

Internet Appendix to: “Why do firms disagree with short sellers?  
Managerial myopia versus private information”

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This Internet Appendix verifies the robustness of our Table 4 abnormal returns regressions and presents logistic regressions of 8-K announcement likelihood by item.

## 1 Robustness and Additional Results

### 1.1 Robustness

Our Table 4 results are robust to using alternative cutoffs, including financials and utilities, and conditioning on firms with authorized repurchase programs:

- Our original high/low cutoff for repurchasing and short selling groups is 0.5% of shares outstanding. Table [IA1](#) shows results using cutoffs of 0.25% in Panel A and 0.75% in Panel B. Panel C uses cutoffs based on annual percentiles, which line up approximately to the observed statistics in Table 1. Specifically, “high” repurchases correspond to firm-quarters in the top decile of repurchases that year, and “high” short selling implies increases in short interest in the top quintile.
- Following much of the prior literature, we exclude financial firms and utilities because these industries are highly regulated. In Table [IA2](#) we leave these companies in the sample.
- Some companies experiencing increases in short interest may not repurchase because they do not have an authorized repurchase plan. In Table [IA3](#) we limit our sample to firms with

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at least one repurchase authorization reported in the Securities Data Corporation database within the past four years.

## 1.2 Short covering and share repurchases

In Table IA4 we explore another type of disagreement: when short sellers *cover* their positions while the firm conducts *zero or low* repurchases. We examine next-quarter abnormal returns within groups classified based on repurchases and short covering. “High” short covering implies short interest decreases by at least 0.5%. We find that next-quarter abnormal stock returns to firms with high short covering and low repurchases do not significantly differ from returns to our base group firms with low short covering and low repurchases. We interpret these results with caution because a lack of repurchasing suggests the firm does not believe its stock is undervalued enough to warrant repurchasing; the firm may still believe its stock is fairly valued or even somewhat undervalued. Next-quarter abnormal returns to firms with low short covering but high repurchase are positive and significant. In this case the firm is actively trading in a way suggesting undervaluation, but now short sellers are not. Again, we interpret these results with caution. While a lack of short covering could be due to short sellers believing that the outlook of the firm is negative, it could also be they have no new information or not enough positive information to significantly alter their position.

This alternative framework also allows us to examine cases in which firms and short sellers actively *agree*: when short sellers cover their positions while the firm conducts a substantial repurchase. This examination of active agreement is consistent with our focus on active disagreement throughout the paper. When we examine next-quarter abnormal returns within groups classified based on repurchases and short covering, we identify positive and significant returns following short covering, but only in the cases in which firms simultaneously repurchase. Next-quarter buy-and-hold abnormal returns are between 111 bps and 125 bps greater when firms and short sellers agree than when firms do not repurchase and short sellers do not cover their positions.

## 1.3 8-K announcement likelihood by type

We also examine the variation among the short selling/repurchase groups in the likelihood of announcing each type of 8-K disclosure. Public companies must report certain material, corporate

events on a more current basis through 8-K filings with the Securities and Exchange Commission (SEC). We obtain 8-K filings by item following [Cuñat and Groen-Xu \(2017\)](#). We thank Vicente Cuñat and Moqi Groen-Xu for sharing their 8-K filing data. The SEC website lists and explains 8-K items, e.g., see <https://www.sec.gov/fast-answers/answersform8khtm.html> and <https://www.sec.gov/investor/pubs/readan8k.pdf>. We group similar items, then calculate item frequency by group. We exclude “Financial Statements and Exhibits” and “Other Events” and retain the 14 groups of items that occur at least 1,000 times during our sample period.

Table [IA5](#) shows logistic regressions modeling the likelihood of firms disclosing each group of items during the quarter after repurchasing or short selling. We include firm and quarter fixed effects as well as all controls from Table 4. Following disagreement, firms are significantly less likely to enter into or terminate material definitive agreements (such as bank loans, leases, or long-term contracts with buyers or suppliers), announce new financial obligations (long-term debt obligations and any off-balance sheet arrangements), amend articles and bylaws, conduct acquisitions and dispositions, sell unregistered equity, delist, and report non-reliance (i.e., errors in previously disclosed financial statements). We observe no significant difference in the likelihood of announcing material operations and financial results, Reg FD disclosures, officer and director departures, shareholder votes, changes to shareholder rights, a change in the firm’s accountant, or material impairments. The disagreement coefficient shows that these findings hold relative to the low short selling/low repurchase base group and F-tests confirm that these relations are also true relative to the high short selling/low repurchase group. Disagreement firms are less likely (significant at the 10% level) to amend articles or bylaws than other high repurchase firms. Otherwise, disagreement firms’ disclosure habits closely resemble those of other high repurchase firms.

