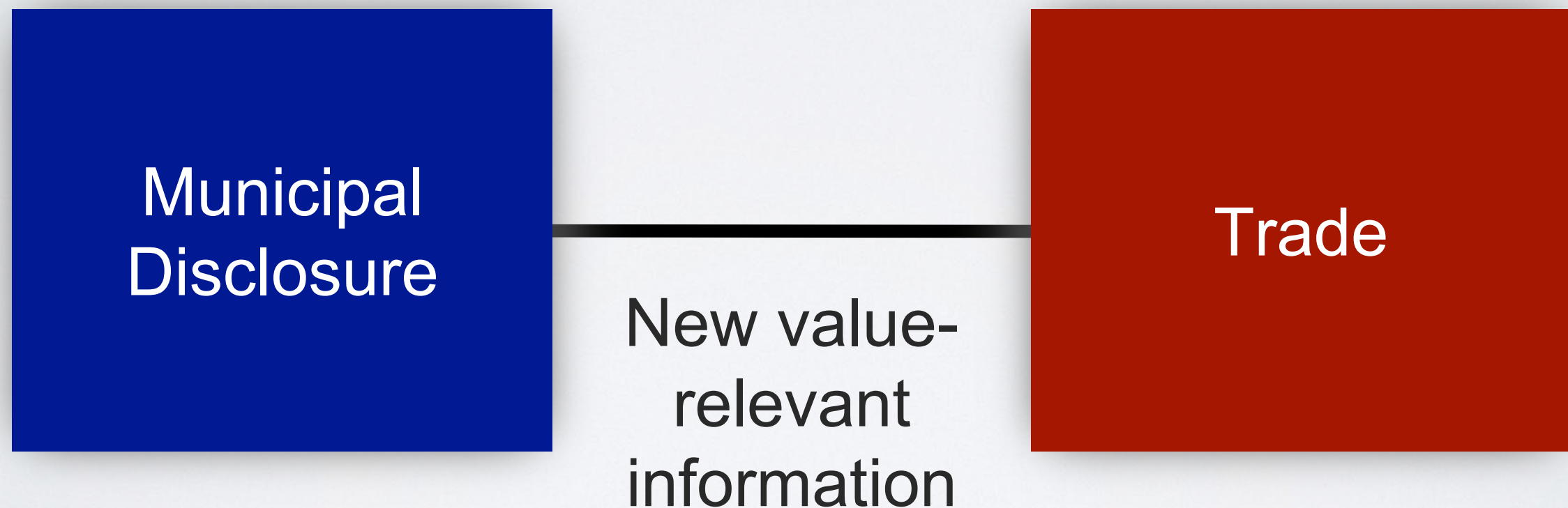


# THE INFORMATION CONTENT OF MUNICIPAL FINANCIAL STATEMENTS

Christine Cuny  
Ken Li  
Anya Nakhmurina  
Edward Watts

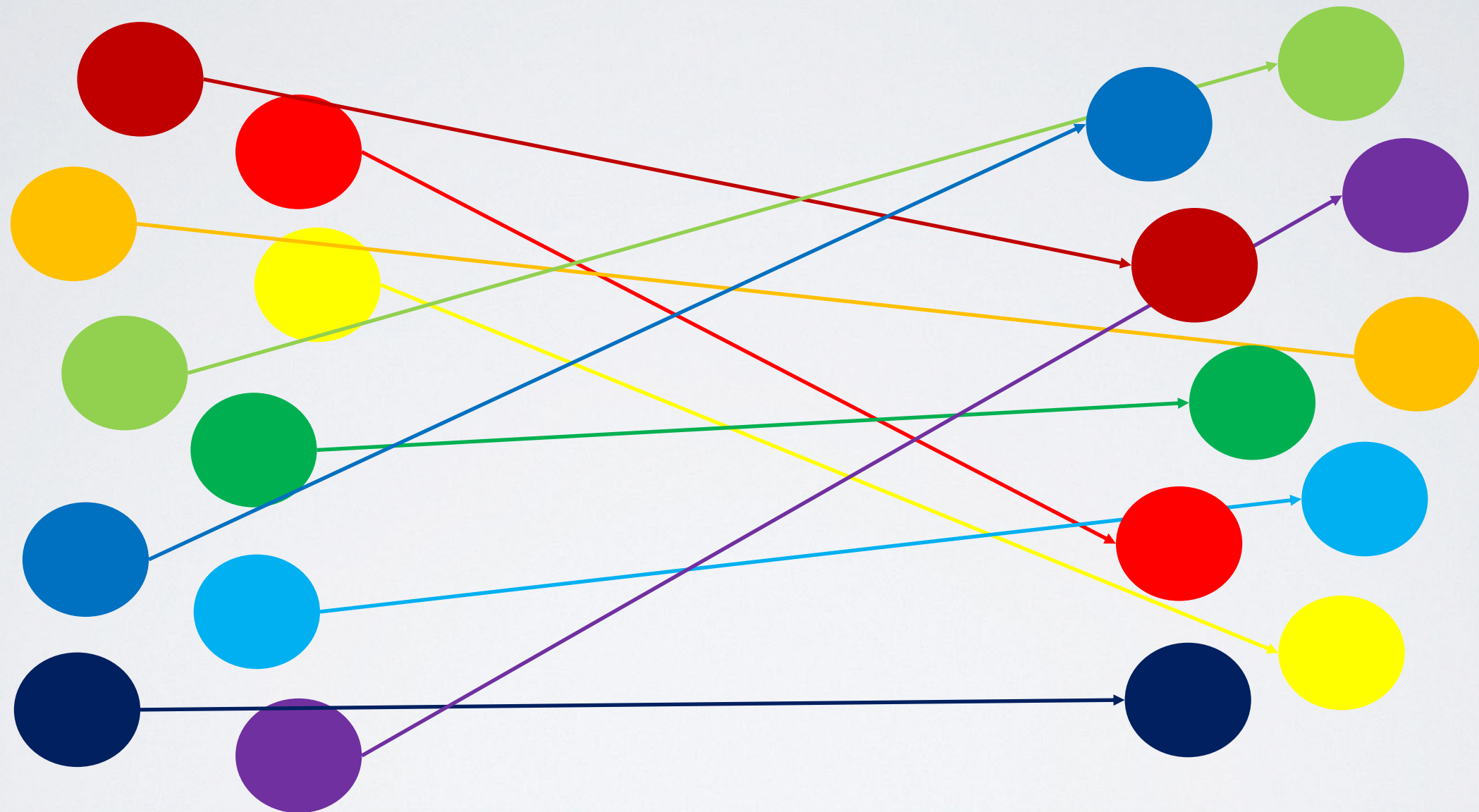
# DO MUNICIPAL FINANCIAL STATEMENTS HAVE INFORMATION CONTENT?



