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1. MoneySwitch at a Glance

Type	Uncollateralized DeFi Lending, Liquidity-as-a-Service (Laas)
Blockchain	Ethereum
Governance Token	MoneySwitch Token (MST)
Total Token Supply	1,000,000,000
Token Type	Deflationary
Support Crypto Assets	FRAX, USDT, USDC
Asset Collateral Type	Uncollateralized
Key Features	Lending, Uncollateralized Borrowing, Yield Farming, Real-Time Liquidity
Key Benefits	<ul style="list-style-type: none">• Solving a Real-World Problem within Cross-Border Payments• Lending & Earning at Attractive Rates• Lending to Licensed Cross-Border Payment Providers• Real-Time Liquidity at Fixed Rates• Decentralized Ownership and Governance• Capital Buffer for Loan Impairments• Credit Default Protection

2. Introduction

MoneySwitch is a liquidity-as-a-service (LaaS) decentralized finance (DeFi) lending platform. MoneySwitch is designed to provide cross-border payment providers (CPPs) access to uncollateralized liquidity. This liquidity is provided instantly, enabling CPPs to power the global cross-border payments industry and allowing stablecoin lenders to earn by lending to CPPs.

Using the power of uncollateralized DeFi lending, MoneySwitch enables access to real-time liquidity, unconstrained by different time zones, trading hours, holidays, weekends, and all “red” banking days. The liquidity can be used to meet immediate liquidity requirements and release capital to grow operations within the framework of existing regulations and standards.

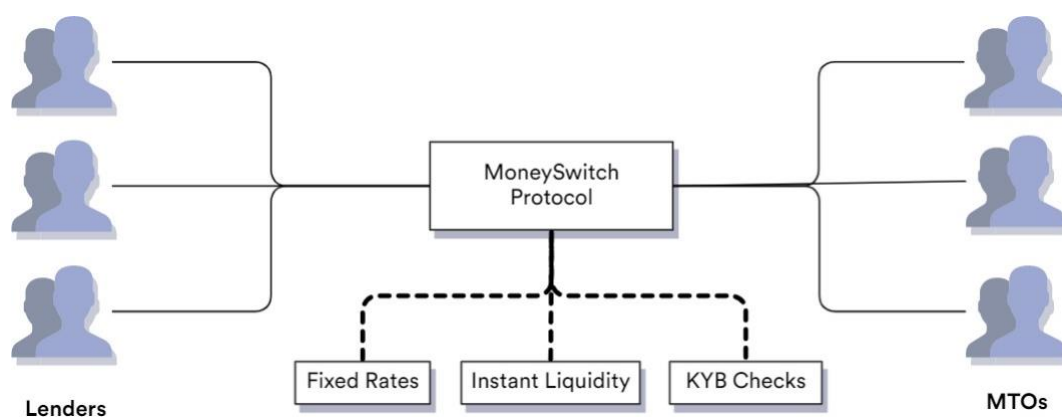


Figure 1: MoneySwitch Protocol

In effect, MoneySwitch uses uncollateralized DeFi lending to immediately serve and break down barriers that restrict traditional finance, thereby fundamentally changing the nature of cross-border payments by moving it from a pre-funding model to an on-demand model

For DeFi lenders, MoneySwitch opens new lending opportunities which thus far have exclusively been available to big banks and financial institutions. Lenders will be able to offer short-term uncollateralized loans which are safer, more efficient, and better suited to the needs of the cross-border payment industry. Their loaned assets will provide real-time liquidity, better enabling the multi-trillion-dollar cross-border payment industry and earning interest on it.

3. Powering the Future of Cross-Border Payments

3.1 Understanding Cross-Border Payments

Global cross-border payments are the engine enabling cross-border trade and investment and have been instrumental in the emergence of today's global economy. The total value of these payments is estimated to be a little over US \$156 Trillion in 2022 ¹. Over the past few decades of growth has been driven by increasing economic activity, e-commerce penetration, migration flows, globalization of supply chains, and smartphone penetration. These growth drivers are structural in nature and therefore expected to continue.

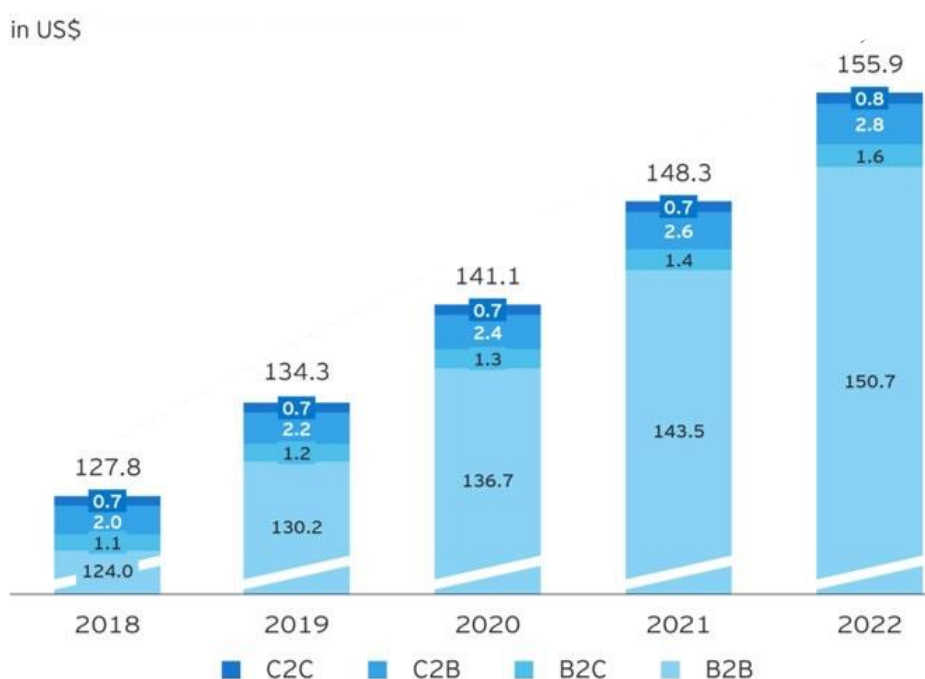


Figure 2: Cross-border Payment Market

Despite the cross-border payments industry's importance, growth, and market size, it is often characterized as slow, costly, and untransparent. This is increasingly frustrating to consumers, businesses, and enterprises which desire cross-border payment services as efficient and safe as comparable domestic services. CPPs are constantly under pressure to improve their customer proposition to grow or retain market share.

