The Left-Digit Effect and Stock Selling Behavior

Investors are more likely to sell stocks after a change in the left-digit. This occurs for both price increases and decreases. The likelihood of a stock being sold jumps when the price crosses the left-digit from below, e.g. a stock increasing from £9 to £10, and also increases when the price crosses the left-digit from above, e.g. a stock decreasing from £10 to £9. We interpret this as showing that investor attention is drawn to stocks that change their leftmost digit. Left-digit changes are attention grabbing, causing sale activity. This is similar to the rank effect finding of Hartzmark (2015), whereby either top-ranked or bottom-ranked stocks by return since purchase are those most likely to be sold.

To show our result, we draw a sample of stock × quarters that have increased in value and have gone through a left-digit in a calendar quarter (e.g. Jan - Mar), which we call the Price Increasing Sample. We then draw a sample of stocks that have decreased in value through a left-digit in a calendar quarter, which we call the Price Decreasing Sample.[1] Note, this sample restriction is at the stock × quarter level.

We then draw all investor × stock × days within the Price Increasing Sample and the Price Decreasing Sample, i.e. all observations for investors × days on which the investor held the stock at the beginning of the day. We look at the probability of sale when the stock is just below a left-digit change, e.g. £9, compared with above the left-digit change, e.g. £10. This exercise might compare investor × stock × days drawn from different investors. Therefore, we also conduct estimates that include individual fixed effects, thereby exploiting within-investor variation in the probability of sale either side of the left-digit change.

Figure A5 illustrates the main result. Each panel shows the probability of a stock sale by the leftmost two digits of the stock price. Note, this pools over leftmost digits that are in pence, pounds, hundreds of pounds, and so on. The only information used in the analysis is the leftmost two digits, in integer values. The left-side plots pool all observations by the leftmost two digits and the probability of sale together with a 95% confidence interval. The right-side plots show the probability of sale by leftmost two digits. Panel A shows an increase in the probability of sale when the price crosses the left-digit from below, Panel B shows an

[1] We have implemented this sample restriction approximately in this version. In a future version we will implement the sample restriction precisely. We do not expect the results to change when we do this.

increase in the probability of sale when the price crosses the left-digit from above. Figure A2 and Figure A3 reproduce these plots for subsamples by the price range of the stock, in Panel A up to £1, in Panel B between £1 and £10, and in Panel C between £10 and £100.

Possible queries:

1 Limit orders. We have previously discussed the possibility that the patterns we see might be created by limit orders set at left-digit thresholds, i.e., round numbers. We think this is not the general mechanism at work, because limit orders would create a spike in the probability of sale at the left-digit alone. It would not explain the increased probability of sale at X1, X2, etc.. We think we see higher probability at X1, X2, etc.. because there is a delay between the stock crossing the left-digit and investors logging-in to their accounts. We could examine the role of limit orders more precisely by looking into very fine price data at the penny level.

2 Sample selection. We have previously discussed the possibility that the results might in some way be an artefact of sample selection, given that we are selecting on stock × quarters that pass through a left digit change. We can clarify any concerns around sample selection in two ways.

   A It is true that our sample selection criteria mean that our sample does not uniformly comprise observations across XO - X9. For example, in the price increasing sample the requirement is that the stock has increased in value up to at least X0, but there is no further requirement. This will give us an excess of observations at X0 compared with X1, X2, and so on. We see this is indeed the case in Figure A4 in the histogram. However, this does not bias our results as the y-variable in our analysis is the *probability* of sale. Hence, the XO bin has a larger denominator in the y-variable compared with the other variables. Moreover, our results is that the probability of sales increases between X9 and X0, for which there is only a small increase in density in the histogram.

   B To double-check, we conducted a simulation analysis in which we input the same data but choose stocks to be sold at random. The result in Figure A4 in the right-side plot confirms that this delivers a uniform probability of sale.

EQ: UPDATING SAMPLES:

The old samples uses only login days to define a price as being part of increasing or decreasing trend:

– Increasing Price sample: We divided the data by quarters and looked at the *FirstLoginPrice* (the price at the first login day of the quarter), we selected all quarters in which at least in one login day during the quarter (i) the price was larger than *FirstLoginPrice* & (ii) the first left digit of that day was different than the first left digit of *FirstLoginPrice*.

– Decreasing Price sample: All remaining quarters.

Because the second sample includes stocks that go down or whose price do not move much,I have redefined the samples as follows:

– Increasing Price sample: We divided the data by quarters and looked at the *FirstLoginPrice* (the price at the first login day of the quarter), we selected all quarters in which at least in one login day during the quarter (i) the price was larger than *FirstLoginPrice* & (ii) the first left digit of that day was different than the first left digit of *FirstLoginPrice* & (iii) **in all days of the quarter the price was never smaller than** *FirstLoginPrice*.

– Decreasing Price sample: We divided the data by quarters and looked at the *FirstLoginPrice* (the price at the first login day of the quarter), we selected all quarters in which at least in one login day during the quarter (i) the price was SMALLER than *FirstLoginPrice* & (ii) the first left digit of that day was different than the first left digit of *FirstLoginPrice* & (iii) **in all days of the quarter the price was never LARGER than** *FirstLoginPrice*.

– Remaining sample: Remaining days, prices were larger or smaller than *FirstLoginPrice*, but they never change the first left digit in comparison with the first left digit of *FirstLoginPrice*

But because we want to study the aggregate market effects of left digit selling, we cannot use the prices on login days to define increasing and decreasing samples (Datastream only has prices and sells but not logins). So here I redefined the samples without making restrictions on whether the investor log in on the first day of the quarter. Recall that above the samples were built looking at the prices on login days during

the quarter relative to the price on the first login day of the quarter. Now we do not look at the first login day, but just at the first day of the quarter, and we compare it with prices on any day—not necessarily login days.

– Increasing Price sample: We divided the data by quarters and looked at the *FirstPrice* (the price at the first day of the quarter), we selected all quarters in which at least in one day during the quarter (i) the price was larger than *FirstPrice* & (ii) the first left digit of that day was different than the first left digit of *FirstPrice* & (iii) **in all days of the quarter the price was never smaller than** *FirstPrice*.

– Decreasing Price sample: We divided the data by quarters and looked at the *FirstPrice* (the price at the first day of the quarter), we selected all quarters in which at least in one login day during the quarter (i) the price was SMALLER than *FirstPrice* & (ii) the first left digit of that day was different than the first left digit of *FirstPrice* & (iii) **in all days of the quarter the price was never LARGER than** *FirstPrice*.

