Appendix A1. Sample Instructions

Note: The following contains instructions for initial BASE periods that presents the environment and pertinent incentives for traders and monitors. After 2 BASE periods participants are given instructions for the REGB, REGI or REGD treatment condition. Here we present instructions for the REGB condition in the case of a value increasing conversion (termed in the instructions a 'positive corrective action '). In each session 10 periods in one conversion condition are followed by 10 periods in the other condition.

REGI instructions parallel the REGB instructions with two differences. First, monitors in the REGI treatment suffer no penalty for making an unnecessary conversion. Second, in the REGI treatment monitors were told the underlying market fundamental each period with a 50% probability. Similarly, the REGD treatment parallels the REGB treatment with two differences. First, monitors in the REGD treatment suffer no penalty for making an unnecessary conversion. Second, following the close of trade each period, the monitor chooses to either intervene (convert) or wait. If the monitor chooses to intervene, she earns either $12 or $0 depending on whether not the decision is correct. If the monitor elects to wait she earns $6. In this case she is shown the underlying market fundamental and is obligated to make the correct decision.

Overview: Welcome! Thank you for coming to today's session. This is an experiment in the economics of decision-making. Various foundations have provided funds for this research. The instructions are simple, and if you follow them carefully and make good decisions, you may earn a considerable amount of money that will be paid to you in CASH at the end of the experiment. Your earnings will be determined partly by your decisions and partly by the decisions of others.

A. ***General Description.*** Today's experiment consists of two types of people, *Traders* and *Monitors*. *Traders* earn money from buying and selling units of an abstract stock we'll call an "asset." *Monitors* earn money from correctly guessing the asset's value.
   1) There will be ten *Traders* and three *Monitors.*
   2) The session consists of 21 *trading periods* in which traders buy and sell assets. The trading portion of each period will last 110 seconds.
   3) During each trading period
      a. Traders may buy and/or sell assets.
      b. Monitors observe contract prices and guess the asset's underlying value.

B. ***Actions and Incentives for Traders***.
   1) At the outset of each period traders are given a *portfolio* consisting of two assets. Traders are also given a $16 (lab) loan to purchase assets. Traders repay this loan at the end of each trading period, without interest.
   2) The value of each asset to a trader is determined by the trader's *dividend*. The dividend is each asset's *intrinsic value*– that is, each asset held by a trader at the end of a period will be converted into this dividend. Traders' dividends for each period are determined as follows.
      a. The program takes (draws) a number over the range [$2.00 $8.00], each number is equally likely to be selected. The draws were made by a computer prior to the experiment.
      b. For 6 randomly selected traders, their dividend equals this draw. We call these high value traders**.**
      c. For the remaining 4 traders their dividend value will be 60¢ below this draw. We call these low value traders.
      d Traders will know only their own dividend in a period. They will not know if they are a high-value or a low-value trader that period. That is, they won't know whether their dividend is high or low relative to the other traders in that period.
   3) The dividend of an asset depends on whether it is held by a high-value or a low-value trader. Thus, the same unit may have different dividends for different traders.
   4) At the end of each period each trader's portfolio net of their $16.00 loan is converted to lab dollars: That is, they earn the sum of any cash on hand in excess of the $16.00 which they have to pay back, plus their dividends for all assets held.

C. Actions and Incentives for Monitors
   1) At the end of the trading period, monitors observe the *median* of all contract prices. The median price is the price that divides evenly the higher and the lower prices
   2) Then Monitors guess the high dividend. After all monitors make their guesses, the correct answer will be revealed.

3) Monitor payoffs are determined by the accuracy of their guesses. Specifically, monitors will earn
   a. $3.00 (lab) if their guess is within 20¢ of the correct answer.
   b. $1.00 (lab) if their guess is within 50¢ of the correct answer.
   c. 0 otherwise.

Specific Instructions/ Screen Displays.

A. Trader's Screen Display.

1. *The Upper Portion of the Screen.* The upper portion of trader T2's screen at the beginning of a period is shown below. This screen conveys information regarding trader identity, the trading period and the trader's portfolio.

Period:	2 of 5	Time Remaining	107
	Trader: T2		
Assets:	2	Cash on Hand	$16.00
Dividend	**$4.57**	Total Asset Value	$9.14
		Net Portfolio Value	$9.14

Question: *Observe that the Trader's dividend in the above example is $4.57. What are the possible dividend values for the other traders? Why?*

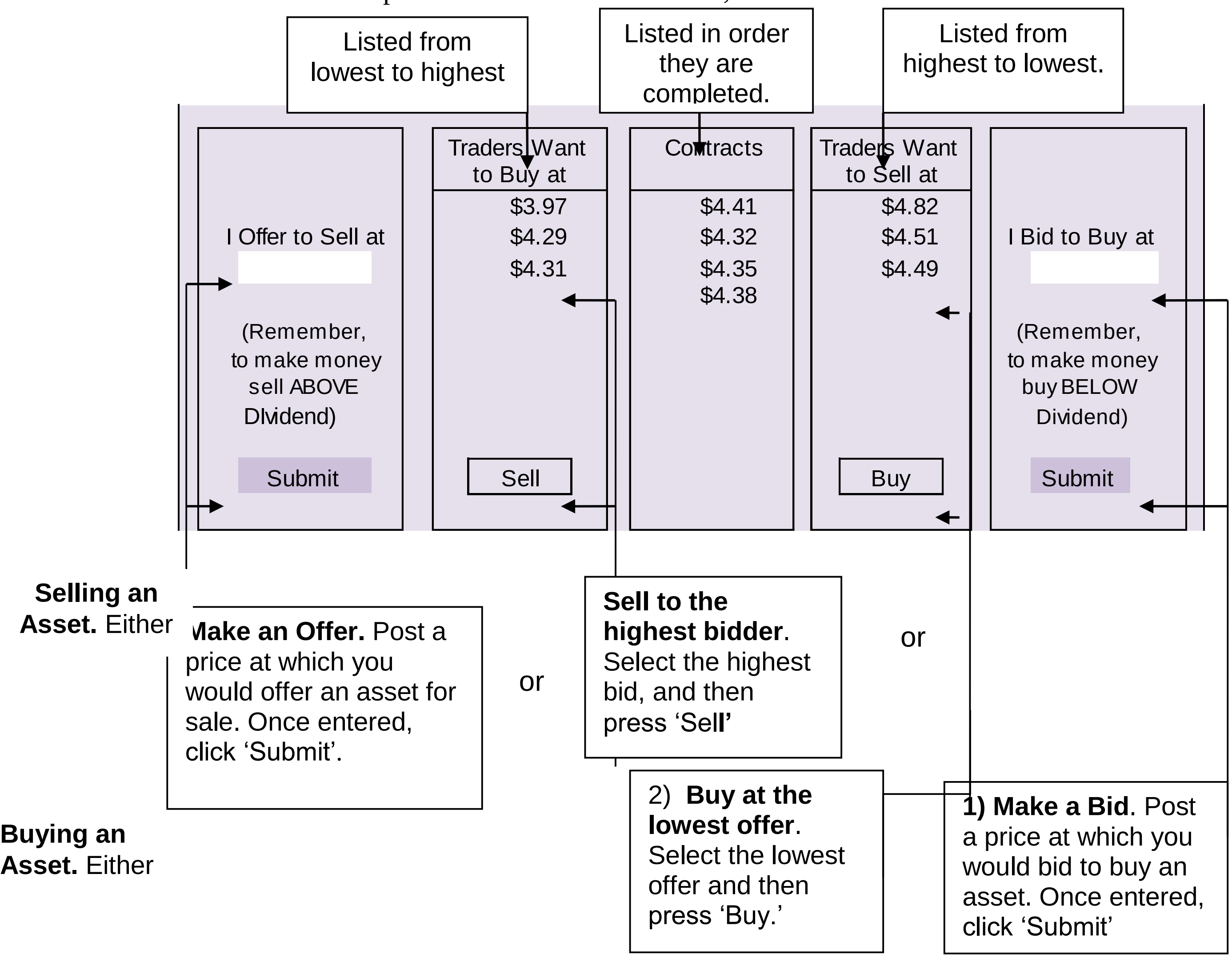
Question: *Observe that the Net Portfolio Value is $9.14 despite the Trader having cash on hand of $16.00. Why?*

At the end of the period the upper portion of the trader's screen reflects trader earnings, as seen below. Notice below that in period 2, Trader T2 acquired one asset. Her net portfolio value is the sum of the total asset value and her remaining cash on than less the initial $16 working capital loan. The trader's cumulative earnings for the session are also displayed. Once you've reviewed your earnings press 'Continue'. a

Period:	2 of 5		Time Remaining	0
	Trader: T2			
Assets:	3		Cash on Hand:	$11.90
Dividend	**$4.57**		Total Asset Value	$13.71
		Period Earnings:	Net Portfolio Value	$9.61
		Cumulative Earnings:		$14.37

Question: *Notice that Trader T2 finished the period with a Portfolio Value of $9.61. She started the period with only $9.14. How did she increase her earnings?*

2.*Trading Assets.* A trader increases her net portfolio value by buying and selling assets. She uses the lower portion of their screen for this, as shown below.



