

IS THE MARKET “RIGGED”?

OR, WHY WE NO LONGER MANUFACTURE “ORDERLINESS” ON THE NYSE

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WHAT IS AN EXCHANGE?

SASE CHICAGO JULY 11, 2014

OVERVIEW

Caveat

Results

Argument

Further Considerations

CAVEAT

Division of labor

Law **Diamond**

Theory **Diamond and Kuan**

Data **Kuan (jwkuan@stanford.edu)**

RESULTS

We compared bid-ask spreads (our dependent variable) for shares listed on NYSE before and after implementation of Reg. NMS

We found a 10% increase in spreads as trading shifted to Nasdaq post-NMS

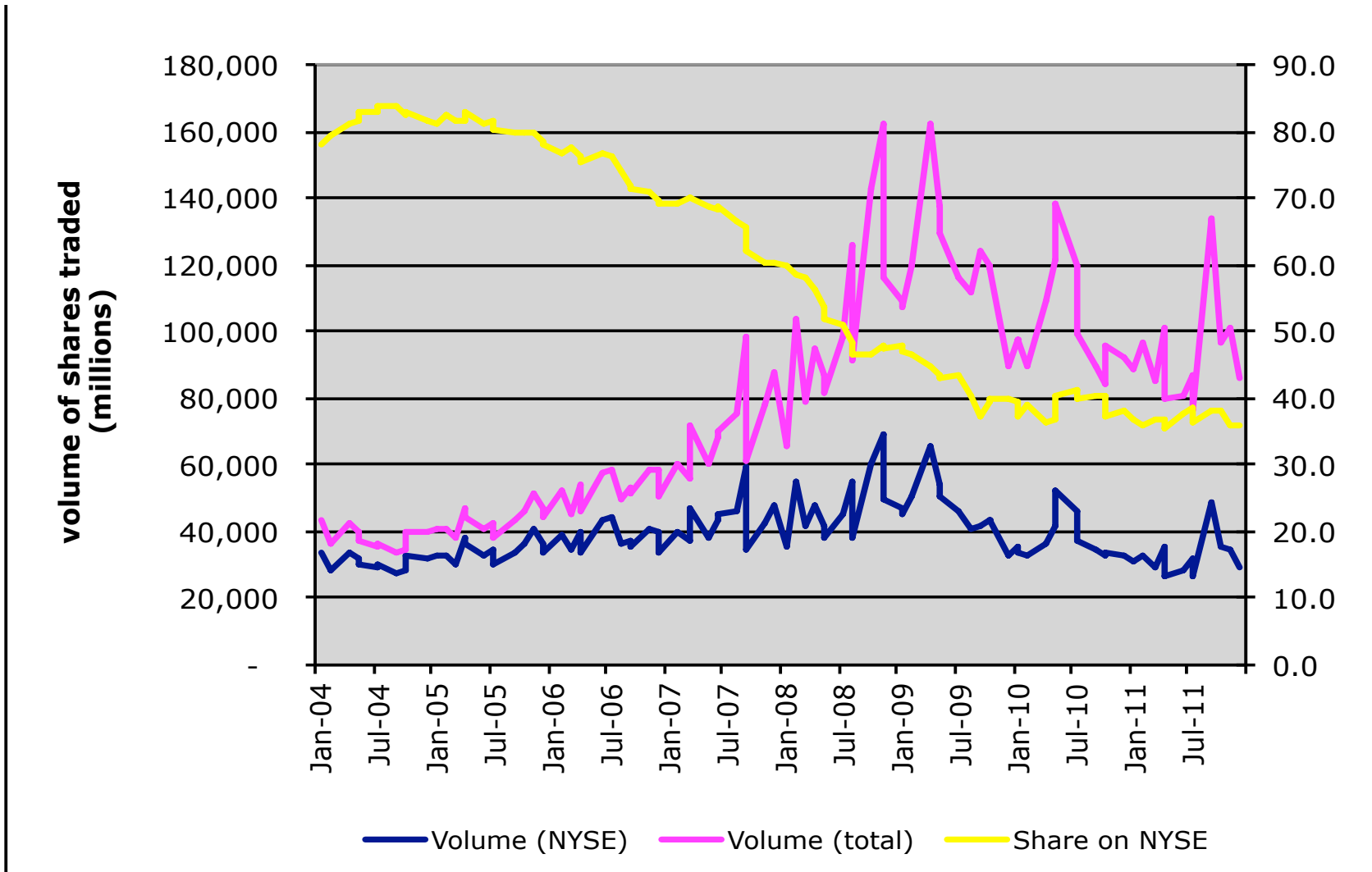
(key interaction in regression: Nasdaq*after)

