

Conference on Corporate Debt Market Structure, Liquidity and Volatility

# Has Liquidity Risk in Corporate Bonds Increased?\*

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\* Based on work with Tobias Adrian, Or Shachar, Daniel Stackman, and Erik Vogt. Views expressed are those of the presenter and not necessarily those of the Federal Reserve Bank of New York or the Federal Reserve System.

# Reasons to Think Liquidity May Have Changed

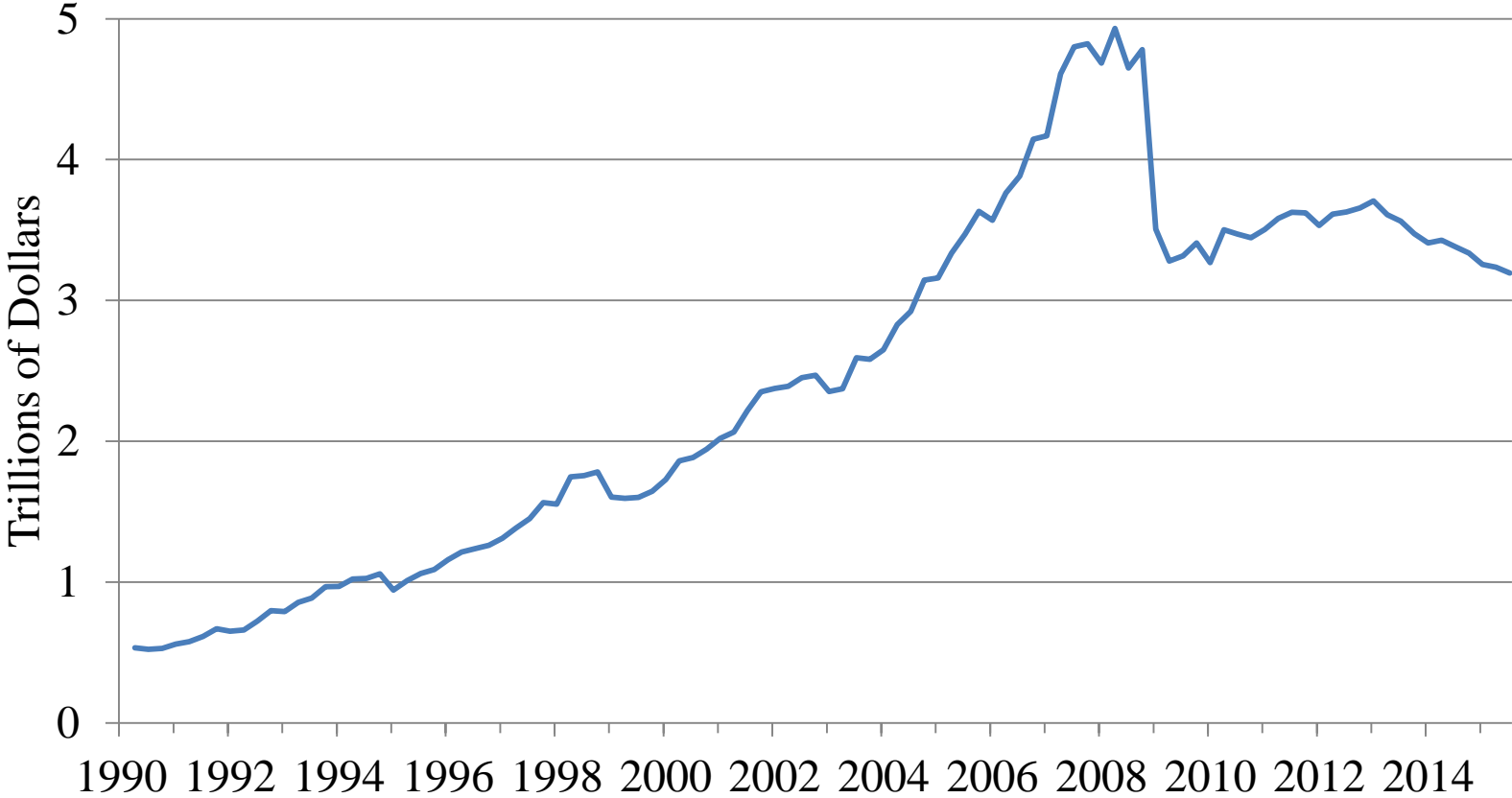
- Dealers' reduced balance sheets and risk taking
  - Aftermath of crisis, regulatory changes, changes in market structure
- Technological changes and entrance of new participants
  - October 15<sup>th</sup> report (Treasury market)
- Growth in market and changes in liquidity demand
- Monetary policy environment

# Overview

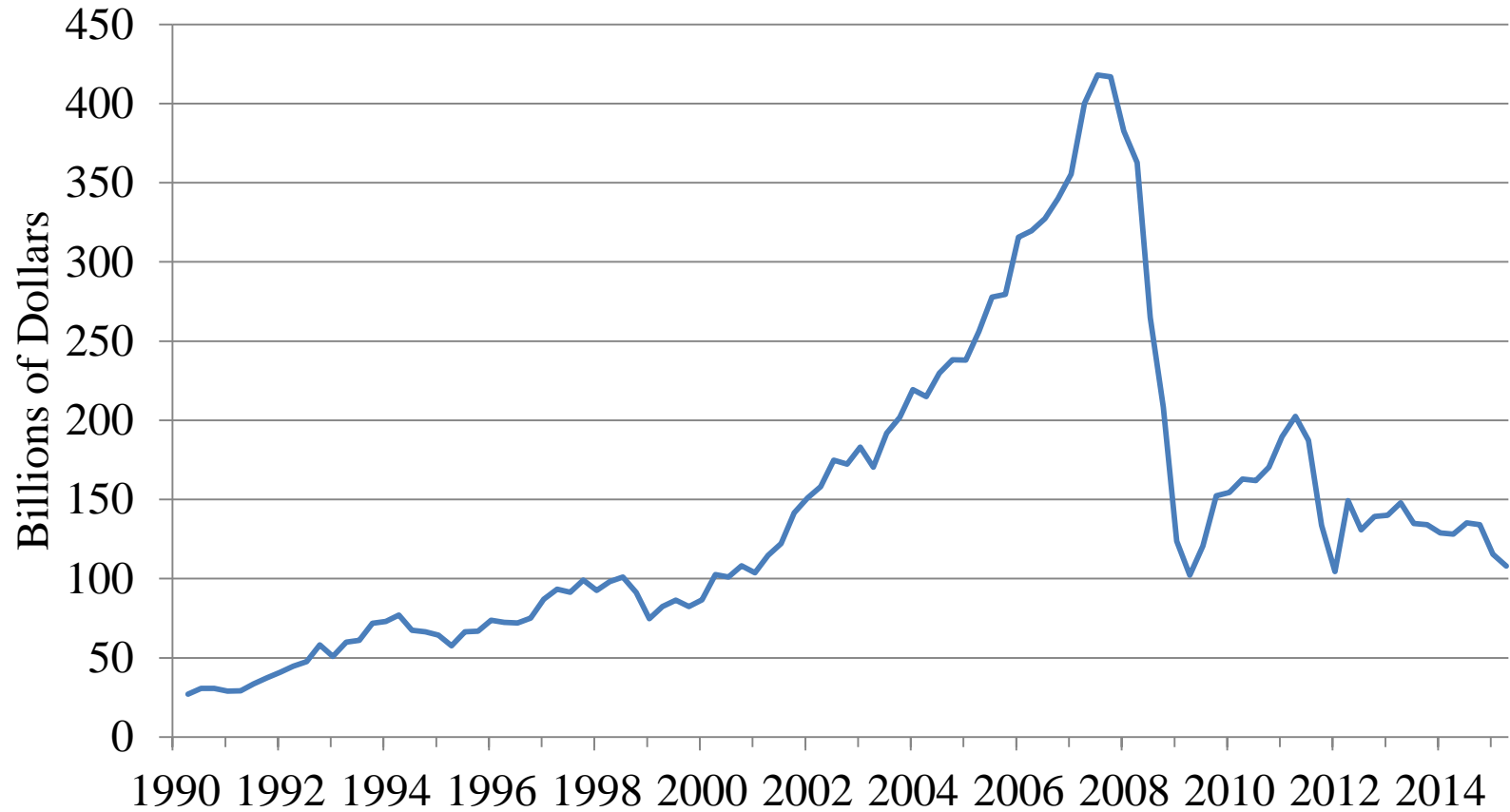
- Dealer positioning
- Treasury liquidity
- Corporate liquidity
- Liquidity risk

# Dealer Positioning

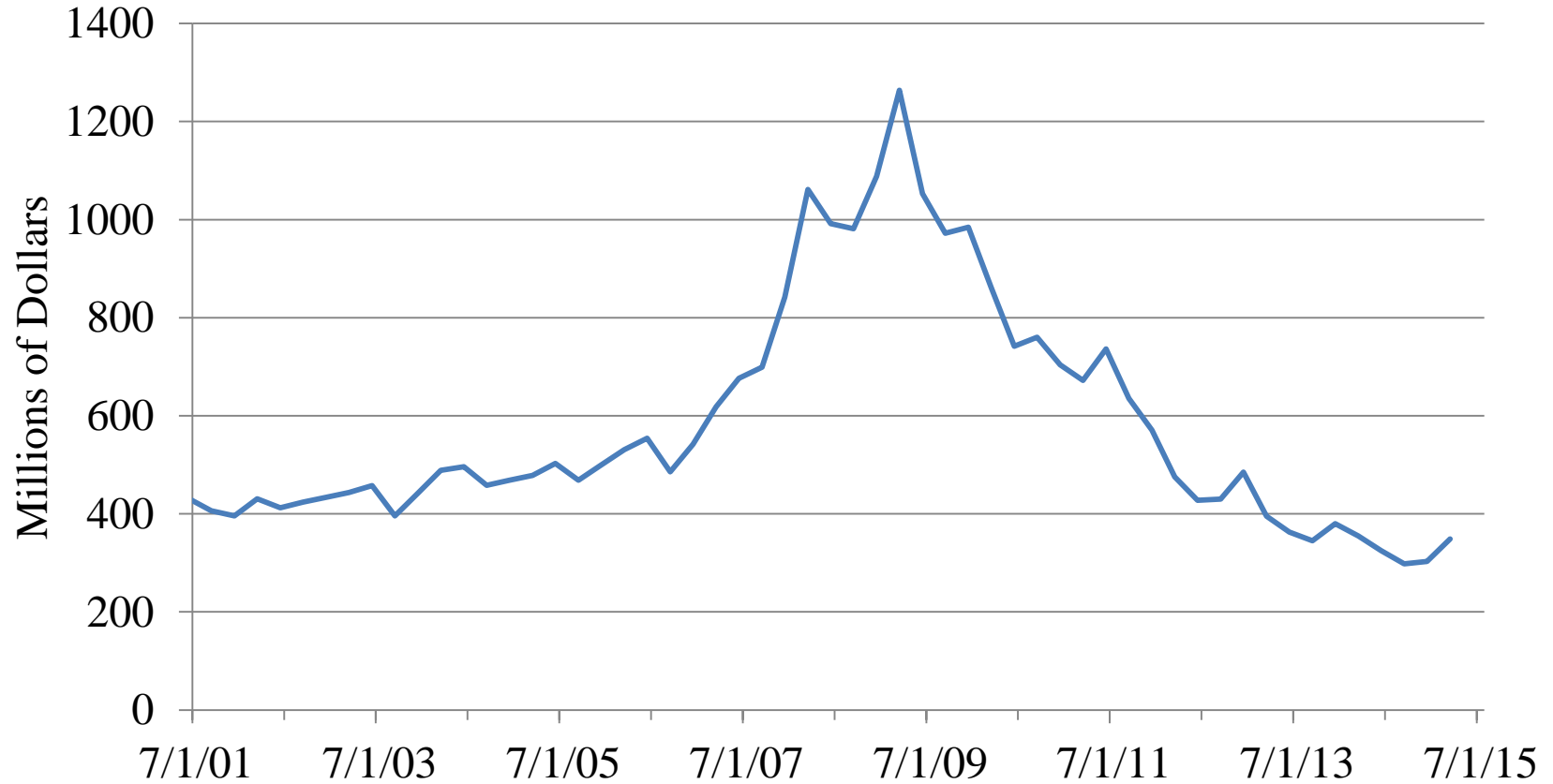
# Dealer Assets Have Stagnated Since the Crisis