Note: Traders may submit new offers and bids as often as they like

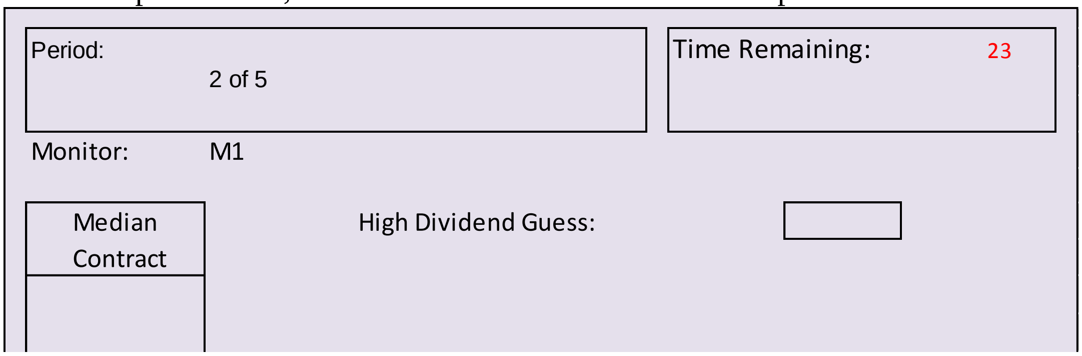
Question: *Suppose a Trader's dividend is $4.80.*

- *If she saw other traders offering to sell for $4.49 and bidding to buy for $4.31 (as shown above) should she consider buying or selling?*
- *How much she could earn in this case?*

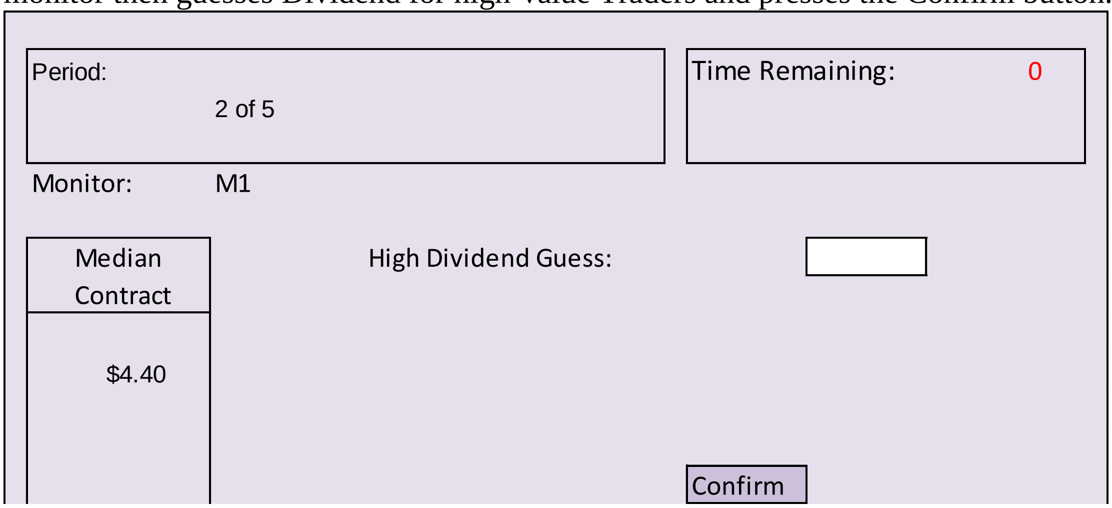
Question: *Suppose a Trader's dividend is $4.20.*

- *If other traders offering to sell for $4.49 and bidding to buy for $4.31 (as shown above) should she consider buying or selling?*
- *What is the maximum amount she could earn in this case?*

B. Monitor Screen Displays. The monitor does nothing until the trading period concludes. When the period ends, the monitor sees the median contract price.



Monitor actions. When the trading period concludes the median contract price is displayed. The monitor then guesses Dividend for high-value Traders and presses the Confirm button.



Monitor earnings. When all monitors have submitted their guesses, the correct answer is revealed and earnings are calculated, as shown below.

After reviewing earnings, press Continue.

Question: *Why does the monitor in the illustration earn $3.00?*

Question*: Suppose a Monitor guesses $7.82 and the correct answer turns out to be $7.60. How much does the Monitor Earn? Why?*

Question: *Suppose a Monitor guesses $2.48 and the correct answer turns out to be $4.50. How much does the Monitor Earn? Why?*

Quiz of Understanding

1. Suppose you are a Trader and your dividend is $7.31. What are the possible dividends for the other traders?

2. If the two dividends are $7.31 and $7.91 in a period, how many traders will have the $7.31 dividend and how many will have the $7.91 dividend?

3. Suppose a Trader has a dividend of $3.47 and sees a bid to buy of $3.63. Should the trader consider buying or selling his asset? How much can he earn?

4. Suppose a Trader has a dividend of $3.47 and sees an offer of $3.20. Should the trader consider buying or selling his asset? How much can he earn?

5. Suppose a monitor, guesses that the high dividend value is $2.32 and it turns out that the high dividend is $2.58. How much does the monitor earn?

Final Details

1. Your identity as a monitor or as a trader will be revealed to you once the experiment starts. Other participants will not know your identity. Your role as a monitor or trader will remain fixed throughout today's session. However, it is important that you DO NOT publicly disclose your identity.

2. To ensure that you understand how the market proceeds we will conduct one practice period. You will not be paid for your decisions in this period. During this practice period, please feel free to raise your hand and ask any questions you might have.

3. Any Questions?

(Following the practice periods).

Thank you again for coming to today's session and bearing with us as we read through the instructions. Now we will begin the session.

1. The first portion of today's session consists of 5 trading periods under the conditions described above. After that we will stop and explain a second condition.

2. Your lab earnings will be converted to U.S. currency at a rate of 12 lab dollars = $1 U.S. Your total earnings for participating in today's session will be the sum of your earnings from trade or guesses plus the $6.00 appearance fee.

3. Any final Questions? Please don't ask questions or talk to each other during the next 5 trading periods.

Summary Sheet
Baseline

Traders: Make money by buying and selling assets.

Buying and selling assets: To increase portfolio value,

Buy cheaply (at prices below dividend)
Sell dearly (at prices above dividend)

Dividends:

6 Traders have the High Dividend
4 Traders have the Low Dividend (60¢ below the High Dividend)

Monitors: Make money by guessing the High Dividend.

Guess Accuracy	Earnings (in lab dollars)
Within 20¢	$ 3.00
Within 50¢	$ 1.00
More than 50¢	$ 0.00

Treatment Condition (Positive Corrective Action –REGB)

Introduction: We now modify the market in one respect: in addition to guessing the high dividend each period, the monitors also make a decision to *intervene* or to *not intervene*.

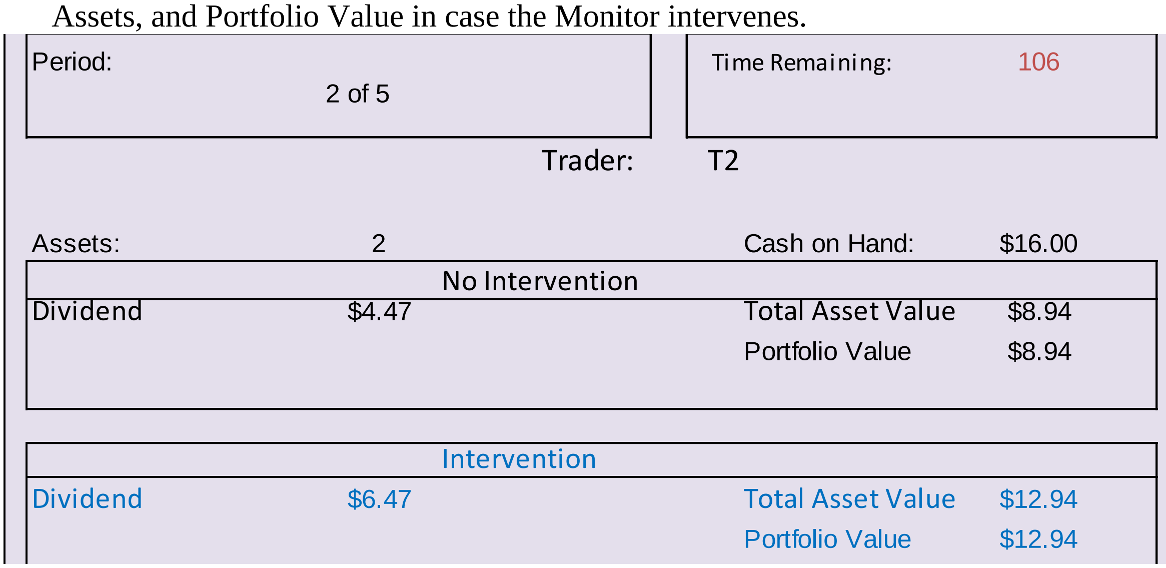
1. *Changes in Monitors' Incentives:*
   a. In addition to guessing the high dividend, Monitors not make an intervention decision. They may either earn or lose money from this decision.
      i. If they **intervene**.
         - They **earn** $12.00 (lab) if the high dividend (before intervention) turns out to be less than $5.
         - They **lose** $12.00 (lab) if the high dividend (before intervention) turns out to be more than $5.00.
      ii. If they **do not intervene**
         - They **earn** $12.00 (lab) if the high dividend (before intervention) turns out to be more than $5.00
         - They lose $0.00 if the high dividend (before intervention) turns out to be less than $5.00
   b. After all monitors make their decisions, the choice of one of the three monitors will be randomly selected and implemented in the market.

2. *Changes in Traders' Incentives:* If the chosen monitor picks '*intervention*' all dividends increase by $2. If the chosen monitor picks '*no intervention*' dividends do not change.

Specific Instructions. Changes relative to the Baseline.

A. Changes in Trader Screens.

1. The upper portion of the trader screen shown below is identical to that shown previously except now a new (blue) row of entries appears. The blue row lists the Dividend, Value of Assets, and Portfolio Value in case the Monitor intervenes.



Notice that the difference between black and blue lines is that the Dividend increases by $2 per unit in the case of intervention.