#### **1.4 Disagreement and other informed trading: Continuous measures**

Table [IA6](#) builds upon Table 7, which models next-quarter buy-and-hold abnormal returns, by replacing indicator variables for net insider selling and analyst downgrades with continuous measures. The proxy for informed trading in Model (1) equals the difference in the total dollar value of nonroutine open market sales and purchases for the top five executive (CEO, CFO, COO, President, and Chairman of the Board), scaled by lagged market capitalization. We classify routine trades at the trade level using the methodology of [Cohen, Malloy, and Pomorski \(2012\)](#) and remove

them from our measure of insider trading. The dependent variable in Model (2) is the number of analyst downgrades minus upgrades, divided by the total number of analysts. More insider selling and more analyst downgrades are associated with lower next-quarter buy-and-hold returns, though only the coefficient on insider selling achieves statistical significance. From Row (7) of Table IA6, a one standard deviation increase in net insider selling is associated with 42 bps ( $212.064 \times 0.002$ ) decrease in returns while a one standard deviation increase in net analyst downgrades is associated with a 21 bps ( $0.301 \times 0.698$ ) decrease in next-quarter returns. F-test (2) + (7) shows the slope is not different than zero in the disagreement group for either insider selling or analyst downgrades, in line with our results from Table 7 using indicator variables.

### 1.5 Disagreement and repurchase information content

In Table IA7 we examine two subsets of repurchase transactions unlikely based on private information: dilution-motivated repurchases and repurchases conducted under preset plans. We identify firms with significant dilution by comparing the change in shares outstanding net of repurchases to two cutoffs. To qualify as a dilution quarter, the net increase in shares outstanding, after adding back any decreases in shares outstanding due to repurchasing, must be at least 0.25% or 0.50%, as noted. Panel A shows next-quarter abnormal returns regressions on dilution indicators interacted with short selling/repurchase groups. Coefficients on dilution interactions with both repurchasing groups (disagreement or low short selling/high repurchase) are negative, consistent with dilution-motivated repurchases containing less information than other repurchases; however, only the interactions with the disagreement group are statistically significant. The net effect of dilution-motivated repurchases on returns is close to zero; F-tests reveal that returns to dilution-motivated repurchases coupled with short selling are consistently negative but only marginally significant and returns to dilution-motivated repurchases without short selling do not significantly differ from zero. Yet, among firms that experience dilution and increasing short interest, those that repurchase fare between 91 and 181 bps better in terms of next-quarter abnormal returns. The results suggest repurchases associated with dilution are less informative, but repurchasing against short selling is associated with positive private information even during quarters with dilution.

Next, we examine preset repurchases, which include accelerated share repurchase plans (ASRs) and Rule 10b5-1 plans. Repurchases under preset plans are less likely to convey information be-

cause these plans are established in advance and represent a stronger commitment to repurchase announced amounts (Bargeron, Kulchania, and Thomas, 2011; Bonaime, Harford, and Moore, 2019). Panel B of Table IA7 shows next-quarter abnormal returns regressions with short selling and repurchase indicators as well as interactions with a preset repurchase indicator. The preset repurchase indicator equals one if the firm announced an ASR or Rule 10b5-1 repurchase plan within the past 6 months.<sup>1</sup> Because firms with preset repurchase plans are almost fully contained within our “high” repurchase group, we only interact the preset repurchase indicator with the disagreement indicator and the low short/high repurchase indicator. Abnormal returns following disagreement continue to be positive and significant if repurchases are not under preset plans; however, post-disagreement abnormal returns do not significantly differ from zero if the repurchases are conducted under a preset plan. Further, returns following preset repurchases around short selling are not significantly different from returns following high short selling but low repurchases. These results are consistent with repurchases concurrent with short selling containing little information if they fall under a preset repurchase plan.

