

# .Altify

## Crypto Bundle Methodology

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The purpose of this document is to inform you on how our Crypto Bundles function.

We welcome all feedback and suggestions to improve our services. We will conduct regular reviews and provide feedback from engagement with external stakeholders to keep our Crypto Bundle methodology updated, complete and representative. For additional information, please email [support@altify.app](mailto:support@altify.app).

Before continuing, please read our [Crypto Risk Disclosures](#) as well as our [Disclaimers](#) so as to better understand the risks of investing with us.

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## 1. Disclaimers

Altify and its affiliates (Collectively “Altify” or “We”) offer its Bundle Technology as a means for investors to gain direct, manageable, and secure exposure to the cryptocurrency market. Our Cryptocurrency Bundles (“Bundles”, or “Crypto Bundles”) are not are not financial securities and should not be misconstrued as mutual funds, ETNs, ETPs, collective investment schemes or any similar fund structure.

A Crypto Bundle is a proprietary investment execution and investment management technology that enables Altify customers to directly trade and securely store a predefined set of cryptocurrencies with predetermined operational rules.

There can be no assurance that Altify’s Crypto Bundle Technology will accurately track its intended assets or otherwise achieve its investment objectives. Specifically, transactional buy and sell as well as monthly rebalancing fees are expected to cause tracking error between Altify’s Crypto Bundles and the underlying assets.

Cryptocurrency prices are volatile and it is possible to incur significant losses of invested capital. You should not invest more than you are prepared to lose. The value of cryptocurrencies may go down as well as up, and returns are not guaranteed. An investment using an Altify Crypto Bundle should be considered high risk and long-term in nature. To the maximum extent allowed by law, Altify, its licensors, and their respective employees, contractors, agents, suppliers and vendors shall have no liability or responsibility whatsoever for any damages or loss - whether direct or indirect, consequential, incidental, punitive or otherwise - arising in connection with Crypto Bundles or any data or values relating thereto - whether arising from their negligence or otherwise. Without limiting any of the foregoing, in no event shall Altify have any liability for any lost profits or indirect, punitive, special or consequential damages or losses, even if notified of the possibility thereof.

The information, data, analyses, and opinions contained herein:

1. Include the proprietary information of Altify,
2. May not be copied or redistributed without written consent from a Altify senior staff member,

3. Should not constitute investment advice,
4. Are provided solely for informational purposes and therefore are not an offer to buy or sell any asset,
5. Are not warranted to be correct, complete, or accurate, and
6. Shall not constitute or be construed as an offering of financial instruments.

All information provided by Altify is impersonal and not tailored to the needs of any person, entity or group of persons. Altify does not express an opinion on the future or expected value of any cryptocurrency or fiat currency and does not explicitly or implicitly recommend or suggest an investment strategy of any kind. Before deciding to invest, prospective investors should read all definitive information relating to a Crypto Bundle and pay particular attention to the risk factors related to the investment. Altify shall not be responsible for any trading decisions, damages, or other losses resulting from, or related to, this information, data, analyses, or opinions or their use. This document and all website related content does not constitute an offer to subscribe for securities and is neither an offer to sell nor a solicitation to buy units or shares in any fund.

It is the responsibility of any persons wishing to acquire cryptocurrencies using Altify's Platform to observe all applicable legal requirements and tax consequences within the countries of their citizenship, residence, domicile, and place of business with respect to the acquisition, holding or disposal of the cryptocurrency, and any foreign exchange restrictions that may be relevant thereto. You should consult with your own attorney, accountant and other advisors about those matters including determining whether you may legally purchase cryptocurrencies using Altify's Crypto Bundle technology. Nothing in this document is intended to create a contract for investment into Altify or any Crypto Bundle, and each investor acknowledges that Altify will rely on this assertion of Crypto Bundle holders' statements with respect to compliance with the laws of the jurisdiction in which the investor is legally domicile.

## 2. Introduction

### 2.1. About

Founded in April of 2018, Altify offers an easy to use, reliable and secure investment platform that caters to professional and non-professional investors alike. We offer individual cryptocurrencies which can be bundled together to create a one-click diversified crypto portfolio.

#### **What Are Crypto Bundles?**

Crypto Bundles are baskets of individual cryptocurrencies which enable you to easily own and manage a diversified crypto portfolio. Our Crypto Bundles are ready-made crypto investment baskets that provide you with direct exposure to the underlying cryptocurrencies within each Crypto Bundle. This approach provides Crypto Bundle holders with a means to obtain effortless low-cost diversified exposure to the crypto market. Take a look at [Bundling Approach](#) below to learn more about our Crypto Bundles.

Our Crypto Bundles attract a diverse investor base with a longer-term investment horizon and a high tolerance for risk.

Some benefits of a bundling approach include:

- There's a lower crypto-specific risk when investing due to diversification. Many professional investors prefer a diversified approach, so you're 'not putting all your eggs in one basket'.
- Your crypto holdings are kept up to date with the dynamic crypto market through the rules-based framework that our Crypto Bundles follow which include automated monthly reconstitution and rebalancing of all Crypto Bundles, and
- We provide immediate access to multiple secure, liquid and reputable crypto exchanges to offer superior trade execution pricing for both buy and sell transactions.

We believe that all investors deserve a simply-delivered yet sophisticated level of service and security when investing in the emerging world of crypto.

Please note that our Crypto Bundles and their associated returns are developed, calculated and administered by our internal team at Altify.

## **2.2. Our Principles**

We aim to provide you with a passive and rules-based way to invest in cryptocurrencies. The crypto market is nascent and presents many opportunities and challenges to well-established protocols found when investing in traditional assets such as stocks and bonds. Our Crypto Bundles aim to combine the best of traditional asset investing methodologies with appropriate adjustments to adapt those practices to the crypto space.

The principles of our Crypto Bundles include:

### **1. Maintain a Systematic and Transparent Approach**

The pricing and corresponding performance of our Crypto Bundles follows a structured, transparent and predefined rules-based approach. There is no active management when deciding which cryptocurrencies to include or exclude from a Crypto Bundle on a month-to-month basis.

### **2. Maintain Investability**

Our Crypto Bundles are designed in all aspects to be investable through the direct acquisition of the underlying cryptocurrencies which make up the Crypto Bundle. Our Crypto Bundles will take into account factors impacting liquidity, exchange trading pairs, spreads, exchange stability, custody limitations, custody charges and other notable factors.

### **3. Minimise Crypto Bundle Turnover**

Due to the crypto market's volatility, a Crypto Bundle could potentially be rebalanced at the end of every moment in order to maintain the Crypto Bundle's targeted holding weights. This would result in significant Crypto Bundle turnover where the total value of transactions including and/or excluding cryptocurrencies from a Crypto Bundle would become costly. To avoid this, maintaining a reasonable level of Crypto Bundle turnover is an important guiding principle.

### **4. Maintain Fully Backed Collateral**

At any given time, our Crypto Bundles are 100% collateralised by the underlying cryptocurrencies that constitute them.

### **3. Bundling Approach**

#### **3.1. Defining a Crypto Bundle**

Our Crypto Bundles are developed to provide our customers with a clear, pre-defined, rules-based and transparent way to own a diversified basket of cryptocurrencies.

When you buy any of our Crypto Bundles, you provide us with an instruction to directly purchase the underlying cryptocurrencies within that Crypto Bundle and then to automatically update your Crypto Bundle every month through a rebalancing process.

Our Bundling approach is the cryptocurrency version of direct indexing.

#### **Direct Indexing**

As is the case with any industry, investing has evolved thanks to technological improvements. Direct indexing is the next evolution in the investing landscape.

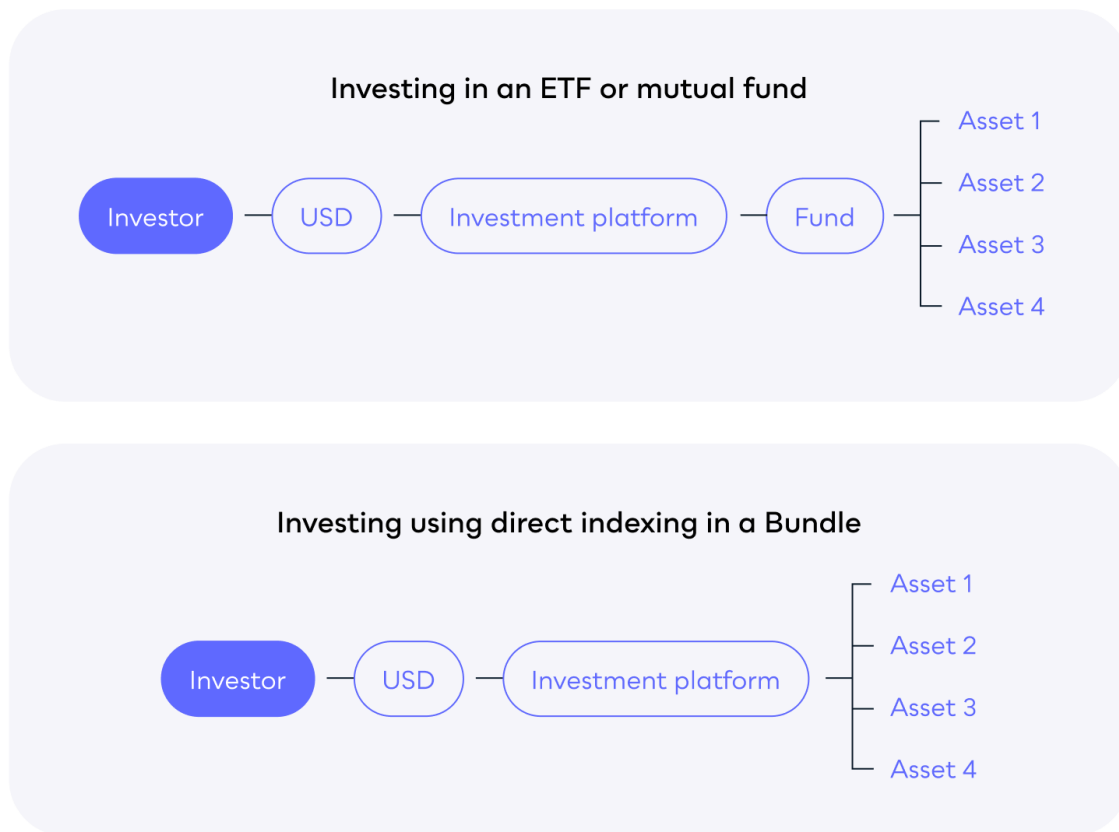
Direct indexing is a technology, not a financial instrument, which enables investors to instantly purchase, manage and sell several individual assets within a broader portfolio.

