

June 2022



MarketVector Indexes GmbH

MVIS® CryptoCompare Digital Assets indexes

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Accelerating innovation in financial index design

Types of Digital Assets

Index Concept

**MarketVector
Indexes™ Index Family**

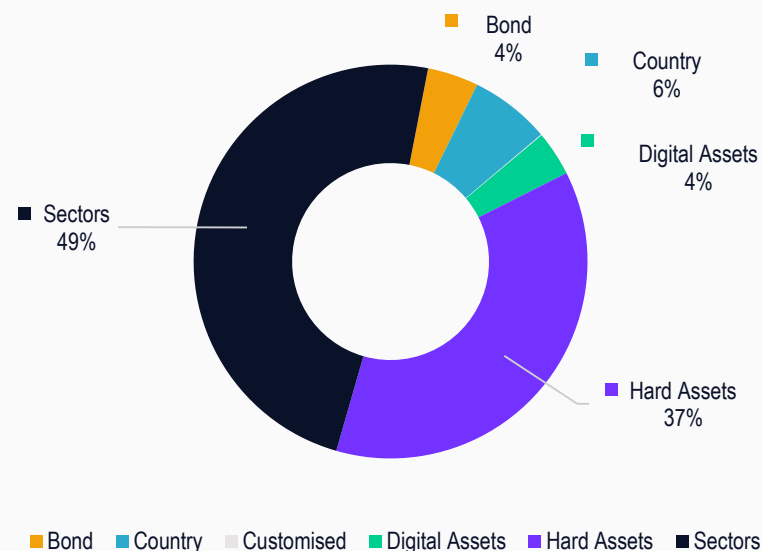
indexes in the spotlight

MarketVector Indexes™

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

- Moving beyond common categories, MarketVector Indexes™ 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™ 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™ 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™ acquires BlueStar® Indexes, a New York-based research-driven provider of indexes and financial data, increasing the range of indexes and global business.
- MarketVector Indexes™ 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™ 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 Products by % of Index Category



Index Category	AUM for Licensed Products (USD mn)	Count of Licensed Index	Count of Index (Family)
Bond	1,107	3	3
Country	1,743	10	40
Customised	17	2	15
Digital Assets	971	17	45
Hard Assets	9,734	10	11
Sectors	12,838	49	65
Total	26,410	91	179

Source: MarketVector Indexes™. Data as end of June 2022

Digital Asset Classification Scheme

There is currently no standard definition of digital assets types, as there are for securities in various jurisdictions. Drawing distinctions between different types of digital assets is important because the regulatory treatment of a particular digital asset depends in large part on whether or not it is a “security”. MarketVector Indexes™ categorizes digital asset coins into distinct, non-overlapping categories that form the building blocks of a new crypto classification scheme. Categories capture the value and use case related to a coin. Using a qualitative process, each coin is categorized into one category.

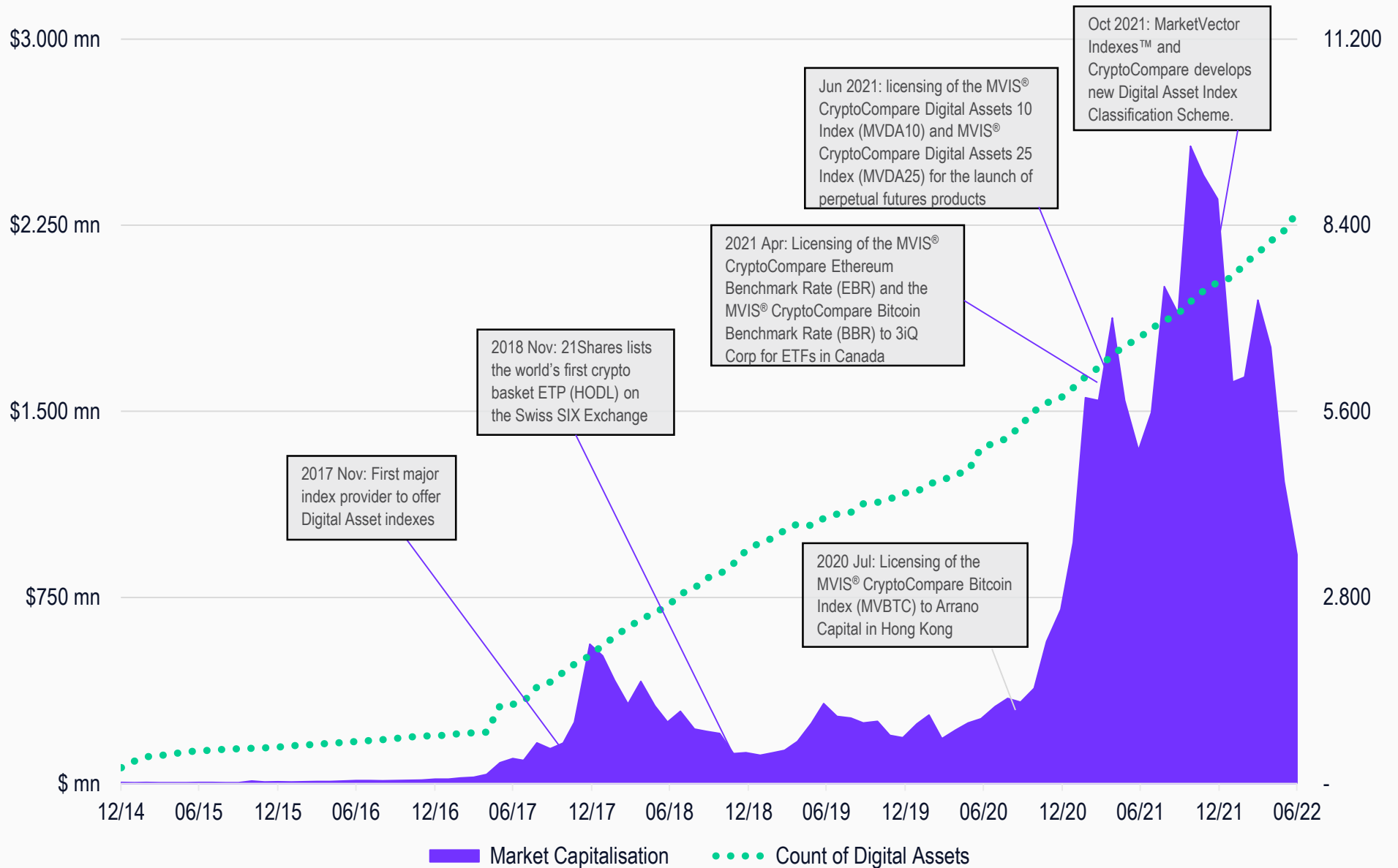
Category	Definition	Examples
DeFi	Financial services built on top of distributed networks with no central intermediaries	Uniswap, Aave
Exchange	Tokens owned and operated by a centralized cryptocurrency exchange	Binance, FTX
Infrastructure Applications	A decentralized computer program designed to perform specific tasks	Polygon, Chainlink
Media & Entertainment	Used to reward users for content, games, gambling or social media	Axie Infinity, Basic Attention Token
Payments	Digital, non-stable money for use in a distributed network	Bitcoin Cash, Litecoin, wallet apps
Smart Contract Platforms	Blockchain protocol designed to host variety of self-developed and 3rd party applications	Ethereum, Cardano, Solana
Stablecoins	Designed to minimize volatility by pegging to a more stable asset	Tether, USDC
Store of value	Designed to hold or increase purchasing power over time	Bitcoin

