The Calçotada Protocol: Equity PEG Tokens for Decentralized Venture Capital

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Abstract—This paper introduces the Calçotada Protocol, an open specification for a blockchain-based mechanism that democratizes early-stage venture capital through performance-pegged tokens and buyback mechanics inspired by convertible notes. The protocol is designed to give retail investors structured exposure to real-world startup success—moving beyond speculation to create a new asset class: Performance Equity Growth (PEG) tokens. These tokens are explicitly tied to company valuation milestones and offer transparent exit paths through protocol-enforced buybacks. By redirecting the speculative energy of meme-driven investors toward tangible value creation, the Calçotada Protocol opens a powerful new channel of venture funding for traditional startups outside the crypto-native sphere. This document presents an early MVP implementation and lays the foundation for a broader, community-driven protocol. We invite collaborators—from financial engineers to DAO architects—to help shape this emerging standard for decentralized venture capital.

Index Terms—Blockchain, Venture Capital, Equity Peg Token, Retail Investing, Tokenized Buyback, DAO, Open Specification

I. Introduction: A Foundation for Real-World Crypto Value

While blockchain has the potential to transform financial systems, much of today's crypto landscape is dominated by speculative, zero-utility assets—most notably, meme coins. These tokens attract massive retail attention yet contribute little to real economic value creation. The result is a cycle of hype, volatility, and financial loss that undermines trust in the broader promise of web3 as a foundation for meaningful innovation.

At the same time, startup founders continue to face structural barriers to early-stage capital. Traditional venture capital remains concentrated in the hands of a few players, often funding only a narrow set of trends and gatekeeping access to company-building resources. This leaves many high-potential founders without access to seed funding, even when their ideas have strong market validation or cultural relevance.

The Calçotada Protocol proposes a new path. By introducing a class of Performance Equity Growth (PEG) tokens, we present a framework for aligning token value with company success. These tokens are issued against valuation milestones and governed by smart contracts that enforce financial transparency and buyback mechanisms. For investors, this offers exposure to real-world growth with access to liquidity and governance. For founders, it opens a new channel of capital that is faster, more inclusive, and tied to transparent valuation logic.

Critically, the protocol is not just theoretical. Its initial development is anchored in the funding needs of a real operating company: The Calçotada Company, a food-tech startup with a validated business model and operational roadmap. By grounding the protocol in a working use case from day one, we ensure that its architecture, incentives, and smart contracts are developed in direct response to actual startup constraints—not abstract scenarios. This applied approach allows us to test buyback logic, community governance, and financial flows in a live environment, creating a higher-trust and more credible launch for the broader framework.

This paper introduces the protocol as both a Minimum Viable Product (MVP) and an open specification. While we acknowledge the role traditional VC has played in advancing innovation, we also recognize its limitations in scope and inclusivity. By enabling startup capital formation through PEG tokens, we open a new source of venture capital—one powered by community participation, blockchain transparency, and a more diverse range of ideas entering the economic system.

II. The Calçotada Tradition: A Symbol of Collective Success

The naming and symbolism of the Calçotada Protocol draws inspiration from the centuries-old Catalan tradition of la calçotada, a communal feast that embodies the values of collaboration, shared success, and collective contribution. This tradition, recognized by UNESCO as an Intangible Cultural Heritage, serves as the perfect metaphor for democratized venture capital.

In a traditional calçotada, everyone contributes to create the best possible experience—from growing and harvesting the calçots (a type of spring onion), to preparing the fire, making the romesco sauce, and sharing the meal. No single person owns the success; rather, it emerges from the collective effort where each participant adds their unique contribution. This symbolism directly translates to our protocol's philosophy: democratizing access to venture capital by allowing everyone to participate in and benefit from startup success.

The protocol's dual-token architecture reflects the key elements of this tradition:

- The NFT (Calçot-Coin): Represents the people, their enthusiasm, and the collective spirit. Just as each person at a calçotada brings their unique contribution, each NFT holder becomes part of the governance collective, sharing in decision-making and community building.
- The RMSC Token (Romesco): Named after the essential sauce that defines a calçotada's success, RMSC represents the "secret sauce" of venture capital—the capital itself and its returns. As any Catalan will tell you, "the success is always in the sauce," and similarly, the success of startups lies in proper funding and value creation.
- Company Equity (The Fire): Just as the fire transforms raw calçots into a delicious meal, company equity represents the transformative engine that converts capital into returns. The protocol acts as the fire that powers companies to succeed through structured, transparent funding mechanisms.

This tradition-inspired naming serves a dual purpose: it honors the collaborative spirit essential to successful venture capital while creating a memorable, culturally-rooted identity that distinguishes our protocol from purely financial instruments. The Calçotada Protocol isn't just about investment returns—it's about building a community where everyone can participate in nurturing innovation and sharing in its success.

