## **TD Asset Management**

Investor Knowledge 🕓 10 Minutes



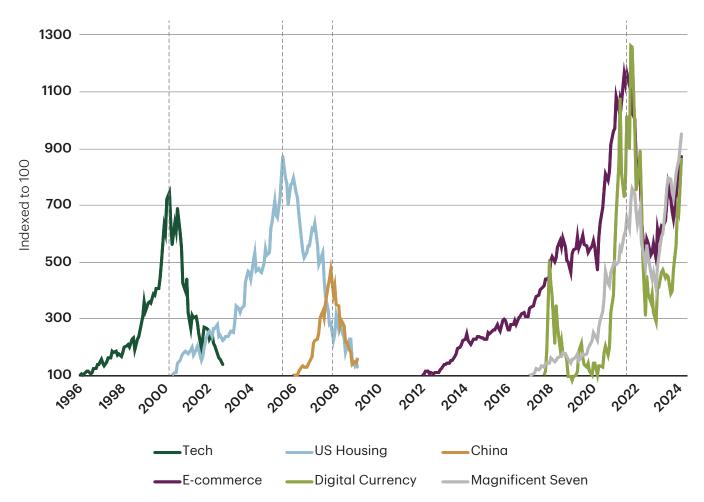
## The Magnificent Seven:

Are AI Expectations creating a Bubble?

In finance, bubbles occur when euphoria, market momentum and price action race far ahead of fundamentals, particularly free cash flow ("FCF") generation. Such bubbles are fragile and can hit an air pocket when exuberant expectations finally catch up to earnings reality. In recent memory, we at TD Asset Management Inc. ("TDAM", "we", "our") have seen a number of bubble-like conditions rise and fall (**Chart 1**), and although we do not believe that artificial intelligence ("AI") is just another overhyped fad, we can also see that much of the euphoric commentary around AI is reminiscent of previous episodes of speculative frenzy.

Further, a notable amount of earnings growth has already been priced into several big technology names, particularly among the so-called **Magnificent Seven** (namely Alphabet Inc., Apple Inc., Amazon. com, Inc., Meta Platforms, Inc., Microsoft Corporation, NVIDIA Corporation and Tesla Inc.) and it is not at all clear that all of the prevalent rife optimism will be proven justified. For example, one of the Magnificent Seven names would need to grow earnings by 20% annually for the next 18 years to justify its euphoric multiple. This is unprecedented for a firm of its size, so some skepticism must be applied in that specific case.





Source: Bloomberg Finance L.P., as at January 31, 2024.

Note: Each asset class is indexed to 100. China: Shanghai Stock Exchange Index, e-Comm: e-Commerce, Digital Curr: Digital currencies Mag 7: Magnificent 7

# Is the Magnificent 7 phenomenon just another bubble waiting to burst?

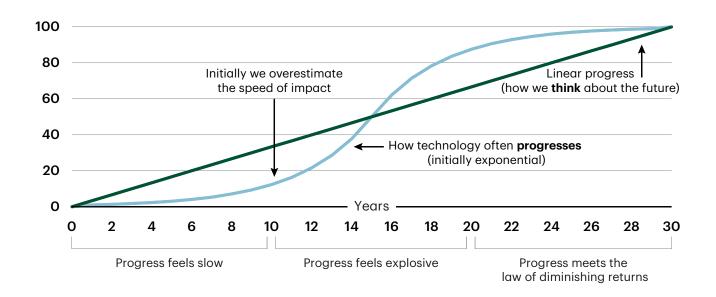
In most of the bubblish cases illustrated in **Chart 1**, the underlying asset classes were essentially sound (the jury is still out regarding Chinese equities and digital currencies), but market momentum and price action raced too far ahead of fundamentals. This is especially common with new technologies. Many of us saw this phenomenon with the internet in the mid-1990s, though it was present all the way back to railways in the 1840s. As a society we can expect progress to be linear, but digital technology is more likely to proceed exponentially (**Chart 2**) and this can lead investors to swiftly pivot from euphoria to disillusionment when progress is perceived as occurring too slowly.

