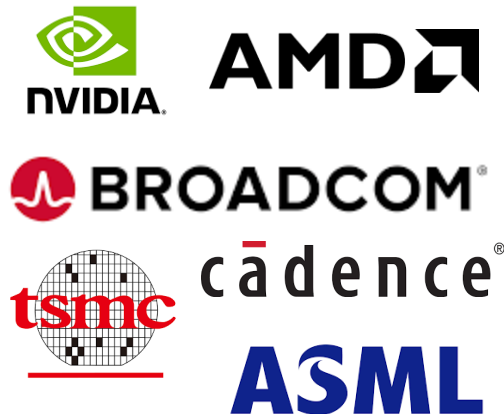
## Forecast for Generative AI Market (\$/Billions)



As of 6/30/23.  
 Source: Piper FactSet, Company Filings, Piper Sandler Estimates, Piper Sandler Research (used with permission). \*Forecasted. Forecasts may not be achieved and are not a guarantee or reliable indicator of future results.  
 Although Jennison believes that the expectations reflected in such forward-looking statements are based on reasonable assumptions, actual results may differ materially from those projected. See Portfolio Notes in the Appendix.

## Investing in Generative AI

### Silicon Players



### Cloud Computing Platforms

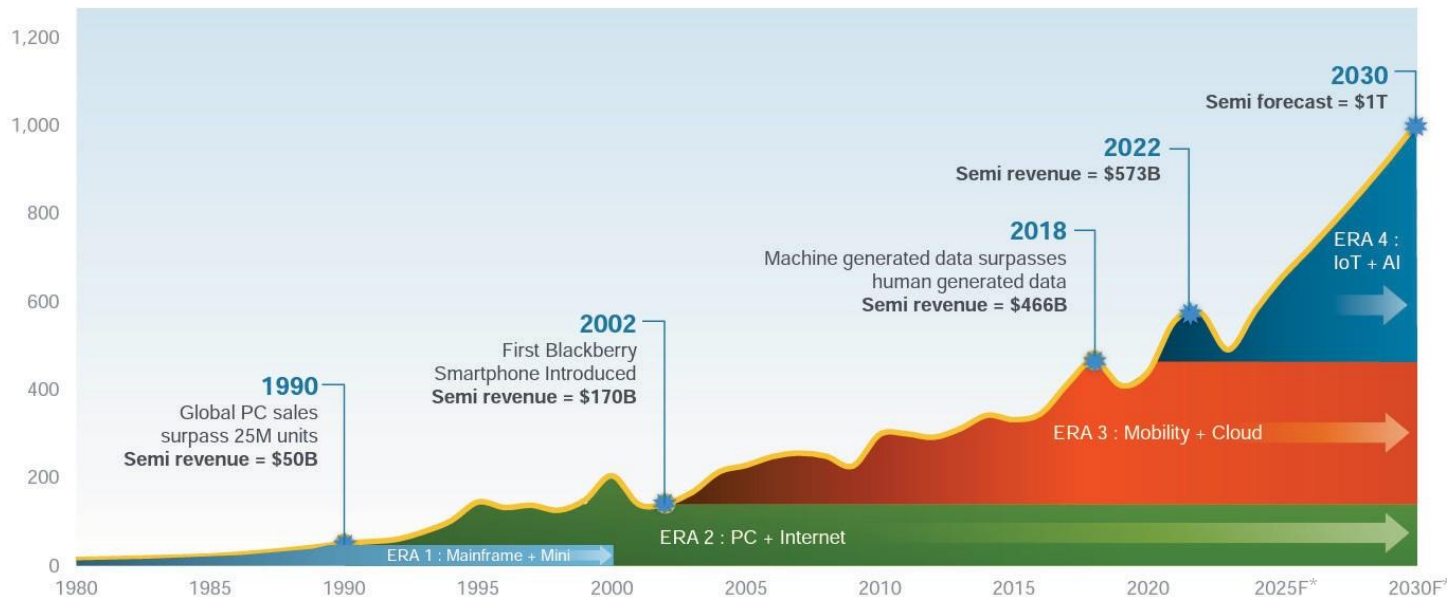


### Software Applications



The above information is for illustrative and educational purposes only and should not be considered investment advice. The companies above were selected because we believe they are good representative examples of the above listed themes. The views expressed herein are those of Jennison investment professionals at the time the comments were made. They may not be reflective of their current opinions, are subject to change without prior notice.

