BANCA D'ITALIA
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The series is available online at www.bancaditalia.it .

ISSN 1972-6643 (online)

Designed by the Printing and Publishing Division of the Bank of Italy

IS THERE A TECH BUBBLE IN THE US STOCK MARKET? EVIDENCE FROM AN AGNOSTIC VALUATION PROCEDURE

by Marco Albori*, Valerio Nispi Landi* and Marco Taboga*

Abstract

We propose an agnostic procedure for deriving implied abnormal earnings growth rates from equity prices. We use a dividend discount model that requires minimal subjective inputs, as its parameters are constrained by equilibrium conditions and can be estimated by the generalized method of moments using historical data. We use the model to address the debate on the potential overvaluation of large US technology companies involved in the Artificial Intelligence race. We compute the abnormal growth rates of earnings that would justify their current equity valuations, i.e., that would make them compatible with rational pricing in line with historical norms. We find that the current valuations would be rational if technology firms were able to sustain expansion rates for earnings that, while high, do not seem implausible given historical experience and the structural drivers of future growth.

JEL Classification: G10, G12, G15.

Keywords: dividend discount model, GMM estimation, equilibria on financial markets, rational stock valuation, artificial intelligence.

DOI: 10.32057/0.QEF.2025.975

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1. Introduction[1]

Advances in artificial intelligence (AI) have fueled substantial gains in the stock prices of listed US technology companies. Nvidia, the most focused on AI technology, was the first company to reach a 4 trillion-dollar capitalization, in early July 2025, followed by Microsoft three weeks later. The top ten US tech companies[2] (henceforth, Mag10) now account for one third and one sixth of total US and global stock market capitalizations respectively (Fig.1).[3]

The elevated and increasing valuations of US tech companies (as measured by their price/earnings ratios; Fig. 2), along with growing market concentration[4], have been a top-of-mind concern for financial analysts, prompting a debate as to whether the US stock market is currently experiencing a bubble like that of the dot-com era in the late nineties (Marks 2025; Novik and Stacey 2025; Duguid et al. 2025).

In this paper, we contribute to the debate by asking the following question: what growth rates of future earnings would make the current valuations of US tech companies rational? We seek to answer this question with a methodology that is as simple and transparent as possible, while also requiring minimal subjective inputs and priors.

We start from a three-stage dividend discount model (Molodovsky et al. 1965; Fuller and Hsia 1984; Sorensen and Williamson 1985), which allows us to model phases of abnormally high earnings growth such as currently in US tech firms. This model requires as inputs steady-state values of earnings growth, dividend payout ratios, and discount rates that are often difficult to pin down in an objective manner. We show how to link these quantities with equilibrium conditions proposed, among others, by Blanchard and Gagnon (2016). Then, we leverage these conditions to estimate relevant model parameters with the generalized method of moment, using historical data.

We solve the model numerically to derive the abnormal earnings growth rates implied by the current equity prices of the Mag10. We find that current market valuations would be rational if

[1] We thank Riccardo Cristadoro, Sergio Nicoletti Altimari, Luigi Federico Signorini and Giovanni Veronese for helpful feedback on previous versions of this paper. All opinions expressed here are our own and do not necessarily reflect those of Banca d'Italia.

[2] Alphabet (Google), Amazon, Apple, Broadcom, Meta, Microsoft, Nvidia, Oracle, Palantir and Tesla.

[3] Based respectively on Datastream US Total Market Index (including about one thousand constituent stocks) and World Total Market Index (including more than 7000).

[4] Stock market concentration in the US remains lower than in many other advanced economies, despite its significant increase since 2020. What distinguishes the US market is that concentration is driven by innovation-led sectors, in contrast to other countries dominated by traditional industries. Some studies (e.g., Oppenheimer et al. 2024; Taylor 2024) show that, like today, over the past 200 years, the biggest industry represented in the US stock market at each point in time was often the major driver of innovation and economic growth in that particular period. For example, the technology sector today has about the same share of total market capitalization of the energy sector in the 50s and is much less relevant than earlier drivers of growth, like the transport sector (1850-early 1900) and the finance sector (1800-1850).

the largest six companies were able to achieve real annual earnings growth rates of around 12% for the next five years, significantly lower than the rates recorded in the past five years. For the remaining, much smaller companies, which have recently entered fast-growing AI-related markets, earnings would have to grow in line with past performance.

