Left-Digit Bias, Investor Attention and Trading Behavior

John George Edika Neil Gathergood* Loewenstein[†] Quispe–Torreblanca[‡] Stewart[§]

March 19, 2020

Abstract

Abstract here

Keywords: words

JEL Codes: codes

^{*}University of Nottingham, School of Economics; Network for Integrated Behavioural Science. Email: john.gathergood@nottingham.ac.uk.

[†] Social and Decision Sciences, Carnegie Mellon University. Email: gl20@andrew.cmu.edu.

[‡] University of Oxford, Saïd Business School. Email: Edika.Quispe-Torreblance@sbs.ox.ac.uk.

[§] University of Warwick, Warwick Business School. Email: Neil.Stewart@wbs.ac.uk.

Although there is by now a large literature in finance addressing the question of when people *don't* like to sell stocks – specifically focusing on the disposition effect, the distaste for selling stocks at a nominal loss – beyond this strong regularity there is very little research focusing on when, exactly, investors *do* sell stocks. Are there specific events that trigger the sale of a stock? Recent research (Akepanidtaworn et al., 2019), which finds that the buy decisions of professional traders are quite sensible – the stocks they buy are more likely to rise in value than those they don't buy – but that their sell decisions are worse than random, further highlights the need for a better understanding of when stock sales occur.

While not providing a comprehensive theory, nor a broad empirical investigation, of when people sell stocks, in this paper we address one event that, we predicted and found, has a substantial effect on sales: People are significantly -xx% – more likely to sell stocks when their price crosses a round-number price threshold from below – e.g., rising from below \$30 per share to above \$30 per share. By the same token, we find that investors are less likely to sell stocks immediately after they cross a round number threshold from above. We document these interrelated patterns using a data set of transactions made by online retail investors, demonstrate its robustness across different empirical inspections, and rule out limit orders as an alternative explanation.

Left-digit bias is the tendency to focus on the leftmost digit of a number while paying less attention to other digits (Poltrock and Schwartz, 1984). Prior research on the left-digit bias has shown automobiles depreciate disproportionately when their milage crosses a around number threshold. Research on physician decision making likewise find that patients hospitalized with acute myocardial infarction 2 weeks after, as compared with 2 weeks before, their 80th birthday were significantly less likely to undergo coronary-artery bypass graft surgery. And research (Shlain, 2018) shows not only that 99 cent pricing works – that consumers respond to a one cent increase of \$.99 to \$1.00 as if it was a 15-25 cent difference, but also that firms exploit this bias less than they would if they were maximizing profits. Our contribution is to show that the left-digit bias strongly affects the behavior of investors.

1 Data

Data were provided by Barclays Stockbroking, an execution-online brokerage service operating in the United Kingdom. The data cover the period April 2012 to March 2016 and include daily-level records of trades and quarterly-level records of portfolio positions. The data also include a dummy variable, at daily frequency, denoting whether the investor made a login to their account on the day. The daily-level login dummy variable covers all days, including days on which the market is closed such as Sundays and public holidays, which we use later in our analysis. We combine the daily-level records of trades with the quarterly-level records of portfolio positions, together with stock price data from Datastream, to calculate the value of each stock position in an investor's portfolio on each day of the sample period.

1.1 Sample Selection

As a first step, we apply a series of data cleaning sample restrictions which restrict the data to active accounts with trading histories during the data period for which we can match price and demographic data. Details of this first stage of data cleaning are shown in Table 1. The unrestricted sample as received from Barclays contains 155,300 accounts. In this version of the paper we draw a 60% random sample of accounts for analysis.

The unit of observation in the data is an account \times stock \times day, i.e. an observation per investor per stock holding per day. We focus our analysis on three two subsets of this universe of account \times days, specifically login-days and sell-days. We define a login-day as an observation which is paired with a login and a sell-day as an observation which is paired with a sale event on the day from the portfolio (of the stock, or of a different stock held in the account on the same day). The sample of accounts together provides a total of approximately 67 million login-days and 500,000 sell-days.

We then apply five data cleaning restrictions, which are applied to the data at the account level unless otherwise noted. We apply these restrictions in order to limit the sample to the minimum variables required for analysis. First, we drop observations for which the account is

¹ During the data period the brokerage operated only through an online interface. Barclays have subsequently introduced a mobile phone trading app.

inactive, defined as a one-year period in which the investor makes fewer than two logins or two transactions. Where an account does not meet this restriction, we drop all observations for the relevant year. Second, we remove observations where a matched price is not available from Datastream. Third, we remove observations for all account \times days in which there are fewer than two stocks within the portfolio. Fourth, we remove all observations for accounts for which demographic data is missing (i.e., we drop all investor \times stock \times days for that account from the sample). Finally, we remove observations for which do not observe starting positions the days in which the investor purchased the stocks (starting position days) as speculative day traiding is rare among retail investors.

Table 1 reports the effects of these steps in sample selection. The table reports the number of accounts dropped due to each step in the sample restrictions, together with the number of login-days and buy-days login events and sell events (account × stock × days) dropped at each step. From the starting sample of approximately 46,000 accounts, the largest drop of accounts is due to dropping approximately 14,400 inactive accounts (31.3% of accounts). After applying all five sample restrictions the resulting baseline sample retains 58.8% of accounts from the unrestricted sample. Our sample restrictions tend to drop accounts with below-average logins and sales (due to the largest drop being the drop of inactive accounts), hence the baseline sample retains 64.8% of login-days and 70.9% of sell-days.

As a second step, we restrict to a sample for analysis. Two motivations drive our sample selection. First, responses to changes in left-digits are only detectable in a sample of observations for an investor in which the left-digit changes. A key element in our analysis therefore is to draw a "price increasing sample" and a "price decreasing sample", which we define below. Moreover, we show that the response of changes in left-digit is very different depending upon when the stock is increasing in value or decreasing in value over time, in particular, selling activity occurs when prices cross left-digits from below and from above.

Second, responses to changes in left-digits are contingent upon the investor observing the change in left-digit. For example, a stock that changes left-digit over a holding period in which the investor does not make a login to the account is much less likely to be noticed

 $^{^{2}}$ In cases where the account satisfies this sample restriction in other years, we keep those years of observations in the data set.

compared with a change in left-digit which occurs between login days within a holding period. We therefore apply sample restrictions in order to obtain a series of observations in which the price crosses the left-digit between login-days.

We define the price increasing sample and the price decreasing sample as follows. First, using the example of the price increasing sample, we identify the first day in each calendar quarter on which an investor made a login to their account.³ We then define the price increasing sample as the set of login days within the quarter for which the prices on subsequent login days were always above the price on the first day and the left-digit had changed within the quarter on at least one subsequent login-day. This sample therefore provides a series of login-days through the quarter in which the price of the stock had broached a left-digit change on at least one of the login-days.

We define the price decreasing sample using parallel sample restrictions applied to decreasing prices. Hence the price decreasing sample is defined as the set of login days within the quarter for which the prices on subsequent login days were always below the price on the first day and the left-digit had changed within the quarter on at least one subsequent login-day. Our samples are based on quarters and individual \times login days during the quarter.

1.2 Summary Statistics

Table 3 describes the price data for the baseline sample, price increasing sample and price decreasing sample. The baseline sample provides approximately 43.9 million login-day observations (the bottom row of Table 1). Panel A summarises prices of all observations paired with login-days and sell-days in the first two rows, together with price of stocks sold in the third row. The mean price of a stock in the sample of login-days is approximately £8, with a median of £3.

