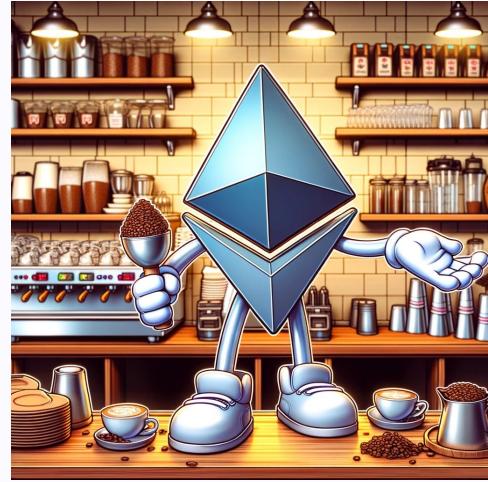Gauntlet

Caffeinated Yield

with LRTs

Walter Li
2024-02-25, EL Hacker House

Outline

1. What are LRTs?
   a. How has the LRT market developed?

2. How have new markets evolved to trade LRTs?
   a. How do these dynamics affect LRT risk profile?

3. Looking forward to AVS launches + Takeaways
   a. And other considerations

What are Liquid Restaking Tokens (LRTs)?

LRT market sizing

LRTs offer users liquid method to participate in restaking initiatives. These tokens represent a claim to the underlying ETH + accrued rewards from securing both L1 and secondary services (AVS), and offer greater flexibility to work with Eigenlayer deposit requirements
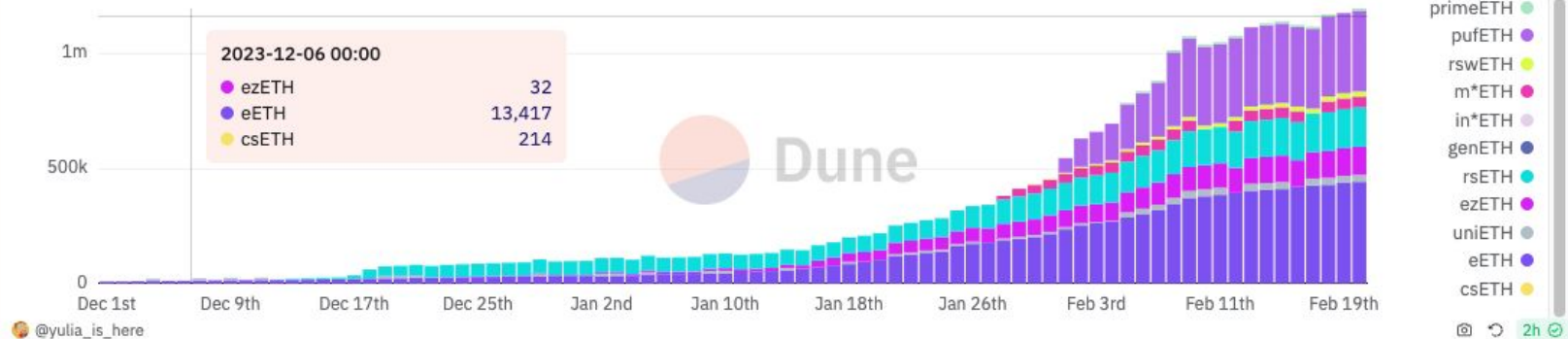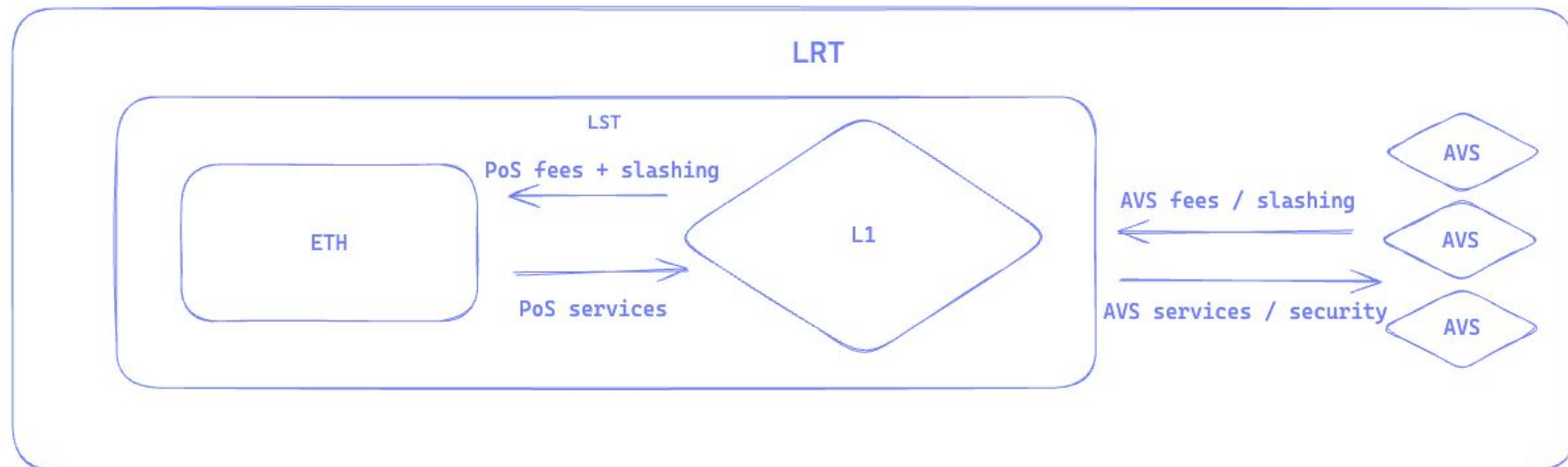
LRT uniqueness