# THEORETICAL UNDERPINNING

Pre-Disclosure  
Beliefs

Post-Disclosure  
Beliefs



Trade occurs when investors update  
their beliefs differently



# WHY EXPECT NO TRADING?

Survey evidence that  
annual financial disclosures  
are not useful when they  
are untimely  
(NFMA, 2009; GASB, 2011; GAO, 2012)

Small sample evidence of  
of no investor reaction  
from 1980s & 1990s  
(Ingram et al., TAR 1989;  
Reck & Wilson, JAPP 2006)

Low incentive to monitor for  
information about low-risk  
securities  
(Default rate less than 1%)

High cost of acquiring &  
integrating information  
(Retail holdings 72%)

# WHY EXPECT TRADING?

Corporate equity and bond investors trade on financial disclosures

(Beaver, JAR 1968; Easton et al., JAR 2009)

80% of surveyed analysts believe financial statements are useful

(Robbins & Simonsen, MFJ 2010)

Diffuse prior beliefs due to limited disclosure

(Kim & Verrecchia, JAR 1991)

The market has advanced since the 1980s & 1990s

(e.g., the Internet, EMMA)



issuance.

## FINANCIAL INFORMATION &amp; DOCUMENTS

Collapse▲

Most Recent

[2020 Operating Data - School District 27J for the year ended 06/30/2020 posted 12/15/2020 \(87 MB\)](#) [details](#)**Annual Financial Information and Operating Data**

<a href="#">2020 Operating Data - School District 27J for the year ended 06/30/2020 posted 12/15/2020 (87 MB)</a>	<a href="#">details</a>
<a href="#">2019 Operating Data for the year ended 06/30/2019 posted 12/27/2019 (3.8 MB)</a>	<a href="#">details</a>
<a href="#">2018 Operating Data for the year ended 06/30/2018 posted 12/21/2018 (8.1 MB)</a>	<a href="#">details</a>
<a href="#">2017 Operating Data for the year ended 06/30/2017 posted 12/23/2017 (3.4 MB)</a>	<a href="#">details</a>

**Audited Financial Statements or CAFR**

<a href="#">2019 CAFR for the year ended 06/30/2019 posted 12/27/2019 (10.7 MB)</a>	<a href="#">details</a>
<a href="#">2018 CAFR for the year ended 06/30/2018 posted 12/21/2018 (7.8 MB)</a>	<a href="#">details</a>
<a href="#">2017 CAFR for the year ended 06/30/2017 posted 12/23/2017 (3 MB)</a>	<a href="#">details</a>
<a href="#">Comprehensive Annual Financial Report for the year ended 06/30/2016 posted 01/24/2017 (13.7 MB)</a>	<a href="#">details</a>
<a href="#">Comprehensive Annual Financial Report for the year ended 06/30/2015 posted 12/15/2015 (4.3 MB)</a>	<a href="#">details</a>
<a href="#">2014 Comprehensive Annual Financial Report (CAFR) for the year ended 06/30/2014 posted 12/08/2014 (4.9 MB) (Modified 12/10/2014)</a>	<a href="#">details</a>
<a href="#">Audited Financial Statment 12/13 for the year ended 06/30/2013 posted 10/28/2014 (4.3 MB)</a>	<a href="#">details</a>
<a href="#">Audited Financial Statments 11/12 for the year ended 06/30/2012 posted 10/28/2014 (5.2 MB)</a>	<a href="#">details</a>

**Failure to Provide Annual Financial Information**

<a href="#">audit for year ended June 30, 2007 for the year ended 06/30/2007 posted 03/28/2012 (2.7 MB)</a>	<a href="#">details</a>
<a href="#">2007-2011 audits for the year ended 06/30/2011 Document3 posted 03/28/2012 (9.5 MB)</a>	<a href="#">details</a>
<a href="#">2007-2011 audits for the year ended 06/30/2011 Document2 posted 03/28/2012 (6.3 MB)</a>	<a href="#">details</a>
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**Other Financial / Operating Data**

<a href="#">Incorporate OS by Reference as of 09/25/2017 posted 09/25/2017 (6.6 MB)</a>	<a href="#">details</a>
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All annual &  
audited financial  
statements filed  
in EMMA  
from 2009 to 2020



All annual &  
audited financial  
statements filed  
in EMMA  
from 2009 to 2020

412,947  
disclosures

8,284,927  
bond-disclosures

40,560,034  
bond-disclosure-months



issuance.