III. State of the Art: Venture Capital, Tokenization, and Speculation

The rise of blockchain has introduced a new class of financial primitives—tokens—that allow for programmable ownership, decentralized governance, and borderless capital formation. These innovations have prompted a wave of alternative fundraising models for startups, most notably Initial Coin Offerings (ICOs), token presales, and security token offerings (STOs). However, despite their structural novelty, most of these approaches have failed to address one fundamental challenge: the link between token value and real company performance.

A. The Tunnel Vision of Venture Capital

In Power and Progress (2023), Acemoglu and Johnson open with a powerful critique of how technological trajectories are shaped. They argue that innovation, rather than being a neutral force for collective uplift, often serves the narrow agendas of those controlling capital flows. In the context of venture capital, this dynamic manifests as tunnel vision—where funding flows toward ideas aligned with dominant investor interests, not necessarily those with the most societal relevance or disruptive potential.

This systemic bias is amplified by the structure of the VC industry itself, which filters startup potential through a small number of high-net-worth individuals and institutions. The result is a cycle of centralized decision-making and trend-following capital allocation, as documented in works by Gompers and Lerner [?] and more recently by Kenney and Zysman [?].

B. The Rise—and Limits—of Token-Based Startup Financing

Blockchain-based financing emerged as a promising alternative to VC dominance. ICOs, in particular, were initially seen as a democratized fundraising mechanism. However, studies such as Howell et al. (2020) [2] and Catalini & Gans (2019) [3] found that token value in these offerings was often driven by speculative market sentiment rather than by startup fundamentals. The lack of intrinsic utility or rights backing these tokens made them volatile and prone to pump-and-dump cycles.

Attempts to bridge token value with financial fundamentals include models like the Simple Agreement for Future Tokens (SAFT), token warrants [7], and hybrid governance protocols (e.g., Compound, MakerDAO). Yet these models stop short of enforcing a valuation peg—a strict, transparent link between company performance and token economics.

Moreover, the majority of these fundraising models have been designed to serve crypto-native projects—protocols, DeFi platforms, and dApps—rather than general startups with traditional product-market strategies or offline operations. This creates a structural exclusion: while crypto capital is abundant, it remains inaccessible to founders outside the ecosystem who lack deep technical ties to Web3 culture or tooling.

As blockchain infrastructure matures and regulatory clarity improves, there is a growing opportunity to extend DAO-based venture financing to traditional startups. Doing so requires token models that reflect the financial logic of early-stage equity, not speculative or utility-only design.

C. The Missing Piece: Equity Peg Tokens

Recent research by Cao (2023) [1] differentiates between token and equity-based startup financing, concluding that token sales provide liquidity but introduce misalignment risks unless structured to reflect startup success metrics. This gap motivates the core innovation of the Calçotada Protocol: the design of Performance Equity Growth (PEG) tokens, which are governed by on-chain logic tied to company valuation.

PEG tokens act as a synthetic representation of equity performance—without requiring the legal complexity of security issuance—by enforcing treasury-backed buyback mechanics once valuation milestones are achieved. This model builds on the foundations of tokenized convertible instruments but extends them with financial enforcement via smart contracts, oracle-fed financial data, and protocol-level transparency.

PEG tokens aim to serve not only crypto-native ventures but any startup that can benefit from structured capital, community engagement, and transparent governance. This extends the reach of token-based financing beyond the narrow corridor of Web3-native businesses and opens the door for new industries to access decentralized capital infrastructure.

D. Beyond Speculation: Capturing Retail Energy for Innovation

Another key motivation for this protocol is the observed misalignment between retail investor behavior and long-term innovation. Meme coins and speculative tokens have attracted vast inflows from non-accredited investors who are excluded from traditional VC. While often dismissed as irrational actors, these users are expressing a real hunger for high-upside opportunities.

Recent studies highlight that meme coins (e.g., Dogecoin, Shiba Inu, PEPE, and $TRUMP) are driven primarily by social momentum, narrative virality, and celebrity or influencer activity rather than utility or project fundamentals [?], [?]. Despite high volatility, they consistently attract hundreds of thousands of wallets, as seen in the over 700,000 wallets impacted by the $TRUMP crash in 2024 [?].

Far from being irrational, these users are seeking accessible, high-upside entry points—currently unavailable through traditional equity mechanisms. As retail sentiment continues to move faster than institutional cycles, it represents a powerful force if properly directed [?], [?].

Redirecting this energy from pure speculation toward structured, valuation-pegged startup exposure could unlock meaningful capital for underserved founders. In this sense, PEG tokens are not just technical artifacts—they are political instruments. They challenge the concentration of venture power, expand the set of founders with access to capital, and provide retail investors with an opportunity to participate in shaping the economic frontier.

