GLOBAL

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10 July 2014

Quantamentals

A Surprising Tone

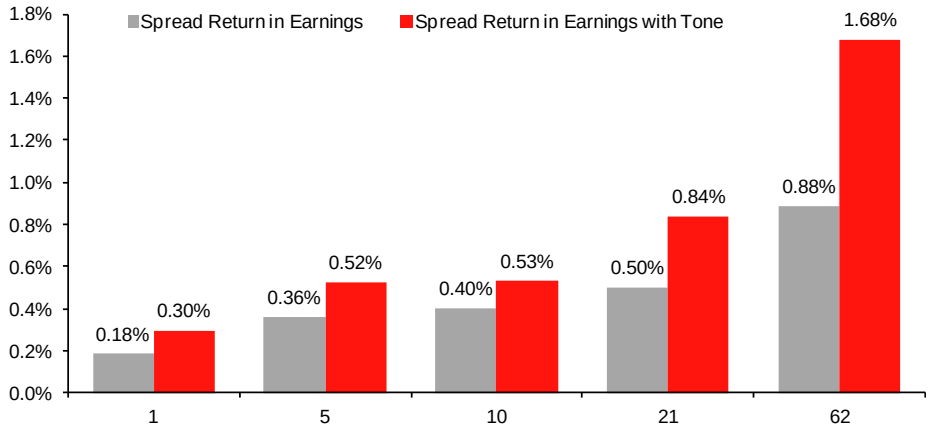
Applying text analysis to Earnings Press Releases

We assess whether the soft information contained in Earning Press Releases complements the hard information contained in reported earnings. This can be used to improve the efficacy of earnings surprise strategies and extends our earlier research on analysing the tone in company call transcripts (Quantamentals: Positively Persuasive). We have collected reported Earnings Press Releases for R3000 universe on a quarterly basis since 2004.

Tone differentiates earnings surprises

Combining an earnings surprise strategy with abnormal tone doubles the returns of a large cap strategy to 1.68% (see Figure below). Performance persists controlling for prior price and earnings momentum. The impact is stronger for large cap relative to small-cap universe.

Earnings Surprise Returns with and without Tone



Source: SEC Edgar, Russell, IBES, Compustat , Macquarie Capital (USA), July 2014.

Improving Stock Selection

Investors can use the soft information embedded in tone measures as a confirmatory signal to assess the quality of reported numbers. We build a trading strategy of investing in companies where both the reported numbers and tone measures align. This strategy generates long-short returns of 4.2% and 11.3% in R1000 and R2000.

Investors can also filter for stocks whose reported numbers miss expectations but have given a positive outlook. Our analysis shows that these stocks are likely to rebound as their operational performance improves over the coming quarters. Similarly, our analysis shows that stocks which beat expectations but have a negative outlook are likely to underperform over the coming quarters.

Tone-ing up recent earnings

Based on earnings in the current quarter we provide stocks where soft information in tone can be used as a confirmatory signal for earnings quality. Similarly we provide a set of stocks which are Value and Glamour Traps.

Evaluating Earning Surprises

A Deeper Dive into Earnings

In our note Quantamentals: Positively Persuasive, we analysed the information content present in the tone of Earnings Transcripts and our analysis showed that the discussion section provides a good signal over a short to medium-term horizon. In this paper we extend the tone analysis to Earnings Press Releases, as the textual analysis provides soft information which combined with the hard information contained in reported numbers can help to improve the efficacy of earnings surprise strategies.

Earnings Press Releases are a widely used resource to gauge earnings quality.

Earning Press Release provides a brief summary / commentary of reported results and there are several advantages of working with this unique dataset.

- Firstly, like all regulatory filings an Earnings Press Release has to be filed with the SEC Edgar website after Earnings Disclosure, which makes it easier to locate and download.
- Secondly, Earning Press Releases are expected to be filed within four business day following Earnings Announcement. This simultaneous availability of the Earnings Press Release makes it a timely information set and helps to benchmark any signal it can generate with the traditional measures of earnings surprise such as a standardised unexpected earnings (i.e. SUE) score.
- Thirdly, there is no specific form and hence the entire release can be used for signal generation. This is unlike earnings transcripts or quarterly reports where specific sections have to be parsed and adds to the cost of processing.
- Finally, Earnings Press Release documents are smaller in size than comparable transcripts or quarterly/annual reports, which further increases the processing efficiency.

Academic Insights

Academic literature has focussed on the quality aspects of Earnings present in the Press Release. For instance, Brown, Chistensen, Elliott and Mergenthaler *et al* (2011) argue that managers use adjusted earnings in Earnings Press Releases under the influence of investor sentiment. This reflects opportunistic motives on behalf of management.

