

# **Shadow Banking:**

Evolution, Accounting, Context

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## Shadow banking and money:

The types of assets and the types of backstops behind money claims yield four basic categories of money.

Purely public, hybrid and purely private money claims.

Cash vs. cash equivalents.

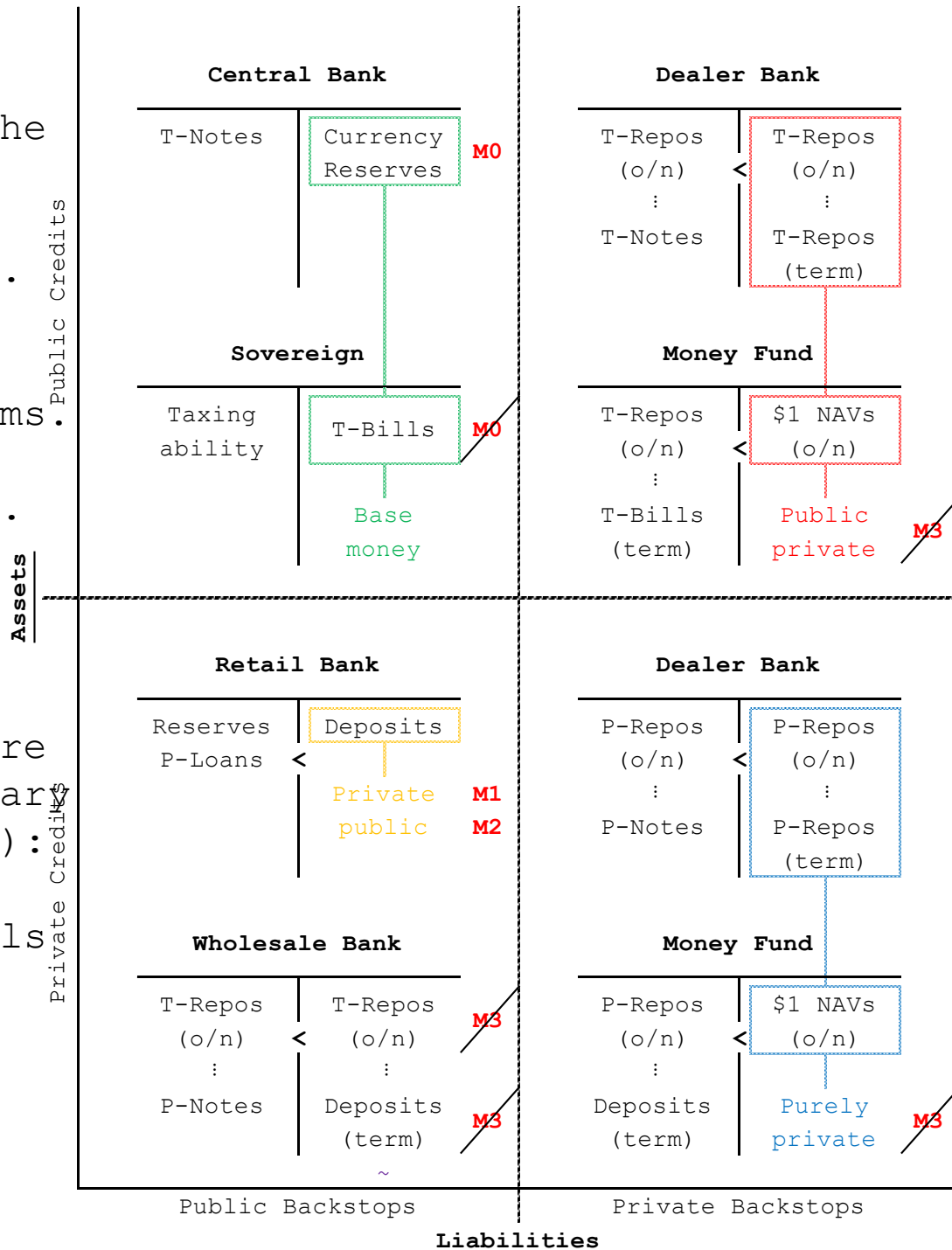
Traditional money supply vs. shadow money supply.

