

# The Disruptive Strategist

Marketing material for professional, institutional and accredited investors

## Executive Summary

In our Q3 2022 newsletter, members of GAM Investments' Global Equities team cover topics including the equity market rally and sell off, regulation in the crypto space, 'proof of stake' in the blockchain, some key learnings from Communicopia in California this quarter, and 5G unlocking the industrial Internet of Things.

Mark Hawtin reviews Q3 and its major events, including interest rate rises and equity market woes.

Mark also examines regulation in the cryptocurrency space and how this could and should be resolved going forward.

Pieran Maru discusses the much-anticipated Ethereum Mainnet Merge and the move from proof of work to proof of stake.

David Goodman picks out some highlights and what he learned from his trip to the 2022 Goldman Sachs Communicopia and Technology Conference.

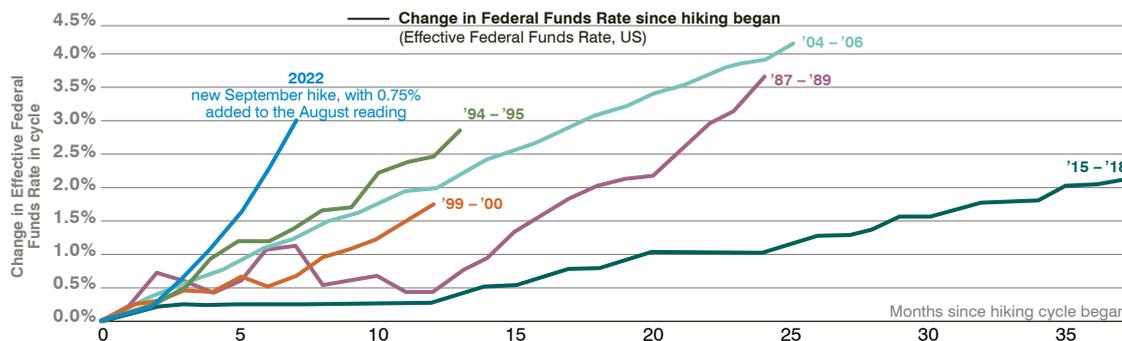
Kevin Kruczynski looks at the power of 5G networks and the important role they will play.

## Quarter review

By Mark Hawtin

The third quarter of 2022 saw hiatus among nearly all asset classes. There was a sharp bear market rally in the first part of the quarter followed by a vicious sell off in September as the Federal Reserve (Fed) re-emphasised its commitment to do whatever it takes to bring down inflation. The Fed funds rate has now risen faster than at any time in history, as seen in the chart below, and this has added to the speed and size of sell off in financial markets.

## The FED is hiking further & faster than any time in modern history



Source: Federal Reserve. For illustrative purposes only. Past performance is not a reliable indicator of future results or current or future trends.

## Management team



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Investment Director



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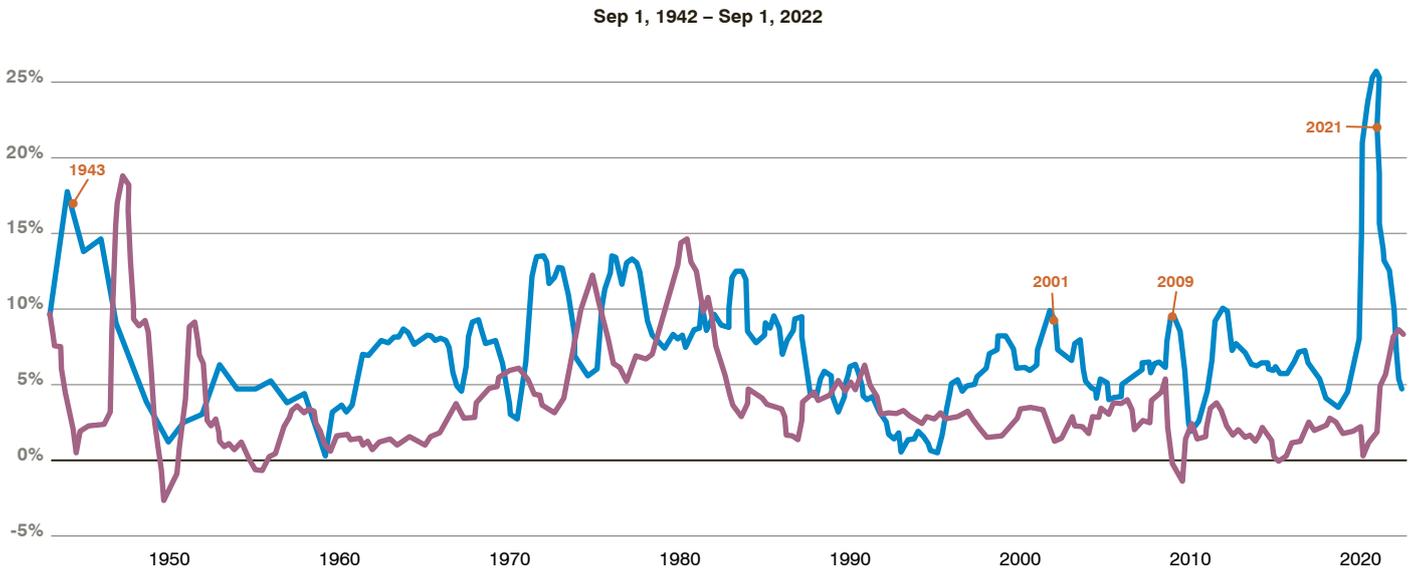
**Wendy Chen**  
Senior Investment Analyst



**Pieran Maru**  
Investment Analyst



## M2 yearly growth vs. inflation



Source: Longtermtrends.net. Past performance is not an indicator of future performance and current or future trends. The blue line shows M2 yearly growth and the purple line shows inflation.

