

Seeking Singularity



October 2018



The
Singularity
group



UPCOMING EVENTS

NEW January 25, 2019, Panel and Lunch @ Baur au Lac Zurich, 11.30am

Expert Access: Space - Launching Into 2019

Featuring the Following Executives: Collin Lee, General Dynamics; Rainer Horn, SpaceTec Partners ; Kyle Acierno, ispace

Sign up: events@singularity-group.com

BOOKED OUT November 16 2018, Lunch @ Baur au Lac Zurich, 12pm

Expert Access: Nanotechnology - The Rise of Smart Nanosystems

Featuring: Featuring: Prof. Simone Schürle, Head of Responsive Biomedical Systems Laboratory, ETH Zurich

Sign up (Waitlist Only): events@singularity-group.com

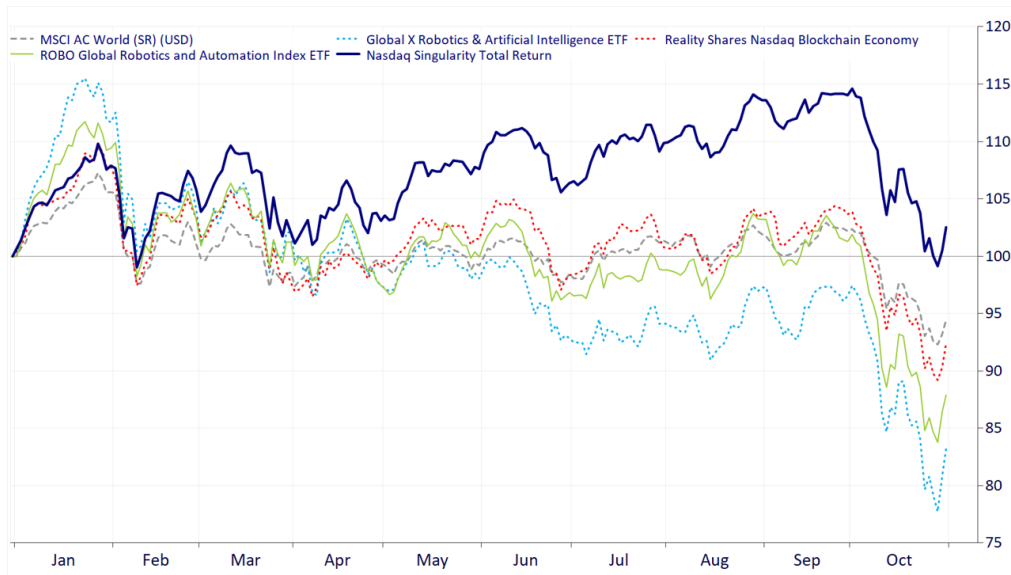
SINGULARITY PERFORMANCE

Monthly Nasdaq Singularity Index NSI (NQ 2045) vs. benchmarks: October marked the month of a long awaited correction in equity markets, with no sector spared. As investor sentiment turned negative ahead of earnings and on a potentially weaker 2019 outlook, the NSI finished the month down -10.11%, this compared to the Nasdaq 100 at -9.20% and the MSCI AC World at -7.00%. Strong negative contribution came from the semiconductor positions in VR and Blockchain, which have so far been the strongest contributors to Index performance. The **Singularity Fund** outperformed the NSI (-8.97%). **The Singularity Fund applies a quality filter to the NSI, and with that avoids high valuations as well as debt burdens. In a challenging environment like October, this proved helpful.**

Year to date, the NSI is up 2.51%, continuing to outperform the benchmark MSCI AC World (-3.41%). The Singularity Fund, having launched into the correction, is proving relatively defensive vs the NSI and peers.

