How It Works: HLB-Option Advance

FHLBank Boston
Strategic partnerships. Reliable funding.

May 2023

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What is the HLB-Option Advance?

The HLB-Option Advance allows you to borrow at lower rates than would typically be available on Classic Advances by selling the option to FHLBank Boston to cancel the advance prior to final maturity.

Features of the HLB-Option Advance			
Coupon Type	Fixed	**Putable/Callable**	Putable, after the lockout period at pre-determined intervals
Available Term	Up to 20 years	**Availability**	Every day
Interest Paid	2nd business day of the month	**Minimum Size**	$2,000,000
Principal Due	At maturity	**Prepayable**	Yes

How is the HLB-Option Advance Priced?

When the yield curve is inverted and interest-rate volatility is high, the rate on an HLB-Option Advance can be below that of Classic Advances with a maturity matching that of the HLB-Option Advance's lockout period.

HLB-Option Advance and Classic Advance Curves

3-mo Classic
5.60% 5.59%
12-mo Classic
5.36%
4.79%
2-yr maturity, 3-mo lockout
4.27%
4.42%
4.28%
4.17%
3.59%
5-yr maturity, 12-mo lockout

Months: Lockout Period (HLB-Option), Final Maturity (Classic)

━━ 2-yr HLB-Option ━━ 3-yr HLB-Option ━━ 4-yr HLB-Option ━━ 5-yr HLB-Option ━━ 7-yr HLB-Option ━━ 10-yr HLB-Option ○ Classic
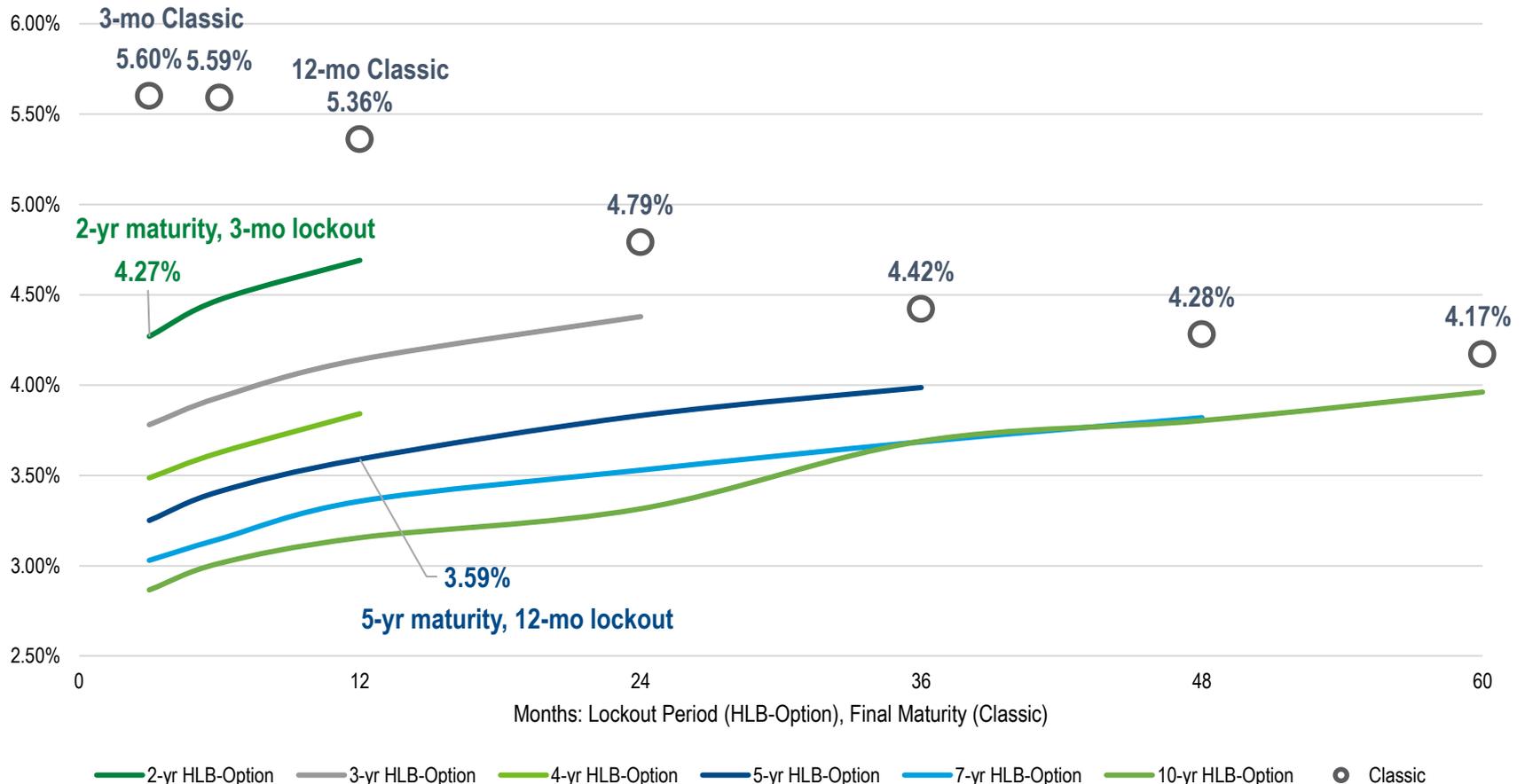
Rates as of 5/31/23- all pricing is subject to change and rates and spreads are not guaranteed