Investable Solutions for Digital Asset Exposure

To some investors, purchasing digital assets (DAs) directly may seem to be the most obvious way to participate in the performance of the asset class, but due to a range of complexities and costs, the direct purchase approach may not be the most optimal solution for many investors. Below, we list various investable solutions that can be taken into consideration by investors.

Investment Vehicle	Description
Direct Investment	DAs can be purchased on an exchange or marketplace where DAs are traded, either directly or through a broker. Investors need to make decisions around exchanges and safe custody. Investors also need to manage AML/KYC fees, software upgrades, hacking risks, and privacy issues. Full-service payment platforms offer additional services to manage the above at a fee, but may have restrictions around platform transferability. By owning DAs, investors will gain access to the asset's price performance and can use it as a currency to make limited transactions.
Futures	Futures enable investors to gain exposure to DAs without having to hold the underlying asset by taking cash instead of physical delivery upon settlement of the futures contract. Like futures contracts for commodity or stock indexes, they allow investors to leverage and require margin accounts. Because DAs are risky, regulated exchanges generally require higher margin amounts compared to other assets. And because DAs are volatile, investors can face unexpected, forced liquidations when they are unable to fulfill the margin requirements. Long-term investors using DA futures must manage costly futures rolls as contracts expire or they can now invest in perpetual futures – contracts with no expiry or settlement - to keep the position. The DA futures price is based on the underlying spot prices as well as the cost of carry – creating opportunities for price deviation from the underlying DA price.
Equities	Publicly listed companies that generate a significant portion of their revenues from the DA ecosystem can provide correlated exposure to their performance. There are several alternatives, such as investing in companies that provide services, products or technology for digital exchanges, payment gateways, mining operations, infrastructure, commerce, software, equipment, and hardware for the DA ecosystem. Investors can buy a portfolio of these companies directly or find funds and ETFs that have exposure to related companies to provide an indirect exposure to their performance. Equities can provide investors relevant exposure to DAs to the extent these listed companies, in aggregate, are directly impacted by the performance and are highly correlated to the price movements for DAs.
Funds	Funds pool the investment costs and participation of owning DAs. They can be open ended (can issue/redeem an unlimited number of shares to investors) or closed-ended (capping the number of shares it sells at inception). Open-ended funds are bought and sold at their net asset value (NAV), which is defined as a fund's total assets minus its total liabilities and closed-ended funds can trade at a premium or discount to NAV depending on supply/demand interest. Investors pay a management fee to manage the operations of holding and trading DAs. Funds provide investors the performance of DAs less the management fees, trading costs and or platform fees where investors access fund shares. Investors own shares of the fund, not the underlying assets.
Exchange Traded Funds (ETFs)	ETFs combine the ease of stock trading with the benefits and cost efficiencies of pooled funds. As regulated funds, they provide all the options listed above under Funds, with the additional benefits of regulated securities trading, including the ability to short positions. Additionally, the capital gain tax triggered by fund trading can be minimized through the in-kind mechanisms of an ETF . While several companies have filed to issue U.S. bitcoin ETFs, there currently are no U.S. ETFs offering direct holdings of DAs, however, there are various regulated ETF bitcoin products in other jurisdictions outside of the U.S., such as those listed and regulated in Canada and Europe.
Alternative Investment Vehicles	Qualified sophisticated investors can make direct as well as indirect plays on the price of DAs through alternative investment vehicles such as hedge funds or venture capital funds. These often require minimum initial investments that are far higher than what mutual funds may require with higher fees and potential lock-in periods. They can also be subject to minimum accredited investor standards under different regulatory regimes.

Growth of Digital Assets & MarketVector Indexes™ Milestones



Source: MarketVector Indexes™. Data as end of June 2022.