IV. Extended Analysis of Dual-Token Models

A. Dual-Asset Token Models

A growing class of decentralized finance and DAO systems use a dual-token model, combining:

- A non-fungible or governance token for voting/access
- A fungible token for utility or financial participation

Examples include:

Charged Particles offers a framework allowing NFTs to hold fungible tokens—creating hybrid assets, but not necessarily valuation-pegged economic instruments [8].

Tensor DAO issues a governance token (TNSR) alongside protocol usage tokens—holders vote and receive revenue-share—but tokens are not directly pegged to outside company valuations [9].

Origyn Protocol uses OGY as a fungible utility/governance token alongside provenance NFTs—though again, without a peg to company performance [10].

Academic work on NFT authentication and hybrid structures exists (e.g. Talgar & Banach [11], Avrilionis & Hardjono [12]), but these focus on access control or metadata consistency—not on funding mechanics or value-redemption.

B. Research Gap

While dual-token models are gaining traction in DeFi and NFT ecosystems, none explicitly link the fungible token's value to company performance or guarantee redemption pegged to valuation. Existing models focus on speculative pricing, membership perks, or governance, not on treating tokens as digital equity with built-in mechanisms to ensure economic alignment.

C. Contribution of the Calçotada Protocol

The Calçotada Protocol bridges these gaps by:

- Issuing Founder NFTs for governance and access;
- Issuing RMSC fungible tokens with a strict, externally validated PEG to company valuation;
- Enforcing buyback commitments on-chain via transparent smart contracts and external oracles;
- Combining liquidity, governance, and valuation parity in a single dual-token financial architecture.

V. Fundamental Key Assets and On-Chain Accountancy

A primary innovation of the Calçotada Protocol is the incorporation of on-chain accountancy as a transparent foundation for venture valuations, investor returns, and protocol trust. This section reviews the strategic assets necessary for protocol integrity and public confidence, highlighting how on-chain financial tracking directly informs estimated valuations and buyback commitments.

A. On-Chain Accountancy

Unlike traditional venture frameworks—where assessment of company value and investor ROI rely on opaque, often delayed financial reporting—the Calçotada Protocol mandates continuous, verifiable financial accounting on-chain. All critical financial flows (revenue, costs, operational reserves, distributions) are recorded in transparent smart contracts.

This enables:

- Real-time, tamper-proof valuation: Investors and protocol governors can view up-to-date figures at any point, reducing ambiguity or information asymmetry.
- Reliable ROI estimates: Using industry-standard financial metrics (see next subsection), the protocol can project and periodically update company valuations and potential ROI for token holders.
- Algorithmic buyback triggers: Token buyback amounts and conditions are derived from on-chain accounting data, automating investor returns and aligning incentives.

B. Valuation Methodology and Financial Modeling

To ensure that buybacks reflect fundamentally justified valuations, the protocol leverages conventional startup valuation techniques. The accompanying Tokenomics RMSC.ods model calculates buyback scenarios and expected valuations based on revenue multiples, discounted cash flows, or other startup-typical factors. These methods are encoded in oracles or contract formulas, supporting automated, auditable financial flows without need for off-chain negotiations.

This structure allows retail and institutional investors to benefit from return estimates and exit strategies anchored in both blockchain transparency and accepted financial practice—even before actual company liquidity events.

C. Additional Key Assets

- Smart Contracts: All protocol commitments (NFTs, RMSC tokenomics, buybacks, treasury reserve) are transparently on-chain.
- External Oracles: For validation of off-chain revenue or event triggers as needed.
- Decentralized Governance: Founder NFTs enable participatory protocol upgrades and control structures.

VI. Protocol Architecture

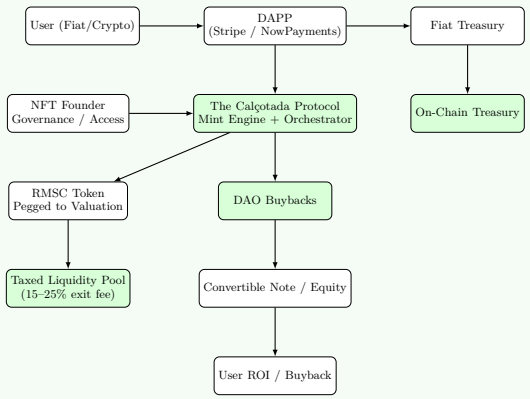

Fig. 1. Simplified architecture of the Calçotada Protocol: dual-token issuance and treasury-integrated valuation peg.

The Calçotada Protocol implements a sophisticated two-asset system deployed on the Polygon blockchain to facilitate decentralized venture funding. The architecture consists of four core smart contracts that work in concert: CalcotCoin (NFT), Romesco (RMSC token), Calçotada (orchestrator), and NormalizeToEuro (oracle integration). This system combines governance through non-fungible tokens (NFTs) with economic participation via fungible tokens (RMSC) that are designed to track company valuation.