Source: FHLBank Boston

# What Factors Impact How the Advance is Priced?

Because the member is selling the optionality, certain features (longer maturities, shorter lockouts, higher frequency, higher volatility) will typically lead to that option having more value, reducing the rate.

HLB-Option Advance Put Frequency

Chart showing rates (y-axis 2.5 to 4.75) vs Months (x-axis 3 to 84):
- 2yr/6mo Qtrly (green squares) at ~4.45
- 7yr/6m 1x (green triangle) at ~3.6
- 7yr/2yr Qtrly (light blue circles) at ~3.55
- 7yr/6m Qtrly (dark blue X marks) at ~3.15
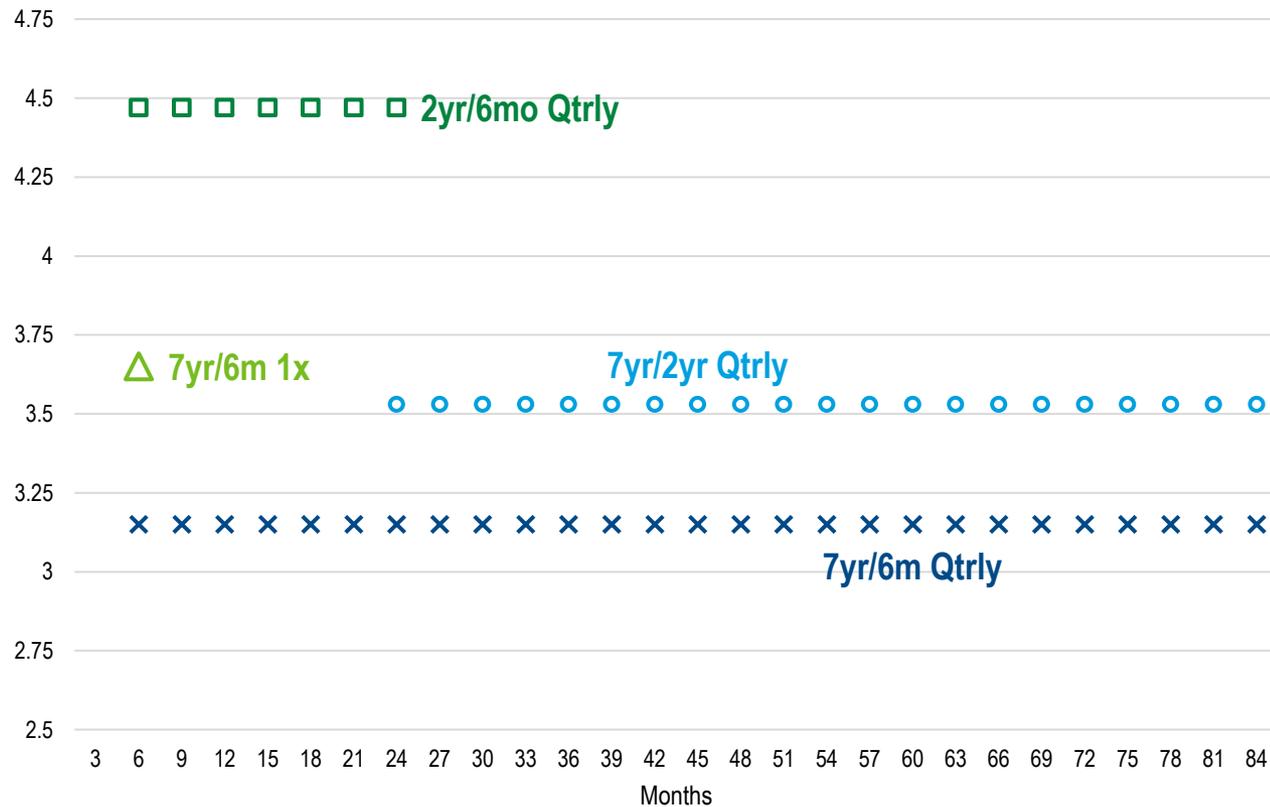
Factors that Can Lead to Lower Rates on HLB-Option Advances

More Frequent Puts
vs.
Less Frequent Puts

Shorter Lockout Period
vs.
Longer Lockout Period

Longer Stated Maturity
vs.
Shorter Stated Maturity

Higher Levels of Interest-Rate Volatility

Source: FHLBank Boston

What Does the Cash Flow Profile Look Like?

