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Guest Feature: AI Insights

The Through Line: The AI revolution is fast upon us, bringing an intense amount of change and opportunity. Such periods of transformation inevitably lead to a host of questions. We asked our partners in BMO Global Asset Management (who also happened to have lived through the dot.com period a quarter-century ago) their take on some of the key issues.

What is the long-term outlook for AI and how will it influence industries?

AI is expected to drive noticeable progress in all industries in the decade ahead. We believe that futurist Ray Kurzweil's "Law of Accelerating Returns" is in effect today with AI as a catalyst. We anticipate incredible amounts of innovation across multiple industries in the decade to come. AI will accelerate knowledge, discovery, innovation and efficiency. Consider some of the amazing transformations AI is making possible:

Media – full-length professional production of feature films for a cost under \$25,000

Financial – fully functioning service agents for clients; predictive AI for markets

Automotive – autonomous vehicles trained using simulation for all driving conditions

Industrial – digital twins of physical facilities to simulate, automate and optimize production

Utilities – optimized energy utilization and generation; predictive usage models

Health Care – reduced cost and time to market for drug discovery; enhanced targeting and efficacy

Logistics – optimized routes and systems via autonomous delivery vehicles and robotics

Material science – discovery of new optimal molecular compounds for batteries, semiconductors

Gaming and VR – fully realistic and interactive gaming environments

Environmental – full simulation and prediction of global weather patterns

Can AI answers ever be trusted?

Yes, especially the new reasoning models – they are excellent. Early versions of AI suffered from the problem of generating inappropriate but convincing responses such as citing non-existent legal cases or academic papers. Next-generation language models and retrieval engines have fixed this problem by spending more time "thinking" about a question before answering and using proper tools to augment data through searches.

How legitimate are the concerns around cybersecurity?

In our opinion, cybersecurity concerns are not that great in the near-term relative to AI but may be an issue longer term as quantum computing evolves. We are not currently seeing examples of AI-based security breaches. Most are caused by careless human error such as compromised passwords, bad security practices or social hacking. ChatGPT could in theory write code that can break into computer systems, but these language models lack examples to teach them. AI has increased email phishing scams. One e-mail security vendor – Proofpoint - noticed more phishing emails written in Japanese that were translated from English by an AI. A breakthrough in quantum computing would be a bigger problem than AI for cybersecurity as the private keys used to encrypt digital information could be exposed.

What about AI used to perpetrate fraud?

This is a much bigger problem because of realistic, real-time Deepfakes. We have a real concern around Deepfakes as it will soon be possible to create an AI puppet that impersonates a person broadcasting over a video feed in real-time using just a 2D picture and a voice sample. Organizations and individuals will need to implement a digital asset verification process soon to protect themselves.

Do all of the Mag-7 have exposure to AI?

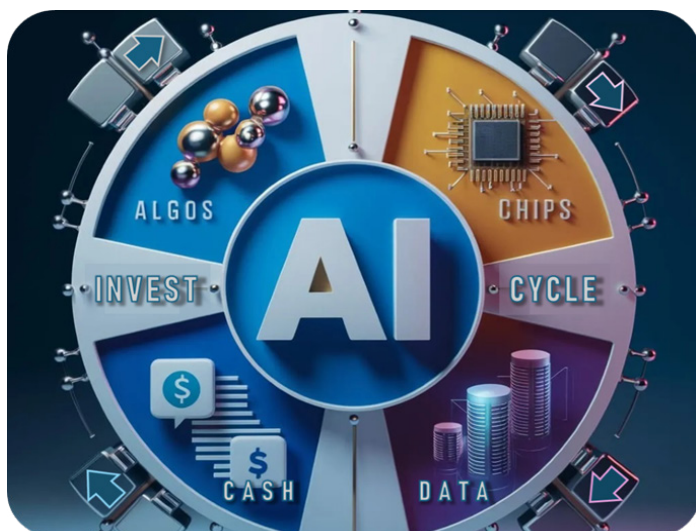
Yes, but some more than others. The Magnificent 7 have various exposures to AI. Some are developing AI applications to use internally to enhance advertising and social network feeds (Meta). Others are developing semiconductors to power AI systems (Nvidia) or to host AI services such as Microsoft and Amazon. Tesla is utilizing AI to power self-driving cars. For Alphabet (Google), there is a debate as to the benefit as some investors fear AI may cannibalize search (e.g., Perplexity). Apple has admittedly been lagging in terms of AI and recently reshuffled its executives in charge of updating the Siri service to use AI.¹

How do apps like DeepSeek change this?

