

# LIQUIDITY IMPROVEMENT

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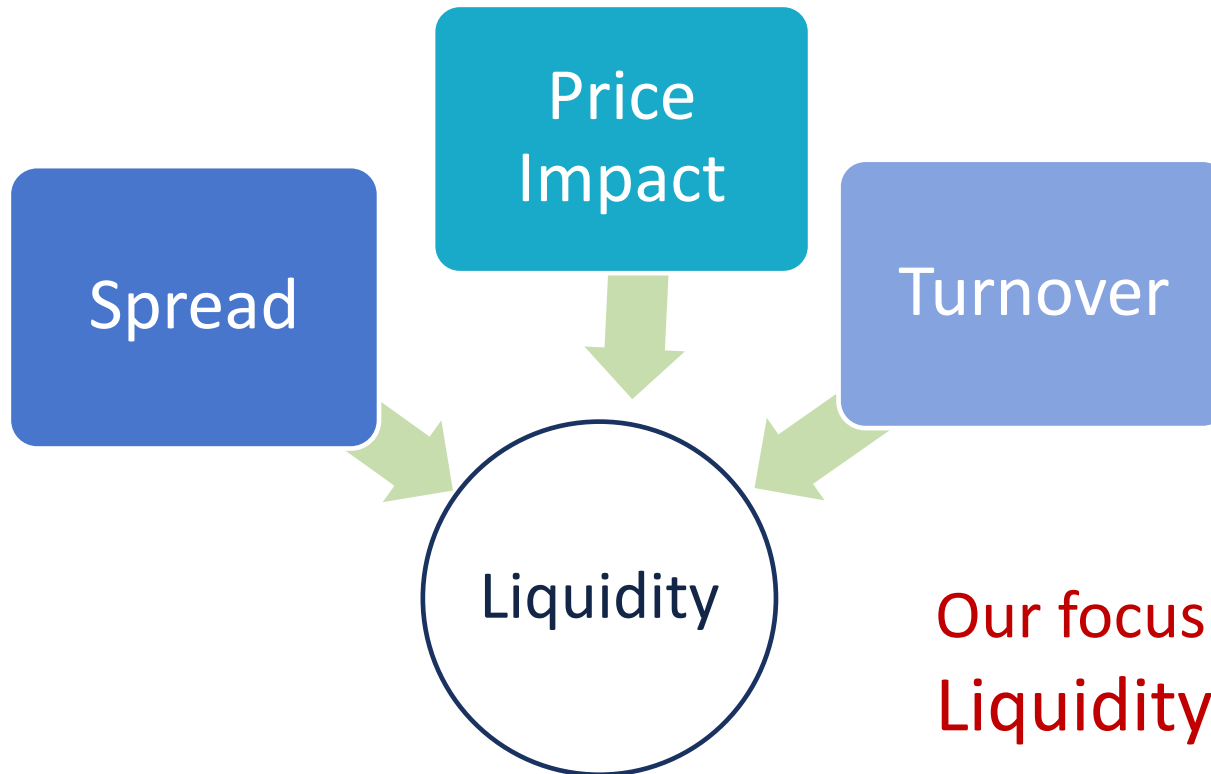
Canadian ETF Association Roundtable  
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# LIQUIDITY

According to the 2012 and 2013 Greenwich Associates surveys of asset managers and institutional funds, the 3 most important selection criteria for ETFs are:

1. Liquidity and volume
2. Cost (expense ratio)
3. Tracking error

# MEASURES



Our focus:  
Liquidity Improvement

# LIQUIDITY IMPROVEMENT

Difference between:

