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Sujet traité : Découvrir la prime IA / Uncovering The AI Premium

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ALPINEMACRO
A Unique Mind On The Markets

RESEARCH NOTE

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Uncovering The AI Premium

AI-related stocks have soared since 2023, with the Mag 7 rising by 44.7% (Chart 1). Some are concerned that AI is caught in a bubble, echoing the dot-com mania of the late 1990s. Others, however, proselytize that AI could be the driving force behind the next industrial revolution and that AI-related companies will continue to rack up profits in the months and years ahead, justifying a premium valuation.

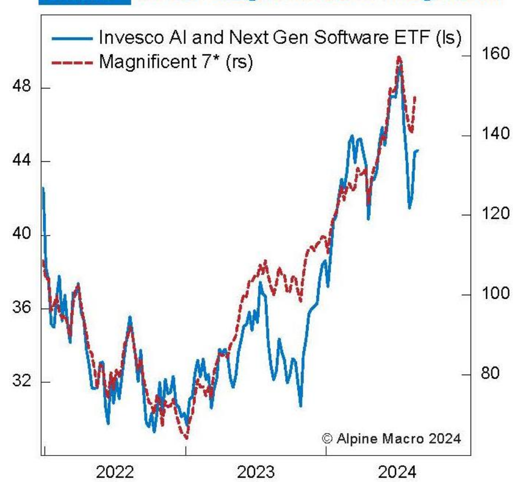
This report attempts to uncover the premium the market has currently priced in for AI. We construct a proprietary AI-Relevance Indicator (ARI) to gauge the AI exposure of individual firms within the S&P 500. This indicator enables us to evaluate the market's current pricing of AI-related expectations and provide investment recommendations.

Methodology Of Discounting AI

ARI uses an intuitive method to measure the exposure of various market segments to AI by tracking how frequently companies mention AI-related words in their earnings calls. We compiled a list of AI-relevant terms and calculated their frequency as a percentage of the total word count in each earnings call to create this indicator.

This methodology accounts for the fact that some companies are related to AI but not fully AI-based.

Chart 1 AI Has Caught Investors' Imagination



*Meta, Apple, Amazon, Google, Nvidia, Microsoft and Tesla

ARI, by design, moves on a sliding scale, unlike many other indicators that often categorize companies binarily as either AI or non-AI. Companies more relevant to the AI theme receive higher indicator scores, while companies less relevant to AI receive lower scores. Companies unrelated to AI receive a score of zero.

We then use ARI as an explanatory variable in regressions with traditional corporate financial metrics, such as EBITDA growth and P/E ratios after filtering for extreme values, to assess the premium or discount attributable to AI. The results are as follows:

P/E Ratio

AI-relevance is clearly positively correlated with higher valuation multiples. The regression suggests that, were it not for AI, the trailing P/E ratio for the average company in the S&P 500 would be 26.3 instead of the current 28. AI has added an additional 6% premium to the overall index (Chart 2).

Forward P/E Ratio

AI adds a relatively small multiples premium to the forward P/E ratio, suggesting that the market expects AI to deliver on earnings growth over the next year. The current forward P/E ratio for the average S&P 500 firm is 23, with AI contributing 0.9 points, or 4%, to this multiple. Without AI, the average forward P/E would be 22.1 (Chart 3).

Revenue Growth

The market currently expects sales growth for the average firm in the S&P 500 to increase by 4.1% over the next year. Without AI, this figure would drop to 2.7%. In other words, AI has boosted expected revenue growth by 1.4 percentage points (Chart 4).

EBITDA Growth

The market projects EBITDA for the average company to expand by 16.2% next year, despite a lower value for the market cap-weighted index. Without AI exposure, EBITDA growth would fall to 14.1%. This means AI is expected to boost the average EBITDA growth by 2.1 percentage points (Chart 5).

