

Compass Crypto Total Return Indices

Methodology

October 28th, 2024

Version History

Readers can access other versions of the methodology for the Compass Crypto Total Return Indices online when they become available on Compass Financial Technologies website (www.compass-ft.com).

Date	Version	on Change	
November 28 th , 2023	1.0	Methodology Publication	
September 10^{th} , 2024	1.1	Add Compass Solana Total Return Index	
October 28 th , 2024	1.2	Add Compass Aptos Total Return 90% Index.	

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1 Introduction

The Compass Crypto Total Return Indices (the *Indices* or the *Index*) measure the return generated by an investment in a specific digital asset while staking on the corresponding blockchain.

Indices are computed every day of the year.

The Indices can be accessed online on the Compass Financial Technologies website (www.compass-ft.com) or on Bloomberg or Refinitiv.

The Compass Crypto Total Return Indices have been designed to provide institutional investors with independent and robust cryptocurrency prices. Based on a resilient and BMR compliant methodology, they serve as independent and transparent prices to value cryptocurrency portfolio or as benchmarks for investors willing to issue investment products tracking cryptocurrencies prices.

Compass Crypto Total Return Indices are owned by Compass Financial Technologies SA. The Index Administrator and Calculation Agent is Compass Financial Technologies (France).

The Indices available as of October 25^{th} 2024 are listed in the Appendix.

2 Input Data

2.1 Underlying Price

Compass Crypto Total Return Indices invest in one or more digital assets called Underlying Components.

Reference prices of the Underlying Components used in the determination of the Index are the hourly Compass Crypto Reference Indices fixing at 4pm London Time, noted $Ref_{LD}^{4pm}(t)$.

The Compass Crypto Reference Indices have been designed to provide institutional investors with independent and robust cryptocurrency Reference prices. Based on a resilient and BMR-ready compliant methodology, they serve as independent and transparent prices to value cryptocurrency portfolio or as benchmarks for investors willing to issue investment products tracking cryptocurrencies prices.

More details on the Compass Crypto Reference Indices including the methodology are available on the Compass website (https://www.compassft.com/wp-content/uploads//CCRI_Methodology.pdf)

2.2 Staking Yield

Compass Crypto Total Return Indices use Compass Staking Yield Reference Indices to reflect the return linked to staking.

The Compass Staking Yield Reference Indices measures the annualized staking yield obtained when staking on a specific blockchain

The Compass Staking Yield Reference Indices have been designed to provide institutional investors with independent and robust blockchain staking yield. Based on a resilient and BMR-ready compliant methodology, they serve as independent and transparent yield to value cryptocurrency portfolio or as benchmarks for investors willing to issue investment products tracking cryptocurrencies prices.

More details on the Compass Staking Yield Reference Indices including the methodology are available on Compass website. $^{\rm 1}$

 $^{^{1} \}verb+https://www.compassft.com/wp-content/uploads/Methodology_Compass_Staking_Yield_Reference_Index.pdf$

3 Index Calculation

3.1 Index Mechanism

The Compass Crypto Total Return Indices invest simultaneously in a long position in a specific digital asset while staking a proportion of the investment on the digital asset blockchain.

On every Reinvestment Date, the staking reward gained since the previous reinvestment date is accrued to the previous digital asset quantity invested.

The Index Level on each calculation date corresponds to the value of the Index at 4pm London Time.

3.2 Index Calculation formula

3.2.1 Index Level

On each Calculation Date t with respect to cryptocurrency c, the Compass Crypto Total Return Index level (IL(t)) is computed using the formula below.

