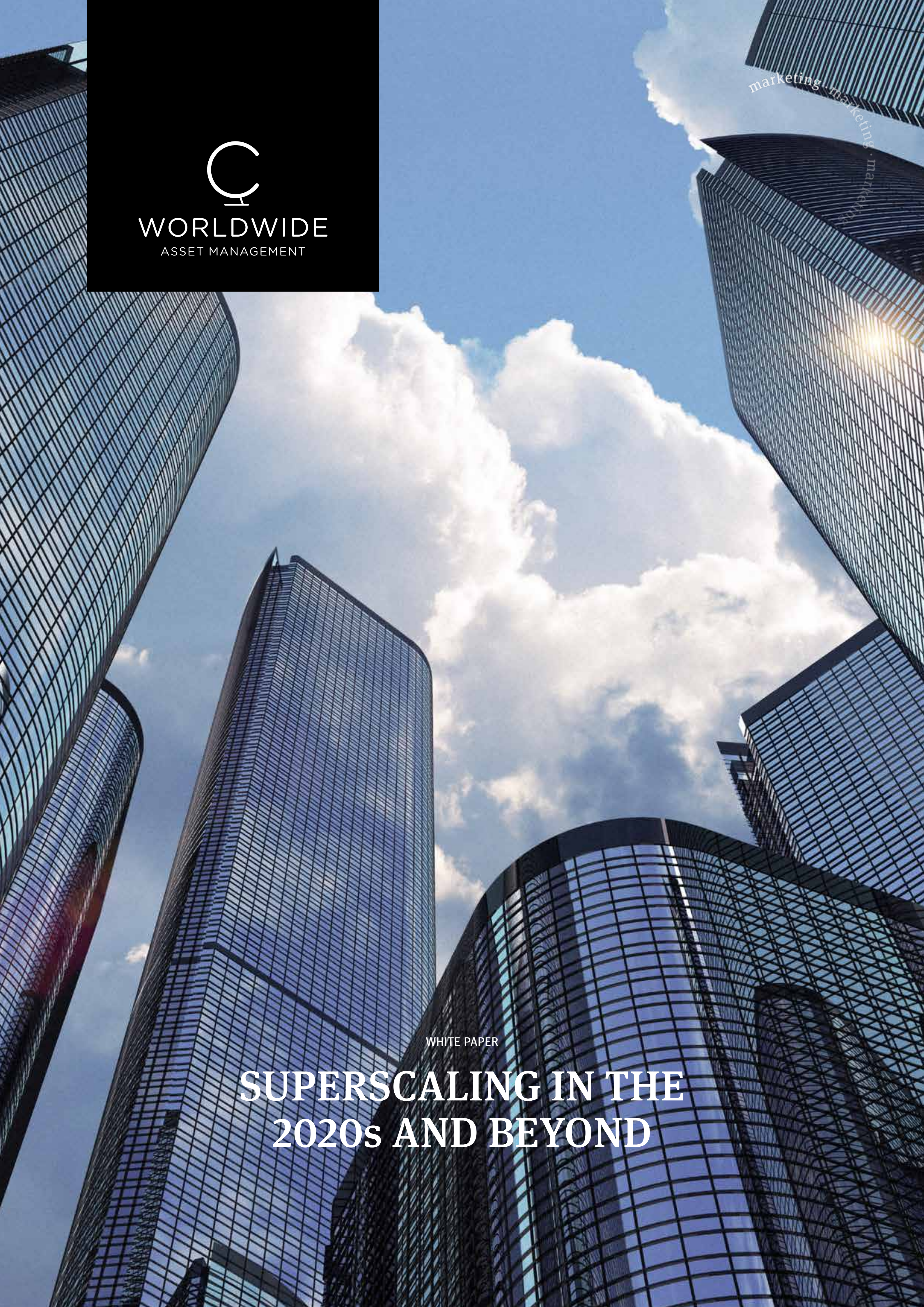

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WHITE PAPER

SUPERSCALING IN THE 2020s AND BEYOND

Superscaling in the 2020s and beyond

Key Insights

- *The dominance of today's largest companies, particularly tech giants like Apple and Microsoft, has led to an extreme market concentration. However, as this paper shows, this is not historically unique.*
- *When adjusting for inflation and the size of the global economy, the market dominance of today's giants mirrors the concentration seen in the 1960s, when companies like AT&T and IBM holding similar weight relative to the economy.*
- *While today's tech giants are well-positioned to be market leaders, particularly with the rise of AI, challenges such as increased regulation, geopolitical shifts, and faster technological changes mean that maintaining dominance will require adaptability and constant reinvention.*
- *We always emphasise long-term thinking when analysing existing and potential investments. Our portfolios have exposure to several Superscalers and are well-positioned to take advantage of their compounding qualities.*