Panels B and C summarise prices for stocks from observations in the price increasing sample and observations in the price decreasing sample. Note, there are four units of left-digit in the data, pennies, tens of pennies, pounds and tens of pounds (there are only a few cases of hundreds of pounds). So, the left-digit changes of interest are pence to tens of pence, tens of

³ We show later that results are unchanged when we modify the period that defines a sample to either a month, or a year, instead of a quarter.

pence to pounds, and pounds to tens of pounds (plus a few cases of tens of pounds to hundreds of pounds).

The most common price range for observations in both the price increasing sample and the price decreasing sample is the £1.1 to £10.1 range, which accounts for 54.8% of observations in the price increasing sample and 43.4% of observations in the price decreasing sample.

Most stocks in the samples are prices in the range £1.10 to £10.10. A histogram of prices for all investor \times login days is shown in Figure A1.

Figure 1: Leftmost Stock Price Digit and Probability of Sale, Quarterly Sample

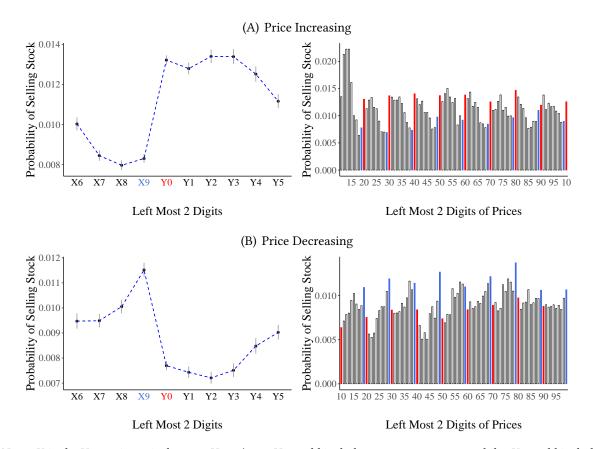
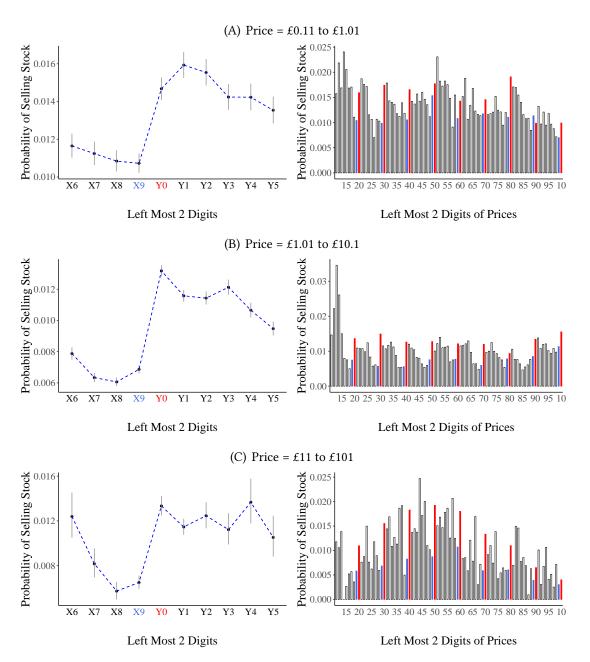
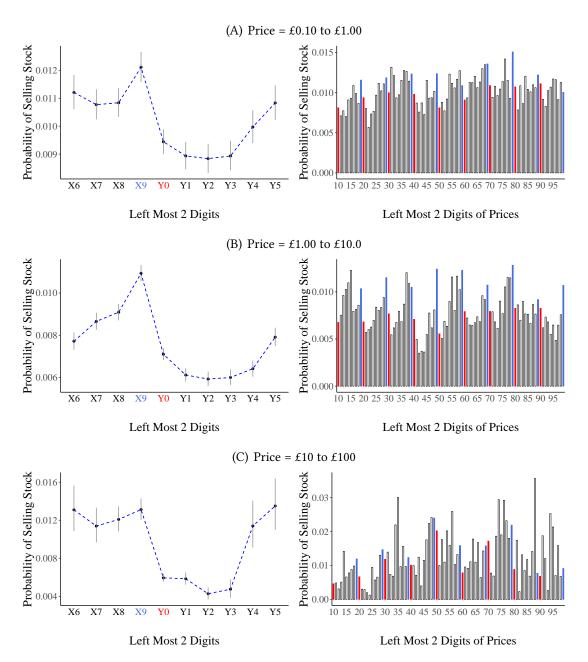


Figure 2: Leftmost Stock Price Digit and Probability of Sale Prices Increasing Sample by Price Range



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% of the observations in the prices increasing sample; Panel B, to 55%; and Panel C, to 8%.

Figure 3: Leftmost Stock Price Digit and Probability of Sale Prices Decreasing Sample by Price Range



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 27% of the observations in the prices decreasing sample; Panel B, to 43%; and Panel C, to 7%.

Figure 4: Leftmost Stock Price Digit and Probability of Sale, Prices Increasing Sample Limit Order Robustness Tests



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 display different sample restrictions to exclude sells corresponding to limit orders. Panel A drops sells executed when the market was closed. It also exclude potential discretionary trades (high frequency trades executed on the same stock, at the same time and at the same price that would likely correspond to sells arranged by Barclays discretionary service). Panel B excludes sells with a preceding login day. Panel C exclude non-liquid stocks, and Panel D excludes potential limit orders following Linnainmaa (2010) methodology. Panel A drops 2.2% of sells, Panel B drops 64.7% of sells, Panel C drops 75.9% of sells, and Panel D drops 11.4% of sells.

Table 1: Sample Selection

	Accounts	Logins	Sells
Unrestricted Sample	91817	135331214	993312
Drop due to:			
Inactive Accounts	28990	15951667	39075
Unmatched Prices	581	26014606	101667
At Least Two Stocks in Portfolio	5999	1444418	65638
Missing Demographic Data	2282	3980478	35724
Starting Position Days	40	726121	49899
Baseline sample	53925	87213924	701309

Note: The unrestricted sample contains 155,300 accounts. We use a 60% random sample of accounts. The table detail the steps in sample selection. Logins and Sells are at the account \times stock \times day level.

Table 2: Baseline Sample Summary Statistics

	1		,			
	Mean	Min	p25	p50	p75	Max
A. Account Holder Characteristics						
Female	0.190					
Age (years)	54.890	17.000	47.000	57.000	67.000	87.000
Account Tenure (years)	5.292	0.060	3.066	4.049	6.959	16.975
B. Account Characteristics						
Portfolio Value (£10000)	48.275	0.000	0.663	1.950	5.531	800203.817
Investment in Mutual Funds (£10000)	0.566	-1.092	0.000	0.000	0.000	1606.614
Investment in Mutual Funds (%)	7.678	-4050.456	0.000	0.000	0.000	12606.139
Number of Stocks	5.966	2.000	2.429	3.913	7.064	541.978
Login days (% all days)	18.805	0.076	4.286	11.595	28.733	100.000
Transaction days (% all market open days)	3.263	0.036	0.847	1.662	3.471	100.000
N Accounts	53925					

Note: This table presents summary statistics for the baseline sample of accounts. Age is measured at date of account opening. Account tenure is measured on the final day of the data period. Portfolio value is the value of all securities within the portfolio at market prices. Portfolio value, number of stocks and investment in mutual funds are measured as within-account averages of values at the first day of each calendar month in the data period. Login days is the percentage of days the account is open in the data period and the account holder made at least one login. Transaction days is the percentage of market open days the account is open in the data period and the account holder made at least one trade.