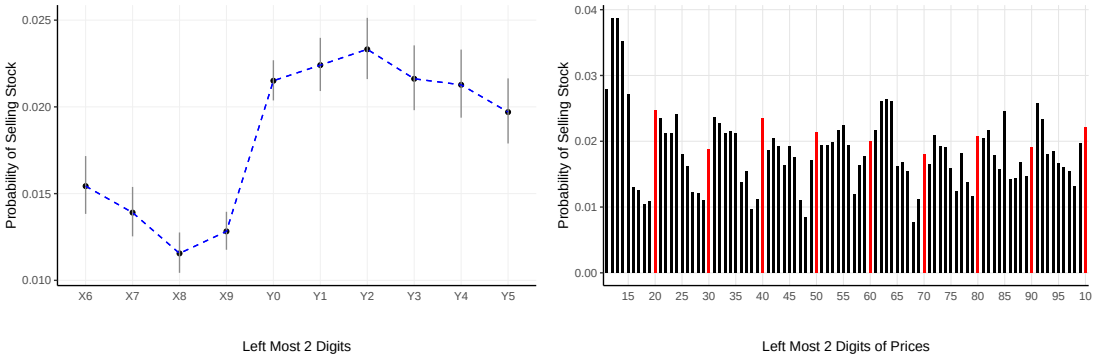
– Stable Price sample: Remaining days, prices were larger or smaller than *FirstPrice*, but they never change the first left digit in comparison with the first left digit of *FirstPrice*.

THE PROBLEM IS THAT USING PRICES WITHOUT CONDITIONING ON LOGIN DAYS TO DEFINE THE SAMPLES SHOWS NO EFFECT OF LEFT DIGITS ON SELLING CHOICES. THIS IMPLIES THAT PEOPLE CANNOT REPRODUCE OUR RESULTS UNLESS THEY ALSO HAVE LOGIN DATA. THIS ALSO IMPLIES THAT I CANNOT USE MARKET DATA TO IDENTIFY THE ECONOMIC CONSEQUENCES OF LEFT DIGIT BIAS. HOW BIG THIS PROBLEM IS??

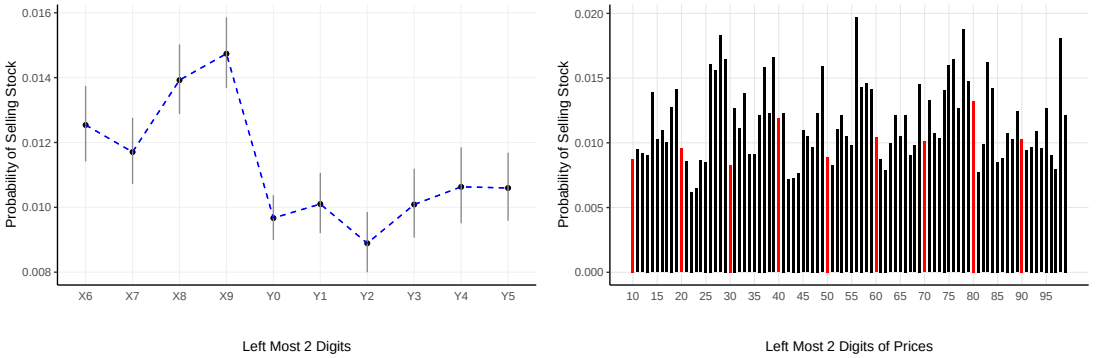
ANY WAY, ALL THE ANALYSIS HAS BEEN UPDATED USING THE NEW SAMPLES DEFINED USING PRICES ON LOGIN DAYS (BLUE TEXT ABOVE). I AM KEEPING SOME OF THE OLD PLOTS JUST TO HELP COMPARISON WITH THE NEW RESULTS

Figure 1: Leftmost Stock Price Digit and Probability of Sale

(A) Price Increasing



(B) Price Decreasing



Note: £Y in the X-axes is equivalent to £$X + 1$ (e.g., £X9 could include £0.19, £1.9, £19, etc., while £Y0 could include £0.20, £2.0, £20, etc.).

Table 1: Summary Stats

Panel (A): Baseline Sample

	N	Mean	St. Dev.	Min	Pctl(25)	Median	Pctl(75)	Max
Price on Login Days £	5,894,175	7.090	27.717	0.000	0.938	2.625	6.990	4,495.251
Price on Sell Days £	349,983	6.247	29.101	0.000	0.645	2.211	5.615	4,443.405
Price of Stocks Sold £	68,103	6.451	40.256	0.000	0.624	2.200	5.400	4,443.405

Panel (B): Price Increasing Sample

	N	Mean	St. Dev.	Min	Pctl(25)	Median	Pctl(75)	Max
All Stocks	316,242	5.777	15.384	0.000	0.582	2.433	6.010	2,001.557
Stocks with Prices Between £0.11 to £1.01	82,932	0.588	0.254	0.110	0.378	0.616	0.795	1.010
Stocks with Prices Between £1.1 to £10.1	155,842	4.816	2.367	1.100	2.917	4.348	6.578	10.099
Stocks with Prices Between £11 to £101	25,401	34.166	18.423	11.000	19.931	30.040	46.290	100.690

Panel (C): Price Decreasing Sample

	N	Mean	St. Dev.	Min	Pctl(25)	Median	Pctl(75)	Max
All Stocks	440,805	4.140	24.057	0.000	0.091	0.912	4.490	2,034.661
Stocks with Prices Between £0.10 to £1.0	114,133	0.506	0.276	0.100	0.250	0.479	0.755	1.000
Stocks with Prices Between £1 to £10	181,411	4.575	2.551	1.000	2.256	4.180	6.490	9.999
Stocks with Prices Between £10 to £100	29,721	26.268	16.820	10.000	11.040	21.220	37.450	99.800

Table 2: Probability of Sale and Left Digit, Price Increasing Sample

	$Probability\ of\ Sale_{ijt} = 1$				
	(1)	(2)	(3)	(4)	(5)
Above Y0 = 1 (in Range Y0 to Y5)	0.0086***	0.0101***	0.0096***	0.0107***	0.0116***
	(0.0005)	(0.0008)	(0.0008)	(0.0008)	(0.0009)
Stock Digits Y0 to Y5		-0.0003	-0.0007***	-0.0008***	-0.0011***
		(0.0002)	(0.0002)	(0.0002)	(0.0002)
Stock Digits X6 to X9		-0.0009***	-0.0003	-0.0003	-0.0001
		(0.0003)	(0.0003)	(0.0003)	(0.0003)
Constant	0.0132***	0.0121***	0.0085**		
	(0.0005)	(0.0006)	(0.0033)		
Day FE	NO	NO	YES	YES	YES
Industry FE	NO	NO	YES	YES	YES
Account FE	NO	NO	NO	YES	YES
Stock FE	NO	NO	NO	NO	YES
Observations	316,242	316,242	316,242	316,242	316,242
R^2	0.0010	0.0010	0.0046	0.0993	0.1114

Note: The unit of observation is an investor × stock × day. The samples is restricted to login days. We include only quarters in which the stocks increased in price (regarding the first observation of the quarter) and change the left most digit at least once during the quarter. Only those stocks that have changed the left most digit are included. Regressions fit an intercept for the change in the left most digit at X0 and two slopes for the left (with values in the range -3 to 0, corresponding to X6 to X9) and right (with values in the range 0 to 5, corresponding to Y0 to Y5) values. The constant shows the probability to sell the stock at when the second digit is 9 (X9). The second digit over threshold dummy shows the jump in probability when the first digit changes and so the second digit becomes 0 (X0). SE are clustered by account.

