

Designing Mrgnlend

Risk-First DeFi Lending on Solana

Connor Lee • April, 2025

What is MRGNLend?

- Lending & borrowing protocol built on Solana
- Offers the highest APYs through optimized risk parameters
- Designed for power users and DeFi newcomers
- Visual-first approach to portfolio risk and clarity

My Role

Led UX research and entirety of UX, UI.

The interface was designed solely by me while continuously iterating based on feedback from both the team, and product manager who helped coordinate UX interviews (Anders Jorgensen).

The Problem

- Borrowing in DeFi is often intimidating and unclear
- Users don't understand liquidation risk
- Tools focus on power use, not peace of mind
- Most interfaces lack real-time risk feedback

The proposed solution...

After months of talking to various users in de-fi providing collateral during the bear market, the first initial wireframes began:

Human-centered design is all about building a deep empathy with the people you're designing for; generating tons of ideas; building a bunch of prototypes; sharing what you've made with the people you're designing for; and eventually putting your innovative new solution out in the world.

Who It's For

Power Users

- Actively managing complex portfolios
- Swapping strategies and farming yields

Newcomers

- Curious but hesitant
- Want safety nets and clearer education

The Design Challenge

Internal:

How can I satisfy team requests, while balancing external design feedback from UX research interviewees, and my intuition for how this product will work?

External:

How can we design a platform that places risk optimization first, and works like a consumer-facing product?

what if we redesigned
borrow and lend
around the concept of risk
management

Press **⌘ + ⌘ + S** to add to version history while editing.

**Current version**

5 autosave versions

Nov 4, 2023, 1:23 AM

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Oct 14, 2023, 7:17 PM

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Sep 11, 2023, 4:42 PM

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May 16, 2023, 2:51 PM

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Jan 28, 2023, 12:49 AM

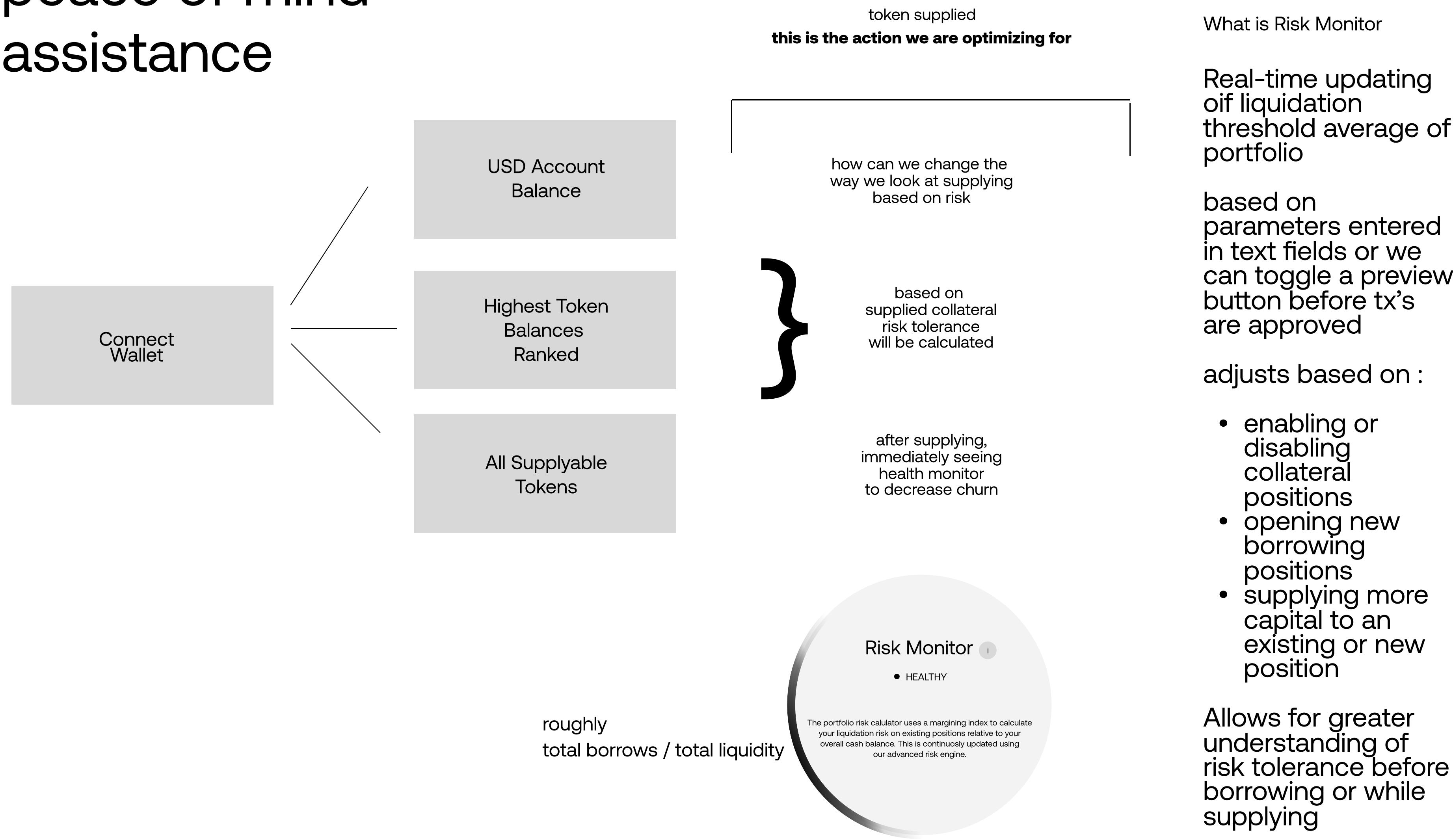
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Key
design
pillars

security
peace of mind
assistance



Input from Product Manager

Portfolio

- Supplied and borrowed assets
 - APY on each
 - Account balance in token and dollar terms
- Net worth
- Net APY
- Risks
 - Health factor with popout to explanation:
 - Liqu price of each asset
 - LTV threshold

Anders

Assets

- All supplyable assets
 - Token - link to market page
 - Wallet supply
 - APY
- All borrowable assets
 - Token - link to market page
 - Wallet supply
 - APY

Anders

Yield Farms Component

We can make a component that shows top 5-10 farms and then either allows them to manipulate it in the UI or just shows top ones and then links to full table on defillama

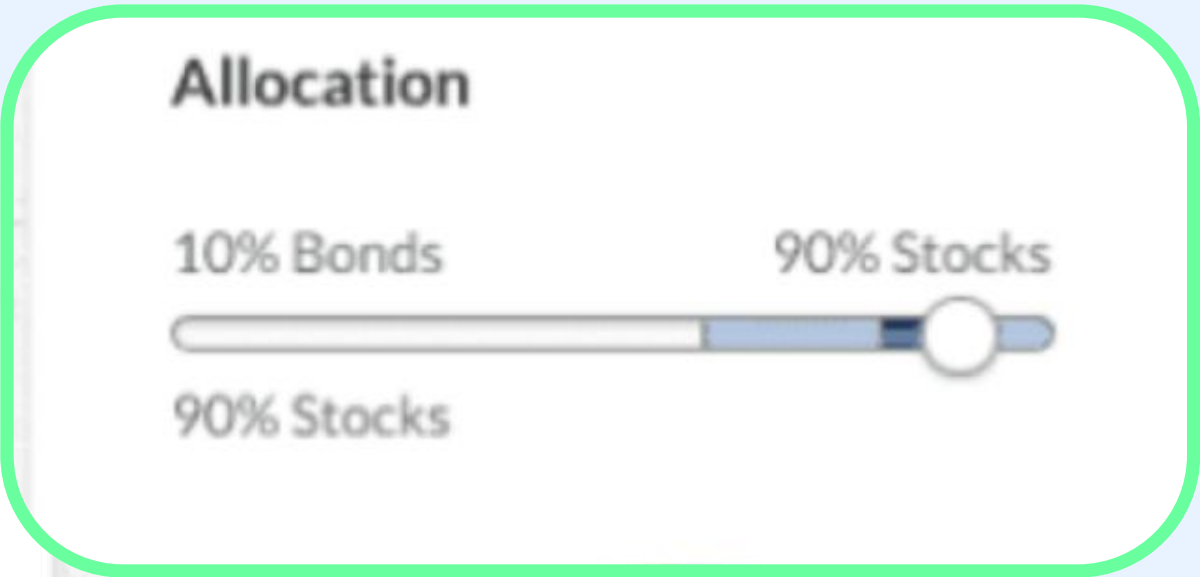
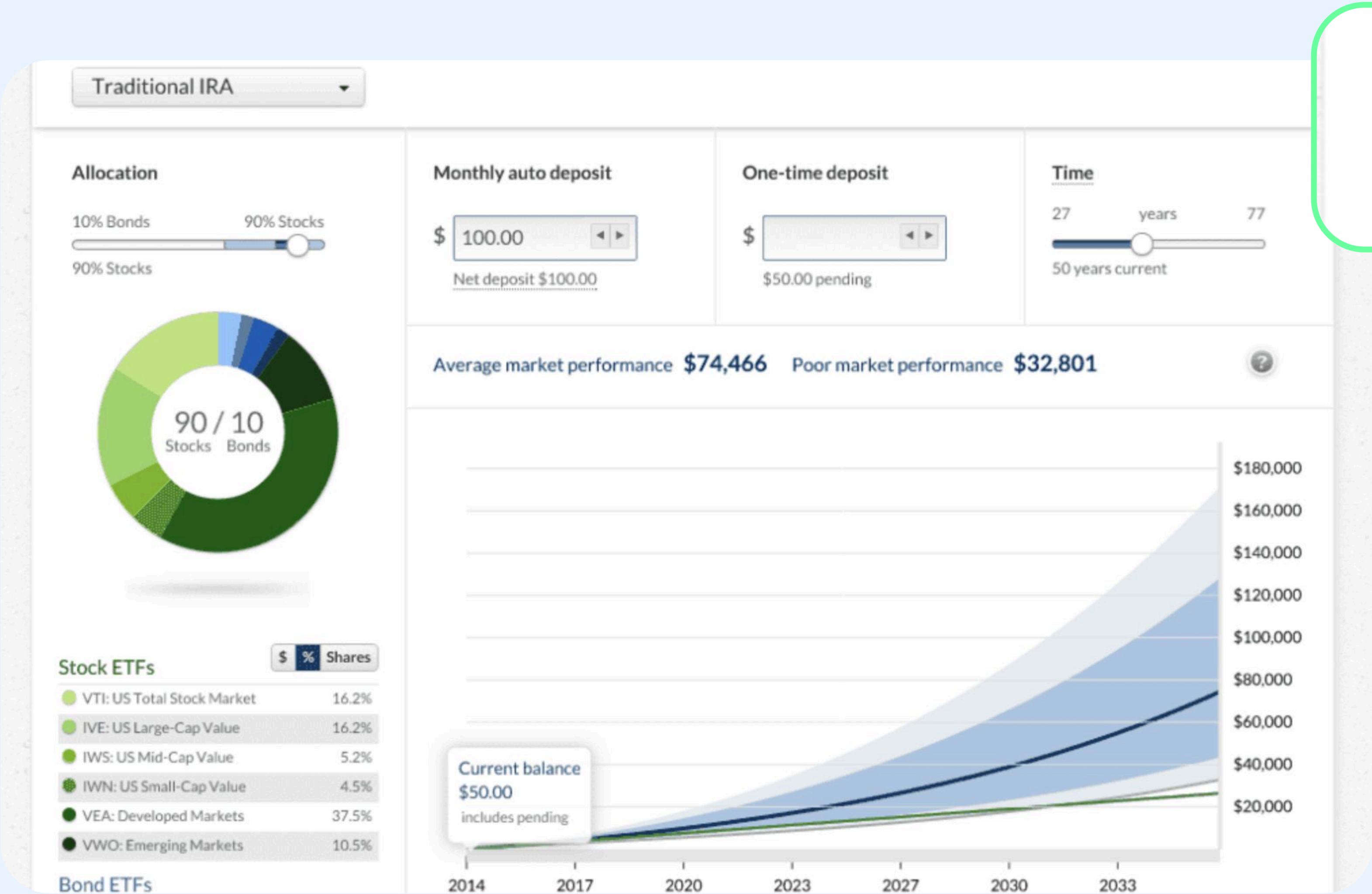
Columns in table should be:

- Pair
- Venue (composing venue if levered)
- APY
 - Native
 - LM
 - Payout token
- Volume
- TVL

Anders

External

Inspiration: Betterment (2013)



