

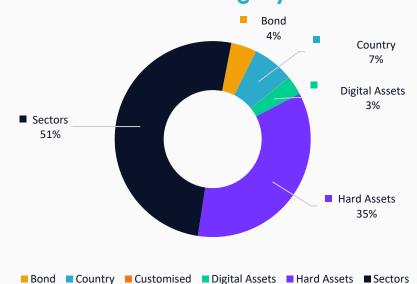
## **MarketVector Indexes**<sup>TM</sup>



# Accelerating innovation in financial index design and adoption since its launch in 2011

- Moving beyond common categories, MarketVector Indexes<sup>TM</sup> is a leading provider of blue-chip indexes built on three key factors: pure-play exposure, component liquidity, and index diversification. In combination, these factors ensure best practices in index design, optimized for the future of ETPs.
- MarketVector Indexes<sup>TM</sup> specializes in indexes that capture specific potential investment themes ranging from hard assets, international equities with a strong focus on emerging markets, digital assets, fixed income, and disruptive sectors.
- MarketVector Indexes<sup>TM</sup> is registered as a benchmark administrator under the European Benchmarks Regulation since July 2019 and its Index methodology and operational process adheres to IOSCO guidelines.
- August 2020, MarketVector Indexes<sup>TM</sup> acquires BlueStar<sup>®</sup>
   Indexes, a New York-based research-driven provider of indexes
   and financial data, increasing the range of indexes and global
   business.
- MarketVector Indexes<sup>TM</sup> deploys a highly customizable product and paradigm-based index methodology that enables investors to express views beyond the limitations of traditional broad or sector benchmarks.
- MarketVector Indexes<sup>™</sup> leverages its Index Advisory
   Committee, a governance body of industry and thematic
   experts, to oversee the maintenance of its indexes, ensuring that
   they reflect their stated objectives and implement best practices
   into their construction.

AUM for Licensed Prodcuts by % of Index Category



Index Category	AUM for Licensed Products (USD mn)	Count of Licensed Index	Count of Index (Family)
Bond	1,205	3	3
Country	1,937	13	26
Customised	15	2	15
Digital Assets	892	16	42
Hard Assets	9,940	11	13
Sectors	14,342	52	65
Total	28,331	97	164

Source: MarketVector Indexes<sup>TM</sup>. Data as end of March 2023.

## The MarketVector<sup>TM</sup> difference



Comprehensive and adaptable: Every MarketVector<sup>TM</sup> product is crafted to encompass opportunity and evolve over time.



#### Pioneering innovation

- Deep research and proprietary classifications transcend standard taxonomies and challenge the status quo
- A unique pure-play approach targets markets with unparalleled precision
- Custom methodology enables investors to go beyond the limitations of traditional benchmarks



#### **Operational excellence**

- Institutional quality: designed to IOSCO principles and EU Benchmark Regulation
- Quality assurance enhanced with technology and human insight to personally validate thousands of data points
- Independent oversight by the Index Advisory Committee to ensure indexes meet standards and objectives



#### Immersive collaboration

- An extension of your product development team
- Embedded to workshop your ideas, inject vitality into your process, and tailor each solution to your competitive advantage
- Real-world asset management experience to drive performance and differentiation in the market

# The MarketVector<sup>TM</sup>/BlueStar<sup>®</sup> Advantage



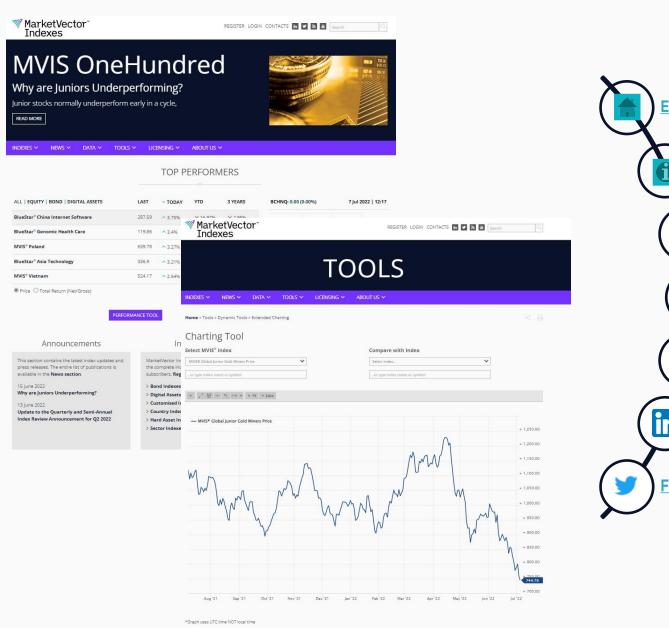
## Accelerating innovation in financial index design

