Angeles

[1]

Переосмысление (Perosmysleniye)

Ivan IV, Grand Prince of Moscow and first Tsar of all Russia, was known as *the Terrible* in English, a translation of the Russian word, Грозный (*grozny*), which is more accurately defined as *fearsome*. Terrible or fearsome, and there's evidence that Ivan was both, he was the tsar that extended Russia's territory from the region around Moscow into the Caucuses, Central Asia and Siberia. In 1580, he sent the Cossack, Yermak Timofeyevich, into Siberia to conquer the Khanate of Sibir. The result was Russia controlling all of western Siberia, and Ivan established Tobolsk as its capital.

Two hundred and fifty years later in Tobolsk, another Ivan, a schoolteacher, and his wife Maria, had a baby boy they named Dmitri. He was the youngest of their 17 children, 14 of whom survived childbirth. Ivan soon went blind[2] and lost his job, forcing Maria to work at her family's nearby glass factory. When Dmitri was 13, the glass factory burned down, Ivan died, and the family was destitute. Leaving the older children to fend for themselves, Maria took Dmitri to Moscow to enroll

[1] Portrait of Ivan IV by Viktor Vasnetsov, 1897 (Tretyakov Gallery, Moscow).
[2] It's not known if from the sight of 17 children in the house.

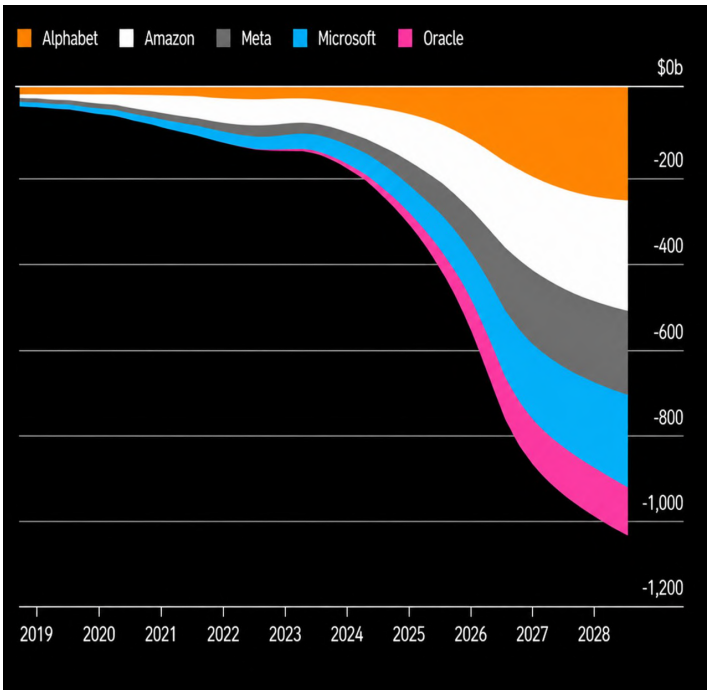
in the university there, but he was turned down. They travelled on to Saint Petersburg, where Dmitri was accepted as a student at his father's alma mater. Shortly thereafter, Maria died, and right after graduation Dmitri contracted tuberculosis, forcing him to convalesce in Crimea. He found a job teaching high school chemistry, and a year later, with health restored, returned to Saint Petersburg for his Ph.D.

Dmitri would go on to write the definitive textbooks on both organic and inorganic chemistry, publishing hundreds of articles on many scientific topics, gaining world renown. But he became the most important chemist of the 19th century with a singular insight, seeing what others could not, thereby changing our fundamental understanding of elemental chemistry, and giving us a framework for considering our world today.

Artificial Intelligence is the great theme of our time. As singularity approaches, the moment when AI surpasses human intelligence, AI will unleash an unprecedented wave of prosperity, or annihilate human civilization; experts are divided. The reality will likely be somewhere in between. What is not in doubt is the extraordinary expenditures being shoveled, literally in some cases, into building data centers, computing power and the energy and infrastructure to support them. Investors debate if this is madness, or exceptional foresight.

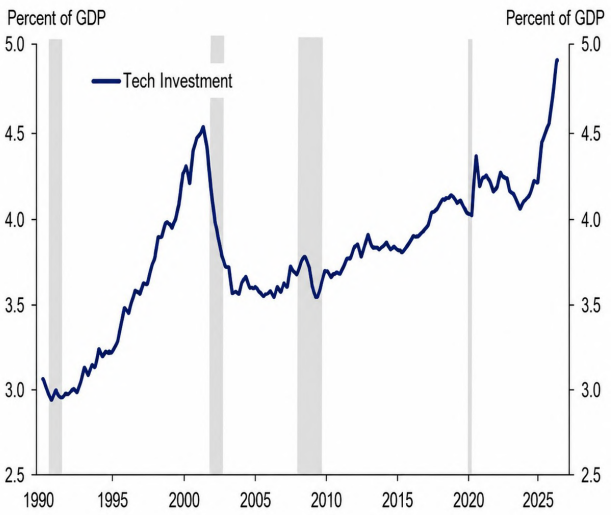
The five large US hyperscalers have already spent hundreds of billions of dollars building computing capacity, and are on track to exceed $1 trillion of annual spending (Chart 1). Spending thus far equals 5% of GDP, exceeding the internet buildout of the 1990s (Chart 2).

