**Intro**

Emma Interest is a gamefi platform. The game will focus on missions which have Ghibli-studio quality. The game not only incorporates a decentralized exchange component, but users can also go out and fight monsters, but also buy and sell in-game land and financial licenses, and trade thousands of different financial products.

**Problem Statement**

Emma Interest tackles three problems. 1) The Harmony-Terra Luna bridge exists. No project is utilizing it. 2) Almost all DeFi projects do not live up to their name because they do not use decentralized money as assets 3) Gamefi projects like Axie Infinity feel bland and soulless because it does not resemble a real-life economy for its players.

Harmony is the Layer 1 solution for DeFi Kingdoms -- a gamefi project with a DEX that will be bigger than Axie Infinity. Harmony’s extremely low-cost gas fees, enables costless rewards, airdrops, and loot boxes. Terra Luna has the most diverse and fastest growing ecosystem of financial products. In just six months, Terra has seen just one of its Anchor Protocol projects grow in total value locked by $4 billion USD.

Therefore, considering explosive growth potential for using the Terra Luna-Harmony bridge, the lack of any development of combining the two is a huge opportunity. Emma Interest integrates Harmony and Terra by building a play-to-earn game where users can trade all sorts of financial products. Emma Interest’s first MVP will be Forex liquidity pools, integrating them with Terra Luna's stablecoin ecosystem. For example, if a user is in the 3x USD pool rewards are paid in Emma Interest tokens. There will be an NFT-market place too, and land can be sold which gives a "license" to the creator of the liquidity pool. The license-holder will be the only one able to create particular pools. In a sense, this kind of interaction resembles a real-life economy.

Furthermore, by solving the problem that no project yet uses the Harmony-Terra Luna bridge, means the solution covers a growing problem of DeFi: even if the DeFi project is decentralized the assets listed are not. Reserve-backed coins like USDT or USDC have their problems: centralisation. And their accounting is either opaque or not transparent at all.

Instead, Emma Interest and its Forex trading uses Terra’s decentralized, algorithmically-pegged coins like UST. UST has grown to be the 3rd largest USD stablecoin. And Emma Interest unlocks a large market opportunity for users who want to interact with their local currency instead of just trading every asset against USD. Terra Luna also has eighteen other stablecoins; including lesser-known ones that have been heavily under-utilized like the Filipino Peso and the Indonesian Rupiah. By using Emma Interest tokens as the reward and the token for gains on the platform, thousands of truly decentralized trading pairs can be created.

Finally, to make the game fun Emma Interest will have an NFT-marketplace where users can swap or trade not only in-game items but land so get precious licenses for trading products. This fixes the issue of having under marketed assets show up in a DEX no one uses, or competing pools that offer the same trading pairs. Emma interest enables users to create a corporation and have a little bit of friendly competition. Hunting monsters is great, but when the user comes back and relaxes at the local alehouse in-game, the immersion of DeFi and Gamefi should not stop.

**Roadmap**

After implementing Forex trading, the Emma Interest team will focus on liquidity pools for leveraged trading for stocks and commodities via Terra’s Mirror Protocol, before finally creating the world’s first blockchain-based fixed-FX deposit staking and borrowing platform via Terra’s Anchor Protocol.

**Game Setting**

The game is set during the 17th century world of Hogwarts. It is inspired by none other than the city JK Rowling wrote Harry Potter, Edinburgh Scotland. Situated right off of the British Isles, Emma Island takes inspiration from the financial capital that was once Edinburgh -- the city that spawned the first ever asset management company, life insurance, and first public bank. In its heyday, the winding streets of the capital of Scotland were once the gathering place of the founder of modern economics, Adam Smith, as well as the great enlightenment leaders like David Hume and many others.

Emma Interest characters combine Harry Potter and Ghibli Studio. Instead of human-looking characters, we replace people with cute animals. NPCs will be showcased too -- including a cute version, including but definitely not limited to a cat named Adam Smith. The user will be transported to a fair town that is growing as a place for merchants in a town called New Edinburgh. Users from all over the world will travel to the town to trade stocks, commodities, land, and foreign currency.

