Internet Appendix: Are Monthly Market Returns Predictable?

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In this appendix, we present additional results not tabulated in the paper. Some results from the paper are also presented here to allow for easy comparison across timing measures.

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1 Timing Measures

In the paper, we focus on an investor's ability to time the market at the monthly frequency. The monthly timing measure is calculated:

$$MarketTiming_i = Correlation(Flow_{it}, MonthReturn_{t+1}), \tag{1}$$

where $Flow_{it}$ is the monthly flow for investor i in month t and $MonthReturn_{t+1}$ is the cash return on the HEX 25 in month t+1. We use cash returns so that both the flows and returns are in euros. We compare investors$'$ timing measures in two equal length sub-periods: January 1995 to March 2002 and April 2002 to June 2009. There are 87 months in each sub-period.

In this appendix, we will present results for a quarterly timing measure. This measure is calculated:

$$QuarterlyTiming_i = Correlation(Flow_{it}, QuarterlyReturn_{t+1}), \tag{2}$$

where $Flow_{it}$ is the monthly flow for investor i in month t and $QuarterlyReturn_{t+1}$ is the cash return on the HEX 25 from the beginning of month t+1 to the end of month t+3.

We focus on timing during the entire period in the paper. In the appendix, we also tabulate results for timing during bubble periods and normal times separately. Bubble periods are defined around the two market peaks. The peak months on the HEX 25 were March 2000 and July 2007. We treat these two months as the beginning of a market crash and calculate whether an investor performed well in the 12 months before and 12 months after the market peak. Therefore, we have 25 months of data for each bubble period. Normal times are defined as the months outside of the bubble periods.

2 Discussion of results

Tables 1, 2, 3, and 4 : These tables examine the persistence in investor market timing ability across the first and second halves of our sample. The point estimates are identical to Table 3 in the main text. The method for calculating the levels of statistical significance differ across the four tables. In Table 1, p-values are calculated by comparing the point estimate in each cell to the distribution of values from 1,000 simulations. We simulate market return time-series drawn from an iid normal distribution with the same mean and variance of returns as the original data. For each simulation, we correlate investor flows with the simulated returns and calculate the percentage of investors in each cell. In Table 2, we repeat the simulation procedure assuming market returns follow an AR(1) process. In Table 3, we use a bootstrap procedure conducted as follows: each first period investor is matched with a second period investor based on their geographic region (9 regions in Finland) and their within-region tercile ranking of the number of trades. We match first and second period investors 1,000 times. In Table 4, basic OLS standard errors are used to calculate significance.

Table 5: We examine whether our choice of the market index affects our results. We re-run our analysis using the general market index for the Finnish stock exchange (HEX). The results in Table 5 are very similar to the main result of the paper, so we conclude that the choice of index does not materially affect our results.

Table 6: Another concern may be the observed autocorrelation in our index over time. Trading on this autocorrelation could still be considered market timing, but it is less interesting if investors are following a simple strategy based solely on this apparent predictability in returns. We address the concern that auto-correlation in the market return is driving our results in two ways. First, in the paper, we present return predictability results using investor flows and show that controlling for past market return does not affect the relationship between flows and future market returns. Additionally, we create a market timing measure that controls for auto-correlation in returns. To adjust for autocorrelation, we forecast returns based on five year rolling regressions of the form: $return_{t+1} = \beta * return_t + \epsilon_{t+1}$. For each month, we run this regression on the 60 months prior to the month of interest. We then multiply the estimated β by the $month_t$ return to get the forecasted return. Next we regress individuals flows on the forecasted returns and use the residuals to calculate our monthly timing measure. This orthogonalized flow should be independent of the simple autocorrelation strategy. In Table 6, we present our monthly timing results. We continue to see very significant persistence in timing ability with a near monotonic relationship between first and second half performance and a rank correlation of 0.056.

Table 7: We examine the ability of investor flows to predict bear markets. We find the difference between good and bad timers flows is a good predictor of future bear markets (market return less than 0.5 of a standard deviation below the mean.

Table 8: We examine the relationship between stock picking ability and market timing ability. There does not appear to be a strong relationship between stock picking ability and market timing ability.

Table 9: We examine the characteristics of market timers. Discussion is provided in the main text.

Table 10: We present summary statistics for the monthly and quarterly timing measures calculated in the 3 market periods of interest (entire, bubble and normal times) for each half of the sample. For all measures, the average timing measure is close to zero. In normal times, investors' average timing measure is 0.01 in both periods. The quarterly timing measure displays a similar pattern as the monthly timing measure. Investors are not great timers on average. The average quarterly timing measure for the entire period is 0.02 in the first half and 0.01 in the second half. Investors were better at quarterly timing during the 2000 bubble than during the 2007 bubble. Investors were worse at quarterly timing in normal times in the first half of the sample than in the second half.

Table 11: In Table 11, we present correlations between the timing measures calculated during different market conditions. In Panel A, we provide the correlations between the first period measures. We find that investors that are better timers in the bubble period are also better timers during normal times. The correlation between monthly measures is 0.0255 and the correlation between quarterly measures is 0.0332. Both are highly statistically significant. In Panel B, we provide the correlations for the second half measures. Once again, we see a positive and significant correlation of 0.0542 between the monthly bubble and normal times timing measures. There is a significant positive relationship of 0.0353 between the quarterly bubble and normal times measures. Overall, it appears that investors that time well in bubbles are also better timers in normal times.

Table 12: We present the cross-tabulations for the monthly timing measure calculated during the bubble periods. We find persistence in timing around bubbles although the results are economically and statistically less significant than the main monthly timing results. Investors that were in the top performing quintile in period 1 are much more likely to be in the top performing quintile in period 2. Similarly for the bottom performing quintile. The spearman rank correlation is 0.0212 and significant at the 5% level.

Table 13: We present the cross-tabulations examining persistence in flows right before market peaks. We detail the flow measure calculation in the caption. We find some persistence in timing market peaks although the results are economically and statistically less significant than the main monthly timing results and the monthly flow based results in Table 12. We find a spearman rank correlation of 0.0150 and significant at the 0.01% level.

Table 14: We present the cross-tabulations for the monthly timing measure with beta-adjusted flows. We multiply the euro value of each flow by the beta of the transacted security. This measure will capture within portfolio variation in market exposure as well as flows into and out of the market. We find the results are very similar to the results using the main timing measure.