# SEMICONDUCTOR INDUSTRY GROWING TO \$1 TRILLION BY 2030



## AI Era is the 4<sup>th</sup> and Biggest Age of Computing

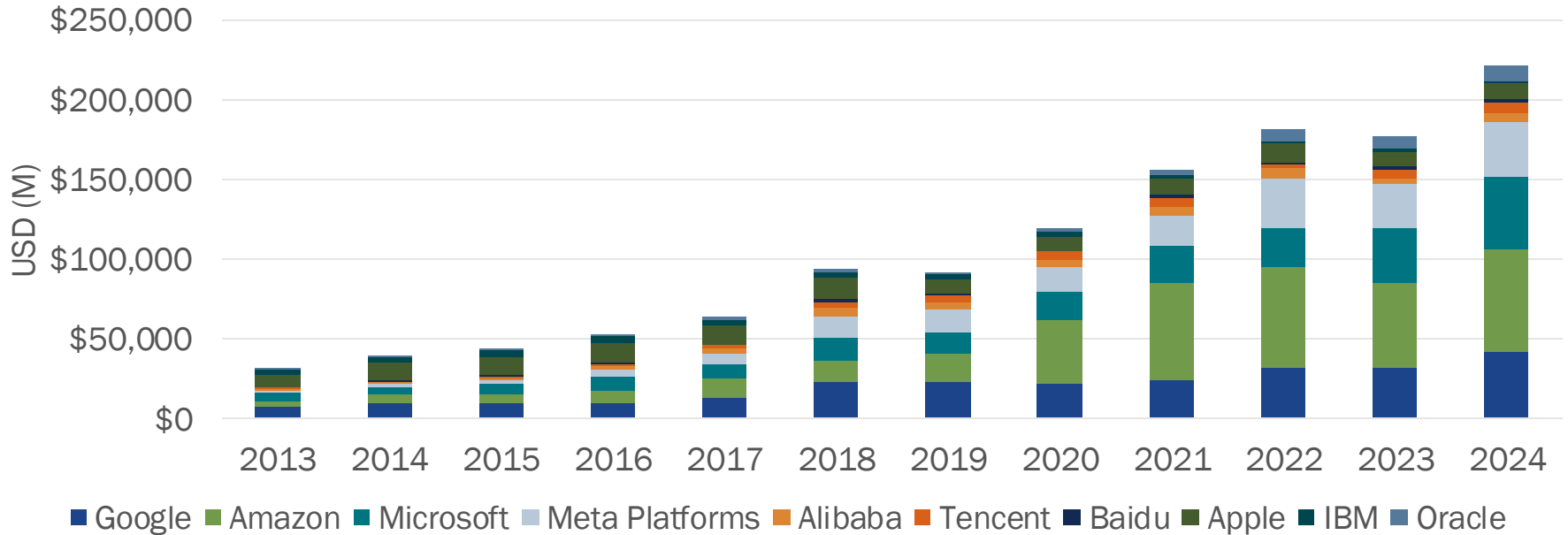
As of 5/31/23.  
 Source: SIA, Applied Materials - SMI (used with permission); 2030 Forecasts: TechInsights: \$1.0T; McKinsey & Company: \$1.1T; SEMI: \$1.3T. \*Forecasted. Forecasts may not be achieved and are not a guarantee or reliable indicator of future results. Although Jennison believes that the expectations reflected in such forward looking statements are based on reasonable assumptions, actual results may differ materially from those projected. See Portfolio Notes in the Appendix.



