Information in Mandatory and Voluntary Earnings Announcement Date Forecasts

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Motivating question

Are mandatory forecasts of earnings announcement (EA) dates informative to investors and do they provide more or less information to investors than voluntary EA date forecasts?

Research questions

1. Are mandatory forecasts of EA dates informative to investors about yet-to-be-announced firm performance?

2. What are the informational tradeoffs when such forecasts are mandatory versus voluntary?
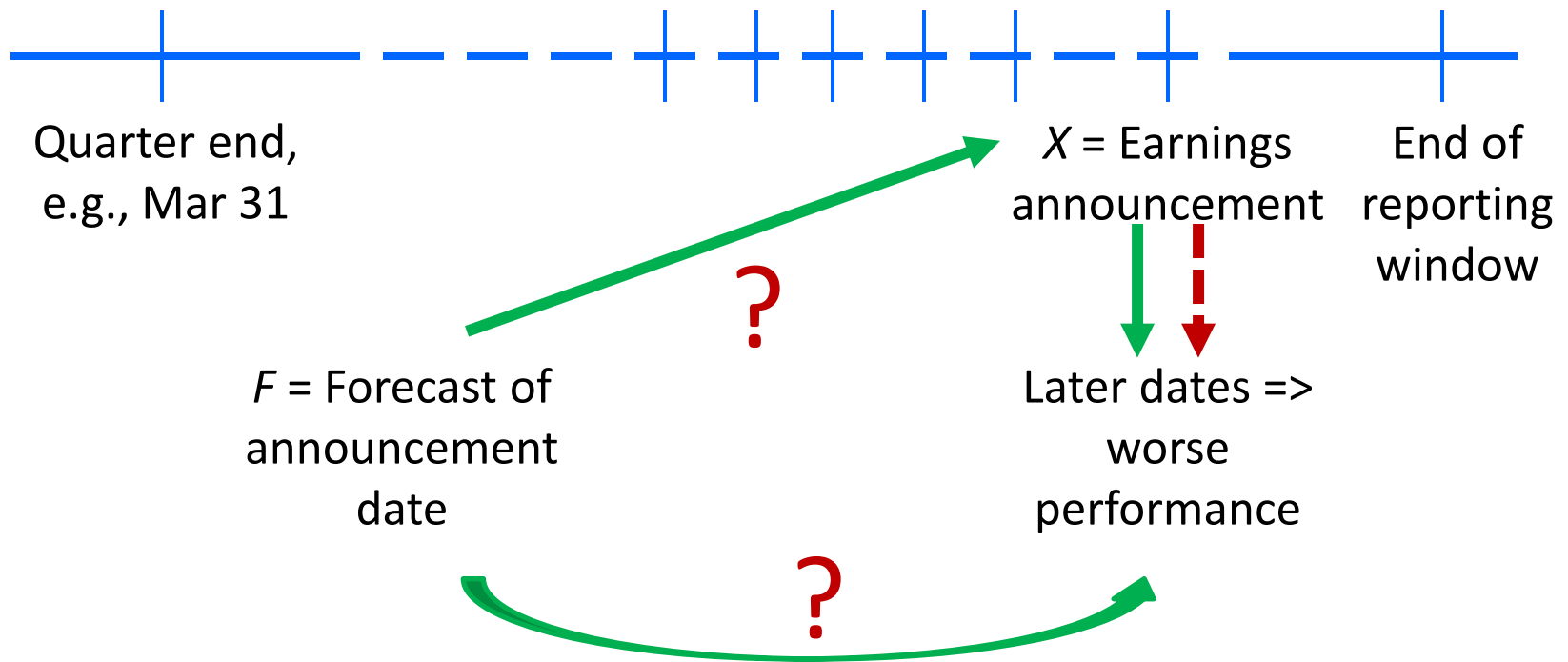
Putting our paper in context

- A large literature in accounting, finance, and economics studies
  - a) Content/quality of various types of forecasts
  - b) Motivations of forecasters in generating such forecasts

- In most cases, these forecasts are voluntary with respect to
  - a) Act of forecasting
  - b) Timing of the forecast

- Theory suggests content, act, and timing of voluntary forecasts all could convey information, but little empirical evidence of each component of voluntary forecasts, or on the information in mandatory forecasts

- To provide evidence on mandatory EA date forecasts, we exploit a requirement in China that all firms simultaneously to make public—at the end of the quarter—a forecast of their upcoming EA date

- We benchmark findings regarding information conveyed by these mandatory forecasts against information conveyed by voluntary EA date forecasts by US firms

What is the information in EA date forecasts?