Table 3: Summary Stats, Quarterly Sample

Panel	(Δ).	Raceline	Sample	
ranei	I A II	Daseime	samble	

		1 and	(11). Dasci	inic ouni	Pre			
	N	Mean	St. Dev.	Min	Pctl(25)	Median	Pctl(75)	Max
Price on Login Days £	43,910,771	7.946	26.271	0.000	1.153	3.050	7.642	15,051.630
Price on Sell Days £	3,348,713	7.152	25.799	0.000	0.831	2.645	6.680	3,589.000
Price of Stocks Sold £	349,936	7.322	29.887	0.000	0.856	2.689	6.717	2,057.301
		Panel (B)	: Price Inc	reasing S	Sample			
	N	Mean	St. Dev.	Min	Pctl(25)	Median	Pctl(75)	Max
All Stocks	4,995,011	6.348	22.795	0.000	0.740	2.975	6.125	3,600.000
Between £0.11 to £1.01	1,245,620	0.602	0.256	0.110	0.385	0.631	0.814	1.010
Between £1.1 to £10.1	2,734,008	4.869	2.307	1.100	2.947	4.526	6.565	10.100
Between £11 to £101	378,789	35.412	22.351	11.000	19.700	29.625	47.000	100.997
	I	Panel (C)	Price Dec	creasing	Sample			
	N	Mean	St. Dev.	Min	Pctl(25)	Median	Pctl(75)	Max
All Stocks	5,020,091	4.311	22.496	0.000	0.180	1.039	4.515	3,284.000
Between £0.10 to £1.0	1,372,819	0.514	0.270	0.100	0.277	0.488	0.755	1.000
Between £1 to £10	2,195,987	4.508	2.512	1.000	2.350	4.115	6.231	10.000
Between £10 to £100	354,766	25.596	18.917	10.000	10.890	20.660	30.235	99.990

Table 4: 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)	0.0043*** (0.0001)	0.0054*** (0.0002)	0.0050*** (0.0002)	0.0054*** (0.0002)	0.0060*** (0.0002)	
Stock Digits Y0 to Y5	(*******)	-0.0003*** (0.0000)	-0.0004*** (0.0000)	-0.0005*** (0.0000)	-0.0007*** (0.0000)	
Stock Digits X6 to X9		-0.0005*** (0.0001)	-0.0003*** (0.0001)	-0.0003*** (0.0001)	-0.0002*** (0.0001)	
Constant	0.0086***	0.0080*** (0.0001)	0.0067***	(0.0001)	(0.0001)	
Day FE	(0.0001) NO	(0.0001) 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	4,995,011	4,995,011	4,995,011	4,995,011	4,995,011	
\mathbb{R}^2	0.0004	0.0004	0.0017	0.0674	0.0723	

Table 5: 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)	-0.0024***	-0.0038***	-0.0042***	-0.0039***	-0.0039***	
	(0.0001)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	
Stock Digits Y0 to Y5		0.0002***	0.0002***	0.0004***	0.0004***	
		(0.0000)	(0.0000)	(0.0000)	(0.0000)	
Stock Digits X6 to X9		0.0007***	0.0008***	0.0006***	0.0005***	
		(0.0001)	(0.0001)	(0.0001)	(0.0001)	
Constant	0.0102***	0.0112***	0.0147***			
	(0.0002)	(0.0002)	(0.0011)			
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	5,020,091	5,020,091	5,020,091	5,020,091	5,020,091	
\mathbb{R}^2	0.0002	0.0002	0.0005	0.0669	0.0710	

Table 6: Probability of Sale and Left Digit, Splitting by Median Age

	Prices Increa	asing Sample	Prices Decre	asing Sample
	Below Median	Above Median	Below Median	Above Median
Above $Y0 = 1$ (in Range $Y0$ to $Y5$)	0.0074***	0.0046***	-0.0040***	-0.0039***
,	(0.0003)	(0.0002)	(0.0002)	(0.0003)
Stock Digits Y0 to Y5	-0.0009***	-0.0006***	0.0004***	0.0004***
	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Stock Digits X6 to X9	-0.0003***	-0.0001	0.0007***	0.0004***
	(0.0001)	(0.0001)	(0.0001)	(0.0001)
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	2,644,647	2,350,364	2,717,999	2,302,092
\mathbb{R}^2	0.0861	0.0503	0.0861	0.0487

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

	Prices Incre	asing Sample	Prices Decreasing Sample		
	Female	Male	Female	Male	
Above $Y0 = 1$ (in Range $Y0$ to $Y5$)	0.0064***	0.0060***	-0.0037***	-0.0040***	
	(0.0004)	(0.0002)	(0.0004)	(0.0002)	
Stock Digits Y0 to Y5	-0.0007***	-0.0008***	0.0004***	0.0004***	
	(0.0001)	(0.0000)	(0.0001)	(0.0000)	
Stock Digits X6 to X9	-0.0004***	-0.0001*	0.0005***	0.0006***	
	(0.0002)	(0.0001)	(0.0002)	(0.0001)	
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	852,203	4,142,808	801,938	4,218,153	
R^2	0.0697	0.0740	0.0699	0.0724	

Table 8: Probability of Sale and Left Digit, Splitting by Portfolio Value

	Prices Increa	asing Sample	Prices Decreasing Sample	
	Below Median	Above Median	Below Median	Above Median
Above Y0 = 1 (in Range Y0 to Y5)	0.0088***	0.0035***	-0.0049***	-0.0029***
	(0.0003)	(0.0002)	(0.0003)	(0.0002)
Stock Digits Y0 to Y5	-0.0011***	-0.0004***	0.0005***	0.0003***
	(0.0001)	(0.0001)	(0.0001)	(0.0000)
Stock Digits X6 to X9	-0.0003***	-0.0001	0.0008***	0.0002**
	(0.0001)	(0.0001)	(0.0001)	(0.0001)
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	2,452,052	2,542,959	2,555,500	2,464,591
\mathbb{R}^2	0.1021	0.0499	0.1055	0.0436

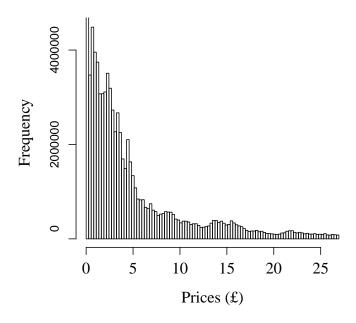
Table 9: Probability of Sale and Left Digit, Splitting by Account Tenure

	Prices Increa	asing Sample	Prices Decreasing Sample		
	Below Median	Above Median	Below Median	Above Median	
Above Y0 = 1 (in Range Y0 to Y5)	0.0070***	0.0051***	-0.0045***	-0.0034***	
	(0.0003)	(0.0002)	(0.0003)	(0.0003)	
Stock Digits Y0 to Y5	-0.0009***	-0.0006***	0.0005***	0.0003***	
	(0.0001)	(0.0001)	(0.0001)	(0.0000)	
Stock Digits X6 to X9	-0.0002	-0.0002**	0.0006***	0.0005***	
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	
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	2,458,942	2,536,069	2,553,042	2,467,049	
R^2	0.0825	0.0604	0.0784	0.0640	

Table 10: Probability of Sale and Left Digit, Splitting by Number of Stocks

	Prices Increa	asing Sample	Prices Decreasing Sample		
	Below Median	Above Median	Below Median	Above Median	
Above Y0 = 1 (in Range Y0 to Y5)	0.0088***	0.0031***	-0.0049***	-0.0029***	
,	(0.0003)	(0.0002)	(0.0003)	(0.0002)	
Stock Digits Y0 to Y5	-0.0011***	-0.0004***	0.0005***	0.0004***	
_	(0.0001)	(0.0001)	(0.0001)	(0.0000)	
Stock Digits X6 to X9	-0.0003***	-0.0000	0.0009***	0.0002**	
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	
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	2,688,343	2,306,668	2,523,918	2,496,173	
R^2	0.0906	0.0377	0.0930	0.0330	

Figure A1: Histogram of Stock Prices



Note: Figure shows the histogram of prices on login days. Outliers above the 95 percentile are excluded.