Monetary aggregates measure only the tip of the monetary iceberg (see Pozsar, 2011):

M0 does not include T-Bills despite their money-ness.

M3 discontinued in 2005.

Source: Pozsar (2013)



[1] Purely public money (M0, or base money):

Ability to tax and money creation at will

[2] Private-public money (M1 and M2):

Explicit liquidity puts from the Fed, and explicit credit puts from the sovereign (i.e. the FDIC) on all bank liabilities.

[3] Public-private money (M3):

Implicit official liquidity and credit puts via Treasury collateral involved, but no direct puts on the liability side.

[4] Purely private money (M3):

No official puts, not even implicitly via the collateral involved. Peripheral money

# Cash pools and shadow money:

[1] Cash pools do not have access to M0, M1 or M2.

⇒ For cash pools, money begins where M2 ends.

[2] Cash pools can't get enough T-Bills. This is the "paradox of safe investing" (see Pozsar, 2011 and 2012).

⇒ This drives demand for quasi T-bills (credit-safe, short-term assets) issued by shadow banks.

[3] Cash pools' access is limited to shadow banks, and

[4] un-insured bank deposits

⇒ Cash pools are constrained to holding public-private and private shadow monies.

Public Credits

Assets

Private Credits

[1] **Central Bank**

T-Notes	<del>Currency Reserves</del>	M0
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[2] **Sovereign (guaranteed)**

Taxing ability	T-Bills (o/n)	S0
	T-Bills (term)	S0

[1] **Retail Bank (insured)**

Reserves P-Loans	<del>Deposits (o/n)</del>	M1
	<del>Deposits (term)</del>	M2

[4] **Wholesale Bank (un-ins./un-sec./un-div.)**

T-Repos (o/n)	T-Repos (o/n)	S1 <sub>s</sub>
P-Notes	Deposits (term)	S2 <sub>u</sub>

[3] **Dealer Bank (secured)**

T-Repos (o/n)	T-Repos (o/n)	S1 <sub>T</sub>
T-Notes	T-Repos (term)	S2 <sub>T</sub>

[3] **Money Fund (secured/guaranteed)**

T-Repos (o/n)	\$1 NAVs (o/n)	S1 <sub>T</sub>
T-Bills (term)		

[3] **Dealer Bank (secured)**

P-Repos (o/n)	P-Repos (o/n)	S1 <sub>P</sub>
P-Notes	P-Repos (term)	S2 <sub>P</sub>

[3] **Money Fund (secured/diversified)**

P-Repos (o/n)	\$1 NAVs (o/n)	S1 <sub>P</sub>
Deposits (term)		

**Cash Pool (corporate)**

"Cash" (o/n)	:
"Cash" (term)	Equity (permanent)

**Cash Pool (real money)**

"Cash" (o/n)	Equity (temporary)
"Cash" (term)	

**Cash Pool (seclenders)**

"Cash" (o/n)	Cash (collateral)
"Cash" (term)	

**Cash Pool (levered money)**

"Cash" (o/n)	:
"Cash" (term)	Equity (temporary)