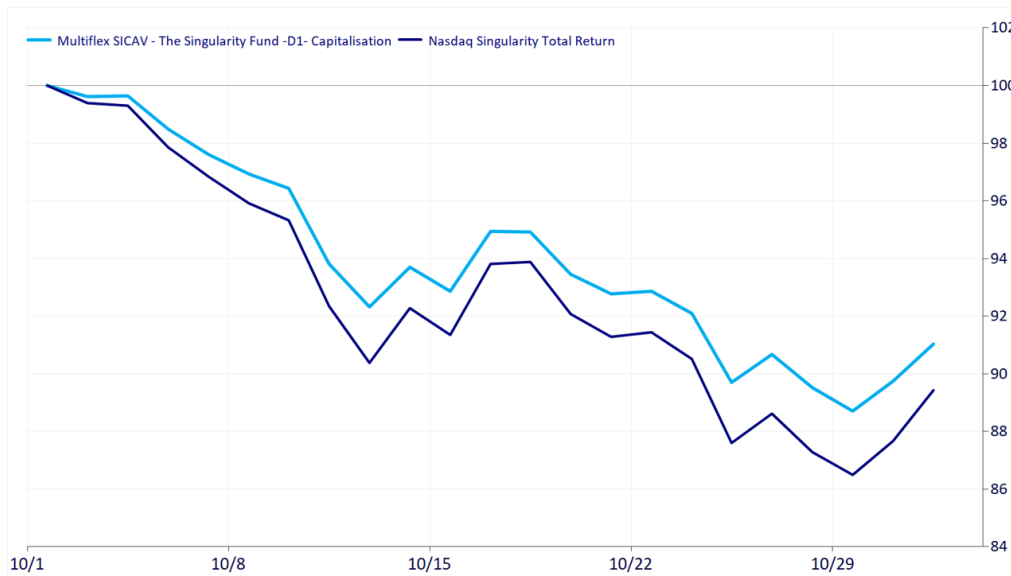


Performance Year to Date as of October 31 2018



Source: FactSet

Performance Since Launch Singularity Fund as of October 31 2018



Source: FactSet

SINGULARITY SECTORS

Top Sector Performers: **New Energy** (+1.44%) was the only Singularity Sector with positive performance in October, with controversial personality Elon Musk and **Tesla (TSLA; +27.40%)** surprising the market with a more positive outlook than expected. **Artificial Intelligence** (-7.93%) was the second strongest sector. Here, top contributor to the sector was **Coca-Cola (KO; +3.66%)**. Coca-Cola is one of the examples of value creation with exponential technologies outside the Technology sector, using Blockchain and Artificial Intelligence for supply-chain and inventory management.



The weakest sector was **Virtual and Augmented Reality (-22.34%)** - not surprising after having been the strongest year to date. In line with this, the NSI's top performing stock up until September 28, Advanced Micro Devices (AMD; -41.05%), was one of the hardest hit in the correction.

SINGULARITY STOCKS

The top performing single stock was also Tesla. The company had been battered by media and analysts, mainly due to Elon Musk's unconventional 'outbursts' on social media and other appearances. However, the company's third quarter report and outlook suggests cash-flow and profitability can be sustained in the near and mid-term future, giving shorters of the stock a hard time as one of the strongest performers on the Nasdaq in October.

Align Technology (ALGN; -43.46%) was the worst performer in the NSI portfolio for October, just shy of AMD. The company known for its invisalign tooth-straightening system based on 3D-printed invisible braces **enjoyed a premium valuation and for that reason was excluded from the Singularity Fund portfolio.**

SINGULARITY OUTLOOK

3Q earnings calls are generally the most followed, mainly due to the outlook component for the following year. 2018 is a year with many exogenous moving parts and analysts reports show a preoccupation with politics. **In our view, the focus should be on long term equity health and some companies are showing strong evidence of improvement linked to innovation.** The Singularity Fund's large cap constituents will finish the year with strong balance sheets and a lot of plans for 2019. The recent high-profile tech acquisitions are in our view not one-offs, but mark the beginning of an **M&A cycle - one with a focus on transformative acquisitions.**

What this means is **the correction may be justified and it might have some legs down toward the end of the year.** This would however have more to do with the unpredictable nature of new business models companies are aiming for and the fear related to this. In terms of earnings prospects, we continue to believe that companies concerned with truly making exponential innovation part of their business model will come out stronger, and thus we categorize these changes as positive and much needed. On another note, **cheaper equity may accelerate acquisition decisions, giving equity markets a boost from an unexpected angle.**

In November, rebalancing of the NSI is due. The direction continues to be the same: more conventional sector companies adding exposure in Singularity Sectors. While small- and midcap companies have so far been the stronger contributors to performance, **2019 is likely to see large, low-growth companies with strong balance sheets in a more active role in deploying their cash.**



M&A within Tech has already taken place in 2018: **Microsoft's acquisition of GitHub (acquired for \$7.5bn)** that was followed by a number of smaller acquisitions and mergers in the cloud space, and late October, **IBM announced the acquisition of Red Hat (acquired for \$34bn)**, IBM's largest transaction ever and the largest tech sector acquisition of the year. We expect this to move to sectors outside tech and we expect non-tech companies to acquire tech companies to complement core businesses. There are many examples as companies add innovation sectors. The TSG Space event on Jan 25th will focus on this theme (Zurich - Baur au Lac - 1130).

Expert Insights

Every month, Seeking Singularity will dive into one of the Singularity Sectors to highlight some of the exciting developments and companies making waves in that space.