# Dealer Corporate Positions Have Stagnated



# Value-at-Risk at Bank-Dealers Has Declined



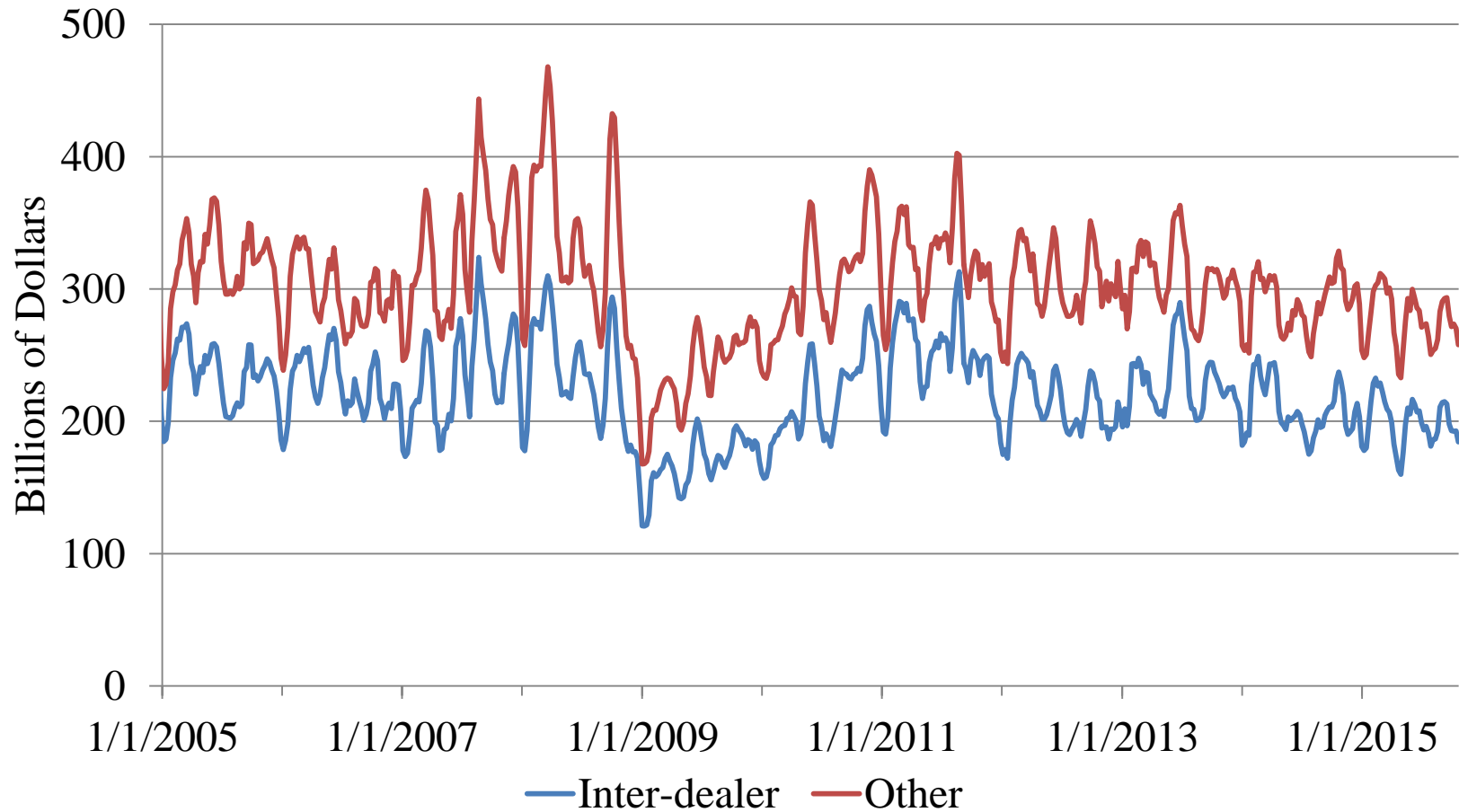
# What Explains Evolution of Dealer Positioning?

- Regulations have tightened markedly
  - Large dealers now BHCs – enhanced liquidity & capital requirements
- Much deleveraging before regulations announced/passed
- Post-crisis contraction concentrated among riskier and faster-growing firms pre-crisis
- Electronification has likely lowered returns to market making

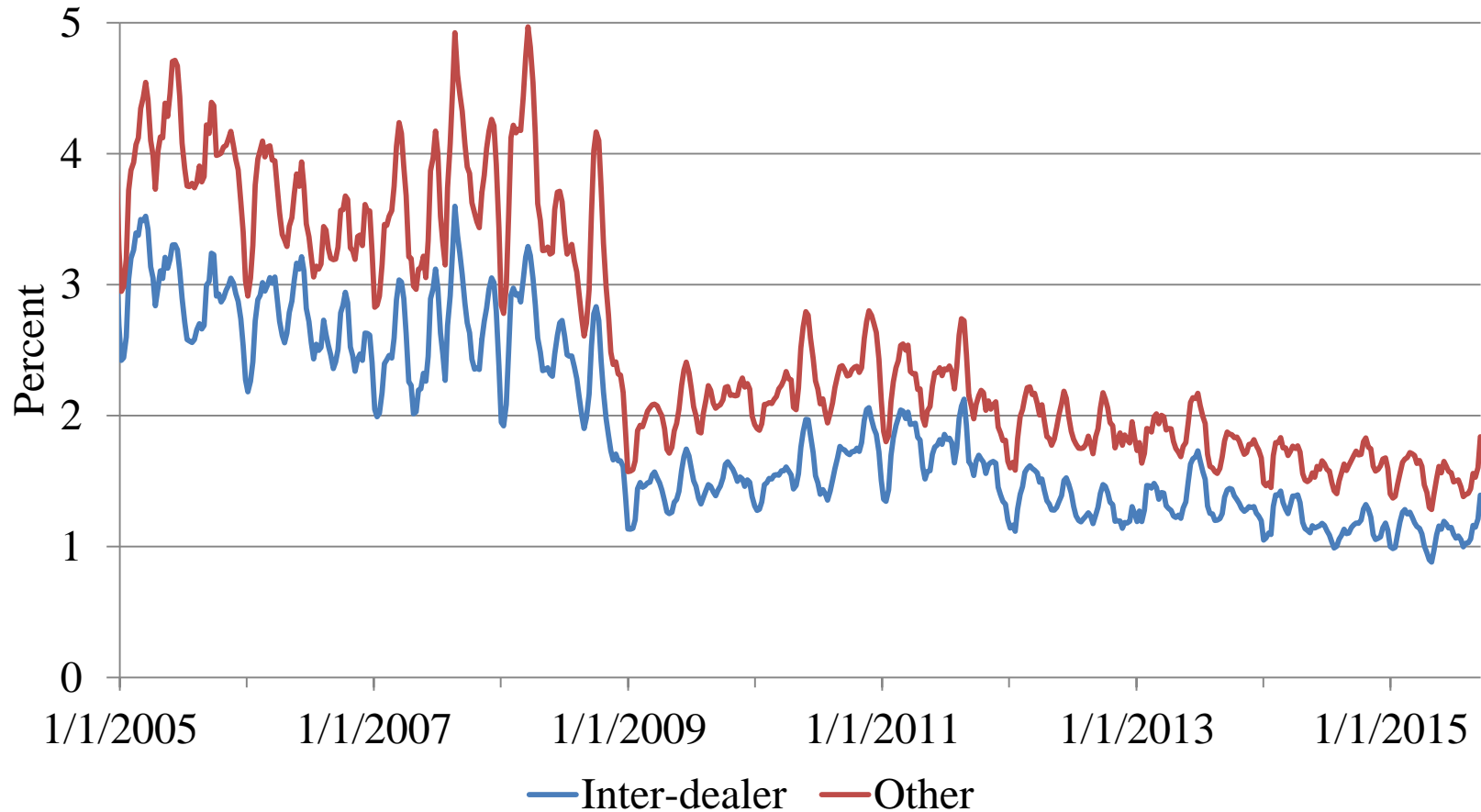


# Treasury Liquidity

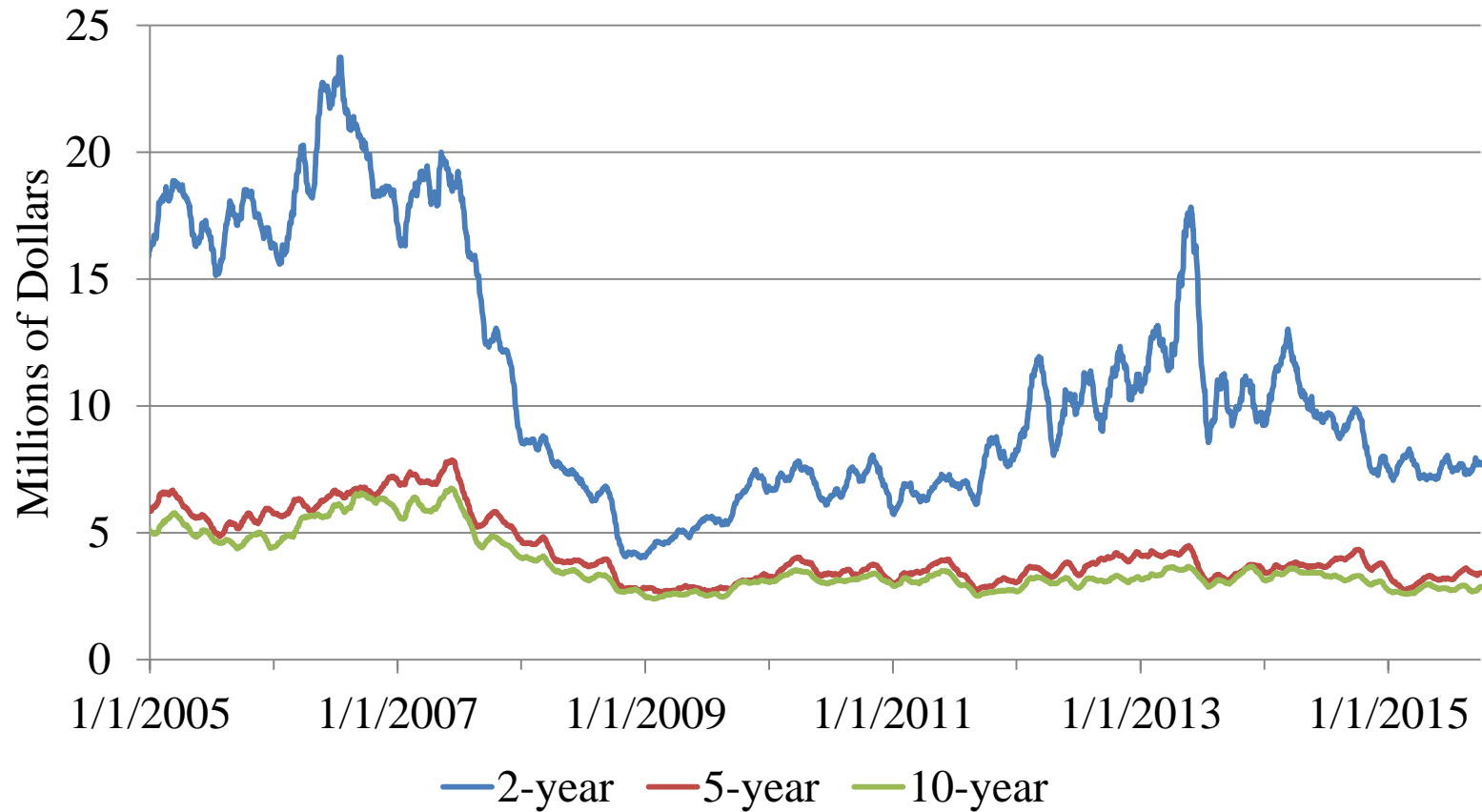
# Primary Dealer Trading Volume Has Been Stable



