

The Disruptive Strategist

Marketing material for professional, institutional and accredited investors

Executive Summary

In the first half of 2021, volatility across hyped alternative assets, including crypto and alternative vehicles for equities, such as special purpose acquisition companies (SPACs), served as a reminder that markets are never a one-way train.

The semiconductor space has become a topic of intense debate among analysts and investors. We believe decisions on whether to invest in the market should no longer be sector based but rather industry specific.

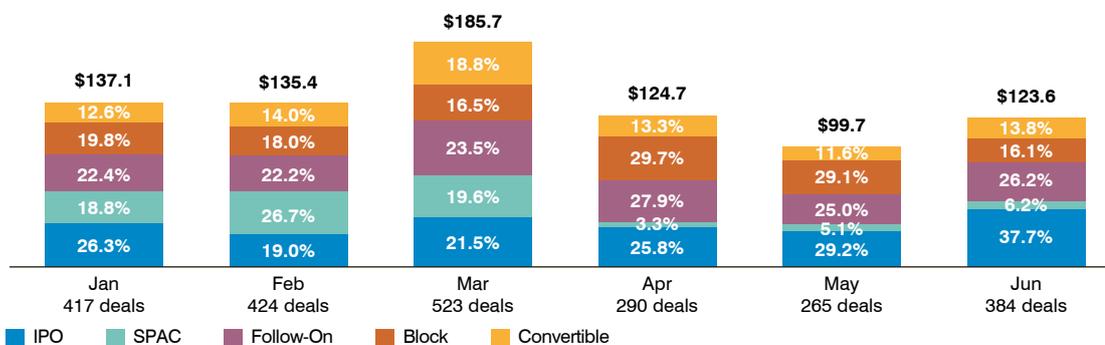
Truly innovative ways of using technologies such as artificial intelligence (AI), advanced robotics and the Internet of Things (IoT) have the potential to turn traditional manufacturing upside down.

In the post-pandemic world of ecommerce, retailers able to utilise technology to create an omnichannel experience focused on the consumer are likely to benefit.

The second quarter of 2021 saw continued strength in equity markets as indices pushed higher, but the quarter was packed with differences below the surface that made navigating it less easy. Value outperformed growth through to the start of June, peaking on 3 June with quarterly outperformance of over 50%. This was then reversed later in June as growth reasserted itself, driving value to underperform by circa 15%. Retail favourites continued to move higher, hitting 12-month highs in many cases, and the initial public offering (IPO) market surged. Conversely, the SPAC market was subdued in Q2 following expectations of stricter

regulation. The make-up of corporate activity can be seen in Chart 1. SPAC activity fell in Q2 to just 51 issued IPOs versus 298 in Q1, at the height of the frenzy. In value terms, this fall was even more pronounced – USD 95 billion of SPAC issuance in Q1 2021 declined to just USD 10 billion in Q2. We have commented on this previously – it is the Gartner Hype Cycle at work and Q1 represented the peak of inflated expectations. We fully expect the SPAC and de-SPAC space to be a long-term route to market for many innovative companies, but the hype-cycle process must be worked through as with every innovation.

Chart 1: Record corporate activity in H1 2021



Source: Goldman Sachs. Data as of 30 June 2021. For illustrative purposes only.

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The de-risking of growth continued in Q2. In particular, China became a focus as regulation became a focal point. Starting with the crackdown on education companies, authorities cited companies such as Didi and Full Truck Alliance in their latest efforts to ensure that firms know who has control. The result was a wholesale decline in Chinese internet names. The KraneShares CSI China Internet UCITS ETF (KWEB) fell 8.6% in Q2 versus a rise in the Nasdaq 100 of 11.2%.

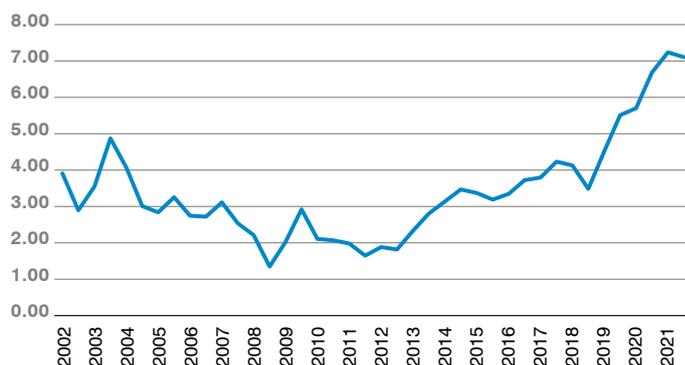
Another significant area of volatility in Q2 was crypto. After Bitcoin, a proxy for the sector, rose 103% in Q1, it fell 41% in Q2 after crackdowns in major markets on both owning and mining crypto assets, as is the case in China. Again, it is our belief that this is a healthy implementation of the hype cycle although for many it felt very painful. We believe that a decentralised digital currency system is highly likely and that the future for the major assets remains healthy.