Traditionally, direct indexing was a method for replicating the performance of a broader portfolio, or index, by purchasing the underlying assets rather than buying an exchange-traded fund (ETF), mutual fund or structured financial product.

At Altify, direct indexing is used to create a Crypto Bundle that enables you, as a customer, to directly buy, sell and own the underlying assets within the Crypto Bundle rather than buying a unit of a fund that then buys, sells and holds the underlying assets.



## A comparison of direct indexing vs fund investing



### 3.2. Weighting Methodologies (Please See Annexure A for More Information)

#### 1. Equally Weighted (Annexure A.1)

The Altify Equally weighted Crypto Bundles aim to capture an equal importance of each of the top cryptocurrency in the ecosystem and specific sectors, as measured by the free-float market capitalisation. The Equally weighted Crypto Bundle tries to avoid the risks of over-investing in a particular cryptocurrency and allows the customer equal exposure.

#### 2. Market Capitalisation Weighted (Annexure A.2)

The Altify Market Capitalisation weighted Crypto Bundles aim to capture the importance of each cryptocurrency in the ecosystem, as measured by the aggregate value investors

assign to that cryptocurrency. To do so, Altify must calculate the market capitalisation of each cryptocurrency and weigh them accordingly. Altify does this by multiplying the cryptocurrencies current price with the free-float capitalisation of a given cryptocurrency as given by CoinMarketCap.

### **3. Sortino Optimisation Weighted (Annexure A.3)**

The Altify Sortino optimised Crypto Bundles aim to capture the importance of protection and minimise negative returns. To do so, Altify must optimise a bundle of cryptocurrencies to achieve the highest Sortino ratio over the analysed data set. Altify does this by running an internal Sortino optimization as set out by Markowitz (1959) and Estrada (2007).

## **3.3. Rebalancing and Reconstitution**

### **What Happens?**

On the 1<sup>st</sup> of every month, we reconstitute and rebalance all of our customers' Crypto Bundles to ensure that:

1. You hold the largest cryptocurrencies as measured by market capitalised within your Crypto Bundle, and
2. The cryptocurrencies within your Crypto Bundle are adhering to the rules of the specific Crypto Bundle.

The monthly reconstitution and rebalancing is considered a re-weighting and is performed by our direct indexing algorithms. It is a fully automated process and ensures that your portfolio stays up to date with the fast-paced crypto market.

A rebalance starts on the 1st of each month at 05:00 AM SAST and is completed at 11:00 AM SAST. During this period, your Crypto Bundle's constituents are bought and sold so Crypto Bundle holders may be limited from making any trades over this period depending on the size of the rebalance.

Our reconstitution and rebalancing steps occur simultaneously on a month-to-month basis.

## **What Fees are Charged?**

You can see a complete list of our fees [here](#).

Specifically for our Crypto Bundles, we charge a 0.17% rebalancing fee on a monthly basis which is levied on your Crypto Bundle holdings at 05:00 AM SAST on the 1st of every month.

This fee is paid in Crypto Bundle units and remains constant from month to month and equates to a 2.04% annualised fee.

This fee is only levied on your Crypto Bundle holdings and is not charged on individual cryptocurrencies that you may hold like Bitcoin or Ethereum.

## **What Does It Mean to Reconstitute and Rebalance a Crypto Bundle?**

### **Reconstitution**

Our algorithms analyse the crypto market and compare the relative size of individual cryptocurrencies as measured by market capitalisation. If a cryptocurrency that was not included in a Crypto Bundle during the prior month has grown in value so that it has become more valuable than a cryptocurrency that was held within our Crypto Bundle, and is eligible to join a specific Crypto Bundle, then the cryptocurrency would be included in the Crypto Bundle and the cryptocurrency which has declined in relative value would be removed.

### ***Example***

*If we look at the Top 10 Crypto Bundle, at month-end we could see that Stellar (XLM) has declined in relative value and fallen out of the top 10 largest cryptocurrencies. While Tezos (XTZ) has increased in relative value and overtaken Stellar in market capitalisation. In this instance, our algorithms would automatically sell out of Stellar's XLM tokens in the Crypto Bundle and replace them by purchasing Tezos' XTZ tokens.*

### **Rebalancing**

Our algorithms evaluate the weights of cryptocurrencies within your Crypto Bundle at 05:00 AM on the first of every month. After taking into account what should occur in the reconstitution step, our algorithms calculate how much of each cryptocurrency within the Crypto Bundle should be purchased or sold so that the Crypto Bundle can be weighted

according to the Crypto Bundle's specific weighting structure. This is usually a market weighting or an equal weighting approach.

### **Example**

*If we considered the Top 10 Crypto Bundle again then if Bitcoin returned 10% over the prior month but the prices of the 9 other cryptocurrencies within the Top 10 Crypto Bundle remained unchanged then a portion of Bitcoin's gain would be sold and used to equally purchase the remaining 9 cryptocurrencies. This would result in each cryptocurrency having a weight of exactly 10% within the Top 10 Crypto Bundle at 05:00 AM on the 1st of the month.*

## **3.4. Market Pricing and Capitalisation Methodology**

In calculating Crypto Bundle prices, we incorporate pricing data from [CoinMarketCap](#) which aggregates prices and volumes from over 200 reputable exchanges.

### **Assessing the Price for a Cryptocurrency Pair**

The price for each individual crypto market pair is calculated by taking the price reported from the exchange and converting it to USD using CoinMarketCap's existing reference prices.

Taking the PAXG/BTC pair as an example:

Let (E) be the price of PAXG/BTC reported directly from the exchange.

Let (C) be the last known reference price of BTC from CoinMarketCap in USD.

Let (D) be the derived price reported on CoinMarketCap for the market pair.

For this example, let (E) = 0.1 BTC / 1 PAXG and let (C) = 10,000 USD / 1 BTC.

$$D = E * C$$

$$D = (0.1 \text{ BTC} / 1 \text{ PAXG}) * (10,000 \text{ USD} / 1 \text{ BTC}) = 1,000 \text{ USD} / 1 \text{ PAXG}$$

Therefore, the derived price for PAXG/BTC on this specific market pair is \$1,000.

Note: Any conversion into other fiat currencies (for example, GBP) are converted from the USD price based on current foreign exchange rates provided by [openexchangerates.org](#).

A nominal spread may be added to all currency pairs in order to reflect the true exchange rate or the price at which an asset can actually be traded.

### **Assessing the Price for a Single Cryptocurrency**

The price of any cryptocurrency is a volume-weighted average of market pair prices for the cryptocurrency from different exchanges as determined by [CoinMarketCap](#).

The higher percentage of volume contributed from the pair, the more influence it has on the average price.

The rationale for using a weighted average is because in general, markets with higher volume have higher liquidity and are less prone to price fluctuations. Some prices are manually excluded from the average if the price does not seem indicative of a free market price, for example, when an exchange disables withdrawals or deposits, or regulatory conditions make it impossible for anyone else outside of a certain geographical region to buy coins. Some prices are also automatically excluded when our algorithms detect that the reported price is a significant outlier when compared to other market pairs for the same cryptocurrency.

## 4. Governance, Protection and Security

### 4.1. The Altify Investment Committee

The Altify Investment Committee consists of:

- [Sean Andrew Sanders](#) CFA,
- [Gregory Rodrigues](#) CA SA,
- [Brett Hope Robertson](#)

In extraordinary circumstances, the Altify Investment Committee has full discretion to override the algorithmic rules in order to protect customer assets.

More generally, the Altify Investment Committee is responsible for:

- Reviewing the accuracy and availability of data sources, both existing and proposed, for uptime, accuracy, and robustness.
- Reviewing calculations of the Crypto Bundle prices for anomalies.
- Determining whether, in exceptional circumstances, a Crypto Bundle's price will be calculated from different data sources.
- Determining whether, in exceptional circumstances, it is necessary to recalculate the Crypto Bundle's price for a particular period. For example, if one or more data sources are discovered to be inaccurate.
- Determining whether, in exceptional circumstances, a change to the Crypto Bundle methodology or Crypto Bundle constituents is required.
- Publishing the outcome of any such extraordinary events or adjustments noted above on the Altify website and emailing all respective Crypto Bundle owners.
- Handling other matters on an ad-hoc basis.

### 4.2. Rules-based Approach

#### 4.2.1. Crypto Bundle Orders

- Crypto Bundles can be purchased using one of our supported fiat currencies or supported cryptocurrencies.
- All Crypto Bundle buy and sell orders are executed as market orders and the prices of the underlying holdings are subject to market price volatility.