# AI IS DRIVING A CLOUD CAPEX BOOM

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## Cloud CapEx

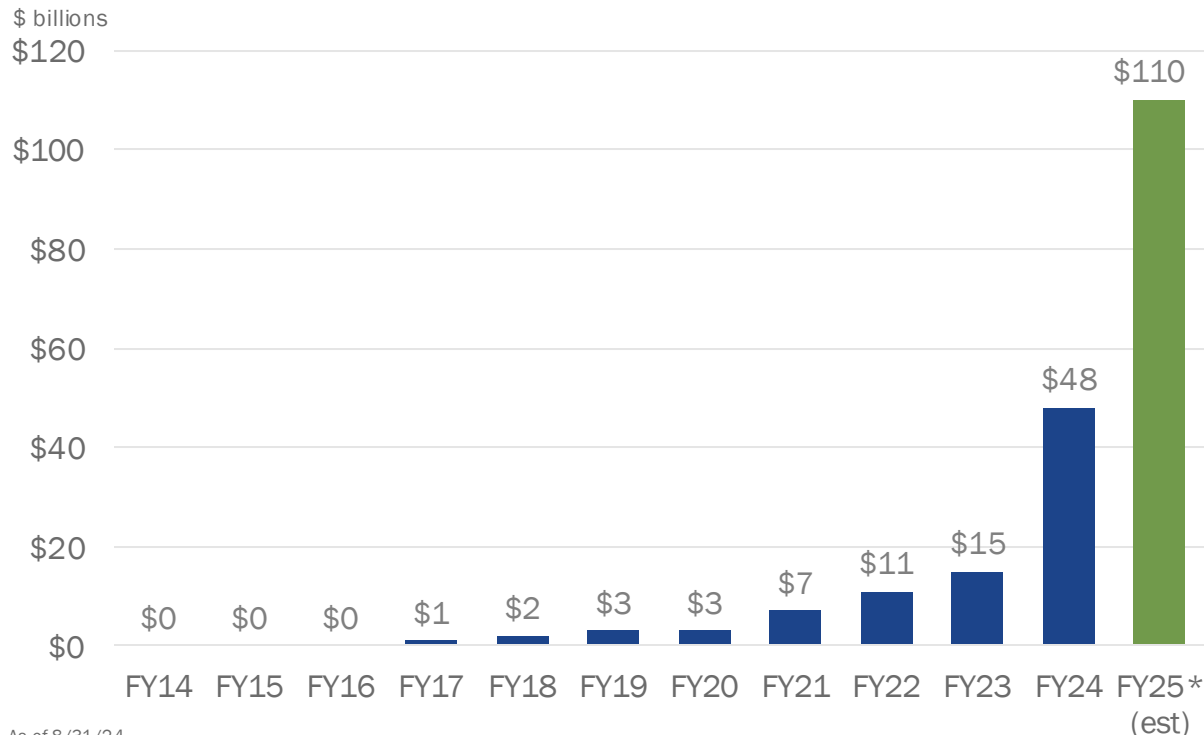


As of 3/31/24.

Source: Morgan Stanley, used with permission. The examples above are for illustrative and educational purposes only and should not be considered investment advice. See Portfolio Notes in the Appendix.

# EXAMPLE: NVIDIA DATACENTER REVENUES

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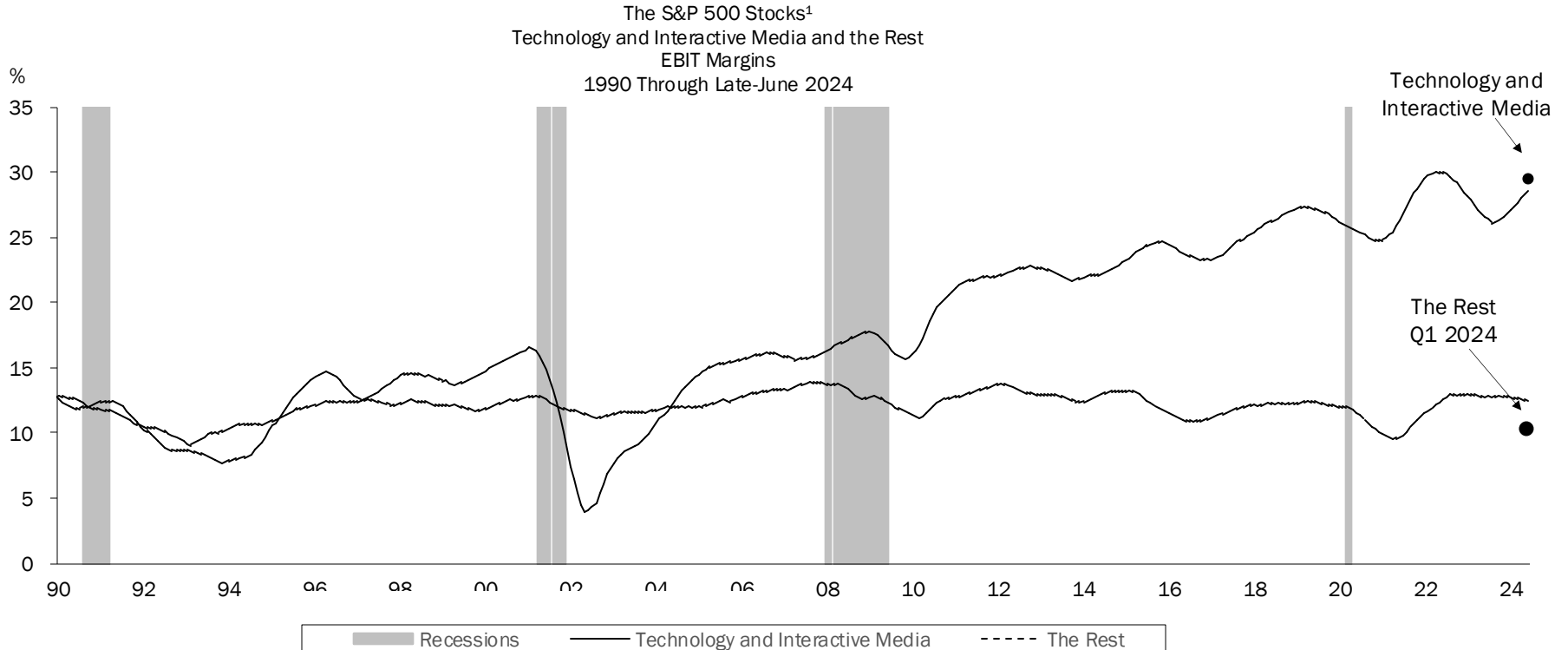


