Verified RWA Markets

Enable

Requirements specification and Architecture for Comet Extension

Summary

Verified RWA Markets allows asset managers of real world assets to sell them for collateral that can be used to borrow liquid digital assets, and for users to buy staked real world assets with collateral supported on Compound and earn income from underlying real world assets.

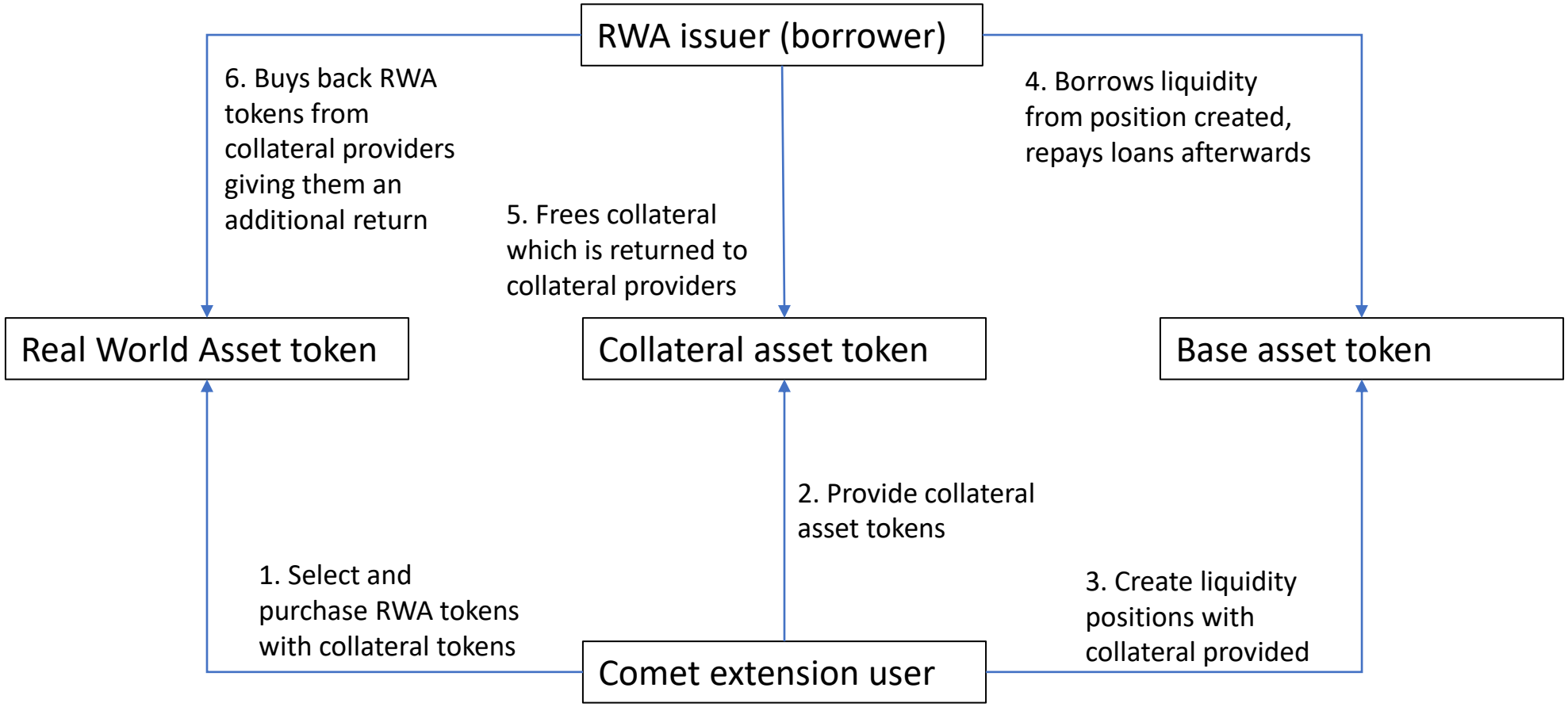
Description

- Real World Assets (RWAs) are a pair of <asset token, currency token>, where, asset token represents underlying asset (eg, real estate trust unit) and currency token (eg, USDC) is what is used to invest in the RWA.
- RWA asset token issuers need liquidity. They could be very interested in borrowing from Compound protocol.
- The Compound protocol can only supply liquidity with base tokens for RWA asset tokens that have put up sufficient collateral on Compound.
- RWA asset token issuers can borrow currency (base) tokens at a for a satisfactory <collateral token, base token> collateralization factor.
- Credit enhancement is required for RWA asset tokens to provide collateral for such loans from the Compound protocol, and collateral providers can benefit from higher interest rates paid by the RWA asset token issuers after repaying loans taken from the Compound protocol.