Domestic payment systems are not traditionally directly connected with the systems of other countries. They are usually closed systems which adhere to domestic standards and regulations. To make a cross-border payment, a network of intermediaries is often required (referred to as the correspondent banking network). These intermediaries perform debit transactions in local accounts across the globe until payment reaches its final destination. This semi-automated process relies on the SWIFT messaging service to send instructions about transactions

¹ Source: https://www.ey.com/en_gl/banking-capital-markets/how-new-entrants-are-redefining-cross-border-payments

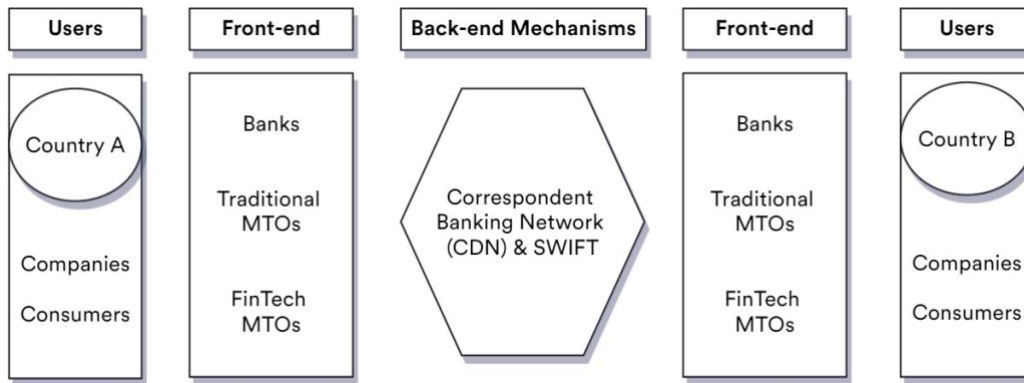


Figure 3: Correspondent Banking Network

The SWIFT network was established in the 1970s as a transaction messaging service between financial institutions. Although the SWIFT network is heavily used today, there are many challenges and frictions associated with it. Specifically, the industry works on a pre-funding model for cross-border payments, with no guarantees of credit time using SWIFT networks.

This pre-funding model requires each CPP to pre-fund their payout partners using USD. This involves a CPP converting local currency to USD and paying it into their payout partners' accounts (Nostro and Vostro accounts) as collateral for eventual end-customer payout.

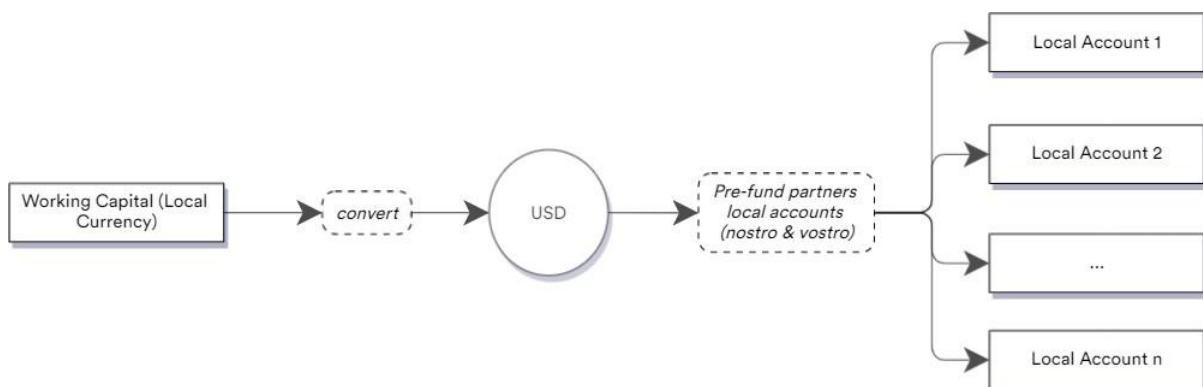


Figure 4: The Pre-Funding Model

The pre-funding model forces CPPs to lock up their working capital in the form of pre-funded liquidity with their payout partners worldwide. This makes cross-border payments highly inefficient as it **requires the right amount** of capital to be pre-funded to the **right place** (i.e., payout partner) at the **right time, every time**.

For example, SendMoney Ltd. (a CPP) expects to send \$1,000,000 in transactions over the coming weekend from Country A (SendMoney's local country) to Country B and Country C. Under the pre-fund model, SendMoney Ltd. buys \$2,000,000 and pre-funds \$1,000,000 into their payout partners, Nostro and Vostro accounts in Country B and C. However, during the weekend, the actual payments are \$500,000 to Country B and \$1,500,000 to Country C. In this scenario, some or all of the payments to Country C will fail, creating FX risks, transfer delays, and customer dissatisfaction for SendMoney Ltd. while the payments to Country B will succeed, MoneySwitch will

have \$500,000 excess working capital in the account of the payout partner which is unproductive as it is in the wrong place at the wrong time.

