In the name of God

Whitepaper: ILIA Financial Platform and Token

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Disclaimer

This whitepaper has been prepared solely for informational purposes to present the technical and economic vision of the ILIA Protocol. The information contained in this document should under no circumstances be considered a sales proposal, a solicitation to purchase ILIT tokens, or any form of financial, legal, or investment advice.

The ILIA Protocol and the ILIT token are experimental digital assets. Investing in them carries significant inherent risks, including risks related to smart contract vulnerabilities, severe market volatility, and legal and regulatory changes. There is no guarantee of the project's success, an increase in the token's value, or a return on investment.

The information and forecasts provided in this document are based on internal analysis and current market conditions and may change in the future at the discretion of the development team and based on community feedback through the DAO governance processes.

It is strongly recommended that you conduct your own comprehensive research (Do Your Own Research - DYOR) and consult with professional financial advisors before any financial interaction with the protocol. The responsibility for any profit or loss resulting from your actions lies exclusively with you. The ILIA development team and its affiliated entities will bear no liability in this regard.

Executive Summary

In the current Decentralized Finance (DeFi) ecosystem, value creation primarily occurs through interest-based debt models, which can be modeled by the cost function **C(P,r,t)=P×(1+r)^t.** This model, by imposing an exponential cost on borrowers, closely resembles traditional financial models and presents an ethical barrier for a large segment of the global community.

The ILIA project is a decentralized, multi-chain, and Layer-2 aware financial protocol designed to introduce a new paradigm: a financial ecosystem based on ethical principles, algorithmic transparency, and collaborative value creation.

The ILIA protocol allows users to lock their digital assets as collateral in smart contracts and, in return, receive a loan with a fixed dollar value in the form of reputable stablecoins. The project's revenue model, instead of charging interest, is based on fixed, transparent operational fees and participation in the real profits generated from asset management. ILIA also offers solutions for ethical-participatory investment and insurance against impermanent loss risk, which are detailed further in this document.

ILIA's Key Innovations:

Interest-Free Lending: We have replaced the interest-based debt model with a Service Fee Model. The total fee for the loan operation is calculated based on a proprietary formula and is collected transparently at various stages. This structure transfers financial risk from the borrower to the protocol, fostering a participatory economy. The project's profit from lending operations is generated by managing the received collateral in Yield Farming strategies.

Dynamic and Multi-Factor Risk Assessment Model: To determine the Loan-to-Value (LTV) ratio fairly and accurately, ILIA uses a proprietary and dynamic algorithm called AHP+. This model analyzes the risk of each asset based on 14 weighted factors and calculates the final LTV according to the following formulas:

$$LTV\ Base = \sum_{i=1}^{14} \text{Score } i \times \text{Weight } i$$

$$LTV\ Final = (1 + \sum \text{Score } Modifiers) \times LTV\ Base$$

This approach transforms risk management from a static state to an intelligent process that responds to user and market conditions.

True Decentralized Governance: Governance in ILIA is conducted through a transparent voting process, with security maintained by the ILIA entity. Community decisions are made via the Snapshot platform (for off-chain, gas-free voting), and their execution is guaranteed by a multi-signature TimeLock smart contract.

Participatory Insurance Fund: ILIA offers an innovative product to cover the risk of Impermanent Loss, insuring users' assets in liquidity pools across all DeFi platforms as a standalone service.

With a fixed total supply of 4 billion ILIT tokens and a fundraising goal of over $100 million, the ILIA project aims to become a fundamental and trustworthy infrastructure for the next generation of the digital economy; an economy built on fairness, transparency, and the empowerment of every single one of its members.

Chapter 1: The New Lending Paradigm in ILIA: Beyond Interest, Towards Capital Efficiency

1-1. Analysis of Interest-Based Lending Models in DeFi

The current DeFi lending ecosystem, led by pioneering protocols like Aave and Compound, is primarily built on a century-old economic model: interest-based debt. In this model, the Cost of Capital is determined by floating or fixed interest rates that fluctuate based on supply and demand in liquidity pools. While this model has been successful, it has structural inefficiencies and inherent risks that limit the full potential of DeFi:

Risk-Reward Asymmetry: In interest-based models, liquidity providers (Lenders) share their capital in exchange for interest, but nearly all market risk and liquidation risk are borne by the borrower. This relationship is inherently adversarial, creating a zero-sum game where one party's gain is another's cost.

Dollar Debt vs. Crypto Debt: Most competing platforms lend crypto assets. This means if a user collateralizes Bitcoin and borrows Ethereum, they are not only exposed to the price volatility of their collateral, but their debt itself is also a volatile asset. This "Double Exposure" makes position management extremely complex and risky.

Structural Market Exclusion: The interest-based model conflicts with ethical financial principles emphasized by a large part of the global community. For instance, this model is a barrier to entry for the Islamic finance market (estimated to be worth over $3 trillion) and other groups seeking fairer financial models.

1-2. ILIA's Value Proposition: Redefining Efficiency Through a Service Model

The ILIA project challenges the current paradigm. We believe a more efficient, fairer, and more inclusive lending protocol can be built. Our model completely eliminates interest, replacing it with a structure based on a Service Fee and participation in the protocol's real profits.

<u>Key Advantages of This Model:</u>

Stable Dollar-Denominated Loans Against Volatile Collateral: Instead of lending crypto assets, ILIA provides their dollar equivalent in reputable stablecoins (like USDT and DAI). This simple yet crucial design eliminates "Double Exposure" for the borrower. The user can benefit from the potential upside of their collateralized asset while their debt has a fixed, predictable value. This stability allows the borrower to plan for other investments (e.g., buying gold, other cryptocurrencies, or even for daily life expenses) with greater confidence.

Incentive Alignment Through Protocol-Owned Liquidity: Unlike competitors who act merely as intermediaries between lenders and borrowers, a significant portion of ILIA's lending capital will be sourced through its Initial Coin Offering (ICO) and will be owned by the protocol itself. This means the protocol's primary goal is not to maximize interest rates for liquidity providers, but rather to maintain the health of the ecosystem, increase transaction volume, and consequently, grow the value of its governance token (ILIT). This model aligns the protocol's interests with the borrower's, creating a collaborative relationship.

Transparent and Predictable Costs: Interest rates on competing protocols can spike dramatically in volatile market conditions, leaving borrowers with unforeseen costs. In ILIA, the cost of a loan is a fixed and transparent fee determined at the outset of the contract, following the formula:

Total Fee = 2 × ((Loan Value × 0.2%) + (Collateral Value × 0.2%)).

This transparency and predictability significantly reduce the financial risk for the user.

1-3. Quantitative Comparison: A Practical Scenario

Assumption: A user wants to take out a 6-month loan equivalent to 5 ETH ($10,000) by collateralizing 10 ETH ($20,000). We assume the price of ETH increases by 50% during this period.

<u>On an Interest-Based Platform (e.g., Aave):</u>

- Cost: Assuming an average variable annual interest rate of 8%, the interest cost for 6 months would be approximately 0.2 ETH.
- Risk: The user faces the risk of their debt's value increasing, their collateral's value decreasing, and sudden spikes in the interest rate.
- Final Outcome: After repaying 5.2 ETH (now worth $15,600), the user unlocks their collateral (now worth $30,000). Their final cost is $5,600.

<u>On the ILIA Protocol:</u>

- Cost: Based on ILIA's fee formula, the total cost is $120. This fee is fixed and does not change with market fluctuations.
- Risk: There is no risk of increasing costs; only the risk of the collateral's value decreasing.
- Final Outcome: After repaying $10,000 (the principal) and paying the $120 fee, the user unlocks their $30,000 collateral. Their final cost is $120.

Comparison Conclusion: In this scenario, ILIA's model is not only significantly cheaper but is also a much safer and more predictable option for the borrower by eliminating the risk of fluctuating interest rates and volatile debt value.

1-4. Strategic Impact: A Gateway to Global Adoption

ILIA's value proposition extends beyond a more efficient economic model. With its ethical and inclusive design, the protocol strategically targets massive markets that have been overlooked by the current DeFi ecosystem:

True Financial Inclusion: By eliminating interest and offering a simple, understandable model, ILIA significantly lowers the barriers to entry for non-professional users, unbanked communities, and developing markets.

Activating Untapped Markets: The protocol is naturally aligned with the needs of the ethical and Islamic finance markets, acting as a bridge to connect the liquidity of this large market to the DeFi world.

Ultimately, ILIA is not just a lending platform; it is a foundational Economic Primitive that demonstrates it is possible to build decentralized financial systems that are both economically efficient and ethically sound. This vision is our path to connecting the DeFi world with the physical economy and creating a positive, sustainable impact on global communities.

Chapter 2: Architecture and Foundational Principles of the ILIA Protocol

The ILIA Protocol is not merely a set of features; it is a cohesive system built upon five foundational architectural pillars. Each pillar is purposefully engineered to address a fundamental shortcoming of the current DeFi ecosystem. Their synergistic interaction creates a new economic infrastructure that is inherently robust, fair, and transparent.