## 1.6 Regulation SHO

Table IA8 presents regressions of short selling and our high short selling indicator on indicators for the post-Regulation SHO (“Reg SHO”) time period and their interactions with indicators for the randomly selected pilot firms. We show results with continuous and binary short selling measures and use three pre/post cutoffs: (1) the implementation of Reg SHO in May 2005, (2) the announcement of Reg SHO in August 2004, and (3) the end of the Reg SHO trial period in July 2007. In these first stage models, the change in the magnitude of short selling and frequency of high short selling quarters for the treated sample is not significantly different than the change in the frequency of high short selling quarters for the control sample.

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<sup>1</sup>These data are available from Bonaime, Harford, and Moore (2019), who describe the hand-collection process.

## References

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**Table IA1. Alternative Cutoffs**

<b>Panel A: 0.25% Cutoff</b>			
	Size & B/M adjusted returns	Size & momentum adjusted returns	DGTW returns
Disagreement	0.589** (2.109)	0.813*** (3.209)	0.776*** (3.620)
High short * Low repurchase	-1.186*** (-3.565)	-1.171*** (-4.080)	-0.774** (-2.674)
Low short * High repurchase	0.902*** (2.935)	0.890*** (3.062)	1.035*** (3.083)
<b>F-tests with p-values:</b>			
Disagreement -	1.775***	1.984***	1.550***
High short * Low repurchase	[0.000]	[0.000]	[0.000]
Disagreement -	-0.313	-0.077	-0.259
Low short * High repurchase	[0.34]	[0.814]	[0.443]
Observations	100,755	98,974	89,367
Controls	Yes	Yes	Yes
Adjusted $R^2$	0.0539	0.0486	0.0390
<b>Panel B: 0.75% Cutoff</b>			
	Size & B/M adjusted returns	Size & momentum adjusted returns	DGTW returns
Disagreement	0.741* (1.720)	0.975** (2.374)	0.603 (1.607)
High short * Low repurchase	-1.341*** (-3.894)	-1.302*** (-4.327)	-1.210*** (-4.112)
Low short * High repurchase	0.900*** (3.212)	0.964*** (4.113)	1.117*** (3.822)
<b>F-tests with p-values:</b>			
Disagreement -	2.082***	2.277***	1.813***
High short * Low repurchase	[0.001]	[0.000]	[0.002]
Disagreement -	-0.159	0.011	-0.514
Low short * High repurchase	[0.717]	[0.979]	[0.225]
Observations	100,755	98,974	89,367
Controls	Yes	Yes	Yes
Adjusted $R^2$	0.0538	0.0485	0.0391
<b>Panel C: Annual Percentile Cutoffs</b>			
	Size & B/M adjusted returns	Size & momentum adjusted returns	DGTW returns
Disagreement	0.783* (1.859)	1.179*** (2.910)	0.712* (1.835)
High short * Low repurchase	-1.429*** (-4.105)	-1.395*** (-4.693)	-1.232*** (-4.073)
Low short * High repurchase	0.682** (2.344)	0.859*** (3.428)	0.846** (2.690)
<b>F-tests with p-values:</b>			
Disagreement -	2.212***	2.574***	1.944***
High short * Low repurchase	[0.001]	[0.000]	[0.002]
Disagreement -	0.101	0.32	-0.134
Low short * High repurchase	[0.828]	[0.498]	[0.788]
Observations	100,755	98,974	89,367
Controls	Yes	Yes	Yes
Adjusted $R^2$	0.0538	0.0486	0.0391

This table presents regressions of next-quarter abnormal returns on repurchase/short selling classification indicators and control variables, using alternative cutoffs for “high” and “low” repurchase and short selling classifications. In Panel A (Panel B) repurchases and changes in short interest are labeled “high” if they exceed 0.25% (0.75%) of shares outstanding; otherwise, they are considered “low.” In Panel C “high” repurchases denotes repurchase levels in the top annual decile; “high” short selling indicates changes in short interest in the top annual quintile. Firm-quarters associated with “disagreement” have simultaneously high repurchases and increases in short interest. Dependent variables are buy-and-hold abnormal returns adjusted using Fama-French 25 portfolios matched on size and book-to-market, Fama-French 25 portfolios matched on size and momentum, or DGTW portfolios matched on size, book-to-market and momentum, as noted. All control variables from Table 4 are included, but omitted for brevity. Firm and quarter fixed effects are included in all regressions, and errors are double clustered by firm and quarter.  $t$ -statistics are presented in parentheses,  $p$ -values in brackets, and \*, \*\*, and \*\*\* denote significance at the 10%, 5% and 1% levels, respectively.

