

US Equity Short Positions and Securities Lending Data

Headlines:

- **Securities loan *levels* provide a good direct proxy for public short interest.**
- **Securities loan *changes* provide a very good and unbiased estimate of public short interest.**
- **Comparison of the two datasets helps to identify stocks with *high levels of hedging*.**
- **Securities loans may provide a measure of *directional short selling* for single stock names.**

Short interest data for US Equities is published by the main exchanges twice per month, with a typical lag of settlement date + 10. Securities loans from custodians to prime brokers (for onward lending to hedge funds) are published daily by Data Explorers on settlement date + 2, and indicate the approximate level of borrowing by hedge funds and banks to cover short selling.

The following example shows how securities lending data can be used to estimate upcoming short interest releases:

Example: Sagent Pharmaceuticals: Shares Outstanding* = 27,828,000

Public Short interest for settlement 15/06 (24/06)**: 250,148 shares

Data Explorers stock loan balance for 15/06 (17/06): 309,888

Data Explorers stock loan balance for 30/6 (4/7): 630,024

Change in stock loan balance = +103.3%, or 2.033x

Predicted Public Short Interest for 30/6: 250,148 * 2.033 = 508,550 = 1.83% of shares outstanding

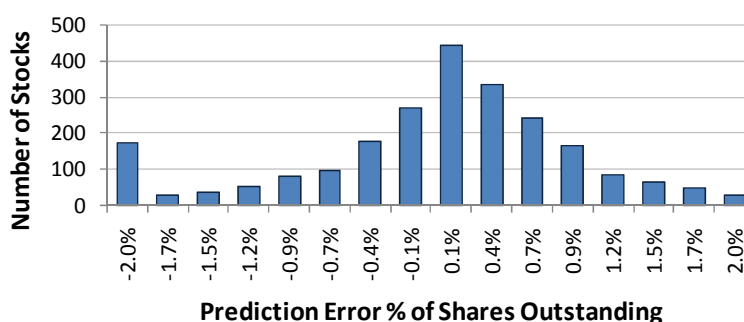
Actual Public Short interest for 30/6: (published 12th July) = 593,367 = 2.13% of shares outstanding

Prediction Error = 2.13% - 1.83% = 0.3%

*Source: Thomson Reuters

**() = publication dates in brackets

The following chart shows these prediction errors for 2466 US stocks, on settlement date 30 June 2011. 136 stocks, or 5.5% of the sample, have errors of more than 2% of shares outstanding.



What causes these prediction errors?

- Hedging – Delta one desks, Equity and derivative market makers, and ETF desks will often use in-house long positions to deliver stock. Public data contains a higher proportion of hedging rather than securities lending data.
- Offshore transactions – Data Explorers data is compiled from global contributors who may not be exchange members. Public data is compiled from US exchange members.
- Coverage – Data Explorers covers nearly all of the lenders and custodians but will not capture all internal broker supply or broker to broker lending.

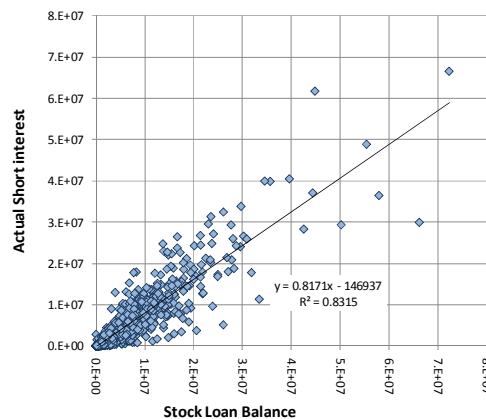
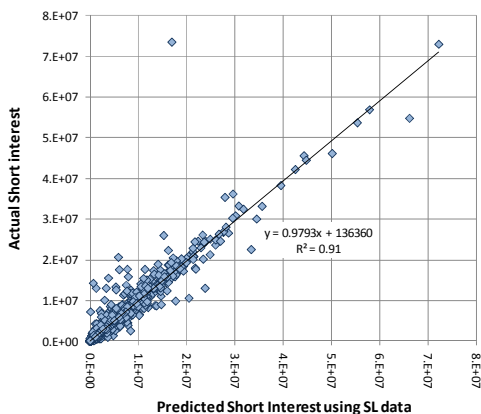
So a higher public number for a particular stock implies significant hedging in futures and options, or broker borrowing from internal sources. A lower public number implies significant offshore borrowing activity. The presence of hedging activity in the public data implies that the lending data may give a more accurate measure of the extent of directional short selling in individual names, especially in the large capitalization stocks.

The following table summarizes the overall prediction performance for various settlement dates.

	29/4/11	15/3/11	15/2/11	14/1/11	15/11/10	29/10/10	30/9/10	13/8/10	30/7/10	28/5/10
% Prediction errors +/- 2%	96	96	94	96	95	94	93	94	93	92
% USSI explained by prediction	92	85	92	97	91	97	30	84	97	92
% Prediction error bias	0.3	10	0.3	1.3	1.7	0.5	12.7	5.6	0.3	4

- 1) **% Prediction errors:** more than 90% of the prediction errors are in the range of +/- 2%. Most of the very large % errors are in small stocks.
- 2) **% USSI explained:** the regression fit between the predicted and actual short interest quantities. This is typically above 90%, implying a correlation of more than 0.95; but for one date in this sample (30/9/2010) it is a very low 30%. This probably reflects a high proportion of hedging on that date.
- 3) **% Prediction error bias:** If this is zero, then the predicted short interest is, *on average*, exactly in line with the actual. This bias is usually very low; the worst bias is 12.7% which occurs on the same 30/09/2010 date.

These results imply that securities lending data can provide an unbiased forecast of the short positions published by the main exchanges. Portfolio managers can use this data to provide of early warning of changing trends in short positions and anticipate the actual published numbers on the eve of publication.



These charts show the relationship between Predicted and Actual USSI (on the left) and the Stock Loan Balance and USSI (on the right) This shows that stock loan data is a good proxy for public data; but that the combination of changes in stock loan data and public data described previously removes the bias and significantly improves the overall fit.

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