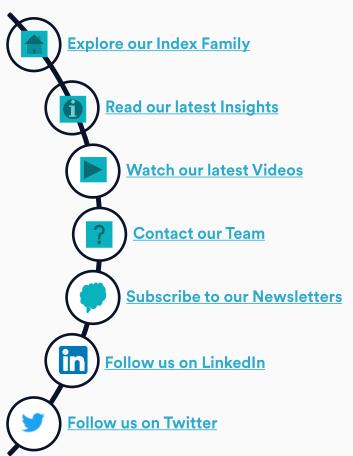


Watch the MarketVector Indexes<sup>TM</sup> story

## **MarketVector**<sup>TM</sup> **Website**







# MarketVector Indexes<sup>TM</sup> by the Numbers...



\$28bn

AUM of indexes licensed

12%

AUM growth of licensed products Q1 2023 v Q4 2022 9

# of global markets with MarketVector Indexes<sup>TM</sup> products

164

indexes

6

indexes licensed above \$1bn

3

new indexes developed in YTD 2023

91%

MVIS Global Digital Assets Mining
(MVDAM Index)
Q1 2023 Performance

4%

MVIS® Moody's Analytics US BBB
Corporate Bond
Q1 2023 Performance

105%

 $\frac{MarketVector^{TM}\ Solana\ VWAP\ Close}{Index}$ 

Q1 2023 Performance

## **Grounded in Tradition, Driven by Innovation**



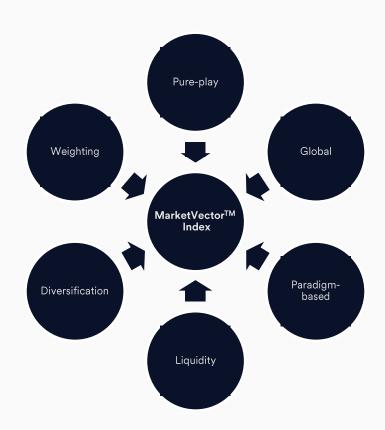
## "Accelerating innovation in financial index design and adoption"

## **Applying Traditional Best Practices**

- Liquidity: Applying strict and demanding liquidity screening to ensure a more investable index
- Diversification: Mitigates concentration issues through depolyment of a sophisticated capping approach, resulting in balanced and diversified index eposure
- Transparency: MarketVector Indexes<sup>TM</sup> offers real-time index data and more at www.marketvector.com

#### **Deploying New Innovations**

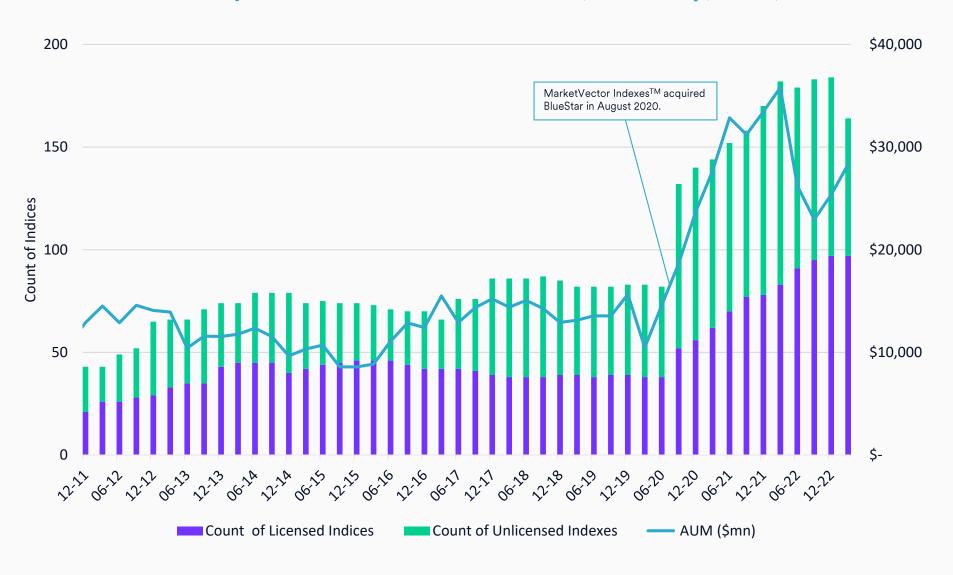
- Pure-play: Applies integrety by capturing companies that generate at least 50% of their revenues in the target country, sector or theme
- Global: Connects companies to their country origin, regardless of thier listing venue
- Paradigm-based: Deploys a top-down approach in the construction of thematic indexes; often utilizes diversified subthemes within the Index to capture the idea holistically
- Weighting Strategies: Applies flexible & customizable strategies from standard to alpha-seeking



