

What's next for AI, US tech innovation and thematic ETFs?

February 2025



Lisa Ren
ETF Product Manager,
Asia Pacific



Tom Digby
Director,
Head of ETF Business Development &
Capital Markets, APAC

Key takeaways

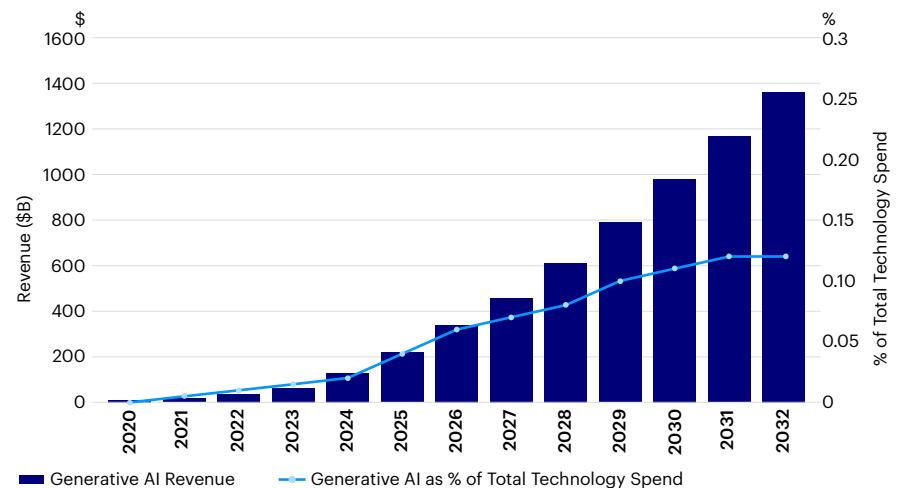
- We are currently in the wake of an AI era and believe the main drivers of this market are in the enabling infrastructure and architecture components.
- Natural language processing (NLP), machine learning (ML) and other sophisticated AI technologies have contributed to the construction of thematic ETFs.
- Apart from using AI in index construction, we are positive on this investment theme as AI is incorporated into companies' products, services and business activities.

Artificial intelligence (AI) is an investment theme with legs

We are currently in the wake of an AI era and believe the AI investment theme has a multi-year tail and much more room to run. AI is expected to lead to substantial improvements in total factor productivity gains globally, although the timing and impact could vary from country to country.

The main drivers of this thematic market are in the enabling infrastructure and AI architecture components. We believe that these sectors will continue to be catalysts of the AI market across both developed and emerging market economies in the near term.

Figure 1 - Bloomberg Intelligence estimated revenue for generative AI and % of total technology spend through 2032



Source: Bloomberg Intelligence, The Business Guide to AI, February 2024. Forward-looking statements are not guarantees of future results. They involve risks, uncertainties and assumptions, there can be no assurance that actual results will not differ materially from expectations.

The US stock market has been concentrated with mega cap AI winners recently and we believe there is more room for these companies to grow as they have plenty of cash to fund new opportunities. Despite the speculation of a potential tech bubble with the largest US tech stocks surging to record levels in recent years, we believe such a scenario is unlikely, at least in the short-term.

What's next for AI, US tech innovation and thematic ETFs?

February 2025

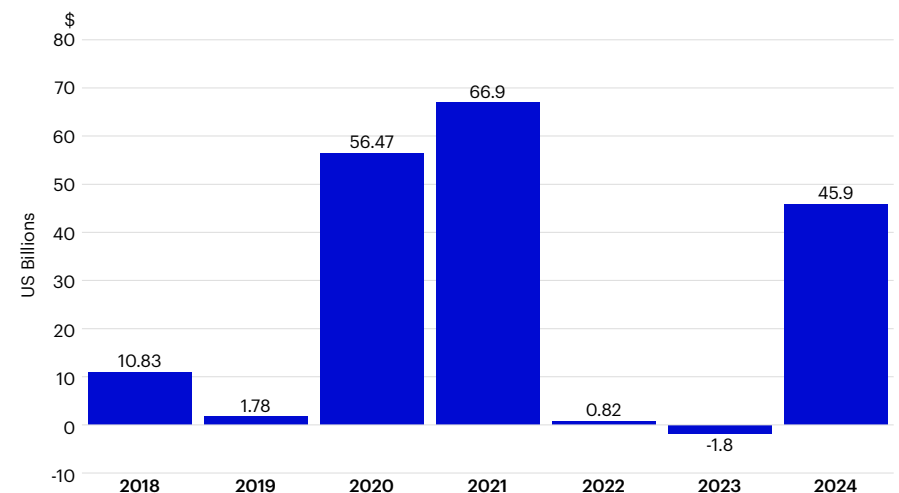
While the US tech sector is hot, the Magnificent 7 group of companies currently trade at a P/E ratio of nearly 40x, half of that of the Four Horsemen (Dell, Microsoft, Intel, Cisco) which traded at more than 80x trailing earnings during the peak of the 2000s Dot-com bubble.¹ The top six companies by market capitalization during the Dot-com bubble traded at 64x P/E at their peak.²