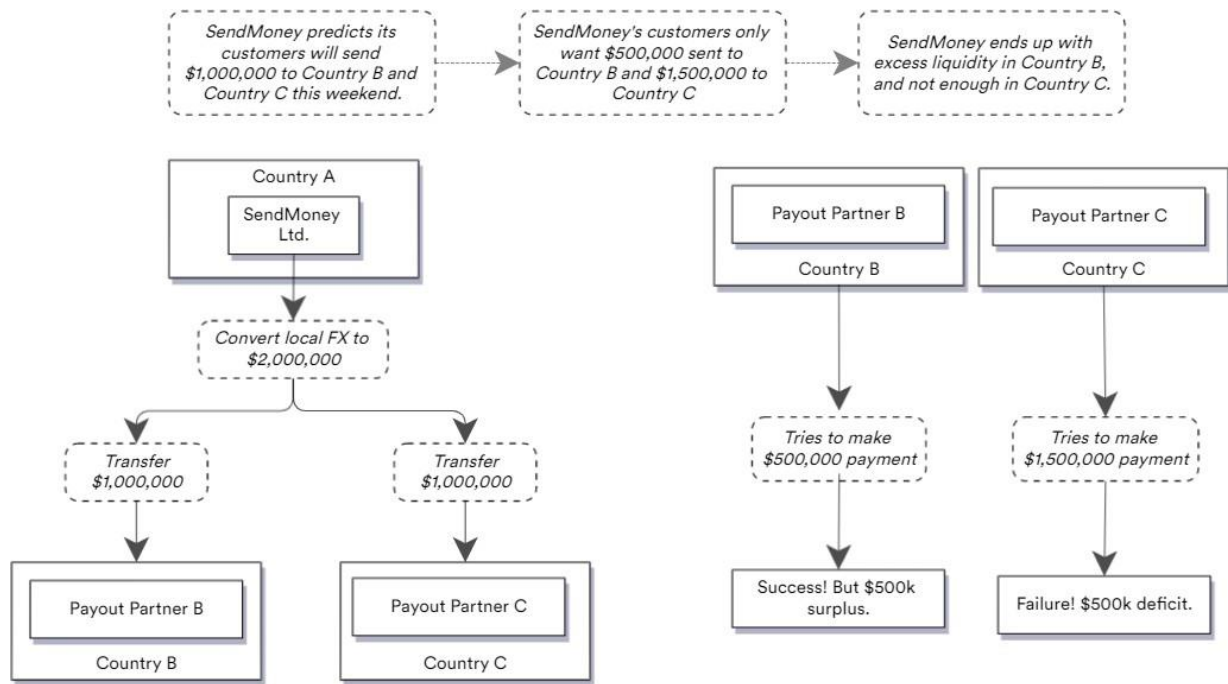


Figure 5: An Example of Pre-Funding

This problem is exacerbated because money within the SWIFT network sleeps every "red day," such as weekends, national holidays, outside working hours, and cut-off times. This is becoming increasingly unacceptable in an age of e-commerce and instant consumer gratification. There are around 180 "red days" worldwide in any given calendar year, where the traditional banking system and the SWIFT network are sleeping. Practically this means that CPPs have to pre-fund for longer periods of time and larger amounts of working capital, taking on more cost, uncertainty, and risk.

" Money via SWIFT sleeps over 180 days each year. "

3.2 Pre-Funding to On-Demand

With MoneySwitch, we leverage the power of DeFi and digital assets to offer CPPs access to real-time liquidity outside of traditional constraints like time zones, trading hours, holidays, weekends, and all “red” banking days. MoneySwitch will enable CPPs to attract more customers by providing a more efficient and reliable service, allowing them to reduce the size of their pre-funded working capital, thereby freeing up capital for growth and reducing counterparty risk.

More fundamentally, by enabling access to real-time liquidity free from traditional constraints, the industry as a whole will be able to rethink and evolve the pre-funding model. With access to real-time un-collateralized liquidity, CPPs can adopt an on-demand model, where liquidity for B2B settlements (CPP-to-CPP) for cross-border transactions can be done on-demand rather than on a pre-funding basis. This will enable CPPs to unlock working capital for growth and investment and offer better value to their customers and their counterparty partners, ushering in a renaissance within the cross-border payment industry, all powered by MoneySwitch.

Further, lenders on MoneySwitch will be able to access lending opportunities that thus far have exclusively been available to big banks. Lenders will be able to do so in a way that is more efficient and better suited to the needs of the cross-border payment industry. Lenders on MoneySwitch will become part of powering the global cross-border payment industry. Their loaned assets will provide real-time liquidity and better enable the multi-trillion-dollar cross-border payment industry. Lenders will be able to earn by lending to some of the biggest CPPs in the world transparently and securely. While at the same time have full control of their assets, lend without a lockup, and use the MST to govern borrowing.

4. The MoneySwitch Protocol

MoneySwitch is an uncollateralized lending protocol on the Ethereum blockchain which establishes a liquidity pool for borrowing and lending assets (in the form of stable coins). The liquidity pools (one for each stablecoin) are designed to provide approved borrowers instant access to liquidity at fixed interest rates which are paid to lenders. Negotiation of terms such as maturity, interest rate, or collateral is not required. The protocol creates a transparent, publicly-inspectable ledger with a record of all transactions.

4.1 Lending Assets

Unlike an exchange or peer-to-peer platform, where a lender's assets are matched and lent to another user, the MoneySwitch protocol aggregates the supply of each user into a liquidity pool which borrowers then access. This improves liquidity as lenders can withdraw their assets at any time, and borrowers can access liquidity at any time (unless every asset in the pool is borrowed). Default risk is diversified, as lenders are no longer exposed to one borrower but all borrowers as a collective.

4.1.1 Depositing Assets

A user who wishes to lend their assets on the MoneySwitch protocol first connects their wallet and approves interaction with the lending smart pool contract. The user then selects the amount of stablecoin they wish to lend. Once the deposit is confirmed, the user will be able to earn in both stablecoin and MST.