China-based studies **US-based studies**

Quarter end,
e.g., Mar 31

X = Earnings
announcement

End of
reporting
window

F = Forecast of
announcement
date

?

Later dates =>
worse
performance

?

If mandatory EA date forecasts are not informative, then there is nothing to be gained by mandating them

Would mandatory forecasts convey information?

Why wouldn't they?

1. Inability to develop informative forecasts by the mandated forecasting date

2. Forecast an arbitrary or strategically selected date, such as the last day of the reporting window. No regulatory penalty for revising later

Why would they?

1. Managers' career concerns, such as cultivating a reputation for timeliness and accuracy

Why can't we just infer this from evidence on voluntary forecasts?

Voluntary forecasts result from self-selection in response to a variety of incentives => findings don't necessarily apply to mandatory forecasts

Institutional Background

- In China, as in US, firms report quarterly earnings within a specified reporting window

- In China, unlike in US, firms must schedule with the stock exchange their upcoming EA date. Since 2002 this date forecast is public

  China firms can update the forecast, but are not permitted to announce earnings without advance notice of at least one day

- In the US, firms voluntarily forecast EA dates; the timing of the forecast also is voluntary
  - 51% of US firms do not issue forecasts during our sample period
  - 29% issue forecasts in some, but not all quarters
  - 20% issue forecasts every quarter

- US firms that issue forecasts do so on average one-third into the reporting window, whereas China firms do so at the beginning of the reporting window

Timeline

China firms
US firms

Quarter end,
e.g., Mar 31

X = Earnings
announcement

End of
reporting
window
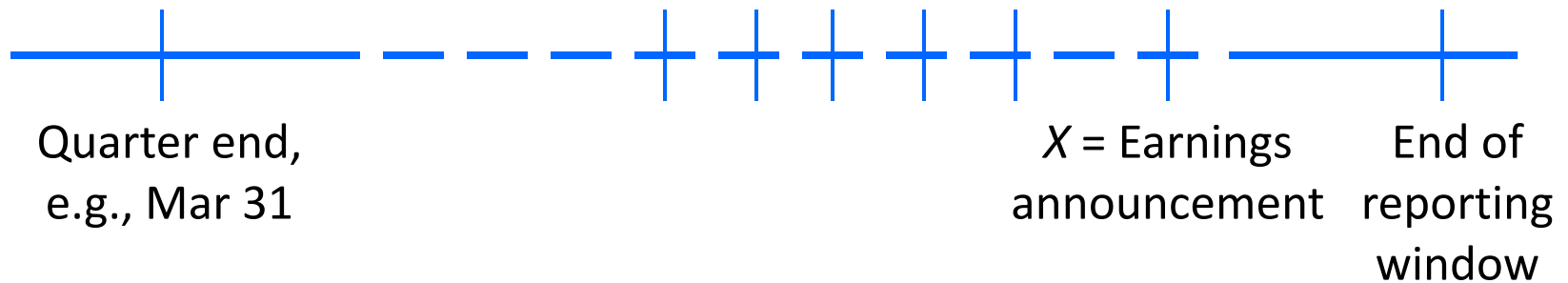
F = Forecast issued
by all China firms
simultaneously

Revision = Forecast revised
at various times by some
China firms if needed

30, 60, 30, 120 days

F = Forecast issued by some
US firms at various times

45, 45, 45, 90 days

Scale X, F, and *Revision* by
window length

Sample and Data

- China firms trading A-shares on the Shenzhen and Shanghai stock exchanges

- Actual and forecast EA dates from 2004Q2 to 2013Q3; forecast revisions from 2010Q4

- For China firms, hand collect forecasts daily from Shenzhen and Shanghai stock exchange website

- For US firms, obtain EA date forecasts from Capital IQ

- Other variables from PACAP (China), CSMAR (China), and CRSP-Compustat (US)