LRTs accrue both L1 fees and AVS fees. Currently, they also accrue Eigenlayer points.

- Results in **greater variability in yield accrual, compared to vanilla LSTs**

Newer Markets for LRTs

New LRT Markets - Whalesmarket

Marketplace to exchange points
- Limit buy / sell
- Market buy / sell

Best bid

EigenLayer #1285
PARTIAL FILL   0%

OFFER   FOR
14.75K pts 🅑   →   1998 💲
$0.1354 /Point $1998

21 hours ago   Sell

Best ask

EigenLayer #1332
PARTIAL FILL   0%

OFFER   FOR
18.88K pts 🅑   →   1 ◆
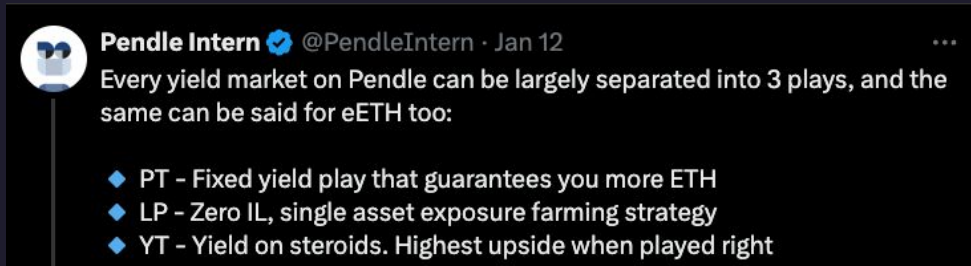$0.1591 /Point $3003.8

3 hours ago   Buy

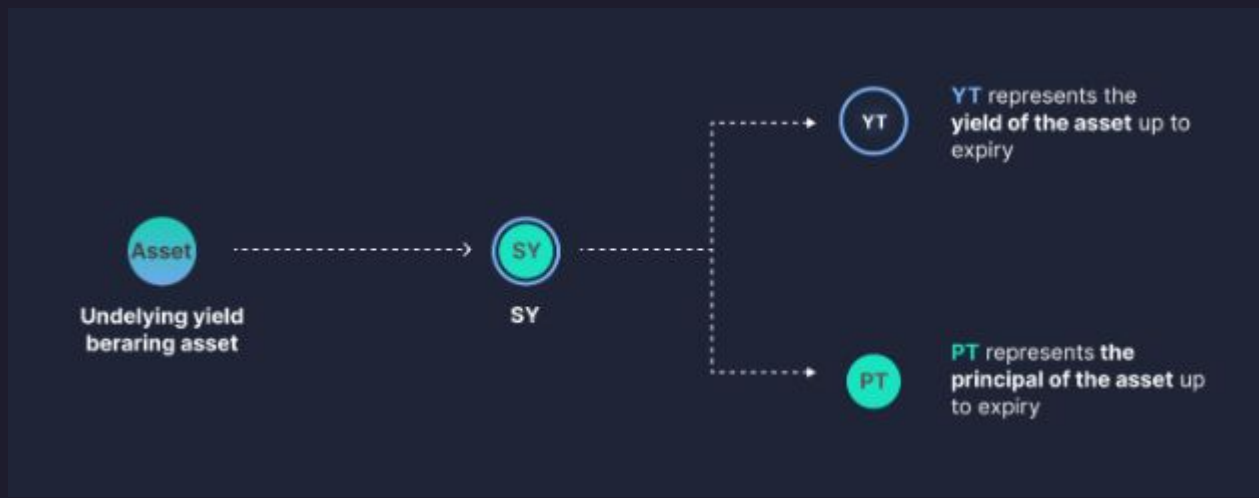# New LRT Markets - Pendle

Split underlying LRT into
- "principal" component
- "yield" component that captures all the L1 fees + AVS fees

