

市場泡沫實驗

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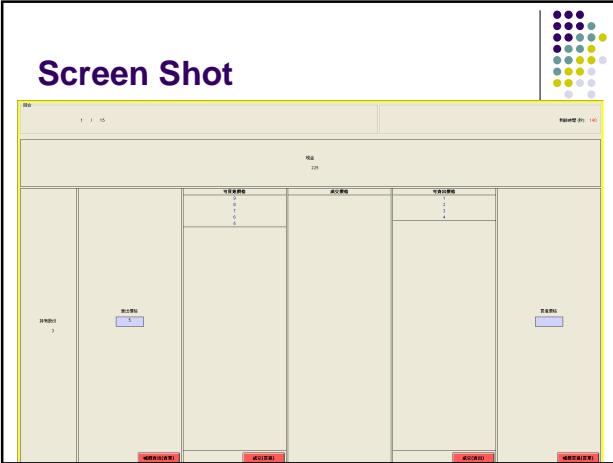


Introduction

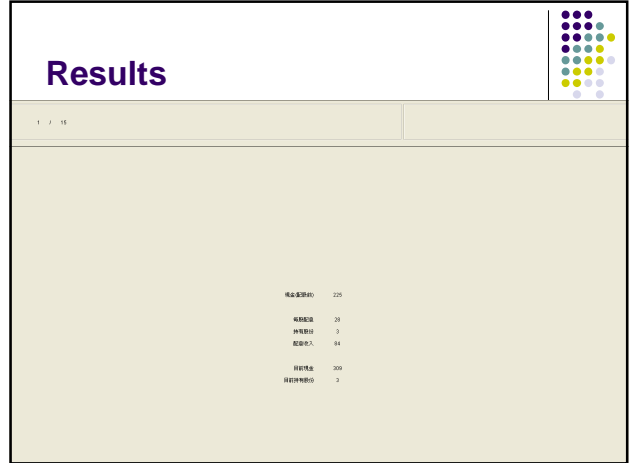
- Smith, Suchanek and Williams (1988), *Econometrica*, 56(5), pp. 1119-1151:
 - Bubbles, Crashes, and Endogenous Expectations in Experimental Spot Asset Markets



Screen Shot



Results



Market Parameters

TABLE I

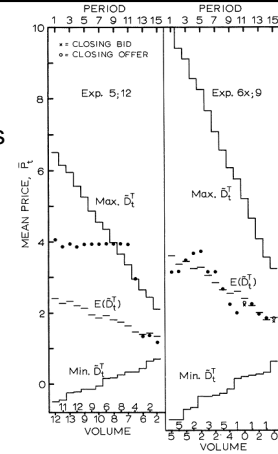
Design	Endowment*			Dividend d_t , cents ($p = 1/4$) ^b	Expected Dividend per Period, $E(d_t)$, cents	Intrinsic (Dividend) Value per Share Period 1, $E(D_1^i)$ ^c	Experiments ^d
	Class I	Class II	Class III				
1	(\$2.80; 4)	(\$7.60; 2)	(\$10.00; 1)	(0, 4, 8, 20)	8	\$2.40 (5; 12) (7; 12) (12x; 9, 3c)	(Including Buyout) (17; 12) (23pc; 12)
2	(\$2.25; 3)	(\$5.85; 2)	(\$9.45; 1)	(0, 4, 14, 30)	12	\$3.60 (6; 9) (9c; 9) (10; 9) (16; 9)	(Including Buyout) (18; 9) (19c; 9) (20pc; 9)
3	(\$2.80; 4)	(\$7.60; 2)	(\$10.00; 1)	(0, 8, 16, 40)	16	\$2.40 (26; 12) (41f; 12)	(25x; 9) (28x; 9) (30xsf; 9)
4	(\$2.25; 3)	(\$5.85; 2)	(\$9.45; 1)	(0, 8, 28, 60)	24	\$3.60 (36xc; 9) (39xsf; 9)	(43xnf; 9) (46f; 9) (48xnf; 9)
5*	(\$2.25; 3)	(\$5.85; 2)	(\$9.45; 1)	(0, 8, 28, 60)	24	\$7.20 (124xf; 9)	(42xf; 9)

