Active Duration Management in a US Treasury Portfolio

Balancing Yield and Interest Rate Risk in a Buy-and-Hold Portfolio

Session 2: Managing Large Portfolios in the Current Market Environment

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Portfolio Duration Sensitivity to Interest Rate Movements

- estimates the portfolio's sensitivity to interest rate outlook or changes
- acts as a lever for a portfolio manager to adjust the risk quickly based on interest rate outlook
- immunizes the portfolio from interest rate volatility and the future liability coming from cash drawdowns to reallocate liquidity where needed
- helps manage short- and long-term risk in the portfolio

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Challenges of Duration Adjustment

- In a buy-and-hold portfolio, portfolio managers avoid taking realized losses just to extend duration
- Yield curve risk is another challenge when adjusting duration
- Non-linear price movements due to the portfolio's convexity
- Portfolio constraints due to investment guidelines, benchmark constraints, and liquidity needs
- Return trade-offs

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Investment Solutions

- Buy longer-maturity duration bonds
- Barbell or bullet strategy
- Buy longer-term spread products
  - Covered bonds
  - US strips (zero-coupon)
  - SSAs with an attractive G-spread
- Create derivatives and structured solutions
  - Interest rate swaps
  - TIPs zero coupon asset swap in a cancelable format
  - Cancelable swaps
  - Forward starting swaps

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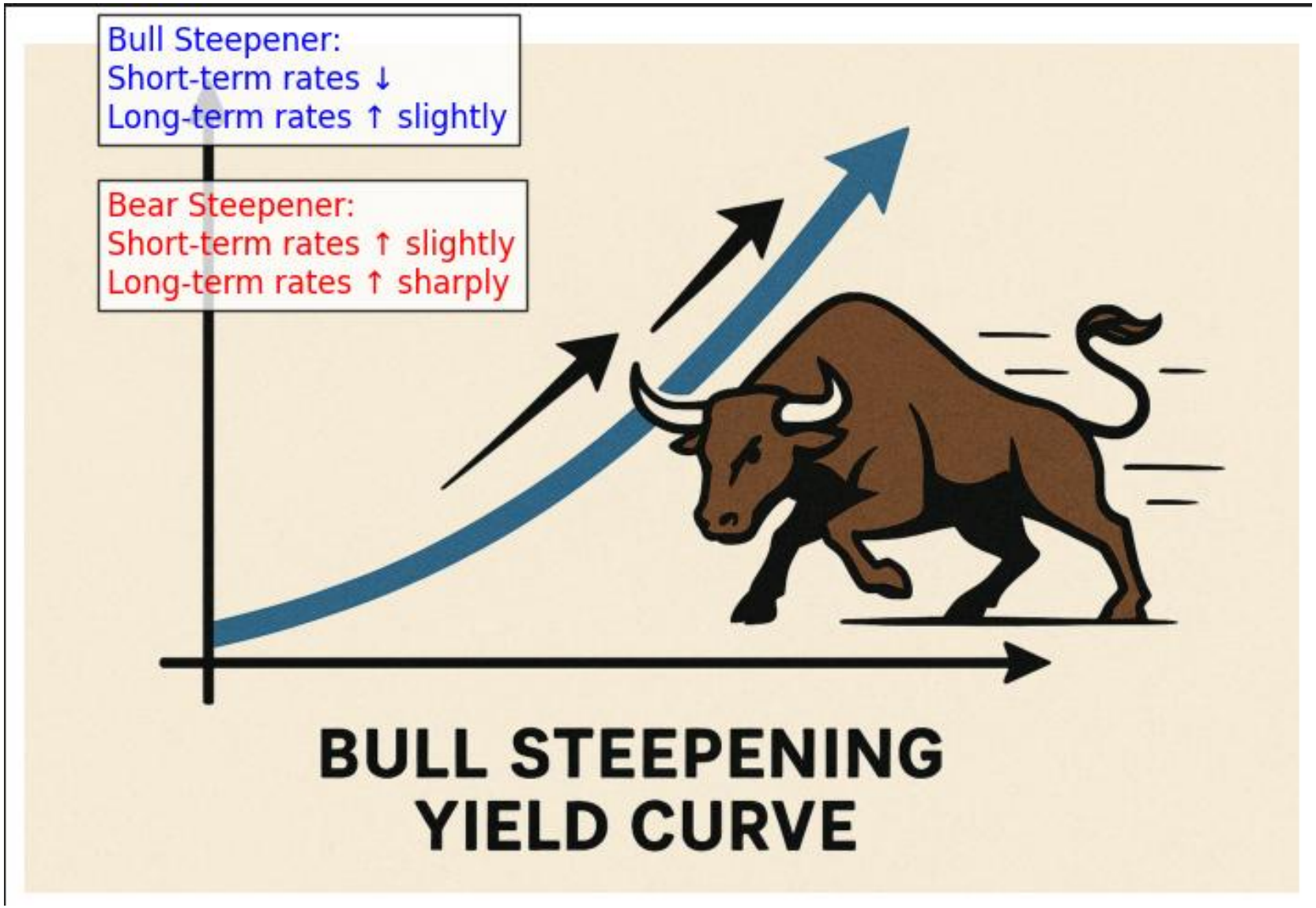