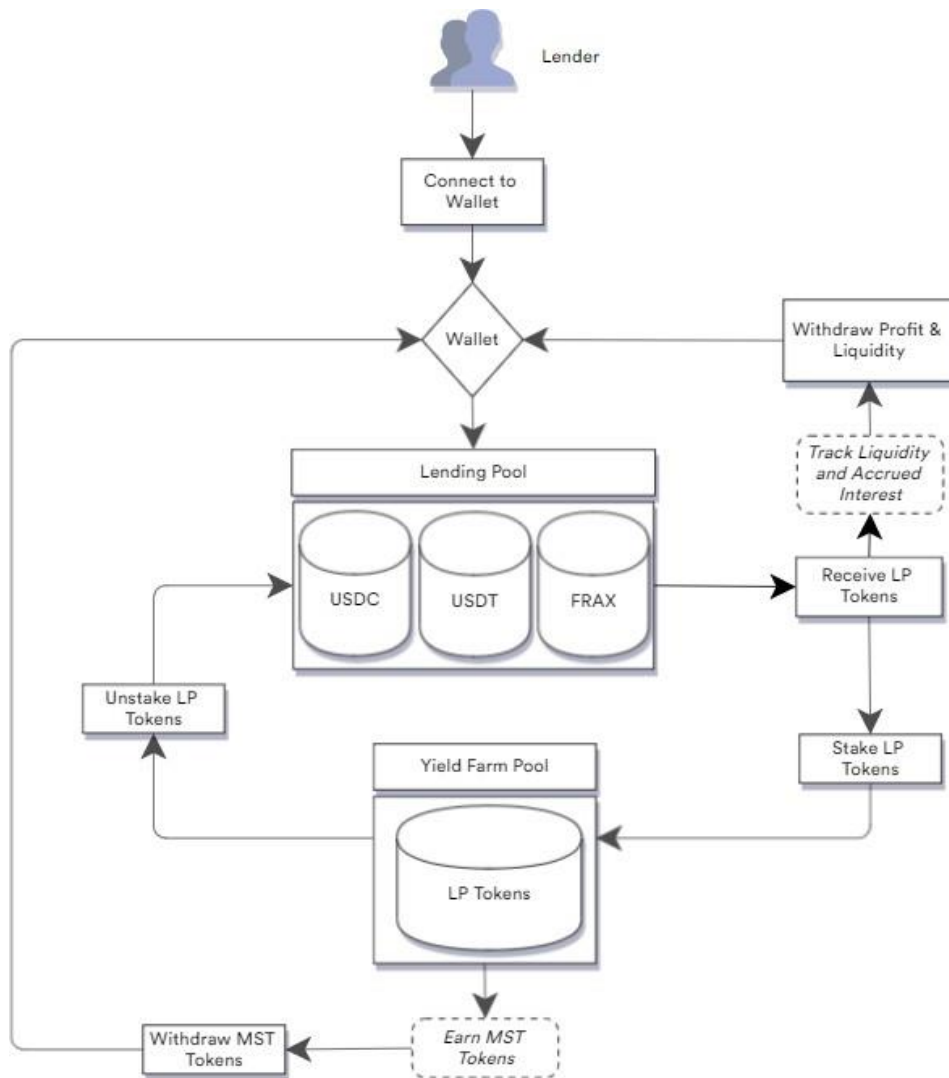


Figure 6: Lender Journey

4.1.2 Earning Interest

When a lender provides liquidity into a liquidity pool, they will automatically start earning from the lending activities in that pool. The lender can claim accrued interest at any time. Although borrowers pay a fixed interest rate, the total interest received is dependent on the utilization rate, which means the exact amount of interest obtained by lenders will vary.

4.1.3 Withdrawals

Lenders can exit the lending pool at any time by simply withdrawing their principal liquidity. All lenders lend against a pool, which means as long as the pool is not at a 100% utilization rate, lenders will be able to enter and exit their positions freely. In a scenario where the pool utilization rate is at 100%, lenders will have to wait for the short-term loans to be repaid before being able to withdraw. Earned interest in stablecoin and MST can be withdrawn at any time.

4.2 Borrowing Assets

The MoneySwitch Protocol is designed to provide the type of liquidity that can be withdrawn, used to fund a cross-border payment, fully repaid, and then withdrawn again when needed. This process can be repeated, without reapplying for finance, as often as is needed within an overall agreed loan limit.

4.2.1 On-Boarding Process

Borrowing is made available to vetted and licensed cross-border payment providers. Borrowers are approved through a rigorous onboarding process which involves a review of their business, regulatory licenses, cross-border transaction volumes, strength of their capital/solvency position, the signing of an enforceable lending agreement, and final approval by the MoneySwitch community. Borrowers will be subject to a MaxLendingAmount threshold which controls the maximum total amount a borrower can borrow. This value is set by the MoneySwitch community and can be increased or decreased via a DAO process.

4.2.2 Liquidity Access

Liquidity access is designed to be instant as long as the borrower is approved, the 'loan size' does not cause a breach of the 'max lending amount' threshold, and there is enough liquidity in the pool. Individual loans are not subject to lengthy credit checks or approvals which means borrowers can quickly access and deploy capital. Borrowers can choose which stablecoin they wish to borrow from the liquidity pools. The 'max lending amount' is reinforced against the total amount borrowed from all available liquidity pools.

4.2.3 Loan Durations

MoneySwitch is designed to give borrowers access to real-time loans on a short-term basis. The expected average duration of loans ranges from five to ten days. Borrowers will be able to borrow on a per-day basis for a maximum of 30 days for any given individual loan. Borrowers will also have the option to extend any given loan for up to an additional seven days maximum (includes a 30-day loan).