Table 3: Probability of Sale and Left Digit, Price Decreasing Sample

	$Probability\ of\ Sale_{ijt} = 1$				
	(1)	(2)	(3)	(4)	(5)
Above Y0 = 1 (in Range Y0 to Y5)	-0.0034***	-0.0050***	-0.0057***	-0.0060***	-0.0064***
	(0.0004)	(0.0006)	(0.0006)	(0.0006)	(0.0006)
Stock Digits Y0 to Y5		0.0002	0.0002**	0.0007***	0.0007***
		(0.0001)	(0.0001)	(0.0001)	(0.0001)
Stock Digits X6 to X9		0.0009***	0.0010***	0.0006**	0.0007**
		(0.0003)	(0.0003)	(0.0003)	(0.0003)
Constant	0.0133***	0.0146***	0.0189***		
	(0.0005)	(0.0006)	(0.0024)		
Day FE	NO	NO	YES	YES	YES
Industry FE	NO	NO	YES	YES	YES
Account FE	NO	NO	NO	YES	YES
Stock FE	NO	NO	NO	NO	YES
Observations	440,805	440,805	440,805	440,805	440,805
R^2	0.0002	0.0003	0.0008	0.0852	0.0945

Note: The unit of observation is an investor × stock × day. The samples is restricted to login days. We include only quarters in which the stocks have not increased in price (regarding the first observation of the quarter) and have not changed the left most digit at least once during the quarter. Regressions fit an intercept for the change in the left most digit at X0 and two slopes for the left (with values in the range -3 to 0, corresponding to X6 to X9) and right (with values in the range 0 to 5, corresponding to Y0 to Y5) values. The constant shows the probability to sell the stock at when the second digit is 9 (X9). The second digit over threshold dummy shows the jump in probability when the first digit changes and so the second digit becomes 0 (X0). SE are clustered by account.

[EQ: Splitting the data by account/investor characteristics. Young, Male, small portfolios, young accounts, and portfolios with few stocks show more often left digit bias.]

Table 4: Probability of Sale and Left Digit, Splitting by Median Age

	Prices Increasing Sample		Prices Decreasing Sample	
	Below Median	Above Median	Below Median	Above Median
Above Y0 = 1 (in Range Y0 to Y5)	0.0128***	0.0107***	-0.0080***	-0.0048***
	(0.0012)	(0.0012)	(0.0009)	(0.0008)
Stock Digits Y0 to Y5	-0.0015***	-0.0008**	0.0009***	0.0006***
	(0.0003)	(0.0003)	(0.0002)	(0.0002)
Stock Digits X6 to X9	0.0001	-0.0005	0.0008*	0.0005
	(0.0005)	(0.0005)	(0.0004)	(0.0004)
Day FE	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES
Account FE	YES	YES	YES	YES
Stock FE	YES	YES	YES	YES
Observations	171,106	145,136	230,074	210,731
R^2	0.1239	0.1044	0.1122	0.0835

Note: The unit of observation is an investor × stock × day. The samples is restricted to login days. We include only quarters in which the stocks increased/decreased in price (regarding the first observation of the quarter) and change the left most digit at least once during the quarter. Only those stocks that have changed the left most digit are included. Regressions fit an intercept for the change in the left most digit at X0 and two slopes for the left (with values in the range -3 to 0, corresponding to X6 to X9) and right (with values in the range 0 to 5, corresponding to Y0 to Y5) values. The constant shows the probability to sell the stock at when the second digit is 9 (X9). The second digit over threshold dummy shows the jump in probability when the first digit changes and so the second digit becomes 0 (Y0). SE are clustered by account.

Table 5: Probability of Sale and Left Digit, Splitting by Gender

	Prices Increasing Sample		Prices Decreasing Sample	
	Female	Male	Female	Male
Above Y0 = 1 (in Range Y0 to Y5)	0.0112***	0.0118***	-0.0057***	-0.0066***
	(0.0018)	(0.0010)	(0.0013)	(0.0007)
Stock Digits Y0 to Y5	-0.0010*	-0.0012***	0.0006**	0.0007***
	(0.0005)	(0.0002)	(0.0003)	(0.0001)
Stock Digits X6 to X9	-0.0008	0.0000	0.0001	0.0008**
	(0.0008)	(0.0004)	(0.0006)	(0.0003)
Day FE	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES
Account FE	YES	YES	YES	YES
Stock FE	YES	YES	YES	YES
Observations	51,515	264,727	66,918	373,887
R^2	0.1259	0.1141	0.1228	0.0944

Note: The unit of observation is an investor × stock × day. The samples is restricted to login days. We include only quarters in which the stocks increased/decreased in price (regarding the first observation of the quarter) and change the left most digit at least once during the quarter. Only those stocks that have changed the left most digit are included. Regressions fit an intercept for the change in the left most digit at X0 and two slopes for the left (with values in the range -3 to 0, corresponding to X6 to X9) and right (with values in the range 0 to 5, corresponding to Y0 to Y5) values. The constant shows the probability to sell the stock at when the second digit is 9 (X9). The second digit over threshold dummy shows the jump in probability when the first digit changes and so the second digit becomes 0 (Y0). SE are clustered by account.

Table 6: Probability of Sale and Left Digit, Splitting by Portfolio Value

	Prices Increasing Sample		Prices Decreasing Sample	
	Below Median	Above Median	Below Median	Above Median
Above Y0 = 1 (in Range Y0 to Y5)	0.0153***	0.0081***	-0.0082***	-0.0038***
	(0.0013)	(0.0011)	(0.0009)	(0.0007)
Stock Digits Y0 to Y5	-0.0016***	-0.0008***	0.0009***	0.0005***
	(0.0003)	(0.0003)	(0.0002)	(0.0002)
Stock Digits X6 to X9	0.0001	-0.0005	0.0010**	0.0001
	(0.0005)	(0.0004)	(0.0004)	(0.0003)
Day FE	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES
Account FE	YES	YES	YES	YES
Stock FE	YES	YES	YES	YES
Observations	171,087	145,155	248,029	192,776
R^2	0.1701	0.0886	0.1445	0.0750

Note: The unit of observation is an investor × stock × day. The samples is restricted to login days. We include only quarters in which the stocks increased/decreased in price (regarding the first observation of the quarter) and change the left most digit at least once during the quarter. Only those stocks that have changed the left most digit are included. Regressions fit an intercept for the change in the left most digit at X0 and two slopes for the left (with values in the range -3 to 0, corresponding to X6 to X9) and right (with values in the range 0 to 5, corresponding to Y0 to Y5) values. The constant shows the probability to sell the stock at when the second digit is 9 (X9). The second digit over threshold dummy shows the jump in probability when the first digit changes and so the second digit becomes 0 (Y0). SE are clustered by account.