DeepSeek is accelerating AI by making reasoning models more affordable. The market expressed concerns that a language model released from China developers had unlocked new training techniques that radically changed the future cost of creating AI models. We believe instead that DeepSeek has created an impressive reasoning model and made it more accessible and affordable, motivating startups to lever DeepSeek as an alternative way to create new AI services.

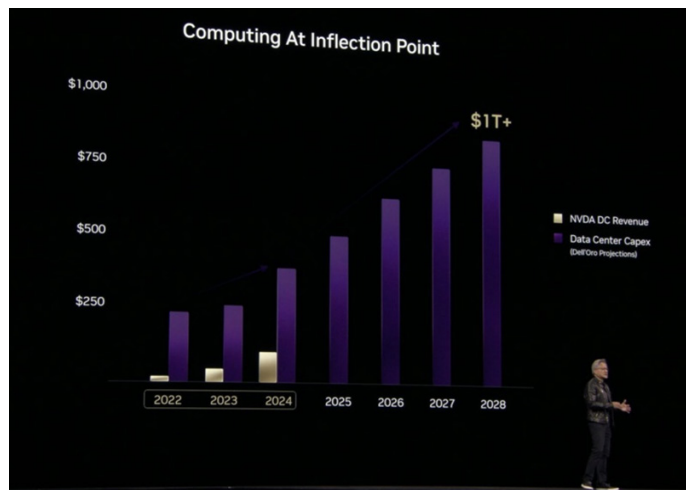
What are the growth prospects for AI companies?

It depends (upon the segment and status on the food chain) The AI investment cycle starts with the development of innovative algorithms that drive new applications such as chatbots or text-to-video. These algorithms need more advanced chips to process large amounts of training data. These chips are bought by data centers for their use and to rent time to other AI developers. Trained models are hosted in the cloud to power applications that are sold to consumers.



This sets up a cycle from algorithms to chips to data centers and then to consumption that broadens out the investment opportunities. Overall data center capital spending is estimated to grow to \$1 trillion in 2028 according to Dell'Oro Group, with AI spending representing only a small portion of that spend (figure 1). Opportunities are expected to shift over the coming years as hardware investments (data centers) support software services and physical devices (robots and automobiles). We caution that these investments are nascent, and adoption curves are still uncertain.

Figure 1



Projected Data Center (purple) and current AI Data Center Spending (gold). Source: NVIDIA GTC 2025, March 18 2025 and Dell'Oro Group

How will AI be regulated to guard against negative consequences?

Regulation has already been happening for some time. Unlike data privacy, regulation has been at the forefront of AI development to ensure that AI systems are compliant. Nearly every geography has implemented some form of AI regulation in conjunction with data privacy legislation starting in the EU. AI application companies have also introduced several self-regulating organizations in anticipation of further regulations and rules with the preferred tack of pre-emptively introducing them as an industry before the regulators intervene.

How do you view current AI valuation levels?

In our opinion public valuations are in line with their markets; private markets are rich. Public valuations are higher than historical levels, but this is a function of the U.S. market trading at a premium to other global markets and U.S. growth names trading at a premium in their domestic market. This premium has been justified by high earnings growth rates that maintain reasonable P/E-to-growth ratios. However, valuations of private AI companies trade at very high multiples of sales with largely unproven business models – a not uncommon occurrence for early stage/new technologies with few comparators.

Are we on the cusp of another dot.com situation?

Having lived through that period ourselves, we can attest the circumstances today are different. The failure of the dot.coms was largely due to telecommunications equipment customers running out of financing and investors losing patience with the long-term, break-even models. In contrast, the current situation with AI is different. There's an immediate need for AI, supported by customers with a cumulative market capitalization in the tens of trillions of dollars, making even substantial capital spending relatively small. AI is advancing faster than the internet, encouraging data center customers to spend more to avoid being left behind.

Is AI a threat to employment and could that hurt the economy?