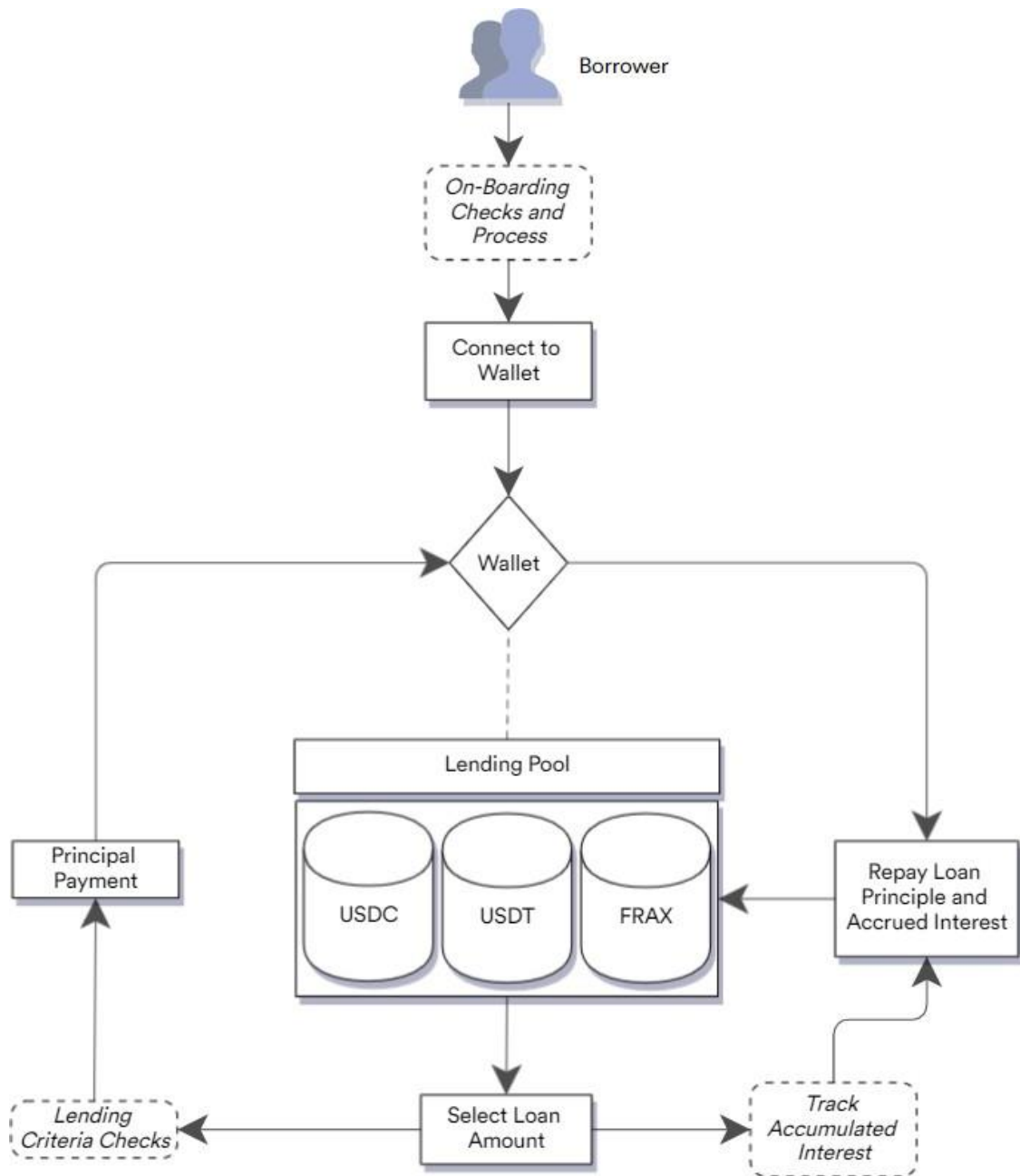


Figure 7: Borrower Journey

4.2.4 Accruing Interest

The interest rate on the loans follows a capped fixed-rate model, where borrowers are charged 0.1% based on the borrower's 'total loan amount' for each 24-hour cycle. Loans with an initial duration of 20 to 30 days are capped at a 2% interest rate. Any loan extension for up to seven days is charged individually at 0.1% per day.

4.2.5 Loan Default

If a borrower fails to repay the loan plus interest at the end of the specified duration of the loan (including any potential loan extensions), the loan is classified as a default. In the event of default, a few different steps are taken. Firstly the liquidity pool is stabilized by receiving additional liquidity from the Credit Default Protection Pool. This will help protect lenders and the health of the liquidity pool. The injected liquidity amount will equal the principal of the defaulted loan.

Secondly, the defaulted borrower will be blocked from accessing any further loans on MoneySwitch and urged to repay their remaining balance (principal of defaulted loan plus interest) into the Credit Default Protection Pool. If a borrower fails to repay a defaulted loan, legal actions will commence in accordance with the framework loan agreement signed when initially onboarded on MoneySwitch.

A defaulted borrower may resume borrowing on MoneySwitch on the condition they repay the principal and interest on the defaulted loan as well as community approval via the MoneySwitch DAO.

4.3 Liquidity Pool Mechanics

4.3.1 Transactional Updates

A transaction is defined as a user depositing assets, withdrawing assets, borrowing assets, or repaying assets in the liquidity pool. Every time a transaction occurs, the liquidity pool balance L_{Pt} is updated to account for flows in assets and interest accumulated since the last transaction. The InterestFactor is also updated on every transaction (see section 3.3.4 below).