A. CalcotCoin NFT: Governance and Foundational Access

The CalcotCoin (CEBA) contract implements an ERC721 NFT system designed to recognize early supporters and provide governance rights. The current implementation features:

Fig. 2. Calçot-Coin (CEBA) - The NFT representing community participation and governance

Technical Specifications:

- Token Type: NFT (ERC721)
- Token Name: Calçot-Coin
- Token Symbol: CEBA
- Batch: 0 (Genesis)
- Fixed supply of 333 NFTs (CEBA Genesis edition)
- Public allocation: 300 NFTs
- Premint - Reserved Treasury: 33 NFTs
- Linear pricing mechanism from 222.22 to 200 RMSC per NFT
- Sell Price: €100 per NFT with dynamic RMSC conversion

Minting Mechanism: The CalcotCoin contract implements a sophisticated dual-minting system where NFT purchases trigger a 2x RMSC mint. When purchasing an NFT:

1) The buyer receives 2x the NFT price in newly minted RMSC
2) Half of the RMSC is automatically transferred to the treasury as payment
3) The buyer retains the other half as a bonus incentive
4) The NFT is minted to the buyer's address

Planned Governance Features:

- One vote per wallet (implementation pending)
- Participation in valuation recognition and capital allocation decisions
- Access to exclusive founder communications

Note: The whitepaper originally specified 6 batches totaling 5,888 NFTs. The current implementation focuses on the initial 333-unit genesis collection, with future batches to be deployed based on protocol evolution and community feedback.

B. RMSC Token: Equity-Pegged Financial Instrument

The Romesco Token (RMSC) is the core financial instrument of the protocol, implemented as an ERC20

Fig. 3. Romesco (RMSCU) - The fungible token representing the "secret sauce" of venture returns

token with ERC1363 and ERC20Permit extensions for enhanced functionality.

Technical Implementation:

- Token Type: FT (ERC20)
- Token Name: Romesco
- Token Symbol: RMSCU
- Fixed maximum supply of 5,000,000 RMSC (hard cap enforced in contract)
- Premint Treasury: 200,000 RMSC for liquidity and operational needs
- Base Price: €0.40 per RMSC
- Pausable functionality for emergency situations
- Permit functionality for gasless approvals
- ERC1363 support for single-transaction transfers and callbacks

Economic Design:

- Minting controlled by the orchestrator contract only
- No burn functionality for regular users (maintains supply integrity)
- Designed for future buyback mechanism at €1.5–€3.0 per RMSC
- Starting valuation implies approximately €0.40–€0.60 per RMSC

Integration Features: The RMSC token is designed for composability with DeFi protocols:

- ERC20Permit enables gasless transactions and meta-transactions
- ERC1363 allows for advanced payment flows and automated callbacks
- Standard ERC20 interface ensures compatibility with all major DEXs and lending protocols

Note: The buyback mechanism mentioned in the economic design is planned for future implementation through a separate contract that will interact with the on-chain accountancy system.

C. Calçotada Orchestrator: Protocol Coordination

The Calçotada contract serves as the central orchestrator, coordinating interactions between all protocol components:

Core Functions:

- Manages the dual-minting mechanism for NFT purchases
- Controls RMSC minting according to bonding curve pricing
- Handles both public and private sale mechanisms
- Integrates with NormalizeToEuro for multi-currency support

Bonding Curve Implementation: The orchestrator implements a sophisticated normalized bonding curve using:

- Q16.16 fixed-point arithmetic for precision
- Configurable sigmoid curve shape for optimal price discovery
- Integration with trapezoidal rule for accurate pricing
- Starting price: €0.40 per RMSC, ending price: €0.60 per RMSC

Transaction Fee Structure:

- NFT purchases: €4.50 transaction fee
- RMSC purchases: €2.50 transaction fee
- Fees collected in POL and forwarded to treasury

D. Price Oracle Integration

The NormalizeToEuro contract provides real-time price conversion using Chainlink oracles:

Oracle Feeds:

- ETH/USD, EUR/USD, and POL/USD price feeds
- Automatic conversion between EUR pricing and POL payments
- 18-decimal precision for all calculations

E. PEG Enforcement and Future Development

While the current implementation provides the foundation for equity-pegged tokens, the full PEG mechanism awaits implementation:

Current State:

- Token supply and pricing mechanisms are fully implemented
- Oracle integration provides real-time price conversion
- Treasury accumulation occurs automatically

Planned Enhancements:

- On-chain accountancy module for transparent financial tracking
- Automated buyback contracts triggered by valuation milestones
- Governance voting mechanisms for NFT holders
- Integration with external valuation attestation services

F. Initial Supply and Distribution

The initial supply of RMSC tokens is allocated in a controlled and transparent manner to recognize pre-protocol contributions and prepare for public issuance. No tokens are minted speculatively or granted without capital justification.