(we hold listing firms and information constant across exchanges)

This result runs counter to prevailing SEC orthodoxy about market competition

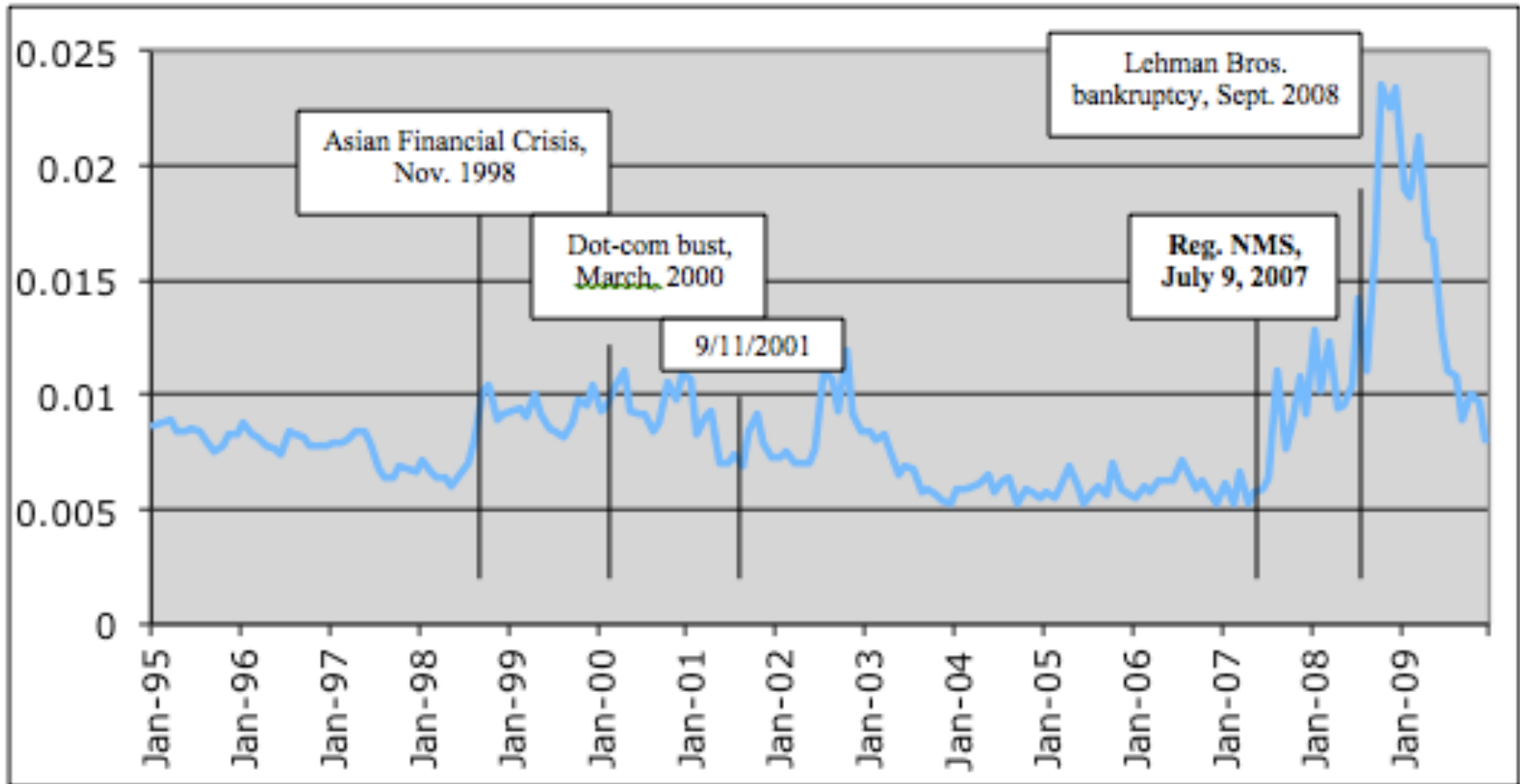
DEATH OF NYSE

SHIFT IN TRADING VOLUME AWAY FROM NYSE



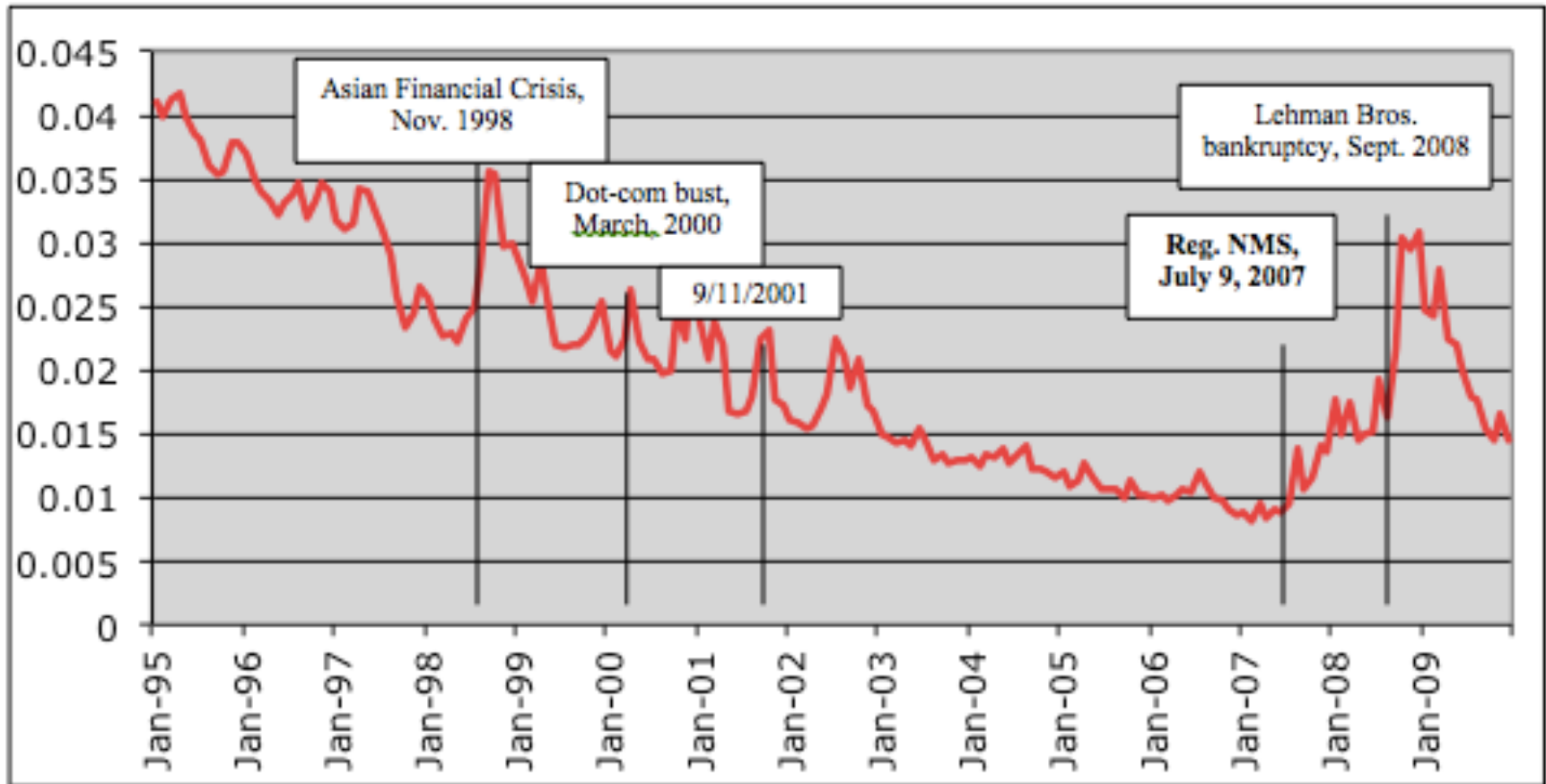
CAN'T HANDLE THIS!

