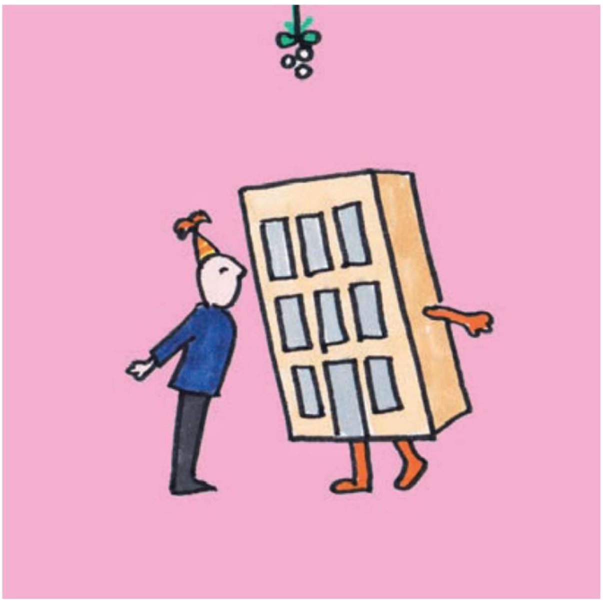
MONTANARO ASSET MANAGEMENT

Annual Letter 2024

"Forever Blowing Bubbles"



December 2024

Welcome to our fourth (probably equally unsuccessful) attempt to write something interesting … but priorities first.

Happy Christmas! I hope that Santa brings you all the goodies you have wished for - that Mrs M. is not too disappointed on that front - and that you stay well and enjoy a lovely break.

Now you can all sing along with me … "on the first day of Christmas" …

And lest we forget the most important stars of the show, Ruby now has a baby brother named Chester who is a complete monkey driving her to distraction. A typical "dude" according to Mrs M. (not too sure what that means). They are great chums. Chester in the front here decided to take Ruby for a walk …

And Mrs M. is positively blooming (and relieved to no longer feature in Despatches) …

Before my trusty quill jumps into action and the little grey cells awake from their (some would say permanent) slumber, some health warnings: Mr M. will not be telling you that SmallCap is cheap (you know that already and if you don't, please read last year's missive); it will be shorter this year with lots of charts; and none of what follows comes courtesy of AI. So, there is no-one else to blame but me …

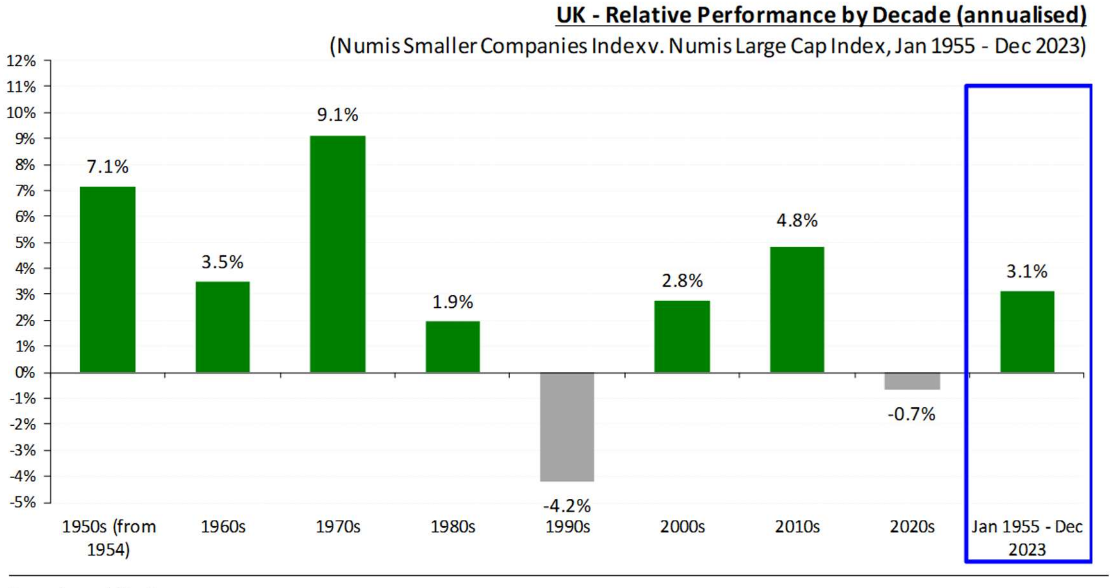
“Forever Blowing Bubbles”

No, there has been no shift in allegiance to *another* London Football team. This is the chosen theme for 2024’s Annual Letter. There will always be Stock Market “Bubbles”. Being older than most readers, Mr M. will look back at previous ones during his career to see if there are parallels that might provide clues to the future. Human nature does not change; we make the same mistakes as our forefathers. So, we can learn from the Bubbles of the past. Here are some examples:

Source: BofA Global Investment Strategy, Bloomberg. Note: Gold (XAU Curncy), Japanese Equities (NKY Index), Thai Equities (SET Index), Tech (NDX Index), US Housing (S5HOME Index), Commodities (SHCOMP Index), Disruptors (DJECOM Index + NYFANG Index constituents, equal weighted)

For SmallCap investors like us, this period feels very like the 1990s (please don’t reveal your ages), the only decade when UK SmallCap underperformed:

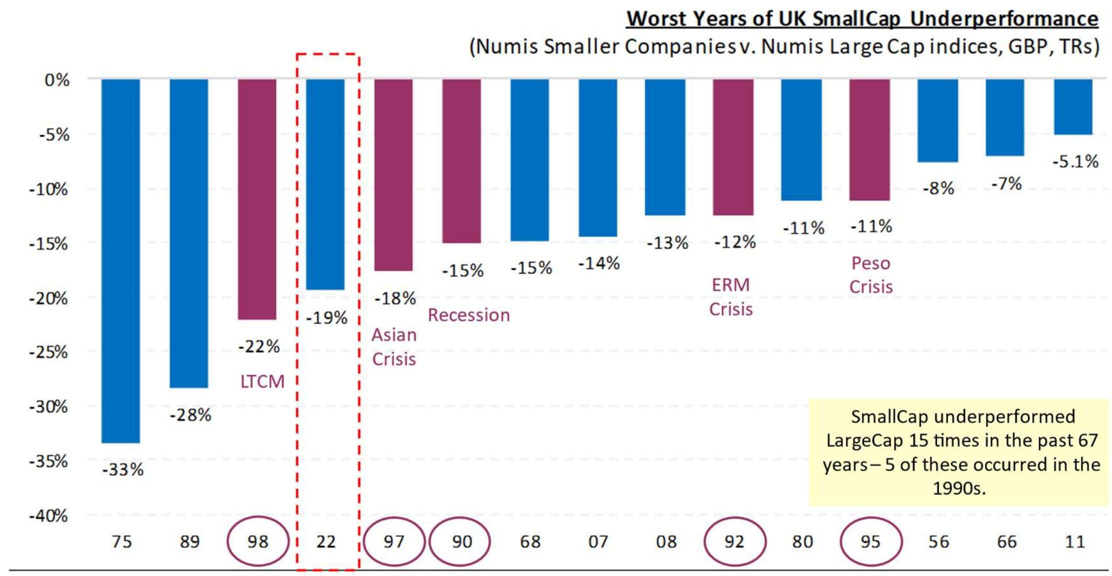
UK SmallCap has outperformed LargeCap in every decade bar the 1990s



