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Does XBRL Adoption Affect the Accuracy of Analyst Forecasts?

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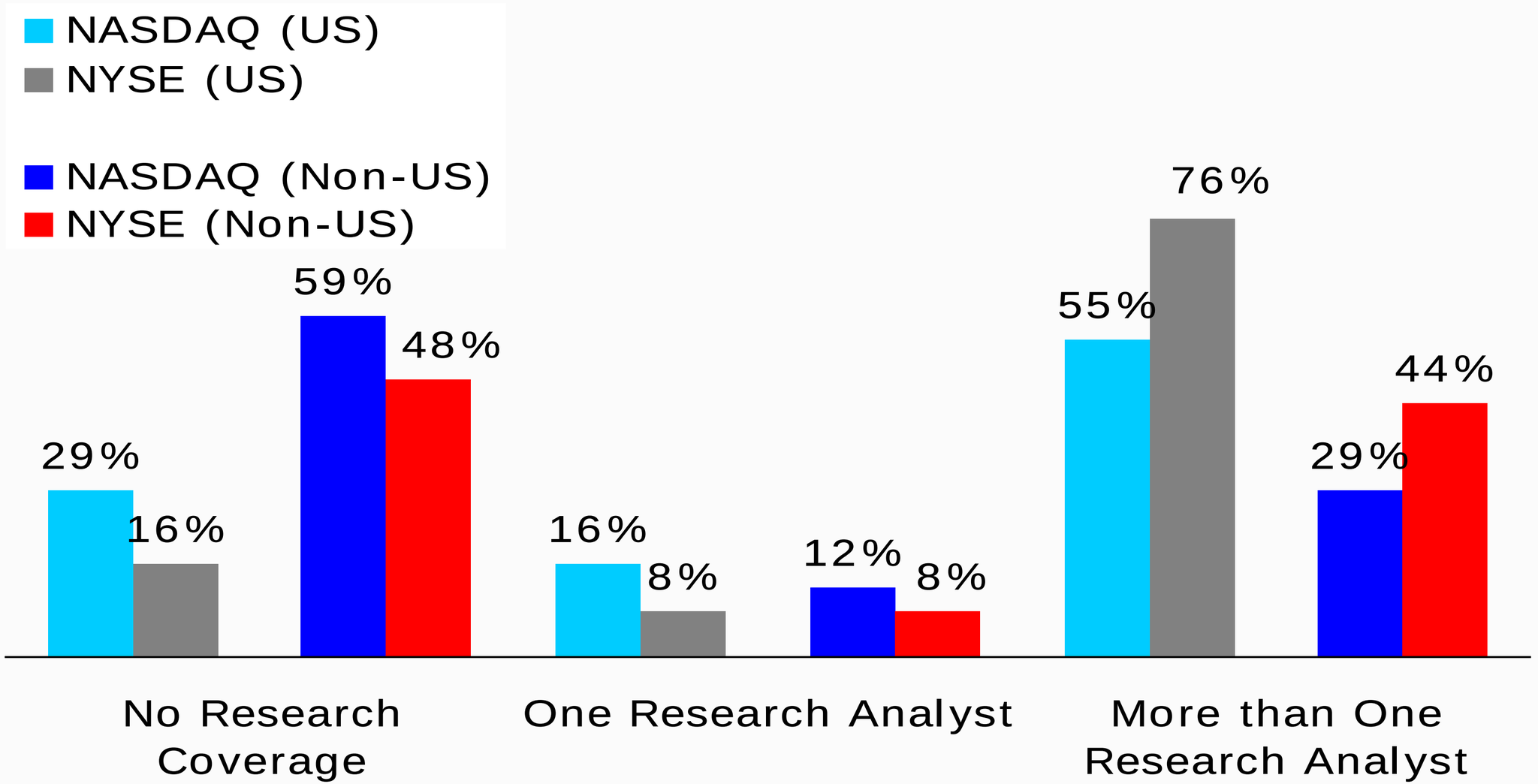
December 2002: **More evidence of opacity**



Includes all common stock on NASDAQ National Market and NYSE.
Source: Thomson Financial. December 2002.