2-1. Pillar One: Interest-Free Capital Provision Protocol

ILIA's fundamental and differentiating feature is the complete elimination of interest as a financial mechanism. In conventional models, interest is an artificial and inefficient cost for capital allocation that asymmetrically imposes risk on the borrower. In contrast, ILIA's revenue model is based on two principles:

Service Fees: The protocol charges a transparent fee for each core operation (such as loan origination or collateral release). This fee covers the cost of technical infrastructure, security, and network maintenance, calculated based on the formula mentioned in the previous chapter.

Real Profit Sharing: The protocol's primary income is generated through the active management of its controlled assets in DeFi investment opportunities (such as staking and liquidity provision).

In this model, the protocol's revenue function, rather than depending on user debt, is a function of total operational volume and the performance of its investment portfolio: $R_{protocol}=f(V_{ops},P_{portfolio})$. This approach transforms the borrower-lender relationship into a service-based and collaborative one.

2-2. Pillar Two: Financial State Abstraction via Representative Tokens

ILIA utilizes an innovative abstraction layer based on Representative Tokens (RTs) to transparently record and display dynamic financial states (such as collateral, debt, or investments). These tokens represent a cryptographically verifiable claim on a portion of the protocol's state.

NFT-Based Technical Architecture: These tokens are implemented using the non-fungible token (NFT) standard. This means the token itself is just a unique identifier (Token ID) that points to a data structure within a core smart contract like LoanEngine or StakingManager. All critical and variable information (such as the exact debt amount) is stored off-token in the mappings of the main contract and updated in real-time. This architecture ensures security, accuracy, and gas efficiency.

2-3. Pillar Three: Evolving and Responsive Governance Protocol

Governance in ILIA is designed to solve the trilemma of efficiency, security, and decentralization. The initial governance model has been revised and evolved to avoid any centralized points of control. Our new philosophy is based on the principle that the role of the founding team is not that of a gatekeeper, but as a Steward & Expert Guide. Ultimate power always remains with the community (DAO), and any change to the protocol follows a transparent, four-step path.

Proposal and Public Discourse: Any community member can propose ideas in the project's public forums. To prevent spam proposals, the proposer may be required to lock a certain amount of ILIT tokens as a bond.

Formal and Transparent Team Recommendation: The founding team is obligated to publish a formal, transparent recommendation for every significant proposal. This recommendation will include the team's technical and strategic analysis and will be one of three states: Approve, Reject, or Neutral. This mechanism transforms the team's expertise into a guiding tool for the community.

DAO Governance Vote: After the team's recommendation is published, the proposal is put to a public vote among ILIT token holders on the Snapshot platform for the final decision. The community holds the ultimate sovereign power to approve or reject any proposal.

Execution with TimeLock: To ensure maximum security, approved DAO decisions are not executed instantly. Instead, they are first placed in a smart contract with a TimeLock feature. This waiting period acts as a final security layer, giving the community time to take necessary action if unforeseen risks are identified and ensuring that changes and new smart contracts are communicated to all stakeholders before being implemented.

2-4. Pillar Four: Investment Models Based on Real Risk

In ILIA's investment models, profit is defined as non-guaranteed and dependent on the actual performance of the project's investment portfolio (managed by the YieldAggregator module). This principle, inspired by ethical financial models, creates a natural incentive alignment, as both the investor and the protocol share in the real profit and loss.

To manage risk, the protocol guarantees the principal capital only against technical and operational risks (such as hacks or smart contract bugs) from its internal resources or external insurance. Market risks, like impermanent loss, are not covered by this guarantee, and users can opt to cover them separately using ILIA's insurance protocol.

2-5. Pillar Five: Permissionless and Inclusive Access

ILIA is designed to serve a global and diverse market. Therefore, for most protocol services up to a transaction limit of $15,000, no Know Your Customer (KYC) process is required. For transactions exceeding $15,000, non-governmental and decentralized identity verification methods are being explored and will be announced in future versions of the whitepaper upon finalization. This approach has two key advantages:

- Preserving user privacy as a fundamental principle of Web3.
- Promoting Financial Inclusion and providing access to modern financial tools for communities underserved by traditional banking.

Chapter 3: Economic Protocols and Core Services of the ILIA Ecosystem

The ILIA ecosystem offers a suite of integrated economic protocols to realize its vision, each acting as a value-creation engine for the network. These services, built on the architectural principles from Chapter 2, provide practical solutions for the fundamental needs of users in the DeFi space.

3-1. Interest-Free Lending Protocol

Design Philosophy: This protocol is designed to enhance Capital Efficiency. Users can convert their long-term assets into active liquidity without needing to sell and lose their investment position. This process occurs within a fair economic framework, far from exploitative debt models.

Service Fee Structure: As mentioned, we use a fee-based and participatory model. The total fee is calculated using the formula: Total Fee = 2 * ((Loan Value * 0.2%) + (Collateral Value * 0.2%)). For example, a $1,000 loan with $1,500 in collateral would have a total fee of $10. This amount is collected in stages:

- $5 at the time of collateral deposit and loan creation.
- $3 upon full release of the collateral.
- The remaining $2 is divided equally among the loan installments.

Users can also pay the entire fee upfront for a 10% discount. It should be noted that these are protocol service fees; blockchain network gas costs are the responsibility of the service user. The project team is also working on reducing gas costs for both itself and users through proprietary or public technical algorithms.

Technical Loan Process:

- Request Submission: The user submits a request to the LoanEngine contract via the user interface.
- Risk Assessment & LTV Determination: The LoanEngine calls the RiskEngine module. The RiskEngine, by querying the OracleManager for real-time prices and applying the AHP+ algorithm, calculates the final LTV ratio and returns it to the LoanEngine.
- Collateralization & Token Issuance: Upon LTV approval, the user's asset is transferred and locked in the CollateralVault contract. Simultaneously, Collateral-RT and Debt-RT representative tokens are minted for the user. If the borrower and collateral provider are different, these tokens are issued separately.
- Loan Disbursement: The loan amount is disbursed as stablecoins to the user's wallet.
- Repayment & Release: After the debt is fully settled, the Debt-RT is burned, and the user's collateral is released from the CollateralVault, converting into an Investment-RT.
- Liquidation Mechanism: To protect protocol health, if the collateral value drops below 110% of the outstanding debt, the Liquidator module is automatically activated. It liquidates the collateral through a DEX Aggregator at a 3% discount to the market price to settle the debt. This discount is to expedite the sale. For example, if collateral worth $100 is to be liquidated, it is sold for $97. A $1 operational fee is deducted, leaving $96 for the collateral owner. $1 goes to the liquidator, and the $3 is the sales discount. If the sale occurs at a higher price, say $99, the $2 difference is split between the owner, the platform, and the liquidator at a 70%, 15%, and 15% ratio, respectively.
- Different Liquidation Threshold for Non-Fixed Collateral Loans: In these loan models, the collateral is liquidated if its value falls below 1.4 times the total outstanding debt.
- Mechanism for Overdue Installments: If an installment is overdue by one period, it is considered non-current. The system automatically deducts the debt from the user's collateral value and charges a 1% fee on the debt amount for this operation.

This 1% fee goes directly to the protocol, and the liquidation is handled by the protocol (the protocol becomes the owner of that portion of the collateral).

3-1-2. Protocol for Undercollateralized Lending (Leveraged Purchase)

To increase capital efficiency for users and offer advanced financial tools, the ILIA protocol provides a secondary lending model for the leveraged purchase of digital assets. This model allows users who lack sufficient liquidity to fully purchase an asset to gain full ownership by paying a portion of the cost, thereby benefiting from its potential growth.

- Design Philosophy and Technical Process: This protocol is for users who are confident in the future of a specific asset but are unwilling or unable to pay the full amount at once. The process is as follows:
- Initial Down Payment: A user intends to buy a digital asset (e.g., Token X worth $1,000). Based on the calculated LTV for that asset (e.g., 70%), the user provides an initial down payment equal to the difference between the total value and the loan ceiling (in this example, $300) to the protocol.
- Capital Provision by Protocol: The ILIA protocol provides the remaining amount needed (in this example, $700), and the asset is purchased in full.

Automatic Collateralization: The purchased asset ($1,000 of Token X) is automatically locked in the CollateralVault smart contract as full collateral for the $700 loan. In this respect, this model operates similarly to the primary lending model, with the key difference being that the purchased asset itself serves as the loan's collateral.

3-2. Impermanent Loss Risk Coverage Protocol

3-2-1. Design Philosophy: Turning a Systemic Risk into a Strategic Opportunity

Impermanent Loss (IL) is one of the biggest challenges and barriers to capital entry in the DeFi ecosystem. The ILIA insurance protocol is designed to turn this challenge into an opportunity by providing a robust and reliable solution as a Public Good for the entire DeFi space. By offering a transparent and well-capitalized risk coverage mechanism, we provide security and confidence to liquidity providers on all reputable platforms.