Source: Montanaro Asset Management, Deutsche Numis

It was a decade of constant geo-political crises - in a crisis (black swan event or whatever you want to call it) - investors sell SmallCap seeking refuge in LargeCap or cash. UK SmallCap has underperformed significantly only on 15 occasions in the past 67 years - five of these occurred in the 1990s:

The 1990s was a decade of repeated crises (bad for SmallCap)



Source: Montanaro Asset Management, Deutsche Numis

So far this decade we have seen Covid; the Ukraine war; supply side disruptions leading to inflation; hostilities in the Middle East and the threat of China annexing Taiwan ... and we are not even halfway through. Is it any wonder that SmallCap has had a tough time?

But this period feels similar for another reason: the internet era of the late 1990s, which led to the TMT Bear Market, is spookily like the present-day euphoria about Artificial Intelligence (AI). For the youngsters out there, here comes a history lesson …

The World Wide Web (WWW) of the 1990s - internet to you and me - saw an explosion of dot.com companies keen to capitalise on the new online world that was going to change all our lives. It was one of the biggest technological breakthroughs in history (way over Mr. M.'s head).

Arguably the TMT "Bubble" began in 1995 when Netscape, a loss-making web-browser developer with no revenues, went public on 9 August 1995. It more than doubled on the first day of trading with a market capitalisation of $2.5 billion. This opened the floodgates to a veritable boom in internet IPOs (there were 677 in the US in 1996 alone).

Bubble Behaviour

As investors flocked to buy these "hot issues" offering the promise of untold wealth that always seemed to go up, young entrepreneurs could raise capital to fulfil their next hare-brained scheme. Traditional valuation metrics such as P/Es or Price/Cashflows went out the window. Instead, they punted on likely future performance and growth potential, brand awareness and website-traffic metrics such as clicks. Incredible when you look back. Many start-ups had fanciful business models and were unlikely to ever generate cash. CEOs barely shaved. Nobody cared.

It was an internet goldrush. There were literally "dot.com parties". The Guardian wrote on 19 September 1999 (John Arlidge): *"In their stretch cotton T-shirts, neoprene trousers and trainers, they look like a bunch of ravers. The first Tuesday of each month is club night, but London's Cafe de Paris, just off Piccadilly Circus, is a far cry from the Ministry of Sound.*

The bar fills with the new generation of 'dot com' millionaires - the emerging élite of the fabulously rich and unfeasibly young. Usually, to be found in one corner, is 26-year-old Martha Lane-Fox, an Oxford history graduate who is set to become one of Britain's youngest multimillionaires. Yesterday it emerged that lastminute.com, an Internet travel company she set up 17 months ago, is planning a £400m flotation in the first half of next year which could net her and her partner £150m"…

The number of 'entreneters' who are joining the First Tuesday club is increasing by 1,000 a month. 'Everyone's looking to do something on the internet and make money. It's a combination of the gold rush and the Wild West. It is nice to be in a room where everyone thinks they are going to be millionaires.'

A feature of Bubbles is that lure of "easy money" attracts the naïve and unsophisticated - typically private investors. The late 1990s saw the birth of internet day-traders. People gave up secure, well-paid jobs to become internet day traders. Taxi drivers would sit on their ranks planning their next killing (a bit like crypto today). But the problem is that no-one tells you when the party is about to end and the music stops … you don't want to be left holding the baby when there are no chairs left to sit on …

End of the Internet Party

Markets became overhyped and over-valued which people eventually came to realise. You don't want to be the last buyer right at the top. By 1999, the P/E of the NASDAQ surpassed 90x and the S&P 500 reached an all-time record P/E of 32x. The average price-to-sales ratio of companies going public in 2000 was 49x.

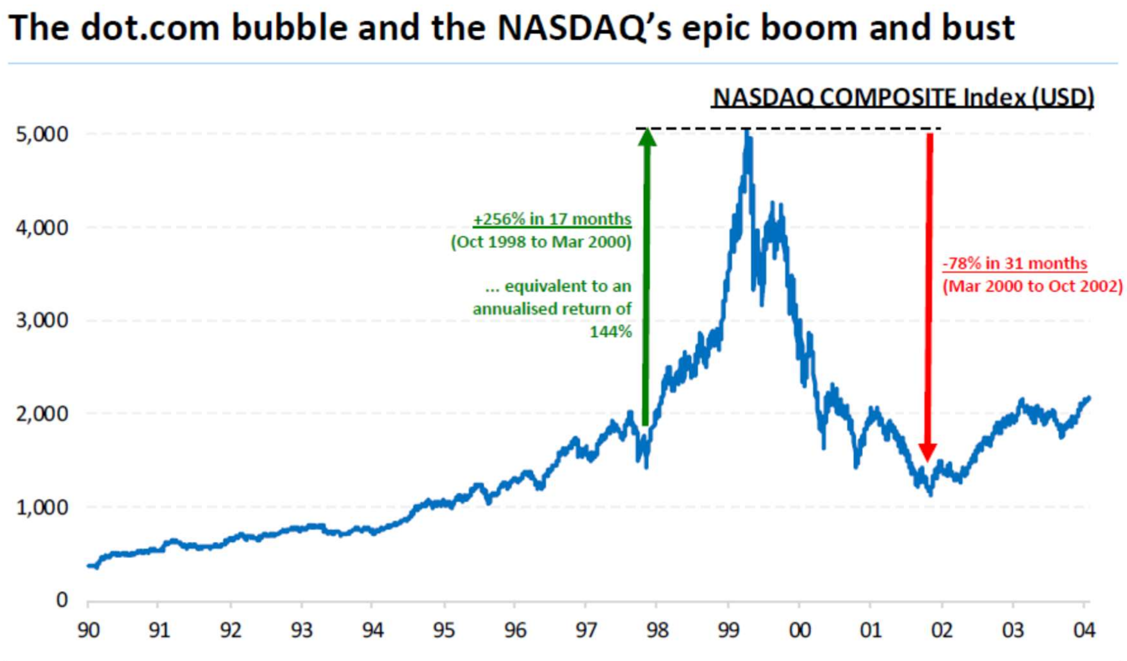
On 10 January 2000, new-kid-on-the-block America Online bid for Time Warner for some $182 billion in stock and debt to form AOL Time Warner, a $350 billion mega-corporation. Only two years later, the company announced an annual loss of $99 billion, the largest in corporate history. The world had gone mad.