The game will enable users to spend their Emma Interest tokens on leveling up characters. Face the wrath of Ghibli-inspired Highlanders, turned cute animals in the aftermath of the Jacobite Rebellion. Venture forth from Emma Island into the great beyond, into the wilderness of bandit-country and try to wrestle with the elements of northern Scotland. Gain rewards, and return to Emma Island a hero and build your financial empire! Additional islands and towns, maps, and missions will be created in the future. Key land features of New Edinburgh will include pubs, teahouses, banks, and castles. Be a banking baron and gain licenses to trade key financial products with the rest of the world.

**Holding Licenses**

There would be two types of NFTs. The first NFT are licenses that enable users to incorporate and have a particular right to a specific financial product. The second type of NFT are in-game items that offer particular rights such as discounts and revenue sharing.

The license NFT gives the user the ability to incorporate and have a building -- which in Emma Interest - are castles. The license also gives the user the ability to list a particular financial product. Each license is specific to the particular financial product and has a liquidity pool to act as collateral to users trading the product. The corporation has investors who deposit and fund the liquidity pool, take the risas the counter-party of trading, and reaps of liquidations and high APY returns. For example, a user who wants to interact with a 2x long leveraged US dollar trading must go to the particular corporation which is the license holder of that product to trade it. There are multiple leveraged products per trading pair (1x, 2x, 3x, and eventually 4x, and 5x). Over time, there can be more than 2,000 potential licenses that can be granted. Although, in the beginning of mainnet only key licenses for major trading pairs will be offered to the community.

**Benefits of trading on Emma Interest versus in fiat, in the “real world”**

Users will enjoy foreign currency without having to go to a trading app that requires a minimum of 100x leverage. The fact is, Forex trading is certainly not for the faint of heart and definitely not fun with that kind of leverage. As for stock trading, using crypto to do hassle-free stock trading without any KYC is a huge plus. And finally, all gains enable users to either cash-out or utilize those gains and turn them into capital for playing the Ghibli-inspired Emma Interest game.

**Mechanics of gains and losses in the corporation’s FOREX and Stock leveraged liquidity pools**

All gains/losses from trading a particular product are paid in Emma Interest Tokens. For example, if a user deposits 1000 Emma Interest tokens in a 2x long EUR/USD pool, and the USD gains 5%, then the user receives a 10% gain in revenue from that particular trade. Not only does the user gain 10% and receives the unrealized gains in the form of Emma Interest tokens, but in virtue of interacting with the pool, the user’s invested trading funds are treated as a deposit which receives the Emma Interest APY. If the user, however, sees a 5% decrease in EUR/USD, then 10% of the user’s deposit is returned to the investors of the EUR/USD liquidity pool.

Pools that are considered “higher risk” are currencies that are more volatile and are not very well known. These currencies will require higher APYs in order to incentivize collateralization of those pools. Most likely, these currencies will include the likes of the Mongol tögrög (MNT) and others -- currencies like the MNT which have lost 50% of their value against the USD in the past ten years.

**How exactly does Terra Luna’s stablecoins interact with Emma Interest (which is being built on Harmony)?**

While it is not necessary to use Terra Luna’s stablecoins in the “pay-out” mechanism of a gain or loss in trading with the corporation, where Terra Luna’s stablecoins are essential is the ability to collateralize the pools. Each pool will have a fixed amount that must come from the currency trading pair. For example, if it is a EUR/USD pool, it would need at least 25% of each of the two countries (wrapped in Harmony) and swapped from Terra Luna using the Terra Bridge, in order to satisfy the requirements of a stable liquidity pool. While not all of the pool needs to come from the two currencies, and a portion can be collateral in the form of wrapped BTC, ETH, and Harmony’s ONE coin, these relatively volatile cryptocurrency tokens will always be a minority of the liquidity pool’s total collateral.

**How Corporations and users trading on Emma Interest gain or lose Emma Interest tokens**

From the perspective of the corporation and the liquidity pool, when a user trades one of its financial products (like EUR/USD), then if the user has unrealized gains, these unrealized gains come from Emma Tokens come from the staked Emma Tokens the liquidity pool would have received by the APY of the locked invested tokens (of all kinds) in the pool.

However, if the gains of the user exceed the amount of Emma tokens held by the liquidity pool during the duration of the smart contract, parts of the liquidity pool then needs to be liquidated and turned into Emma tokens to pay for the user’s gains (i.e. 70% of the pool might contain various stablecoins and other tokens, and a small portion of these would need to be liquidated and turned into Emma Tokens to pay for the user’s gains).

