Internet Appendix

A Tough Act to Follow: Contrast Effects in Financial Markets

Samuel M. Hartzmark and Kelly Shue

Figure 1
Distribution of Returns by $Surprise_{t-1}$

This graph shows the distribution of returns for firms that announced earnings on day t. The red line represents firms that announced the day after a $surprise_{t-1}$ in the highest decile, while the blue lines represents firms that announced after a $surprise_{t-1}$ in the lowest decile. Distributions are estimated using a kernel density estimator.

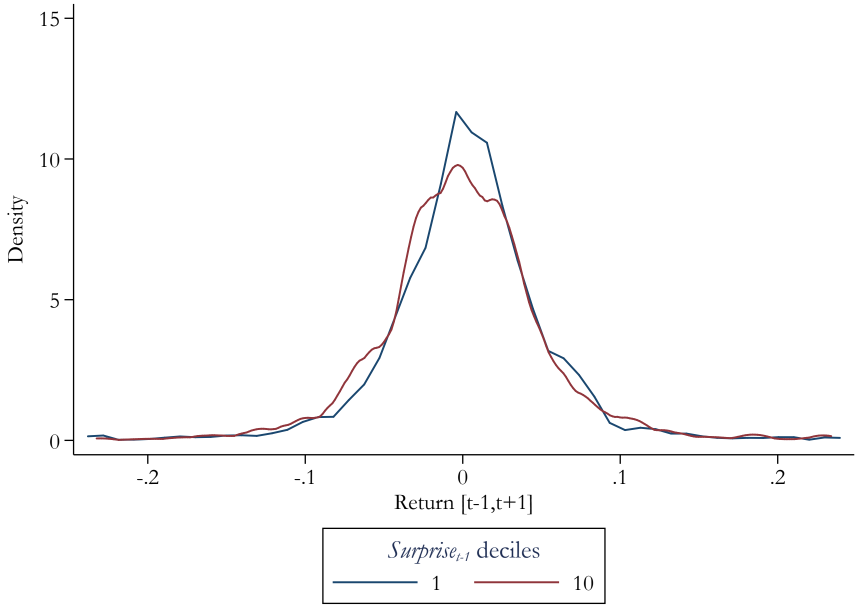

Table 1

Information Transmission: Sample with No Evidence of Information Transmission

This table re-estimates our baseline test of contrast effects within the subsample of observations for which information transmission is unlikely to have occurred. In Column 1 and 2, the sample is restricted to observations for which the $t-1$ open-to-open returns of the firm announcing earnings today moved by less than 1% and 0.5%, respectively, in either direction. Column 3 examines the sample with no negatively correlated information transmission, i.e., we exclude negative (positive) return reactions to positive (negative) $surprise_{t-1}$. The dependent variable is the open-to-open $[t, t+1]$ return of the firm announcing earnings on day t. All other variables and weights are as defined in Table 2. Standard errors are clustered by date. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Return $[t-1, t+1]$	$\lvert Ret_{t-1}\rvert < 0.01$	$\lvert Ret_{t-1}\rvert < 0.005$	No neg corr info transmission $[t-1]$
	(1)	(2)	(3)
$Surprise_{t-1}$	-1.198***	-1.208***	-1.496***
	(0.327)	(0.406)	(0.292)
Own $surprise_{it}$ controls	Yes	Yes	Yes
R^2	0.0793	0.0940	0.0611
Observations	25917	14046	31075

Table 2
Alternative Cutoffs for $Surprise_{t-1}$ and Analyst Forecasts

This table shows robustness to alternative measures and sample restrictions. All variables and weights are as defined in Table 2, except for the following changes. In Columns 1 and 2, $surprise_{t-1}$ is calculated using firms that announced in $t-1$ that exceeded the 85th and 95th percentile size cutoffs of the NYSE index in that month, respectively. In Column 3, $surprise_{t-1}$ is calculated using the value-weighted surprise of all firms that announced in the previous trading day, regardless of size. Columns 4 and 5 calculate own surprise and $surprise_{t-1}$ using the median of each analyst's most recent forecast released with the past 30 or 45 days, respectively, excluding days t and $t-1$. Standard errors are clustered by date and reported in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	Return $[t-1, t+1]$				
	(1)	(2)	(3)	(4)	(5)
$Surprise_{t-1}, > 85^{th}$ pctile	-0.948***				
	(0.223)				
$Surprise_{t-1}, > 95^{th}$ pctile		-1.080***			
		(0.252)			
$Surprise_{t-1}$, all firms			-0.704***		
			(0.220)		
$Surprise_{t-1}$, forecasts [t-30,t-2]				-0.812***	
				(0.219)	
$Surprise_{t-1}$, forecasts [t-45,t-2]					-0.726***
					(0.202)
Own $surprise_{it}$ controls	Yes	Yes	Yes	Yes	Yes
R^2	0.0601	0.0588	0.0596	0.0557	0.0558
Observations	75897	66608	75897	121406	150168