# **MarketVector**<sup>TM</sup> - **Index Family Overview**



## Development of indexes and AUM (Quarterly, \$mn)



# **MarketVector**<sup>TM</sup> **Index Family - licensed\* products**



Туре	Underlying Index	AUM*	Туре	Underlying Index	AUM*	Туре	Underlying Index	AUM*
	MVIS® US Listed Semiconductor 25	8,147		BlueStar® Hotels, Airlines, and Cruises	53		BlueStar® Europe Travel and Vacation	3
	MVIS® US Listed Semiconductor 10% Capped	905		MVIS® Global Video Gaming & eSports (AUD)	250		BlueStar® Data Center and Log. RE	3
	BlueStar® 5G Communications	708		BlueStar® Hydrogen and NextGen Fuel Cell	42		BlueStar® Top 10 US List. Alt. Asset Mgr.	2
	MVIS® US Business Development Companies	658		BlueStar® Robotics	25	>	BlueStar® Global Robotics & 3D Printing	2
	MarketVector™ Glb. Vid Gaming & eSports ESG	537		BlueStar® China Internet Software	25	Equity	MVIS® Digital India	1.36
	MVIS® US Listed Biotech 25	491		BlueStar® Fintech	22	natic	MVIS® Global Digital Assets Mining	1.34
	MVIS® Australia A-REITs (AUD)	400		BlueStar® Asia Technology	22	/Then	BlueStar® Total Security	1.33
>	MVIS® US Listed Pharmaceuical 25	369		BlueStar® Global 5G Connectivity	19	ector,	BlueStar® E-Commerce US Leaders	1.14
Equity	MVIS® Global Video Gaming & eSports	294	Equity	BlueStar® Global Logistics	19	S	BlueStar® Electric Vehicle Industry	1.01
natic	MVIS® Global Low Carbon Energy	208	natic	BlueStar® Artificial Intelligence	17		BS® Glb. Onl. Gamb. Vid. Gam. & eSports	0.78
/Then	BlueStar® Israel Global Technology	199	/Then	BlueStar® Global GreenTech	10		BlueStar® Glb. E-Brokers & DCM	0.36
Sector/	MVIS® US Mortgage REITs	183	ector/	BlueStar® E-Games	8		BlueStar® E-Brokers & DCM	0.14
Š	MVIS® US Listed Retail 25	148	ι, Σ	BlueStar® Solar Energy Industry	8			
	MVIS® Australia Banks (AUD)	124		MVIS® Global Future of Food ESG	7			
	BlueStar® Machine Learn. & Quantum Comp.	121		MVIS® Global Space Industry ESG	7			
	BlueStar® Top 10 US Banks	120		MVIS® Global Future Healthcare ESG	6			
	MVIS® Global Hydrogen Economy ESG	113		MVIS® Global Circular Economy ESG	6			
	BlueStar® Travel and Vacation	101		BlueStar® Autonomous Driving	6			
	MVIS® Global Gaming	90		MVIS® Global Bionic Healthcare ESG	5			
	MVIS® Global Digital Assets Equity	53		BlueStar® Genomic Health Care	3			