The volatility seen in alternative asset classes and among alternative vehicles for equities, including SPACs, serves as a reminder that things are never a one-way train. The rebasing of many growth equities in the software space also shows that exuberance can spiral out of control. Fortunately, the huge wave of liquidity has ensured that the foundations of the markets have remained strong with key indices at or around record highs. This has allowed such corrections to occur in a much safer environment than normal, but we remain vigilant in case of a deeper crack in the core of markets.

Semiconductors - Is it really different this time?

We have written on the [semiconductor sector previously](#), but it has become a topic of intense debate among analysts and investors and we therefore felt it was worth re-emphasising our views. A recent report from Capital International Group described semiconductors as the 'new oil' without which the wheels of disruption cannot turn. We would contend that there is certainly truth in the fact that semiconductors are a critical piece of the jigsaw but, like oil to the petrol engine, we believe data is the new oil and semiconductors are the new engines - not as glamorous perhaps, but the workhorse of the new economy. Such is the hype that now surrounds the sector, we have seen valuations expand to extreme levels by historic standards. As Chart 2 shows, semiconductors have steadily become more expensive over the last 10 years when measured by price to sales ratios rising from less than 2x in the global financial crisis to over 7x today. This is at a time when gross margins have, in some cases, increased by 20%. The result is a huge expansion in price to earnings ratios that we find hard to justify in many cases.

Chart 2: Price to sales multiples for the semiconductor sector



Source: Bloomberg. Data from 28 June 2002 to 30 June 2021. For illustrative purposes only.

At 7x, the price to sales ratio is similar to mainstream, mature software companies. This is comparable in our minds because of the maturity and growth profiles of these companies and yet, software carries significantly higher gross margins. We therefore urge caution on a blanket approach to the sector and would suggest that the world has changed in such a way that semiconductors are no longer a homogeneous vertical, but rather a horizontal segment of the market where the end use vertical is far more important in deciding the outcome for individual names. We believe a decision on whether to invest should no longer be sector based but rather industry specific.

In the automotive industry, for example, there is a clear secular growth case as the dollar content in vehicles increases with autonomous and semi-autonomous driving capability. Recent research from Arete shows that the content per light vehicle has increased from USD 310 per car in 2015 to USD 397 per car in 2019, a pedestrian 6.4% compound annual growth rate (CAGR). This is expected to accelerate over the next five years to USD 630 per car, a CAGR of almost 10%. However, neither the historic nor the forecast growth rates match the pace of growth in software, where 10-15% is considered pedestrian in today's world and rates can comfortably exceed 30%. The issue in automotive semiconductors is rather one of scarcity; capacity is scarce particularly with regards to eight inch wafer fabs and this has led to a supply / demand imbalance that has resulted in component shortages and a belief that things can only go from good to better in the sector. History shows that this is not the case and when supply / demand issues are solved, reality sets in with a reversion to the mean. It is for this reason that we find it difficult to find value in the sector overall on long-term intrinsic valuations.

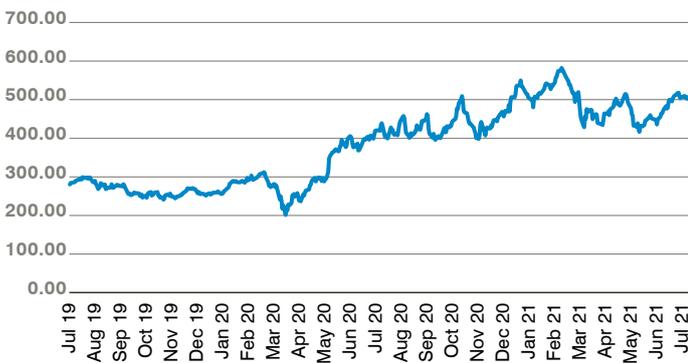
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This does not exclude semiconductor names entirely. Indeed, we see attractive opportunities in companies exposed to the fourth digital pillar - Digital 4.0. In particular, names exposed to 5G, IoT, data and AI could offer compelling investment potential, but these are clearly chosen on their thematic exposure, not their sector classification, in our view.