Table 3
Alternative Return Measures and Date Corrections

This table shows robustness to alternative measures and sample restrictions. All variables and weights are as defined in Table 2, except for the following changes. Column 1 uses returns in excess of the market, and Column 2 uses standard characteristic adjusted returns without removing the firm announcing on t and firms included in the calculation of $surprise_{t-1}$ from the characteristic matched portfolio. Column 3 uses announcement dates based on the filters from Dellavigna and Pollet (2009). Our main analysis uses I/B/E/S dates which, in the early years of our sample, sometime record the date when the earnings announcement was first published in the Wall Street Journal rather than when the information was released through other means (usually one day earlier). We use I/B/E/S announcement dates because we hope to capture when investors pay attention to earnings announcements. Especially early in the sample (which contains the bulk of the errors), the date of publication in the Wall Street Journal as listed in I/B/E/S may be a better measure of when each firm's earnings announcement is most salient. In Column 3, we show that our results are similar utilizing the alternative Dellavigna and Pollet (2009) date correction, which compares the announcement date listed in I/B/E/S with that in Compustat. We only include announcements contained in both datasets where the date is the same or is different by no more than one trading day. We then use the following rules: 1) If I/B/E/S has a time stamp for the time of the announcement within the day, we use the I/B/E/S date. 2) If the announcement dates in Compustat and I/B/E/S agree, we use this date if it is on or after January 1, 1990 and the previous trading date if it occurred prior to January 1, 1990. 3) If the Compustat date is the trading day before the I/B/E/S date, we use the Compustat date. 4) If the I/B/E/S date is the trading day before the Compustat date, we use the I/B/E/S date. Column 4 re-estimates the baseline regression, but equal-weights each observation instead of of value-weighting. Standard errors are clustered by date and reported in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Return $[t-1, t+1]$	Excess return	Char adj ret	Adjusted dates	Equal weighted
	(1)	(2)	(3)	(4)
$Surprise_{t-1}$	-1.105***	-0.781***	-0.784***	-0.413**
	(0.252)	(0.184)	(0.245)	(0.162)
Own $surprise_{it}$ controls	Yes	Yes	Yes	Yes
R^2	0.0572	0.0534	0.0656	0.0679
Observations	76062	76062	63463	75897

Table 4
Controlling for Additional Fixed Effects

This table adds fixed effects to the baseline specification. All variables and weights are as defined in Table 2, except for the following changes. Column 1 adds day of week fixed effects, Column 2 adds quarter of year fixed effects, Column 3 adds firm fixed effects, Column 4 adds year-month fixed effects, and Column 5 includes all of the fixed effects together. Standard errors are clustered by date and reported in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Return $[t-1, t+1]$	Day of week FE	Quarter of year FE	Firm FE	Year-Month FE	All the FE
	(1)	(2)	(3)	(4)	(5)
$Surprise_{t-1}$	-0.963***	-0.942***	-0.965***	-0.892***	-0.814***
	(0.226)	(0.231)	(0.244)	(0.246)	(0.252)
Own $surprise_{it}$ controls	Yes	Yes	Yes	Yes	Yes
R^2	0.0615	0.0601	0.107	0.0847	0.137
Observations	75897	75897	75897	75897	75897

Table 5
Timing of Contrast Effects

This table provides further analysis of the timing of contrast effects by examining how return reactions to announcements on day t are related to salient surprises by other firms in the current and previous (up to five) half-day windows. Because most observations lack a complete set of lagged half-day salient surprises for the past five half-day periods, each coefficient is estimated from a separate regression of returns on the relevant half-day salient surprise. The return window is set to start before the relevant half-day announcement is released by other firms (Rows 1 and 2 use the $[t, t+1]$ return window, Rows 3 and 4 use the $[t-1, t+1]$ return window, and Row 5 uses the $[t-2, t+1]$ return window). Column 1 includes both AM and PM announcers on day t (as long as time stamps are available) while Column 2 includes only AM announcers and Column 3 includes only PM announcers. The firm's own earnings surprise is always excluded from the calculation of the salient surprise measure within a contemporaneous time window. All other variables and weights are as defined in Table 2. Standard errors are clustered by date and reported in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Own announcement time:	AM or PM	AM	PM
	(1)	(2)	(3)
$Surprise_t$ PM	-0.168	-0.444	0.426
	(0.290)	(0.343)	(0.694)
$Surprise_t$ AM	-0.686*	-0.417	-1.2646*
	(0.360)	(0.408)	(0.664)
$Surprise_{t-1}$ PM	-0.0139	0.217	-0.0868
	(0.322)	(0.397)	(0.579)
$Surprise_{t-1}$ AM	-0.732***	-0.378	-1.539***
	(0.258)	(0.338)	(0.579)
$Surprise_{t-2}$ PM	0.392	0.667	0.0569
	(0.343)	(0.447)	(0.992)
Own $surprise_{it}$ controls	Yes	Yes	Yes