Judging whether these implied growth rates are plausible (i.e. realistic that the Mag10 will manage to achieve them) requires an evaluation of the underlying structural growth drivers. In the last part of this paper, we provide a review of these drivers and discuss them, considering existing analyses and quantitative evidence. According to many analysts, the expansion pace of cloud-computing services, including AI-related ones, will likely be the discriminant factor determining whether or not the earnings growth rates implied in equity prices are achieved. We identify three large global markets where substantial AI adoption and, in some cases, the consequent displacement of jobs, are not just a future possibility but a scenario that is already underway at scale and is unlikely to stop. Mechanically, AI adoption generates demand for cloud compute, which is mostly offered by large US tech firms, thus supporting their growth. These observations would support the case for further rapid earnings growth for the Mag10, as implicitly envisaged by current equity prices.

The main contributions of our work are as follows. First, to the best of our knowledge, the procedure we propose for generalized-method-of-moments estimation of the parameters of a dividend discount model subject to equilibrium constraints is novel. Second, while the policy debate on the risks of overvaluation has been intense (e.g. Lombardi and Pinter 2024; Klass and Manu 2025; ECB 2025; IMF 2025), the methodologies employed in this debate have typically relied on price/earnings ratios or other valuation measures based on current values or short-term expectations of firms' balance-sheet items. This reliance limits the ability to assess the impact of medium- and long-term earnings growth on valuations and tends to attribute a large share of equity price variation to shifts in risk premia. By contrast, our model allows us to capture prolonged phases of abnormal growth – consistent with past empirical evidence – and thereby explore more thoroughly the pricing implications of the sustained earnings growth experienced by technology companies. Finally, we believe that ours is the first systematic discussion of structural growth drivers in the context of an equity-pricing exercise.

The rest of the paper is organized as follows: Section 2 introduces the dividend discount model and the procedure for estimating its parameters; Section 3 presents the data and the evidence obtained from the model; Section 4 discusses the growth drivers (literature and quantitative evidence); Section 5 concludes.

2. The equilibrium dividend discount model

In this Section, we introduce the equilibrium dividend discount model used to derive price-implied growth rates.

Let t denote time. We use the following notation:

- P_t: share prices.
- E_t: real earnings per share.
- D_t: real dividends per share.
- π_t: payout ratios, equal to D_t/E_t.
- g_t: earnings growth rates, equal to $E_t/E_{t-1} - 1$.
- r_t: discount rates (real rates of return required by investors on their equity investments).

The standard dividend discount formula used by investors to price equities is:

$$P_0 = \sum_{t=1}^{\infty} (1 + r_t)^{-t} D_t$$

We first show how to derive estimates of the equilibrium, steady-state values of P_t/E_t, π_t, g_t and r_t.

We require that, in a steady state, π_t, g_t and r_t are constant (denoted by π, g and r respectively).

Then, the dividend discount formula becomes:

$$P_0 = \sum_{t=1}^{\infty} (1 + r)^{-t} \pi E_0 (1 + g)^t$$

which implies:

$$\frac{P_0}{E_0} = \frac{\pi(1 + g)}{r - g} \quad (1)$$

provided that the equilibrium condition $r > g$, which is necessary for non-explosive price trajectories, is satisfied.

Several authors (e.g., Blanchard and Gagnon 2016, Cecchetti and Taboga 2017) show that a further equilibrium condition can be derived from minimal economic assumptions, such as dividend irrelevance (Modigliani and Miller 1958, Brennan 1971, Stiglitz 1974):

$$\frac{E_0}{P_0} = r \quad (2)$$

Under dividend irrelevance, a stock can be valued as if future earnings were entirely paid out as dividends. In such a case, there are no net investments in the firm and the real capital remains constant, which implies that, in an equilibrium, earnings (equal to dividends) do not grow in real terms.[5] In our framework, this means that $\pi = 1$ and $g = 0$. By plugging these values into equation (1), we obtain equation (2), which states that the earnings/price ratio (or earnings yield) should be equal to the real rate of return required in a steady state. Over long time spans, this assumption has been empirically sound: in the post-war period (1946-2024), the average earnings yield on the S&P 500 index has been 6.70%, while the geometric average of the yearly real rate of return (including dividends) has been 7.19%.

