# Interest Rate Trading Cheat Sheet

## Core Tools & Concepts

* Basic statistics: Mean, standard deviation, regression, correlation
* Principal Component Analysis (PCA): Level, slope, curvature of the yield curve
* DV01: Dollar value of 1 basis point – interest rate sensitivity
* Hedge ratio / Yield beta: Used to neutralize interest rate exposure
* Backtesting: Evaluate strategy performance with metrics like Sharpe ratio

## Trade Types

* Carry Trades: Earn return from coupon income minus financing costs
* Carry-Efficient Directional Trades: E.g., Weighted 2s/5s flattener to maintain direction with less carry cost
* Relative Value Trades: Long undervalued bond, short overvalued bond, using regression to control risk

## Yield Curve Strategies

* Flattener: Long 10Y, short 2Y to benefit from curve flattening
* Steepener: Long 2Y, short 10Y to benefit from steepening
* Butterfly: Long wings, short belly or vice versa to capture mid-curve dislocations

## Advanced Spread Trades

* Swap Spread Trades: Long/short swap vs Treasury
* Conditional Spread Trades: Use options to express view on spread widening or narrowing
* Futures Asset Swaps: Combine Treasury futures with forward swaps

## Basis & Volatility Trading

* LIBOR/OIS Spread Trade: Positioning based on funding stress
* Options on Rates: Calls, puts, swaptions, caps/floors; volatility trading via delta-hedging, skew

## Technical Considerations

* Sharpe Ratio: Return per unit of risk
* Regression Beta: Trade sensitivity to underlying market factors
* Z-score: Identify relative value trades based on mean reversion
* Overcrowding Risk: Watch out for consensus trades
* Mean Reversion Check: Ensure the basis for relative value is intact