Madison

U.S. EQUITY INVESTOR LETTER

June 30, 2024

To our investors and partners,

One of these is not like the others:

	YTD Performance
S&P 500	+15.29%
Dow Jones Industrial Average	+4.79%
S&P 500 Equal Weight	+5.08%
Russell Midcap	+4.96%

The above chart lists the total returns of the major U.S. stock market indices for large and midcapitalization stocks through the first six months of 2024. The Russell Midcap and the Equal-Weight version of the S&P 500 are far more diversified than the capitalization-weighted S&P 500, and thus have vastly underperformed the latter index, where just five stocks accounted for well over half of the gains. Of the five, only two are constituents of the 30-stock Dow Jones Industrial Average, which explains why the Dow has performed more like the other broadly diversified indices so far this year.

In many respects, this narrowing of the market is occurring only at the top. We mentioned in our 2023 year-end letter that the larger the capitalization of its components, the better the index performance has been for many years, and how that pattern intensified in 2023 with the mega-cap index outperforming the small-cap index by just over 20 points last year. It's hard to believe, but that roughly 20-point gap has been replicated in just a six-month period this year.

	YTD Performance
Russell Top 50 Mega Cap	+22.10%
Russell Top 200	+17.19%
Russell Midcap	+4.96%
Russell 2000	+1.73%

Another angle to view the narrowness of the market is that the stocks of companies benefiting from the artificial intelligence ("AI") boom are doing extremely well while almost everything else is doing soso. In some ways, this is the same thing as saying that size itself is increasingly becoming a source of competitive advantage, given the enormous sums of capital needed to build the infrastructure to power AI. So, let's talk about AI.

To get to the punchline first: we're AI skeptics. To be sure, we're not skeptical that AI could be a transformational technology. We think it's very possible, if not likely, that it will indelibly alter the way we live, think, and behave as a society. But that is a far cry from saying that the technology will provide instant economic returns, especially the kind of returns that will justify some of the enthusiasm evident in the market valuations placed on many stocks today.

Let's take Microsoft, who is currently the leading purveyor of AI-related software services. Microsoft has increased its capital expenditures over the past year by over \$35 billion, if one includes its latest capital injection into OpenAI, a privately-held AI firm. To put \$35 billion in perspective, that is about equal to the total revenues of Salesforce, Inc., one of the largest software companies in the world.

Let's assume that \$20 billion of that \$35 billion is for AI. Microsoft has also disclosed that its AIrelated revenue for its cloud segment is currently running at a rate of about \$4 billion a year. If you assume a healthy profit margin and that revenues will continue to grow quickly, you can get to a decent return on the spend, conceivably in the neighborhood of 10-20%. That would constitute a good return on investment for Microsoft. The problem for the AI industrial complex is that Microsoft is as wellpositioned as any company to benefit from AI, possibly by a significant amount, and thus is on the far right end of the bell curve when it comes to the economic beneficiaries of AI. So we can then deduce that companies in the fat part of the curve have returns well below 10-20%.

We can see this more directly by looking at companies spending enormous sums of money on AI-related services, many of them Microsoft's customers, and observing that the revenue they are producing from their AI investments is currently...near zero. A simpler way to say this is that everyone is attempting to build out the infrastructure and create a foundation to provide AI-related services, thus the very real boom in demand for Nvidia, Microsoft, and other AI vendors, but very few have yet proven that there is end demand for AI-generated products and services. [Here's a thought: it's been almost two years since generative AI exploded onto the scene. Now, name one transformative real-world application that has resulted from that.]

To be clear again, we don't doubt that there might be many over time. We simply doubt there will be enough in the near-term to justify the current hype. The list of ballyhooed technological revolutions from just the past decade that haven't lived up to their billing is long: metaverse, virtual reality, fully autonomous driving, blockchain, cryptocurrency, et al. That doesn't mean that optimistic predictions may not eventually come to fruition; it just means that the road is rarely as straight and smooth as it's made out to be.

Another heretical notion we hold is that even if the AI boom meet some of the more enthusiastic projections, we question whether anyone is smart enough to pick the winners this early in its life cycle. This is not an opinion specific to AI. We simply doubt whether anyone can consistently pick winners early in the life cycle of *any* new technological trend. AI has yet to find its killer app, as the Silicon Valley visionaries would phrase it, and that means that whoever appears to be in the lead now may not be best suited to maintain that lead when the killer app manifests itself, if it indeed manifests at all. Pioneers often end up on the ground with arrows in their backs.

Combined with the high valuations attributed to many stocks seemingly at the vanguard of AI, we see no reason to think this will end up any differently for the stock market than, to use the comparison most often brought up by others, the early days of the internet revolution. That is, the astonishing potential of a new technology to transform society has clouded the ability of investors to see clearly. There is survivorship bias in the minds of many investors today with regards to the early days of the internet – they know about the Amazons and the Metas, but they have either forgotten or have never studied to find out about the Pets.coms, the Webvans, the MySpaces, and the countless other failures and modest successes. Even in the case of the singular success of Amazon, its stock as late as 2006 traded at half of its 2000 peak. And it almost went bankrupt in the interim.