**Table IA2. Including Financials and Utilities**

	Size & B/M adjusted returns	Size & momentum adjusted returns	DGTW returns
Disagreement	0.570* (2.006)	0.958*** (3.719)	0.507* (1.997)
High short * Low repurchase	-0.923*** (-2.711)	-0.826** (-2.671)	-0.880*** (-2.883)
Low short * High repurchase	0.872*** (3.617)	0.965*** (3.993)	0.956*** (3.423)
<b>F-tests with p-values:</b>			
Disagreement -	1.493***	1.784***	1.387***
High short * Low repurchase	[0.000]	[0.000]	[0.000]
Disagreement -	-0.302	-0.007	-0.449
Low short * High repurchase	[0.321]	[0.98]	[0.127]
Observations	129,025	126,851	110,510
Controls	Yes	Yes	Yes
Adjusted $R^2$	0.0502	0.0454	0.0280

This table presents regressions of next-quarter abnormal returns on repurchase/short selling classification indicators and control variables, including financials and utilities (SIC codes 4800–4829, 4910–4949, and 6000–6999). Repurchases and changes in short interest are labeled “high” if they exceed 0.5% of shares outstanding; otherwise, they are considered “low.” Firm-quarters associated with “disagreement” have simultaneously high repurchases and increases in short interest. Dependent variables are buy-and-hold abnormal returns adjusted using Fama-French 25 portfolios matched on size and book-to-market, Fama-French 25 portfolios matched on size and momentum, or DGTW portfolios matched on size, book-to-market and momentum, as noted. All control variables from Table 4 are included, but omitted for brevity. Firm and quarter fixed effects are included in all regressions, and errors are double clustered by firm and quarter.  $t$ -statistics are presented in parentheses,  $p$ -values in brackets, and \*, \*\*, and \*\*\* denote significance at the 10%, 5% and 1% levels, respectively.

**Table IA3. Open Market Repurchase Announcers**

	Size & B/M adjusted returns	Size & momentum adjusted returns	DGTW returns
Disagreement	1.211*** (2.780)	1.587*** (3.869)	1.076** (2.455)
High short * Low repurchase	-1.606*** (-3.881)	-1.456*** (-3.884)	-1.543*** (-3.370)
Low short * High repurchase	0.845*** (2.964)	1.027*** (3.867)	1.044*** (2.982)
<b>F-tests with p-values:</b>			
Disagreement -	2.817***	3.043***	2.619***
High short * Low repurchase	[0.000]	[0.000]	[0.000]
Disagreement -	0.366	0.56	0.032
Low short * High repurchase	[0.355]	[0.137]	[0.941]
Observations	33,603	33,003	31,755
Controls	Yes	Yes	Yes
Adjusted $R^2$	0.0587	0.0483	0.0625

This table presents regressions of next-quarter abnormal returns on repurchase/short selling classification indicators and control variables, for the subset of firms with at least one open market repurchase announcement reported in SDC during the prior four years. Repurchases and changes in short interest are labeled “high” if they exceed 0.5% of shares outstanding; otherwise, they are considered “low.” Firm-quarters associated with “disagreement” have simultaneously high repurchases and increases in short interest. Dependent variables are buy-and-hold abnormal returns adjusted using Fama-French 25 portfolios matched on size and book-to-market, Fama-French 25 portfolios matched on size and momentum, or DGTW portfolios matched on size, book-to-market and momentum, as noted. All control variables from Table 4 are included, but omitted for brevity. Firm and quarter fixed effects are included in all regressions, and errors are double clustered by firm and quarter.  $t$ -statistics are presented in parentheses,  $p$ -values in brackets, and \*, \*\*, and \*\*\* denote significance at the 10%, 5% and 1% levels, respectively.