FINANCIAL INFORMATION & DOCUMENTS

Collapse

**Most Recent** 2020 Operating Data - School District 27J for the year ended 06/30/2020 posted 12/15/2020 (87 MB) details

**Annual Financial Information and Operating Data**

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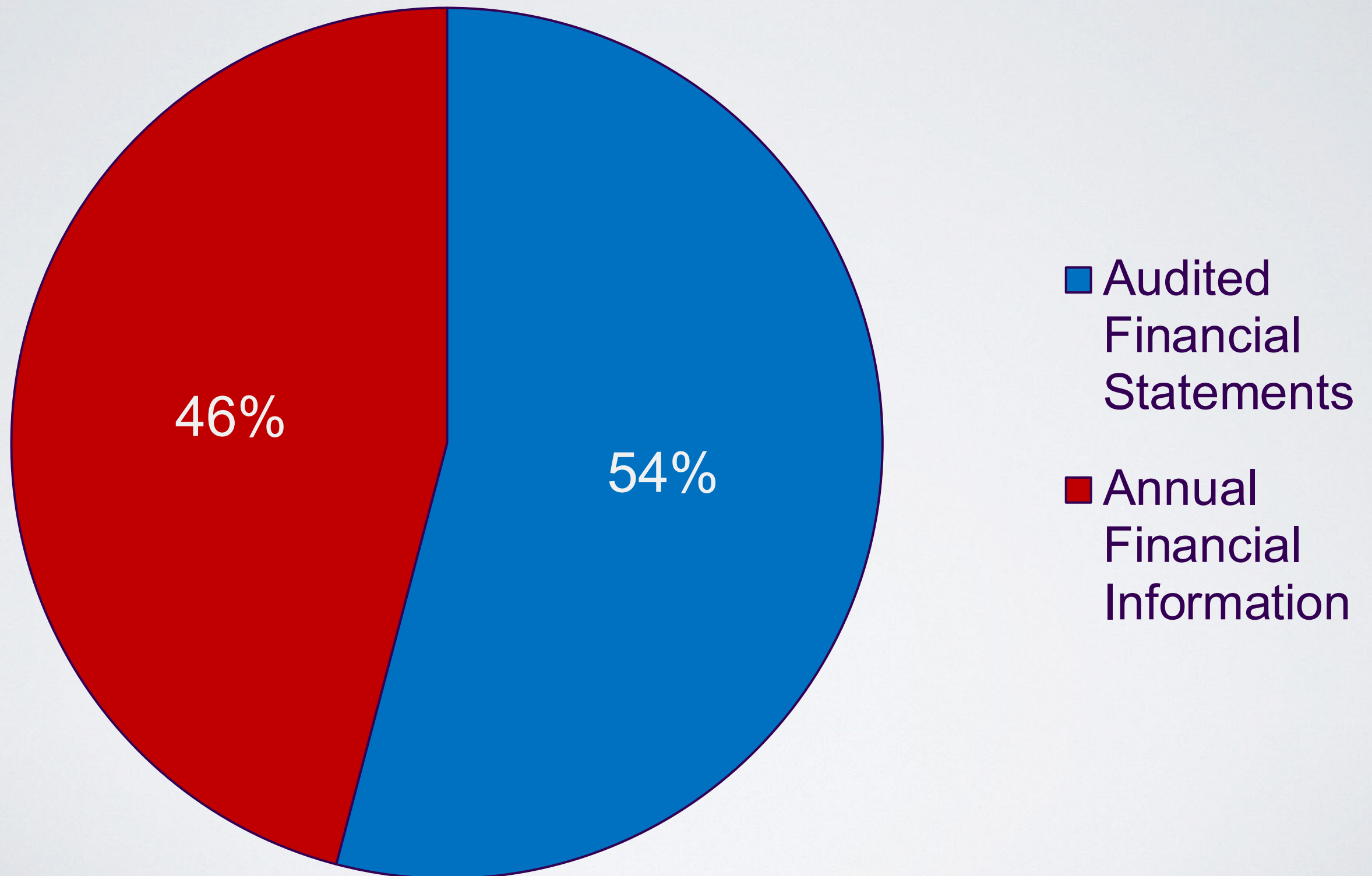
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**Other Financial / Operating Data**

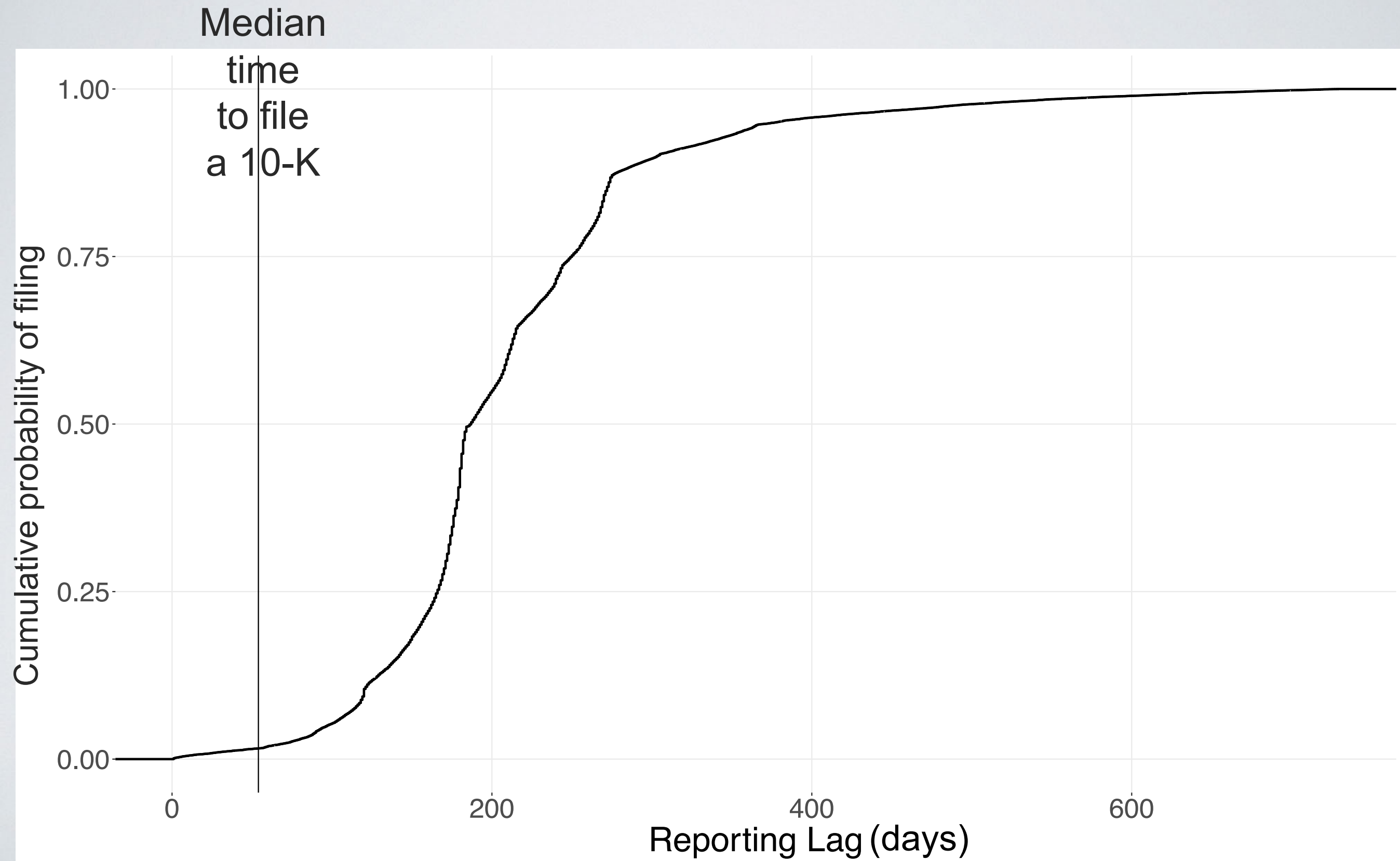
Incorporate OS by Reference as of 09/25/2017 posted 09/25/2017 (6.6 MB)	details
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# WHAT ARE THE DISCLOSURES?