Pendle Intern ✓ @PendleIntern · Jan 12
Every yield market on Pendle can be largely separated into 3 plays, and the same can be said for eETH too:

◆ PT - Fixed yield play that guarantees you more ETH
◆ LP - Zero IL, single asset exposure farming strategy
◆ YT - Yield on steroids. Highest upside when played right

YT represents the **yield of the asset** up to expiry

Asset
Undelying yield beraring asset

SY
SY

PT represents **the principal of the asset** up to expiry

New LRT Markets

YT represents the **yield of the asset** up to expiry

PT represents the **principal of the asset** up to expiry

Asset — Undelying yield beraring asset → SY → YT / PT
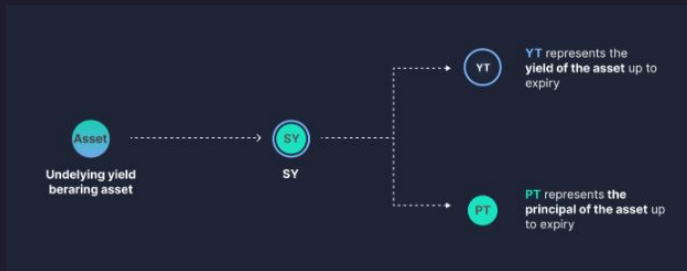
Input	Balance: 0
eETH	1 — $3,007.28 — Max

Amount exceeds your available balance

⇅

Output

YT eETH	13.7102 — $2,999.33 (-0.26%)

Input	Balance: 0
eETH	1 — $3,007.28 — Max

Amount exceeds your available balance

⇅

Output

PT eETH	1.0784 — $3,007.19 (0%)

| Name	Maturity	Underlying APY Price	Implied APY	Long Yield APY YT Price		Fixed APY PT Price	
ezETH Renzo	**24 Apr 2024** 63 days	3.129% $3,014.49	35.54%	YT	-100% $156.46	PT	35.54% $2,858.04
rsETH Kelp	**26 Jun 2024** 126 days	3.097% $3,014.49	25.12%	YT	-99.7% $226.07	PT	25.12% $2,788.43
eETH Ether.fi	**26 Jun 2024** 126 days	2.856% $3,012.21	24.15%	YT	-99.7% $218.34	PT	24.15% $2,793.87

LRT implied yield with Whalesmarket volume
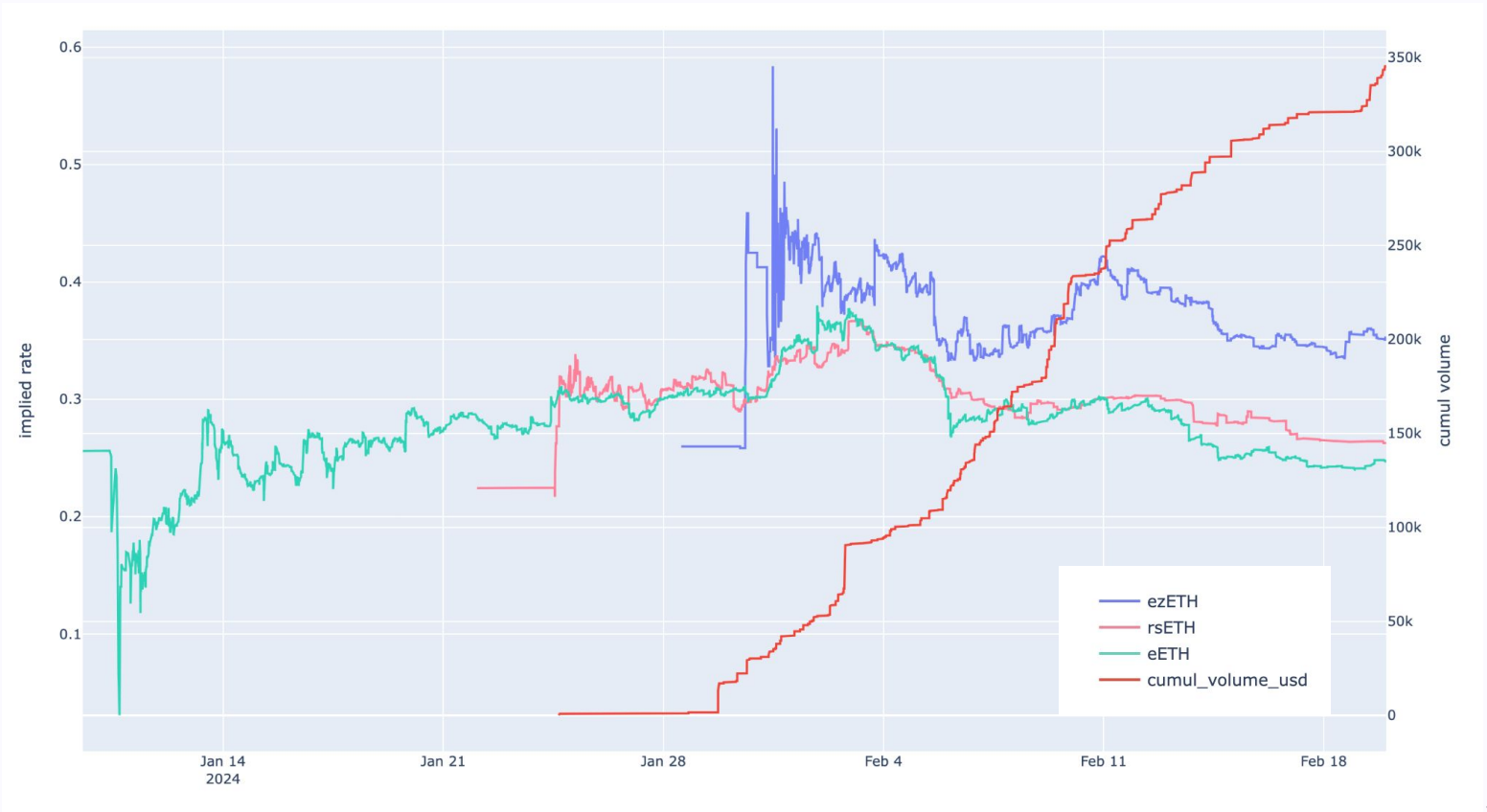
How are these YT / PT swaps facilitated?

