Case Study: Aligning Prepayment Risk Across the Balance Sheet

FHLBank Boston
Strategic partnerships. Reliable funding.

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Overview

- Prepayment risk on both sides of the balance sheet
- Navigating rate volatility
- Pricing & funding considerations

The Hidden Option on Your Balance Sheet

When customers can react to rates faster than you can, they capture option value which can distort asset mix, funding mix, and NIM.

Customer Leaves

Rates Fall			Rates Rise
	Rates Fall *Borrowers Refinance* Higher-yield assets leave	**Rates Rise** *Depositors Reprice / Leave* Low-cost funding leaves	
	Rates Fall *Customers Keep High-Rate CDs* Expensive funding stays	**Rates Rise** *Borrowers Keep Low-Rate Loans* Low-yield assets stay	

Customer Stays

What Happened to CDs When Rates Moved Higher

Static or weak early withdrawal penalties can leave institutions exposed when customers have a strong incentive to move up rate.

Deposit Dynamics 2021-2024

Low-rate CD booked → Market rates rise sharply → Customer has incentive to break, reprice, or leave at maturity

What Happened

Retention pressure
Deposits become harder to hold

Funding cost pressure
Replacement funding costs more

Growth distortion
Rates change funding mix, not strategy

Not All Prepayment Penalties Protect You Equally

A simple penalty may be familiar, but a replacement-cost penalty may better reflect an institution's real economics when rates move.

Static Penalty
6 months interest at contract rate
Easy to explain
May undercharge when rates rise

Dynamic Penalty
Greater of:
6 months interest
or
replacement cost of same remaining term FHLBank advance

Example: $100,000 1-Year CD
Booked at **2.00%**
Broken after 6 months
Customer wants to move to **5.00%**
Current 6-month FHLBank advance cost = **4.75%**

→

Static Penalty
$100,000 × 2.00% × 6/12
= **$1,000**

→

Dynamic Penalty
$100,000 × 4.75% × 6/12
= **$2,375**

→

Difference
= **$1,375** more protection

→

Customer's gain from moving to 5.00%
$100,000 × 3.00% × 6/12
= **$1,500**

Reclaiming Optionality on the Liability Side

Callable funding can give the institution flexibility when growth, paydowns, and the path of rates are uncertain.

Uncertain growth / paydowns / rate path

Value of issuer-side optionality rises

Use callable liabilities selectively

- Callable CDs
- Callable SOFR-Indexed Advances
- Member-Option Advances

Make Funding Behavior More Intentional

Better liability-side design can reduce rate-path distortion and make funding outcomes more reflective of management intent.

Rate-driven liability behavior

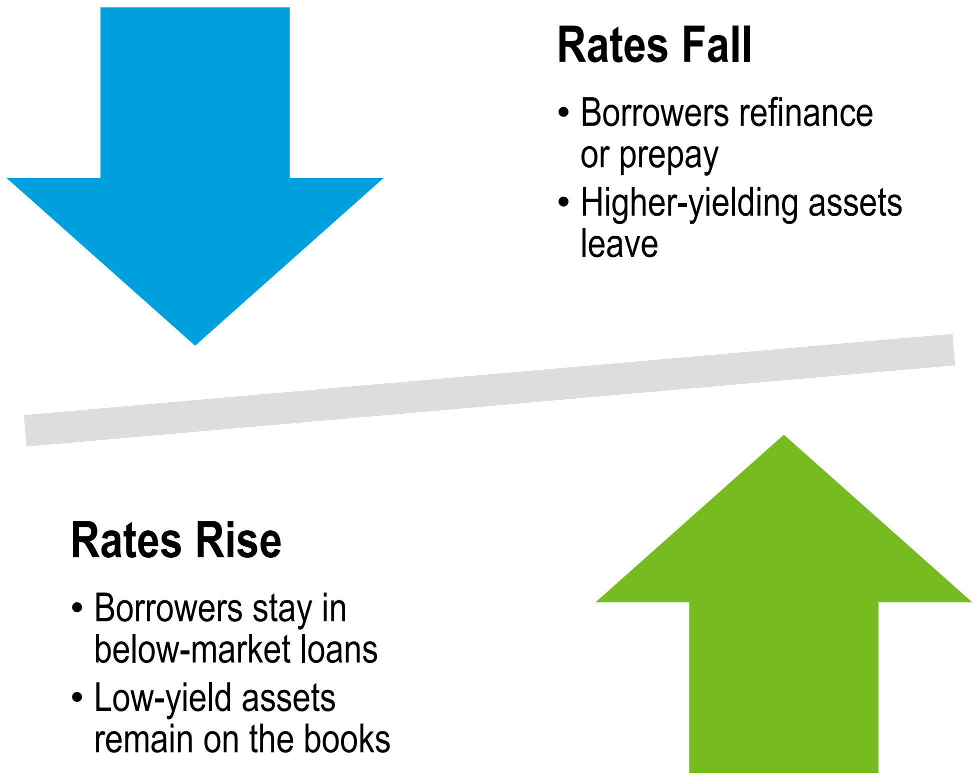
- CDs may leave when better rates appear
- Funding mix can change with rate shocks
- Margin impact may depend on customer timing

Strategy-driven liability management

- Penalties reflect replacement cost
- Callable structures preserve flexibility
- Funding mix better reflects management intent

The Asset Side Has the Same Problem

Fixed-rate commercial and CRE loans can give borrowers valuable timing options when rates move, and weak prepay design can distort earning-asset mix just as weak deposit design can impact funding mix.