Tables 15 & 16: We present the cross-tabulations for the quarterly timing measure calculated over the entire period in Table 15. Results are similar to the monthly timing results presented in the paper. Investors that were in the top performing quintile in period 1 are much more likely

to be in the top performing quintile in period 2. Similarly for the bottom performing quintile. The spearman rank correlation is 0.0745 and highly significant. The bubble period results are presented in Table 16. The results do not display quite as clean a pattern as the entire period measure, but there is still significant persistence. The spearman rank correlation is 0.0220 and is significant at the 0.01% level. These results show that the persistence results presented in the paper are robust to the time period in which future returns are calculated.

Tables 17 & 18: We tabulate the persistence in timing during normal times (outside of the bubble periods). Monthly timing results are presented in Table 17 and quarterly results are presented in Table 18. At the monthly frequency, there is some persistence in market timing ability during normal times. The spearman rank correlation is 0.0271. This is much smaller than the entire period measure correlation of 0.0726. It is comparable to the bubble period timing correlation of 0.0212. The quarterly timing measure exhibits much stronger persistence. For the top performing quintile in the first half, the percentages are monotonically decreasing across quintiles in the second half. The percentages are monotonically increasing for the bottom performing quintile. The spearman rank correlation is 0.0648 and is highly significant. This is close to the entire period quarterly timing measure correlation and much larger than the bubble period correlation. There appears to be more persistence in normal times timing when returns are measured over longer periods.

Table 19: We examine the economic significance of the return predictability both for the entire period and the bubble periods. The results for the entire period are the same as Table 6 Panel A in the main text. We find similar economic significance when using the bubble period timing measure.

Table 20: We examine the relationship between first period market timing performance and the likelihood an investor is inactive in the second half of our sample. We find a non-monotonic relationship. Further discussion is provided in the main text.

Table 21: We examine whether our sample selection process affects our inferences by performing the main market timing test with investors that are active (having at least 15 months with nonzero flows) in both sample halves instead of classifying based on just first half activity. The results in Table 21 are very similar to the main result of the paper, so we conclude that our sample selection procedure is reasonable.

Tables 22 & 23: Finland is a relatively unique market in that Nokia makes up approximately 50% of the market capitalization during our sample period. Although the market weight of Nokia in our index is capped (at 20% until August 1, 2001 and 10% thereafter), one possible explanation for our results is that investors$'$ timing movements in Nokia are driving our results. To address this concern we run two tests. First, we test whether investors can persistently time Nokia, by correlating investor monthly flows into and out of the market with Nokia returns over the next month. The results from this test are presented in Table 22 and they are similar to the results using market returns, with a nearly monotonic relationship between first and second period performance. Because Nokia's returns are correlated with market returns, this result may not be surprising and does not necessarily mean Nokia is driving our results. To determine

whether investors are timing the market, not solely Nokia, we run a similar test, but omit flows into and out of Nokia and exclude Nokia's returns from the index. These persistence results are in Table 23. Once again, we see a near monotonic relationship between first and second period performance and very significant departures from the null of no timing, so it is highly unlikely Nokia alone is driving the timing persistence we observe.

Table 24: We examine persistence in the timing ability of institutions. We do not find statistically significant persistence in market timing across institutions. Further discussion is provided in the main text.

3 Results

Table 1: Two Period Cross-Tab of the Entire Period Monthly Timing Measure (iid Simulated Market Returns)

	Second Period					
First Period	**Q1**	**Q2**	**Q3**	**Q4**	**Q5**	**Total**
Q1	24.43%***	20.57%	19.35%*	18.36%***	17.29%**	100%
Q2	20.20%	20.31%	19.93%	20.03%	19.53%	100%
Q3	19.42%	20.31%	20.70%**	19.78%	19.79%	100%
Q4	18.74%**	20.05%	20.25%	20.27%	20.69%	100%
Q5	17.16%***	18.76%**	19.78%	21.58%***	22.71%**	100%
Total	100%	100%	100%	100%	100%	

*** p<0.01, ** p<0.05, * p<0.1. Null: Cell%=20%.

This table provides frequencies of investors sorted and grouped by their monthly timing measure in each of the two sample sub-periods (January 1995 - March 2002 and April 2002 - June 2009). The monthly timing measure is calculated using equation (1). The January 1995 - March 2002 (April 2002 - June 2009) percentile rank is along the vertical (horizontal) axis. The timing measures are grouped into quintiles. **Q1** is the top performance quintile. We present row percentages. If the two periods were independent, we would expect row percentages of 20% in each cell. p-values are calculated by comparing the point estimate in each cell to the distribution of values from 1,000 simulations. We simulate market return time-series drawn from an iid normal distribution with the same mean and variance of returns as the original data. For each simulation, we correlate investor flows with the simulated returns and calculate the percentage of investors in each cell. The pairwise correlation between the first and second period monthly timing measures is 0.0745 and is significant at the 1% level. The spearman rank correlation coefficient is 0.0726 and is significant at the 1% level.

Table 2: Two Period Cross-Tab of the Entire Period Monthly Timing Measure (AR(1) Simulated Market Returns)

	Second Period					
First Period	**Q1**	**Q2**	**Q3**	**Q4**	**Q5**	**Total**
Q1	24.43%***	20.57%	19.35%*	18.36%***	17.29%**	100%
Q2	20.20%	20.31%	19.93%	20.03%	19.53%	100%
Q3	19.42%	20.31%	20.70%**	19.78%	19.79%	100%
Q4	18.74%**	20.05%	20.25%	20.27%	20.69%	100%
Q5	17.16%***	18.76%**	19.78%	21.58%***	22.71%**	100%
Total	100%	100%	100%	100%	100%	

*** p<0.01, ** p<0.05, * p<0.1. Null: Cell%=20%.

This table provides frequencies of investors sorted and grouped by their monthly timing measure in each of the two sample sub-periods (January 1995 - March 2002 and April 2002 - June 2009). The monthly timing measure is calculated using equation (1). The January 1995 - March 2002 (April 2002 - June 2009) percentile rank is along the vertical (horizontal) axis. The timing measures are grouped into quintiles. **Q1** is the top performance quintile. We present row percentages. If the two periods were independent, we would expect row percentages of 20% in each cell. p-values are calculated by comparing the point estimate in each cell to the distribution of values from 1,000 simulations. We simulate market return time-series drawn from an AR(1) distribution with the same distribution of returns as the original data. For each simulation, we correlate investor flows with the simulated returns and calculate the percentage of investors in each cell. The pairwise correlation between the first and second period monthly timing measures is 0.0745 and is significant at the 1% level. The spearman rank correlation coefficient is 0.0726 and is significant at the 1% level.

