

Seeking Singularity

Performance

May 2020

Rebalancing Report

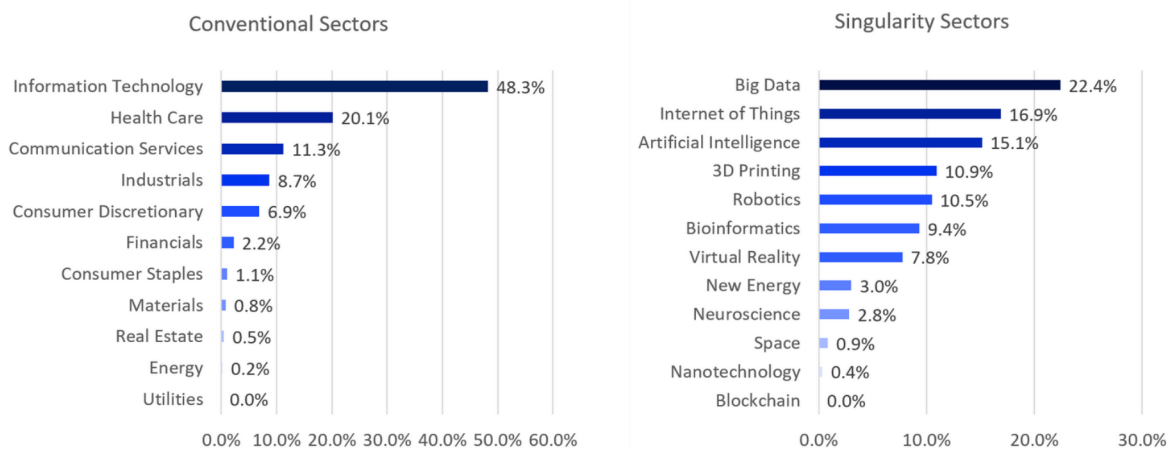




SINGULARITY REBALANCING

In accordance with the semi-annual index reconstitution schedule, which occurs on the 3rd Monday in May and November respectively, we rebalanced the Singularity Index on May 18 2020. The ensuing portfolio is the result of a bottom-up process that tracks technological developments within our Singularity Sectors and identifies companies that have exposure to revenue streams associated with the key focus areas of such technologies. In addition, **this is the first time we've applied our ESG filter which excludes firms that either 1/ carry a red flag according to MSCI ESG Research, 2/ violate a comprehensive list of international norms and conventions, or 3/ are active in controversial business areas¹.** In the following section we provide some highlights and major changes coming out of the most recent index rebalancing, comparing the index pre rebalancing (May 15) with post rebalancing (May 18).

Singularity Index Sector Composition as of May 18 2020



Singularity Sectors: **Big Data** continues to be the biggest sector in the index with a new weight of 22.4% (+2.6% vs pre rebalancing). The largest names in the sector are Microsoft (MSFT; 4.0%), Visa (V; 2.2%) and Alibaba Group (BABA; 2.1%). **Internet of Things** is the second largest sector, increased by +2.1%. Tencent (0700; 2.0%), Broadcom (AVGO; 1.9%) and Samsung Electronics (005030; 1.3%) are the top allocations here. **3D Printing** had the biggest weight increase (+3.9%) and stands at 10.9% with companies including Johnson & Johnson (JNJ; 2.4%), Stryker (SYK; +1.1%) and 3M (MMM; 0.8%). **Bioinformatics** gained by +1.9% to close to 10% weight in the new composition. Top names in this sector are Medtronic (MDT; 1.1%), Danaher (DHR; 1.0%) and Thermo Fisher Scientific (TMO; 1.0%). **Space** (0.9%) registered the largest sector weight decrease (-4.3%), mainly because a number of companies in the Aerospace & Defence sector no longer pass the ESG filter including Boeing, Airbus, Honeywell, and Lockheed Martin. **Neuroscience** has a new weight of (2.8%), a decrease of -2.8%. Roche (RO; 0.7%), Amgen (AMGN; 0.3%) and Biogen (BIIB; 0.3%) are top holdings in the sector.