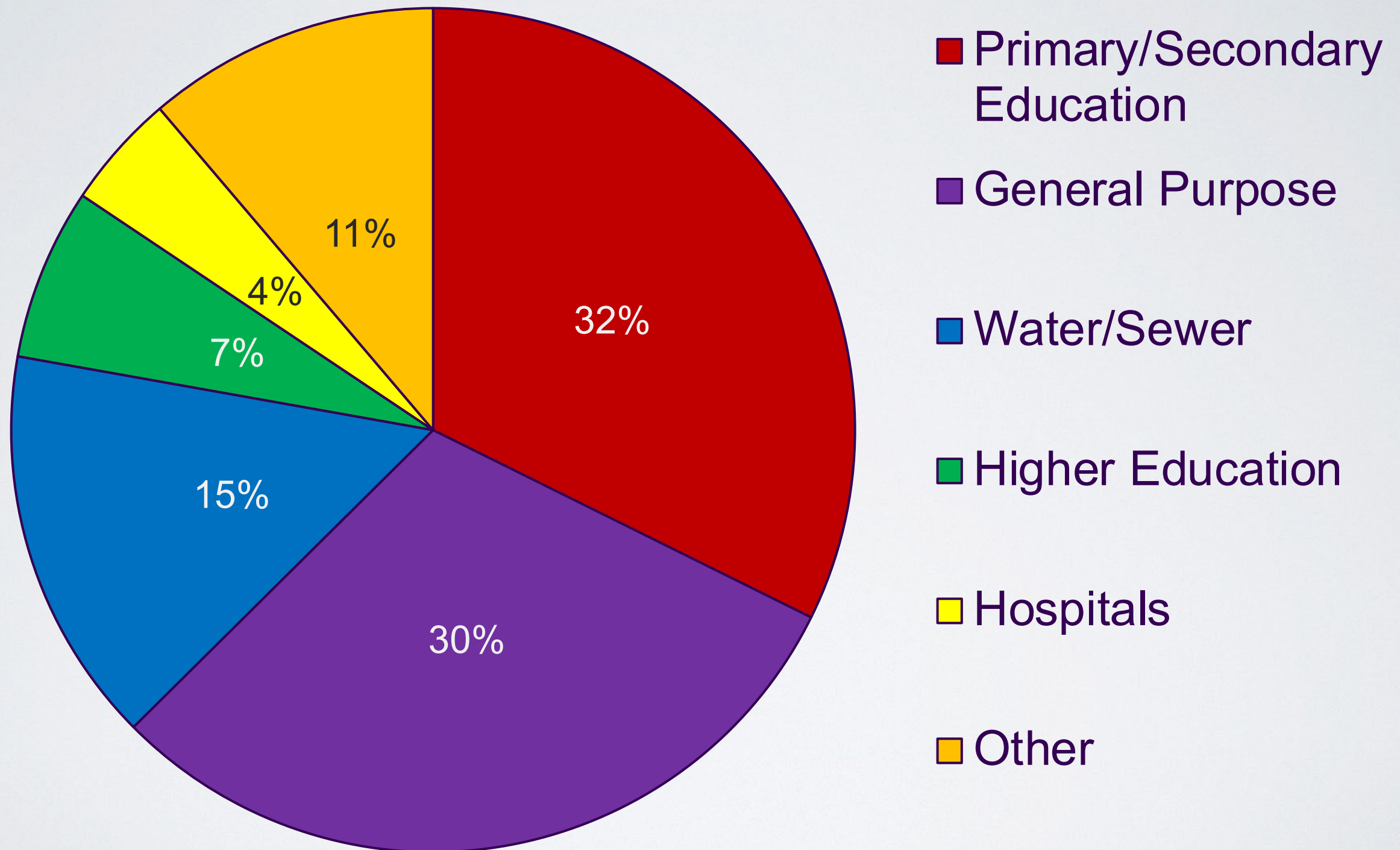




# DISCLOSURE TIMELINESS



# WHAT ARE THE BONDS FOR?

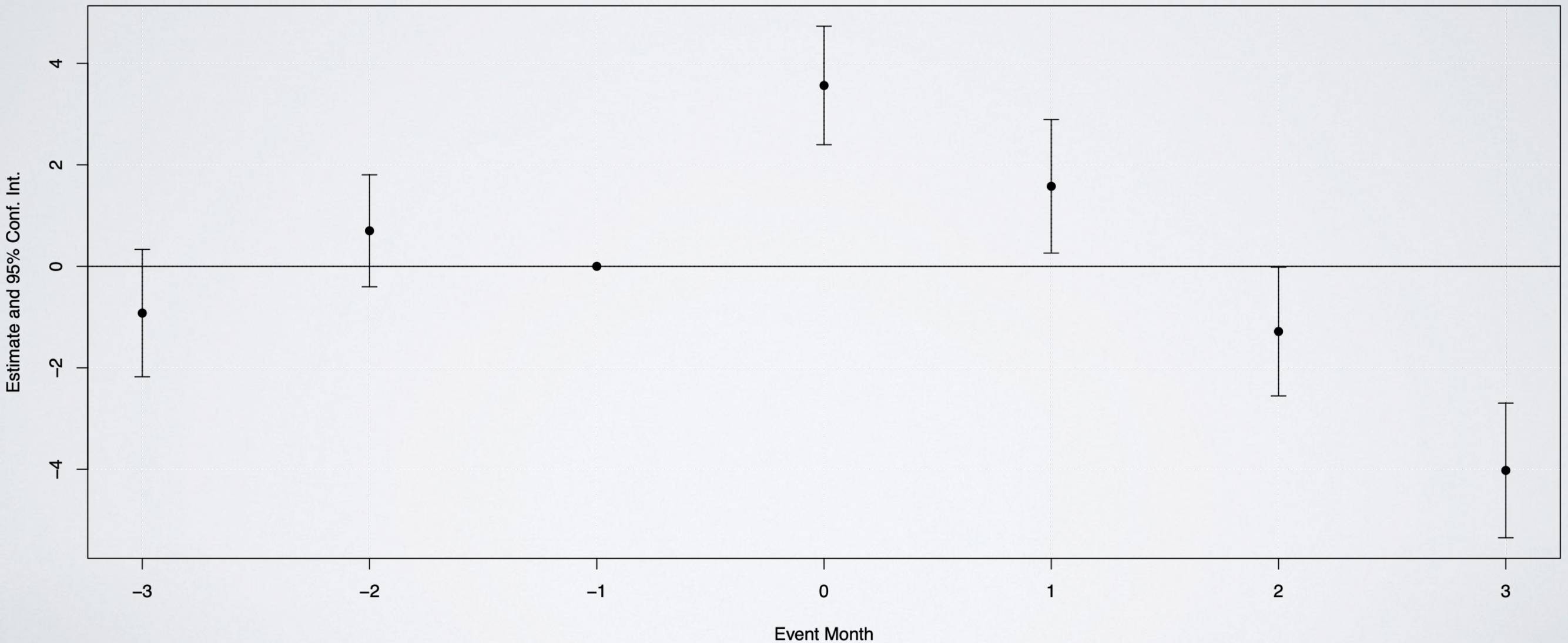


# 3 MEASURES OF TRADING ACTIVITY

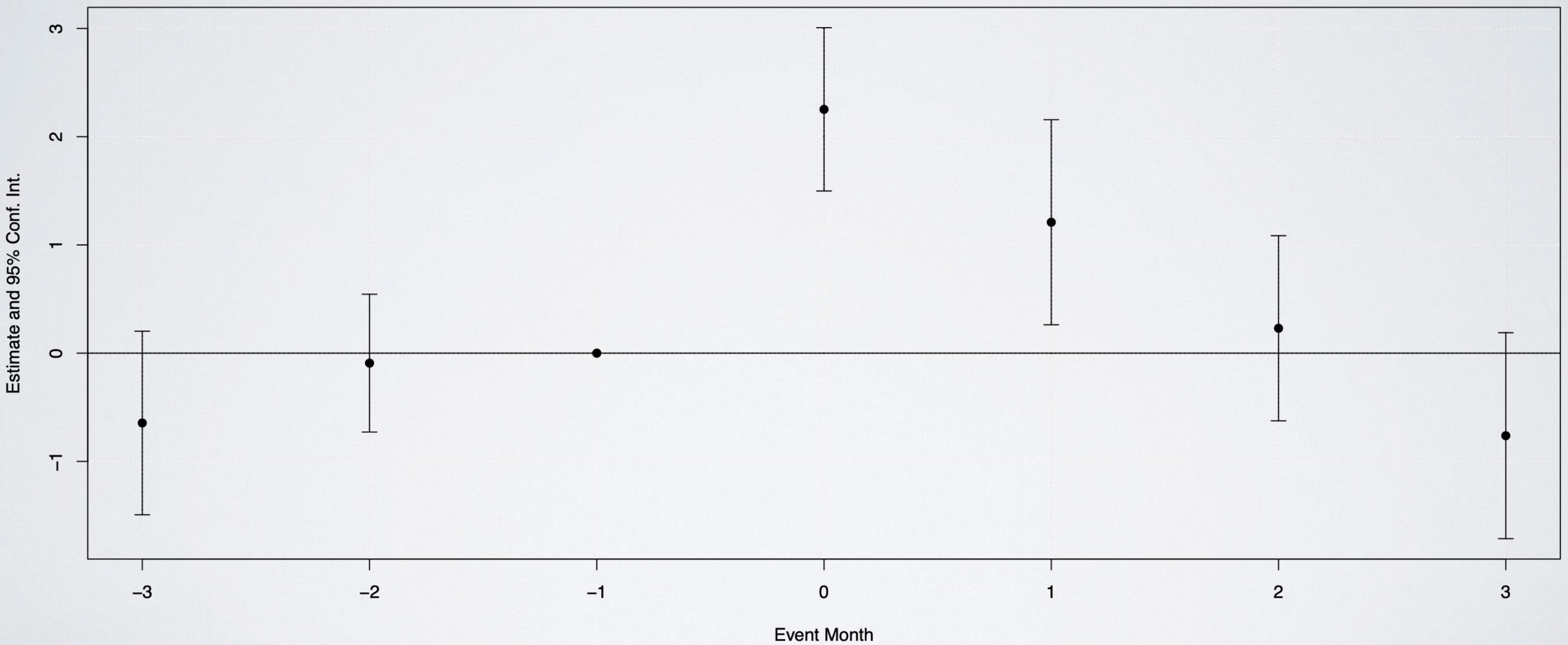
	Mean	P25	P50	P75	Bond- Disclosure- Month Obs (mil)
Turnover (%)	521.3	0.0	0.0	0.0	40.3
Volume (\$000's)	156.5	0.0	0.0	0.0	40.5
N Trades	1.3	0.0	0.0	0.0	40.5