We believe that the lessons of overbuilding, overspending, and market dynamism still apply, and we're keeping that in mind as we go about our craft. One of us recently read a report by an investment bank strategist (we assure you he didn't do so on company time) that recommended that investors stay invested in AI infrastructure providers because even though we may be in a bubble, bubbles can take a long time to burst. We will continue to resist such FOMO and invest as we always have: if we wouldn't want to own something for decades, we don't want to own it for even one day.

We look forward to updating you at year-end.

Respectfully,

Haruki Toyama

DISCLOSURES & DEFINITIONS

This letter was written by Haruki Toyama, Head of Mid and Large Cap Equities and Portfolio Manager on the respective strategies.

"Madison" and/or "Madison Investments" is the unifying tradename of Madison Investment Holdings, Inc., Madison Asset Management, LLC ("MAM"), and Madison Investment Advisors, LLC ("MIA"), which also includes the Madison Scottsdale office. MAM and MIA are registered as investment advisers with the U.S. Securities and Exchange Commission. Madison Funds are distributed by MFD Distributor, LLC. MFD Distributor, LLC is registered with the U.S. Securities and Exchange Commission as a broker-dealer and is a member firm of the Financial Industry Regulatory Authority. The home office for each firm listed above is 550 Science Drive, Madison, WI 53711. Madison's toll-free number is 800-767-0300.

Any performance data shown represents past performance. Past performance is no guarantee of future results.

Non-deposit investment products are not federally insured, involve investment risk, may lose value and are not obligations of, or guaranteed by, any financial institution. Investment returns and principal value will fluctuate.

This report is for informational purposes only and is not intended as an offer or solicitation with respect to the purchase or sale of any security.

Although the information in this report has been obtained from sources that the firm believes to be reliable, we do not guarantee its accuracy, and any such information may be incomplete or condensed. All opinions included in this report constitute the firm's judgment as of the date of this report and are subject to change without notice. This report is for informational purposes only and is not intended as an offer or solicitation with respect to the purchase or sale of any security.

Equity risk is the risk that securities held by the fund will fluctuate in value due to general market or economic conditions, perceptions regarding the industries in which the issuers of securities held by the fund participate, and the particular circumstances and performance of particular companies whose securities the fund holds. In addition, while broad market measures of common stocks have historically generated higher average returns than fixed income securities, common stocks have also experienced significantly more volatility in those returns.

Diversification does not assure a profit or protect against loss in a declining market.

The S&P 500® is an unmanaged index of large companies and is widely regarded as a standard for measuring large-cap and mid-cap U.S. stock-market performance. Results assume the reinvestment of all capital gain and dividend distributions. An investment cannot be made directly into an index.

The Dow Jones Industrial Average® (The Dow®), is a price-weighted measure of 30 U.S. blue-chip companies. The index covers all industries except transportation and utilities.

Russell Investment Group is the source and owner of the trademarks, service marks and copyrights related to the Russell Indexes. Russell® is a trademark of Russell Investment Group.

Russell Midcap Index is a market-capitalization-weighted index representing the smallest 800 companies in the Russell 1000 Index. The average Russell Midcap Index member has a market cap of \$8 billion to \$10 billion, with a median value of \$4 billion to \$5 billion.

Russell 2000® Index measures the performance of the 2,000 smallest companies in the Russell 3000® Index, which represents approximately 11% of the total market capitalization of the Russell 3000® Index.

The Russell Top 50® Mega Cap Index measures the performance of the largest companies in the Russell 3000 Index. It includes approximately 50 of the largest securities based on a combination of their market cap and current index membership and represents approximately 45% of the total market capitalization of the Russell 3000, as of the most recent reconstitution. The Russell Top 50 Index is constructed to provide a comprehensive unbiased and stable barometer of the largest US companies. The Index is completely reconstituted annually to ensure new and growing equities are reflected.

The Russell Top 200® Index measures the performance of the largest cap segment of the US equity universe. The Russell Top 200 Index is a subset of the Russell 3000® Index. It includes approximately 200 of the largest securities based on a combination of their market cap and current index membership and represents approximately 68% of the Russell 3000® Index, as of the most recent reconstitution. The Russell Top 200 Index is constructed to provide a comprehensive and unbiased barometer for this very large cap segment and is completely reconstituted annually to ensure new and growing equities are included.

Upon request, Madison may furnish to the client or institution a list of all security recommendations made within the past year.

Holdings may vary depending on account inception date, objective, cash flows, market volatility, and other variables. Any securities identified and described herein do not represent all of the securities purchased or sold, and these securities may not be purchased for a new account. Past performance does not guarantee future results. There is no guarantee that any securities transactions identified and described herein were, or will be profitable. Any securities identified and described herein are not a recommendation to buy or sell, and is not a solicitation for brokerage services.

Madison-569960-2024-07-09