***Question**: When do the BLUE numbers determine dividends? What sort of contract prices would make the blue numbers more likely to be relevant (e.g, high or low)?*

2. *End of period*. After trading concludes and monitors make intervention decisions, one of these decisions is implemented in the market. If the selected monitor does not intervene, the no intervention part of the screen is bolded to emphasize the choice, as indicated below. Also Period and Cumulative Earnings appear

Period:	2 of 5	Time Remaining:	0
Monitor Signal:	**$5.24**	Trader	T2
Assets:	**4**	**Cash on Hand:**	**$7.92**

		No Intervention		
Dividend	**$4.47**		**Total Asset Value**	**$17.88**
		Period Earnings:	**Portfolio Value**	**$9.80**
		Cumulative Earnings:		**$15.32**

		Intervention		
Dividend	$6.47		Total Asset Value	$25.88
			Portfolio Value	$17.80

If the selected monitor does intervene, entries in the lower part are bolded, as shown below, and Period and Cumulative Earnings appear.

Assets:	4	Cash on Hand:	$7.92

		No Intervention		
Dividend	$4.47		Total Asset Value	$17.88
			Portfolio Value	$9.80

		Intervention		
Dividend	**$6.47**		**Total Asset Value**	**$25.88**
		Period Earnings:	**Portfolio Value**	**$17.80**
		Cumulative Earnings:		**$19.32**

***Question:** Suppose a trader T2 has a 'No Intervention' dividend of $4.47 and an 'Intervention' dividend of $6.47, as shown above.*

- *Trading starts and the trader sees contract prices of $5.23 and $5.35. Can she increase her portfolio by buying an asset for $5.50?*
- *Do these contract prices present any possible problems for traders and/or for the monitor?*

***Question:** Suppose a trader T2 has a 'No Intervention' dividend of $2.47, and an 'Intervention' dividend of $4.47. Trading starts and she sees initial contract prices of $2.73 and $2.86. Can she increase her portfolio by buying an asset for $3.50?*

B. Changes in the Monitor's Screens. As the screen below shows, in addition to submitting a High Dividend guess, the monitor makes an intervention decision.

Period: 2 of 5

Time Remaining: 0

Monitor: M1

Median Contract

High Dividend Guess:

Intervene? Yes / No

Confirm

The screen below shows that in addition to a return from guessing the high dividend, the monitor earns a return from the intervention decision.

High Dividend Guess: $4.41

Intervene? (•) Yes ( ) No

High Dividend		
Your Guess:	$4.41	
Actual:	$4.47	
Guess Earnings:		$3.00
Intervention Earnings:		$12.00
Period Earnings:		$15.00
Cumulative Earnings		$18.00

In this example, the Monitor intervened. This decision turned out to be the correct one because the Actual High Dividend was below $5. Thus the monitor earns $12 (lab) dollars from her intervention decision. The intervention part of Monitor earnings would be $0 had she chosen not to intervene in this case.

Suppose, however that in light of the above information that the monitor guessed that the high dividend exceeds $5 and on this basis decided to intervene. In this case the monitor would earn nothing from his dividend guess and would lose $12 from incorrectly choosing to intervene, as shown here. Losses will be deducted from the monitor's cumulative earnings.

High Dividend Guess: $5.22

Intervene? (•) Yes ( ) No

High Dividend		
Your Guess:	$5.22	
Actual:	$4.47	
Guess Earnings:		$0.00
Intervention Earnings:		-$12.00
Period Earnings:		($12.00)
Cumulative Earnings		$1.00

Question: *Suppose a Monitor saw a median contract price of $3.32 in a period. Would a Monitor likely find an intervention to be profitable in this case? Why or Why not?*

Question: *Suppose a Monitor saw a median contract price of $5.32 in a period. Would a Monitor likely find an intervention to be profitable in this case? Why or Why not?*

Question*: In general, why is it riskier to intervene than to not intervene?*

Question: *Suppose a Monitor saw a median contract price of $7.32 in a period. Would a Monitor likely find an intervention to be profitable in this case? Why or Why not?*

Quiz of Understanding

1. Suppose a Trader is given a dividend of $4.37. What is the maximum possible value of that unit to the Trader?

2. Consider a period where the high dividend value is $2.63. In this case

    a. What trading prices might a monitor observe?

    b. What could the monitor infer from contract prices about intervention? Why?

    c. Suppose a trader with a high dividend value sees another trader offering to sell an asset for $3.20. Could the trader increase her portfolio value by buying this unit? Is this likely? Why or Why Not?

3. Consider a period where the high dividend value is $7.89. In this case

    a. What median contract prices might a monitor observe?

    b. What could the monitor infer from these prices about intervention? Why?

    c. Suppose a trader with a high dividend value sees another trader offering to sell an asset for $9.00. Could the trader increase her portfolio value by buying this unit? Is this likely? Why or Why Not?

4. Suppose a monitor decides to intervene, but the high dividend turns out to be $5.18.
    a. How much do traders with high dividend values earn from each asset?
    b. How much do traders with low dividends earn from each asset?
    c. What does the monitor earn from her decision to intervene?

5. Suppose a monitor decides to not intervene, but the high dividend turns out to be $4.54.
    a. How much do traders with high dividend values earn from each asset?
    b. How much do traders with low dividends earn from each asset?
    c. What does the monitor earn from her decision to not intervene?

Final Details

1. There will be 10 periods in this treatment. At the conclusion of this treatment the experiment will end, and you will be paid.
2. Your earnings will be the sum of your appearance fee, your earnings from the first part and your earnings from this second part.
3. Questions? If not, we will begin. Again, thank you for your participation!

Summary Supplement

Positive Corrective Action

Traders: Make money by buying and selling assets.

-To increase portfolio value,

Buy cheaply (at prices below the dividend)
Sell dearly (at prices above the dividend)

Dividends:

6 Traders have the High Dividend
4 Traders have the Low Dividend (60¢ below the High Dividend)

Each period traders know whether their dividend draw is high or low

If the selected monitor intervenes, ALL Dividend values increase by $2.00.

Monitors: Make money by guessing the High Dividend and by making an intervention decision.

Earnings from guessing the high dividend:

Guess Accuracy	Earnings (in lab dollars)
Within 20¢	$ 3.00
Within 50¢	$ 1.00
More than 50¢	$ 0.00

If the monitor chooses to intervene

a) She earns $12 if the high dividend is below $5, and

b) She loses $12 if the high dividend is greater than or equal to $5.

If the monitor chooses to not intervene

a) She earns $12 if the high dividend is greater than or equal to $5

b) She earns $0 if the high dividend is less than $5.

Appendix 2. Probit Estimates of Conversion Error Rates

This appendix parallels the linear probably estimates reported in Tables 2-5 in the text, using a probit estimation technique. Although coefficient estimates are not directly comparable, observe that instances of significant interactions largely overlap across the linear probability and probit estimates.

Table A2.1. Error Rates Comparisons of *REG* relative to *FT* (Probit Regression Coefficients)

	Value Decreasing Conversions				Value Increasing Conversions			
β_0	-1.11***	-0.62***	-0.43***	-6.77***	-1.00***	-1.88***	-0.46	-1.59***
	(0.09)	(0.12)	(0.14)	(0.28)	(0.17)	(0.44)	(0.30)	(0.30)
β_{REG}	-0.31**				0.05			
	(0.14)				(0.21)			
$\beta_{REG\text{-}def}$		-0.47***				0.92**		
		(0.17)				(0.47)		
$\beta_{REG\text{-}cd}$			-0.45**				0.19	
			(0.19)				(0.36)	
$\beta_{REG\text{-}abef}$				4.74***				0.22
				(0.39)				(0.32)
Wald χ^2	1.95	3.05*	2.35	0	0.04	3.65*	0.31	0.38
N	510	234	156	318	510	234	156	354

Key: ***, **, * denote rejection of the null hypothesis at p<.01, p<.05 and p<.10 respective (two-tailed tests).

Table A2.2. Error Rates Comparisons of *REGB* relative to *FT* (Probit Regression Coefficients)

	Value Decreasing Conversion				Value Increasing Conversion			
β_0	-1.11***	-0.62	-0.43***	†	-0.97***	-1.83***	-0.43	-1.59***
	(0.09)	(0.12)	(0.14)		(0.16)	(0.44)	(0.28)	(0.30)
β_{REGB}	-0.31*				0.36*			
	(0.18)				(0.21)			
$\beta_{REGB\text{-}def}$		-0.72***				0.49		
		(0.15)				(0.49)		
$\beta_{REGB\text{-}cd}$			-0.43*				0.15	
			(0.24)				(0.31)	
$\beta_{REGB\text{-}abef}$								0.73***
								(0.34)
Wald χ^2	1.58	*5.52***	1.88	†	2.62	1.03	0.24	3.96**
N	240	120	96		240	120	96	144

Key: ***, **, * denote rejection of the null hypothesis at p<.01, p<.05 and p<.10 respective (two-tailed tests). Note: † No observations.