Places risk optimization first

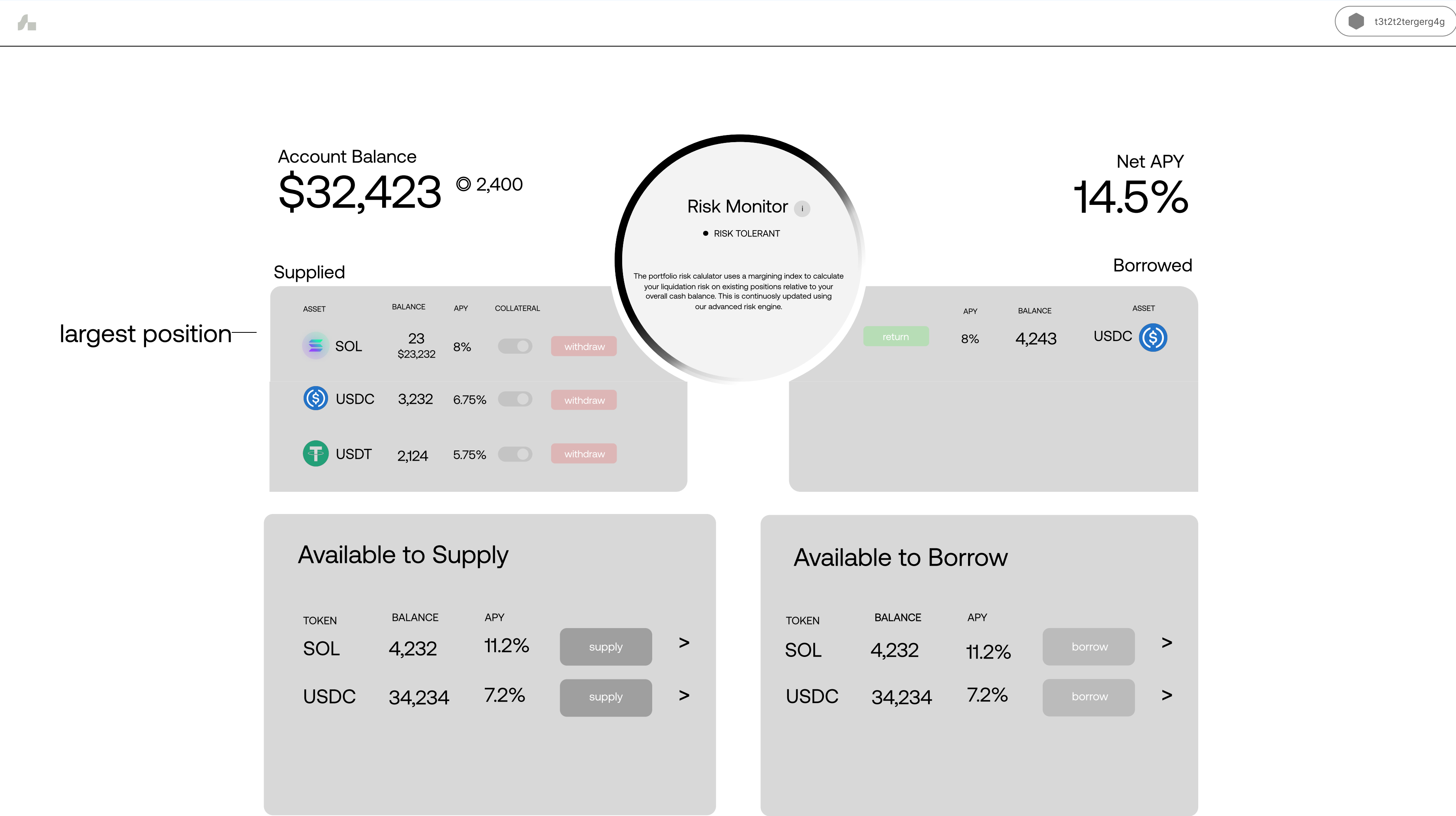
Allows for risk increase / decrease based on user input

Goals

1. Visualize liquidation zones and risk clearly
2. Show health factor changes in real time
3. Simplify complex flows (borrow/supply/toggle)
4. Inspire confidence through UI
5. Highlight high-APY opportunities at a glance

Wireframes

Concept 1



Wireframes

Concept 2

mrgnlend

CONNECT WALLET

Account Balance

\$0

◎0

SUPPLYING

\$0

BORROWING

\$0

Net APY

--%

Portfolio Risk

Health Factor

1.00

Liquidation Value

10

calculate your risk >

Supply

	Asset	APY	Wallet Balance		
i	SOL	1.8%	--	max	SUPPLY
i	USDC	8.5%	--	max	SUPPLY
i	mSOL	3.0%	--	max	BORROW
i	stSOL	9.7%	--	max	BORROW

Borrow

	Asset	APY	Available to Borrow		
i	SOL	3.0%	--	max	BORROW
i	USDC	9.7%	--	max	BORROW

Yield Farms

SOL-USDC

TVL: \$889,468.00

volume

\$2,234,243

\$TULP

APY

42%

>

Core Feature – Risk Monitor

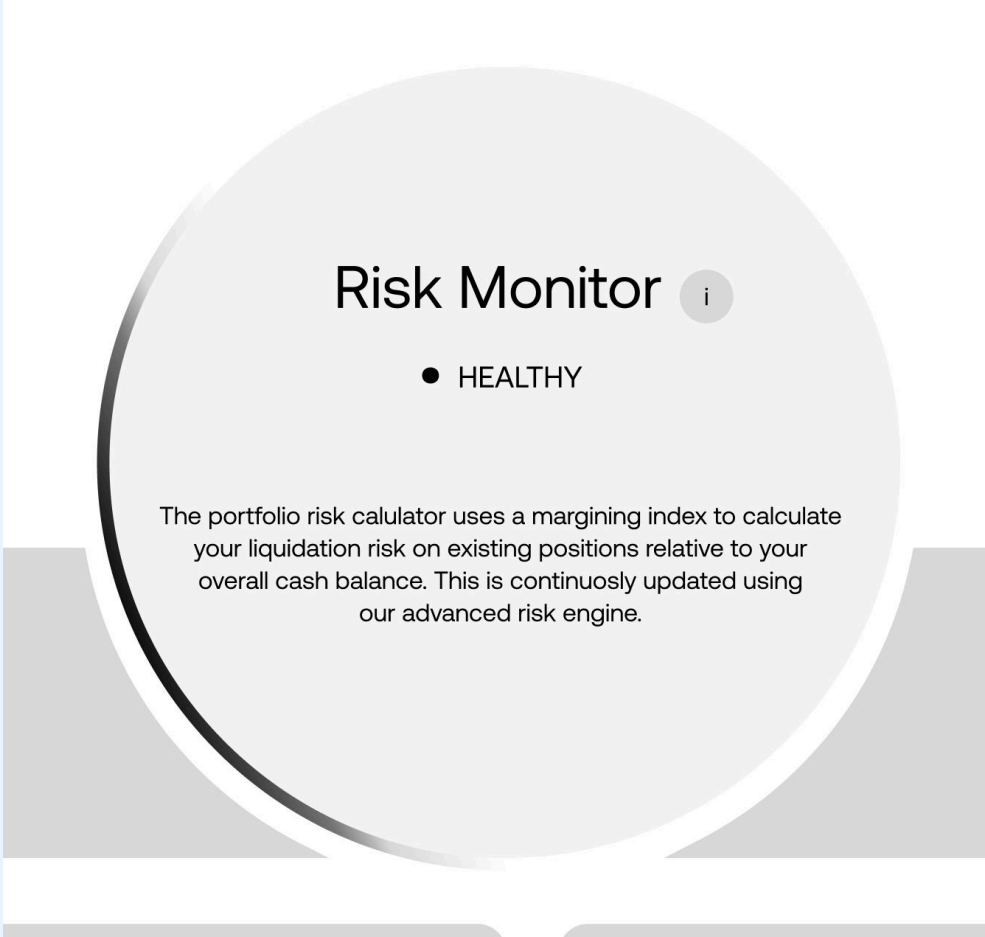
- Real-time health factor
- Liquidation range slider
- Auto-deleveraging toggle
- Margin index tracking your entire portfolio's risk



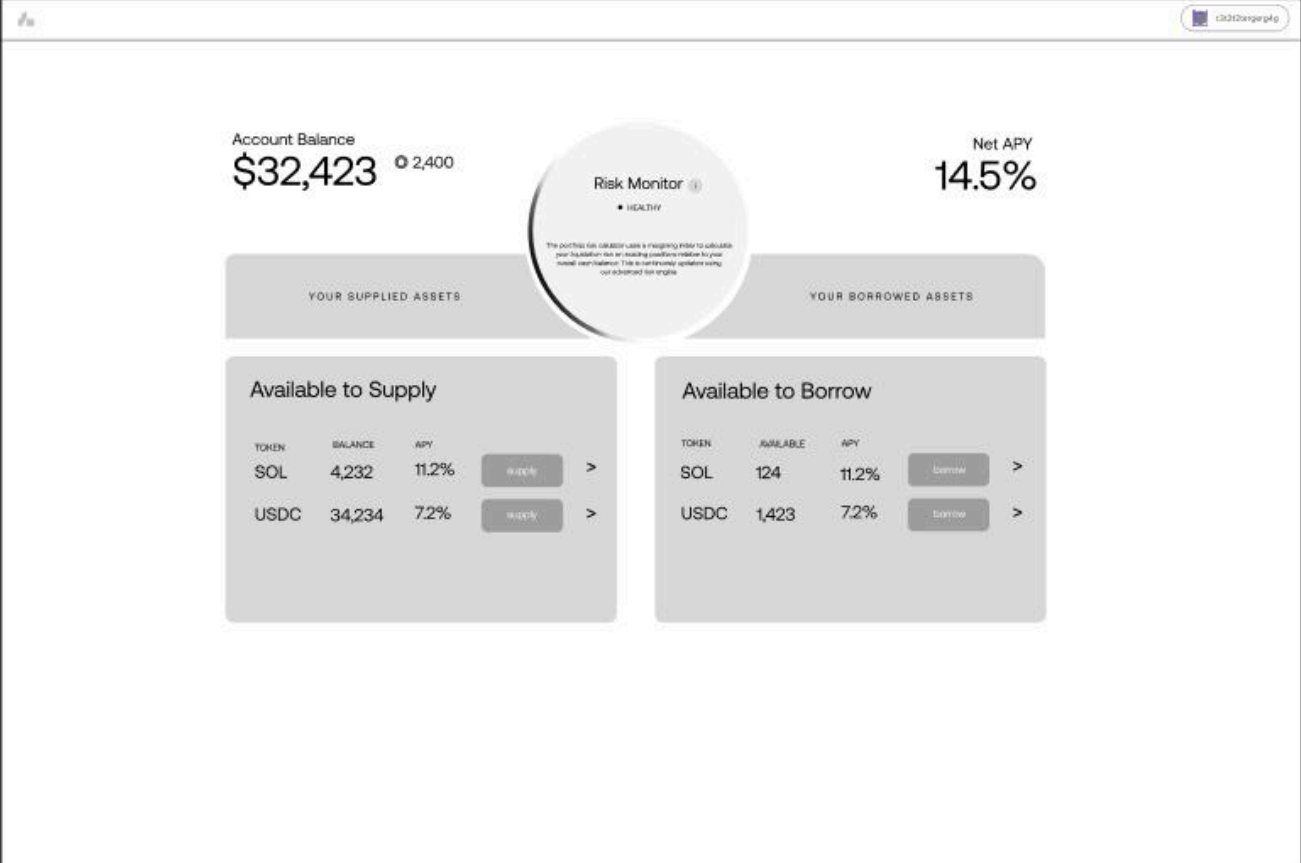
“What if we designed borrowing around peace of mind?”



