## Phil Erlanger Research Short Interest Performance (SIP) Data

For years money managers have tracked how effectively **insiders at companies** are able to predict stock price movement through their buy and sell transactions. To date, no research firm has focused on tracking collectively how **short sellers** predict stock price movement through their short sales over the last twenty years. **Phil Erlanger Research** has been tracking the action of short sellers for the past twenty years to many of the top firms on Wall Street.

Now Phil Erlanger Research has built a tool from its database to track moderate and heavy short selling since 1993. Once a stock is tracked via the Erlanger Short Intensity Rank then we quantify how well short sellers are able to (shorts are correct) or not able to (short squeeze) predict stock movement. Certain stocks like Visa (V) see short sellers never get it right. Other stocks like Callaway Golf (ELY) see short sellers get it right time and again.

Q Sho	Short Interest Performance Results Stock by Stock														
Symbol	Short Intensity Rank	Prior Short Intensity Rank			-	Winning Trades	Heavy Avg Losing Trades Pct	Avg	Performance		Completed Trades	Avg	Avg Losing Trades Pct	Sector	
V	87%	100%	1	4	13.0	100.0	0.0	124	13.0	1	9	11.8	-0.1	Technology: Software_Serv	
ELY	28%	8%	5	7	0.0	0.0	-14.8	214	-14.8	4	18	12.7	-19.4	Consumer Durables_Apparel	

You cannot determine when short selling is at an extreme by simply looking at the shares short as a percentage of float or the absolute shares short. The variable that adds value is the Erlanger Short Intensity Rank. In simple terms, the Erlanger Short Intensity rank is built once we determine the **Erlanger Short Ratio**. This ratio is shares short divided by average volume over the past twelve months.



The Erlanger Short Ratio is different from what the masses follow, shares short divided by volume over the last month. Once we know the Erlanger Short Ratio we then plot it over time. If the short ratio is at the high end of its range, then the Erlanger Short Intensity rank is high. If the short ratio is at the low end of its range, then the Erlanger Short Intensity rank is low.

Understand short interest in a stock rises and falls based on the stock price getting ahead of valuation, a product cycle that is about to undergo a change or the media deciding to pick on a company. So over time, there will be periods where short sellers try to capitalize on these outliers. Much like our seasonality data, extremes in short interest tend to repeat.

Our tool allows us to tracks indexes, sectors or portfolios in addition to individual stocks to summarize how effective short sellers are or are not. In the past, we have only recommended shorting stocks where the short selling was light and the technicals were poor (Long Squeeze). Now with our new tool stocks with heavy short interest may be shorted if the shorts can demonstrate value add. The risk of a short squeeze in these stocks will always be a clear and present danger but our technical bias and trigger indicators will alert us to such squeezes ahead of time allowing for the proper hedging or to step aside when needed.

Below is a quick summary of our results on the S&P 500 and Russell 2000. Our results can be broken out by sector as well as industry group.

	C Mode	rate Short Inter	sity	Heavy S	hort Intensi	ty				
Universe	5876	7	18.40%	53%	-12.90%	3.73%	87			
Filter	496	10	20.59%	61%	-12.36%	8.10%	103			
	Symbol 🔽	Completed Trades 🔽	Average winning trade%	Winning Trades Pct 🔽	Average losing trade% 🔽	Average Performance	Avg Trade Duratior 💌			Sector
-	А	7	44.74%	29%	-11.74%	4.39%	87	5	5	Pharmaceuticals
	AA	11	7.51%	36%	-4.64%	-0.22%	68	5	5	Materials
	AAPL	8	20.84%	63%	-26.84%	2.96%	153	3	3	Technology: Computers/Equip
	ABBV	1	5.21%	100%	0.00%	5.21%	86	1	1	Pharmaceuticals
C Mo	derate Shor	t Intensity	• He	avy Short Ir	ntensity					
587	67	18.40	1% 5	53% -12	.90%	3.73%	87			
174	2 7	26.35	i% <u>s</u>	53% -18	.16%	5.69%	125			
	Comple		ng Trad	es losi	ng A	verage A	vg Trade Sh	ort Intensity	Heavy Short Intensity	

	Completed		Trades	losing Average		Avg Trade	Short Intensity	Intensity	
Symbol 🔽	Trades 💌	trade% 💌	Pct 💌	trade% 💌	Performance	Duratior	Grade 💌	Grade	Sector
AAON	9	23.26%	78%	-44.18%	8.28%	199	4	2	Capital Goods
AAT	3	11.07%	67%	-1.22%	6.97%	40	3	3	Real Estate
AAWW	4	17.23%	25%	-5.45%	0.22%	72	5	5	Transportation
ABAX	12	30.80%	67%	-32.03%	9.86%	136	5	3	Health Care Equip & Serv

Our screens further show how much of the short squeeze or correct short selling has played out.

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Symbol	Short	Prior	Heavy	Heavy	Heavy	Heavy	Heavy	Heavy	Heavy	Heavy	Heavy	Heavy	Heavy Avg	Heavy Avg	Heavy	Heavy	Sector
	Intensity	Short	Active	Active	Active	Active	Active Avg	Active Max	Short	Completed	Winning	Avg	Losing	Performance	Avg	Active	
	Rank	Intensity	Price Start	Price	Price High	Current Net	Upside	Upside	Intensity	Trades	Trades	Winning	Trades Pct		Duration	Current	
		Rank		Current		Pct	Expectation	Expectation	Grade		Pct	Trades Pc				Duration	
WWW	100%	43%	26.72	27.19	27.21	1.76%	19.10%	30.31%	2	12	75.0	20.9	-7.1	13.9	124	9	Consumer Durables_Apparel

Our data is available in a .csv file, via email, on our application Erlanger Chart Room and on our website www.erlangerresearch.com. We update our technical and options data nightly. Short interest is updated every two weeks when the NYSE and NASDAQ release short interest data.