

The topic of Artificial Intelligence (AI) has quickly come to dominate the global investment narrative, fueling much debate, excitement and volatility in financial markets. Though it is early days, recent developments have given the world a glimpse into the possibilities of this powerful tool, causing many to compare this time to other transformative evolutions throughout history. We recently sat down with Davenport Asset Management Research Analyst, Brian Ward, to discuss the AI landscape and what the future may hold in this rapidly developing space.



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Q AI is a term that has been used for some time. Can you walk us through some of the recent history?

A Artificial Intelligence is a field of computer science that involves creating a system to perform a specific task. AI models have many use cases including visual perception, decision making, speech recognition, language translation, and recommendation models among many others. Historically, these models were designed with a very narrow focus in mind, however, recent advances in the field have led to more robust capabilities with broader applications.

Q Can you elaborate on how the technology has evolved in recent years?

A A few years ago, researchers discovered new techniques to build AI models that enabled the system to better understand sentiment and context to reason. Early adopters of these techniques experimented with large language models (LLMs), which are AI systems based on complex neural networks capable of processing enormous amounts of training data, typically in the form of text. Given an LLM's scale and understanding of conversational language, these advances enabled the AI model to accomplish a much wider range of tasks. At the same time, the semiconductor industry was experiencing massive improvements in power and performance for the processing chips, or hardware. That's important because advanced processor chips are critical to train AI models and allow them to ingest larger quantities of data. As it turns out, the power of these new AI systems scaled with increased model size, processing power and training data. This led to an arms race to build bigger and bigger AI models.

Q The buzz around AI has ticked up dramatically over the past several months. What triggered the heightened interest?

A Historically, advanced AI systems were only available to large computer science organizations and various research groups as prohibitive investment costs and specialized use cases limited wider adoption. That all changed when the research firm OpenAI commercialized the technology and launched a consumer version called ChatGPT in November 2022. Within months, millions of consumers were interacting with the AI chatbot and experiencing the full potential of a generative AI platform for the first time.

Q Can you expand on the nuances of Generative AI and what new capabilities these technologies might enable?

A Generative AI is a system capable of creating new and original content when prompted such as text, images or other media. Now that the large language models understand sentiment and context, the interaction between the user and the AI becomes increasingly human-like. ChatGPT was very good at writing essays, papers, poems and giving summaries of text and other data. It could answer questions on complex concepts like geopolitics and the United States' relationship with China. The underlying technology is capable of writing software code, organizing a travel itinerary, creating a shopping list or compare top rated retail products for you. You could prompt a generative AI model via text to generate an image or video. Needless to say, users were impressed with the technology.

Q Microsoft was an early investor in OpenAI. What is their role?

A Soon after the release of ChatGPT, Microsoft which was an early investor in OpenAI, announced an additional investment in the company along with plans to integrate the technology across its suite of products. Other companies, for fear of being perceived as an "AI loser", were forced to introduce their own AI platforms that had, up until then, maintained lower profiles. These announcements created an explosion of interest in generative AI and sent investors and companies scrambling to assess potential business applications.

Q Outside of the major players in the headlines, how do we think about the AI value chain and other key role players?

A I think you can look at the AI value chain in multiple tiers. At the ground level you have infrastructure, hardware and the pick and shovel type industries which could include semiconductor chip and equipment companies as well as networking players. The cloud service providers, like Microsoft Azure, Amazon Web Services, Google Cloud Platform or Oracle Cloud Infrastructure, would install that hardware and help allocate those technology resources to their respective customer bases via the cloud. The AI models could sit on top of that infrastructure and individual companies can create unique products and use cases with new applications that tie into the AI technology.

Q Taking that a step further, what are some of the characteristics of the winners in the AI era?

A I think an important thing to keep in mind when assessing potential beneficiaries is that there will be some companies that harness this technology and generate revenue while others might be users of the AI technology to lower costs and drive productivity. There are a handful of perceived early winners in the revenue generating bucket, and we think they appear to share similar characteristics including:

1. Strong underlying technology with history of organic innovation
2. The new AI technologies are generally incremental to the existing product portfolio
3. Access to a large customer base which should help accelerate the go to market strategy
4. Access to proprietary data sets which serve to differentiate products and lend to more customization
5. Large research and development budgets to iterate and deploy new applications.

Q Are there any losers?

A It is so early to call clear losers from this new wave of technical innovation, but in general we envision challenges for companies that are already providing a more commoditized product or service. We do feel strongly now more than ever, that companies slow to embrace innovation will be prime targets for disruption and risk getting left behind. As it relates to the labor market, we see risks to jobs with repetitive or manual tasks. And while automation could lead to job losses in certain areas, we expect new products, new AI use cases and new job functions to help redistribute the workforce.

Q Some have equated this recent period to the tech bubble of the late 2000's. Are we in an AI bubble?

A We think that advances in Artificial Intelligence will unlock significant innovation and productivity over the next several years and could have a profound impact on every industry, economy and society throughout the world. It is still early days in the new AI era and we believe that we are just scratching the surface of what's to come. As it relates to timing, we're not here to time the market but we do believe that when it comes to significant advances in technology that the market tends to inflate expectations near term but underestimate the potential impact over the long-run.

Q In light of all of this, how are the Davenport Portfolios positioned around AI?

A At the end of the day, we think it's likely that large, well-capitalized companies with proprietary data sets and a sizable customer base will emerge as early leaders in the generative AI era. These attributes may be more evident in companies within the Davenport Core Leaders Portfolio, which tends to hold larger companies. We're experiencing a very dynamic market environment today and the pace of innovation is moving incredibly fast. While we will continue to look for opportunities to play the AI theme across all industries and market sizes, we are unwavering in our disciplined approach that targets high quality businesses, strong balance sheets, talented management teams and shrewd capital allocators.

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