Written by

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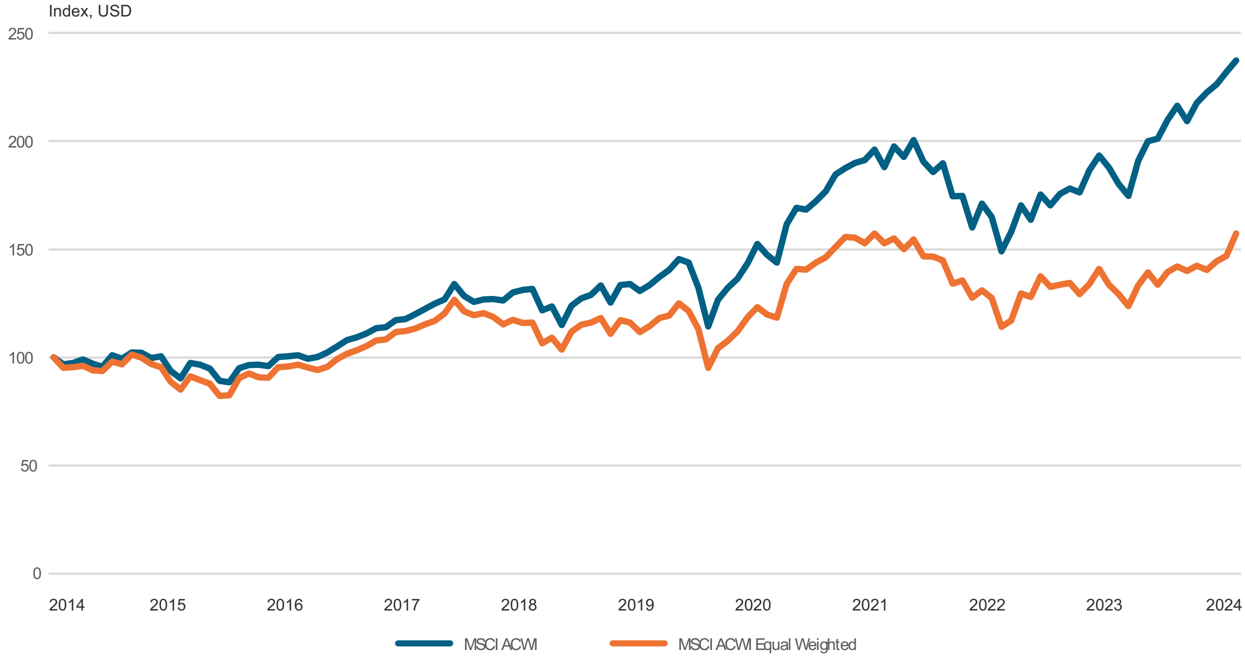
C WorldWide Asset Management

Figure 1
Equal weighted index underperforms dramatically



Source: Bloomberg, September 2024 (Net Total Return, 10-year monthly data).

"We call them "Superscalers" because of their ability to compound earnings fast from already high levels."

We live in extraordinary times. The most valuable companies in the world have reached impressive heights in recent years, with an increasing number of publicly traded companies reaching market capitalisations of one trillion US dollars or more. Apple reached one trillion US dollars in 2018. Other well-known tech companies soon followed. Alphabet, Amazon, Apple, Meta, Microsoft, Nvidia, and Tesla have created 14 trillion dollars of market cap since 2010 and compounded 24% on average. The exceptional gains for such large companies – we call them "Superscalers" because of their ability to compound earnings fast from already high levels – have profoundly affected the entire stock market. As illustrated in Figure 1, an equal-weighted global stock index has performed far worse than its market cap-weighted equivalent. This has led some observers to conclude that the MSCI World index has become a proxy for US tech stocks. It also means that relatively few companies now represent a relatively large share of the total value of all listed companies. Put differently: concentration in stock markets has increased.