Chart 1 **Actual and Estimated Capex from Five US Hyperscalers, 2019-2028**



Source: Bloomberg

Chart 2 **Technology Investment as Pct. Of GDP, 1990-2026**



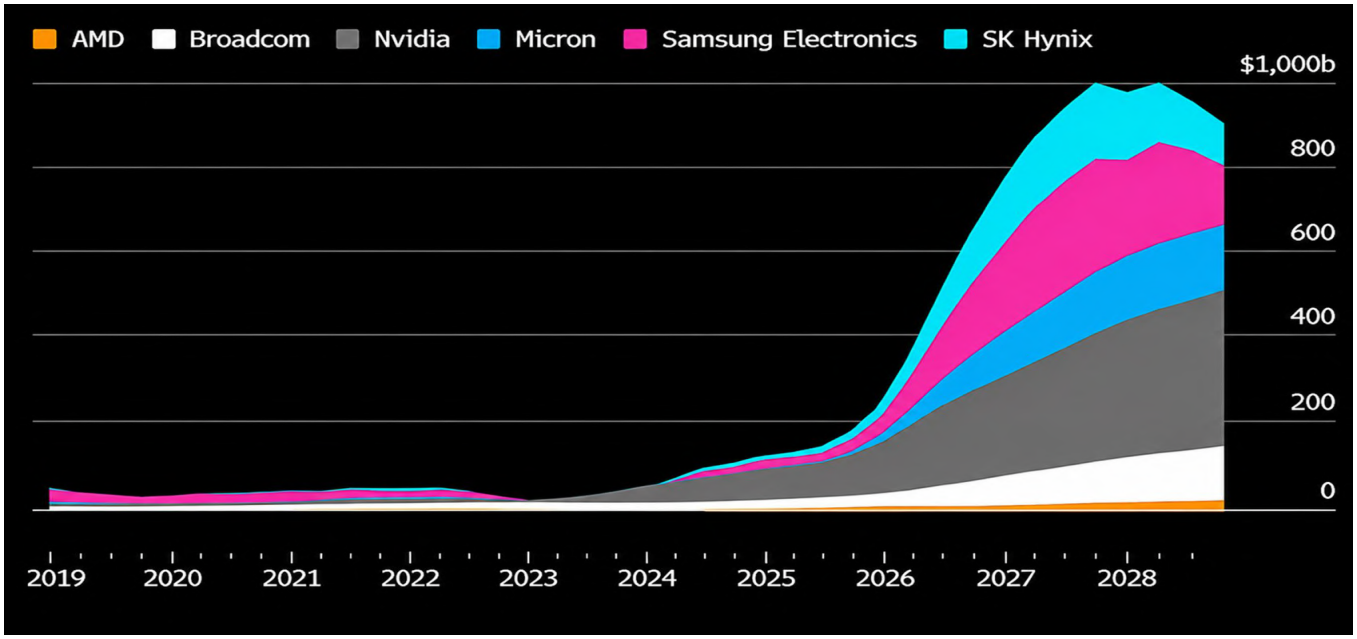
Shading indicates NBER recessions. Tech investment includes private nonresidential fixed investment in software and information processing equipment.

Source: Goldman Sachs

Much of this money is flowing into the pockets of the chip makers (Chart 3), but unlike the 1990s boom, expenditures are being funded largely from cash, and corporate profits remain at record levels.

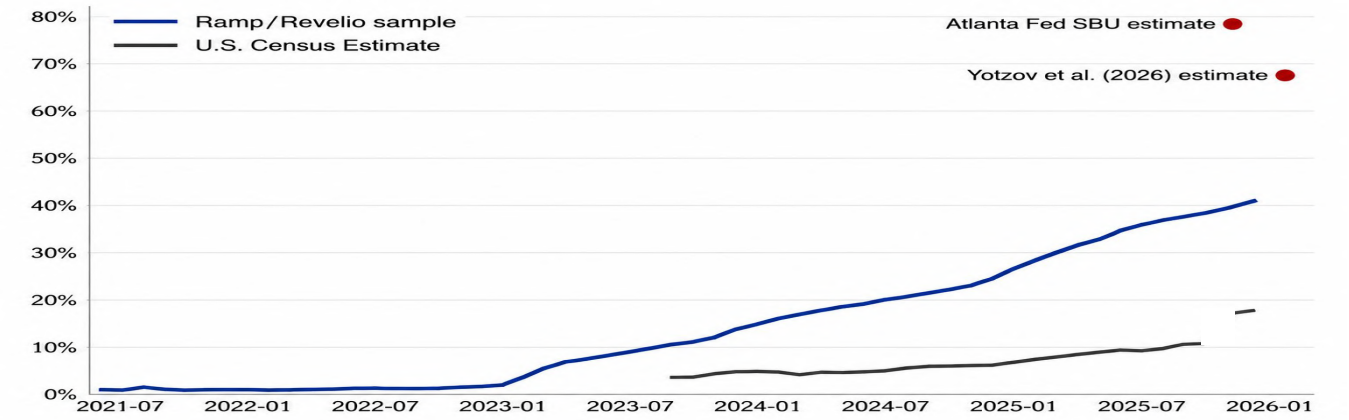
If you build it, they will come[3] has been proven true. AI adoption at US companies is estimated to be as much as 80% (Chart 4). The purpose of adopting any

Chart 3 Actual and Estimated Free Cash Flow to Six Chipmakers, 2019-2028



Source: Bloomberg

Chart 4 AI Adoption Estimates, 2021-2026



Notes. The Ramp–Revelio series reports paid-AI adoption in the linked analytical panel. Public benchmarks come from Census BTOS, executive surveys in Yotzov et al. (2026), and the Atlanta Fed Survey of Business Uncertainty (Federal Reserve Bank of Atlanta, 2026).

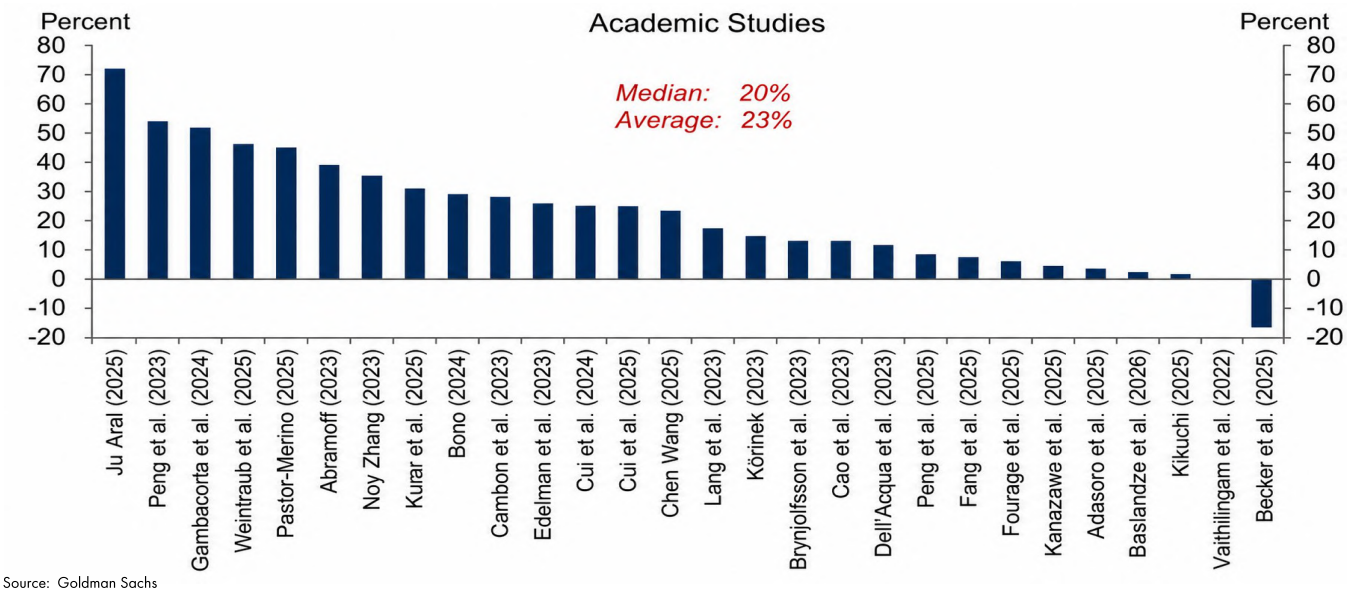
Source: https://ramp.com/data/ai-jobs-impact