- NVDA continues to post above consensus results
- Growth is driven mostly by datacenter, reflecting a massive surge in generative AI demand
- \$1 trillion installed datacenter infrastructure will transition from ~100% CPU based computing to accelerated computing over the next decade + AI requires a step increase in computations leading to greenfield opportunities

As of 8/31/24.

Source: Jennison, Company Reports (used with permission). \*Forecasted. Forecasts may not be achieved and are not a guarantee or reliable indicator of future results. Although Jennison believes that the expectations reflected in such forward-looking statements are based on reasonable assumptions, actual results may differ materially from those projected. The examples above are for illustrative and educational purposes only and should not be considered investment advice. NVIDIA was the example selected as it is the portfolio's largest holding and we believe it is a good example of the growing opportunity in datacenter and AI. See Portfolio Notes in the Appendix.

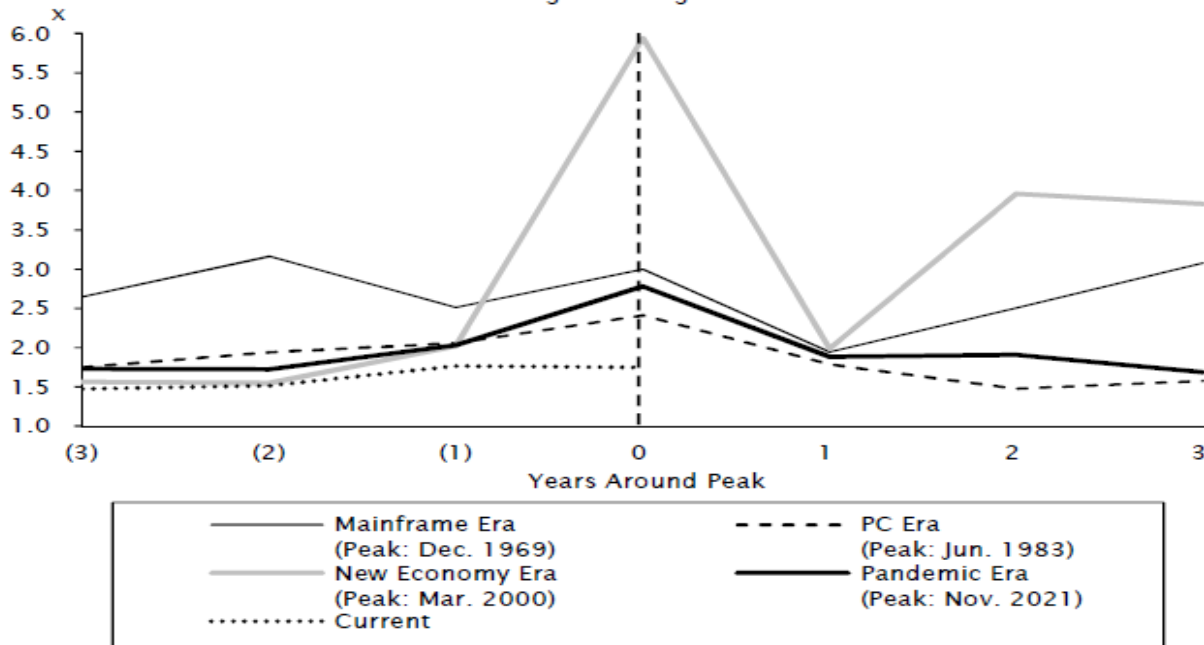
# TECHNOLOGY MARGINS ARE VERY ATTRACTIVE



As of 6/24.