Digital Asset Investment Risks

The primary or main risks related to digital assets include the following:

- **Liquidity risk:** illiquid and fragmented market structures; difficult to exit market or transfer value.
- **Volatility risk:** non-transparent valuation and pricing leading to high price volatility.
- **Counterparty risk:** risks arising from crypto-asset brokers, crypto trading platforms, wallet providers and other intermediaries; may be difficult to identify and/or locate counter-party or intermediary; it may also be difficult to determine relevant jurisdiction laws.
- **Investment risk:** the capital invested is not guaranteed, and the risks associated with the investment may not be clearly stated in the documentation published by the issuer.
- **Risk of insufficient information disclosure:** information may be missing, inaccurate, incomplete and unclear; documents may be highly technical and require sophisticate; unintentional coding error knowledge.
- **Project risk:** immaturity/extreme early stage of many applications; the project might not be realized, which would ultimately make the crypto-asset worthless
- **Technical and operational risks:** cyber-security risk and hacking of trading platforms and participants in the life cycle of a trade (usually social engineering); encryption vulnerability; developments in quantum computing (which would increase success of private key hacking; custody risk; loss of access code.
- **Ecosystem design flaws:** can miners and developers “run” the “core” software? (Linux is a good example for successful open execution); will payments continue to sustain processing and verification activities?
- **Risk of fraud:** lack of transparency and decentralized systems can mask underlying activity.
- **Governance shortfall:** lack of appropriate regulation or changing regulation; lack of appropriate investor protection.

Top Ten Digital Assets By Market Capitalization

	Name	Market Cap (in mln USD)	Price (in USD)	Symbol	Mon. Avg. Vol. (1 Mon) (in mlnUSD)
1	Bitcoin	407,151	21,341.30	BTC	75,558
2	Ethereum	148,595	1,224.86	ETH	49,265
3	Tether	66,841	1.00	USDT	170,307
4	USD Coin	55,872	1.00	USDC	3,987
5	Binance Coin	39,019	238.97	BNB	4,966
6	BUSD	17,373	1.00	BUSD	8,376
7	Cardano	17,156	0.51	ADA	4,023
8	Solana	13,894	40.53	SOL	6,395
9	Dogecoin	9,755	0.07	DOGE	2,196
10	HEX	8,019	0.05	HEX	7

Source: MarketVector Indexes™. Data as end of June 2022.

Designing an Investable Digital Asset Index

Seven Attributes of a 'Good Index'*



Challenges for Digital Assets

Digital Asset Products Have Unique Challenges Some of the distinct characteristics of digital assets make it harder to launch financial products. De facto corporate events such as

- Measuring liquidity and benchmarking price is difficult. MarketVector Indexes™ Solution: liquidity-weighted tape
- Complicated events like hard forks require a robust methodology. A fork is defined as an event that splits the existing blockchain protocol into two or more versions using a different set of rules and features. Exposure to a single digital asset necessitates exposure to subsequent forks and future evolutions. Blockchain “actions” require extensive research.

MarketVector Indexes™ Solution: index that includes forks

Understanding custody and safekeeping risks is critical. Counterparty risk of trading platforms (along with potential conflicts of interest, front running, lack of transparency) can be opaque. High human/key person risk, dependency on trusting individuals at custody providers.

MarketVector Indexes™ Solution: using exchange traded instruments and best practices around custody

*Schoenfeld, Steven A. "Perfection Impossible - Best Practices for Index Construction", Chapter 6, [Active Index Investing](#) (Wiley Finance, 2004)

Price: Developing a Fair and Liquidity-Driven Global Price

MarketVector Indexes™'s methodology

- Prices compiled from multiple global **digital asset trading platforms**
- Trading platform weights established based on liquidity
 - Prices are checked real-time on multiple trading platforms, covering >90% of global trading volume (ex OTC)
 - Availability every second, over 80,000 times a day
 - More liquid trading platform receives a higher weight
 - Exchanges are weighted by **24 hour volume**
 - Intraday liquidity is taken into account **by liquidity penalty factor**

At any time t the Index price for a currency pair is the weighted average of prices on all exchanges.

$$P_t^* = \sum_i P_t^i W_t^i \quad (1)$$

A weight belonging to an exchange is the ratio of the 24 hour trading volume of a currency pair to the total volume of the pair on all exchanges.

$$W_t^i = \frac{V_t^i 1_{\{x=0\}} \gamma_t^i}{\sum_k V_t^k 1_{\{x=0\}} \gamma_t^k} \quad (2)$$

The 24 hour volume of an exchange at a certain time is defined as the sum of trading volume of the last 24 full hours.

$$V_t^i = \sum_{s=h_t-86400}^{h_t} V_s^i \quad (3)$$

The exchange volume is adjusted with the liquidity penalty factor, that decreases with the increasing time since the last trade.

$$\gamma_t^j = \begin{cases} 1 & \text{if } \tau_t^i \leq 5 \\ 0.8 & \text{if } 5 < \tau_t^i \leq 10 \\ 0.6 & \text{if } 10 < \tau_t^i \leq 15 \\ 0.4 & \text{if } 15 < \tau_t^i \leq 20 \\ 0.2 & \text{if } 20 < \tau_t^i \leq 25 \\ 0.001 & \text{otherwise} \end{cases}$$

Important notice: The calculated prices may not be achieved by investors as the calculated price is based on prices from different trading platforms. As not all trading platforms may be used by the investor the actual price may differ and be much less than the calculated price referred to on this slide.

Setting Industry Standards

MarketVector Indexes™ universe:

- The index universe of the **MVIS® CryptoCompare index** family includes all crypto currencies (excl. security tokens and financial instruments) covered by CryptoCompare in their Crypto Coin Comparison Aggregated Index ('CCCAGG'). A detailed list of these crypto currencies is available on request.
- Additional platforms can be added/current platforms can be replaced by decision of the index owner.

MarketVector Indexes™ applies strict and demanding liquidity screening to digital assets:

- One month average daily trading volumes of at least USD1 million at review date
- Liquidity criteria applies to the blue chips (5, 10, 25 component indexes) - not for the 100 component index (broad benchmark used as a universe).