[3] The famous line from the 1989 film, *Field of Dreams*, where Kevin Costner hears a voice telling him to build a baseball field in his corn farm and the ghosts of great players from the past will return to play there. Sounds like a silly premise, but it's a great film.

new technology is to become more efficient, and academic studies suggest a 20% boost in productivity from AI adoption (Chart 5).

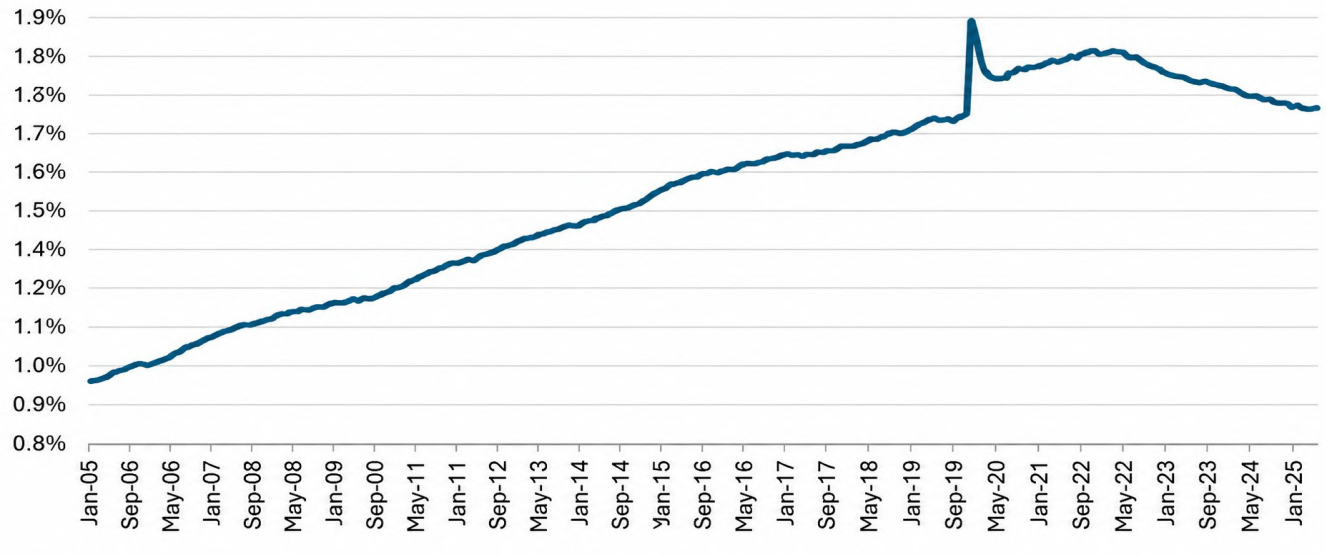
As to the notion that AI is eating jobs, there is little evidence of this, despite the dip in technology employment as a percentage of the total workforce, a modest decline that began four years ago (Chart 6).

Chart 5 Productivity Gains from AI Adoption, Academic Studies, 2022-2026



Source: Goldman Sachs

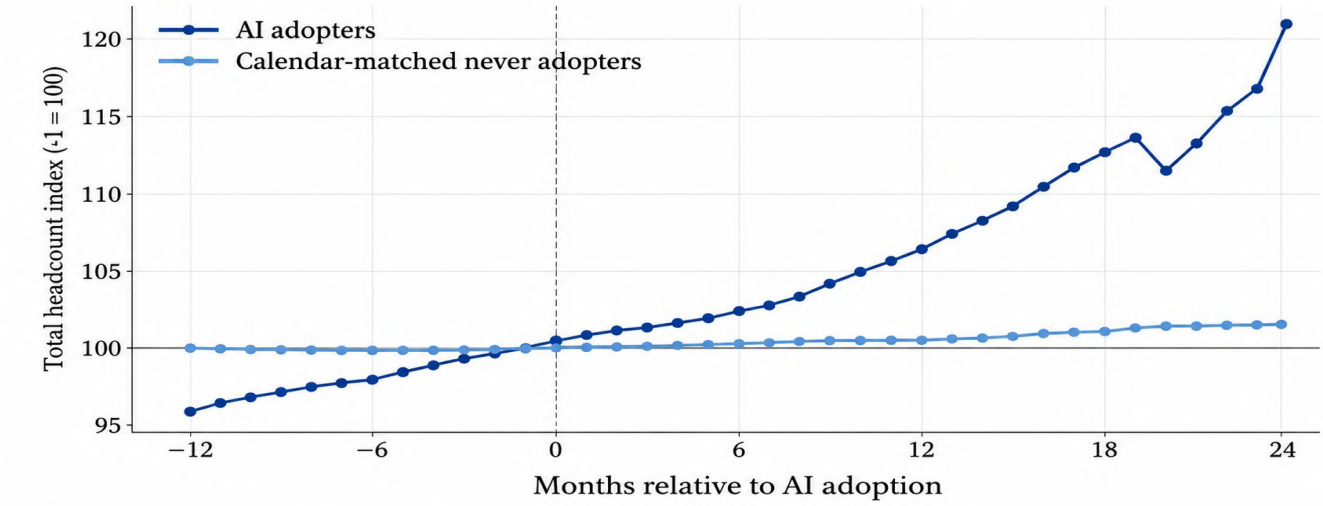
Chart 6 Employees in Computer Design and Information Services as Pct. Total Employment, 2006-2026



Source: Bureau of Labor Statistics

If anything, though, the evidence suggests the opposite: companies that have adopted AI have increased their headcount significantly over non-adopters (Chart 7). But overall, there is little correlation in the economy between AI adoption and the unemployment rate (Chart 8).