**Table IA4. Alternative Disagreement**

	Size & B/M adjusted returns	Size & momentum adjusted returns	DGTW returns
High short covering & Low repurchase	0.069 (0.211)	0.301 (1.081)	0.235 (0.732)
Low short covering & High repurchase	0.834*** (2.989)	1.085*** (4.119)	0.875*** (3.206)
High short covering & High repurchase	1.112*** (2.788)	1.226*** (3.521)	1.245*** (2.829)
Observations	100,755	98,974	89,367
Controls	Yes	Yes	Yes
Adjusted $R^2$	0.0535	0.0482	0.0389

This table presents regressions of next-quarter abnormal returns on repurchase/short *covering* classification indicators and control variables. Repurchases are labeled “high” if they exceed 0.5% of shares outstanding; otherwise, they are considered “low.” Short covering is “high” if short interest decreases by at least 0.5% of shares outstanding; otherwise, short covering is considered “low.” Dependent variables are buy-and-hold abnormal returns adjusted using Fama-French 25 portfolios matched on size and book-to-market, Fama-French 25 portfolios matched on size and momentum, or DGTW portfolios matched on size, book-to-market and momentum, as noted. All control variables from Table 4 are included, but omitted for brevity. Firm and quarter fixed effects are included in all regressions, and errors are double clustered by firm and quarter.  $t$ -statistics are presented in parentheses,  $p$ -values in brackets, and \*, \*\*, and \*\*\* denote significance at the 10%, 5% and 1% levels, respectively.

**Table IA5**  
**8-K Logistic Regressions**

	Operations and Financial Results	Reg FD Disclosure	Director Departure	Officer and Director Departure	Material Definitive Agreement	Financial Obligation	Shareholder Vote	Articles or Bylaws Amendment
Disagreement	0.007 (1.632)	-0.009 (-1.185)	-0.009 (-0.956)	-0.024*** (-2.709)	-0.012** (-2.164)	-0.000 (-0.035)	-0.014** (-2.503)	
High short selling & Low repurchase	0.001 (0.449)	0.002 (0.477)	-0.010* (-1.940)	0.005 (1.074)	0.001 (0.457)	0.002 (0.475)	0.004 (1.443)	
Low short selling & High repurchase	0.004 (1.047)	-0.013** (-2.548)	0.000 (0.057)	-0.022*** (-4.132)	-0.005 (-1.192)	-0.001 (-0.546)	-0.004 (-1.119)	
<b>F-tests with p-values:</b>								
Disagreement -	0.006 (0.175)	-0.002 (0.195)	0.010 (0.936)	-0.025*** (-4.003)	-0.011** (-2.164)	-0.002 (-0.69)	-0.014*** (-3.000)	
High short selling & Low repurchase	0.003 (0.483)	0.010 (0.489)	0.000 (0.364)	0.000 (0.803)	-0.010 (-0.193)	0.000 (0.835)	-0.01* (-0.094)	
Disagreement -	0.003 (0.483)	0.010 (0.489)	0.000 (0.364)	0.000 (0.803)	-0.010 (-0.193)	0.000 (0.835)	-0.01* (-0.094)	
Low short selling & High repurchase	0.003 (0.483)	0.010 (0.489)	0.000 (0.364)	0.000 (0.803)	-0.010 (-0.193)	0.000 (0.835)	-0.01* (-0.094)	
Observations	78,995	78,995	78,995	78,995	78,995	78,995	78,995	
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Adjusted R <sup>2</sup>	0.395	0.424	0.130	0.165	0.0814	0.664	0.0544	

	Acquisition or Disposition	Unregistered Equity Sales	Delisting	Shareholder Rights	Accountant Change	Non-Reliance	Material Impairments
Disagreement	-0.016*** (-5.111)	-0.008*** (-4.709)	-0.007*** (-2.885)	-0.001 (-0.393)	0.000 (0.044)	-0.004** (-2.395)	0.000 (0.154)
High short selling & Low repurchase	0.005** (2.121)	0.003 (1.437)	-0.002 (-1.297)	0.003** (2.081)	0.000 (0.337)	0.000 (0.498)	0.001 (0.904)
Low short selling & High repurchase	-0.011*** (-4.481)	-0.006*** (-3.042)	-0.006*** (-2.801)	-0.003** (-2.544)	0.000 (0.074)	-0.002 (-1.040)	-0.002 (-1.314)
<b>F-tests with p-values:</b>							
Disagreement -	-0.021*** (-5.111)	-0.011*** (-4.709)	-0.005** (-2.885)	-0.004 (-1.666)	0.000 (0.863)	-0.004** (-2.395)	-0.001 (-0.741)
High short selling & Low repurchase	0.000 (0.105)	0.000 (0.193)	0.000 (0.469)	0.000 (0.279)	0.000 (0.994)	0.000 (0.127)	0.000 (0.292)
Disagreement -	0.000 (0.105)	0.000 (0.193)	0.000 (0.469)	0.000 (0.279)	0.000 (0.994)	0.000 (0.127)	0.000 (0.292)
Low short selling & High repurchase	0.000 (0.105)	0.000 (0.193)	0.000 (0.469)	0.000 (0.279)	0.000 (0.994)	0.000 (0.127)	0.000 (0.292)
Observations	78,995	78,995	78,995	78,995	78,995	78,995	78,995
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R <sup>2</sup>	0.0448	0.123	0.123	0.0334	0.0297	0.0295	0.0402

