

March 2021

Quarterly Thematic Index Performance Review

MVIS[®]
A VanEck Company

Thematic Index Round-Up

MV Index Solutions (MVIS[®]) publishes 44 thematic indices to cover forward-looking investment concepts grouped into meta themes: Clean Energy, Health Care Innovation, Financials 2.0, NextGen Hardware & Communications, NextGen Software, Consumer Trend, Thematic Industrials & Infrastructure, Thematic REITs, Materials, and Disruptive Technology.

Q1 2021 fintech and financials outperformed while clean energy and health care underperformed. Q1 2021 witnessed a performance rotation across themes with some of the top outperforming indices, such as [BlueStar Electric Vehicle Industry](#) and [BlueStar Solar Energy Industry](#), over the last 12 months underperforming over the last 3 months. However, these indices remain the highest outperforming indices over the last 3 years.

Exhibit 1: Meta Thematic Returns (USD, ending 31 March 2021)

	Q2-2018	Q3-2018	Q4-2018	Q1-2019	Q2-2019	Q3-2019	Q4-2019	Q1-2020	Q2-2020	Q3-2020	Q4-2020	Q1-2021
1	Health Care Innovation 18.4%	Health Care Innovation 18.0%	Thematic REITs -4.7%	Next Gen Software 26.1%	Clean Energy 5.8%	NextGen Hardware & Communications 5.1%	Health Care Innovation 20.1%	Health Care Innovation -8.1%	Next Gen Software 49.2%	Clean Energy 42.4%	Clean Energy 54.2%	Financials 2.0 26.4%
2	Thematic Industrials & Infrastructure 8.2%	Thematic Industrials & Infrastructure 7.7%	Clean Energy -8.1%	Health Care Innovation 23.1%	Thematic Industrials & Infrastructure 5.5%	Thematic REITs 4.8%	Clean Energy 15.4%	Next Gen Software -10.9%	Clean Energy 49.1%	Disruptive Technology 15.0%	Financials 2.0 35.5%	NextGen Hardware & Communications 9.4%
3	Financials 2.0 7.6%	NextGen Hardware & Communications 6.7%	Materials -8.6%	Disruptive Technology 19.3%	Health Care Innovation 4.9%	Clean Energy 0.9%	NextGen Hardware & Communications 13.1%	Disruptive Technology -12.9%	Health Care Innovation 47.3%	Consumer Trends 14.2%	Health Care Innovation 30.9%	Thematic Industrials & Infrastructure 7.1%
4	Thematic REITs 5.2%	Thematic REITs 2.8%	Disruptive Technology -13.6%	Thematic Industrials & Infrastructure 18.7%	Thematic REITs 4.7%	Thematic Industrials & Infrastructure 0.4%	Disruptive Technology 11.8%	Clean Energy -14.0%	Materials 36.1%	Materials 12.2%	Materials 29.7%	Consumer Trends 7.1%
5	Consumer Trends 3.2%	Next Gen Software 2.5%	NextGen Hardware & Communications -14.8%	NextGen Hardware & Communications 17.6%	Materials 4.5%	Disruptive Technology 0.1%	Next Gen Software 10.8%	Financials 2.0 -15.0%	Disruptive Technology 33.0%	Thematic Industrials & Infrastructure 12.1%	Disruptive Technology 24.7%	Thematic REITs 3.8%
6	Next Gen Software 2.9%	Financials 2.0 1.8%	Financials 2.0 -15.6%	Clean Energy 16.3%	Consumer Trends 3.6%	Consumer Trends -1.3%	Consumer Trends 10.5%	Thematic Industrials & Infrastructure -18.1%	Consumer Trends 30.9%	Health Care Innovation 9.9%	Next Gen Software 23.7%	Materials 3.2%
7	Disruptive Technology 1.2%	Consumer Trends 10%	Consumer Trends -16.9%	Consumer Trends 14.0%	Financials 2.0 3.4%	Financials 2.0 -1.6%	Materials 10.0%	NextGen Hardware & Communications -18.4%	NextGen Hardware & Communications 30.2%	Financials 2.0 9.7%	NextGen Hardware & Communications 23.3%	Next Gen Software 1.8%
8	NextGen Hardware & Communications 0.5%	Disruptive Technology 0.9%	Next Gen Software -17.2%	Thematic REITs 11.1%	NextGen Hardware & Communications 3.0%	Next Gen Software -2.4%	Financials 2.0 6.1%	Consumer Trends -21.0%	Financials 2.0 29.9%	NextGen Hardware & Communications 8.6%	Consumer Trends 21.0%	Disruptive Technology 1.0%
9	Clean Energy -2.4%	Clean Energy -3.2%	Thematic Industrials & Infrastructure -18.8%	Financials 2.0 9.7%	Disruptive Technology 1.9%	Materials -4.2%	Thematic Industrials & Infrastructure 5.7%	Materials -23.1%	Thematic Industrials & Infrastructure 28.1%	Next Gen Software 7.5%	Thematic Industrials & Infrastructure 14.8%	Health Care Innovation -3.1%
10	Materials -4.4%	Materials -7.7%	Health Care Innovation -23.0%	Materials 9.6%	Next Gen Software -3.3%	Health Care Innovation -8.9%	Thematic REITs 2.4%	Thematic REITs -33.0%	Thematic REITs 24.6%	Thematic REITs 6.2%	Thematic REITs 14.5%	Clean Energy -5.0%