I am all-in on a fundamental bet that AI will drive substantial value creation, but this is a decade plus transition [...] investors will need to be patient.

Sarah Guo, founder of Conviction, 2023

#### **Chart 2: The Path to Progress**

Investors can overestimate the speed of new technologies, especially in the digital economy



The next three charts aim to look back on the ways in which the current economic situation is historically reminiscent of other high-hype periods and will demonstrate why a vocal minority of commentators are still arguing that we are entering a bubble. For a start, the enormous appreciation of the Magnificent Seven represented 44% of the S&P 500 Index's market capitalization gain since January 2015 and 62% since January 2023 (**Chart 3**). The U.S. equity market has only been similarly concentrated two times before, in the late-1920s and the late-1990s, and those are not periods investors remember fondly.

#### Chart 3: High Concentration (2015-2024)

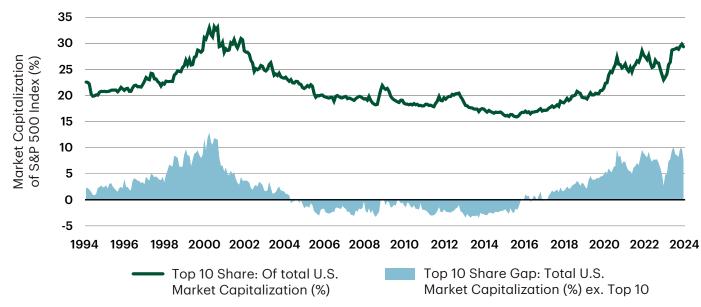
The Magnificent Seven now represent over 30% of S&P 500 Index's market capitalization



Source: Bloomberg Finance L.P., as at December 31, 2023.

## Chart 4: Historical Market Capitalization (1994 - 2024)

The top 10 stocks in MSCI USA Index represent 29% of the total market capitalization. That is the highest point since the technology bubble collapsed in 2000-2001 and notably above the historical average of 21%

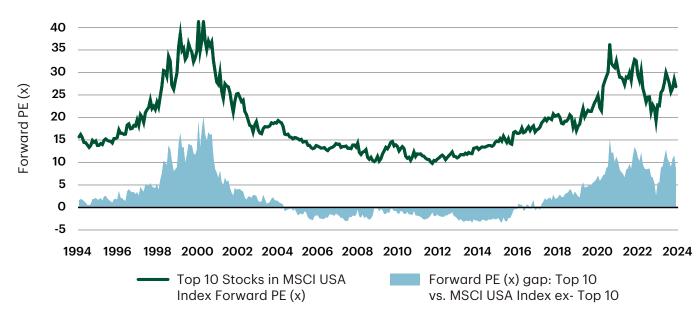


Source: JP Morgan, as at January 31, 2024.

A second sign of potentially bubblish behaviour can be seen by looking at the weight of the top 10 stocks in MSCI USA Index over the last thirty years (**Chart 4**). They currently represent around 29% of total market capitalization, which is the highest attained since 2001. Further, the top 10 stocks only represent 22% of forward earnings per share (EPS), which is just slightly above the 30-year mean of 20%. Moreover, the gap between the market capitalization and EPS, as illustrated by the gray shaded area, is the largest since the 2000s era technology bubble and four times the historical norm.

## Chart 5: Forward Price to Earnings (PE) at Another Peak (1994-2024)

Top 10 stocks in MSCI USA Index have a forward PE of 27x, which is far above the historical median of 17x



Source: JP Morgan, as at January 31, 2024.

With respect to valuations, the top 10 stocks in the MSCI USA Index have a dizzying forward price to earnings (PE) of 27x, while the remaining 599 names possess a multiple of 18x (only slightly above the 30-year mean of 16x) (**Chart 5**). Further, the gap between the PEs of the top 10 and the bottom 599 (gray shaded area) is stretched at four times the historical norm (or the 92nd percentile).