This table presents logistic regressions of 8-K announcement likelihood (by group) on repurchase/short selling indicators and control variables. The SEC website lists and explains 8-K items, e.g., see <https://www.sec.gov/fast-answers/answersform8khtm.htm> and <https://www.sec.gov/investor/pubs/readan8k.pdf>. Operations and Financial Results corresponds to items 2.02 and 12, Reg FD Disclosure to 7.01 and 9, Officer and Director Departure to 5.02, Material Definitive Agreement to 1.01 and 1.02, Financial Obligation to 2.03, Shareholder Vote to 5.07, Articles or Bylaws Amendment to 5.03, Acquisition or Disposition to 2.01 and 2, Unregistered Equity Sales to 3.02, Delisting to 3.01, Shareholder Rights to 3.03, Accountant Change to 4.01 and 4, Non-Reliance to 4.02 and Material Impairments to 2.06. Repurchases and changes in short interest are labeled “high” if they exceed 0.5% of shares outstanding; otherwise, they are considered “low.” Firm-quarters associated with “disagreement” have simultaneously high repurchases and increases in short interest. All control variables from Table 4 are included, but omitted for brevity. Firm and quarter fixed effects are included in all regressions, and errors are double clustered by firm and quarter. *t*-statistics are presented in parentheses, *p*-values in brackets, and \*, \*\*, and \*\*\* denote significance at the 10%, 5% and 1% levels, respectively.

**Table IA6. Disagreement and Other Informed Trading: Continuous Measures**

Informed traders:	Insiders	Analysts
(1) Disagreement	0.734* (1.832)	0.821** (2.033)
(2) Informed trader & Disagreement	54.085 (0.293)	0.747* (1.792)
(3) High short selling & Low repurchase	-1.087*** (-2.962)	-0.935*** (-2.804)
(4) Informed trader & High short selling & Low repurchase	-151.125 (-1.422)	0.584* (1.749)
(5) Low short selling & High repurchase	0.779*** (2.817)	1.074*** (3.793)
(6) Informed trader & Low short selling & High repurchase	201.542* (1.913)	0.650 (1.672)
(7) Informed trader	-212.064*** (-3.465)	-0.301 (-1.242)
<b>F-tests with p-values:</b>		
(2) + (7)	-157.920 [0.357]	0.446 [0.281]
(4) + (7)	-363.1*** [0.000]	0.283 [0.295]
(6) + (7)	-10.500 [0.912]	0.349 [0.218]
Observations	100,754	50,036
Control variables	Yes	Yes
Adjusted $R^2$	0.0541	0.0712

This table presents regressions of next-quarter buy-and-hold abnormal returns on repurchase/short selling indicators, interacted with continuous measures of trading by insiders and analysts. The proxy for informed trading in Model (1) equals the difference in the total dollar value of nonroutine open market sales and purchases for the top five executive (CEO, CFO, COO, President, and Chairman of the Board), scaled by lagged market capitalization. We classify routine trades at the trade level using the methodology of [Cohen, Malloy, and Pomorski \(2012\)](#) and remove them from our measure of insider trading. The dependent variable in Model (2) is the number of analyst downgrades minus upgrades, divided by the total number of analysts. Repurchases and changes in short interest are labeled “high” if they exceed 0.5% of shares outstanding; otherwise, they are considered “low.” Firm-quarters associated with “disagreement” have simultaneously high repurchases and increases in short interest. The dependent variable is buy-and-hold abnormal returns adjusted using Fama-French 25 portfolios matched on size and book-to-market. All control variables from Table 4 are included, but omitted for brevity. Firm and quarter fixed effects are included in all regressions, and errors are double clustered by firm and quarter.  $t$ -statistics are presented in parentheses,  $p$ -values in brackets, and \*, \*\*, and \*\*\* denote significance at the 10%, 5% and 1% levels, respectively.