Table 3: Two Period Cross-Tab of the Entire Period Monthly Timing Measure (Bootstrapped Standard Errors)

	Second Period					
First Period	**Q1**	**Q2**	**Q3**	**Q4**	**Q5**	**Total**
Q1	24.43%***	20.57%*	19.35%**	18.36%***	17.29%***	100%
Q2	20.20%	20.31%	19.93%	20.03%	19.53%*	100%
Q3	19.42%*	20.31%	20.70%**	19.78%	19.79%	100%
Q4	18.74%***	20.05%	20.25%	20.27%	20.69%**	100%
Q5	17.16%***	18.76%***	19.78%	21.58%***	22.71%***	100%
Total	100%	100%	100%	100%	100%	

*** p<0.01, ** p<0.05, * p<0.1. Null: Cell%=20%.

This table provides frequencies of investors sorted and grouped by their monthly timing measure in each of the two sample sub-periods (January 1995 - March 2002 and April 2002 - June 2009). The monthly timing measure is calculated using equation (1). The January 1995 - March 2002 (April 2002 - June 2009) percentile rank is along the vertical (horizontal) axis. The timing measures are grouped into quintiles. **Q1** is the top performance quintile. We present row percentages. If the two periods were independent, we would expect row percentages of 20% in each cell. p-values are calculated using bootstrapping procedures conducted as follows: each first period investor is matched with a second period investor based on their geographic region (9 regions in Finland) and their within-region tercile ranking of the number of trades. We match first and second period investors 1,000 times. Significance levels are based on two-sided tests of significance.

Table 4: Two Period Cross-Tab of the Entire Period Monthly Timing Measure (OLS Standard Errors)

	Second Period					
First Period	**Q1**	**Q2**	**Q3**	**Q4**	**Q5**	**Total**
Q1	24.43%***	20.57%*	19.35%**	18.36%***	17.29%***	100%
Q2	20.20%	20.31%	19.93%	20.03%	19.53%	100%
Q3	19.42%*	20.31%	20.70%**	19.78%	19.79%	100%
Q4	18.74%***	20.05%	20.25%	20.27%	20.69%**	100%
Q5	17.16%***	18.76%***	19.78%	21.58%***	22.71%***	100%
Total	100%	100%	100%	100%	100%	100%

*** p<0.01, ** p<0.05, * p<0.1. Null: Cell%=20%.

This table provides frequencies of investors sorted and grouped by their monthly timing measure in each of the two sample sub-periods (January 1995 - March 2002 and April 2002 - June 2009). The monthly timing measure is calculated using equation (1). The January 1995 - March 2002 (April 2002 - June 2009) percentile rank is along the vertical (horizontal) axis. The timing measures are grouped into quintiles. **Q1** is the top performance quintile. We present row percentages. If the two periods were independent, we would expect row percentages of 20% in each cell. p-values are calculated using basic OLS standard errors. The quintile cut-off values for the first period are: -0.098, -0.019, 0.051 & 0.173. For the second period, the cut-off values are: -0.079, -0.022, 0.028 & 0.088. Avg. Second Period Timing provides the average second half timing measure (April 2002 - June 2009) of investors sorted and grouped by their monthly timing measure in the first half of the sample (January 1995 - March 2002). The sample size is 66,840 investors.

Table 5: Two Period Cross-Tab of the Entire Period Monthly Timing Measure (General Market Index)

	Second Period					
First Period	**Q1**	**Q2**	**Q3**	**Q4**	**Q5**	**Total**
Q1	24.92%***	20.17%	18.29%***	18.50%***	18.12%***	100%
Q2	20.32%	20.11%	19.80%	20.37%	19.40%*	100%
Q3	18.79%***	20.00%	20.94%***	20.41%	19.85%	100%
Q4	18.56%***	20.12%	20.71%**	19.59%	21.01%***	100%
Q5	17.38%***	19.61%	20.19%	21.20%***	21.61%***	100%
Total	20.00%	20.00%	20.00%	20.00%	20.00%	100%

*** p<0.01, ** p<0.05, * p<0.1. Null: Cell%=20%.

This table provides frequencies of investors sorted and grouped by their monthly timing measure in each of the two sample sub-periods (January 1995 - March 2002 and April 2002 - June 2009). The monthly timing measure is calculated using equation (1). The proxy for the return on the market is HEX, the general market index with 130 stocks. HEX does not cap the weight of each stock. The January 1995 - March 2002 (April 2002 - June 2009) percentile rank is along the vertical (horizontal) axis. The timing measures are grouped into quintiles. **Q1** is the top performance quintile. We present row percentages. If the two periods were independent, we would expect row percentages of 20% in each cell. p-values are from OLS regressions. The sample is 66,840 investors.

The pairwise correlation between the first and second period monthly timing measures is 0.0771 and is significant at the 0.01% level. The spearman rank correlation coefficient is 0.0646 and is significant at the 0.01% level.

Table 6: Two Period Cross-Tab of the Monthly Timing Measure - Adjusted for Autocorrelation

	Second Period					
First Period	**Q1**	**Q2**	**Q3**	**Q4**	**Q5**	**Total**
Q1	21.69%***	21.58%***	20.33%	19.12%***	17.28%***	100%
Q2	20.22%	20.11%	20.39%	20.04%	19.24%**	100%
Q3	20.67%**	20.16%	20.04%	19.82%	19.31%**	100%
Q4	19.25%**	19.64%	19.66%	20.58%*	20.87%***	100%
Q5	18.19%***	18.52%***	19.58%	20.44%	23.27%***	100%
Total	20.00%	20.00%	20.00%	20.00%	20.00%	100%

*** p<0.01, ** p<0.05, * p<0.1. Null: Cell%=20%.

This table provides frequencies of investors sorted and grouped by their monthly timing measure (see equation (1)) in each of the two sample sub-periods (January 1995 - March 2002 and April 2002 - June 2009) where the investor flow measure used is the residual from regressing the individuals flows during the period on forecasted returns. The forecasted returns are estimates from an OLS regression, $return_{t+1} = \beta * return_t + \epsilon_{t+1}$, using the 60 months prior to the flow month. The first order auto-correlation during the entire sample is 0.30. The January 1995 - March 2002 (April 2002 - June 2009) percentile rank is along the vertical (horizontal) axis. The timing measures are grouped into quintiles. **Q1** is the top performance quintile. We present row percentages. If the two periods were independent, we would expect row percentages of 20%. The p-values are calculated using OLS regressions. The sample size is 66,840 investors.