Table A2.3(a). Error Rate Comparisons of *REGI** relative to *FT* (Probit Regression Coefficients)

	Value Decreasing Conversion				Value Increasing Conversion			
β_0	-1.11 (0.09)	-0.62 (0.12)	-0.43 (0.14)	†	-0.97 (1.94)	-2.24^{***} (0.57)	-0.43 (0.33)	-1.59^{***} (0.30)
β_{REGI*}	-0.11 (0.15)				0.44 (1.08)			
$\beta_{REG\ I*\text{-}def}$		-0.09 (0.21)				1.46^{**} (0.58)		
$\beta_{REG\ I*\text{-}cd}$			-0.16 (0.21)	†			0.29 (0.35)	
$\beta_{REG\ I*\text{-}abef}$								0.76^{**} (0.32)
Wald χ^2	0.17	0.08	0.21	†	3.48^{*}	4.01^{**}	0.74	3.81^{*}
N	150	72	60		150	78	60	90

Table A2.3(b) Error Rates Comparisons of *REGI* relative to *FT* (Probit Regression Coefficients)

	Value Decreasing Conversion				Value Increasing Conversion			
β_0	-1.11^{***} (0.09)	-0.62^{***} (0.12)	-0.43^{***} (0.14)	†	-0.97^{***} (0.21)	-1.97^{***} (0.47)	-0.43 (0.28)	-1.59^{***} (0.30)
β_{REGI}	-0.48^{***} (0.13)				0.00 (0.18)			
$\beta_{REG\ I\text{-}def}$		-0.60^{***} (0.17)				0.82^{*} (0.48)		
$\beta_{REG\ I\text{-}cd}$			-0.65^{***} (0.18)				-0.33 (0.30)	
$\beta_{REG\ I\text{-}abef}$								0.47 (0.32)
Wald χ^2	3.59^{***}	*3.93***	*4.12***	†	0	2.28	1.15	1.55
N	240	120	96		240	120	96	144

Key: ***, **, * denote rejection of the null hypothesis at p<.01, p<.05 and p<.10 respective (two-tailed tests). Note: † No observations.

Table A2.5. Error Rates Comparisons of *REGD* relative to *FT* (Probit Regression Coefficients)s)

	Value Decreasing Conversion				Value Increasing Conversion			
β_0	-1.11***	-0.62***	-0.43***	†	-0.97***	-2.07***	-0.45	-1.60***
	(0.09)	(0.12)	(0.14)		(0.16)	(0.54)	(0.31)	(0.30)
β_{REGI}	0.03				0.86***			
	(0.18)				(0.21)			
$\beta_{REG\ I\text{-}def}$		-0.18				*1.54***		
		(0.22)				*(0.66)*		
$\beta_{REG\ I\text{-}cd}$			-0.08				*0.64**	
			(0.26)				*(0.38)*	
$\beta_{REG\ I\text{-}abef}$				†				1.29***
								(0.37)
Wald χ^2	0.01	0.39	0.06	†	15.96***	6.67**	3.32*	12.12***
N	240	120	96		240	120	96	144

Key: ***, **, * denote rejection of the null hypothesis at *p*<.01, *p*<.05 and *p*<.10 respective (two-tailed tests). Note: † No observations.

Appendix 3. Efficiency Comparisons and Price Deviations.

This appendix reports a series of bivariate linear regressions conducted to assess relative trading efficiency performance in the *REG, REGB, REGI* and *REGD* treatments relative to the *FT* treatment. Also at the end of this appendix we report average price deviations for each treatment, and to facilitate understanding of notes 26 and 30 in the text, we illustrate those deviations for some select treatments in the case of a value-increasing conversion.

We measure trading efficiency as percentage of the 8 asset units held by low-value traders at the beginning of a period that were held by high-value traders at the period's end. We use the same criteria for assessing relative efficiency performance used for assessing conversion error rates discussed in the text. Also, the following regressions use the market rather than the monitor as the unit of observation (thus explaining the difference in the number of observations for the regressions reported here relative to the comparable tables in the text). We control from repeated measures on markets across periods by modeling them as random effects. Finally, we do not assess separately the *REGI** periods relative to the *FT* treatment. For the purposes of trading efficiency, periods where the market fundamental is or is not revealed to monitors are indistinguishable, since such information is revealed only after the close of trade.

Table.A3.1. Trading Efficiencies for *REG* relative to *FT* (%).

	Value-Decreasing Conversion				Value-Increasing Conversion			
β_0	0.79^{***}	0.85^{***}	0.79^{***}	0.79^{***}	0.79^{***}	0.83^{***}	0.77^{***}	0.81^{***}
	(0.02)	(0.03)	(0.04)	(0.03)	(0.02)	(0.05)	(0.03)	(0.03)
β_{REG}	0.00				-0.03			
	(0.03)				(0.03)			
$\beta_{REG\text{-}def}$		-0.02				-0.03		
		(0.04)				(0.06)		
$\beta_{REG\text{-}cd}$			0.03				-0.11^{***}	
			(0.04)				(0.04)	
$\beta_{REG\text{-}abef}$				-0.01				0.00
				(0.04)				(0.04)
Wald χ^2	0.00	0.21	0.44	0.15	1.02	0.31	6.95^{***}	0.00
N	210	98	68	142	210	98	68	142

Notes: Each column corresponds to a regression run on a different range of fundamentals. The coefficient β_{REG} measures the incremental effect for the full range of fundamentals. The coefficient $\beta_{REG\text{-}def}$ measures the incremental effect for errors of omission, that is, for the range above \$5.00. The coefficient $\beta_{REG\text{-}cd}$ measures incremental errors for fundamentals within \$0.60 of the \$5.00. The coefficient $\beta_{REG\text{-}abef}$ measures incremental errors for fundamentals not within \$0.60 of \$5.00. The symbols ***, **, * denote rejection of the null hypothesis at p<0.01, p<0.05, and p<0.10, respectively (two-tailed tests).

Table.A3.2 Trading Efficiencies for *REGB* relative to *FT* (%)

	Value-Decreasing Conversion				Value-Increasing Conversion			
β_0	0.79***	0.85***	0.79***	0.79***	0.79***	0.83***	0.77***	0.81***
	(0.02)	(0.03)	(0.03)	(0.03)	(0.02)	(0.03)	(0.03)	(0.03)
β_{REGB}	0.08***				-0.06**			
	(0.03)				(0.03)			
$\beta_{REGB\text{-}def}$		0.01				-0.11***		
		(0.04)				(0.04)		
$\beta_{REGB\text{-}cd}$			0.09**				-0.15***	
			(0.03)				(0.04)	
$\beta_{REGB\text{-}abef}$				0.07**				0.00
				(0.04)				(0.05)
Wald χ^2	6.82***	0.03	5.11***	*3.99***	3.82***	7.05***	11.10***	0.01
N	120	60	48	72	120	60	48	72

Notes: Each column corresponds to a regression run on a different range of fundamentals. The coefficient β_{REG} measures the incremental effect for the full range of fundamentals. The coefficient $\beta_{REG\text{-}def}$ measures the incremental effect for errors of omission, that is, for the range above \$5.00. The coefficient $\beta_{REG\text{-}cd}$ measures incremental errors for fundamentals within \$0.60 of the \$5.00. The coefficient $\beta_{REG\text{-}abef}$ measures incremental errors for fundamentals not within \$0.60 of \$5.00. The symbols ***, **, * denote rejection of the null hypothesis at p<0.01, p<0.05, and p<0.10, respectively (two-tailed tests).

Table A3.3 Trading Efficiencies for *REGI* relative to *FT* (%)

	Value-Decreasing Conversions				Value-Increasing Conversions			
β_0	0.79***	0.85***	0.79***	0.79***	0.79***	0.83***	0.77***	0.81***
	(0.02)	(0.02)	(0.03)	(0.03)	(0.02)	(0.03)	(0.03)	(0.02)
β_{REGI^*}	0.07*				-0.06*			
	(0.04)				(0.03)			
$\beta_{REGI^*\text{-}def}$		0.05				-0.14***		
		(0.03)				(0.03)		
$\beta_{REGI^*\text{-}cd}$			0.08*				-0.23***	
			(0.04)				(0.04)	
$\beta_{REGI^*\text{-}abef}$				0.06				0.05
				(0.04)				(0.03)
Wald χ^2	3.45*	2.38	3.69*	1.83	3.76*	9.11***	28.69***	2.03
N	120	60	48	72	120	60	48	72

Notes. Each column corresponds to a regression run on a different range of fundamentals. The coefficient β_{REG} measures the incremental effect for the full range of fundamentals. The coefficient $\beta_{REG\text{-}def}$ measures the incremental effect for errors of omission, that is, for the range above \$5.00. The coefficient $\beta_{REG\text{-}cd}$ measures incremental errors for fundamentals within \$0.60 of the \$5.00. The coefficient $\beta_{REG\text{-}abef}$ measures incremental errors for fundamentals not within \$0.60 of \$5.00. Symbols ***, **, * denote rejection of the null hypothesis at p<0.01, p<0.05, and p<0.10, respectively (two-tailed tests).

Table A3.4 Trading Efficiencies for *REGD* relative to *FT* (%).