2000 to 2003: **Dwindling Coverage**

Number of Stocks followed by some Wall Street firms 2000 and 2003

Firm	2000	2003
• Merrill Lynch	3,500	2,469
• CSFB	3,077	2,373
• Smith Barney	3,000	2,300
• J.P. Morgan Chase	2,400	2,260
• Goldman Sachs	2,315	1,950
• Morgan Stanley	2,150	1,925
• Lehman Brothers	1,650	1,605

18% reduction

Source: WSJ Research; Includes both U.S. and abroad.

Motivation

Previous research:

- Focused on the impact of XBRL adoption on information asymmetry (bid-ask spread; trading volume)
- Examined filers with high market capitalization (Phases I and II of the SEC mandate)
- Investigated the short-term (one year) consequences of XBRL adoption

- Limited evidence on the impact of XBRL adoption on sophisticated users of financial reports

Hypothesis development

- H1a: XBRL adoption is positively associated with analyst following
- H1b: The effect of XBRL adoption on increasing analyst following is stronger for large filers

- H2a: XBRL adoption is positively associated with analyst forecast accuracy
- H2b: The effect of XBRL adoption on increasing analyst forecast accuracy is stronger for large filers

Method

- Focus on annual 10-K reports
- We excluded voluntary filers

Sample:

- Phase II filers: 4,113 observations representing 749 companies for the period 2007-2012
- Phase III filers: 7,655 observations representing 1,619 companies for the period 2008-2013

Data sources: SEC EDGAR, Compustat North America, I/B/E/S, CRSP

Results: Univariate Analysis

Phase II filers

short-term	Pre-XBRL [-1] years	Post-XBRL [+1] years	
	(n = 716)	(n = 730)	Difference
ANALYST	9.244	10.507	1.264***
	(n = 716)	(n = 726)	
FACC	-0.015	-0.009	0.005***

long-term	Pre-XBRL [-3] years	Post-XBRL [+3] years	
	(n = 1,984)	(n = 2,129)	Difference
ANALYST	8.843	11.118	2.275***
	(n = 1,984)	(n = 2,120)	
FACC	-0.019	-0.011	0.008***

Phase III filers

short-term	Pre-XBRL [-1] years	Post-XBRL [+1] years	
	(n = 1,246)	(n = 1,437)	Difference
ANALYST	4.956	5.155	0.199
	(n = 1,227)	(n = 1,366)	
FACC	-0.027	-0.033	-0.006*

long-term	Pre-XBRL [-3] years	Post-XBRL [+3] years	
	(n = 3,427)	(n = 4,228)	Difference
ANALYST	4.803	5.476	0.673***
	(n = 3,388)	(n = 4,060)	
FACC	-0.051	-0.028	0.023***

Results: Analyst Following

Phase II filers

	Pred.	Model 1 [-3; +3] years	Model 2 [-2; +2] years	Model 3 [-1; +1] years
Constant		-0.461	0.780	2.984
		(-0.25)	(0.44)	(1.63)
POST		2.204***	2.244***	0.960***
		(4.28)	(13.73)	(8.77)
$SIZE_{t-1}$		1.709***	1.559***	1.490***
		(7.29)	(6.45)	(5.89)
EPS_{t-1}		-0.151	-0.191	-0.316**
		(-1.38)	(-1.57)	(-2.44)
$LOSS_{t-1}$		-0.009	0.269	-0.145
		(-0.02)	(0.39)	(-0.21)
$LEVERAGE_{t-1}$		-4.735***	-4.588***	-4.721***
		(-4.65)	(-4.33)	(-4.29)
$VOLATILITY_{t-1}$		3.083	-1.505	-5.609**
		(1.06)	(-0.52)	(-2.01)
Year effect		Yes	Yes	Yes
Industry effect		Yes	Yes	Yes
R-square		0.198	0.184	0.176
N		4,113	2,843	1,446