**ETF**

Liquidity



Cap-weighted liquidity of the underlying basket of stocks

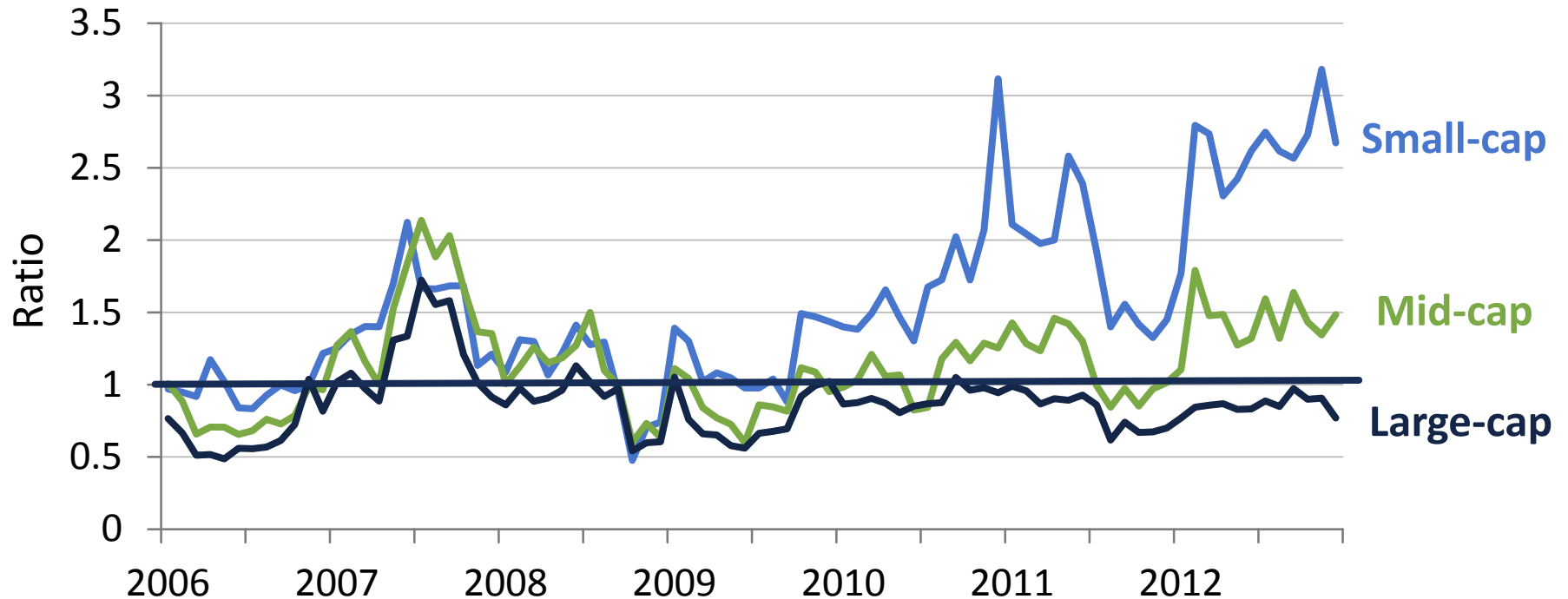
**Both are traded**

# DATA

- 147 equity ETFs traded in the U.S.
  - Domestic equities: no stale prices
  - Passive; physically replicated
- Sample period: 2006-2012
  - Daily, monthly, quarterly observations
- Sources: Morningstar Direct, Bloomberg, CRSP, 13f holdings, WRDS, Bushee's institutional investor classification

