



Seeking Singularity

January 2019



The
Singularity
group



UPCOMING EVENTS

NEW March 28, 2019, Lunch @ Baur au Lac Zurich, 12:00pm

Expert Access: Virtual & Augmented Reality – Brave New Worlds

Featuring: Lukas Schleuniger, Founder of Red or Blue Labs

Sign up: events@singularity-group.com (Members: Free | Non-Members: 70 CHF)

NEW May 16, 2019, Lunch @ TBD Location in Zurich, 8:30am

Expert Access: Blockchain – A Reality Check

Featuring: Daniel Gasteiger, Founder and CEO Procvivis AG, Co-Founder Nexussquared, Board Member of Global Blockchain Council; Laurenz Apiarius, Founder & Managing Partner of Blockwall, adviser to the OECD on policy making for crypto assets & blockchain technology; and more Blockchain industry experts

Sign up: events@singularity-group.com (Members: Free | Non-Members: 70 CHF)



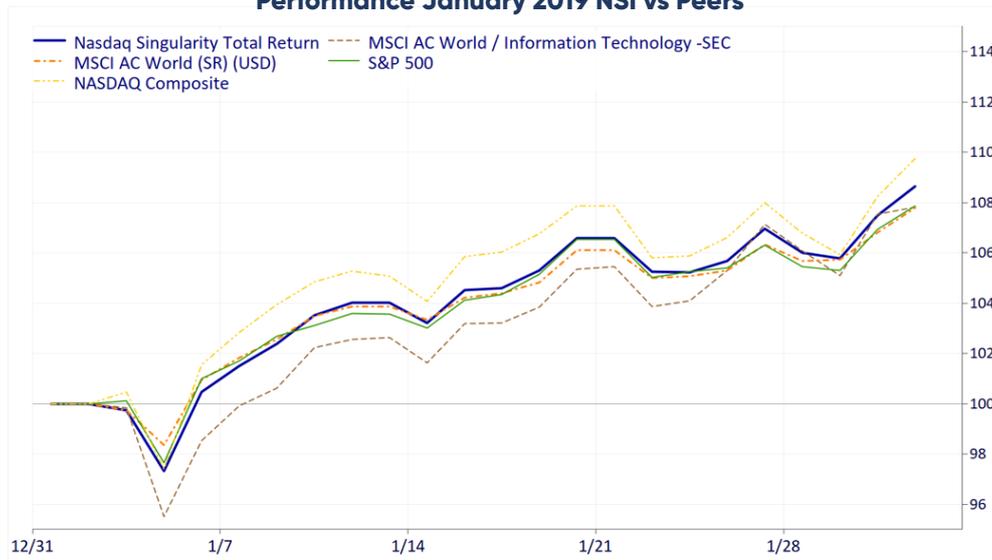
SINGULARITY PERFORMANCE: Starting Strong

Monthly Nasdaq Singularity Index NSI (NQ2045) vs. benchmarks: The first month of the year showed renewed investor confidence in equity markets after weakness in the market during the last four months of 2018. The **Nasdaq Singularity Index (NSI, NQ2045) finished January up 8.65%**, well ahead of the MSCI AC World (+7.80%) and MSCI AC World Technology (+7.81%). Since the launch on 21 December 2017, the NSI is up 4.01%, a strong result relative to major peers and benchmarks (Nasdaq Composite: +4.54%; S&P500: +0.73%; MSCI AC World Technology: -0.01%; MSCI AC World: -3.91%).

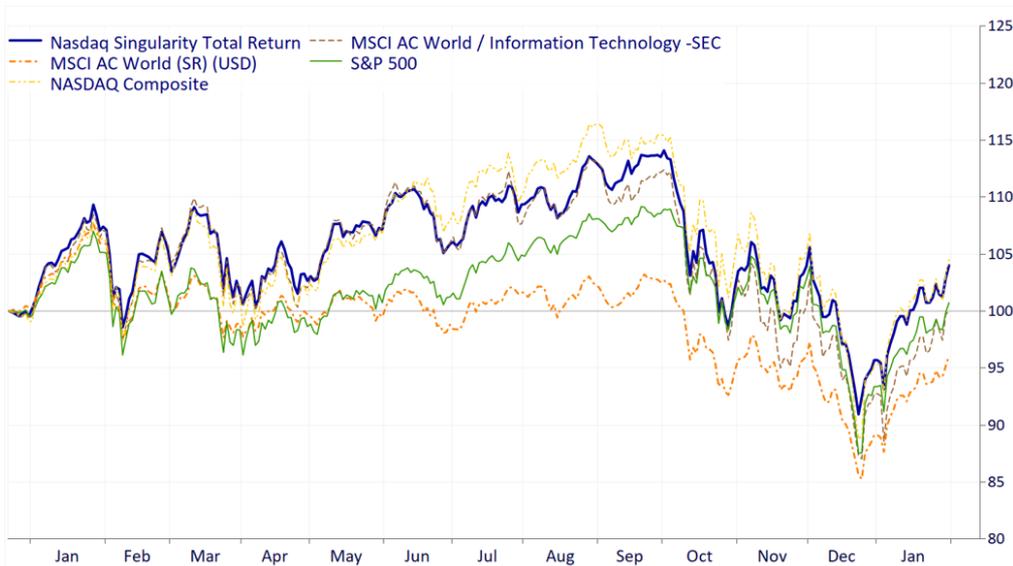
The Singularity Fund outperforms the NSI since its launch in October 2018. See charts below.