In the year to end September, the US aggregate bond index is down more than 15% while equities have suffered far worse, with growth equities taking the brunt of discriminant selling. In short, this has been one of the worst years for risk assets in the last 50 years with over USD 17 trillion wiped off US bond and equities market capitalisations according to Gavekal. It is no surprise, therefore, that duration equities have been soundly sold down with proxies like the ARK Innovation ETF falling 60% in the year to September end.

Macro events only served to add pressure to already frazzled markets. The UK Prime Minister election debacle reminded investors of possible black swan events through the LDI fiasco; the war in Ukraine continued to drag on with no signs of a solution; China/US relations remained strained with the imminent introduction of the CHIPS Act and in China itself, uncertainty over the outcome of the 20th China Party Congress led to further declines in the Chinese markets. The KWEB index of Chinese ADRs fell a further 25% in Q3 alone.

It was clearly a quarter when company fundamentals mattered little. Winning strategies were run by macro funds pressing the trends that had marked the first half of the year – long commodities and the US dollar, and short equities and bonds.

Drilling down into the growth or duration equity world where we focus, year-to-date numbers do not make for pretty reading. Within the MSCI World Growth index, the bottom five names are Wayfair -83%, Affirm -81%, Applovin -79%, Snap -79% and Ringcentral -79%. The size of these moves over such a short space of time is typical of chaotic periods where outcomes on a macro basis are unpredictable. Investors look for the relative safety of quality and here we find better levels of performance, although only 18% of the 802 World Growth constituents were up in the first nine months of this year (MSCI World Growth Index -33%). Mega-cap consumer facing names were a last bastion for many; Apple and Tesla fared better than most at -22% and -25%, respectively, but surely this can only be for a matter of time. Elsewhere, winners came from healthcare, staples and luxury – LVMH -16%, Nestle -16%, Roche -16%, Heineken -13% to name a few. Twitter was an odd stand out with flat performance to the end of September underpinned by the bid made by Elon Musk. If he had waited just a few months more, the asset he has paid top dollar for might have been significantly cheaper!

## The regulatory crypto conundrum

By Mark Hawtin

Just as Coinbase announced a partnership with BlackRock underlining its position as the leading crypto and other blockchain-based asset platform, the regulatory clouds appear to be intensifying. Recently, the US Securities and Exchange Commission (SEC) launched legal action against Coinbase claiming that nine of its listed coins are securities and therefore the company is in breach of securities law. At the same time, the US Department of Justice has, in conjunction, pressed charges against three individuals for insider trading claiming they have front run a number of these coin listings. The charge that one Coinbase employee, Isahn Wahi, and two others made as much as USD 1.5 million are being denied by the three. This case has focused attention on Coinbase, but we believe this fails to recognise the point at issue – who is responsible for regulating crypto and how should it be regulated? That Coinbase is involved in this case is pure coincidence and should not be seen as reflective of bad practice by the company. Indeed, Coinbase itself gave up the names of the three to the SEC and dismissed the employee involved.

The bigger issue is that regulation is well behind the curve. In fact, existing regulation is so unfit for purpose that Bitcoin and Ethereum have been deemed commodities by the Commodity Futures Trading Commission (CFTC) and accepted as so by the SEC. This is because they are now so big that trying to implement securities law would risk destabilising and possibly driving the dominant bitcoin trading hubs offshore – in short it risks the US competitive positioning in crypto assets.

There is a clear set of battle lines emerging on who should regulate crypto, with the SEC and the CFTC going head to head. The SEC's position is difficult because there is no brightline definition of a security. As a result, it is trying to legislate by litigation; this is not ideal. The SEC is staking its claim on the definition of a "security", which includes investment contracts as established in the 1946 Supreme Court case of the SEC versus Howey. The CFTC claims, meanwhile, that crypto is a currency and, therefore, a commodity regulated by the Commodity Exchange Act of 1934, a law that was created long before crypto existed. There is a clear competitive dynamic between the SEC, which implements securities law, and the CFTC, which implements derivatives law. Oversight for the SEC is undertaken by the congressional finance committee while oversight for the CFTC is undertaken by the agricultural committee. Both have different agendas and lobbyists.

We believe that it is this race for oversight that is driving SEC policy and that the targets in legal actions are merely a means to an end rather than being targeted specifically for their own working practices. In fact, Coinbase as the latest recipient of SEC action, is keen to engage in the discussion on legislation but the SEC appears less willing. Coinbase is keen to highlight its recent petition to the SEC which outlines several points about the SEC needing to overhaul its regulations if it really wants to define crypto as a security. In other words, the SEC still has work to do in order to truly regulate crypto and this underscores that the industry is not being uncooperative for failing to "come in and register". A much bigger case that is being litigated actively by both sides is against Ripple and that development may go some way to defining new case law, although we are sceptical.