How are these swaps into the YT facilitated? If YT/PT are only created when the underlying LRT are broken down into its components?
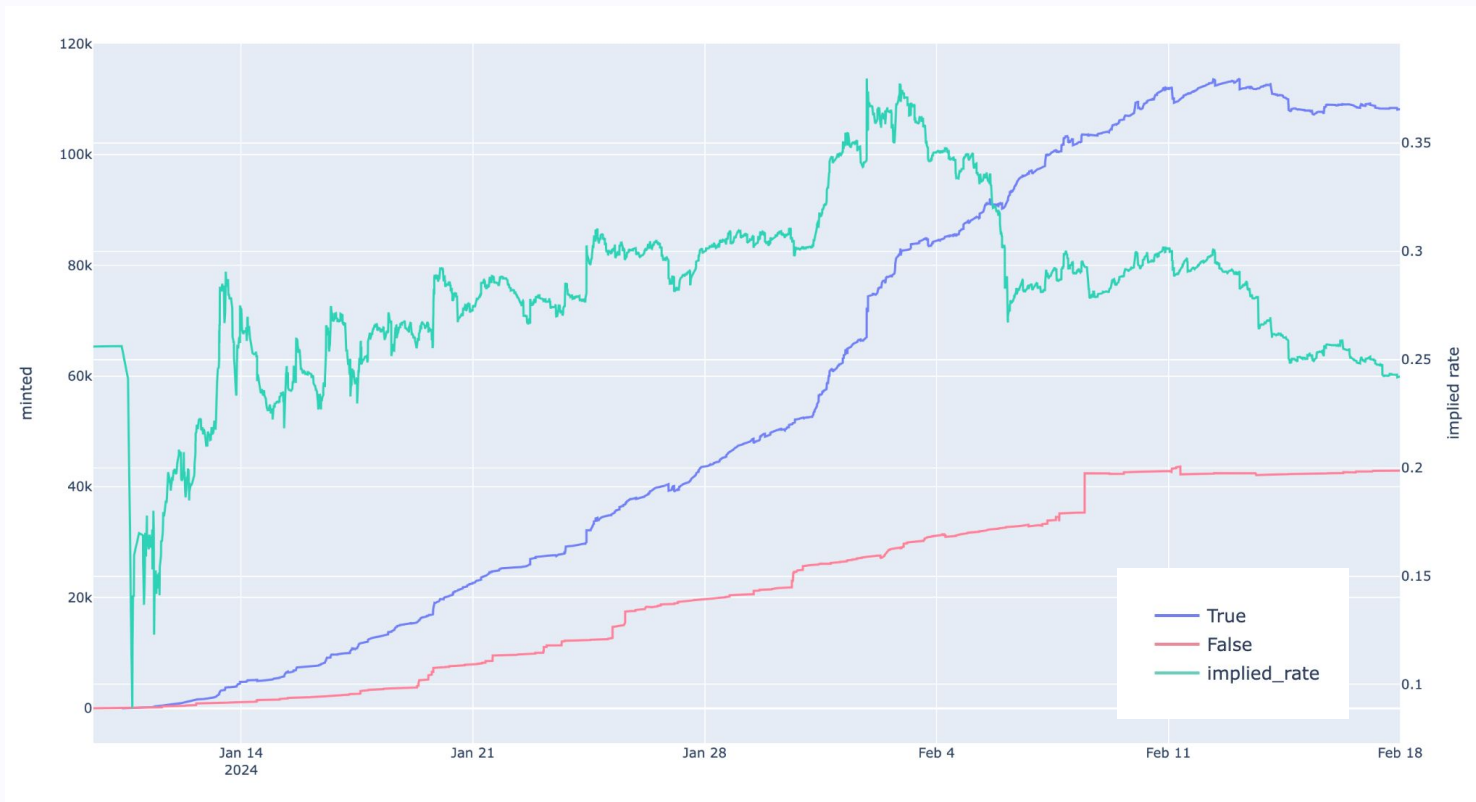
Suppose I want to use 1 eETH to buy 10 YT. Then the LP pool takes 9 eETH and mints 9 YT and 9 PT. The 9 YT is sent to me and 9 PT is sent back to the LP pool.
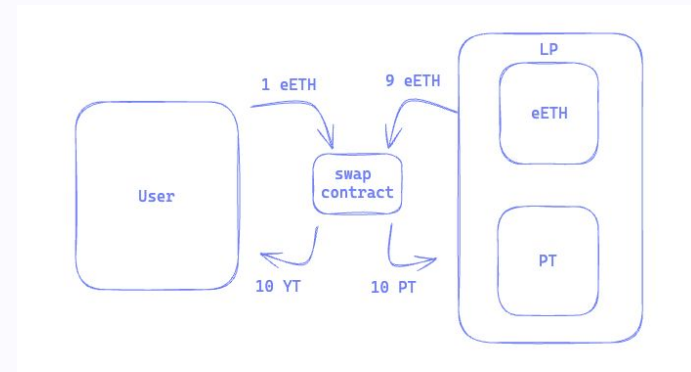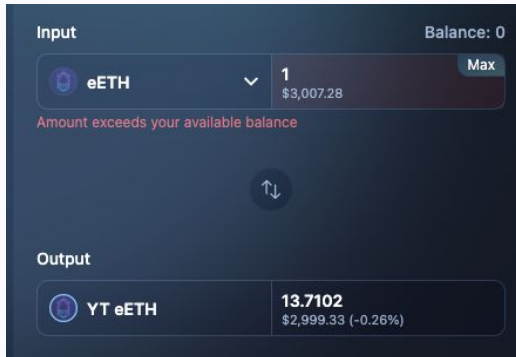
How do these dynamics affect the existing risk profile for LRTs?