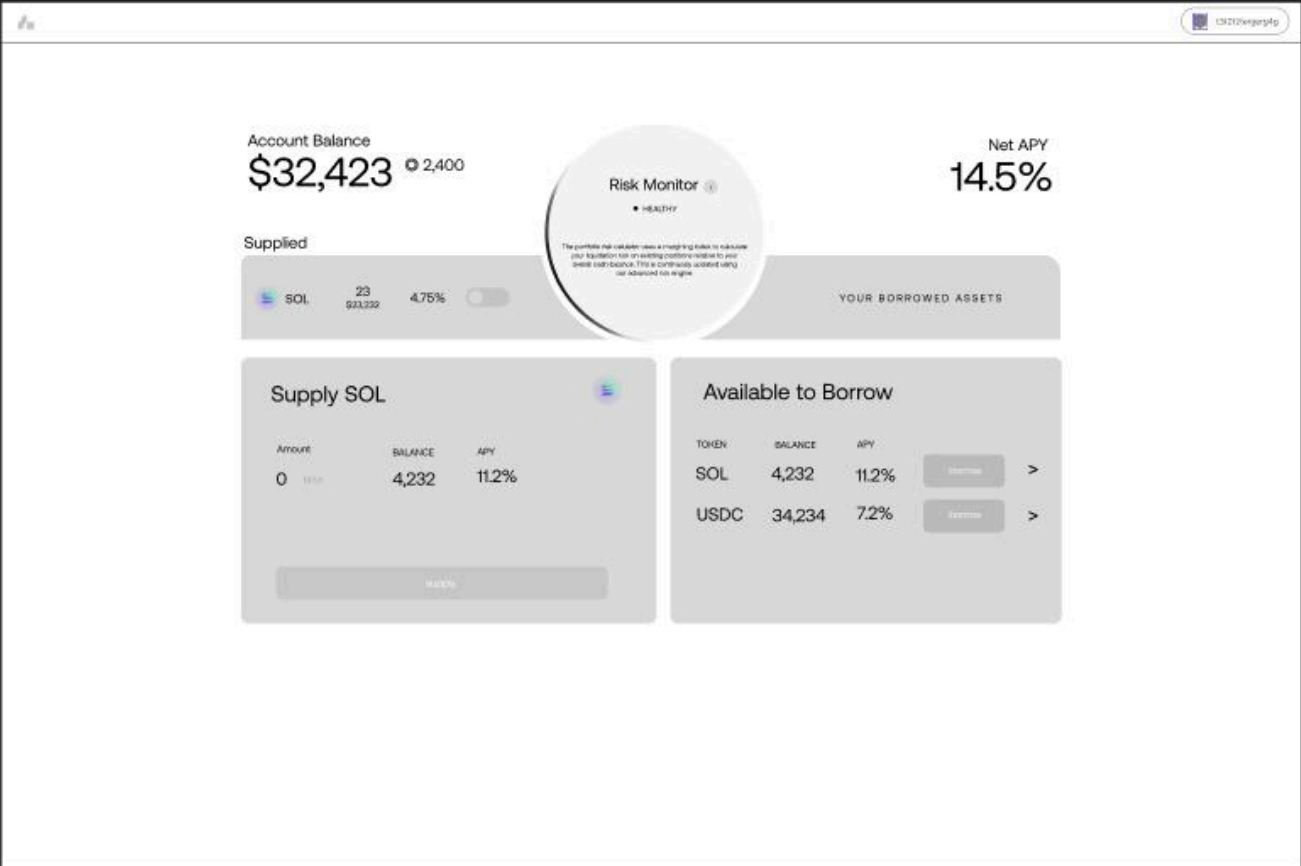
Wireframes



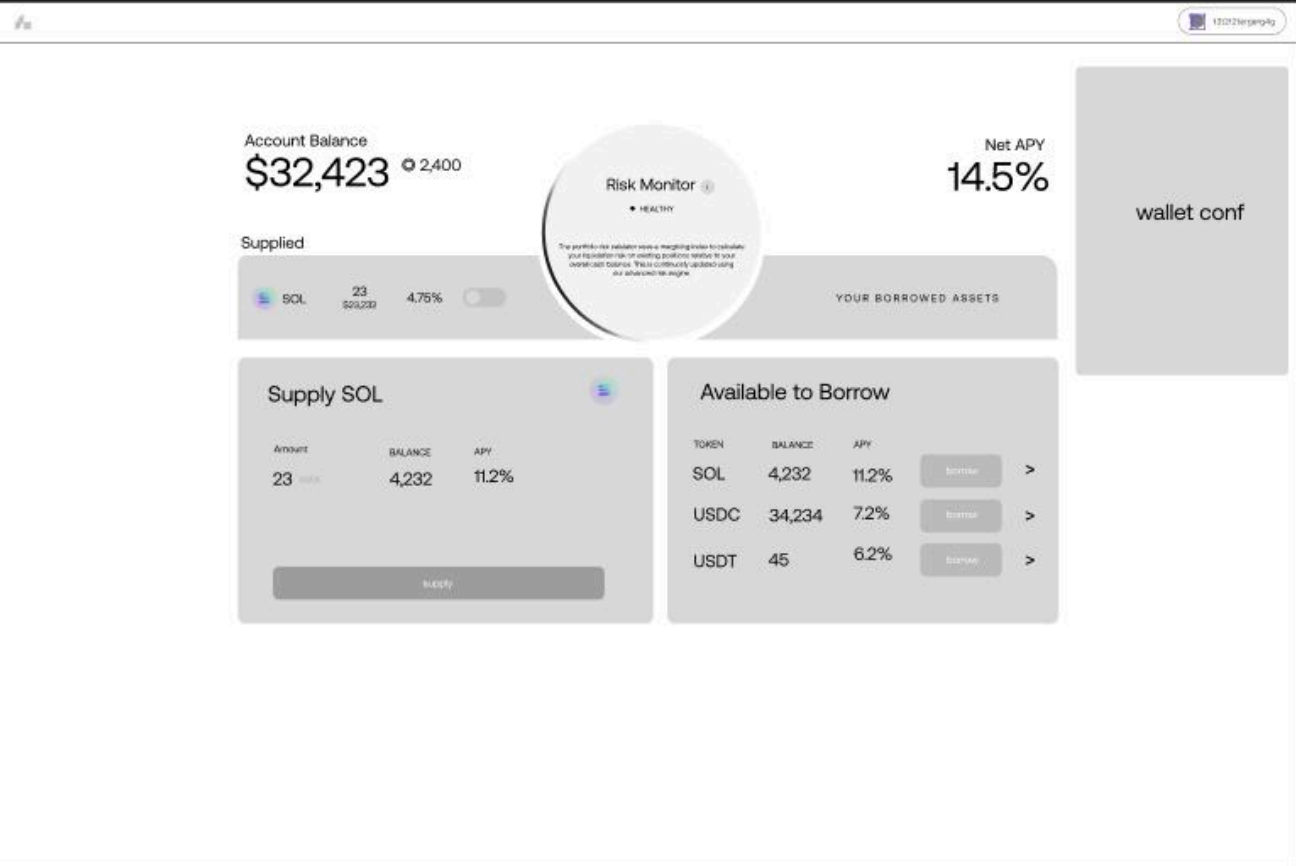
B/L Designed Around Risk



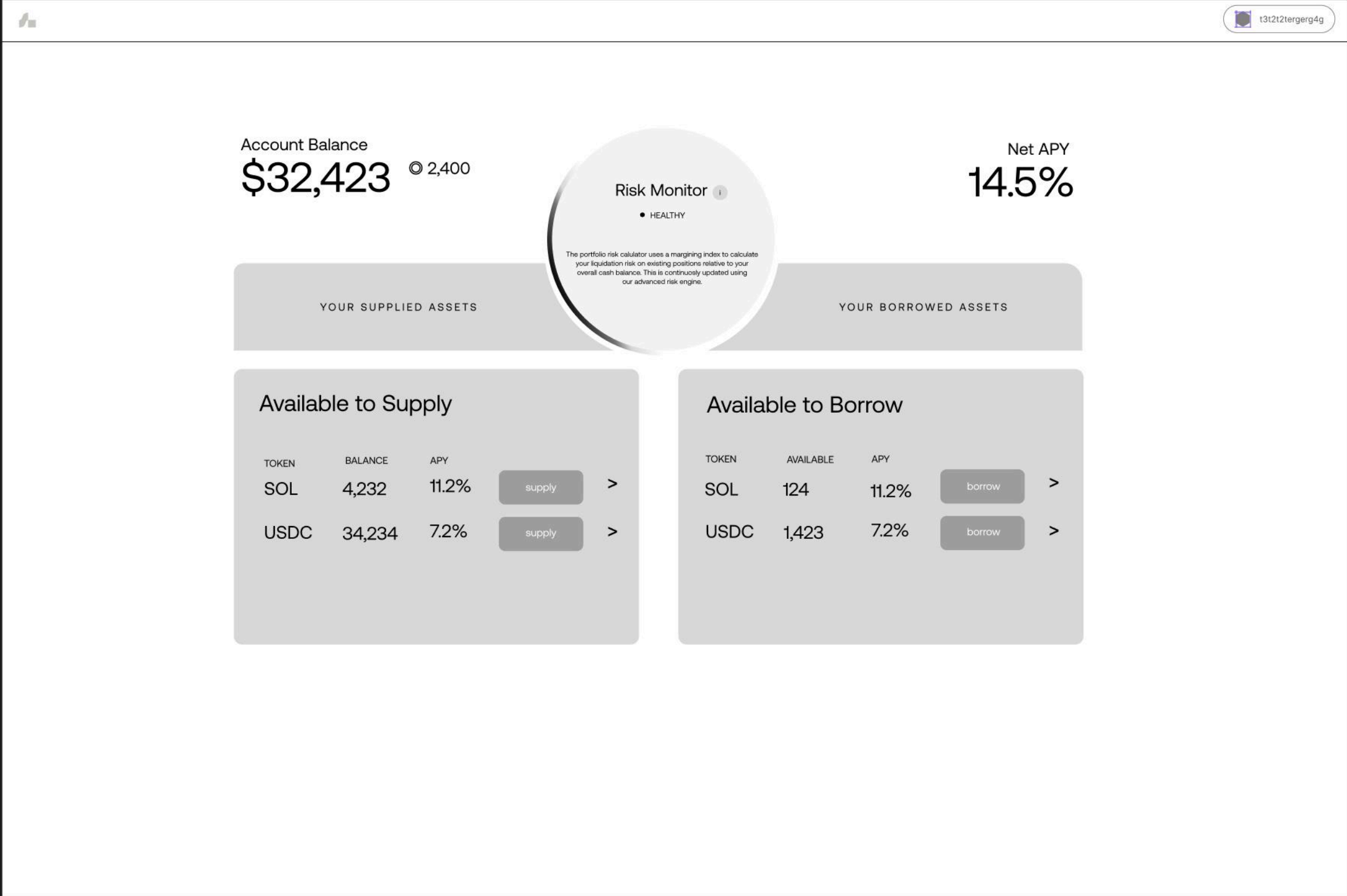
Supply Asset Conf



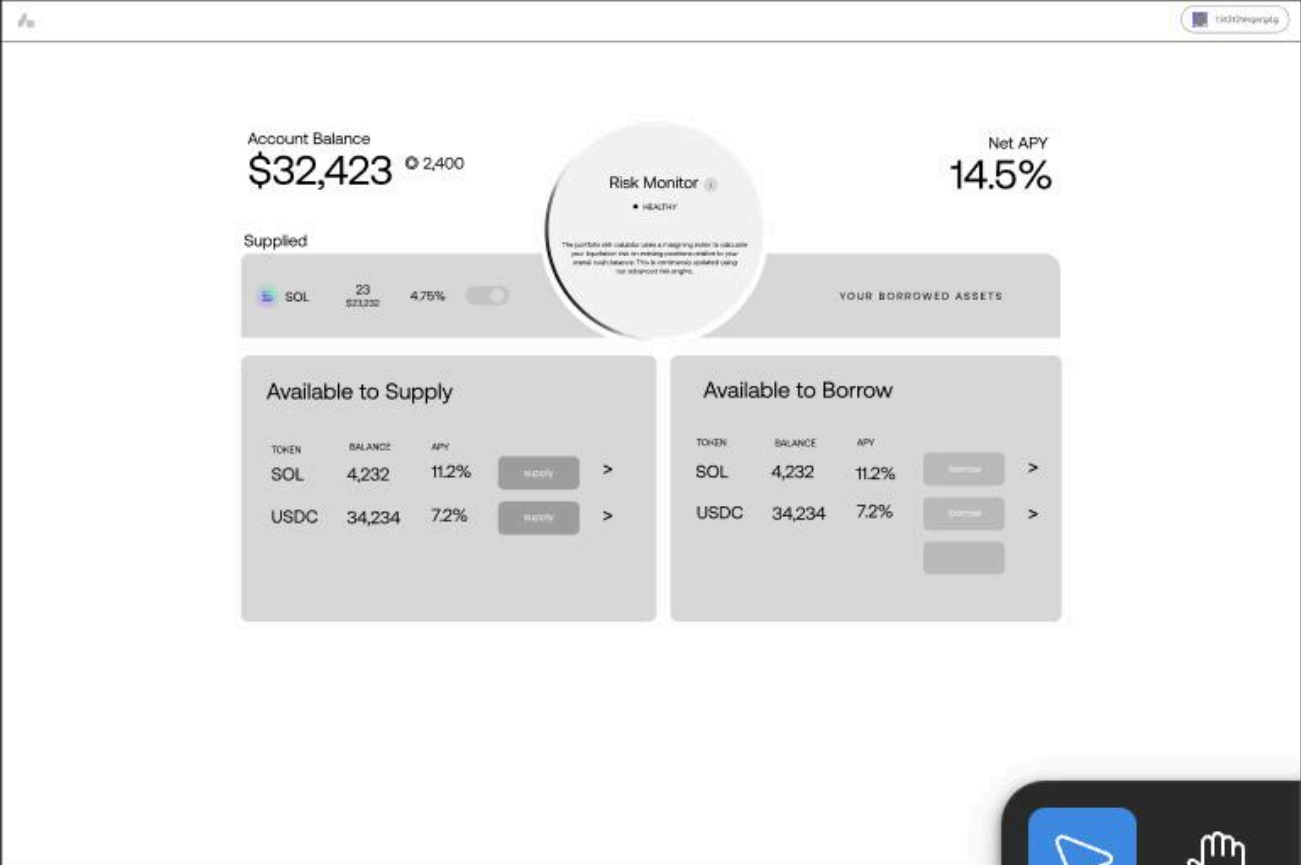
Supply Asset Tx



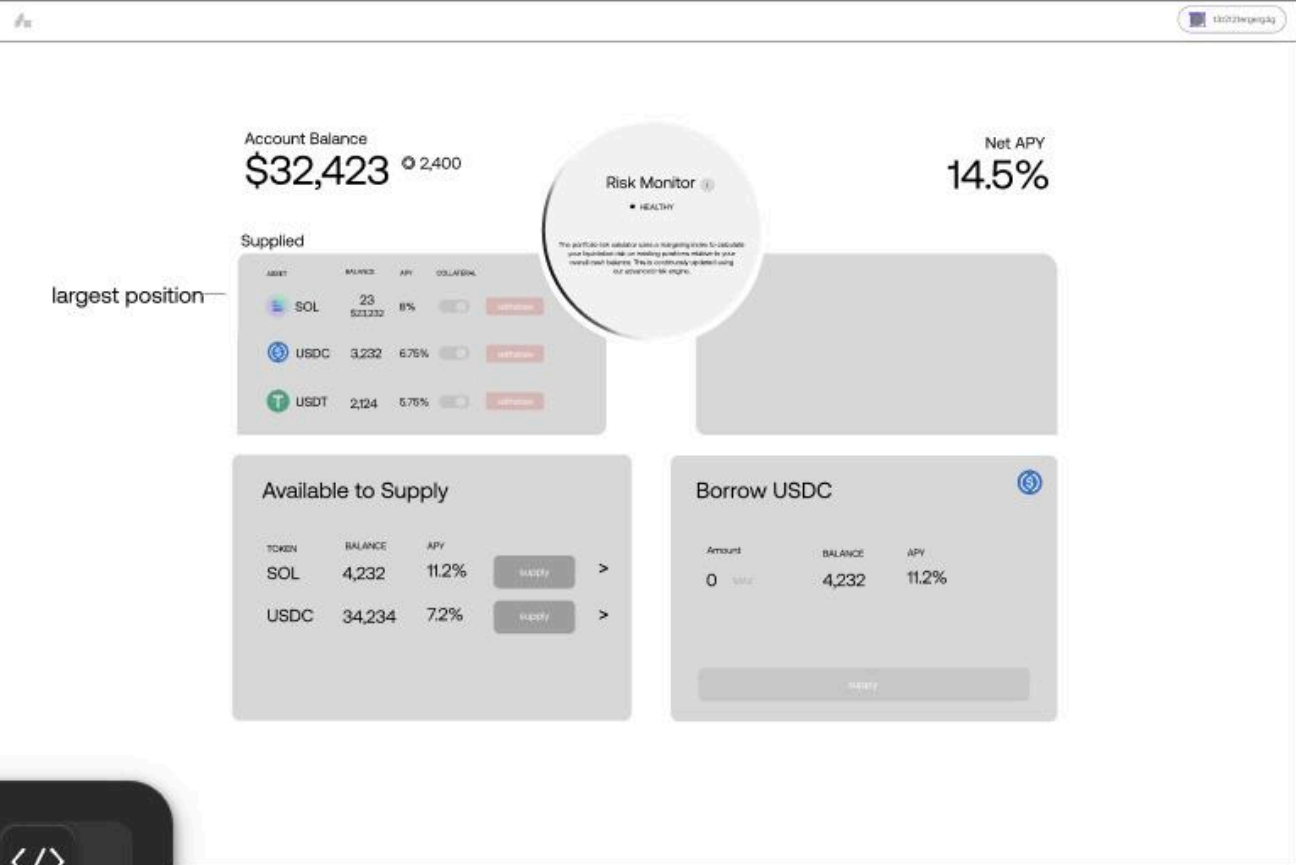
B/L Designed Around Risk



Asset Supplied View

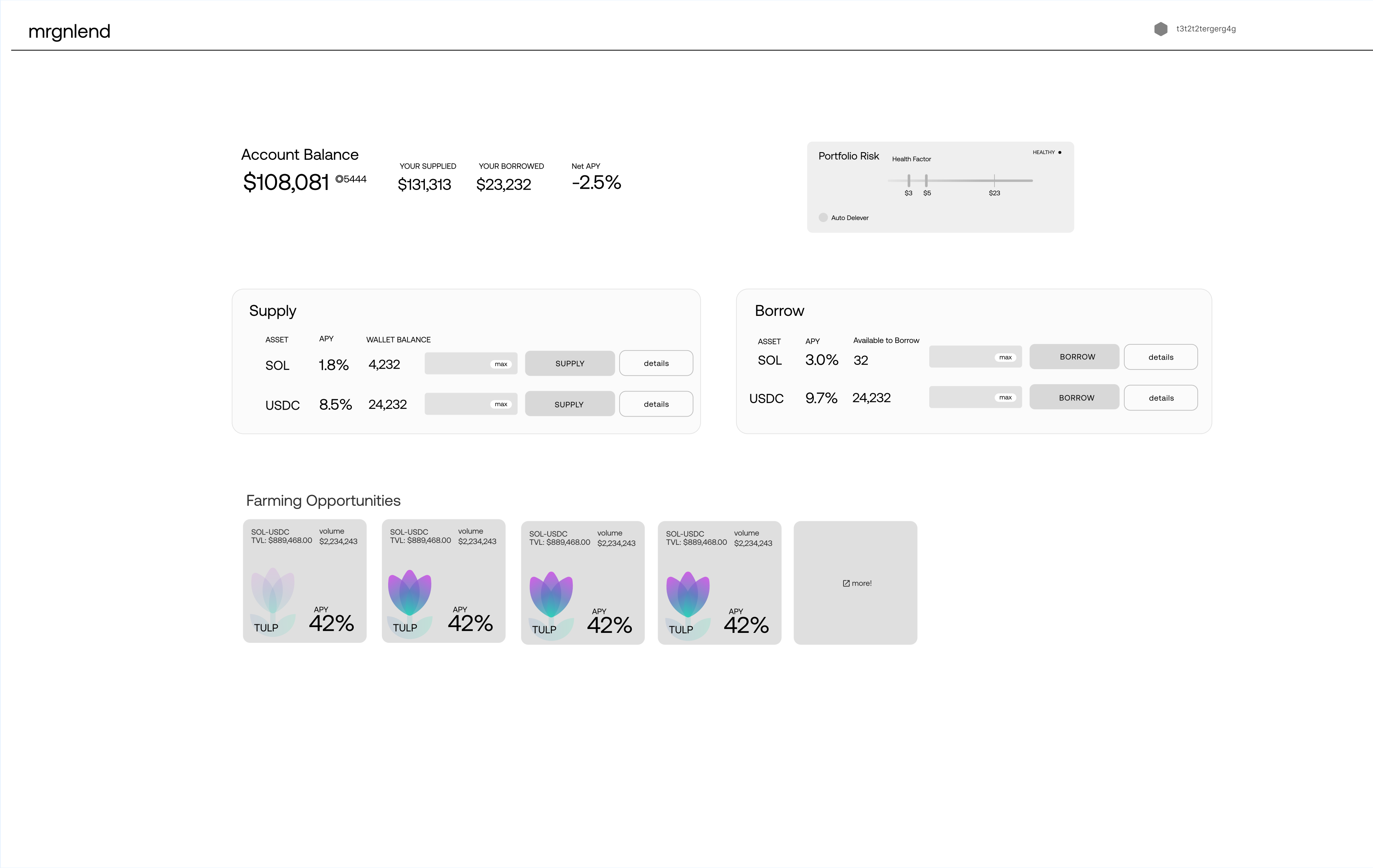


Multiple Assets Supplied



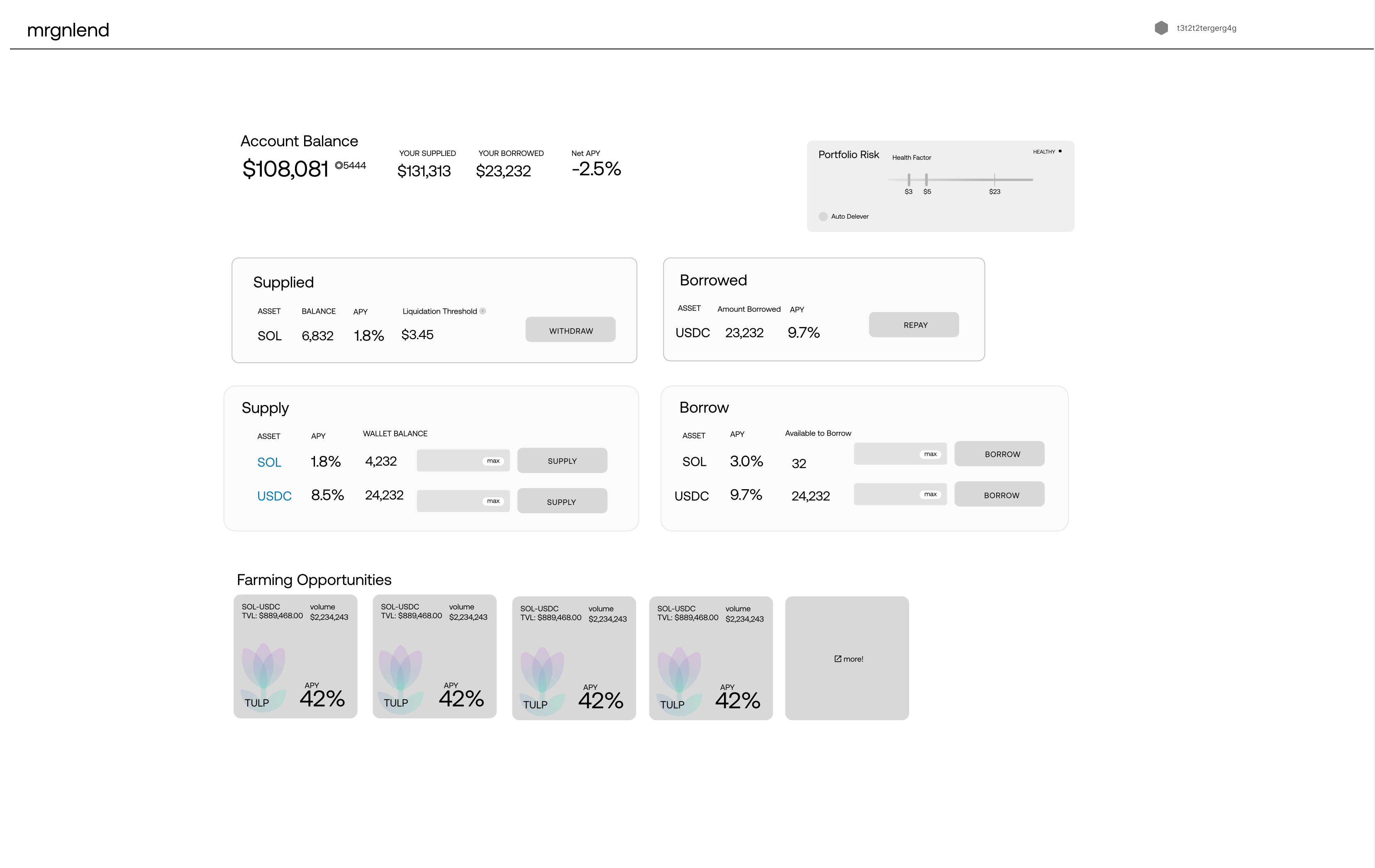
Wireframes

Concept 2 (funded)



Wireframes

Concept 2 (supplying)



Internal

Balancing
harsh team
feedback
with
design instincts

- be a team player
- provide specific solutions

Jakob's Feedback:

I think there should be a better visual distinction between assets supplied and the general information about the lending pool

Both user deposits and the lending pool present the information in the same format, but the context is different

Lets also keep edge rounding consistent, the input fields and buttons vary wildly

Mac's Feedback:

avail balance looks like it's just against your borrow, not against the pool

if you're going to separate out pool avail liquidity / pool borrowed, make those go with each other to reduce confusion

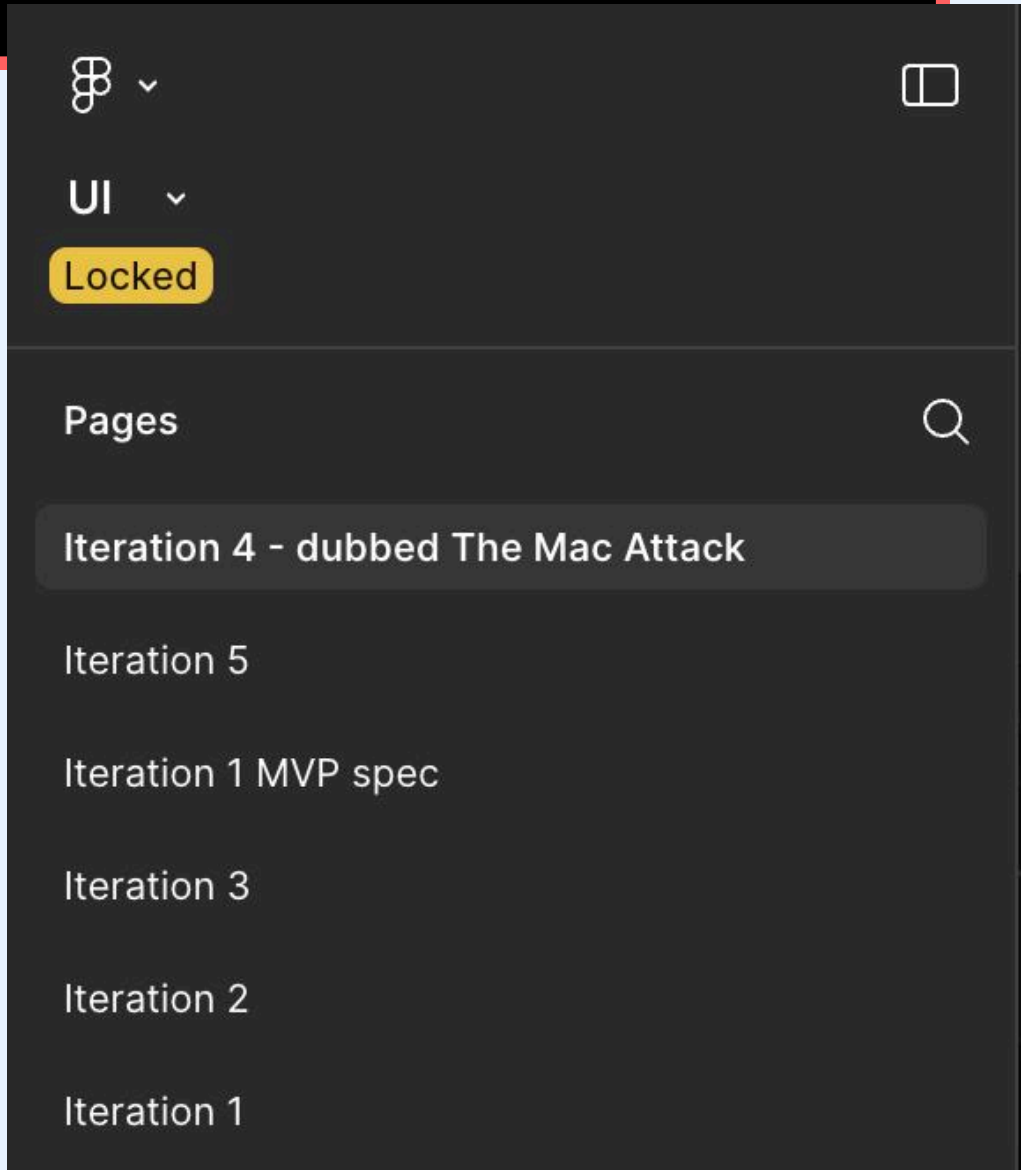
would at least make slightly more sense if by borrow panel instead to show borrow action is what causes liq not supply action