Over the next few years, we expect cash flows to flip for AI companies, from outflows or spending on AI infrastructure to inflows or selling AI cloud products and services to the majority of publicly traded companies.

AI's role in the construction of thematic ETFs

AI has already made an important contribution to investing by aiding in the construction of thematic ETFs. Thematic investments were once almost exclusively the domain of actively managed funds, but increased investor demand has seen passively managed ETFs tracking new thematic indices gain popularity. As of late 2024, there were more than 200 thematic ETFs available in Europe with combined assets of more than \$50 billion.³

Figure 2 - Thematic ETF annual flows – US\$ Billions



Source: Bloomberg L.P. as of December 31, 2024. Theme type determined by our internal tagged thematic fund list not available to the public.

The biggest difference between thematic and sector ETFs is that sector ETFs group companies together by specific fields of business activity, while thematic ETFs seek to identify companies that are involved in a specific theme or global trend irrespective of their economic sector. A theme is often associated with disruptive technologies, such as clean energy, blockchain, robotics or other technological innovations.

As thematic ETFs follow indices designed to select stocks based on characteristics other than sector classification, an index provider needs an efficient way to screen the universe of stocks for those meeting the theme's definition.

Natural language processing (NLP), machine learning (ML) and other sophisticated AI technologies can be used to quickly and objectively search through thousands or potentially millions of corporate documents and communications to flag occurrences of relevant key words and phrases to identify potential candidates for inclusion in that theme.

The use of these technologies offers a powerful complement to more traditional subject-matter-led approaches to identifying thematic exposures and some strategies look to combine both.

1. Bloomberg, data as of July 4, 2024

2. Ibid

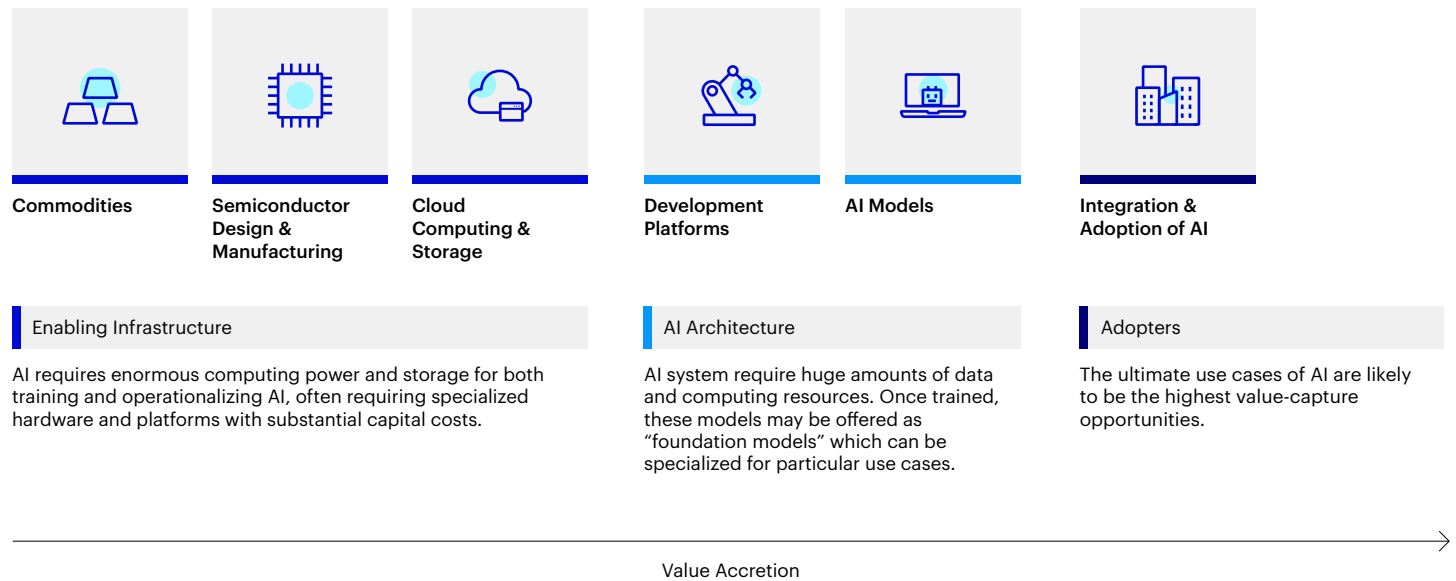
3. Bloomberg, data as of October 1, 2024