Requirements

- Use a web extension to show RWA assets, and let Compound users view collateral posted by RWA issuers and balance collateral required.
- Let Verified Markets web extension users enhance credit by purchasing the corresponding RWA asset token with collateral tokens.
- Let collateral tokens provided create positions for RWA asset token issuers to borrow base token liquidity by RWA token issuer.
- Let RWA asset token issuers repay loans from Compound and pay out net interest margin to collateral providers.
- Let any default in repayments by RWA asset token issuers to Compound liquidate collateral provided by credit guarantors.

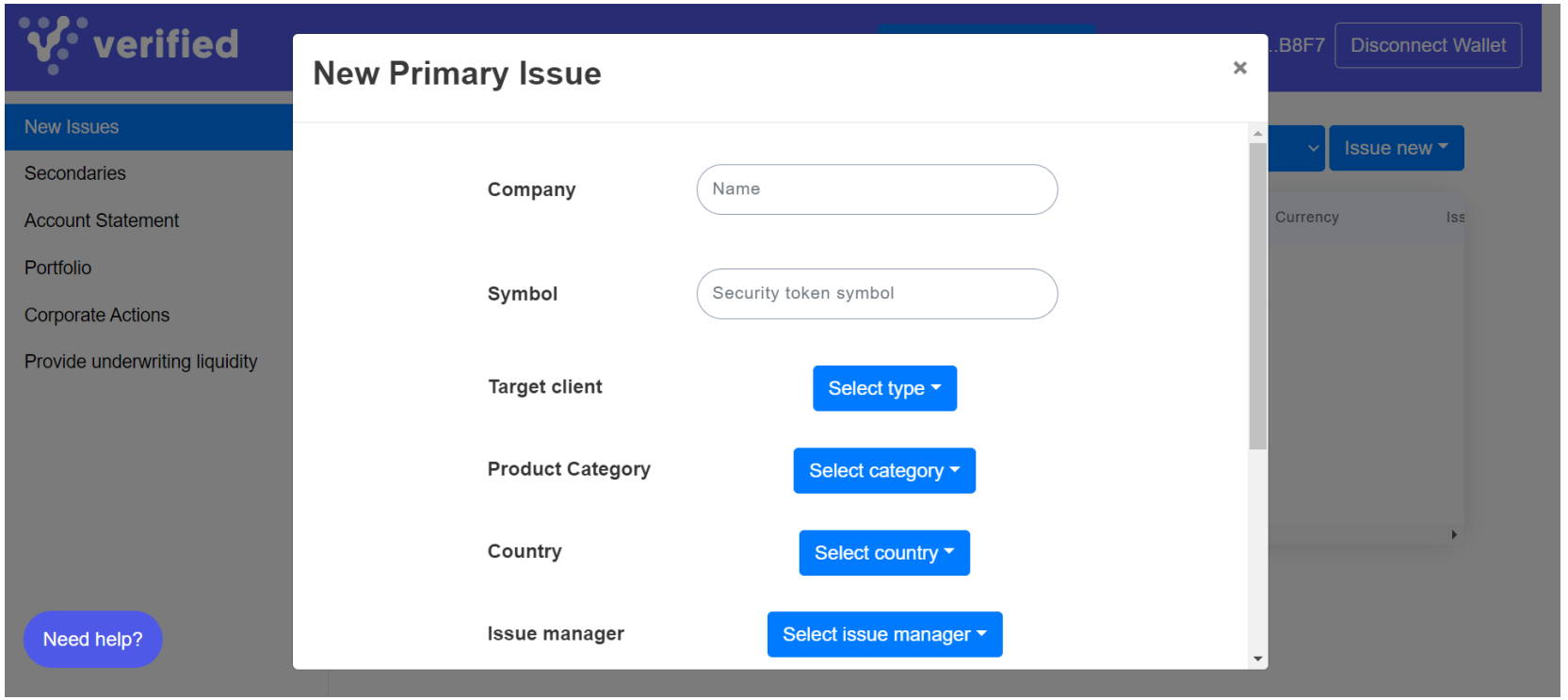
High level Architecture



Benefits

- RWA issuer : liquidity from Compound
- Comet extension user : additional returns from Compound
- Compound protocol : more collateral and base assets from borrowers and comet extension users
- An illustration of the economic model
  - RWA issuer borrows USDC from Compound @3.95% APY
  - Collateral providers (Comet extension users) buy RWA tokens for collateral tokens (eg, WETH) that get posted on Compound @3.05% APY
  - RWA issuers pay 3.95% to Compound and the balance yield on the RWA (14%-3.95%=10.05%) to collateral providers who earn 3.05% (from Compound) + 10.05% (from RWA issuers) = 13.1% APY
  - Collateral is freed up and returned to collateral providers.