## **How a Crypto Bundle Buy Order Works**

If a Crypto Bundle buy order is confirmed, new Crypto Bundle units are created and allocated to your Altify account. This is done by purchasing the constituent cryptocurrencies in the exact quantity as detailed by the Crypto Bundle composition on your behalf.

When we make a purchase, we first calculate the value of your transaction fee as a percentage of the total transaction value.

The transaction fee is then deducted from the total transaction amount in either a cryptocurrency or fiat currency. The transaction fee is always paid in the asset that is used in the transaction

*As an example, if Bitcoin is purchased using GBP, then the transaction fee will be paid in GBP as this was the asset used in the transaction. Conversely, if Bitcoin was sold to GBP, then the transaction fee would be levied in Bitcoin as this was the asset used in the transaction.*

The net value of the transaction, which is the total transaction value less the transaction fee, is then used.

In some cases, the quoted price of a transaction on an exchange is not attainable when the order is executed due to the inherent volatility in the cryptocurrency markets. This is known as [slippage](#), and results in varying amounts of individual cryptocurrencies being purchased. This is unpredictable and can result in some unexpected gains and/or losses during the purchase or sale of a single cryptocurrency or crypto Crypto Bundle. We endeavour to ensure that slippage related losses are mitigated. These pricing variations can result in a trade price that is marginally different to the quoted price.

## **How a Crypto Bundle Sell Order Works**

If a sale order is initiated, then a redemption process is started. Crypto Bundled cryptocurrencies are then immediately sold by first calculating the value of your [transaction fee](#) as a percentage of the total transaction value.

As with the buy order, the transaction fee is deducted from the total transaction amount.

Each of the underlying cryptos within the Crypto Bundle is then traded as a market order using our Smart Pricing Engine through our network of crypto exchanges for either another cryptocurrency or a fiat currency like GBP.

#### **4.2.2. Crypto Bundle Rebalancing and Reconstitution**

Any value held in a Crypto Bundle over a rebalancing period will have a rebalancing fee levied and deducted from the total value.

The process to complete a rebalance is as follows:

1. The value of a single unit of a Crypto Bundle is calculated in USD using price data from [CoinMarketCap](#).
2. Our rebalancing fee is then levied on the total Crypto Bundle value being rebalanced.
3. To calculate the new Crypto Bundle Composition, a list of the relevant cryptocurrencies and their associated values and prices are retrieved from [CoinMarketCap](#).
4. The post-rebalance Crypto Bundle Composition is calculated by using the new asset closing values, the new list of the largest cryptocurrencies by market capitalisation and the USD Crypto Bundle unit price calculated above in step 1.
5. The differences between the old and new composition of the Crypto Bundle is then calculated.
6. Once calculated, our system automatically initiates transactions to bring the underlying asset holdings in line with the new Crypto Bundle Composition.
7. Our Smart Pricing Engine connects to a network of exchanges to acquire the required assets to be included in the new Crypto Bundle Composition.
8. This execution is done at the best possible prices available at the time the trade order was placed.
9. Your Crypto Bundle is then regarded as having been rebalanced and reconstituted.

*See Annexure A for a detailed description of the rebalancing methodology applicable to each weighting methodology.*



## **5. Eligibility Requirements**

### **5.1. Cryptocurrency Exchange and Broker Eligibility Requirements**

Cryptocurrency exchanges and brokers that we use are required to have:

1. Significant trading volume for at least two or more cryptocurrencies.
2. No capital controls in place for international investors in the country where the platform is domiciled.
3. Compliant policies and procedures with local laws and is not subject to any severe legal action.
4. Appropriate Know-Your-Client (KYC) and Anti-Money-Laundering (AML) policies and procedures in place and the processes are properly documented.

### **5.2. Cryptocurrency Eligibility Requirements**

Cryptocurrencies that are included in a Crypto Bundle are required to fulfil a set of eligibility requirements which are also subject to a monthly review. Cryptocurrencies must:

1. Be defined as a cryptographically secure digital bearer instrument.
2. Have sufficient liquidity, community support and trading history to ensure that the cryptocurrency is investable for an average retail investor. Additionally, any cryptocurrency to be included in a Crypto Bundle must be listed on coinmarketcap.com on the rebalancing date for eligibility.
3. Have a free-floating price that is not pegged to any other asset, such as currency, or another cryptocurrency. This means that stablecoins cannot be included in a Crypto Bundle.
4. Not be known as a meme coin (examples of meme coins include SHIBU and DOGE) with the exception of the Blue Chip Bundle.
5. Not be known as a privacy coin (examples of privacy coins include Monero and Zcash).
6. Trade on at least two reputable and established exchanges, where one of the exchanges is the largest global exchange by volume.

*See Annexure A for the different eligibility requirements for each weighting methodology.*

## 6. Asset Pricing

This section details how we identify the prices of individual cryptocurrencies and price our Crypto Bundles. This section also describes how Altify handles network distributions including hard forks and airdrops.

### 6.1. Cryptocurrency Pricing

- The price for each cryptocurrency on our platform is the latest available price on CoinMarketCap with a maximum of up to 15-minutes of pricing delay.
- CoinMarketCap offers the most accurate and reliable prices for cryptocurrencies globally.
  - When we execute cryptocurrency trades on behalf of investors, we link to various individual cryptocurrency exchanges. We strive to offer superior trade pricing to that displayed on CoinMarketCap for every trade.
  - Any conversion into fiat<sup>1</sup> currencies other than USD, for example GBP, are converted from the USD price based on either the [Bid or Ask](#) foreign exchange rates provided by [openexchangerates.org](#)<sup>2</sup> or LUNO.
  - CoinMarketCap provides up-to-the-minute updates for all market data found on their website. All data is run through several data cleaning and verification algorithms to ensure data integrity.
  - CoinMarketCap offers a detailed overview of its pricing methodology at <https://coinmarketcap.com/methodology/>.

### 6.2. Crypto Bundle Pricing

- Altify's Crypto Bundle prices are published in near real-time.
- All cryptocurrencies included in a Crypto Bundle are considered for inclusion or exclusion from a Crypto Bundle based on their market capitalisation.

*The market capitalisation of the cryptocurrency is calculated by multiplying the existing reference price of the cryptocurrency by the current circulating supply. Let's take the market capitalisation of Bitcoin as an example:*

*Let (C) be the last known reference price of Bitcoin from CoinMarketCap in USD.*

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<sup>1</sup> <https://coinmarketcap.com/glossary/#fiat>

<sup>2</sup> <https://openexchangerates.org/>

*Let (S) be the current circulating supply of Bitcoin.*

*Let (D) be the derived market capitalisation for Bitcoin.*

*For this example,*

*Let (C) = 10,000 USD*

*Let (S) = 17,000,000 BTC.*

$$D = C * S$$

$$D = 10,000 \text{ USD} * 17,000,000 \text{ BTC} = 170,000,000,000 \text{ USD}$$

*Therefore, the derived market capitalisation for Bitcoin is \$170,000,000,000.*

- The Crypto Bundle composition reflects the exact ratio of assets required to represent 1 unit of the Crypto Bundle.
- Altify's Crypto Bundles are designed to capture the total returns of the constituent cryptocurrencies grouped by market capitalisation.
- The default denomination of a Crypto Bundle is the U.S. Dollar.

### **6.3. Historic Crypto Bundle Data**

- Historic Crypto Bundle prices are calculated from the 1st of January 2016.
- The baseline value of each Crypto Bundle was arbitrarily assigned \$1 on this day.
- The closing price of Bitcoin was \$431.55 on the 1st of January 2016, so in order to equate Bitcoin's price to our Crypto Bundle's arbitrary value, the price of the largest cryptocurrency was divided by 431.55.
- Hypothetical asset returns follow the same pricing methodology detailed in this document, however, please note that historical Crypto Bundle returns are hypothetical returns and do not reflect an actual investment into a Crypto Bundle.
- Additionally, hypothetical Bundle returns only consider the top 20 cryptocurrencies as measured on [CoinMarketCap](#) at the start of each month. This investable universe ensures that our Crypto Bundle historic returns are representative of what an ordinary retail investor could obtain in the crypto market.

- Hypothetical returns, unless explicitly stated, do not include Altify fees and therefore will have tracking error when compared to a direct investment in a Crypto Bundle's underlying assets over the specified period.

## **7. Contingency Treatment**

### **7.1. Data Interruption or Delay**

If the retrieval time of the relevant price source at an eligible cryptocurrency exchange is at least 15 minutes later than the time of calculation of the real-time prices, then the eligible exchange is removed from the pricing calculation, and the weighting of the affected exchange will be automatically re-distributed proportionally into the remaining functional exchanges until the affected exchange resumes operation.

### **7.2. Erroneous Data**

All relevant pricing sources are subject to a filtering process to screen out erroneous data. Erroneous data is disregarded in the calculation of the spot price of a Crypto Bundle, and the weighting of the affected exchange will be automatically re-distributed proportionally into the remaining functional exchanges until the affected price source is no longer regarded as erroneous.

### **7.3. Exceptional Events**

It is clearly acknowledged that the ability to connect to the internet is subject to limitations on the stability of the global network, residence of user, network in use, power supply, computer viruses, hacking, and other uncertain factors. We are not liable for any stop in service due to the above-mentioned situations. We may, at our sole discretion, suspend trading, especially in circumstances of force majeure events, including but not limited to typhoon, earthquake, tsunami, flood, power outage, terrorist attacks, computer viruses, Trojan horse, hacking attacks, system instability or government behaviours, material adverse change of applicable laws or policies and other reasons, which result in our inability to provide a reliable service or if, in our reasonable opinion, continuous provision of services would result in significant risks.