**Table IA7. Disagreement and Repurchase Information Content**

<b>Panel A: Dilution-motivated repurchases</b>						
Dilution cutoff:	Size & B/M adjusted returns		Size & Momentum adjusted returns		DGTW returns	
	0.25%	0.50%	0.25%	0.50%	0.25%	0.50%
(1) Disagreement	1.446** (2.156)	1.416*** (3.032)	1.882*** (3.094)	1.704*** (3.931)	1.571** (2.575)	1.460*** (3.377)
(2) Dilution & Disagreement	-1.215 (-1.586)	-1.555** (-2.397)	-1.522** (-2.150)	-1.537** (-2.395)	-1.484* (-1.958)	-1.773*** (-2.850)
(3) High short selling & Low repurchase	-1.042** (-2.333)	-1.009** (-2.384)	-0.880** (-2.485)	-0.930*** (-2.883)	-1.109*** (-2.806)	-1.106*** (-2.970)
(4) Dilution & High short selling & Low repurchase	-0.297 (-0.630)	-0.536 (-0.931)	-0.574 (-1.376)	-0.698 (-1.407)	-0.066 (-0.154)	-0.118 (-0.208)
(5) Low short selling & High repurchase	1.026*** (2.928)	1.127*** (3.643)	1.264*** (3.746)	1.252*** (4.378)	1.246*** (3.212)	1.343*** (4.258)
(6) Dilution & Low short selling & High repurchase	-0.142 (-0.357)	-0.370 (-0.874)	-0.417 (-1.017)	-0.428 (-1.087)	-0.266 (-0.570)	-0.568 (-1.170)
(7) Dilution	-0.803** (-2.456)	-0.847** (-2.515)	-1.031*** (-3.272)	-1.159*** (-3.744)	-0.589 (-1.507)	-0.601 (-1.418)
<b>F-tests with p-values:</b>						
(1) + (2) + (7)	-0.572 [0.149]	-0.986* [0.051]	-0.671* [0.010]	-0.992* [0.053]	-0.502 [0.219]	-0.914* [0.074]
(5) + (6) + (7)	0.081 [0.825]	-0.090 [0.832]	-0.184 [0.571]	-0.335 [0.358]	0.391 [0.324]	0.174 [0.685]
((1) + (2)) - ((3) + (4))	1.57*** [0.003]	1.406** [0.041]	1.814*** [0.001]	1.795** [0.011]	1.262*** [0.007]	0.911 [0.137]
Observations	100,581	100,581	98,802	98,802	85,959	85,959
Control variables	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted $R^2$	0.0541	0.0542	0.0490	0.0491	0.0305	0.0305
<b>Panel B: Preset repurchases</b>						
	Size & B/M adjusted returns		Size & Momentum adjusted returns		DGTW returns	
	0.25%	0.50%	0.25%	0.50%	0.25%	0.50%
(1) Disagreement			0.809** (2.145)	1.109*** (3.318)		0.814** (2.478)
(2) Preset repurchase & Disagreement			-1.103 (-0.719)	-1.602 (-1.183)		-1.099 (-0.776)
(3) High short selling & Low repurchase			-1.211*** (-3.535)	-1.192*** (-4.016)		-1.155*** (-3.666)
(4) Low short selling & High repurchase			0.896*** (3.216)	0.975*** (3.798)		1.079*** (3.590)
(5) Preset repurchase & Low short selling & High repurchase			-0.224 (-0.165)	-0.608 (-0.497)		-0.835 (-0.635)
<b>F-tests with p-values:</b>						
(1) + (2)			-0.294 [0.827]	-0.493 [0.693]		-0.285 [0.823]
((1) + (2)) - (3)			0.917 [0.496]	0.699 [0.573]		0.870 [0.489]
(4) + (5)			0.672 [0.609]	0.367 [0.759]		0.244 [0.853]
Observations			100,755	98,974		86,003
Control variables			Yes	Yes		Yes
Adjusted $R^2$			0.0538	0.0485		0.0304