Was the YT created from a swap?

Majority of YT is minted when traders swap underlying for YT, rather than minting YT from underlying

Implied Rate vs DEX Sell Pressure

Some correlation between Pendle implied weETH rate and cumulative weETH sold on external DEX

→ lower expected yields can cause additional LRT sell flow

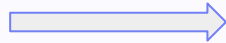# Implied Rate vs DEX Sell Pressure

Decreases in implied rate are more heavily influenced by traders purchasing PT

But sudden decrease in implied rate can be associated with larger LRT sells!

LRT Risk manifestation

One hypothesis can be that magnitude of slippage is function on yield premia, time trading at premia, total YT minted

Eigenlayer maturity and AVS launch gives variability to yields

- Right now no AVS is live, real yields outside of points is only from L1
- These types of shocks from YT sells may become more pronounced

The key element is whether YT selloff can motivate an LRT depeg

- Accentuate impacts of slashing that occured
- LRT depeg can cause redemptions which can affect AVS security

Looking forward to AVS launches

Looking forward to AVS launches

Several considerations from the LRT side to keep in mind to lower risk profile

- How to perform AVS selection?
- How to optimize risk adjusted yield and mitigate excess slashing risks?

Make bounds on fee conditions for the LRT

Give probabilistic guarantees for anti-slashing

Looking forward to AVS launches

How we consider the interplay of the fundamental restaking risk vectors with evolving market conditions will be important

- What happens when we add on broad based market variance?
- How can LRTs become integrated across the defi ecosystem?

Gauntlet

Thanks! @0xringwraith10