Transparency, Liquidity Uncertainty and Crises

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Why liquidity uncertainty?

- Current crisis
  - Liquidity dried up
  - Especially for opaque assets

- Investors worry about liquidity uncertainty

  "the principal challenge is not the average level of financial liquidity, but its variability and uncertainty" (Persaud, 2003)

  "As important as the level of liquidity is its *uncertainty.* Investors may avoid markets altogether where liquidity is uncertain" (McCoy, 2003)

Why might transparency matter to liquidity uncertainty?

- Grossman and Miller (1988)
  - Investors value immediacy
  - Liquidity providers facilitate immediacy
  - Charge a price for immediacy through discounts
- Lessons:
  - Illiquidity as price pressure
  - Possibility of illiquidity with volume (e.g., crises)
  - Speculators are our friends

- Brunnermeier and Pedersen (2009)
  - Liquidity providers rely on borrowed money
    - Subject to margin requirements
  - Liquidity will be affect by:
    - Anything that affects funders willingness to lend or margin requiremens
    - Anything that affects liquidity providers level of capital or risk tolerances

Predictions

- Economic shocks affect availability of liquidity capital
  - Effects will be greater for stocks with greater uncertainty about intrinsic value (opaque stocks)

H1: Liquidity variability is greater for opaque stocks

- Illiquidity effects can spiral into black holes
  - Especially for opaque stocks

H2: Extreme illiquidity events are more common for opaque stocks

- When market-wide liquidity gets tight, opaque stocks suffer more

H3: The covariance between firm liquidity and market liquidity is higher for opaque stocks

- When the market drops, liquidity dries up more for opaque stocks

H4: The covariance between firm liquidity and market return is higher for opaque stocks

- All of the previous effects are more pronounced during crisis periods
  - Market downturns reduce speculator capital and funders' willingness to lend, reducing liquidity

H5: Crises strengthen the relation between transparency and:

- **liquidity volatility,**
- **extreme illiquidity events,**
- **covariance of liquidity with market liquidity and**
- **covariance of liquidity with market returns.**

- Even more so for greater crises.
- Transparency mitigates the increase in beta during crises.

- Investors will prefer stocks with lower liquidity variability

H6: Tobin's Q is higher for firms with:

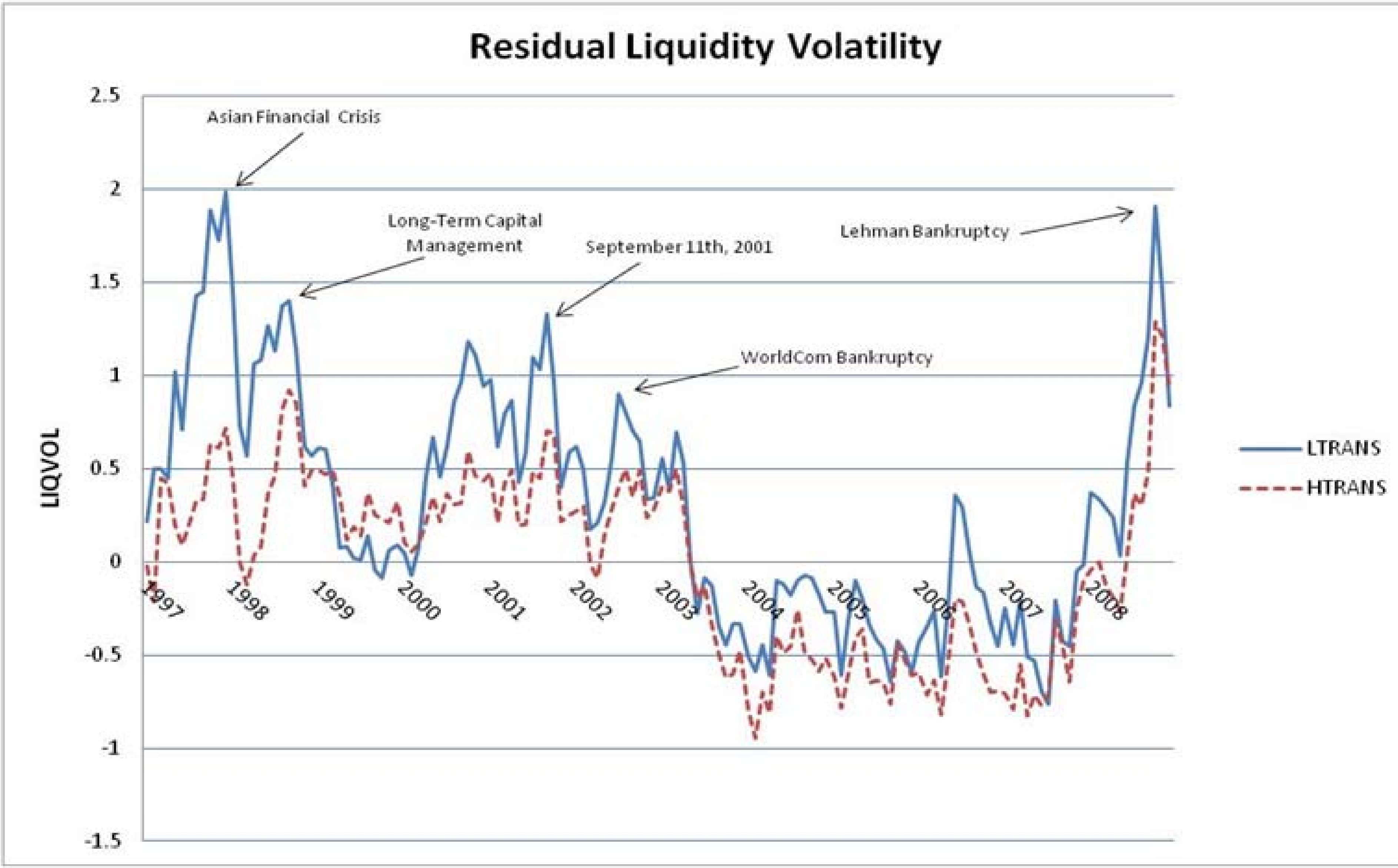
- **lower liquidity variability,**
- **fewer extreme illiquidity events,**
- **less skewed liquidity,**
- **lower correlation with market liquidity, and**
- **lower correlation with market returns.**