February 2025

AI as a thematic investing opportunity

The use of AI in index construction is just one example of the potential this technology has. Experts expect there to be examples of companies in most industries incorporating some form of AI into their products, services and business activities in the short to medium term. This enormous growth potential means that AI is an exemplary case study of what makes a good investment theme.

Figure 3 – Mapping the AI value chain



Source: Invesco, for illustrative purposes only.

AI-enabled applications are predicted to contribute potentially US\$15.7 trillion to the global economy by 2030.⁴ The largest part of this market is expected to be NLP followed by ML, with other potential growth areas including AI-enabled robotics and automation, and generative AI. Demand is being driven by the desire for greater efficiency and productivity from data-intensive devices that are such a critical part of our daily lives.

The concepts underpinning today's AI date back to at least the 1950s, when scientists, mathematicians and even the Hollywood industry envisioned the potential for machines to formulate ideas. However, AI began taking shape in the '90s and has gathered pace more recently with more scalable applications. Nvidia dominates the specialist chip market that is fundamental to the growth in AI-enabled applications, but the broader AI space includes more than enough diversity to construct indices, from broad to more specifically focused exposures.

4. PwC, 2017, "Sizing the prize"

What's next for AI, US tech innovation and thematic ETFs?

February 2025

Investment risks

The value of investments and any income will fluctuate (this may partly be the result of exchange rate fluctuations) and investors may not get back the full amount invested.

Securities mentioned above are for illustrative purpose only. It does not represent a recommendation to buy/hold/ sell the securities. It must not be seen as investment advice.

Important information

This document is for Professional Clients only in Dubai, Jersey, Guernsey, the Isle of Man, Continental Europe (as defined below) and the UK; for Institutional Investors only in the United States; for Professional/Qualified/Sophisticated Investors in Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates; for Sophisticated or Professional Investors in Australia; in New Zealand for wholesale investors (as defined in the Financial Markets Conduct Act); for Professional Investors in Hong Kong; for Qualified Institutional Investors in Japan; in Taiwan for Qualified Institutions/Sophisticated Investors; in Singapore for Institutional/Accredited Investors; for Qualified Institutional Investors and/or certain specific institutional investors in Thailand; for certain specific sovereign wealth funds and/or Qualified Domestic Institutional Investors approved by local regulators only in the People's Republic of China; for certain specific institutional investors in Malaysia upon request; for certain specific institutional investors in Brunei; for Qualified Professional Investors in Korea; for certain specific institutional investors in Indonesia; for qualified buyers in Philippines for informational purposes only; in Canada, this document is restricted to i) accredited investors and ii) permitted clients as defined under National Instrument 45-106 and 31-103 respectively. It is not intended for and should not be distributed to or relied upon by the public or retail investors. Please do not redistribute this document.

Forward-looking statements are not a guarantee of future results. They involve risks, uncertainties, and assumptions. There can be no assurance that actual results will not differ materially from expectations.

This is marketing material and not financial advice. It is not intended as a recommendation to buy or sell any particular asset class, security, or strategy. Regulatory requirements that require impartiality of investment/investment strategy recommendations are therefore not applicable nor are any prohibitions to trade before publication.

By accepting this document, you consent to communicate with us in English, unless you inform us otherwise. Data as at February, 2025, unless otherwise stated.

For the distribution of this document, Continental Europe is defined as Austria, Belgium, Denmark, Finland, France, Germany, Greece, Italy, Ireland, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, and Switzerland.

All articles in this publication are written, unless otherwise stated, by Invesco professionals. Views and opinions are based on current market conditions and are subject to change. This publication does not form part of any prospectus. This publication contains general information only and does not take into account individual objectives, taxation position or financial needs. Nor does this constitute a recommendation of the suitability of any investment strategy for a particular investor.

This publication is not an invitation to subscribe for shares in a fund nor is it to be construed as an offer to buy or sell any financial instruments. As with all investments, there are associated inherent risks. This publication is by way of information only. This document has been prepared only for those persons to whom Invesco has provided it. It should not be relied upon by anyone else and you may only reproduce, circulate and use this document (or any part of it) with the consent of Invesco. Asset management services are provided by Invesco in accordance with appropriate local legislation and regulations.