In this paper, we seek to answer the questions:

1. How does today's market concentration compare to history?

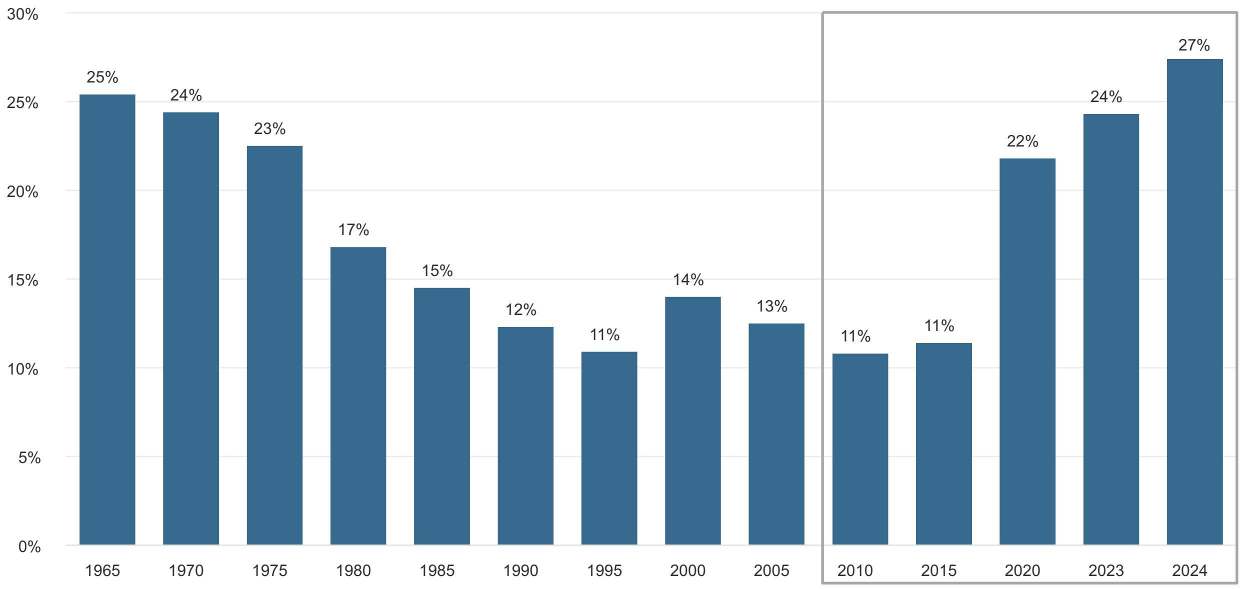
2. What is the significance of companies becoming so large that we count their market capitalisations in trillions?

3. What will happen to market concentration in the years to come?

Figure 2

High Share But Seen Before in Modern History

Index weight of 5 largest companies in S&P 500



Sources: A Wealth of Common Sense, Bianco Research, Bloomberg, Fundamental Index Newsletter, S&P, September 2024.

"Interestingly, eight of the top 10 companies in 1960 continued to excel in the following ten years and remained in the top 10 in 1970."

We base our research on the S&P 500 index since it has existed longer (since 1957) than global indices such as MSCI ACWI (introduced in 1990) and because detailed data on the S&P 500 is easier to find.

How does today's market concentration compare to history?

First, as illustrated in Figure 2, the weight of the five largest stocks in the S&P 500 index in 1960-2024. The current market concentration, although at the higher end of the spectrum, is not unprecedented, as witnessed in 1960 and 1970.

Second, as seen in Table 1, the industry and sector exposures of the largest publicly listed firms were considerably more diverse and broadly based than today. Interestingly, eight of the top 10 companies in 1960 continued to excel