With the latter assumption in place, there is a neat relation among π, g and r:

$$r = \frac{g}{1 - \pi(1 + g)}$$

We use data on earnings, stock prices and dividends for a large basket of US stocks (Datastream US Total Market equity index) over the period 2005-2024 to derive generalized-method-of-moments estimates of the steady-state values of π, g and r satisfying the equilibrium conditions derived above. We use a 20-year sample to strike a balance between two competing objectives: ensuring that the sample is large enough to support meaningful inference, while maintaining the plausibility of the assumption of stable preferences and required returns.

We compute the following sample averages:

- $\bar{g}$: average annual real earnings growth rate.
- $\bar{\pi}$: average payout rate.
- $\bar{r}$: average annual total real return (capital gain + dividends - inflation).
- $\overline{ep}$: average earnings/price ratio.
- $\overline{pe}$: average price/earnings ratio.

Then, we define deviations from moment conditions:

$$\delta_1 = \bar{g} - g$$

$$\delta_2 = \bar{\pi} - \pi$$

$$\delta_3 = \bar{r} - g/[1 - \pi(1 + g)]$$

$$\delta_4 = \overline{ep} - g/[1 - \pi(1 + g)]$$

[5] Implicitly, the average real return on invested capital is assumed to remain constant through time. At the aggregate level, this assumption does not rule out productivity growth, but it requires Harrod-neutral technological progress. If the latter holds, the hypothetical firm that stops accumulating capital sees its productivity gains compensated by diminishing returns due to capital accumulation elsewhere in the economy.

$$\delta_5 = \overline{pe} - [1 - \pi(1+g)]/g$$

where δ_4 and δ_5 are not redundant due to Jensen's inequality adjustments.

A first-stage GMM estimate is obtained by minimizing numerically the loss function

$$l(g,\pi) = \sum_{i=1}^{5} [\delta_i(g,\pi)]^2$$

with respect to g and π.

The final estimate is obtained by minimizing

$$l_w(g,\pi) = \sum_{i=1}^{5} w_i [\delta_i(g,\pi)]^2$$

where the weight w_i of each moment condition is inversely proportional to the sample variance of period-by-period deviations computed in the first stage (i.e., moments that are estimated less precisely receive less weight).

The resulting estimated parameters, used as steady-state values in the exercise below, are reported in Table 1, along with autocorrelation-robust block-bootstrap confidence intervals.

We follow a standard strategy to model phases of abnormal earnings growth.

We assume that g_t can temporarily deviate from its equilibrium value, while reverting to it in the long run. Specifically, as is often done in the literature, we assume three stages:

- First stage (abnormal growth): $g_t = g_H$ for $t = 1, \dots, T_1$;
- Second stage (transition): $g_t = g_H - (g_H - g)(t - T_1)/(T_2 - T_1)$ for $t = T_1 + 1, \dots, T_2$;
- Third stage (equilibrium growth): $g_t = g$ for $t > T_2$.

In other words, earnings growth remains at an abnormal level g_H for T_1 periods; then, it linearly decays to its equilibrium value over the subsequent $T_2 - T_1$ periods, after which it remains constant.

The same three-stage structure is assumed for the payout ratio π_t, which starts from its currently observed value, remains constant for T_1 periods, and then decays to its equilibrium value π.

Following prevalent practice, we set T_1 and T_2 equal to 5 and 10 years respectively.

Thanks to this simple specification of g_t and π_t, we can numerically solve the equation

$$\frac{P_0}{E_0} = \sum_{t=1}^{\infty} \pi_t (1+r)^{-t} (1+g_t)^t$$

to compute the abnormal growth rate g_H that is compatible with any given observed value of P_0/E_0 (while using estimated equilibrium values for g, r and π).

In summary, the methodology above allows us to compute estimates of the implied growth rates of earnings that would justify the current equity valuations (i.e. that would make them compatible with rational pricing in line with historical norms). These estimates are discussed in the next Section.

We conclude the presentation of the methodology with a caveat. The decision to use an estimated equilibrium required rate of return r to discount dividends allows us to avoid subjective judgements about the "right" discount rate to use, and it rules out values of the discount rate that would not be sustainable in the long run. Moreover, as the model is framed in real terms, we do not need to worry about inflation dynamics: implicitly, inflation has counterbalancing effects on the nominal growth of earnings and on nominal required returns (i.e. these effects would cancel out if they were incorporated in the pricing equations). However, our conclusions could be invalidated if significant time-variation in the real risk-free rate and the equity risk premium, the two components of the real required rate of return, were able to bring the latter far from equilibrium values.

