

Conditional Funding Markets question resolution policy

Conditional Funding Markets - Question Resolution Policy

Purpose

This policy defines the rules and principles to be followed when resolving **Decision Questions** and **Metric Questions** submitted through Butter's Conditional Funding Markets (CFM).

This policy serves one main purpose:

Ensuring that CFM Decision Questions and Metric Questions going to arbitration are resolved correctly.

In case of a direct contradiction between this policy and a specific condition in a question statement, the latter shall take precedence except in cases of fundamental resolution principles (e.g., the policy rules on UTC timestamps and official data sources can be overridden by the question statement).

Definitions

Question Resolution: the act of answering the market's question.

Opening Date: The moment when the question becomes available

CFM: Butter's Conditional Funding Market mechanism. By default, the version referenced corresponds to

<https://github.com/butterygg/cfm-v1/tree/d294afbd5297788a2576aa279c06dfb7597311a7>.

By default, a "CFM" represents a given CFM instance, represented by `FlatCFM` in the codebase.

Funding Entity: The entity that will distribute funds. This will usually be an organization that controls the CFM deployer address and defines the CFM parameters, including the decision question and the metric question.

Projects: Projects competing for funding in a given CFM. Each project corresponds to a conditional outcome, based on Gnosis' Conditional Token Framework and Butter's CFM contracts. These are also called "decision outcomes".

Funding Decision: The decision of the Funding Entity to fund none, one or multiple Projects within a given CFM instance. A “decision” is valid when it represents a commitment to act (or not act) in a manner that aligns with the Funding Entity’s capacity and intent. It must originate from the Entity or its representatives in a way that reasonably reflects the Entity’s will.

Decision Question: A multi-select question pertaining to the CFM funding decision. Each option of this multi-select is a project name or “decision outcome name”.

Conditional Scalar Market: A prediction market over a scalar outcome, which resolves with a numerical value. Each scalar outcome is conditional on one of the CFM’s decision outcomes. This is represented in smart contracts by `ConditionalScalarMarket`.

Metric Question: A numerical question pertaining to the resolution of one of the CFM scalar outcomes.

Rules

1. Decision Questions Resolution

Decision Questions in CFM relate to **verifiable funding decisions** and must be resolved based on **publicly available announcements** from the Funding Entity.

Decision Questions are implemented as multiple-choice options in Reality.eth.

1.1. Invalid Questions

- The **funding decision** must be publicly documented through an **official announcement** from the **Funding Entity**.
- **Official announcements** may include, but are not limited to:
 - Governance forum posts
 - Blog posts on the Funding Entity’s official website
 - Official announcements on social media accounts verified as belonging to the Funding Entity
 - On-chain transactions directly associated with the funding round, if explicitly labeled as such
 - Valid: *A foundation’s board approves funding for Project A and announces it via its official blog and verified social media. Since this comes from an authorized source and reflects a formal commitment, it qualifies as a valid decision.*
 - Invalid: A prominent DAO member posts in the governance forum: "The DAO will fund Project A!" However, the DAO has a formal voting process for funding projects that hasn’t occurred, and this individual lacks authority. Since it doesn’t reflect an official commitment, it’s not a valid decision.
- The **question must clearly identify a single CFM instance together with a single Funding Entity**

- Valid: *“Which project received funding during Uniswap Foundation CFM #1?”*
- Invalid: *“Which project received funding during Uniswap CFM?”*
- Invalid: *“Which project received funding during Butter’s most important CFM?”*
- Invalid: *“Which project received funding during Uniswap’s and Optimism’s CFMs?”*
- Invalid: *“Which project received funding during Uniswap’s and Optimism’s CFMs?”*
- **Project names listed in the multiple-choice options must unambiguously identify the intended projects as referenced in the announcement itself.**
 Variations in spelling or format are acceptable unless they create ambiguity. If a name is ambiguous, it should be interpreted in the most reasonable way based on the announcement, context of the question and common industry usage.
 - Valid: *“Which project received funding during Uniswap Foundation CFM #1?” with options [“Aave v3”, “Aave v2”].*
 - Valid: *“Which lending protocol received funding during Uniswap Foundation CFM #1? Use protocol references from DefiLlama” with options [“Aave”, “Compound”].*
 - Valid: *“Which lending protocol received funding during Uniswap Foundation CFM #1?” with options [“protocol 1”, “protocol 2”] and the announcement containing an unambiguous explanation like “Protocol 1’ identifies with Aave, ‘Protocol 2’ identified with Compound”.*
 - Invalid: *“Which project received funding during Uniswap Foundation CFM #1?” with options [“Lending Protocol”, “DEX”] and no further explanation in the announcement text.*

1.2. Resolving Unclear Questions

- If multiple announcements exist with conflicting information, the **latest valid announcement before the Opening Date** must be considered the valid one.
- If **no valid announcement exists by the Opening Date**, the question shall be resolved as **“Answered too Soon”**.
- If multiple valid answers exist, but some of them are missing from the multiple-choice options set in the Reality.eth question, the correct choices should still be selected from those available. The absence of certain valid answers does not automatically invalidate the question.
 - *Ex: with question “Which project received funding during Uniswap Foundation CFM #1?” and options “A” and “B”. Supposing that project “A” and “C” got funded, the correct response is [“A”].*
- If multiple projects received funding but the question is phrased as expecting a **single answer**, and multiple answers are equally valid, the question shall be resolved as **“Invalid”**.