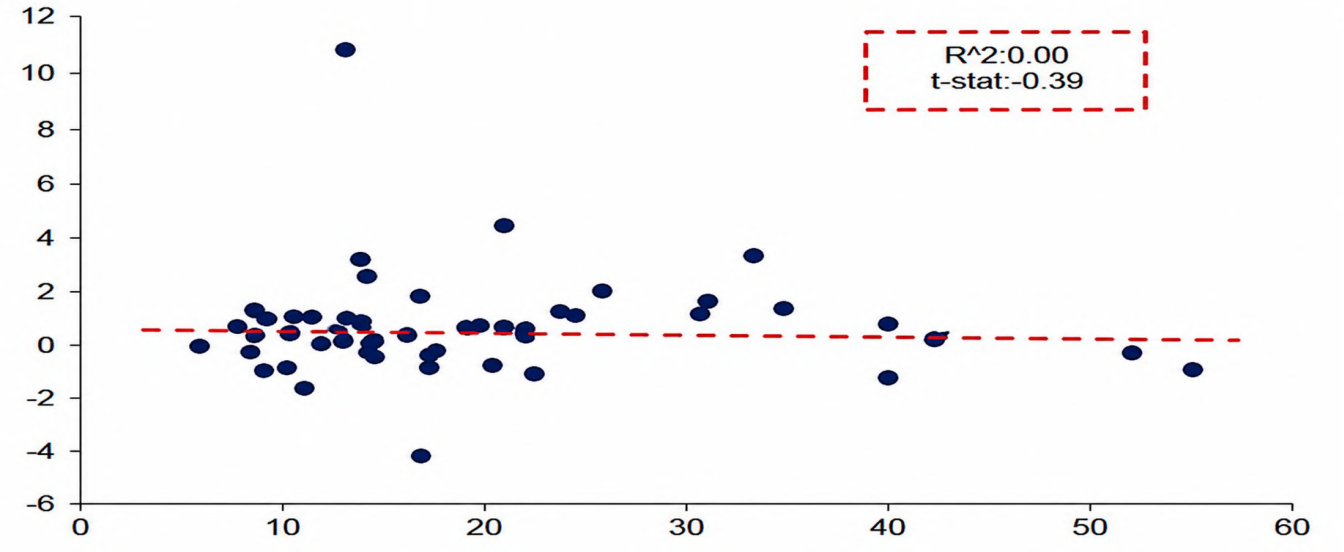
Chart 7 Indexed Headcount of AI Adopters and Non-Adopters



Notes. The figure plots mean total headcount for sustained adopters and calendar-matched never-adopter firms. For each adoption cohort, both series are indexed to 100 in event month −1 and then averaged across cohorts using treated cohort firm counts as weights.

Source: https://ramp.com/data/ai-jobs-impact.

Chart 8 AI Adoption (x-axis) and Unemployment Rate by Industry (y-axis)



Source: Goldman Sachs

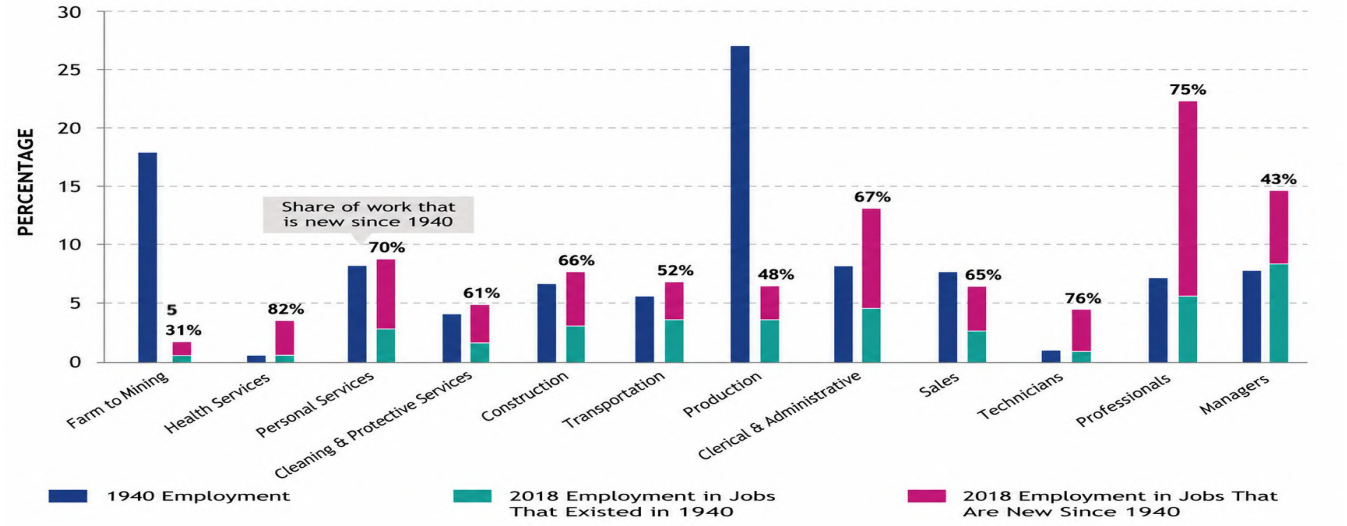
When considering the employment impact of AI, or any new technology, remember that the US labor market is in constant churn. Each quarter, between 7 and 8 million jobs are created, and 7 to 8 million jobs are lost (Chart 9). Investors focus on the headline *net* new jobs created or lost, but underlying the net number are much higher gross numbers of jobs in flux.

Most relevant is that from this enormous turnover of existing jobs comes entirely new ones. Think of it as natural selection, where small mutations are at first hidden, but eventually evolve into new species. Most (60%) of the jobs today did not exist in our grandparents' era (Chart 10).