3. Data and evidence from the model

We start with some descriptive evidence on price/earnings (P/E) ratios of technology companies, which are often part of the previously cited debates about over-valuation risks.

P/E ratios for the US stock market have been on an increasing trajectory for more than a decade, with a notable surge during the Covid period, and they are approaching the levels observed during the dot-com era (Fig. 2). In contrast, the P/E ratios of the largest tech companies remain well below the dot-com extremes, in part because stock prices have not skyrocketed as spectacularly as they did in the late nineties (Figs. 3 and 4).

By focusing on the Mag10, we find significant heterogeneity in their current and forward P/E ratios (from 20 to more than 600; Table 2). The smaller companies (Broadcom, Oracle, Palantir and Tesla) have the higher multiples. These are also the companies that recently have made – or are in the process of making – inroads into new, mostly AI-related businesses that have high growth potential and are expected to significantly change the level and composition of their earnings.[6] The larger companies, instead, have much lower multiples. This may reflect investors' expectations that their profits are unlikely to experience spectacular growth rates, given their already huge size and reliance – at least in part – on fairly traditional and saturated markets. Finally, Google's relatively low P/E ratio (around 20) seems to indicate that investors are not indiscriminately pouring money into AI companies: while Google has developed frontier and, in some cases, best-in-class AI models, it is not yet clear that its AI strategy is able to contrast threats to its most lucrative business (Search), which might be displaced by the rapid change in users' behavior (the use of large language models – LLMs – instead of Internet navigation).

This preliminary descriptive evidence seems to point to the fact that investors are still significantly discriminating tech and AI-related firms by their idiosyncratic earnings prospects. Such discrimination tends to vanish during bubbles and other periods when sentiment and herd behavior substantially shape valuations (e.g. Chang et al. 2000; Baker and Wurgler 2006).

We now discuss the evidence obtained from the model introduced in the previous Section. By numerically solving the model, we compute the abnormal growth rates of earnings (gH) that would justify the current equity valuations, i.e. that would make them compatible with rational pricing in line with historical norms. Table 3 shows the model-implied growth rates, together with recent earnings growth rates and analysts' expected growth rates, all inflation-adjusted.

For the six largest companies in our sample, the average model-implied annual growth rate is 12%, with moderate dispersion. This indicates a significant deceleration from the 33% average growth observed over the past five years and is also more conservative than the 15% growth expected by analysts.

For the remaining four companies, the mean model-implied growth rate is 41%, which compares to 39% in the previous 5 years and 17% expected by analysts. As discussed in the previous Section, these four companies are considerably different from the other six: they are much smaller and have only recently entered fast-growing AI-related markets. Their implied growth rates are compatible with scenarios – far from guaranteed, but not utterly unrealistic – in which they manage to scale up their new business lines at a pace similar to that kept in recent years.

[6] Broadcom has recently become a key supplier of AI chips that offer an alternative to NVIDIA's silicon. Oracle, traditionally a supplier of database software, has successfully scaled up its cloud data center business, which is deemed able to compete with those of major cloud-services vendors such as Amazon. Palantir, which previously provided database-integration services mostly to defense and law-enforcement contractors, has significantly expanded its offerings with AI services that appeal to large corporations. Tesla is continuing to develop autonomous driving and a humanoid robot that – in case of commercialization – could open huge markets.

In summary, current equity valuations for the top US tech companies are rational if one expects high but not historically unusual growth rates for the coming years. Apart from historical comparisons, determining if these expected growth rates are realistic is challenging. This assessment relies heavily on subjective judgments about market developments, particularly the future demand for AI-related services and improvements in productivity and profitability driven by AI adoption. In the following Section, we review data and literature that may help to inform these judgments.

4. Review of structural growth drivers

This Section provides a reasoned review of analyses and data sources aimed at better understanding the structural drivers that support the earnings growth of large US tech companies and that may help to achieve the model-implied growth rates previously discussed.

