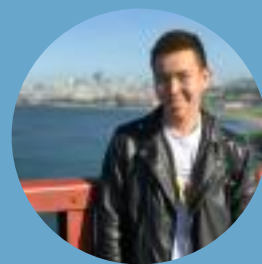




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# Secured Finance

Protocol to Unlock Innovation



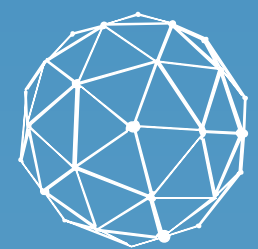
HackFS Jul 6 - Aug 6, 2020





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# Institutional-grade, peer to peer Financial Transaction Platform



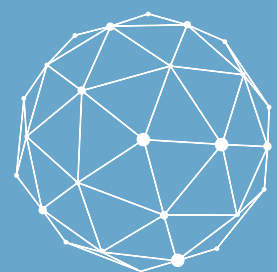
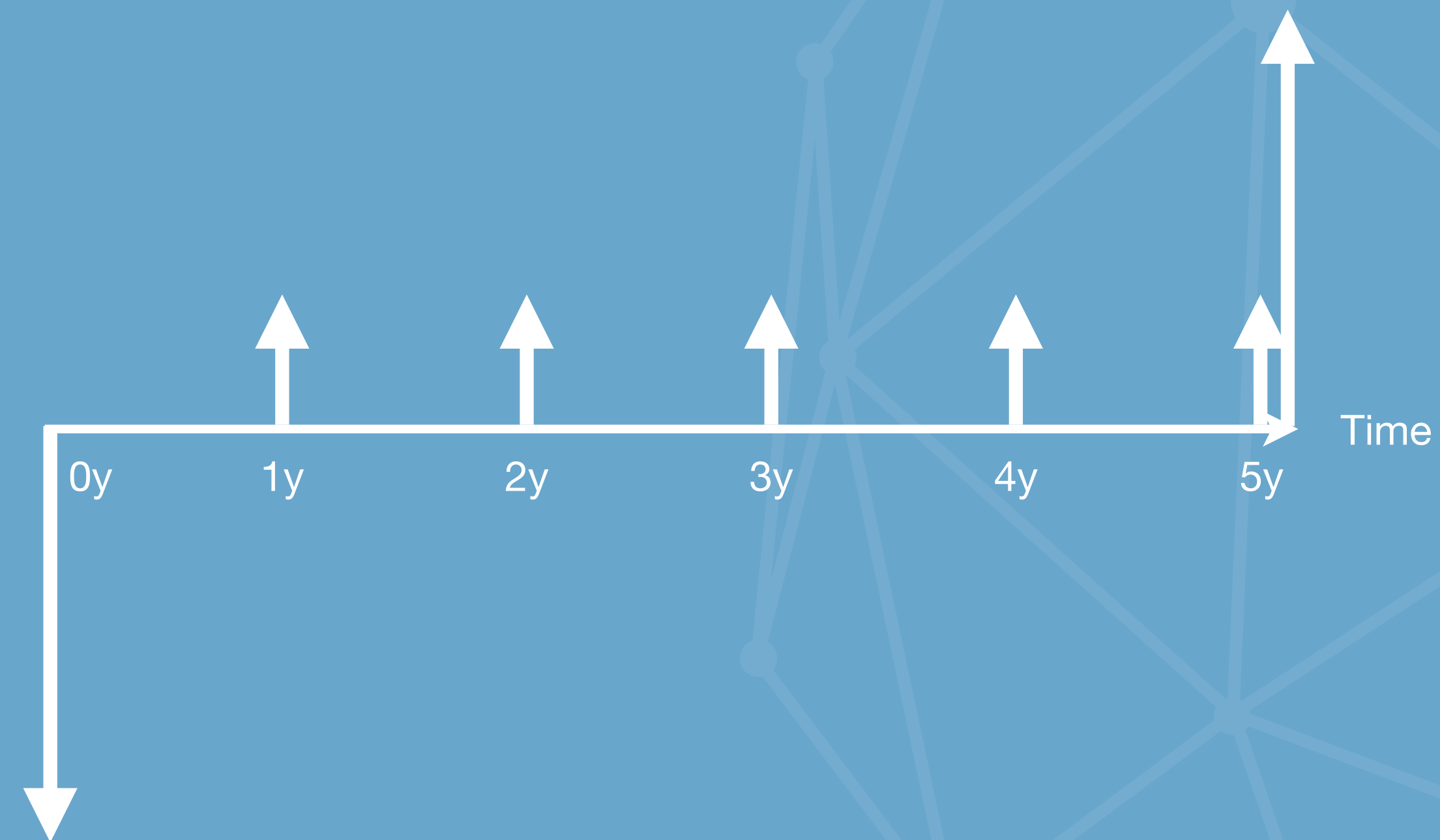
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# Financial Transactions

# Financial Transactions

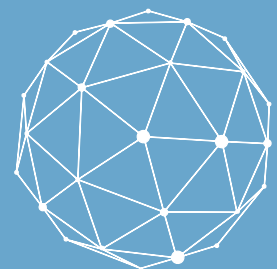
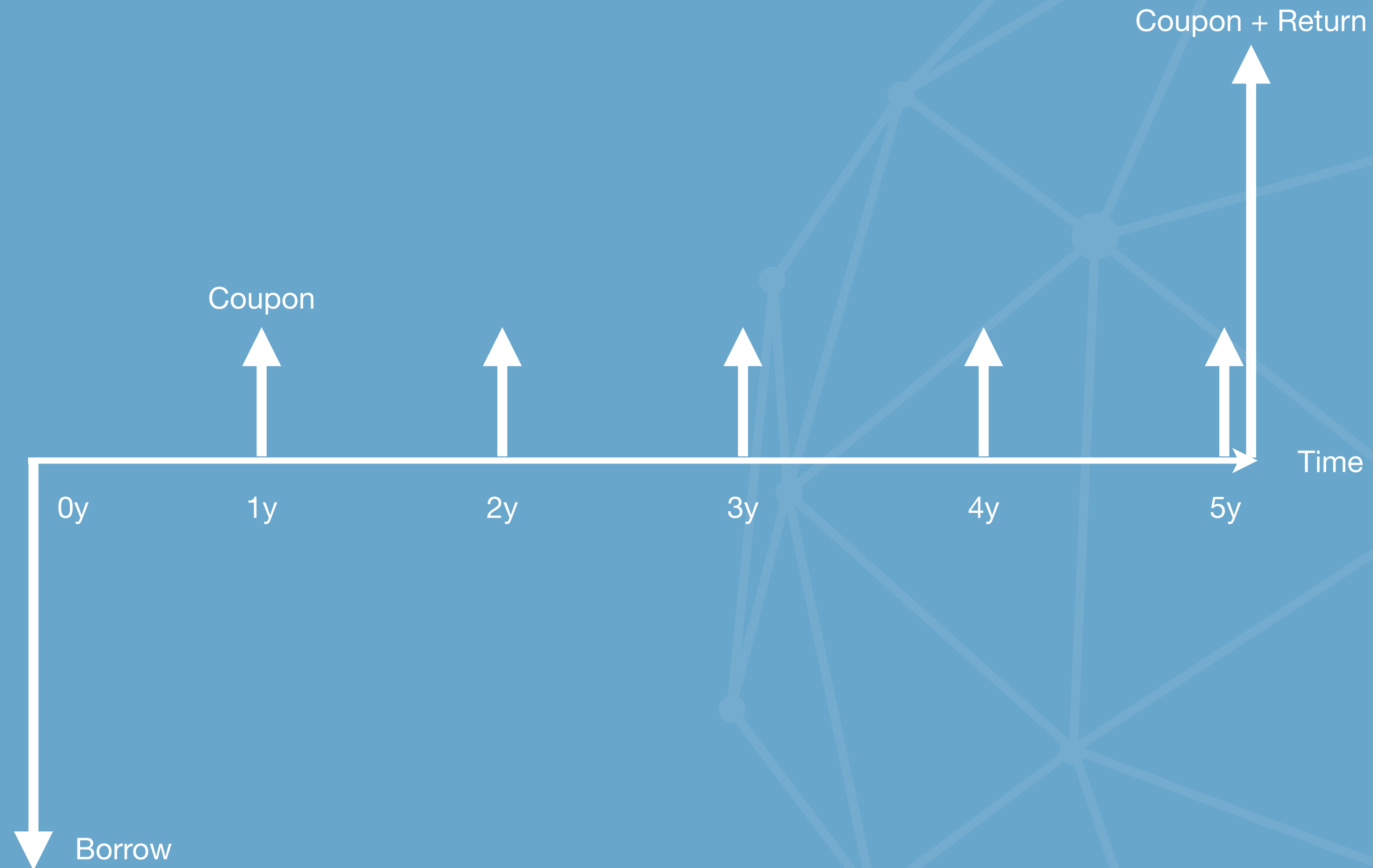
What is it?