This publication is issued:

- in **Hong Kong** by Invesco Hong Kong Limited 景順投資管理有限公司, 45/F, Jardine House, 1 Connaught Place, Central, Hong Kong.
- in **Singapore** by Invesco Asset Management Singapore Ltd, 9 Raffles Place, #18-01 Republic Plaza, Singapore 048619.

What's next for AI, US tech innovation and thematic ETFs?

February 2025

- in **Taiwan** by Invesco Taiwan Limited, 22F, No.1, Songzhi Road, Taipei 11047, Taiwan (0800-045-066). **Invesco Taiwan Limited is operated and managed independently.**
- in **Japan** by Invesco Asset Management (Japan) Limited, Roppongi Hills Mori Tower 14F, 6-10-1 Roppongi, Minato-ku, Tokyo 106-6114; Registration Number: The Director- General of Kanto Local Finance Bureau (Kin-sho) 306; Member of the Investment Trusts Association, Japan and the Japan Investment Advisers Association.
- in **Australia** by Invesco Australia Limited (ABN 48 001 693 232), Level 26, 333 Collins Street, Melbourne, Victoria, 3000, Australia which holds an Australian Financial Services Licence number 239916.

This document has been prepared only for those persons to whom Invesco has provided it. It should not be relied upon by anyone else. Information contained in this document may not have been prepared or tailored for an Australian audience and does not constitute an offer of a financial product in Australia. You may only reproduce, circulate and use this document (or any part of it) with the consent of Invesco.

The information in this document has been prepared without taking into account any investor's investment objectives, financial situation or particular needs. Before acting on the information the investor should consider its appropriateness having regard to their investment objectives, financial situation and needs.

You should note that this information:

- may contain references to dollar amounts which are not Australian dollars;
 - may contain financial information which is not prepared in accordance with Australian law or practices;
 - may not address risks associated with investment in foreign currency denominated investments; and
 - does not address Australian tax issues.
- in **New Zealand** by Invesco Australia Limited (ABN 48 001 693 232), Level 26, 333 Collins Street, Melbourne, Victoria, 3000, Australia which holds an Australian Financial Services Licence number 239916.

This document is issued only to wholesale investors (as defined in the Financial Markets Conduct Act) in New Zealand to whom disclosure is not required under Part 3 of the Financial Markets Conduct Act. This document has been prepared only for those persons to whom it has been provided by Invesco.

It should not be relied upon by anyone else and must not be distributed to members of the public in New Zealand. Information contained in this document may not have been prepared or tailored for a New Zealand audience. You may only reproduce, circulate and use this document (or any part of it) with the consent of Invesco. This document does not constitute and should not be construed as an offer of, invitation or proposal to make an offer for, recommendation to apply for, an opinion or guidance on interests to members of the public in New Zealand. Applications or any requests for information from persons who are members of the public in New Zealand will not be accepted.

- in the **United States** by Invesco Advisers, Inc., 1331 Spring Street NW, Suite 2500, Atlanta, GA 30309, USA.
- in **Canada** by Invesco Canada Ltd., 16 York Street, Suite 1200, Toronto, Ontario M5J 0E6.
- in **Austria and Germany** by Invesco Asset Management Deutschland GmbH, An der Welle 5, 60322 Frankfurt am Main, Germany.
- in **Belgium, Denmark, Finland, France, Greece, Italy, Ireland, Luxembourg, Netherlands, Norway, Portugal, Spain and Sweden** by Invesco Management S.A., President Building, 37A Avenue JF Kennedy, L-1855 Luxembourg, regulated by the Commission de Surveillance du Secteur Financier, Luxembourg.
- in **Dubai, Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates** by Invesco Asset Management Limited, Index Tower Level 6 - Unit 616, P.O. Box 506599, Al Mustaqbal Street, DIFC, Dubai, United Arab Emirates. Regulated by the Dubai Financial Services Authority.
- in the **Isle of Man, Jersey, Guernsey and the UK** by Invesco Asset Management Limited, Perpetual Park, Perpetual Park Drive, Henley-on-Thames, Oxfordshire, RG9 1HH, United Kingdom. Authorised and regulated by the Financial Conduct Authority.
- in **Switzerland** by Invesco Asset Management (Schweiz) AG, Talacker 34, 8001 Zurich, Switzerland.