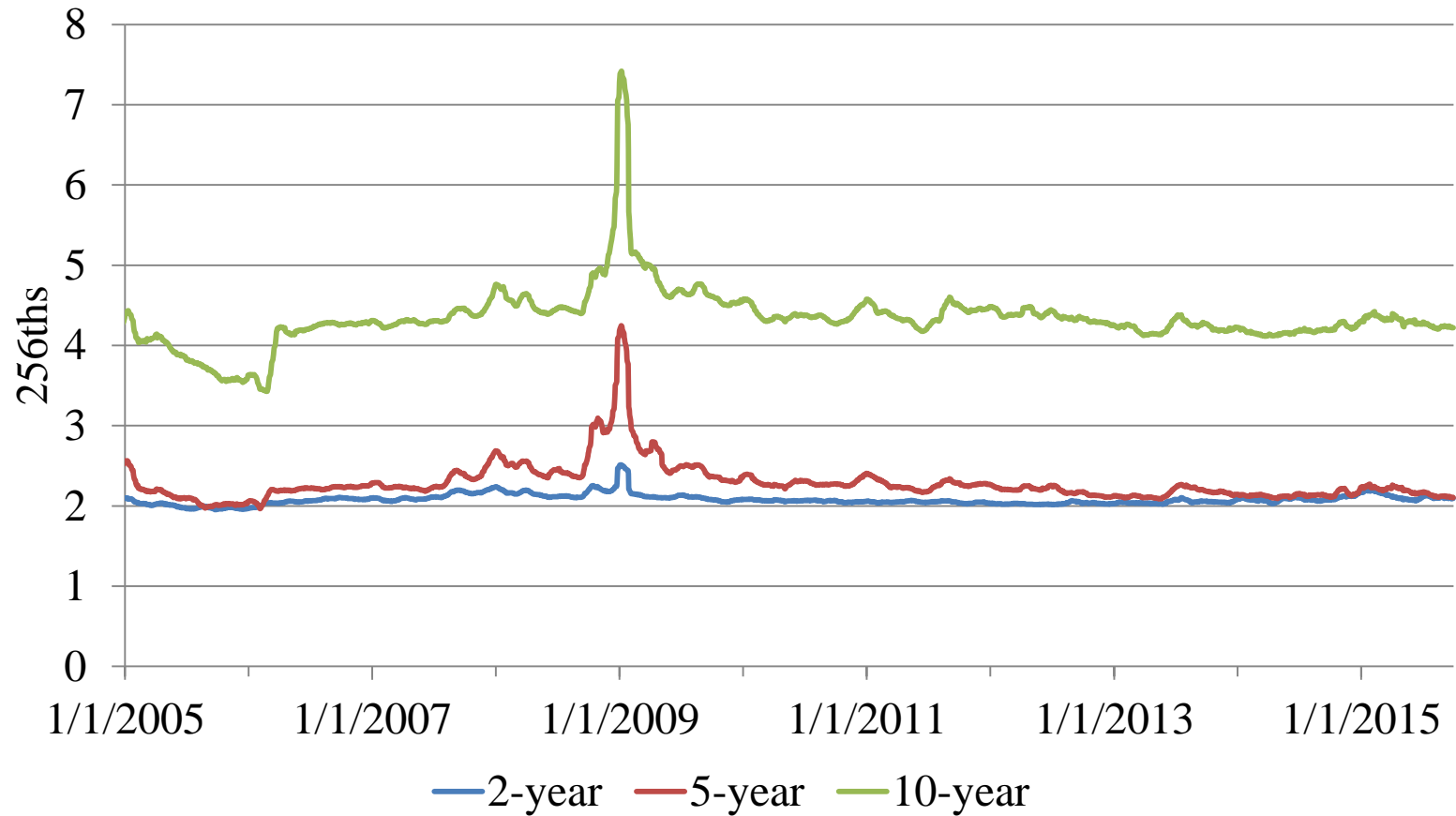
# Primary Dealer Turnover Has Declined Sharply