Pets.com had the idea of selling pet food on-line and offered free delivery. Chester and Ruby would probably approve. To build up a client base, they sold products at a third of what they paid for them - some might argue "pretty dumb". Then they spent $70 million on advertising, achieving sales in 1999 of just over $600,000 (yes, not a typo, less than $1 million).

Over two years, they burned though over $300 million and hired over 300 employees. They managed a first to Mr M.'s recollection: they floated and went bust within the very same year: IPO on 11 February 2000 (right at the top); ceased trading on 7 November 2000. Wow. That's a bubble and shows how to lose money. Guess Mr and Mrs M. will have buy our pet food from Pets at Home instead.

There is of course no magic money tree. It is not and should not be "easy" to make money. Eventually sanity returns.

On Friday 10 March 2000, the NASDAQ hit a high of 5,048.62. The following Monday, Japan entered recession. The Bear Market had started - the NASDAQ fell by 40% that year. Two years later, most publicly traded internet stocks had gone bust, wiping out trillions of dollars of "investments". The NASDAQ would not see that level again until April 2015, fifteen years later. Eventually, "pie in the sky" ideas (Pets.com et alia) run out of cash and there is one almighty hangover.



Source: Montanaro Asset Management, Factset.

The Lesson of Japan

The Internet Bubble was not the first. For students of history, please look up:

1. Dutch Tulip Mania (1634 - 1637);
2. British South Sea Bubble: (1711 - 1720);
3. British Railway Mania (1843 - 1845).

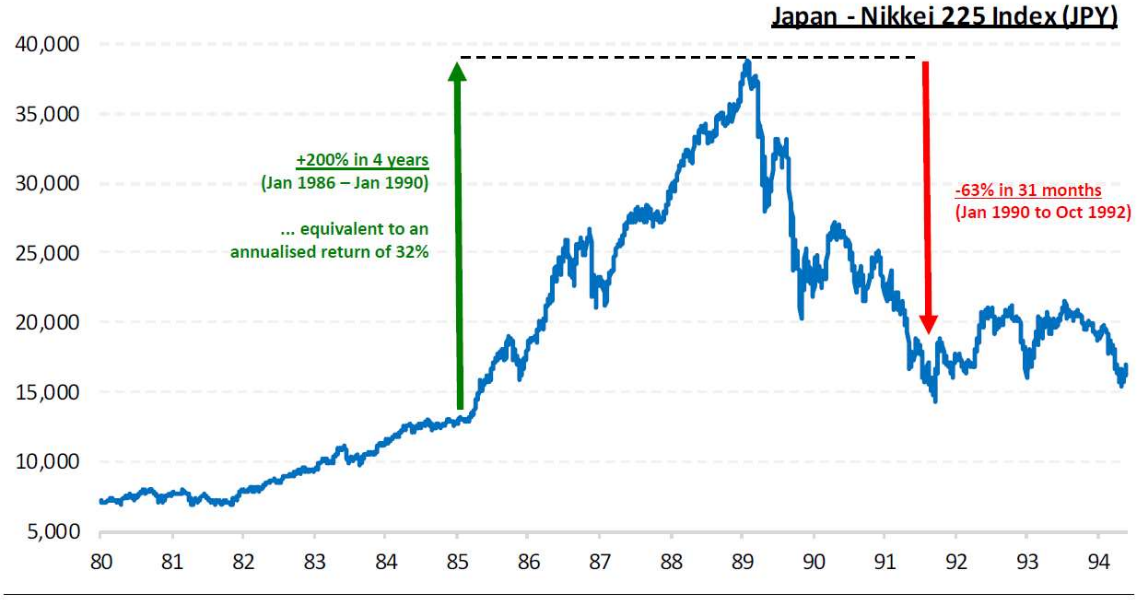
But sticking to times that Mr M. can recall (now that the little grey cells are wide awake), Japanese Banks were deregulated in the 1980s and introduced 0% interest rates. If you can borrow for free, predictably and inevitably this led to an economic boom and a huge asset price bubble.

People speculated in both the Stock Market and property. Land price inflation was so distorted that land constituted 65% of Japan's national wealth compared to just 2.5% for the UK at the time. Tokyo real estate sold for US$139,000 per square foot, 350 times as much as equivalent space in Manhattan (on this measure, *the Imperial Palace in Tokyo was worth more than all of California)*.

The Japanese were taking over the world, described at the time as an "economic Pearl Harbour": Mitsubishi bought New York's Rockefeller Centre; Sony acquired Hollywood's Colombia Pictures; golf membership cost millions and could be traded (remarkably there was actually a Nikkei Golf Club Membership Index); Japan was predicted to become the largest economy in the world despite having a land mass only 4% of the US with minimal natural resources. Insane.

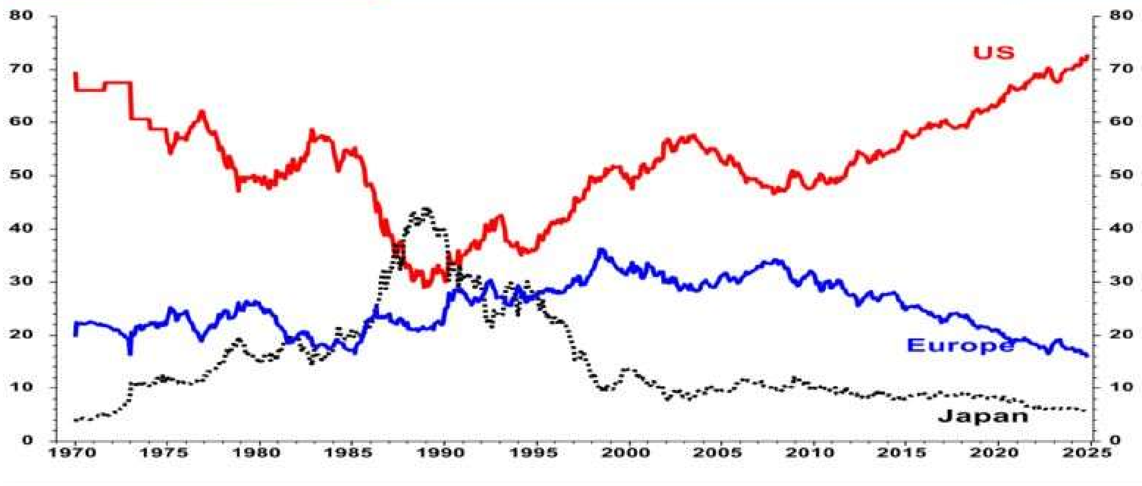
At the end of 1989, the Nikkei 225 stock market reached 39,000, an historic high. Then the Bubble burst as interest rates rose and people came to their senses. Three years later, by the end of 1992, the stock market had more than halved to just 17,000. It took 34 years - until early 2024 this year - to recover.

