



Thematic Insights Tech Disruptors Blockchain: Going Beyond Cryptocurrencies

J. Safra Sarasin Sustainable Asset Management
Q2/2021

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Commentary from the Portfolio Management Team

Strong performance in Q2 driven by rebound of Growth stocks

In Q2 we saw a reversal of the previous trend, with expensive growth stocks outperforming the cheaper cyclical value firms. This has only accelerated after the Fed meeting in June, during which officials reiterated their views that the current spike in inflation is transitory and that monetary policy will remain accommodative for the foreseeable future. In this environment, the JSS Sustainable Equity – Tech Disruptors fund gained 8.54% in Q2 2021 (P USD acc share class), boosted by a rebound in software stocks.

New position in Match Group, further strengthening our software exposure

During the quarter, we started a new position in Match Group, an internet company operating the largest portfolio of online dating services, including platforms such as Tinder, Hinge, and OkCupid. In our view, with the roll-out of vaccinations globally, Match will benefit from accelerated pent-up demand for social interactions. From a longer-term perspective, we view online dating as one of the most under-monetized segments in social media. Furthermore, Match's recent acquisition of Hyperconnect expands the company's user base to younger age groups and allows them to provide next-generation, augmented reality-based dating experiences. Additionally, during the quarter we increased positions in our highest conviction software holdings, such as Elastic, Rapid7, and ServiceNow.

Semiconductor shortage persists and as a result the industry is changing

The unprecedented shortage of semiconductors continues, with the automotive sector being one of the most heavily affected industries. It is estimated that because of the chip shortage, the industry will be unable to produce 4 million cars in 2021, resulting in a loss of around USD 100 billion in revenues.

As a result, awareness about the importance of semiconductors in the digital economy has risen. This realization will likely result in a change in how chips will be procured in the future, with customers of semiconductor companies carrying more inventories on their balance sheets. Furthermore, the "just-in-time" orders that contributed to the historically volatile supply of semiconductors will be likely a construct of the past. Hurt by the recent semiconductor shortage, we expect automotive original equipment manufacturer (OEMs), smartphone manufacturers and other buyers to agree to more predictable order schedules.

Emergence of more environmentally friendly blockchain¹ technology

In this quarter's insight we focus on the distributed ledger technologies (DLTs), known more broadly as blockchains, and their environmental impact.

We have seen some shocking statistics about Bitcoin's energy consumption. For instance, its mining consumes more energy than Switzerland, or the carbon emission from one Bitcoin transaction is equivalent to watching 120'000 hours of YouTube videos. Tesla CEO Elon Musk, who initially suggested that the car company will accept bitcoin payments, has recently changed his stance due to concerns over Bitcoin's energy usage.



Tomasz Godziek
Lead Portfolio
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Portfolio Manager



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Portfolio Manager

In addition, China's latest crackdown on Bitcoin mining as a result of the miners' inability to meet Beijing's climate targets, further illustrates the scale of the problem.

Bitcoin's enormous energy consumption is due to its underlying blockchain-based consensus mechanism, called Proof-of-Work. It uses significant computing resources as miners compete to solve complex cryptographic problems to append blocks to the chain. This has boosted the short-term sales of Nvidia, a producer of computer processing chips and one of our portfolio holdings.

However, some blockchains are moving to a more eco-friendly mining approach. Ethereum, the second-largest cryptocurrency after Bitcoin, is migrating to a significantly more energy-efficient mechanism known as the Proof-of-Stake. In this set-up, the algorithm selects a single forger² who can validate blocks depending on how many coins he or she has staked. Additionally, a new, highly efficient storage-based concept, called Proof-of-Space, is emerging and is driving the strong share price appreciation of hard-disk drive companies such as Seagate and Western Digital. The latter is a portfolio holding of ours.

These improvements in energy efficiency might ultimately change the perception on the future of blockchain-based technologies, and extend their applications beyond payments to other areas – for example, supply chain monitoring, copyrights management, financial systems for developing countries, and cybersecurity.