Source: MVIS. Meta Thematic index returns are the equal weighted returns of underlying Thematic indices listed in Exhibit 2.

Over the last quarter ending Q1 2021, the top performing MVIS index was [BlueStar E-Brokers & Trading Platforms Index](#) (55.8% USD, Net Total Return) and the bottom performing MVIS index as [MVIS Global Junior Gold Miners Index](#) (-17.4% USD, Total Return).

Exhibit 2: Thematic Index Returns (USD, ending 31 March 2021)

Index Ticker	Index Name	Meta Theme	Launch Date	Base Date	Quarterly Returns (USD)				Last 3 Years (USD)		
					Q1-2021	Q4-2020	Q3-2020	Q2-2020	Ann Ret	Ann Stdev	Max Mon Draw-Down
BSOLRNT *	BlueStar Solar Energy Industry	Clean Energy	3/9/2020	12/31/2014	-9.0%	65.0%	79.7%	46.5%	71.7%	40.6%	-28.5%
BWINDNTI *	BlueStar Wind Energy Industry	Clean Energy	3/23/2021	12/31/2014	-5.3%	44.7%	23.6%	17.6%	32.0%	23.3%	-12.3%
BGTQNTF *	BlueStar Global GreenTech	Clean Energy	7/6/2020	12/30/2016	0.3%	36.2%	30.6%	32.5%	34.1%	25.1%	-17.9%
BEVNTR *	BlueStar Electric Vehicle Industry	Clean Energy	1/19/2021	12/29/2017	-12.5%	57.5%	43.7%	115.8%	48.3%	56.7%	-19.0%
BECOMN *	BlueStar E-Commerce US Leaders	Consumer Trends	9/11/2018	12/28/2012	2.1%	19.5%	15.3%	41.1%	28.8%	24.7%	-14.0%
BEGAMN *	BlueStar E-Games	Consumer Trends	10/5/2018	12/29/2014	1.3%	10.9%	16.6%	30.9%	18.9%	18.8%	-12.6%
MVBJKTR	MVIS Global Gaming	Consumer Trends	5/8/2012	12/29/2006	14.2%	20.2%	17.6%	28.1%	7.8%	33.4%	-28.5%
BAUGTR	BlueStar NextGen Video Gaming	Consumer Trends	6/6/2018	12/18/2015	2.2%	16.9%	15.5%	38.1%	24.5%	20.9%	-14.2%
MVESPT	MVIS Global Video Gaming & eSports	Consumer Trends	7/16/2018	12/31/2014	-2.7%	14.6%	18.4%	33.9%	30.3%	20.0%	-15.8%
BFOODTF	BlueStar Food and Agriculture Sustainability	Consumer Trends	8/29/2019	12/31/2014	12.1%	16.0%	9.6%	17.0%	13.2%	17.3%	-11.7%
BTOURNT *	BlueStar Travel and Vacation	Consumer Trends	5/13/2019	12/31/2015	18.0%	34.6%	11.1%	24.1%	5.0%	40.2%	-38.3%
BAUTNTR *	BlueStar Autonomous Driving	Consumer Trends	5/10/2018	12/28/2012	9.5%	35.1%	9.2%	33.7%	18.7%	29.6%	-21.6%
BEBKPMN *	BlueStar E-Brokers & Trading Platforms	Financials 2.0	12/31/2021	12/29/2017	55.8%	44.8%	11.1%	23.8%	39.1%	27.8%	-6.7%
MVDAPP *	MVIS Global Digital Assets Equity	Financials 2.0	3/8/2021	2/26/2021							
BFNQNTF *	BlueStar Fintech	Financials 2.0	1/17/2017	6/29/2012	-2.9%	26.2%	8.4%	36.0%	20.1%	28.4%	-22.5%
BFIWGTR	BlueStar 5G Communications	NextGen Hardware & Communications	1/10/2019	12/30/2016	5.0%	18.6%	4.8%	25.3%			
BGFGNTF *	BlueStar Global 5G Connectivity	NextGen Hardware & Communications	7/26/2019	12/15/2015	4.3%	21.6%	5.1%	26.2%	19.7%	20.2%	-11.4%
BQTUMTF	BlueStar Machine Learning and Quantum Comp	NextGen Hardware & Communications	6/7/2018	12/18/2015	13.3%	26.0%	7.2%	31.3%	28.2%	24.0%	-13.1%