### **7.4. Force Majeure**

A party will not be liable for any failure of or delay in the performance of this agreement for the period that such failure or delay is:

1. beyond the reasonable control of a party,

2. materially affects the performance of any of its obligations under this agreement, and
3. could not reasonably have been foreseen or provided against, but
4. will not be excused for failure or delay resulting from only general economic conditions or other general market effects.

## 7.5. Security and Custody

Your trust and security are important to us. We're committed to keeping your assets and personal information safe. We invest heavily to ensure both a secure system and a continually developing internal process for identifying and remedying any vulnerabilities detected.

To ensure system integrity, we employ industry-standard information security practices. These include, but are not limited to:

1. The separation and full isolation of the production environment from all development or testing environments. The production system cannot be accessed, nor deployed via any other means than a pre-configured delivery pipeline.
2. The use of key vaults, operated on globally distributed hardware security modules (HSMs)<sup>3</sup> to securely store an application secret key or access key for the production environment.
3. All accounts and integration partners, or provider accounts, are protected by multi-factor authentication and disable all unneeded functionality.
4. Bi-directional authentication between front and backend systems, network address restriction and whitelisting for communication between distinct applications in the Altify universe.
5. Distinct identity server for central user authentication across all Altify services.
6. Standard web protection techniques to combat injection attacks.
7. Full SSL protection.

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<sup>3</sup> <https://safenet.gemalto.com/data-encryption/hardware-security-modules-hsms/>

## 8. Licence and Use

- 8.1. When registered the Altify trademark, Altify Crypto Bundles, which for the purposes of this section includes the website at [www.altifyinvest.com](http://www.altifyinvest.com), and all related tickers, widgets, URL's, factsheets, and APIs and the contents of this document are the proprietary property of Altify UK Limited (UK Company Registration Number: 11713189) and is provided for information purposes only.
- 8.2. Subject to the terms of this document, you are granted a non-exclusive, revocable, limited licence to copy and redistribute this document, or publish, quote or refer to Altify Crypto Bundles, in any medium or format for non-commercial and non-monetisation purposes only and provided that you give attribution to Altify. If you modify this document, you may not distribute the modified material without the prior written permission of Altify.
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- 8.4. Our Crypto Bundles and this document are provided on an "as is" basis and Altify UK Limited and all other affiliated entities make no representations or warranties as to the quality, accuracy or suitability of Crypto Bundle pricing data.

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## **Annexure A: Crypto Bundles Methodologies**

### **A.1 Equally Weighted**

#### **Overview**

The Altify Equally weighted Crypto Bundles aim to capture equal importance of each of the top cryptocurrency in the ecosystem and specific sectors, as measured by the free-float market capitalisation. The Equally weighted Crypto Bundle tries to avoid the risks of over-investing in a particular cryptocurrency and allows the customer equal exposure.

#### **Equally Weighted Cryptocurrency Eligibility Requirements**

Cryptocurrencies that are included in a Crypto Bundle are required to fulfil a set of eligibility requirements which are also subject to a monthly review. Cryptocurrencies must:

1. Be defined as a cryptographically secure digital bearer instrument.
2. Have sufficient liquidity, community support and trading history to ensure that the cryptocurrency is investable for an average retail investor. Additionally, any cryptocurrency to be included in a Crypto Bundle must be listed on coinmarketcap.com on the rebalancing date for eligibility.
3. The cryptocurrency must have been launched at least 180 days before being able to qualify to be included in the index.
4. Have a free-floating price that is not pegged to any currency or another cryptocurrency. This means that stablecoins cannot be included in a Crypto Bundle.
5. Not be known as a meme coin (examples of meme coins include SHIBU and DOGE) with the exception of the Bule Chip Bundle.
6. Not be known as a privacy coin (examples of privacy coins include Monero and Zcash).
7. Trade on at least two reputable and established exchanges, where one of the exchanges is the largest global exchange by volume.
8. Have no more than 90% of its trailing 30-day average trading volume on any single eligible exchange.



9. In addition, each new asset must demonstrate an average 30-day trade volume of at least 5% of its current market capitalisation on eligible Cryptocurrency exchanges over the past 30 days.
10. **Buffer Zone:** A Altify Crypto Bundle that uses market capitalisation guidelines to drive inclusion decisions and has a “5% market capitalisation buffering rule” to limit unnecessary turnover. An eligible cryptocurrency that is held in a Altify market capitalisation Crypto Bundle will only be removed if there is a cryptocurrency eligible for the Crypto Bundle that exceeds the current cryptocurrency’s free-float market capitalisation by 5% as of 4 p.m. SAST on each of the five-consecutive days up to and including the fourth-last day of the month.

## Investment and Rebalancing Process

The process to complete a rebalance is as follows:

**Step 1:** The value of a single unit of a Crypto Bundle is calculated in USD using price data from CoinMarketCap.

**Step 2:** Our rebalancing fee is then levied on the total Crypto Bundle value being rebalanced.

**Step 3:** To calculate the new Crypto Bundle Composition, a list of the relevant cryptocurrencies and their associated values and prices are retrieved from CoinMarketCap.

**Step 4:** The post-rebalance Crypto Bundle Composition is calculated by using the new asset closing values, the new list of the largest cryptocurrencies by market capitalisation and the USD Crypto Bundle unit price calculated above in step 1.

**Step 5:** The differences between the old and new composition of the Crypto Bundle is then calculated.

**Step 6:** Once calculated, our system automatically initiates transactions to bring the underlying asset holdings in line with the new Crypto Bundle Composition.

**Step 7:** Our Smart Pricing Engine connects to a network of exchanges to acquire the required assets to be included in the new Crypto Bundle Composition.

**Step 8:** This execution is done at the best possible prices available at the time the trade order was placed.

**Step 9:** Your Crypto Bundle is then regarded as having been rebalanced and reconstituted

$$BP_t = \sum_{i=1}^x ((p_i \cdot n_i) + (D_i \cdot n_i))$$

Where:

*BP* = Crypto Bundle Price per unit

*t* = time period (0 for the start of the month to max 31)

*x* = the number of cryptocurrencies included in the Crypto Bundle

*i* = the starting point, the lower limit of the summation

*p* = cryptocurrency price

*n* = number of cryptocurrency units held in one Crypto Bundle unit

*D* = eligible average distribution price

For illustrative purposes, Crypto Bundle prices for equally weighted Crypto Bundles are calculated as per the following flow diagram below (the Payment Bundle is used for illustrative purposes).



Net distributions, if they are eligible for inclusion as detailed in 5.3. below, are added to a Crypto Bundle's price. A distribution will only be included in a Crypto Bundle's price prior to a rebalancing period, after which the distribution will be considered for inclusion only if it is an eligible Crypto Bundle cryptocurrency.

## **A.2 Market Capitalisation Weighted**

### **Overview**

The Altify Market Capitalisation weighted Crypto Bundles aim to capture the importance of each cryptocurrency in the ecosystem, as measured by the aggregate value investors assign to that cryptocurrency. To do so, Altify must calculate the market capitalisation of each cryptocurrency. Altify does this by multiplying the cryptocurrencies current price with the free-float capitalisation of a given cryptocurrency as given by CoinMarketCap.

### **Market Capitalisation Cryptocurrency Eligibility Requirements**

Cryptocurrencies that are included in a Crypto Bundle are required to fulfil a set of eligibility requirements which are also subject to a monthly review. Cryptocurrencies must:

1. Be defined as a cryptographically secure digital bearer instrument.
2. Have sufficient liquidity, community support and trading history to ensure that the cryptocurrency is investable for an average retail investor. Additionally, any cryptocurrency to be included in a Crypto Bundle must be listed on [coinmarketcap.com](https://coinmarketcap.com) on the rebalancing date for eligibility.
3. The cryptocurrency must have been launched at least 180 days before being able to qualify to be included in the index.
4. Have a free-floating price that is not pegged to any currency or another cryptocurrency. This means that stablecoins cannot be included in a Crypto Bundle.
5. Not be known as a meme coin (examples of meme coins include SHIBU and DOGE) with the exception of the Blue Chip Bundle.
6. Not be known as a privacy coin (examples of privacy coins include Monero and Zcash).
7. Trade on at least two reputable and established exchanges, where one of the exchanges is the largest global exchange by volume.
8. Have no more than 90% of its trailing 30-day average trading volume on any single eligible exchange.

9. In addition, each new asset must demonstrate an average 30-day trade volume of at least 5% of its current market capitalisation on eligible Cryptocurrency exchanges over the past 30 days.
10. **Buffer Zone:** A Altify Crypto Bundle that uses market capitalisation guidelines to drive inclusion decisions and has a “5% market capitalisation buffering rule” to limit unnecessary turnover. An eligible cryptocurrency that is held in a Altify market capitalisation Crypto Bundle will only be removed if there is a cryptocurrency eligible for the Crypto Bundle that exceeds the current cryptocurrency’s free-float market capitalisation by 5% as of 4 p.m. SAST on each of the five-consecutive days up to and including the fourth-last day of the month.

## Investment and Rebalancing Process

### Step 1: Identify the cryptocurrency eligible to be included

Make sure the asset being added meets the eligibility criteria stated above. The **Buffer Zone** requirement means that the cryptocurrency to be included will be decided four days prior to the rebalance.