Common Commercial Loan Prepay Structures

For most banks and credit unions, the practical question is usually step-down versus yield-maintenance-style protection.

Step-Down

- Penalty declines over time
- Simple and easy to explain
- More borrower flexibility
- Protection weakens as the loan seasons

Yield Maintenance / Make-Whole

- Penalty tied more closely to reinvestment economics
- Stronger spread protection
- More economically precise
- Can be harder to explain or negotiate

Defeasance

- Loan is replaced with substitute collateral rather than simply prepaid
- Very strong protection
- More operationally complex
- Most structured of the three

Prepay Structure Can Shape the Right Funding Solution

The same five-year balloon loan may call for very different funding depending on how protected the asset is.

Sample Loan

$5MM fixed-rate CRE or C&I loan

5-year balloon

6.25% coupon

If Step-Down

Expected life may be shorter
Advance fit: shorter **Classic**, **Member-Option**, or **laddered Classics**

If Yield Maintenance

Expected life may be closer to full term
Advance fit: 5-year Classic or **Amortizing Advance**

If Replacement Economics Improve

Runoff may be beneficial
Advance fit: Member-Option or **Callable SOFR-Indexed Advance**

If You Buy Optionality, Fund It Accordingly

Callable investments may offer extra spread, but if you buy them, funding should reflect likely call behavior so the asset can run off without leaving costly funding behind.

Callable investment — Extra yield may look attractive

Embedded option — Issuer will call when it benefits them, not you

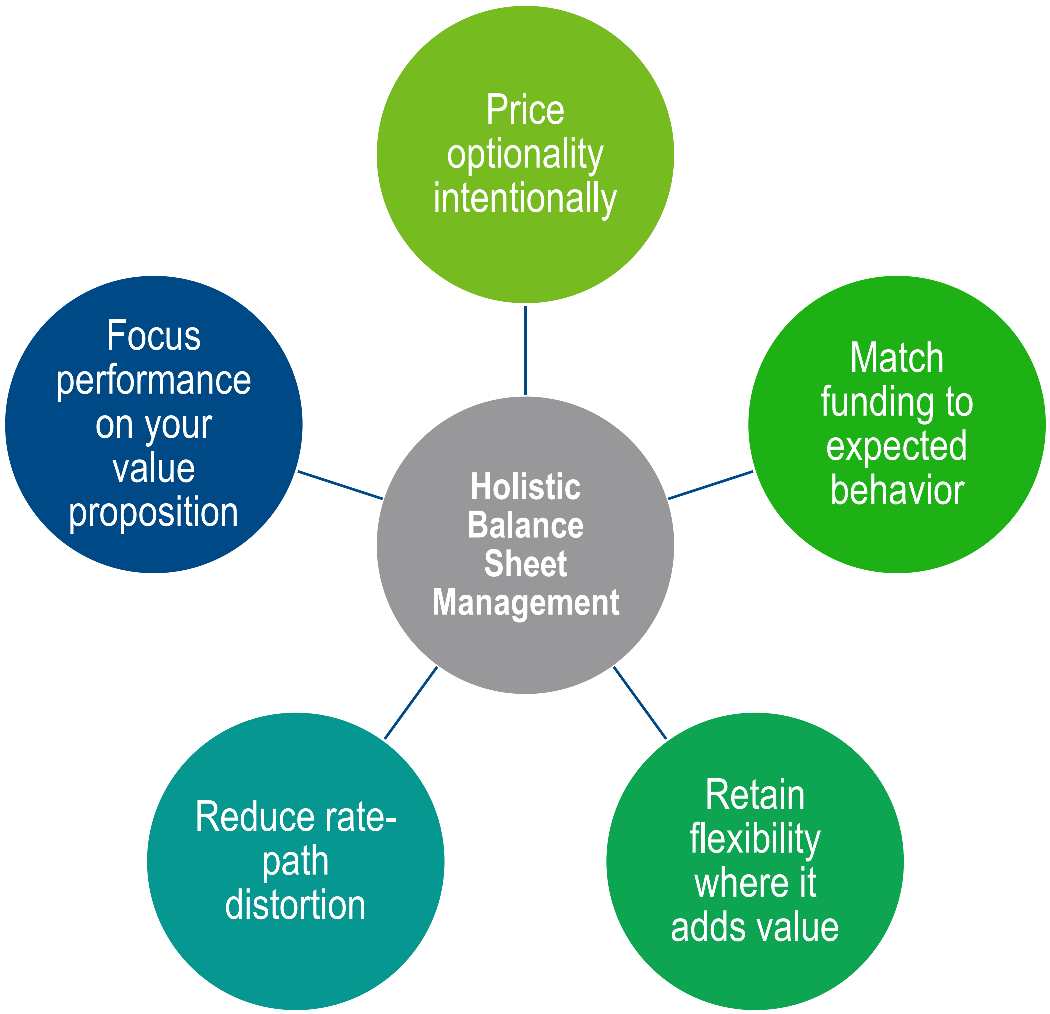
Funding risk — If the asset prepays but funding stays in place, the option can be more costly than the extra spread was worth

Better funding approach

- Use shorter Classics, a ladder, Member-Option, or Callable SOFR-Indexed funding to reduce the risk of being left with excess funding

Holistic Balance Sheet Management

Ideally, depositories can meet customer prepayment needs, while also maintaining flexibility and performance independent of the path of rates.



Thank You

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