Learn more about **Blockchain: Going Beyond Cryptocurrencies** in our thematic insights

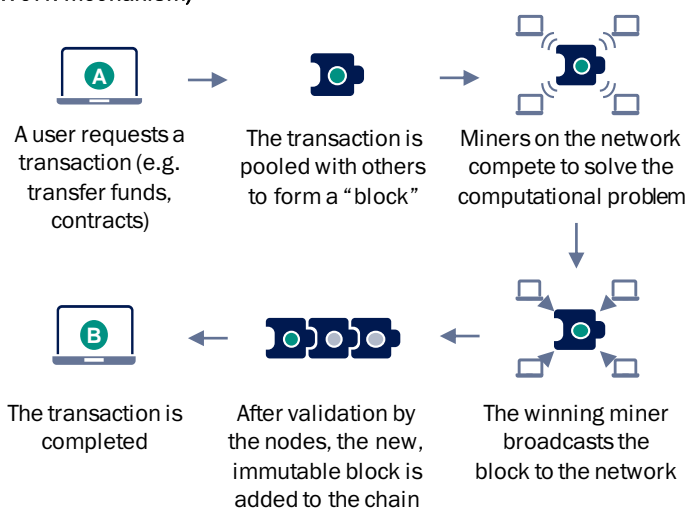
¹The blockchain is a decentralized ledger system that can record and confirm transactions between multiple users, without the need for a central certification authority. ² Forger is an individual creating or validating blocks in the Proof-of-Stake concept. Source: Bank J. Safra Sarasin Ltd, as of 30.06.2021. Past performance is no indicator or guarantee for future performance. Company examples do not constitute a request or offer, solicitation or recommendation to buy or sell investments or other specific financial instruments, products or services.

Blockchain: Going Beyond Cryptocurrencies



Blockchain technology rose to prominence with the launch of Bitcoin in 2009. The increasing use, accessibility and volatile prices of Bitcoin and other cryptocurrencies have also increased the attention of central banks, regulators and the general public. The Proof-of-Work concept used by Bitcoin is being challenged by new technologies like Proof-of-Stake, which has a significantly better environmental footprint. In addition, new applications of blockchain technology are emerging outside cryptocurrencies, such as securing patient data, minimizing election fraud, as well as improving the shipment of physical assets. One of the main benefits of this disruptive technology is its ability to reduce costs and time, as the traditional middle man is eliminated and transactions are processed within minutes and around the clock.




A simplified look at blockchain technology (based on Proof-of-Work mechanism)¹



Its application could benefit many stakeholders²

"Blockchain technology could change our world more than people imagine"

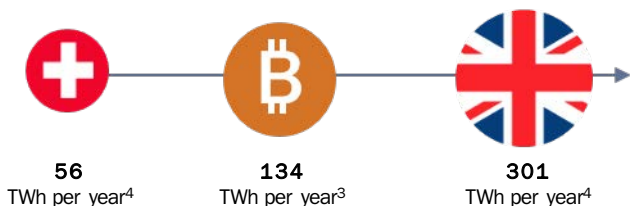
Jack Ma, Founder of Alibaba Group

 <p>Health Records</p> <p>Patient data can be transferred between doctors, hospitals, and insurance companies without compromising data security.</p>	 <p>Digital Voting</p> <p>Governments can have an auditable trail, ensuring that no votes are changed or deleted and illegal votes are added.</p>	 <p>Real Assets</p> <p>Suppliers can increase the speed and accuracy of transactions by using smart contracts as proof of ownership.</p>
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Bitcoin: an environmental concern

Bitcoin remains the most famous user of blockchain technology, but the high computing power required by the mechanism it uses, known as Proof-of-Work, to validate and add new blocks is a major environmental concern.

Annualized energy consumption of Bitcoin vs. countries:





1 Bitcoin transaction consumes the same amount of energy as:


 watching +120'000h of YouTube videos⁵ or
  +1.7m VISA transactions⁵

A more efficient blockchain technology is underway


Ethereum, the second largest blockchain, is migrating to **Proof-of-Stake** consensus mechanism, which will use **c. 99% less energy than the current Ethereum network.**⁵

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1 Forgers are selected by algorithm based on how many coins they have staked
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2 They need to either create or validate blocks
- 