Public Backstops

Private Backstops

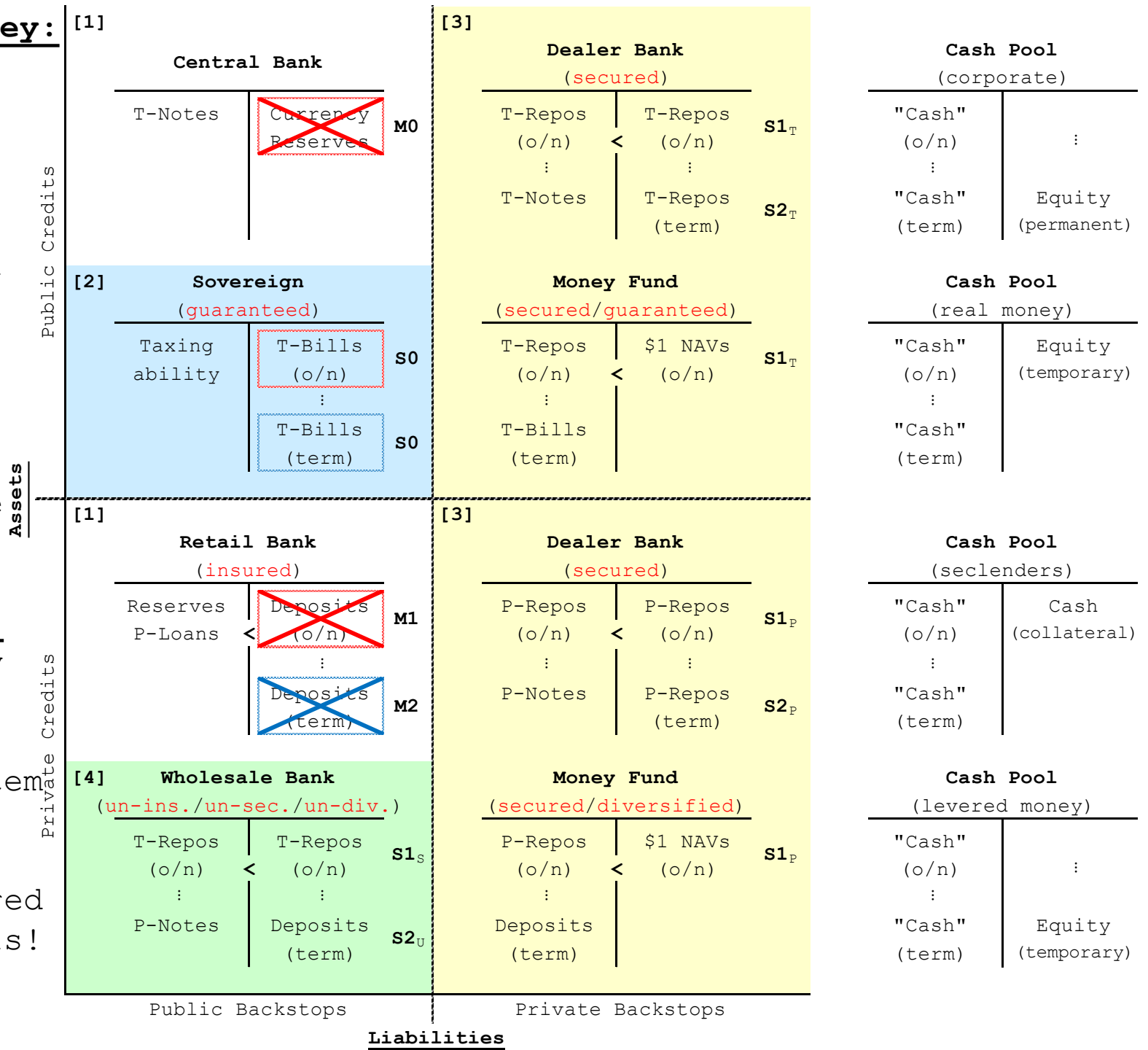
Liabilities

# Cash pools and shadow money:

⇒ Cash pools always face some counterparty risk in a "cash" portfolio.

⇒ How effective is retail deposit insurance and LoLR access to retail and wholesale banks only when cash pools prefer to invest their cash balances elsewhere for reasons of safety?

⇒ **Ineffective safety net:** a system funded by many uninformed, small and insured depositors is more stable than a system funded by a relatively few very well informed, very large and un-insured institutional cash pools!



# Dealers' buy-side customers:

Risk portfolio managers need **leverage**, **shorting** and **derivative exposures**.

Cash plays a role in each.