Remember Japan?



Source: Montanaro Asset Management, Factset.

At its peak, Japan was almost 50% of the MSCI World Index and had overtaken the United States. As the chart below shows (courtesy of Albert Edwards), the picture is very different today as the US has returned to the giddy heights of the Nifty Fifties:



Source: Albert Edwards, Datastream.

The Nifty Fifties

Although just before Mr M.'s time, the "nifty fifties" were a group of "premier league" growth stocks such as Xerox, IBM, Polaroid and Coca-Cola that were the institutional darlings of the early 1970s. They were thought of as "no-brainer", "Buy and never Sell" stocks. Institutions flocked to the party paying little attention to valuation (a precursor of the internet boom to follow). Jeremy Siegel described this period as "*temporary insanity of institutional managers – proving again that stupidity well-packaged can sound like wisdom*". Great line, wish Mr M. was that smart.

By 1972, the average P/E was 41.9x; more than double the overall Stock Market. Within the "nifty fifty", half had P/Es of over 50x; Polaroid sold for over 90x. The Bear Market of 1973 – 1974 saw the end of these heady times as valuations collapsed.

Bubbles and SmallCap

The closest historical parallels with today are the Nifty Fifty (1971-73) and the TMT Bubble (1995-2000). SmallCap had been underperforming much like then. *Both times, SmallCap subsequently had a strong run lasting several years.*

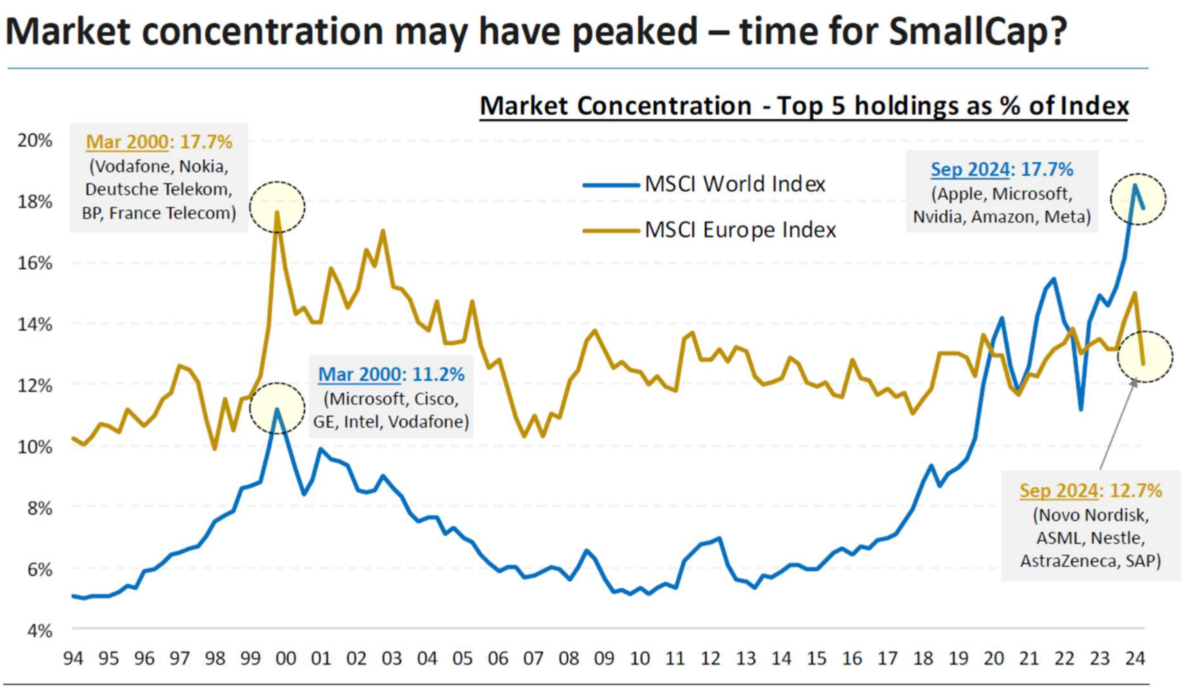
MegaCap dominance is not new – but then SmallCap typically takes over

	Magnificent 7 (March 2024?)	FAANG (August 2020)	TMT (March 2000)	Nifty Fifty (April 1973)
Top 5 % of S&P 500 (Ave = 14%)	26%	24%	18%	25%
P/E of S&P 500	19.9x	23.7x	25.5x	18.9x
P/E of Top 5 Stocks	35.1x (77% Premium)	48.1x (103% Premium)	44.0x (73% Premium)	41.9x (122% Premium)
Small v. Large (Next 5 & 7 Yrs)	??	?? (+8% over next 3Y)	+75% (5Y) +103% (7Y)	+31% (5Y) +91% (7Y)

Source: Montanaro Asset Management, Factset, Jeremy Siegel.