BUQCNT *	BlueStar US Quantum & Future Computing	NextGen Hardware & Communications	3/8/2021	12/18/2015	14.1%	27.0%	6.7%	32.5%	33.8%	24.9%	-13.0%
BIOTUNTF *	BlueStar Internet of Things	NextGen Hardware & Communications	4/12/2018	12/28/2012	6.0%	21.2%	6.6%	34.0%	20.9%	24.6%	-13.8%
MYSMCTF	MVIS US Listed Semiconductor 10% Capped	NextGen Hardware & Communications	8/13/2020	12/31/2011	11.9%	22.5%	15.4%	31.2%	33.7%	25.3%	-16.1%
MYSMHTF	MVIS US Listed Semiconductor 25	NextGen Hardware & Communications	8/12/2011	9/29/2000	11.5%	26.0%	14.0%	30.7%	34.4%	25.9%	-15.5%
BEHCNTF *	BlueStar E-Healthcare	Health Care Innovation	1/22/2021	12/31/2015	-3.3%	18.7%	19.3%	45.4%	47.4%	25.8%	-12.7%
BDNANTF *	BlueStar Genomic Health Care	Health Care Innovation	5/22/2020	12/31/2015	-2.8%	43.0%	0.5%	49.2%	35.2%	32.7%	-15.1%
BLOGRNT *	BlueStar Global Logistics	Thematic Industrials & Infrastructure	10/23/2020	12/29/2006	12.1%	5.1%	15.5%	26.4%	25.5%	15.1%	-7.5%
BLOGTNT *	BlueStar Global Logistics Benchmark	Thematic Industrials & Infrastructure	10/23/2020	12/29/2006	11.4%	6.1%	13.2%	24.1%	22.5%	15.1%	-8.4%
BECLGNT *	BlueStar E-Commerce, Payments, and Logistic	Thematic Industrials & Infrastructure	3/1/2021	12/29/2006	7.5%	13.0%	17.9%	39.3%	29.8%	20.4%	-9.1%
BRBTNTF *	BlueStar Robotics	Thematic Industrials & Infrastructure	1/29/2018	6/29/2012	4.8%	24.3%	10.2%	28.7%	18.9%	26.8%	-15.1%
BTOTNTR *	BlueStar Total Security	Thematic Industrials & Infrastructure	7/8/2019	12/31/2015	-0.1%	25.5%	3.6%	22.0%	18.0%	22.4%	-14.2%
MVMOOTI	MVIS Global Agribusiness	Materials	7/18/2012	12/29/2006	12.5%	16.5%	12.4%	16.8%	14.1%	18.8%	-14.1%
MVGDXT	MVIS Global Junior Gold Miners	Materials	8/31/2009	12/31/2003	-17.4%	-0.5%	12.9%	71.6%	13.3%	40.3%	-22.4%
MVREMX *	MVIS Global Rare Earth/Strategic Metals	Materials	10/13/2010	12/28/2007	14.3%	73.1%	11.4%	19.7%	0.2%	38.5%	-17.4%
BSEAQNT *	BlueStar Asia Technology	Disruptive Technology	8/13/2018	6/29/2013	7.4%	24.9%	11.8%	34.6%	23.6%	24.9%	-13.4%
BGTHTR	BlueStar Israel Global Technology	Disruptive Technology	1/31/2014	12/31/2003	-5.4%	24.4%	18.2%	31.5%	28.4%	22.6%	-13.9%
BDLRNT *	BlueStar Data Center and Logistics Real Estate	Thematic REITs	8/5/2019	12/31/2013	-0.4%	4.9%	7.4%	15.9%	17.8%	14.3%	-7.1%
MVMVATF	MVIS Australia A-REITs (AUD)	Thematic REITs	12/21/2012	12/29/2006	-0.9%	13.7%	6.0%	19.1%	8.4%	27.1%	-35.6%
MVMORT	MVIS US Mortgage REITs	Thematic REITs	8/4/2011	12/30/2004	12.8%	25.0%	5.2%	38.8%	-0.7%	39.8%	-56.2%
BCHNQNT *	BlueStar China Internet Software	Next Gen Software	8/13/2018	6/29/2013	5.1%	21.9%	6.8%	40.8%	17.4%	29.9%	-18.2%
BAINTR *	BlueStar Artificial Intelligence	Next Gen Software	3/26/2018	12/31/2012	0.1%	18.0%	11.8%	39.5%	23.3%	24.8%	-13.6%
BDATATF	BlueStar Big Data & Analytics	Next Gen Software	3/9/2021	12/31/2015	0.3%	31.2%	3.8%	67.3%	40.5%	34.0%	-15.3%