This is an excerpt from a recorded interview with Aleksandra. The full interview will be available to Singularity Fund Clients and Members of 'Seeking Singularity - Insider'. For inquiries on Membership, please email: info@singularity-group.com.

An Interview with Aleksandra W Gadzala, PhD

This past month, as part of our upcoming recorded interview series also titled Seeking Singularity, we interviewed Aleksandra W Gadzala, an expert in emerging markets and in particular the economic relationship between China and Africa. During the interview we dived deep into technology adoption and application, we looked at the challenges and opportunities in the Sub-Saharan region of Africa, and we look at the reality, both good and bad, of China's influence in the region. Members of the managing team of The Singularity Group, Alex Cahiz, Evelyne Pflugi and Jonathan Toretta, sat on the other side of the recording booth.



Aleksandra is a recognized geopolitical expert, author of the book *Africa and China, How Africans And Their Governments Are Shaping Relations With China*, and is a thought leader and frequent contributor to the theme of exponential technologies' impact on emerging markets.

Alex: What are the technologies that are transforming the region of Sub-Saharan Africa and who are the countries leading in application and adoption?

Aleksandra: If you're looking at the Sub-Saharan region, a lot of the main players that you see coming to market and scaling up are more or less in the fintech space. You have a little bit in 3D printing, you have a little bit in some of the other exponential technologies as well. But really it's fintech, and from a country standpoint, if you look at how fintech evolved in the sub-Saharan region, it really kicked off in about 2007 with M-Pesa, the mobile money provider. Backed by Safaricom, M-Pesa started out as a simple peer-to-peer mobile money transfer platform in Kenya itself. And over time it's grown across the continent. It has operations in just about every country on the continent at the moment. It's grown in terms of its services and is no longer just money transfer, but it now also deals in wealth management and just about any other kind of financial service that you can need or imagine.

Alex: I think the the story of M-Pesa is really fascinating for the region, but what is it exactly? We have mobile payment systems here too, services like Venmo Apple Pay, Alipay, here in Switzerland we have Twint. But how is M-Pesa different, how does it work and why was it so transformative?

Aleksandra: M-Pesa is often spoken about as an exception in some ways, in terms of the success that it's been able to enjoy. It was able to piggyback off of Safaricom, which is a big mobile network operator in the region and has 80% of the market share in Kenya. So the distribution channel was already organically in place. And when M-Pesa was emerging, it wasn't regulated by the Kenyan government. That's because it wasn't really finance, it wasn't really tech, **so nobody really knew where and how to regulate it. That allowed it to have a large degree of innovation and allowed it to become what it is.**



So what M-Pesa started out doing was facilitating very simple money transfers. If I want to send money to you I go to an agent provided by Safaricom, I deposit \$5 with that agent and that agent "uploads" that money to the Safaricom/M-Pesa network. So now with that money on my account I can use it to send to another phone or cash out with another Safaricom agent. Now it has evolved to facilitate other services. I can have a savings account in my M-Pesa wallet, use it to pay for groceries or pay for my electricity bill. It is starting to become an all-in-one network, similarly to what we see in China with WeChat.

Alex: It sounds a bit like what some cryptocurrencies are trying to achieve. This is kind of a **proto-cryptocurrency**, which doesn't have a lot of the cryptographic elements though. But in a sense, it is a micro economy, and it is a digital form of currency, and is doing things and is being adopted in a way that a lot of these cryptocurrency projects could only dream of.

Aleksandra: I think it's important [to know] in this context that cryptocurrencies haven't caught on that much in the African markets either. So there's an interesting distinction that's being drawn among consumers. M-Pesa and others in that space have really been adopted at a very high rate. Platforms that use Bitcoin or other cryptocurrencies are not being adopted so readily. **And one of the barrier there, in my view, is trust.**

With a cryptocurrency you don't necessarily see who's behind it and it's an intangible good. Even for the mobile platforms adoption came slowly because customers were afraid of being defrauded in some ways or being taken advantage of. M-Pesa was able to partner with known other big players in this case, mostly the mobile network operators. So the cryptocurrency story in Africa is even more nascent than it is here in the West because it's not just a question of the technology itself, but also coming to grips with who's behind it.

Arguably, the decentralization part of cryptocurrencies, is one of the things that's stopping it from adoption. Also, what in my view makes [fintech] more easily adopted among populations is that there's still a bit of a human element: Even if I want to deposit money on my account, I have to go to an agent for it. This matters especially in some of these



economies where the government's are questionable and trust is low. Behavioral Science in terms of how people respond to and adopt new technologies should be a whole new interview and podcast on it's own!