- Sample:
  44,489 (max) firm-quarters from 2,464 China firms
  76,863 (max) firm-quarters from 3,605 forecasting US firms

Preview of results

1. Are mandatory forecasts of EA dates informative to investors about yet-to-be-announced firm performance?   YES
    a. Mandatory forecasts are predictive of actual EA dates
    b. Forecasts of later, and later than expected, EA dates predict lower yet-to-be-announced firm performance
    c. Market reacts negatively to forecasts of EA dates later than expected

2. What are tradeoffs for mandatory vs voluntary forecasts?   It's more nuanced
    a. Mandatory and voluntary forecasts both convey about 8% of the quarter's earnings news
    b. Mandatory forecasts by firms less likely to forecast voluntarily are informative
    c. Voluntary forecasts content, act, and timing each reflects incremental performance information, but only content reflects incremental earnings news

Table 1: Descriptive Statistics

	China Firms		US Forecasting Firms	
	Mean	Std. Dev.	Mean	Std. Dev.
F_t	0.767	0.152	0.653	0.184
X_t	0.771	0.153	0.655	0.190
X_{t-1}	0.765	0.156	0.651	0.193
$\hat{X}^{post} - \hat{X}^{pre}$	0.000	0.101	−0.002	0.085
negative EPS	0.147	0.354	0.293	0.455
negative ΔEPS	0.420	0.494	0.446	0.497
roa	0.022	0.042	−0.006	0.064
size	5.671	2.804	6.238	2.707
market-to-book	5.655	2.813	5.634	2.801
earnings-surprise	5.469	2.798	5.526	2.833
Voluntary	na	na	0.864	0.342
Time After FP	na	na	0.336	0.313

F forecasted announcement date; X actual announcement date

$\hat{X}_t^{pre}$ fitted value from firm-level estimation of $X_t = \theta_0 \qquad + \theta_2 X_{t-1} + \nu_t$

$\hat{X}_t^{post}$ fitted value from firm-level estimation of $X_t = \theta_0 + \theta_1 F_t + \theta_2 X_{t-1} + \nu_t$

Table 2: Information in Mandatory EA Date Forecasts

Panel A: Actual Announcement Dates, X, and Firm Performance

	Pred.	X			
negative EPS	+	0.036*** (6.92)			0.011*** (2.89)
negative ΔEPS	+		0.023*** (7.28)		0.013*** (5.46)
roa	–			−0.538*** (−8.68)	−0.434*** (−6.86)
Adjusted R^2		0.224	0.224	0.230	0.232
p-value for F-test					0.000

Panel B: Forecasted Announcement Dates, F, and Firm Performance

	Pred.	F			
negative EPS	+	0.032*** (6.99)			0.009** (2.40)
negative ΔEPS	+		0.021*** (7.80)		0.011*** (6.12)
roa	–			−0.492*** (−9.26)	−0.404*** (−7.19)
Adjusted R^2		0.235	0.235	0.241	0.242
p-value for F test					0.000

All regressions include size and MTB deciles as controls, firm and quarter fixed effects, and double cluster standard errors by firm and quarter

Table 3: Informativeness of Mandatory EA Date Forecasts

Panel A: Predicting Actual Announcement Dates, X

		X_t	
F_t		0.908***	0.893***
		(82.69)	(77.60)
X_{t-1}	0.374***		0.037***
	(24.39)		(6.03)
Constant	0.486***	0.074***	0.057***
	(43.32)	(7.84)	(5.92)
Adjusted R^2	0.150	0.819	0.820

Panel B: Updated Expectations, $\hat{X}^{post} - \hat{X}^{pre}$, and Firm Performance

	Pred.	$\hat{X}^{post} - \hat{X}^{pre}$
negative EPS	+	0.009***
		(3.81)
negative ΔEPS	+	0.010***
		(7.30)
roa	−	−0.177***
		(−5.80)
Adjusted R^2		0.047
p-value for F test		0.000

Panel C: Market Reaction to Updated Expectations, $\hat{X}^{post} - \hat{X}^{pre}$