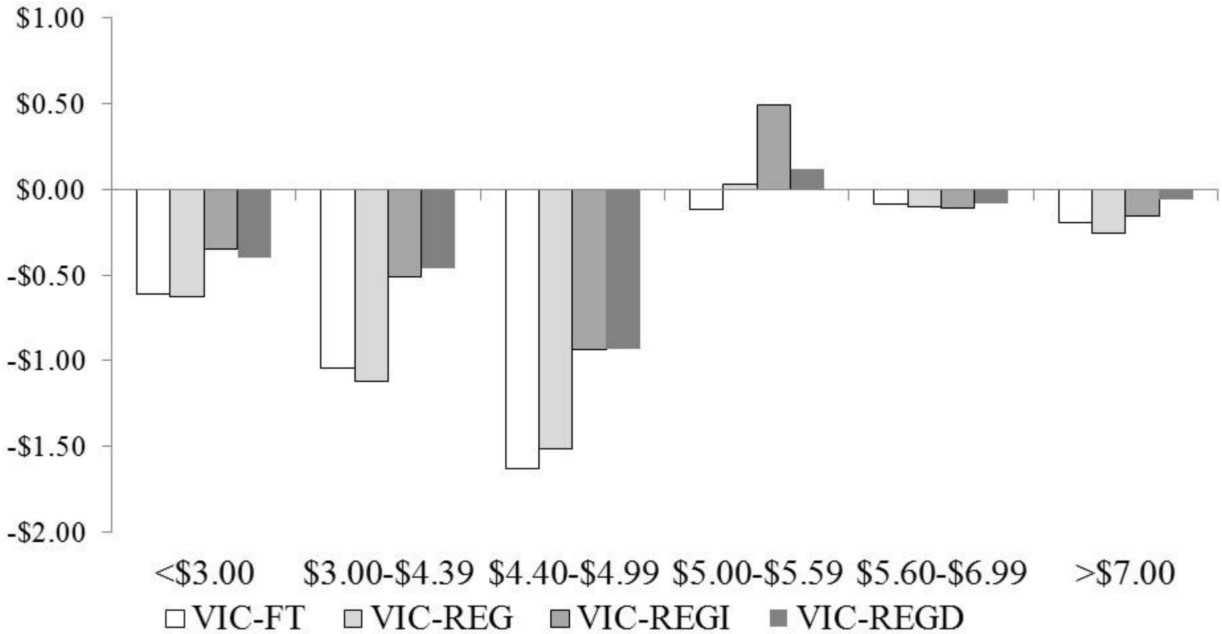
	Value Decreasing Conversions				Value Increasing Conversions			
β_0	0.79***	0.85***	0.79***	0.79***	0.79***	0.83***	0.77***	0.81***
	(0.02)	(0.03)	(0.03)	(0.02)	(0.02)	(0.03)	(0.03)	(0.03)
β_{DEL}	0.08***				-0.07**			
	(0.03)				(0.03)			
$\beta_{DEL\text{-}def}$		0.01				-0.11***		
		(0.04)				(0.04)		
$\beta_{DEL\text{-}cd}$			0.10**				-0.17***	
			(0.04)				(0.05)	
$\beta_{DEL\text{-}abef}$				0.06*				0.00
				(0.03)				(0.04)
Wald χ^2	8.42***	0.02	4.58**	3.43*	5.64**	7.88***	14.32***	0.00
N	120	60	48	72	120	60	48	72

Notes: Each column corresponds to a regression run on a different range of fundamentals The coefficient β_{REG} measures the incremental effect for the full range of fundamentals. The coefficient $\beta_{REG\text{-}def}$ measures incremental effect for errors of omission, that is, for the range above \$5.00. The coefficient $\beta_{REG\text{-}cd}$ measures incremental errors for fundamentals within \$0.60 of the \$5.00. The coefficient $\beta_{REG\text{-}abef}$ measures incremental errors for fundamentals not within \$0.60 of \$5.00. The symbols ***, **, * denote rejection of the null hypothesis at p<0.01, p<0.05 and p<0.10 respectively (two-tailed tests).

Table A3.5 Mean Price Deviations by Treatment

	Value Decreasing Conversion					Value Increasing Conversion				
Range	FT	REG	REGB	REGI	REGD	FT	REG	REGB	REGI	REGD
<$3.00	0.15	0.57	-0.09	0.15	-0.08	-0.61	-0.63	-0.33	-0.35	-0.40
$3.00-$4.39	0.19	0.58	0.01	-0.04	-0.11	-1.04	-1.12	-0.59	-0.51	-0.46
$4.40-$4.99	0.14	0.53	0.12	-0.06	0.08	-1.63	-1.51	-1.34	-0.94	-0.93
$5.00-$5.59	-0.67	-0.94	-0.92	-0.74	-1.18	-0.11	0.03	0.24	0.49	0.12
$5.60-$6.99	-0.39	-0.59	-0.35	-0.20	-0.39	-0.09	-0.10	0.03	-0.11	-0.08
≥$7.00	-0.37	-0.43	-0.31	-0.39	-0.61	-0.19	-0.25	-0.21	-0.16	-0.06

Figure A3.1 Mean Price Deviations from the *Ex Post* Efficient Price for the Fixed-Trigger (*FT)*, Regulator (*REG)*, Regulatory-Information (*REGI)*, and Regulatory-Delay (*REGD)* Treatments under a Value-Increasing Conversion Rule



Appendix 4. Additional Error Rate Comparisons.

In the text we report only the incremental effects on conversion errors of the various *REG* treatments relative to the *FT* treatment for purposes of conciseness. This restricted focus makes sense, because our primary interest is in the superiority or inferiority of each regulator treatment relative to the *FT* treatment. The interested reader, however, may also wish to see other cross treatment effects. This appendix reports error rate comparisons of the *REGB*, *REGI* and *REGD* treatments relative to the *REG* treatment. Also, due to the substantially larger conversion error rates in the *REGD* treatment relative to the *REGB* and *REGI* treatments, we compare across treatment conversion error rates for these treatments as well. In each case, our presentation parallels the comparisons in the text of the *REG* treatments relative to the *FT* treatment.

4.1 Conversion Error Rates Comparison, REGB to REG. Figure A4.1 illustrates the incidence of conversion error rates for the *REGB* and *REG* treatments. For the case of a value decreasing conversion, shown in the left panel of Figure A4.1, we observe that the introduction of inaction bias reduces the propensity for monitors to make socially undesirable conversions. The overall incidence of conversion errors, however, does not increase. Moreover, the incidence of 'gross' errors (e.g., conversion errors outside the range of fundamentals extending from 60¢ below to 60¢ above the $5.00 cutoff for efficient intervention) falls

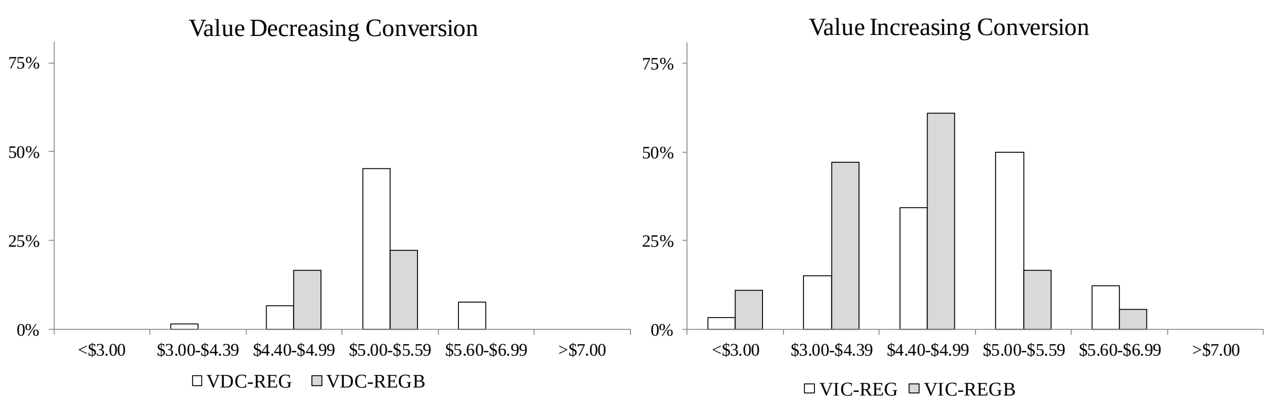


Figure A4.1. Conversion Error Rates for *REGB* and *REG* Treatments.

For the case of a value-increasing conversion, shown in the right panel, observe that the introduction of a regulator bias toward inaction shifts reduces the propensity of monitors to intervene when socially undesirable (e.g. for values above $5.00), but at the cost of a substantially increased propensity for monitors to forego socially desirable conversions for fundamental realizations in the \$4.00-\$4.39 and \$4.40-\$4.99 ranges. Also, in the case of value-increasing conversions while fewer 'errors of commission' occur in the *REGB* treatment, the overall incidence of conversion errors appears to rise.

Linear probability estimates of conversion error rates by the four performance criteria assessed in Tables 2-5 in the text provides some statistical support these observations.[1] In the case of a value-decreasing conversion, shown in the left panel of Table A4.1 observe that suggests that inaction bias may modestly improves performance of the regulator treatment, Inaction bias significantly reduces the incidence 'gross' errors ($\beta_{\text{REGB-abef}}$=-3.4, p<.10). It also reduces the incidence of errors of commission but just misses significance at the 10% level (β_{REGB}= -4.8, p<.113).

Table A4.1. Error Rate Comparisons of *REGB* relative to *REG* (%)

	Value Decreasing Conversion				Value Increasing Conversion			
β_0	7.9***	13.7***	18.9***	3.4*	18.5***	17.5***	40.1***	8.5***
	(1.5)	(2.8)	(3.0)	(1.8)	(3.2)	(3.1)	(6.4)	(1.9)
β_{REGB}	-0.1				8.7			
	(2.7)				(5.5)			
$\beta_{\text{REGB-def}}$		-4.8				-8.7 *		
		(3.1)				(5.0)		
$\beta_{\text{REGB-cd}}$			0.5				-1.2	
			(6.4)				(8.2)	
$\beta_{\text{REGB-abef}}$				-3.4*				10.9**
				(1.8)				(4.8)
Wald χ^2	0	2.5	0.01	3.37*	2.52	3.03*	0.02	5.21**
N	630	294	204	426	630	294	204	426

Key: ***, **, * denote rejection of the null hypothesis at p<.01, p<.05 and p<.10 respective (two-tailed tests). †No observations

On the other hand, looking at the case of a value-increasing conversion, shown in the right panel of Table A4.1 observe that in the case of a value-increasing conversion, the introduction of inaction bias significantly reduces the incidence of errors of commission ($\beta_{\text{REGB-def}}$=-8.7, p<.10), but at the cost of an increase in 'gross errors ($\beta_{\text{REGB-abef}}$=10.9, p<.05). Also, the overall incidence of conversion errors rises in the bias treatment, but just misses the cutoff for significance (β_{REGB}= 8.7, p<.113).