Source: MarketVector Indexes<sup>TM</sup>. Data as end of March 2023. \* in mln USD

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# **MarketVector**<sup>TM</sup>**Index Family - licensed\* products**



Туре	Underlying Index	AUM*	Туре	Underlying Index	AUM*	Туре	Underlying Index	AUM*
	MVIS® Australia Equal Weight (AUD)	1,185	5	MarketVector™ Bitcoin Benchmark Rate	363		MVIS® US Investment Grade Floating Rate	1,184
	MarketVector™ Vietnam Local	517	· ,	MarketVector <sup>TM</sup> Ethereum Benchmark Rate	192	3ond	MVIS® MA US Inv. Grade Corp. Bond	13
	BlueStar® Israel Global	58		MarketVector <sup>TM</sup> Bitcoin VWAP Close	162	_	MVIS® Moody's Analytics US BBB Corp. Bond	8
	MVIS® GDP Africa	46	<del>.</del> 5	MarketVector™ Ethereum VWAP Close	74	Туре	Underlying Index	AUM*
	MVIS® Russia	33		MarketVector <sup>TM</sup> TRON VWAP Close	63		MVIS® Global Junior Gold Miners	5,106
>	MVIS® Australia SC Dividend Payers (AUD)	32	2	MarketVector <sup>TM</sup> Algorand VWAP Close	12		MVIS® US Listed Oil Services 25	2,410
Country	MVIS® Indonesia	29		MarketVector™ Solana VWAP Close	6.49		MVIS® Global Agribusiness	1,269
	MVIS® Brazil Small-Cap	25	ital ets	MarketVector <sup>™</sup> Crypto Leaders VWAP Close	6.42		MVIS® Global Rare Earth/Strategic Metals	770
	MVIS® Egypt	12	Digital Assets	MarketVector <sup>TM</sup> Avalanche VWAP Close	5.77	ts	MVIS® Australia Resources (AUD)	225
	MVIS® Russia Small-Cap	0.34		MarketVector <sup>TM</sup> Polkadot VWAP Close	1.80	Hard Asse	MVIS® Global Uranium & Nuclear Energy	57
	MarketVector <sup>TM</sup> Brazil Global Exposure (BRL)	0.19	)	MarketVector™ Polygon VWAP Close	1.62		MVIS® Global Oil Refiners	38
	MarketVector™ Brazil Domestic Exposure (BRL)	0.16	;	MarketVector <sup>TM</sup> Chainlink VWAP Close	1.04		MVIS® North America Energy Infrastructure	28
	MarketVector™ Brazil Small-Cap Value (BRL)	0.15	;	MarketVector <sup>TM</sup> Smart Contract Leaders VWAP	0.95		MVIS® Global Clean-Tech Metals	26
				MarketVector <sup>TM</sup> Meta Leaders Brazil	0.69		MarketVector <sup>TM</sup> Gl. Uranium & Nuclear En. Infra.	. 6
				MarketVector <sup>TM</sup> Smart Contract Leaders Brazil	0.47		BlueStar® Agribusiness 50	5
				MarketVector™ FTX Token VWAP Close	0.03		<del>-</del>	

Source: MarketVector Indexes<sup>TM</sup>. Data as end of March 2023. \* in mln USD

<sup>\*</sup>A licence agreement is required to use indexes, index data or trademarks for any commercial purpose, or for research and analysis, or for the issuance, launch, promotion or marketing of financial products such as exchange-traded products, mutual funds, certificates, derivatives, swaps, bonds or OTC products linked to or based on MVIS® Indexes. The information provided here reflects the list of licensed indexes with publically available assets under management.

## **Leadership Team**





Steven Schoenfeld CEO

Steven Schoenfeld joined MarketVector Indexes<sup>TM</sup> as CEO following its acquisition of BlueStar Indexes in August of 2020. Steven was the Founder and Chief Investment Officer of BlueStar which maintained a family of indexes for Global Technology Stocks and Israeli Equities & Bonds. Steven is a 36-year veteran of the investment management industry, having served in senior fiduciary positions at Northern Trust, where he oversaw more \$300 billion in quantitatively-managed global equity and fixed income portfolios, and at Barclays Global Investors (now Blackrock), where he managed more than \$70 billion in developed and emerging market stock index fund and ETFs. Previously, he led the team at IFC/World Bank which developed the first investable Emerging Market indexes, and traded Japanese stock index futures on the floor of the Singapore Exchange.