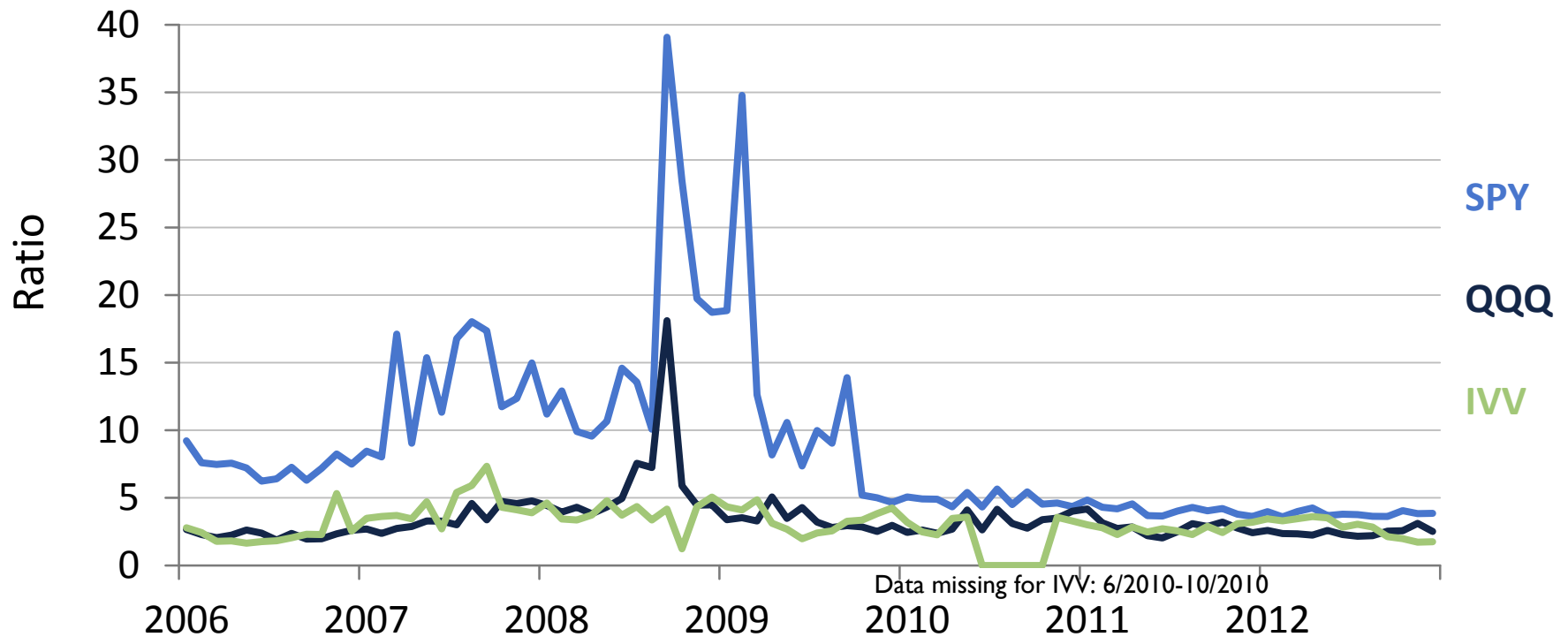
# IMPROVEMENT IN SPREAD MEDIAN RATIO

$$\frac{\text{Spread}(und)}{\text{Spread}(ETF)}$$



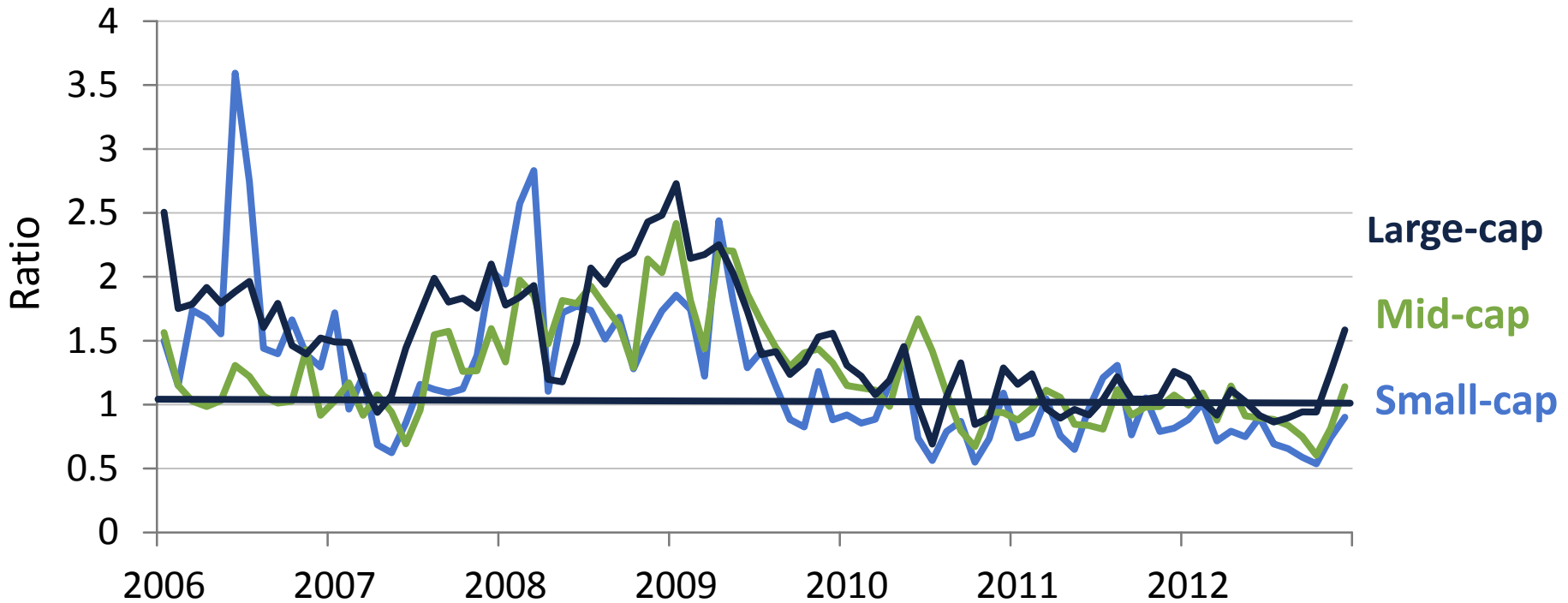