The overall outcome here is likely to be slow but we see three possible outcomes. The first and most unlikely is that the SEC prevails. In this instance the setup would strongly favour existing broker/dealers who could start to easily offer crypto trading capability on their existing platforms at the expense of the current exchanges. The second is that the CFTC prevails and that crypto is deemed a currency. A Senate Bill proposed at the end of August by the agriculture committee would give the CFTC the leading role in overseeing the two largest cryptocurrencies and the platforms where they are traded. The Bill proposes that the remaining cryptocurrencies would be divided between the CFTC and the SEC, though the process for making those determinations is not yet clear. The third outcome, and the one to which we attach the largest likelihood, is that in time Congress will be pushed into creating new legislation for crypto, something for which they have shown little appetite to date, but it seems to be the only workable long-term solution. This is a new asset class requiring new legislation. It is worth noting that policy trend lines are moving away from the SEC and more towards Congress giving the CFTC spot authority (via three separate bipartisan bills) while giving the Fed stablecoin oversight. In other words, the role of the SEC is important, but it is only one piece of the puzzle.

Any solution that leaves total oversight in the hands of the SEC would place the US in a very uncompetitive position and therefore we think is unlikely to prevail. Any other outcome will leave existing platforms with business models that are unimpaired and indeed those, like Coinbase, who are trying to be transparent and 'onshore' are ultimately likely to cement their positions as clear leaders in the market.

**Proof of stake – one step closer**

By Pieran Maru

Q3 saw the much-anticipated Ethereum Mainnet ‘Merge’ occur after years in the planning – upgrading the original consensus protocol mechanism from proof-of-work (PoW) to proof-of-stake (PoS). For background, Ethereum is a blockchain (database of transactions) with its main differentiator from Bitcoin being the ability to be programmable and build decentralised apps. The market cap of its native cryptocurrency Ether (ETH), required for actions on the network, currently makes it the second largest. Innovative use cases vary from decentralised exchanges and digital art ownership to virtual worlds.

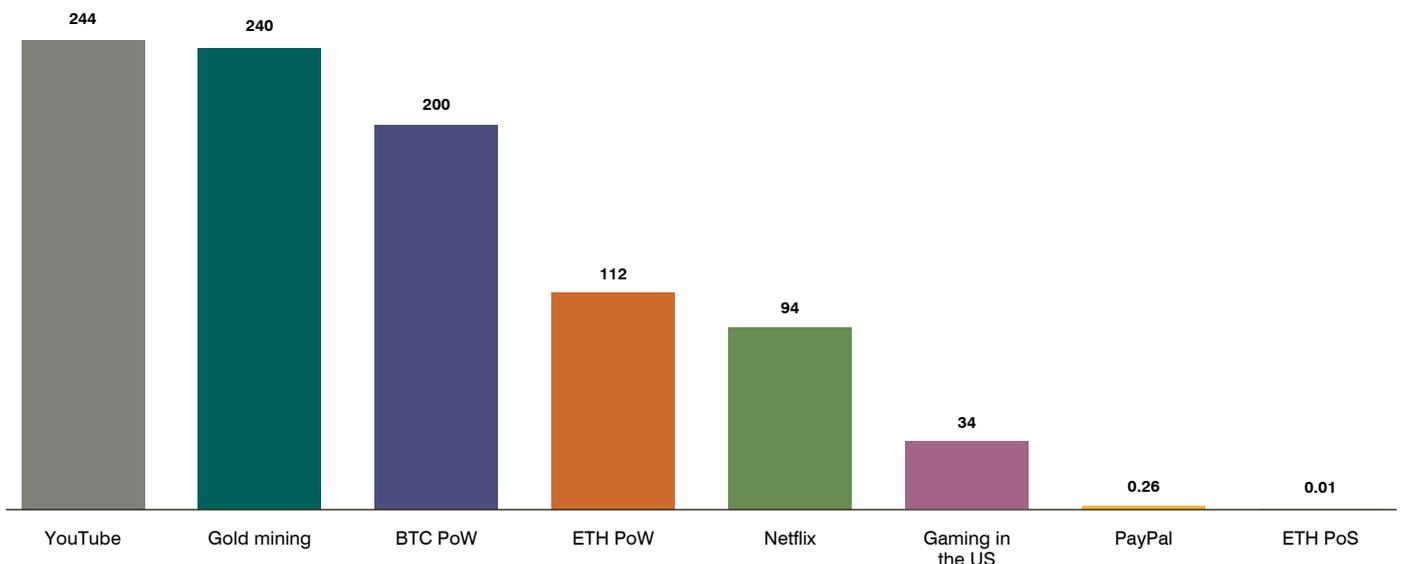
**Consensus mechanism**

Blockchains use a consensus mechanism for nodes to agree on the state and achieve distributed consensus. In the original PoW-based blockchains, miners (who create blocks of verified transactions which are added to the blockchain) go through a brute force trial and error approach to validate transactions and create new blocks. One analogy for this is finding the winning ticket in a lottery for which the numbers are already known. This secures the network; however, as the network scales, it leads to an increasing requirement for compute power and energy usage. On the other hand, for a PoS consensus mechanism, validators secure the network by staking their ETH in a smart contract, acting as collateral. Validators are then responsible for checking to ensure the block is valid and sending an attestation across the network in favour of the block to add. Advantages of PoS include lower barriers to entry and better energy efficiency (see further below). However, one concern with PoS has been whether the network has become more centralised, with a large proportion of individuals using staking pools rather than solo staking.