## Leverage:

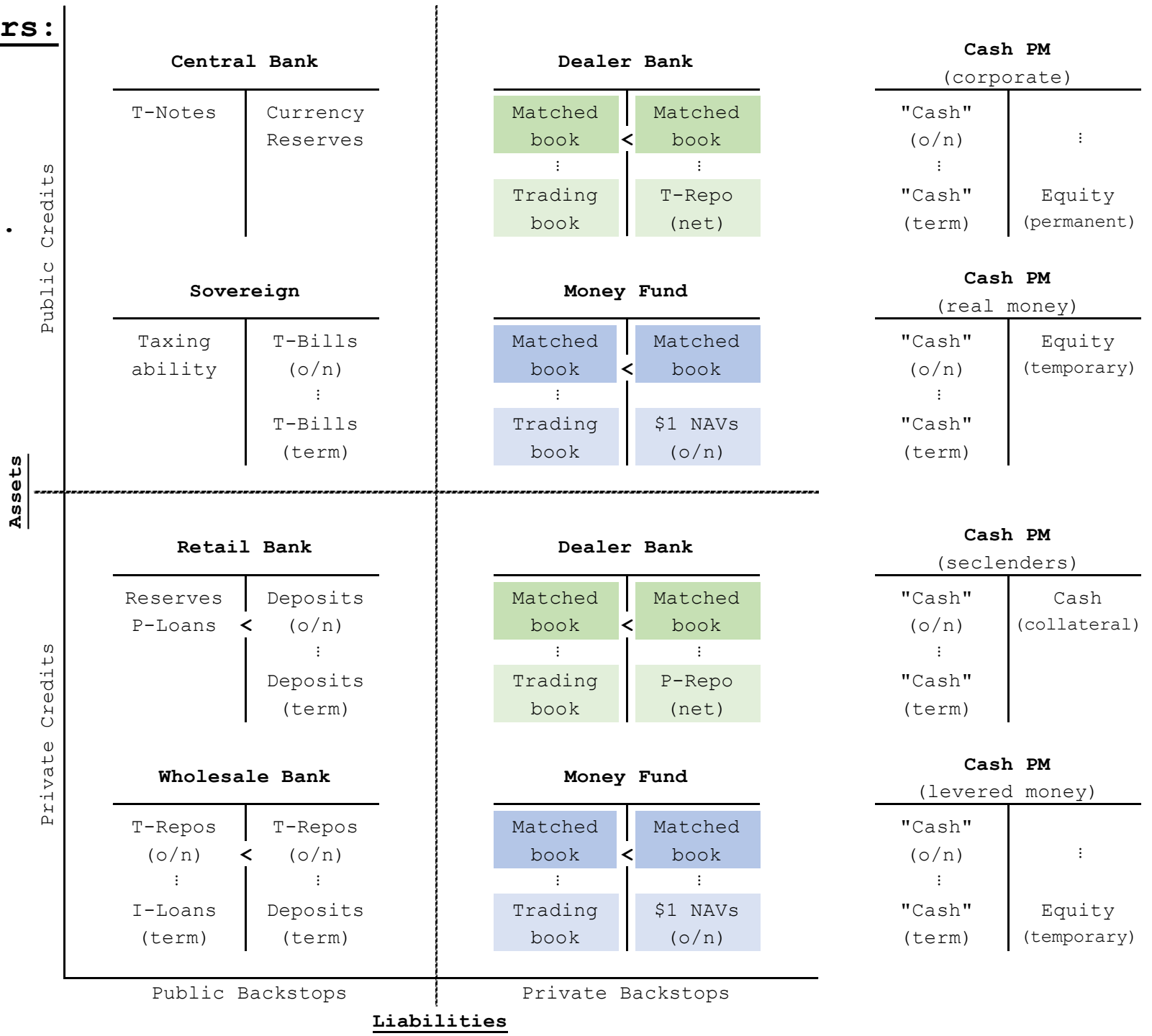
Risk PM
(cash for funding)

## Shorting:

Risk PM
(cash as collateral)

## Derivatives:

Risk PM
(cash for margining)



