

MARKET SIGHT LINES



AI Will Change Our Future; It's Transforming Our World Today

By Michael O'Keeffe, *Chief Investment Officer*



The [strong stock market results](#) this year celebrate the potential for artificial intelligence (AI). And while big, tech-oriented companies are driving this performance, the opportunity goes well beyond tech-oriented stocks. In this week's Sight|Lines, we review the concept of AI and zoom in on some real-life uses that are already transforming our world today.

THE TAKEAWAY: AI IS LEARNING CONSTANTLY, TRANSFORMING OUR WORLD

AI is learning from a large volume of data each day and is already transforming our world.

In summary:

- With AI, computers process data to learn and make decisions, and generative AI goes further, with machines creating content sometimes indistinguishable from human output.
- 2.5 billion gigabytes (GB) of data are created daily, equal to 19 million 128GB iPhones.
- 42% of large-scale businesses worldwide have actively deployed AI, and it's estimated that 30% of hours currently worked could be automated by 2030.
- AI is expected to contribute over \$15 trillion to the global economy by 2030.
- AI applications are showing up in the healthcare industry, conducting research, creating new drugs, improving diagnosis tools, and some forms of nursing with patients.
- In industry, we're seeing applications like improved farming, equipment monitoring, and the use of augmented reality to assist workers in the field.
- And, of course, we're seeing significant applications in retail, like voice-enabled assistants that help people understand and use consumer products, or travel assistants that help you plan your next trip.
- AI is already transforming our world.

IN-DEPTH: AI IS LEARNING CONSTANTLY ON A LOT OF NEW DATA EACH DAY, AND WITH THAT, AND NEWER MODELS, AI IS TRANSFORMING OUR WORLD

AI can learn almost in real time each day on a large and ever-growing volume of data, and by doing so, it's already transforming our world, even as we set up for more dramatic change in the future. Going deeper:

- Let's review the definitions AI and generative AI:
 - AI is the technology that allows computers to learn how to think and make decisions like humans, processing lots of data, including inputs and outcomes.
 - Generative AI goes further, with machines using what they learn to create new things, like images, videos, text, or speech, sometimes so real it's as if they were created by a real person.
- Imagine 19 million 128GB iPhones, that's 2.5 billion GB of data, are created each day, like:
 - 1.3 billion photos shared on Instagram and 1 billion hours of YouTube content streamed.
 - 300 billion e-mails sent and received and 150 million U.S. credit card transactions.
- With a growing number of companies deploying AI and almost 30% of hours currently worked possibly automated by 2030, AI is estimated to contribute meaningfully to the global economy by then:
 - A \$6.6 trillion increase in GDP is expected from increased productivity, with an additional \$9.1 trillion in economic growth from product enhancements.
- AI applications are already making a meaningful difference in healthcare, with AI:
 - Now able to instantly predict the shape of a protein, a process that took years before. Source: Google DeepMind
 - Having discovered a new class of antibiotics able to kill drug-resistant bacteria. Source: MIT News
 - Enabling a tool to diagnose sepsis, a life-threatening response to infection. Source: Prenosis
 - Doing as well or better than [human nurses](#) in areas like medical safety and bedside manner.
- We're seeing applications in a variety of non-tech-oriented companies, with AI:
 - Able to scan 2,100 square feet of farmland per second, allowing farmers to spray only weeds, reduce herbicide costs, and improve the quality of crops delivered.
 - Able to evaluate data from sensors installed on equipment to predict failure before it occurs.
 - Enabling augmented reality to assist technicians in equipment maintenance, like with aircraft.
- We've all been familiar with applications in retail, and increasingly AI is making a difference:
 - A leading makeup company has released a voice-enabled makeup assistant designed to help visually impaired people with applying makeup.
 - A travel company has integrated Chat GPT with its platform to help customers discover travel ideas or plan their itinerary in seconds.

CONCLUSION

The stock market results in 2024 have been positive so far, really driven to a good degree by optimism around the potential for AI. And while this wave is benefiting big, tech-oriented companies, opportunities abound in areas like medicine and industrials, for example. As we evaluate the macroeconomy, the markets, and specific investment opportunities, innovation like AI continues to play a critical role in our analysis.

Michael P. O'Keeffe, CFA 

Chief Investment Officer

michael.okeeffe@stifel.com

www.stifelinsights.com

The information contained herein has been prepared from sources believed to be reliable but is not guaranteed by us and is not a complete summary or statement of all available data, nor is it considered an offer to buy or sell any securities referred to herein. Opinions expressed are subject to change without notice and do not take into account the particular investment objectives, financial situation, or needs of individual investors. There is no guarantee that the figures or opinions forecasted in this report will be realized or achieved. Employees of Stifel, Nicolaus & Company, Incorporated or its affiliates may, at times, release written or oral commentary, technical analysis, or trading strategies that differ from the opinions expressed within. Past performance is no guarantee of future results. Indices are unmanaged, do not reflect fees or expenses, and you cannot invest directly in an index.

Asset allocation and diversification do not ensure a profit and may not protect against loss. There are special considerations associated with international investing, including the risk of currency fluctuations and political and economic events. Investing in emerging markets may involve greater risk and volatility than investing in more developed countries. Due to their narrow focus, sector-based investments typically exhibit greater volatility. Small company stocks are typically more volatile and carry additional risks, since smaller companies generally are not as well established as larger companies. Property values can fall due to environmental, economic, or other reasons, and changes in interest rates can negatively impact the performance of real estate companies. When investing in bonds, it is important to note that as interest rates rise, bond prices will fall. The Standard & Poor's 500 index is a capitalization-weighted index that is generally considered representative of the U.S. large capitalization market. The Dow Jones Industrial Average (DJIA) is a price-weighted average of 30 significant stocks traded on the New York Stock Exchange (NYSE) and the NASDAQ. The DJIA was invented by Charles Dow back in 1896. The MSCI EAFE index (Europe, Australasia, and the Far East) is a free float-adjusted market capitalization index that is designed to measure the equity market performance of developed markets, excluding the U.S. and Canada. VIX is a trademarked ticker symbol for the Chicago Board Options Exchange Market Volatility Index, a popular measure of the implied volatility of S&P 500 index options.