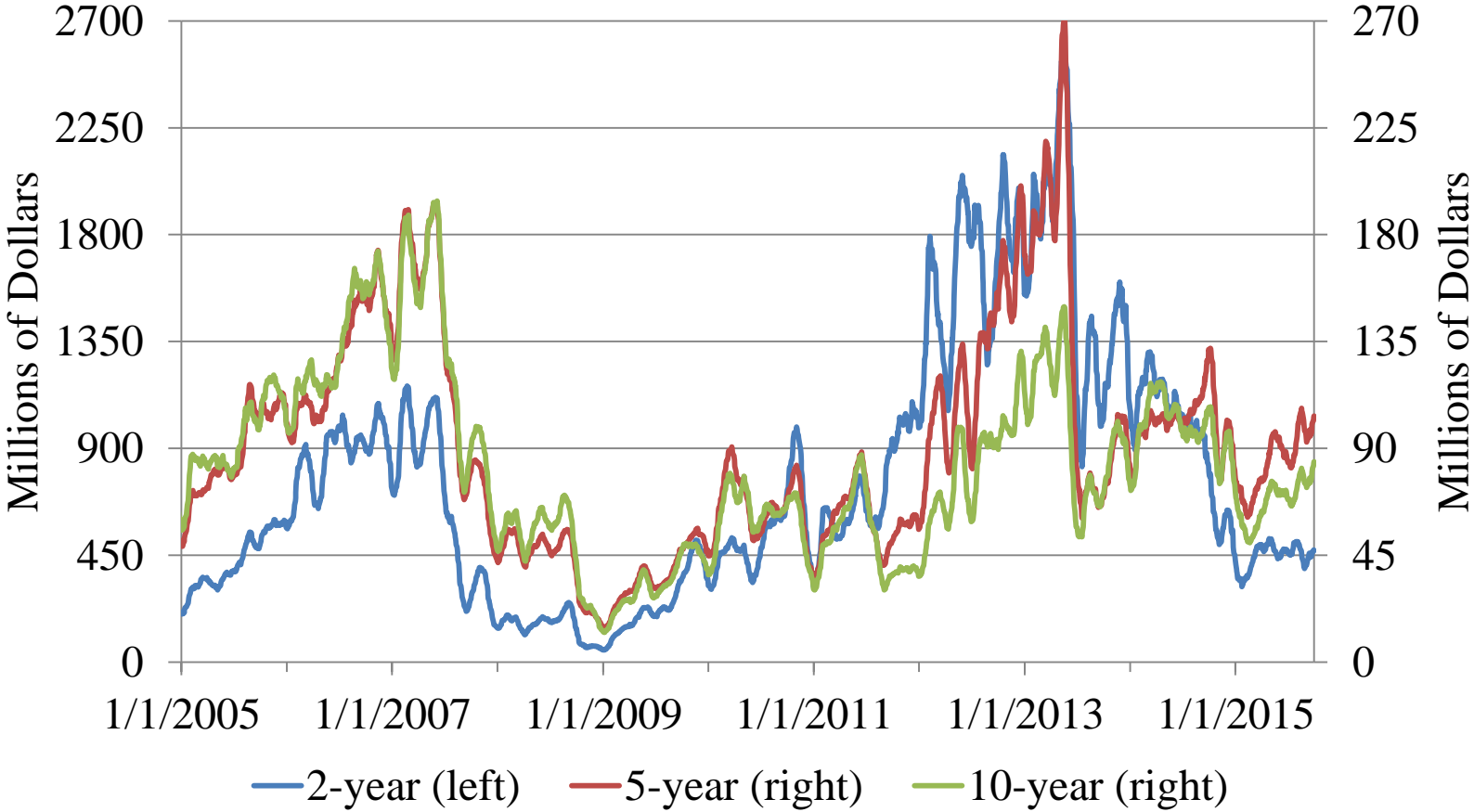
# Trade Size Has Declined Over Time



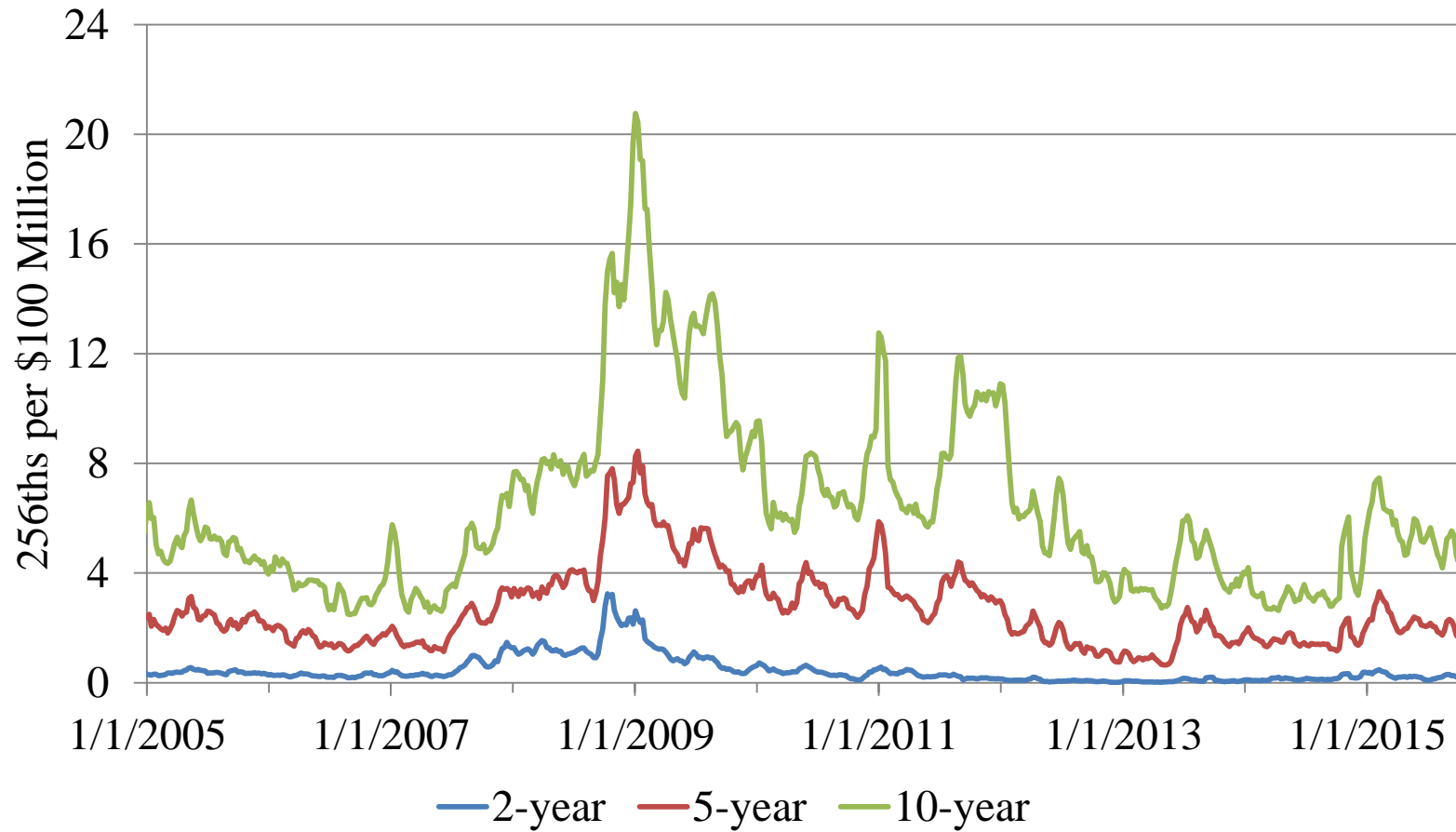
# Bid-Ask Spreads Are Narrow and Stable



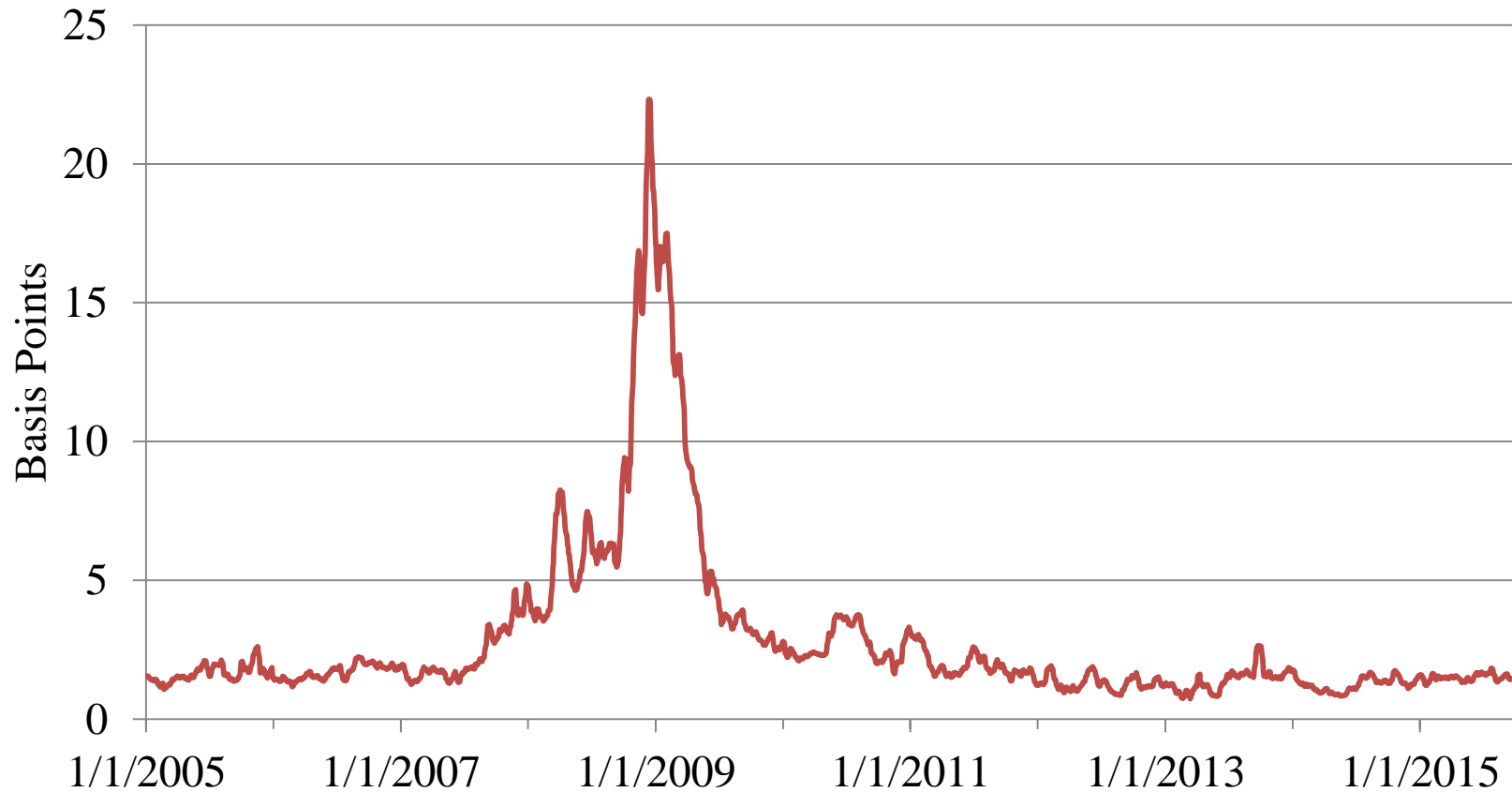
# Depth Has Declined from Recent Highs



# Price Impact of Trades Has Recently Risen



# Yield Curve Fitting Errors are Low and Stable



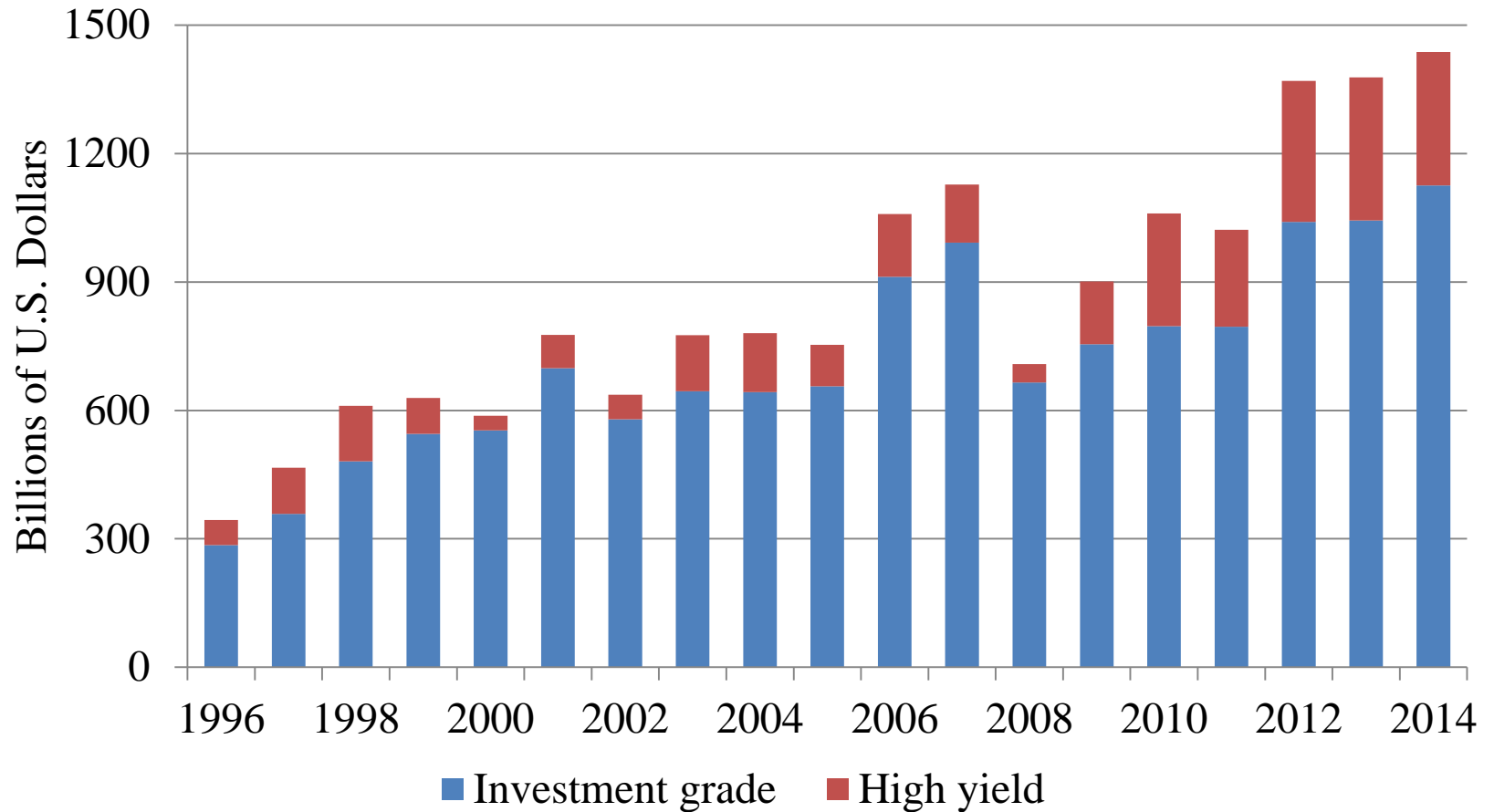


# Treasury Liquidity Caveats/Next Steps

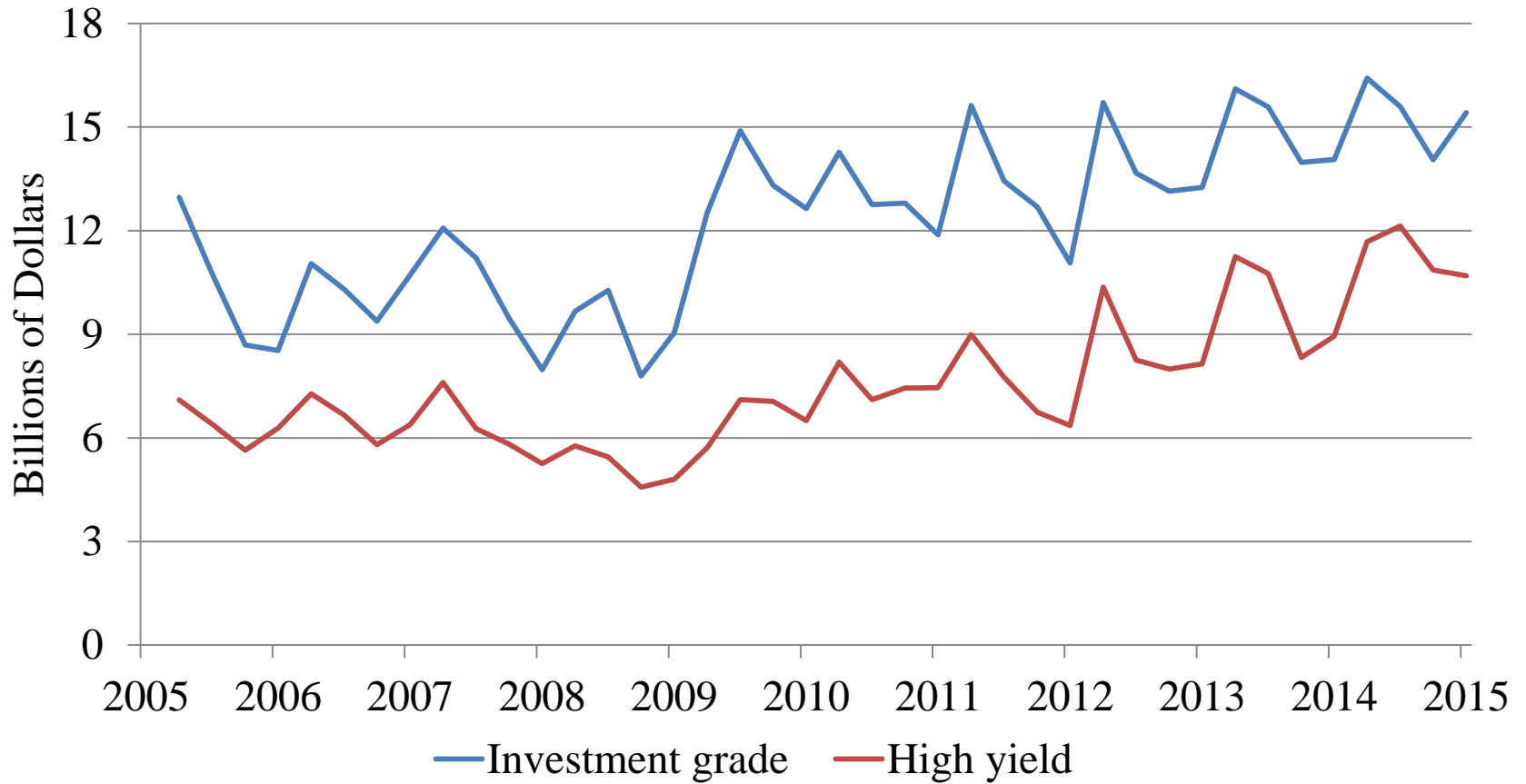
- Evidence is for interdealer market, not dealer-customer market
- Evidence is for on-the-run securities, not off-the-runs
  - Little recent evidence of liquidity bifurcation
- Structural changes may mask liquidity changes
- Concerns about future liquidity – when policy normalizes
- Concerns really about liquidity risk (not average liquidity)
  - To be discussed