3-2-2. How This Model is Reliable

Accurate risk pricing is the heart of a sustainable insurance fund. ILIA's pricing model is built on extensive, pre-calculated statistical analysis derived from a proprietary Stochastic Modeling Engine. To prove the validity and robustness of our model, we are committed to absolute transparency:

- Technical Paper Publication: The entire methodology, statistical assumptions, mathematical models, and extensive simulation results will be published in a public technical research paper for peer review.
- Open-Source Code: The code used for the simulations will be made available in a public repository (GitHub) so that any third party can verify and validate our results.

3-2-3. Dynamic Pricing Model

The crypto market is dynamic, and our risk pricing model must be as well. To prevent mispricing in conditions of high volatility, we use a hybrid pricing model:

Final Premium = Base Premium × Real-time Volatility Coefficient

- Base Premium: These are the rates derived from our extensive simulations, presented in the tables below, representing long-term risk.
- Volatility Coefficient: This is a dynamic multiplier that uses on-chain data feeds (from reputable oracles) to measure the ratio of current market volatility to historical volatility averages. This coefficient ensures that during periods of fear and high volatility, premiums automatically increase to protect the fund's health.
- Volatility Coefficient Calculation Algorithm: The general formula is based on combining the weight of each factor with its score.

Volatility Coefficient=1+(Adjusted Risk Score)

Adjusted Risk Score= $\sum_{i=1}^{4}(\text{Weight } i \times \text{Score } i)$

Assessment Indicators:

1. Ratio of Short-term to Long-term Price Volatility:

    - **Short-term Volatility**: Annualized standard deviation of daily logarithmic returns of the insured asset over a 30-day period.
    - **Long-term Volatility**: Annualized standard deviation of daily logarithmic returns of the insured asset over a 360-day period.

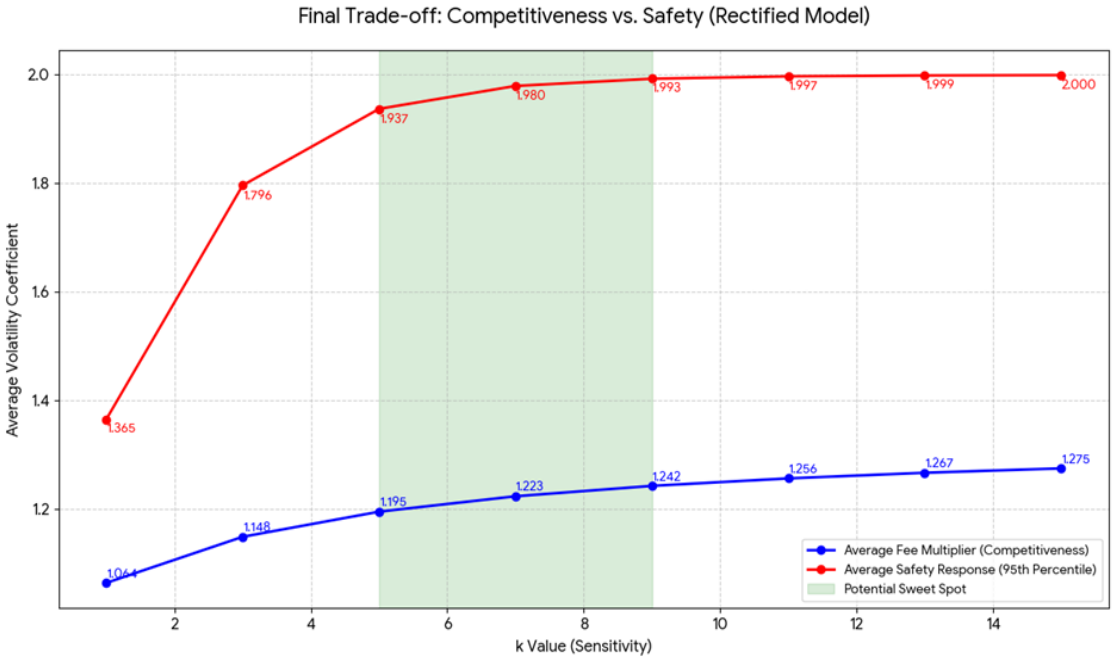
$$hv_{index} = \frac{\text{HV short}}{\text{HV long}}$$

- The output is then adjusted by the following function to get the final factor score:

If hv_index ≤ 1, the factor score is 0.

If hv_index > 1, then: Risk_Factor_Score $= 2 \times \left(\frac{1}{1+e^{-k(hv_{index}-1)}} - 0.5 \right)$

- Based on simulations using three years of market data (details to be published separately), the optimal value for k was determined to be 7. The weight of this index is 10%.



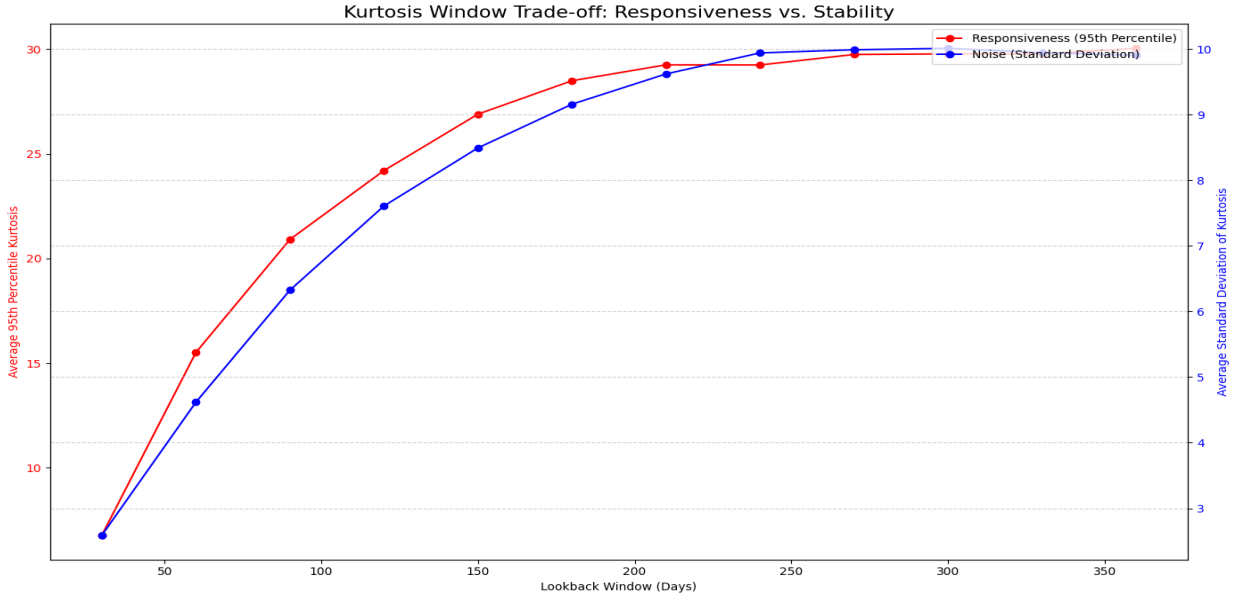
2. <u>DeFi Market Stress Index Based on Trading Volume:</u>

- **Data Source & Collection**: A list of reputable DEXs is first determined by the DAO. Daily trading volume for the specific pair and pool is collected from all sources using tools like The Graph to obtain total daily trading volume.
- **Score Calculation**: The 30-day moving average (MA) of the volume is calculated. The ratio of one-day volume to the 30-day MA is then calculated, minus 1, to get the factor score, which is then multiplied by its weight. A higher number indicates increased risk. If the score is less than 0, it defaults to 0. The weight of this index is 25%.

$$\frac{V\ daily}{V\ MA30} - 1 = Score$$

3. Excess Kurtosis Index of the Insured Liquidity Pool:

- While indicators one and four measure the intensity of typical price movements using standard deviation, this indicator measures the probability of extreme and sudden movements. A kurtosis value of 3 is considered normal; values greater than 3 indicate a higher risk of sharp, sudden moves. Excess kurtosis is kurtosis minus 3.
- Based on calculations on 3 years of price history for major pairs, the optimal window for measuring the kurtosis of a pool's price ratio is 210 days. The weight of this index is 20%.



- Kurtosis formula is :

$$= \frac{\frac{1}{n}\sum_{i=1}^{n}(X_i - \bar{X})^4}{\left(\frac{1}{n}\sum_{i=1}^{n}(X_i - \bar{X})^2\right)^2}$$

4. Price Divergence Volatility Index of the Insured Pair:

All processes in this index—logarithmic volatility assessment, 30-day and 360-day annualized evaluation, and final balancing—are similar to the first index. The only difference is that the first index evaluated the insured token's price changes, whereas this index evaluates changes in the price ratio of the insured token to its paired token in the liquidity pool. The coefficient and weight for this index are 45%.

These calculations ultimately enhance the security of the insurance liquidity fund and align the insurance cost with dynamic market risks. Thus, each token in any pool will have coverage tailored to its specific risk profile. For example, this coefficient will differ between an ETH/USDT pool and an ETH/BTC pool.