A collection of future cashflows (ex. Loans, Deposits, Swaps, Options)



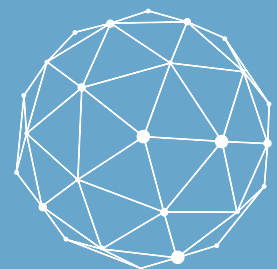
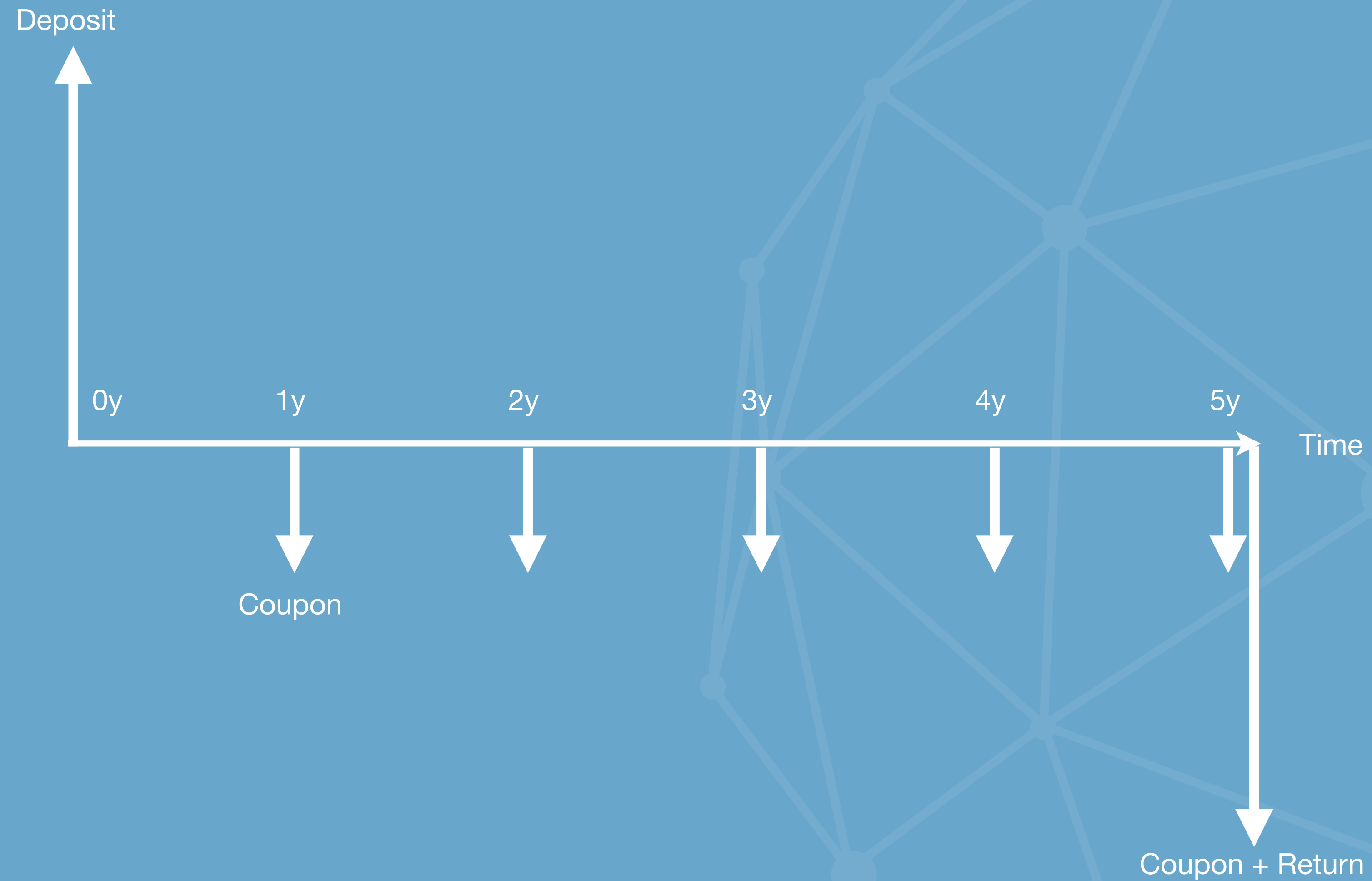
# Loans

Basic form of financial transactions.