The pairwise correlation between the first and second period monthly timing measures is 0.0520 and is significant at the 0.01% level. The spearman rank correlation coefficient is 0.0559 and is significant at the 0.01% level.

Table 7: Predicting Low Market Returns With Difference Between Good and Bad Timers' Flows

Timing Measure	**P(Bear Mkt)**	**P(Low Flow)**	**P(Low Flow |Bear Mkt)**	**P(Bear Mkt |Low Flow)**
Entire Period	25.3%	19.5%	31.8%	**41.2%**
Bubble Period	25.3%	19.5%	36.4%	**47.1%**

This table presents the probability of a "large" negative excess return in month $t+1$ conditional on a large negative difference in flows between the good and bad timers in month t. We examine 2 timing measures: market timing calculated over the entire period (**Entire Period**) and market timing calculated in the Bubble Period (**Bubble-Monthly**). The timing measures are calculated in the relevant months of the first half of our sample (January 1995 - March 2002) whereas all the probabilities are calculated in the second half of our sample (April 2002 - June 2009). There are 87 months in the second half of our sample. In column 1, we provide the unconditional probability of a "bear" market. A "bear" market is defined as a monthly excess return (HEX25 minus 1m-Euribor) that is at least half of one standard deviation below the mean excess return. In column 2, we provide the unconditional probability of a "Low Flow" defined as a difference between the top and bottom timers flows that is at least half of one standard deviation below the average. The difference between the top and bottom group flows is calculated according to equation (3) in the main text. In column 3, we provide the probability of "Low Flow" given the next month is a "bear" market. In column 4, we provide the probability of a "bear" market in month $t+1$ given investors have a significant outflow in month t.

Table 8: Two Period Cross-Tab of the Stock Picking Measure

	Second Period					
First Period	**Q1**	**Q2**	**Q3**	**Q4**	**Q5**	**Total**
Q1	22.14%***	20.64%	18.43%***	17.51%***	21.28%**	100%
Q2	19.30%	21.13%**	22.41%***	19.97%	17.19%***	100%
Q3	17.57%***	20.30%	21.84%***	21.58%***	18.71%**	100%
Q4	19.81%	19.20%	20.35%	20.90%*	19.74%	100%
Q5	21.19%**	18.76%**	16.92%***	20.02%	23.11%***	100%
Total	100%	100%	100%	100%	100%	

*** p<0.01, ** p<0.05, * p<0.1. Null: Cell%=20%.

This table provides frequencies of investors sorted and grouped by their stock picking measure in each of the two sample sub-periods (January 1995 - March 2002 and April 2002 - June 2009). The stock picking measure is calculated according to Seru, Stoffman and Shumway (2009). For all stock purchases, we calculate the return over the next 30 days less the market return. If the investor sells the stock before 30 days, we use the holding period return less the market return. The stock picking measure is the average of these returns over all stock purchases. The January 1995 - March 2002 (April 2002 - June 2009) percentile rank is along the vertical (horizontal) axis. The stock picking measures are grouped into quintiles. **Q1** is the top performance quintile. We present row percentages. If the two periods were independent, we would expect row percentages of 20% in each cell. The p-values are calculated using OLS regressions. The quintile cut-off values for the first period are: -3.0%, -1.3%, -0.0% & 1.5%. For the second period, the cut-off values are: -1.5%, -0.4%, 0.4% & 1.4%. The sample size is 24,521 investors. Investors are included if they trade at least 75 times in the first half of the sample.

The pairwise correlation between the first and second period monthly timing measures is 0.0057 and is insignificant. The spearman rank correlation coefficient is 0.0239 and is significant at the 0.01% level.

Table 9: Timing Investors Characteristic Regressions

VARIABLES	(1) Top 20	(2) Bottom 20	(3) Timing Skill
Male	0.0250*	0.00746	0.0132
	(0.0142)	(0.0141)	(0.0133)
Age 25-45	0.0327	0.00920	0.00931
	(0.0205)	(0.0200)	(0.0194)
Age 46-64	0.128***	-0.0541***	0.112***
	(0.0211)	(0.0207)	(0.0199)
Age 65+	0.0905***	-0.104***	0.104***
	(0.0280)	(0.0277)	(0.0258)
Density	0.161	-0.496*	0.193
	(0.292)	(0.287)	(0.269)
University %	-0.00230***	-0.000493	-0.000932
	(0.000664)	(0.000647)	(0.000612)
Finance %	-0.000508	-0.000160	-0.000510
	(0.00210)	(0.00206)	(0.00193)
Finnish	-0.000962	0.0169	-0.0403**
	(0.0202)	(0.0195)	(0.0183)
Option	-0.169***	0.0117	-0.109***
	(0.0292)	(0.0250)	(0.0251)
OMX ETF	-0.00333	0.0245	-0.0363
	(0.0464)	(0.0421)	(0.0415)
Nokia Flow %	-0.893***	0.727***	-1.041***
	(0.0378)	(0.0321)	(0.0320)
Avg. Beta	1.341***	0.250***	0.693***
	(0.0359)	(0.0350)	(0.0334)
Log(Trades)	-0.318***	0.156***	-0.261***
	(0.0111)	(0.00911)	(0.00902)
Log(Flow Size)	-0.111***	-0.0487***	-0.0236***
	(0.00766)	(0.00718)	(0.00687)
26-40 Securities	0.317***	-0.162***	0.282***
	(0.0158)	(0.0155)	(0.0147)
41+ Securities	0.466***	-0.229***	0.418***
	(0.0216)	(0.0202)	(0.0192)
Observations	62,879	62,879	62,879
R-squared			0.049

