PROJECT IDEAS

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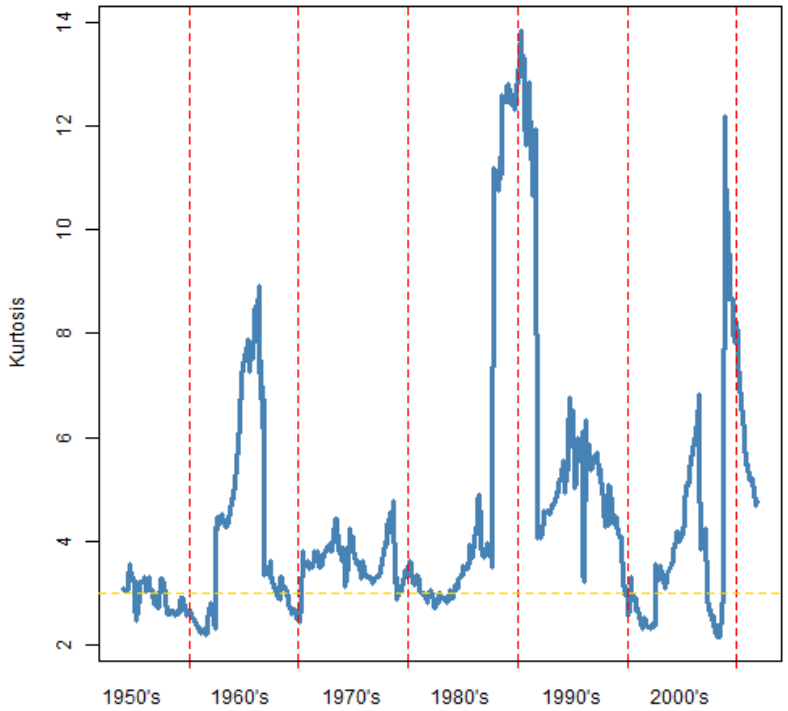
Topics

- VIX-based dynamic hedging
- Value vs. growth: a macro-based strategy
- Stock return kurtosis and crash exposure
- Timing beta exposure using idiosyncratic volatility
- Cross-sectional volatility spread as a timing signal
- Testing and extending the Betting Against Beta strategy
- Exploiting predictable intraday patterns with 0DTE options

STOCK RETURN KURTOSIS AND CRASH EXPOSURE

Idea

- Investigate whether elevated realized kurtosis in index or stock returns signals impending market crashes or volatility spikes



Objective

- Identify and measure individual stock **exposure to tail risk** via return kurtosis
- Construct portfolios that balance return and crash exposure by **filtering high-kurtosis stocks**
- Explore the **pricing of higher-moment risk** in cross-sectional stock returns

Strategy outline

- **Signal construction:**
  - Estimate ex-ante return kurtosis for each stock
  - Identify stocks with persistently high crash risk profiles
  - Form long-short portfolios that overweight low-kurtosis stocks and underweight high-kurtosis stocks
- **Portfolio implementation:**
  - Simple equal weighting
  - Monthly rebalancing to update crash exposure estimates

Data

- Daily or weekly stock returns (e.g., CRSP data, S&P 500 universe)
- Computed rolling kurtosis over fixed windows (e.g., 6 or 12 months)

Performance expectations

- **Why it works?**
  - Kurtosis captures crash risk that volatility overlooks
  - Market participants underprice extreme left-tail risk, creating a premium for low-kurtosis stocks
  - Avoiding crash-prone assets enhances compound returns during market stress
- **Expected outcomes:**
  - Improved downside protection and lower tail risk exposure
  - Consistent performance during crisis periods and high-volatility regimes
  - Potential alpha from neglected pricing of higher-moment risks