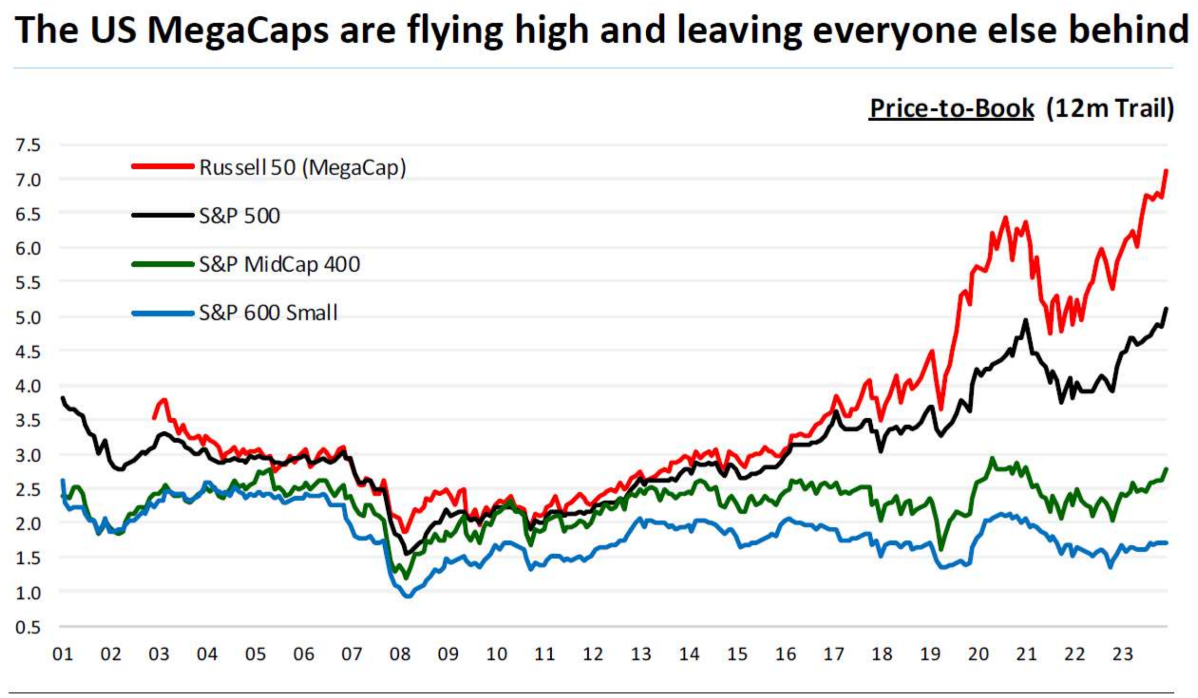
A feature of Bubbles is that herd instinct drives similar behaviour: whether the Gold Rush; the Nifty Fifties; the technological revolution of the Internet in the 1990s; or AI today. Concerns over valuation become forgotten in the rush to be invited to the party. A handful of "must own" stocks become an ever more concentrated part of the index and seemingly always go up, driven by passive index / ETF buying in a self-fulfilling cycle. Reminiscent of Vodafone in 1999 that you had to buy as it was such a large part of the benchmark even though everyone knew it was overpriced, so today "investors" have to own Nvidia (making it almost impossible for sensible active managers to outperform).

Markets always mean-revert. When a handful of companies dominate the market, they become overpriced; concentration reaches an unsustainable level and peaks (see chart below):



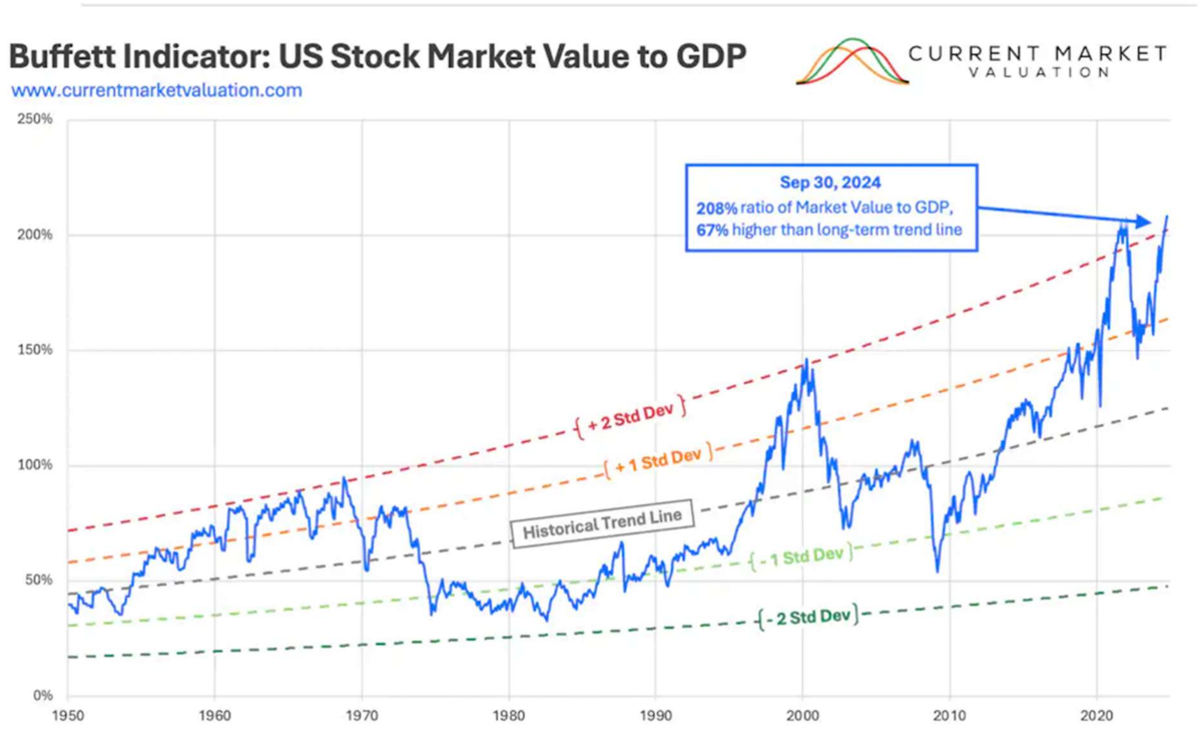
Source: Montanaro Asset Management, MSCI.

The dominance of the MegaCaps, as with previous Bubbles, has resulted in valuations of the largest companies decoupling from the rest of the market:



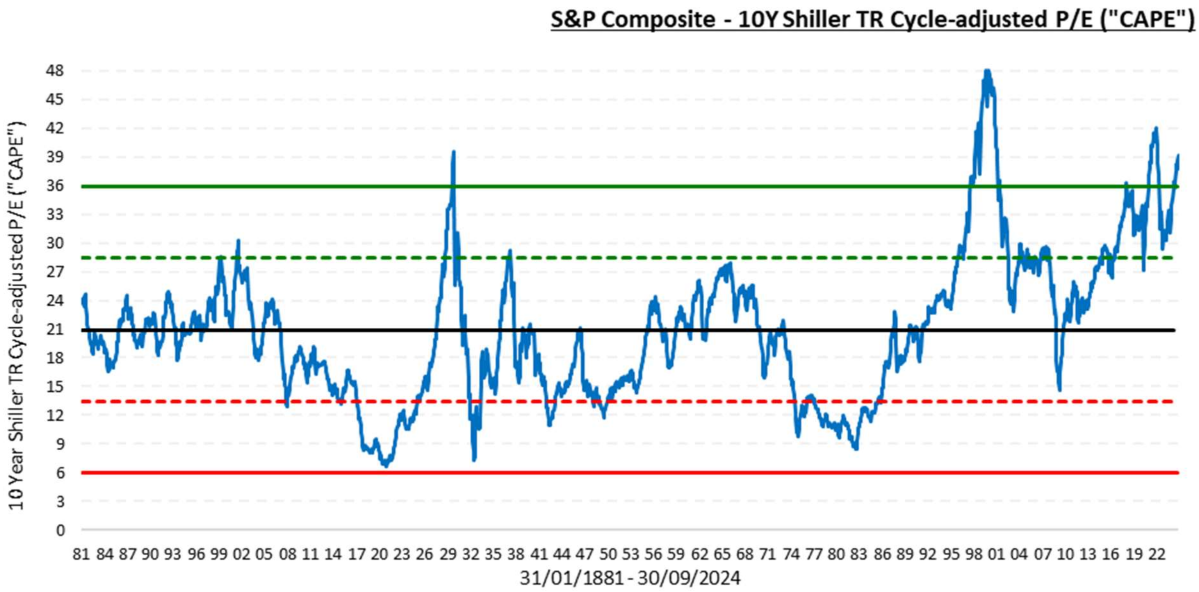
Source: Montanaro Asset Management, Factset.