The Buffer Zone (i.e 5 days prior to the 4th last day of the month) will need to have daily snapshots of the top crypto assets as at 4 p.m. SAST for the 5 days in the buffer zone. These screenshots will determine which cryptocurrencies will be included in the new month (i.e 4 days prior to the 1st of each month the Crypto Bundle of cryptocurrencies will be finalised based on the criteria above).

### Step 2: Identifying weights and units for rebalancing

A screenshot of the new Crypto Bundle and current Crypto Bundle constituents’ market capitalisations will be taken at 05:00 am SAST on the first of every month. These snapshots will be used to compute the rebalance adjustment from the current Crypto Bundle to the new Crypto Bundle as indicated in the table and steps below:

## 2.1 Weight Calculation

$$W = \frac{Mc}{BMc}$$

Where:

*W* = Weight of Crypto

*Mc* = Market Capitalisation of Crypto

*BMc* = Crypto Bundle Market Capitalisation

## 2.2 Unit Calculation

$$U_i = \frac{BP \times W}{CP}$$

Where:

*U<sub>i</sub>* = Units of Crypto

*BP* = Crypto Bundle Price

*W* = Weight of Crypto

*CP* = Crypto Price

### 2.3.1 Current Crypto Bundle Price and Allocation

$$BP_t = \sum_{i=1}^x ((p_i \cdot n_i) + (D_i \cdot n_i))$$

Where:

*BP* = Crypto Bundle Price per unit

*t* = time period (0 for start of the month to max 31)

*x* = the number of cryptocurrencies included in the Crypto Bundle

*i* = the starting point, the lower limit of the summation

*p* = cryptocurrency price

*n* = number of cryptocurrency units held in one Crypto Bundle unit based on market cap weightings

$D = \text{eligible average distribution price}$

### 2.3.2 Determining the Weights of the Current Crypto Bundle

The allocation for each cryptocurrency is calculated by multiplying the constituents price by the number of cryptocurrency units held in one Crypto Bundle unit. The sum of units will equal the price of the Crypto Bundle at 05:00 SAST. The weight of each cryptocurrency can be determined by dividing their individual units by the current price of the Crypto Bundle (\$100).

05:00 Snapshot of Current Bundle						
Rank	Crypto	Marketcap (M)	Weight	Price	Allocation	Units
1	Bitcoin	\$500.00	63.61%	\$27,034.64	\$63.61	0.002353
2	Ethereum	\$190.00	24.17%	\$1,673.71	\$24.17	0.014443
3	BNB	\$32.00	4.07%	\$215.09	\$4.07	0.018928
4	XRP	\$26.00	3.31%	\$0.52	\$3.31	6.409918
5	Cardano	\$8.50	1.08%	\$0.26	\$1.08	4.233464
6	Solana	\$7.50	0.95%	\$21.23	\$0.95	0.044940
7	Tron	\$7.00	0.89%	\$0.09	\$0.89	10.094957
8	Polkadot	\$5.50	0.70%	\$4.11	\$0.70	0.170102
9	Polygon	\$5.00	0.64%	\$0.53	\$0.64	1.189623
10	Litecoin	\$4.50	0.57%	\$65.94	\$0.57	0.008682
Total		\$786.00	100%		\$100.00	

### 2.3.3 Determining the Weights of the New Crypto Bundle

At 05:00 SAST, the new Crypto Bundle asset components market caps are pulled. It is during this stage that we include the new additions or exclusions from the current Crypto Bundle above according to the rules set out in point 9 under Cryptocurrency Eligibility Requirements. The new weights will be calculated by using weight calculation (2.1) above. Once weights are determined, the number of units allocated to the Crypto Bundle under the new composition needs to be calculated as seen using unit calculation (2.2) above.

### 05:00 Snapshot of New Bundle

Rank	Crypto	Marketcap (M)	Weight	Price	Allocation	Units
1	Bitcoin	\$500.00	63.58%	\$27,034.64	\$63.58	0.002352
2	Ethereum	\$190.00	24.16%	\$1,673.71	\$24.16	0.014435
3	BNB	\$32.00	4.07%	\$215.09	\$4.07	0.018918
4	XRP	\$26.00	3.31%	\$0.52	\$3.31	6.406658
5	Cardano	\$8.50	1.08%	\$0.26	\$1.08	4.231310
6	Solana	\$7.50	0.95%	\$21.23	\$0.95	0.044917
7	Tron	\$7.00	0.89%	\$0.09	\$0.89	10.089823
8	Polkadot	\$5.50	0.70%	\$4.11	\$0.70	0.170015
9	Polygon	\$5.00	0.64%	\$0.53	\$0.64	1.189018
10	Bitcoin Cash	\$4.90	0.62%	\$236.62	\$0.62	0.002633
11	Litecoin	\$4.50	0.00%	\$65.94	\$0.00	0.000000
Total		\$786.40	100%		\$100.00	

### 2.3.4 Rebalance of the New Crypto Bundle

In order to determine the number of units needed to be either bought or sold during the rebalance of the Crypto Bundle, compare the pre units to the post units.

The total of the units bought and sold should always sum to zero. If this is the case, then the correct amount of units were bought and sold, and this will be reflected in the new weights of the new Crypto Bundle.

To find out the total number of each constituent to buy and sell, times the 'unit change' by the total amount of Crypto Bundle units being rebalanced.



## Rebalance

Rank	Crypto	Units Pre	Units Post	Units Changed	Bought/Sold
1	Bitcoin	0.002353	0.002352	-0.000001	-\$0.03236
2	Ethereum	0.014443	0.014435	-0.000007	-\$0.01230
3	BNB	0.018928	0.018918	-0.000010	-\$0.00207
4	XRP	6.409918	6.406658	-0.003260	-\$0.00168
5	Cardano	4.233464	4.231310	-0.002153	-\$0.00055
6	Solana	0.044940	0.044917	-0.000023	-\$0.00049
7	Tron	10.094957	10.089823	-0.005135	-\$0.00045
8	Polkadot	0.170102	0.170015	-0.000087	-\$0.00036
9	Polygon	1.189623	1.189018	-0.000605	-\$0.00032
10	Bitcoin Cash	0.000000	0.002633	0.002633	\$0.62309
11	Litecoin	0.008682	0.000000	-0.008682	-\$0.57252

## **A.3 Sortino Optimisation Weighted**

### **Overview**

The Altify Sortino weighted Crypto Bundles aim to capture the importance of protection and minimise negative returns. To do so, Altify must optimise a Crypto Bundle of cryptocurrencies to achieve the highest Sortino ratio over the analysed data set. Altify does this by running an internal Sortino optimisation as set out by Markowitz (1959) and Estrada (2007).

### **Sortino Optimisation Weighted Cryptocurrency Eligibility Requirements**

Cryptocurrencies that are included in a Crypto Bundle are required to fulfil a set of eligibility requirements which are also subject to a monthly review. Cryptocurrencies must:

1. Be defined as a cryptographically secure digital bearer instrument.
2. Have sufficient liquidity, community support and trading history to ensure that the cryptocurrency is investable for an average retail investor. Additionally, any cryptocurrency to be included in a Crypto Bundle must be listed on coinmarketcap.com on the rebalancing date for eligibility.
3. Have a free-floating price that is not pegged to any other currency, or another cryptocurrency. This means that stablecoins and wrapped cryptocurrency trackers (E.g. WBTC) cannot be included in a Crypto Bundle.
4. Not be known as a meme coin (examples of meme coins include SHIBU and DOGE).
5. Not be known as a privacy coin (examples of privacy coins include Monero and Zcash).
6. Trade on at least three reputable and established exchanges.
7. Have no more than 75% of its trailing 30-day average trading volume on any single eligible exchange.
8. In addition, each new asset must demonstrate an average 30-day trade volume of at least 10% of its current market capitalisation on eligible Cryptocurrency exchanges over the past 30 days.

## Investment and Optimisation Process

### Step 1

#### 3.1 Monthly Asset Return calculation

$$R_{im} = \frac{p_m - p_{m-1}}{p_{m-1}} \quad (1)$$

Where:

$R_{im}$  is the monthly percentage return of the asset in the  $m^{\text{th}}$  month

$p_m$  is the month-end price of the asset at the  $m^{\text{th}}$  month-end

$p_{m-1}$  is the month-end price of the asset one month prior to the  $m^{\text{th}}$  month-end

### Step 2

Monthly portfolio returns were calculated by making use of Equation 2 below, and each asset class' monthly percentage returns were multiplied by a randomly simulated weight assigned to it. From this, a monthly portfolio return was generated. Monthly portfolio returns were calculated by expanding Equation 2 as follows:

$$R_{pm} = \sum_{i=1}^n W_i R_{im} \quad (2)$$

$$\text{Expanded : } R_{pm} = W_1 R_{1m} + W_2 R_{2m} + \dots + W_8 R_{8m}$$

Where:

$R_{pm}$  is the monthly portfolio return for month  $m$

$W_1, W_2 \dots W_3$  are randomly simulated weights assigned to the individual assets over the investment period.

$R_{1m}, R_{2m} \dots R_{3m}$  are monthly returns of the individual assets over the  $m^{\text{th}}$  month

$n$  is the number of asset classes in the portfolio

The mean portfolio return over the investment period was calculated by taking the average of all the monthly portfolio returns, subject to a select weighting, over the investment period. This is set out in Equation 3 below:

$$\mu_p = \left(\frac{1}{n}\right) \sum_{m=1}^n R_{pm} \quad (3)$$

*Where:*

$\mu_p$  is the mean portfolio return over the investment period,

$R_{pm}$  is the  $m^{\text{th}}$  monthly portfolio return,

$n$  is the number of months.