3-2-4. Multi-Layered Capital Structure

To guarantee the ability to pay claims under any circumstances, the ILIA insurance fund utilizes a highly resilient, three-layered capital structure:

- **Layer 1**: Premium Aggregation Fund: This is the first line of defense, directly funded by user-paid premiums, covering normal and expected claims.
- **Layer 2**: Reinsurance Staking Pool: A separate pool where users can stake stablecoins in exchange for high yields (from a percentage of premiums), acting as reinsurance providers. Their capital is only used to pay claims if the first layer is completely depleted. This layer creates strategic depth and flexibility for the fund's capital. (This fund can be sourced from ILIA's participation bonds).
- **Layer 3**: Protocol Guarantee Fund: As the final line of defense, a specific percentage of ILIA's total protocol revenue (from all services) is allocated to this fund to provide the ultimate backstop for the insurance product. Use of this fund will only be possible through an emergency DAO vote.

3-2-5. Flexible Premium Models for Every Strategy

ILIA offers three different coverage models so users can choose the option that best fits their investment strategy.

Note: The rates in the following tables are base premiums, calculated before the application of the real-time volatility coefficient.

Models 1 & 2: Fixed-Value Coverage and Proportional-Value Coverage: These models are designed for users seeking simpler, more predictable structures.

- **Model 1 (Fixed-Value Coverage):** The premium and claim ceiling are based on the asset's value at the time of purchase. 75% of the incurred loss (up to the coverage limit) is always paid. Example: An asset is worth $1,000. The user insures it for up to 10% loss for one year. The premium is $35, and the maximum payout is $75. (The system first calculates the max loss of $100. If the actual loss is less than the max, it pays 75% of the actual loss. If the actual loss is more, it pays 75% of the max, which is $75).
- **Model 2 (Proportional-Value Coverage):** The user pays an initial premium based on the asset's value at purchase. At the time of a claim, they pay the premium difference based on the asset's current value and then receive 80% of their loss up to the new coverage limit. Example: An asset is worth $1,000, insured up to 10% for one year for a $35 premium. Later, the asset's value should have been $3,000 but due to IL is only $2,800. The user pays an additional $70 to update the premium. The new coverage ceiling is $300, and the loss is $200. The user receives 80% of the loss, which is $160, after paying the supplemental premium. (If the IL is due to a decrease in asset value, no supplemental premium is collected. The volatility coefficient is only applied once at the start and does not need to be recalculated or reapplied for the supplemental premium payment).

Base Premium Table for Models 1 & 2 (% of Total Asset Value)

Max Coverage (% of TVL)	Annual Premium (%)	Monthly (%)	Quarterly (%)	6-Month (%)	9-Month (%)
up to 5%	1.8	1	1.3	1.4	1.6
up to 10%	3.5	2	2.5	2.8	3
up to 15%	5.5	3	4.5	4.5	5
up to 20%	7.5	4	6	6.5	7
up to 25%	10.2	5	7	8.5	9.2
up to 30%	12.7	6	10	11	11.9
up to 35%	15.5	7	11.5	13	14.25
up to 40%	17.8	8	13.5	15	16.8
up to 45%	19.7	9	15.5	17	18.4
up to 50%	21.5	10	17.5	19	20.3
up to 55%	23.1	11	19.5	21	22.1
up to 60%	24.7	12	20.5	22	23.4
up to 65%	26.3	13	21.5	23	24.7
up to 70%	27.9	14	22.5	24	25.2
up to 75%	29.5	15	23.5	25	26
up to 80%	31.1	16	24.5	26	27
up to 85%	32.7	17	25.5	27	29
up to 90%	34.3	18	26.5	28	31
up to 95%	35.9	19	27.5	29	33
up to 100%	37.5	20	28.5	30	35

Model 3: Correlated Growth-Based Coverage: This advanced model is for professional liquidity providers whose coverage increases in tandem with their asset's potential growth. The coverage ceiling is based on the future value the asset could have had without IL, while the premium is based on its current value. The payout percentage varies dynamically from 75% to 90% based on the time elapsed since the contract began.

For 1-month contracts, the max payout is 75%; for 3-month contracts, 80%. The calculation is linear: Payout % $= 75\% + (\frac{passed\ time-30}{total\ time-30} \times 15\%)$.

If passed_time < 30 days, it defaults to 30. Coverage levels marked as "Not Insured" are those deemed economically irrational for users due to excessively high costs, which ILIA believes would lead to unfair and purely profit-driven financial models. Users can utilize the other two models for these cases.

Base Premium Table for Model 3 (% of Total Asset Value)

Max Coverage (% of TVL)	Annual Premium (%)	Monthly (%)	Quarterly (%)	6-Month (%)	9-Month (%)
up to 5%	2	1.1	1.4	1.5	1.7
up to 10%	4.3	2.45	3.1	3.45	3.7
up to 15%	7.7	4.2	6.3	6.3	7
up to 20%	12.15	6.5	9.7	10.5	11.3
up to 25%	19.25	9.45	13.2	16	17.4
up to 30%	28	13.21	22	24.25	26.25
up to 35%	40	18	29.5	33.5	36.75
up to 40%	54.5	24.5	41.35	46	51.5
up to 45%	72.5	33	57	62.5	67.7
up to 50%	96	45	78	85	91
> 50%	Not Insured	Not Insured	Not Insured	Not Insured	Not Insured

3-2-6. Policy Lifecycle and Execution Rules

- **Claim Process:** After exiting a liquidity pool, the user has a maximum of one month to submit a claim with the necessary documentation. If the system rejects a claim, it must provide reasons so the user can address any deficiencies.
- **DAO Arbitration**: If the system rejects a claim and the user appeals to the DAO, the case is referred with full details. The fee for system re-review (if the file was incomplete) is $3, and the fee for DAO referral is $15.
- **Single-Token Coverage:** Each insurance policy covers only one of the two assets in a liquidity pool. To cover both, two separate policies are required.
- **General Conditions:** Pools with a lifespan of less than 30 days are not covered. Each policy is valid for a single claim payment and terminates upon exiting the liquidity pool.

3-2-7. Strategic Launch and Sustainable Growth

To ensure model sustainability, the insurance protocol will initially launch in a limited beta version, covering only major, logically-trending pairs on a few reputable DEXs. After the fund's stability and economic model are proven, new assets and platforms will be gradually added to the coverage list based on DAO votes.

This approach allows us to manage systemic risks in a controlled manner while building community trust.

3-3. Profit-Sharing Investment Protocols

ILIA's foundational philosophy is value creation through real economic activity in the DeFi ecosystem, not value extraction from users via interest. This philosophy is embodied in our two main investment products: Staking and Participation Bonds. These services are the true engine of profit-sharing in the ILIA ecosystem—a partnership between the protocol (as asset manager) and users (as capital owners) in the real, realized profits from investments.

3-3-1. ILIA Staking: Performance-Based Returns

ILIA's staking model allows users to lock various digital assets in the protocol and share in the returns generated from their active management.

- **Accepted Assets:** The model supports a wide range of assets, including BTC, ETH, stablecoins (USDT, DAI, USDC), the project's governance token (ILIT), and other reputable assets.
- **Non-Guaranteed, Reality-Based APR:** Unlike many platforms, the Annual Percentage Rate (APR) in ILIA is not a fixed, guaranteed number. It represents the investor's share of the portfolio's actual, realized profit over past periods and is updated dynamically. It is usually higher than competitors' fixed rates.

- **Profit-Sharing Model:** To encourage long-term investment, the profit-sharing ratio between the project and the investor varies based on the contract duration.

Contract Duration	ILIA's Share	User's (Investor's) Share
7 Days	90%	10%
1 Month	60%	40%
3 Months	50%	50%
6 Months	30%	70%
9 Months	25%	75%
12 Months	20%	80%

- **Early Withdrawal Policy:** To maintain pool stability, early withdrawals from staking contracts are subject to a penalty, which is clearly stated in the contract and calculated based on the percentage of the contract term that has elapsed. For example, a withdrawal in the first 25% of the contract term incurs a 5% penalty on the principal, whereas after 75% of the term has passed, the user can receive half of the profit realized up to that point, with the penalty being only a portion of their profit share.
- **Principal Guarantee:** The ILIA protocol voluntarily commits to compensating users' principal capital from its internal resources in the event of losses due to technical flaws or smart contract hacks. This guarantee does not cover market risks like impermanent loss, which can be covered by ILIA's insurance product.

3-3-2. Asset Allocation and Risk Management Strategy

Deposited assets are allocated across various investment opportunities based on a risk management strategy aimed at optimizing returns.

- **Stablecoins:** Approximately 70% used for liquidity in ILIT pools, with the rest in other reputable token pools.
- **Volatile Assets:** Approximately 40% used to create and strengthen liquidity pools, and 60% for staking in reputable projects or Proof-of-Stake (PoS) nodes for stable, low-risk income.

Additionally, we are exploring the use of an AI-based price prediction processor to manage liquidity pools and maximize returns.