Chart 2 AI-Relevance Commands A Small Valuation Premium

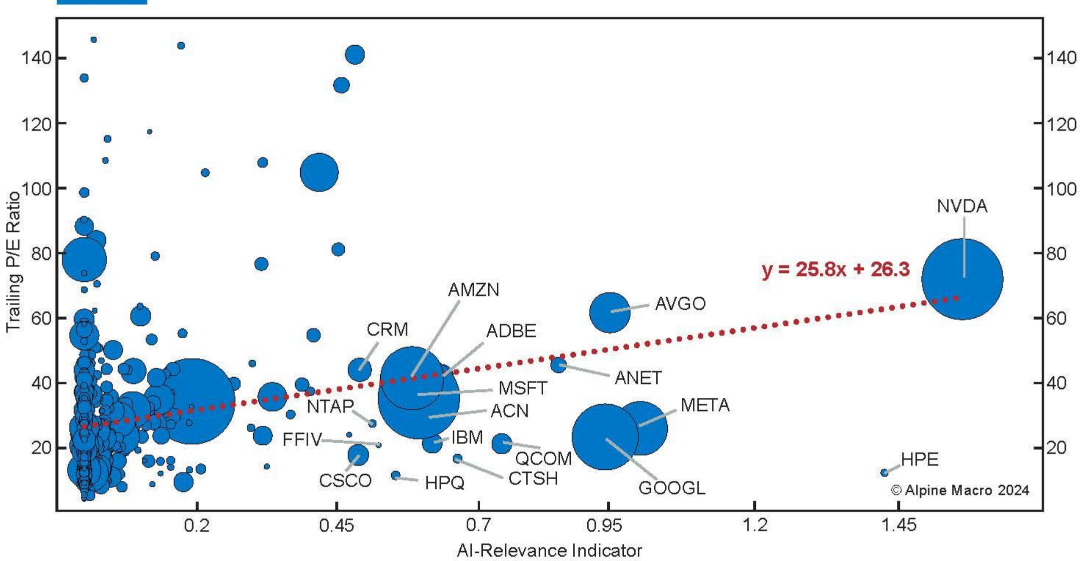


Chart 3 The Same Is True On A Forward Basis

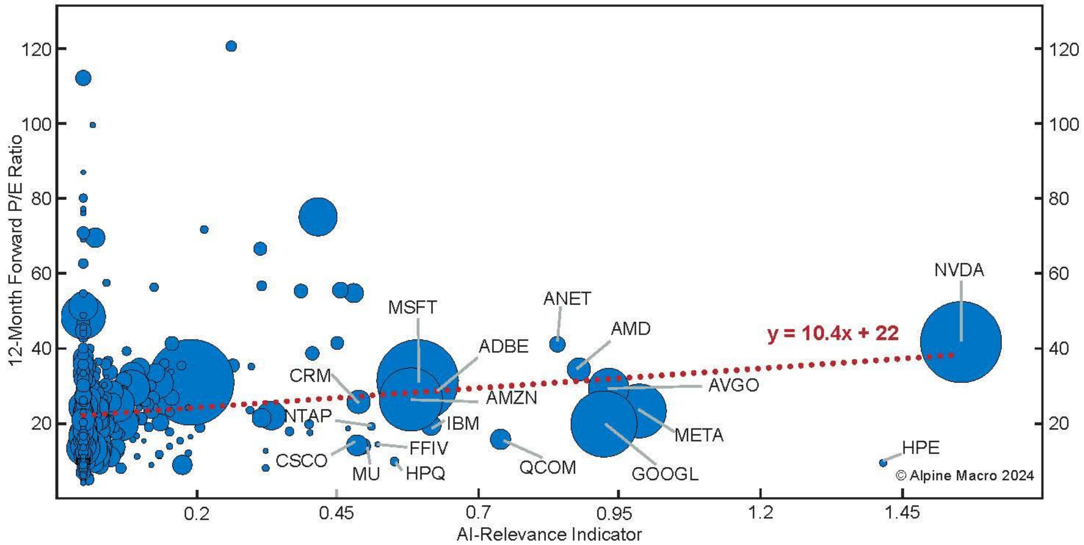