# Corporate Liquidity

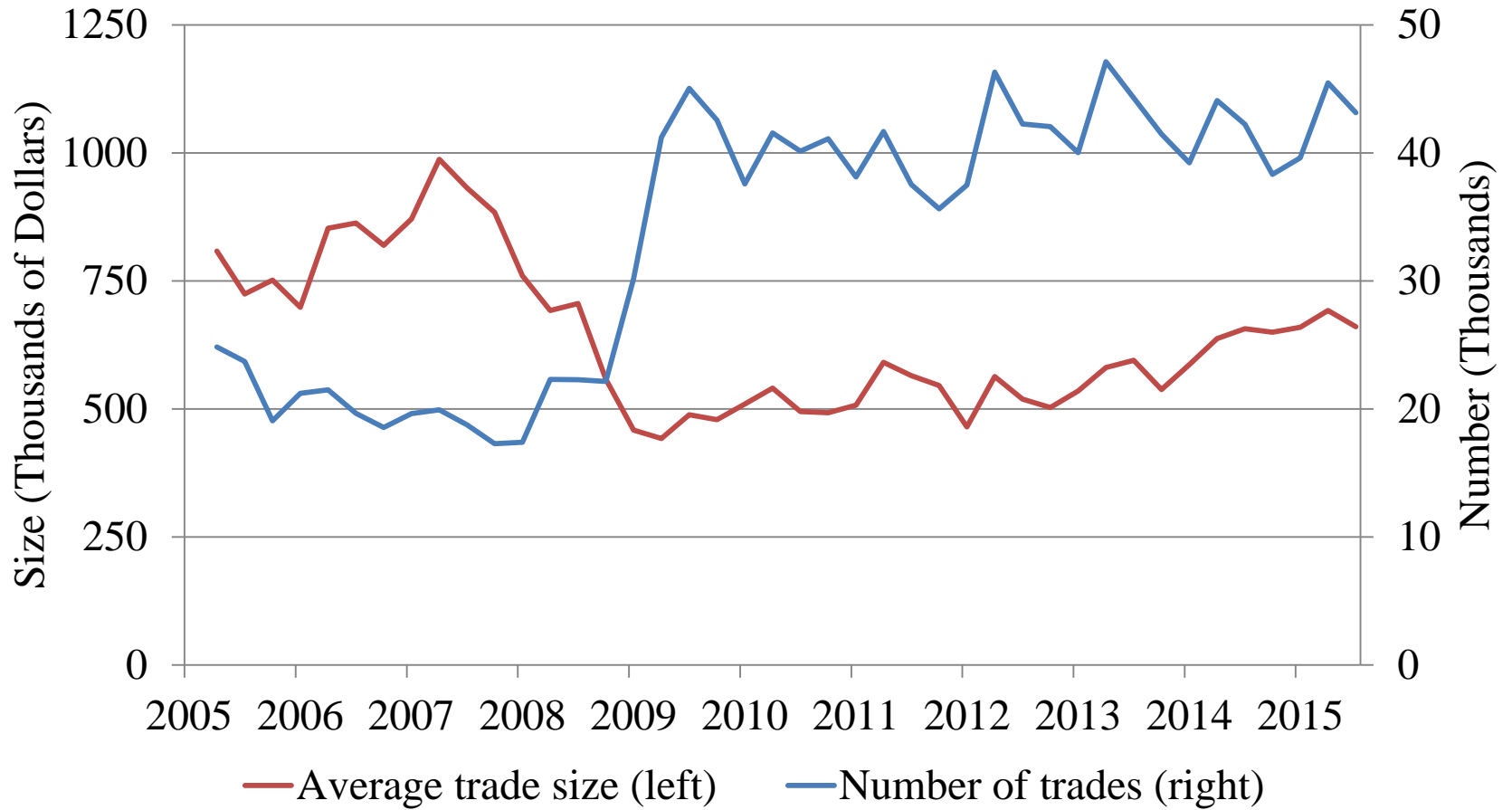
# Corporate Bond Issuance At Record Highs