Steven is the author of Active Index Investing (Wiley Finance, 2004), co-author of The Pacific-Rim Futures and Options Markets (McGraw-Hill, 1992), and co-founder of IndexUniverse.com (now ETF.com). He has a BA in History and Government from Clark University, was a Fulbright Scholar in Economics at the National University of Singapore, and has an MA from the Johns Hopkins School of Advanced International Studies (SAIS).



Thomas Kettner

Thomas Kettner is COO at MarketVector Indexes™ with global responsibility for the company's index business. He is an index expert with more than fifteen years of experience in the development and maintenance of indexes, with a focus on the development of indexes designed for financial products. He is supported by a team of index specialists with an average of five years of experience in index development, maintenance and marketing. Prior to joining MarketVector Indexes™ in 2012, Mr. Kettner held various positions at leading index providers such as Dow Jones Indexes and STOXX Ltd.

Mr. Kettner holds a degree in Economics from the University of Konstanz, Germany, and is a CIIA graduate.



**Torsten Hunke**Managing Director

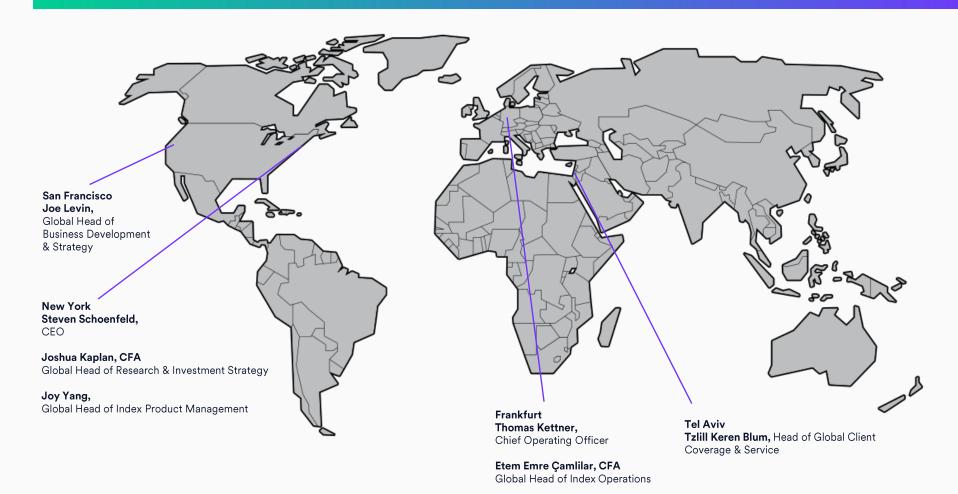
Torsten Hunke joined MarketVector Indexes™ in 2014 to support the firm's index business as the European Legal Counsel and has served as Managing Director since 2016.

He has more than 15 years of experience as international banking regulatory and investment fund lawyer. Prior to joining MarketVector Indexes<sup>TM</sup>, Mr. Hunke worked as a Director at Credit Suisse where he was responsible for the EMEA Asset Management Legal Department and for the legal affairs of Credit Suisse's two German investment companies. Earlier career milestones include positions at the Global Depositary Department at Deutsche Bank AG and the investment funds and banking regulatory department at Linklaters in Frankfurt and London.

Mr. Hunke is an attorney at law and a member of the German Bar Association. He studied law at the Universities of Hannover, Brandenburg, and Le Havre (France).

## **Global Contacts**





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Map Source: Wikimedia Commons.