# IMPROVEMENT IN SPREAD THE BIG THREE

$$\frac{\text{Spread}(und)}{\text{Spread}(ETF)}$$



# IMPROVEMENT IN TURNOVER MEDIAN RATIO

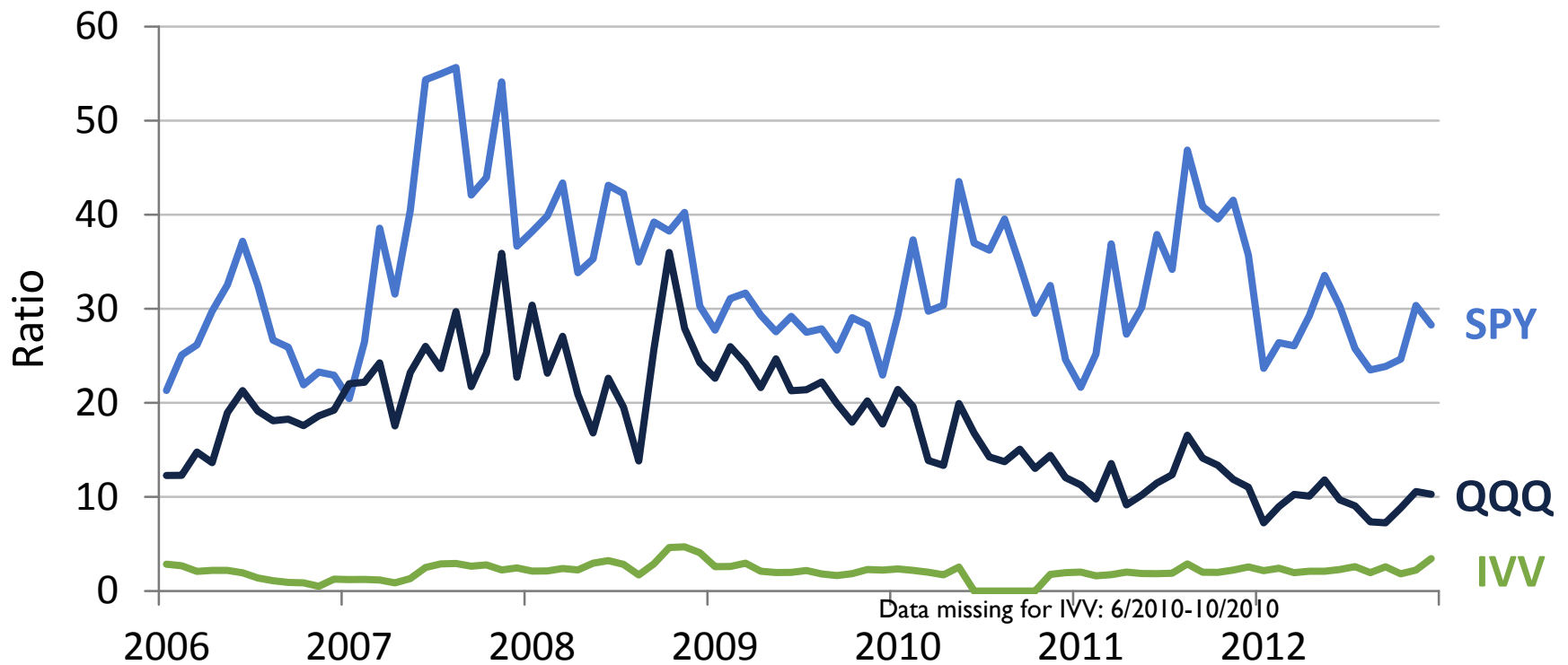
$$\frac{\text{Turnover}(ETF)}{\text{Turnover}(und)}$$