## The simplified dealer eco-system:

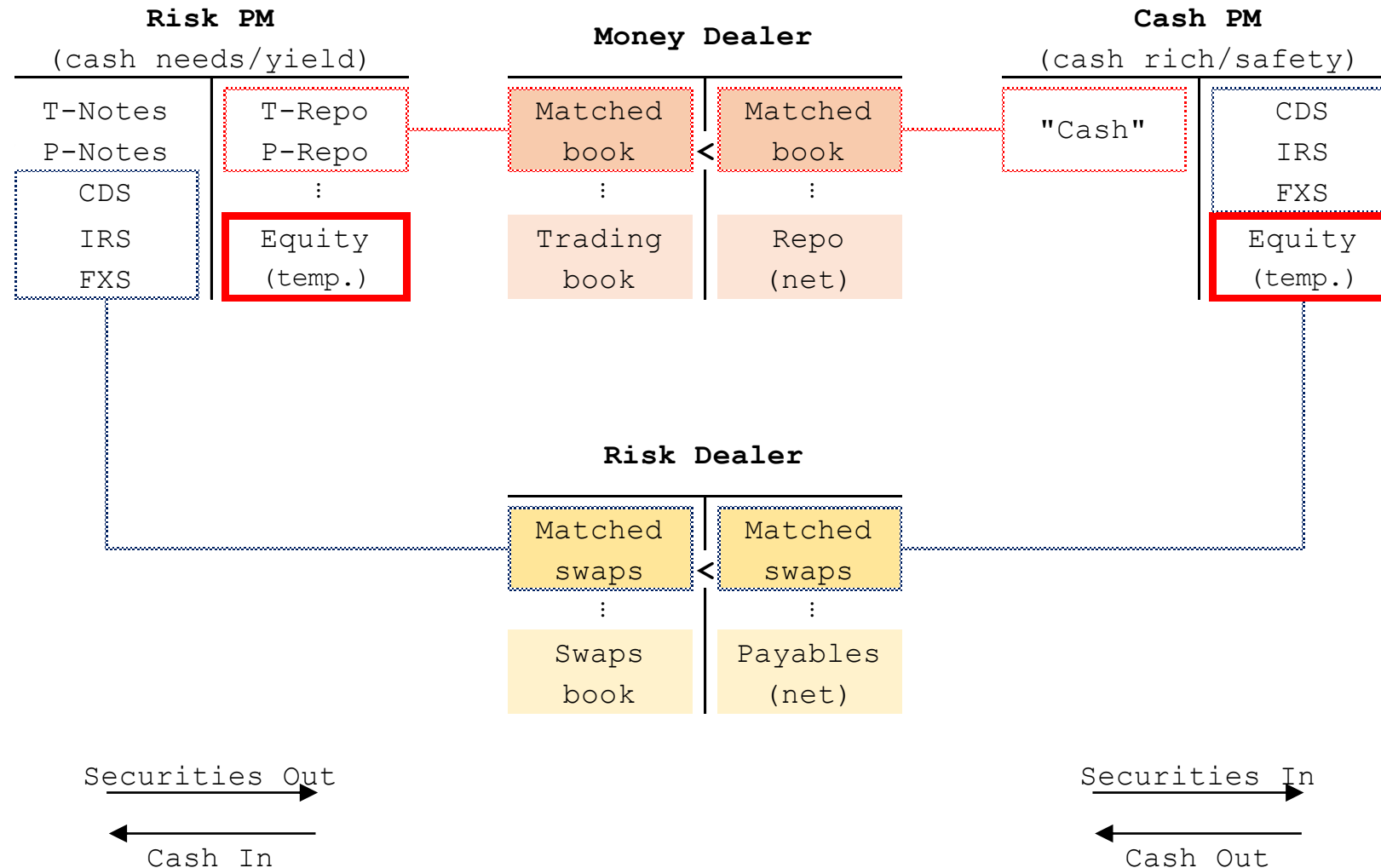
- [1] Cash and risk PMs, money and risk dealers.
- [2] Matched book and net long/short positions.

<b>Risk PM</b> (cash needs/yield)		<b>Money Dealer</b>		<b>Cash PM</b> (cash rich/safety)	
T-Notes	T-Repo	Matched book	<	Matched book	CDS
P-Notes	P-Repo				IRS
CDS	:				FXS
IRS	Equity	Trading book		Repo (net)	Equity (temporary)
FXS	(temporary)				

<b>Risk Dealer</b>	
Matched swaps	Matched swaps
:	:
Swaps book	Payables (net)