Software as a Service - A proper correction in Q2

With the market grinding ever higher, it is easy to worry about valuations and overheating. This, coupled with the rhetoric of cyclical recovery trumping growth, makes it harder to see the wood from the trees. The reality is that markets have corrected some of the potential excesses effectively and with very little distress. Chart 3 shows the internet software and services sector. As can be seen, there was a circa 30% correction in March 2021 followed by a recovery and further correction. By the normal bear market metric of a 20% drawdown, this segment of the market has been through its bear market which has probably created a better base for moving higher.

Chart 3: Internet software and services sector



Source: Bloomberg, Goldman Sachs. Data from 2 July 2019 to 16 July 2021. Past performance is not a reliable indicator of current or future trends. For illustrative purposes only.

This evidence is further emphasised by the performance of some of the high growth software favourites. For example, Snowflake, Palantir and C3.ai fell from peak to trough in H1 2021 by 51%, 52% and 70% respectively taking much of the steam out of an overhyped section of the market. While the overall high growth software sector has recovered much lost ground, these names have not, suggesting at least a more rational approach to the constituent parts.

We believe that, in the words of US entrepreneur Marc Andreessen: "Software is eating the world." This sector is likely to provide many strong performers over the next 5-10 years, but

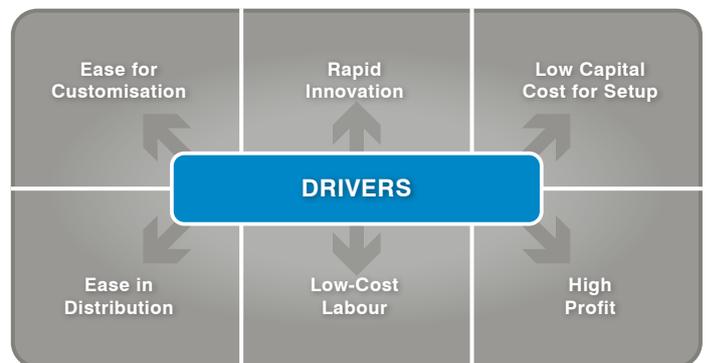
a correction was long overdue. For us, this was an opportunity to revisit some names that we favour as prices fell - ServiceNow and Veeva being examples.

Industry 4.0 - Huge implications for global manufacturing

Industry is yet another area of the market that is evolving at an ever-increasing pace driven by AI, advanced robotics and IoT. We have believed for some time that the effects of this will be felt in many sectors that have not been subject to the levels of disruption seen in areas such as retail, advertising or entertainment. A recent study by McKinsey estimated that the economic value created within manufacturing could range between USD 1.7 trillion and USD 3.7 trillion by 2025. Accenture estimates even bigger benefits and estimates investment in industrial IoT could drive a USD 15 trillion global GDP value by 2030. This is a sizable opportunity and one that extends the reach of digital disruption deep into additional sectors of the market like industrials, healthcare and transportation. It further supports our contention that technology is no longer a vertical but an economic horizontal – in other words, a total necessity. It also opens new, exciting and differentiated investment opportunities in these sectors, in our view.

We strongly believe that such is the size and scope of the opportunity that over the next 10-15 years we will see a reversal of the trend towards manufacturing globalisation. Technology can provide the components needed to alter the traditional order of competitive advantage. Developing countries operating with low-skilled labour and low labour cost production are at risk as routine low-skill tasks are increasingly automated. New ways of manufacturing will be led by innovation, new ecosystems, and require strong digital inputs. The ecosystems will involve multiple modules in a broadened and better-managed holistic process.

Figure 1: Drivers of microfactories



Source: FutureBridge Analysis. For illustrative purposes only.

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To try and understand this, we have looked at a few examples and pieces in a complex jigsaw that we expect will together create the significant value add. Silicon Valley-based company Enlightened estimates that clients can reduce their lighting bills by circa 60-70% and air conditioning by approximately 20-30% using IoT sensor-based systems. AI-based systems are estimated by PTC, a US computer software and services company, to save as much as 50% of scrap cost losses, a 12% reduction in operating costs and a 60% increase in operator productivity. These numbers are significant in the context of traditional competitive benchmarks. However, one area we expect to see a shift is in the capital intensity of manufacturing, the development of microsities capable of doing what had required multi-billion-dollar investments. Executives at E.go in Germany, an electric vehicle company, talk about the company's business as the internet of manufacturing first and foremost - this drives the firm's competitive advantage allowing it to run a 30,000 unit factory for an investment of about USD 100 million. This is truly innovative and has the potential to turn traditional manufacturing upside down.