^aIn experiments with 9(12) traders, 3(4) traders are assigned to each class.
^bEach dividend outcome occurs with probability 1/4 in each period.
^cEach period's expected dividend value, $E(D_1^i) = E(d_1) \cdot T$, $i = 1, 2, \dots, T$. In designs 1-2 (with buyout), $E(D_1^i) = \sum_{t=1}^T d_t + 2E(d)T - i + 1$, since the buyout at T is $\sum_{t=1}^T d_t \pm 0.50$, probability 1/2, in design 1 ($\sum_{t=1}^T d_t \pm 1.00$, probability 1/2 in design 2), d_t refers to the realized dividend at the end of t .
^d5; 12 means experiment number 5 using 12 subjects, x means experienced, sx means superexperienced, s means subjects were trained in a sequence of independent single period asset markets, n means some novice (inexperienced) subjects were combined with experienced subjects, f means subjects were asked to forecast next period's mean price, pc means price controls were set at $E(D_1^i) \pm 0.10$ for $i = 1, 2, 3$. In experiment (12x; 9, 3c), 3 of the 12 traders were confederates.
^e $T = 30$ in experiment (42xf; 9); otherwise $T = 15$.

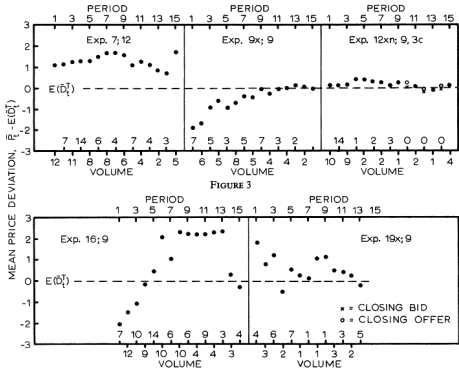


First Session

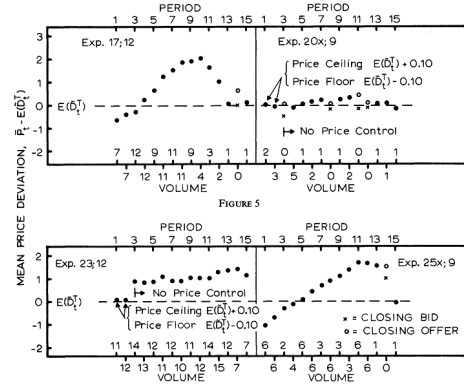
- Exp.5: 12 traders
- Exp.6: 9 traders who participated in Exp.5
- Bubble and Crash in Exp.5
- None in Exp.6