# TURNOVER AROUND DISCLOSURE FILING

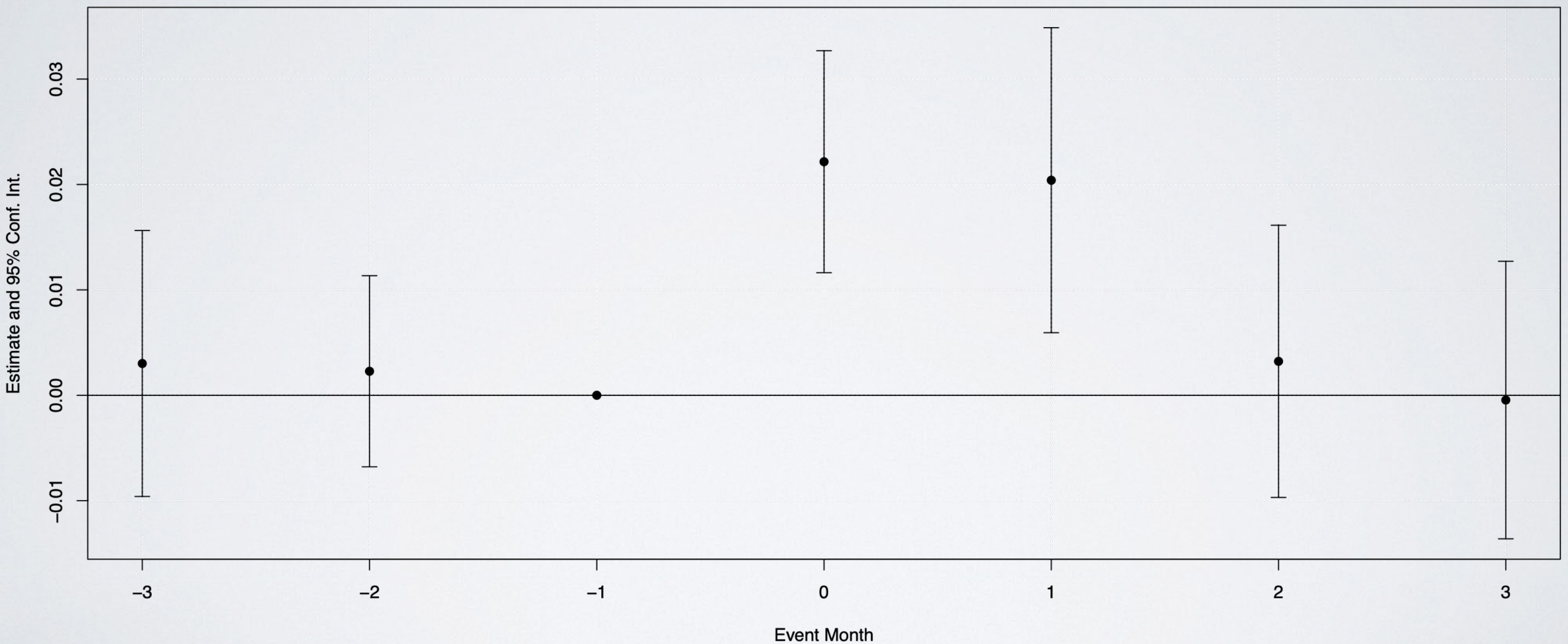


# VOLUME AROUND DISCLOSURE FILING



# N TRADES

## AROUND DISCLOSURE FILING





Municipal  
Disclosure

Trade

$$\text{Trading}_{b,m} = \beta_1 \text{DisclosureMonth}_{b,m} + \beta_2 \text{Controls}_{b,m} + \beta_{bd} + \varepsilon_{b,m}$$

	Turnover	Volume	N Trades
Disclosure Month	4.016***	2.058***	0.025***
Controls	Yes	Yes	Yes
Bond-Disclosure Fixed Effects	Yes	Yes	Yes
Obs (mil)	39.098	39.098	39.098
R <sup>2</sup>	0.282	0.463	0.634

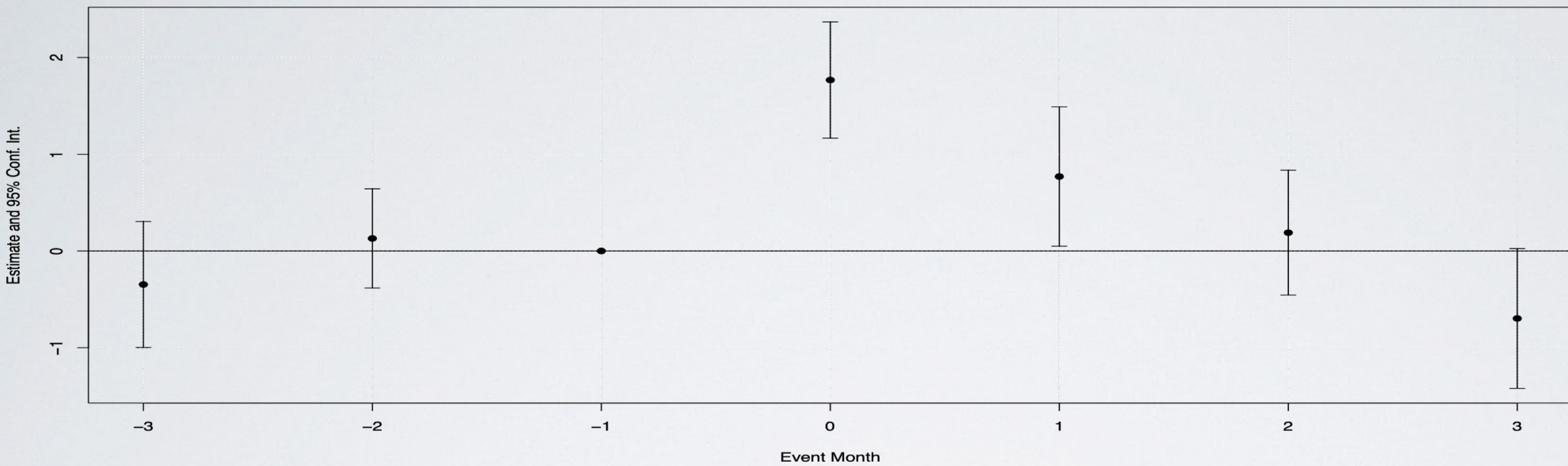


$$\text{Trading}_{b,m} = \beta_1 \text{DisclosureMonth}_{b,m} + \beta_2 \text{Controls}_{b,m} + \beta_{bd} + \varepsilon_{b,m}$$

