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ARTIFICIAL INTELLIGENCE (AI) FRIEND OR FOE?

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What is Artificial Intelligence? According to the IBM website, “Artificial intelligence, or AI, is technology that enables computers and machines to simulate human intelligence and problem-solving capabilities. On its own or combined with other technologies (e.g., sensors, geolocation, robotics) AI can perform tasks that would otherwise require human intelligence or intervention.”

There are two types of AI: Weak AI and Strong AI.

1. Weak AI – is AI that is trained and focused to perform specific tasks. This is the AI that most of us have heard of, like writing term papers for college students. It also is the basis for Apple’s Siri or Amazon’s Alexa. This is a non-threatening form of AI.
2. Strong AI – “is made up of artificial general intelligence (AGI) and artificial super intelligence (ASI). AGI or general AI is a theoretical form of AI where a machine would have an intelligence equal to humans; it would be self-aware with a consciousness that would have the ability to solve problems, learn, and plan for the future. ASI – also known as superintelligence- would surpass the intelligence and ability of the human brain.”

Algorithms which are coded instructions for AI to solve a problem or complete a task. These algorithms which control AI are written by humans and reflect the thinking and biases of the programmer. The concern for the future is that AI will begin to write its own algorithms.

The history of the development of AI:

1. 1950: Alan Turing publishes Computing Machinery and Intelligence. “In this paper, Turing – famous for breaking the German ENIGMA code during WWII and often referred to as the ‘father of computer science’ – asks the following question: ‘Can machines think?’ ”
2. 1980s: Use of an algorithm to train itself becomes widely used in AI applications.
3. 1995: The book, Artificial Intelligence: A Modern Approach which becomes one of the leading textbooks in the study of AI is published.
4. 1997: IBM’s Deep Blue beats the then world chess champion, Gary Kasparov, in a chess match and rematch.
5. 2004: John McCarthy writes the paper, What Is Artificial Intelligence?
6. 2011: IBM’s Watson beats champions Ken Jennings and Brad Rutter at Jeopardy.
7. 2015: Baidu’s Minwa supercomputer identifies and categorizes images with a higher rate of accuracy than the average human.
8. 2016: DeepMind’s AlphaGo program, powered by a deep neural network, beats Lee Sodol, the world champion Go player in a five-game match. Later, Google purchased DeepMind for \$400 million.
9. 2023: The rise in large language models, such as ChatGPT, create an enormous change in performance of AI. These new generative AI, deep learning models can be pre-trained on vast amounts of raw data.

The above information came largely from the IBM article “What is artificial intelligence?”

Weak AI is considered to be a scary technology because it will be able to perform tasks faster, cheaper and more efficiently than people. Therefore, many jobs will be lost to this new technology. However, some of the same fears were voiced regarding the internet and yet the internet has become a great tool for the workplace and has greatly increased worker productivity as well as creating many new jobs. The fears were unfounded.



Strong AI, AGI and super intelligence ASI, are the real concerns because they represent technology that can replace and/or dominate humankind. Hopefully safeguards will be built into the algorithms and regulation will help to restrict the reach of AGI and ASI into human affairs.

There are two other great technological breakthroughs that represent significant danger but also incredible usefulness. The first is nuclear power which produces huge amounts of electrical power and is the power source for many of our ships. On the other hand, it can destroy the world.

The second, as previously mentioned, is the internet, it enables human connectivity, communication and enhanced productivity among other benefits. On the negative side: cyber-attacks, cyber-bullying, child pornography and more. Again, the benefits seem to outweigh the negatives.

AI represents a third great technological breakthrough and has the potential to enhance the quality of life for billions of people. Yes, the risks are substantial, but as an eternal optimist, I believe the human race will find a way to harness this great new breakthrough just as we are doing with the other two revolutionary technological marvels. We remain hopeful for the future!

The Outlook

The first half of 2024 has followed in the footsteps of 2023. The five high-tech stocks primarily leading in the development of AI are the top performers and because of their enormous capitalization have skewed the performance of the indices.

According to The Motley Fool (A media organization that provides commentary on markets and individual companies): "The Nasdaq-100 is weighted by market capitalization, which means larger companies have a greater influence over its performance than smaller companies. The proliferation of artificial intelligence (AI) is driving a surge in the value of some of America's trillion-dollar tech stocks, and the following five now make up 35.9% of the entire index.

1. Microsoft (NASDAQ: MSFT) has a market cap of \$3.3 trillion.
2. Apple (NASDAQ: APPL) has a market cap of \$3.2 trillion.
3. Nvidia (NASDAQ: NVDA) has a market cap of \$3 trillion.
4. Alphabet (NASDAQ: GOOG) (NASDAQ: GOOGL) has a market cap of \$2.2 trillion.
5. Amazon (NASDAQ: AMZN) has a market cap of \$2 trillion.

The Nasdaq-100 is up 18.9% so far in 2024. However, the Nasdaq-100 Equal Weighted index – which assigns the same representation to all 100 companies regardless of size – is up just 6.2%. The difference can be explained (in part) by the outperformance of the above five stocks, which have delivered an average return of 47.3% year to date."

The future for these 5 companies seems very bright, but we cannot abandon the proven concept of diversification. The valuation of the 5 highfliers is stretched (high price to earnings ratios P/E) whereas the valuation of the other 95 companies in the index is modest. If there is a stock market correction (we have not had one since the bear market in 2022) the high valuations are likely to experience a greater decline.

The second half of 2024 will probably experience more volatility than the first half. Also, the uncertainty of an election that represents a choice of two very different approaches to the economy, taxation and regulation could introduce more volatility. The stock prices for the large AI companies may fluctuate but the longer-term prospects for those companies should remain positive.

Later this year or in the beginning of next year the Fed will probably begin its long-awaited reduction in interest rates, which should provide support for stock prices. All things considered the market should remain constructive, yet with some volatility, at least until we get a clearer direction on the election. As always, new circumstances will change the outlook and a truly "black swan" type event (like a war) can change everything.

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