There is currently no exposure to **Blockchain** as chip manufacturers for Bitcoin mining are no longer part of our key focus areas in this sector. Mining operations are highly capital intensive and according to our experts there seems little room for value creation.

Singularity Sector	post	pre	+/-
Big Data	22.4	19.8	2.6
Internet of Things	16.9	14.8	2.1
Artificial Intelligence	15.1	15.1	0.1
3D Printing	10.9	7.0	3.9
Robotics	10.5	9.7	0.8
Bioinformatics	9.4	7.4	1.9
Virtual Realty	7.8	7.7	0.0
New Energy	3.0	3.6	-0.5
Neuroscience	2.8	5.6	-2.8
Space	0.9	5.2	-4.3
Nanotechnology	0.4	0.5	-0.2
Blockchain	-	3.5	-3.5

Conventional Sectors: Unsurprisingly, the **Information Technology** sector remains the largest allocation with 48% (+6.1%) in the new index constitution as measured by the GICS standard. This weight is somewhat overstated as the tech sector allocation on a look-through basis is 37%, whereas GICS classifies a company to a single sector leading to a higher weighting. The biggest tech names are NVIDIA ((NVDA; 4.1%), Microsoft (MSFT; 4.0%) and Apple (AAPL; 3.7%). **Health Care** (20.1%) remained roughly the same, whereas **Communication Services** (11.3%) registered an increase of +2.4%. Top positions in the former and latter sectors are Johnson & Johnson (JNJ; 2.4%), Intuitive Surgical (ISRG; 1.2%), Medtronic (MDT; 1.1%); and Alphabet (GOOGL; 4.0%), Tencent (0700; 2.0%) and Netflix (NFLX; 1.1%) respectively. As mentioned above, there was a significant decrease in Aerospace & Defence names leading to a -3.6% decrease in the **Industrial** sector allocation to 8.7%. **Financials** (2.2%) and **Consumer Staples** (1.1%) both decreased by approximately 2 percentage points. It should be noted that Visa (V; 2.2%) and MasterCard (MA; 1.6%) are both classified as Information Technology (not Financials) firms under the GICS standard, reflecting their heavily data-driven business models.

GICS Sector	post	pre	+/-
Information Technology	48.3	42.2	6.1
Health Care	20.1	19.2	1.0
Communication Services	11.3	8.8	2.4
Industrials	8.7	12.3	-3.6
Consumer Discretionary	6.9	7.9	-1.1
Financials	2.2	4.7	-2.4
Consumer Staples	1.1	3.0	-2.0
Materials	0.8	1.3	-0.5
Real Estate	0.5	-	0.5
Energy	0.2	0.5	-0.3



Regional Exposure: **North America** (70.4%) increased by +3.5%, almost equally as much as **Asia Pacific** (16.8%) decreased (-3.9%) while **Western Europe** (11.9%) remains unchanged. Within North America the US took the lionshare of the increase whereas the decrease in Asia Pacific was concentrated in Taiwanese chip makers. Allocations to the rest of the world remain negligible.

Region	post	pre	+/-
North America	70.4	66.9	3.5
Asia Pacific	16.8	20.7	-3.9
Western Europe	11.9	11.0	0.8
South / Central Americ	0.4	0.7	-0.3
Africa / Middle East	0.3	0.4	-0.1
Eastern Europe	0.1	0.1	0.0

Style Factor Exposure: Using the Bloomberg Global Risk Model which operates with long-short style portfolios (i.e. long the top quintile of stocks, short the bottom quintile of stocks), the Singularity Index has - in descending order - **positive exposures to the equity style factors growth, momentum, earnings variability, profitability, and trade activity, while exhibiting negative exposures to dividend yield, value and leverage**². At the same time, these tilts also apply to the index's respective active exposure vs the MSCI ACWI³. For example, the index, both on an absolute and relative basis vs the MSCI ACWI, is positively exposed to companies that have strong sales and earnings growth, with a beta of 0.42. On the other hand, it has a relatively low dividend yield of 1.2% as evidenced by the negative exposure to the dividend yield factor. **In sum, the index comprises companies with a strong growth and profitability profile at reasonable valuations that have low levels of indebtedness and reinvest earnings back into the business to innovate and grow the topline.**