# **MarketVector**<sup>TM</sup> **Extended Index Family - calculated**



ype	Underlying Index	Туре	Underlying Index	Туре	Underlying Index
	BlueStar® 5G Communications		BlueStar® Global Robotics & 3D Printing		MVIS® Australia A-REITs (AUD)
	BlueStar® Artificial Intelligence		BlueStar® Hotels, Airlines, and Cruises		MVIS® Australia Banks (AUD)
	BlueStar® Asia Technology		BlueStar® Hydrogen and NextGen Fuel Cell	•	MVIS® Digital India
	BlueStar® Autonomous Driving	_	BlueStar® Israel Global Technology	'	MVIS® Global Bionic Healthcare ESG
	BlueStar® Big Data & Analytics	_	BlueStar® Israel Global Technology North America	'	MVIS® Global Circular Economy ESG
	BlueStar® China Internet Software		BlueStar® Israel Infrastructure	'	MVIS® Global Digital Assets Equity
	BlueStar® Data Center and Logistics Real Estate	_	BlueStar® Machine Learning and Quantum Computing	Sector/Thematic Equity	MVIS® Global Digital Assets Mining
	BlueStar® Digital Advertising	_	BlueStar® Robotics		MVIS® Global Future Healthcare ESG
uity	BlueStar® E-Brokers and Digital Capital Markets	 Equity	BlueStar® Solar Energy Industry		MVIS® Global Future of Food ESG
ic Eq	BlueStar® E-Commerce US Leaders	lic Eq	BlueStar® Top 10 US Banks		MVIS® Global Gaming
emat	BlueStar® E-Games	- lemat	BlueStar® Top 10 US List. Alt. Asset Mgr.		MVIS® Global Hydrogen Economy ESG
Sector/Thematic Equity	BlueStar® Electric Vehicle Industry		BlueStar® Top 10 US Residential Real Estate		MVIS® Global Low Carbon Energy
Sect	BlueStar® Europe Travel and Vacation	Sect	BlueStar® Total Security		MVIS® Global Space Industry ESG
	BlueStar® Fintech		BlueStar® Travel and Vacation		MVIS® Global Video Gaming & eSports
	BlueStar® Genomic Health Care	_	BlueStar® US List. E-Brokers & DCM		MVIS® Global Video Gaming & eSports (AUD)
	BlueStar® Global 5G Connectivity		BlueStar® US Listed Internet Infrastructure		MVIS® North America Cannabis Industry
	BlueStar® Glb. E-Brokers & DCM	_	BlueStar® US Machine Learn. & Quantum Comp.		MVIS® US Business Development Companies
	BlueStar® Global GreenTech	_	BlueStar® Wind Energy Industry		MVIS® US Listed Biotech 25
	BlueStar® Global Logistics	_	MarketVector <sup>TM</sup> Global Defense Industry		MVIS® US Listed Pharmaceutical 25
	BlueStar® Global Logistics Benchmark		MarketVector <sup>TM</sup> Global Video Gaming & eSports ESG		MVIS® US Listed Retail 25
	BlueStar® Glb. Onl. Gamb. Vid. Gam. & eSports	_	MarketVector <sup>TM</sup> US Listed Emerging Tech. Strategy		MVIS® US Listed Semiconductor 10% Capped ESG
					MVIS® US Listed Semiconductor 25
					MVIS® US Mortgage REITs

Source: MarketVector Indexes<sup>TM</sup>. Data as end of March 2023.

# **MarketVector**<sup>TM</sup> **Extended Index Family - calculated**



ype	Underlying Index	Type	Underlying Index	Туре	Underlying Index
	BlueStar® Israel Global	_	MVIS® United Arab Emirates	<u> </u>	BlueStar® Agribusiness 50
	MarketVector <sup>TM</sup> Brazil Domestic Exposure (BRL)	atry .	MVIS® Vietnam		MarketVector™ Glb.Uranium and Nuclear Energy In
	MarketVector <sup>TM</sup> Brazil Global Exposure (BRL)	Country	Solactive-BlueStar Israel Domestic Exposure		MarketVector™ US Listed Oil Services 10% Capped
	MarketVector <sup>TM</sup> Brazil Small-Cap Value (BRL)	_	Solactive-BlueStar Israel Global Exposure		MVIS® Australia Resources (AUD)
	MarketVector <sup>TM</sup> Vietnam Local	-			MVIS® Global Agribusiness
	MVIS® Australia (AUD)	_		ş	MVIS® Global Clean-Tech Metals
	MVIS® Australia Equal Weight (AUD)	_		d Assets	MVIS® Global Clean-Tech Metals ex-China
	MVIS® Australia Small-Cap Dividend Payers (AUD)	_		Hard	MVIS® Global Junior Gold Miners
	MVIS® Brazil				MVIS® Global Oil Refiners
	MVIS® Brazil Small-Cap	_			MVIS® Global Rare Earth/Strategic Metals
<b>A</b>	MVIS® Egypt	_			MVIS® Global Uranium & Nuclear Energy
	MVIS® GDP Africa	_			MVIS® North America Energy Infrastructure
	MVIS® Germany	_			MVIS® US Listed Oil Services 25
	MVIS® India	_		Туре	Underlying Index
	MVIS® Indonesia	_			MVIS® MA US BBB Corp. Bond
	MVIS® Poland	_		Bond	MVIS® MA US Inv. Grade Corp. Bond
	MVIS® Qatar				MVIS® US Investment Grade Floating Rate
	MVIS® Russia	_		-	
	MVIS® Russia Small-Cap	_			