Chart 4 AI-Relevance Is Positively Correlated With Revenue Expectations

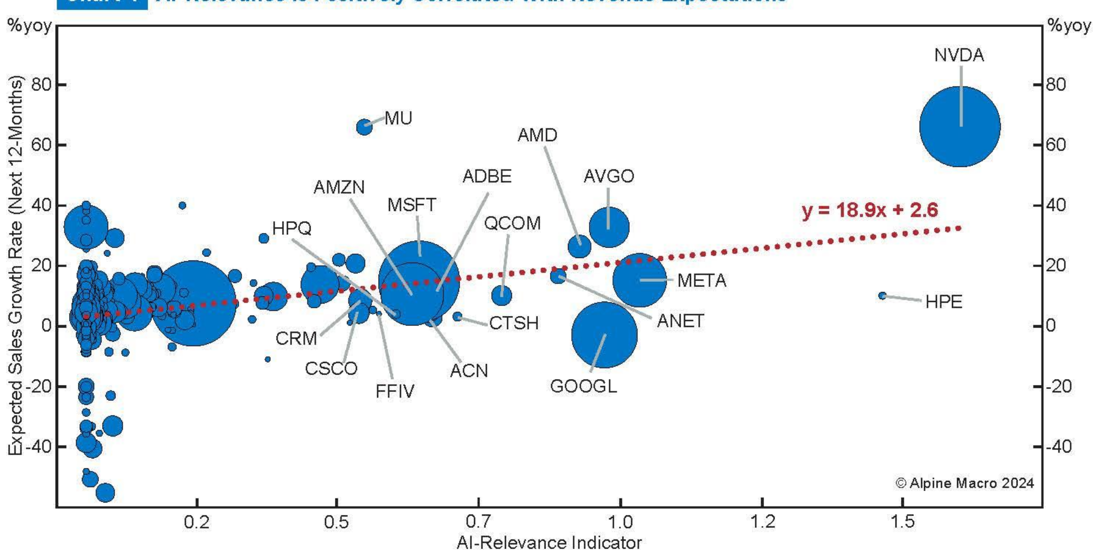
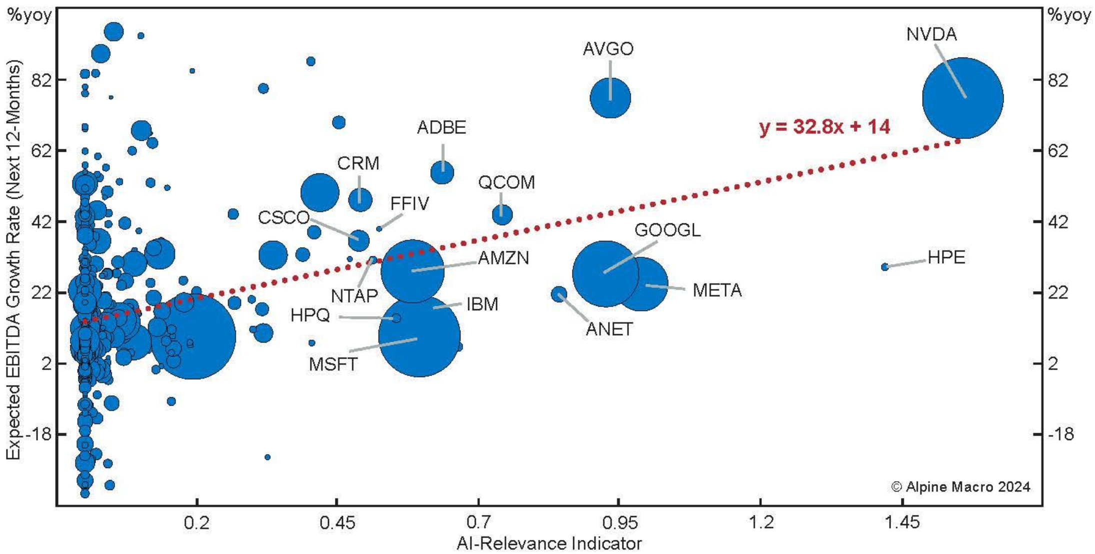