The average life can extend and contract - like a mortgage loan or mortgage-backed security - as interest rates and interest-rate volatility change over time.

Example Instantaneous Rate Shock: HLB-Option Advance

Maturity Date

Day 0 Average Life, with unchanged rates and volatility

As rates go up (and/or volatility goes down), the **average life** *will move towards the* **lockout date**

Years

As rates go down (and/or volatility goes up), the **average life** *will move towards the* **maturity date**

Lockout Date

<- RATES DOWN (VOLATILITY UP) : RATES UP (VOLATILITY) DOWN ->

Source: FHLBank Boston

Classification: Public

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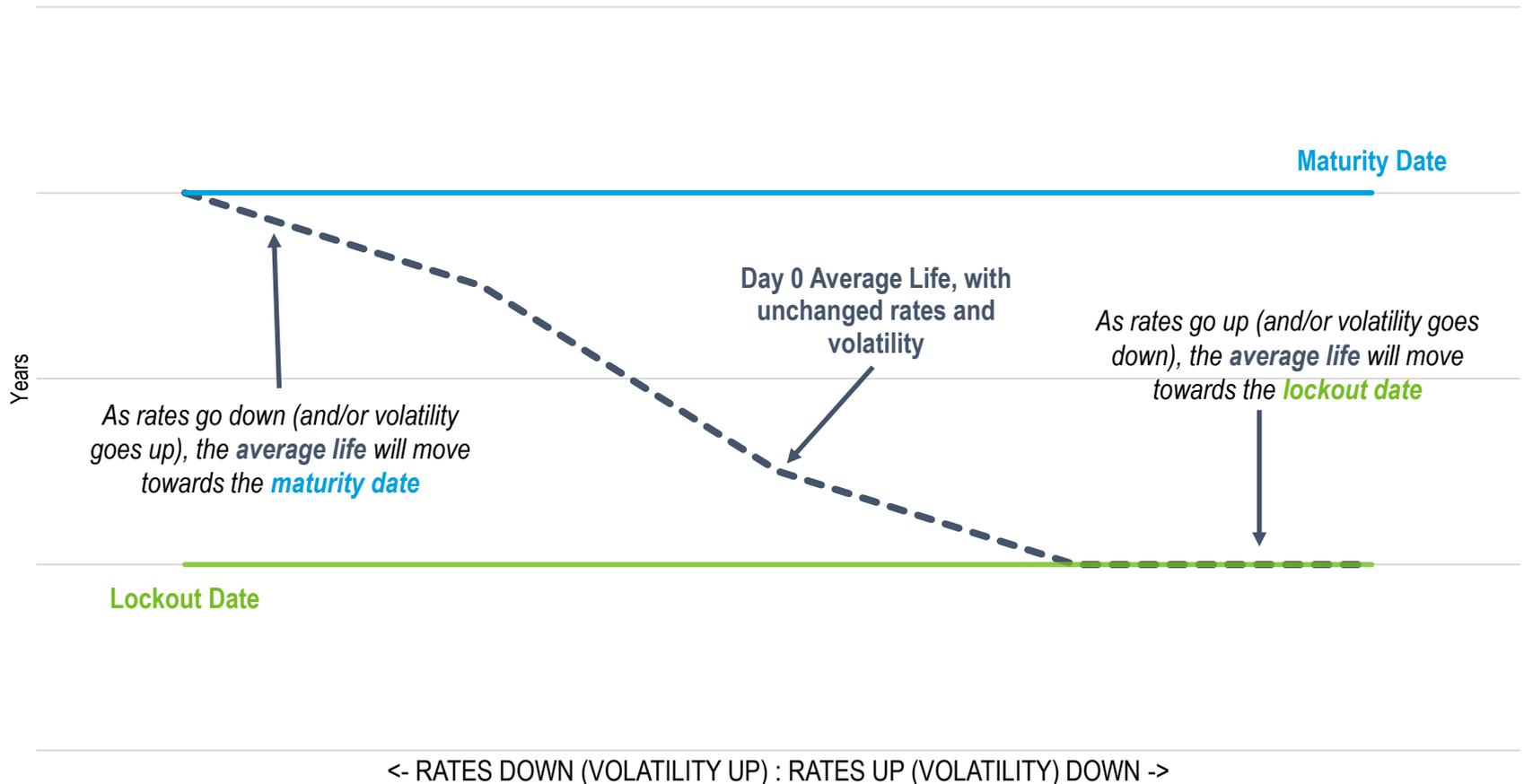
# What is the Breakeven Rate in Stress Test Scenarios?