1) Angel Investor Allocation: Prior to the protocol's launch, a group of early angel investors provided capital to The Calçotada Company under a convertible loan agreement. These early backers are entitled to receive RMSC tokens at the protocol's base issuance price, plus an interest premium to account for the time value of their risk.

- Base Price Conversion: Angel investments are converted into RMSC at the same base price offered during the initial public issuance phase.
- Interest Adjustment: A fixed 7% interest rate is applied to the original invested amount, and this adjusted total determines the corresponding RMSC allocation.
- Non-inflationary Grant: These tokens are accounted for as part of the protocol's total capped supply and are not created in excess of the 5 million RMSC ceiling.

2) Pre-Mint Reserve: In addition to angel investor conversion, a total of 200,000 RMSC tokens are pre-minted and held in the protocol treasury for operational, liquidity, and market stabilization purposes. This reserve will be used judiciously to support exchange listings, liquidity pool seeding, and strategic partnerships.

3) Public Issuance: All remaining RMSC tokens are made available through direct, capital-backed purchase via the protocol interface. Tokens are minted on-demand as described in the Minting Scheme, with no pre-sale, airdrop, or speculative allocation.

This initial supply model ensures that token distribution is fully aligned with the company's real financial history and avoids the common pitfalls of over-allocation, unbacked inflation, or opaque private rounds.

G. Initial Distribution and Structured Pricing

The protocol implements a sophisticated pricing mechanism that balances early adopter incentives with sustainable fundraising:

1) Current Implementation: Genesis Collection: The deployed contracts focus on the initial CalcotCoin Genesis collection:

- 333 total NFTs with 33 reserved for treasury
- Linear RMSC pricing from 222.22 to 200 RMSC per NFT
- Fixed EUR price of €100 per NFT
- Dual-minting mechanism providing 2x RMSC to NFT buyers

2) Future Batch Structure: The protocol design accommodates future expansion through additional NFT collections:

Half of the RMSC minted for each NFT is transferred to the protocol treasury, while the remaining half is consumed by the NFT minting contract. This ensures that treasury-backed liquidity grows proportionally with capital raised.

TABLE I
NFT Batches and Associated RMSC Minting

Batch	NFTs	NFT €	RMSC €	MINT kRMSC
Calçot Coins	333	100	0.40	66
FounderPass 1	555	125	0.50	139
FounderPass 2	1111	250	0.525	529
FounderPass 3	1111	375	0.55	757
FounderPass 4	1111	500	0.575	966
FounderPass 5	1111	625	0.60	1,157
Total: 5,332 NFTs 2,047,025 € raised, 1,807,796 RMSC minted				

3) Public RMSC Issuance via Bonding Curve: The Calçotada orchestrator implements a sophisticated bonding curve mechanism for public RMSC sales:

Technical Implementation:

- Normalized sigmoid curve stored as Q16.16 fixed-point values
- Configurable curve shape via uploadable parameters
- 16-step trapezoidal integration for accurate pricing
- Real-time POL/EUR conversion via Chainlink oracles

Pricing Parameters:

- Starting price: €0.40 per RMSC
- Ending price: €0.60 per RMSC
- Available supply: Up to 4.6M RMSC (after pre-mint and NFT allocations)
- Transaction fee: €2.50 per purchase

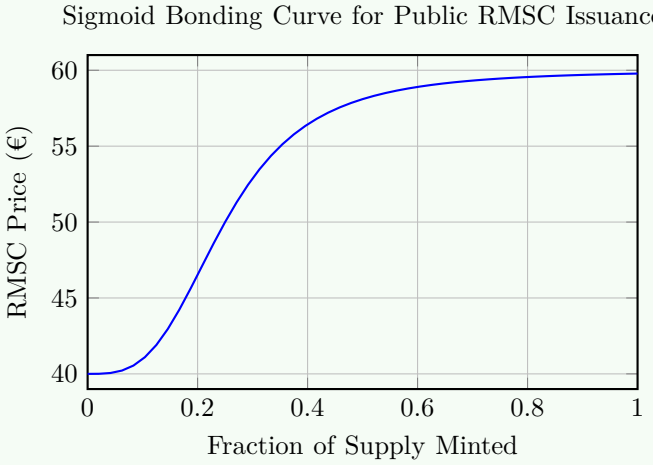

Fig. 4. Sigmoid bonding curve used for public RMSC issuance pricing.

This curve allows the protocol to capture higher marginal funding value while maintaining a predictable and fair pricing structure. Early public buyers enjoy lower prices, and late-stage buyers pay a premium as the available supply nears exhaustion.