Chart 5 The Market Expects AI-exposure To Boost EBITDA Growth



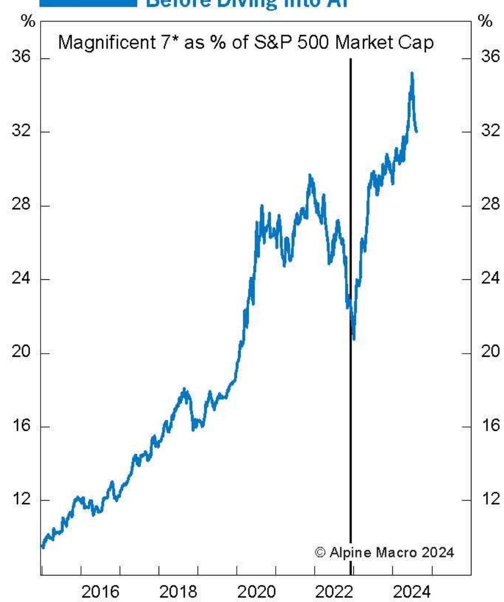
Interpreting Market Pricing

The AI premium is present but not extreme, based on ARI. Compared to the late 1990s tech bubble, markets remain rational and are far and are far from exuberant. Investors are expecting AI to deliver better-than-average earnings. This stands in contrast to the dot-com bubble, where lower or negative profits were not an impediment to higher stock prices.

Today, investors are not persuaded by exciting stories alone, and demand multiples to be justified by earnings growth. The selloff in tech stocks in early August was partially due to investors wanting to see AI companies generate sustainable revenue growth before committing more capital.

The S&P 500's overall exposure to AI is likely smaller than what headlines suggest. Many AI-exposed companies are part of the mega-cap universe, which garners much attention. However, these mega-cap

Chart 6 The Mag7 Were Already Huge Before Diving Into AI



*Meta, Apple, Amazon, Google, Nvidia, Microsoft and Tesla
Note:Vertical line denotes the launch of ChatGPT-3

companies became significant components of the index long before AI became a focal point. While AI is their latest big bet, it is not their primary revenue stream (Chart 6).

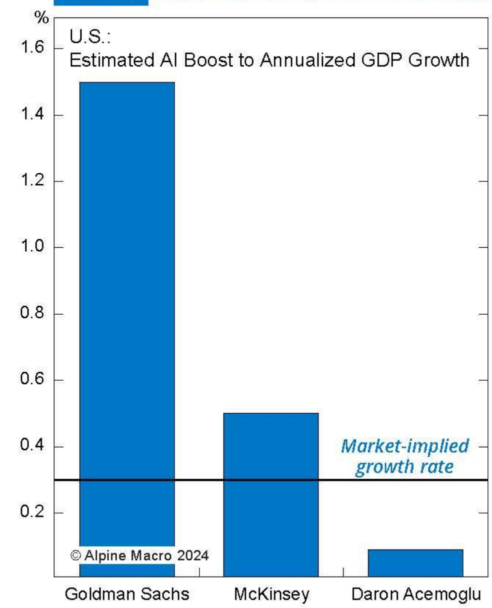
The market pricing of AI's boost to earnings growth also does not look excessive relative to academia's theoretical research on AI's productivity potential. Most approaches involve identifying tasks that AI could potentially replace. These tasks are then aggregated by jobs and industry to estimate labor cost savings and the resulting productivity increase.