# IMPROVEMENT IN TURNOVER THE BIG THREE

$$\frac{\text{Turnover}(ETF)}{\text{Turnover}(und)}$$



# METHODOLOGY

- Regression Analysis
  - Control for a variety of individual ETF features and market factors
    - Style, AUM, age, past returns, term spread, market liquidity, market volatility, premium, creation/redemption activities....etc.

# WHERE DOES LIQUIDITY IMPROVEMENT MATTER?



$$Inflow_t = \frac{NAV_t(ShrOut_t - ShrOut_{t-1})}{AUM_t}$$

- ↑ Liquidity improvement
  - ↑ Monthly ETF inflows
- over time and cross-sectionally

# WHERE DOES LIQUIDITY IMPROVEMENT MATTER?

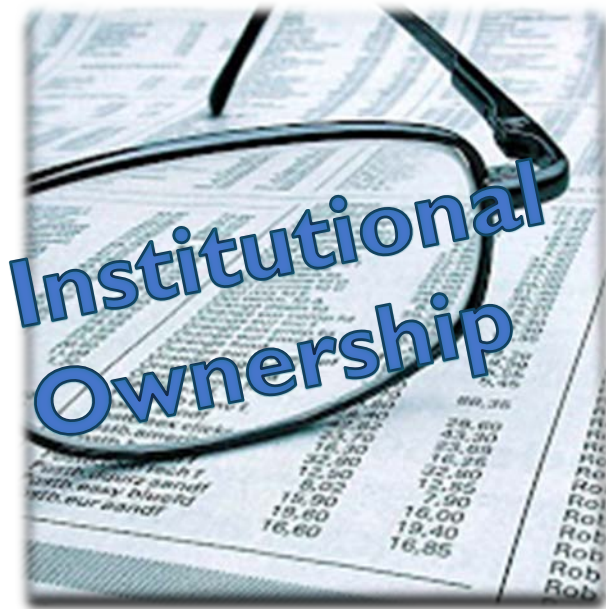


$$\text{Mispricing} = \text{Abs}(\text{Pre})$$

$$\text{Premium} = \ln \left( \frac{\text{bid} + \text{ask}}{2} \right)$$

↑  
↓  
Liquidity improvement  
Daily mispricing  
over time and cross-sectionally

# WHERE DOES LIQUIDITY IMPROVEMENT MATTER?



↑ Liquidity improvement ↑ ownership

By investor type:

matters more for investment companies

By investment strategy:

matters more for “transient” managers  
(high turnover / short horizon)