Table 7: Probability of Sale and Left Digit, Splitting by Account Tenure

	Prices Increasing Sample		Prices Decreasing Sample	
	Below Median	Above Median	Below Median	Above Median
Above Y0 = 1 (in Range Y0 to Y5)	0.0145***	0.0097***	-0.0079***	-0.0052***
	(0.0012)	(0.0012)	(0.0010)	(0.0008)
Stock Digits Y0 to Y5	-0.0015***	-0.0008**	0.0010***	0.0007***
	(0.0003)	(0.0003)	(0.0002)	(0.0002)
Stock Digits X6 to X9	-0.0003	-0.0001	0.0008*	0.0003
	(0.0005)	(0.0005)	(0.0004)	(0.0003)
Day FE	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES
Account FE	YES	YES	YES	YES
Stock FE	YES	YES	YES	YES
Observations	163,840	152,402	205,653	235,152
R^2	0.1257	0.1469	0.1179	0.1120

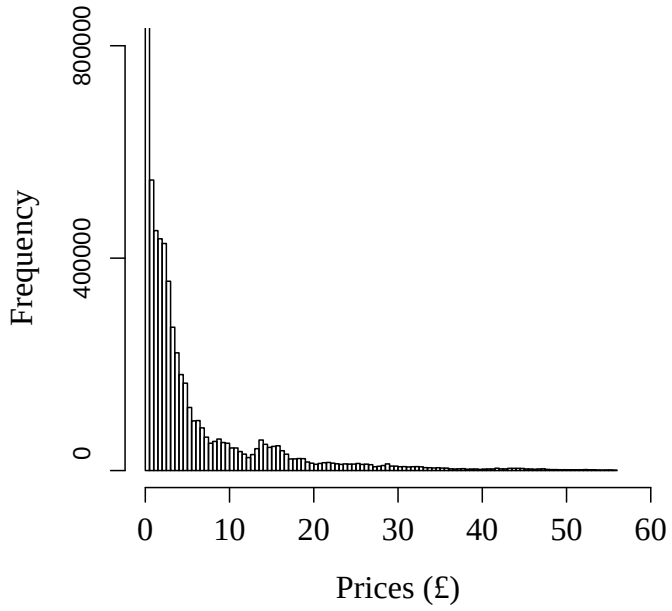
Note: The unit of observation is an investor × stock × day. The samples is restricted to login days. We include only quarters in which the stocks increased/decreased in price (regarding the first observation of the quarter) and change the left most digit at least once during the quarter. Only those stocks that have changed the left most digit are included. Regressions fit an intercept for the change in the left most digit at X0 and two slopes for the left (with values in the range -3 to 0, corresponding to X6 to X9) and right (with values in the range 0 to 5, corresponding to Y0 to Y5) values. The constant shows the probability to sell the stock at when the second digit is 9 (X9). The second digit over threshold dummy shows the jump in probability when the first digit changes and so the second digit becomes 0 (Y0). SE are clustered by account.

Table 8: Probability of Sale and Left Digit, Splitting by Number of Stocks

	Prices Increasing Sample		Prices Decreasing Sample	
	Below Median	Above Median	Below Median	Above Median
Above Y0 = 1 (in Range Y0 to Y5)	0.0167***	0.0064***	-0.0092***	-0.0034***
	(0.0014)	(0.0009)	(0.0010)	(0.0006)
Stock Digits Y0 to Y5	-0.0016***	-0.0007***	0.0010***	0.0004***
	(0.0003)	(0.0003)	(0.0002)	(0.0001)
Stock Digits X6 to X9	-0.0006	0.0002	0.0010**	0.0003
	(0.0006)	(0.0004)	(0.0004)	(0.0003)
Day FE	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES
Account FE	YES	YES	YES	YES
Stock FE	YES	YES	YES	YES
Observations	174,614	141,628	232,167	208,638
R^2	0.1372	0.0709	0.1175	0.0545

Note: The unit of observation is an investor × stock × day. The samples is restricted to login days. We include only quarters in which the stocks increased/decreased in price (regarding the first observation of the quarter) and change the left most digit at least once during the quarter. Only those stocks that have changed the left most digit are included. Regressions fit an intercept for the change in the left most digit at X0 and two slopes for the left (with values in the range -3 to 0, corresponding to X6 to X9) and right (with values in the range 0 to 5, corresponding to Y0 to Y5) values. The constant shows the probability to sell the stock at when the second digit is 9 (X9). The second digit over threshold dummy shows the jump in probability when the first digit changes and so the second digit becomes 0 (Y0). SE are clustered by account.

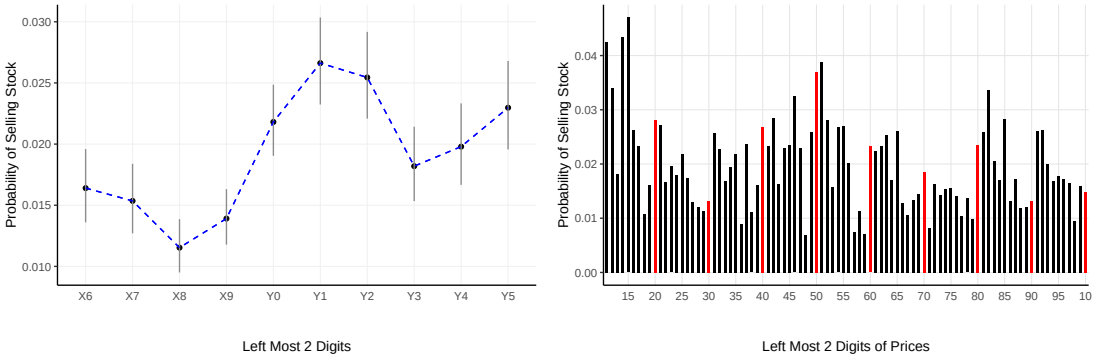
Figure A1: Histogram of Stock Prices



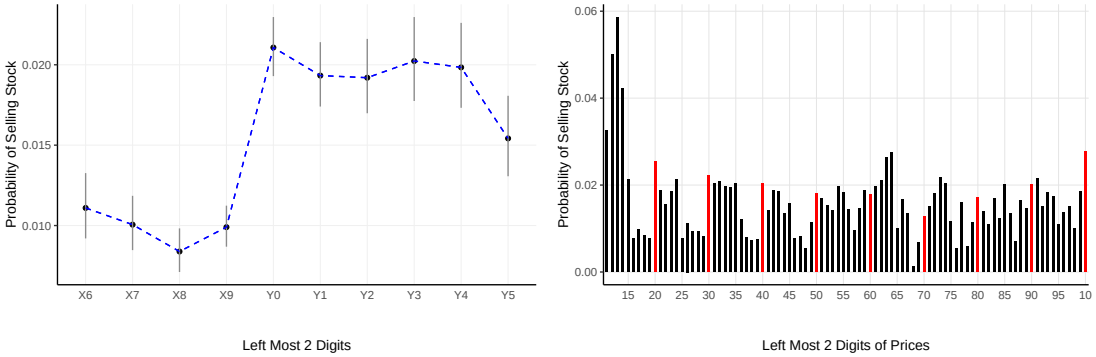
Note: Figure shows the histogram of prices on login days. Outliers in the 99 percentile are excluded.