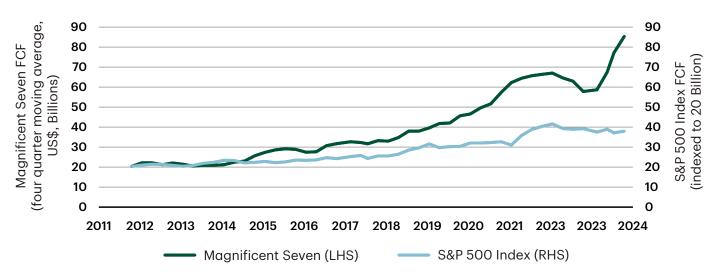
## Winner-Takes-Most: Leading Firms Generate 15% Free Cash Flow Growth, 26% Operating Margins ("OPM") and 22% Return on Invested Capital ("ROIC")

The above charts could be used to make the case that we are in late stages of an AI bubble. However, this assessment implicitly assumes that AI does not represent a structural change in the distribution of FCF, margins and returns. This is where our thinking diverges. As has been written about extensively over the last eight years, digital technology and the substitution of bits for atoms invokes powerful, capital-light business models that exploit formidable economies of scale and network effects. One key feature is that the pursuit of market dominance leads technology firms to invest massively in intangible rather than tangible capital, which involves huge fixed costs but drastically lowers marginal costs. This is what drives winner-takes-most dynamics and produces a small number of so called superstar firms.

The next three charts will demonstrate this powerful impulse which we believe is still in early innings. For a start, the Magnificent Seven have produced an average annual FCF growth of 15% over the last decade and 17.5% over the past five years (Chart 6). By contrast, the S&P 500 Index has delivered only 5% growth, roughly in line with nominal GDP (gross domestic product). Moreover, the S&P 493 (that is, the constituents of the S&P 500 Index excluding the Magnificent Seven) have generated only 3% FCF growth over the last decade, well below that of the overall economy. This dichotomy can also be seen in consensus expectations for 2024 EPS growth, which is 12% for the overall S&P 500 Index. However, underneath lies an extreme bifurcation, with the Magnificent Seven at a staggering 55% and the S&P 493 a paltry 5%.

## Chart 6: FCF (2011-2024)

The Magnificent Seven leads the overall S&P 500 Index

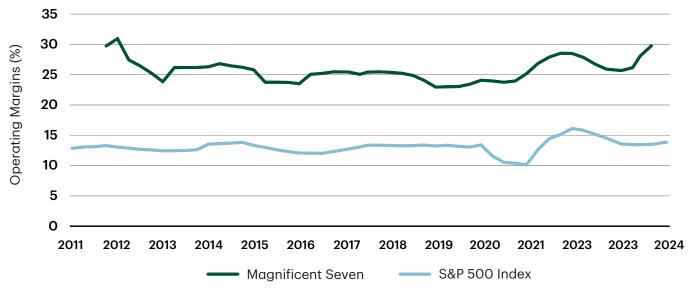


Source: Bloomberg L.P., TD Epoch as at December 31, 2023. Note: Magnificent Seven FCF (four quarter moving average, US dollar, billions), S&P 500 Index (indexed to 20)

Next, we will take a look at operating margins (**Chart 7**), most importantly noting that the Magnificent Seven's impressive margin shows no sign of normalizing toward that of the S&P 493, which has averaged only 9.9% over the last decade.