This table presents regressions of next-quarter buy-and-hold abnormal returns on repurchase/short selling indicators, interacted with repurchase information content indicators, and control variables. *Dilution* is an indicator variable equal to one if the change in shares outstanding without a repurchase would have exceeded 0.25% or 0.50%, as noted. *Preset repurchase* is an indicator variable equal to one if the firm announced an accelerated share repurchase plan or Rule 10b5-1 share repurchase plan within the past 6 months. Repurchases and changes in short interest are labeled “high” if they exceed 0.5% of shares outstanding; otherwise, they are considered “low.” Firm-quarters associated with “disagreement” have simultaneously high repurchases and increases in short interest. Dependent variables are buy-and-hold abnormal returns adjusted using Fama-French 25 portfolios matched on size and book-to-market, Fama-French 25 portfolios matched on size and momentum, or DGTW portfolios matched on size, book-to-market and momentum, as noted. All control variables from Table 4 are included, but omitted for brevity. Firm and quarter fixed effects are included in all regressions, and errors are double clustered by firm and quarter.  $t$ -statistics are presented in parentheses,  $p$ -values in brackets, and \*, \*\*, and \*\*\* denote significance at the 10%, 5% and 1% levels, respectively.

**Table IA8**  
**Short Selling around Regulation SHO**

**Panel A: Firm and quarter fixed effects**

Event window (in months):	- 12 to + 12 around Reg SHO implementation (May 2005)		- 7 to + 9 around Reg SHO announcement (August 2004)		- 12 to + 12 around Reg SHO end date (July 2007)	
	Continuous	Indicator	Continuous	Indicator	Continuous	Indicator
Post	-0.002 (-0.849)	-0.008 (-0.122)	-0.004*** (-3.486)	-0.185** (-3.349)	-0.016*** (-4.438)	-0.342*** (-4.438)
Pilot * Post	0.000 (0.037)	0.022 (1.663)	0.000 (0.347)	0.008 (0.506)	-0.001 (-1.231)	-0.016 (-1.273)
Observations	15,499	15,499	10,188	10,188	15,047	15,047
Fixed Effects	Firm & Quarter	Firm & Quarter	Firm & Quarter	Firm & Quarter	Firm & Quarter	Firm & Quarter
Errors Clustered on	Firm & Quarter	Firm & Quarter	Firm & Quarter	Firm & Quarter	Firm & Quarter	Firm & Quarter
Adjusted R <sup>2</sup>	-0.0151	0.0520	-0.0165	0.0624	0.0294	0.0985

**Panel B: No firm and quarter fixed effects**

Event window (in months):	- 12 to + 12 around Reg SHO implementation (May 2005)		- 7 to + 9 around Reg SHO announcement (August 2004)		- 12 to + 12 around Reg SHO end date (July 2007)	
	Continuous	Indicator	Continuous	Indicator	Continuous	Indicator
Pilot	0.000 (0.472)	-0.003 (-0.228)	-0.000 (-0.298)	-0.007 (-0.475)	0.000 (0.235)	0.001 (0.116)
Post	-0.001* (-1.953)	-0.019** (-2.086)	-0.001*** (-3.000)	-0.014 (-1.202)	-0.002*** (-3.734)	-0.056*** (-5.691)
Pilot * Post	-0.000 (-0.003)	0.020 (1.254)	0.000 (0.298)	0.008 (0.406)	-0.001 (-1.011)	-0.017 (-0.989)
Observations	15,576	15,576	10,235	10,235	15,096	15,096
Fixed Effects	None	None	None	None	None	None
Errors Clustered on	None	None	None	None	None	None
Adjusted R <sup>2</sup>	0.0002	0.0001	0.0009	-0.0001	0.0018	0.0038

This table presents regressions of short selling and our high short selling indicator on indicators for the post-Regulation SHO (“Reg SHO”) time period and their interactions with indicators for the randomly selected pilot firms. We show results with continuous short selling measure and an indicator equal to one if changes in short interest are exceed 0.5% of shares outstanding. We also use three pre/post cutoffs: (1) the implementation of Reg SHO in May 2005, (2) the announcement of Reg SHO in August 2004, and (3) the end of the Reg SHO trial period in July 2007. In Panel A we include firm and quarter fixed effects and double cluster errors. Panel B does not include fixed effects or cluster standard errors, but standard errors are robust. *t*-statistics are presented in parentheses, *p*-values in brackets, and \*, \*\*, and \*\*\* denote significance at the 10%, 5% and 1% levels, respectively.