Figure A2: Sample Selection and Simulation Exercise

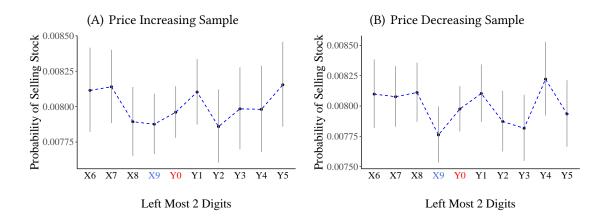


Figure A3: Leftmost Stock Price Digit and Probability of Sale, Monthly Sample

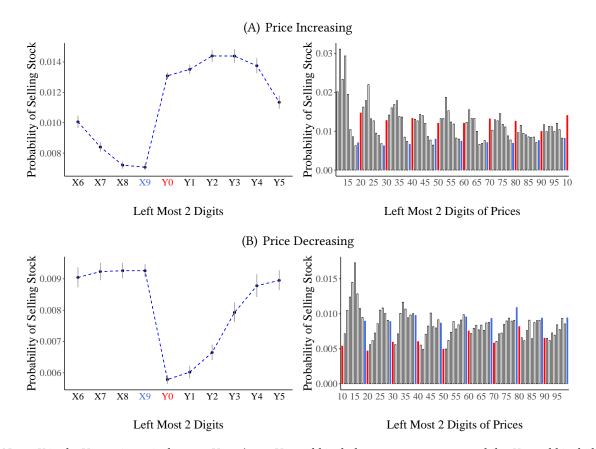


Figure A4: Leftmost Stock Price Digit and Probability of Sale, Annual Sample

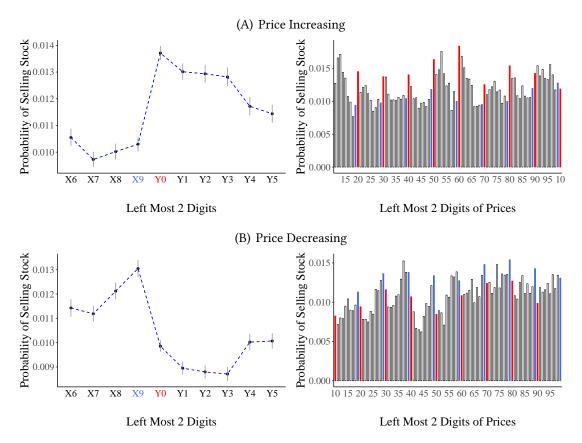


Figure A5: Leftmost Stock Price Digit and Probability of Sale, Sell Days

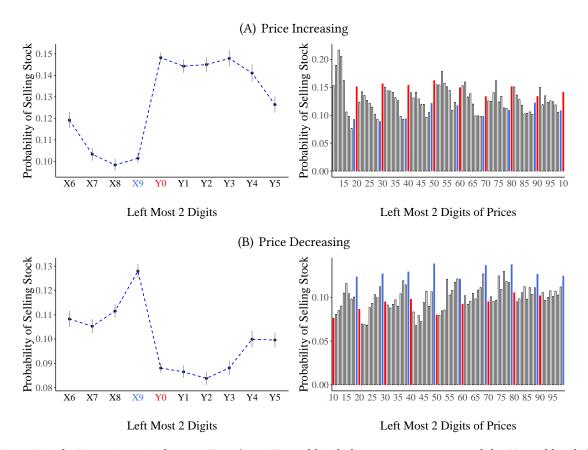
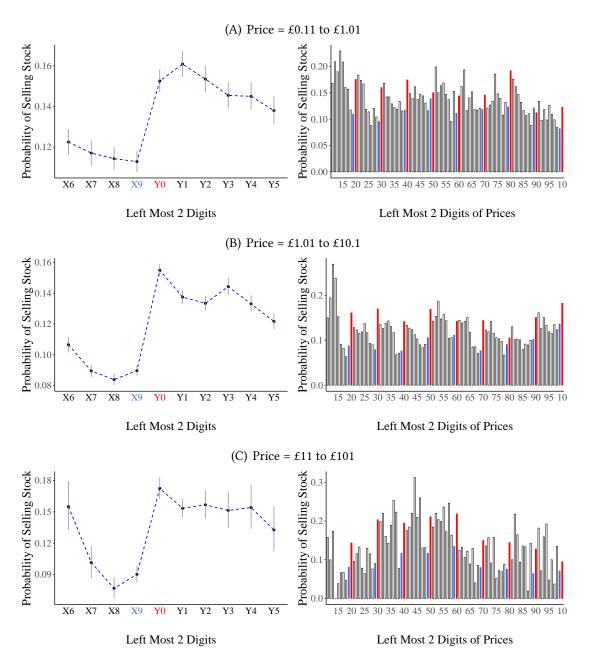
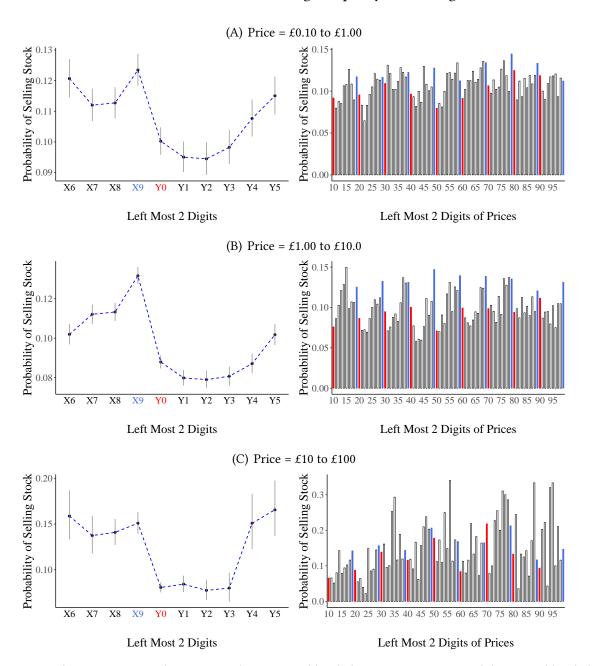


Figure A6: Leftmost Stock Price Digit and Probability of Sale, Sell Days Prices Increasing Sample by Price Range



Note: £*Y* in the X-axes is equivalent to £*X* + 1 (e.g., £*X*9 could include £0.19, £1.9, £19, etc., while £*Y*0 could include £0.20, £2.0, £20, etc.). Panels A, B and C show equal size bins of 1p, 10p and £1, respectively.

Figure A7: Leftmost Stock Price Digit and Probability of Sale, Sell Days Prices Decreasing Sample by Price Range



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.