Mac's Feedback (cont):

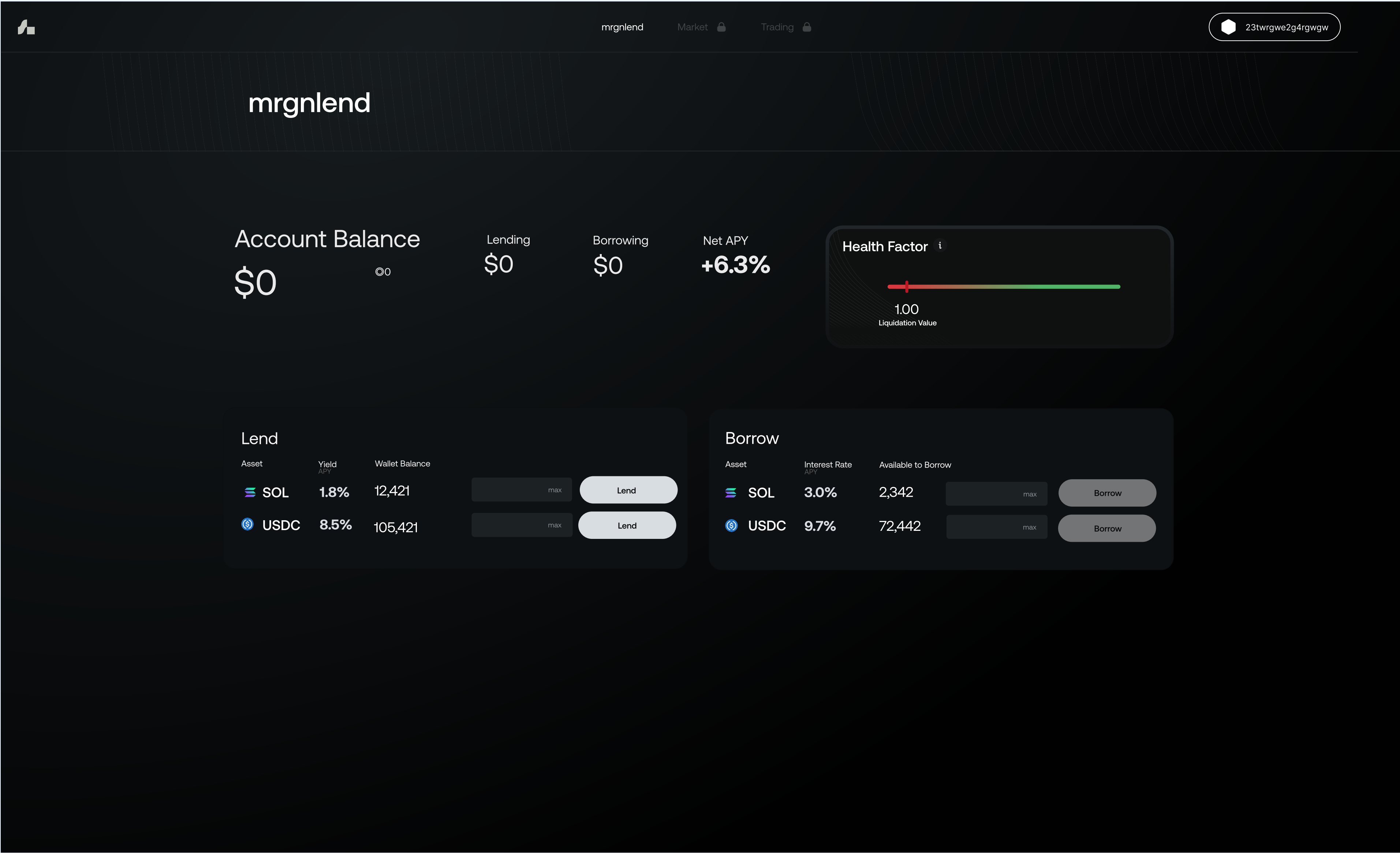
ok rn health factor makes no sense + if we don't have calcs for it idk why it's there, liq threshold in this context makes no sense, i think "current apr" has more integrity / makes sense vs "apy", SOL & usd denomination is throwing me off, "wallet balance" is throwing me off — is that what i have to supply in my actual wallet or what's in the app or some abstraction of my account equity? why does borrow tab have apy? that sounds like i'm earning not paying interest. i don't know what "available" in the borrow tab means.

denote balances with the currency figure? like "\$"12.000 or the sol if it's denoted in that — esp since there's two units here between sol and usdc like i'm not sure if those sol balances are in usd or sol

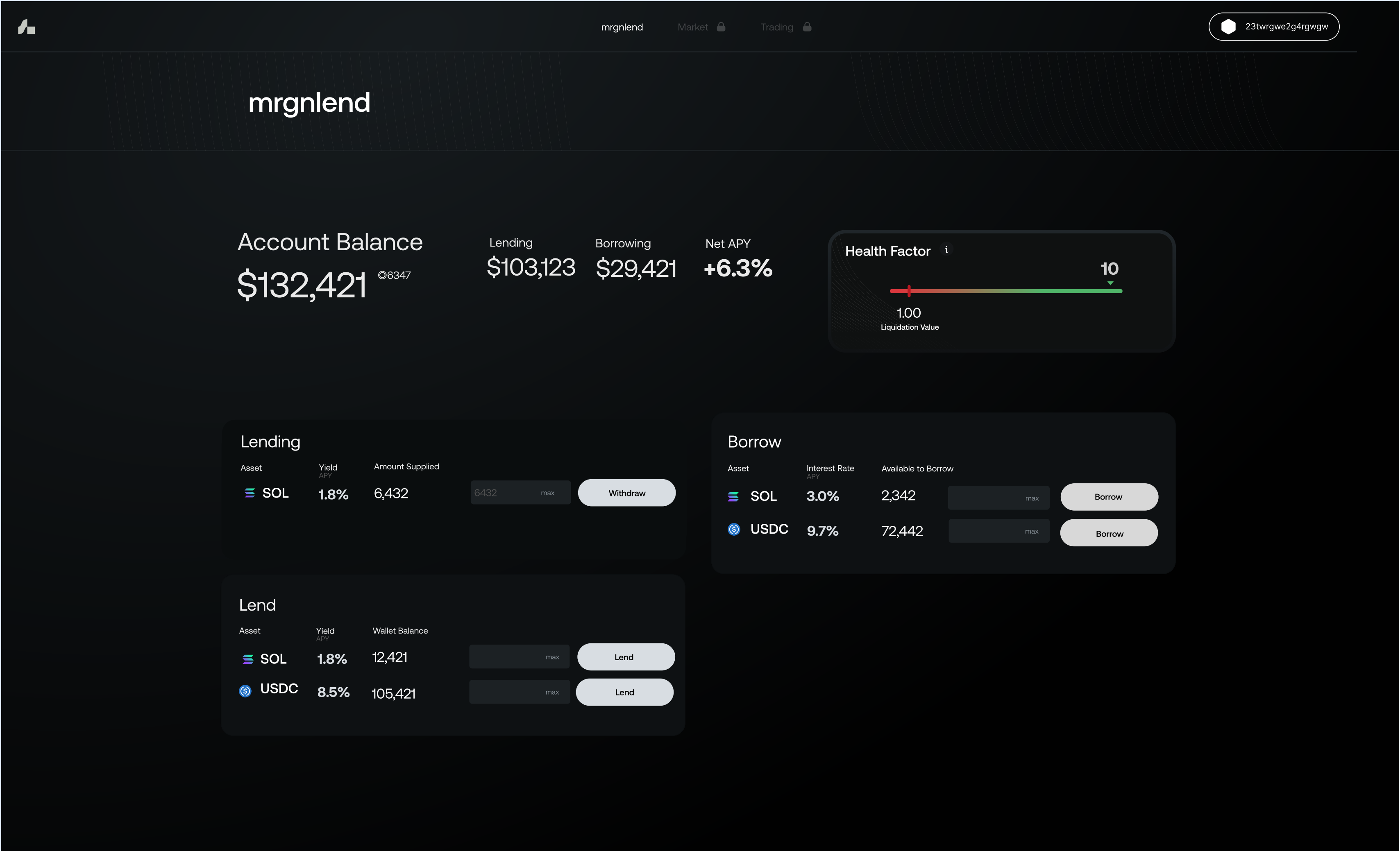
finally something nice(personal to me) would be to recognize supply as equity and borrowing as liabilities so I have the familiar sense of the balance sheet as a reference point, and also to show how much I am net earning with actual numbers with the net APY — meaning am I making 1000 bucks a month for example



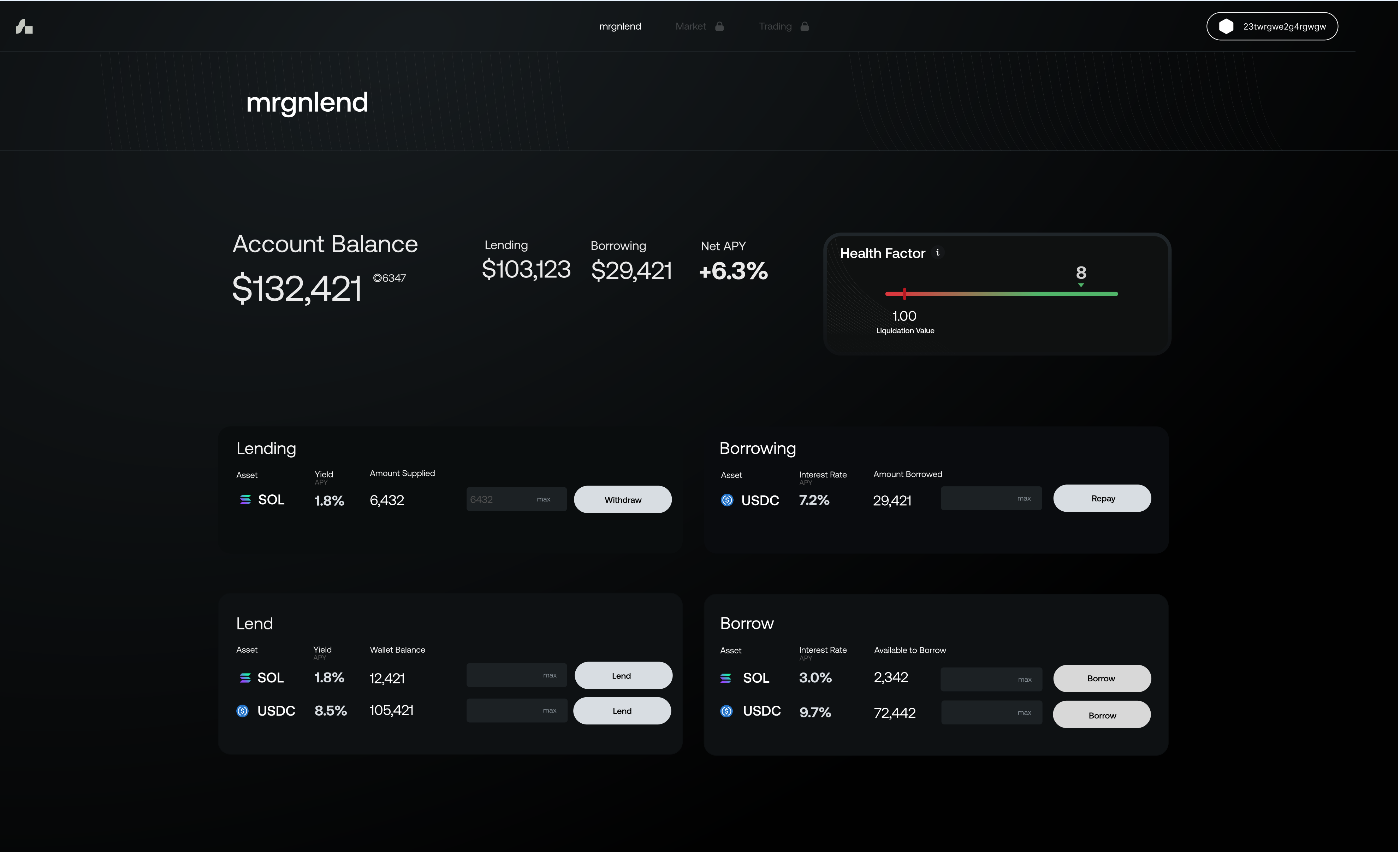
UX → UI



Concept 2
(lending)