Standard Errors in Parentheses
*** p<0.01 ** p<0.05 * p<0.1

This table presents results for regressions of timing ability on investor characteristics. We use investors monthly timing ability measured over the entire period for these tests. We run the regressions for 3 skill measures: Top 20, Bottom 20 and Timing Skill. Top 20 is a dummy variable equal to 1 if the investor is in the top 20% of investors. Bottom 20 is a dummy variable equal to 1 if the investor is in the bottom 20% of investors. Timing Skill is a variable equal to 5 if the investor is in the top 20%, 4 if the investor is in the Top 20-40%, 3 if the investor is in the Top 40-60%, etc. The regressions in columns 1 and 2 are probit regressions. The regression in column 3 is an OLS regression. Male is a dummy variable equal to 1 if the investor is a male. Age 25-45 is a dummy variable equal to 1 if the investor is 25 to 45 years old at the end of 1995. Age 46-64 is a dummy variable equal to 1 if the investor is 46 to 64 years old at the end of 1995. Age 65+ is a dummy variable equal to 1 if the investor is 65 years old or older at the end of 1995. Density is the population density of the investor's zip code times 10^{-5}. University % is the percentage of persons in the investor's zip code with a university degree. Finance Profession % is the percentage of persons in the investor's zip code working in the finance industry. Finnish is a dummy equal to one if the individual's primary language is Finnish. Option is an indicator variable equal to 1 if the investor ever trades an option. OMX ETF is an indicator variable equal to 1 if the investor transacted in the OMX ETF during the sample period. Nokia Flow % is the value percentage of absolute flows in Nokia. Avg. Beta is the average beta of all securities the investor traded. Log(Trades) is the logarithm of the total number of transactions placed by the investor over the entire sample. Log(Flow Size) is the logarithm of the investor's mean absolute monthly flow over the entire sample. 26-40 Securities (41+ Securities) is a dummy variable equal to one if the number of securities (unique CUSIPS) the investor transacted in during the sample period is between 26 and 40 securities (41+ securities). The R^2 reported for the probit regressions in columns 1 and 2 are Pseudo-R^2. The reported R^2 from the OLS regression in column 3 is the adjusted-R^2. We report the number of observations in the last row and z and t-stats are reported in parentheses.

Table 10: Summary Statistics of Monthly and Quarterly Timing Measures

Time Period	Mean	Std. Dev.	25th	Median	75th	N
Monthly Timing Measure:						
Entire Period						
1995-2002	0.03	0.18	-0.07	0.01	0.13	68,937
2002-2009	0.00	0.10	-0.06	0.00	0.07	66,840
Bubble Period						
1995-2002	0.03	0.25	-0.12	0.01	0.19	68,717
1995-2002	0.00	0.19	-0.13	0.00	0.13	51,061
Normal Times						
1995-2002	0.01	0.15	-0.08	0.01	0.09	72,552
2002-2009	0.01	0.12	-0.07	0.01	0.09	68,702
Quarterly Timing Measure:						
Entire Period						
1995-2002	0.02	0.13	-0.07	0.02	0.10	68,937
2002-2009	0.01	0.10	-0.06	0.00	0.07	66,840
Bubble Period						
1995-2002	0.01	0.19	-0.11	0.02	0.14	68,717
1995-2002	-0.01	0.19	-0.16	-0.02	0.13	51,061
Normal Times						
1995-2002	0.02	0.17	-0.09	0.02	0.12	72,552
2002-2009	0.01	0.12	-0.07	0.01	0.10	68,702

This table gives the summary statistics (mean, standard deviation, 25th percentile, median and 75th percentile) for the monthly and quarterly timing measures. The monthly timing measure is calculated according to equation (1) and the quarterly timing measure is calculated according to equation (2). For the entire period measure, we calculate the flow measures during two equal length sub-periods: January 1995 - March 2002 and April 2002 - June 2009. For the "Bubble Period" measures, we center our analysis around the market peak during the relevant half of our sample. Once we have determined the peak month, we calculate each investor's performance during the time period from 12 months before the peak to 12 months after (e.g. for the 2000 bubble, the HEX25 peaked in February 2000, so the performance period is February 1999 to February 2001. For the 2007 bubble, the HEX25 peaked in July 2007, so the performance period is July 2006 to July 2008). The "Normal Times" time periods are the months outside of the "Bubble Period" in each half of our sample. Our original sample of individual investor transaction data contains 1,386,540 investors. To capture active traders we only include investors in our sample that have absolute flows greater than a minimum: for the entire period ("Bubble Period" and "Normal Times") measure, an investor must have absolute monthly flows greater than zero in at least 15 (8) months during the first period. N is the number of investors that meet the criteria and have enough flows to calculate a correlation.

Table 11: Correlations Between Timing Measures

Panel A: First Period Measures			
	Bubble-Monthly	**Normal-Monthly**	**Bubble-Quarterly**
Normal-Monthly	0.0255	-	-
	(0.0000)	-	-
Bubble-Quarterly	0.7399	0.0350	-
	(0.0000)	(0.0000)	-
Normal-Quarterly	0.0241	0.6412	0.0332
	(0.0000)	(0.0000)	(0.0000)
Panel B: Second Period Measures			
	Bubble-Monthly	**Normal-Monthly**	**Bubble-Quarterly**
Normal-Monthly	0.0542	-	-
	(0.0000)	-	-
Bubble-Quarterly	0.6062	0.0721	-
	(0.0000)	(0.0000)	-
Normal-Quarterly	0.0255	0.7047	0.0353
	(0.0000)	(0.0000)	(0.0000)

This table provides pairwise correlations between the timing measures. The monthly timing measure is calculated using equation (1). The quarterly timing measure is calculated using equation (2). In Panel A, we present the correlations between the first half (January 1995 - March 2002) measures. In Panel B, we present the correlations between the second half (April 2002 - June 2009) measures. **Bubble-Monthly** stands for the bubble period monthly timing measure. **Normal-Monthly** stands for the normal times monthly timing measure. **Bubble-Quarterly** stands for the bubble period quarterly timing measure. **Normal-Quarterly** stands for the normal times quarterly timing measure. p-values are provided in parentheses. We only present the correlations between the bubble period measures and the normal times measures. The entire period measures are highly correlated with the sub-period measures.

Table 12: Two Period Cross-Tab of the Bubble Period Monthly Timing Measure

	2007 Bubble					
2000 Bubble	**Q1**	**Q2**	**Q3**	**Q4**	**Q5**	**Total**
Q1	21.96%***	19.95%	19.20%**	19.50%	19.39%	100%
Q2	19.80%	20.11%	19.76%	20.31%	20.03%	100%
Q3	19.78%	19.80%	19.66%	20.53%	20.23%	100%
Q4	19.41%**	20.26%	19.47%	20.87%***	19.98%	100%
Q5	18.91%**	19.97%	20.01%	20.73%**	20.38%	100%
Total	100%	100%	100%	100%	100%	

*** p<0.01, ** p<0.05, * p<0.1. Null: Cell%=20%

This table provides frequencies of investors sorted and grouped by their 2000 and 2007 market bubble monthly timing measure. The monthly timing measure is calculated using equation (1). The 2000 (2007) percentile rank is along the vertical (horizontal) axis. The timing measures are grouped into quintiles. **Q1** is the top performance quintile. We present row percentages. If the two periods were independent, we would expect row percentages of 20%. Levels of significance are based on placebo tests (see Section 2.1 of the main text for more details). The quintile cut-off values for the first period are: -0.161, -0.039, 0.070, 0.239. For the second period, the cut-off values are: -0.155, -0.052, 0.047, 0.156. The sample size is 51,061 investors.