The main factors that contributed to the spectacular earnings growth of the Mag10 in recent years (Figs. 5 and 6) were:

- Strong increases in global spending on digital advertisements (by 15% annually on average between 2019 and 2024; Kemp 2025), often driven by the displacement of traditional advertisements (e.g. TV and newspapers) and by the rise of e-commerce at the expense of brick-and-mortar stores. Amazon, Google and Meta are market leaders in this space and have continued to expand their market shares (in 2024 they accounted for 51% of global ad sales; BestMediaInfo Bureau, 2025).
- Increased corporate spending on both traditional and AI-related cloud services (up by 21% annually on average between 2019 and 2024; Singerland 2025). Amazon, Google and Microsoft are the main providers of these services, with a combined global market share of 63% (Brindley and Zhang 2025). A significant amount of the hardware bought by these players to scale up their data centers is provided by NVIDIA and Broadcom.
- Still rapid global expansion of the number of smartphones (+5% average yearly growth between 2019 and 2024), coupled with a continued increase in the amount of time spent by users on these devices (Howarth 2025). This has sustained the sales of phones (Apple, Google) and consumer-oriented cloud services (Apple, Google, Microsoft) and it has also helped fuel the previous two trends (spending on digital ads and cloud infrastructure).
- Gains in efficiency driven by economies of scale and AI adoption. For example, software development represents a significant fraction of the cost of offering the products and services mentioned above, but its cost tends to increase less than proportionally as the user base expands (the same piece of software serves more users). Moreover, AI has

already facilitated the automation of labor-intensive tasks, such as content-moderation on social platforms (Meta). Reportedly, AI has also improved the economics of digital advertising, by allowing for a better targeting of users.

According to the latest quarterly reports of the Mag10, none of these trends is expected to end abruptly in the near future, although some of them are expected to slow down. For example, smartphone adoption is expected to be sustained mostly by emerging markets, as advanced markets are already saturated (Bellan 2025). Similarly, future growth in digital-advertisement sales may be hindered by the already large market shares held by the Mag10, although also in this case emerging markets represent a significant expansion opportunity.

The growth prospects of cloud services (and related hardware) are probably the most controversial. Some analysts expect AI adoption, as well as more traditional use cases, to continue propping up cloud spending for the foreseeable future (Goldman Sachs 2024). Others deem that current AI spending by corporations is bubbly and likely to slow down, as the economics of AI applications are often unproven (Hicks and Widder 2025). Whatever the stance on this issue, many analysts do seem to agree that AI spending will be a key factor contributing to determine whether tech companies are able to achieve the high growth rates envisaged by financial analysts and embedded in their stock prices (e.g. our model-implied estimates).

While this debate is complex, we note that some recent trends seem to support the view that the demand for AI services will keep increasing at a brisk pace.

First, as reported by a recent Economist (2025b) article, the use of LLMs, such as ChatGPT, is quickly displacing Internet navigation (15% search traffic drop in the past year), as users find it more convenient to receive responses to their queries from LLMs rather than sifting through multiple web sites. This trend has just started, and it is likely to continue. The consequence is that a large portion of the revenues and profits previously made by millions of web-site owners and content creators will be shifted to cloud-service providers and hardware vendors (e.g., Godoy 2025; Weiss 2025), as on-the-fly content creation by LLMs requires enormous amounts of computational resources. As of today, some of the major AI players still report difficulties in meeting these computational requirements, despite the huge investments in infrastructure made in previous years.

Second, job destruction by generative AI technologies (not only LLMs, but also image and video generators) is reportedly gaining traction and with economic significance not only in the web-site-ownership space, but also in adjacent occupations (ad creatives, illustrators, writers and copywriters, photographers, models, translators, moderators, etc.; Bartholomew 2025). For example, according to a 2024 survey conducted by the Society of Authors (SOA Policy Teams

2024), 26% of illustrators and 36% of translators report having already lost work due to generative AI, and three quarters of them expect future income reductions. As explained in the previous point, this kind of displacement creates demand for the hardware and cloud services sold by the Mag10.

Third, AI technology is being increasingly adopted in the automotive sector (not only in autonomous vehicles, but also for driving assistance and infotainment). This trend – which will also significantly prop-up the demand for cloud services, given the huge size of the automotive sector – has begun only recently, and it seems unlikely to abate, given that most auto-industry executives expect vehicles to become increasingly "software-defined" (IMB 2025).