### **Step 3**

The portfolio mean semivariance was calculated through the implementation of equation 4 below. This equation first determines the mean semivariance through the portfolio returns deviation from its benchmark return. The mean semideviation was then calculated by square rooting the semivariance.

The benchmark return is normally implemented as either zero or the mean return of the portfolio under analysis<sup>4</sup>. This index is an industry benchmark for many actively managed funds and provides a real-world input to the calculation of semivariance.

Only returns below the benchmark, in other words, negative deviations, are included in the calculation of semivariance and, in turn, semideviation (hence the minimum, or Min function below).

---

<sup>4</sup> Benchmark is subject to change applicable to the Crypto Bundle it is used for.

$$\psi_{pB}^2 = \left(\frac{1}{n}\right) \sum_{m=1}^n [\text{Min}(R_{pm} - B, 0)]^2 \quad (4)$$

Where:

$\psi_{pB}^2$  is the mean portfolio semivariance over the full investment period,

$R_{pm}$  is the monthly portfolio return for  $m^{\text{th}}$  month,

$B$  is the benchmark return,

$n$  is the number of negative deviations [ $0 > (R_{pm} - B)$ ] subject to the constraint:

$$-1 < R_{pm} - B < 0$$

#### Step 4

It is then possible to optimise this portfolio through the optimisation of its risk-return efficiency. The Sortino ratio considers the downside risk-adjusted return with regards to the standard deviation of negative asset returns. This Sortino ratio applies the semideviation of negative deviations from its benchmark (still a downside risk). This is the risk-return optimisation we will be looking at. From Equations 3 and 4 a risk-return measure can be set up as shown below (Equation 5):

$$Eff = \frac{\mu_p - r_f}{\sqrt{\psi_{pB}^2}} \quad (5)$$

Where:

$Eff$  is the portfolio's risk-return efficiency (Sortino ratio)

$\mu_p$  is the mean portfolio return over the investment period,

$r_f$  is the risk-free rate,

$\sqrt{\psi_{pB}^2}$  is the mean semideviation of the portfolio over the investment period.

## **Step 5**

Using Equations 1, 2 and 3, the portfolio mean monthly semivariances, semideviations, returns and risk-return efficiencies were calculated through optimisation. In total, 20 000 random asset-weighted scenarios were generated, forming 20 000 random portfolio weight combinations. The result was 20 000 portfolio's mean monthly semivariances, semideviations and returns, which were used to solve for the highest efficiency portfolio. Once the highest efficiency was found, these weightings were used as the base weightings to run the solver function for maximising Equation 3 (the efficient ratio), subject to specific weighting constraints and the portfolio framework. This process was repeated five times to make sure that the correct optimal portfolio was found.

## **Altify Crypto Bundles: Detailed Explainer**

Altify offers 13 Crypto Bundles:

1. Top 10 Equal Bundle
2. Top 10 Market Bundle
3. Top 20 Equal Bundle
4. Top 20 Market Bundle
5. Hedge Bundle
6. Auto Bundle
7. Payment Bundle
8. Ecosystem Bundle
9. Inflation Shield Bundle
10. DeFi Bundle
11. Blue Chip Bundle
12. Metaverse Bundle
13. Web 3.0 Bundle

Our Payment, Ecosystem, Inflation Shield, DeFi, Blue Chip, Metaverse and Web 3.0 Bundles are theme-based Crypto Bundles, otherwise known as “thematic” Crypto Bundles that provide exposure to major crypto and economic themes and sectors.

Our Crypto Bundles are ‘passive’ in nature. This means that there is no person actively buying and selling cryptocurrencies at their discretion on your behalf.

Instead, our Crypto Bundles strictly follow the rules and procedures outlined in this methodology.

Our Crypto Bundles do not aim to outperform any particular investment or index. They simply aim to provide you with low-cost and diversified exposure to the crypto market or a niche crypto sector.

## More Detailed Information on Our Crypto Bundles



### Top 10 Equal Bundle | Ticker: T10E

The Top 10 Equal Bundle offers equally-weighted exposure to the 10 largest cryptocurrencies as measured by free-float market capitalisation. By investing 10% in each of the Top 10 cryptocurrencies, the Top 10 Equal Bundle allows investors to gain greater exposure to the largest and most reputable cryptocurrencies - reducing the risk that comes with holding smaller emerging altcoins, while still offering a potentially higher Crypto Bundle return when compared to its market capitalisation-weighted Crypto Bundle counterpart.

### Why Equally-Weighted?

By using equally-weighted, investors can take advantage of what is called a ‘positive skew in returns’. Simply put, smaller-cap assets can deliver outsized positive returns, which significantly overshadow the maximum possible loss of an asset, which is limited to -100%. Equally weighted Crypto Bundles increase an investor’s exposure to this positive skew, which can significantly boost overall portfolio performance.

### Why Diversify?

Exposure to a diversified basket of cryptocurrencies helps to avoid concentration risk in any specific cryptocurrency (i.e. the level of risk in your portfolio arising from concentration to a single cryptocurrency).

### **Top 10 Equal Cryptocurrency Investable Universe and Eligibility Criteria:**

1. The entire cryptocurrency market - subject to cryptocurrency exclusions seen in Annexure A.1 under Equally Weighted Cryptocurrency eligibility requirements.

This Crypto Bundle allows for direct investment in the cryptocurrencies constituting the Crypto Bundle and offers investors an innovative, cost-efficient, and secure way to access a crypto market tracker. The Crypto Bundle's assets are rebalanced and reconstituted on the 1st of every month, held securely, and audited quarterly.



### **Top 10 Market Bundle | Ticker: T10M**

The Top 10 Market Bundle offers market-weighted exposure to the 10 largest cryptocurrencies as measured by free-float market capitalisation. By giving investors exposure to over 80.00% of the crypto market's total value, the Top 10 Market Bundle aims to seamlessly track the overall performance of the crypto market while reducing the investment risk and volatility experienced in the crypto market by only gaining exposure to the 10 largest and most reputable cryptocurrencies.

### **Why Market Capitalisation?**

By using market capitalisation weighting, this Crypto Bundle aims to capture the importance of each cryptocurrency in the ecosystem, as measured by the aggregate value investors assign to that cryptocurrency.

### **Why Diversify?**

Exposure to a diversified basket of cryptocurrencies helps to avoid concentration risk in any specific cryptocurrency (i.e. the level of risk in your portfolio arising from concentration to a single cryptocurrency).

### **Top 10 Market Cryptocurrency Investable Universe and Eligibility Criteria:**

1. The entire cryptocurrency market - subject to cryptocurrency exclusions seen in Annexure A.1 under Market Weighted Cryptocurrency eligibility requirements.

This Crypto Bundle allows for direct investment in the cryptocurrencies constituting the Crypto Bundle and offers investors an innovative, cost-efficient, and secure way to access a crypto



market tracker. The Crypto Bundle's assets are rebalanced and reconstituted on the 1st of every month, held securely, and audited quarterly



### **Top 20 Equal Bundle | Ticker: T20E**

The Top 20 Equal Bundle offers equally-weighted exposure to the 10 largest cryptocurrencies as measured by free-float market capitalisation. By investing 5% in each of the Top 20 cryptocurrencies, the Top 20 Equal Bundle allows investors to gain greater exposure to emerging altcoins that could offer a potentially higher Crypto Bundle return when compared to its market capitalisation-weighted Crypto Bundle counterpart.

### **Why Equally-Weighted?**

By using equally-weighted, investors can take advantage of what is called a 'positive skew in returns'. Simply put, smaller-cap assets can deliver outsized positive returns, which significantly overshadow the maximum possible loss of an asset, which is limited to -100%. Equally weighted Crypto Bundles increase an investor's exposure to this positive skew, which can significantly boost overall portfolio performance

### **Why Diversify?**

Exposure to a diversified basket of cryptocurrencies helps to avoid concentration risk in any specific cryptocurrency (i.e. the level of risk in your portfolio arising from concentration to a single cryptocurrency). Top 20 Equal Bundle also allows investors to gain increase exposure to some of cryptos largest sectors:

### **Main Sector Exposure**

1. Smart Contracts
2. Payments
3. Centralised Exchanges
4. Scaling Solutions
5. Decentralised Exchanges
6. Decentralised Finance
7. Oracles

## 8. Web 3.0

### **Top 20 Equal Cryptocurrency Investable Universe and Eligibility Criteria:**

1. The entire cryptocurrency market - subject to cryptocurrency exclusions seen in Annexure A.1 under Equally Weighted Cryptocurrency eligibility requirements.

This Crypto Bundle allows for direct investment in the cryptocurrencies constituting the Crypto Bundle and offers investors an innovative, cost-efficient, and secure way to access a crypto market tracker. The Bundle's assets are rebalanced and reconstituted on the 1st of every month, held securely, and audited quarterly.



### **Top 20 Market Bundle | Ticker: T20M**

The Top 20 Market Bundle offers market-weighted exposure to the 20 largest cryptocurrencies as measured by free-float market capitalisation. By giving investors exposure to over 90.00% of the crypto market's total value, the Top 20 Market Bundle aims to seamlessly track the overall performance of the broader crypto market while providing investors further exposure to more emerging altcoins that offer potentially higher returns.

### **Why Market Capitalisation?**

By using market capitalisation weighting, this Crypto Bundle aims to capture the importance of each cryptocurrency in the ecosystem, as measured by the aggregate value investors assign to that cryptocurrency.

### **Why Diversify?**

Exposure to a diversified basket of cryptocurrencies helps to avoid concentration risk in any specific cryptocurrency (i.e. the level of risk in your portfolio arising from concentration to a single cryptocurrency). Top 20 Market Bundle also allows investors to gain increase exposure to some of cryptos largest sectors.