AVERAGE NYSE SPREAD (1995-2009)

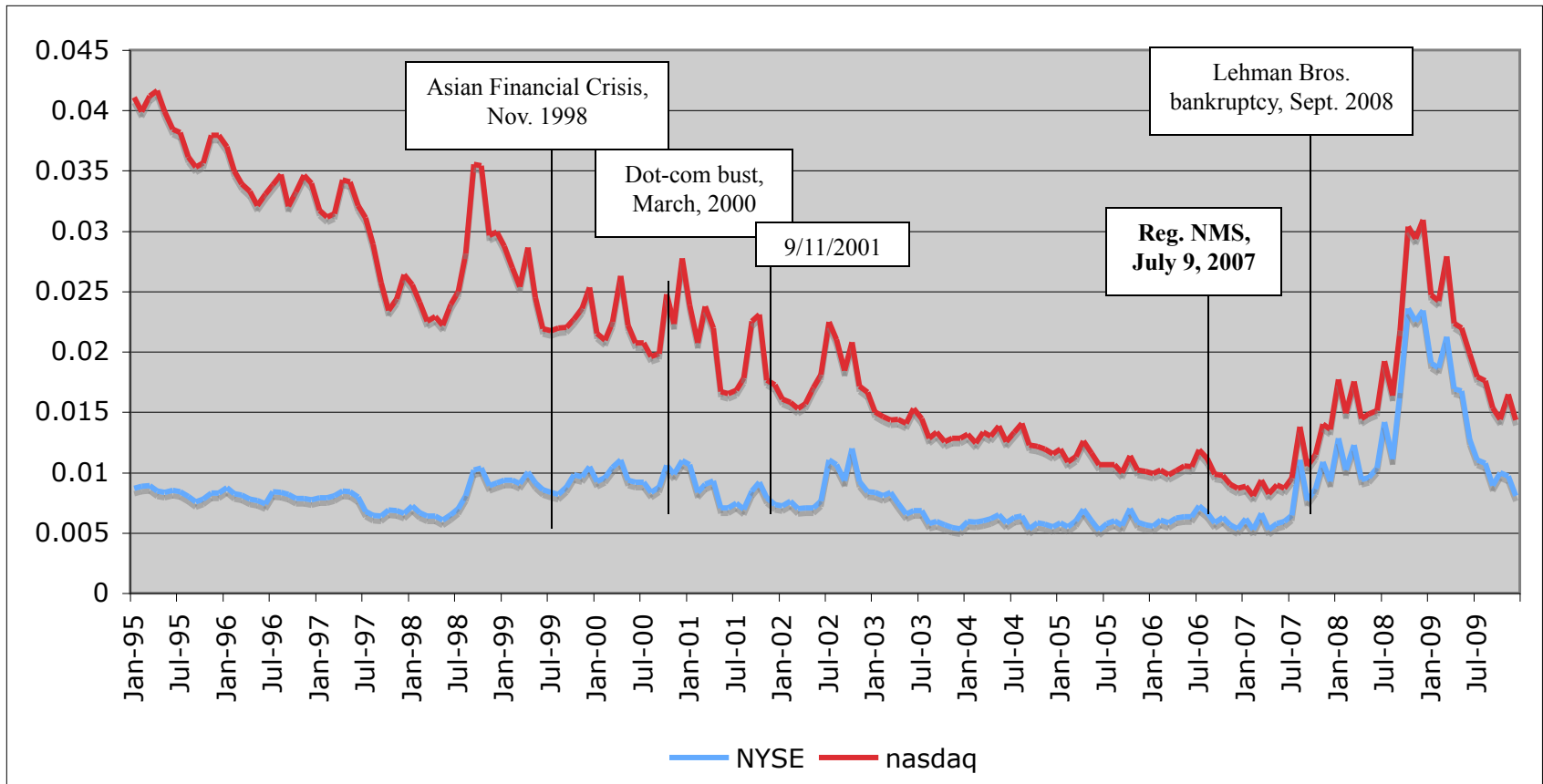


DANGEROUS WATERS

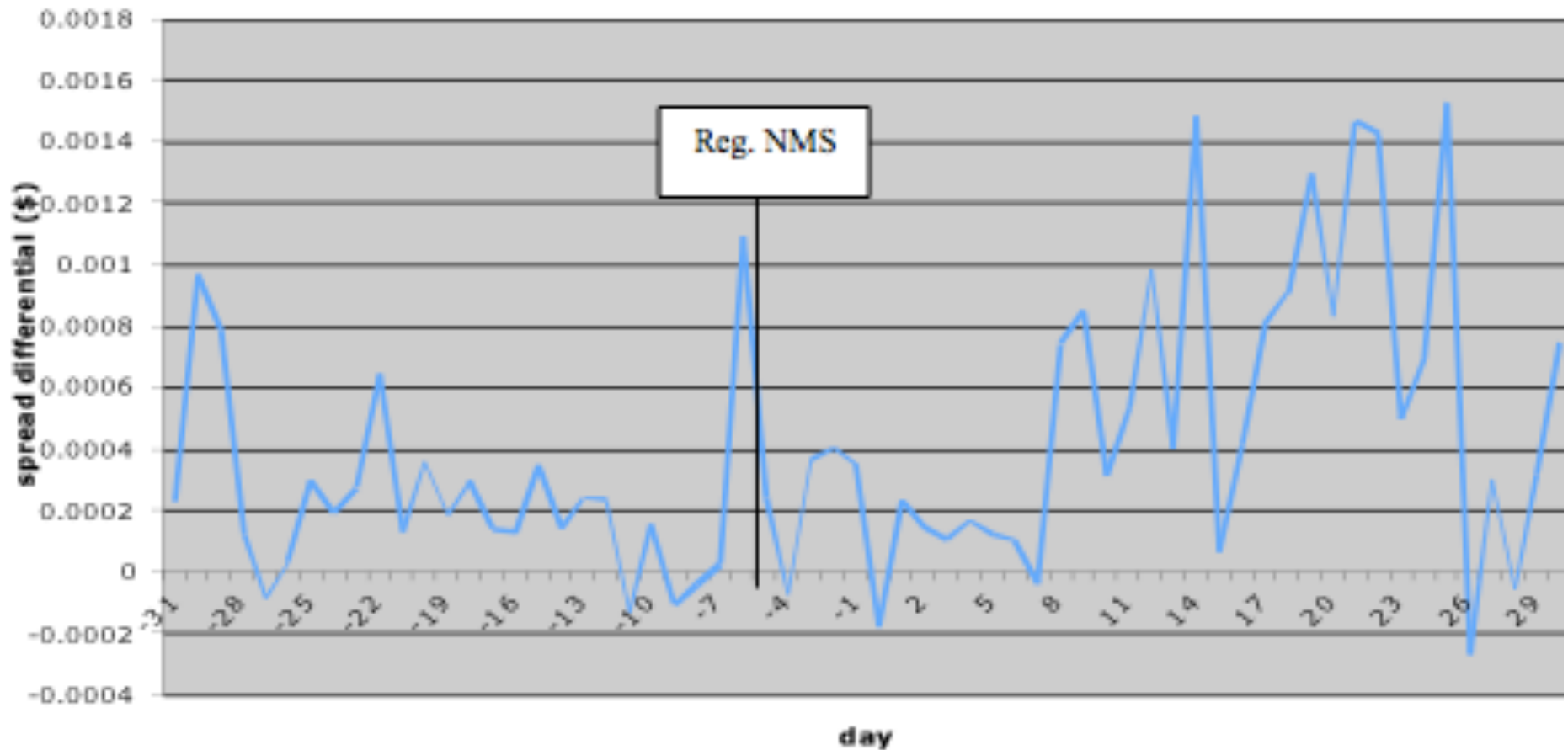
AVERAGE NASDAQ SPREADS



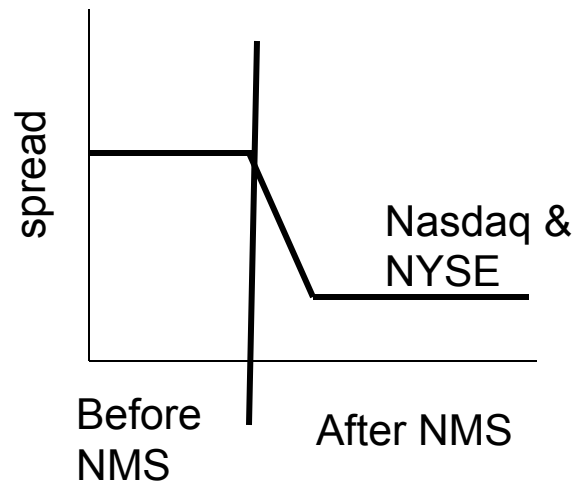
AVERAGE SPREADS ON NYSE, NASDAQ (1995-2009)



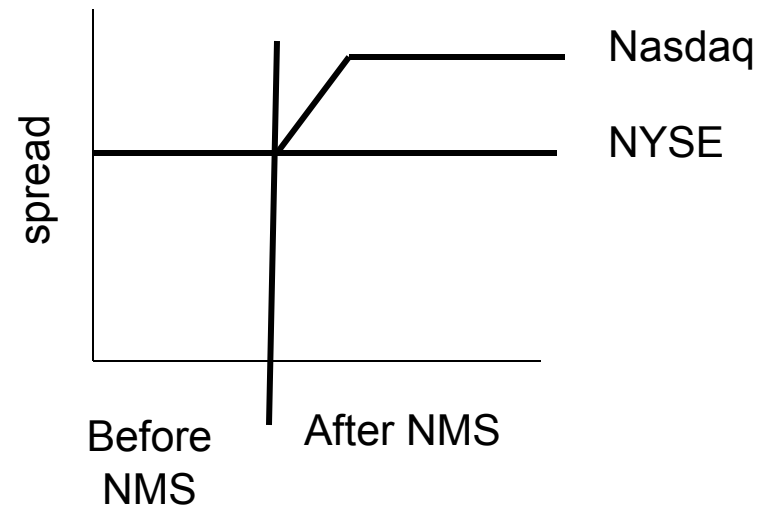
OUR EVENT DATE (+/- 30 NMS) NASDAQ - NYSE SPREAD



SEC'S THEORY V. OUR THEORY



Homogeneous owners
(SEC hypothesis)



Heterogeneous owners
(our hypothesis)

MECHANISM MATTERS

Pre-NMS - Stock market a dual monopoly

Each venue governed by different owners and therefore institutions, i.e., listing and trading mechanisms

Result was different incentives and thus outcomes

