AI: BUILDING MOMENTUM AS WE START 2022

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While it is easy to find the big prognostications about megatrends—such as artificial intelligence (AI)—many of them tell us where we might be 10, 20 or 30 years into the future. Instead of focusing on where we could find ourselves by 2050, we think it's helpful to think about what we might see in 2022.

Record M&A Activity

Globally, there have been about 130 AI mergers and acquisitions during 2021, the total value of which exceeded $28 billion. By contrast, 2020 saw 120 deals (a similar number), but the value of these deals was closer to $5 billion (a very different figure)[1].

Can the pace of M&A continue? While impossible to know with certainty, the landscape suggests that some of the world's largest companies (think of Amazon, Microsoft, Facebook, Alphabet as some examples) will continue to have:

1. Lots of cash, as well as continued capability to generate further cash.
2. Appetite to continue to increase their AI capabilities.

These companies can and do develop things internally, but they certainly do not develop 100% of their capabilities internally. Think of the case of Nuance Communications Inc., purchased by Microsoft for about $16 billion.[2] Microsoft could have taken the time to develop the natural language processing repertoire internally, but Nuance had expertise, particularly in dialogue related to medicine and health care. This will still be a challenging area for Microsoft—success is never guaranteed—but it's clear that they sought to improve both their long-term chances as well as their starting point through this acquisition.

It's logical to assume opportunities like this will persist, and at least some of the big players are focusing on health care related functionality. One needs only to look at Oracle's announcement regarding Cerner, a deal valued at $28.3 billion.[3]

More Industries Are Spending More on AI

In most of the articles and outlooks telling us where we might be by 2050, you will see a variety of industries poised to benefit. However, it is much tougher to see much detail regarding where things stand currently.

Data suggests that the global retail sector is expected to spend $11.8 billion on AI in 2021, which would compare to an expectation of banks spending $11.7 billion. The notable development here is that banks would no longer be the biggest spenders. Spending in global retail related to AI is expected to grow at a compound annual rate of 25.5% between now and 2025.[4]

Take the example of Levi Strauss & Co, where AI is being used in pricing to help the company boost revenue growth and improve margins. Through the use of Google's Cloud, Levi Strauss can analyze inventory info, sales data and even some data on what's happening at other retailers. There was a case in China where the company was thinking of discontinuing a particular t-shirt, but the data indicated otherwise and sales on the product (that would have been discontinued), have remained strong.[5]

What About the Big Advancements?

The AI space is rife with predictions of future capabilities—and it's impossible to know for sure what may or may not be possible here. Will society ever achieve artificial general intelligence? Predictions abound, but no one could say for sure if or when this could occur. What we know today is the following:

- Big models, like GPT-3 and its 175 billion parameters or Google's Switch-Transformer with 1 trillion parameters have shown interesting results during the course of 2021. This doesn't mean the models are conscious, and it doesn't mean that they will immediately replace humans in various ways, but they did represent a step change in capability. While they may not be conscious or 'understand' what they are doing, they can write language and computer code with proficiency that hadn't been seen previously. It'll be notable to watch whether models simply grow ever larger or if there will be new developments that can squeeze more capability out of smaller models.[6]

- The electric vehicle revolution is pushing more and more data into vehicles. While cars driving literally by themselves across global cities could be years away, the car as a collector of data is here already, and more and more new vehicles will be monitoring how humans drive in various ways, collecting data and 'learning' from patterns all the time.

- Data is really the lifeblood of AI. Streaming services, digital assistants, conference call tools like Zoom and Microsoft Teams, and wearables (like the iWatch) are all collecting data all the time, seeking to recognize patterns and serve consumers with what they're looking for before they realize they even want it.

Conclusion: performance may be [volatile](#), but we believe AI will continue to advance in capability and adoption.

If you asked us, point blank, what we predict to be the main driver of investment performance in AI-related companies in 2022, we would have to answer something along the lines of "U.S. interest rate policy at the Fed" or "inflation." Why? Many AI companies are in "growth mode," meaning that they do a lot of reinvestment with low or even negative current earnings. With interest rates at or near zero, the value of these future cash flows is higher. If rates rise, the value of these future cash flows will decrease. Unfortunately, this can have an impact across all sorts of different technology companies, AI and otherwise, and it may not leave a simple demarcation between the more exciting or less exciting AI companies. Investors focused solely on 2022 may be in for a volatile ride, but investors focused on longer horizons could see interesting points of entry as long as they understand the megatrend should have staying power over many years, not just in 2022.

[1] Source: McCormick, John. "The Big AI Stories of 2021." Wall Street Journal. 28 December 2021.

[2] Source: McCormick, 2021.

[3] Source: Bhattacharyya, Suman. "Oracle-Cerner Deal Could Help Healthcare Systems Share Data." Wall Street Journal. 21 December 2021.

[4] Source: McCormick, 2021.

[5] Source: McCormick, John. "Levi's AI Chief Says Algorithms Have Helped Boost Revenue." Wall Street Journal. 17 December 2021.

[6] Source: Heaven, Will Douglas. "2021 was the year of monster AI models." MIT Technology Review. 21 December 2021.

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Value : Characterized by lower price levels relative to fundamentals, such as earnings or dividends. Prices are lower because investors are less certain of the performance of these fundamentals in the future. This term is also related to the Value Factor, which associates these stock characteristics with excess returns vs the market over tim.

Volatility : A measure of the dispersion of actual returns around a particular average level. .