Source: Nasdaq, Bloomberg, TSG

²Style factor definitions: **Momentum:** cumulative return over one year (averaged), skipping the most recent two weeks to mitigate the price reversal effect. **Value:** composite of book to price, earnings to price, cash flow to price, sales/EV, EBITDA/EV, forecast earnings to price. **Dividend Yield:** most recently announced net dividend (annualized) divided by the current market price. **Size:** composite metric of log(market capitalization), log(sales), log(total assets). **Trading Activity:** trading volume normalized by shares outstanding; this factor indirectly controls for the Size effect. **Earnings Variability:** earnings, cash flow, and sales volatility vs median total assets (5y horizon). **Profitability:** composite of ROE, ROA, ROCE, EBITDA margin. **Volatility:** composite of rolling 1y volatility, rolling CAPM beta, historical residual volatility, and cumulative range. **Growth:** composite of total asset growth, sales growth, earnings growth, forecast of earnings growth, and forecast of sales growth. **Leverage:** composite of book leverage, market leverage and debt to total assets.

³Equity style factor exposures for the MSCI ACWI are by design close to zero as the global equity universe forms the basis of the long-short style portfolios.



Equity Style Factor Exposure as of May 18 2020

Factor	Singularity Index	MSCI ACWI	+/-
Growth	0.42	-0.01	0.43
Momentum	0.40	0.01	0.39
Earnings Variability	0.38	-0.05	0.43
Profitability	0.37	0.11	0.26
Trade Activity	0.31	-0.03	0.35
Size	0.18	0.29	-0.11
Volatility	0.02	0.00	0.02
Leverage	-0.33	0.00	-0.33
Value	-0.34	-0.02	-0.31
Dividend Yield	-0.39	0.00	-0.40

Portfolio Characteristics: The factor exposure above is also reflected in the portfolio characteristics in the table below. Compared with the MSCI ACWI, the Singularity Index has a better profitability profile, a stronger balance sheet, and better liquidity at a reasonable valuation. For instance, the portfolio's operating margin is 14.8% (vs 10.4%) with net debt to EBITDA of 2.2x (vs 3.9x), a current ratio of 1.6x (vs 1.2x) at an enterprise value to EBITDA of 17.9x (vs 11.5x).

Portfolio Characteristics as of May 18 2020

Indicator	Singularity Index	MSCI ACWI	+/-
Profitability			
Profit Margin	12.8%	7.2%	5.6%
Operating Margin	14.8%	10.4%	4.4%
Return on Capital	10.3%	5.1%	5.2%
Return on Common Equity	16.3%	10.2%	6.1%
Return on Assets	5.7%	1.7%	4.0%
Balance Sheet			
Net Debt to Shareholders Equity	0.45	0.77	-0.32
Total Debt to Total Assets	0.43	0.58	-0.15
Total Debt to EBITDA	2.2	3.9	-1.7
Liquidity			
Quick Ratio	1.2	0.7	0.5
Current Ratio	1.6	1.2	0.4
Valuation			
Enterprise Value to EBITDA	17.9	11.5	6.4
Price to Earnings Ratio (P/E)	32.5	19.1	13.4
Price to Free Cash Flow	27.3	17.7	9.6
Dividend Yield	1.2	2.5	-1.3



TOP POSITIONS

Below is a list of the **top 20 holdings** in the Singularity Index. While individual weights are meaningful, there is a significant degree of diversification. Top 5 positions sum up to 18.1%, for the top 10 it's 26.6%, and the weight of the top 20 holdings is 41.2%. While there are no complete new entrants in the top 20, there has been some reshuffling. **NVIDIA, Microsoft, Johnson & Johnson, Tesla** and **Tencent** continue to be in the top 10. **Alphabet, Apple** and **Broadcom** moved up in the table while **Samsung Electronics** and **Adobe** moved down. The new names in the top 20 are marked with an asterisk.