Source: National Bureau of Economic Research, Corporate Reports, Empirical Research Partners. <sup>1</sup>Measured as aggregates and data smoothed on a trailing six-month basis. Excludes financials and REITs. The above information is for illustrative and educational purposes only and should not be considered investment advice. See Portfolio Notes in the Appendix. Past performance does not guarantee future results.

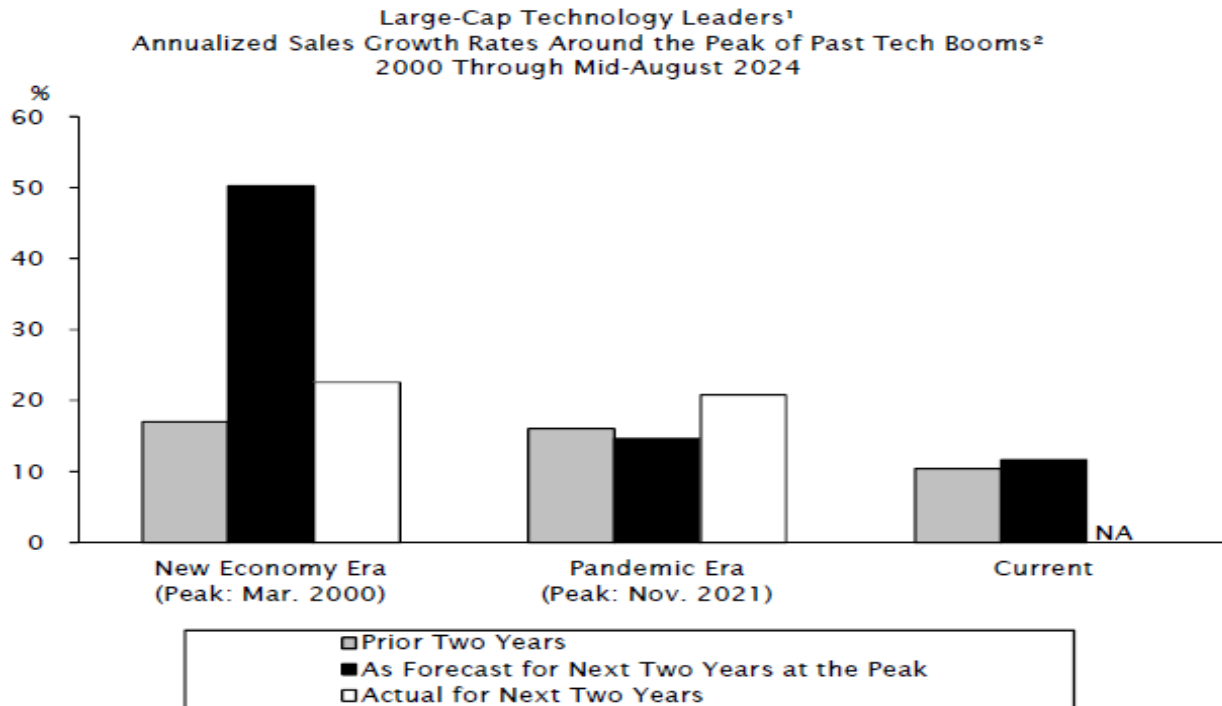
**Large-Cap Technology Leaders<sup>1</sup>**  
**Relative Forward-P/E Ratios Around the Peak of Past Tech Booms<sup>2</sup>**  
**1969 Through Mid-August 2024**



As of 8/26/24.

Source: Empirical Research Partners. <sup>1</sup>Technology and interactive media stocks in the highest two quintiles of price momentum marketwide at the peak date. <sup>2</sup>Median forward P/E ratio relative to the equally-weighted market P/E. Trailing P/Es used for Mainframe Era as analyst forecasts unavailable. The above information is for illustrative and educational purposes only and should not be considered investment advice. See Portfolio Notes in the Appendix. Past performance does not guarantee future results.