Chart 9 **Gross Private Sector Job Gains and Losses, Quarterly 2015-2025 (MM)**

Source: Bureau of Labor Statistics

Chart 10 **Employment by Industry and New and Preexisting Jobs in 1940-2018**

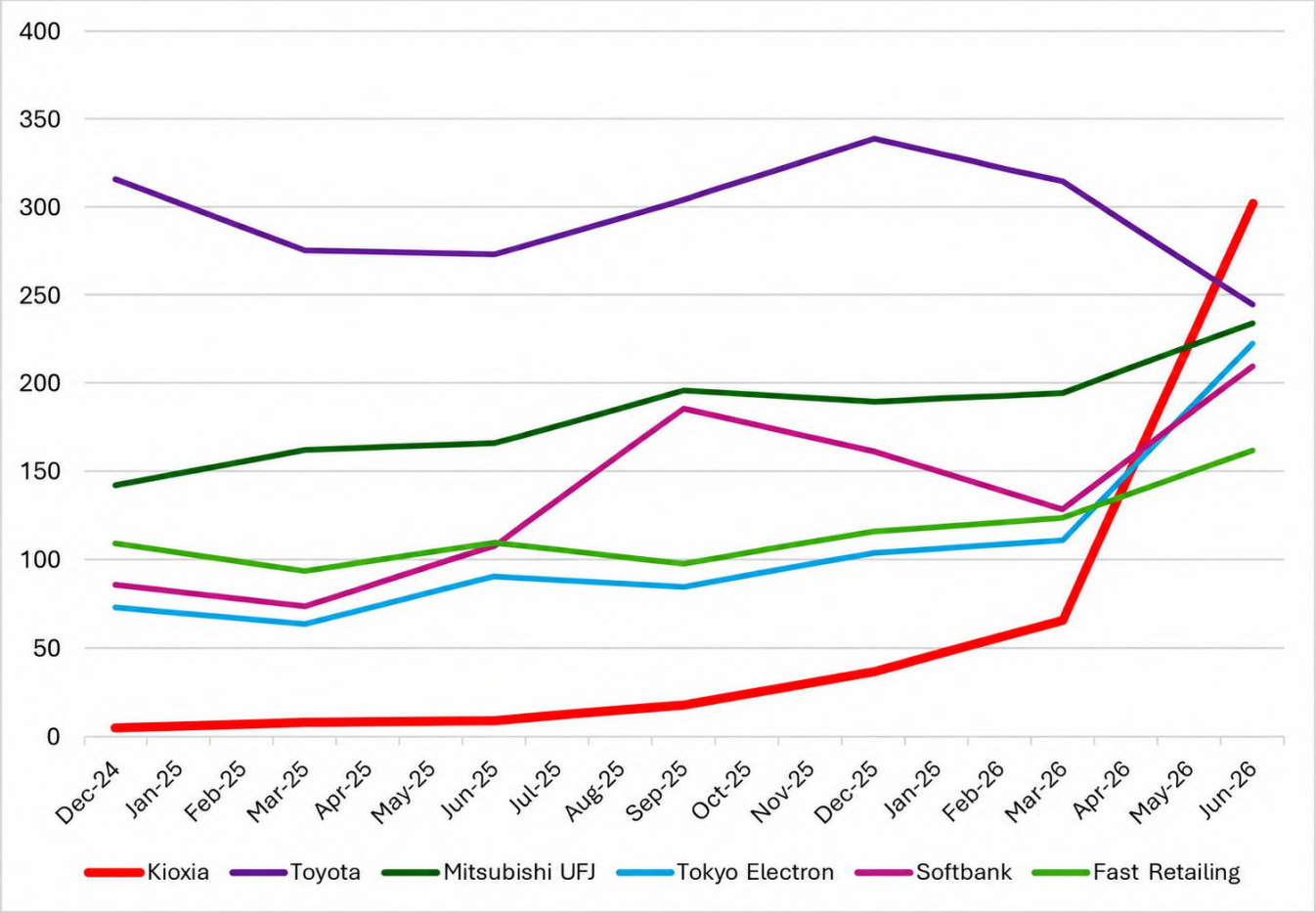


Source: David Autor, The labor market impacts of technological change: from unbridled enthusiasm to qualified optimism to vast uncertainty, NBER Working Paper 30074, May 2022

We should therefore expect AI to displace millions of workers; and for AI to create millions of new jobs, many of which do not even exist today. That is the lesson from history.

Artificial Intelligence is quickly permeating throughout the economy, impacting GDP growth, the labor market and corporate behavior, as nearly all companies seek to harness its potential. AI's most immediate, and dramatic, impact, though, has been in the equity markets, and not just in the United States. Overseas, Taiwan Semiconductor represents 20% of the entire Taiwan equity market. Samsung and SK Hynix are 40% of the Korean market. In Japan, a company most have never heard of because it listed only 18 months ago under a new name,[4] has surpassed Toyota to become the most valuable company in Japan (Chart 11).

Chart 11 **Market Capitalization of Six Largest Japanese Companies, 2024-2026 (US $Billions)**