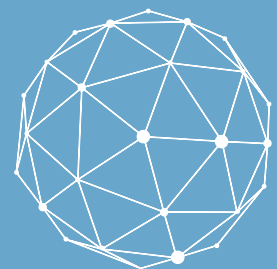
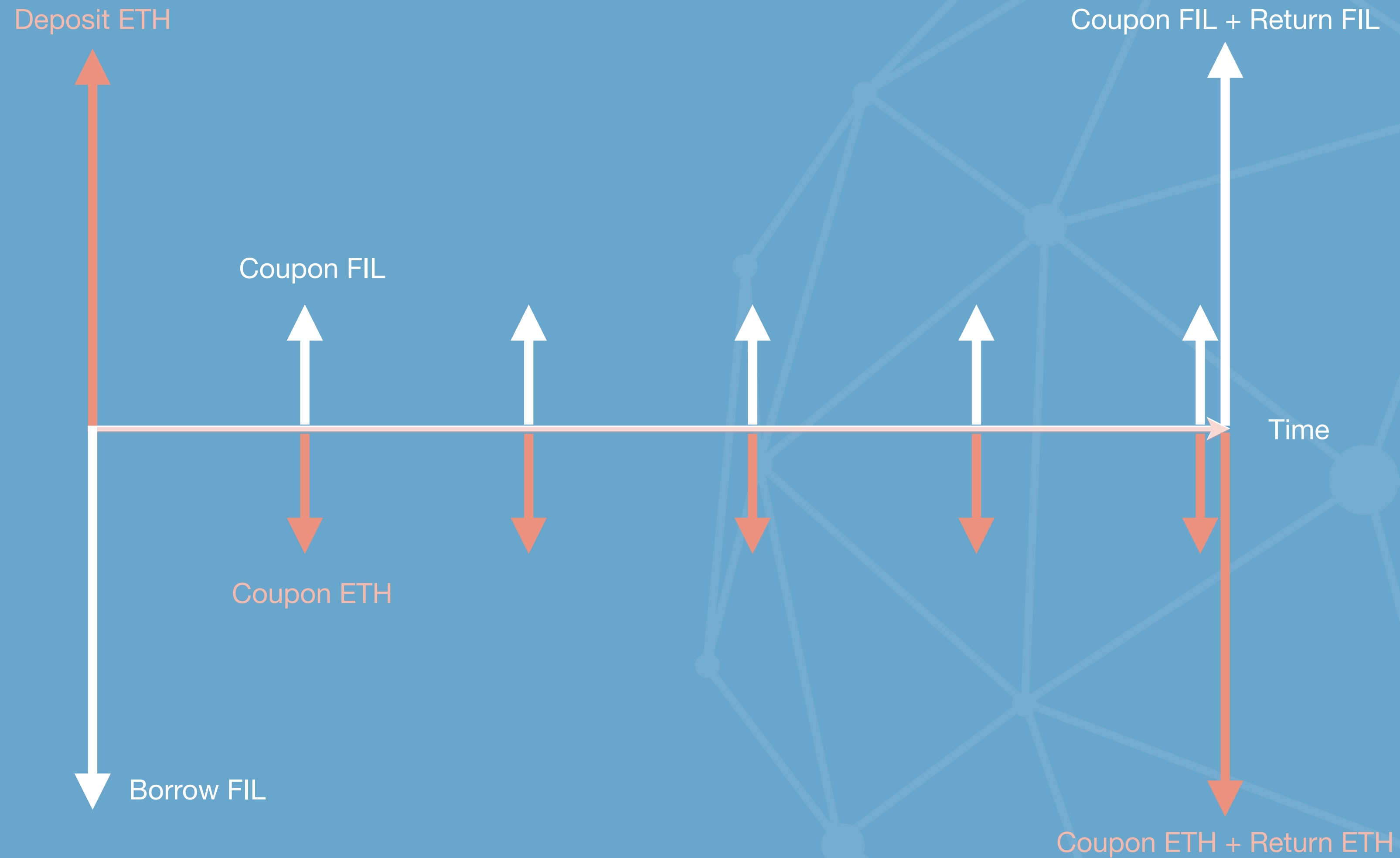
# Deposits

Just a flip side of loans.



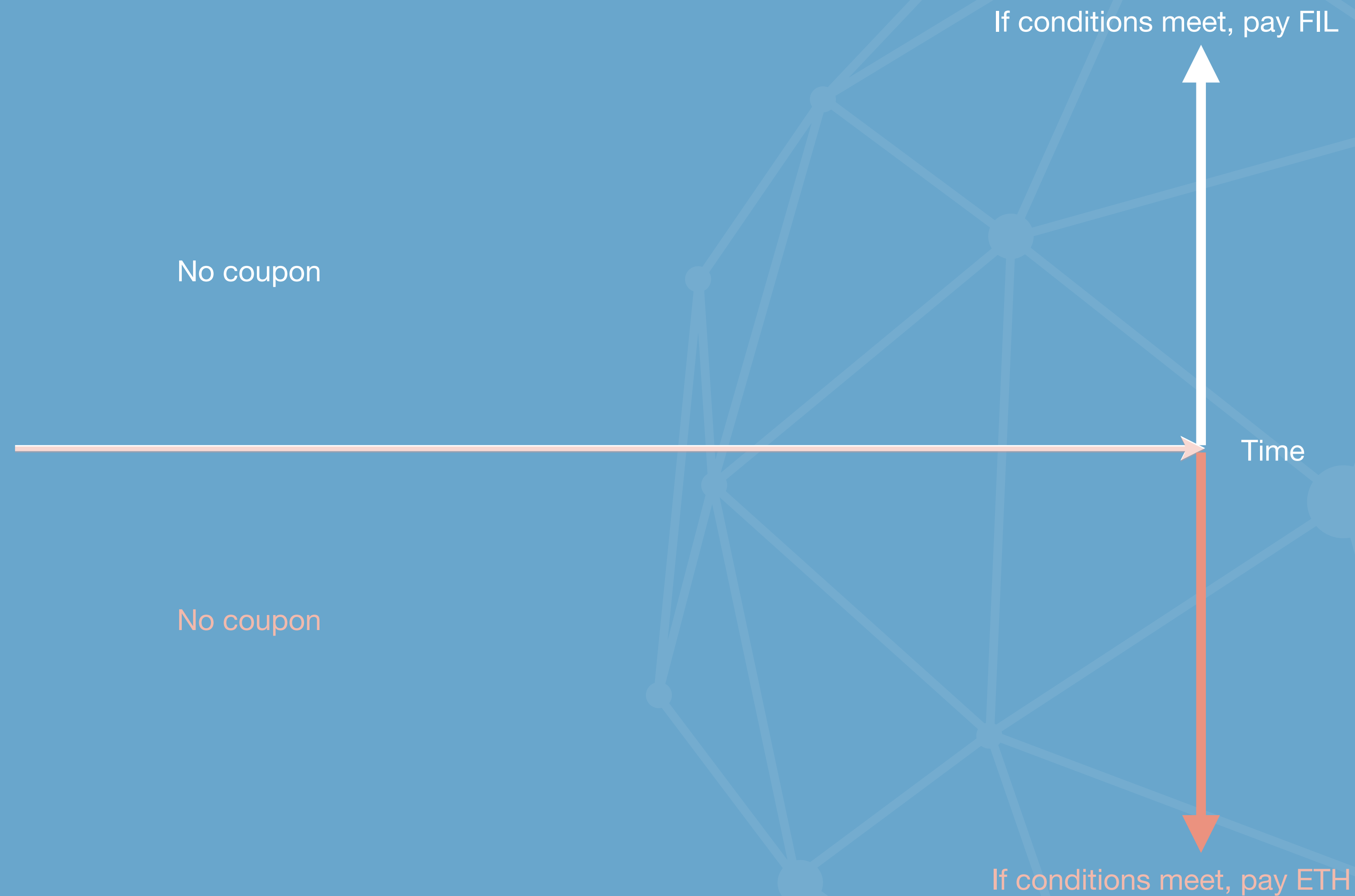
# Swaps

## Loans + Deposits.



# Options

## Conditional swap.





# Summary of Financial Transactions

## What can we do?

- Loan (ex. FIL loan backed by ETH) 🙌 HackFX focus
- Deposit (ex. FIL deposit to earn interest)
- Swap (ex. FIL/ETH cross-currency swap)
- Option (ex. FIL/ETH European call option)