Partnership with CryptoCompare:

- In 2017, MarketVector Indexes™ in partnership with CryptoCompare - an established London-based digital assets data provider - launched a series of digital assets indexes designed to most accurately track the performance of the otherwise fragmented global digital assets markets.
- The MVIS® CryptoCompare indexes are the first to meet investment industry benchmarking standards by providing a public rulebook for fork treatments and other events, industry-wide data distribution, proper identifiers and further standard index governance requirements that are expected from a regulated, unaffiliated, major benchmark provider.
- CryptoCompare offers the most complete pricing and transaction data collected from digital asset exchanges. It provides data to a broad range of digital asset natives, wallets, apps, traders and researchers, as well as helps its community of over 330,000 users track their portfolio, stay up to date and discuss the latest news



Important notice: The calculated prices may not be achieved by investors as the calculated price is based on prices from different trading platforms. As not all trading platforms may be used by the investor the actual price may differ and be much less than the calculated price referred to on this slide.

Providing Diversification

- Most MVIS® CryptoCompare Digital Assets indexes use cap-factors to ensure diversification and avoid overweighting. Please refer to the individual index description in section 4 of the [Index Guide](#) for the capping scheme used.
- Index components and weightings are reviewed on a monthly basis.
- **Weighting schemes**
 - MVIS® CryptoCompare Digital Assets 5 Index: 35% maximum weight per constituent
 - MVIS® CryptoCompare Digital Assets 10 Index: 30% maximum weight per constituent
 - MVIS® CryptoCompare Digital Assets 25 Index: 20%
(capping factors are staggered from a maximum weight of 20% down to 4.5%)

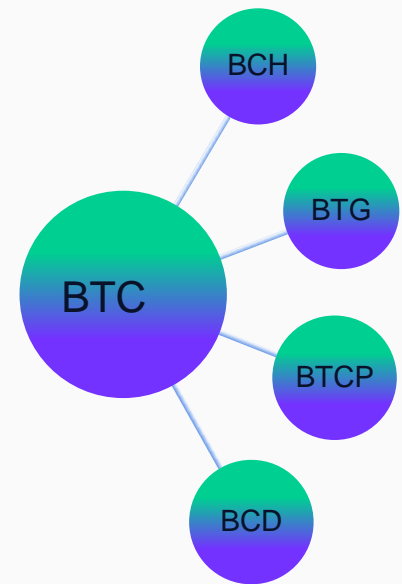
MVIS® CryptoCompare Digital Assets 10 Index

Digital Asset	Uncapped Weight	Weight
Bitcoin	61.53%	30%
Ethereum	22.45%	30%
Binance Coin	5.90%	15%
Cardano	2.59%	6%
Solana	2.10%	5%
Dogecoin	1.47%	4%
Polkadot	1.21%	3%
Shiba Inu	0.96%	2%
TRON	0.90%	2%
Avalanche	0.89%	2%

Source: MarketVector Indexes™. Data as end of June 2022..

Treatment of Hard Forks*

- **A forked digital asset of an index constituent can be eligible for the index if it fulfills some rigorous requirements that ensure quality:**
 - The fork should trade in at least one of the top tier exchanges.
 - It should ensure accountability: Open source code, public developers engaged in project, premine information as well as an announcement significantly prior to activation are among factors that ensure seriousness of the fork.
- **If eligible, a forked digital asset of an index constituent is added to the index as soon as the fork becomes effective. The price of the forked asset is determined as follows:**
 - If the main net is available and the fork trades on at least one trading platform (not by futures), the (composite) price is used.
 - Otherwise the price is 0.
- **As soon as a price is available, the first available close (5:00 pm GMT) is used.**
 - In the multi component indexes, the smallest coin by market capitalization will be deleted.
 - In the single component indexes, the forked coin will be deleted. Only in exceptional cases (e.g., no acceptance for the old chain), MarketVector Indexes™ may decide to keep the new chain and delete the old.
 - In all instances, the market capitalization of the deleted coin is reinvested in the index.
- **The new index composition is implemented after the second close after the first price is available.**



*A hard fork occurs when a blockchain protocol is radically changed, such that it becomes incompatible with older versions. In effect, participants taking part in transactions on the old blockchain must upgrade to the new one in order to continue validating transactions. However, participants that do not upgrade may continue to support and validate transactions on the older blockchain protocol separately. The result of this is that a blockchain splits into two - hence the name 'hard fork'. If there are nodes permanently supporting the new chain, then the two chains will co-exist. Users that once held digital assets on an older blockchain before the protocol change at a pre-specified blockchain length will now also hold an amount of new coins on the altered blockchain. This new asset has essentially been derived from an older token as well as its associated blockchain's transaction history

Treatment of Initial Coin Offerings (ICOs)

Definition

ICOs are a means to raise capital for a company's business or project.

In an ICO campaign, a percentage of the underlying digital asset (i.e., the initial coin) is sold to investors in exchange for U.S. Dollars or digital assets. Importantly, ICOs do not necessarily provide ownership in the company or the underlying venture or project

MarketVector Indexes™' Treatment of ICOs

ICOs and non-component digital assets are added to the indexes at the next review, provided they trade for at least ten days, and meet index selection and liquidity criteria set forth in the MVIS® Index rulebook



MarketVector™, MVIS® and BlueStar® Extended Index Family - calculated

Type	Underlying Index	AUM*	Type	Underlying Index	AUM*
	MVIS® CC Bitcoin Benchmark Rate	481	Custom ised	ATAC Risk-On/Risk-Off Domestic	10
	MVIS® CC Ethereum Benchmark Rate	235		ATAC Credit-On/Credit-Off	7
Digital Assets	MVIS® CC Bitcoin VWAP Close	104			
	MVIS® CC TRON VWAP Close	64			
	MVIS® CC Ethereum VWAP Close	43			
	MVIS® CC Solana VWAP Close	16			
	MVIS® CC Algorand VWAP Close	15			
	MVIS® CC Avalanche VWAP Close	5			
	MVIS® CC Polkadot VWAP Close	2			
	MVIS® CC Crypto Leaders VWAP Close	2			
	MVIS® CC Media & Entertainment Leaders	1			
	MVIS® CC FTX Token VWAP Close	0.6			
	MVIS® CC Smart Lead VWAP Close	0.6			
	MVIS® CC Chainlink VWAP Close	0.5			
	MVIS® CC Smart Contract Leaders Brazil	0.4			
	MVIS® CC Polygon VWAP Close	0.4			
	MVIS® CC Terra VWAP Close	0.1			



Source: MarketVector Indexes™. Data as end of June 2022. * in mln USD

*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.