3-3-3. ILIA Participation Bonds: Investing in Ecosystem Growth

This product is for investors seeking long-term participation in the growth of the entire ILIA ecosystem. In the future, this model will also be used for crowdfunding other ventures.

- **Mechanism:** Investors purchase these bonds (a form of partnership contract with the entire project), providing the financial resources needed for infrastructure development and increasing the protocol's lending capacity or for the development of other ventures seeking capital.
- **Term and Return:** The minimum contract term is currently 12 months. At the end of the period, the full dollar-value principal is returned, and 70% of the net realized profit from all funded activities is distributed to the investor. Plans for offering shorter terms (like 3 and 6 months) are under development.

Chapter 4: Technical Architecture and Innovations

The architecture of the ILIA Protocol is built upon a set of technical and economic innovations aimed at creating a financial system that is secure, transparent, efficient, and inherently fair. This chapter details the key components of this architecture, including the advanced risk assessment model, the unique structure of representative tokens, and the technical strategies for ensuring scalability and security.

4-1. Advanced Collateral Assessment Engine (AHP+)

4-1-1. Design Philosophy

Conventional lending protocols in DeFi often use a simple, static model for the Loan-to-Value (LTV) ratio. This approach, while simple, is incapable of accurately and continuously assessing the real risk of an asset, leading to capital inefficiency or hidden risks for the protocol.

The ILIA Protocol revolutionizes this paradigm by introducing a dynamic and multi-factor risk assessment engine (AHP+). In our philosophy, LTV is not a fixed number but a dynamic output of a risk assessment function that continuously measures the health and creditworthiness of any collateral type based on a comprehensive set of on-chain and off-chain indicators. This 14-factor model, designed based on the experience and consultation of the project's financial team, ensures the most accurate and fair lending conditions for users. Until we are confident in the proper implementation of the AHP+ model, we will use the average LTVs of AAVE and COMPOUND.

4-1-2. Risk Assessment Engine Architecture

- **Oracle Data Aggregation - Commitment to Transparency and Decentralization:** The accuracy and integrity of the entire AHP+ risk model depend directly on the quality and security of its input data. ILIA Protocol adopts a strict, non-negotiable policy regarding data sources: no data from a centralized, non-transparent, or unverifiable source shall enter the risk calculation engine. Accordingly, the protocol's data procurement architecture is as follows:
    - Exclusive Use of Decentralized Oracle Networks (DONs): For all standard market data such as price, trading volume, and market capitalization, the protocol relies exclusively on on-chain feeds provided by reputable, leading, and market-proven oracle networks like Chainlink.
    - On-Chain Calculation for Extractable Factors: For non-standard factors whose data exists directly on the blockchain (such as ownership concentration, staking exit penalties, etc.), the logic for calculating these metrics is implemented on-chain within ILIA's smart contracts. This approach eliminates any dependency on an off-chain, centralized data processor.
- **Exclusion Policy for Unverifiable Factors:** This is the most critical principle in our data policy. If no on-chain, decentralized, and reliable data source can be found for a risk factor, that factor will be removed from the risk assessment model, regardless of its theoretical importance, unless the data is in a DAO-approved report format. We believe having a slightly simpler model with 100% verifiable data is far more secure than a more complex model with weak, centralized links.
- **Future Vision:** To further increase the system's fault tolerance, the project roadmap includes the creation of an Oracle Mixer. This module will receive data from multiple reputable oracle services and produce a final output with maximum confidence using the median or a weighted average.

With this architecture, the protocol ensures that no data from unreliable and insecure sources, such as centralized APIs or web scraping of public websites, ever enters the critical risk assessment process.

4-1-3. Securing Mechanisms Against Manipulation

ILIA Protocol's security is built on a multi-layered defense wall aimed at making any manipulation attempt uneconomical:

- **Resistance to Trading Volume Manipulation:** To counter Wash Trading attacks, the model uses an advanced algorithm that includes a weighted moving average of volume over long periods (30 to 180 days) and a whitelist of reputable, DAO-approved DEXs. This approach drastically increases the cost and time required to meaningfully manipulate the volume.
- **Economic Deterrence:** Our security architecture is designed such that the financial and technical cost of executing a successful attack (including Gas fees and the capital required for sustained manipulation) is far greater than the potential benefit of obtaining a loan with a slightly higher LTV. Our primary defense is to make an attack uneconomical, not to hope for the attacker's rational behavior.

4-1-4. LTV Calculation Process

1. **Base LTV Calculation:** The inherent risk of each digital asset is analyzed based on 14 weighted factors, and the base LTV is calculated through a weighted average of the scores of these 14 factors

   $$LTV\ Base = \sum_{i=1}^{14} \text{Score } i \times \text{Weight } i$$

2. **LTV Adjustment Based on User Choices:** In this stage, the user's chosen conditions are applied as adjustment coefficients to the base LTV to determine the final LTV

   $$LTV\ Final = (1 + \sum \text{Score } Modifiers) \times LTV\ Base$$

Base LTV Factor Tables:

#	Factor	Final Weight (%)
1	Market Cap	20%
2	Ownership Concentration	6%
3	Time on Market	5%
4	Number of Sharp Drops	10%
5	Logarithmic Average of Sharp Drops	5%
6	Average Daily Drops	5%
7	Average Weekly Drops	5%
8	Average Monthly Drops	5%
9	Average Annual Drops	10%
10	Daily DEX Trading Volume	7%
11	Unstaking Penalty	7%
12	Unstaking Waiting Period	5%
13	Staking Yield	5%
14	Liquidity Pool Yield	5%

Scoring Tables for 14 Factors

Score is from 1 to 9, where 9 is best and 1 is worst. (Any asset that fails to meet the minimum criteria for a score of 1 in any factor is not accepted as collateral.)

1. **Market Cap**

Market Cap	Score
> $10B	9
$1B - $10B	7
$200M - $1B	5
$50M - $200M	3
< $50M	1

2. **Ownership Concentration (% of total supply in top 10 wallets)**

Top 10 Wallets' Holdings	Score
< 10%	9
10% - 20%	7
20% - 40%	5
40% - 60%	3
> 60%	1

3. **Time on Market**

Duration	Score
> 10 years	9
8 - 10 years	7
5 - 7 years	5
3 - 4 years	3
1 - 2 years	1

4. **Number of Sharp Drops (Drops >20% within a 1-7 day period)**

Number of Drops	Score
0 - 2	9
3 - 5	7
6 - 10	5
11 - 20	3
> 20	1

5. **Logarithmic Average of Sharp Drops**

Log Return Value	Score
< 0.05	9
0.05 - 0.10	7
0.10 - 0.20	5
0.20 - 0.35	3
> 0.35	1

6. **Average Daily Drops**

Average Daily Drop	Score
< 1%	9
1% - 2%	7
2% - 3%	5
3% - 5%	3
> 5%	1

7. **Average Weekly Drops**

Average Weekly Drop	Score
< 3%	9
3% - 5%	7
5% - 10%	5
10% - 15%	3
> 15%	1

8. **Average Monthly Drops**

Average Monthly Drop	Score
< 5%	9
5% - 10%	7
10% - 15%	5
15% - 25%	3
> 25%	1

9. **Average Annual Drops**

Average Annual Drop	Score
< 10%	9
10% - 15%	7
15% - 20%	5
20% - 30%	3
30% - 40%	1

10. **Daily DEX Trading Volume**

Trading Volume	Score
> $1B	9
$500M - $1B	7
$200M - $500M	5
$100M - $200M	3
< $100M	1

11. **Unstaking Penalty (% of total principal + interest)**

Penalty Percentage	Score
0%	9
< 2%	7
2% - 4%	5
5% - 7%	3
> 7%	1

12. **Unstaking Waiting Period**

Waiting Period	Score
Up to 24 hours	9
1 - 3 days	7
3 - 7 days	5
7 - 15 days	3
> 15 days	1

13. **Staking Yield (Annual)**

Yield Percentage	Score
> 15%	9
10% - 14%	7
6% - 9%	5
3% - 5%	3
< 2%	1

14. **Liquidity Pool Yield**

(Score based on 1.2x the staking yield tiers. E.g., for a score of 9, yield must be > 18%)

Modifiers' Impact on LTV Table:

Repayment Term (1 to 36 months) (For each month over 6, reduce by 1%)

Condition	LTV Modifier
6 months or less	0%
12 months	-6%
18 months	-12%
24 months	-18%
30 months	-24%
36 months	-30%

Installment Frequency

Condition	LTV Modifier
Monthly (1 month)	0%
Bimonthly	-2%
Quarterly	-4%
Every 4 months	-8%
Every 6 months	-16%
Annually	-32%

Collateral Currency Type

All currencies must be PoS (Proof-of-Stake). We currently do not have a model for other currencies but plan to develop one in the future for other currencies and tokens based on creating liquidity pools. (The initial model for our managed and invested liquidity pools for all currencies is ready, and upon launch for each currency, that currency will be added to the list of acceptable collateral, provided it scores at least 1 in all 14 factors.)