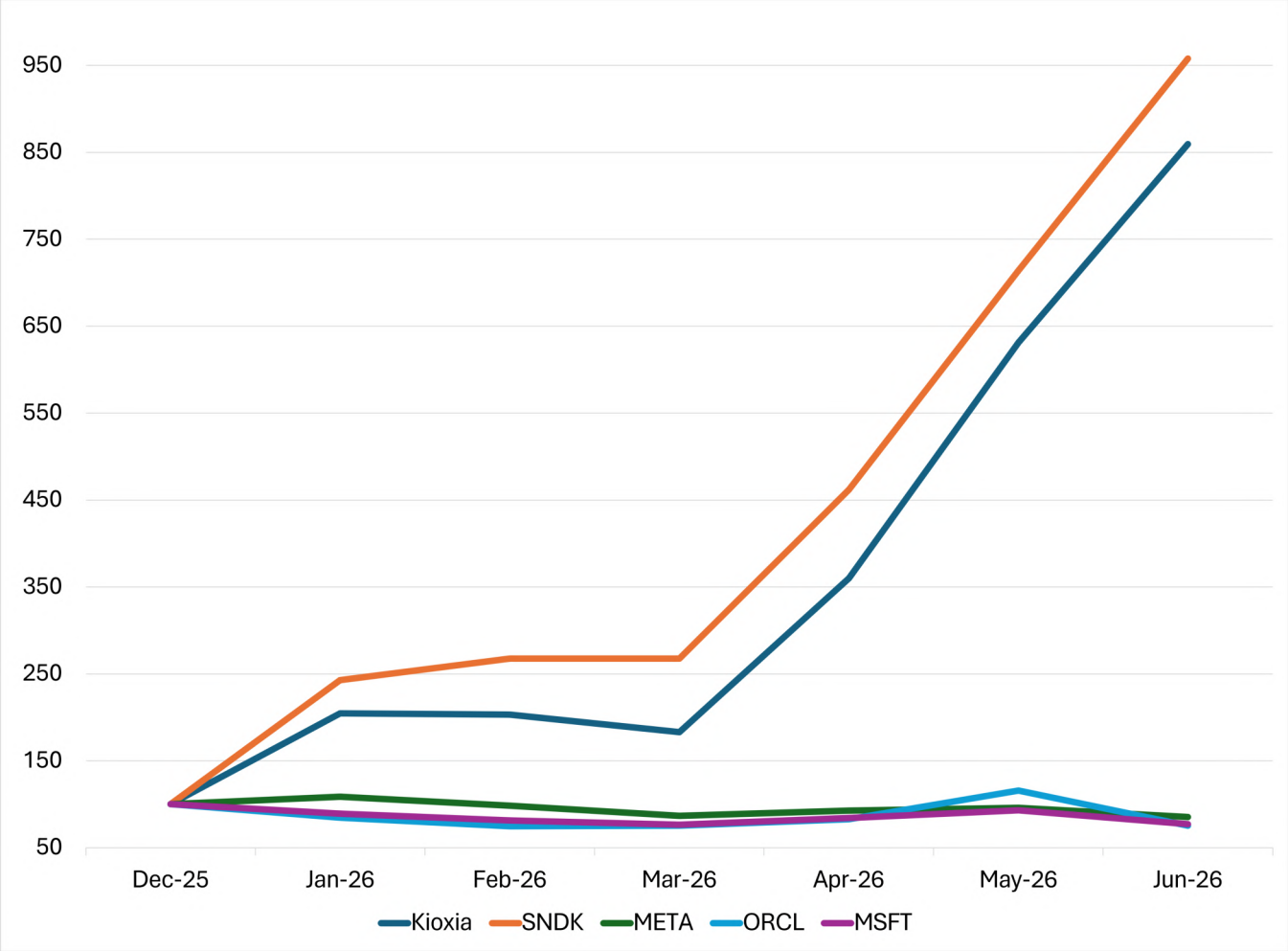
Source: Bloomberg

[4] Kioxia, formerly Toshiba Memory Corp., is an amalgam of the Japanese word for memory, *kioku*, with the Greek word for value, axia.

The market has differentiated between the recipients of the AI expenditure bonanza and those who are spending their treasure, favoring the former and punishing the latter. Sandisk and Kioxia are up 960% and 860%, respectively, this year, while Meta, Microsoft and Oracle, big spenders on computing capacity, are all down 10-20% (Chart 12). Unlike the internet bubble of the late 1990s, the rising tide is not lifting all stocks. The market is discerning.

Diversification is a fundamental tenet of investing, the first clause in the investment constitution, the eleventh commandment given at Sinai. Diversification is based on the underlying assumption that assets are not perfectly correlated, that returns cannot be forecasted and tend to mean revert, that portfolio volatility can be reduced without sacrificing (or ideally, enhancing) returns. The principle applies across assets as well as within asset clas-

Chart 12 **1H2026 Stock Performance of Selected AI-Related Companies**



Source: Bloomberg

ses. We discussed in 2021 why this might not apply across asset classes,[5] when we argued against the diversification properties of bonds, and the same diminishing effectiveness of diversification is true within asset classes.

The US equity market has massively outperformed the rest of the world (Chart 13). With a high correlation of 0.90 between US and non-US equities (Chart 14), there is little diversification benefit in geographic exposure.