	Pred.	$FCAR[-1, +1]$	$FCAR[+3, End]$
$\hat{X}^{post} - \hat{X}^{pre}$	−	−0.011**	−0.040***
		(−2.29)	(−4.21)
Adjusted R^2		0.061	0.137

Table 5: Earnings News in EA Date Forecasts

Panel A: Mandatory Forecasts

	Pred.	QCAR[−1,+60]	FCAR[−1,+1]	XCAR[−1,+1]	RanCAR[−1,+1]
earnings-surprise	+	0.660***	0.053***	0.146***	0.030**
		(7.19)	(3.01)	(5.33)	(2.09)
CAR[EA+2,−2]		−5.790	2.889***	−0.192	−0.853*
		(−1.23)	(2.33)	(−0.29)	(−1.70)
Constant		−0.962	−0.230	−0.900***	0.021
		(−0.69)	(−0.71)	(−3.27)	(0.14)
ERC Ratio			0.080	0.221	0.045
Adjusted R^2		0.013	0.009	0.007	0.001

Panel B: Voluntary Forecasts

	Pred.	QCAR[−1,+60]	FCAR[−1,+1]	XCAR[−1,+1]	RanCAR[−1,+1]
earnings-surprise	+	1.064***	0.094***	0.503***	0.035**
		(9.33)	(5.74)	(18.61)	(2.32)
CAR[EA+2,−2]		−0.208	0.131	0.109	−0.093
		(−0.06)	(0.47)	(0.22)	(−0.30)
Constant		−4.167***	−0.519***	−2.861***	−0.080
		(−3.05)	(−3.26)	(−13.28)	(−0.41)
ERC Ratio			0.088	0.473	0.033
Adjusted R^2		0.014	0.002	0.021	0.000

Table 6: Forecasting Characteristics and US Forecast Probability

Panel A: Characteristics by Forecast Frequency

| | Mean | | | | t-stat. for mean diff. | | |
	Full	Never	Sometimes	Always	S − N	A − S	A − N
h_ε, Private Info. Precision	157.21	na	113.43	162.81	na	6.59	na
h_η, Public Info. Precision	130.21	141.96	151.35	185.05	1.42	5.59	5.36
ρ, Ann. Date Persistence	0.35	0.23	0.38	0.43	13.85	4.38	16.05
Firms	4,664	1,240	2,268	1,156			

Panel B: Correlation Matrix

			(1)	(2)
(1)	h_ε, Private Info. Precision			
(2)	h_η, Public Info. Precision		0.47	
(3)	ρ, Ann. Date Persistence		0.31	0.24

Panel C: Probability of Forecasting

	Forecast Frequency
h_ε, Private Info. Precision	0.118***
	(3.75)
h_η, Public Info. Precision	0.160***
	(5.05)
ρ, Ann. Date Persistence	−0.036
	(−1.25)
Pseudo R^2	0.536
Observations	4,664

Table 7: Low and High Forecast Probability China Firms

Panel A: Means of Forecasting Information Characteristics

| | | Forecasting Probability | | |
	All	Low	High	Diff. t-stat.
h_{ε}, Private Info. Precision	76.52	30.10	113.13	−19.03
h_{η}, Public Info. Precision	93.68	47.97	129.73	−89.85
ρ, Ann. Date Persistence	0.26	0.08	0.40	−23.07
Firms	1,118	493	625	

Panel B: Earnings News in Forecasts of Earnings Announcement Dates

| | Forecasting Probability | | |
ERC Ratio	Low	High	Diff p-value
Forecast Date	0.108	0.090	0.600
Earnings Announcement Date	0.162	0.239	0.046
Observations	7,530	9,294	

Table 7: Low and High EA Date Forecast Probability China Firms

Panel C: Actual Announcement Dates, X, Forecasts, F, and Updated Expectation, $\hat{X}^{post} - \hat{X}^{pre}$, and Firm Performance