# Target User

## Who will become the user?

- Miners who want to borrow/lend FIL without worrying about credit risk
- Investors who have market view and aim for excess return from crypto-assets
- Hedgers who want to reduce their exposure of crypto-assets
- Arbitraders who want to profit from high-liquidity, low-spread markets





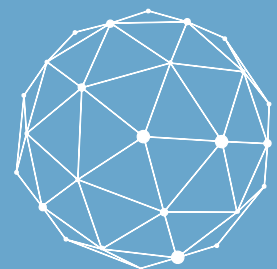
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# Motivation



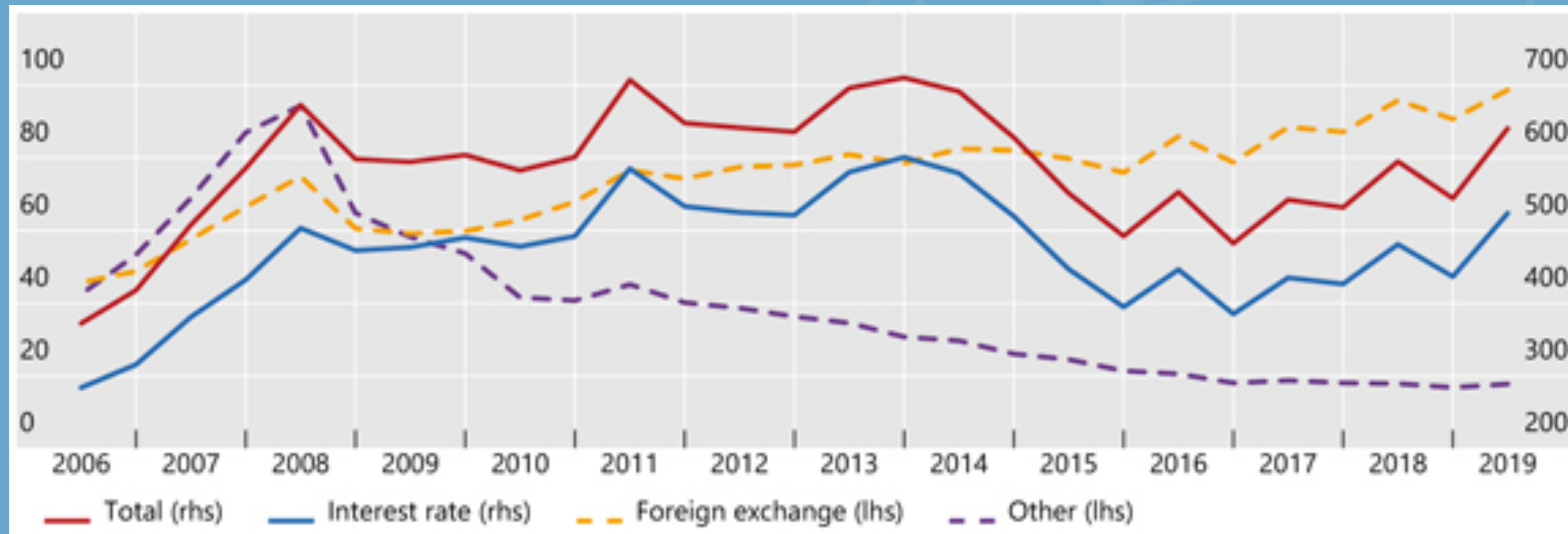
# 1981

**IBM and the World Bank's the First Swap Agreement**

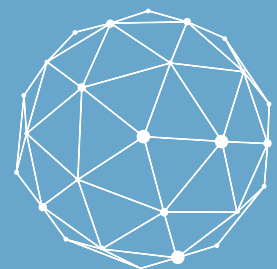


# 600

## USD Trillions of OTC derivatives



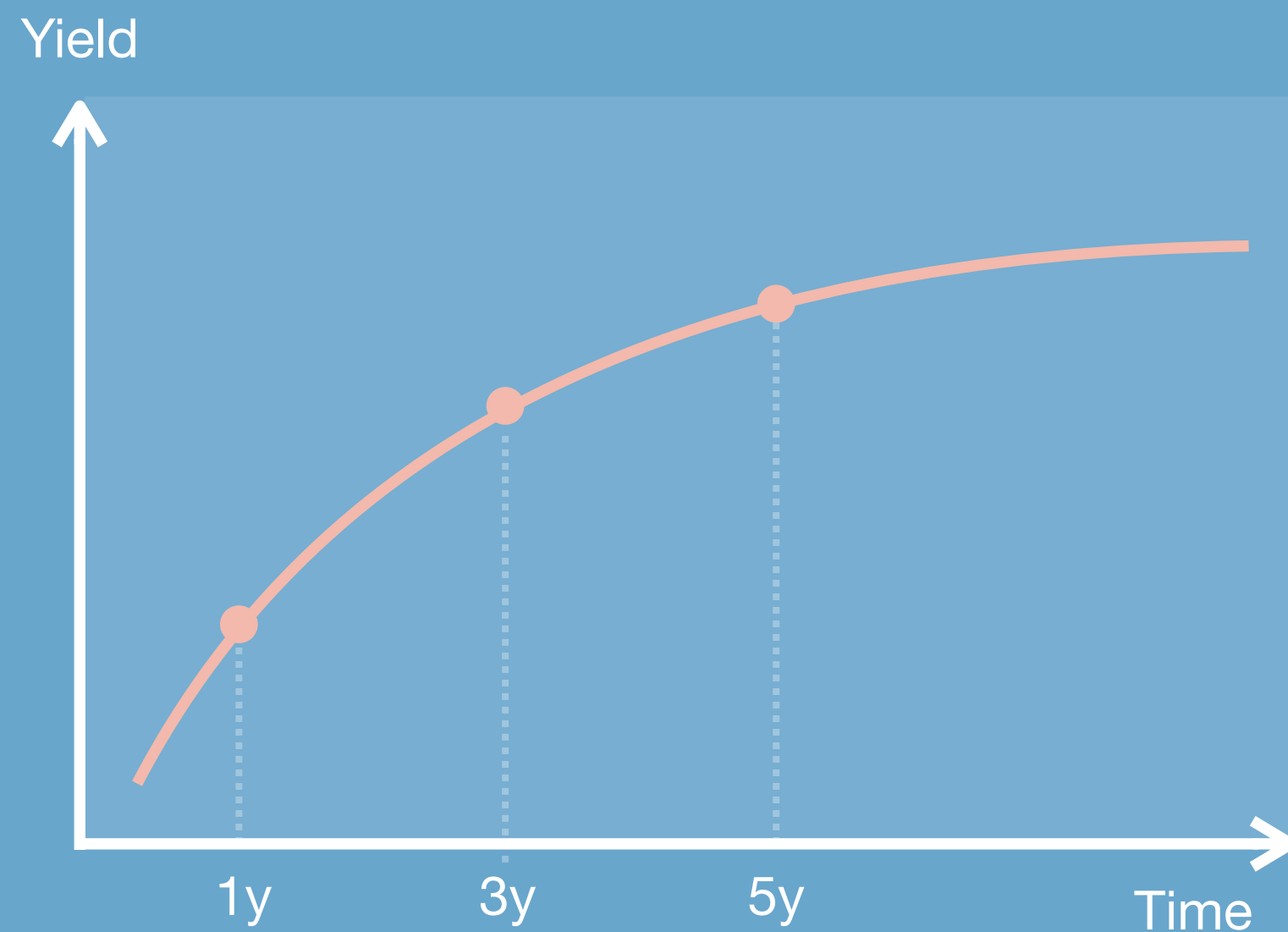
(Source: [www.bis.org/publ/otc\\_hy1911.htm](http://www.bis.org/publ/otc_hy1911.htm))