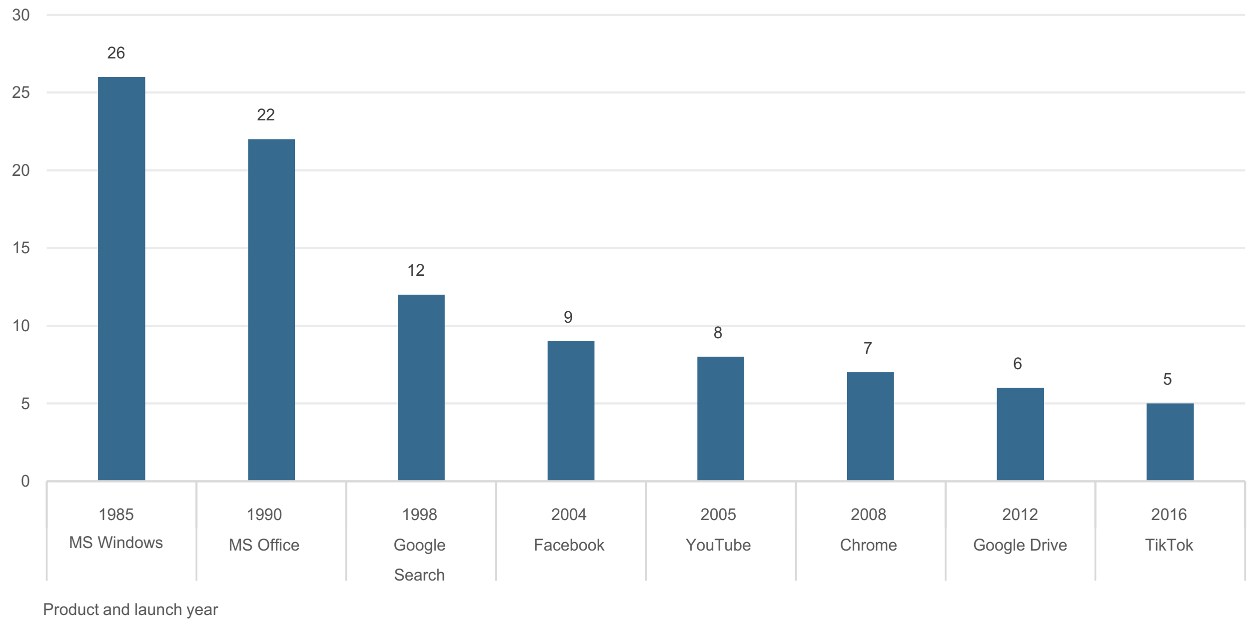
Table 1

Top 10 companies by market cap in 1960 and 1970

Rank	1960	1970
1	AT&T	IBM
2	GM	AT&T
3	Dupont	GM
4	Exxon	Exxon
5	GE	Eastman Kodak
6	IBM	Sears Roebuck
7	Texaco	Texaco
8	Union Carbide	GE
9	Eastman Kodak	Xerox
10	Sears Roebuck	Gulf Oil

Sources: A Wealth of Common Sense, Bianco Research, Bloomberg, Fundamental Index Newsletter, S&P, September 2024.

Figure 3
Years needed to reach a billion users



Sources: Statista, Visual Capitalist, September 2021.

in the following ten years and remained in the top 10 in 1970. Most of the largest public firms dealt with physical products. Only one company in the top 10 dealt with computing, namely IBM. As we will show later, six of today's ten largest companies primarily deal in digital.

Third, the time needed to achieve Superscaler status has shortened. In 1960, the average top 10 company was 68 years old. In 2024, it is 41 years.

There is a considerable difference even among some of today's top 10 companies. Figure 3 above shows that the world seems to spin far faster today than when Microsoft launched Windows in the 1980s. This is another reason we label the current generation Superscalers.

We see several reasons for this increase in the pace at which companies achieve market dominance.

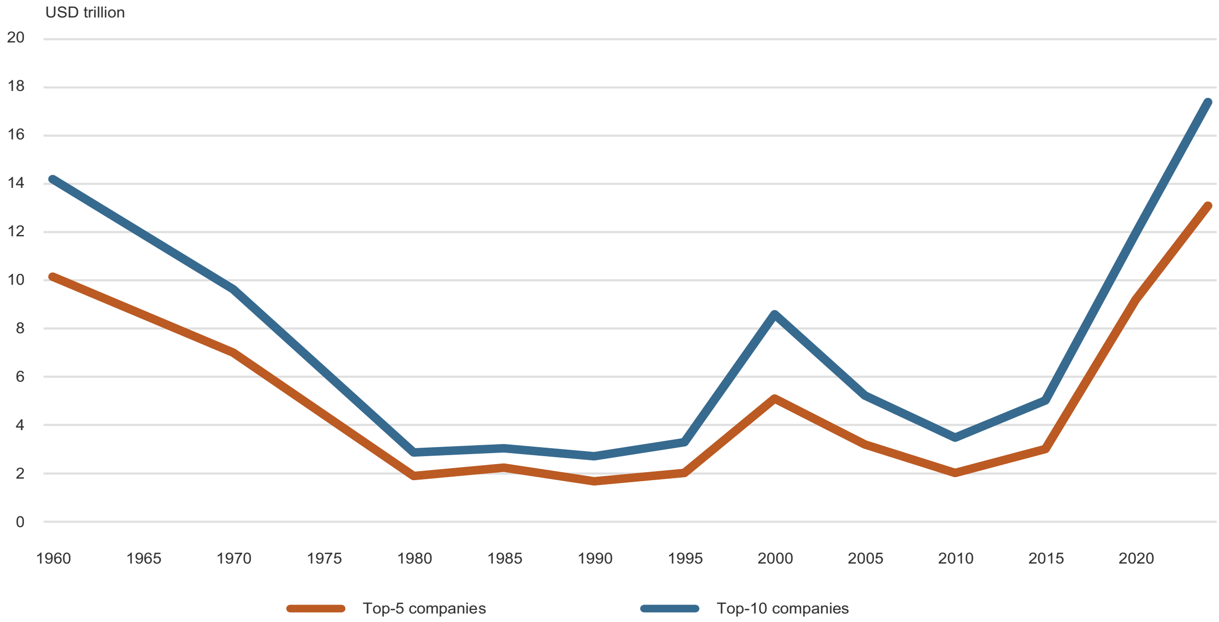
- **The information age and free trade**
  The world is arguably more interconnected today than in the 1960s or even the 1980s, not least because of the escalation in cell phone usage and increase in broadband deployment. That means new ideas and products can spread quickly (and regulators have a more challenging time keeping up). It also means that so-called network effects, i.e., the notion that the utility of a service increases with the number of users, are more robust.