**Green credentials**

One of the main benefits of moving to a PoS consensus mechanism is the reduction in energy consumption, given the elimination of miners. To put this into perspective, the energy use and carbon impact of Ethereum PoW had an approximate power consumption equivalent to Finland on an annualised basis and a carbon footprint in line with Switzerland (source: <https://ethereum.org/en/energy-consumption/>). Meanwhile Vitalik Buterin, co-founder of Ethereum, tweeted, “The Merge will reduce worldwide electricity consumption by 0.2%.” After The Merge occurred on 15 September 2022, the Crypto Carbon Ratings Institute (CCRI) estimated it led to a reduction in electricity consumption of 99.988% and carbon footprint of 99.992% on the network (source: <https://carbon-ratings.com/eth-report-2022>). However, although Ethereum is now considered a green blockchain, a large proportion of miners have moved to other PoW blockchains to continue operations – shifting their energy use and carbon footprint elsewhere.

**Annual energy consumption in TW/yr**

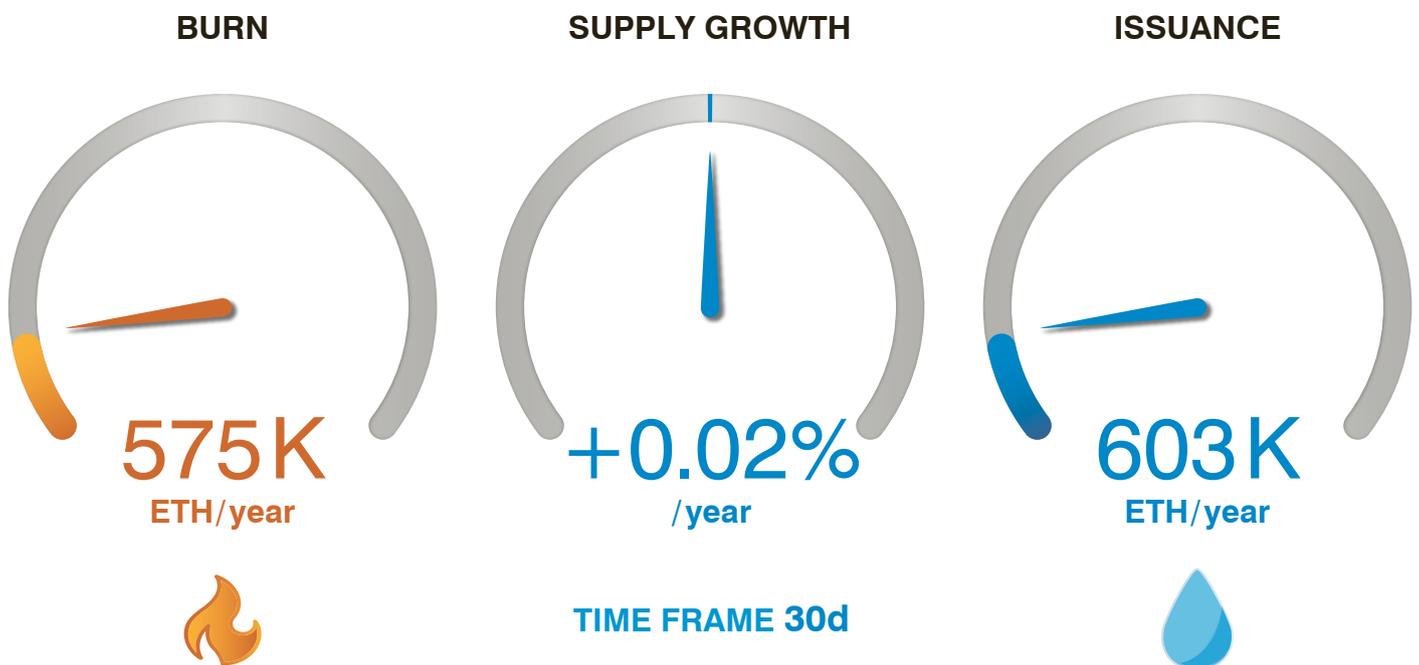


Source: <https://ethereum.org/en/energy-consumption/>

**Deflationary?**

An additional impact of The Merge has been the supply of ETH via issuance and burning. Prior to The Merge, miners were rewarded approximately 13,000 ETH per day and ~1,600 ETH in staking rewards. Today, only the staking rewards remain, leading to a net reduction in annual ETH issuance of approximately 90%. In opposition, the burn relates to a base fee paid for a transaction to be valid on Ethereum and is removed from circulation. As the network usage increases, we could begin to see a deflationary impact. Supply growth prior to The Merge was just under 5% while PoS over the last 30 days (at the time of writing) shows a 0.02% growth in the figure below.