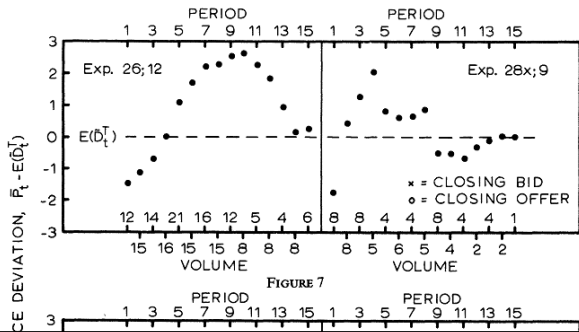
Second Set of Sessions



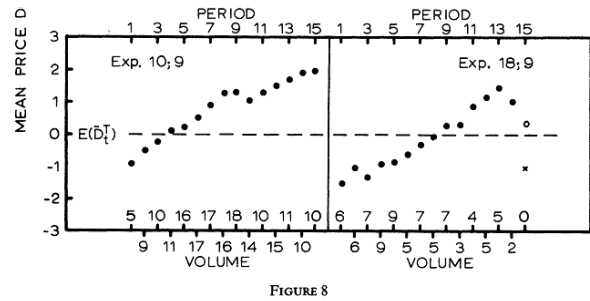
Effect of Initial Price Control



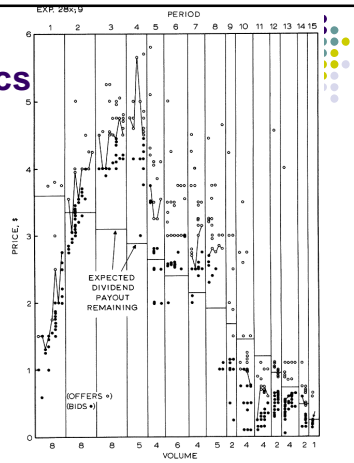
Expectations for a Bubble



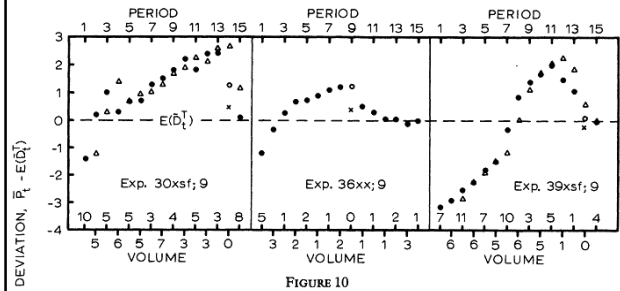
Professionals in the Lab

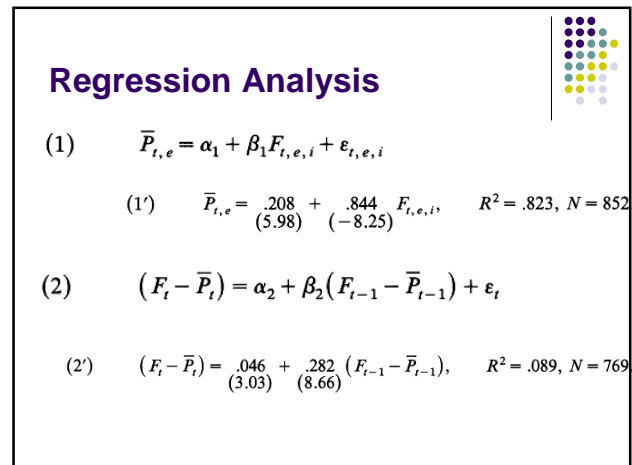
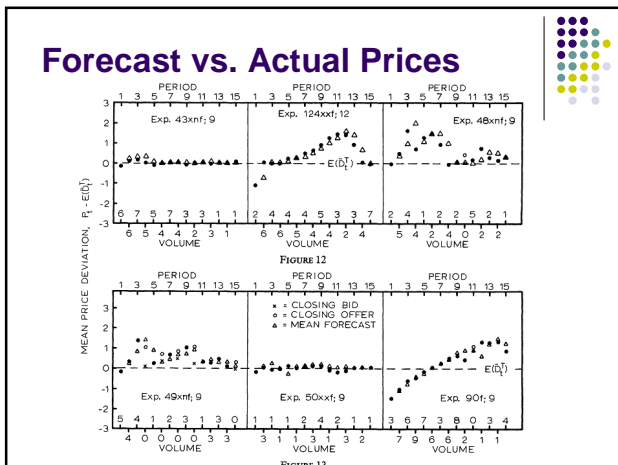
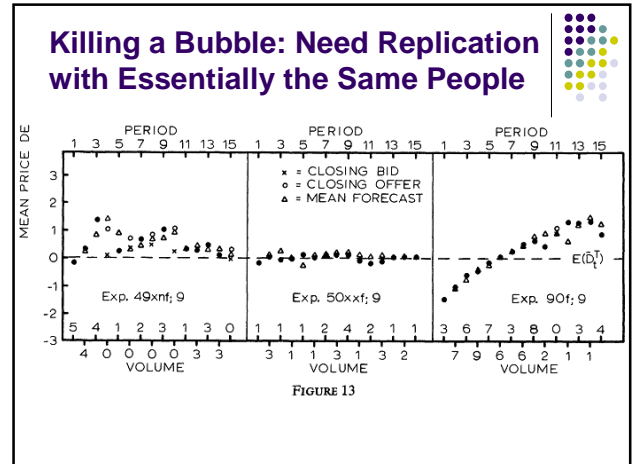
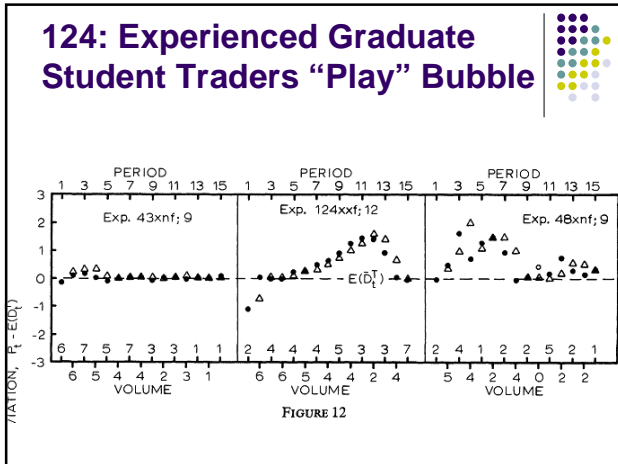
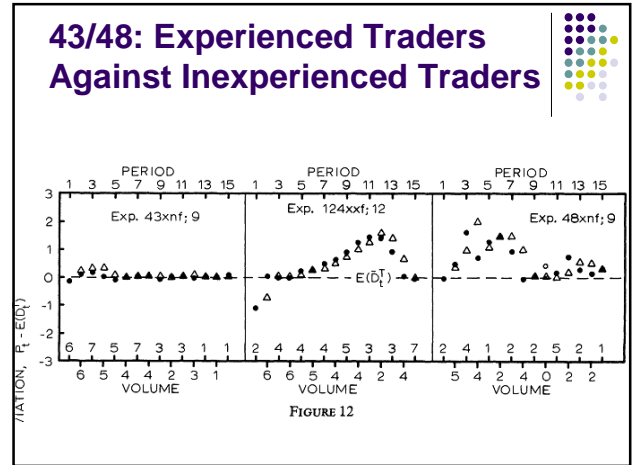
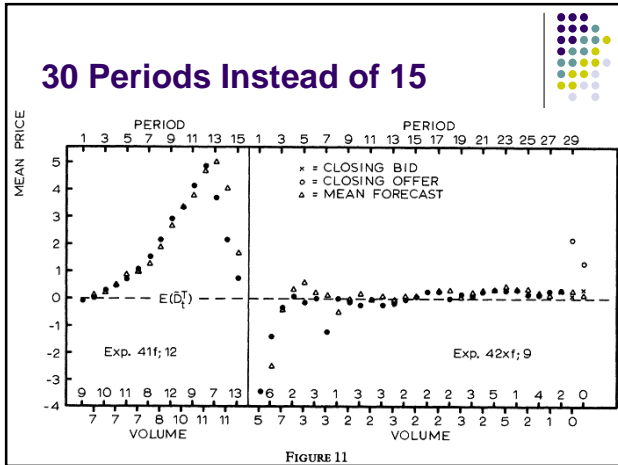