Trade and tariff policies will be more impactful in the short term than AI. Thus far, AI capital spending has benefited the economy and AI adoption has not led to weakness in aggregate employment.

It is reasonable to expect that companies will use AI to grow with less additional headcount than otherwise would be the case. This is the productivity uplift promise of AI that boosts profit margins. Increased productivity is a powerful driver of overall economic health. A good parallel is the last great productivity boom of the mid-1990s that (like all productivity enhancers) also brought fears of job losses. Additionally, the developed world faces an aging demographic in the decades to come, AI stands to be a part of the solution to that reality.

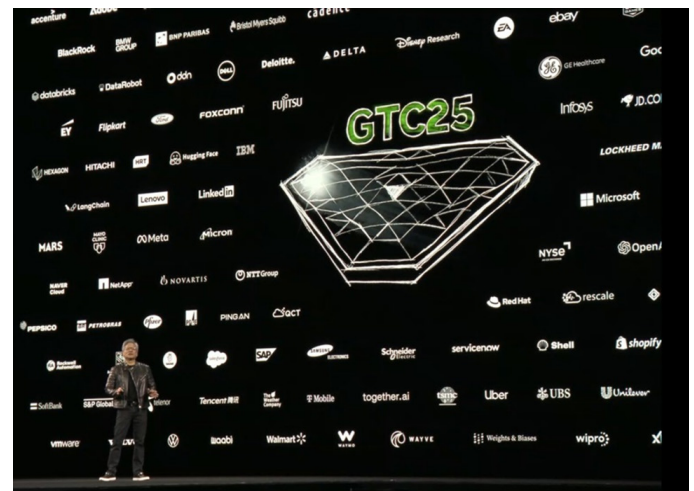
What jobs are likely to be impacted? Created?

Hard to tell yet, though early studies have been released. It is difficult to understand the economic impact of AI because it has just come into existence as noted by University of Toronto Professor Emeritus, Nobel prize winner Geoffrey Hinton, a pioneer of AI. There are numerous studies around potential job lossesⁱⁱ but many do not factor new types of jobs that will be created to offset losses as new uses emerge. In much the same way as the advent of the internet and mobility altered personal and professional life in the 1990s, AI is expected to introduce a wide variety of opportunities for those who lean into its adoption. Professional associations or unions will likely insist that while members can use AI tools for productivity - medical, legal, or financial conclusions must be reviewed by a licensed, human representative.

What about AI from other countries?

Media headlines around AI have understandably focused on a handful of U.S. companies. Industry participants understand that AI has advanced so quickly because of an extensive global ecosystem (Figure 2). AI academic insights came from Canadian and European researchersⁱⁱⁱ, AI chips are manufactured in Taiwan and Korea, equipment is manufactured in China and data centers across the world run the software. Canada, for example, is home to Cohere, which is well regarded as a peer to OpenAI in the language model (LLM) space.

Figure 2



A Broad Global AI Ecosystem shown at NVIDIA GTC 2025 (Source: Authors)

Scenes from recent NVIDIA GTC Conference, March 17-21, 2025.



Source: Authors

In focus in North America

Jon Borchardt, Sr. Analyst

George Trapkov, CFA, VP and Portfolio Manager

This week

Elections called in Canada – The Canadian Governor General has officially dissolved Parliament, paving the way for elections scheduled on April 28. The campaign is focused heavily on tariffs, Canada-US relations and economic strategies aimed at rejuvenating the Canadian economy. This election announcement was widely anticipated, as the Liberals were likely to face a confidence vote upon Parliament's return on March 24. Recent polls indicate a tight race between Mark Carney's Liberals and Pierre Poilievre's Conservatives, with the NDP trailing significantly.

Canadian retail sales decline more than anticipated – retail sales fell 0.6% in January, a couple tenths softer than the flash estimate. That follows an outsized (and upwardly revised) 2.6% jump in December as the GST/HST holiday continued to impact the data. Weakness in autos (-2.6%), food and beverage (-2.5%, mostly groceries and liquor stores) and sporting goods stores (-2.2%) drove the headline drop. Seven of 10 provinces reported higher sales, led by Newfoundland (+3.5%) and Saskatchewan (+2.7%). The weakness was concentrated in Quebec (-2.7%), while Ontario (-0.9%) and Manitoba (-0.4%) rounded out the softer provinces. The tax holiday will continue to add some noise to the data through March – just in time for tariff uncertainty to hit consumer sentiment – though the removal of the consumer carbon tax could add a buffer starting in April.