4.3.2 Interest Rate Charges

Interest r_B is charged at 0.1% per day. A borrower taking a single loan with principal P , for a time period ΔT (T = number of seconds in a day), will be charged interest at of I_B where:

$$I_B = P\left(1 + r_B \frac{\Delta T}{T}\right)$$

4.3.3 Supply / Demand Management

A liquidity pool of size LP_t with utilization U_t , will earn interest of I_{LP} over a time period ΔT (T = number of seconds in a day) where:

$$I_{LP} = LP_t * U_t * (1 + r_B \frac{\Delta T}{T})$$

The total interest accumulated by liquidity pool suppliers is a function of the utilization rate U_t . When demand for loans is high relative to supply (high utilization rate), higher levels of interest will be earned by the liquidity pool suppliers (and vice versa). As a result, the effective interest rate r_L earned by suppliers, for a given utilization U_t is:

$$r_L = U_t * r_B$$

When U_t is high, the effective interest rate r_L will be high, incentivizing suppliers to add assets to the pool. Equally, when U_t is low, the effective interest rate r_L will be low, incentivizing suppliers to remove assets from the pool. This model is supply-driven, where the supply of assets adjusts overtime to meet demand.

When the liquidity pool is small, large transactions can have a big impact on utilization U_t leading to volatility in r_L . However, as the liquidity pool grows, individual transactions are less like to have a meaningful impact on utilization U_t which means r_L will become more stable.

4.3.4 Allocation of Accumulated Interest

Suppliers of assets receive L_P tokens in a 1-1 ratio equal to the amount of stablecoins deposited. However, a new supplier of assets isn't entitled to interest already accumulated from the liquidity pool. As a result, an adjustment mechanism is needed to ensure that suppliers of assets only earn interest whilst their assets are part of the liquidity pool. Interest Factor monitors the accumulated interest in the pool and is used as this adjustment mechanism. It is updated every time there is a transaction in the liquidity pool (deposit, withdrawal, borrow, repay). The InterestFactor Γ_T is updated as follows, where Δt is the time since the last transaction:

$$\Gamma_{t+1} = \Gamma_t * (1 + (\frac{\Delta t}{T} * r_B * U_t))$$

When a supplier adds assets to the liquidity pool, the InterestFactor at the time of deposit is used to ensure a supplier is only rewarded for the interest accumulated in the future and not interest accumulated in the past.

4.3.5 Revenue Distribution

Interest earned is split in four ways. 30% of interest is distributed to liquidity providers in stable coins, 35% of interest is allocated to the treasury used to distribute revenue via for instance buyback and burn MST, 25% is used for platform maintenance, and 10% is used to reward users taking the risk to provide liquidity against a default by staking in the Credit Default Protection Pool.

Revenue Distribution

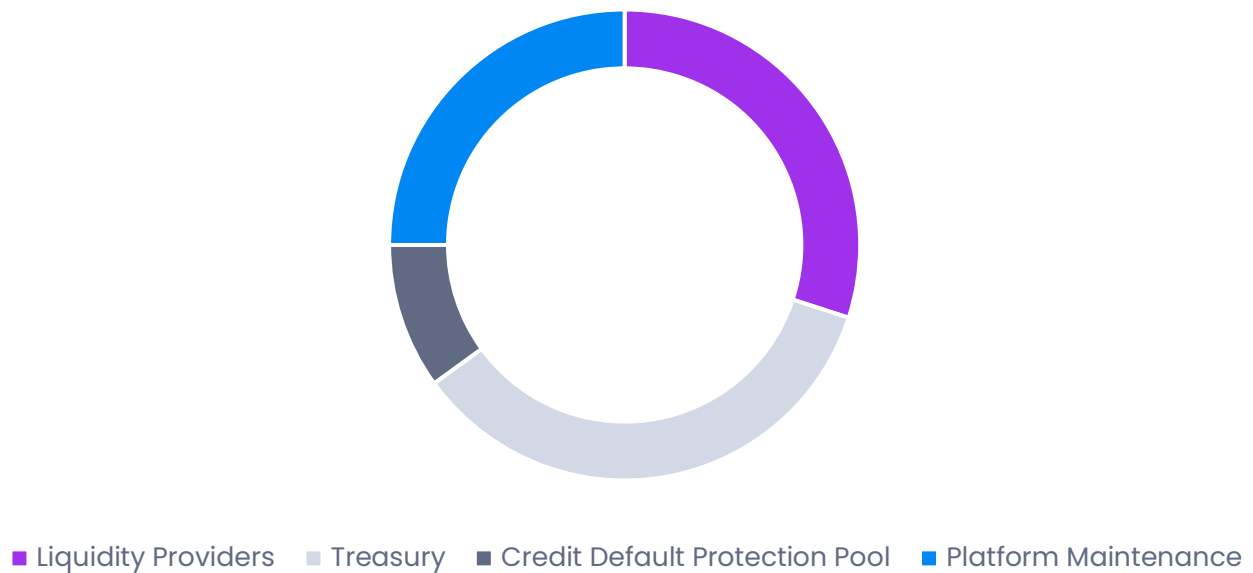


Figure 8: Revenue Distribution

4.4 Risk and Mitigation

Lending assets to another party always entails risk. This is true of most investments and is also true of MoneySwitch. However, MoneySwitch seeks to manage and mitigate these risks in a number of ways.

4.4.1 Credit Default Protection Pool

MoneySwitch creates a loss protection layer for lenders through the Credit Default Protection Pool. Stacker will be able to choose to take on the risk of potential default by depositing liquidity into a 50/50 MST <> FRAX pool. The LP tokens from the MST <> FRAX pool will be staked into the Credit Default Protection Pool. In the unlikely case of a loan default, the LP tokens will be liquidated in order to allocate additional liquidity to the lending liquidity pool and ensure loss protection for lenders. In order to compensate stackers for taking on this risk, 10% of all interest generated across all lending liquidity pools are going to go towards rewarding Credit Default Protection Pool participants.