MarketVector™, MVIS® and BlueStar® Extended Index Family - calculated

Type	Underlying Index	Type	Underlying Index
Digital Assets	MarketVector™ Centralized Exchanges	Digital Assets	MVIS® CryptoCompare Ethereum Benchmark Rate
	MarketVector™ Coinbase Bitcoin Benchmark Rate		MVIS® CryptoCompare Ethereum VWAP Close
	MarketVector™ Coinbase Ethereum Benchmark Rate		MVIS® CryptoCompare FTX Token VWAP Close
	MVIS® CryptoCompare Algorand VWAP Close		MVIS® CC Global Bitcoin Benchmark Rate (AUD)
	MVIS® CryptoCompare Avalanche VWAP Close		MVIS® CC Global Ethereum Benchmark Rate (AUD)
	MVIS® CryptoCompare Bitcoin		MVIS® CryptoCompare Infrastructure Application
	MVIS® CryptoCompare Bitcoin Benchmark Rate		MVIS® CC Infrastructure Application Leaders
	MVIS® CryptoCompare Bitcoin VWAP Close		MVIS® CryptoCompare Media & Entertainment
	MVIS® CryptoCompare Chainlink VWAP Close		MVIS® CryptoCompare Media & Entertainment Leaders
	MVIS® Cryptocompare Crypto Leaders VWAP Close		MVIS® CC Media & Entertainment Leaders Brazil
	MVIS® CryptoCompare Decentralized Finance		MVIS® CryptoCompare NEAR VWAP Close
	MVIS® CryptoCompare Decentralized Finance Leaders		MVIS® CryptoCompare Optimum Global Cryptoasset
	MVIS® CryptoCompare DeFi 20		MVIS® CryptoCompare Polkadot VWAP Close
	MVIS® CryptoCompare Digital Asset Select		MVIS® CryptoCompare Polygon VWAP Close
	MVIS® CryptoCompare Digital Assets 10		MVIS® CryptoCompare Smart Contract
	MVIS® CryptoCompare Digital Assets 100		MVIS® CryptoCompare Smart Contract Leaders
	MVIS® CryptoCompare Digital Assets 100 Large-Cap		MVIS® CryptoCompare Smart Contract Leaders Brazil
	MVIS® CryptoCompare Digital Assets 100 Mid-Cap		MVIS® CC Smart Contract Leaders VWAP Close
	MVIS® CryptoCompare Digital Assets 100 Small-Cap		MVIS® CryptoCompare Solana VWAP Close
	MVIS® CryptoCompare Digital Assets 25		MVIS® CryptoCompare Terra VWAP Close
MVIS® CryptoCompare Digital Assets 5	MVIS® CryptoCompare TRON VWAP Close		
MVIS® CryptoCompare Ethereum	MVIS® CryptoCompare XRP		
	Weiss MVIS Top Tech Adoption Rating		

Source: MarketVector Indexes™. Data as end of June 2022.

MarketVector™, MVIS® and BlueStar® Extended Index Family - calculated

Type	Underlying Index
Customised	21Shares Bitcoin Suisse Crypto
	21Shares Crypto Basket
	ATAC Credit-On/Credit-Off
	ATAC Risk-On/Risk-Off Domestic
	FTX 20X Leveraged Bitcoin
	FTX 5X Leveraged Bitcoin
	Menai-MVIS Diversified Digital Asset
	MVIS-Wavebridge Bitcoin Plus Altcoins Momentum
	NRI IU Crypto-Asset (JPY)
	NRI IU Crypto-Asset (USD)
	One River Digital Core
	One River Digital Size Tilt
	SEBA Crypto Asset Select
	SEBA VALOUR Metaverse
	Universal Standard Diamonds Evaluation 100

Source: MarketVector Indexes™. Data as end of June 2022.

Digital Asset Index Returns (USD, ending 30 June 2022)