[1] As in the text, we report linear probability estimates for expositional ease. Comparable probit estimates appear as tables A3.4 to A3.6 and the end of this appendix. All regressions use the monitor as the unit of observation, and we control for repeated measures on the monitors by modelling them as random effects. Further to control for possible correlations across monitors within markets we cluster data by markets.

Overall, a comparison of conversion error rates in the *REGB* and *REG* treatments supports the pertinent discussion in text Section 3.2. In the case of a value-decreasing conversion inaction bias improves the relative performance of the regulator regime because it eliminates the incidence of 'gross' errors – the single dimension for which the fixed trigger regime was superior to the baseline regulator regime, while it also reduces the incidence of type II errors of commission. In the case of a value-increasing conversion, inaction bias weakens the performance of the regulator regime to a fixed-trigger regime because it significantly increases the incidence of 'gross' errors outside the range extending 60¢ above and below the efficient conversion cutoff, and while not quite significant, may also increase the incidence of conversion errors overall.

4.2 Conversion Error Rates Comparison, REGI to REG.* As discussed in the text, probabilistically revealing to monitors the underlying market fundamental has the necessarily ameliorative effect of reducing the incidence of conversion errors in those periods where the monitor is informed. Counterbalancing this effect, however, is an indirect effect of traders more fully incorporating the value of a conversion into prices on the belief that monitors are informed when in fact they are not. To assess the magnitude of this indirect effect we assess the incidence of conversion errors in those periods of the *REGI* treatment where the market fundamental is not revealed to monitors. Label the pertinent periods *REGI**.

The striped and white bars in Figure A4.2 plot the incidence of conversion errors in the *REGI** periods and the *REG* treatment, respectively. Looking first at the case of a value-decreasing conversion, shown in the left panel, conversion error rates in the *REGI** treatment concentrate in the \$5.00-\$5.59 range, but occur at a somewhat higher frequency than in the *REG* regime. In the case of a value-increasing conversion, shown in the right panel, observe that error rates in the *REGI** regime exceed those for the *REG* regime in every range of fundamental realizations save one, the \$5.00 - \$5.59 range. Even here, however, the relative modest reduction conversion errors of commission for fundamentals just above \$5.00 are more than offset by an increase in conversion errors in the \$5.60-\$6.99 range.

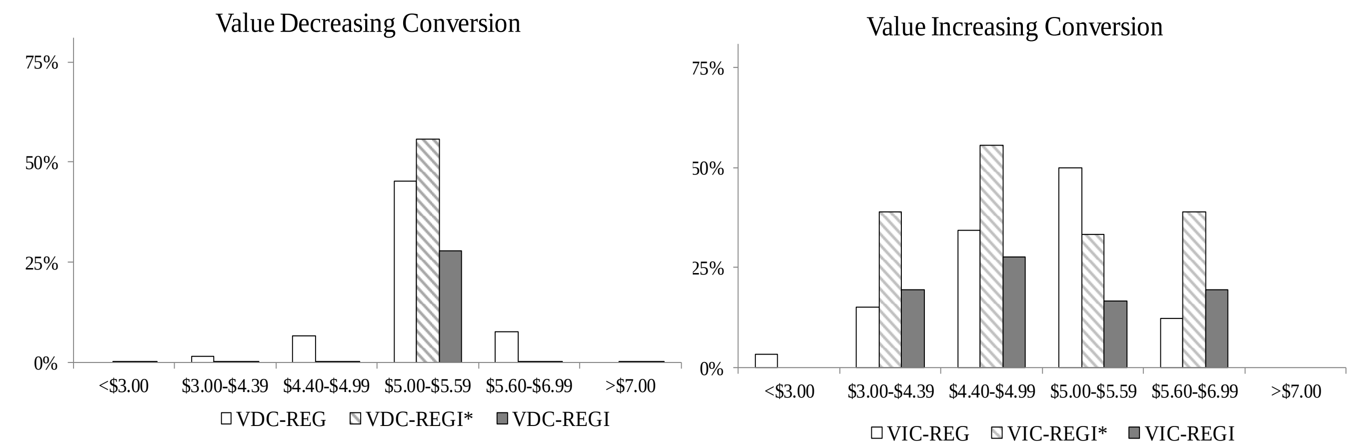


Figure A4.2 Conversion Error Rates for *REGI** and *REG* Treatments.

The linear probability estimates shown Table A4.2(a) verify the significance of the differences suggested by inspection of Figure A4.2. As can be seen in the right panel of the table, in the case of a value-increasing conversion, monitors in the *REGI** periods perform worse in every respect than in the *REG* regime, and these differences are significant in every case but one. Turning to the left panel of the table observe that in the *REGI** the incidence of 'gross' errors falls significantly ($\beta_{\text{REGB-abef}}$=-3.2, p<.10), but at the cost of a 10% significant increase in the incidence of errors of commission ($\beta_{\text{REGB-def}}$=10.1, p<.10).

Table A4.2(a). Error Rate Comparisons of *REGI** relative to *REG* (%)

	Value Decreasing Conversion				Value Increasing Conversion			
β_0	7.8***	13.7***	18.9***	3.2*	18.4***	18.4***	39.5***	8.5***
	(1.4)	(2.8)	(3.0)	(1.7)	(3.1)	(3.3)	(6.1)	(1.8)
$\beta_{\text{REGI*}}$	3.3				11.6**			
	(2.5)				(4.7)			
$\beta_{\text{REGi* -def}}$		10.1*				8.6**		
		(5.9)				(4.3)		
$\beta_{\text{REG I*-cd}}$			8.8				5.0	
			(6.0)				(9.0)	
$\beta_{\text{REG I*-abef}}$				-3.2*				11.8***
				(1.7)				(3.7)
Wald χ^2	1.73	2.95*	2.15	3.53*	6.08**	4.13**	0.30	10.25***
N	540	246	168	372	540	252	168	372

Key: ***, **, * denote rejection of the null hypothesis at p<.01, p<.05 and p<.10 respective (two-tailed tests). †No observations.

Overall, a comparison of the *REGI** periods to the *REG* treatment complements the comments in the text comparing the *REGI** and *FT* treatments: probabilistically revealing the market fundamental to monitors exerts a strong indirect effect. In the case of a value-decreasing conversion the *REGI** periods increase the incidence of type 2 errors of commission relative to the *REG* treatment. At the same time, however, the incidence of 'gross' conversion errors in the *REGI** periods falls relative to the *REG* treatment. In the case of value-increasing conversion, this indirect effect weakens the performance of the regulator regime in each of the four dimensions assessed, and significantly so in three of four comparisons.

4.3 Conversion Error Rates Comparison, REGI to REG.

The solid gray bars in Figure A4.2 illustrate conversion error rates for the *REGI* treatment (including both states where monitors are and are not informed). Since the market fundamental was revealed to monitors in half the periods, combining informed and uninformed periods cuts by half the incidence of conversion errors for each range of fundamental realizations. Looking first at the case of a value-decreasing conversion, shown in the left panel of the figure observe that the incidence of conversion errors in the *REGI* treatment is lower overall than for the *REG* regime, and occurs over a narrower range of fundamental realizations.

In the case of a value-increasing conversion, shown in the right panel, notice that, while revealing to monitors the market fundamental in half of the periods clearly reduces the incidence of 'close' conversion errors, this reduction is offset by small increases in the incidence of 'gross' conversion errors both above and below the efficient conversion cutoff in the *REGI* regime. In this way the indirect effect traders incorporating the value a conversion into prices when monitors are not informed importantly dampens the necessarily ameliorative effects of revealing fundamental information to monitors.

Results of the linear probability estimates shown in Table A4.2(b) verify the significance of the differences suggested by inspection of Figure A4.2. As can be seen in the left panel of the table, for the case of a value-decreasing conversion, the *REGI* regime yields fewer conversion errors by every measure than the *REG* regime, although only the reduction in the incidence of 'gross' conversion errors is significant ($\beta_{\text{REGI-abef}}$=-3.4, p<.10). In the case of a value-increasing conversion, the *REGI* regime generates significantly fewer 'close' errors ($\beta_{\text{REGI-cd}}$=-17.8, p<.10). At the same time the overall incidence of conversion errors and the incidence of 'gross' errors rise, albeit by insignificant amounts.

Table A4.2(b). Error Rate Comparisons of *REGI* relative to *REG*

	Value Decreasing Conversion				Value Increasing Conversion			
β_0	7.8***	13.7***	18.9***	3.4*	18.4***	17.7***	40.0***	8.5***
	(1.5)	(2.8)	(3.0)	(1.8)	(3.1)	(3.2)	(6.3)	(1.9)
β_{REGI}	-2.2				-1.7			
	(1.8)				(3.8)			
$\beta_{REGI\text{-}def}$		-2.6				-3.2		
		(3.5)				(3.7)		
$\beta_{REG\ I\text{-}cd}$			-5.1				-17.8**	
			(4.0)				(7.2)	
$\beta_{REG\ I\text{-}abef}$				-3.4*				4.5
				(1.8)				(2.9)
Wald χ^2	1.57	0.57	1.61	3.37*	0.2	0.76	6.18**	2.38
N	630	294	204	426	630	294	204	426

Key: ***, **, * denote rejection of the null hypothesis at p<.01, p<.05 and p<.10 respective (two-tailed tests). †No observations.