Singularity Core: Our methodology, at its core, does not only select for winners but also makes sure the losers stay out. As soon as a company fails to stay on its innovative track, we're quick to punish. At the top, competition is fierce. It is noteworthy that since launch of the index, a few companies have managed to continually move up the ranks: **NVIDIA**, the top position in the index, is an accelerated computing company for high performance computing and artificial intelligence applications. It manufactures computer chips, develops related software stacks and is the market leader in the design of GPUs which facilitate deep learning for example. **Its computer chips and software stacks power a wide range of solutions across Singularity Sectors from Artificial Intelligence to Robotics, from Virtual Reality to the Internet of Things, and from Blockchain to Big Data.** The most notable names that moved up in the rankings in the latest reshuffling are **Visa** and **MasterCard** which play a key role as network operators in the ever-evolving payments ecosystem and continue to have a strong growth profile. **Both companies continue innovating to adapt to technological developments and behavioral trends and sit in the unique focal point of the hub-and-spoke payments system.** Moreover, given their existing extensive infrastructure and network, they are likely two of the major beneficiaries of new evolving avenues of moving money digitally more generally, unrelated to payments strictly speaking. Such areas encompass money transfers in P2P (including cross-border remittances), B2C, and government to consumer (G2C), offering new exponential growth opportunities.

#	Company	Weight (%)	#	Company	Weight (%)
1	NVIDIA	4.1	11	MasterCard*	1.6
2	Microsoft	4.0	12	Intel*	1.4
3	Alphabet	4.0	13	Keyence	1.3
4	Apple	3.7	14	Samsung Electronics	1.3
5	Johnson & Johnson	2.4	15	Adobe	1.2
6	Tesla	2.3	16	Intuitive Surgical	1.2
7	Visa*	2.2	17	Amazon	1.1
8	Alibaba Group*	2.1	18	Netflix*	1.1
9	Tencent	2.0	19	Medtronic*	1.1
10	Broadcom*	1.9	20	ADV Micro Devices*	1.1

* denotes new position in top 20

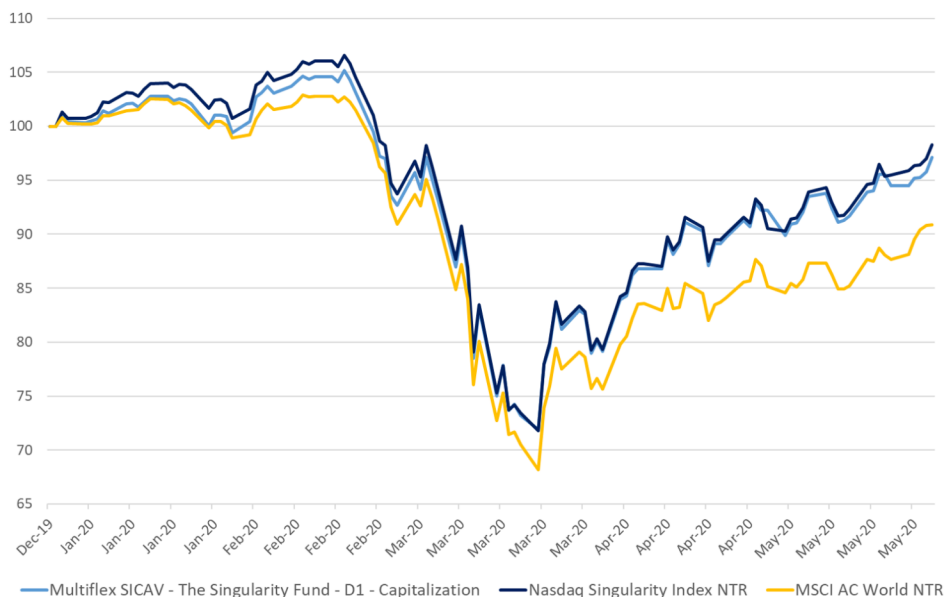
Source: Nasdaq



SINGULARITY PERFORMANCE - May 2020

Singularity Index (SI; NQ2045) vs. benchmarks: May was a solid month for global financial markets, driven by optimism around the reopening of economies and hyper supportive policy. **The Singularity Index gained +6.0%, outperforming the MSCI AC World Index (MSCI ACWI)**, which advanced by +4.3%. Global equity benchmarks in comparison: S&P 500 +4.7%, MSCI Europe +3.0%, SMI +2.5%, MSCI AC Asia Pacific +1.9%. On a YTD basis the SI is down by -1.7% vs MSCI ACWI (-9.2%), S&P 500 (-5.2%), MSCI Europe (-15.4%), SMI (-4.4%), MSCI AC Asia Pacific (-11.0%).