Table A1: 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)			
0.0037***	0.0048***	0.0045***	0.0047***	0.0047***			
(0.0002)	(0.0003)	(0.0003)	(0.0003)	(0.0004)			
	-0.0003***	-0.0003***	-0.0004***	-0.0006***			
	(0.0001)	(0.0001)	(0.0001)	(0.0001)			
	-0.0003**	-0.0001	-0.0002*	-0.0002*			
	(0.0001)	(0.0001)	(0.0001)	(0.0001)			
0.0111***	0.0106***	0.0220***					
(0.0002)	(0.0003)	(0.0030)					
NO	NO	YES	YES	YES			
NO	NO	YES	YES	YES			
NO	NO	NO	YES	YES			
NO	NO	NO	NO	YES			
1,245,620	1,245,620	1,245,620	1,245,620	1,245,620			
0.0003	0.0003	0.0013	0.1012	0.1080			
	0.0037*** (0.0002) 0.0111*** (0.0002) NO NO NO NO 1,245,620	(1) (2) 0.0037*** 0.0048*** (0.0002) (0.0003) -0.0003*** (0.0001) -0.0003** (0.0001) 0.0111*** 0.0106*** (0.0002) (0.0003) NO 1,245,620 1,245,620	(1) (2) (3) 0.0037*** 0.0048*** 0.0045*** (0.0002) (0.0003) (0.0003) -0.0003*** -0.0003*** (0.0001) (0.0001) -0.0003** -0.0001 (0.0001) (0.0001) 0.0111*** 0.0106*** 0.0220*** (0.0002) (0.0003) (0.0030) NO NO YES NO NO YES NO NO YES NO NO YES NO N	(1) (2) (3) (4) 0.0037*** 0.0048*** 0.0045*** 0.0047*** (0.0002) (0.0003) (0.0003) (0.0003) -0.0003*** -0.0003*** -0.0004*** (0.0001) (0.0001) (0.0001) -0.0003** -0.0001 -0.0002* (0.0001) (0.0001) (0.0001) 0.0111*** 0.0106*** 0.0220*** (0.0002) (0.0003) (0.0030) NO NO YES YES NO NO YES YES NO NO YES YES NO NO NO NO NO NO YES			

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)	0.0050***	0.0064***	0.0062***	0.0063***	0.0067***			
	(0.0001)	(0.0002)	(0.0002)	(0.0002)	(0.0002)			
Stock Digits Y0 to Y5		-0.0006***	-0.0007***	-0.0006***	-0.0007***			
C		(0.0001)	(0.0001)	(0.0001)	(0.0001)			
Stock Digits X6 to X9		-0.0002***	-0.0002**	-0.0003***	-0.0001			
		(0.0001)	(0.0001)	(0.0001)	(0.0001)			
Constant	0.0067***	0.0065***	0.0133***	, ,	, ,			
	(0.0001)	(0.0002)	(0.0026)					
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	2,734,008	2,734,008	2,734,008	2,734,008	2,734,008			
\mathbb{R}^2	0.0006	0.0007	0.0020	0.0732	0.0759			

Panel (C): Price = £11 to £101

	$Probability\ of\ Sale_{ijt}=1$						
	(1)	(2)	(3)	(4)	(5)		
Above Y0 = 1 (in Range Y0 to Y5)	0.0052***	0.0067***	0.0068***	0.0082***	0.0088***		
	(0.0004)	(0.0005)	(0.0005)	(0.0006)	(0.0006)		
Stock Digits Y0 to Y5		-0.0003	-0.0003*	0.0001	-0.0000		
		(0.0002)	(0.0002)	(0.0002)	(0.0002)		
Stock Digits X6 to X9		-0.0014***	-0.0018***	-0.0015***	-0.0014***		
		(0.0003)	(0.0003)	(0.0003)	(0.0003)		
Constant	0.0070***	0.0059***	-0.0024***				
	(0.0003)	(0.0003)	(0.0006)				
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	378,789	28 8,789	378,789	378,789	378,789		
R^2	0.0006	0.0007	0.0031	0.1387	0.1433		

Table A2: 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)	0.0037***	0.0048***	0.0045***	0.0047***	0.0047***			
, ,	(0.0002)	(0.0003)	(0.0003)	(0.0003)	(0.0004)			
Stock Digits Y0 to Y5		-0.0003***	-0.0003***	-0.0004***	-0.0006***			
		(0.0001)	(0.0001)	(0.0001)	(0.0001)			
Stock Digits X6 to X9		-0.0003**	-0.0001	-0.0002*	-0.0002*			
-		(0.0001)	(0.0001)	(0.0001)	(0.0001)			
Constant	0.0111***	0.0106***	0.0220***					
	(0.0002)	(0.0003)	(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	1,245,620	1,245,620	1,245,620	1,245,620	1,245,620			
\mathbb{R}^2	0.0003	0.0003	0.0013	0.1012	0.1080			

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)	-0.0027*** (0.0001)	-0.0042*** (0.0002)	-0.0045*** (0.0002)	-0.0044*** (0.0002)	-0.0042*** (0.0002)		
Stock Digits Y0 to Y5	(0.0001)	0.0002)	0.0001*	0.0002)	0.0002)		
Stock Digits X6 to X9		(0.0000) $0.0010***$	(0.0000) 0.0011***	(0.0001) 0.0006***	(0.0001) 0.0006***		
Stock Digits No to No		(0.0001)	(0.0001)	(0.0001)	(0.0001)		
Constant	0.0093*** (0.0002)	0.0107*** (0.0002)	0.0188*** (0.0067)				
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	2,195,987	2,195,987	2,195,987	2,195,987	2,195,987		
\mathbb{R}^2	0.0002	0.0003	0.0008	0.0791	0.0831		

Panel (C): Price = £10 to £100

	$Probability\ of\ Sale_{ijt}=1$							
	(1)	(2)	(3)	(4)	(5)			
Above Y0 = 1 (in Range Y0 to Y5)	-0.0066***	-0.0074***	-0.0068***	-0.0056***	-0.0045***			
Stock Digits Y0 to Y5	(0.0005)	(0.0006) 0.0005***	(0.0006) 0.0007***	(0.0007) 0.0006***	(0.0008) 0.0003			
Stock Digits X6 to X9		(0.0002) 0.0003	(0.0002) 0.0007*	(0.0002) 0.0000	(0.0002) 0.0003			
	0.0125***	(0.0004)	(0.0004)	(0.0004)	(0.0004)			
Constant	(0.0125)	0.0128*** (0.0006)	0.0064^{***} (0.0011)					
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	354,766	2954,766	354,766	354,766	354,766			
\mathbb{R}^2	0.0011	0.0011	0.0031	0.1489	0.1543			

Table A3: Price Increasing Sample Limit Order Robustness Tests

Panel (A): Excluding Pre-Market and After-Hours Sells (Outside 8am to 4:30pm)

	$Probability\ of\ Sale_{ijt}=1$						
	(1)	(2)	(3)	(4)	(5)		
Above Y0 = 1 (in Range Y0 to Y5)	0.0042***	0.0053***	0.0048***	0.0052***	0.0059***		
	(0.0001)	(0.0002)	(0.0002)	(0.0002)	(0.0002)		
Stock Digits Y0 to Y5		-0.0003***	-0.0004***	-0.0005***	-0.0007***		
		(0.0000)	(0.0000)	(0.0000)	(0.0000)		
Stock Digits X6 to X9		-0.0005***	-0.0003***	-0.0002***	-0.0002***		
		(0.0001)	(0.0001)	(0.0001)	(0.0001)		
Constant	0.0084***	0.0078***	0.0064***	, ,	, ,		
	(0.0001)	(0.0001)	(0.0007)				
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	4,993,803	4,993,803	4,993,803	4,993,803	4,993,803		
\mathbb{R}^2	0.0004	0.0004	0.0018	0.0683	0.0730		