Source: MVIS. Total Return Indices, *Total Return Gross Indices

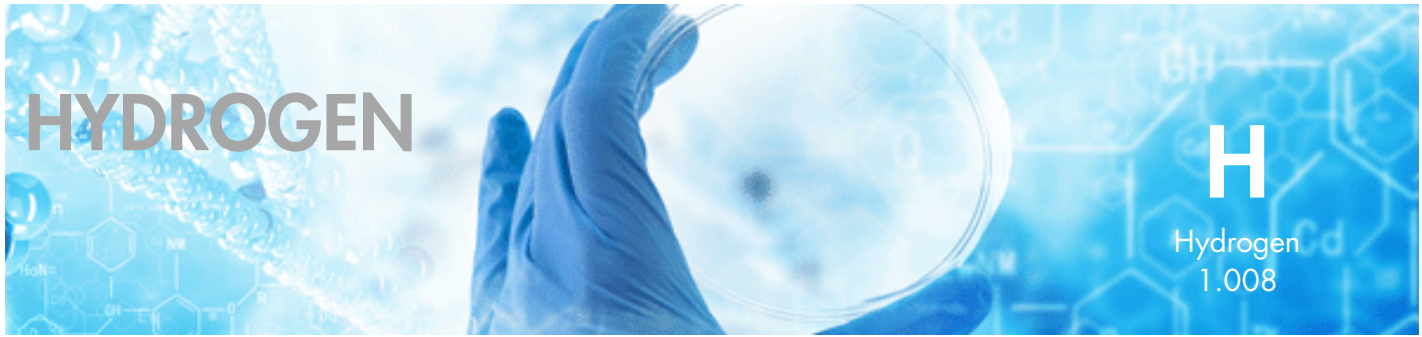
New Index Launches

BEHC	BlueStar E-Healthcare	Health Care Innovation	The index tracks the performance of global companies with at least 50% (25% for current components) of their revenue from: Software used to facilitate online medical consultations, E-Commerce pharmacies, Software for the management of medical practices and/or patient records, Outpatient medical IoT devices.
BEV	BlueStar Electric Vehicle Industry	Clean Energy	The index tracks the performance of global companies with at least 50% of revenue from electric vehicles or 50% of revenue from electric vehicle parts, charging equipment, or related equipment.
MVDAPP	MVIS Global Digital Assets Equity	Financials 2.0	The index tracks the performance of global companies with at least 50% of their revenues from digital asset exchanges, payment gateways, mining operations, software services, equipment and technology or services to the digital assets industry, digital asset infrastructure businesses, or companies facilitating commerce with the use of digital assets.
BWIND	BlueStar Wind Energy Industry	Clean Energy	The index tracks the performance of global companies with at least 50% of revenue, operating assets, or real estate assets, from wind technology, wind farm operations, or wind farm construction services.
BDATA	BlueStar Big Data & Analytics	Next Gen Software	The index tracks the performance of global companies with at least 50% of revenue or operating activity from solutions focused on: database management, data platforms, dev-ops, big data analytics, or API management.
MVSMOG	MVIS Global Low Carbon Energy	Clean Energy	The index tracks the performance of companies with at least 50% of their revenues from renewable sources of energy or the development of related technologies.
BHDRO	BlueStar Hydrogen and NextGen Fuel Cell	Clean Energy	The index tracks the performance of global companies with at least 50% of their revenues from hydrogen fuel cells, hydrogen gas production, or technology/equipment used to produce, store, or generate energy from hydrogen. Vehicle manufacturers are not eligible for inclusion in the index.
BEBKR	BlueStar E-Brokers & Trading Platforms Index	Financials 2.0	The index tracks the performance of global companies with at least 50% (25% for current components) of revenue or operating activity from online brokerage or market making activities, digital asset portfolio management or capital market activities.

Licensed Product News

As of Q1 2021, total thematic products licensed stands at \$27.7bn USD. We are excited to welcome our newest products licensed in Q1 2021.

MVHTWO	MVIS Licensed the MVIS Global Hydrogen Economy Index to VanEck	31-Mar-21
BHDRO	MVIS Licensed the BlueStar Hydrogen and NextGen Fuel Cell Index to Defiance ETFs	10-Mar-21



Thematic Spotlight

In the search for the ultimate renewable energy source, hydrogen stands out. Not only is it the most abundant element in the atmosphere, but unlike wind & solar, it can be stored and transported with relative ease.