Presence of Project Token in Borrower's Wallet

Condition	LTV Modifier
Yes	0%
No	-9%

Ratio of Project Token Value to Loan Amount

Ratio	LTV Modifier
> 100%	0%
75% - 100%	-1.5%
50% - 75%	-3%
25% - 50%	-4.5%
10% - 25%	-6%
< 10%	-7.5%

Impact of Free Collateral Model on LTV

In this model, where the user opts for their collateral to be released proportionally as they repay installments, the final calculated LTV is multiplied by 0.8 (e.g., 70% becomes 56%).

Practical Example for Final LTV Calculation:

- Assume a calculated base LTV of 70% with the following conditions:
- Repayment term: 12 months (-6%)
- Installment frequency: Monthly (0%)
- Project token in wallet valued at 50% of the loan (-4.5%)
- Total modifiers: -10.5%

Final LTV = 70% × (1 - 10.5%) = 62.65%

If this same loan were under the free collateral model, the LTV would be reduced to 50.12% = (62.65% × 80%).

Critical Market Conditions Protocol: During systematic market shocks, the protocol automatically applies a global negative safety factor (-15%) to all LTVs.

4-2. Modular Architecture and State-Representative Tokens

Technical Architecture: In this model, an RT, implemented based on NFT standards, is not the asset or debt itself, but a cryptographically verifiable pointer to a unique data structure (struct) in the protocol's main smart contracts like LoanEngine. This NFT only contains a tokenId which is the access key to the real-time, variable data of that specific position.

Types of Representative Tokens (RTs) in the ILIA Ecosystem:

Token Type	Technical Standard	Tradable	Managing Smart Contract	Primary Use
Investment-RT	NFT-Based	Yes	InvestmentManager.sol	Represents an investment position (staking or participation bond).
Collateral-RT	NFT-Based	Yes (Conditional)	CollateralVault.sol	Represents locked collateral (ready to be allocated to a specific loan).
Debt-RT	NFT-Based	No	LoanEngine.sol	Represents the debt status of a loan. Non-transferable.

4-3. Smart Contract Ecosystem and Process Flow

ILIA's architecture consists of a set of modular smart contracts, each with a specific responsibility. This separation of concerns enhances security and allows for independent development and auditing of each part.

Core Ecosystem Components: (May change in future versions)

- *LoanEngine:* The protocol's main engine that manages loan creation, repayment, and coordination between other modules.
- *RiskEngine:* Responsible for executing the AHP+ algorithm and calculating the final LTV for each loan request.
- *OracleManager:* The protocol's interface with external oracles like Chainlink for receiving secure and reliable price data.
- *CollateralVault:* The treasury contract that securely locks and manages users' collateral.
- *Liquidator*: A module that automatically executes the liquidation process for collateral in high-risk situations.
- *ILIA _DAO & TimeLock:* The protocol's governance infrastructure for voting and securely executing community decisions.

Example of a Loan Creation Technical Flow:

1- *Request Initiation:* The user calls the requestLoan function in the LoanEngine contract via the UI.
2- *Risk and LTV Assessment:* LoanEngine sends asset information to RiskEngine. RiskEngine calls OracleManager to get real-time price data, runs the AHP+ model, calculates the final LTV, and returns it to LoanEngine.
3- *Collateral Deposit:* The user confirms the depositCollateral transaction to transfer their asset to the CollateralVault. After receiving the collateral, this contract signals success to LoanEngine.
4- *Representative Token Minting:* Once the collateral is locked, LoanEngine calls the specific RT contracts to mint a Collateral-RT and a Debt-RT, both with a unique tokenId, for the user.
5- *Loan Disbursement:* The loan amount is transferred as stablecoin from the protocol treasury to the user's wallet.

4-4. Liquidation Protocol

4-4-1. Design Philosophy

To ensure maximum security at launch, we have adopted a hybrid model.

- *Open and Permissionless Process:* From day one, the liquidate function in the smart contract will be publicly accessible. Any person or bot can monitor loans and liquidate an eligible position.
- *Transparent Economic Incentive:* The smart contract automatically rewards the system address that successfully executes the transaction with a portion of the liquidation penalty (equivalent to 1% of the total liquidated asset value).
- *Team as a Backstop:* The protocol's internal servers will also act as one of these keepers on the network. Their role is to be the last line of defense, ensuring that even if other keepers are inactive, the protocol's health is never compromised.

Post-launch, the team's focus will shift from direct execution to empowering the community. This includes:

- *Releasing Open-Source Tools:* Providing sample code and open-source liquidation bots to lower technical barriers and encourage community developer participation.
- *Analytical Dashboards:* Creating public dashboards that display real-time information on loan health and potential liquidation opportunities.

ILIA's ultimate vision is to achieve complete independence from the founding team. Once a healthy, competitive, and sustainable network of independent keepers is established, the team will publicly announce the decommissioning of its backup servers. From that point on, the critical process of liquidation will be entirely protected by a free market and economic incentives, and the protocol will achieve the highest level of decentralization and stability.

4-4-2. Secure and Optimal Execution with MEV Resistance

Once a liquidation command is issued, its execution has two main priorities: protection against market manipulation and maximizing the returned value from the collateral.

Countering MEV through Private Transaction Relays: The biggest threat when selling collateral on a DEX is Miner Extractable Value (MEV) attacks. Bots can front-run the liquidation transaction in the public MemPool, causing the collateral to be sold at a much lower price. For this reason, the protocol's liquidation engine is natively integrated with private transaction relays like Flashbots. The liquidation transaction is sent directly to a private bundle, hidden from MEV bots. This advanced mechanism ensures the trade is executed in a secure environment, protecting both the user's and the protocol's assets.

Optimal Execution via Liquidity Aggregator: To minimize price impact and slippage, the Liquidator contract uses a DEX Aggregator. This tool intelligently splits the collateral sale order across multiple liquidity pools on different exchanges, ensuring the transaction is executed at the best possible average rate across the entire market.

Chapter 5: Tokenomics

The economic model (Tokenomics) of the ILIA Protocol is designed to create a sustainable ecosystem, foster community-driven growth, and align the long-term interests of all stakeholders. The ILIT token is not just a financial instrument but the backbone of governance, the incentive mechanism, and the primary tool for ensuring the economic security of the protocol.

5-1. Token Specifications

- **Token Name:** ILIA Token
- **Symbol:** ILIT
- **Network:** On the Ethereum network or its equivalent on supported Layer-2 networks like Polygon and Arbitrum.
- **Maximum Total Supply:** 4,000,000,000 tokens. This amount is hard-capped and non-inflationary; no new tokens will be created after the initial supply.

5-2. Token Allocation & Vesting Schedule

The ILIT token's economic and distribution model is designed with a philosophy of gradual decentralization, long-term incentive alignment, and community empowerment.

5-2-1. Token Allocation Table

Sector	Token Amount	% of Total	Strategic Goal
Founding Team (Entity)	800M	20%	Ensure long-term commitment and alignment of the team with the project.
Pre-Sale	250M	6.25%	Raise capital for initial infrastructure development and security.
Initial Coin Offering (ICO)	2.1B	52.5%	Achieve wide token distribution and secure main lending capital.
DEX Liquidity Pool	400M	10%	Create a deep and stable market for the ILIT token.
Airdrop	400M	10%	Reward early contributors and grow the community.
Market Maker	50M	1.25%	Control market volatility in the initial months post-launch.

5-2-2. Vesting Schedule

To prevent sudden selling pressure and build sustainable market confidence, key token allocations are subject to a precise, time-locked release schedule:

- **Founding Team Tokens:** To demonstrate maximum commitment to the protocol's future, all 800 million tokens allocated to the founding team will be hard-locked for 3 full years. These tokens, however, will exceptionally retain voting rights in the DAO. (All other locked tokens, such as those in liquidity pools, collateral, burned, etc., do not have DAO voting rights).
- **Liquidity Pool Tokens:** To ensure stable and deep liquidity in secondary markets, all 400 million tokens for this sector, along with $24 million of initial capital, will be locked in liquidity pools for 3 full years.
- **Airdrop Tokens:** To prevent immediate selling by recipients, all airdropped tokens will be locked for one month after the first DEX listing, after which they will become claimable.
- **Public Sale Tokens (Pre-Sale & ICO):** Tokens sold in these stages will be fully unlocked at the Token Generation Event (TGE) and distributed to buyers.

5-3. Value Accrual Mechanism and Protocol Revenue Allocation

5-3-1. Design Philosophy

The ILIT token's economic model is based on a fundamental philosophy: creating sustainable value through ecosystem growth. Unlike protocols that distribute a large portion of their revenue as instant dividends to holders, ILIA adopts a reinvestment model. Protocol revenues are strategically reinvested to strengthen technical infrastructure, security, community growth, and market stability. This can include hardware or software purchases and investments.

This approach ensures that the value of the ILIT token is tied to the long-term success and expansion of the entire ecosystem, rather than relying on short-term profits.