U.S. consumers still not feeling it – The Conference Board reported that consumer confidence fell another 7.2 points, with the March reading coming in at 92.9. The result was below the Bloomberg consensus forecast of 94 and marked the fourth consecutive monthly decline. The **consumer expectations reading dropped to 65.2, the lowest level in 12 years, as respondents became increasingly negative on the outlook for future employment and business conditions.** Optimism regarding the prospects for improved future incomes “largely vanished,” suggesting that worries about the economy and labor market have begun to influence consumers' views of their personal situations. Twelve-month inflation expectations rose to 6.2%, up from 5.8% in February. Survey respondents were also more pessimistic about the stock market outlook, with only 37.4% expecting higher equity prices a year from now. At last week's FOMC press conference, Fed Chair Powell said the economy is solid and that hard data remains in reasonably good shape. While he acknowledged weakness in some soft data, he noted that, historically, expectations surveys have shown limited efficacy as predictive tools. This assessment aligns with the view of BMO Wealth Management Chief Investment Officer Yung-Yu Ma – though with the added caveat that, on occasion, large drops in current conditions that aren't quickly

stabilized or reversed can point to impending spending slowdowns. Synchrony Financial (SYF) Chief Credit Officer Max Axler said this week that challenging economic conditions and persistent inflation are causing U.S. consumers across all income levels to become more thoughtful in their spending decisions, and purchase volumes have declined. Both the Fed and investors will be watching closely to see if this is a sign that soft sentiment data is beginning to show up in the hard economic data.

U.S. businesses not feeling it either – U.S. trade policy and inflation were top of mind for the approximately 400 corporate chief financial officers (CFOs) who responded to the Richmond Federal Reserve Bank's quarterly outlook survey. The resulting Economic Optimism Index fell 3.9 points in Q1 to 62.1. As the Richmond Fed notes, almost all of the post-election euphoria has now been erased. **Expectations for U.S. economic growth, hiring, and internal revenue forecasts have waned, while inflation assumptions have risen.** The decline in sentiment was most pronounced among the 53% of survey participants that source some or most of their inputs from Canada, Mexico, and/or China. **Respondents noted that tariff policy risk has created uncertainty, impeding planning and decision-making.** There is concern that the pass-through of higher input costs could negatively impact final demand. Despite elevated macro concerns, CFOs maintained relatively consistent forward revenue expectations for their own firms. Financial decision-makers are looking for clarity on the breadth and duration of tariffs.

Thoughts from the Bank of Canada – At its recent rate decision meeting, the BoC stuck to the hawkish messaging of the past few weeks. There was full acknowledgement that tariffs and the uncertainty clouding the outlook will weigh (perhaps heavily) on growth. Consumer and business sentiment have plummeted, while anecdotes suggest a more cautious tone on spending. Still, the BoC doesn't want to get too far ahead of itself, as the situation is fluid. Policymakers are extremely sensitive to upside inflation risks after the past few years, especially with fiscal stimulus likely playing a role in the response to the trade war. **That won't keep the BoC from cutting rates if tariffs worsen,** but it suggests any further easing won't be aggressive and limits how low the Governing Council is willing to go. **BMO Economics expects three more cuts for a total of 75 bps for the rest of the year.**

Still. Talking. U.S. Tariffs – The “BIG ONE,” “Liberation Day” for America, is now less than a week away. President Trump's reciprocal tariffs (and possibly a few others) had been expected on April 2. How things will ultimately play out is still uncertain, with recent

commentary from the President only serving to muddy the waters. This week, President Trump hinted at the potential for leniency suggesting tariff breaks could be offered to many countries. Levies on pharmaceuticals, semiconductors and lumber now appear more likely to arrive “down the road.” On the other hand, Wednesday afternoon brought the announcement of 25% tariffs on auto imports and suggested 25% will be applied to certain auto parts in early May. These tariffs will likely increase the costs of new vehicles, disrupt supply chains and reduce consumer choice. A tariff on copper imports might be implemented “within weeks,” sooner than industry had anticipated. Uncertainty around U.S. trade policy and its broader economic implications has left the Fed in a difficult position and many businesses hitting the pause button. The hope is that “Liberation Day” marks a turning point – restoring confidence, reviving animal spirits and reawakening the post-election optimism that drove markets higher.