These are just some examples of large markets where substantial AI adoption and, in some cases, the consequent displacement of jobs are not just a future possibility but already happening at scale. Mechanically, AI adoption generates demand for cloud compute, which is mostly offered by large US tech firms, reinforcing the case for further earnings growth for the Mag10.

We also note that while the pace of AI adoption will undoubtedly contribute to shape earnings growth for the Mag10, it is not the only determinant of the demand for cloud-computing services. According to Rangan et al. (2024), the market for these services is far from saturated and it is likely to experience significant growth independent of AI adoption.

Clearly, there are numerous risks that could undermine Mag10's earnings growth. While it is difficult to assess which are most relevant – both in terms of likelihood and severity – two concerns are frequently highlighted by analysts. The first is the disillusionment with AI which could arise from difficulties in further advancing the capabilities of generative models or in identifying more applications where they can be used productively and reliably. Such a shift in sentiment may temporarily curb corporate AI spending, thereby diminishing the profitability outlook of tech firms (Economist 2025a). The second is the risk of loss of technological leadership and competitiveness which may stem from intense competition from China, new entrants in Mag10's most profitable businesses, or disruptive technological breakthroughs. Reportedly, Mag10's main strategy to counter these threats is to strengthen their moats by scaling up infrastructure investments – particularly in data centers and energy generation – to levels that are difficult for competitors to match (Mims 2025).

5. Conclusions

The largest US technology companies recently have been recording substantial increases in their valuations, prompting financial analysts and policymakers to express concerns about the risk of a stock market bubble. In this paper, we present model-based evidence suggesting that the earnings growth rates required to justify current prices may be plausible given the underlying structural drivers of recent and expected performance. We also argue that the adoption of generative AI technologies will be a major engine of growth, which is already transforming markets and displacing jobs at scale. Its rollout fuels rising demand for computing power, largely supplied by US tech companies, reinforcing their dominance. However, some caution is in order. Some industries still struggle to identify reliable applications, sparking short-term disillusionment. This could temporarily curb corporate AI spending and drive a re-pricing of technology stocks. Added to this, intensifying competition, particularly from China, threatens to erode big tech's profit margins. These factors could make the realization of the growth rates implied by our model less certain.

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Tables

Table 1 – Two-stage generalized-method-of-moments estimates of model parameters

	Historical average	GMM estimate of equilibrium value (95% confidence interval)	
Real earnings growth (pct)	4.87	2.98	[2.67 – 3.44]
Payout ratio (pct)	38.79	38.76	[36.09 – 41.57]
Real required return (pct)	8.62	4.96	[4.60 – 5.59]
Price/earnings ratio	20.66	20.17	[17.90 – 21.76]

Source: LSEG, own calculations.

Note: historical averages refer to the 2005-2024 period. Two-stage GMM estimates of equilibrium values are accompanied by autocorrelation-robust 95%-confidence intervals (in square brackets) estimated with a block-bootstrap procedure (consecutive 24-month blocks; 100 repetitions).

Table 2 – Mag10 market capitalization and price/earnings multiples

	Market cap (USD bn)	Mkt share (%)	P/E	12m-fw. P/E
Nvidia	4397	7.0	58	35
Microsoft	3904	6.2	39	34
Apple	3234	5.2	30	28
Amazon	2341	3.7	34	31
Alphabet	2395	3.8	21	19
Meta	1934	3.1	28	28
Broadcom	1419	2.3	113	39
Tesla	1044	1.7	187	159
Oracle	705	1.1	58	36
Palantir	419	0.7	646	253

Source: LSEG.

Note: average values for 1-13 August 2025.

Table 3 – Mag10 recent, expected, and model-implied growth in earnings per share
(percent)

	Previous 5 years	Expected by analysts	Model-implied (95% confidence interval)	
Nvidia	84	29	21	[19.8 – 24.3]
Microsoft	13	12	14	[12.9 – 17.0]
Apple	13	9	10	[9.0 – 13.0]
Amazon	38	15	15	[13.2 – 17.5]
Alphabet	25	14	5	[3.3 – 7.1]
Meta	25	10	9	[7.8 – 11.8]
Broadcom	32	18	30	[28.8 – 33.2]
Tesla	49	-2	43	[41.6 – 46.9]
Oracle	2	14	20	[18.3 – 22.5]
Palantir	74	38	72	[69.2 – 75.4]