Main	Universe	Index Ticker	Index Name	Meta Theme	Launch Date	Base Date	Quarterly Returns (USD)				
							Q2-2022	Q1-2022	Q4-2021	Q3-2021	Q2-2021
MVBTC	Single Token	MVBTC	MVIS CryptoCompare Bitcoin	Bitcoin	10/23/17	01/31/12	-58.2%	-3.7%	10.5%	25.8%	-42.1%
MVETH	Single Token	MVETH	MVIS Global Junior Gold Miners	Ethereum	10/23/17	08/31/15	-68.4%	-12.7%	25.6%	41.5%	14.2%
MVDA10	Multi Token	MVDA10	MVIS CryptoCompare Digital Assets 10	Large-Cap	10/23/17	12/31/14	-64.3%	-11.2%	12.4%	37.2%	-14.8%
MVDAMC	Multi Token	MVDAMC	MVIS CryptoCompare Digital Assets 100 Mid-Cap	Mid-Cap	10/23/17	12/31/14	-64.5%	-15.3%	14.9%	41.8%	-19.4%
MVDASC	Multi Token	MVDASC	MVIS CryptoCompare Digital Assets 100 Small-Cap	Small-Cap	10/23/17	12/31/14	-67.8%	-20.0%	12.9%	45.3%	-29.3%
MVCEX	Multi Token	MVCEX	MarketVector Centralized Exchanges Index	Exchanges	06/01/22	02/28/21	-53.3%	-15.8%	43.2%	35.1%	-14.9%
MVDF	Multi Token	MVDF	MVIS CryptoCompare Decentralized Finance	Decentralized Finance	10/08/21	01/31/21	-69.4%	-22.4%	-9.0%	23.3%	-40.0%
MVDFLE	Multi Token	MVDFLE	MVIS CryptoCompare Decentralized Finance Leaders	Decentralized Finance	10/08/21	01/31/21	-65.0%	-34.3%	-9.1%	18.4%	-38.9%
MVIAP	Multi Token	MVIAP	MVIS CryptoCompare Infrastructure Application	Infrastructure Applications	10/08/21	12/31/20	-70.1%	-27.1%	14.4%	29.8%	-44.6%
MVIALE	Multi Token	MVIALE	MVIS CryptoCompare Infrastructure Application Leaders	Infrastructure Applications	10/08/21	12/31/20	-71.8%	-27.8%	12.8%	12.2%	-25.2%
MVME	Multi Token	MVME	MVIS CryptoCompare Media & Entertainment	Media & Entertainment	10/08/21	03/31/21	-76.5%	-33.7%	40.1%	4.8%	-48.4%
MVMELE	Multi Token	MVMELE	MVIS CryptoCompare Media & Entertainment Leaders	Media & Entertainment	10/08/21	03/31/21	-77.3%	-30.8%	83.8%	41.6%	-53.8%
MVSC	Multi Token	MVSC	MVIS CryptoCompare Smart Contract	Smart Contract Platforms	10/08/21	12/31/17	-70.9%	-12.9%	14.3%	57.0%	-3.7%
MVSCLE	Multi Token	MVSCLE	MVIS CryptoCompare Smart Contract Leaders	Smart Contract Platforms	10/08/21	12/31/17	-72.4%	-12.9%	5.6%	85.5%	-14.4%

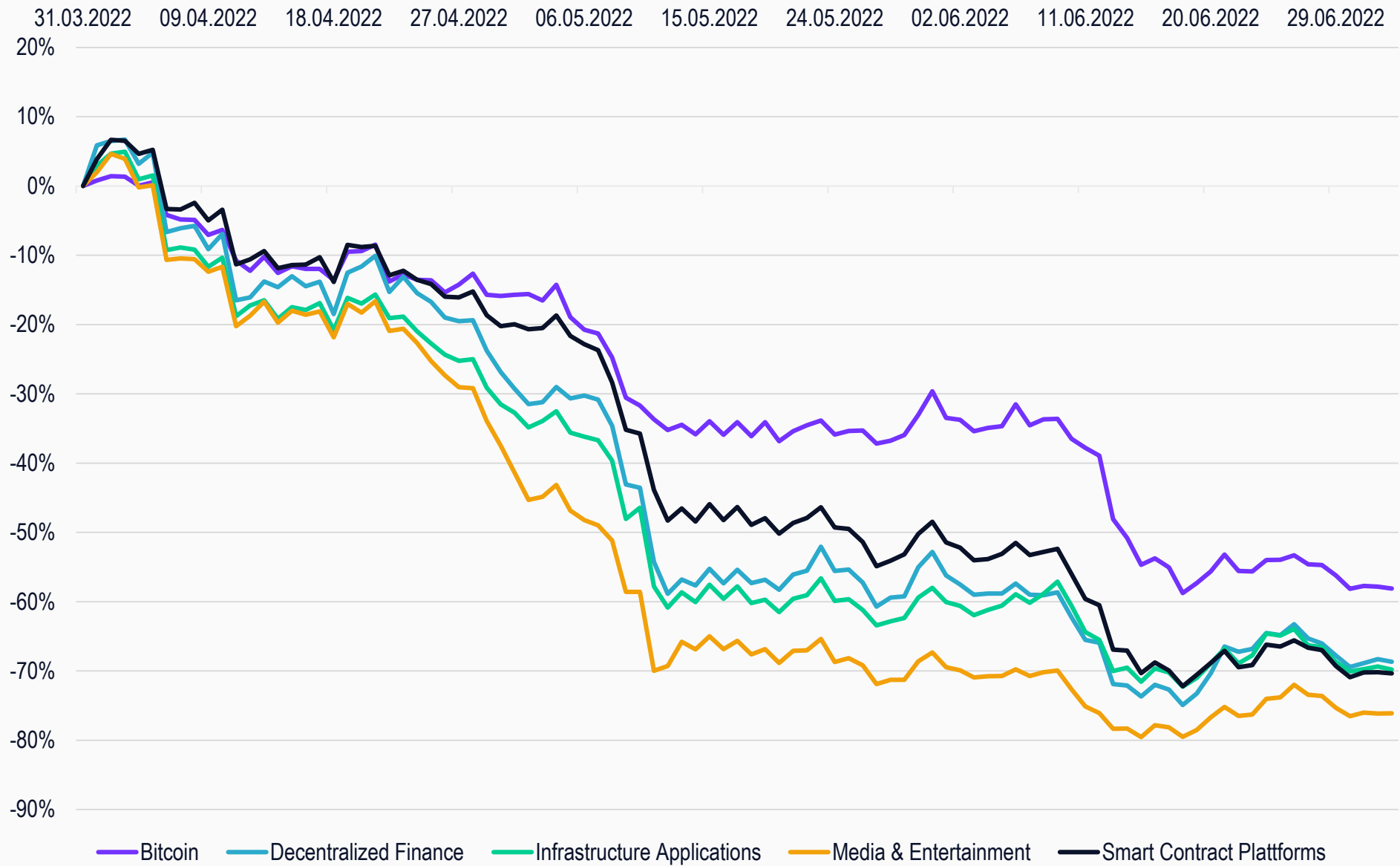
Source: MarketVector Indexes™, Drawdown is the max monthly drawdown