## **Chart 7: Operating Margins**

The Magnificent Seven's OPM has averaged 26% over the last decade, double that of the overall S&P 500 Index

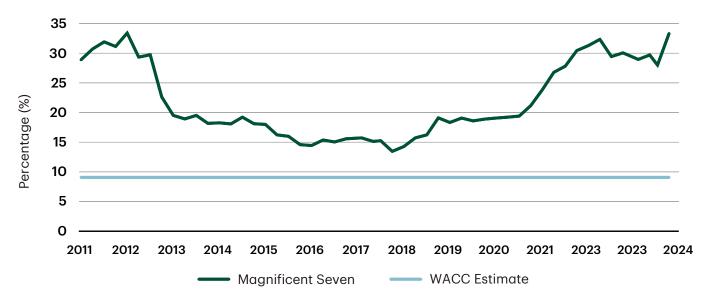


Source: Bloomberg L.P., TD Epoch as at December 31, 2023. Note: Magnificent Seven OPM (four quarter moving average)

Third, the Magnificent Seven's ROIC is not only leagues above its estimated weighted average cost of capital ("WACC") but has actually accelerated during the last five years (**Chart 8**). By contrast, the S&P 500 Index overall has averaged a ROIC of 7-9%. Moreover, the S&P 493 has generated a meager 5-7%, which means the vast majority of companies require a low WACC, similar to that experienced last decade, to create value. We believe that the impressive ROIC is a key indicator to focus on when considering whether we are seeing bubblish conditions. It is important for a number of reasons including that a higher ROIC results in a loftier PE ratio and for many technology companies, their seemingly expensive PE can be entirely attributed to their elevated ROIC.

## Chart 8: ROIC





Source: Bloomberg L.P., TD Epoch, as at December 31, 2023.



## Are We Really Seeing Echoes of the Late-1990s Tech Boom?

The above analysis we have completed in this piece has three key take aways, the last of which may be the most important:

- 1. We see a lot of earnings growth currently priced into the Technology sector.
- Investors can swiftly pivot from euphoria to disillusionment when progress, especially in FCF growth, is perceived as too slow relative to what is priced in.
- 3. We believe that AI is not just another overhyped fad, as demonstrated by an impressive track record in generating FCF, OPM and ROIC.

The first two takeaways would have been equally applicable to the internet boom of the late-1990s (or even the railway boom of the 1840s). However, the third takeaway is different: investors in the internet boom were not sufficiently skeptical of hype stocks that promised future earnings somewhere far down the road but remained negative FCF at the time.

This time, in sharp contrast, the Magnificent Seven is generating impressive FCF, and consensus expectations are that the group should be able to grow earnings by an eye-popping 55% in 2024.

Much of this immediate impact represents revenue from infrastructure build, including blitz-scaling Al platforms. Additionally, some companies are reaping early returns from the use of AI to reduce labour costs and create process innovations: that is, making existing business processes more efficient by lowering operating costs. However, the vast majority of the value-added from general purpose technologies ("GPTs") like AI (as well as the internet, electricity and steam engine) have historically come from product innovation. That is, entirely novel goods and services that were not foreseen when the GPT was first commercialized.

The good news is that this really moves the needle on earnings, creating the potential for enormous value. The bad news is no one knows when or how it will play out and, in sharp contrast to process innovations, it can take years and even decades to be realized.

For these reasons, we believe AI enthusiasm will likely be rewarded for the next year or two, despite lofty valuations, as earnings growth proves robust and meets expectations for some period of time. However, this is also a long term trend and investors will need to be patient and calm as the initial operational efficiencies wane. The 1990s boom ended after newspaper headlines began warning that many technology darlings were burning buckets of cash and had only a few months of liquidity remaining. There is some reason to be concerned that we might see a similar reversal in headlines here: after technology companies have spent tens of billions building out Al infrastructure, the news may begin a cycle of warning investors that the highly anticipated product innovation remain years away. Such a retracement might be averted if AI proves its value, in terms of FCF generation beyond the technology sector, more quickly than previous technologies have done.

## **The Bottom Line**

Beyond the next year or two lies enormous uncertainty regarding how AI will evolve. As a result, we believe investors need to be cautious regarding speculative growth or hope stocks, which offer an enticing narrative and promises of future earnings that may or may not be realized. Instead, we at TDAM will continue to monitor the market trends but favour companies with a demonstrated track record of FCF generation, as well as high and sustainable OPMs and ROIC. We believe such companies are most likely to create value and reward investors during this period of extraordinary innovation and disruption.

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