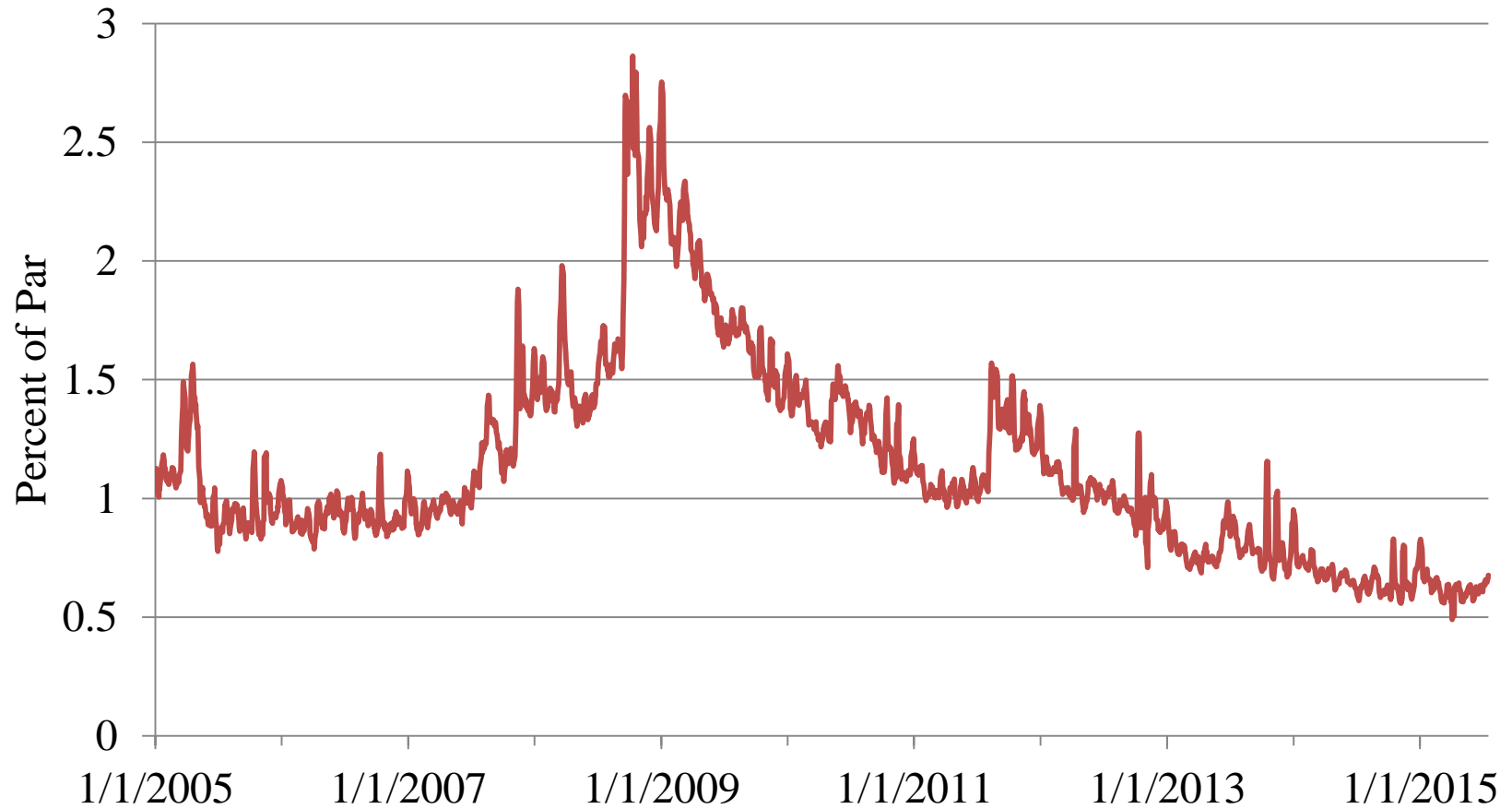
# Trading Volume Has Increased Modestly



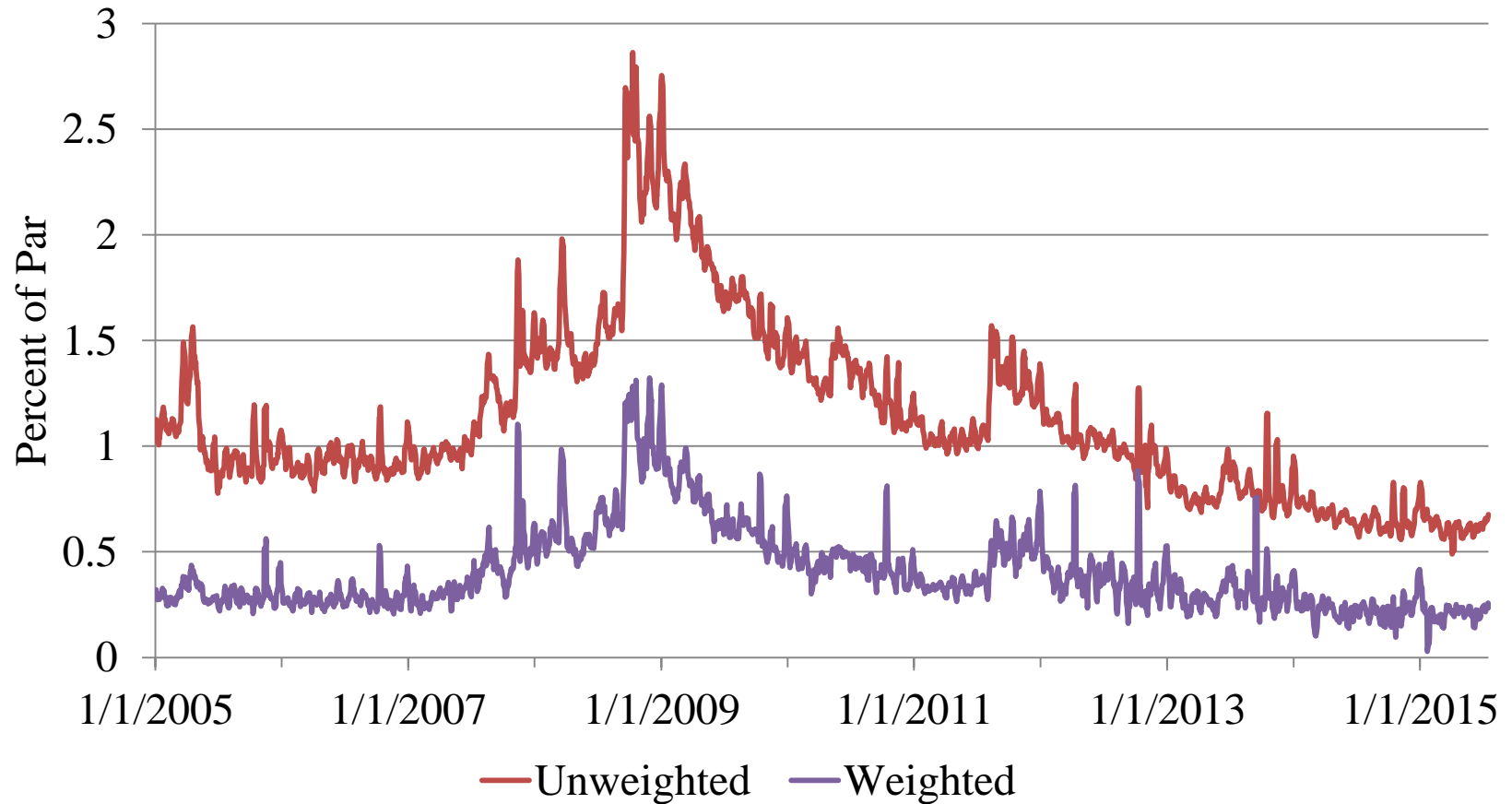
# Trade Size Has Declined



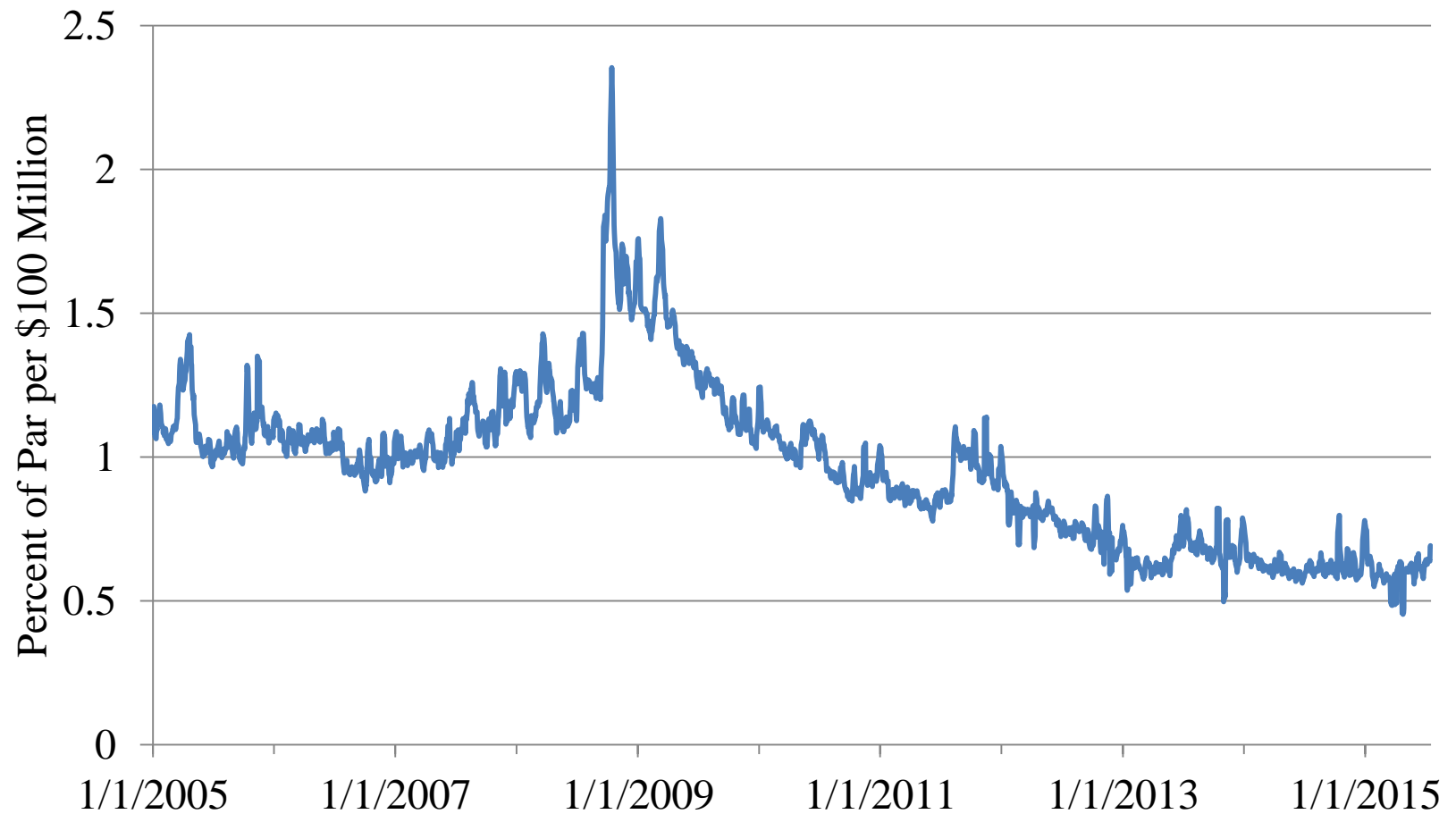
# Realized Bid-Ask Spreads Have Narrowed