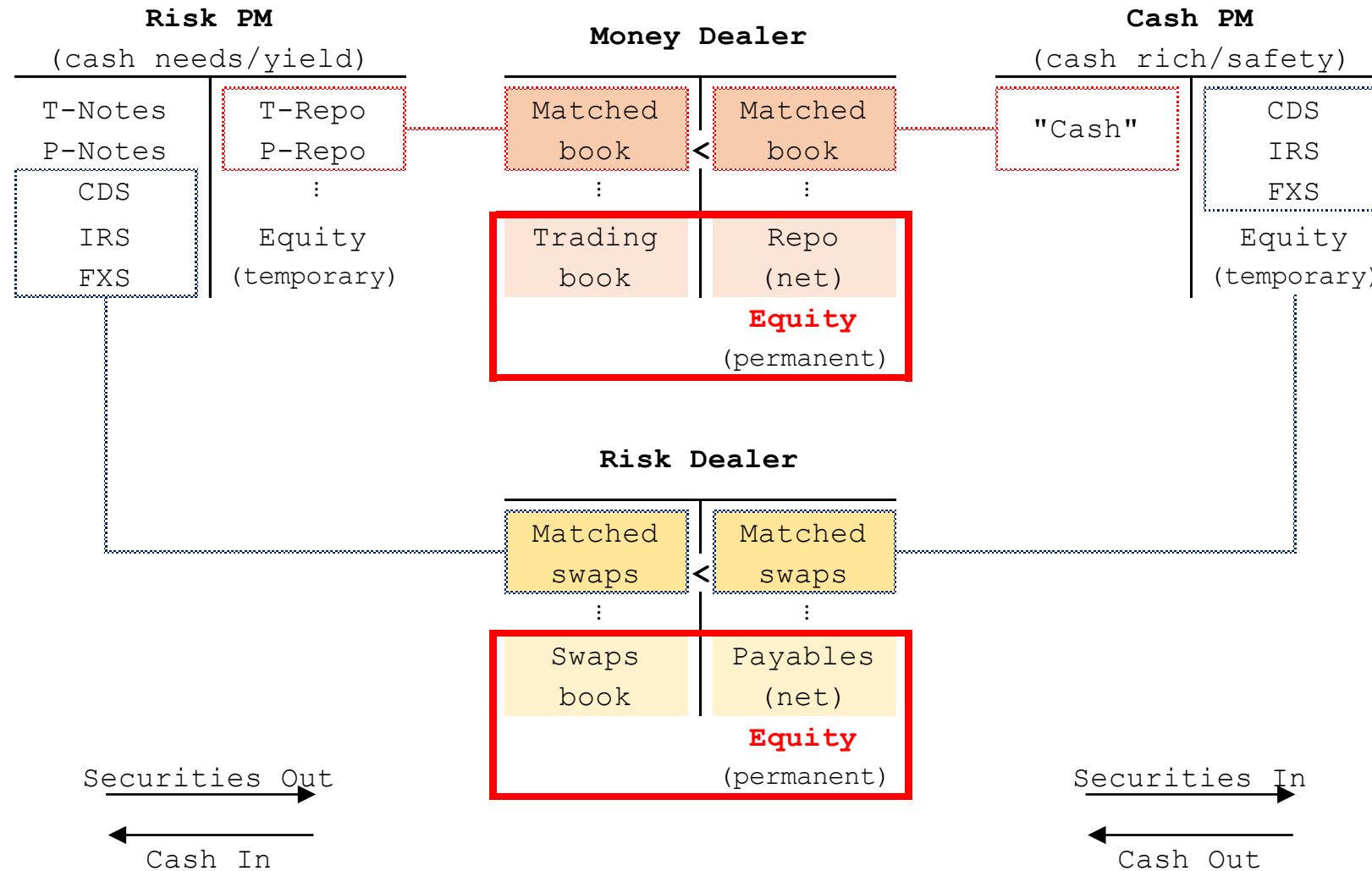
## Risk intermediation:

PM's equity is temporary equity. Temporary equity is an asset allocation decision. Dealers intermediate temporary equity b/w winning and losing counterparts to a bet.