Panel (B): Excluding Sells with Login the Day Before or Weekend Logins for Monday Sells

	$Probability \ of \ Sale_{ijt} = 1$							
	(1)	(2)	(3)	(4)	(5)			
Above Y0 = 1 (in Range Y0 to Y5)	0.0016***	0.0020***	0.0019***	0.0023***	0.0025***			
Stock Digits Y0 to Y5	(0.0001)	(0.0001) -0.0001***	(0.0001) -0.0001***	(0.0001) -0.0002***	(0.0001) -0.0003***			
Stock Digits X6 to X9		(0.0000) -0.0002***	(0.0000) -0.0002***	(0.0000) -0.0002***	(0.0000) -0.0002***			
Stock Digits Ao to A9		(0.0000)	(0.0000)	(0.0002)	(0.0002)			
Constant	0.0030*** (0.0001)	0.0027*** (0.0001)	0.0009*** (0.0003)					
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	4,958,983	4,958,983	4,958,983	4,958,983	4,958,983			
\mathbb{R}^2	0.0002	0.0002	0.0010	0.0612	0.0639			

Note: Panels A, B and C show equal size bins of 1p, 10p and £1, respectively. Panel A drops 0.018% of sells, Panel B drops 61% of sells, Panel C drops 76% of sells, and Panel D drops 11% of sells.

Table A4: Price Increasing Sample Limit Order Robustness Tests

Panel (C): Including Only FTSE100 Stocks

		Proba	bility of Sal	$e_{ijt} = 1$	
	(1)	(2)	(3)	(4)	(5)
Above Y0 = 1 (in Range Y0 to Y5)	0.0069***	0.0089***	0.0086***	0.0095***	0.0097***
,	(0.0002)	(0.0003)	(0.0003)	(0.0004)	(0.0004)
Stock Digits Y0 to Y5	,	-0.0009***	-0.0009***	-0.0008***	-0.0009***
C		(0.0001)	(0.0001)	(0.0001)	(0.0001)
Stock Digits X6 to X9		-0.0002	-0.0001	-0.0006***	-0.0005***
C		(0.0001)	(0.0001)	(0.0001)	(0.0001)
Constant	0.0079***	0.0077***	0.0261***		
	(0.0002)	(0.0002)	(0.0013)		
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	1,146,626	1,146,626	1,146,626	1,146,626	1,146,626
\mathbb{R}^2	0.0010	0.0011	0.0025	0.1019	0.1026
Panel (D): Excluding Acco	ounts with P	otential Limi	t Orders (Lin	nainmaa, 201	10)
Panel (D): Excluding Acco	ounts with P				10)
Panel (D): Excluding Acco	ounts with P		t Orders (Lin bility of Sale (3)		(5)
Panel (D): Excluding Accordance Above Y0 = 1 (in Range Y0 to Y5)		Proba	bility of Sal	$e_{ijt} = 1$	
	(1)	Proba (2)	bility of Sale (3)	$e_{ijt} = 1 \tag{4}$	(5)
	(1) 0.0041***	Proba (2) 0.0052***	(3) 0.0048***	$e_{ijt} = 1$ (4) 0.0052^{***}	(5) 0.0058***
Above Y0 = 1 (in Range Y0 to Y5)	(1) 0.0041***	Proba (2) 0.0052*** (0.0002)	(3) 0.0048*** (0.0002)	$e_{ijt} = 1 $ (4) 0.0052^{***} (0.0002)	(5) 0.0058*** (0.0002)
Above Y0 = 1 (in Range Y0 to Y5)	(1) 0.0041***	Proba (2) 0.0052*** (0.0002) -0.0003***	(3) 0.0048*** (0.0002) -0.0004***	$e_{ijt} = 1 $ (4) 0.0052^{***} (0.0002) -0.0005^{***}	(5) 0.0058*** (0.0002) -0.0007***
Above Y0 = 1 (in Range Y0 to Y5) Stock Digits Y0 to Y5	(1) 0.0041***	Proba (2) 0.0052*** (0.0002) -0.0003*** (0.0000)	0.0048*** (0.0002) -0.0004*** (0.0000)	$ \begin{aligned} \varepsilon_{ijt} &= 1 \\ (4) \\ 0.0052^{***} \\ (0.0002) \\ -0.0005^{***} \\ (0.0000) \end{aligned} $	(5) 0.0058*** (0.0002) -0.0007*** (0.0000)
Above Y0 = 1 (in Range Y0 to Y5) Stock Digits Y0 to Y5	(1) 0.0041***	Proba (2) 0.0052*** (0.0002) -0.0003*** (0.0000) -0.0004***	0.0048*** (0.0002) -0.0004*** (0.0000) -0.0003***	$e_{ijt} = 1$ (4) 0.0052^{***} (0.0002) -0.0005^{***} (0.0000) -0.0003^{***}	(5) 0.0058*** (0.0002) -0.0007*** (0.0000) -0.0002***
Above Y0 = 1 (in Range Y0 to Y5) Stock Digits Y0 to Y5 Stock Digits X6 to X9	(1) 0.0041*** (0.0001)	Proba (2) 0.0052*** (0.0002) -0.0003*** (0.0000) -0.0004*** (0.0001)	0.0048*** (0.0002) -0.0004*** (0.0000) -0.0003*** (0.0001)	$e_{ijt} = 1$ (4) 0.0052^{***} (0.0002) -0.0005^{***} (0.0000) -0.0003^{***}	(5) 0.0058*** (0.0002) -0.0007*** (0.0000) -0.0002***
Above Y0 = 1 (in Range Y0 to Y5) Stock Digits Y0 to Y5 Stock Digits X6 to X9	(1) 0.0041*** (0.0001) 0.0081***	Proba (2) 0.0052*** (0.0002) -0.0003*** (0.0000) -0.0004*** (0.0001) 0.0075***	0.0048*** (0.0002) -0.0004*** (0.0000) -0.0003*** (0.0001) 0.0060***	$e_{ijt} = 1$ (4) 0.0052^{***} (0.0002) -0.0005^{***} (0.0000) -0.0003^{***}	(5) 0.0058*** (0.0002) -0.0007*** (0.0000) -0.0002***
Above Y0 = 1 (in Range Y0 to Y5) Stock Digits Y0 to Y5 Stock Digits X6 to X9 Constant	(1) 0.0041*** (0.0001) 0.0081*** (0.0001)	Proba (2) 0.0052*** (0.0002) -0.0003*** (0.0000) -0.0004*** (0.0001) 0.0075*** (0.0001)	0.0048*** (0.0002) -0.0004*** (0.0000) -0.0003*** (0.0001) 0.0060*** (0.0007)	$e_{ijt} = 1 $ (4) 0.0052^{***} (0.0002) -0.0005^{***} (0.0000) -0.0003^{***} (0.0001)	(5) 0.0058*** (0.0002) -0.0007*** (0.0000) -0.0002*** (0.0001)
Above Y0 = 1 (in Range Y0 to Y5) Stock Digits Y0 to Y5 Stock Digits X6 to X9 Constant Day FE	(1) 0.0041*** (0.0001) 0.0081*** (0.0001) NO	Proba (2) 0.0052*** (0.0002) -0.0003*** (0.0000) -0.0004*** (0.0001) 0.0075*** (0.0001) NO	0.0048*** (0.0002) -0.0004*** (0.0000) -0.0003*** (0.0001) 0.0060*** (0.0007) YES	$e_{ijt} = 1 \\ (4)$ $0.0052^{***} \\ (0.0002) \\ -0.0005^{***} \\ (0.0000) \\ -0.0003^{***} \\ (0.0001)$ YES	(5) 0.0058*** (0.0002) -0.0007*** (0.0000) -0.0002*** (0.0001)
Above Y0 = 1 (in Range Y0 to Y5) Stock Digits Y0 to Y5 Stock Digits X6 to X9 Constant Day FE Industry FE	(1) 0.0041*** (0.0001) 0.0081*** (0.0001) NO NO	Proba (2) 0.0052*** (0.0002) -0.0003*** (0.0000) -0.0004*** (0.0001) 0.0075*** (0.0001) NO	0.0048*** (0.0002) -0.0004*** (0.0000) -0.0003*** (0.0001) 0.0060*** (0.0007) YES YES	$e_{ijt} = 1 $ (4) 0.0052^{***} (0.0002) -0.0005^{***} (0.0000) -0.0003^{***} (0.0001) YES YES	(5) 0.0058*** (0.0002) -0.0007*** (0.0000) -0.0002*** (0.0001) YES YES
Above Y0 = 1 (in Range Y0 to Y5) Stock Digits Y0 to Y5 Stock Digits X6 to X9 Constant Day FE Industry FE Account FE	(1) 0.0041*** (0.0001) 0.0081*** (0.0001) NO NO NO	Proba (2) 0.0052*** (0.0002) -0.0003*** (0.0000) -0.0004*** (0.0001) 0.0075*** (0.0001) NO NO	0.0048*** (0.0002) -0.0004*** (0.0000) -0.0003*** (0.0001) 0.0060*** (0.0007) YES YES NO	$e_{ijt} = 1$ (4) 0.0052^{***} (0.0002) -0.0005^{***} (0.0000) -0.0003^{***} (0.0001) YES YES YES	(5) 0.0058*** (0.0002) -0.0007*** (0.0000) -0.0002*** (0.0001) YES YES YES YES