Attention will be focused on Wednesday’s tariff announcements when the U.S. is set to reveal overarching reciprocal tariff intentions for all trading partners. Various trade reports and employment data in both the U.S. and Canada will also give plenty for markets to scrutinize.

- **Tuesday 4/1** – U.S. ISM Manufacturing, Final Manufacturing PMI | Canada Manufacturing PMI
- **Wednesday 4/2** – U.S. Overarching Tariff policy announced, Factory orders
- **Thursday 4/3** – U.S. Initial jobless claims, Trade deficit, Final Services PMI | Canada Balance of Trade, Composite and Services PMIs
- **Friday 4/4** – U.S. Employment report | Canada Employment reports

Next Week

Data scorecard as of March 26, 2025

Equity Market Total Returns						
	3/26/2025 Level	WTD	YTD	2024	2023	2022
S&P 500	5,712	0.8%	-2.6%	25.0%	26.3%	-18.1%
NASDAQ	17,899	0.6%	-7.2%	29.6%	44.7%	-32.5%
DOW	42,455	1.1%	0.2%	15.0%	16.2%	-6.9%
Russell 2000	2,074	0.8%	-6.8%	11.5%	16.9%	-20.5%
S&P/TSX	25,161	0.8%	2.4%	21.7%	11.8%	-5.8%
MSCI EAFE	8,879	-0.4%	9.9%	3.8%	18.2%	-14.5%
MSCI EM	607	0.0%	5.7%	7.5%	9.8%	-20.1%
Bond Market Total Returns						
		WTD	YTD	2024	2023	2022
Bloomberg U.S. Aggregate		-0.5%	2.1%	1.3%	5.5%	-13.0%
Bloomberg U.S. Treasury		-0.5%	2.1%	0.6%	4.1%	-12.5%
Bloomberg U.S. Corporate		-0.6%	1.7%	2.1%	8.5%	-15.8%
Bloomberg U.S. High Yield		0.0%	1.5%	8.2%	13.4%	-11.2%
Bloomberg 1-10 Year Munis		-0.5%	0.5%	0.9%	4.5%	-4.7%
Bloomberg Canada Aggregate		-0.7%	0.9%	4.0%	6.5%	-11.3%
Bloomberg Canada Treasury		-0.7%	1.1%	2.9%	5.0%	-9.9%
Bloomberg Canada Corporate		-0.4%	1.1%	6.9%	8.2%	-9.5%
Government Bond Yields						
	3/26/2025	Last Month End	Last Quarter End	2024	2023	2022
U.S. 10-Year Treasury	4.35%	4.21%	4.57%	4.57%	3.88%	3.88%
Canada 10-Year Government	3.13%	2.90%	3.23%	3.23%	3.11%	3.30%
U.K. 10-Year Gilt	4.73%	4.48%	4.56%	4.56%	3.53%	3.66%
German 10-Year Bund	2.79%	2.41%	2.36%	2.36%	2.02%	2.57%
Japan 10-Year Government	1.58%	1.37%	1.09%	1.09%	0.61%	0.41%
Currencies & Real Assets						
	3/26/2025 Level	WTD	YTD	2024	2023	2022
USD Index	104.55	0.4%	-3.6%	7.1%	-2.1%	8.2%
CAD:USD	\$0.70	0.6%	0.8%	-7.9%	2.3%	-6.7%
Bitcoin	\$87,286.31	3.7%	-6.9%	120.5%	157.0%	-64.3%
Gold	\$3,019.38	-0.1%	15.0%	27.2%	13.1%	-0.3%
Oil (WTI)	\$69.65	2.0%	-2.9%	0.1%	-10.7%	6.7%

*Benchmark data does not reflect actual investment performance but reflects benchmark results of the underlying indices referenced. You cannot invest directly in an index. Index definitions can be found at the end of this publication.

Index Definitions

Equity indices

S&P 500® Index is an index of large-cap U.S. equities. The index includes 500 leading companies and covers approximately 80% of available market capitalization.