4) Liquidity and Secondary Market Strategy: The protocol's liquidity strategy leverages standard DeFi infrastructure:

Current Implementation:

- RMSC is a standard ERC20 token, compatible with all major DEXs
- Treasury accumulates POL and RMSC for future liquidity provision
- No transfer restrictions or vesting schedules

Planned Liquidity Features:

- DEX liquidity pools on QuickSwap or Uniswap V3
- Treasury-funded initial liquidity provision
- Potential liquidity mining incentives for early providers
- Integration with lending protocols for RMSC collateralization

Note: The Taxed Liquidity Pool (TLP) mentioned in the original design is deferred to future protocol upgrades, allowing for simpler initial deployment and community-driven liquidity solutions.

H. Network Deployment

Polygon is selected as the base network for its:

- Low transaction fees and fast confirmation times,
- Proven security track record via Ethereum finality,
- Established ecosystem of NFT and DeFi projects.

Deploying on Polygon enables frictionless user participation while ensuring composability with future liquidity protocols and DAO tools.

VII. Technical Implementation

A. Smart Contract Architecture

The Calçotada Protocol consists of four core smart contracts deployed on Polygon:

1. CalcotCoin.sol (ERC721):

- Manages NFT issuance and ownership
- Implements linear pricing mechanism
- Handles treasury pre-allocation
- Integrates with orchestrator for minting

2. Romesco.sol (ERC20):

- Implements capped token supply (5M RMSC)
- Provides ERC1363 and Permit extensions
- Controlled minting via orchestrator only
- Pausable for emergency situations

3. Calcotada.sol (Orchestrator):

- Coordinates all protocol interactions
- Implements bonding curve pricing
- Manages dual-minting mechanism
- Handles fee collection and treasury forwarding

4. NormalizeToEuro.sol (Oracle):

- Integrates Chainlink price feeds
- Provides EUR/POL/ETH conversions
- Ensures accurate multi-currency pricing

B. Security Considerations

Access Control:

- Owner-controlled administrative functions
- Orchestrator pattern for inter-contract calls
- No external minting access on token contracts

Safety Features:

- ReentrancyGuard on all payment functions
- Pausable functionality for emergency response
- Overflow protection via Solidity 0.8.28
- Battle-tested OpenZeppelin libraries

C. Gas Optimization

- Batch minting reduces per-NFT gas costs
- Q16.16 arithmetic minimizes computational overhead
- Efficient storage patterns in bonding curve
- Optimized loops with unchecked arithmetic where safe

D. Protocol Composability

The Calçotada Protocol exposes several public and payable functions that enhance composability with other DeFi protocols:

Public Query Functions:

- previewPurchaseCost: Returns prices in POL for RMSC purchases
- previewPurchaseCostEur: Returns prices in EUR for RMSC purchases
- getPriceBatchNFT: Provides pricing for NFT batches in both POL and EUR

Payable Minting Functions:

- calcotCoinPublicMint: Allows public minting of NFTs with POL payment
- publicRmscMint: Enables direct RMSC token purchases (not yet exposed in UI)

These functions allow external protocols and smart contracts to integrate with the Calçotada ecosystem, enabling:

- Automated trading strategies based on real-time pricing
- Integration with DEX aggregators for optimal routing
- Building of derivative products on top of RMSC tokens
- Creation of vaults and yield strategies

VIII. Vision: From Meme Coins to PEG Coins

This whitepaper presents not just a protocol implementation, but a vision for transforming venture capital through blockchain technology. We invite builders, researchers, and visionaries to join us in developing the foundational components for true DAO-based venture capital.

A. Redefining PEG: From Price Stability to Performance Growth

The term "PEG" in traditional crypto contexts typically refers to price-pegged assets like stablecoins. We intentionally reappropriate this term to create a powerful contrast with MEME coins. While MEME coins represent pure speculation without underlying value, PEG (Performance Equity Growth) tokens represent the opposite: real value creation tied to company performance.

The MEME vs PEG Paradigm:

- MEME: Speculation, hype-driven, no intrinsic value
- PEG: Performance-driven, value-backed, growth-oriented

Unlike traditional price pegs that maintain stable values, our PEG tokens are pegged to company growth. This represents a new category of crypto assets:

- Not pegged to a stable price (like USDT to USD)
- Not pegged to another asset (like WBTC to BTC)
- But pegged to a company's valuation trajectory and success

This redefinition serves a dual purpose: it creates a memorable contrast with MEME coins while accurately describing tokens that track real business performance. PEG tokens offer the excitement of venture returns with the substance of equity participation—transforming speculation into investment.