If
$$t = t_0$$
,

$$IL(t) = 100$$

with

$$CIQ(t_0) = \frac{IL(t_0)}{Ref_{LD}^{4pm}(t_0)}$$

Else,

$$IL(t) = CIQ(t) \times Ref_{LD}^{4pm}(t)$$

with

$$CIQ(t) = CIQ(t-1) + CIQ(R_t) \times \frac{STY_c(t) \times nbSec_t}{100 \times nbSec} \times U(t-1)$$

where,

- R_t is the first Reinvestment Date strictly preceding t as defined in table 3
- t_0 is the Index launch date
- IL(t) is the Index Level at 4pm London time on t
- CIQ(t) is the Crypto Index Quantity on t. It represents the quantity of coins held in the Index on t
- *nbSec*: is the number of seconds in 1 year
- $nbSec_t$: is with respect to cryptocurrency c, the staking period duration expressed in seconds
- $Ref_c^{4pm}{}_{LD}(t)$ is with respect to cryptocurrency c, the Compass Crypto Reference Index fixing at 4pm London Time
- $STY_c(t)$ is with respect to cryptocurrency c, the Compass Staking Yield Reference Index value corresponding to the staking period which ends on t
- U(t) is the Utilisation Rate. It represents the percentage of index value staked on t as defined in table 3.
- staking period: with respect to cryptocurrency c, the period during which the quantity of coins held in the index remains identical

3.3 Calculation Date

A Calculation Date means any calendar day.

3.4 Eligible Reinvestment Date

An Eligible Reinvestment Date means with respect to a Calendar, any day on which the Calculation Date is not an holiday.

3.5 Rounding of Data

Indices values are computed with all decimals available and are published with 4 decimals.

3.6 Calculation Frequency and Dissemination

The Indices are computed and published for each calendar day as soon as the data necessary to calculate the relevant staking yield reference index on that day is available. Indices levels are published at 4:30pm London time. Indices levels are published on the Compass Financial Technologies website (https://www.compass-ft.com) and are distributed to Bloomberg and Refinitiv under the ticker symbols listed in tables in the Appendix.

4 Index Governance

4.1 Index Administrator

Compass Financial Technologies is the Administrator of the Index ("the Index Administrator"). The Index Administrator is responsible for the day-to-day management of the Index and is also responsible for decisions regarding the interpretation of these rules.

4.2 Index Calculation Agent

Compass Financial Technologies is the Calculation Agent of Compass Crypto Total Return Indices. It is responsible for the day-to-day management of Indices computation according to this methodology.

4.3 Index Committees – Supervisor

Compass Financial Technologies has established governance functions to review and provide challenges on all aspects of the Indices determination process. Governance functions are managed by the Compass Oversight Committee (the Oversight Committee) and by the Compass Staking Yield Reference Index Steering Committee (the Steering Committee).

Compass Oversight Committee:

The Compass Oversight Committee oversees all areas of the benchmark determination processes. It is responsible for supervising and controlling the Index operations team on all Compass Indices. It is also responsible for:

- 1. Periodic review of incidents
- 2. Making final decisions in case the Index operations team are not capable or allowed to take decisions
- 3. Defining and implementing organisation procedures for the Index operations team
- 4. Defining and overseeing measures that allow for mitigation of operational risks
- 5. Supervising internal or external audit results
- 6. The implementation and supervision of the potential codes of conduct that have to be implemented

The Oversight Committee is comprised of senior representatives of Compass Financial Technologies and external industry experts.

Compass Staking Yield Reference Index Steering Committee:

The Compass Staking Yield Reference Index Steering Committee is responsible for:

- 1. Determining the calculation methodology and the rules governing the publication of the Compass Crypto Total Return Indices
- 2. Making periodic reviews of the Compass Crypto Total Return Indices to validate the robustness of the methodology and to analyse the impact of methodology changes
- 3. Organising consultation with Compass Crypto Total Return Indices stakeholders if necessary
- 4. Ensuring that Compass Crypto Total Return Indices offers a reliable and representative view of the market

The Compass Staking Yield Reference Index Steering Committee is composed of members from Compass. The Steering Committee may include individuals or representatives of companies, academics, external counsels, or market participants.

The Steering Committee assembles once a year in April. However, at the request of a member of the Steering Committee, the Steering Committee may meet on any other day of the year to discuss potential

"market emergency" and "force majeure" events or any other situation, which makes an extraordinary meeting necessary.

All Committee decisions will be published without delay following the Committee decision.