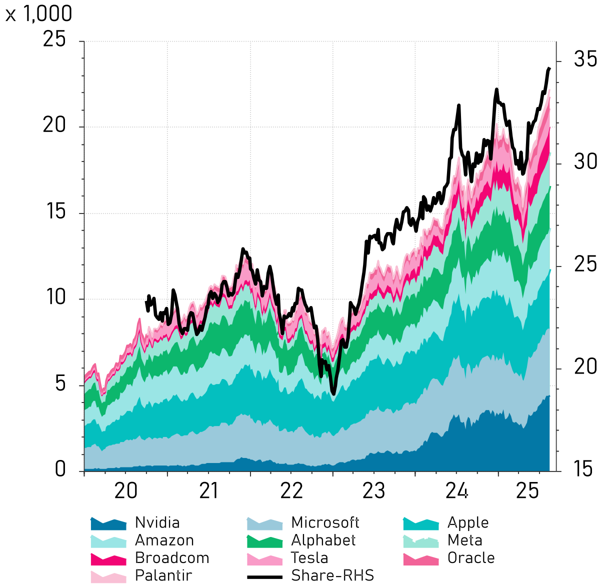
Source: LSEG, our estimates.

Note: real (inflation-adjusted) annual growth rates in earnings per share (EPS). For Tesla, historical EPS growth is over the past 4 years; for Palantir, the past year. Growth expected by I/B/E/S analysts refers to the average growth rate over a period of 3 to 5 years. Model implied growth rates are derived from P/E ratios as recorded on 28 July 2025. Confidence intervals are obtained by using the bootstrapped distribution of equilibrium parameter values shown in Table 1.

Figures

Fig. 1 - Mag10 market capitalization

(USD billion and market share)

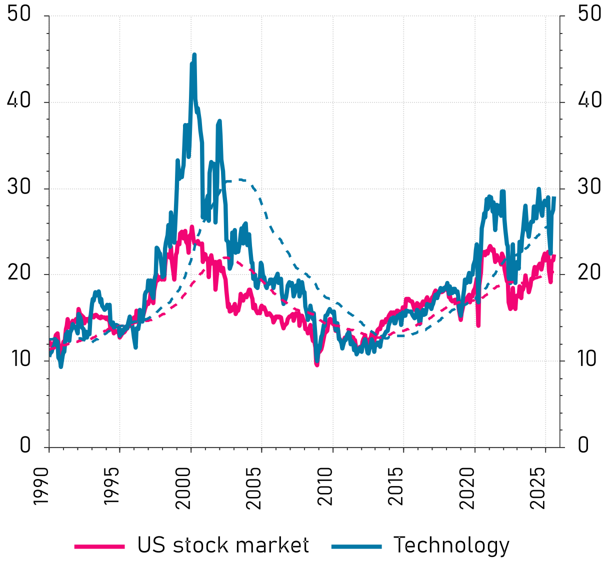


Source: LSEG.

Note: market capitalization in USD billion (colored areas, LHS) and share of US total market (line, RHS). The share line starts when Palantir was listed.

Fig. 2 - Forward P/E ratios

(values)

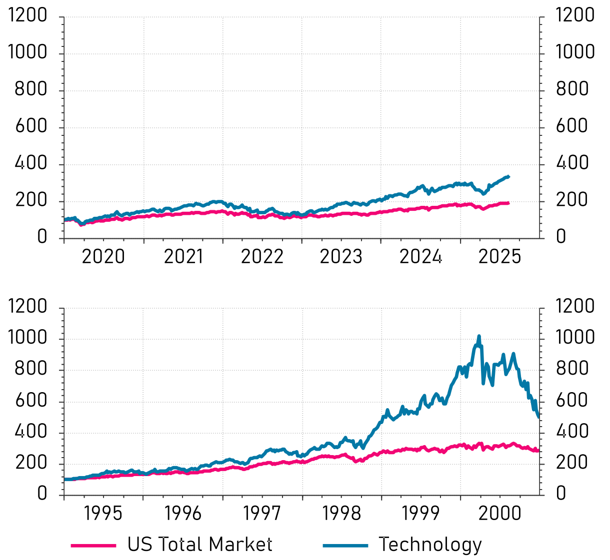


Source: LSEG.