Chart 13 MSCI USA Index vs MSCI World ex-US Index, 1988-2026

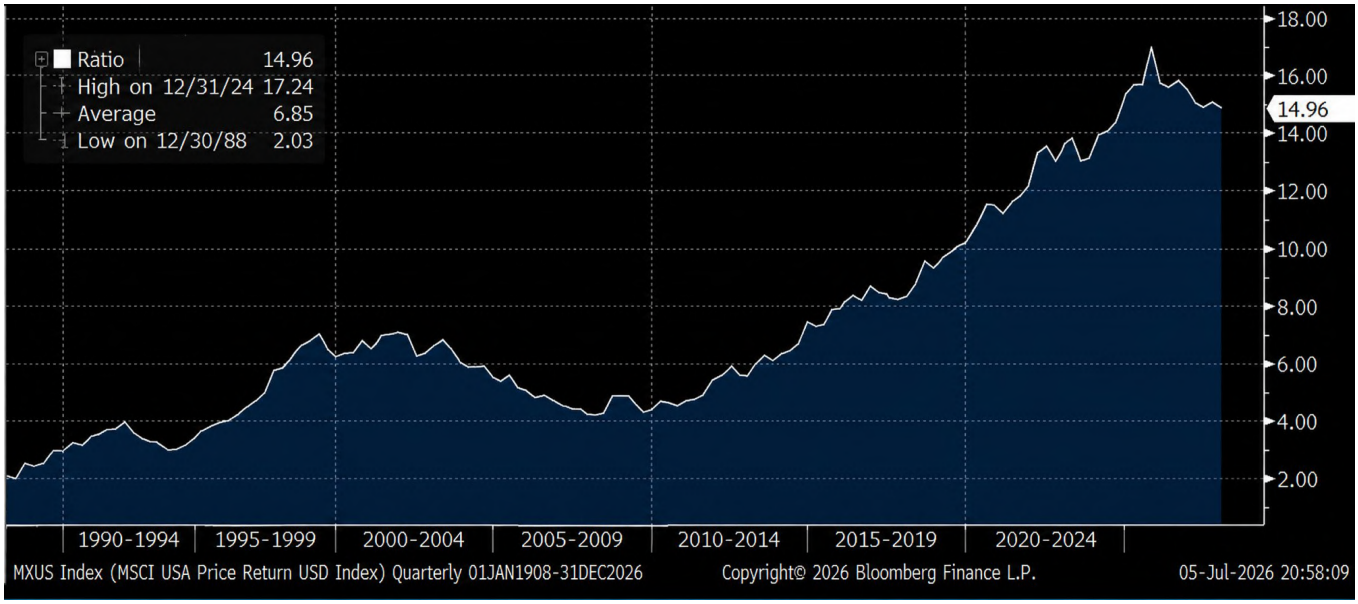
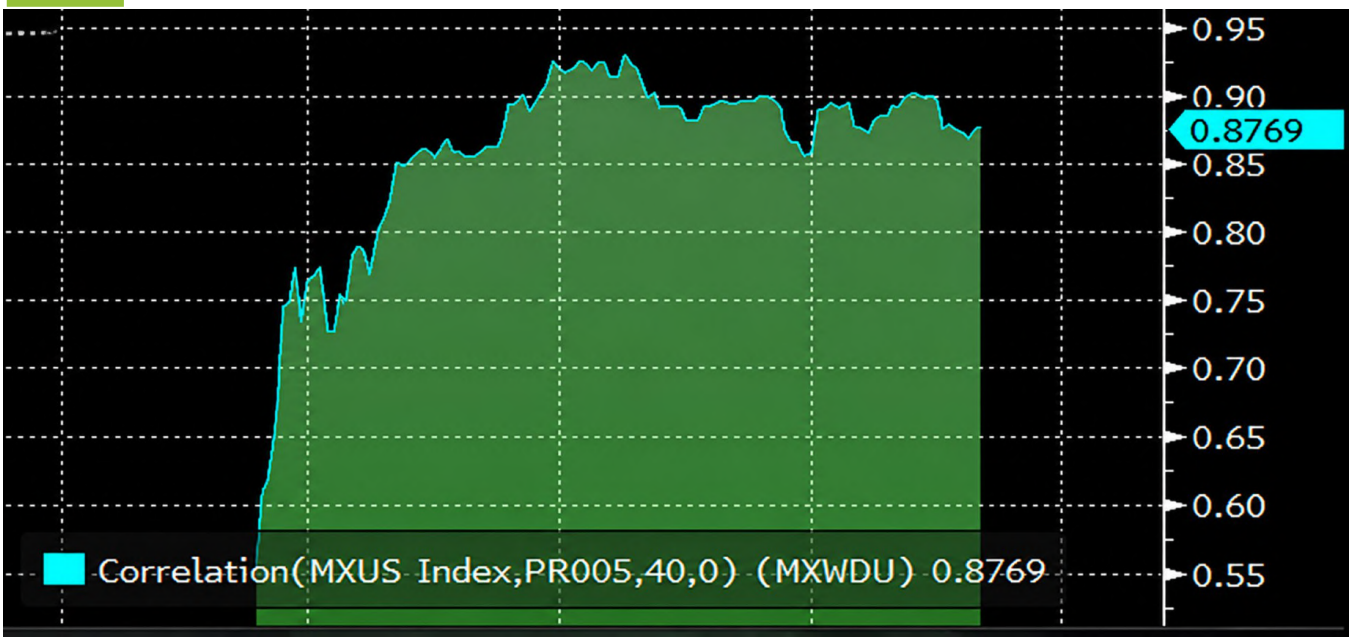


Chart 14 Correlation MSCI US Index and MSCI World ex-US Index, 1988-2026



Source: Bloomberg

5 https://www.angelesinvestments.com/insights/angeles/a-new-framework-to-strategic-asset-allocation

The reason for US outperformance is simple: on average, US companies are more profitable than non-US companies. This is true across every major industry sector (Table 1). The reasons are structural, primarily due to well-established rules of law and a market that rewards successful risk-takers. These characteristics are not found, or not to the same degree, in other countries. This argues for a structural overweight to US equities.

On a related note, it is time to bury the style box. Invented in 1992 by Morningstar as a simple way to categorize mutual funds, its methodology is illogical, irrelevant and misleading. Index providers assign multiple style categories to each company, thereby negating the distinction among styles. Furthermore, the notion that value investing means buying cheap stocks and growth investing means buying expensive, but fast-growing, stocks is obsolete. Both value and growth investors seek the same thing: companies whose future earnings are discounted against what they think those future earnings will be. That discount may exist because earnings will not be as bad as discounted (value), or because earnings will be better than forecast (growth), but it amounts to the same principle: to claim a share of future earnings that are priced at a discount to what those future earnings will be.

These are the companies that investors need to own. They exist in many industries and in many countries. They are both privately held and publicly traded. Most importantly, in the future, they will be the most successful adopters of new technologies. In today's economy, investors will be rewarded by owning those companies that can harness AI to transform their practices, processes, goods and services they offer to the world. Investment winners and losers will be separated, not by geography or ownership or style category, but by adaptation to new technologies.

Empedocles identified[8] the four basic elements of the universe as earth, fire, air and water. That remained our understanding of chemistry for over two millennia until 1789 when Antoine Lavoisier identified four main groups of elements[9] and 33 substances. In 1817, Johann Wolfgang Döbereiner grouped the elements into triads, noting that there was a relationship in atomic weights[10] among these groups of three.[11] In the 1860s, various chemists[12] attempted to sort elements into groups with common weights and properties. But it was Dmitri Mendeleev in 1869 who put it all together and provided the key insights to understanding the relationships among the elements.

Table 1 **Major Sector Return on Equity, 2026**

Major sector return on equity							
	Staple	Con disc	Tech	Hcare	Comm serv	Indust	Finan
US	25.8	24.2	32.6	17.1	23.9	25.1	14.1
Euro	18.2	5.0	16.5	16.9	7.8	16.7	13.4
Japan	8.3	5.6	12.7	9.3	20.2	10.6	10.5
China	14.1	10.2	8.9	8.8	15.9	9.7	10.8