Research Design

- 37 countries in all, including the U.S.
  – Results are robust across countries
- Liquidity measure: Amihud price impact
  – Price movement for one million dollar trade
  – Unit of observation: firm/month
- Transparency:
  – Discretionary earnings smoothing
  – Big-5 auditor
  – Non-local accounting standards
  – Analyst following
  – Analyst forecast accuracy

Control Variables

- Level of liquidity
- Firm size
- Book-to-Market
- Standard Deviation of Returns
- Firm Returns
- Cross-Listing
- Ownership Structure
- Profitability
- Business Risk
- Country, Year and Firm Fixed Effects



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H1: Transparency and Liquidity Volatility

VARIABLES	(1) *LIQVOL*	(2) *LIQVOL*	(3) *LIQVOL*	(4) *LIQVOL*	(5) *LIQVOL*	(6) *LIQVOL*
DIS_SMTH	0.121					
	(0.001)					
INTGAAP		-0.120				
		(0.000)				
BIG5			-0.193			
			(0.000)			
ANALYST				-0.080		
				(0.000)		
ACCURACY					-1.239	
					(0.000)	
TRANS						-2.009
						(0.000)
Fixed Effects	C,Y	C,Y	C,Y	C,Y	C,Y	C,Y

H2: Transparency and Extreme Illiquidity Events

VARIABLES	(1) *LIQSKEW*	(2) *LBH*
SIZE	-0.120	-0.211
	(0.000)	(0.000)
BM	-0.014	0.030
	(0.000)	(0.003)
STDRET	-2.429	-1.301
	(0.000)	(0.011)
FRET	0.097	-0.463
	(0.027)	(0.000)
ILLIQ	0.038	0.385
	(0.000)	(0.000)
TRANS	**-0.189**	**-0.873**
	(0.000)	**(0.000)**
Fixed Effects	C,Y	C,Y

H3&4: Transparency and Liquidity Covariability

VARIABLES	(1) *COM(FL,ML)*	(2) *COM(FL,MR)*
SIZE	-0.021	-0.025
	(0.000)	(0.000)
BM	-0.002	-0.004
	(0.297)	(0.006)
STDRET	-0.247	-0.187
	(0.048)	(0.116)
FRET	-0.123	-0.072
	(0.030)	(0.180)
ILLIQ	0.014	0.015
	(0.000)	(0.000)
TRANS	**-0.118**	**-0.080**
	(0.000)	**(0.000)**
Fixed Effects	C,Y	C,Y

H5: Transparency, Liquidity Uncertainty and Crises

VARIABLES	(1) *LIQVOL*	(2) *LIQVOL*	(3) *LIQSKEW*	(4) *LIQSKEW*	(5) *LBH*	(6) *LBH*	(7) *COM(FL,ML)*	(8) *COM(FL,ML)*	(9) *COM(FL,MR)*	(10) *COM(FL,MR)*
TRANS	-1.961	-1.957	-0.181	-0.181	-0.812	-0.810	-0.094	-0.094	-0.070	-0.070
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
MKTDOWN_BIG	0.838		0.072		0.722		0.159		0.038	
	(0.000)		(0.000)		(0.000)		(0.000)		(0.047)	
MKTDOWN_BIG1		0.745		0.053		0.500		0.134		0.006
		(0.000)		(0.008)		(0.000)		(0.000)		(0.818)
MKTDOWN_BIG2		1.046		0.091		1.070		0.193		0.079
		(0.000)		(0.000)		(0.000)		(0.000)		(0.006)
*MKTDOWN_BIG*TRANS*	-0.692		-0.119		-0.901		-0.361		-0.159	
	(0.000)		(0.000)		(0.000)		(0.000)		(0.000)	
*MKTDOWN_BIG1*TRANS*		-0.699		-0.070		-0.605		-0.316		-0.096
		(0.000)		(0.054)		(0.000)		(0.000)		(0.043)
*MKTDOWN_BIG2*TRANS*		-0.840**		-0.168**		-1.370***		-0.418*		-0.234**
		(0.000)		(0.000)		(0.000)		(0.000)		(0.000)
Fixed Effects	C,Y	C,Y	C,Y	C,Y	C,Y	C,Y	C,Y	C,Y	C,Y	C,Y

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H6: Liquidity Uncertainty and Valuation

VARIABLES	(1) *Q*	(2) *Q*	(3) *Q*	(4) *Q*	(5) *Q*	(6) *Q*
A_LIQVOL	-0.025					-0.005
	(0.000)					(0.038)
A_LIQSKEW		-0.303				-0.263
		(0.000)				(0.000)
A_LBH			-0.042			-0.023
			(0.000)			(0.000)
A_COM(FL,ML)				-0.094		-0.070
				(0.000)		(0.000)
A_COM(FR,ML)					-0.103	-0.067
					(0.000)	(0.000)
Fixed Effects	C,Y	C,Y	C,Y	C,Y	C,Y	C,Y

Conclusions

- Liquidity variability, extreme illiquidity events and liquidity covariability with market liquidity and market returns are correlated with transparency
  - Very robust
- Importance of transparency varies predictably across institutional environments
- Effects are particularly strongest during crises
- Each dependent variable is correlated with Tobin's Q