Figure A2: Leftmost Stock Price Digit and Probability of Sale
Prices Increasing Sample by Price Range

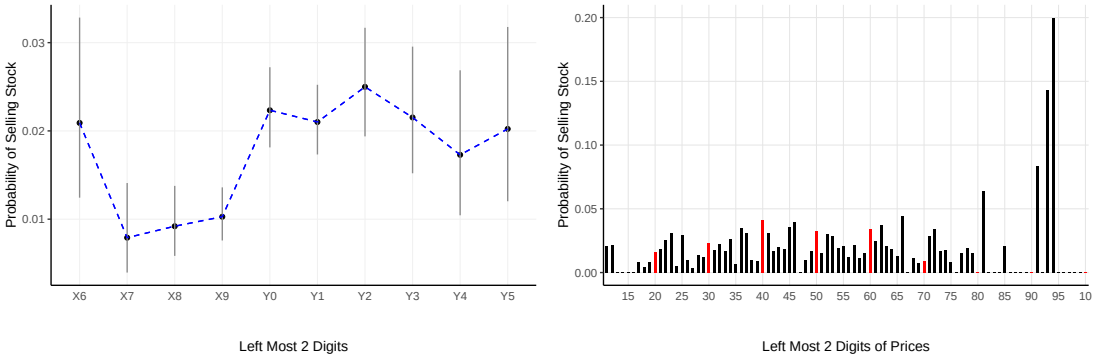
(A) Price = £0.11 to £1.01



(B) Price = £1.01 to £10.1



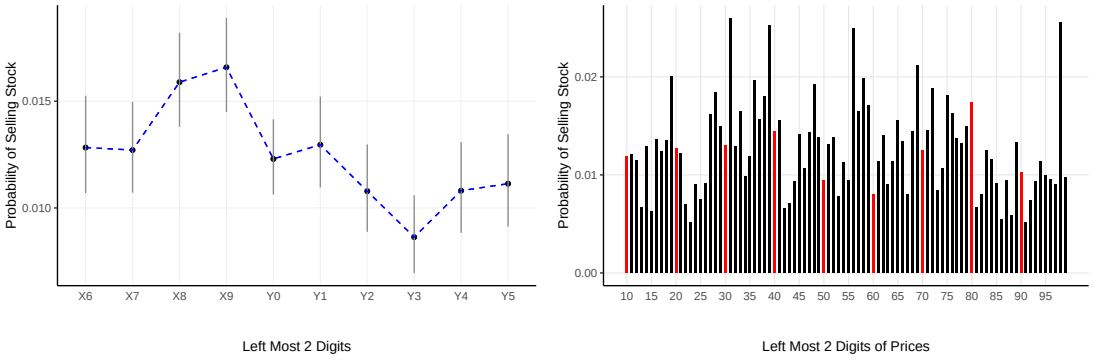
(C) Price = £11 to £101



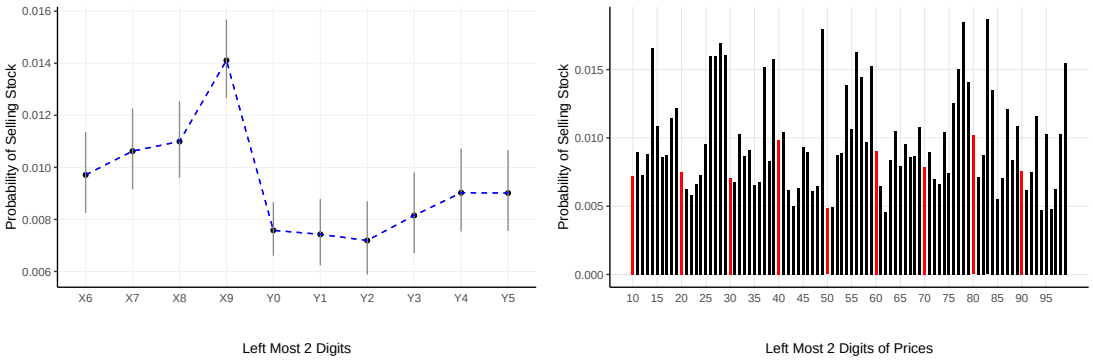
Note: £Y in the X-axes is equivalent to £$X+1$ (e.g., £X9 could include £0.19, £1.9, £19, etc., while £Y0 could include £0.20, £2.0, £20, etc.). Panels A, B and C show equal size bins of 1p, 10p and £1, respectively. Panel A corresponds to 26.22% of the observations in the prices increasing sample; Panel B, to 49.28%; and Panel C, to 8.03%.

Figure A3: Leftmost Stock Price Digit and Probability of Sale
Prices Decreasing Sample by Price Range

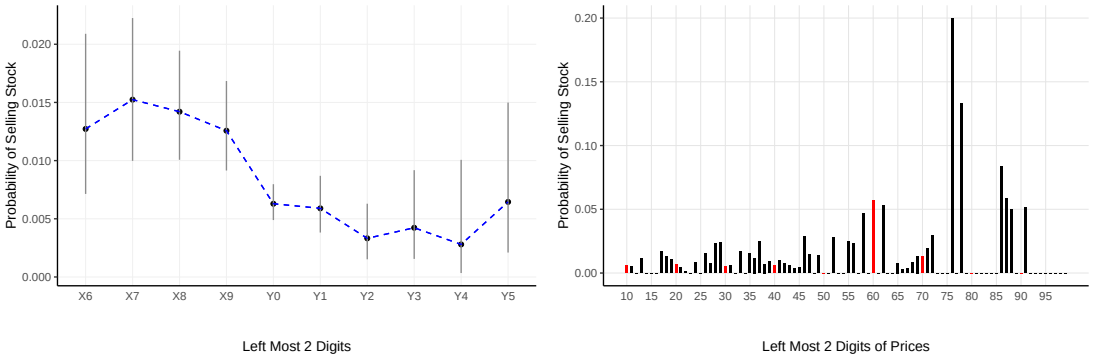
(A) Price = £0.10 to £1.00



(B) Price = £1.00 to £10.0



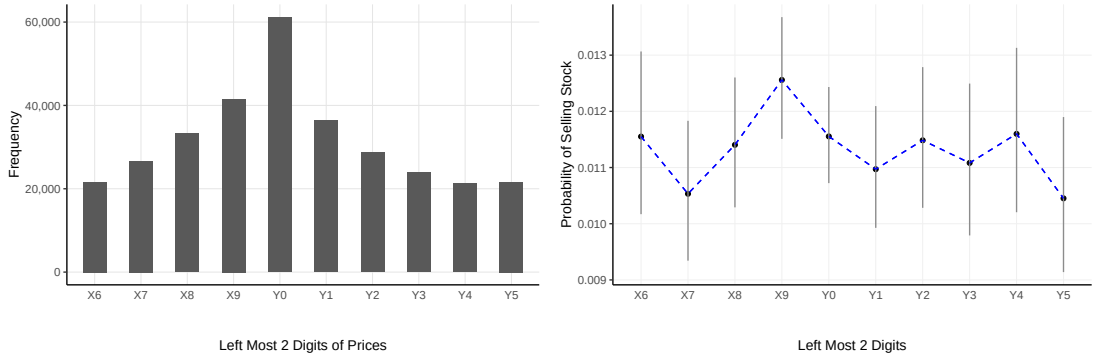
(C) Price = £10 to £100



Note: £Y in the X-axes is equivalent to £$X + 1$ (e.g., £X9 could include £0.19, £1.9, £19, etc., while £Y0 could include £0.20, £2.0, £20, etc.). Panels A, B and C show equal size bins of 1p, 10p and £1, respectively. Panel A corresponds to 25.89% of the observations in the prices decreasing sample; Panel B, to 41.15%; and Panel C, to 6.74%.