UI – Submit RWA tokens from 3rd party Dapps using API

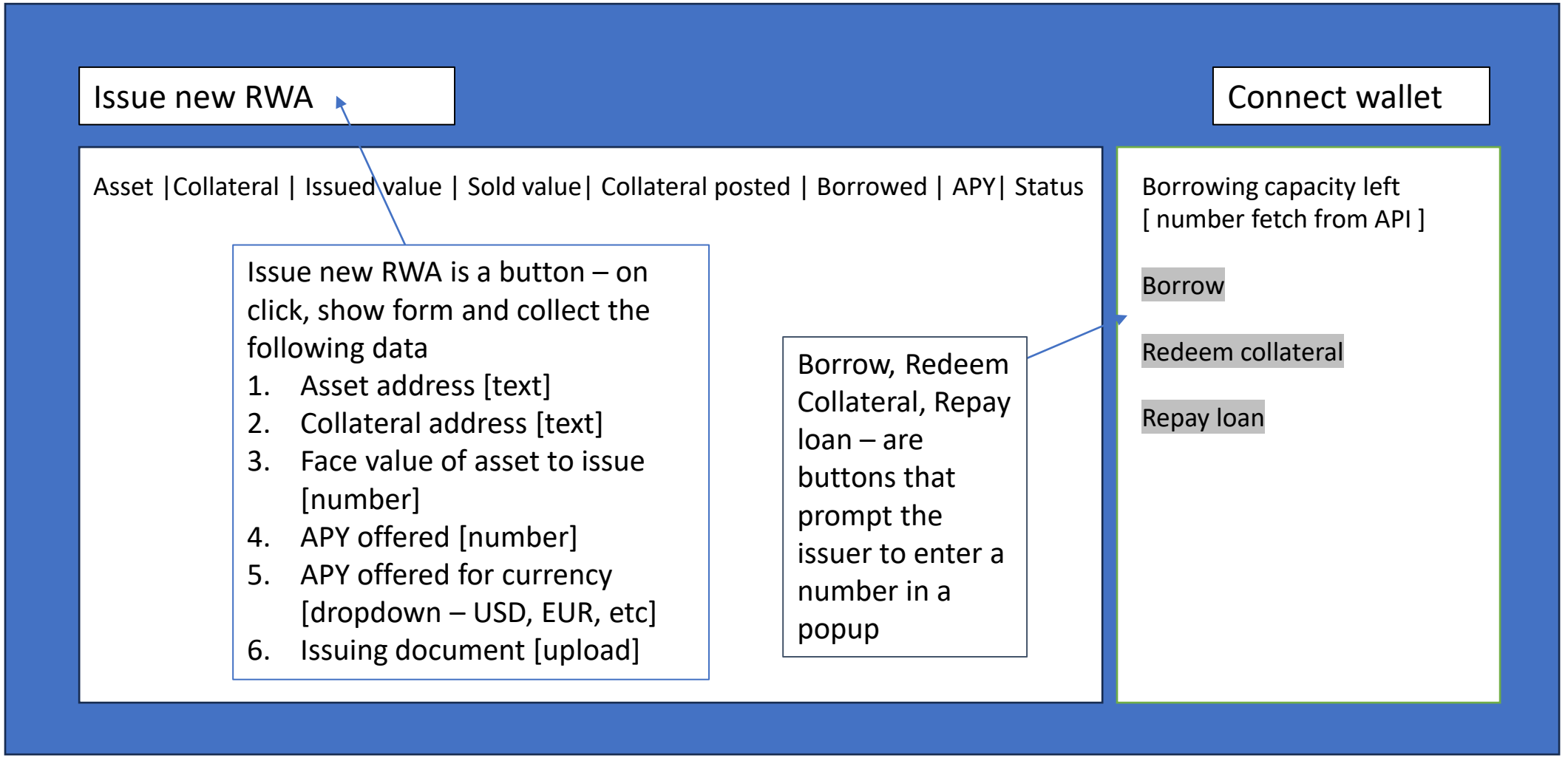


Comet extension operator to provide APIs for

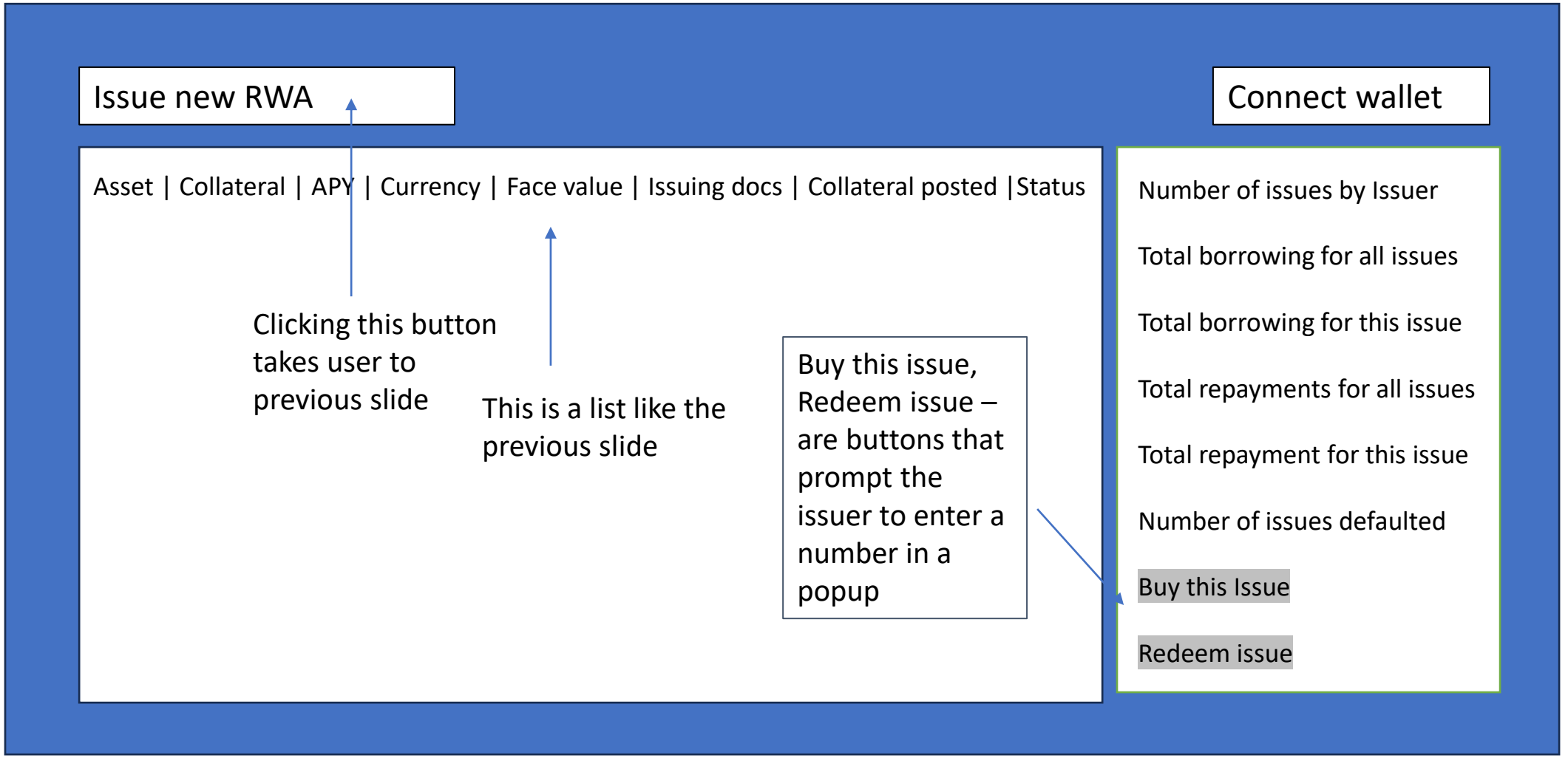
1. Submitting asset details
2. Post collateral
3. Borrow
4. Repay
5. Buyback

Each RWA token should create its own position on the Comet operator.