The pairwise correlation between the first and second period monthly timing measures is 0.0250 and is significant at the 1% level. The spearman rank correlation coefficient is 0.0212 and is significant at the 5% level.

Table 13: Two Period Cross-Tab of Significant Outflows Around the Market Peak

	2007 Bubble					
2000 Bubble	**Q1**	**Q2**	**Q3**	**Q4**	**Q5**	**Total**
Q1	19.82%	21.70%**	18.57%***	20.75%**	19.16%**	100%
Q2	20.10%	19.69%	19.91%	20.49%	19.81%	100%
Q3	19.96%	20.09%	20.58%*	19.92%	19.45%	100%
Q4	20.31%	19.79%	21.26%***	18.89%***	19.74%	100%
Q5	19.85%	18.67%***	19.49%	20.00%	22.00%***	100%
Total	100%	100%	100%	100%	100%	

*** p<0.01, ** p<0.05, * p<0.1. Null: Cell%=20%

This table provides frequencies of investors sorted and grouped by their flows around the market peaks in 2000 and 2007. The significant flow for investor i is calculated as follows: $-\frac{1}{6}\sum_{PeakMonth-5}^{PeakMonth}\frac{flow_{im}-\overline{flow_i}}{s_i}$, where $flow_{im}$ is the flow of investor i in month m, $\overline{flow_i}$ is the average flow for investor i over the sample half in which the bubble occurs, s_i is the standard deviation of flows for investor i over the sample half in which the bubble occurs, $PeakMonth$ is the month the market reached its apex during the sample half. The 2000 (2007) percentile rank is along the vertical (horizontal) axis. The flow measures are grouped into quintiles. **Q1** is the top performance quintile. We present row percentages. If the two periods were independent, we would expect row percentages of 20%. p-values are calculated using bootstrapping procedures conducted as follows: each first period investor is matched with a second period investor based on their geographic region (9 regions in Finland) and their within-region tercile ranking of the number of trades. We match first and second period investors 1,000 times. Significance levels are based on two-sided tests of significance. Significance levels are nearly identical if basic OLS standard errors are used to calculate significance. The quintile cut-off values for the first period are: -0.420, -0.025, 0.257, 0.684. For the second period, the cut-off values are: -0.158, -0.074, 0.034, 0.237. The sample size is 65,370 investors.

The pairwise correlation between the first and second period monthly timing measures is 0.0108 and is significant at the 1% level. The spearman rank correlation coefficient is 0.0150 and is significant at the 0.01% level.

Table 14: Two Period Cross-Tab of the Entire Period Monthly *Beta-Adjusted* Timing Measure

	Second Period					
First Period	**Q1**	**Q2**	**Q3**	**Q4**	**Q5**	**Total**
Q1	24.88%***	21.24%*	18.66%***	17.95%***	17.26%**	100%
Q2	19.44%	19.90%	20.34%	20.03%	20.30%	100%
Q3	19.46%	20.37%	20.39%	20.33%	19.45%	100%
Q4	19.12%	19.31%	20.58%*	19.95%	21.04%	100%
Q5	17.01%***	19.15%	20.07%	21.77%*	22.00%**	100%
Total	100%	100%	100%	100%	100%	

*** p<0.01, ** p<0.05, * p<0.1. Null: Cell%=20%.

This table provides frequencies of investors sorted and grouped by their monthly timing beta-adjusted measure in each of the two sample sub-periods (January 1995 - March 2002 and April 2002 - June 2009). The beta-adjusted timing measure adjusts flows by multiplying the euro value of each flow by the beta of the transacted security. The January 1995 - March 2002 (April 2002 - June 2009) percentile rank is along the vertical (horizontal) axis. The timing measures are grouped into quintiles. **Q1** is the top performance quintile. We present row percentages. If the two periods were independent, we would expect row percentages of 20% in each cell. Levels of significance are based on placebo tests (see Section 2.1 of the main text for more details). The quintile cut-off values for the first period are: -0.107, -0.020, 0.067, 0.241. For the second period, the cut-off values are: -0.087, -0.027, 0.025, 0.085. The sample size is 66,596 investors.

The pairwise correlation between the first and second period monthly timing measures is 0.0711 and is significant at the 1% level. The spearman rank correlation coefficient is 0.0692 and is significant at the 1% level.

Table 15: Two Period Cross-Tab of the Entire Period Quarterly Timing Measure

	Second Period					
First Period	**Q1**	**Q2**	**Q3**	**Q4**	**Q5**	**Total**
Q1	24.20%***	20.86%***	19.20%***	18.51%***	17.22%***	100%
Q2	21.73%***	20.29%	19.49%	19.49%	19.00%***	100%
Q3	18.97%***	19.86%	20.90%***	20.40%	19.88%	100%
Q4	17.74%***	19.60%	20.79%**	20.44%	21.43%***	100%
Q5	17.36%***	19.39%**	19.62%	21.16%***	22.47%***	100%
Total	20.00%	20.00%	20.00%	20.00%	20.00%	100%

*** p<0.01, ** p<0.05, * p<0.1. Null: Cell%=20%

This table provides frequencies of investors sorted and grouped by their quarterly timing measure in each of the two sample sub-periods (January 1995 - March 2002 and April 2002 - June 2009). The quarterly timing measure is calculated using equation (2). The January 1995 - March 2002 (April 2002 - June 2009) percentile rank is along the vertical (horizontal) axis. The timing measures are grouped into quintiles. **Q1** is the top performance quintile. We present row percentages. If the two periods were independent, we would expect row percentages of 20%. The p-values are calculated using OLS regressions. The sample size is 66,840 investors.

The pairwise correlation between the first and second period monthly timing measures is 0.0705 and is significant at the 0.01% level. The spearman rank correlation coefficient is 0.0745 and is significant at the 0.01% level.