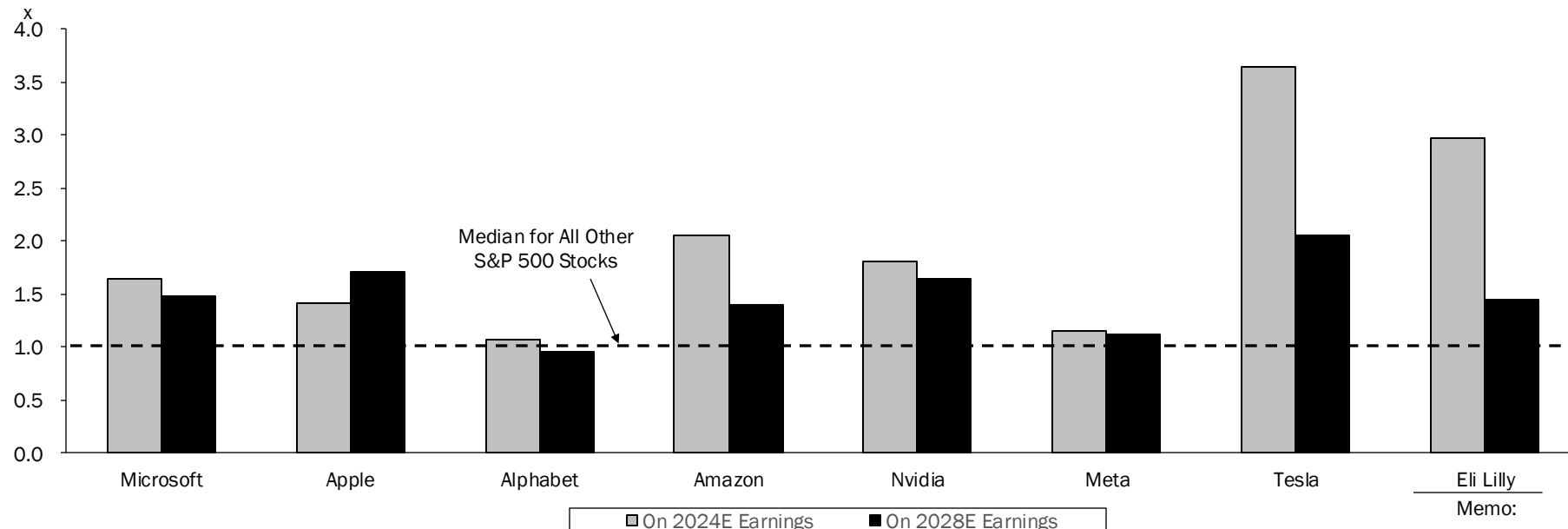
# ...AND GROWTH RATE EXPECTATIONS AREN'T COMPARABLE TO THE NEW ECONOMY ERA:



As of 8/26/24.

Source: Empirical Research Partners. <sup>1</sup>Technology and interactive media stocks in the highest two quintiles of price momentum marketwide at the peak date. <sup>2</sup>Medians. The above information is for illustrative and educational purposes only and should not be considered investment advice. See Portfolio Notes in the Appendix. Past performance does not guarantee future results.

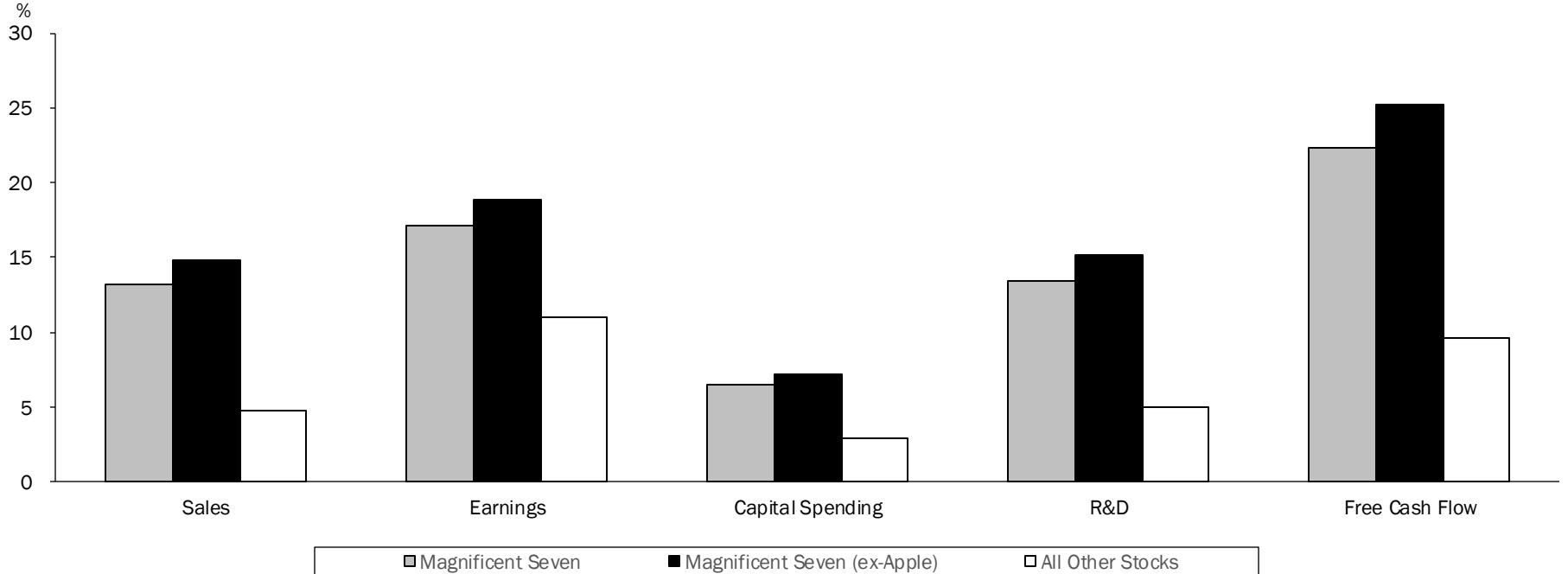
## Relative Forward P/E Ratios are Attractive, Especially on Forward Estimates