4.4.2 Credit Risk

This is the risk of loss resulting from a borrower's failure to meet its repayment obligations when they become due. Credit risk is reduced by focusing on cross-border payment providers (which by their nature tend to be large and well-capitalized). Furthermore, these cross-border payment providers are subject to rigorous credit checks as part of their onboarding process and have a maximum credit limit to control risk exposure.

Lender's assets are aggregated together into a liquidity pool which is then accessed by borrowers. Therefore, credit risk is diversified, as lenders are not exposed to one borrower but to all borrowers as a collective.

4.4.3 Liquidity Risk

This is the risk that liquidity providers will not be able to immediately withdraw their assets upon request. This will occur if all of the assets are currently on loan (i.e., 100% utilization). In this event, liquidity providers will have to wait for a borrower to make a repayment to withdraw their assets. When the utilization is high, the interest rate earned by lenders will be at its most attractive, incentivizing liquidity providers to retain or increase the amount of assets they have in the liquidity pool. Whilst liquidity risk will still exist, this provides a mechanism to incentivize additional liquidity when it is most needed.

Liquidity risk will be greatest initially when the size of the liquidity pool and the number of borrowers is small. In this event, a single borrower could take out a loan representing a large % of the liquidity pool. As the liquidity pool becomes larger, we expect the utilization of the asset pool to become more stable and for loan sizes to represent a smaller % of the pool, which will naturally reduce liquidity risk.

4.4.4 Interest Rate Risk

This is the risk that arises when the level of interest rate fluctuates. Although the lenders pay a fixed interest rate, the effective interest rate achieved by lenders is dependent on the utilization of the liquidity pool.

Therefore, asset suppliers have no guarantee of what interest will be earned on their assets when those assets are initially deposited. Keeping the utilization rate of the liquidity pool high and stable will reduce interest rate risk. As mentioned above, there is a natural incentive to keep utilization at an optimal level, which will help mitigate interest rate risk.

5. The MoneySwitch Tokens (MST)

The MoneySwitch Token (MST) is the governance token of MoneySwitch. It enables token holders to participate in governance, share in generated interest, and stake to the Credit Default Protection Pool. As MoneySwitch moves towards full decentralization, MST holders will be responsible for governance. MST holders can submit and vote on proposed changes to the platform, including adjusting fees, minting, or burning MST, and other platform-level changes. MST holders can also vote on the use of the revenue generated through lending on MoneySwitch.

5.1 MST Distribution & Release Schedule

MST is an ERC20 token with an initial fixed supply of 1,000,000,000 tokens.

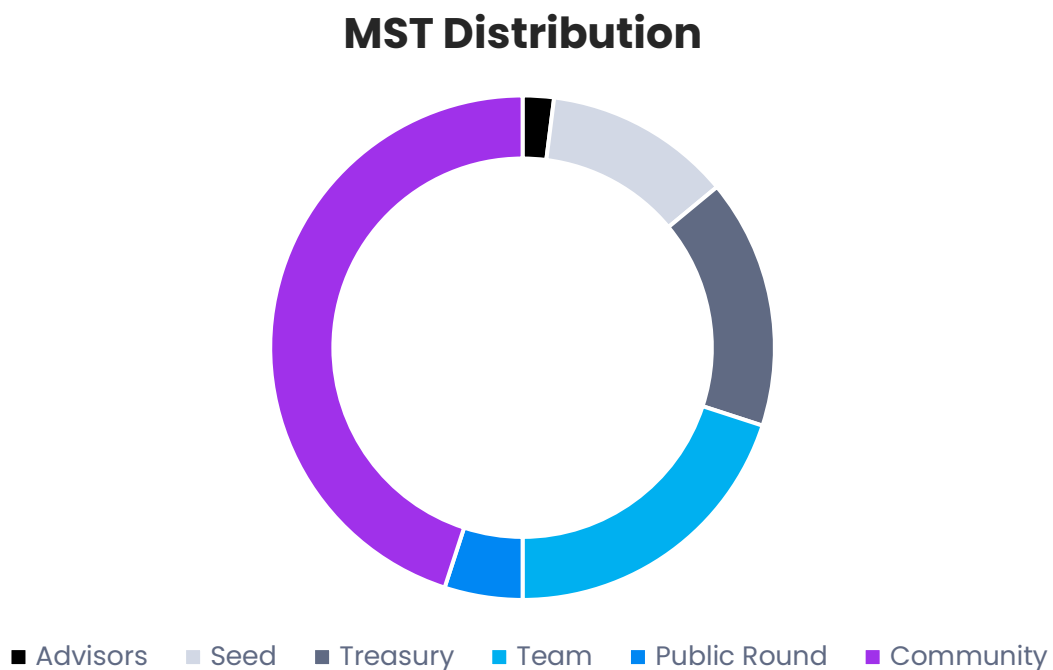


Figure 9: MST Distribution

Category	MST	Vesting
Community Farms	450,000,000	15% release at token launch and 85% release linearly over four years.
Treasury	160,000,000	33.3% release at token launch as a reserve, then from 2nd year, linear release over 24 months.
Team	200,000,000	12-month cliff, linear release over 24 months.
Seed	120,000,000	12-month cliff, linear release over 24 months.
Public	50,000,000	100% release at token launch
Advisor	20,000,000	12-month cliff, linear release over 24 months.