PoS over the last 30 days



Source: <https://ultrasound.money/>

**What's next?**

So what lies ahead for Ethereum? One of the next major upgrades in the works is 'sharding' to enhance scalability and capacity to store/access data. The main problems to address are improving speed, reducing network congestion and reducing disk space as the network grows, given validators are required to store all the data. At current levels, Ethereum handles roughly 15 transactions per second. By splitting a database horizontally, this will spread the handling of data in conjunction with 'layer 2 rollups' with layer 1 being the base blockchain and layer 2 an additional blockchain built on top that can settle back to layer 1. By combining layer 2 rollups and sharding, we could see transactions per second increase up to 100,000.

## Learnings from Q3 California 2022

By David Goodman

At the end of Q3, Pieran Maru and I took a trip out to California, primarily to attend the 2022 Goldman Sachs Communicopia and Technology Conference, showcasing 220 companies. We also joined two bus tours meeting company management and I took a Tesla factory tour, where I met investor relations, toured the manufacturing facility and test drove the model Y and S Plaid (zero to 60mph in 1.9 seconds!)

As well as finding new, re-enforcing old and in some cases re-visiting existing ideas, several high-level learnings came out of the trip.

### **Business/mission critical software**

Markets have long understood the value of recurring revenue income streams. As enterprise transitions to digital, software solutions are becoming mission-critical in nature and vital to the day-to-day operations of a modern organisation. Leading software vendors can raise prices consistently without losing demand, resulting in high and stable margins. It is becoming clear that a number of software companies are now mission critical to their customers, especially in an accelerated digital-first environment.

Mission critical application examples differ among industries, so while an automatic vehicle locating (AVL) app might be mission critical for a taxi or delivery company, a plumbing company which utilises the same software might consider it significant but not vital. A company specific example would be Guidewire. Their software runs all core systems for property and casualty (P&C) insurance, setting premiums for policies, processing claims, and billing customers. Excluding their analytics and other modules, the core InsuranceSuite solutions have only had a single customer churn off in the company's history (outside of bankruptcies).

### **The continued rise of omni-commerce**

Shoppers making purchases through retailers on multiple channels are often spending more and are more profitable, making omni-channel increasingly critical to success in retail. Point of sale (PoS) transactions, which previously dominated the payments environment, have changed significantly as a result of the Covid-19 outbreak. Omni-channel has become essential for ensuring a seamless integration of online and offline systems to deliver a single perspective of the customer – encompassing end use pick-up points, buy online or collect in store options. Customers are also demanding a continuous experience across multiple devices and touch points – they want the same experience – irrespective of which channel they choose. If you had said 10 years ago that retail shopping would be conducted on phones, social platforms, tablets, interactive kiosks and more, you would have been laughed at. Today, that is exactly what is happening. Omni-commerce is becoming the primary competitive advantage for retailers in a post-Covid world.

### **Data growth**

The necessity to deploy next generation database and analytics infrastructure is being driven by the infinite increase of data. In this context, open source is becoming a potent tool for standardising technology and processes among various cloud vendors. Furthermore, it is possible that integrated artificial intelligence/machine learning (AI/ML) solutions will be included in contemporary applications and infrastructure.

### **Hybrid working**

Demand for next generation platforms that integrate collaborative capabilities with core programmes to boost productivity is being driven by hybrid working. The emphasis is on cooperative enhanced productivity and efficiency, but this can only be done if you have the best tools to begin with. These solutions might provide everything from video conferencing for online meetings, to cloud document storage for managing everyday activities – with all functioning equally as well across mobile devices, desktops and laptops.

Above all, everything should be simple, user-friendly and misunderstanding-free. Regardless of where they are in the organisation, every employee should have the authority to handle the same issue with the appropriate party, then resolve that issue in accordance with a practical workflow.

### **Platforms**

One of the buzzwords throughout the San Francisco visit was the word 'platform'. Many companies highlighted how they are striving to disrupt their respective area and be the go to 'platform'. By offering a platform, the user is locked in the ecosystem and is embedded, making it harder to change later in time. This aids net retention rates and allows for easier upsells for their new offerings. Meanwhile the customer benefits from having a framework to connect other apps for easy integration and develop apps cheaper and faster in the future. Platforms are receiving more attention since

cloud technology makes it much easier to integrate products. The idea is it becomes simpler to combine different tools and apps onto a single platform.

Microsoft chief commercial officer, Judson Athoff, spoke of how they see a “rich opportunity for customers to use collaborative applications” and went on to describe how Microsoft’s vision of expanding their Teams offering to being a collaborative platform. The value proposition, which has a “best-of-suite” philosophy, is integrated into a low-cost, high-value platform that benefits most, if not all, employees within a business. Microsoft views Teams as a crucial corporate platform rather than a compartmentalised communication tool that may link and enhance remote operations.

Companies with a platform strategy can therefore increase their total available market (TAM), provide customers with more value and are probably more resilient over time. B2B software suppliers from a variety of industries have noted a shift away from discrete solutions, towards a platform strategy. In the meantime, we have seen a growth in cloud native point solution providers over the previous few years, followed by significant M&A activity. The adoption and integration of platform approaches will probably be the main priorities of the following step.