As of 2/16/24.

Source: Empirical Research Partners and Visible Alpha. Based on the consensus forecasts of sell-side analysts covering the stocks. All other stocks based on medians. The universe used is the S&P 500 Index. The magnificent 7 stocks include Apple, Microsoft, Alphabet, Amazon, NVIDIA, Tesla, and Meta. They are among the most well-known companies in the world. Empirical Research Partners added Eli Lilly was added to the analysis because its earnings growth and free cash flow growth are in-line with the other magnificent 7 companies. Hyper Growers are companies that have grown sales at more than 2.5x the market's growth rate over a five-year period; grown earnings at more than 1.5x the market's growth rate; grown capex at more than 2x the market's rate; and had a capex-to-sales ratio greater than 2x the market. Forecasts may not be achieved and are not a guarantee or reliable indicator of future results. Although Jennison believes that the expectations reflected in such forward-looking statements are based on reasonable assumptions, actual results may differ materially from those projected. The above information is for illustrative and educational purposes only and should not be considered investment advice. See Portfolio Notes in the Appendix. Past performance does not guarantee future results.

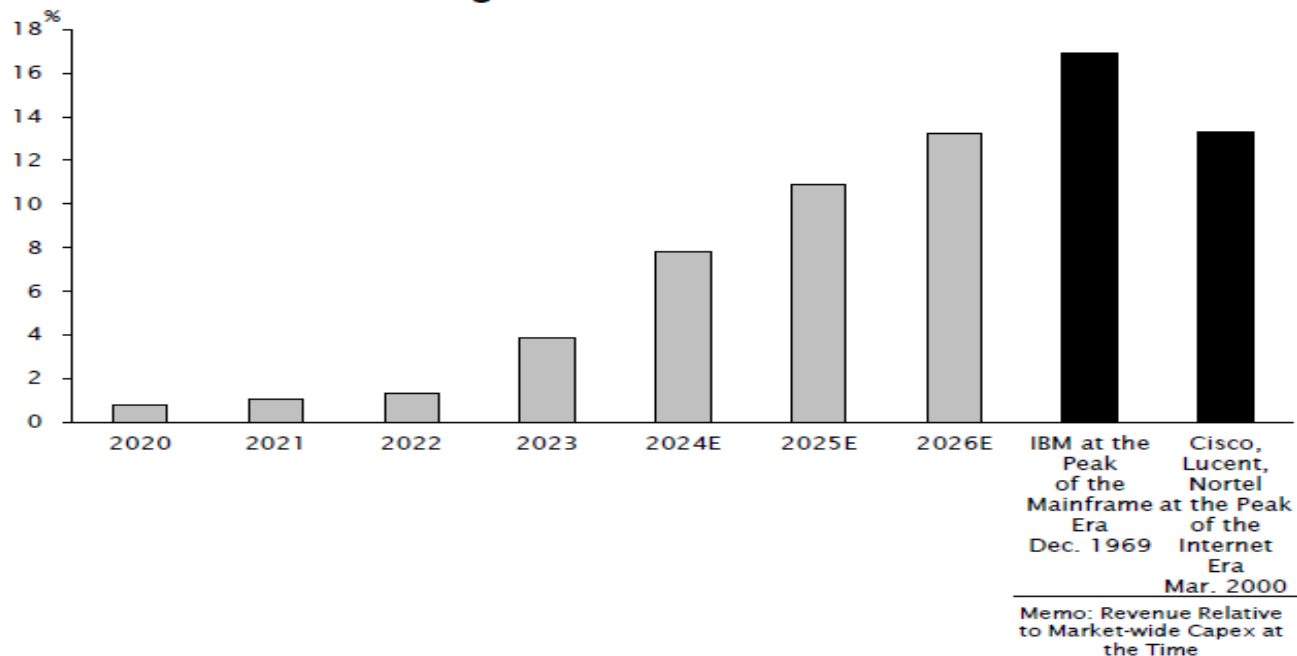
## S&P 500 Index Annualized Five-Year Forward Growth Rates