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Interest Rate Swaps

- Enter a receive-fixed, pay floating swap increases portfolio duration adding positive convexity
- Structured option overlays can increase effective duration
- Cancelable swaps provide flexibility in adding duration but has negative convexity
- Zero coupon bonds add duration and convexity
- Forward starting swaps add duration by locking in today's forward rates for future exposure

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Interest Rate Swap Strategy

1. Receive-Fixed, Pay-Floating → Increase Duration
2. Add Swaption Overlay → Boost Yield, Add Optionality
3. Use Zero-Coupon Bonds → Maximize Duration
4. Forward Starting Swap → Pre-commit Future Duration

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Comparative Impact of Duration Extension Strategies on Portfolio Risk and Return

Strategy	Duration Impact	Convexity	Flexibility
Receive-fixed IRS	↑	Neutral	High
Cancelable Swap	↑	Negative	Moderate
Zero-Coupon Bond	↑↑	Positive	Low
Forward Starting Swap	↑↑↑	Depends	Strategic

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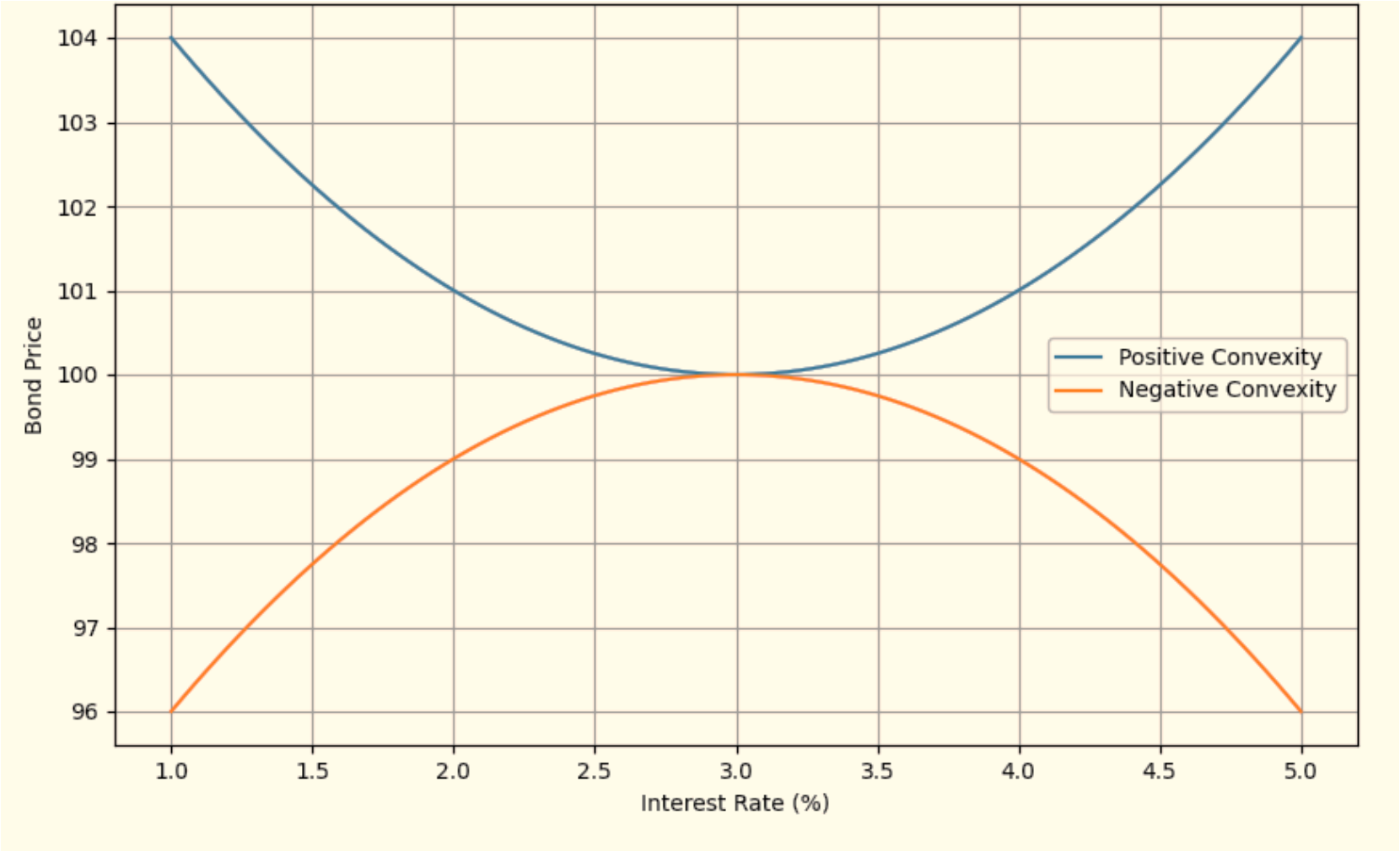
Convexity Comparison