Source: MarketVector Indexes<sup>TM</sup>. Data as end of March 2023.

MVIS® South Korea

MVIS® Turkey

MVIS® South Korea Equal Weight

# **MarketVector**<sup>TM</sup> **Extended Index Family - calculated**



Туре	Underlying Index	Туре	Underlying Index			
	MarketVector™ Algorand VWAP Close		MarketVector <sup>TM</sup> Ethereum Benchmark Rate			
	MarketVector <sup>TM</sup> Avalanche VWAP Close		MarketVector™ Ethereum VWAP Close			
	MarketVector <sup>TM</sup> Bitcoin	_	MarketVector <sup>TM</sup> FTX Token VWAP Close			
	MarketVector™ Bitcoin Benchmark Rate	_	MarketVector™ Global Bitcoin Benchmark Rate (AUD)			
	MarketVector <sup>TM</sup> Bitcoin VWAP Close		MarketVector™ Global Ethereum Benchmark Rate (AUD)			
	MarketVector <sup>TM</sup> Centralized Exchanges		MarketVector™ Infrastructure Application			
	MarketVector <sup>TM</sup> Chainlink VWAP Close		MarketVector™ Infrastructure Application Leaders			
	MarketVector <sup>TM</sup> Coinbase Bitcoin Benchmark Rate	_	MarketVector <sup>TM</sup> Media & Entertainment			
	MarketVector <sup>TM</sup> Coinbase Ethereum Benchmark Rate	_	MarketVector™ Media & Entertainment Leaders			
sets	MarketVector <sup>TM</sup> Crypto Leaders VWAP Close	sets	MarketVector™ Media & Entertainment Leaders Brazil			
Digital Assets	MarketVector <sup>TM</sup> Decentralized Finance	l I Digital Assets	MarketVector <sup>TM</sup> Optimum Global Cryptoasset			
Digit	MarketVector <sup>TM</sup> Decentralized Finance Leaders	Digit	MarketVector <sup>TM</sup> Polkadot VWAP Close			
	MarketVector <sup>TM</sup> Digital Asset Select	_	MarketVector <sup>TM</sup> Polygon VWAP Close			
	MarketVector <sup>TM</sup> Digital Assets 10	_	MarketVector <sup>TM</sup> Smart Contract			
	MarketVector™ Digital Assets 100		MarketVector™ Smart Contract Leaders			
	MarketVector™ Digital Assets 100 Large-Cap		MarketVector™ Smart Contract Leaders Brazil			
	MarketVector™ Digital Assets 100 Mid-Cap	_	MarketVector <sup>TM</sup> Smart Contract Leaders VWAP Close			
	MarketVector™ Digital Assets 100 Small-Cap		MarketVector <sup>TM</sup> Solana VWAP Close			
	MarketVector™ Digital Assets 25		MarketVector <sup>TM</sup> TRON VWAP Close			
	MarketVector™ Digital Assets 5		MarketVector <sup>TM</sup> XRP			
	MarketVector <sup>TM</sup> Ethereum		Weiss MarketVector™ Top Tech Adoption Rating			

Source: MarketVector Indexes<sup>TM</sup>. Data as end of March 2023.

## **Important Disclosure**



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