# Similar Pattern When Weighting by Volume

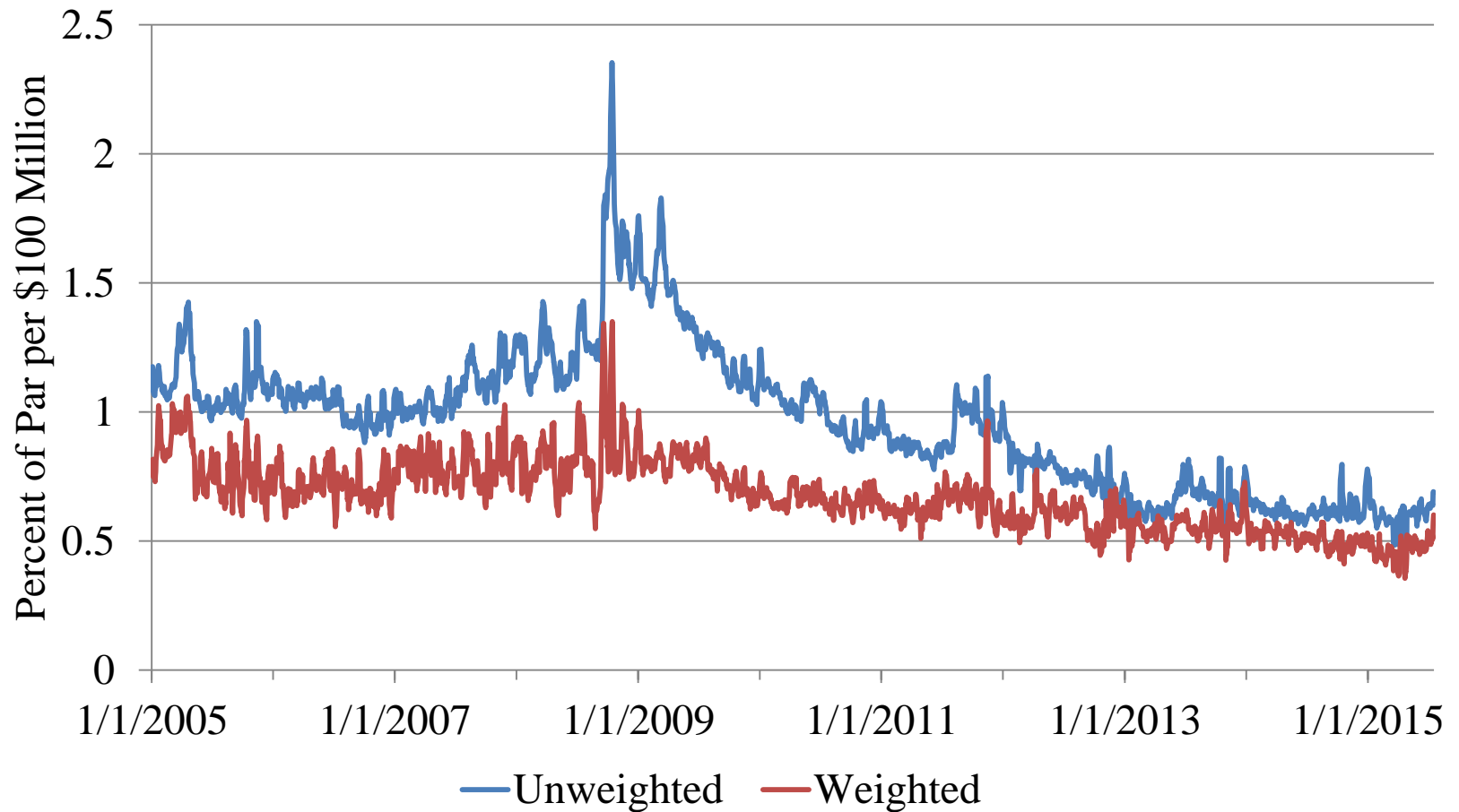


# Amihud Price Impact Has Declined Markedly

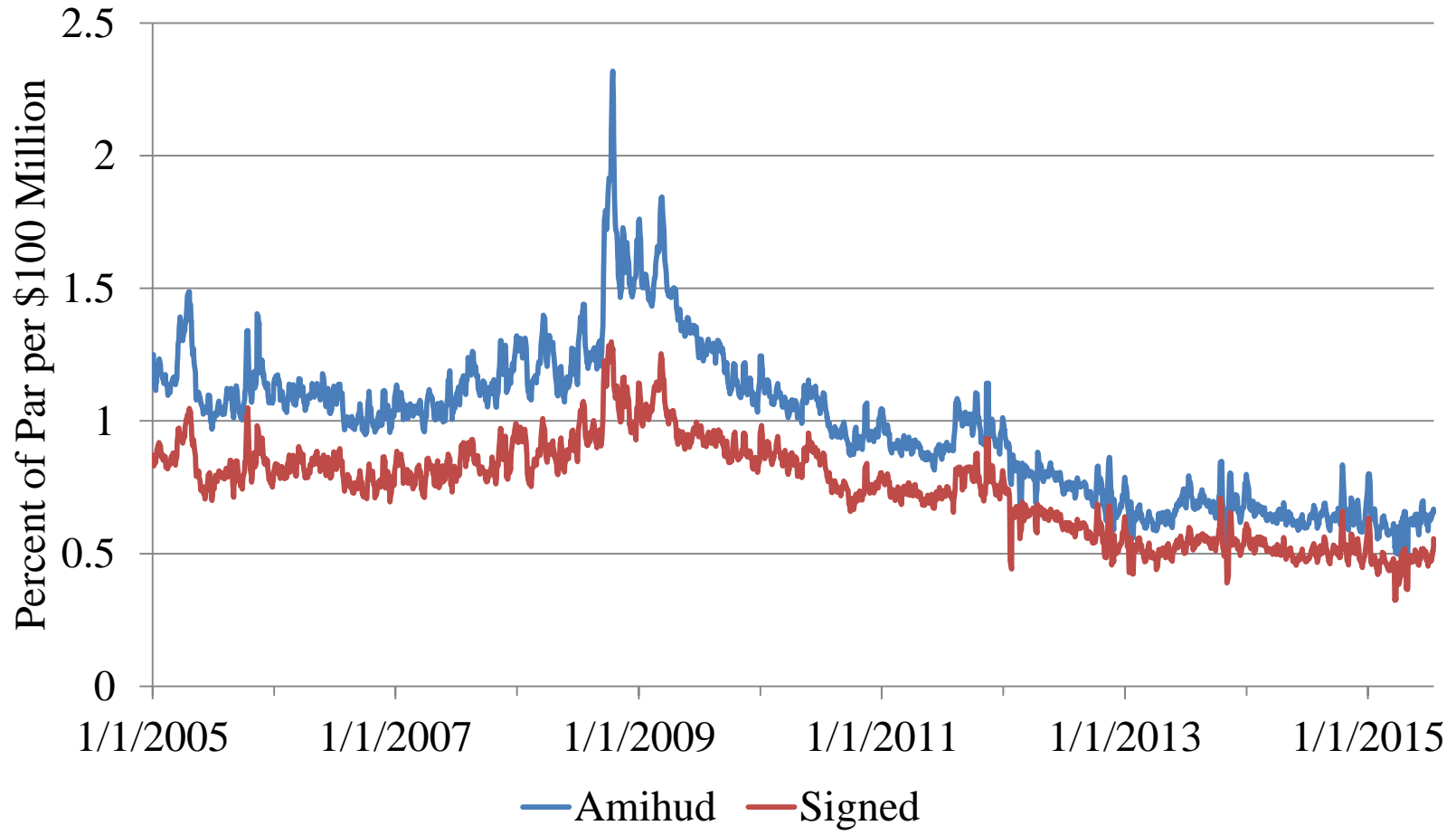




# Similar Pattern When Weighting by Volume



# Similar Pattern Using Signed Order Flow

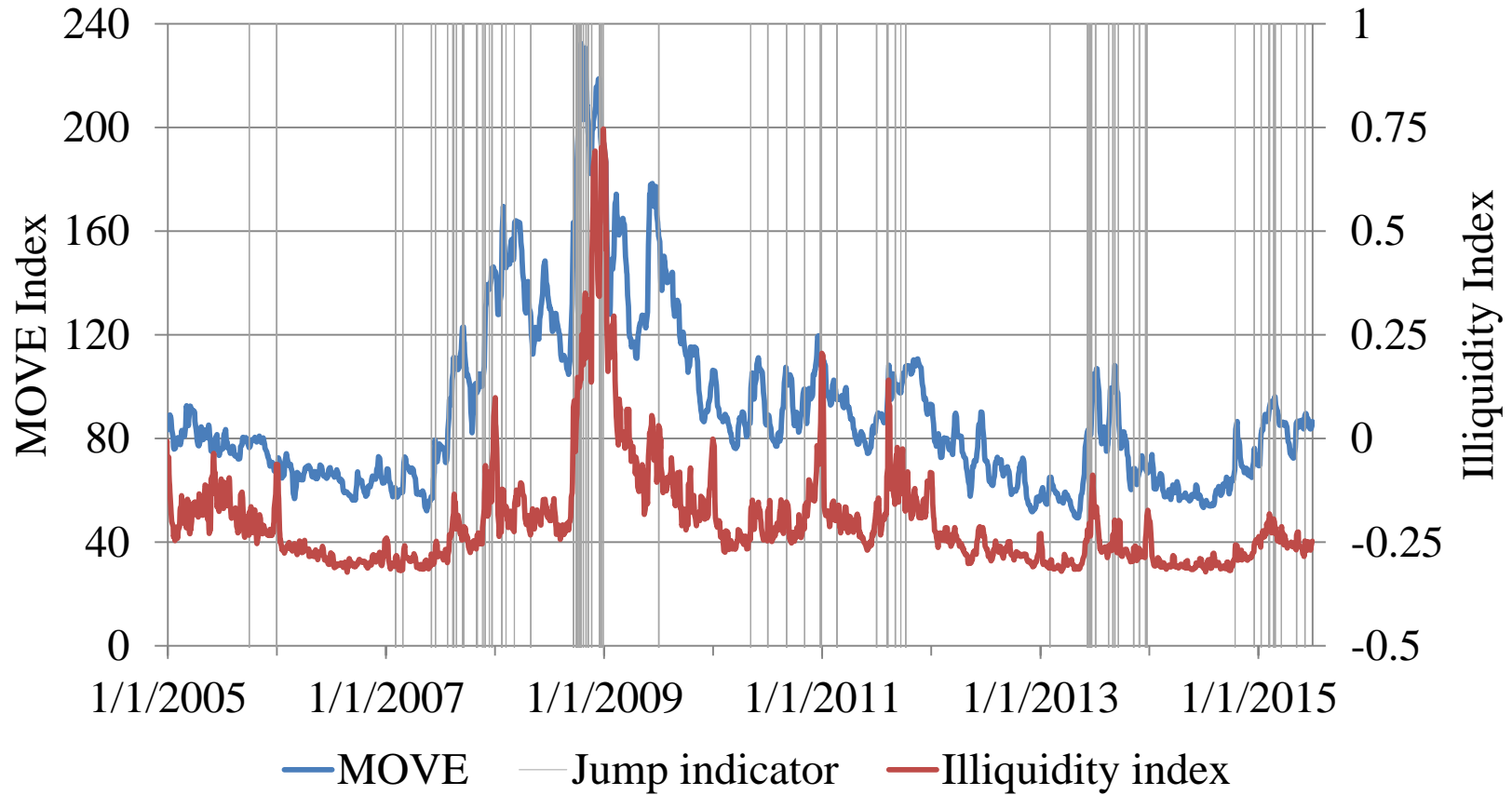


# Corporate Liquidity Caveats/Next Steps

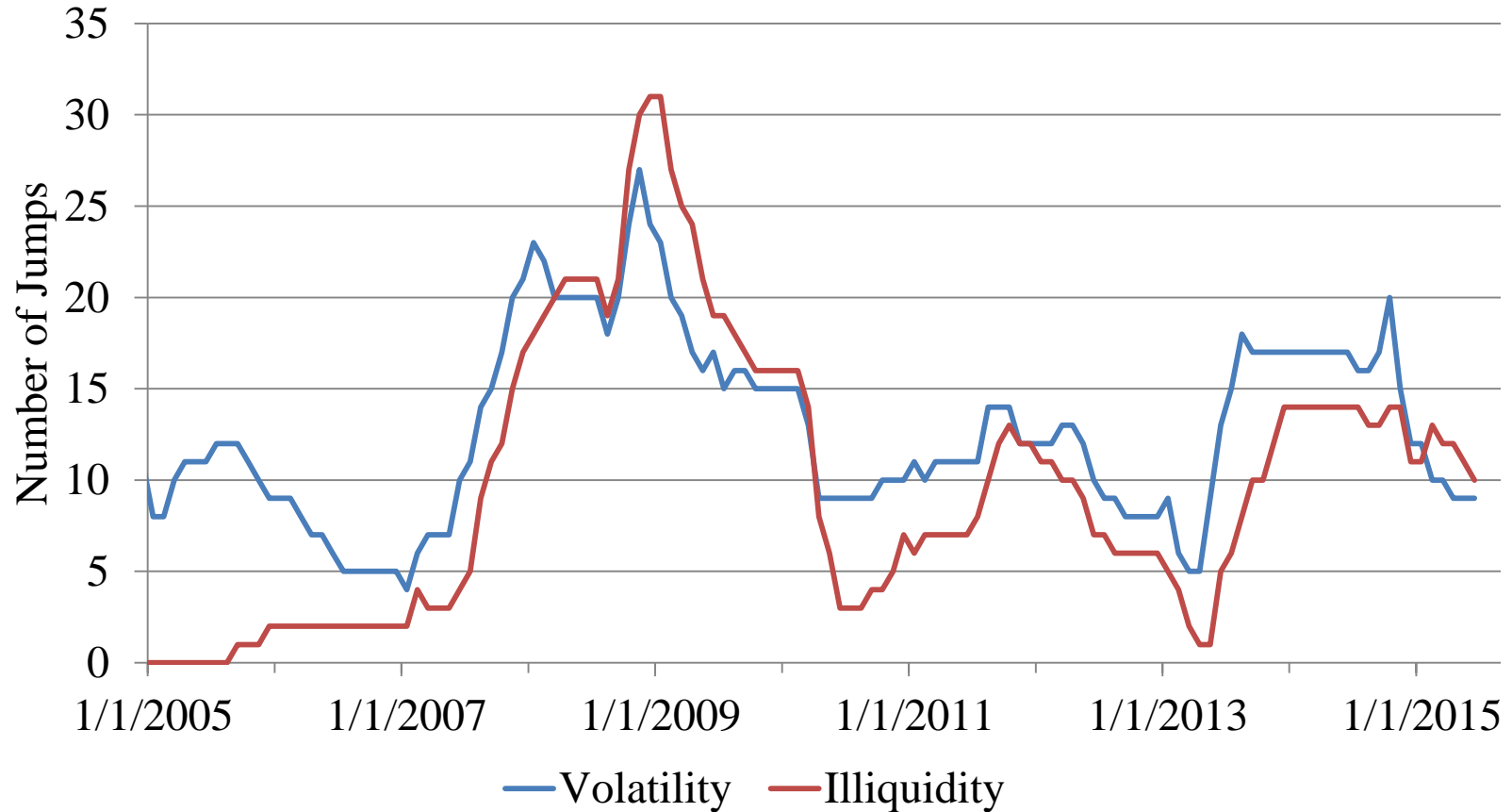
- Evidence is less direct than for Treasuries
  - Cannot directly observe bid-ask spreads or depth
- Evidence is for traded securities (data limitations)
  - Limit analysis to consistent sample over time
- Structural changes may mask liquidity changes
  - What is happening to dealer holding periods?
- Concerns about future liquidity or liquidity risk