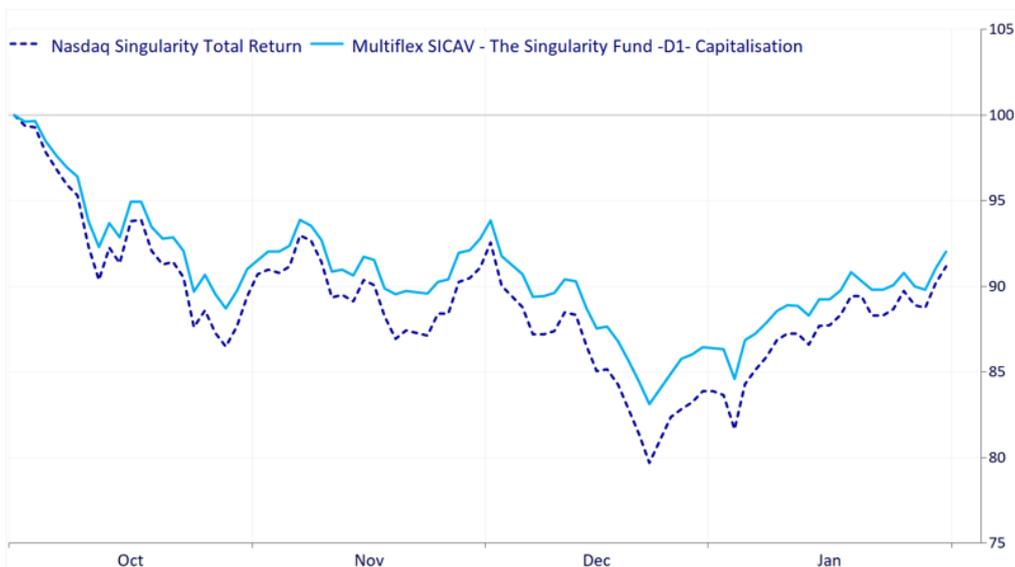
Performance January 2019 NSI vs Peers



Performance Since Launch NSI vs Peers



Performance Singularity Fund vs NSI - since Launch (October 1 2018)





SINGULARITY SECTORS

Top Performing sectors in January were Space (+14.92%) and Big Data (+11.34%). Airbus (AIR; +19.82%) and Boeing (BA; +19.57%) led the pack in Space while Facebook (FB; +27.16%) and Netflix (NFLX; +27.64%) were top performers in Big Data as tech rebound with generally more positive investor sentiment.

The worst performing Singularity sector was Blockchain (-0.26%). Contributing to this was Taiwan Semiconductor (2330) down -1.59% for the month.

SINGULARITY STOCKS

The strongest single stock was GW Pharmaceuticals (GWPH; +46.61%) in Neuroscience. The company was partially driven by market growth in Marijuana-based cures for neurological diseases.

Qualcomm (QCOM; -12.99%), a company growing exposure in Internet of Things, Big Data, Virtual and Augmented Reality and also Artificial Intelligence, was the worst performer in the NSI portfolio as chip sales and patent licensing showed negative growth in Q4 2018.