We reviewed several research papers on this topic and selected a few that represent the range of mainstream expectations. This range is admittedly quite wide, spanning from negligible to a 75% boost to steady-state productivity (Chart 7):

- **Goldman Sachs** is the most optimistic, projecting AI to nearly double current productivity and GDP growth rates.[1] They foresee a 9.2% increase in total factor productivity and a 15% GDP rise over the next 10 years. Their analysis assumes a significant portion of tasks can be automated by AI (25% compared to Acemoglu's 4.6%). They also predict that AI will displace workers, who will then transition to new roles that drive further growth.

- **McKinsey** sees sizable growth potential from AI. They estimate that generative AI could contribute 0.3-0.7 percentage points to annual productivity growth in the U.S. through 2040,[2] with similar results expected for other developed markets.

Chart 7 AI's Productivity And Growth Potential



This estimate excludes potential GDP growth from increased capital investment.

- **MIT Professor Daron Acemoglu** sees limited benefits from AI.[3] He estimates that AI's economic impact over the next decade will primarily stem from automating and enhancing existing processes, particularly in the service sector. He expects a 0.5% increase in total factor productivity and a 0.9% overall rise in GDP over the next decade, translating to minimal annual output increases.

The current market pricing expects AI to deliver on productivity increases below the middle of

1 "Gen AI: Too Much Spend, Too little Benefit?" Goldman Sachs Global Macro Research, ISSUE 129 (June 25, 2024)

2 Acemoglu, Daron. *The Simple Macroeconomics of AI.* National Bureau of Economic Research, (May 12, 2024)

3 "The economic potential of generative AI: The next productivity frontier", McKinsey (June 14, 2023)

this range. Historical correlations show that a 1 percentage point rise in GDP growth should lead to a 6-7 percentage points of rise in earnings growth. The market expects AI to add about 2.1 percentage points to earnings growth over the next year.

This is equivalent to a 0.3 percentage point boost to GDP growth.

The ultimate outcome is unknown. Optimists point to AI's rapid adoption across industries as evidence that the AI revolution will unfold faster than previous technological leaps. Conversely, pessimists argue that much of the current hype focuses on large language models like ChatGPT, which mainly summarize and synthesize data. A truly transformative "killer" application has yet to emerge.

Bottom Line: Although AI trades at a premium, it does not seem to be inflating the whole market.

Caveat Emptor

The model quantifies each company's relevance to AI but is subject to several shortcomings:

Some companies may mention AI in their earnings calls to attract investor attention, even if their business is not heavily involved in AI. While this could skew the results for individual companies, the large sample size of the regressions should minimize the impact.

The frequency of AI-related terms mentioned during earnings calls has a positive relationship with the AI-relevance of the company's operations. However, that relationship may not always be linear. A deeper dive into the operations of individual companies is required to analyze this.

The model cannot explicitly take into account which stage of the long and complex AI supply chain each company operates in. For example, TSMC manufactures the AI chips designed by NVIDIA, which makes servers that run the models developed by Microsoft. Although all three companies are key to AI development, they have a client-supplier rather than direct competitor relationship.

Investment Conclusion

The AI premium on equity prices remains reasonable and does not indicate frothy market conditions similar to the late 1990s. We believe there remains opportunity to profit from investing in the AI theme.

Although AI is not in a mania, it has the potential to develop into one. The classic ingredients for a mania, as outlined by the late Charles Kindleberger in his seminal book "Manias, Panics, and Crashes: A History of Financial Crises", are beginning to fall into place:

- AI is a potential *displacement* that captures investors' imagination. The technology is genuinely changing how people live, work, and socialize with each other.

- Liquidity will be abundant as the Fed is on the cusp of rate cuts and a new monetary easing cycle is ahead.

- Investment vehicles that are large enough to absorb mass participation and speculation. The Mag 7 could be the perfect candidate for large inflows of speculative capital.

It is difficult to time a bubble, but we would still be in the early stages if one is currently developing as the signs of a late-stage bubble such as an IPO bonanza and indiscriminate buying are absent. We will continue to keep tabs on the market pricing of AI with our AI-Relevance Indicator.

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