Figure A4: Sample Selection and Simulation Exercise

(A) Price Increasing Sample



(B) Price Decreasing Sample

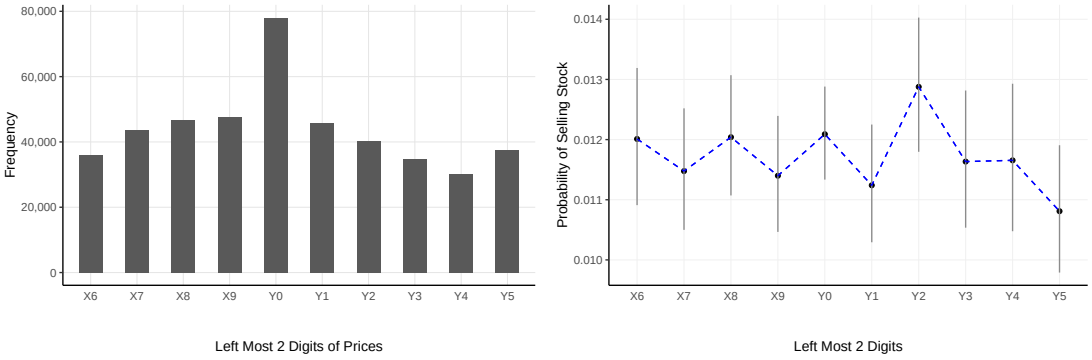
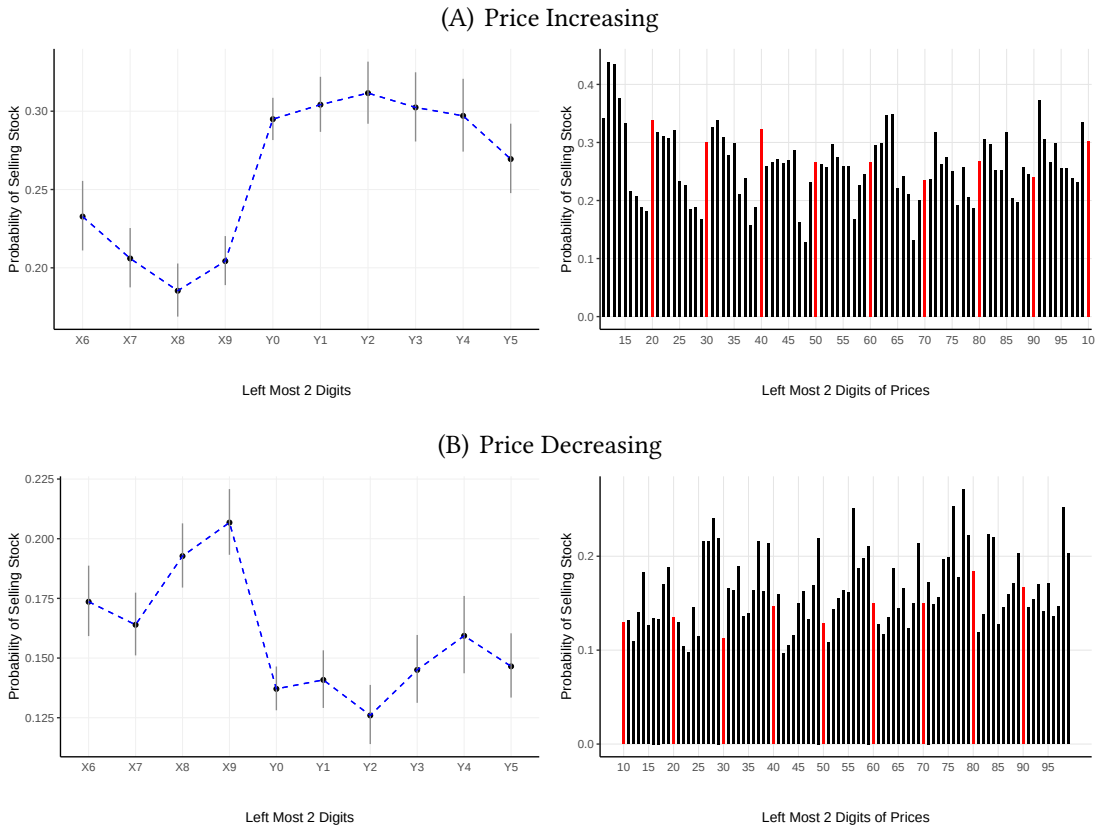
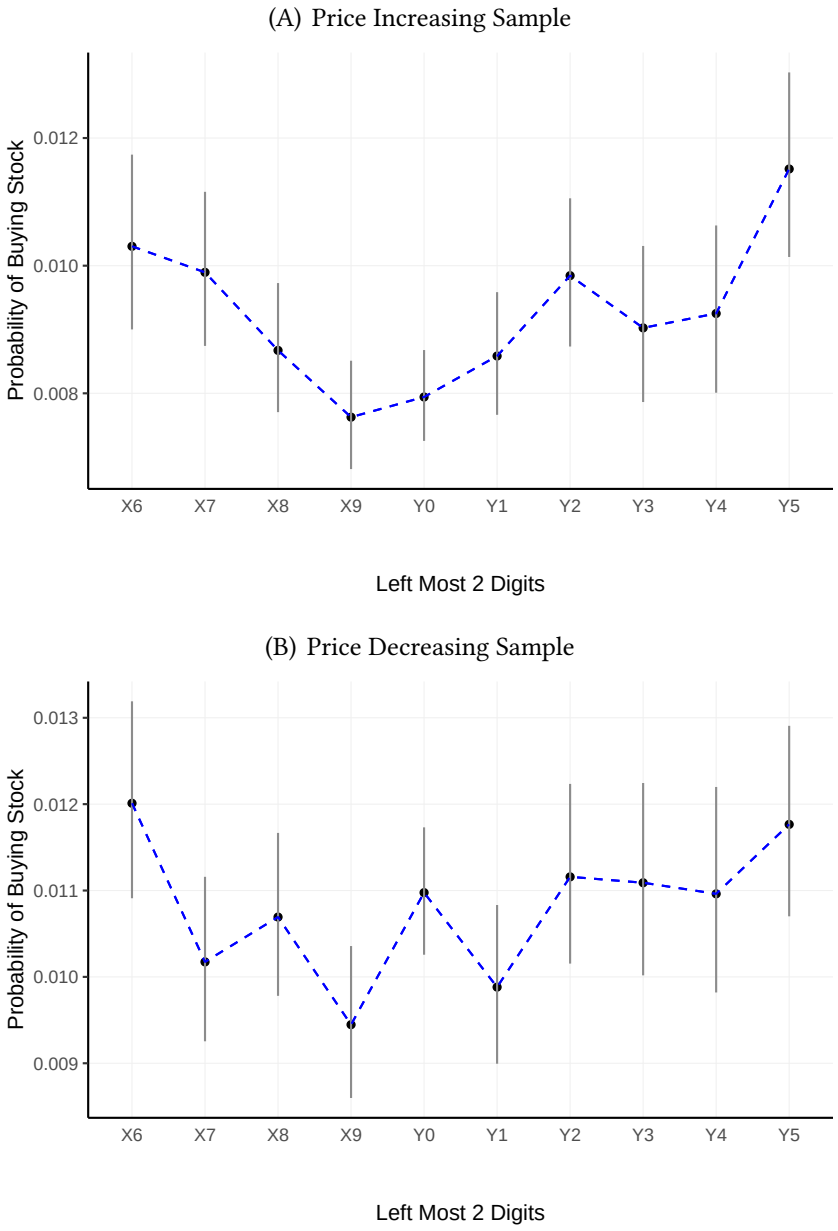