Flat and higher rates are desirable paths, but the sizable cost savings during the lockout period can create a cushion for rates to move lower and still have the HLB-Option produce a lower total interest expense.

Scenario Analysis
If HLB-Option (5yr/1yr) extends past the lockout, what is the breakeven rate (on a 5-year horizon) vs. 1yr Classic + Replace?

Legend:
- 5yr/1yr HLB
- 1yr Classic
- Replacement Funding at Breakeven Rate
- Rolling Cost of Classic + Replacement Funding

Breakeven Rate Sensitivity Analysis
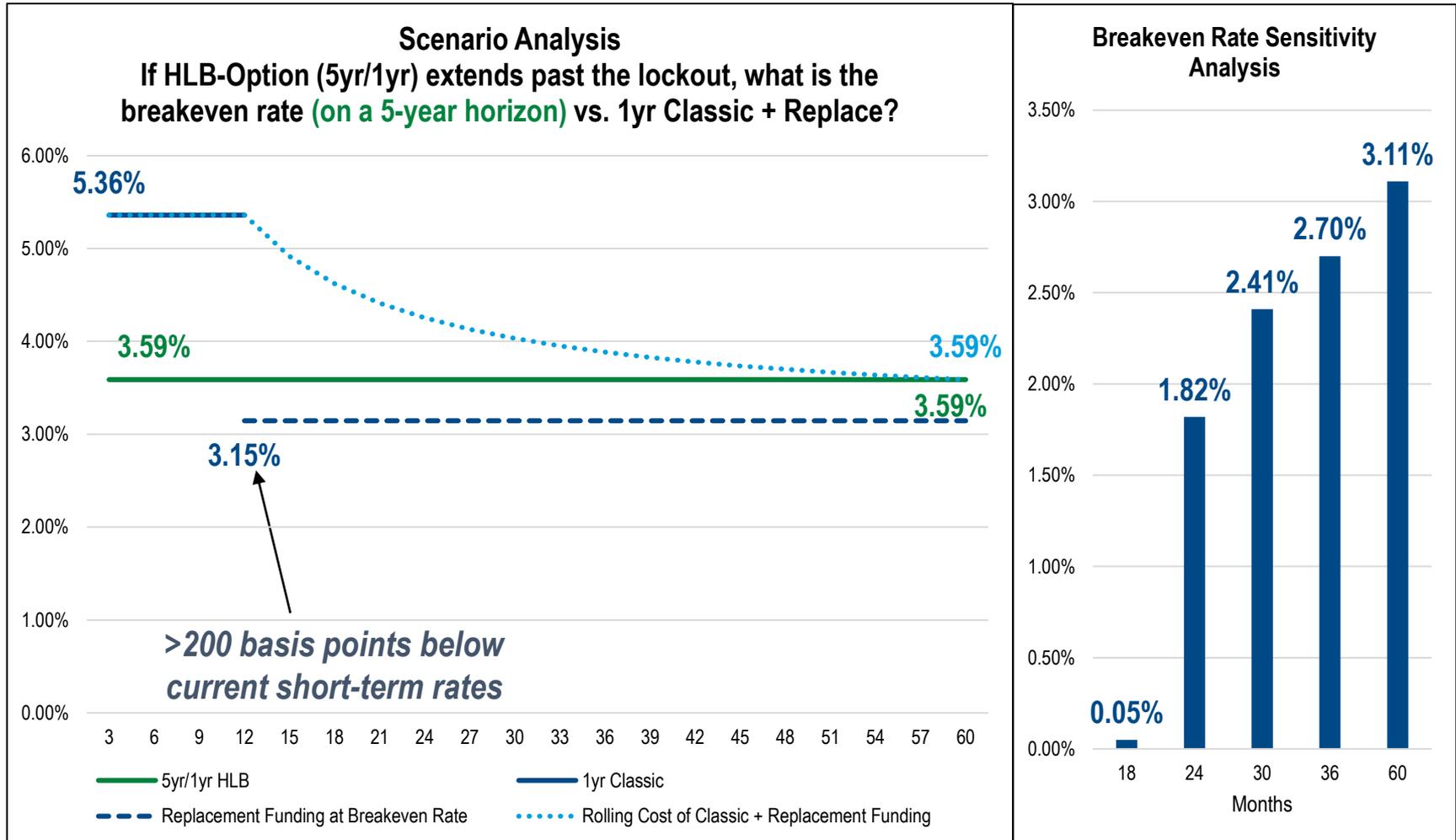
Source: FHLBank Boston

Where is Relative Value in the Current Environment?