Price Dynamics



30/39: Experience to Interface 36: Past Superstars





Regression Analysis



$$(3) \quad (F_t - \bar{P}_t) = \alpha_3 + \beta_3(\bar{P}_t - \bar{P}_{t-1}) + \varepsilon_t$$

$$(3') \quad (F_t - \bar{P}_t) = \begin{matrix} -.077 & -.824 \\ (-7.30) & (-33.4) \end{matrix} (\bar{P}_t - \bar{P}_{t-1}), \quad R^2 = .589, N = 781$$

$$(4) \quad (F_t - F_{t-1}) = \alpha_4 + \beta_4(\bar{P}_{t-1} - F_{t-1}) + \varepsilon_t$$

$$(4') \quad (F_t - F_{t-1}) = \begin{matrix} -.117 & .815 \\ (12.11) & (38.16) \end{matrix} (\bar{P}_{t-1} - F_{t-1}), \quad R^2 = .632, N = 850$$

Regression Analysis



$$(5) \quad \bar{P}_t - \bar{P}_{t-1} = -E(\tilde{d}) + K + \beta(B_{t-1} - O_{t-1}), \quad \beta > 0.$$

$$(5.1) \quad \bar{P}_t - \bar{P}_{t-1} = -E(\tilde{d}).$$

$$(5.2) \quad \bar{P}_t - \bar{P}_{t-1} = -E(\tilde{d}) + K.$$

$$(5.3) \quad \bar{P}_t - \bar{P}_{t-1} = \alpha_5 + \beta_5(B_{t-1} - O_{t-1}) + \varepsilon_t.$$

$$(5.3') \quad (\bar{P}_t - \bar{P}_{t-1}) = \begin{matrix} -.230 & .027 \\ (0.29) & (7.55) \end{matrix} (B_{t-1} - O_{t-1}), \quad R^2 = .240, N = 182$$