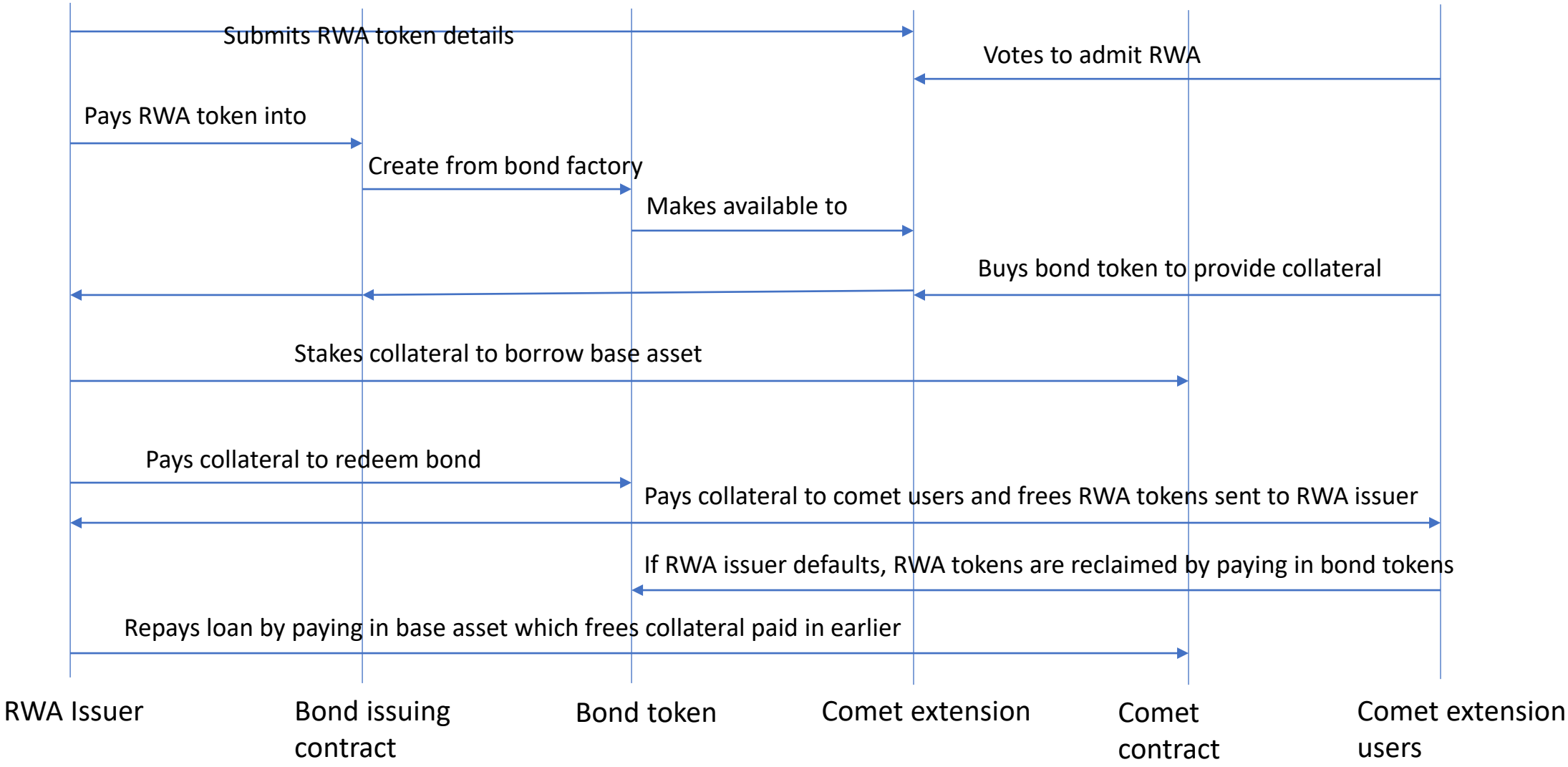
Extension UI – to be used by RWA Issuer



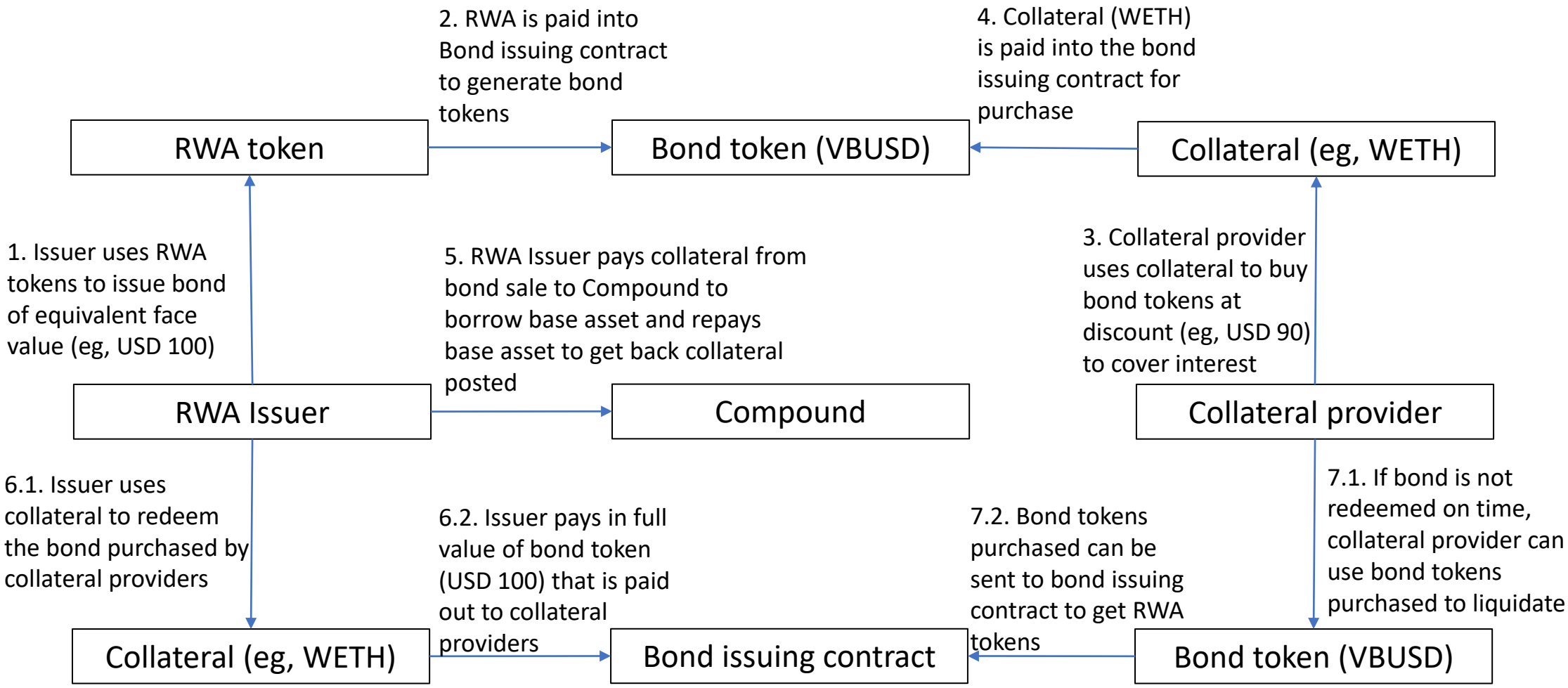
Extension UI – to be used by RWA collateral provider



RWA Comet extension workflow sequence



Issuing, Purchasing, Redeeming RWA tokens for Collateral



RWA operator interfaces with Comet [Step 5 prev slide]

Borrow and Repay loans

- function supplyFrom(address issuer, address asset, address collateral, uint amount) override external
- function withdrawTo(address issuer, address asset, uint amount) override external

Get collateral info

- function getAssetInfo(uint8 i) override public view returns (AssetInfo memory)
- function getAssetInfoByAddress(address asset) override public view returns (AssetInfo memory)

Get reserves info

- function getCollateralReserves(address asset) override public view returns (uint)
- function getReserves() override public view returns (int)

Check borrowing capability

- function baseBorrowMin()

[see use in operator branch on github https://github.com/verified-network/verified-compound-markets]