As of 2/16/24.

Source: Empirical Research Partners and Visible Alpha. Based on the consensus forecasts of sell-side analysts covering the stocks. All other stocks based on medians. Averages used for the Magnificent Seven. The universe used is the S&P 500 Index. The magnificent 7 stocks include Apple, Microsoft, Alphabet, Amazon, NVIDIA, Tesla, and Meta. They are among the most well-known companies in the world. Forecasts may not be achieved and are not a guarantee or reliable indicator of future results. Although Jennison believes that the expectations reflected in such forward-looking statements are based on reasonable assumptions, actual results may differ materially from those projected. The above information is for illustrative and educational purposes only and should not be considered investment advice. See Portfolio Notes in the Appendix.

## Data Center Revenues as a Share of Market-wide Capital Spending<sup>1</sup> 2020 Through 2026E



As of 6/24.

Source: Visible Alpha, Empirical Research Partners. <sup>1</sup>Based on aggregate worldwide capital spending for large-cap stocks. The above information is for illustrative and educational purposes only and should not be considered investment advice. Forecasts may not be achieved and are not a guarantee or reliable indicator of future results. Although Jennison believes that the expectations reflected in such forward-looking statements are based on reasonable assumptions, actual results may differ materially from those projected. See Portfolio Notes in the Appendix. Past performance does not guarantee future results.



# Appendix

All non-performance portfolio data provided is based on a representative Jennison Global Equity Opportunities portfolio. The representative portfolio was selected because it is in the composite and we believe the holdings, characteristics and risk profile are representative of this strategy.

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**Portfolio (continued)**

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**Average Weight** is the dollar value (price times the shares held) of the security or group, divided by the total dollar value of the entire portfolio displayed as a percentage. It is calculated as the simple arithmetic average of daily values. **Contribution to Return** is the contribution of a security or group to the overall portfolio return. It is calculated as the security weight multiplied by the daily security return linked daily across the reporting period. **Allocation Effect** is the portion of portfolio excess return that is attributable to taking different group bets from the benchmark. (If either the portfolio or the benchmark has no position in a given group, allocation effect is the lone effect.) A group's allocation effect equals the average percent capitalization of the portfolio's group minus the average percent cap of the benchmark's group times the total return of the benchmark group minus the total return of the benchmark. **Stock Selection** is the portion of portfolio excess return attributable to choosing different securities within groups from the benchmark. A group's security selection effect equals the average weight of the benchmark's group times the total return of the portfolio's group minus the total return of the benchmark's group. It is calculated as the security weight multiplied by the daily security return linked daily across the reporting period. There is a third component called the **Interaction Effect** that is added to the Stock Selection. **Interaction Effect** is the portion of the portfolio excess return attributable to combining allocation decisions with stock selection. This effect is often thought of as measuring the strength of the manager's convictions. The interaction effect is the weight differential times the return differential. A group's interaction effect equals the average percent cap of the portfolio's group minus the average percent cap of the benchmark's group times the total return of the portfolio's group minus the total return of the benchmark's group. **Total Effect** is the sum of Allocation Effect and Stock Selection. The total effect represents the opportunity cost of what was done in a group relative to the overall portfolio. It is not just the difference between percent contribution in the portfolio and benchmark. At the overall portfolio level, the two numbers are equal. At the group level, they can be different. This information should not be considered as a recommendation to purchase or sell a particular security and there is no assurance that certain securities will remain in or out of the portfolio. These sectors, stock selections and holdings may change at any time and may not represent current or future sectors or stock selections.