Table 16: Two Period Cross-Tab of the Bubble Period Quarterly Timing Measure

	2007 Bubble					
2000 Bubble	**Q1**	**Q2**	**Q3**	**Q4**	**Q5**	**Total**
Q1	21.20%***	19.87%	19.53%	19.74%	19.67%*	100%
Q2	20.62%*	20.31%	19.84%	19.01%*	20.22%	100%
Q3	20.09%	20.15%	20.29%	19.69%	19.78%	100%
Q4	19.55%	19.68%	20.14%	20.27%*	20.36%	100%
Q5	18.57%***	19.99%	20.19%	19.74%	21.52%***	100%
Total	20.00%	20.00%	20.00%	20.00%	20.00%	100%

*** p<0.01, ** p<0.05, * p<0.1. Null: Cell%=20%

This table provides frequencies of investors sorted and grouped by their 2000 and 2007 market bubble quarterly timing measure. The quarterly timing measure is calculated using equation (2). The 2000 (2007) percentile rank is along the vertical (horizontal) axis. The timing measures are grouped into quintiles. **Q1** is the top performance quintile. We present row percentages. If the two periods were independent, we would expect row percentages of 20%. The p-values are calculated using OLS regressions. The sample size is 51,061 investors.

The pairwise correlation between the first and second period monthly timing measures is 0.0208 and is significant at the 0.01% level. The spearman rank correlation coefficient is 0.0220 and is significant at the 0.01% level.

Table 17: Two Period Cross-Tab of the Normal Times Monthly Timing Measure

	Second Period					
First Period	**Q1**	**Q2**	**Q3**	**Q4**	**Q5**	**Total**
Q1	18.37%***	20.00%	20.80%***	20.31%	20.52%*	100%
Q2	20.96%***	20.65%**	20.84%***	19.65%	17.90%***	100%
Q3	23.64%***	20.31%	18.92%***	18.76%***	18.38%***	100%
Q4	20.20%	19.69%	19.49%*	19.93%	20.69%**	100%
Q5	16.88%***	19.34%**	19.92%	21.34%***	22.52%***	100%
Total	20.00%	20.00%	20.00%	20.00%	20.00%	100%

*** p<0.01, ** p<0.05, * p<0.1. Null: Cell%=20%

This table provides frequencies of investors sorted and grouped by their "Normal Times" monthly timing measure in each of the two sample sub-periods (January 1995 - March 2002 and April 2002 - June 2009). The monthly timing measure is calculated using equation (1). "Normal Times" are the 62 months in each sample half that lie outside of the bubble. The January 1995 - March 2002 (April 2002 - June 2009) percentile rank is along the vertical (horizontal) axis. The timing measures are grouped into quintiles. **Q1** is the top performance quintile. We present row percentages. If the two periods were independent, we would expect row percentages of 20%. The p-values are calculated using OLS regressions. The sample size is 68,702 investors.

The pairwise correlation between the first and second period monthly timing measures is 0.0273 and is significant at the 0.01% level. The spearman rank correlation coefficient is 0.0271 and is significant at the 0.01% level.

Table 18: Two Period Cross-Tab of the Normal Times Quarterly Timing Measure

	Second Period					
First Period	**Q1**	**Q2**	**Q3**	**Q4**	**Q5**	**Total**
Q1	24.42%***	19.83%	19.07%***	18.94%***	17.74%***	100%
Q2	20.47%	20.84%***	19.81%	19.71%	19.17%***	100%
Q3	19.24%**	20.62%**	20.09%	19.85%	20.20%	100%
Q4	18.68%***	19.62%	20.47%	20.65%**	20.58%*	100%
Q5	17.11%***	19.09%***	20.59%*	20.87%***	22.35%***	100%
Total	20.00%	20.00%	20.00%	20.00%	20.00%	100%

*** p<0.01, ** p<0.05, * p<0.1. Null: Cell%=20%

This table provides frequencies of investors sorted and grouped by their "Normal Times" quarterly timing measure in each of the two sample sub-periods (January 1995 - March 2002 and April 2002 - June 2009). The quarterly timing measure is calculated using equation (2). "Normal Times" are the 62 months in each sample half that lie outside of the bubble. The January 1995 - March 2002 (April 2002 - June 2009) percentile rank is along the vertical (horizontal) axis. The timing measures are grouped into quintiles. **Q1** is the top performance quintile. We present row percentages. If the two periods were independent, we would expect row percentages of 20%. The p-values are calculated using OLS regressions. The sample size is 68,702 investors.

The pairwise correlation between the first and second period monthly timing measures is 0.0603 and is significant at the 0.01% level. The spearman rank correlation coefficient is 0.0648 and is significant at the 0.01% level.

Table 19: Second Half Performance Measures

Timing	Q1	Q2	Q3	Q4	Q5	Top 20%-Bot. 20%	Passive
Panel A: Correlation between flow$_t$ and HEX25 Excess Return$_{t+1}$							
Entire Period	0.09	0.05	-0.00	-0.00	-0.08	0.25**	0.00
Bubble Period	0.07	0.05	-0.02	-0.01	-0.08	0.26**	0.00
Panel B: Average Flow-Weighted Monthly Excess Return (in percent)							
Entire Period	1.37	0.65	-0.00	-0.06	-0.81	2.19**	1.02
Bubble Period	0.98	0.53	-0.16	-0.16	-0.82	1.81**	1.02
Panel C: Flow-Weighted Return-Volatility Ratio							
Entire Period	0.30	0.20	-0.00	-0.02	-0.25	0.88	0.04
Bubble Period	0.24	0.16	-0.06	-0.05	-0.26	0.97	0.04

This table provides measures of performance in the second half of our sample for investors grouped by first period performance. We present results sorting by the two main timing measures. We sort by the market timing measure calculated during the entire period (**Entire Period**) and by the market timing measure calculated during the Bubble Period (**Bubble Period**). Panel A presents the correlations between quintile group flows in month t and market returns in month $t+1$. Panel B presents the average flow-weighted return, labeled Average Flow-Weighted Return, calculated according to equation (4) in the main text. This measure multiplies the return in month $t+1$ by the group flow in month t. Panel C presents the ratio of the average flow-weighted return to the standard deviation of the flow-weighted return, labeled Flow-Weighted Return-Volatility Ratio. The quintile group flows are calculated according to equation (2) in the main text. The Top 20% - Bot. 20% flow is calculated according to equation (3) in the main text.

Table 20: Investor Survivorship

First Period Performance	**% 2nd Half Inactives**
Q1 (Best)	2.07 %
Q2	3.34 %
Q3	3.75 %
Q4	3.12 %
Q5 (Worst)	2.93 %
t-test (Top-Bottom) p-value	0.00

This table presents the percentage of investors within each first period performance quintile that do not move money in or out of the market in the second half of the sample (Inactives). First Period Performance is the first period performance quintile, measured using the monthly timing measure. 2nd Half Inactives is the percentage of investors within the quintile that did not move money in or out of the market during the second half of the sample period (April 2002 - June 2009). The last row presents the p-value for a student's t-test for a difference in means between the best (Q1) and worst (Q5) investor groups.