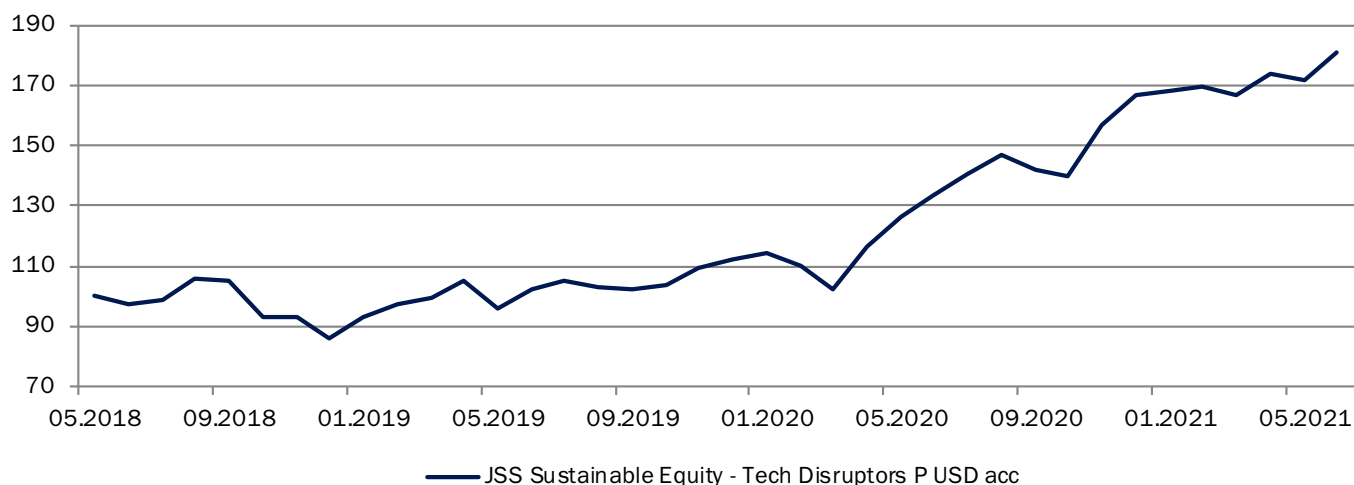
3 As a reward, they receive a transaction fee

 We expect the emergence of more energy-efficient mechanisms, which will allow wider use of this truly disruptive technology.⁶

Sources: ¹garyfox.co, Infographic: How Blockchain Works, June 2021; ²berkeley.edu, Beyond Bitcoin – in the World of Blockchain, 2019; ³Digiconomist, Bitcoin Energy Consumption Index, June 2021; ⁴U.S. Energy Information Administration, 2019; ⁵Ethereum Foundation, A country's worth of power, no more!, May 2021; ⁶Ethereum.org, July 2021.

Performance Report

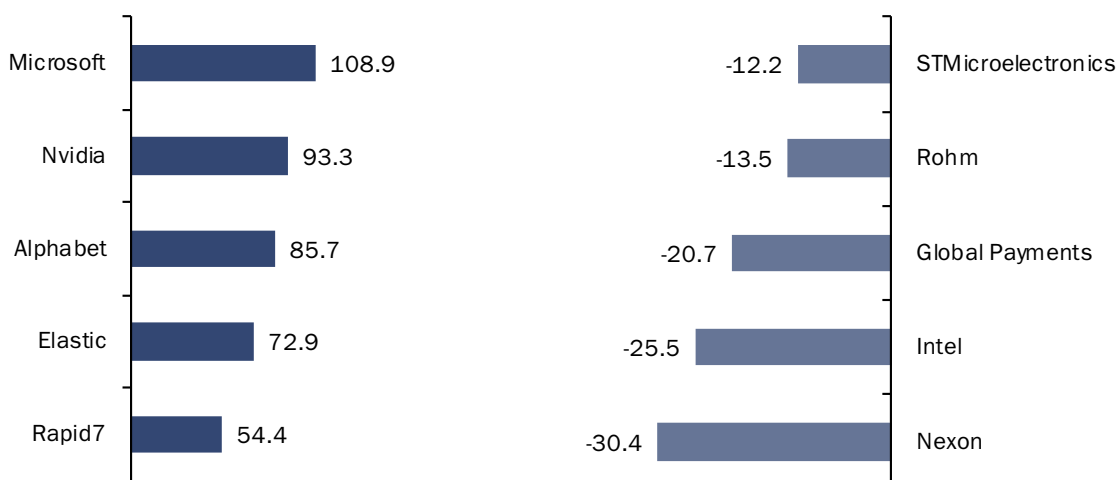
Historical net performance since inception (in USD; 31.05.2018 – 30.06.2021)



Monthly net performance since inception in % (P USD acc)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
2021	1.10%	0.89%	-2.05%	4.52%	-1.40%	5.42%							8.48%
2020	1.85%	-3.63%	-7.08%	13.55%	8.37%	5.63%	5.26%	4.93%	-3.41%	-1.64%	12.27%	6.06%	48.1%
2019	8.31%	4.40%	2.00%	5.74%	-8.74%	6.42%	2.73%	-1.49%	-1.09%	1.87%	5.12%	2.84%	30.6%
2018					0.00%	-2.68%	1.73%	7.21%	-1.32%	-10.96%	-0.55%	-7.16%	-13.9%

Top 5 and bottom 5 contributors to return (Period: 01.04.2021 – 30.06.2021, in bps)



Source: Bank J. Safra Sarasin Ltd, Datastream, Bloomberg, as of 30.06.2021. Past performance is no indicator or guarantee for future performance.