- **Software vs. hardware**
  Most of the largest companies currently deal in digital products and services that can be sold and distributed instantly. In the 1960s, the largest companies were, to a considerable extent, physical entities.

- **B2C rather than B2B**
  Selling directly to consumers is a more common feature among today's giants than those of the past. It is perhaps easier to get a horde of individual consumers excited about the newest technology or trend than to get business customers to change their practices.

These factors are at least part of why today's largest listed companies have achieved Superscaler status. However,

Figure 4
Market cap adjusted for the nominal size of the global economy



Sources: A Wealth of Common Sense, Bianco Research, Bloomberg, Fundamental Index Newsletter, S&P, September 2024.

"A couple of creative souls and a few software developers may lure the next generation of consumers away from the platforms we use today."

they may also constitute the most significant risks for (some of) them. With the world at their fingertips, a couple of creative souls and a few software developers may lure the next generation of consumers away from the platforms we use today (e.g., Facebook vs. TikTok). This means the Superscalers may need to reinvent themselves more often than their predecessors.

What is the significance of companies becoming so large that we count their market capitalisations in trillions?

While Apple's crossing the trillion-dollar line in 2018 made good headlines, and Microsoft's 2024 market capitalisation of USD 3 trillion may seem dizzying, a trillion dollars is not what it used to be. First, inflation constantly erodes the value of money. Second, it is easier to amass value in a world with eight billion potential customers than the three billion that populated the earth in 1960. Third, real income per capita has risen, meaning the average consumer has more spending power.

In Figure 4, we have adjusted the market cap of the largest listed companies for inflation and the size of the real economy. The chart shows that, relative to the global economy, the market cap of the top 5 and the top 10 was just as significant in the 1960s as it is today in the 2020s.

Table 2 on the following page, shows which companies were in the top 10 at the end of each decade. AT&T in 1960 almost equalled Microsoft today in terms of market capitalisation adjusted for the nominal size of the global economy. GM, Dupont, Exxon, GE, and IBM were the equivalents of today's USD 1+ trillion companies. However, from the 1970s to

Table 2
Modern Stock Market History — top 10 companies in different decades

Rank	1960		1970		1980		1990		2000		2010		2020		2024	
1	**AT&T**	2.71	**IBM**	2.22	**IBM**	0.48	**IBM**	0.4	**GE**	1.49	**Exxon Mobil**	0.57	Apple	2.87	Apple	3.45
2	GM	2.44	**AT&T**	1.63	**AT&T**	0.43	**Exxon**	0.4	**Exxon Mobil**	0.95	Apple	0.46	Microsoft	2.23	Microsoft	3.17
3	Dupont	1.93	GM	1.4	**Exxon**	0.42	**GE**	0.31	Pfizer	0.91	Microsoft	0.37	Amazon	1.84	Nvidia	2.98
4	**Exxon**	1.69	**Exxon**	1	Amoco	0.28	Philip Morris	0.3	Citigroup	0.9	Berkshire	0.31	Google	1.38	Amazon	1.75
5	**GE**	1.38	Eastman Kodak	0.74	Schlum-berger	0.27	Royal Dutch	0.26	Cisco	0.86	**GE**	0.3	Facebook	0.87	Alphabet	1.75
6	**IBM**	1.26	Sears Roebuck	0.72	Shell Oil	0.22	Bristol-Myers	0.22	Wal-Mart	0.74	Wal-Mart	0.3	Tesla	0.66	Meta	1.24
7	Texaco	0.83	Texaco	0.58	Mobil	0.21	Merck	0.22	Microsoft	0.72	Google	0.3	Berkshire	0.58	Berkshire	0.84
8	Union Carbide	0.71	**GE**	0.52	Chevron	0.21	Wal-Mart	0.21	AIG	0.72	Chevron	0.29	J&J	0.53	Broadcom	0.8
9	Eastman Kodak	0.67	Xerox	0.41	Atlantic Richfield	0.18	**AT&T**	0.2	Merck	0.68	**IBM**	0.28	JP Morgan Chase	0.5	Tesla	0.72
10	Sears Roebuck	0.59	Gulf Oil	0.41	**GE**	0.17	Coca-Cola	0.19	Intel	0.63	P&G	0.28	Visa	0.48	Eli Lilly	0.69
Top-5		**10.15**		**7**		**1.89**		**1.67**		**5.11**		**2.02**		**9.19**		**13.1**
Top-10		**14.2**		**9.64**		**2.87**		**2.7**		**8.6**		**3.47**		**11.94**		**17.39**