As the yield curve inverts further and volatility remains high, shorter maturity structures (like the 2yr/3mo) with less tail/extension risk have seen a widening discount relative to the short-term alternative.

HLB-Option Spreads vs. 3-month Classic
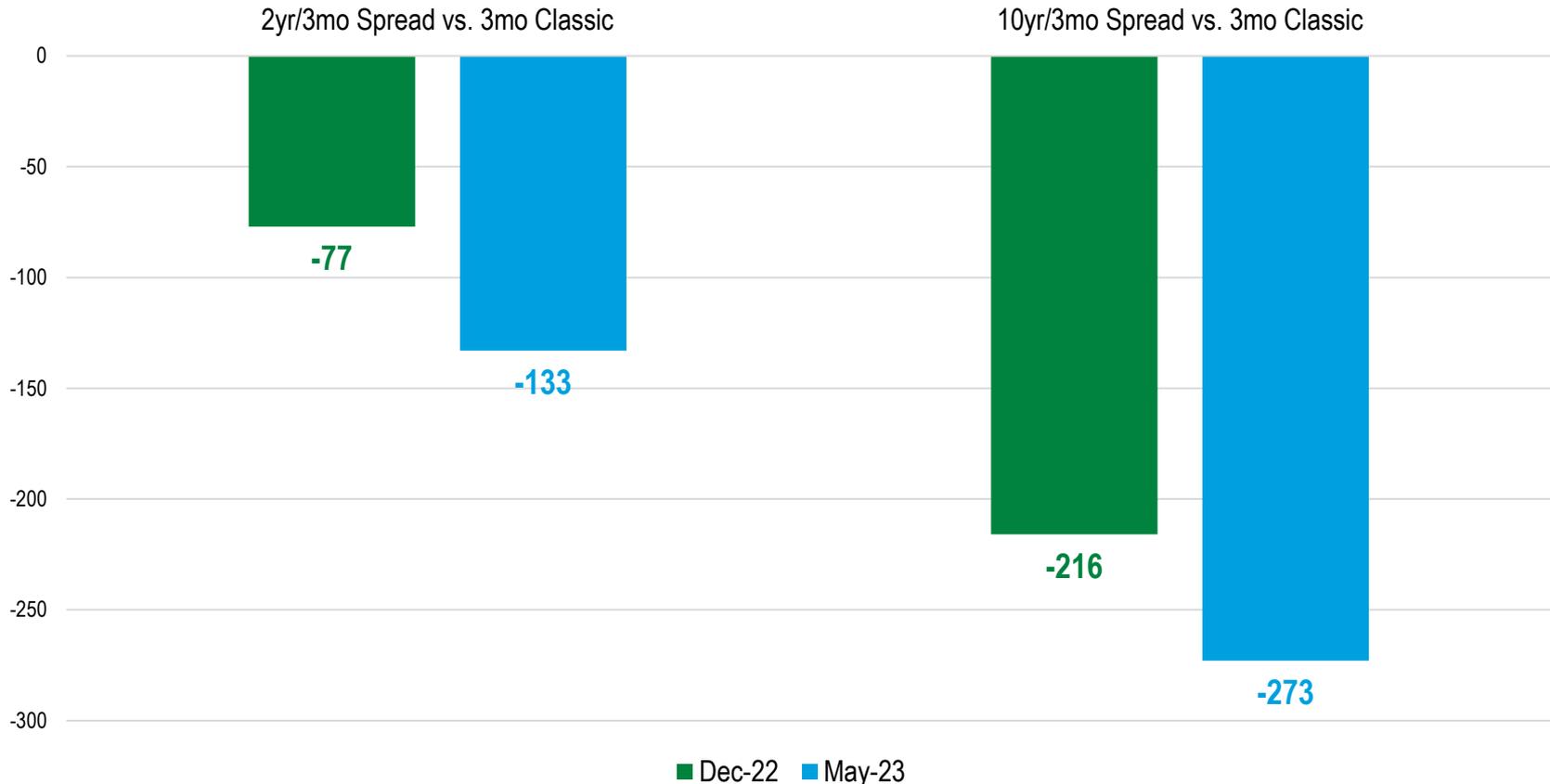
Source: FHLBank Boston

Thank You

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