B. The Composability Foundation

The Calçotada Protocol aims to establish standardized components that any startup can use to create their own equity-pegged tokens:

Standardized Valuation Methods: We propose using Discounted Cash Flow (DCF) models as the industry standard for early-stage startup valuations. Unlike traditional approaches, our innovation embeds buyback mechanisms directly tied to current company performance. This creates a new standard where:

- Valuations are calculated transparently on-chain
- External parameters (industry multipliers, WACC) are provided by oracles
- Buybacks are triggered automatically based on performance milestones
- Early liquidity is provided through a SAFE + Interest model

Projected Returns (2027-2032): Based on our DCF models for The Calçotada Company:

- Pessimistic scenario: 2.1x return by 2031
- Standard scenario: 2.8x return by 2031
- Optimistic scenario: 5.5x return by 2031

C. On-Chain Accountancy Revolution

Current accounting depends on centralized bank integrations and proprietary software. We envision:

- Immutable, auditable financial records on-chain
- Access to real-time Free Cash Flow data
- New ecosystem of accountancy DApps
- Smart contract auditors guaranteeing transparency
- Integration with privacy solutions (e.g., Hyperledger) for competitive data

D. Capturing the Meme Coin Market

The crypto community investing in meme coins represents untapped potential for meaningful investments:

What PEG Coins Offer:

- High risk/reward profile similar to meme coins
- 20% early rewards for liquidity providers
- Long-term returns ranging from 2x to 5.5x
- Real utility backing token value
- Community engagement through governance

Liquidity Strategy:

- Early liquidity pools with tax mechanisms for flippers
- Rewards for long-term believers
- Transition from speculation to value creation

E. Building Trust Through Standards

The protocol addresses fundamental trust barriers:

- Valuation Trust: Pre-defined DCF models with oracle-provided parameters
- Buyback Trust: Smart contract execution with public reserves
- Process Trust: Deterministic mathematical expressions
- Access Trust: Guaranteed participation in seed capital opportunities

F. Target Audience and Growth

Primary Targets:

- Retail investors currently in meme coins seeking real utility
- Young professionals interested in startup investing
- International investors excluded from traditional VC
- Non-accredited investors seeking early-stage opportunities

Growth Mechanisms:

- Referral system (5 RMSC per new user)
- Education initiatives on equity pegs
- Community-driven protocol development

G. Five-Year Success Metrics

By 2029, success means:

- The Calçotada Company operating at full scale in Europe
- 3 patents published on protocol innovations
- Profitable operations from year 3
- Active buyback program demonstrating model viability
- RMSC accepted as collateral in major DeFi protocols
- Establishment of the "Calçotada Standard" for equity pegs

H. Call for Builders and Contributors

This whitepaper is a proposal and invitation. We seek:

- Protocol Developers: To build standardized components
- Oracle Integrators: To validate fiat transactions
- Financial Engineers: To refine DCF models
- Legal Experts: To navigate regulatory frameworks
- Community Leaders: To educate and onboard users
- Startup Founders: To adopt and test the protocol

Many questions remain unanswered—optimal update frequencies, discount rates for pre-revenue startups, governance structures. These will be defined collectively as we build this new foundation for venture capital.

The Calçotada Protocol is more than technology; it's a movement toward democratized, transparent, and accessible startup funding. Join us in creating the future of venture capital.

IX. The Calçotada Company: Protocol Sponsor

A. Company Overview

The Calçotada Company is a Barcelona-based food-tech startup pioneering Food Experience as a Service (FEaaS). As the primary sponsor and first implementation of the Calçotada Protocol, the company serves as both a proof of concept and a real-world test case for tokenized venture funding.

B. Business Model: FEaaS

Food Experience as a Service (FEaaS) represents a paradigm shift in the hospitality industry:

- Scalable Culinary Experiences: Transforming traditional dining into reproducible, high-quality experiences
- Technology-Enabled Operations: Leveraging automation and data analytics to optimize food service
- Franchise-Ready Model: Creating standardized processes that maintain authenticity while enabling rapid expansion
- Cultural Preservation: Protecting and promoting traditional Catalan cuisine through modern business practices

C. Why Calçotada?

The company takes its name from the traditional Catalan calçotada—a communal feast celebrating spring onions. This choice reflects:

- Community-driven values aligned with DAO principles
- Scalable social experiences perfect for FEaaS model
- Strong cultural identity providing market differentiation
- Natural alignment between shared meals and shared ownership

D. Protocol Synergy

The Calçotada Company's use of the protocol demonstrates:

- Real revenue generation for buyback mechanisms
- Clear valuation metrics through operational data
- Community engagement through product and investment
- Bridge between physical business and digital assets

X. Team and Acknowledgments

The Calçotada Protocol is driven by a dedicated team of RMSC holders representing the company's interests:

Dr. Julià Delos Ayllón - Founder and Chief Architect. With a distinguished career spanning from software to high-power systems, Dr. Ayllón holds a PhD in Electrical Engineering focused on power electronics and LED driver optimization. His professional journey includes roles at Philips Research, HP, and Lear Corporation, where he developed innovative solutions from embedded software to advanced power management systems. At Philips Research, he contributed to multiple patents in LED driver technology and integrated power systems. This deep technical expertise in hardware miniaturization and system optimization now informs his approach to blockchain protocol design. Dr. Ayllón founded The Calçotada Company with a vision to revolutionize access to food experiences through a Food Experience as a Service (FEaaS) business model—creating an "Airbnb for culinary experiences" that enables rapid scaling while preserving authentic local gastronomy. His unique background bridges hardware engineering, corporate R&D, and entrepreneurial innovation, positioning him to architect protocols that merge real-world business models with decentralized finance.

Dr. Louisa Spaans - Medical doctor and protocol keyguard. Early angel investor and major RMSC holder safeguarding protocol integrity.

Dr. Dimitri Pustakhod - PhD and protocol keyguard. Strategic advisor and major RMSC holder ensuring governance alignment.

Danail Hristov - Telecom engineer and protocol keyguard. Technical advisor and major RMSC holder protecting protocol development.

This team represents the convergence of technical innovation, medical precision, business acumen, and entrepreneurial vision—united in democratizing access to venture capital through blockchain technology.

XI. Conclusion and Future Work

The Calçotada Protocol represents a significant step toward democratizing venture capital through blockchain technology. By implementing tokenized convertible notes with clear valuation pegs, the protocol creates a bridge between traditional startup funding and decentralized finance.

A. Current MVP Implementation

The deployed Minimum Viable Product serves as a proof of concept and market validation tool:

Implemented Features:

- Genesis collection of 333 CalçotCoin NFTs at €100 each
- RMSC token with 5M supply cap and bonding curve mechanics
- Dual-minting system rewarding early supporters
- Oracle integration for EUR/POL price conversion
- Basic treasury accumulation mechanism

MVP Objectives:

- Demonstrate technical feasibility of tokenized venture funding
- Validate market demand with €30,000 initial raise target
- Build initial community of supporters and advisors
- Test smart contract security and gas efficiency
- Establish foundation for future protocol development

This MVP represents a testimonial to the work ahead, starting with a solid foundation of minting strategies and bonding curve sales mechanisms. The limited scope allows for careful iteration based on community feedback before expanding to the full protocol vision.

B. Development Roadmap

The current deployment represents a Minimum Viable Product (MVP) designed to validate market interest and establish the foundational infrastructure. The roadmap prioritizes sustainable growth and community building over rapid feature deployment.

Whitepaper Publication and Protocol Launch: This whitepaper will be released concurrently with the public announcement of the Calçotada Protocol, marking the official start of Phase 1.

Phase 1 - MVP Validation and Team Formation (Current - Q3 2024):

- Target: Raise initial €30,000 through Genesis collection (333 NFTs)
- Validate market interest and protocol mechanics
- Build core team for protocol development
- Present protocol to major blockchain networks and communities
- Establish fundamental protocol standards
- Define trustworthy governance framework

Phase 2 - Protocol Expansion (Q4 2024 - 2025):

- Launch second NFT collection (September 2024 target)
- Release full 5,555 NFT collection based on community feedback
- Define operational phases for The Calçotada Company
- Establish protocol update and governance strategies
- Begin development of on-chain accountancy framework

Phase 3 - Operations Launch (2025-2026):

- Calçotada Company begins operations with collected funds
- First products delivered to market
- Protocol provides initial company valuation estimates
- Deploy liquidity pools on major DEXs
- Implement basic financial reporting on-chain

Phase 4 - Value Realization (2027+):

- Initiate first buyback programs based on company profits
- Define and communicate exit strategies for token holders
- Expand protocol to support additional portfolio companies
- Establish Calçotada Protocol as standard for tokenized venture funding

C. Research Directions

Future research will explore:

- Optimal bonding curve parameters for different funding stages
- Integration of zero-knowledge proofs for private financial data
- Cross-chain implementations for broader accessibility
- Regulatory compliance frameworks for security token standards

The Calçotada Protocol MVP demonstrates the technical feasibility of tokenized venture funding while prioritizing community validation and sustainable growth. By starting with a focused Genesis collection of 333 NFTs, the protocol seeks to validate market interest, build a dedicated team, and establish fundamental standards before expanding to its full vision. This measured approach ensures that when the protocol scales to support The Calçotada Company's operations and eventual buybacks, it will do so with proven mechanics, community trust, and a clear path to delivering value to all stakeholders. The journey from MVP to full protocol implementation represents not just a technical roadmap, but a new model for inclusive, transparent venture capital.

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