Warren Buffett's favourite metric - the total value of the US Stock Market relative to GDP - shows a similar message:



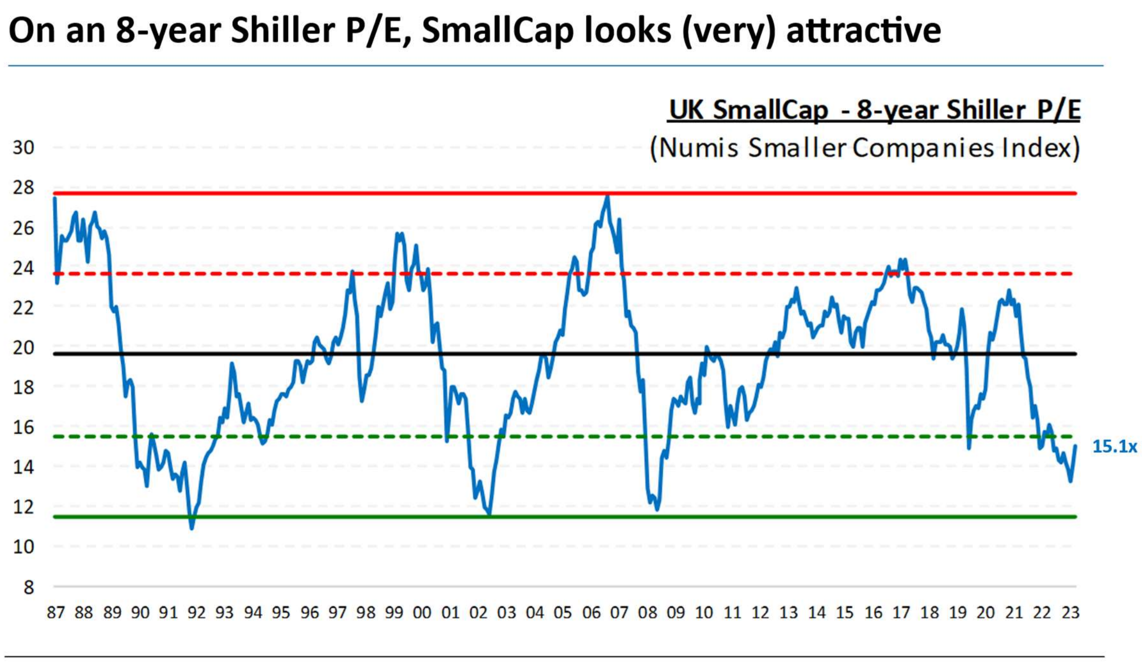
Source: www.currentmarketvaluation.com

One of our favourite valuation models comes from Shiller, which suggests that the US is reaching “warning” territory:



Source: Montanaro Asset Management, Factset.

Whereas the message from Shiller on UK SmallCap is the opposite – almost a mirror image:



Source: Montanaro Asset Management, Factset.

Just looking at these two charts, which would you rather buy?

Artificial Intelligence (AI)

In the late 1990s, the Internet was the emerging technology that promised to change the world. The biggest beneficiaries were the companies that were "inventing" it: the MegaCaps like Cisco, IBM etc. SmallCap underperformed because the hype was largely focused on the LargeCap space, just as we see in AI today.

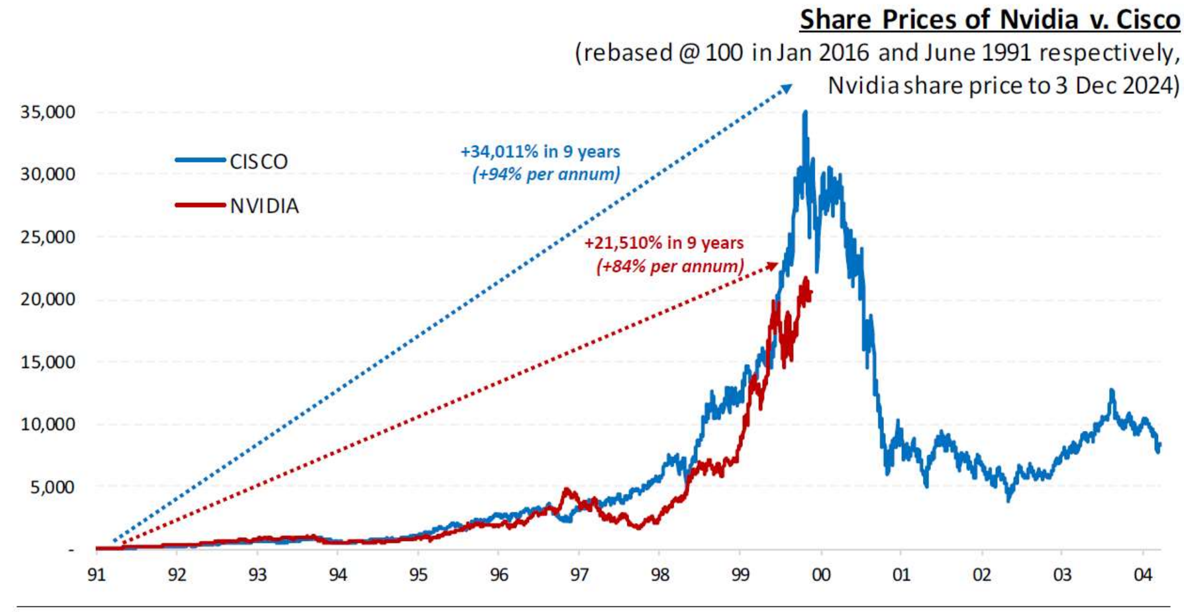
Is AI a Bubble?

There is a difference between the long-term potential of AI technology and the short-term investor exuberance surrounding it. AI has the potential to change our daily lives in the same way that electricity, computers and the internet have. AI has revolutionary applications in numerous fields ranging from healthcare to autonomous vehicles (Mr M. was even introduced to ChatGPT whilst writing this letter, but more on that later…). AI is here to stay, it is not a fad.