Note: Panels A, B and C show equal size bins of 1p, 10p and £1, respectively. Panel A drops 0.018% of sells, Panel B drops 61% of sells, Panel C drops 76% of sells, and Panel D drops 11% of sells.

Table A5: Summary Stats for Annual and Monthly Samples

	N	Mean	St. Dev.	Min	Pctl(25)	Median	Pctl(75)	Max
Monthly Increasing Sample	4,426,906	5.640	28.188	0.000	0.572	2.709	6.040	3,600.000
Monthly Decreasing Sample	5,247,869	4.835	27.304	0.000	0.215	1.008	5.065	3,453.000
Annual Increasing Sample	4,697,387	8.276	24.623	0.000	1.080	3.627	7.300	3,600.000
Annual Decreasing Sample	4,287,902	4.158	23.761	0.000	0.162	1.107	4.261	2,062.035

Table A6: Price Increasing Samples, Monthly and Annual Samples

Panel (A): Monthly Sample

	$Probability \ of \ Sale_{ijt} = 1$							
	(1)	(2)	(3)	(4)	(5)			
Above Y0 = 1 (in Range Y0 to Y5)	0.0056***	0.0067***	0.0062***	0.0065***	0.0069***			
	(0.0001)	(0.0002)	(0.0002)	(0.0002)	(0.0002)			
Stock Digits Y0 to Y5		-0.0001	-0.0002***	-0.0005***	-0.0007***			
-		(0.0000)	(0.0000)	(0.0000)	(0.0000)			
Stock Digits X6 to X9		-0.0009***	-0.0005***	-0.0001*	-0.0001			
C		(0.0001)	(0.0001)	(0.0001)	(0.0001)			
Constant	0.0077***	0.0068***	0.0096***	,	, ,			
	(0.0001)	(0.0001)	(0.0011)					
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	4,426,906	4,426,906	4,426,906	4,426,906	4,426,906			
R^2	0.0007	0.0007	0.0018	0.0628	0.0678			

Danal	(R).	Annual	Sample
ranei	(D):	Annual	Samble

	$Probability\ of\ Sale_{ijt}=1$					
	(1)	(2)	(3)	(4)	(5)	
Above Y0 = 1 (in Range Y0 to Y5)	0.0026***	0.0036***	0.0034***	0.0041***	0.0047***	
Stock Digits Y0 to Y5	(0.0001)	(0.0002) -0.0004***	(0.0002) -0.0005***	(0.0002) -0.0005***	(0.0002) -0.0007***	
		(0.0000)	(0.0000)	(0.0000)	(0.0000)	
Stock Digits X6 to X9		-0.0000	0.0001	-0.0002**	-0.0001	
Constant	0.0101***	(0.0001) 0.0101***	(0.0001) 0.0070***	(0.0001)	(0.0001)	
	(0.0002)	(0.0002)	(0.0007)			
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	4,697,387	4,697,387	4,697,387	4,697,387	4,697,387	
\mathbb{R}^2	0.0001	0.0002	0.0025	0.0756	0.0805	

Table A7: Price Decreasing Samples, Monthly and Annual Samples

Panel (A): Monthly Sample

	$Probability\ of\ Sale_{ijt}=1$					
	(1)	(2)	(3)	(4)	(5)	
Above Y0 = 1 (in Range Y0 to Y5)	-0.0024***	-0.0036***	-0.0039***	-0.0040***	-0.0042***	
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0002)	
Stock Digits Y0 to Y5		0.0007***	0.0007***	0.0006***	0.0006***	
C		(0.0000)	(0.0000)	(0.0000)	(0.0000)	
Stock Digits X6 to X9		0.0001	0.0002***	0.0002***	0.0003***	
C		(0.0001)	(0.0001)	(0.0001)	(0.0001)	
Constant	0.0092***	0.0093***	0.0140***			
	(0.0002)	(0.0002)	(0.0009)			
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	5,247,869	5,247,869	5,247,869	5,247,869	5,247,869	
R^2	0.0002	0.0003	0.0006	0.0586	0.0619	

	$Probability\ of\ Sale_{ijt} = 1$					
	(1)	(2)	(3)	(4)	(5)	
Above Y0 = 1 (in Range Y0 to Y5)	-0.0026***	-0.0036***	-0.0039***	-0.0032***	-0.0030***	
	(0.0001)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	
Stock Digits Y0 to Y5		0.0001	0.0000	0.0003***	0.0003***	
-		(0.0000)	(0.0000)	(0.0000)	(0.0000)	
Stock Digits X6 to X9		0.0006***	0.0007***	0.0004***	0.0004***	
		(0.0001)	(0.0001)	(0.0001)	(0.0001)	
Constant	0.0120***	0.0128***	0.0158***			
	(0.0002)	(0.0003)	(0.0011)			
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	4,287,902	4,287,902	4,287,902	4,287,902	4,287,902	
\mathbb{R}^2	0.0001	0.0002	0.0006	0.0788	0.0836	