Figure 2: Traditional approach versus microfactory approach

Description	Traditional Manufacturing	Microfactory
Required capital cost	Very high	Moderate
Distribution system cost	25-40% of the final price of the cars	5-10% of the final price of the cars
Profit	3-5% of the final price of the cars	20-25% of the final price of the cars
Risk	High	Moderate
Customisation	Difficult to implement	Easy to implement
Environmental Impact	High	Low
Suited to investments in	Developed markets	Emerging markets
Breakeven volumes	High	Less
Delivery time of product	High	Less

Source: FutureBridge Analysis. Data as of 30 June 2021. For illustrative purposes only.

Ecommerce post Covid-19 - Where are the opportunities?

Fifteen months have passed since lockdowns were first introduced in the US and UK (as well as much of the rest of the world). During this period, we saw a monumental shift

towards online commerce away from physical commerce (primarily driven by physical retail being closed). In the [Q1 2021 Disruptive Strategist Newsletter](#) we noted that in the US, ecommerce's share of US retail sales effectively saw four years of growth in a three-month period. However, with 60% of the UK vaccinated and 52% of the US, what happens now? How much of this shift will remain?

A recent survey from Shopify suggests that the categories with the highest online penetration before Covid-19 will remain in a post pandemic world (entertainment, books, toys and technology). However, two interesting insights came out of the survey. First, the businesses that saw a big increase in online penetration have turned these new clients into loyal, sticky customers. The second bucket involves businesses that saw very large shifts to online during the pandemic but are now seeing those new customers return to the physical environment. Groceries, alcohol and pet care are the three largest categories where consumers have indicated they would be reluctant to shift back away from online. The common factor here is that the items tend to be bulkier and are often commodity items and therefore there is a lower requirement to touch / feel / see / try before you buy. The convenience offered by companies such as Chewy in the US and Zooplus in Europe (ecommerce companies offering pet food and pet-related products) is hard to replicate in the physical environment. Similarly, grocery companies such as Ocado, Walmart or Costco each saw a shift towards online sales and faster growth compared to prior periods. The shift to online in this category was accelerated due to Covid-19 and has therefore also seen an increase of companies trying to pivot into the space. Newly-listed Deliveroo is looking to grow its nascent express grocery delivery product. However, it will compete against Uber as well as the more established Ocado. This increase in competition will be challenging for newer, smaller players in the space who will need to invest in marketing to gain share.

Categories such as luxury, outdoor and garden, fashion, and home furnishings and decor, all saw the biggest shift to online during the pandemic. However, the survey suggests that these categories will also see the biggest shift back away from online as the pandemic ends. Within the fashion space it is expected that omnichannel will become more prevalent, where the lines between online and offline become blurred. An order may start online and finish in store or vice versa. Physical retail will become more about the experience, customer service and the ability to touch and feel the product rather than the actual browsing experience. Those retailers able to utilise technology to create an omnichannel experience focused on the consumer will win, in our view. Farfetch has been trialling its 'Store of the Future' with Chanel to develop a range of digital

initiatives to deliver high quality consumer experience both online and offline. After more than a year since the onset of the pandemic, retailers that saw a significant boost to sales last year may struggle with difficult comparisons and the increased competition from the reopening of traditional physical retail.

Outlook

With the reset in several hyped areas like high growth equities, SPACs and crypto, we believe that markets are better positioned than they were a few months ago. The vaccine rollouts around the world seem to be delivering a safety net that allows economies to reopen more safely and life is slowly returning to normal.

As we head into the Q2 reporting season we expect secular growth companies in the disruptive space to continue to show exceptionally strong results and this will act as a reminder of the process of change set in motion ten years ago but accelerated irreversibly by Covid-19. What will be interesting is the way in which some companies will continue to grow unabated and some will likely falter. For example, we would not be surprised to see plain vanilla ecommerce businesses that benefited from an 'online only' world a year ago showing negative revenue development this quarter or in their guides for the balance of the year. This would likely lead to volatility within segments of the market.

A key focus for us will be regulation in China. Our modelling suggests substantial upside to many Chinese names, notwithstanding the regulatory backdrop and so we are watching this carefully. Any signs of clarity will likely lead to a strong rebound in Chinese names, particularly those listed in the US.

Elsewhere, the rapid march of Digital 4.0 is a focus for investment going forward. We believe the opportunity for sectors like healthcare, industrials, transportation and the automation of knowledge work through the use of IoT, 5G, AI and data is sizeable. This is where much of our research work is targeted as we endeavour to identify the next wave of top performers.

For more information, please visit [GAM.com](https://www.gam.com)

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