For these reasons Bank of America estimates that hydrogen will account for nearly one-quarter of our energy needs by 2050¹. And while the hydrogen energy industry is expected to generate several trillion dollars of investment opportunity over the coming decades, the current investable universe of pure-play hydrogen and fuel cell stocks is worth just over USD 90 billion.

Through a process called electrolysis, electricity is applied to water to split the hydrogen molecule from its oxygen counterpart. Electrolysis is a technique that can be replicated at a large scale and done efficiently employing surplus electricity when power is abundant. The hydrogen can then be stored and transported for later use, generating energy where and when it is needed.

It is important to distinguish between so-called “grey” hydrogen versus the “green” process noted above. A majority of hydrogen is currently produced using a byproduct of fossil fuels, most notably, methane, through a process called “steam reforming”. But increasingly, alternative energy sources like wind and solar are being used to produce the electricity that drives the electrolysis process thus generating “green” hydrogen.

Fuel cells then convert hydrogen’s energy into a useable form of electricity. In one portion of the fuel cell the hydrogen’s electrons and protons are separated. The protons pass through a membrane while the electrons are forced through a circuit, thus creating an electric current. In the end, the electrons re-connect with the protons, are exposed to oxygen, and create water as the only byproduct.

Hydrogen has already been adopted in all sorts of industrial settings – from fueling fork lifts to replacing traditional distributed back-up power sources – however, as the cost of generating hydrogen decreases, and the industry advances, hydrogen can be used to power all types of vehicles including ships, trains, planes and passenger cars, as well as in centralized/decentralized power generation for both the home and industrial usage alike.

To help investors capture the hydrogen energy opportunity MVIS has launched two hydrogen and fuel cell indices that are pure-play, diversified and investable: The [BlueStar Hydrogen and NextGen Fuel Cell Index \(ticker: BHDRO\)](#) and the [MVIS Global Hydrogen Economy Index \(ticker: MVHTWO\)](#). Both indices capture leaders in hydrogen generation and fuel cell technologies in a modified market cap weighted strategy. Each index utilizes a slightly different weighting strategy and has slight differences in investability criteria.

¹ “Thematic Investing: The Special 1 – Hydrogen primer,” Bank of America Securities, Global Research, 23 September 2020, p.1 and 6.

To learn more about MVIS's extended family of innovative indices, please visit www.mvis-indices.com and sign up to join the conversation.

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