The numbers show market cap in trillions of USD.

Sources: A Wealth of Common Sense, Bianco Research, Bloomberg, Fundamental Index Newsletter, S&P, September 2024.

2020, market capitalisations were typically much smaller relative to the global economy, with GE being the only one-trillion-dollar exception at the turn of the millennium.

About Table 2, we can summarise:

- Although the trillion-dollar market caps from today are remarkable, they are not unprecedented. From a market cap perspective and adjusted for the size of the global economy, the top 10 companies of the 1960s carried just as much weight as the top 10 companies in 2024.
- Companies can stay in the top 10 for a long time. For example, IBM and AT&T did so for three decades, and GE and Exxon for 50+ years.
- The kind of era we are in matters for which companies dominate. Equipment manufacturers and oil companies were key in constructing vast infrastructure during the 1900s. Now, the digital world is being built, and the current top 10 companies deal largely in intangibles.
- Certain sectors are less common to see in the top 10. Banking services and healthcare, for example, are limited by regulation and borders in a way that more generic products (such as oil) are not.

What will happen to market concentration in the years to come?

One lesson from history is that companies can remain among the world's largest for decades if their ascent is founded on solid fundamentals. The earnings of today's top 10 companies have increased sevenfold since 2010, while their market capitalisations have increased 11-fold.

Consequently, the key driver of market capitalisation is earnings growth, and there is no sign of a major bubble. In a world with fewer physical constraints, remaining a dominant incumbent may be harder than ever. In a more dynamic world, the importance of having the right mindset and corporate culture is greater. Great companies only stay great with good management that handles the dynamics well.

Mind over matter

When it comes to mindset, and to prevail and prosper over decades, we believe that a key quality in a management team is the ability to adapt to changing conditions. As highlighted previously, one example of such a company that has done so repeatedly is Microsoft. For example, its CEO since 2014, Satya Nadella, has made several major changes that have helped Microsoft transition different technology eras from a Windows-focused software vendor into a cloud provider:

- **Focus on Azure**
  With Azure, Microsoft expanded its platform reach into the cloud, offering infrastructure, platform-as-a-service (PaaS), and tools for developers to build and host applications.

- **Office 365 and software as a service (SaaS)**
  By integrating tools like Office, Teams, and security solutions into a cloud platform, and transitioning them to a subscription-based service, Microsoft created a comprehensive ecosystem that businesses depend on.

Mindset matters not only when it comes to internal matters, such as corporate strategy and product development. With government intervention on the rise, executives at global companies must tread carefully. Failing to do so may cost corporations and their shareholders dearly. For example, Ali Baba's share price fell almost 80% from the peak (October 2020) to the trough (October 2022), at least

"With government intervention on the rise, executives at global companies must tread carefully. Failing to do so may cost corporations and their shareholders dearly."

partly because of Jack Ma's spat with the Chinese government. In the US, federal agencies have pursued legal action against Apple, Facebook, Google, and Meta, and the European Union has enacted the Digital Markets Act to curb the dominance of global tech platforms. Management teams and board directors must be sensitive to and mindful of changes to the regulatory and political landscape.

Focus on the long-term

In a world where quarterly results can cause large changes in stock prices, it is easy to start focusing on the short term. At C WorldWide, we always emphasise long-term thinking, and when analysing existing and potential investments, we very much favour management teams with long-term-oriented mindsets. Only by building a strong corporate culture, being proactive when winds are about to change, and investing for the long term can managers reach and maintain a position as one of the largest companies in the world.