However, AI does show classic Bubble attributes: a revolutionary technology creates excitement, leading to skyrocketing valuations, heavy inflows of capital (thank you ETFs) and narratives that keep the cycle going. Much like the dot.com bubble, not all AI-related companies will succeed. Perhaps more importantly, even those companies that will thrive in future may disappoint investors.

Take Cisco as an example: trading on well over 100x earnings in early 2000, it had become the second most valuable company in the world. If you had bought the shares at their peak (in March 2000), you would have made an annualised return of just <u>1% over the subsequent 24 years</u>. The chart below is scary …

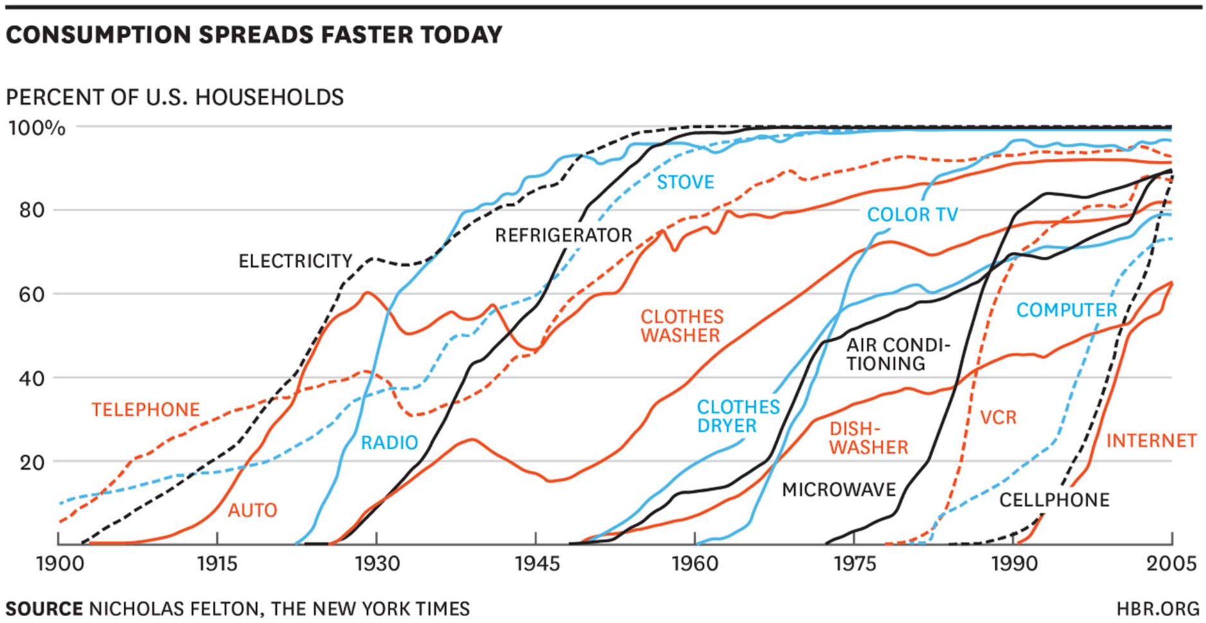
Is Nvidia the new Cisco?



Source: Montanaro Asset Management, Factset.

The current period is not the same as the internet Bubble when most companies went bust due to fundamentally flawed business models. People have learned the lessons of Pets.com. Furthermore, not all internet companies failed: Amazon saw its share price drop from a bubble peak of around $100 to just $7 and is trading today at $213. eBay, Salesforce and Priceline.com similarly survived this period to enjoy strong growth afterwards. Others such as Google have thrived and made into our everyday vocabulary.

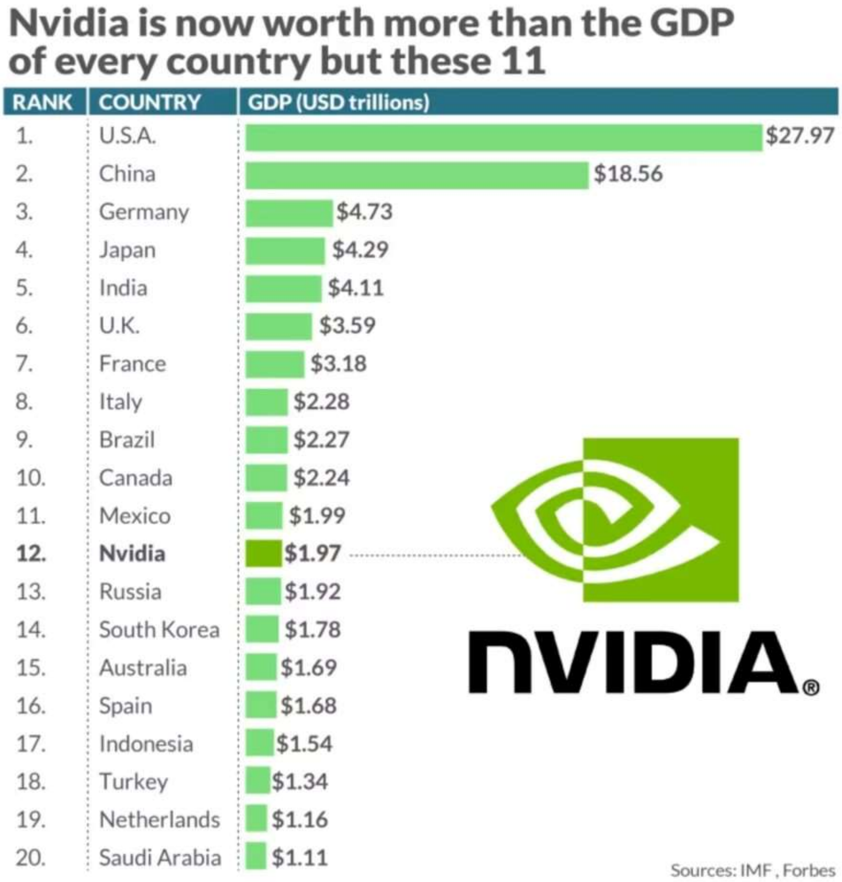
It may be that Stock Market Bubbles are likely to become more extreme but also shorter in future, as the adoption of new technologies accelerates. It took more than 40 years for electricity to reach 80% of US households and just over 10 years for smartphones to do the same… (see chart below). The winner-takes-all dynamics of today’s technology companies - where a handful of firms dominate entire industries - concentrates capital and valuations in fewer hands, which arguably amplifies the potential for Bubbles.



What is Nvidia worth?

During the dot-com Bubble, Cisco was viewed as the "plumber of the internet", providing the critical infrastructure (routers, switches etc) needed to sustain the explosive growth in internet traffic. It was considered a core internet holding. Similarly, Nvidia's chips are essential for processing the massive amounts of data required for AI. Both spent billions in capex and R&D to bring new, disruptive technologies to the world.