The Compass Staking Yield Reference Index Steering Committee members as of October 2024 are:

- Edouard Mouton, Compass Financial Technologies
- Guillaume Le Fur, Compass Financial Technologies
- Wenceslas Sanchez, Compass Financial Technologies
- Michael Petch, Independent

As of October 28th, 2024, Edouard Mouton chairs the Steering Committee.

5 Methodology Changes - Maintenance

This methodology may be supplemented, amended in whole or in part, revised or withdrawn at any time. Supplements, amendments, revisions and withdrawals may also lead to changes in the way the Index is compiled or calculated or affect the Index in another way.

In the absence of exceptional circumstances affecting the Index calculation or methodology, this Methodology is reviewed annually. The review will includes, inter alia, the following points:

- 1. Verify if the methodology and computation are still in line with the original purpose of the Indices
- 2. Make sure the quality and quantity of the input data remain sufficient

Changes made to this methodology are published after the review date and implemented on a reasonable time horizon.

Compass Financial Technologies may terminate a Compass Crypto Total Return Index due to certain extraordinary market circumstances. These circumstances include, but are not limited to:

- 1. The liquidity in one of the underlying cryptocurrencies of a Compass Crypto Total Return Index declines and becomes not sufficient enough to provide an efficient market
- 2. The underlying cryptocurrency of a Compass Crypto Total Return Index experiences a contentious hard fork in which both forks survive.

Changes or termination will be subject to the review and approval of the Steering Committee which will receive all the information related to the change or termination. In case of material changes, a notice will be provided at least two weeks in advance.

The results of the Steering Committee will be published in a press release on Compass Financial Technologies website and distributed timely to data vendors and major news sources.

6 Expert Judgment

The Indices are based on written and transparent rules and procedures with the purpose of minimising as much as possible the exercise of discretion and expert judgment.

Indices are built from input data that is not interpolated, extrapolated or adjusted. In case of lack of data, the last available data is employed.

Nevertheless, the exercise of expert judgment may become necessary in case of errors and Index restatements, delayed and missing data, hard forks, airdrops, or unexpected situations arising from market stress.

In the event that expert judgment is exercised, this will be done by resorting to the written procedures reported in the methodology and by communicating the decisions taken to the Steering Committee and the Internal Compliance Function in order to prevent conflicts of interest and to protect the integrity and the independence of the Index determinations. In addition, the interest of the Index users and the market integrity will be taken into account.

7 Errors and Recalculations

Even though the process of Index calculation is completely automated and pre-defined, an error can be discovered after the publication of the Index.

In case of a material error the Index will be redetermined, and the Index clients will be notified about the error and the date of the publication of the redetermined Index. An error is considered material on the basis of its size, the dates of its discovery and of its occurrence, and the impact of the Index redetermination on the users. The discovery of any error is reported to the Steering Committee.

In case a material error is discovered and the Administrator recognises a manipulation or an attempted manipulation of the Index level or the input data it will be reported to the regulator.

8 Potential Limitations

The issues presented in the following non-exhaustive list may limit the ability of some of the Indices to represent the market they are intended to measure, the ease of replication by investors, and more generally the usefulness of the Indices to users.

- The market the Index is meant to measure is volatile. In particular, cryptocurrencies may be subject to market movements much more than traditional asset classes such as stocks and bonds as a consequence of illiquidity, market trends and changes to market structure.
- The input data provider may fail to provide accurate and timely data.
- Cryptocurrency prices are derived from several trading venues, each of which is characterised by a different market structure and the price of a cryptocurrency may sometimes be different across different trading venues. In addition, cryptocurrency exchanges may suffer problems that usually do not affect regulated asset exchanges, such as distributed denial-of-service, trading halt, hacking of private keys, lack of standards comparable to those of regulated exchanges, rapidly evolving technology and uncertain legal frameworks. Finally, the publication of the Indices may cease. Should this occur, the regulation regarding user transitions will be followed, but the existence of a suitable substitute is not assured.

9 Cases not covered in rules

In cases which are not expressly covered in these rules, operational adjustments will take place along the lines of the aim of the index. Operational adjustments may also take place if, in the opinion of the Index Administrator, it is desirable to do so to maintain a fair and orderly market in derivatives on this index and/or this is in the best interests of the investors in products based on the Index and/or the proper functioning of the markets. The Index Administrator will report to the Supervisor if it took a decision about a case which is not specifically covered in the rules for comments and review.