# Liquidity Risk

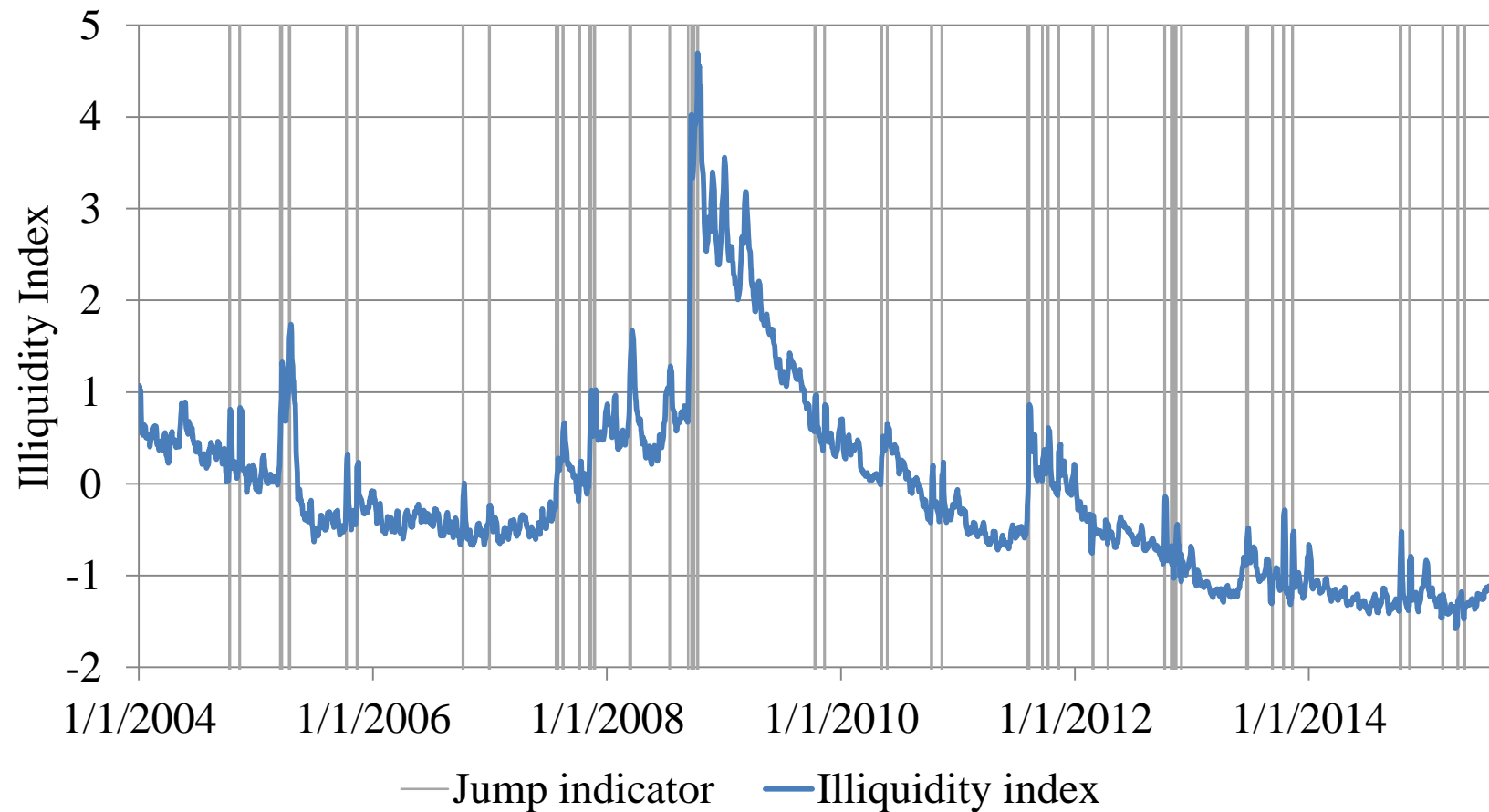
# Treasury Liquidity, Volatility, and Liquidity Risk



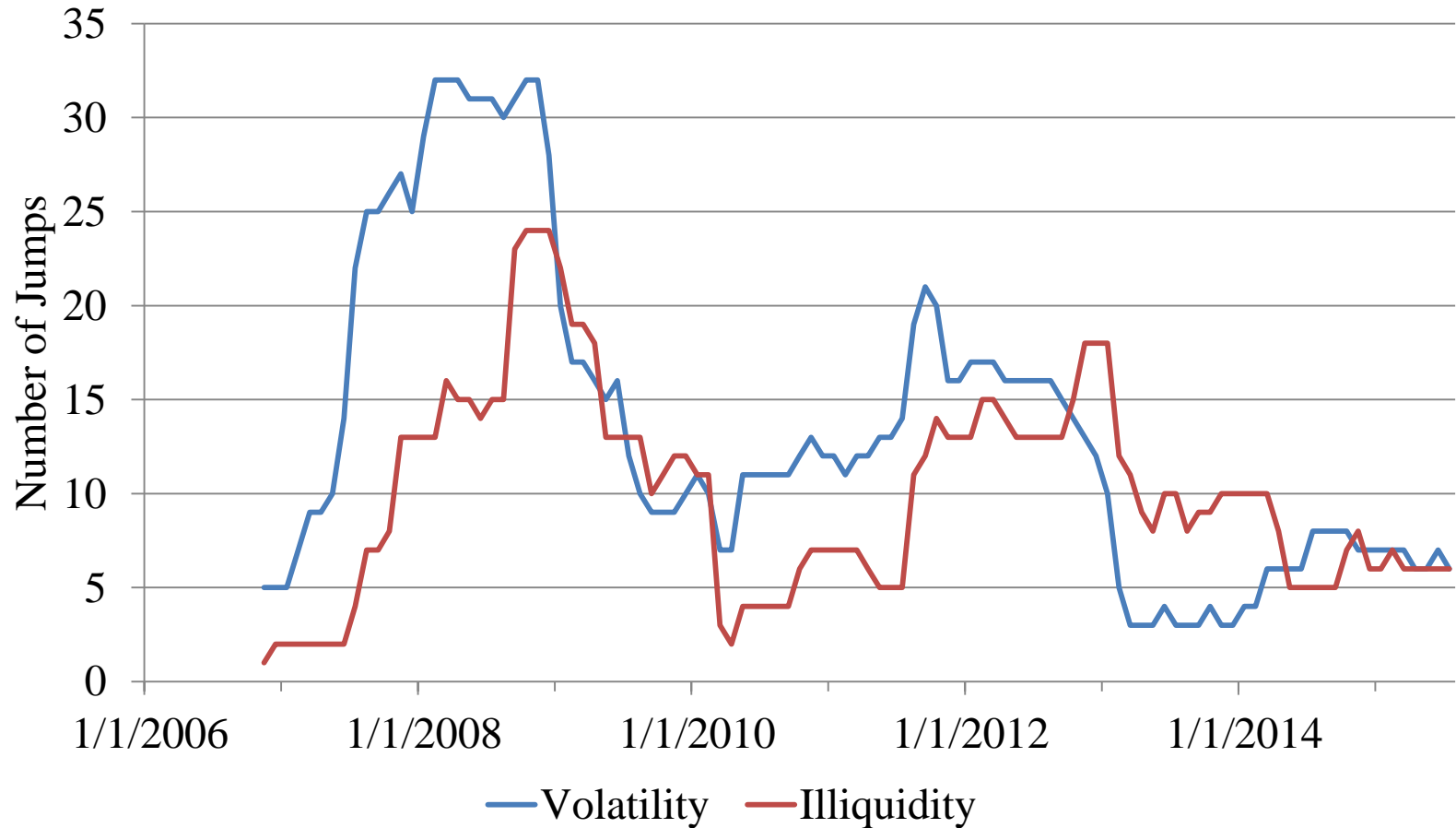
# Treasury Vol-of-Vol and Liquidity Risk Rising?



# Corporate Liquidity and Liquidity Risk

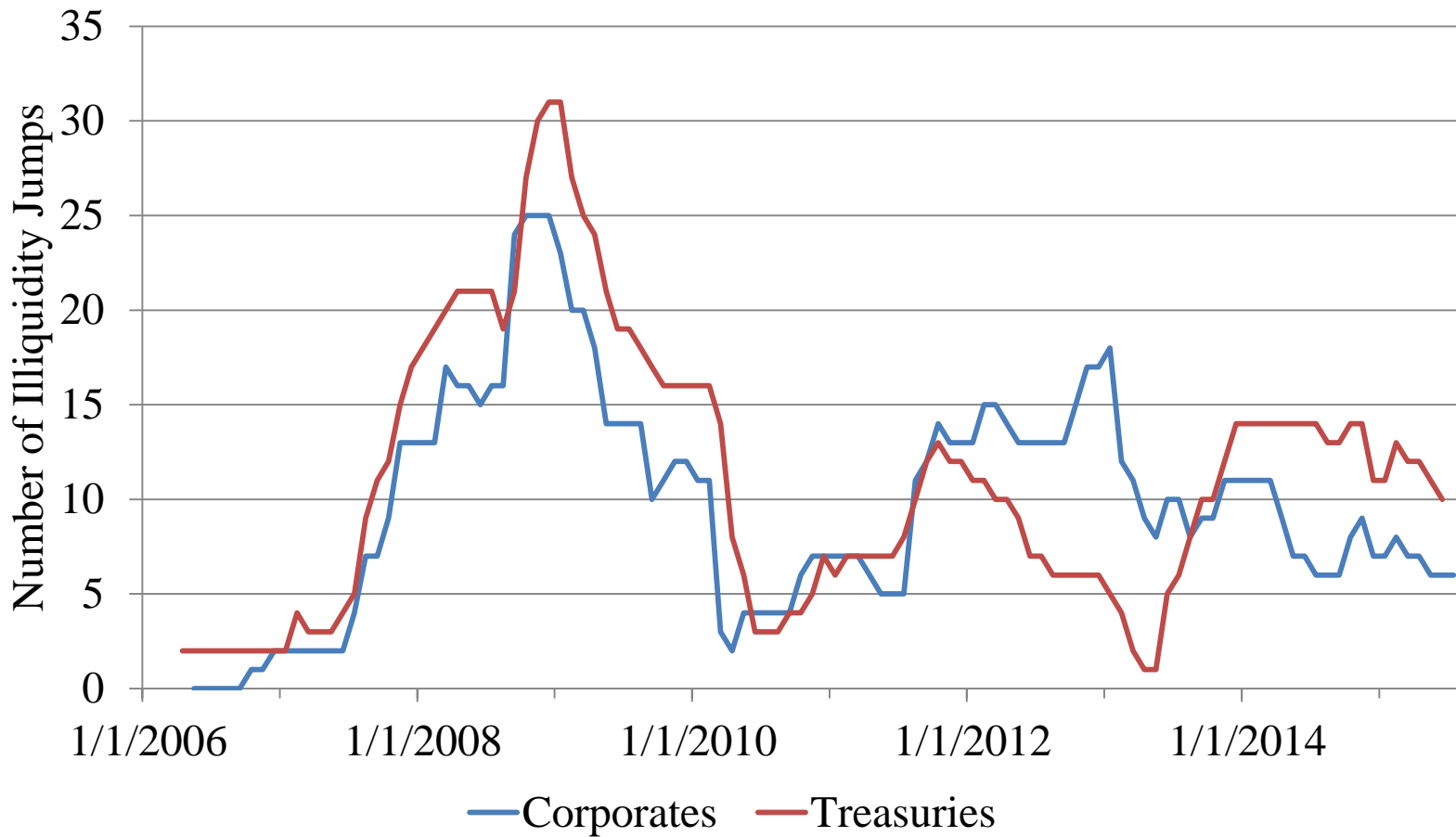


# Corporate Liquidity Risk and Vol-of-Vol Low





# Treasury and Corporate Liquidity Risk Co-Move



# Liquidity Risk Caveats/Next Steps

- This is not the only concept of liquidity risk
- Measures are based on daily changes in liquidity, binary, particular jump threshold, and specific liquidity measures
  - Make greater use of intraday data to assess liquidity risk
  - Consider weighting based on size of jump
- Measures based on average liquidity across securities
  - May miss important idiosyncratic component for corporates

# Sources

- Has U.S. Treasury Market Liquidity Deteriorated?  
<http://libertystreeteconomics.newyorkfed.org/2015/08/has-us-treasury-market-liquidity-deteriorated.html>
- Has U.S. Corporate Bond Market Liquidity Deteriorated?  
<http://libertystreeteconomics.newyorkfed.org/2015/10/has-us-corporate-bond-market-liquidity-deteriorated.html>
- Has Liquidity Risk in the Corporate Bond Market Increased?  
<http://libertystreeteconomics.newyorkfed.org/2015/10/has-liquidity-risk-in-the-corporate-bond-market-increased.html>
- Has Liquidity Risk in the Treasury and Equity Markets Increased?  
<http://libertystreeteconomics.newyorkfed.org/2015/10/has-liquidity-risk-in-the-treasury-and-equity-markets-increased.html>
- What's Driving Dealer Balance Sheet Stagnation?  
<http://libertystreeteconomics.newyorkfed.org/2015/08/whats-driving-dealer-balance-sheet-stagnation.html>