	Pred.	X Forecasting Probability Low	X Forecasting Probability High	F Forecasting Probability Low	F Forecasting Probability High	$\hat{X}^{post} - \hat{X}^{pre}$ Forecasting Probability Low	$\hat{X}^{post} - \hat{X}^{pre}$ Forecasting Probability High
negative EPS	+	0.017**	0.015**	0.011	0.012**	0.007	0.007***
		(2.49)	(2.35)	(1.56)	(2.02)	(1.54)	(2.99)
negative ΔEPS	+	0.015***	0.005	0.013***	0.004	0.013***	0.007***
		(3.26)	(1.38)	(3.17)	(1.00)	(4.89)	(3.49)
roa	−	−0.507***	−0.447***	−0.493***	−0.412***	−0.157***	−0.039*
		(−6.26)	(−5.66)	(−5.81)	(−5.92)	(−3.37)	(−1.70)
Adjusted R^2		0.069	0.082	0.082	0.090	0.046	0.034
Observations		12,085	14,496	12,085	14,496	10,107	12,037

Panel D: Market Reaction to Updated Expectation, $\hat{X}^{post} - \hat{X}^{pre}$

	Pred.	FCAR[−1,+1] Forecasting Probability Low	FCAR[−1,+1] Forecasting Probability High	FCAR[+3, End] Forecasting Probability Low	FCAR[+3, End] Forecasting Probability High
$\hat{X}^{post} - \hat{X}^{pre}$	−	−0.012**	−0.004	−0.034***	−0.037*
		(−2.27)	(−0.65)	(−2.85)	(−1.86)
Adjusted R^2		0.083	0.059	0.146	0.139
Observations		9,818	11,799	9,818	11,799

Table 8: Voluntary US Forecasts: Act, Content, and Timing

Panel A: Firm Performance

	Pred. (1) and (2)/(3)	Voluntary	$\hat{X}^{post} - \hat{X}^{pre}$	Time After FP
negative EPS	−/+	−0.001	0.003	0.592**
		(−0.77)	(0.35)	(2.57)
negative ΔEPS	−/+	−0.000	0.021***	0.190
		(0.16)	(4.00)	(1.32)
roa	+/−	0.044***	−0.231***	−5.842**
		(4.52)	(−4.06)	(−2.37)
Voluntary			−0.054***	−14.947***
			(3.68)	(7.57)
$\hat{X}^{post} - \hat{X}^{pre}$		−0.110***		34.006***
		(−14.59)		(19.11)
Time After FP		0.003***	0.000	
		(11.49)	(1.00)	
Adjusted R^2		0.830	0.911	0.854
p-value for F-test		0.000	0.000	0.000
Observations		76,863	76,863	76,863

Panel B: Market Reaction

	Pred.	$FCAR[-1,+1]$	$FCAR[+3,+End]$
Act	+	0.230*	0.001
		(1.78)	(0.19)
$\hat{X}^{post} - \hat{X}^{pre}$	−	−1.552***	−0.025*
		(−3.46)	(−1.74)
Timing	−	0.114	−0.017***
		(0.56)	(−3.55)
Adjusted R^2		0.012	0.032
Observations		48,346	48,346

Table 8: Voluntary US Forecasts: Act, Content, and Timing

Panel C: Earnings News		
	Pred.	$FCAR[-1,+1]$
earnings-surprise	+	0.095***
		(5.75)
earnings-surprise × Act	+	0.015
		(0.29)
earnings-surprise × Timing	–	–0.034
		(–0.58)
Act		0.081
		(0.24)
Timing		0.263
		(0.63)
$CAR[EA+2,-2]$		0.137
		(0.50)
Constant		–0.537
		(–3.39)
ERC Ratio for earnings-surprise		0.089
Adjusted R^2		0.002
Observations		49,813

In Conclusion

We find

- Similar percentages of the quarter's earnings news is conveyed by mandatory China and voluntary US EA date forecasts

- Mandatory China EA date forecasts provide information about yet-to-be-announced firm performance and convey earnings news, despite making the forecasts at the beginning of the reporting window, even for firms less likely to forecast if forecasting were voluntary and

  Market reacts to information in initial and revised mandatory forecasts

- Voluntary US EA date forecasts provide information primarily through the forecasted announcement date

  Act of forecasting and forecast timing provide some information, but not significant incremental earnings news

  However, 51% of US firms do not issue EA date forecasts

=> Mandatory EA date forecasts for all firms, in aggregate, provide more and earlier information to investors

Thank you!