## Risk intermediation:

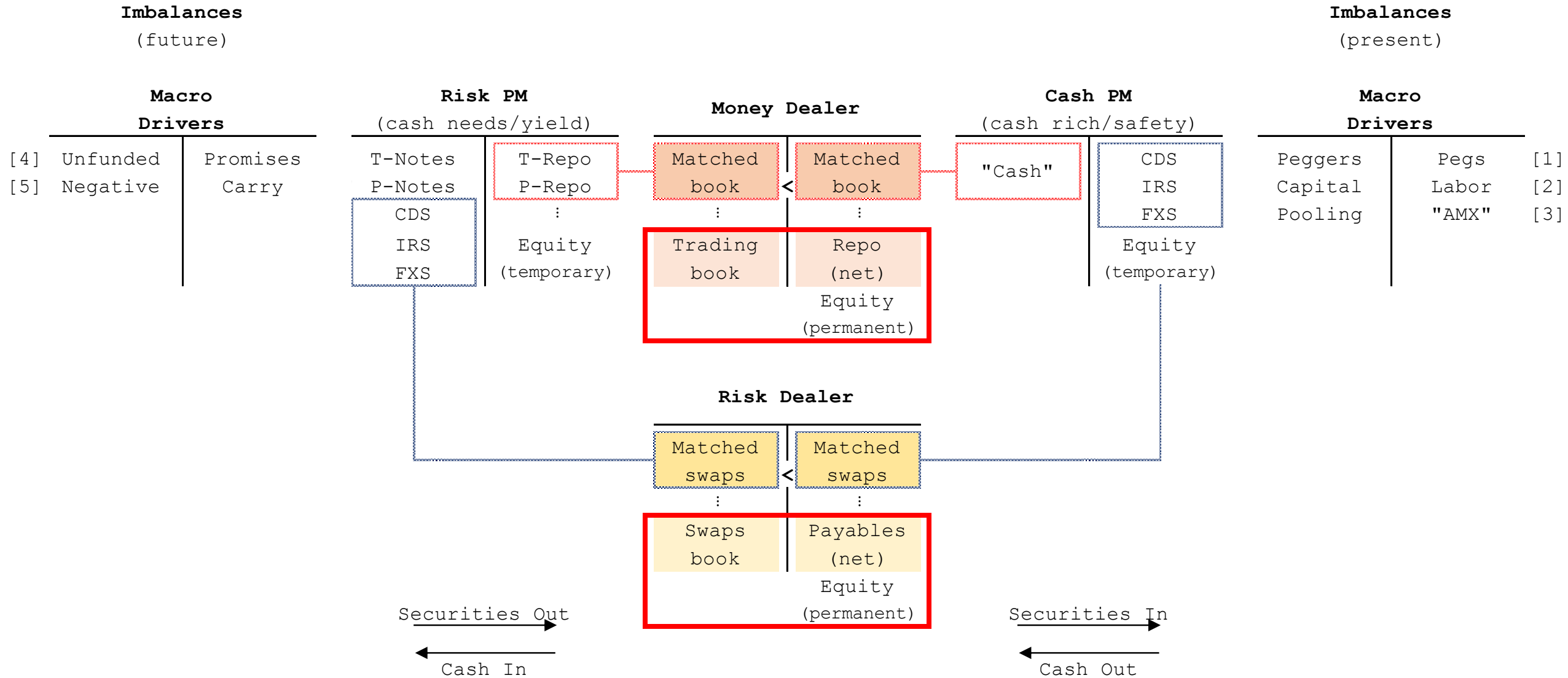
Dealers' equity is permanent equity.  
For counterparty and inventory risk.