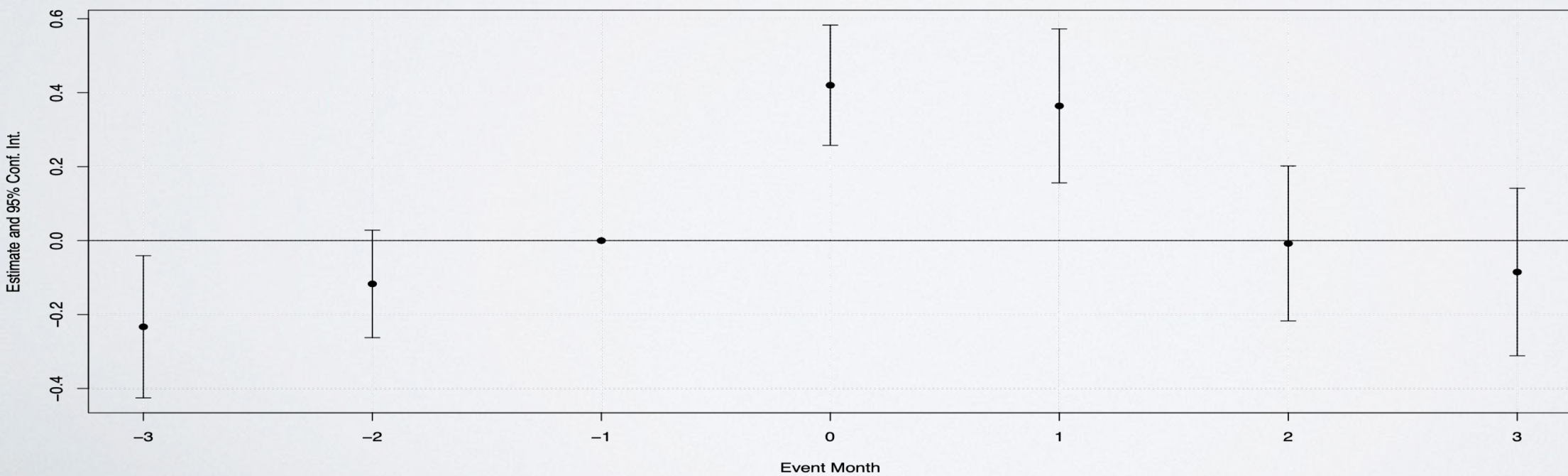
	Turnover	Volume	N Trades
Disclosure Month	4.016***	2.058***	0.025***
Controls	Yes	Yes	Yes
Bond-Disclosure Fixed Effects	Yes	Yes	Yes
Obs (mil)	39.098	39.098	39.098
R <sup>2</sup>	0.282	0.463	0.634