Digital Asset Returns (USD, ending 30 June 2022)

Q3-2019	Q4-2019	Q1-2020	Q2-2020	Q3-2020	Q4-2020	Q1-2021	Q2-2021	Q3-2021	Q4-2021	Q1-2022	Q2-2022
Bitcoin -30.3%	Mid-Cap 3.4%	Mid-Cap 3.0%	Ethereum 70.8%	Ethereum 58.4%	Bitcoin 163.2%	Small-Cap 361.2%	Ethereum 14.2%	Smart Contract Platforms 71.2%	Media & Entertainment 62.0%	Bitcoin -3.7%	Exchanges -53.3%
Large-Cap -39.8%	Bitcoin -13.1%	Ethereum 1.7%	Small-Cap 62.2%	Smart Contract Platforms 36.2%	Ethereum 103.1%	Mid-Cap 300.1%	Smart Contract Platforms -9.0%	Small-Cap 45.3%	Exchanges 43.2%	Large-Cap -11.2%	Bitcoin -58.2%
Ethereum -41.3%	Small-Cap -19.2%	Large-Cap -3.2%	Smart Contract Platforms 56.6%	Large-Cap 34.5%	Large-Cap 93.1%	Smart Contract Platforms 256.6%	Large-Cap -14.8%	Mid-Cap 41.8%	Ethereum 25.6%	Ethereum -12.7%	Large-Cap -64.3%
Smart Contract Platforms -47.4%	Large-Cap -19.9%	Smart Contract Platforms -3.6%	Bitcoin 42.5%	Mid-Cap 26.5%	Smart Contract Platforms 73.0%	Large-Cap 174.2%	Exchanges -14.9%	Ethereum 41.5%	Mid-Cap 14.9%	Smart Contract Platforms -12.9%	Mid-Cap -64.5%
Mid-Cap -48.8%	Smart Contract Platforms -21.6%	Bitcoin -10.8%	Large-Cap 34.8%	Bitcoin 17.6%	Mid-Cap 40.9%	Ethereum 153.8%	Mid-Cap -19.4%	Large-Cap 37.2%	Infrastructure Applications 13.6%	Mid-Cap -15.3%	Decentralized Finance -67.2%
Small-Cap -54.3%	Ethereum -27.6%	Small-Cap -14.5%	Mid-Cap 32.0%	Small-Cap -7.8%	Small-Cap 37.2%	Bitcoin 107.9%	Small-Cap -29.3%	Exchanges 35.1%	Small-Cap 12.9%	Exchanges -15.8%	Small-Cap -67.8%
							Infrastructure Applications -34.9%	Bitcoin 25.8%	Large-Cap 12.4%	Small-Cap -20.0%	Ethereum -68.4%
							Bitcoin -42.1%	Media & Entertainment 23.2%	Bitcoin 10.5%	Infrastructure Applications -27.4%	Infrastructure Applications -71.0%
								Infrastructure Applications 21.0%	Smart Contract Platforms 9.9%	Decentralized Finance -28.4%	Smart Contract Platforms -71.7%
								Decentralized Finance 20.8%	Decentralized Finance -9.0%	Media & Entertainment -32.3%	Media & Entertainment -76.9%

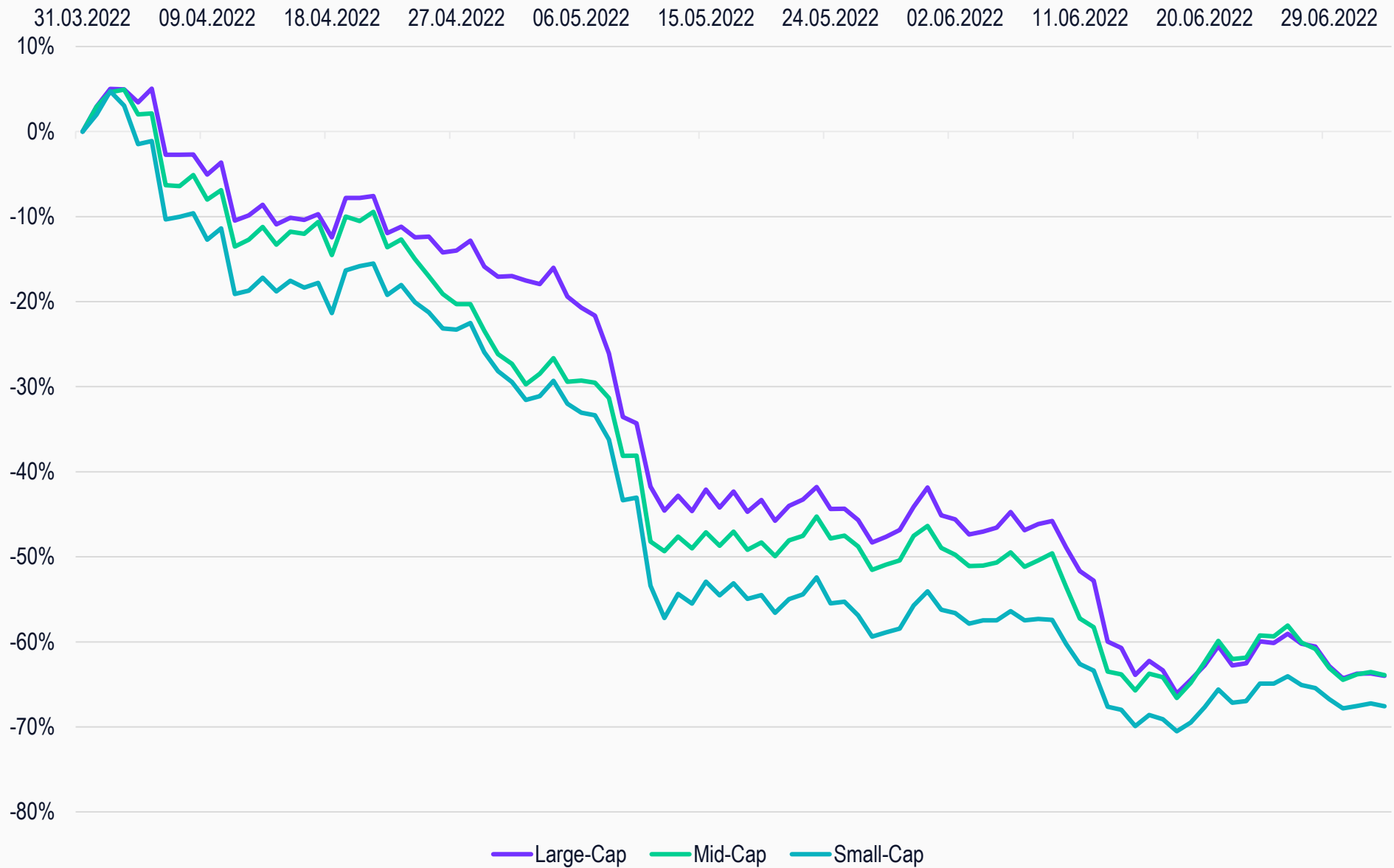
Source: MarketVector Indexes™. Indexes used MVDA10, MVBTC, MVDAMC, MVDASC, MVCEX, MVETH, MVDF, MVIAP, MVME, MVSC