# What is missing in DeFi?

This is what we provide.

1. Volume (size)
2. Liquidity (availability)
3. Time Axis (yield curve)

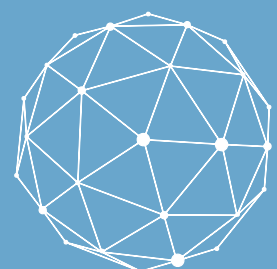




# Players

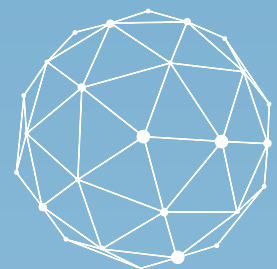
**We are creating new opportunities.**

1. Market Maker - provide borrow/lend interest rates, bid/offer FX rates.
2. Market Taker - take a deal to become borrowers or lenders.
3. Liquidity Provider - in case of liquidation, the best price provider can purchase collateral at discount. (i.e. 20%)



# Ecosystem

We connect institutions.

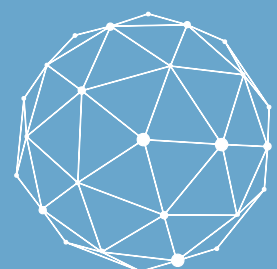
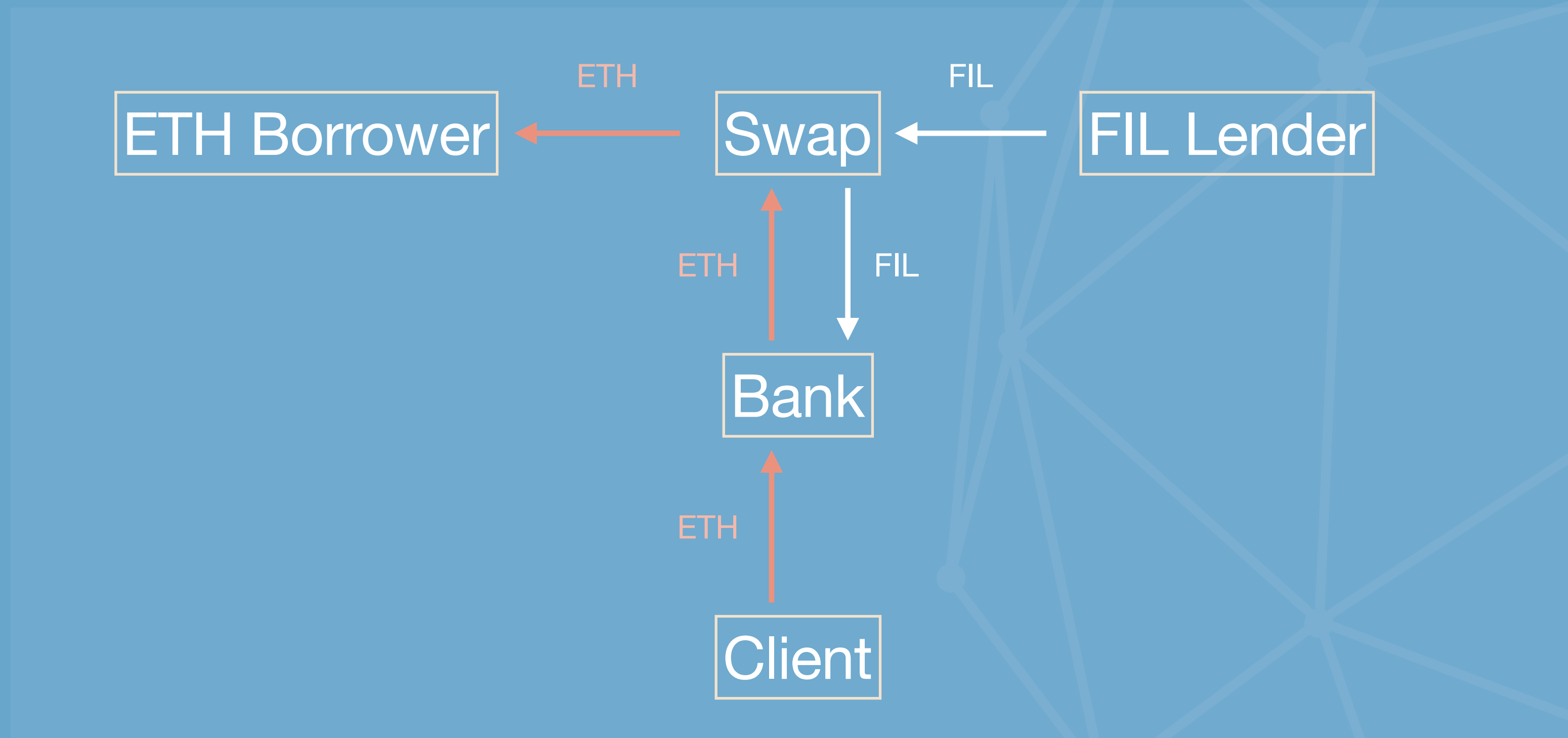




# Use Case

An example of currency swap.