Phase III filers

	Pred.	Model 1 [-3; +3] years	Model 2 [-2; +2] years	Model 3 [-1; +1] years
Constant		-2.893***	-2.516	-1.668
		(-4.72)	(-4.04)	(-2.36)
POST		0.598***	0.662***	0.015
		(5.68)	(6.62)	(0.19)
$SIZE_{t-1}$		1.539***	1.488***	1.479***
		(19.31)	(18.28)	(16.45)
EPS_{t-1}		-0.039	-0.088	-0.191
		(-0.44)	(-0.90)	(-1.63)
$LOSS_{t-1}$		0.589***	0.395*	0.233
		(3.08)	(1.94)	(1.00)
$LEVERAGE_{t-1}$		-2.452***	-2.367***	-2.152***
		(-6.24)	(-5.91)	(-5.05)
$VOLATILITY_{t-1}$		-0.145	-1.126	-2.877***
		(-0.17)	(-1.30)	(-3.07)
Year effect		Yes	Yes	Yes
Industry effect		Yes	Yes	Yes
R-square		0.250	0.237	0.227
N		7,655	5,270	2,683

Results: Forecast Accuracy

Phase II filers

	Pred.	Model 1 [-3; +3] years	Model 2 [-2; +2] years	Model 3 [-1; +1] years
Constant		0.018**	0.001	0.018**
		(2.19)	(0.18)	(2.59)
POST		0.000	0.019***	0.004***
		(0.08)	(8.83)	(3.32)
SIZE		-0.005***	-0.005***	-0.003***
		(-5.60)	(-5.59)	(-4.51)
EPS_{t-1}		-0.000	0.001**	0.001
		(-0.15)	(1.98)	(1.39)
LOSS		-0.037***	-0.034***	-0.024***
		(-6.65)	(-6.32)	(-5.68)
$VOLATILITY_{t-1}$		-0.074***	-0.070***	-0.056***
		(-4.66)	(-4.43)	(-4.86)
ANALYST		0.000**	0.000***	0.000
		(2.49)	(2.93)	(1.05)
SURPRISE		-0.006***	-0.006***	-0.001
		(-4.36)	(-4.50)	(-1.09)
Year effect		Yes	Yes	Yes
Industry effect		Yes	Yes	Yes
R-square		0.197	0.206	0.203
N		4,104	2,835	1,442

Phase III filers

	Pred.	Model 1 [-3; +3] years	Model 2 [-2; +2] years	Model 3 [-1; +1] years
Constant		-0.059***	0.009	0.010
		(-4.89)	(0.78)	(0.63)
POST		0.068***	-0.009***	-0.013***
		(12.93)	(-2.67)	(-4.32)
SIZE		-0.007***	-0.005***	-0.004*
		(-5.03)	(-3.44)	(-1.91)
EPS_{t-1}		0.006***	0.006***	0.006**
		(4.03)	(3.25)	(2.00)
LOSS		-0.054***	-0.047***	-0.047***
		(-10.58)	(-9.22)	(-6.88)
$VOLATILITY_{t-1}$		-0.121***	-0.123***	-0.089***
		(-5.67)	(-5.83)	(-3.60)
ANALYST		0.003***	0.002***	0.002***
		(9.64)	(8.85)	(6.07)
SURPRISE		-0.018***	-0.013***	-0.010**
		(-6.02)	(-4.46)	(-2.05)
Year effect		Yes	Yes	Yes
Industry effect		Yes	Yes	Yes
R-square		0.161	0.141	0.133
N		7,448	5,104	2,593

Conclusion and Limitations

- XBRL adoption increases analyst following and the effect is stronger for large filers
- XBRL adoption increases analyst forecast accuracy. However, for large filers, forecast accuracy increases in the short-term and for small filers it increases in the long-term. Thus, benefits are stronger for small filers.
- We extend previous literature by demonstrating that analyst forecast behavior changes according to the adoption phases

Limitations:

- It is not possible to use a matched sample to control for possible confounding effects
- Data availability for Phase III filers is limited