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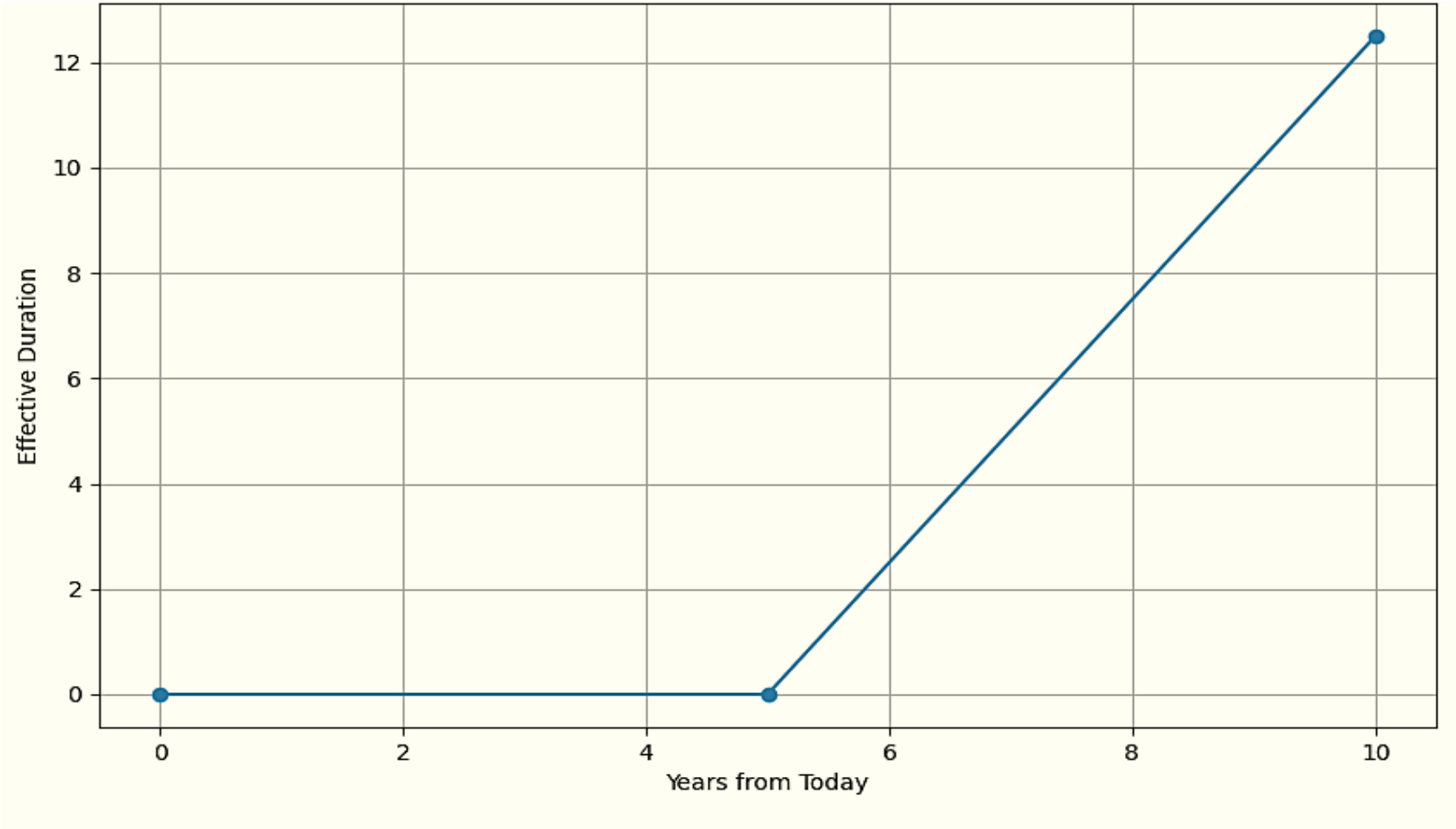
Forward Starting Swap Timeline



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Thank you!

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