"Our preference for long-term thinking is evident in all our equity strategies."

We actively seek companies that exhibit an enduring corporate mindset over the longer term — a perspective that emphasises long-term robustness and longevity rather than maximising short-term performance.

Our preference for long-term thinking is evident in all our equity strategies. Using our C WorldWide Global Equities as an example, Figure 5 below shows that the average age of the companies in the portfolio is more than 90 years, compared to an average of 52 years for the S&P 500.

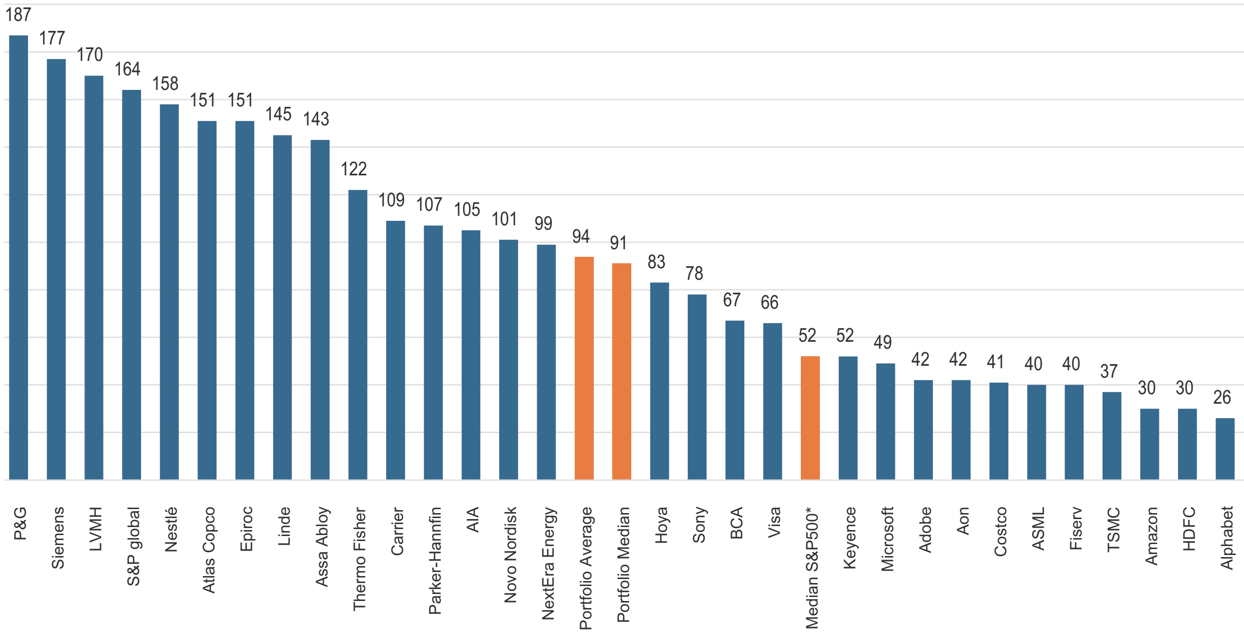
The Future of Superscalers

In this digital era, the physical and digital worlds are converging, rapidly reshaping industries and compa-

Figure 5

Sustainability of Growth

Half of the companies in our global equity strategy have survived two World Wars



Source: C WorldWide Asset Management, June 2024.

"We are now in a multipolar world with national governments and tighter regulations playing a more significant role."

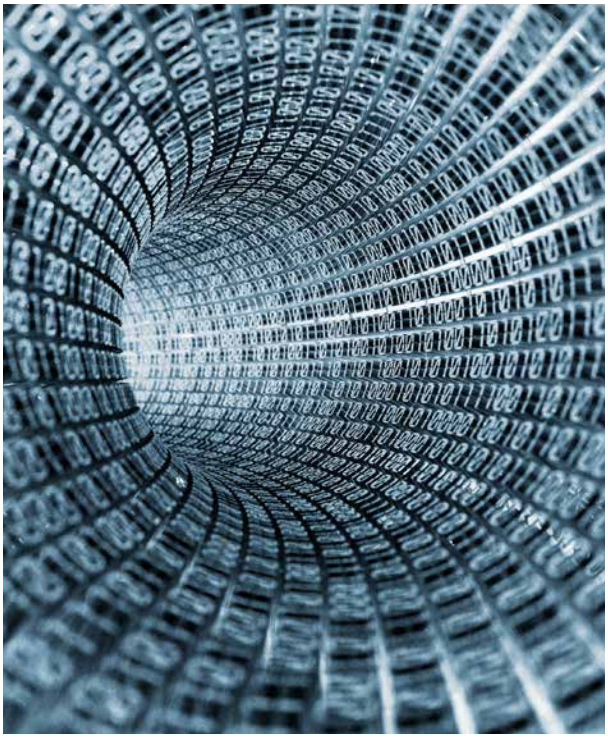
nies around the world. In this new environment, having an agile mindset is far more critical than it used to be, while being patient, humble, and forward-looking is as relevant as ever.