Sector Index Performance Q2/2022



Source: MarketVector Indexes™, Indexes used: MVBTC, MVDF, MVIAP, MVME, MVSC

Performance according to size Q2/2022



Source: MarketVector Indexes™, Indexes used MVDA10, MVDAMC, MVDASC

Leadership Team

marketvector.com/register



Steven Schoenfeld
CEO

Steven Schoenfeld joined MarketVector Indexes™ 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
COO

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 CIAA graduate.



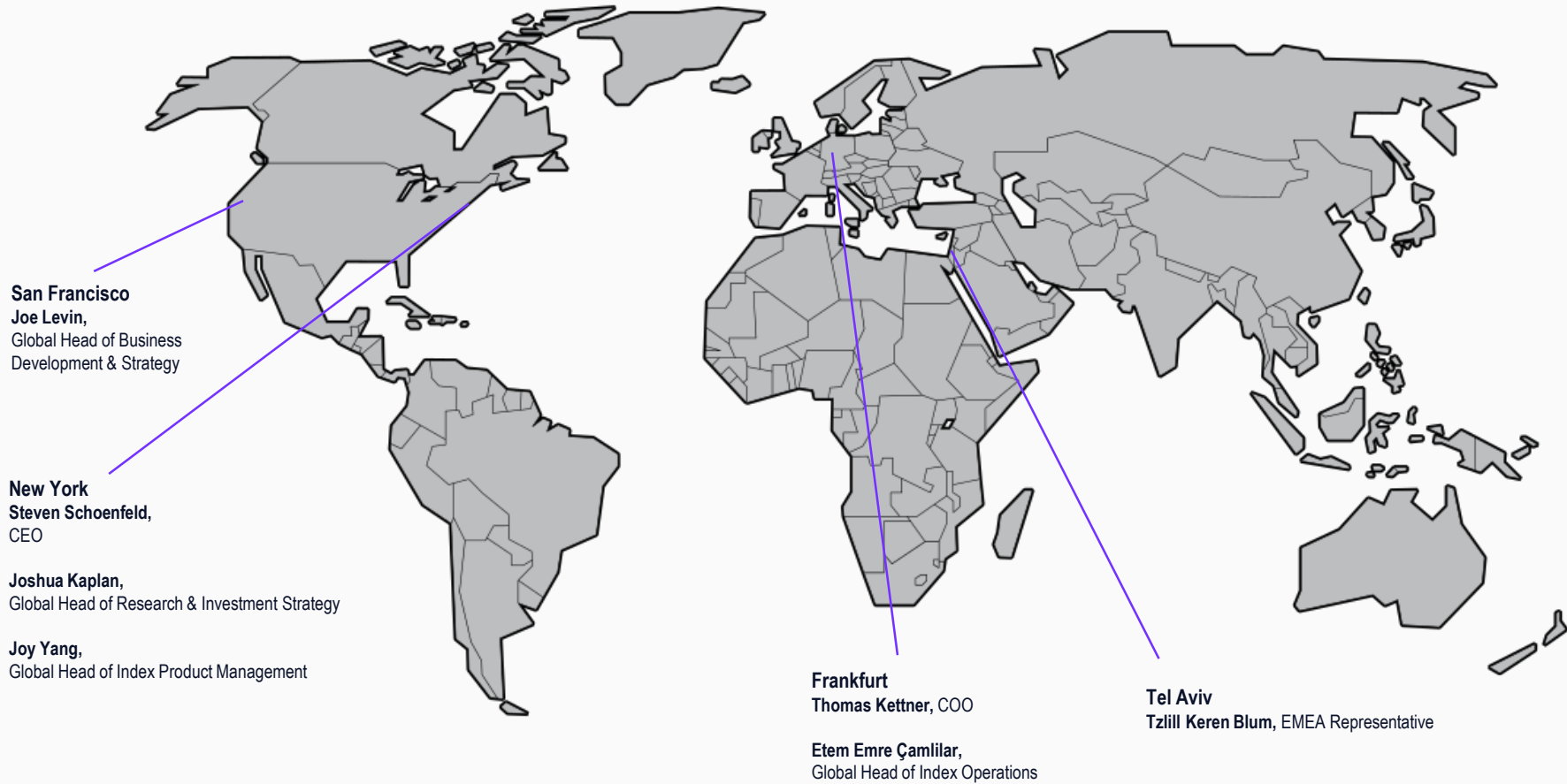
Torsten Hunke
Managing Director

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™, 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 Depository 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).

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Important Disclosure

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