SINGULARITY OUTLOOK

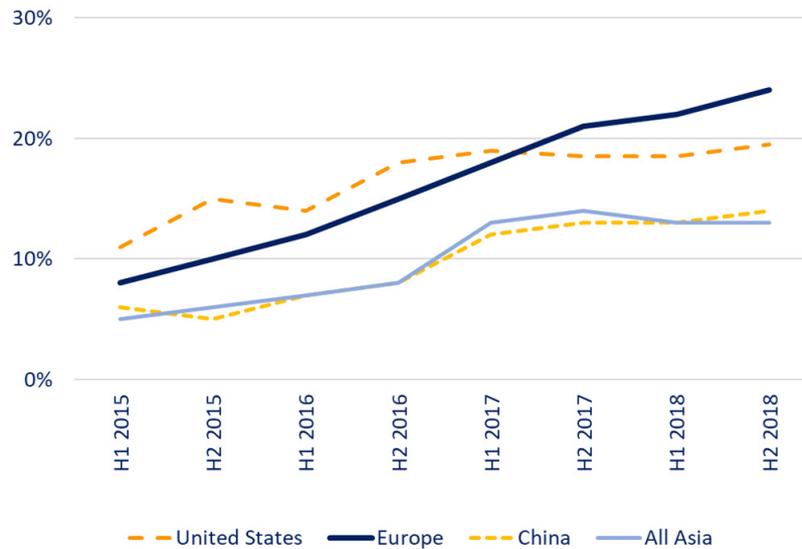
Rumor Has it...

Rumor has it that Europe is further ahead in tech developments than the usual suspects US and China. While Silicon Valley and the Asian counterparts are making a lot of noise on tech developments with a flourishing but over-capitalized industry, Europe actually shines in the implementation of innovative new technologies within industry. A recent analysis of TSG data suggests that the investments in digitalization and exponential technologies in general are showing traction in company revenue with higher growth than the typical tech hubs of America and China. This observation is highly contrarian to the global consensus for European equities.





Average Revenue Exposure to Innovation outside Technology Sector (Public Equities)



Source: FactSet, TSG

Will this lead to M&A? **The NSI has already captured deal events globally** and this trend is expected to continue. If European tech performance continues to surprise to the upside, it may lead to possible reactionary M&A among US and Asian names.

To learn more about country and industry developments around innovation in further detail, please contact us about member access.

EXPERT INSIGHTS

Investing in Space is Happening Now, What's Your Exposure?

Every month, Seeking Singularity highlights one of the Singularity Sectors. This month reflects on the well-attended Expert Access Event '**Space - Launching into 2019**' and adds flavor to public equity investing. During the event our guest speakers sat on a panel and answered questions from the audience. The following includes important insights from that panel.

Featuring:

Collin Lee, Member of the Expert Advisory Board at TSG; Executive for Space and Artificial Intelligence at General Dynamics Corporation.

Rainer Horn, Managing Partner, SpaceTec Partners

Jumpei Nozaki, CFO of ispace

Kyle Acierno, Managing Director of ispace Europe



Space Panel: The Main Takeaways

Takeaway 1: Investor density and diversity increasing

When thinking Space, investors often think of government projects, high-risk venture capital, and private equity investments with long lead times. This is not necessarily the case. For space, the investor base is diverse, half government, half private, according to CFO **Jumpei Nozaki**. Investor interest in the sector is increasingly global and has reached a new growth phase in Japan and Europe, closing the gap with the recognized programs in China, Russia, and the United States.



Colin Lee is focused on the development and provisioning of space based capabilities to defense and intelligence sector at General Dynamics. Previously, he served as a senior national security advisor to the Members of the U.S. House of Representatives and to the POTUS. General Dynamics Corporation (ticker: GD US) is a \$54bn market cap diversified defense company.

Takeaway 2: There is plenty of opportunity for both the private and public sectors in space

To some, there is a perception that the private sector is outpacing the public and governments when it comes to innovation in the space industry. The perception concludes that nation states are losing control to private corporations here on Earth (terrestrially), and inevitably and progressively, in space. In speaking to our experts, this appears a misconception when looking at the big picture and the actual symbiotic relationship of private and public sectors in the advancement of certain technologies and industries.

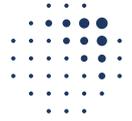


Rainer Horn is a member of several institutional boards in space programmes in Europe and Asia. SpaceTec Capital invests in space applications and space-related disruptive technologies at the interface to major markets, such as mobility, agriculture, insurance, energy, etc.

Lower-earth-orbit (LEO) is illustrative of this relationship, in particular telecommunications, where advancements of private industry have helped governmental organizations in pursuing projects and a presence in LEO. Advancements in the commercial sector have made it more affordable and more accessible for governments according to **Collin Lee** of General Dynamics:

"The exquisite capabilities of governments, not just the United States, are best in class and remain as such. But they are not something that's accessible and useful [to] most folk. [...] what we are trying to do is to commoditize where we can and keep exquisite where it needs to be."

Taking the theme further, **Rainer Horn** of SpaceTec Partners commented on the general expansion of both government and private investment in space:



"A few years ago there were 10 spacefaring nations. Today there are 60 space agencies around the world. Even small countries can launch their own satellites. They can buy the components on Amazon or something else... They have universities proud of having their own satellite... [...] It's very easy to have your own spy satellite up there now. You don't have to rely on having friends in Beijing to supply them some technology. You see the Japanese and their ambition [...] In China, there is a huge space entrepreneurial movement we don't hear too much about [...] but there are big things happening, funds being created, accelerators, incubators, what have you."