AI is here to stay and will likely play a significant role in creating market cap over the coming years. The challenge for investors is to figure out what the next generation of compounding business models emerging from AI/generative AI will look like.

We know about the mindset of the leading tech companies, as exemplified by Mark Zuckerberg, who stated, "AI is perhaps the most important foundational technology of our time" (Feb. 2022). The acceleration towards seeking Superintelligence and Artificial General Intelligence (AGI) is happening, and it is very natural for all tech companies and their iconic leaders to seek leadership here. As Alphabet's CEO, Sundar Pichai, says, "We are at an early stage of a transformative era. The risk of underinvesting is dramatically more significant than the risk of overinvesting for us here" (Jul. 2024). For them, it is about overcoming the biggest challenges of humanity. It is about breakthroughs in linguistic, mathematical, spatial, musical, and intra- and interpersonal intelligence. However, investing aggressively is also essential for staying relevant, not losing, and not missing the boat in the next tech revolution that could be linked to Humanoids.

We also know more about the difference in today's world compared to the 1990s and the 2000s, when globalisation and free markets ruled in a unipolar world led by the US. We are now in a multipolar world with national governments and tighter regulations playing a more significant role.

Creating trillions of market caps in this environment will probably be more challenging. However, there will be winners and losers. Over the last decade, we have



witnessed the rise of oligopolies and near-monopolies in several areas, like social media, cloud hosting, and semiconductors, with a high level of domain dominance driven by scale and execution.

The excitement around AI will probably lead to a potential battle of the giants discussed in this paper, supplemented by loads of capital, supporting start-ups coming in as well. Adding momentum and luck (e.g., algorithmic breakthroughs happening outside the realms of the giants) and changing the rules of the game along the way with very active regulation and politics make high-return scaling more difficult.

The excitement around AI could lead to a battle of the Superscalers, as discussed in this paper. Start-ups funded by private capital may attack the flanks or even face the incumbents head-on.

Additionally, the sheer size of the Superscalers will likely curb their growth. As mentioned previously, the total market cap of the seven superscalers grew by 24% per year, on average, between 2010 and 2024. It now corresponds to 14% of global GDP, and it constitutes 20% of the total market cap of the MSCI ACWI. If the seven superscalers keep growing by 24% per year, while nominal GDP grows by 5% per year and other constituents of the MSCI ACWI gain 8% per year, their total market cap would correspond to 72% of global GDP in ten years and their weight in the MSCI ACWI would be 51%.

Still, the lifeblood of AI is data. Consequently, cloud hosting might be a good business model with a sound industry structure in the coming years. Having one of the big cloud providers hosting your specific LLM as a start-up is efficient. With a pay-per-use cost structure, you can access compute resources and tools like pre-trained models, data analysis, and storage. Cloud provides an infrastructure for innovation, and Microsoft highlights that it hosts about 1,700 LLMs for its clients. This gives some optionality for Microsoft to benefit from a general increased use of AI and exposure to eventual killer applications developed on the Microsoft platform. Therefore, the three giants, Microsoft, Amazon, and Alphabet, seem well positioned at this stage. They are all "picks and shovels" plays on the AI (r)evolution and have a good chance of continuing their dominance for the rest of the decade.

"The three giants, Microsoft, Amazon, and Alphabet, seem well positioned at this stage."

Final thought

History highlights that companies can stay on top for decades, but Big Government and an increasingly polarised world will make super scaling more difficult. Compared to the physical world that characterised stock markets and global value creation in past decades, there is a need for faster reinvention in digital society.

It is vital to focus on individual company fundamentals and the mindset and culture of these companies when it comes to how they adapt to constant change, whether driven by internal or external forces.

At this fascinating stage in stock market history, we take a selected few portfolio approach, focusing on sustainable lower-risk compounding.

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