Overall, comparison of the *REGI* to the *REG* treatment supports the results in Section 3.3 of the text, that in the *REGI* treatment the indirect effects of traders incorporating the value of conversions into prices when monitors are uniformed leave a regulator-based regime inferior to a fixed trigger mechanissm in the case of a value-increasing conversion rule, but superior in the case of a value-decreasing conversion rule. As seen in the table, in the case of a value-decreasing conversion, the *REGI* treatment on net marginally reduces the incidence of conversion errors in all dimensions, but with the difference significant only for reductions in the incidence of 'gross' conversion errors. In the case of a value-increasing conversion, the net effect of probabilistically revealing the market fundamental to monitors reduces the incidence of conversion errors relative to the baseline *REG* regime in only a single dimension and causes small (but statistically insignificant) increases in incidence of the conversion errors in both overall and 'gross' conversion errors.

4.3 Conversion Error Rates Comparison, REGD to REG.

Figure A4.3 illustrates conversion error rates for the *REG* treatment and for the *REGD* treatment. Looking first at the left panel of the figure observe that, in the case of a value-decreasing conversion, the incidence of conversion errors in the *REGD* parallels that for the *REG* treatment almost exactly. On the other hand, in the case of a value-increasing conversion, the opportunity to delay action spectacularly increases the incidence of conversion errors of omission relative to the baseline *REG* treatment, as monitors frequently elect to wait rather than make a conversion decision. In fact, as shown by the high frequency of conversion errors for fundamentals less than $3.00, monitors frequently choose to wait even when prices unambiguously indicate that a conversion is not warranted.

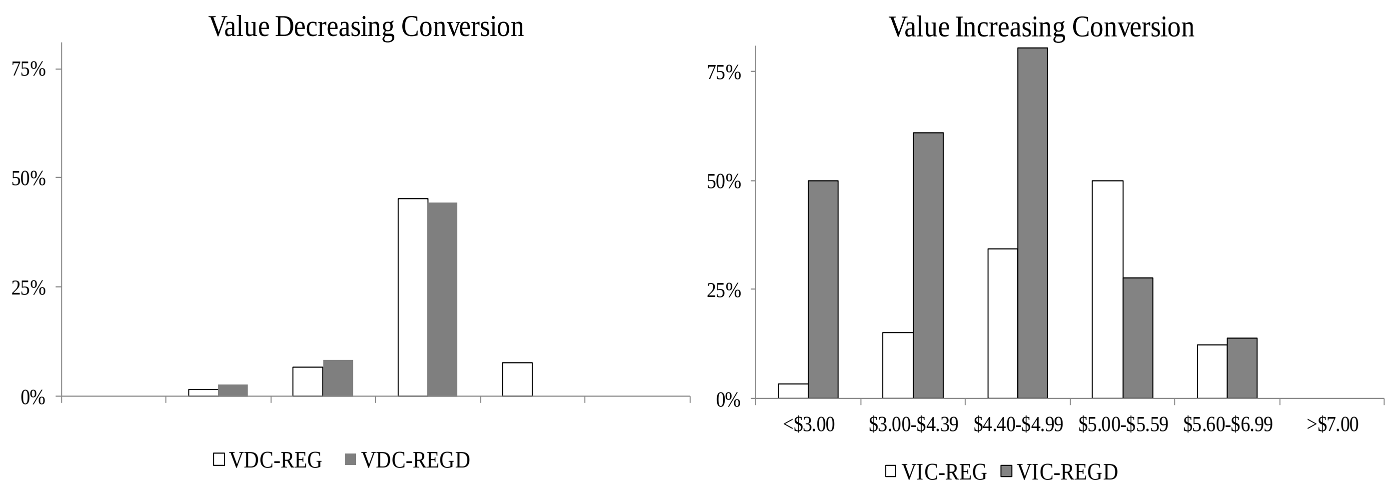


Figure A4.3 Conversion Error Rates for *REGD* and *REG* Treatments.

Results of the linear probability estimates shown in Table A4.3 verify the significance of the differences suggested by inspection of Figure A4.3. As can be seen in the left panel of the table, in the case of a value-decreasing conversion, the *REG* and *REGD* treatments are statistically indistinguishable. On the other hand, in the case of a value-increasing conversion, the *REGD* periods generate significantly more errors overall (β_{REGD}= 24.8, *p*<.01), as well as significantly more 'gross' errors ($\beta_{\text{REGD-abef}}$= 27.6, *p*<.01).

Table A4.3. Error Rate Comparisons of *REGD* relative to *REG*

	Value Decreasing Conversion				Value Increasing Conversion			
β_0	7.9***	13.7***	18.9***	3.3*	18.5***	18.3***	40.4***	8.5***
	(1.5)	(2.8)	(3.0)	(1.8)	(3.2)	(3.3)	(6.5)	(1.8)
β_{REGD}	4.9				24.8***			
	(3.7)				(6.2)			
$\beta_{\text{REGD-def}}$		5.2				11.7		
		(4.9)				(11.4)		
$\beta_{\text{REGD-cd}}$			8.8				13.8	
			(7.3)				(9.3)	
$\beta_{\text{REGDI-abef}}$				-0.5				27.6 ***
				(2.5)				(8.0)
Wald χ^2	1.79	1.1	1.49	0.05	16.21***	1.06	2.21	11.79
N	630	294	204	426	630	294	204	426

Key: ***, **, * denote rejection of the null hypothesis at p<.01, p<.05 and p<.10 respective (two-tailed tests). †No observations

Finally, we observe that although the *REGD* treatment does not generate a significantly higher incidence of conversion errors than the *REG* treatment in the case of a value-decreasing conversion, it is in this case that the *REGD* treatment is, in important respects, more prone to conversion error than either the *REGB* and *REGI* treatments. The comparisons of the *REGD* treatment to the *REGB* and *REGI* treatments in Tables A4.4 and A4.5 illustrate. As seen below in the left panel of Table A4.4, the *REGD* treatment generates 10% more errors of commission than the *REGB* treatment. Similarly, as seen in the left panel of Table A4.5, the *REGD* treatment generates a significantly higher incidence of conversion errors than the *REGI* in every respect except the incidence of 'gross' errors.

Table A4.4. Error Rate Comparisons of *REGD* relative to *REGB (%)*

	Value Decreasing Conversion				Value Increasing Conversion			
β_0	7.8***	8.9***	19.4***	†	27.2***	8.9**	38.9***	19.4***
	(2.3)	(1.3)	(5.7)		(4.5)	(3.9)	(5.3)	(4.5)
$\beta_{REGD\mid B}$	5.0				16.1*			
	(4.1)				(7.0)			
$\beta_{REGD\mid B\text{ -def}}$		10.0*				21.1*		
		(4.4)				(11.8)		
$\beta_{REGD\mid B\text{ -cd}}$			8.3				15.3*	
			(8.8)				(8.6)	
$\beta_{REGD\mid B\text{ -abef}}$				2.8				16.7*
				(1.8)				(9.1)
Wald χ^2	1.48	5.21*	0.89	2.35	5.24**	3.2*	3.16*	3.32*
N	360	180	144	216	360	180	144	216

Key: ***, **, * denote rejection of the null hypothesis at p<.01, p<.05 and p<.10 respective (two-tailed tests). †No observations.

Looking at the right panels of Tables A4.4 and A4.5, observe further that in the case of a value-increasing conversion, the *REGD* treatment performs significantly worse in every respect except the incidence of errors of commission relative to the *REGI* treatment. Even this case the coefficient is fairly large ($\beta_{REGD|I\text{-}def}$=15.6). However, the high variability of outcomes within treatments leaves this difference insignificant and standard significant levels (p<.16).

Table A4.5(a). Error Rate Comparisons of *REGD* relative to *REGI (%)*

	Value Decreasing Conversion				Value Increasing Conversion			
β_0	5.6***	11.1***	13.9***	0.0	16.7***	14.4***	22.2***	13.0***
	(1.1)	(2.1)	(2.7)	---	(2.2)	(2.0)	(3.4)	(2.2)
$\beta_{REGD\|I}$	7.2**				26.7***			
	(3.6)				(5.8)			
$\beta_{REGD\|I\text{-def}}$		7.8*				15.6		
		(4.7)				(11.3)		
$\beta_{REGD\|I\text{-cd}}$			13.9*				31.9***	
			(7.2)				(7.5)	
$\beta_{REGD\|I\text{-abef}}$				2.8				23.1***
				(1.8)				(8.3)
Wald χ^2	4.05**	2.76*	3.69*	2.35	21.06***	1.89	17.95***	7.83***
N	360	180	144	216	360	180	144	216

Key: ***, **, * denote rejection of the null hypothesis at p<.01, p<.05 and p<.10 respective (two-tailed tests). †No observations.

The generally weaker performance of the *REGD* treatment relative to both the *REGB* and *REGI* treatments merits some discussion, because in an important sense the delay option in the *REGD* treatment is a combination of the inaction bias and non-market information conditions that define the *REGB* and *REGI* treatments. Comparison of the *REGD* treatment to the uninformed periods of the *REGI* treatment (*REGI**) shown in Table A4.5(b) provides some insight as to the generally increased incidence of conversion errors in the *REGD* treatment relative to the *REGB* and *REGI* treatments. The *REGD* treatment parallels the uninformed *REGI** periods in the sense that the monitor never sees the underlying fundamental prior to making conversion decision. In the case of a value-decreasing conversion, shown in the left panel of Table A4.6, this results in an overall incidence of conversion errors that does not differ significantly in any respect from those observed in the *REGI** periods.