SPREAD FOR STOCK “A”

bid	ask
\$100	\$110

Dealer market (Nasdaq)

buy from Seller for \$100

sell to Buyer for \$110

profit: \$10

Auction market (NYSE)

match Seller and Buyer, set price at \$105

both get better price

profit: \$0

NYSE “SMOOTH”

NYSE – Orderliness in demand

Owned by underwriters

UW’s served two-sided market

Listing firms (diligence)

Investors (specialists)

NASDAQ “ROUGH”

Nasdaq – Discontinuity in demand

Owned by dealers

Dealers serve themselves

Take both sides of trade

Weak listing standards (OTC origins)

FURTHER CONSIDERATIONS

Capitalists should want

a pricing mechanism that helps capital allocation

a mechanism to transmit **information** between investors and firms

But evidence now that new intermediaries (HFTs) game system with no increase in information flow (e.g., *Flash Boys*, NY AG suit v. Barclays)

We now trade \$56 trillion for every \$220 billion in capital raised (ref: John Bogle)

RESULTS

Dependent variable: spread

	(1)	(2)	(3)
Nasdaq (y=1)	0.024*** (0.004)	0.024*** (0.004)	0.024*** (0.004)
After	0.163*** (0.015)	-0.054** (0.022)	-0.550*** (0.059)
Nasdaq * after	0.033*** (0.007)	0.033*** (0.007)	0.033*** (0.007)
Trend		0.007*** (0.001)	0.001 (0.001)
Trend*after			0.014*** (0.001)
N	27,166	27,166	27,166

Model: stock fixed effects

Data: 200+ NYSE-listed stocks