#### **AV (Autonomous Vehicles) and ADAS (Advanced Driver Assisted Systems)**

Although the majority of businesses anticipate meaningful restrictions on autonomous driving for at least one to two more years (eg limitations due to geography, weather, or requirements for driver supervision), we frequently heard that AV companies have a better understanding of what is required to scale in the long term and thus believe that the pace of AV/ADAS progress could positively surprise the financial community in the future (many investors are naturally cautious on AV timelines given historical delays).

Our core thesis has always been that the world is experiencing an exponential improvement in computing power, storage and connectivity and these improvements are fuelling innovation, which in turn are disrupting business models across the globe. Our trip enforced the thesis. The current pace of technological advance is unprecedented and shows no signs of slowing.

#### **Private 5G Networks - Unlocking the Industrial Internet of Things**

By Kevin Kruczynski

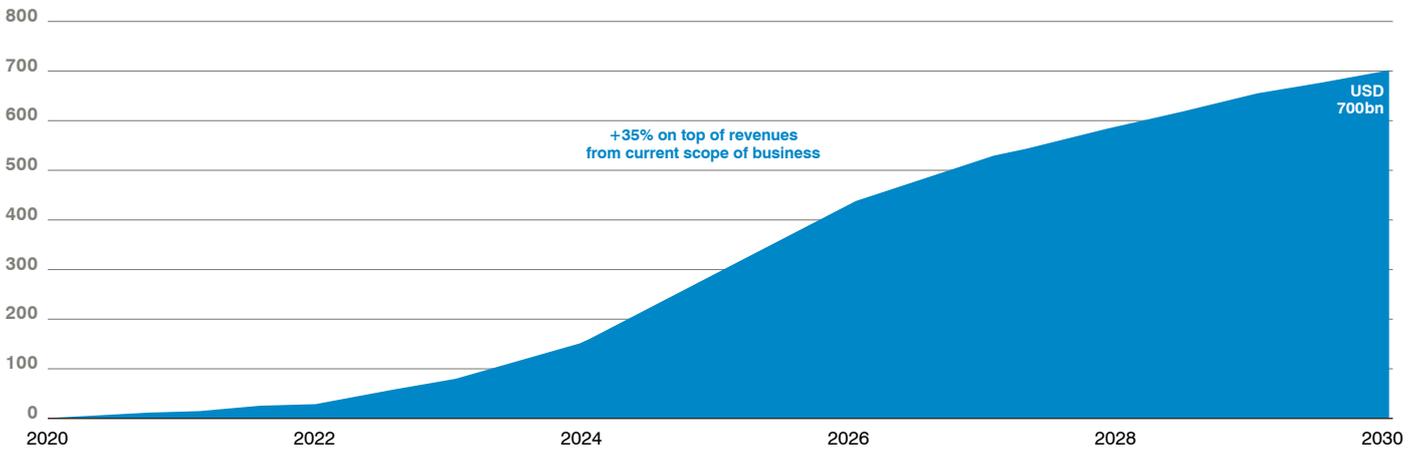
5G networks provide up to 50 times more speed, 10 times less latency and 1,000 times more capacity than 4G, but as network service providers search for a ‘killer app’ to accelerate and monetise 5G adoption from their traditional consumer base of smartphone users, new commercial (or B2B) use cases are emerging at a rapid rate and will be a source of significant incremental growth. This is most apparent when we look at industrial applications where 5G is playing an increasingly important role in the industry 4.0 ecosystem.

For example, the latest smart factories incorporate innovations in artificial intelligence, augmented reality, and automation. These have a multitude of machines, vehicles, robots, sensors, cameras, software systems, and people that need to communicate effectively with one another in real time. Given the number of devices, the amount of data and mission critical nature of many of the functions, this is only possible with fast, reliable, and secure wireless communication. Private 5G networks with ultra-low latency are emerging as the preferred choice as they unlock a wide array of use cases that were not possible under 4G or Wi-Fi based networking solutions. Crucially, these private networks can be designed to meet the most stringent of security requirements, sensitive data can be stored locally and need never leave the network.

As we have seen with many innovations over the years, initial barriers to adoption are high as management teams struggle to visualise the concept and are reluctant to commit large amounts of capital to unproven technologies, but this changes as use cases emerge and early adopters develop a competitive edge, forcing the broader industry to catch up. We think that the S-curve of adoption of 5G enabled industrial internet of things (IIoT) is pivoting from the slow growth to the rapid growth phase. This shift coincides with supply chain rationalisation and near-shoring, as companies reconsider their production footprints against a backdrop of Covid disruption and geopolitical tensions.

Ericsson estimates the incremental opportunity to network service providers from new industrial use cases enabled by 5G will be USD 700 billion by 2030, which should provide ample incentive to continue investment.