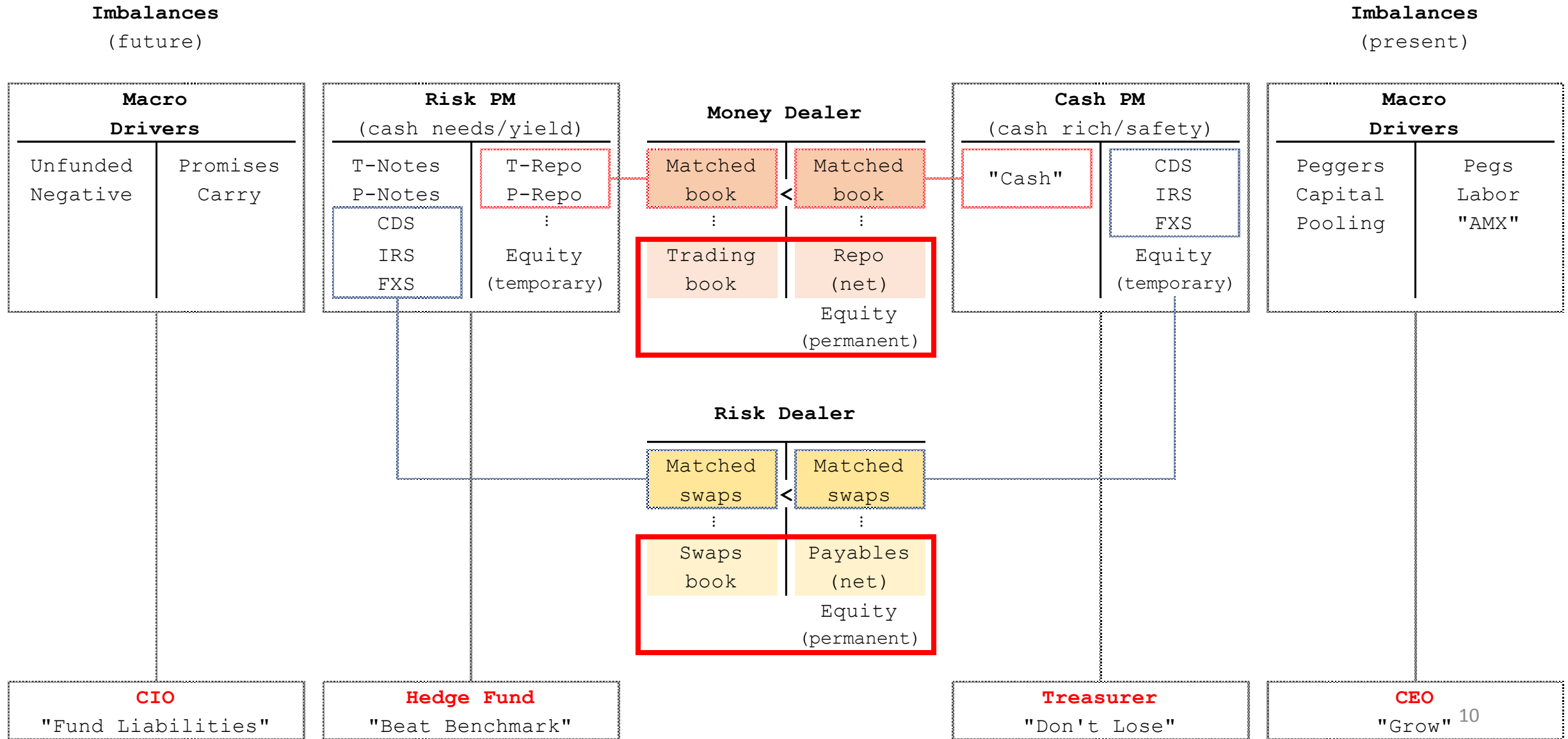




# Symptoms vs. Causes

Equity is a solution for symptoms.  
 What dealers do is a reflection of  
 the eco-system they inhabit.





# **Conclusions:**

A Macro View on Shadow Banking

1. Bond portfolios are getting more and more leveraged and bonds are becoming more and more valuable as collateral.
2. Leveraged bond portfolios help asset-liability matching in an ever-lower yield environment and collateral gives cash pools safety in a system w/ an outdated safety net.
3. Credit intermediation is just a **byproduct**. A carry trader goes to work every day not to lend but to generate alpha.
4. Credit, maturity and liquidity transformation is a start, but ask "why": to manage future and present imbalances.
5. Credit transformation ~ bond-like volatility and equity-like returns to help CIOs meet future promises. Maturity and liquidity transformation ~ quasi Treasury bills and quasi money claims for the safekeeping of skewed incomes.