MST Release Scheduling

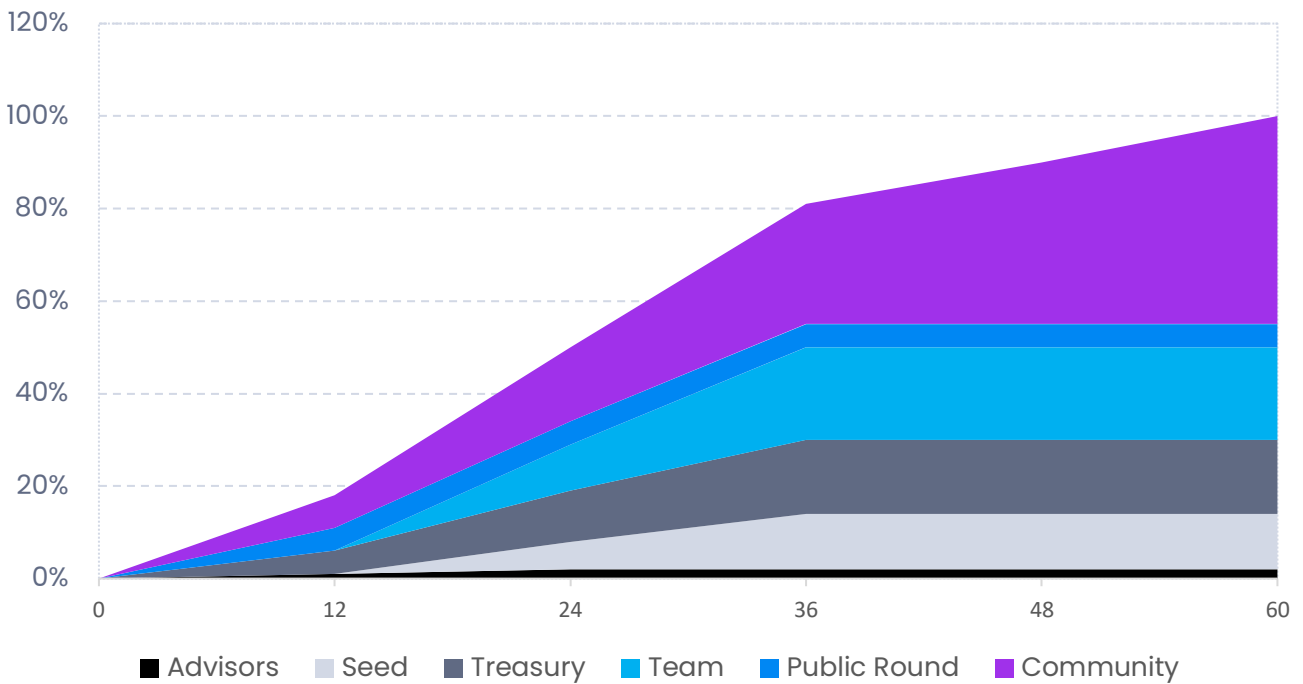


Figure 10: MST Release Schedule

6. Team

MoneySwitch was founded and built by the team behind DeeMoney Thailand. For over half a decade, the team has built the fastest-growing cross-border payment provider in Thailand, sending, and receiving cross-border payments from over 100+ countries worldwide. In 2021, DeeMoney processed over \$3 Billion in cross-border payments, making it the largest non-bank cross-border payment provider in Thailand.

The team behind MoneySwitch brings with it over half a decade of experience working with cross-border payments and proven operational capabilities, tech know-how, and a global cross-border payment provider network.



Aswin Phlaphongphanich
Co-Founder/CEO

Aswin is a serial entrepreneur with over 20 years of experience building and driving successful businesses within finance, payments, and telecoms. Along with his passion for disruptive technologies and FinTech, Aswin is highly enthusiastic about working with young entrepreneurs and start-ups.



Rasmegh Srisethi
Co-Founder

Rasmegh has over 15 years of experience building teams and driving operations. She is an eternal optimist with a passion for building teams and driving socially meaningful distribution. Rasmegh has a B.A in Psychology and Anthropology from the University of Western Australia.



Khibar Rassul
Co-Founder/CTO

Khibar is a serial entrepreneur passionate about disruptive technologies and business models. He thrives in an environment of change, being part of it, enabling it, and driving it. He has an MSc in AI from the University of Bath and an MSc in Violence, Conflict & Development from SOAS, University of London.



Eustace Lobo
COO

Eustace has over 20 years of experience working with telecom, remittances, and mobile commerce, previously working with companies like Western Union, Obopay, and Ericsson. He is at heart a problem solver with a deep and diverse subject matter expertise.



Tharissara Ariyaworakun
CCO

Tharissara is a legal and compliance professional with extensive experience working with start-ups and navigating the initial regulatory and compliance hurdles related to launching new fintech products and services. Tharissara has a Master's Degree in Banking and Securities Law from Chulalongkorn University.



Jatupron Pimngern
Head of Business Development

Jatupron is an experienced business development professional with extensive experience working with MasterCard, TrueMoney, KBank, RHA Invest, and PwC. Jatupron has a Master's Degree in ASEAN Studies from the University of Malaya.



Alexandr Kirshin
Senior Developer

Alexandr is a full-stack developer with over 15 years of experience building software products. He has worked with different technologies including Solidity, C#, TypeScript, PHP, RoR, PostgreSQL, and many more. Alexandr has a Master's Degree in Information Technology from Udmurt State University.



Matt Hall
Solidity Developer

Matt is a blockchain developer with extensive experience in the real-of finance. He is passionate about combining his deep financial insights and technical capabilities to chart the future of how people interact with financial products. Matt has MSc in AI from the University of Bath

7. Conclusion

The MoneySwitch platform provides cross-border payment companies real-time access to uncollateralized liquidity at fixed interest rates. It empowers them to break free from a legacy pre-funding model constrained by SWIFT and move towards a real-time decentralized funding model. This means less FX risk, less credit risk, fewer transfer delays, less trapped liquidity, and, most importantly, better customer satisfaction.

Lenders providing this liquidity earn attractive interest rates by directly lending to large institutions which have been vetted through the MoneySwitch onboarding process. The MoneySwitch Token is a governance token that allows holders to shape the future of the protocol and receive a share of any interest received.

Supported by one of the largest cross-border payment companies in Thailand, with an experienced leadership team, and an attractive roadmap, MoneySwitch is ready to revolutionize the cross-border payments industry.