Table 21: Two Period Cross-Tab of the Entire Period Monthly Timing Measure (Active Investor in Both Periods)

	Second Period					
First Period	**Q1**	**Q2**	**Q3**	**Q4**	**Q5**	**Total**
Q1	23.39%***	20.11%	19.41%	18.48%***	18.61%***	100%
Q2	20.69%*	20.84%**	19.88%	19.77%	18.82%***	100%
Q3	19.28%*	20.40%	20.64%	19.48%	20.21%	100%
Q4	19.53%	19.46%	20.29%	20.10%	20.61%	100%
Q5	17.10%***	19.20%**	19.79%	22.16%***	21.75%***	100%
Total	20.00%	20.00%	20.00%	20.00%	20.00%	100%

*** p<0.01, ** p<0.05, * p<0.1. Null: Cell%=20%.

This table focuses on the timing persistence of investors with at least 15 non-zero flows in each of the sample halves (40,057 total). The table provides frequencies of investors sorted and grouped by their monthly timing measure in each of the two sample sub-periods (January 1995 - March 2002 and April 2002 - June 2009). The monthly timing measure is calculated using equation (1). The January 1995 - March 2002 (April 2002 - June 2009) percentile rank is along the vertical (horizontal) axis. The timing measures are grouped into quintiles. **Q1** is the top performance quintile. We present row percentages. If the two periods were independent, we would expect row percentages of 20% in each cell. p-values are from OLS regressions. The sample size is 39,444 investors.

The pairwise correlation between the first and second period monthly timing measures is 0.0626 and is significant at the 0.01% level. The spearman rank correlation coefficient is 0.0604 and is significant at the 0.01% level.

Table 22: Two Period Cross-Tab of the Monthly Timing Measure - Nokia Returns

	Second Period					
First Period	**Q1**	**Q2**	**Q3**	**Q4**	**Q5**	**Total**
Q1	24.47%***	19.65%	18.89%***	19.03%***	17.95%***	100%
Q2	20.42%	20.21%	19.71%	20.02%	19.64%	100%
Q3	19.44%*	19.62%	20.59%*	19.90%	20.45%	100%
Q4	18.62%***	20.17%	20.76%**	19.71%	20.74%**	100%
Q5	17.05%***	20.34%	20.06%	21.33%***	21.23%***	100%
Total	20.00%	20.00%	20.00%	20.00%	20.00%	100%

*** p<0.01, ** p<0.05, * p<0.1. Null: Cell%=20%.

This table provides frequencies of investors sorted and grouped by their monthly timing measure (see equation (1)) in each of the two sample sub-periods (January 1995 - March 2002 and April 2002 - June 2009) where the return used is the monthly return on Nokia's common stock (instead of the HEX25 index). The January 1995 - March 2002 (April 2002 - June 2009) percentile rank is along the vertical (horizontal) axis. The timing measures are grouped into quintiles. **Q1** is the top performance quintile. We present row percentages. If the two periods were independent, we would expect row percentages of 20%. The p-values are calculated using OLS regressions. The sample size is 66,840 investors

The pairwise correlation between the first and second period monthly timing measures is 0.0667 and is significant at the 0.01% level. The spearman rank correlation coefficient is 0.0577 and is significant at the 0.01% level.

Table 23: Two Period Cross-Tab of the Monthly Timing Measure - Omitting Nokia Flows and Returns

	Second Period					
First Period	**Q1**	**Q2**	**Q3**	**Q4**	**Q5**	**Total**
Q1	23.05%***	21.05%***	19.19%**	19.14%***	17.58%***	100%
Q2	20.61%*	20.68%**	19.68%	19.28%**	19.74%	100%
Q3	20.00%	20.02%	20.16%	20.26%	19.55%	100%
Q4	18.55%***	19.56%	20.56%*	20.31%	21.03%***	100%
Q5	17.73%***	18.67%***	20.44%	21.03%***	22.14%***	100%
Total	20.00%	20.00%	20.00%	20.00%	20.00%	100%

*** p<0.01, ** p<0.05, * p<0.1. Null: Cell%=20%.

This table provides frequencies of investors sorted and grouped by their monthly timing measure (see equation (1)) in each of the two sample sub-periods (January 1995 - March 2002 and April 2002 - June 2009) where flows into and out of Nokia common stock are omitted from the flow measure and returns on Nokia common stock are omitted from the market index (HEX25). The January 1995 - March 2002 (April 2002 - June 2009) percentile rank is along the vertical (horizontal) axis. The timing measures are grouped into quintiles. **Q1** is the top performance quintile. We present row percentages. If the two periods were independent, we would expect row percentages of 20%. The p-values are calculated using OLS regressions. The sample size is 57,852 investors.

The pairwise correlation between the first and second period monthly timing measures is 0.0620 with a p-value of 0.01%. The spearman rank correlation coefficient is 0.0618 with a p-value of 0.01%.

Table 24: Institutions Entire Period Monthly Timing Measure

	Second Period					
First Period	**Q1**	**Q2**	**Q3**	**Q4**	**Q5**	**Total**
Q1	14.75%	21.31%	24.59%	18.03%	21.31%	100%
Q2	32.14%**	19.64%	10.71%*	16.07%	21.43%	100%
Q3	15.38%	23.08%	26.15%	13.85%	21.54%	100%
Q4	18.31%	18.31%	25.35%	23.94%	14.08%	100%
Q5	19.72%	18.31%	12.68%*	26.76%	22.54%	100%
Total	100%	100%	100%	100%	100%	

*** p<0.01, ** p<0.05, * p<0.1. Null: Cell%=20%.

This table provides frequencies of institutions sorted and grouped by their monthly timing measure in each of the two sample sub-periods (January 1995 - March 2002 and April 2002 - June 2009). The monthly timing measure is calculated using equation (1). The January 1995 - March 2002 (April 2002 - June 2009) percentile rank is along the vertical (horizontal) axis. The timing measures are grouped into quintiles. **Q1** is the top performance quintile. We present row percentages. If the two periods were independent, we would expect row percentages of 20% in each cell. p-values are calculated using OLS standard errors. There are 369 institutions that have non-zero flows in at least 15 months during the first period, 324 of these institutions have at least 2 months of non-zero flows in the second period.

The pairwise correlation between the first and second period monthly timing measures is 0.0399 and is insignificant with a p-value of 0.4746. The spearman rank correlation coefficient is 0.0449 and is insignificant with a p-value of 0.4206.