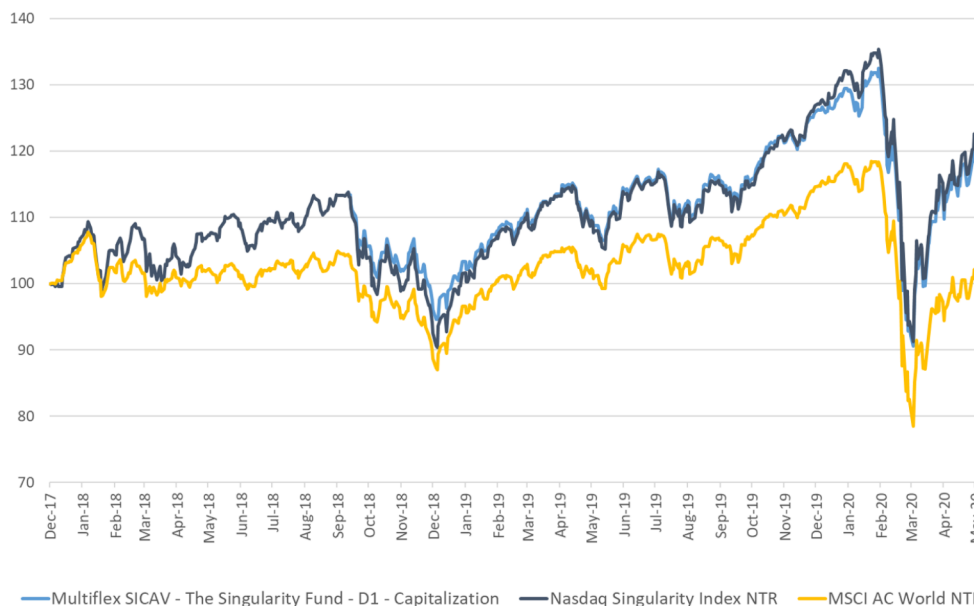
Performance YTD Singularity Index vs. MSCI ACWI per end of May 2020



Compared to the MSCI ACWI, the SI had positive contributions from stock selection (+1.0%) and sector allocation (+0.7%). In May, stock selection was most positive in Information Technology and Energy. In terms of names, relative overweights in NVIDIA, VMware, Adobe, and Keyence drove relative outperformance vs the MSCI ACWI, whereas overweights in Raytheon Technologies, Boeing and Netflix detracted from returns. Both Raytheon and Boeing were removed from the index on May 18 due to the ESG filter. From a sector perspective, an overweight in Information Technology as well as an underweight to Consumer Staples were beneficial while an underweight in Energy hurt performance this month as some of the most beaten down stocks bounced from their lows. **YTD, stock selection and sector allocation accounted for +2.6% and +4.9% respectively relative to MSCI ACWI.**



Performance Since Inception: Singularity Index vs. MSCI ACWI per end of May 2020



The Singularity Fund performed on par with the SI on a gross performance basis over the month. The ex-ante tracking error vs the SI at month-end stood at 0.69%.

Singularity Sectors: All Singularity Sectors in May were positive in absolute terms. Top performing sector was **Virtual Reality (+15.3%)**, driven by strong performance from NVIDIA (NVDA, +21.5%) and Marvell Technology Group (MRVL, +22.0%). Worst performing Singularity Sector was **Neuroscience (+2.9%)**.