Concept 2
(supplying)



Final
MVP



mrgnlend

Markets

Strategies

Trade

 23twrgwe2g4rgwgv

Account Balance

\$ 132,738.28

Borrowing

\$ 32,734

Supplying

\$ 100,123

Net APY

% 7.2

Health Factor 

7.4 

Liquidation



Lend

Borrow

 SOL

Current APY 3.2%



Current Price

\$ 12.423

Total Pool Deposits

3,203 SOL \$372,432

Wallet Balance

40.4824 SOL \$803.32

max

Lend

 USDC

Current APY 8.9%



Current Price

\$ 1.00

Total Pool Deposits

\$547,643 \$547,643

Wallet Balance

\$153,133 USDC \$151,133

max

Lend

 BONK

Current APY 18.9%



Current Price

\$.00000001425

Total Pool Deposits

\$547,643 \$547,643

Wallet Balance

2,123,734,432 \$15,123

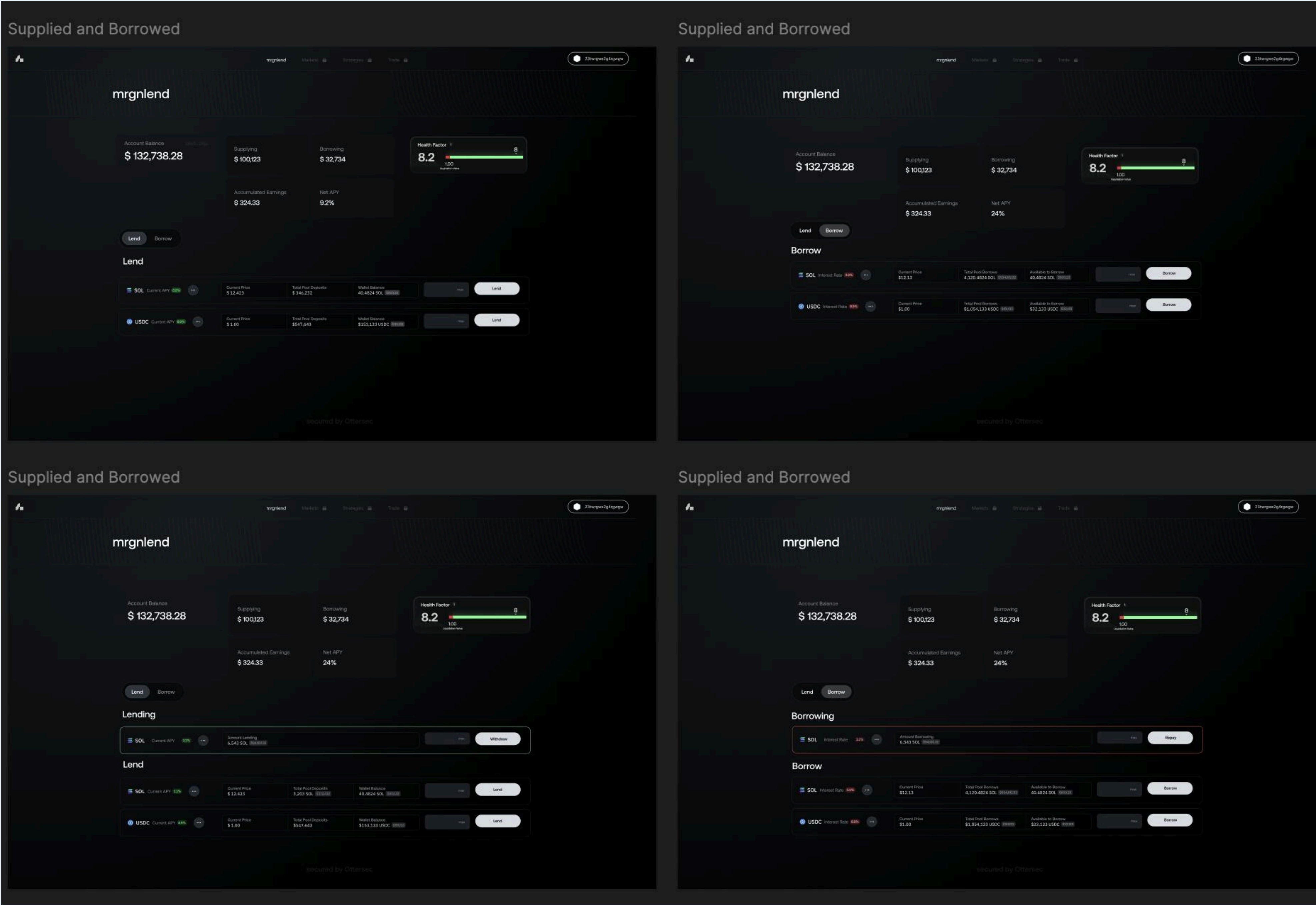
max

Lend

secured by Ottersec

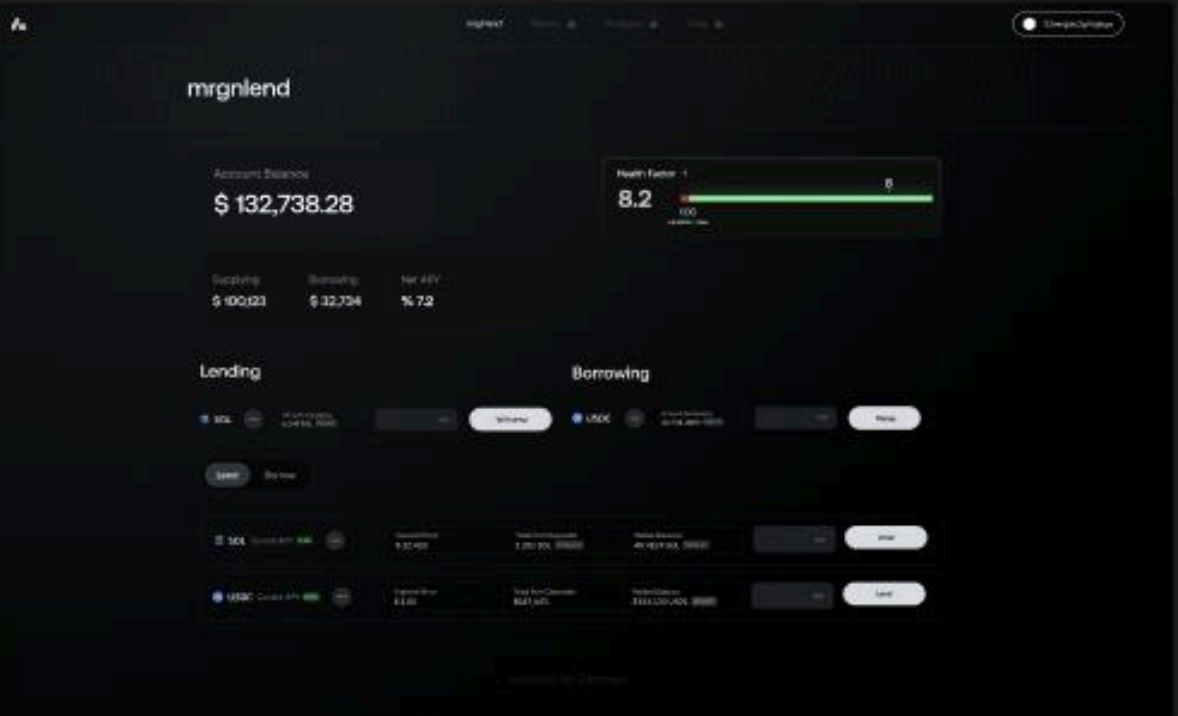
iteration 1

lend/borrow
toggle

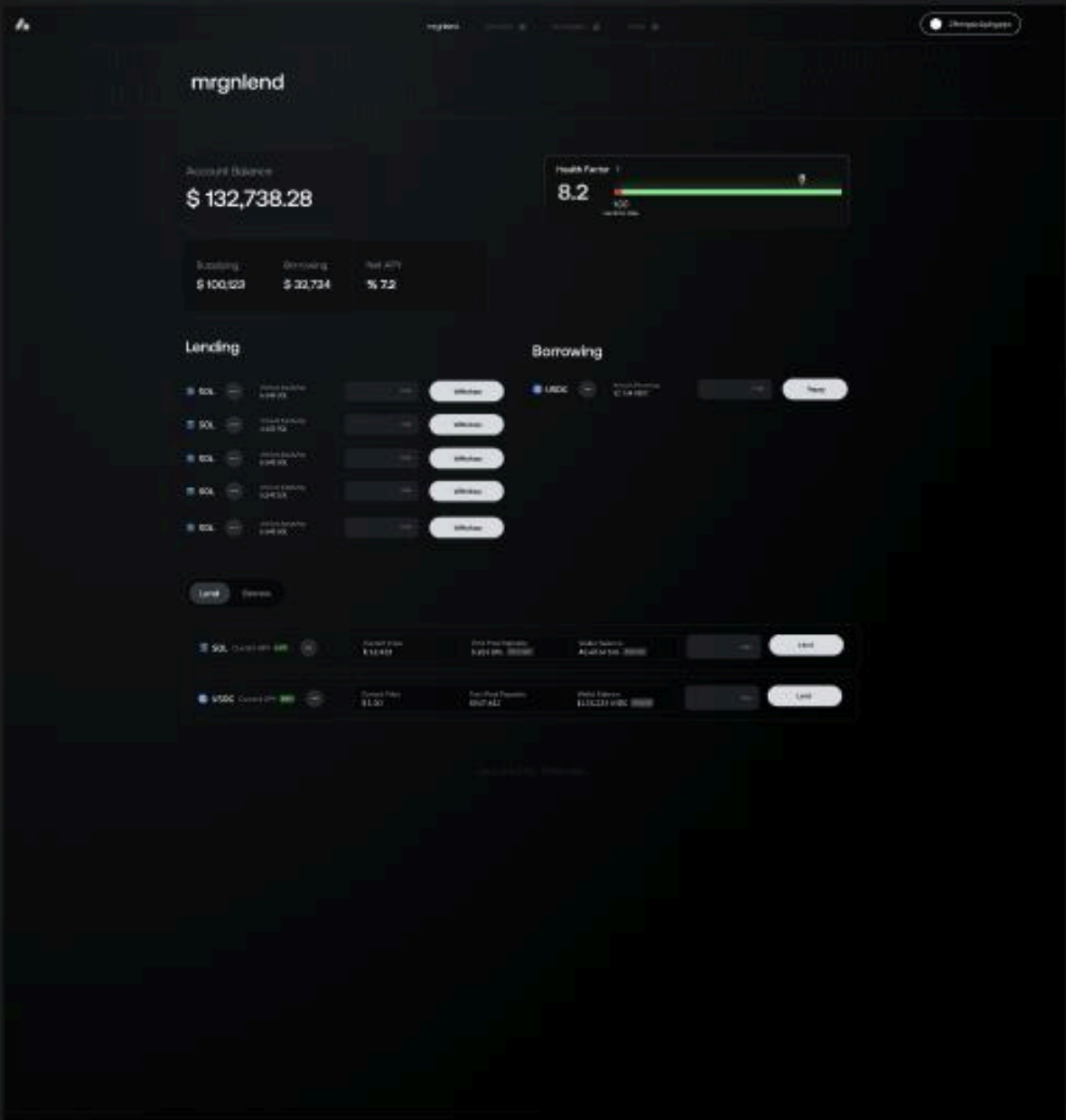


iteration 2

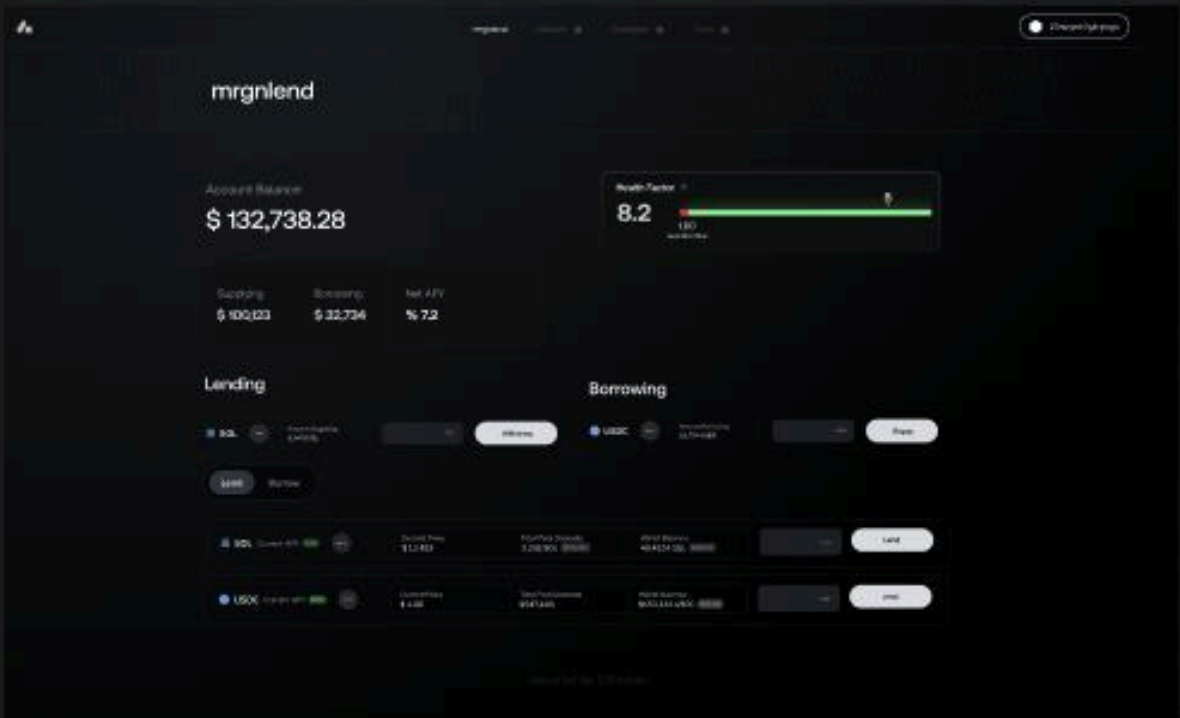
Supplied and Borrowed



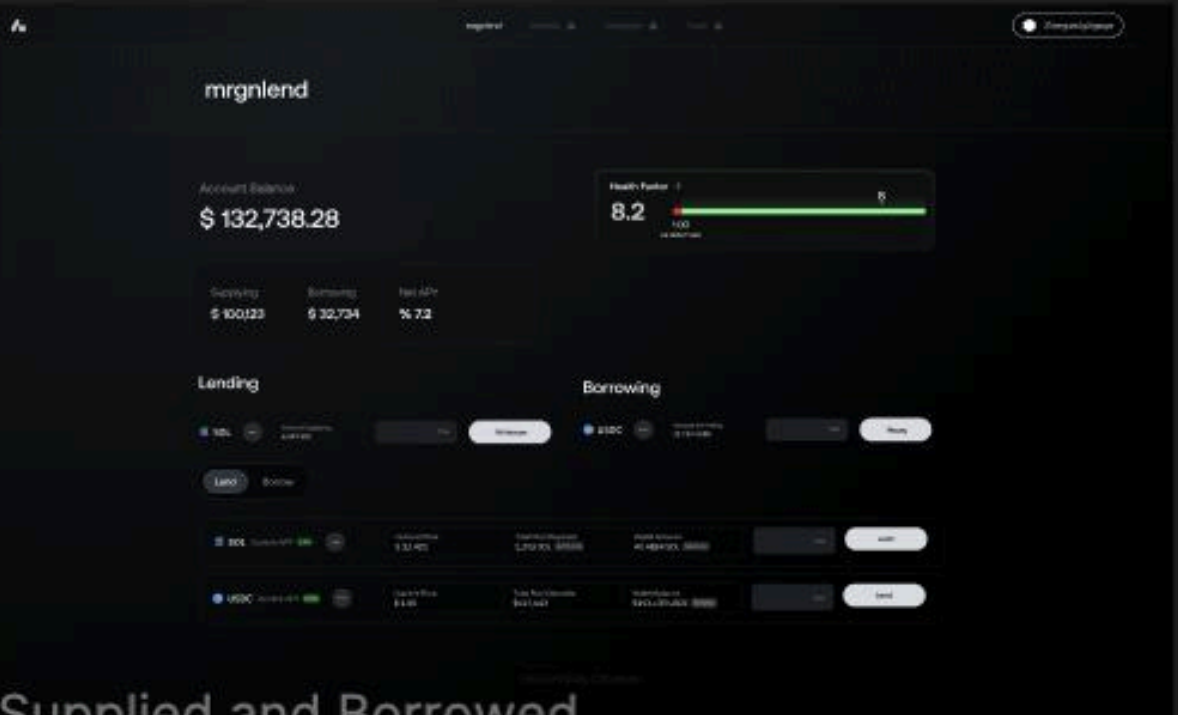
Supplied and Borrowed



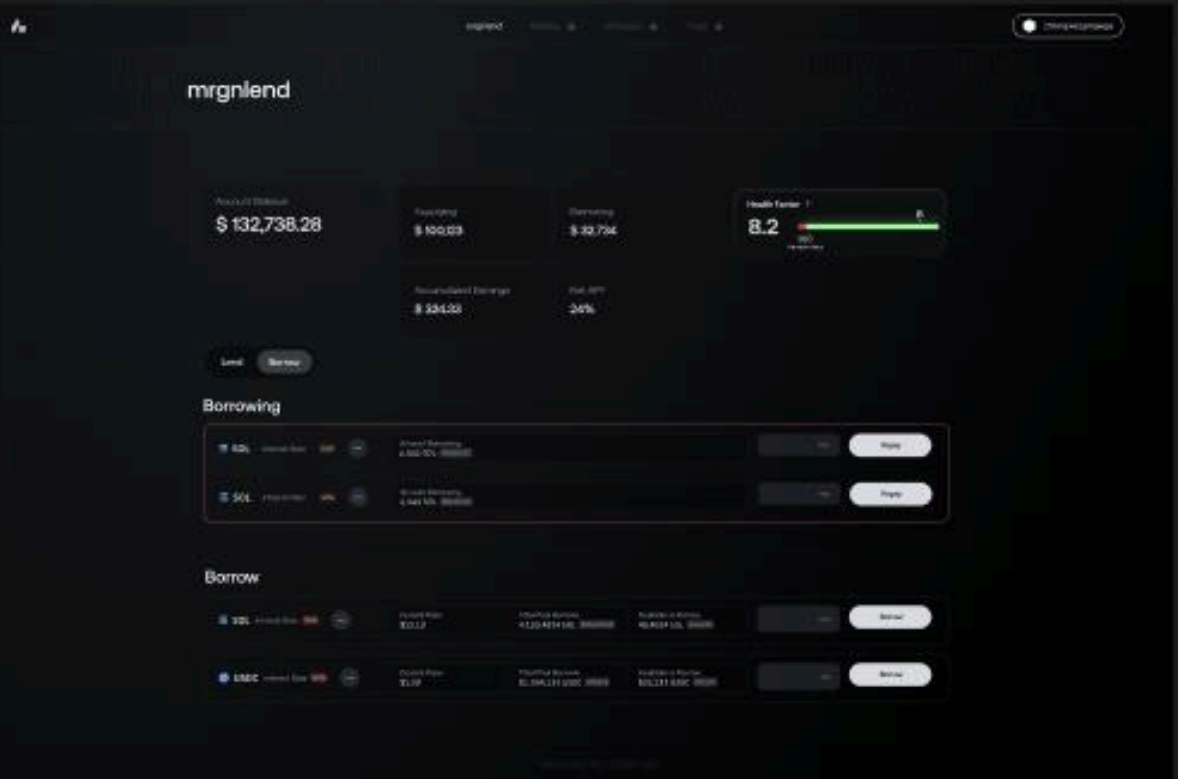
Supplied and Borrowed



Supplied and Borrowed

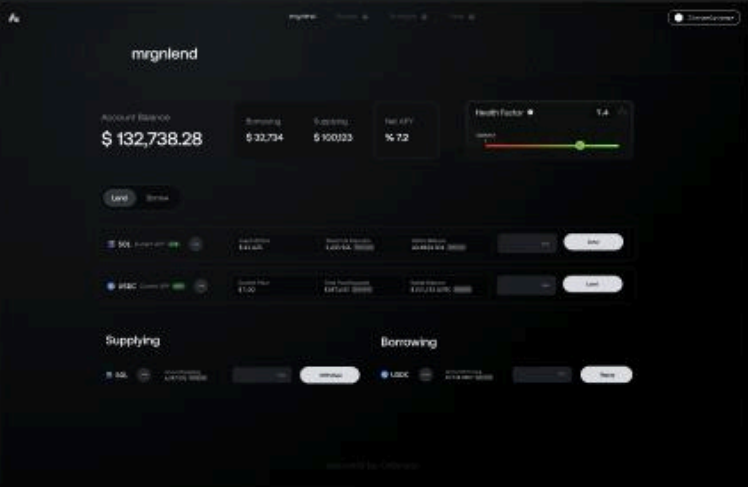


Supplied and Borrowed

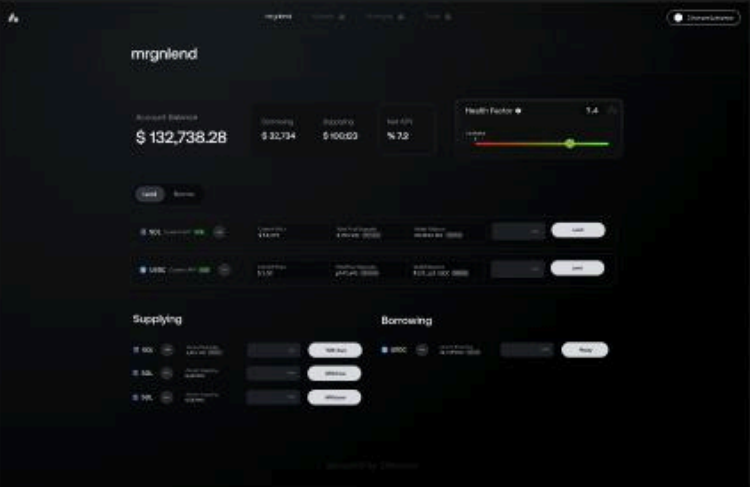


iteration 3

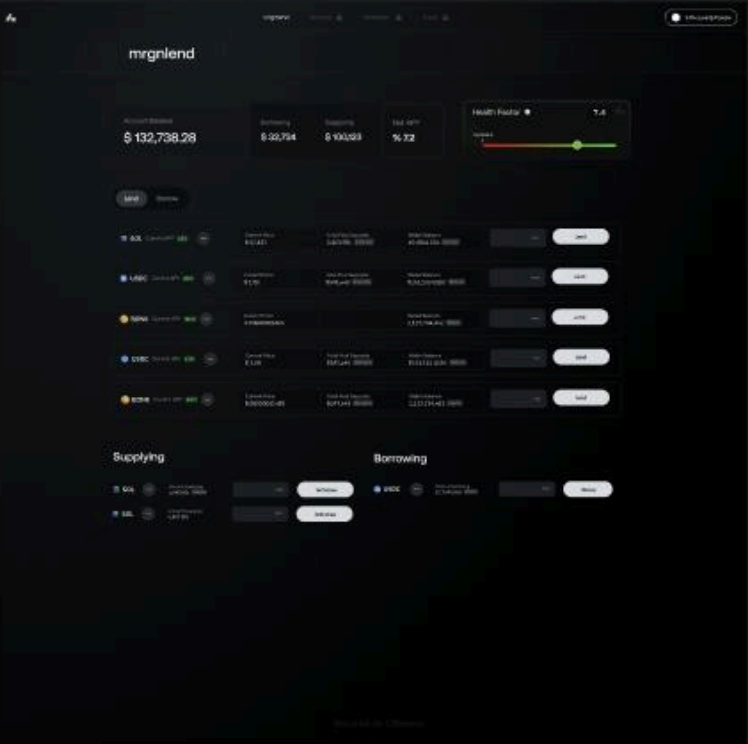
Lending and Borrowing



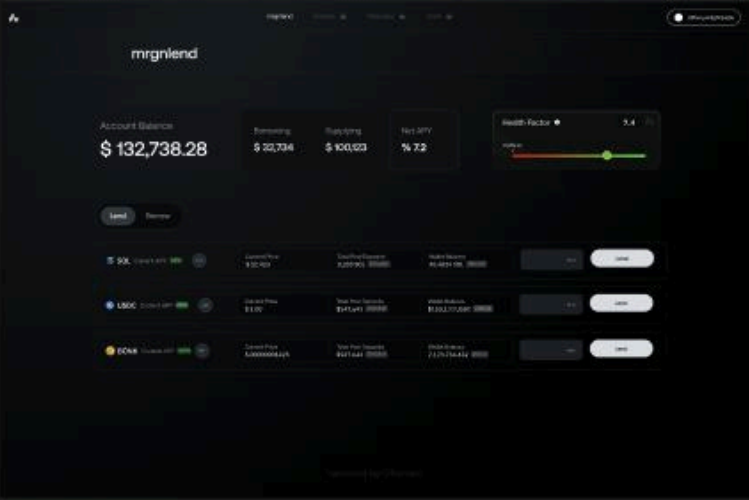
mrgnlend multiple lending



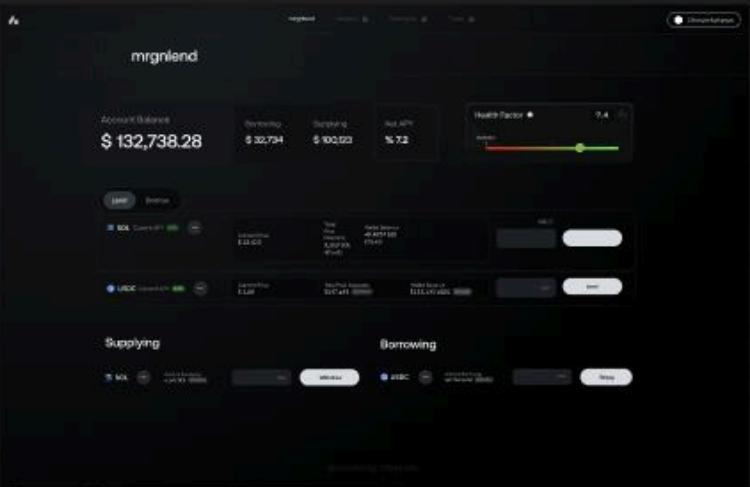