Alex: You talked about how there was little oversight and regulation during the early days of M-Pesa, allowing for its unique adoption and success story. Is this a trend that is shared across the region with regards to these society transformative technologies or is this something that varies on a country by country basis?

Aleksandra: It is really country by country. For example, in South Africa, the only establishments allowed to issue out mobile money are registered banks, so the mobile money revolution or transformation has been a little slower to come on. The only way mobile operators can issue mobile money is through a partnership with a regulated bank. So that has made the dynamics there quite different. When M-Pesa tried to break into the South African market, it struggled because of the highly regulated banking environment.

Then you get hybrids for example in Ghana where the government allows non-banks to issue mobile money and to compete in the open marketplace. **The regulation issue is also one that I think we will be dealing with for a while because governments and regulators still don't understand these technologies.** What's good is that they don't seem to want to over-regulate many of these technologies because they see the benefit to their economies, but then they also realize that they have to be thinking about things like consumer protection and data privacy. There are many ways governments are starting to innovate around that concept.

The concept of **regulatory sandboxing**, which is effectively creating a "science experiment" or a controlled environment is emerging. In South Africa, for instance, Bankymoon, which is a blockchain service provider, entered into a regulatory sandbox with the South African government. With this, Bankymoon was more or less allowed to develop how it wanted to, and innovate, and test things out. It would then feed that information back to the government. The government started to understand the technology, where the parameters of the company's needs lie, and also, how to regulate it. **You're seeing more and more of these regulatory sandboxes crop up, not only in the sub-Saharan region. In Singapore, India, the UK even,** governments are trying to understand what this tech is, what it means for them and how to support it as best they can.

Alex: When it comes to outside influences, the biggest thing to watch is the difference in influence from the West and the US vs China. Which one of these players is the biggest or the most influential in this region?

Aleksandra: It's certainly **China**. US policy towards towards Africa has taken a backseat for a while. To the extent that there is [a policy], it's more or less circumscribed to aid and military assistance. That might be changing though, [recently] the US government changed the mandate of **OPIC, the Overseas Private Investment Corporation**. OPIC was previously able to make only overseas debt Investments, which kind of hamstrung it quite a bit, but now its mandate has been revised and it's allowed to make overseas equity investments. And in revising this it was made very clear that this is in part to boost U.S. competitiveness,



particularly in the African region, in the Southeast Asian region, and other regions that the U.S. feels are strategically important. But the dominant player, not only in tech, but across many sectors and the African region is by and large China.

Early on the main sector in which China was engaged was largely the commodities space. So the stories that you hear a lot in the mainstream are about the oil extraction, the mineral extraction, etc, but China has really expanded its purview. You now have the **Chinese company Cloudwalk, exporting its AI facial recognition technology to Zimbabwe**, and that's the first Chinese AI project in the African region. Also the **WeChat platform and Alipay**, they're pushing quite aggressively into African markets as well. So the U.S. isn't really there in any significant way. Even Twitter and and these kind of platforms are starting to take a back seat to their Chinese competitors.

Evelyne: You've mentioned the Chinese government's role and Chinese companies' role in Africa a few times now, I want to get to China's role globally as an influencer for tech. Are there specific technologies that stand out, where you think they're going to be at the forefront? What do you think is China's game plan here?

Aleksandra: The government has issued their China 2025 policy, which I think makes the game plan pretty clear, which is to make China a leader in many of the technologies that we focus on. **A.I. being at the forefront, but also fintech and nanotechnologies.** They really want to turn the country into a digital and technology leader by by 2030, and they've set milestones for what they want to achieve at what point.

Evelyne: How much can they 'impose' on the world? You've mentioned before that "China is influencing global tech standards," they've become an influencer. But in other technologies that we've seen China's just copied what already existed. Chinese wind turbines, for example, are still far from penetrating the Western world. Is this different for some of these newer technologies?

Aleksandra: I think it can be. Let's take for instance mobile payments as an example. So **China is the leader at the moment in mobile payments.** You look at Alipay that had 520 million active monthly users. You have WeChat payments, they had 1 billion active monthly users back in 2016. I think customers across those two platforms sent something around 2.9 trillion U.S. Dollars, which is basically half of all of the consumer goods that are sold in China. So if they're operating on such a grand scale, then inevitably those payments are going global. Alipay is used throughout the Southeast Asian region, throughout the African region. They're pushing into other regions as well, ditto with WeChat payments and so on and so forth. So then at a certain point, that's going to come to a head with the Western counterparts or it's going to come into Western markets.

This is an excerpt from a recorded interview with Aleksandra. The full interview will be available to Singularity Fund Clients and Members of 'Seeking Singularity - Insider'. For inquiries on Membership, please email: info@singularity-group.com.



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