Singularity Stocks: Best performing stock for the month was **Twilio (TWLO, +76.0%)**, a company that was featured here before in our January monthly letter. The company helps customers weave communication capabilities into its services seamlessly via APIs that plug into existing applications to add voice, text, and video communications as well as identify authentication (e.g. Uber uses Twilio to communicate with drivers while Nordstrom sales people use it to communicate with customers). The runner up was **Datadog (DDOG, +58.0%)** who offers a cloud-based monitoring and analytics platform that integrates and automates infrastructure and application performance monitoring (APM) for real-time observability of customers, bringing together valuable monitoring insights from traditionally siloed data. Their monitoring tools are designed to help companies understand what's happening inside their key systems and warn them where the pressure points are to help them stay up and running or get systems back again as quickly as possible. **The biggest performance attributions came from NVIDIA (NVDA, +0.8%), Apple (AAPL, +0.2%), Alphabet (GOOGL, +0.2%), and VMware (VMW, +0.2%).**

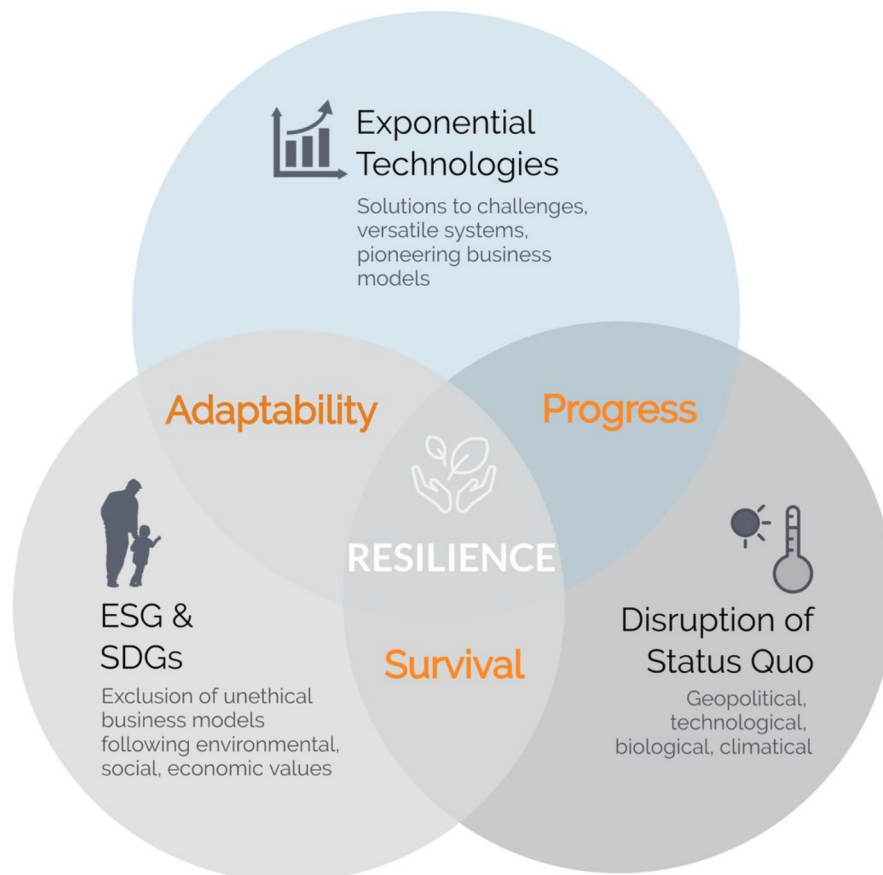
The worst performer in absolute terms was **MOMO (MOMO, -19.4%)**, the Chinese mobile-based social networking platform, who posted disappointing first quarter earnings, beating estimates but marking the company's first quarter of declining revenue since its IPO in late 2014. **Weibo (WB, -18.0%)** was the second worst performer, also driven by a weak earnings report. The biggest relative performance detractors were Raytheon Technologies (RTX, -0.18%) and Boeing (BA, -0.13%), both no longer part of the Singularity Index.



SINGULARITY INSIGHTS

Sustainability in the 4th Industrial Revolution: The term sustainability has become one of the most misused buzz words of our times. It deserves better. We analyzed how current sustainability concepts ignore the fact that the world is in constant flux, and **how applied innovation naturally leads to resilient systems**. Please enjoy our first findings in this [video](#), [blog post](#) and [one-pager](#).

The TSG Triad of Survival, Adaptability and Progress





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