5 assets



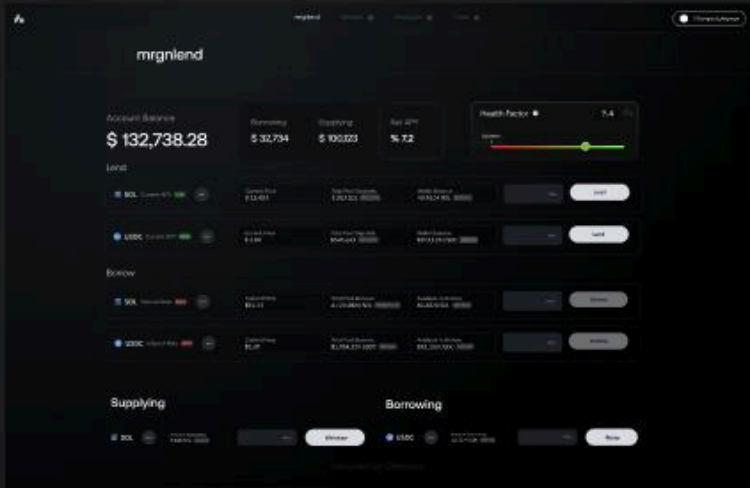
Bonk Asset



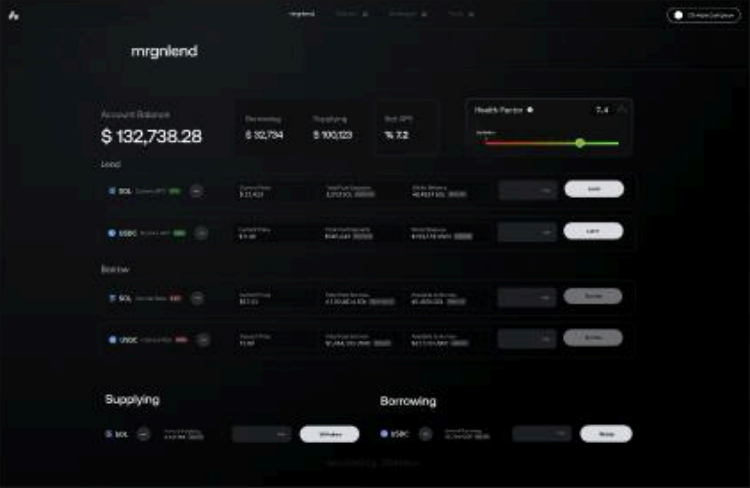
Lending and Borrowing



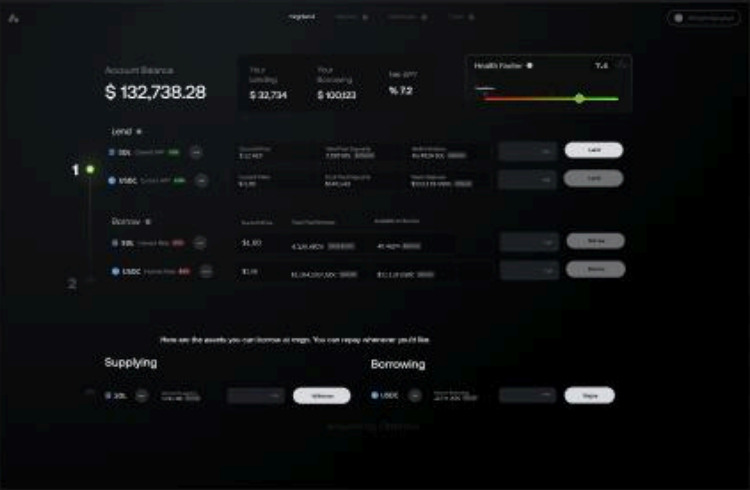
Lending and Borrowing



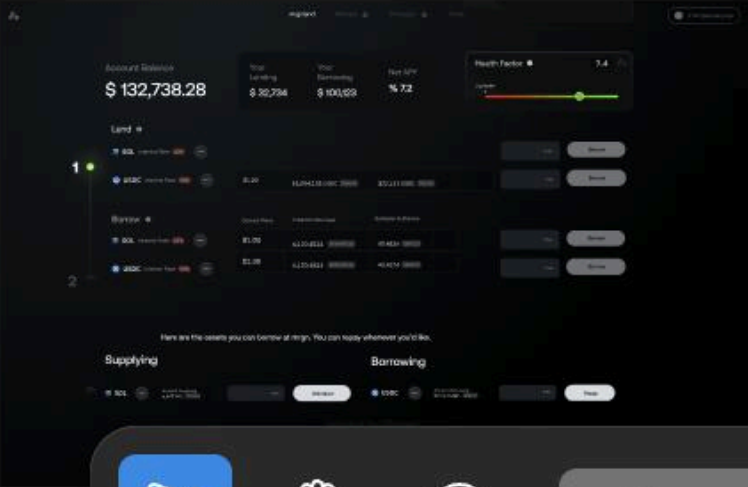
Lending and Borrowing



Lending and Borrowing



Lending and Borrowing



Account Balance
\$132,738.28

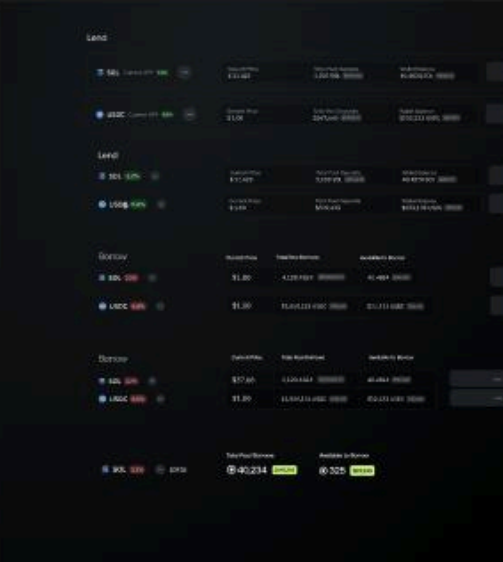
Total Lending
\$32,734

Total Borrowing
\$100,003

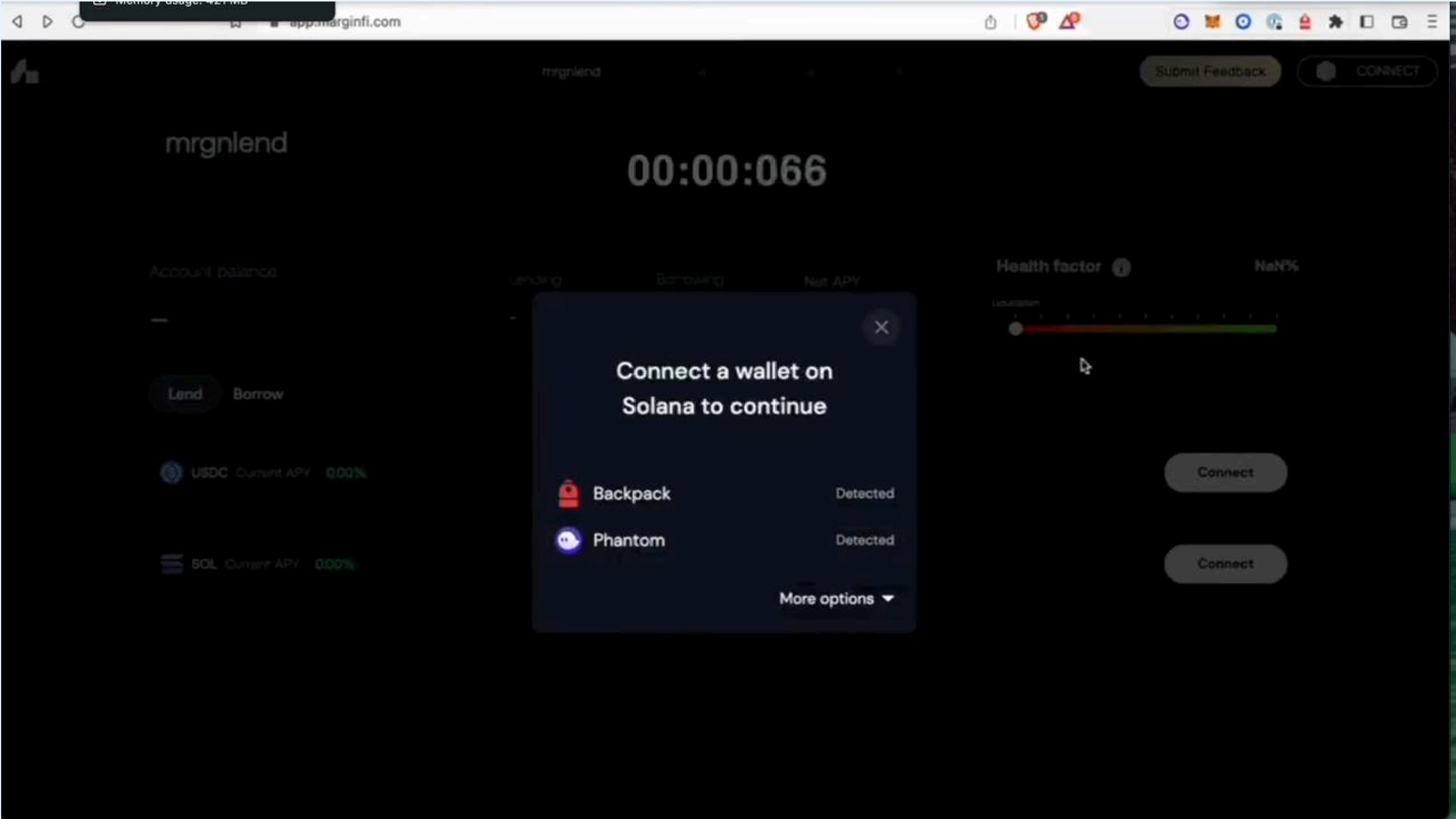
Net APY
% 7.2

Health Factor
1.4

Lending and Borrowing



Build Result: Supply to Borrow in ~12 seconds



iteration 2

mrgnlend

Market

Trading

23twrgwe2g4rgwgw

mrgnlend

Account Balance

\$ 132,738.28

Borrowing

\$ 32,734

Supplying

\$ 100,123

Net APY

% 7.2

Lend

Borrow

Health Factor

8.2

1.00

Liquidation Value

8

SOL

Current APY 3.2%

Current Price

\$ 12.423

Total Pool Deposits

3,203 SOL \$372,432

Wallet Balance

40.4824 SOL \$803.32

max

Lend

USDC

Current APY 8.9%

Current Price

\$ 1.00

Total Pool Deposits

\$547,643

Wallet Balance

\$153,133 USDC \$151,133

max

Lend

Lending

Borrowing

SOL

Amount Supplying

6,543 SOL \$103,124

max

Withdraw

USDC

Amount Borrowing

32,734 USDC \$32,734

max

Repay

Further UI ideas (not implemented)

real-time health-factor based on input

mrgnlend

Markets

Strategies

Trade

23twrgwe2g4rgwgw

Account Balance

\$132,738.28