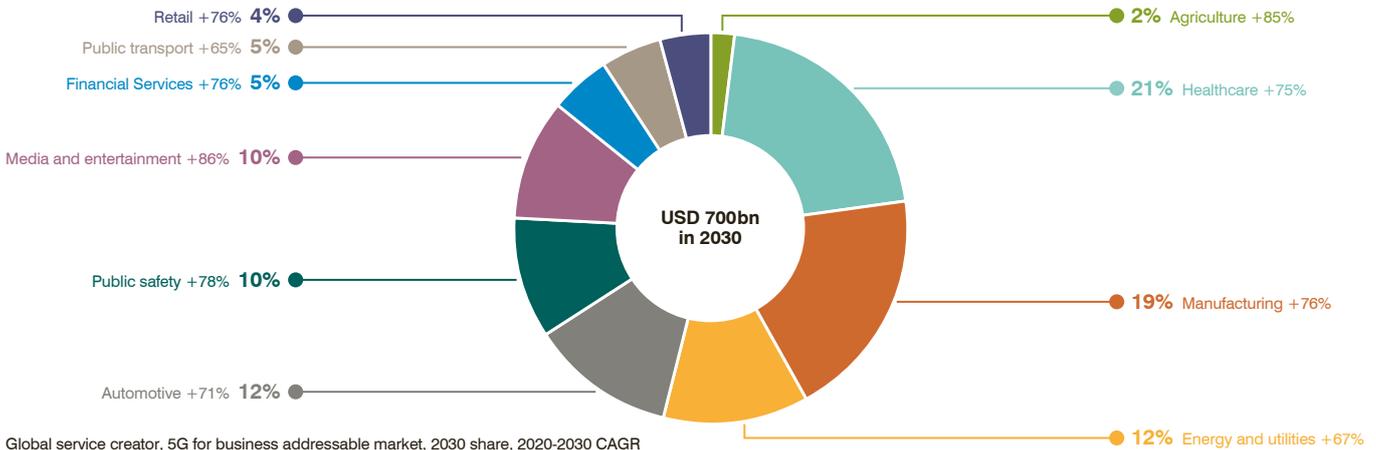
### 5G-enabled revenue potential for service providers



Source: Ericsson and Arthur D. Little. The figures refer to future performance and such forecast is therefore not a reliable indicator of future performance. There is no guarantee that forecasts will be realised.

This will be spread across a broad range of industries and help fuel elevated growth rates.

### Estimated addressable market for 5G



Global service creator, 5G for business addressable market, 2030 share, 2020-2030 CAGR

Source: Ericsson and Arthur D. Little. For illustrative purposes only.

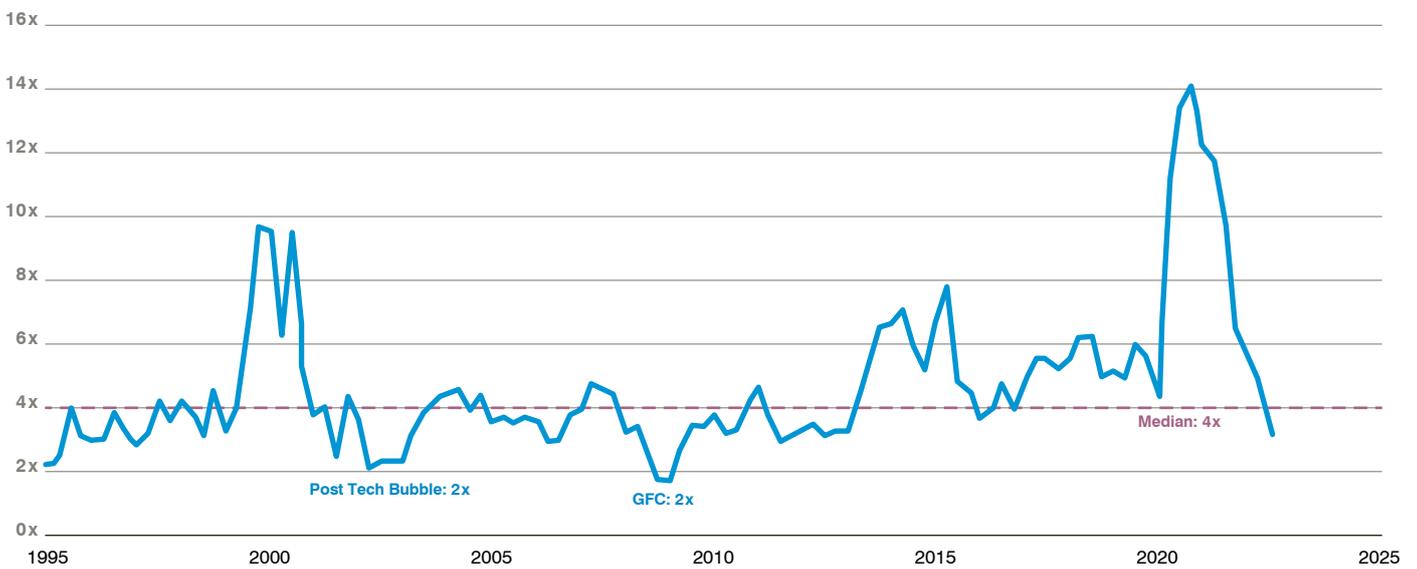
Many companies along the value chain will benefit from the incremental growth, which will provide a significant tailwind for many years. The need for denser networks will be a boon for the networking equipment providers such as Nokia and Ericsson. Keysight Technologies, the leading testing and measurement solution provider, is another obvious beneficiary, given the increasing importance of network reliability and uptime, testing and measurement is vital, not just for the networks but for the devices that connect to them. These developments also unlock new use cases for robotics and automation across a broad range of industries that have been slow to embrace these solutions in the past. This is positive for robot makers such as Fanuc and ABB, as well as machine vision pioneers Keyence and Cognex. It also plays well for companies that provide industrial software solutions, such as PTC, Dassault Systemes, Trimble, and Bentley Systems. Companies will need advice and know-how in developing and implementing digitisation strategies, which leads to robust demand for digital transformation consulting, and is a clear positive for the likes of Accenture and specialists such as EPAM Systems, in our view.