Figure A5: Leftmost Stock Price Digit and Probability of Sale, Sell Days [EQ: sell days results at here the end of the Appendix. But perhaps they should go before Figure A4?]



Note: £Y in the X-axes is equivalent to £$X + 1$ (e.g., £X9 could include £0.19, £1.9, £19, etc., while £Y0 could include £0.20, £2.0, £20, etc.).

Figure A6: Probability of Topping-up [EQ: I remember we talked with George about doing the topping up analysis. Perhaps we could just tell him that the analysis did not work and drop this plot? What do you think? Just in case, I am leaving the plots here for now.]



Note: Figure shows the probability of topping up (increasing position in an stock) under the same sample selection. £Y in the X-axes is equivalent to £X + 1 (e.g., £X9 could include £0.19, £1.9, £19, etc., while £Y0 could include £0.20, £2.0, £20, etc.,).

Table A1: Sample Selection [EQ: we used the sample from our DE paper. So these are new accounts. We can control for returns with this sample in a reviewer suggests us to do so. But the table is a preliminary table. Do you think the sub samples are clear? We need to discuss about how to present the sample exclusions]

	Remaining Accounts
All potential new accounts	33285
Excluding accounts:	
Accounts with transfers-in	29440
Accounts with no single sell record	13785
Accounts with no single login record	13681
Excluding observations (account × stock × day):	
Days with fewer than 2 stocks	11104
Outliers in returns (1 and 99 percentiles)	11083
Days with unknown prices	10415
Accounts with an average portfolio value of 0	10367
Accounts with no remaining selling days after the earlier exclusions	8242
Number of Accounts	**8242**
Number of Observations	**5894175**
Sub-samples	
Price Increasing Stocks Sample	
Quarters in which stock prices > first price of the quarter and the price changed the leftmost digit at least once	316242
Price Decreasing Stocks Sample	
Quarters in which stock prices < first price of the quarter and the price changed the leftmost digit at least once	440850

Note: The unit of observation is an investor × stock × day. Only days in which the investor made a login to their account are included. Sub-samples include stocks and quarters in which prices were increasing (or decreasing) and there was a change in the left most digit of the price of the stock at least once during the quarter. All login days in these quarters are included.

Table A2: Price Increasing Subsamples with Equal Prices Bins

Panel (A): Price = £0.11 to £1.01

	$Probability\ of\ Sale_{ijt} = 1$				
	(1)	(2)	(3)	(4)	(5)
Above Y0 = 1 (in Range Y0 to Y5)	0.0084***	0.0111***	0.0102***	0.0095***	0.0092***
	(0.0010)	(0.0016)	(0.0016)	(0.0017)	(0.0017)
Stock Digits Y0 to Y5		-0.0006	-0.0006	-0.0004	-0.0006
		(0.0004)	(0.0004)	(0.0004)	(0.0004)
Stock Digits X6 to X9		-0.0010*	-0.0007	-0.0005	-0.0003
		(0.0006)	(0.0006)	(0.0006)	(0.0007)
Constant	0.0141***	0.0127***	0.2090***		
	(0.0009)	(0.0011)	(0.0776)		
Day FE	NO	NO	YES	YES	YES
Industry FE	NO	NO	YES	YES	YES
Account FE	NO	NO	NO	YES	YES
Stock FE	NO	NO	NO	NO	YES
Observations	82,932	82,932	82,932	82,932	82,932
R^2	0.0009	0.0010	0.0051	0.1355	0.1501

Panel (B): Price = £1.01 to £10.1

	$Probability\ of\ Sale_{ijt} = 1$				
	(1)	(2)	(3)	(4)	(5)
Above Y0 = 1 (in Range Y0 to Y5)	0.0098***	0.0116***	0.0114***	0.0123***	0.0124***
	(0.0007)	(0.0010)	(0.0010)	(0.0010)	(0.0011)
Stock Digits Y0 to Y5		-0.0007**	-0.0012***	-0.0008***	-0.0010***
		(0.0003)	(0.0003)	(0.0003)	(0.0003)
Stock Digits X6 to X9		-0.0004	0.0001	-0.0003	-0.0001
		(0.0004)	(0.0004)	(0.0004)	(0.0004)
Constant	0.0097***	0.0093***	0.0433***		
	(0.0005)	(0.0007)	(0.0041)		
Day FE	NO	NO	YES	YES	YES
Industry FE	NO	NO	YES	YES	YES
Account FE	NO	NO	NO	YES	YES
Stock FE	NO	NO	NO	NO	YES
Observations	155,842	155,842	155,842	155,842	155,842
R^2	0.0016	0.0016	0.0058	0.1185	0.1271

Panel (C): Price = £11 to £101

	$Probability\ of\ Sale_{ijt} = 1$				
	(1)	(2)	(3)	(4)	(5)
Above Y0 = 1 (in Range Y0 to Y5)	0.0098***	0.0116***	0.0114***	0.0123***	0.0124***
	(0.0007)	(0.0010)	(0.0010)	(0.0010)	(0.0011)
Stock Digits Y0 to Y5		-0.0007**	-0.0012***	-0.0008***	-0.0010***
		(0.0003)	(0.0003)	(0.0003)	(0.0003)
Stock Digits X6 to X9		-0.0004	0.0001	-0.0003	-0.0001
		(0.0004)	(0.0004)	(0.0004)	(0.0004)
Constant	0.0097***	0.0093***	0.0433***		
	(0.0005)	(0.0007)	(0.0041)		
Day FE	NO	NO	YES	YES	YES
Industry FE	NO	NO	YES	YES	YES
Account FE	NO	NO	NO	YES	YES
Stock FE	NO	NO	NO	NO	YES
Observations	155,842	155,842	155,842	155,842	155,842
R^2	0.0016	0.0016	0.0058	0.1185	0.1271