10 Liability

The Index Administrator and the Supervisor are not liable for any losses resulting from supplementing, amending, revising or withdrawing the rules for the index. The Administrator will do everything within its power to ensure the accuracy of the composition, calculation, publication and adjustment of the Index in accordance with relevant rules. However, neither the Index Administrator, nor the Supervisor are liable for any inaccuracy in index composition, calculation and the publication of the Index, the information used for making adjustments to the Index and the actual adjustments. Furthermore, the Index Administrator and the Supervisor do not guarantee the continuity of the composition of the Index, the continuity of the method of calculation of the Index, the continuity of the dissemination of the index levels, and the continuity of the calculation of the Index.

Compass Crypto Total Return Indices - Codes			
Index	Compass API	Bloomberg	Refinitiv
	Code	Code	Code
Compass Ethereum Total Return Monthly Index	ETHTR90M	ETHTR90M	.ETHTR90M
Compass Ethereum Total Return Index	ETHTR	ETHTR	.ETHTR
Compass Solana Total Return Monthly Index	SOLTRM	SOLTRM	.SOLTRM
Compass Aptos Total Return 90% Index	APTTR90	APTTR90	.APTTR90

Appendix: Compass Crypto Total Return Indices

 Table 1: Compass Crypto Total Return Indices - Publication Codes

Compass Crypto Total Return Indices - Input data			
Compass API Code	Underlying Price	Staking Yield	
ETHTR90M	CCRIETH	STYETH	
ETHTR	CCRIETH	STYETH	
SOLTRM	CCRISOL	STYPSOL	
APTTR90	CCRIAPT	STYAPT	

Table 2: Compass Crypto Total Return Indices - Input data

Compass Crypto Total Return Indices - Parameters			
Compass API Code	Compass API Code Utilisation Rate Reinvestment Date Caler		Calendar
ETHTR90M	90%	First eligible reinvestment date of each month	CalUK
ETHTR	100%	Every weekday which is not an holiday for the	CalUK
		Calendar	
SOLTRM	100%	First eligible reinvestment date of each month	CalUK
APTTR90	90%	Every calendar day	CalUK

Table 3: Compass Crypto Total Return Indices - Parameters

Calendar Definition		
Calendar	Definition	
CalUK	means any day other than a Saturday or Sunday which is not a bank holiday in UK	

Table 4: Calendar definition

Staking Yield related documentation		
Staking Yield	documentation	
STYETH	https://www.compassft.com/wp-content/uploads/Methodology_Compass_Staking_	
	Yield_Reference_Index_Ethereum.pdf	
STYPSOL	https://www.compassft.com/wp-content/uploads/Methodology_Compass_Staking_	
	Yield_Reference_Index_Solana.pdf	
STYAPT	https://www.compassft.com/wp-content/uploads/Methodology_Compass_Staking_	
	Yield_Reference_Index_Aptos.pdf	

Table 5: Calendar definition

11 Disclaimer

Nothing contained herein shall constitute or shall be deemed to constitute a financial, legal, tax or other advice of any kind, or a solicitation to purchase, sell or invest in any financial products or to engage in any financial strategy. Compass Financial Technologies SA or any of its affiliates ("Compass") (i) does not guarantee the adequacy, the accuracy, the timeliness, the completeness, the evolution and/or the movements of its indices or any data included therein (the "Indices" or the "Index"), (ii) shall not have any liability for any errors, omissions, delays or interruptions therein and (iii) makes no warranty, express or implied, as to results to be obtained by owners of any securities, or by any other person or entity from the use of the Indices. Compass does not make any express or implied warranties, and expressly disclaims, all warranties of merchantability or fitness for a particular purpose or use with respect to the Indices. Without limiting any of the foregoing, in no event shall Compass have any liability for any lost profits or indirect, punitive, special or consequential damages or losses, even if notified of the possibility thereof.



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