1% increase in trading around financial disclosure filings

# VOLUME, BY TRADER TYPE



Institutional



Retail



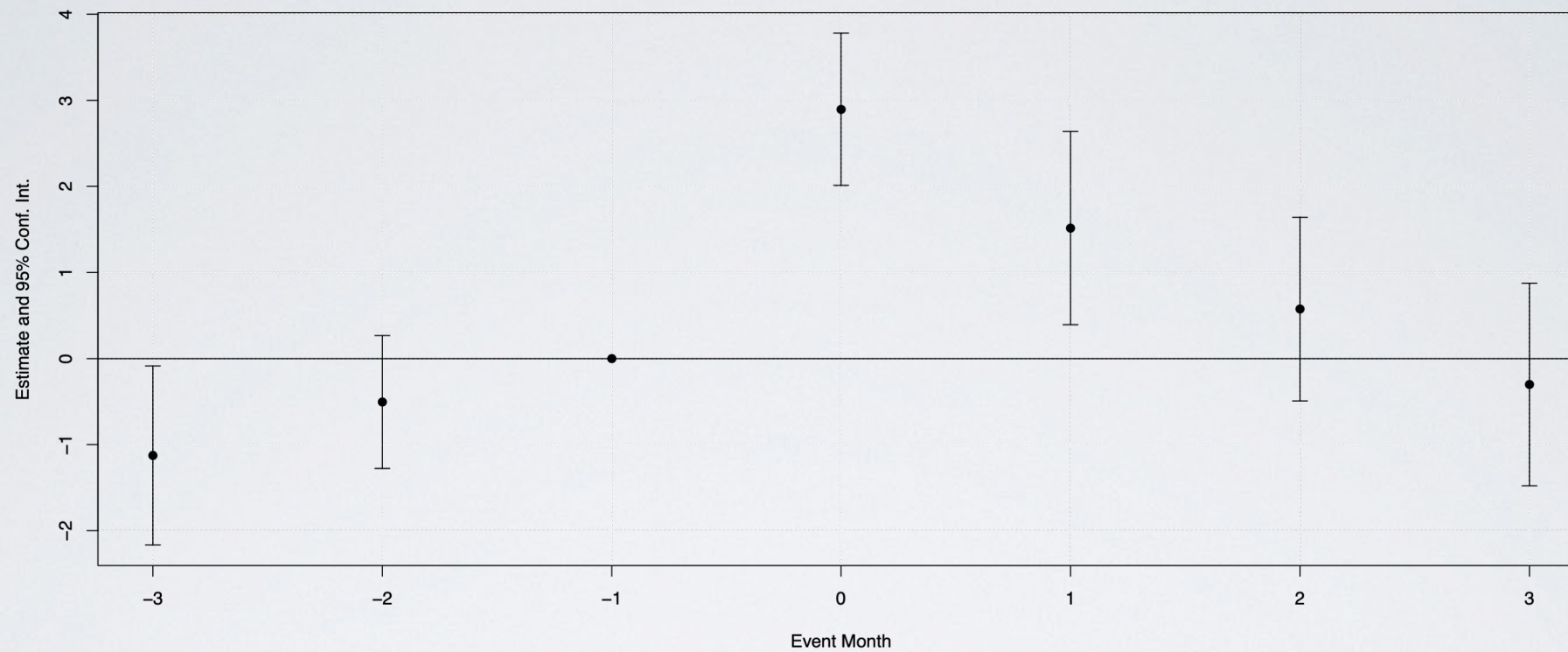
# TRADER TYPE

$$\text{Volume}_{b,m} = \beta_1 \text{DisclosureMonth}_{b,m} + \beta_2 \text{Controls}_{b,m} + \beta_{bd} + \varepsilon_{b,m}$$

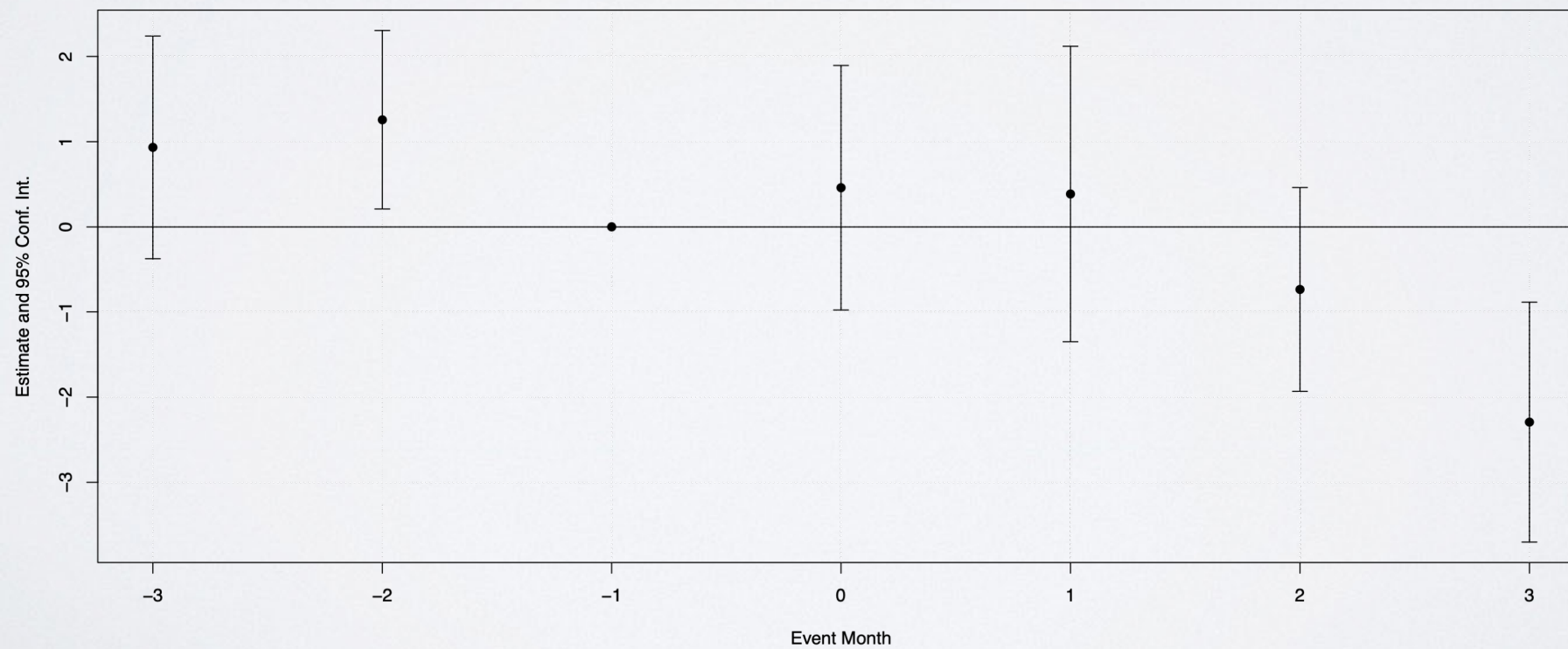
	Institutional	Retail
Disclosure Month	1.941***	1.560***
Controls	Yes	Yes
Bond-Disclosure Fixed Effects	Yes	Yes
Obs (mil)	39.098	39.098
R <sup>2</sup>	0.274	0.284

Both institutional and retail trading increases  
around financial disclosure filings

# VOLUME, BY TIMELINESS



More  
Timely



Least  
Timely



# TIMELINESS

$$\text{Trading}_{b,m} = \beta_1 \text{DisclosureMonth}_{b,m} + \beta_2 \text{DisclosureMonth}_{b,m} \times \text{Least Timely} \\ + \beta_3 \text{Controls}_{b,m} + \beta_{bd} + \varepsilon_{b,m}$$

	Turnover	Volume	N Trades
Disclosure Month	5.476***	2.727***	0.029***
Disclosure Month $\times$ Least Timely	-6.192***	-1.980***	-0.032***
Controls	Yes	Yes	Yes
Bond-Disclosure Fixed Effects	Yes	Yes	Yes
Obs (mil)	39.098	39.098	39.098
R <sup>2</sup>	0.282	0.463	0.634

Largest reaction for more timely disclosures



# TAKEAWAYS

Investors trade when financial disclosures are filed

- Consistent across retail & institutional trades
- More pronounced when the disclosures are timely

Municipal disclosures have information content

**THANK YOU!**