Client wants to deposit **ETH** but Bank needs FIL funding





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# Protocol Design



# Key Components

## What we build?

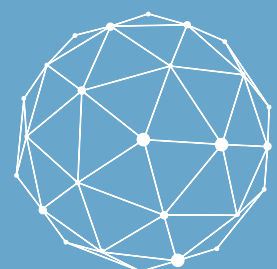
- Payment management
- Collateral management
- Liquidity management to support margin call
- Ecosystem design of primary & secondary market



# Smart Contracts

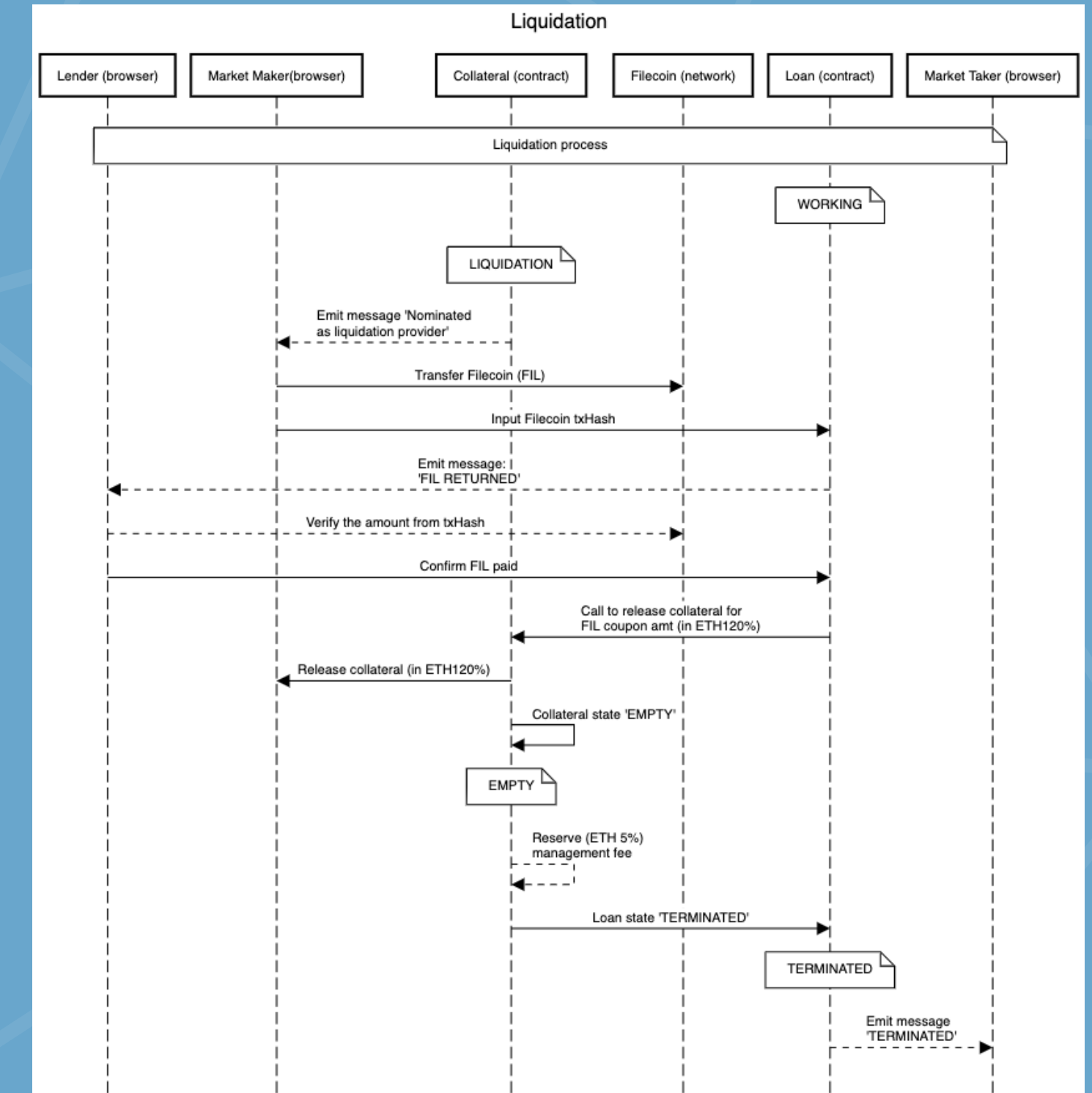
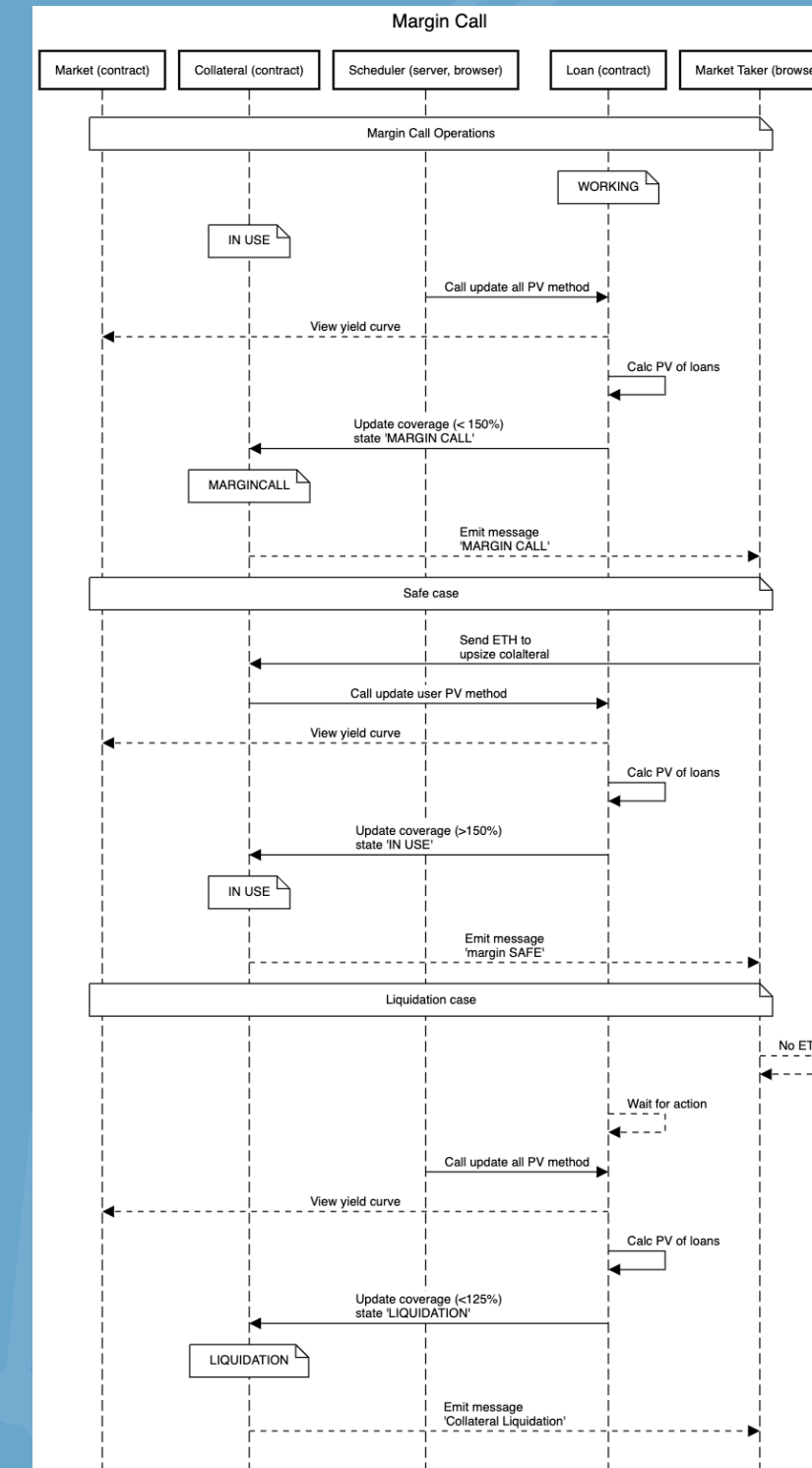
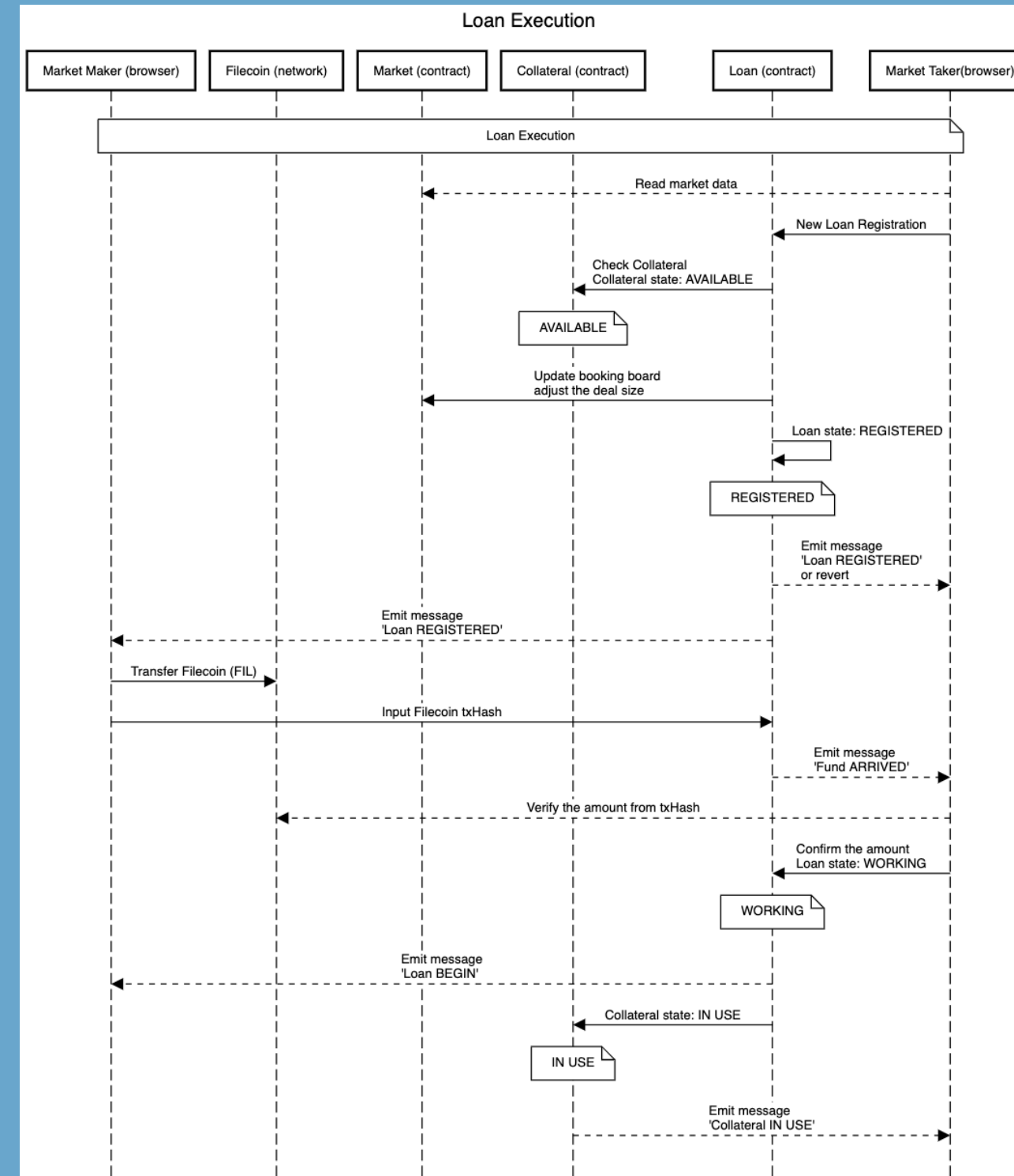
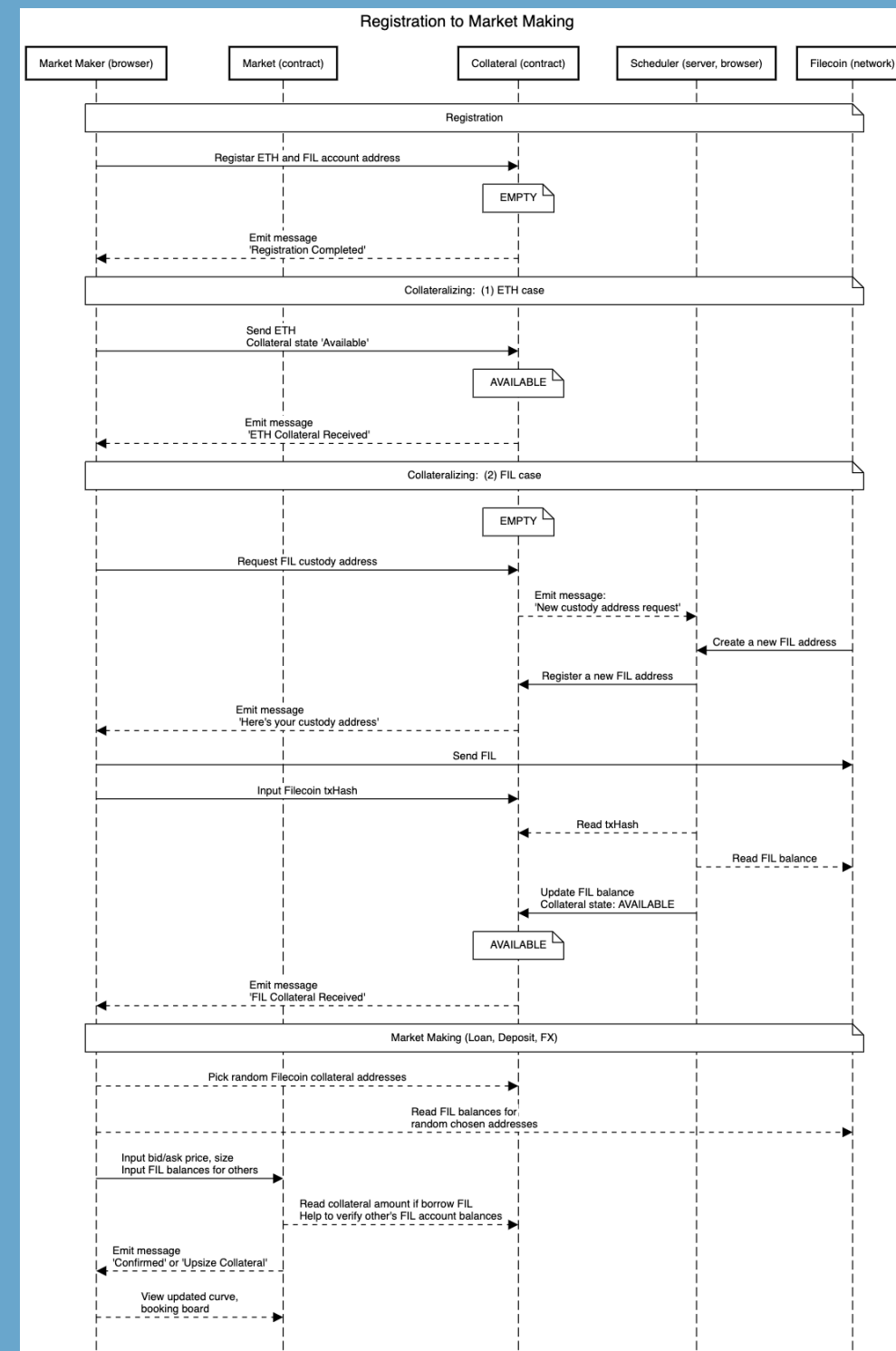
**Replace middle-office & back-office operations.**