That is why liquidity pools would need to be collateralized 100%+ (possibly up to 130% — likely). Still, it is a lot less than other pools where (in MakerDAO) pools are closer to 200%.

If the loser loses 20% of the asset’s value — for example trading Mongolia’s MNT currency — then 20% of the unrealized value of the gains of the user would come from the corporation’s pool. The corporation pays out a part of its liquidity pool in the form of Emma Tokens (meaning some of the liquidity pool is liquidated and converted).

If the trading pair asset (i.e. USD/MNT) somehow sees the base pair lose 40% of its value, it might trigger the liquidation of the corporation’s entire pool if it was not overly collateralized. If the base pair loses 40% of its value, then the exposure of the asset is so great the pool could be liquidated as a whole during a major downswing. To avoid this, as the base pair loses value, the APY of the pool goes up to incentivize additional investment in the liquidity pool.

Both the corporation, as the principal license holder, and other investors who add liquidity to the pool, receive Emma Interest tokens. The amount in the pool acts as a staked deposit that receives APY. The license holder also receives fees generated from the pool itself. The fees would be relatively competitive at 15 bps which go to the license holder as well.

Imagine a pool sees 1,000,000 EUR/USD equivalent of trading volume. It is a 2x long leveraged pool. The USD gains a lot. Even though the pool sees some losses, the APY of Emma Interest is so high (and could be upwards of a 1000% or more) that in the long-run any losses are negligible.

By virtue of providing this service that increases the amount of transacted volume in Emma Interest, the risk of staking of the pool by both the corporation and its investors is highly justified. Afterall, having a large and growing liquidity pool provides an important financial service to the Emma community and therefore the rewards for providing should be justifiably high.

If a user wants to trade far more than what is in the corporation’s liquidity pool for EUR/USD -- i.e. the pool has only 1,000,000 EUR of assets but the user wants to trade 2,000,000 EUR -- then the Emma Interest token APY of the pool is dramatically increased in order to incentivize users to invest in the pool in order to stabilize the pool for that kind of trading volume.

Users can interact with the hundreds of potential financial products, created, owned, and offered by user-created corporations, through interacting with the Board of Trade menu. Users can also visit the corporations themselves in their castles. In each castle, corporations can also sell items that are not in the Board of Trade menu. The Board of Trade is reserved for FOREX and stock trading. The castles will have in-game items for sale or rent to users for the game.

In summary, the objective of Emma’s liquidity pools is to reach two important goals of the protocol: higher volume and higher fun. Higher volume because in Emma Interest’s tokenomic plan, users can interact with each other on something resembling the real-world economy. Every time users interact more with the various corporations, trading volume goes up, and more rewards are paid out. Higher fun, since beyond the obvious ability to re-stake Emma Interest Tokens, the trading on Emma Interest is very diverse (much more than a traditional FOREX trading app) and all tokens can also be used to purchase additional licenses, characters, and items for the game.

**Tokenomics**

The project token also gives real utility to the Emma Interest token because, as a reward for using, trading, and depositing on the Emma Interest DEX built inside the game, the rewards can be used to buy NFTs and upgrade characters to play the game.

Emma Interest's token, EMMA will have a hard cap of 700,000,000 tokens. The Emma Interest team has chosen to follow in DeFi Kingdom’s footsteps by having a pre-minting stage too.

The **13,000,000 EMMA** tokens will be be pre-minted and distributed as follows:

* **3,000,000 EMMA**: Allocated to fund the future development of the game. These tokens will be time-locked and released over a set schedule as features are completed. This will be in addition to the NFT-land sales done that will fund an earlier part of the game development before Emma Interest reaches mainnet.
* **3,000,000 EMMA**: Allocated for promotion of the project, including marketing, airdrops, etc. These tokens are also time-locked to release slowly over the next few years, to ensure that there are always funds available to market the game and acquire new players and investors.
* **6,000,000 EMMA**: Allocated for initial liquidity. These tokens will be matched with ONE tokens to form the initial liquidity pool and will not be withdrawn or sold.
* **1,000,000 EMMA**: Allocated for bounties and hours for the founding team based on their work towards launch. Half of these will be awarded at launch, and the other half will vest over time.