NASDAQ Composite Index is a market-cap weighted index of the more than 3,000 common equities listed on the Nasdaq stock exchange.

Dow Jones Industrial Average (“DOW”) is a price-weighted average of 30 significant stocks traded on the New York Stock Exchange and the Nasdaq.

Russell 2000® Index (Russell 2000®) is an unmanaged index that measures the performance of the smallest 2000 U.S. companies in the Russell 3000® Index.

S&P/TSX Index is a capitalization-weighted equity index that tracks the performance of the largest companies listed on Canada’s primary stock exchange, the Toronto Stock Exchange (TSX).

MSCI EAFE Index (Developed Markets —Europe, Australasia, and Far East Index) is a standard unmanaged foreign securities index representing major non-U.S. stock markets, as monitored by Morgan Stanley Capital International. The index captures large and mid-cap representation across 21 developed markets countries around the world, excluding the U.S. and Canada.

MSCI Emerging Markets Index is a market capitalization weighted index representative of the market structure of the emerging markets countries in Europe, Latin America, Africa, Middle East and Asia. Prior to January 1, 2002, the returns of the MSCI Emerging Markets Index were presented before application of withholding taxes.

Fixed income indices

Bloomberg U.S. Aggregate Bond Index is an unmanaged index that covers the U.S. investment-grade fixed-rate bond market, including government and credit securities, agency mortgage pass-through securities, asset-backed securities and commercial mortgage-based securities.

Bloomberg U.S. Treasury Index is an unmanaged index that includes a broad range of U.S. Treasury obligations and is considered representative of U.S. Treasury bond performance overall.

Bloomberg U.S. Corporate Bond Index measures the investment grade, fixed-rate, taxable corporate bond market. It includes USD denominated securities publicly issued by U.S. and non-U.S. industrial, utility and financial issuers.

Bloomberg U.S. Corporate High Yield Index is an unmanaged index that covers the USD-denominated, non-investment-grade, fixed-rate, taxable corporate bond market. Securities are classified as high yield if the middle rating of Moody’s, Fitch and S&P is Ba1/BB+ or below.

Bloomberg 1-10 Year Blend Municipal Bond Index is a market value-weighted index which covers the short and intermediate components of the Bloomberg Capital Municipal Bond Index — an unmanaged, market value-weighted index which covers the U.S. investment-grade tax-exempt bond market.

Bloomberg Canada Aggregate Bond Index measures the investment grade, Canadian dollar-denominated, fixed-rate, taxable bond market. It includes treasuries, government-related, and corporate issuers.

Bloomberg Canada Aggregate Bond Index - Treasury is the treasury sub-component of the Bloomberg Canada Aggregate Bond Index, which measures the investment grade, Canadian dollar-denominated, fixed-rate, taxable bond market.

Bloomberg Canada Aggregate Bond Index - Corporate is the Corporate sub-component of the Bloomberg Canada Aggregate Bond Index, which measures the investment grade, Canadian dollar-denominated, fixed-rate, taxable bond market.



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ⁱ See “Apple has made major changes to the ranks of its AI executives in an effort to improve Siri, which has struggled to release new features,” Bloomberg, March 21st, 2025 (<https://www.bloomberg.com/news/videos/2025-03-21/apple-s-ai-shake-up-video>) and Apple Delays Siri Upgrade Indefinitely as AI Concerns Escalate, Bloomberg, March 7, 2025, (<https://www.bloomberg.com/news/articles/2025-03-07/apple-confirms-delay-of-ai-infused-personalized-siri-assistant>)

ⁱⁱ <https://www.cnn.com/2025/01/08/business/ai-job-losses-by-2030-intl/index.html>

ⁱⁱⁱ University of Toronto University Professor Emeritus Geoffrey Hinton receives shared Nobel prize for discoveries and inventions that enable machine learning with artificial neural networks <https://defygravitycampaign.utoronto.ca/news-and-stories/geoffrey-hinton-nobel-prize/>. Yoshua Bengio, Geoffrey Hinton, and Yann LeCun recipients of the 2018 ACM A.M. Turing Award for conceptual and engineering breakthroughs that have made deep neural networks a critical component of computing <https://www.acm.org/articles/bulletins/2019/march/turing-award-2018>