Source: JP Morgan

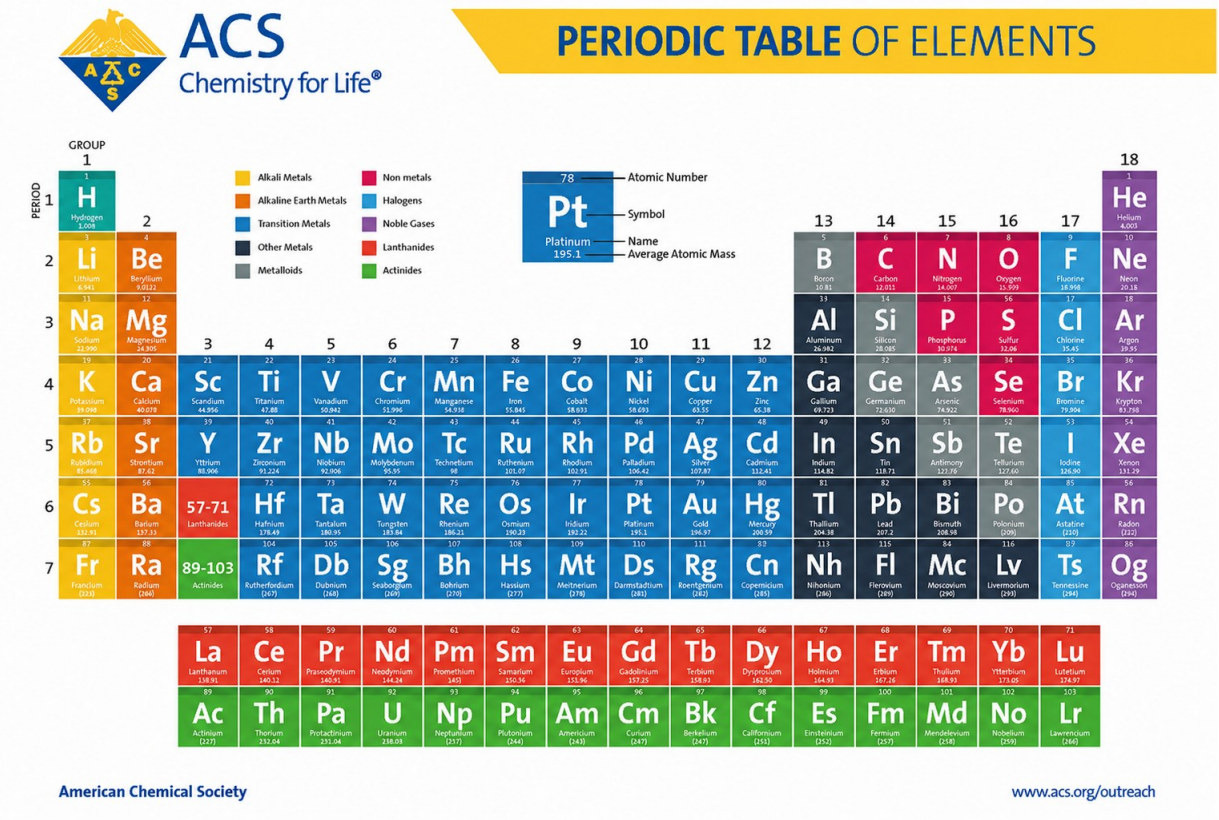
6 The style categories of Value, Core and Growth.
7 Morningstar is the exception in assigning a single style to each stock.
8 Around 420 BCE
9 Gases, non-metals, metals and earths.
10 The mass of the element.
11 He noted that the middle element had a weight approximately equal to the mean of the two flanking elements.
12 Alexandre-Émile Béguyer de Chancourtois, John Newlands, William Olding and Julius Lothar Meyer, in particular.

Mendeleev saw that our fundamental understanding of chemistry rested with the abstract elements, not with the many substances that existed in the world. Many substances shared a common element; for example, carbon could be found in charcoal, diamonds and graphite, all different substances with a shared carbon element. He observed that the atomic weight of an element was unchanged regardless of its form or what substance it was in, and this became the fundamental aspect in understanding chemical relationships.

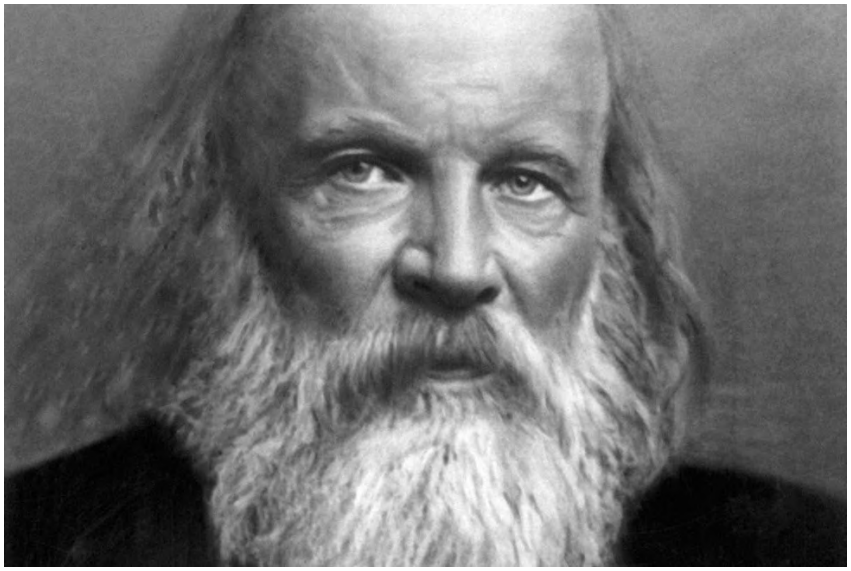
Mendeleev created a table based on increasing atomic weights, where in each row, each subsequent element contains an additional electron and proton, which slightly alters its chemical properties. Each column contains elements with the identical number of valence (outermost) electrons. Because chemical reactions are driven by these outer electrons, elements in each column share similar chemical behaviors and reactivities.

When Mendeleev placed all 70 known elements in this table, there were three spots that were blank. He boldly predicted that three new elements would be discovered that completed his table, and he was proven right: gallium was discovered in 1875, scandium in 1879 and germanium in 1886. Today there are 118 known elements in the periodic table.

Perosmysleniye (Переосмысление) is Russian for reframing. Investors need a new framework to understand this new world we are in, in the broadest sense. The geopolitical structure that stood for the past 80 years has crumbled. The order that replaces it is still being formed, but it will not resemble, or reassemble, the old order. Likewise, AI will transform businesses across every sector. Investors should discard their old framework of categorizing investments for a new one built around the impact of this new technology across every sphere of endeavor.



Dmitri Mendeleev showed us how to construct a new framework that built on the existing knowledge of the time, but was able to adapt to (and predict!) the discovery of new elements in the future. That is exactly our challenge, to create a new framework that can adapt to our changing world.



Source: Ria Novosti/Science Photo Library

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July 2026

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