In the case of a value-increasing conversion, the *REGD* treatment generates significantly more conversion errors overall than the *REGI** periods ($\beta_{REGD|I*}$=13.3, p<.05), because of an increased incidence of 'gross' conversion errors ($\beta_{REGD|I*\text{-abef}}$=15.7 , p<0.10), many in instances where monitors could unambiguously from price information determine that conversion would be desirable. We attribute this increased incidence of conversion errors in this circumstance to some monitors, given the opportunity to wait, choosing to ignore the information content of prices altogether.

Table A4.5(b). Error Rate Comparisons of *REGD* relative to *REGI*(%)*

	Value Decreasing Conversion				Value Increasing Conversion			
β_0	11.1 (2.1)	23.8 (5.3)	27.8 (5.3)	†	30.0*** (3.6)	27.0*** (2.8)	44.4*** (6.7)	20.4*** (3.3)
$\beta_{REGD\|I*}$	1.7 (4.0)				13.3** (6.5)			
$\beta_{REGD\|I\text{-}def}$		-4.9 (6.7)				3.0 (11.5)		
$\beta_{REGD\|I\text{-}cd}$			0.0 (8.6)				9.7 (9.5)	
$\beta_{REGD\|\|I*abef}$				2.8 (1.8)				15.7* (8.6)
Wald χ^2	0.17	0.53	0	2.34	4.24**	0.07	1.04	3.34*
N	270	132	108	162	270	138	108	162

Key: ***, **, * denote rejection of the null hypothesis at *p*<.01, *p*<.05 and *p*<.10 respective (two-tailed tests). †No observations.

4.4 *Probit Estimates.*

Here, we provide the probit regressions that correspond to the linear regression results reported in this appendix. They are consistent with the linear results, so we provide them without any discussion.

Table A4.6 Error Rate Comparisons of *REGB* relative to *REG* (Probit Estimates)

	Value Decreasing Conversion				Value Increasing Conversion			
β_0	-142.0*** (9.8)	-109.3*** (12.3)	-88.0*** (11.8)	-202.7*** (28.2)	-94.8*** (12.8)	-95.8*** (12.4)	-26.9*** (16.2)	-137.3*** (12.7)
β_{REGB}	0.0 (18.7)				31.8 (18.7)			
$\beta_{REGB\text{-}def}$		-25.5* (15.1)				-41.2 (27.8)		
$\beta_{REGB\text{-}cd}$			1.8 (22.4)				-1.4 (21.3)	
$\beta_{REGB\text{-}abef}$				-475.1*** (39.4)				51.1*** (20.2)
Wald χ^2	0	1.39	0.01	0	4.50**	3.34	0.01	8.93***
N	630	294	204	426	630	294	204	426

Key: ***, **, * denote rejection of the null hypothesis at p<.01, p<.05 and p<.10 respective (two-tailed tests).

Table A4.7(a). Error Rate Comparisons of *REGI** relative to *REG* (Probit Estimates)

	Value Decreasing Conversion				Value Increasing Conversion			
β_0	-142.0	-109.3	-88.0	-202.7^{***}	-94.4^{***}	-98.2^{***}	-26.9^{*}	-137.3^{***}
	(9.8)	(12.3)	(16.2)	(27.9)	(12.6)	(13.3)	(16.1)	(12.9)
β_{REGI*}	20.0				40.7^{*}			
	(15.3)				(16.2)			
$\beta_{REGi* -def}$		38.0				32.5^{*}		
		(20.9)				(17.6)		
$\beta_{REG\ I*-cd}$			29.1				12.9	
			(19.0)				(23.3)	
$\beta_{REG\ I*-abef}$				-471.7^{***}				54.4^{***}
				(39.4)				(16.9)
Wald χ^2	1.04	2.53	1.29	0	5.52^{**}	1.67	0.3	6.22^{**}
N	540	246	168	372	540	252	168	372

Key: ***, **, * denote rejection of the null hypothesis at p<.01, p<.05 and p<.10 respective (two-tailed tests). †No observations.

Table A4.7(b) Error Rate Comparisons of *REGI* relative to *REG* (Probit Estimates)

	Value Decreasing Conversion				Value Increasing Conversion			
β_0	-142.0^{***}	-109.3^{***}	-88.0^{***}	-202.7^{***}	-94.0^{***}	-97.3^{***}	-26.9^{*}	-137.3^{***}
	(9.8)	(12.3)	(22.3)	(27.9)	(12.3)	(12.3)	(16.2)	(12.9)
β_{REGI}	-17.3				-4.1			
	(14.4)				(15.1)			
$\beta_{REGI-def}$		-12.8				-13.9		
		(16.8)				(18.7)		
$\beta_{REG\ I-cd}$			-20.5				-49.6^{*}	
			(15.0)				(20.2)	
$\beta_{REG\ I-abef}$				-475.1^{***}				24.5
				(39.4)				(16.2)
Wald χ^2	0.98	0.38	0.85	0	0.08	*0.4*	6.25	*1.78*
N	630	294	204	426	630	*294*	204	*426*

Key: ***, **, * denote rejection of the null hypothesis at p<.01, p<.05 and p<.10 respective (two-tailed tests). †No observations.

Table A4.8. Error Rate Comparisons of *REGD* relative to *REG* (Probit Estimates)

	Value Decreasing Conversion				Value Increasing Conversion			
β_0	-142.0^{***}	-109.3^{***}	-88.0^{***}	-196.1^{***}	-94.5^{***}	-98.9^{***}	-27.1	-138.7^{***}
	(9.9)	(12.4)	(11.5)	(25.8)	(12.7)	(13.1)	(18.7)	(12.7)
β_{REGI}	33.5^{*}				82.9^{***}			
	(18.7)				(18.5)			
$\beta_{REGI\text{-}def}$		29.0				48.6		
		(22.0)				(33.2)		
$\beta_{REG\ I\text{-}cd}$			37.2				45.8^{*}	
			(23.7)				(27.1)	
$\beta_{REG\ I\text{-}abef}$				-5.6				107.7^{***}
				(40.0)				(23.6)
Wald χ^2	5.32^{**}	2.46	3.47^{*}	0.03	34.92^{***}	5.12^{**}	4.37^{**}	40.42^{***}
N	630	294	204	426	630	294	204	426

Key: ***, **, * denote rejection of the null hypothesis at p<.01, p<.05 and p<.10 respective (two-tailed tests).

Table A4.9. Error Rate Comparisons of *REGD* relative to *REGB* (Probit Estimates)

	Value Decreasing Conversion				Value Increasing Conversion			
β_0	-1.42^{***}	-1.35^{**}	-0.86^{***}	†	-0.61^{***}	-1.46^{***}	-0.28^{**}	-0.86^{***}
	(0.16)	(0.09)	(0.20)		(0.14)	(0.28)	(0.14)	(0.16)
$\beta_{REGD\|B}$	0.33				0.50^{***}			
	(0.23)				(0.19)			
$\beta_{REGD\|B\ \text{-def}}$		0.55^{***}				0.95^{**}		
		(0.20)				(0.43)		
$\beta_{REGD\|B\ \text{-cd}}$			0.35				0.46^{*}	
			(0.30)				(0.24)	
$\beta_{REGD\|B\ \text{-abef}}$				†				0.56^{**}
								(0.26)
Wald χ^2	3.46^{*}	5.22^{**}	2.37	†	11.47^{***}	10.48^{***}	4.69^{**}	9.02^{***}
N	360	180	144		360	180	144	216

Key: ***, **, * denote rejection of the null hypothesis at p<.01, p<.05 and p<.10 respective (two-tailed tests). †No observations.

Table A4.10(a). Error Rate Comparisons of *REGD* relative to *REGI* (Probit Estimates)

	Value Decreasing Conversion				Value Increasing Conversion			
β_0	-1.59***	-1.22***	-1.09***	†	-0.97***	-1.20***	-0.76***	-1.13***
	(0.10)	(0.11)	(0.12)		(0.09)	(0.17)	(0.12)	(0.11)
$\beta_{REGD\|B}$	0.51***				0.86***			
	(0.19)				(0.16)			
$\beta_{REGD\|B\text{ -def}}$		0.42*				0.68*		
		(0.21)				(0.38)		
$\beta_{REGD\|B\text{ -cd}}$			0.58**				0.94***	
			(0.25)				(0.23)	
$\beta_{REGD\|B\text{ -abef}}$				†				0.82***
								(0.23)
Wald χ^2	7.02***	3.31*	5.75**	†	34.67***	5.16**	17.97***	17.54***
N	360	180	144		360	180	144	216

Key: ***, **, * denote rejection of the null hypothesis at *p*<.01, *p*<.05 and *p*<.10 respective (two-tailed tests). †No observations.

Table A4.10(b). Error Rate Comparisons of *REGD* relative to *REGI** (Probit Estimates)

	Value Decreasing Conversion				Value Increasing Conversion			
β_0	-1.22***	-0.71***	-0.59***	†	-0.52***	-0.74***	-0.14	-0.83***
	(0.11)	(0.17)	(0.16)		(0.10)	(0.23)	(0.17)	(0.12)
$\beta_{REGD\|I*}$	0.14				0.41**			
	(0.19)				(0.17)			
$\beta_{REGD\|I\text{ -def}}$		-0.09				0.20		
		(0.25)				(0.40)		
$\beta_{REGD\|I\text{ -cd}}$			0.08				0.31	
			(0.27)				(0.26)	
$\beta_{REGD\|\|I*abef}$				†				0.52**
								(0.23)
Wald χ^2	0.41	0.12	0.09		6.07**	0.33	1.5	5.19**
N	270	132	108		270	138	108	162

Key: ***, **, * denote rejection of the null hypothesis at *p*<.01, *p*<.05 and *p*<.10 respective (two-tailed tests). †No observations.