Table A3: Price Decreasing Subsamples with Equal Prices Bins

Panel (A): Price = £0.10 to £1.00

	$Probability\ of\ Sale_{ijt} = 1$				
	(1)	(2)	(3)	(4)	(5)
Above Y0 = 1 (in Range Y0 to Y5)	-0.0035***	-0.0045***	-0.0051***	-0.0048***	-0.0052***
	(0.0008)	(0.0012)	(0.0012)	(0.0012)	(0.0013)
Stock Digits Y0 to Y5		-0.0004*	-0.0003	0.0001	0.0002
		(0.0003)	(0.0003)	(0.0003)	(0.0003)
Stock Digits X6 to X9		0.0015***	0.0015***	0.0011**	0.0012**
		(0.0005)	(0.0005)	(0.0005)	(0.0005)
Constant	0.0147***	0.0167***	0.0613**		
	(0.0008)	(0.0011)	(0.0291)		
Day FE	NO	NO	YES	YES	YES
Industry FE	NO	NO	YES	YES	YES
Account FE	NO	NO	NO	YES	YES
Stock FE	NO	NO	NO	NO	YES
Observations	114,133	114,133	114,133	114,133	114,133
R^2	0.0002	0.0003	0.0015	0.1445	0.1599

Panel (B): Price = £1.00 to £10.0

	$Probability\ of\ Sale_{ijt} = 1$				
	(1)	(2)	(3)	(4)	(5)
Above Y0 = 1 (in Range Y0 to Y5)	-0.0036***	-0.0062***	-0.0065***	-0.0073***	-0.0072***
	(0.0005)	(0.0008)	(0.0008)	(0.0008)	(0.0009)
Stock Digits Y0 to Y5		0.0003*	0.0004**	0.0011***	0.0010***
		(0.0002)	(0.0002)	(0.0002)	(0.0002)
Stock Digits X6 to X9		0.0014***	0.0014***	0.0007**	0.0009**
		(0.0004)	(0.0004)	(0.0004)	(0.0004)
Constant	0.0116***	0.0135***	0.0212***		
	(0.0005)	(0.0008)	(0.0021)		
Day FE	NO	NO	YES	YES	YES
Industry FE	NO	NO	YES	YES	YES
Account FE	NO	NO	NO	YES	YES
Stock FE	NO	NO	NO	NO	YES
Observations	181,411	181,411	181,411	181,411	181,411
R^2	0.0003	0.0005	0.0010	0.1057	0.1161

Panel (C): Price = £10 to £100

	$Probability\ of\ Sale_{ijt} = 1$				
	(1)	(2)	(3)	(4)	(5)
Above Y0 = 1 (in Range Y0 to Y5)	-0.0080***	-0.0070***	-0.0077***	-0.0067***	-0.0067***
	(0.0014)	(0.0019)	(0.0019)	(0.0022)	(0.0023)
Stock Digits Y0 to Y5		-0.0006	-0.0002	0.0005	0.0005
		(0.0004)	(0.0004)	(0.0005)	(0.0005)
Stock Digits X6 to X9		-0.0004	-0.0006	-0.0020*	-0.0023*
		(0.0011)	(0.0011)	(0.0012)	(0.0013)
Constant	0.0136***	0.0131***	0.0181***		
	(0.0014)	(0.0017)	(0.0030)		
Day FE	NO	NO	YES	YES	YES
Industry FE	NO	NO	YES	YES	YES
Account FE	NO	NO	NO	YES	YES
Stock FE	NO	NO	NO	NO	YES
Observations	29,721	29,721	29,721	29,721	29,721
R^2	0.0017	0.0018	0.0027	0.1536	0.1599

[EQ: new results using the sell day sample. We use the same quarters but we only include sell days. We replicate the main regressions. Do you think we need to replicate some other tables presented with the login sample?].

Table A4: Probability of Sale and Left Digit, Price Increasing Sample, Sell Days

	$Probability\ of\ Sale_{ijt} = 1$				
	(1)	(2)	(3)	(4)	(5)
Above Y0 = 1 (in Range Y0 to Y5)	0.0926***	0.1089***	0.1092***	0.0871***	0.0814***
	(0.0074)	(0.0109)	(0.0103)	(0.0109)	(0.0117)
Stock Digits Y0 to Y5		-0.0029	-0.0060**	-0.0049*	-0.0072**
		(0.0027)	(0.0026)	(0.0028)	(0.0028)
Stock Digits X6 to X9		-0.0087**	-0.0054	-0.0028	0.0034
		(0.0043)	(0.0042)	(0.0047)	(0.0050)
Constant	0.2049***	0.1939***	0.1528***		
	(0.0072)	(0.0088)	(0.0438)		
Day FE	NO	NO	YES	YES	YES
Industry FE	NO	NO	YES	YES	YES
Account FE	NO	NO	NO	YES	YES
Stock FE	NO	NO	NO	NO	YES
Observations	22,023	22,023	22,023	22,023	22,023
R^2	0.0102	0.0104	0.0239	0.3515	0.4253

Note: The unit of observation is an investor × stock × day. The samples is restricted to sell days. We include only quarters in which the stocks increased in price (regarding the first observation of the quarter) and change the left most digit at least once during the quarter. Only those stocks that have changed the left most digit are included. Regressions fit an intercept for the change in the left most digit at X0 and two slopes for the left (with values in the range -3 to 0, corresponding to X6 to X9) and right (with values in the range 0 to 5, corresponding to Y0 to Y5) values. The constant shows the probability to sell the stock at when the second digit is 9 (X9). The second digit over threshold dummy shows the jump in probability when the first digit changes and so the second digit becomes 0 (X0). SE are clustered by account.

Table A5: Probability of Sale and Left Digit, Price Decreasing Sample, Sell Days

	$Probability\ of\ Sale_{ijt} = 1$				
	(1)	(2)	(3)	(4)	(5)
Above Y0 = 1 (in Range Y0 to Y5)	-0.0445***	-0.0690***	-0.0742***	-0.0542***	-0.0526***
	(0.0051)	(0.0076)	(0.0075)	(0.0079)	(0.0086)
Stock Digits Y0 to Y5		0.0029*	0.0032**	0.0044***	0.0055***
		(0.0016)	(0.0016)	(0.0017)	(0.0018)
Stock Digits X6 to X9		0.0134***	0.0140***	0.0072**	0.0059*
		(0.0033)	(0.0033)	(0.0033)	(0.0035)
Constant	0.1854***	0.2041***	0.2340***		
	(0.0094)	(0.0103)	(0.0240)		
Day FE	NO	NO	YES	YES	YES
Industry FE	NO	NO	YES	YES	YES
Account FE	NO	NO	NO	YES	YES
Stock FE	NO	NO	NO	NO	YES
Observations	31,279	31,279	31,279	31,279	31,279
R^2	0.0036	0.0043	0.0090	0.3313	0.3904

Note: The unit of observation is an investor × stock × day. The samples is restricted to sell days. We include only quarters in which the stocks have not increased in price (regarding the first observation of the quarter) and have not changed the left most digit at least once during the quarter. Regressions fit an intercept for the change in the left most digit at X0 and two slopes for the left (with values in the range -3 to 0, corresponding to X6 to X9) and right (with values in the range 0 to 5, corresponding to Y0 to Y5) values. The constant shows the probability to sell the stock at when the second digit is 9 (X9). The second digit over threshold dummy shows the jump in probability when the first digit changes and so the second digit becomes 0 (X0). SE are clustered by account.