2. Metric Questions Resolution

Metric Questions rely on **historical data** (e.g., Total Value Locked (TVL)) and must refer to a clear, unambiguous methodology.

2.1. Canonical Data Source

- The **primary data source** for metric computations should ideally be explicitly linked in the question statement, e.g. as a Github repository link with commit hash or an IPFS file containing more detailed information.
- **By default, if no specific data source is mentioned, DefiLlama should be used for metrics referring to DeFi historical data.** The authoritative version is the last one **deployed at the question's Opening Date**.
 - Ex: "What is Aave's aggregate TVL over all Superchains?". This will resolve to the total Superchain TVL as computed by DefiLlama at the question's Opening Date.
- If the question provides a **specific repository, dataset, or methodology**, that reference takes precedence over DefiLlama, even if DefiLlama provides similar data.
 - Ex: "What is Aave's aggregate TVL over all Superchains as reported by <https://github.com/some/repository/tree/1234/?>". This will resolve to the total Superchain TVL as reported by the referenced repository at the specific hash.

2.2. Calculation Methodology

Metric Questions may involve **time-series computations**, such as moving averages or differences between historical values.

Averaging Function

- The **7-day trailing average of a metric M** at date **D** is defined as:

$$M(D) = \frac{1}{7} \sum_{i=0}^6 \text{M}(D-i)$$

where **M(D-i)** represents the recorded metric for a given project on the specified date.

Ex: "7-day trailing average of TVL on chain XYZ on 2025-03-01".

Missing Data Handling

- If **one or more days are missing**, and DefiLlama provides interpolated or backfilled values, those must be used.
- If missing values cannot be reconstructed, the question must be resolved as **"Invalid"**, unless the question specifies a fallback rule.
- If a computed result is **negative**, the reported answer must be **0**.

3. Default Assumptions and Edge Cases

The following assumptions apply **by default** unless explicitly overridden in the question statement or any rules referenced by the question statement:

1. **Dates and times**

- All dates default to UTC with the 24h clock (e.g., “7-day trailing average of TVL on chain XYZ on 2025-01-01” must be interpreted as up to 2025-01-01 00:00 UTC?”
2. **Handling Currencies**
 - If a question requires an answer in a specific currency but does not specify the exact currency, the answer should be provided in USD.
 3. **Rounding Method**
 - If a question does not specify the exact rounding method, the answer should be rounded down to the nearest integer (e.g., if the correct amount is \$10,499.99, the correct answer is 10499).
 4. **Incomplete or Vague Questions**
 - If a question lacks essential details (e.g., missing a Funding Entity in a Decision Question or an exact metric definition in a Metric Question), it must resolve as “**Invalid**”.
 5. **Delayed or Future Data**
 - If a question’s resolution depends on an event or data that **has not yet been published** by the Opening Date, it must be resolved as “**Answered Too Soon**”.
 6. **Finality of Resolution**
 - Jurors must **adhere strictly to the question wording** and cannot infer unstated intent.
 7. **Data Sources Health**
 - If the data sources for **Metric Questions** are compromised in a way that **renders them unreliable**, the question should be resolved as follows:
 - If the data source is **provably hacked** or **providing false data**, as confirmed by **reliable experts** (e.g., maintainers of DefiLlama, reputable blockchain analytics firms, or domain experts in DeFi data aggregation), the question shall be resolved as “**Invalid.**”
 - If the data source is **temporarily down at the opening date** due to a **non-malicious issue** (e.g., a DNS problem, a short-term outage), the question shall be resolved as “**Answered Too Soon**”, **only if** there is a reasonable expectation that the data source will be restored within a short period.
 - If the outage is **long-term, indefinite, or results in missing data at the resolution time**, the question shall be resolved as “**Invalid.**”
 - If **only some protocols or chains are affected** while others remain verifiable, **only the affected questions should be invalidated**, while unaffected questions should be resolved normally.
 - **Clarifications on Expert Verification**
 - A claim that data has been **hacked or manipulated** must be supported by evidence from **trusted data providers or independent experts**.
 - If **multiple credible sources** contradict each other about whether the data is valid, the **most authoritative, well-documented evidence** should be used for resolution.
 - In case of **uncertainty** where no final determination is possible, the question should be resolved as “**Invalid**” to prevent unreliable answers.

4. General-purpose Reality.eth Oracle question resolution policy

This *Conditional Funding Markets – Question Resolution Policy* overrides the *General-purpose Reality.eth Oracle – Question Resolution Policy*. Any issue not addressed here must be resolved using the guidelines specified in the Reality.eth policy.

Reference document:

ipfs://QmNV5NWwCudYKfiHuhdWxcccPyxs4DnbLGQace2oMKHkZv/Question_Resolution_Policy.pdf