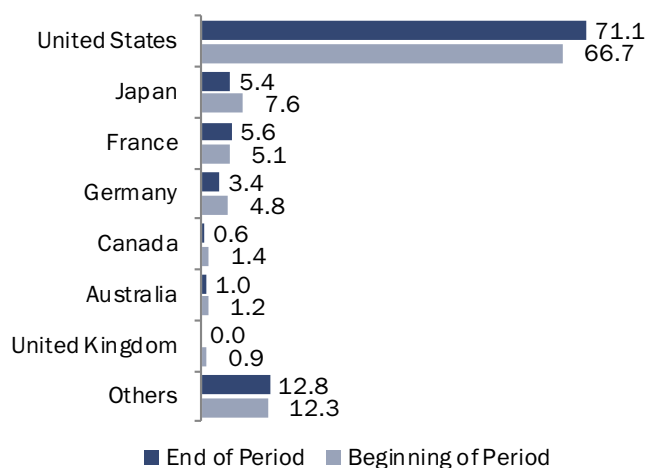
Allocations Report

Top 10 holdings (as of 30.06.2021)

Security	Country	Sector	Theme	Weight (%)
Microsoft	United States	Information Technology	Information Processing	7.1%
Alphabet	United States	Communication Services	Information Processing	4.8%
Tokyo Electron	Japan	Information Technology	High-Tech Products	3.5%
Applied Materials	United States	Information Technology	High-Tech Products	3.3%
Visa	United States	Information Technology	Connectivity	3.1%
Elastic	United States	Information Technology	Information Processing	3.0%
Analog Devices	United States	Information Technology	High-Tech Products	3.0%
Worldline	France	Information Technology	Connectivity	2.9%
Nvidia	United States	Information Technology	High-Tech Products	2.4%
Tencent	China	Communication Services	Information Processing	2.4%
Total				35.2%

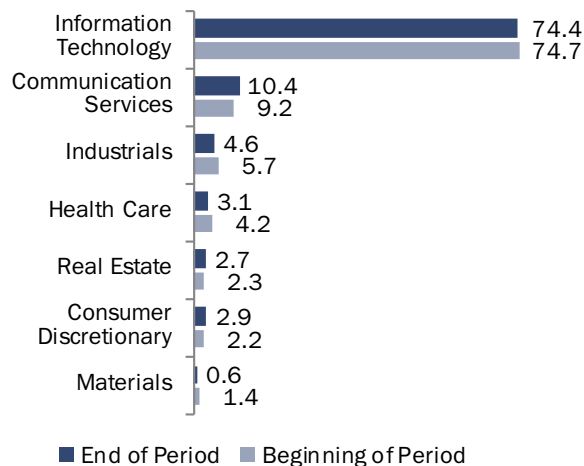
Geographical allocation in %

(Period 01.04.2021 – 30.06.2021)



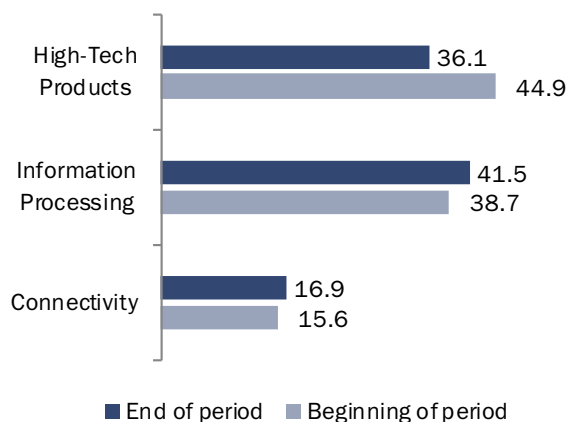
Sector allocation in %

(Period 01.04.2021 – 30.06.2021)



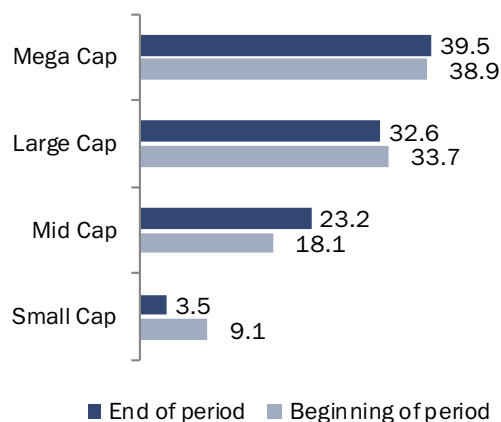
Thematic allocation in %

(Period 01.04.2021 – 30.06.2021)



Size allocation in %

(Period 01.04.2021 – 30.06.2021)



Source: Bank J. Safra Sarasin Ltd, Datastream, Bloomberg, as of 30.06.2021. Allocations may change without notice.

Pictures from Gettyimages, unless specified.

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