- Market.sol - gather all the quotes that works like a database.
- Collateral.sol - collect ETH and manages the control of the funds' ownership based on its state
- Loan.sol - store detail that manages payment schedules and updates PV for margin call operations



# Sequence Diagram

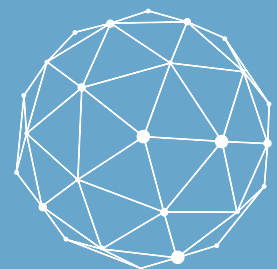
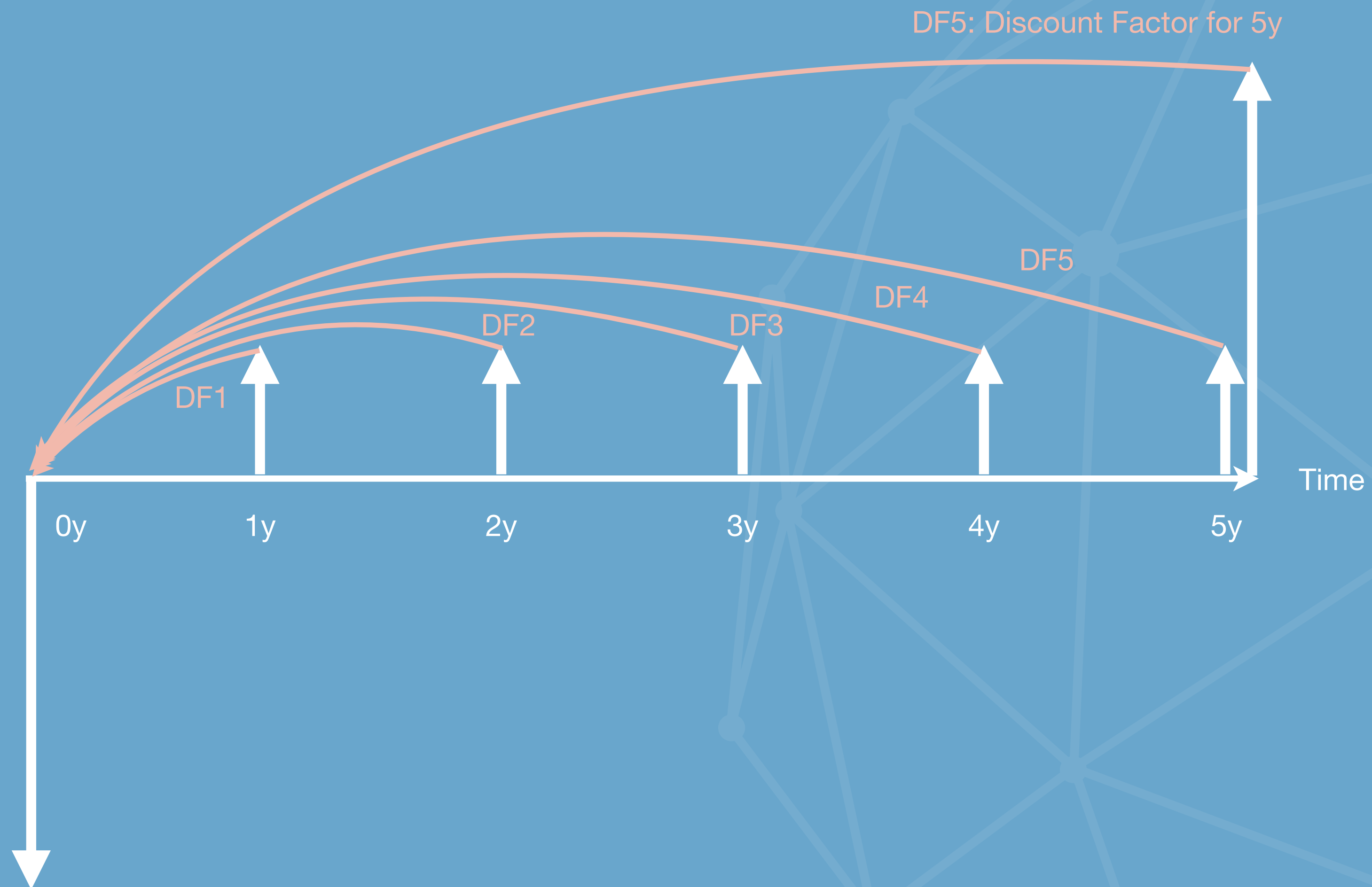
## Designing state machines for collaterals and loans.



(Source: [github.com/Secured-Finance/secured-finance-docs/tree/master/basics](https://github.com/Secured-Finance/secured-finance-docs/tree/master/basics))

# Margin Call

## Calculate PV of all future cash flows



# UI Components

## What do we see on the app?

- Yield Curve Visual - interest rates are provided by market makers
- Block Trade Order Book - market makers provides buy/sell with max size
- Transaction List - Users can see history, schedule, and states
- No login





# Pros and Cons

Highlight what we achieve.

- Zero credit risk (150% coverage)
- Auto margin call
- High volume
- High yield
- High flexibility
- Control future value (Rates, FX)
- Automatic collateral liquidation
- Liquidation penalty
- Slow (wait for confirmation)
- Big size only (2nd layer will cover)
- Complexity of new technology







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# Thank You!

Secured Finance Team: @onion797jp, @muzakparov, @bahadyrbekov, @ChronosX88