In the coming years, AI will trickle down across all corners of society and the economy. Smaller companies will be beneficiaries as they provide the picks and shovels to enable AI to blossom. Some smaller companies will see their business models completely transformed. We are probably transitioning into this second phase already; one where Nvidia will no longer be seen as the obvious and principal AI winner. There will be others - and losers too. There will be technologies and innovations not even imagined today.



Mr M. has no idea what Nvidia is worth. But is any single company really worth more than Australia or Saudi Arabia? This is a company that between January 2016 and December 2024 gave a return of more than 21,000%. Crikey. It was once a SMidCap with a market cap. of $15 billion!

Bubbles are fun

It is fun being in a bubble. Everyone is making money. The chief executives can raise money for deals (or more expensive wine on their expense accounts) and salivate over the value of their stock options; the investment bankers can choose the matching colour of their second new Ferrari; brokers can wine and dine without compliance worrying about gifts and benefits; and investors feel like geniuses as their investments go up.

In the Japan bubble, domestic brokers hosted lavish conferences, the excuse to play a round at exclusive golf clubs (Mr M. doesn't play golf - would be useless).

In the high yield bond market (a bubble in the 1980s close to my heart as Mr M. worked briefly with Mike Milken - which must wait for another letter due to lack of space) we would go to the "Predators' Ball" in LA - the event of the year where anything goes - drink, drugs, wall to wall hookers, you name it - and you could even go mud wrestling with sparsely clad women in your suit. Lest you wonder, Mr M. was never invited (probably for the best). Would have been an expensive drycleaning bill and tricky to explain to Mrs M.

In the internet boom, you could dine out each day courtesy of stockbrokers' expense accounts who were generous, provided you bought the endless IPOs. They went up - so you did.

But the problem is always that no-one tells you when the music stops. All the money you have made on the way up, you lose much more quickly on the way down. Then, in the case of Drexel Burnham, your firm goes bust and you are out of work. The price of second-hand Ferraris plummets (luckily Mr M. was always too tall and fat to get into a Ferrari - and Mrs M. would have insisted on pink).

Never forget the Bubble era of the 1980s. They were great. Health warning coming: Mr M.is Old School... you have been warned … Mrs M. banned what follows, but doesn't know that Mr M. (occasionally) stills lives dangerously …

In my day, there were boys and girls (and a few people a bit confused). Girls had bumps; boys dangly bits. As a Latin scholar - now there's a surprise as Mr M. thinks back to reading Latin poetry (Catullus) in a competition (did not win) - the Romans had no problems with pronouns. Boys and girls. Keep it simple. One for each.

For those who missed out on the 1980s, *just watch RIVALS on Disney plus*. Mrs M. knows Jilly Cooper ... we knew how to have fun … and this recommendation comes from Mrs M. so it must be good (but please send the kids to bed first). It will make you smile. Some scenes will stick in your mind (which ones probably depends on whether you are a boy or a girl - decided sensibly for once not share mine with Mrs M.).

Will history repeat?

The years following the popping of the TMT bubble saw SmallCap enjoy a phenomenal run. Like the 1990s, it has just suffered from several years of underperformance, leading to historically cheap valuations. Currently, the only game in town is Wall Street and AI, which is where most of the retail money is going now. Once again, we read of FOMO ("fear of missing out") and TINA ("there is no alternative"), the time-honoured vocabulary of Bubbles - and we know how that always ends. It is never "different this time around".

So let me close with a new Acronym - you read it first here - "TBSC" which, of course, stands for "<u>Time to Buy SmallCap</u>".

Which has just started to outperform …

Mr. and Mrs. M., Chester (on the left) and Ruby wish you a very Happy Christmas and a Prosperous New Year. Stay safe and well. Best of luck for 2025.

Charles (Mr M.) - 11 December 2024.

Ps. Cedric asked AI to write this Annual Letter. The results follow. Annoyingly, it is doubtless far better, certainly shorter and only took seconds. Whereas it takes time to put a quill into an ink pot…

Dear Investors,

As we approach the festive season, it's customary to reflect on the year gone by. 2024 has been a year of headlines dominated by artificial intelligence (AI), and no discussion of equity markets can escape the shadow of the so-called "Magnificent 7" — a handful of tech titans driving not only the Nasdaq but seemingly the global economy. NVIDIA, Amazon, Meta, and their compatriots have been celebrated as the harbingers of an AI revolution. But are we witnessing a genuine paradigm shift, or is this yet another bubble in the making?

AI undeniably has transformative potential. The ability of machine learning and large language models to reshape industries from healthcare to logistics cannot be overstated. Yet, as with every technological revolution, markets have a tendency to overshoot. The valuations of these AI pioneers now resemble a tech-stock Christmas tree: glittering, over-adorned, and precariously perched on fragile branches of growth assumptions.

This frenzy has left many other areas of the market out in the cold, particularly SmallCaps. In their quest to ride the AI wave, investors have flocked to a concentrated handful of mega-cap stocks, pushing their valuations to stratospheric levels while ignoring the opportunities closer to the ground. SmallCaps, with their nimbleness and untapped potential, have been overlooked, trading at discounts that suggest investors are pricing in perpetual stagnation.

But bubbles, as history reminds us, eventually deflate. When the glitter fades and the market recalibrates, attention tends to shift back to fundamental value and broader diversification. That's where SmallCaps shine. These companies, often leaders in niche industries, can deliver outsized returns when the market rotates away from overbought mega-cap stocks.

As we head into 2025, several factors point to a brighter horizon for SmallCaps. Valuations remain compelling, with many trading at significant discounts relative to their historical averages and to LargeCaps. Earnings expectations are also improving, with SmallCaps forecast to outpace LargeCaps in earnings per share growth over the next two years. Moreover, disinflation, receding interest rate pressures, and increasing M&A activity provide additional tailwinds for this segment of the market.

In many ways, the situation reminds us of the late 1990s dot-com bubble. While mega-cap tech stocks dominated the headlines, value-oriented investors found ample opportunities elsewhere. Those who were willing to look beyond the hype were rewarded handsomely when the bubble burst, and we believe a similar dynamic is taking shape today.

So, as you tuck into your Christmas pudding, remember: markets, like holiday traditions, often repeat themselves. The Magnificent 7 may have had their day in the sun, but history favors those who are patient and disciplined. As the AI mania cools and the market rebalances, SmallCaps are poised to deliver the kind of returns that reward investors for looking beyond the obvious.

From all of us at Montanaro, thank you for your continued trust and support. We wish you and your families a very Merry Christmas and a prosperous New Year.

Warm regards,

Charles Montanaro

Ps Mr M. feels cheated. AI wasn't around in the 1990s, so it is making this all up. Forget "reminds us". Load of rubbish…

Nothing wrong with quill and ink… and AI didn't come up with any photos!