Borrowing

\$ 32,734

Supplying

\$ 100,123

Net APY

% 7.2

Health Factor

Liquidation

CURRENT

74%

Welcome to Solana Defi v3.

Earn up to 312% APY with Superstake.

Lockup

Lend

Borrow

Superstake

Lockup offers higher APY for specific time periods. Earn up to 3x normal APY.

	Wallet Balance	Total Deposits	Lockup Period	Capacity	APY	
SOL 44.15 ...	421 \$643,243	◎ 40,234 \$643,243	2 Weeks	234,523	+6.7%	325 max Lend
USDC 1.00 ...	421 \$643,243	◎ 40,234 \$643,243	2 Weeks	234,523	+6.7%	max Lend

	Your Lockup	Time Remaining	Earned	
SOL 44.15 ...	421 \$643,243	1 Week 7 Minutes	+2.2 SOL	325 max Claim
USDC 1.00 ...	5,232 \$643,243	2 Months	+3.5%	max Claim

Final UI Highlights

- Health factor meter with color-coded risk zones
- Borrow/Supply toggles per token
- Net APY summary at account level
- Wallet integration with real-time TVL, LTV, utilization

Proof of Product

- TVL grew to \$800M in under 12 months
- Users doubled within 2 weeks of points rollout – **platform scaled**
- Fastest-growing Solana protocol in DeFi, passing Solend.

My Role

- UX strategy + user research + designing around a goal with product managers and engineers
- Wireframes → interaction logic → full UX & UI
- Collaboration with Solana engineers & power users
- All visuals designed and built by me (with component library by Airfoil)

Thanks!

clee@anchorpillar.com

Connor Lee • April, 2025