Note: the chart shows 12-month-forward P/E ratios (solid lines) and their 5-year moving averages (dashed lines).

Fig. 3 - Current tech rally vs dot-com bubble

(equity indices)

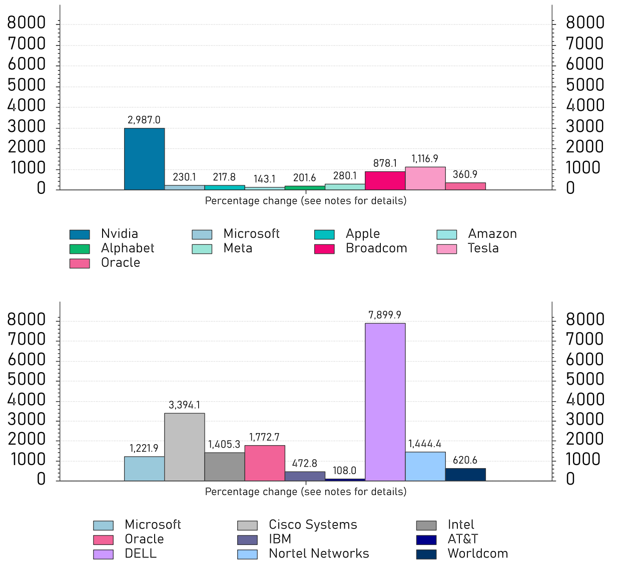


Source: LSEG.

Note: in each panel, indices are rebased at 100 on the first date displayed in the chart.

Fig. 4 - Mag10 vs dot-com stocks

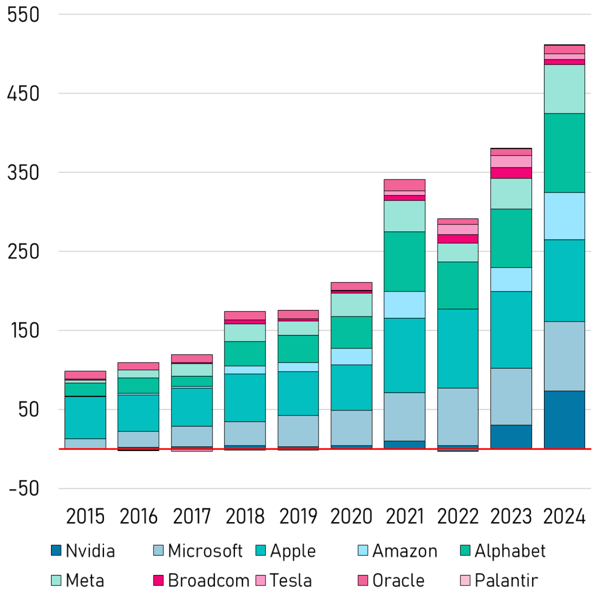
(percentage changes in prices)



Source: LSEG.

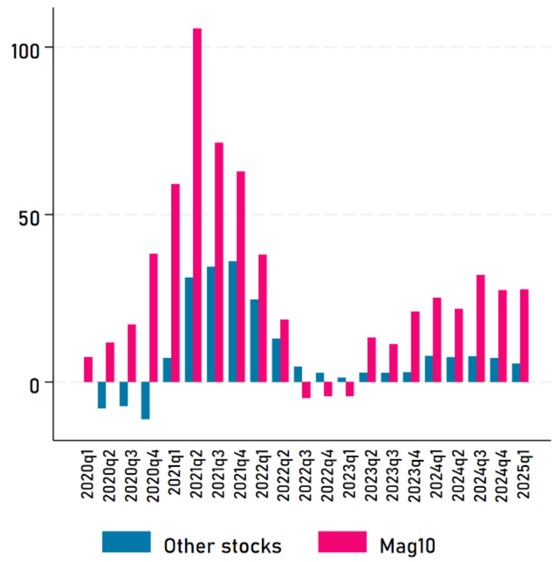
Note: Top panel: percentage change since 01/01/2020. Bottom panel: percentage change in the period 01/01/1995-10/03/2000.

Fig. 5 - Net income
(USD billion)



Source: LSEG.
Note: net income refers to an entire fiscal year.

Fig. 6 - Earnings per share growth
(% chg vs. same qtr prev. yr)



Source: LSEG. Own elaborations.
Note: median values.