
From Skynet to ChatGPT: AI and Its Investment Implications

Wes Crill, PhD
Senior Investment Director and Vice President

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If you were to poll strangers on what comes to mind when they hear the term AI (artificial intelligence), I suspect the two most likely answers would be Skynet or ChatGPT. The generative chat program launched in 2022 seems to have drawn the most mainstream attention to AI applications since Arnold Schwarzenegger promised he'd be back. But the history of AI tools is far older than ChatGPT, although less dramatic than its depiction in 1990s science fiction films. And from an investment standpoint, artificial intelligence pales in comparison to the informational content of the market's AI—aggregate intelligence.

AI HAS BEEN AMONG US FOR YEARS

ChatGPT is but a recent example of AI. One watershed moment came in 1997 when the machine named Deep Blue became the first computer to secure victory in a match against a chess grandmaster. In the mid-2000s, IBM researchers created the Watson computer to compete with star *Jeopardy!* contestants, ultimately defeating two of the show's most decorated past champions. And how many of us routinely dispense orders to, and receive suggestions from, Siri or Alexa?

The common thread among these examples is that each represents a tool that processes and organizes data to identify patterns and summarize information or make suggestions. This type of interaction with AI has grown to permeate our everyday lives. Have you noticed your phone offer an unsolicited ETA for your commute when you get in your car? Does your text app suggest grammar revisions based on the context of your overall message? Congrats—you're an AI user, even if you've never opened a ChatGPT session.

AI MAY NOT HELP PICK STOCKS...

AI has a similarly long history with investing. Active investors have attempted to get an informational edge on markets by using AI processes to retrieve and process data. For example, tools that gauge sentiment from social media or scrape text from company financial reports predate ChatGPT by many years.

While these efforts may have been aimed at selecting stocks that would outperform

markets, it's not clear AI tools are a recipe for consistently generating abnormal returns. Material information gleaned from running AI processes is very likely a subset of the vast information set known by the market in aggregate and reflected in market prices. If new information is obtained, the process of acting on that information (buying or selling stocks/bonds) incorporates it into market prices. As more investors employ these tools, any edge from doing so should wane.

Another reason to question AI's role in helping market timing is limitations with its predictions. AI's forecasting ability fares well when assessing patterns that are relatively stable. For example, my phone's navigation app is often successful at "guessing" when I'm commuting to work because I come to the office on the same days each week. Autonomous car navigation programs know to slow down at the sight of a stop sign because these visual cues are universal and evergreen.

AI is far less likely to successfully predict changes within complex systems that are as dynamic as stock and bond markets. AI trying to predict market prices is like self-piloting cars trying to read stop signs with words, shapes, and colors that differ from one day to the next. The continuous emergence of new information material to market prices is antithetical to static patterns fostering predictability.

...BUT IT MAY ENHANCE A FUND MANAGER'S PROCESS

AI can make businesses more efficient if used as a tool for what Professor Robert C. Merton describes as "assisted implementation"—interrogating data, servicing clients, or making processes more efficient. But like any tool, you have to know how to use it. For example, if it makes interrogating data much easier, then the chances of finding results from data dredging increase. Where using AI can be very helpful is for firms with massive data sets on their customers' activities. It can help those firms identify what their customers are more likely to buy next and advertise in a smart way.

Over time, the best chess players realized chess computers were a powerful supplement to strategy and pattern recognition. Similarly, the best path forward for investment management is likely an amalgam of humans and technology such as AI.

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Robert Merton provides consulting services to Dimensional Fund Advisors LP.

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