Jumpei Nozaki, After graduating from university Jumpei joined a US based Investment Banking firm where he advised on financing, IPO and M&A etc. by Japanese companies among Automobile and Oil & Gas sector. Jumpei currently manages finance control of ispace.

Expanding investment potential, Horn noted the emergence of "space hubs" around the world especially those outside of the traditional market of the U.S., including large hubs in Luxembourg, UAE and Singapore.

Horn also gave an example of how the private sector is pressuring the public sector to accelerate. The European Space Agency (ESA) is being pushed by European private enterprises in response to American based SpaceX on the presumption the ESA needs to be able to compete for the launch of European satellites, without relying on SpaceX. Thus, there is room for new private entrants and further investment.



Kyle Acierono has been working for ispace for two years as the Global Business Development Manager. In this role he secured a number of space agency and commercial agreements while starting new offices in Europe and the USA. Kyle specializes in lunar commerce and in 2015 won the Space Generation Advisory Council's Space Leader award.

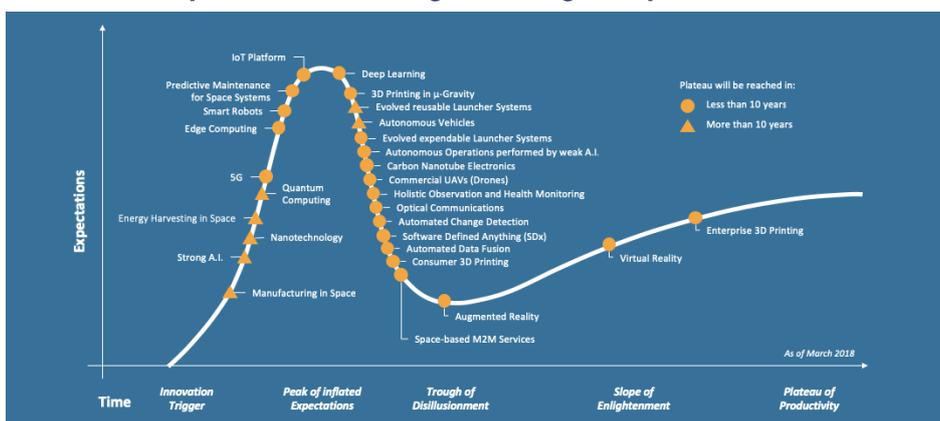
Takeaway 3: Manufacturing consumer products in space is still a while away - Exponential technologies will come first

One of the many aspects of ispace's ambitious long term goal of creating a Lunar economy is manufacturing. Much, if not all, of that manufacturing will be done by remote drones for the purpose of building up a presence on the moon including the technologies and facilities needed to successfully sustain it. **Robotic assisted manufacturing and 3D printing in space are already ideas being developed.** The "Made In Space" project was able to successfully create a 3D printer that works in zero gravity while aboard the International Space Station and was able to demonstrate its ability to print a tool needed by an astronaut aboard the ISS, using 3D printable polymers in that environment. This showed, while in a very minor way, that **3D printing could be a potentially life saving technology for astronauts** for quickly crafting parts critical to mission success or human safety. **Of very relevant significance, blue chip healthcare company Johnson & Johnson (JNJ) has attributable revenue in 3D printing and the space sector.** (Contact us for more equity level insight.)



What happens in space stays in space: The panel members agreed that there are currently no plans nor any value in building manufacturing systems that work in zero gravity or low gravity environments for shipment down to Earth. Until needs and economics prove otherwise, whatever is mined or made in space, will stay in space. **One such extreme case is insufficient Earth resources to sustain accelerating population growth.**

Exponential Technologies Fueling the Space Sector



Source: SpaceTec Partners

Takeaway 4: 'Better to supply the axes and picks than mine the gold'

Net net, **for investors, both public and private, there is near term opportunity.** The analogy that the gold miners were less the beneficiaries than the services providers in logistics, equipment and habitats, certainly applies here as the race to lower orbit space looks and feels similar. **Space sector innovation and technology is driving public equity performance as demonstrated by NSI performance in January 2019. Companies benefitting from Space developments appear in unexpected sectors. One example of a large, well-known healthcare company supplying to the Space industry was highlighted at the event. For the investor, finding these companies could be a gold mine.**

*Full event details will be available to Singularity Fund Clients and Members of 'Seeking Singularity - Insider'.

For inquiries on Membership, please email: jt@singularity-group.com*

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