5-3-2. Revenue Flow and DAO-Governed Allocation

All gross protocol revenues (from sources like lending fees, insurance fund profits, and investment returns) are deposited into a treasury smart contract. This treasury distributes the income among several strategic funds based on a pre-defined allocation policy, which is set by governance and remains in place for at least one year.

Initial Protocol Revenue Allocation Table:

Allocation Fund	% of Revenue	Strategic Goal
Development & Innovation Treasury	50%	"Fund new product development (e.g., uncollateralized loans), strategic investments, and support for aligned projects."
Technical Development & Security	20%	"Cover development team costs, regular security audits, infrastructure upgrades, and Bug Bounty programs."
Marketing & Community Growth	10%	"Execute global marketing campaigns, user education, and community expansion."
Token Buyback & Burn	up to 10%	Create a powerful deflationary mechanism to reduce total supply and increase the token's intrinsic value.
Future Airdrops Fund	up to 5%	"Reward loyal users, active DAO participants, and attract new users in future growth phases."
Crisis Guarantee Fund	up to 5%	A reserve fund to implement a token price support program during severe market downturns.

Note: The percentages for Airdrops and Buyback & Burn are maximums. The exact amount will be determined each fiscal period by a joint vote of the DAO and the executive entity to align with the protocol's immediate needs.

5-3-3. Value Creation Cycle for ILIT Holders

Direct Value Accrual (Deflationary Mechanism): The Buyback & Burn mechanism is the protocol's only direct value-creation path for the token. A portion of gross revenue is periodically used to buy back ILIT from the open market, and these tokens are permanently burned. This process directly increases the scarcity and intrinsic value of each remaining ILIT.

Indirect Value Accrual (Growth-Based): The majority of protocol revenue (>80%) is reinvested into the protocol itself. This creates a virtuous cycle: improved security, new products, and community growth lead to increased protocol usage, which in turn increases demand for the ILIT token (for governance, improved loan terms, etc.).

5-3-4. Yield Opportunities for Token Holders

The ILIA protocol does not have an internal "Fee Sharing" mechanism for ILIT holders. However, holders can earn a yield on their assets through standard DeFi mechanisms:

- **DEX Liquidity Provision:** Users can provide liquidity with their ILIT tokens in pools like ILIT/USDT on Uniswap and earn a share of the trading fees.
- **Staking on the ILIA Platform:** Users can stake their ILIT in the public investment model described in section 3-3 and share in the real profits from the protocol's overall investment activities.

It is crucial to note that ILIT staked in external yield farming platforms do not have DAO voting rights. Voting rights are calculated based on wallet snapshots of actual balances, and representative tokens from liquidity pools are not accepted. Only ILIT staked within the ILIA platform itself can participate in DAO votes.

5-4. Token Generation Event (TGE)

5-4-1. Fundraising Philosophy and Goals

1- **Capitalizing the Lending Fund:** The majority of raised capital will be allocated directly to the main lending fund, ensuring ILIA has significant lending capacity from day one.
2- **Creating Deep Secondary Market Liquidity:** This capital, along with 400 million ILIT, will be used to provide initial liquidity on leading DEXs.
3- **Covering Operational and Growth Costs:** Funding for the first three years of technical development, security audits, global marketing, and community growth.

4- **Initial Infrastructure Development:** This portion, funded by the Pre-Sale, is dedicated to building and securing the core protocol infrastructure before public launch.

5-4-2. Two-Phase ICO Architecture

Phase One: Pre-Sale & Dutch Auction

- **Pre-Sale:** To raise capital for infrastructure development from strategic partners, 250 million tokens will be offered at a fixed price of $0.04.
- **Public ICO:** This will be conducted via a Dutch Auction mechanism, starting at a base price of $0.06. This method was chosen for its transparency and ability to achieve fair price discovery.

Phase Two: Automated Liquidity Growth Protocol

If demand in the ICO exceeds the initial fundraising target, the protocol will activate a smart mechanism we call the 1-1-0.2 Automated Growth Protocol. Instead of hoarding excess capital, it directs it to strengthen the token's liquidity pools.

How it works: For every 1 ILIT sold in this phase:

1- Another 1 ILIT is automatically transferred to the protocol-controlled liquidity treasury.
2- 0.2 ILIT is added to the Community Reward Fund, increasing the ICO-related airdrop budget.
3- The proceeds from the sold token are also transferred to the project's liquidity treasury.
4- Any tokens unsold at the end of the ICO period and not allocated to other funds will be permanently burned.

The conditions of the token offering may be subject to change, which will be communicated in future updates if any changes occur.

5-5. Community Growth and Airdrop Protocol

400 million tokens (10%) are allocated for an intelligent airdrop to reward early and active community members. The airdrop is designed with a non-linear scoring model to prevent whale dominance.

Scoring Formula: $(\mathbf{10} + \boldsymbol{log}_{\mathbf{2}}^{\mathbf{1}+\boldsymbol{tokens}}) \times (\mathbf{1} + \mathbf{5}\boldsymbol{log}^{\boldsymbol{BUY\ price} \div \boldsymbol{ICO\ base\ price}})$

Design Logic: The logarithmic function diminishes the returns for very large purchases, giving smaller buys more relative weight. This helps in a fairer token distribution. Furthermore, the scoring formula helps individuals who purchased the token at higher prices face less risk in terms of return on investment, which in turn greatly contributes to

the protocol's financial strength and its independence from whales. The referrer's score is calculated as 80% of the buyer's score.

Airdropped tokens will be claimable one month after the first DEX listing, but their voting rights are active during this lock-up period. This logarithmic logic will also be applied to DAO voting to increase the influence of smaller participants.

5-6. Stability and Anti-Inflationary Mechanisms

Buyback & Burn: Up to 10% of the project's net revenue will be allocated annually to the buyback and burn program. This acts as a long-term deflationary accelerator.

Price Support Fund:

- A support fund designed to defend the token price during severe market crashes (e.g., dropping below the ICO price) by executing an automated, stepped buying strategy.
- This fund receives its annual budget (5% of protocol revenue) and saves it for crises. It does not have automatic access to the main development or marketing treasuries. Any emergency funding beyond its annual budget requires a transparent proposal and approval by the DAO.
- The program is semi-automated and activates after DAO confirmation under conditions like: price dropping below ICO rate, or a sharp price decline in 24-hour or 7-day windows.
- Purchased tokens are moved to a special pool and are gradually sold back into the market at higher prices after stability returns, with profits used to replenish the fund or be reallocated by the DAO.

Chapter 6: Governance and DAO

6-1. Governance Process

1- **Proposal and Public Discourse:** Any community member can propose ideas in public forums. To submit a formal proposal for a vote, the proposer must lock ILIT as a bond to prevent spam.
2- **Formal Team Recommendation:** The founding team must publish a transparent recommendation for every significant proposal, which will be one of: Approve, Reject, or Neutral, along with a public analysis of their reasoning.
3- **DAO Governance Vote:** The proposal is then put to a public vote among ILIT holders on Snapshot. The community holds the final sovereign power.
4- **Execution with TimeLock:** Approved decisions are placed in a TimeLock contract (e.g., for 48 hours) as a final security layer.

The DAO's role is to determine the "what" and "why"—approving macro-strategies, allocating main budgets, and setting long-term goals.

The founding team's role, as the community's elected executive arm, is to determine the "how"—managing day-to-day operations and executing decisions within the DAO-approved budget and strategy framework.

The team is required to provide regular, transparent performance reports to the DAO.

6-2. Emergency Veto Mechanism

In the rare, critical event that a DAO-approved proposal is deemed an existential threat to the protocol by the founding team, a final, transparent, and high-stakes mechanism is designed.

Activation: The team can activate this emergency veto via its multi-sig wallet.

Consequences:

1- Execution Delayed: The proposal's execution is delayed for 30 days.
2- Team Token Unlocking Initiated: All vested team tokens automatically begin an immediate unlocking process.

Final Confirmation Vote: During the 30 days, extensive public debate occurs. At the end, a final vote is held to re-confirm the proposal.

- **Scenario 1:** Community Reconsiders. If the community is convinced and votes to cancel the proposal, the veto is lifted, the proposal is not executed, and the team's tokens are re-locked.
- **Scenario 2:** Community Stands Firm. If the community re-approves the proposal, it is executed, and simultaneously, the team's tokens are fully unlocked, giving them the right to exit a project whose direction they no longer believe in.

Chapter 7: Development Roadmap

The development of the ILIA protocol is an evolutionary, transparent, and multi-stage process following an Agile methodology.

Phase 1: Foundation and Mainnet Launch (Q4 2025 - Q3 2026)

- Q4 2025: MVP Development & Testnet
  - Complete MVP development of core contracts (LoanEngine, CollateralVault, etc.).
  - Launch public Testnet for community testing and feedback.
  - KPI: 1,000 active testnet users; 3,000 successful loan and staking transactions.