Table A8: 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)	0.0394*** (0.0019)	0.0513*** (0.0024)	0.0487*** (0.0024)	0.0417*** (0.0023)	0.0454*** (0.0024)	
Stock Digits Y0 to Y5	(0.001))	-0.0030***	-0.0037***	-0.0036***	-0.0056***	
Staals Digita V6 to V0		(0.0005) -0.0050***	(0.0005) -0.0036***	(0.0004) -0.0022***	(0.0005) -0.0014*	
Stock Digits X6 to X9		(0.0030	(0.0036	(0.0022)	(0.0014)	
Constant	0.1043***	0.0980***	0.0893***			
	(0.0031)	(0.0031)	(0.0084)			
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	432,435	432,435	432,435	432,435	432,435	
R ²	0.0032	0.0035	0.0111	0.2452	0.2703	

Table A9: 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)	-0.0240*** (0.0012)	-0.0385*** (0.0020)	-0.0408*** (0.0020)	-0.0311*** (0.0018)	-0.0309*** (0.0019)	
Stock Digits Y0 to Y5	(0.0012)	0.0024***	0.0025***	0.0031***	0.0037***	
Stock Digits X6 to X9		(0.0004) $0.0071***$	(0.0004) 0.0076***	(0.0004) $0.0041***$	(0.0004) 0.0033***	
Constant	0.1140***	(0.0009) 0.1236***	(0.0008) 0.1479***	(0.0007)	(0.0008)	
	(0.0025)	(0.0030)	(0.0084)			
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	441,090	441,090	441,090	441,090	441,090	
\mathbb{R}^2	0.0015	0.0019	0.0035	0.2201	0.2421	

Table A10: Price Increasing Subsamples with Equal Prices Bins, Sell Days

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)	0.0337***	0.0458***	0.0426***	0.0294***	0.0270***	
	(0.0026)	(0.0037)	(0.0037)	(0.0037)	(0.0036)	
Stock Digits Y0 to Y5		-0.0035***	-0.0033***	-0.0029***	-0.0033***	
-		(0.0009)	(0.0009)	(0.0008)	(0.0009)	
Stock Digits X6 to X9		-0.0031**	-0.0018	-0.0014	-0.0011	
		(0.0014)	(0.0014)	(0.0014)	(0.0014)	
Constant	0.1162***	0.1120***	0.2184***			
	(0.0044)	(0.0047)	(0.0233)			
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	120,910	120,910	120,910	120,910	120,910	
\mathbb{R}^2	0.0023	0.0025	0.0146	0.3483	0.3732	

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)	0.0490***	0.0643***	0.0626***	0.0494***	0.0512***	
	(0.0025)	(0.0034)	(0.0034)	(0.0032)	(0.0032)	
Stock Digits Y0 to Y5		-0.0051***	-0.0058***	-0.0042***	-0.0060***	
-		(0.0006)	(0.0007)	(0.0006)	(0.0007)	
Stock Digits X6 to X9		-0.0044***	-0.0037***	-0.0025***	-0.0009	
C		(0.0010)	(0.0010)	(0.0010)	(0.0010)	
Constant	0.0909***	0.0857***	0.1156***	, ,	,	
	(0.0031)	(0.0030)	(0.0206)			
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	216,205	216,205	216,205	216,205	216,205	
\mathbb{R}^2	0.0055	0.0060	0.0139	0.3004	0.3154	

Panel (C): Price = £11 to £101

	$Probability\ of\ Sale_{ijt} = 1$					
	(1)	(2)	(3)	(4)	(5)	
Above $Y0 = 1$ (in Range $Y0$ to $Y5$)	0.0638***	0.0845***	0.0801***	0.0561***	0.0605***	
	(0.0051)	(0.0065)	(0.0063)	(0.0073)	(0.0076)	
Stock Digits Y0 to Y5		-0.0058***	-0.0055**	0.0023	0.0012	
		(0.0022)	(0.0022)	(0.0023)	(0.0025)	
Stock Digits X6 to X9		-0.0146***	-0.0163***	-0.0131***	-0.0109***	
		(0.0034)	(0.0033)	(0.0037)	(0.0038)	
Constant	0.0944***	0.0821***	-0.0084			
	(0.0039)	(0.0042)	(0.0102)			
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	28,842	$37_{8,842}$	28,842	28,842	28,842	
\mathbb{R}^2	0.0080	0.0090	0.0295	0.4639	0.4808	

Table A11: Price Decreasing Subsamples with Equal Prices Bins, Sell Days

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)	0.0337***	0.0458***	0.0426***	0.0294***	0.0270***	
,	(0.0026)	(0.0037)	(0.0037)	(0.0037)	(0.0036)	
Stock Digits Y0 to Y5		-0.0035***	-0.0033***	-0.0029***	-0.0033***	
_		(0.0009)	(0.0009)	(0.0008)	(0.0009)	
Stock Digits X6 to X9		-0.0031**	-0.0018	-0.0014	-0.0011	
		(0.0014)	(0.0014)	(0.0014)	(0.0014)	
Constant	0.1162***	0.1120***	0.2184***			
	(0.0044)	(0.0047)	(0.0233)			
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	120,910	120,910	120,910	120,910	120,910	
\mathbb{R}^2	0.0023	0.0025	0.0146	0.3483	0.3732	

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)	-0.0312***	-0.0467***	-0.0496***	-0.0380***	-0.0348***	
	(0.0019)	(0.0029)	(0.0028)	(0.0029)	(0.0030)	
Stock Digits Y0 to Y5		0.0018***	0.0020***	0.0036***	0.0030***	
		(0.0006)	(0.0006)	(0.0006)	(0.0007)	
Stock Digits X6 to X9		0.0094***	0.0096***	0.0041***	0.0043***	
C		(0.0012)	(0.0012)	(0.0012)	(0.0012)	
Constant	0.1171***	0.1289***	0.2362***	, ,	, ,	
	(0.0029)	(0.0037)	(0.0742)			
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	171,437	171,437	171,437	171,437	171,437	
\mathbb{R}^2	0.0027	0.0032	0.0059	0.2847	0.3023	

Panel (C): Price = £10 to £100

	$Probability\ of\ Sale_{ijt}=1$						
	(1)	(2)	(3)	(4)	(5)		
Above $Y0 = 1$ (in Range $Y0$ to $Y5$)	-0.0607***	-0.0712***	-0.0642***	-0.0420***	-0.0292***		
,	(0.0057)	(0.0068)	(0.0068)	(0.0080)	(0.0096)		
Stock Digits Y0 to Y5		0.0101***	0.0097***	0.0055**	0.0012		
C		(0.0024)	(0.0024)	(0.0026)	(0.0029)		
Stock Digits X6 to X9		0.0009	0.0034	-0.0045	-0.0022		
		(0.0046)	(0.0047)	(0.0049)	(0.0050)		
Constant	0.1467***	0.1475***	0.0794***				
	(0.0063)	(0.0066)	(0.0161)				
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	25,982	$3_{25,982}$	25,982	25,982	25,982		
\mathbb{R}^2	0.0083	0.0096	0.0237	0.4388	0.4607		

References

- Akepanidtaworn, K., R. Di Mascio, A. Imas, and L. Schmidt (2019). Selling fast and buying slow: Heuristics and trading performance of institutional investors. *Available at SSRN 3301277*.
- Hartzmark, S. M. (2015). The Worst, the Best, Ignoring All the Rest: The Rank Effect and Trading Behavior. *Review of Financial Studies 28*, 1024–1059.
- Poltrock, S. E. and D. R. Schwartz (1984). Comparative judgments of multidigit numbers. *Journal of Experimental Psychology: Learning, Memory, and Cognition 10*(1), 32.
- Shlain, A. S. (2018). More than a penny's worth: Left-digit bias and firm pricing. *manuscript, University of California, Berkeley*.