**Outlook**

By Mark Hawtin

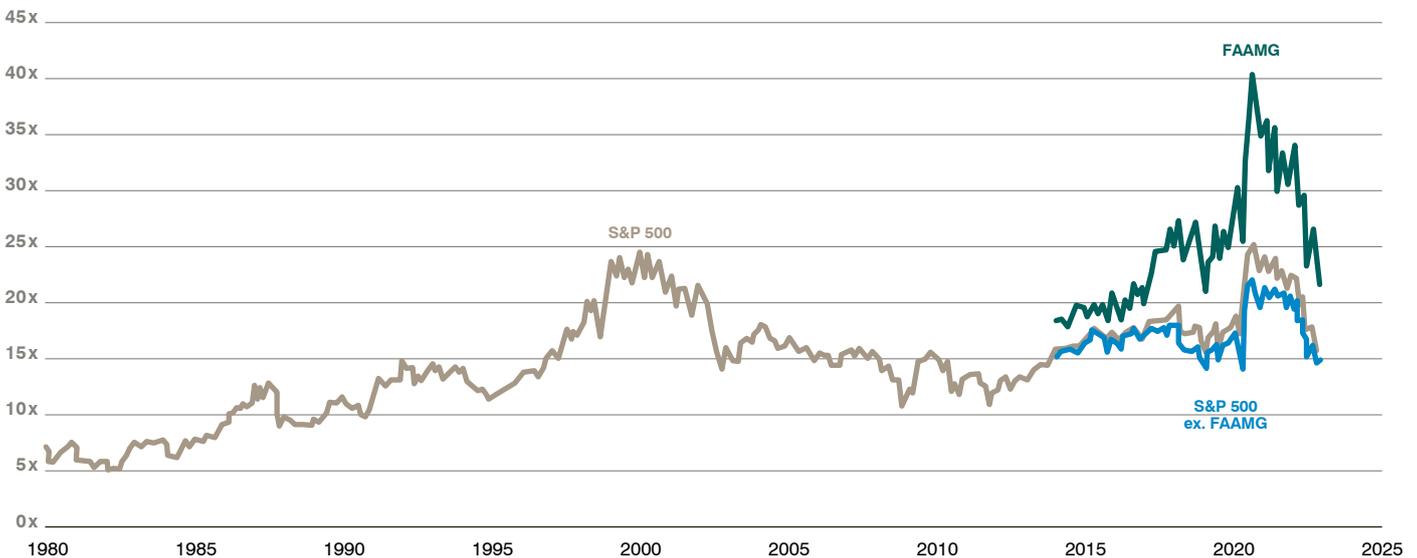
The outlook for growth equities is quite clear for us in terms of the fundamental set up. Rarely have truly disruptive companies been so cheap and we see plenty of upside, in multiple cases more than doubling outcomes being likely, in our view. This is backed up by the collective data that suggests the universe of growth names, as measured by the Russell 3000 and FAAMG names, have derated substantially. The two charts below from Goldman Sachs illustrate this point.

**Median EV/sales for Russell 3000 stocks with high sales growth**



Source: Goldman Sachs. Past performance is not an indicator of future performance and current or future trends.

**NTM P/E**



Source: Goldman Sachs. Past performance is not an indicator of future performance and current or future trends.

Both charts suggest we are not necessarily at rock bottom valuations but it is important to consider that profit margins within the growth equity space have improved sharply as business models have become less capital intensive. In simple terms, a single dollar of revenue earned by a traditional advertising agency is worth far less in profit terms than one earned by Facebook or Google. There has been a shift in revenue dollars from incumbent businesses to platforms that result in a structural shift in margins. According to Bloomberg, operating margins for the MSCI World Growth index ranged between 8% and 12% from the late 1990s to 2018, at which point they broke up to new highs peaking at over 16% in late 2021. From our perspective, valuations are therefore highly compelling. So, it is a green light on fundamentals.

The outlook relies now on the way in which inflation and interest rates play out. Growth equities typically tend to do poorly when rates turn, when the outlook is unclear – they fall first, fastest and sharpest. Much of that has happened. We believe that as soon as the future path of rates is clear (and the expected rate move has jumped very sharply as seen at the start of this newsletter), then there will be a sharp recovery in disruptive growth names. We need to see clear signs of economic weakness for this but they are starting to appear. Any sign of the ‘Fed Pivot’ would add a green light to the technical setup and combined with the fundamental picture could create a positive backdrop for growth equities.

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