- Q1 2026: Security Audits & Protocol Hardening
    - Initiate multi-layered audits by top firms (CertiK, PeckShield, Quantstamp).
    - Launch a public Bug Bounty program.
    - KPI: Receive at least two full audit reports with no critical vulnerabilities.
- Q2 2026: Community Building & Fundraising
    - May 2026: Launch marketing campaigns on platforms like Galxe and Zealy.
    - June 2026: Conduct public token distribution event (ICO) via Dutch Auction.
- Q3 2026: Mainnet Launch & Liquidity Provision
    - August 2026: Deploy all mainnet smart contracts on Ethereum and supported L2s.
    - August 2026: Activate core services (interest-free lending, staking).
    - August 2026: List ILIT on at least 4 reputable DEXs (including Uniswap, PancakeSwap, Curve, SushiSwap) and inject initial liquidity.
    - KPI: Achieve at least $10M in TVL in the first month.

Phase 2: Ecosystem Expansion & L2 Integration (Q4 2026 - Q2 2027)

- Q4 2026: Advanced Services & Governance Activation
    - Full launch of the Impermanent Loss insurance protocol.
    - Hold first DAO votes to set economic parameters.
    - KPI: Sell 500+ insurance policies in the first quarter; >20% of circulating supply participating in the first major vote.
- Q1 2027: Multi-chain Optimization & Cost Reduction
    - Full deployment and optimization on major L2 networks (Arbitrum, Optimism).
    - Activate DEX Aggregator module for optimal liquidations.
    - KPI: Reduce average user transaction cost to < $1.
- Q2 2027: New Investment Products
    - Launch the first ILIA Participation Bonds.
    - KPI: Raise at least $5M through participation bonds in the first quarter.

Phase 3: Novel Financial Instruments & Real-World Integration (Q3 2027 and beyond)

- **Uncollateralized Lending:** R&D on a Decentralized Identity and on-chain credit scoring system to pilot uncollateralized loans.
- **Real-World Asset (RWA) Integration:** Develop technical and legal frameworks to tokenize and accept RWAs (e.g., government bonds, real estate) as collateral.
- **International Payment Systems:** Launch pilot programs using the ILIA infrastructure for cheap, fast, and ethical international payments, focusing on NGOs and developing markets.

Chapter 8: Market Analysis and Strategic Positioning

8-1. Market Size Analysis and Strategic Opportunity

The DeFi lending market has experienced exponential growth, with the Total Value Locked (TVL) currently fluctuating between $60B and $80B, projected to cross $100B by the end of 2025.

However, nearly this entire market is built on interest-based debt models. This creates a blue ocean strategic opportunity for ILIA to address the global demand for interest-free financial services, a demand no major protocol has yet seriously addressed. We project that by 2028, ILIA can capture at least $2-3 billion of this potential market.

8-2. Target Audience Segmentation

Primary Market: Ethical Finance Seekers: Individuals and organizations looking for fair, participatory economic models. This includes the global Muslim community (a potential market of over $3T) and secular, ethics-driven users.

Secondary Market: Professional DeFi & Web3 Users: Experienced crypto users seeking innovative protocols with high transparency, true decentralized governance, and sustainable economic models.

Growth Market: Unbanked & Underbanked Communities: ILIA's KYC-free model (for most services) can provide modern financial tools to millions in developing countries.

Institutional Market: Non-profits & Charities: These organizations need transparent, cheap, and ethical financial infrastructure for managing funds and distributing aid.

Beyond these segments, the novel cost and profit structure of the ILIA protocol can offer attractive material benefits to all global users, whether as investors, borrowers, or recipients of other services.

8-3. Competitive Landscape Analysis

DeFi Lending Platforms:

Competitor	Strengths	Weaknesses (Opportunity for ILIA)
Aave	"Excellent UX, multi-chain support"	"Interest-based, complex for newcomers"
Compound	"High decentralization, active community"	"Interest-based, slower innovation recently"
MakerDAO	Issues the reputable DAI stablecoin	"Interest-based, highly complex economic model"

Strategic Analysis: These competitors are powerful, but all operate on the interest-based model. This is ILIA's single greatest opportunity to emerge as the first credible, global-scale ethical alternative.

Centralized Finance (CeFi) Lending Platforms:

Competitor	Strengths	Weaknesses (Opportunity for ILIA)
Binance Lending	"High trust, ease of use"	"Fully centralized, counter-party risk, lack of transparency"
Nexo / YouHodler	High deposit yields	"Centralized, geographic restrictions, regulatory risks, mandatory KYC"

Strategic Analysis: The appeal of these platforms is their simplicity. However, concerns about asset security, centralization, and lack of transparency create a massive opportunity for trusted decentralized protocols like ILIA that can offer a simple user experience.

8-4. ILIA's Competitive Outlook and Go-to-Market Strategy

Our strategy, aiming for an initial TVL of $100-200M in the first year, is designed in three phases:

Phase 1: Focus on Untapped Markets. Instead of competing directly with Aave, we will initially target segments completely ignored by competitors: the ethical finance market and the unbanked.

Phase 2: Product-Led Growth. After establishing a base, we will highlight our product advantages to attract more professional DeFi users: superior risk management for borrowers (stable dollar debt) and predictable, fixed costs.

Phase 3: Create a Liquidity Flywheel and Attack the Main Market. We will solve the cold start problem by using a significant portion of our raised capital as Protocol-Owned Liquidity, partnering with VCs for more, and creating a virtuous cycle: POL attracts users -> user activity generates fees -> fees fund buyback & burn -> token value increases -> higher value attracts more LPs -> deeper liquidity enables better services.

Competitive Comparison Table:

Feature	**Aave/Compound**	**Nexo/Binance**	**ILIA Protocol**
Economic Model	Variable Interest	Fixed Interest	Service Fee + Profit Sharing
Main User Risk	"Interest rate volatility, cascade liquidations"	"Counter-party risk, lack of transparency"	Protocol portfolio performance risk (can be covered by insurance)
Transparency	Full transaction transparency	Opaque asset management	"Full code, governance, and portfolio transparency"
Governance	Decentralized but often whale-dominated	Fully Centralized	Truly decentralized with anti-whale DAO
Primary Target Market	Professional DeFi traders	Novice users seeking simple yield	"Ethical users, emerging markets, DeFi users"

8-5. PESTEL Environmental Analysis

Factor	Analysis of Impact on ILIA Project
Political	- Increasing regulatory pressure for KYC/AML is a challenge. - Potential for collaboration or obstruction from religious/governmental bodies in Islamic countries is an opportunity/threat.
Economic	- Widespread need for interest-free loans in developing countries is a huge opportunity. - Inflation and economic instability increase the appeal of stablecoins and digital assets.
Social	- High acceptance of and interest in ethical financial tools is a key opportunity. - Cultural resistance to complex blockchain technology is a challenge.
Technological	"- Rapid growth of the DeFi ecosystem, L2s, and oracles is a major opportunity. - Risk of hacks, smart contract bugs, and security vulnerabilities is a constant threat."
Environmental	"- Using PoS networks minimizes energy consumption, making the protocol a green option."
Legal	- The lack of clear legal frameworks for DeFi is both a risk and an opportunity. - Need for thorough jurisprudential reviews for full Sharia compliance in Islamic markets.

Chapter 9: Leadership Team and ILIA's Hybrid Trust Model

9-1. Our Philosophy: A Blend of Public Accountability and Protocol Focus

Trust is the cornerstone of any financial system. At ILIA, we believe that trust in the new Web3 world is no longer a one-dimensional concept solely dependent on personal identity. Therefore, we have designed a hybrid trust model.

Our philosophy is to achieve the highest level of efficiency and accountability by separating public-facing leadership roles from focused protocol development and strategy. This allows us to:

- Build strong communication bridges with the physical financial world and legal entities.
- Maintain the complete focus of the technical and strategic team on long-term protocol innovation and development, away from the distractions and pressures of public notoriety.

9-2. Pillars of ILIA's Hybrid Trust Model

Public Leadership and Legal Accountability: To ensure full accountability, operational transparency, and facilitate institutional partnerships, key members of the ILIA leadership team responsible for executive and business development roles will have public, real-world identities. These individuals will act as the official faces of the project and serve as the direct, legally accountable point of contact for partners, institutions, and the community. The identities of these members will be officially introduced in line with the project roadmap.

Active and Continuous Accountability: A pseudonymous identity in ILIA's philosophy does not mean isolation or a lack of accountability. The pseudonymous members of the team will be fully accessible and are deeply committed to being accountable to the community. This accountability is realized through:

- *Transparent Communications:* Regular publication of statements, analyses, and progress reports through official project channels.
- *Participation in Governance:* Active presence in discussions related to governance proposals, providing technical and strategic perspectives.
- *Accessibility:* Interacting with the community through social media and discussion forums.

Just as Satoshi Nakamoto's influence stemmed not from personal identity but from the quality of his work and public writings, our pseudonymous leaders will be judged by the power of their ideas, the robustness of their code, and the transparency of their communication. We believe this hybrid model is the future for serious projects in the decentralized finance space—a model that remains faithful to the core principles of Web3 while embracing the requirements of the real world.

Thank you for your time in reviewing this document!

Silas Kouri

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