### **Main Sector Exposure**

1. Smart Contracts

2. Payments
3. Centralised Exchanges
4. Scaling Solutions
5. Decentralised Exchanges
6. Decentralised Finance
7. Oracles
8. Web 3.0

### **Top 20 Market Cryptocurrency Investable Universe and Eligibility Criteria:**

1. The entire cryptocurrency market - subject to cryptocurrency exclusions seen in Annexure A.1 under Market Weighted Cryptocurrency eligibility requirements.

This Crypto Bundle allows for direct investment in the cryptocurrencies constituting the Crypto Bundle and offers investors an innovative, cost-efficient, and secure way to access a crypto market tracker. The Crypto Bundle's assets are rebalanced and reconstituted on the 1st of every month, held securely, and audited quarterly.



### **Hedge Bundle | Ticker: HEDGE**

The Hedged Bundle provides investors with a 20% equally-weighted exposure to the 10 largest cryptocurrencies while holding an 80% allocation to the US Dollar stablecoin, USDT.

For investors seeking a secure entry into the cryptocurrency space, the Hedged Bundle's 80% allocation to USDT allows investors to experience a significantly reduced crypto volatility, while still receiving highly correlated returns to the crypto market's potential through the 20% crypto allocation. Designed to keep pace with the rapidly evolving crypto market, this Crypto Bundle automatically rebalances every month, seamlessly adapting to market changes.

### **Hedged Cryptocurrency Investable Universe and Eligibility Criteria:**

1. The entire cryptocurrency market - subject to cryptocurrency exclusions seen in Annexure A.1 under Equally Weighted Cryptocurrency eligibility requirements.



### **Auto Bundle | Ticker: AUTO**

The Auto Bundle provides investors with a 60% equally-weighted exposure to the 10 largest cryptocurrencies while holding a 40% allocation to the US Dollar stablecoin, USDT.

For investors seeking a balance between cash and crypto, the Auto Bundle strategically utilises its 40% US Dollar stablecoin (USDT) allocation to automatically purchase and take profit on the equally-weighted Top 10 cryptocurrencies. Designed to keep pace with the rapidly evolving crypto market, this Crypto Bundle automatically rebalances every month, seamlessly adapting to market changes.

#### **Auto Cryptocurrency Investable Universe and Eligibility Criteria:**

1. The entire cryptocurrency market - subject to cryptocurrency exclusions seen in Annexure A.1 under Equally Weighted Cryptocurrency eligibility requirements.

### **Theme-Based Crypto Bundles**

#### **What are Crypto Themes?**

Just like listed stocks in the technology sector operate differently from those in the oil and gas sector, you get cryptocurrencies that do different things.

The term cryptocurrency is confusing since there's a preconceived notion of what a currency is and what it can and cannot do. Many cryptocurrencies aim to achieve very different objectives than to solely act like digital cash storing or transferring value. It's for this exact reason that we sometimes use the term cryptoasset instead of cryptocurrency.

Today, cryptocurrency projects generally fall into one of two major categories. They're either purpose-built and designed for a very specific function—like Bitcoin, which was specifically designed as an alternative payment system and store of value or they can be more open and general in their functioning and can be applied to a wide range of uses like Ethereum or Cardano, which can be used as a sort of blockchain-based operating system for building decentralised applications (dApps)—which are basically just blockchain-based versions of regular apps, like the ones you get on your phone.

## Tell Me More About the Crypto Bundles

The cryptocurrencies that make up our theme-based Crypto Bundles are based on a specific cryptocurrency's operating dynamics and intended use.

While some crypto-enthusiasts may take issue with the broad categorisations and a clear overlap between each cryptocurrency's potential uses, we have identified cryptocurrencies for each theme-based Crypto Bundle according to how closely they align with the underlying theme in question.

There are many crypto projects that aim to solve similar real-world problems but undertake very different approaches. For example, [Stellar](#) can host initial coin offerings (ICOs) which is generally a Smart Contract Bundle attribute but its native token (Lumens - XLM) is designed for payment purposes. This makes Stellar's Lumens (XLM) tokens a fit for both our Payment Bundle and the Smart Contract Bundle.



### Payment Bundle | Ticker: PAY

Bitcoin may have paved the way for digital payments, but other global competitors are making peer-to-peer, business-to-business and country-to-country payments cheaper and faster than ever before. The Payment Bundle offers broad exposure to the most well-recognised and tried and tested payment cryptocurrencies available.

This Crypto Bundle offers you the ability to invest in the largest 5 payment-focused cryptocurrencies as measured by free-float market capitalisation and aims to be representative of the payment-focused cryptocurrency sector. The Crypto Bundle is equally weighted to avoid the risks of over-investing in a single cryptocurrency. This means that each cryptocurrency is rebalanced and reconstituted on the 1st of every month so that each cryptocurrency makes up 20% within the Crypto Bundle.

### Theme Eligibility Criteria

Cryptocurrencies are classified in the Payments category if they fulfil the following set of eligibility requirements which are also subject to a monthly review. Cryptocurrencies must:

1. Be the native asset of a blockchain network built for the purpose of payments.
2. Stablecoins, privacy coins and assets that were not created with the intended use as a

payments network will not be included. (Eg. Ethereum is a smart contract network, although some use it for payments, payments were not its intended purpose)

### Payment-Focused Cryptocurrency Investable Universe

- |    |                        |     |                       |
|----|------------------------|-----|-----------------------|
| 1. | Bitcoin (BTC)          | 8.  | Algorand (ALGO)       |
| 2. | Ripple (XRP)           | 9.  | Bitcoin Gold (BTG)    |
| 3. | Bitcoin Cash ABC (BCH) | 10. | Bitcoin Diamond (BCD) |
| 4. | Stellar (XLM)          | 11. | Bytecoin (BCN)        |
| 5. | Bitcoin Cash SV (BSV)  | 12. | Decred (DCR)          |
| 6. | Litecoin (LTC)         | 13. | + Many more.          |
| 7. | IOTA (MIOTA)           |     |                       |



#### **Ecosystem Bundle | Ticker: ECO**

To understand what the Ecosystem Bundle is all about, we need to start by understanding what smart contracts are.

Even if you only follow crypto from afar, you've probably heard of them. They're one of the most promising innovations in the space: immutable and verifiable contracts that automatically execute themselves when certain conditions are met – a bit like a vending machine dispensing your order.

A smart contract could, for example, be programmed to send someone \$100 on their birthday every year. There's no third party involved and – since the rules are coded – no room for interpretation, which means it's cheaper, safer, and more efficient than a traditional written contract.

The goal of smart contract-orientated cryptocurrencies is to offer a more general-purpose blockchain infrastructure where smart contracts can be built and executed on the network.

This Crypto Bundle consists of cryptocurrencies such as Ethereum's ETH that enable developers to build applications on top of their blockchain, much like how developers build mobile apps on top of the Apple mobile iOS operating system. When looking at smart contract networks, the applications that we know today will be replaced by decentralised applications

(DApps), which are managed and maintained by multiple network participants and not a centralised organisation. DApps allow for more advanced actions to be recognised without third-party verification and are created with multiple smart contracts. Initial Coin Offerings (ICOs) is one feature often offered by smart contract cryptocurrencies.

The significant potential for an autonomous, decentralised global network of blockchain operators makes the Ecosystem Bundle an opportunistic play on the growth in this innovative crypto sector.

This Crypto Bundle offers investors the ability to passively invest in the largest 5 smart contract-focused cryptocurrencies as measured by free-float market capitalisation and aims to be representative of the smart-contract cryptocurrency sector. The Crypto Bundle is equally weighted to avoid the risks of over-investing in a particular cryptocurrency. This means that each cryptocurrency is reweighted monthly to ensure an equal 20% weighting across each cryptocurrency in the Crypto Bundle. The Crypto Bundle is rebalanced and reconstituted on the 1st of every month.

### **Theme Eligibility Criteria**

Cryptocurrencies are classified in the Smart Contracts category if they fulfil the following set of eligibility requirements which are also subject to a monthly review. Cryptocurrencies must:

1. Be native to a blockchain network that supports Smart Contract functionality and offers the capability to build decentralised applications.
2. Be the native token of a smart contract enabled layer-1 blockchain.
3. Have an active ecosystem (including the main chain, any side chains or parachains) of decentralised apps (DApps) that supports Smart Contracts and the building of decentralised applications.

### **Smart Contract-Focused Cryptocurrency Investable Universe:**

- |                    |                    |
|--------------------|--------------------|
| 1. Ethereum (ETH)  | 5. EOS (EOS)       |
| 2. BNB Chain (BNB) | 6. Tron (TRX)      |
| 3. Solana (SOL)    | 7. Polkadot (DOT)  |
| 4. Cardano (ADA)   | 8. Polygon (MATIC) |

9. Avalanche (AVAX)
10. NEM (XEM)
11. Neo (NEO)
12. Ethereum Classic (ETC)
13. Cosmos (ATOM)
14. VeChain (VET)
15. Aptos (APTOS)
16. Near Protocol (NEAR)
17. Hedera (HBAR)
18. Internet Computer (ICP)
19. Algorand (ALGO)
20. Tezos (XTZ)
21. Waves (WAVES)
22. Ontology (ONT)
23. Zilliqa (ZIL)
24. Qtum (QTUM)
25. + Many more



### **Inflation Shield | Ticker: SHIELD**

To understand what the Inflation Shield is all about, we need to start with understanding what inflation is and how it affects you.

**Inflation** is described as the rate at which the price of goods and services increases over time. For most people, the direct personal cost that inflation exacts on their lives flies under the radar. It is accepted as an inevitable part of modern living. It's something that can't be solved and is therefore not worth worrying about.

Yet this is not true.

Throughout history, investors have looked to protect their wealth in times of inflation by buying assets that will either keep up with inflation or beat it. Gold, shares and property have traditionally been the best options, depending on the level of inflation. These assets are known to the finance world as 'inflation hedges'. Gold has the longest and most successful track record in beating inflation.

But what if there is a better way? A way to take the inflation hedges of yesterday and blend them with the inflation hedges of tomorrow. This is what Altify accomplished with the creation of the Inflation Shield.

While gold has long been considered a hedge against the impacts of inflation and, over the last decade, Bitcoin has increasingly asserted its potential as an alternative.



With this Crypto Bundle, you don't have to choose between the two, as you'll own both gold and Bitcoin in an algorithmically determined ratio aimed to optimise your return while minimising your downside risk. The Inflation Shield Bundle preserves your wealth against inflation while minimising your downside risk.

The Altify Inflation Shield Bundle is a Sortino-optimised Crypto Bundle that aims to capture the importance of protection and minimise negative returns. To do so, Altify must optimise a Crypto Bundle of cryptocurrencies to achieve the highest Sortino ratio over the analysed data set. Altify does this by running an internal Sortino optimisation as set out by Markowitz (1959) and Estrada (2007).

The Crypto Bundle is rebalanced and reconstituted on the 1st of every month.

#### **The Inflation Shield consists of:**

1. PAX Gold (PAXG)
2. Bitcoin (BTC)



#### **DeFi Bundle | Ticker: DEFI**

DeFi (Decentralised Finance) describes the rapidly growing sector of personal finance products built on blockchains, replacing the functions of traditional financial institutions like banks.

DeFi not only recreates the traditional financial system but improves on it, making it accessible to everyone. It does this using blockchains and smart contracts that allow users to invest, earn interest, lend, borrow and make payments.

Through DeFi programs, anyone with an Internet connection can borrow and save, send and receive, buy and sell, and even insure their money. This takes place between users all over the world via peer-to-peer blockchain-based networks. There's no more need for the bank, stock exchange or insurance broker as we know them today.

DeFi users can earn the highest return on their wealth without the need to give the middleman their cut. It gives users the freedom and visibility to manage their finances in ways that banks

simply can't compete with. While DeFi networks already manage more than US\$200bn, we are still early in the technology adoption cycle.

With this Crypto Bundle, Altify offers market capitalisation-weighted exposure to the 10 most prominent Decentralised Finance (DeFi) enabled cryptocurrencies. The Crypto Bundle aims to capture the importance of each cryptocurrency in the ecosystem, as measured by the aggregate value investors assign to that cryptocurrency. This Crypto Bundle allows for direct investment in the cryptocurrencies constituting the Crypto Bundle and offers investors an innovative, cost-efficient, and secure way to access the DeFi sector. The Crypto Bundle's assets are rebalanced monthly, held securely, and audited quarterly. The Crypto Bundle is rebalanced and reconstituted on the 1st of every month.

### **Theme Eligibility Criteria**

Cryptocurrencies are classified in the Decentralised Finance category if they fulfil the following set of eligibility requirements which are also subject to a monthly review. Cryptocurrencies must:

1. Be the native asset of a blockchain-enabled application that uses smart contracts to execute decentralised financial services. Decentralised finance applications are defined as those that compete or look to compete with one or more of the major traditional financial services business lines.

### **DeFi-focused Cryptocurrency Investable Universe:**

- |                          |                                    |
|--------------------------|------------------------------------|
| 1. Uniswap (UNI)         | 12. Frax Share (FXS)               |
| 2. Aave (AAVE)           | 13. Compound (COMP)                |
| 3. THORChain (RUNE)      | 14. 1inch Network (1INCH)          |
| 4. PancakeSwap (CAKE)    | 15. Kyber Network Crystal v2 (KNC) |
| 5. Loopring (LRC)        | 16. Synthetic (SNX)                |
| 6. Curve DAO Token (CRV) | 17. Lido DAO (LDO)                 |
| 7. Kava (KAVA)           | 18. 0x (ZRX)                       |
| 8. Rocket Pool (RPL)     | 19. JUST (JST)                     |
| 9. Gnosis (GNO)          | 20. Osmosis (OSMO)                 |
| 10. Maker (MKR)          | 21. Serum (SRM)                    |
| 11. GMX (GMX)            | 22. dYdX (DYDX)                    |

**Blue Chip Bundle | Ticker: BLUE**

To understand what the Blue Chip Bundle is all about, we need to start by understanding what Blue Chips are.

The term "Blue Chip" originally came from the game of poker, where blue chips had the highest value.

In the traditional space, 'Blue Chip' refers to large companies that are regarded as leaders in their respective sectors - think of names like Coca-Cola and Apple. One would invest in Blue Chip companies because they are considered among the most stable and reliable investments. Blue Chip companies have a long history of success, consistent earnings growth, large market capitalisations, and strong brand recognition. While this is a very sought-after investment strategy in the traditional space, the crypto space has yet to offer Blue Chip index options, until now.

The Blue Chip Bundle adopts the traditional concept of 'Blue Chip' investing and offers a unique investment opportunity for individuals wanting to gain exposure to Blue Chip cryptocurrencies. These cryptocurrencies provide a more stable investment option that offers lower volatility when compared to smaller or emerging cryptocurrencies.

With this Crypto Bundle, Altify offers equally-weighted exposure to the largest cryptocurrencies in the market's 10 leading sectors, ranging from the top Smart Contract player to the leading Metaverse player and everything in between. The Crypto Bundle aims to capture the importance of each crypto sector by investing an equal 10% weighting across each sector-leading cryptocurrency.

This Crypto Bundle allows for direct investment in the cryptocurrencies constituting the Crypto Bundle and offers investors an innovative, cost-efficient, and secure way to access multiple sector leaders through a single investment. The Crypto Bundle's assets are rebalanced monthly, held securely, and audited quarterly. The Crypto Bundle is rebalanced and reconstituted on the 1st of every month.

## Sector Selection

1. Overall Cryptocurrency Market
2. Smart Contracts
3. Exchange Tokens
4. Decentralised Finance
5. Web 3.0
6. Metaverse/ Gaming
7. Meme
8. Scaling Solutions
9. Payments
10. Oracle

## Theme Eligibility Criteria

Cryptocurrencies are classified in the Blue Chip category if they fulfil the following set of eligibility requirements which are also subject to a monthly review. Cryptocurrencies must:

1. Be the largest market capitalisation cryptocurrency in their sector.
2. Pass the sector-specific eligibility requirements.

\*If a cryptocurrency is found to be the largest in two or more sectors, the second largest in either sector will be examined, and the cryptocurrency with the highest market capitalisation will be used.

***Example: Ethereum becomes the largest cryptocurrency by market capitalisation.***

This would mean Ethereum would be the largest cryptocurrency in 2 sectors (Overall Cryptocurrency Market & Smart Contract Sector).

1. The second largest in both affected sectors will be examined: Bitcoin (Overall Cryptocurrency Market) and Binance Coin (Smart Contract Sector).
2. If it's found that Bitcoin has a larger market capitalisation than Binance Coin, then Bitcoin would be used for the Overall Cryptocurrency Market sector, while Ethereum would be used for the Smart Contract Sector.

## Blue Chip cryptocurrency investable universe:

1. Entire cryptocurrency market - subject to cryptocurrency exclusions seen in Annexure A.1 under Equally Weighted Cryptocurrency eligibility requirements.



### **Metaverse Bundle | Ticker: META**

This theme-based Crypto Bundle enables investors to passively invest in an equally weighted Crypto Bundle of the 5 largest and most dominant Metaverse-based cryptocurrencies as measured by market capitalisation.

By investing in this Crypto Bundle, investors can own a stake in the future of social interaction, gaming, sports and entertainment. Designed to keep pace with the rapidly evolving crypto market, this Crypto Bundle automatically rebalances every month, seamlessly adapting to market changes.

### **Theme Eligibility Criteria**

Cryptocurrencies are classified in the Metaverse category if they fulfil the following set of eligibility requirements which are also subject to a monthly review. Cryptocurrencies must:

1. Be the native asset of a blockchain-enabled application (dApp) that's primary focus is involved in the sectors of gaming, sports, culture, entertainment, virtual reality or NFTs
2. Can be the native token of a layer-1 blockchain.
3. Must comply with the Altify cryptocurrency eligibility requirements.



### **Web 3.0 | Ticker: WEB3**

This theme-based Crypto Bundle enables investors to passively invest in an equally weighted Crypto Bundle of the 5 largest and most dominant Web 3.0-based cryptocurrencies as measured by market capitalisation.

By investing in this Crypto Bundle, investors can own a stake in the building blocks of the next generation of the World Wide Web, where the value transfer and control of user data ultimately accrues to the end users themselves. Designed to keep pace with the rapidly evolving crypto market, this Crypto Bundle automatically rebalances every month, seamlessly adapting to market changes.

### **Theme Eligibility Criteria**

Cryptocurrencies are classified in the Web3 category if they fulfil the following set of eligibility requirements which are also subject to a monthly review. Cryptocurrencies must:

1. Be the native asset of a blockchain-enabled application (dApp) that's primary focus is involved in the sectors of Decentralised Physical Infrastructure (DePin), Compute, and Data.
2. Can be the native token of a layer-1 blockchain.
3. Must comply with the Altify cryptocurrency eligibility requirements.