Bowen, Davis and Matsumoto *et al* (2005) find that a firm may use a suitable metric for earnings that portray better firm performance. This suggests opportunism on behalf of management.

Barron, Byrad and Yu *et al* (2008) have argued that analysts can reduce forecast error by examining earnings disclosure. Similarly, they find the question-and-answers section in conference calls also helps to reduce forecast error.

Davis and Tama-Sweet *et al* (2011) looked at the difference in language between a Press Release and the subsequent Management's Discussion and Analysis (MD&A) section. They find lower levels of pessimism but higher levels of optimism in Earnings Press Releases relative to MD&A, which suggests that the management uses the two outlets to communicate with the market and manage investor expectations.

Tone in Earnings Press Releases can be a good alternative to traditional signals for earnings quality.

Key Findings

Our findings are:

- Earnings surprise strategy generates spread returns of 0.88% (Fig 40) and 1.92% (Fig 41) for the R1 and R2 universes respectively over a three month period since 2004;
- Abnormal tone after controlling for earnings surprise produces spread returns of 1.15% (Fig 50) and 1.07% (Fig 51) for the R1 and R2 universes respectively over a three-month period since 2004;
- Performances of abnormal tone persist even after controlling for earnings revision, price momentum and abnormal price reaction around the reporting period.

- Combining traditional earnings surprise signal with abnormal tone signal generates spread returns of 1.68% (Fig 63) and 2.55% (Fig 69) for the R1 and R2 universes respectively.
- Stocks whose reported numbers miss street expectations but the tone is positive helps to screen for turnaround candidates

Overall, we find tone analysis of Earnings Press Releases to be an encouraging area of research due to less complexity, timely availability of data and lower processing costs. Our analysis shows that abnormal tone of Earnings Press Releases complements traditional earnings surprise signals and can be a source of alpha.

Analyzing Earnings Press Release

Getting the Data

Sarbanes-Oxley Act mandated companies to file Form 8-K along with Earnings Press Release on the SEC Edgar website.

The starting point of our analysis is to obtain the Earnings Press Release. Following the adoption Sarbanes-Oxley Act of 2002, the Earnings Press Release has become a regular part of the reporting requirement. Under this Act, companies are mandated to file a Form 8-K when they announce earnings. The Earnings Press Release is furnished along with the Form 8-K. Our analysis uses the Earnings Press Release. As per the SEC requirements, Form 8-K is supposed to be filed with the SEC no later than four business days after earnings announcement.

The Additional Form 8-K Disclosure Requirements Rule, effective since August 2004, has broadened the range of activities for which a Form 8-K has to be filed. Each type of activity is identified by an item. For instance, Item 1.01 pertains to Entry into a Material Definitive Agreement. Of the different items for which Form 8-K is filed, our analysis is restricted to Item 2.02, which concerns Results of Operations and Financial Condition. This particular filing has the Earnings Press Release present in the Form 8-K as an exhibit. Prior to August 2004, Form 8-K had a different classification for the items. During this period, the Earnings Press Release would be present in Form 8-K identified by Item 12 (Results of Operations and Financial Condition) or Item 7 (Financial Statements and Exhibits).

There are following three key steps in identifying, downloading and parsing Earnings Press Releases:

We download all Earnings Press Release Data from SEC Edgar website using a three step process.

- **Creating a database for SEC Filings**: This step involves downloading index file of all historical filings on the SEC Edgar website. The index file is a quarterly file organized by Central Identifier Key (CIK), Date of Filing, Form Type, Company Name and a unique extension to locate the particular filings. This information is saved in a text file and is updated on a daily basis. Below is a snapshot of the first few filings of this file for first quarter of 2013. All index files are present on SEC Edgar's ftp website and can be accessed anonymously.

Fig 1 Index file of SEC Filings

```
Description:           Master Index of EDGAR Dissemination Feed
Last Data Received:    March 31, 2013
Comments:              webmaster@sec.gov
Anonymous FTP:         ftp://ftp.sec.gov/edgar/



CIK|Company Name|Form Type|Date Filed|Filename
---------------------------------------------------------------------------
----------------
1000032|BINCH JAMES G|4|2013-03-04
|edgar/data/1000032/0001181431-13-014069.txt
1000045|NICHOLAS FINANCIAL INC|10-Q|2013-02-08
|edgar/data/1000045/0001193125-13-046001.txt
1000045|NICHOLAS FINANCIAL INC|4|2013-01-09
|edgar/data/1000045/0001000045-13-000001.txt
1000045|NICHOLAS FINANCIAL INC|8-K|2013-01-30
|edgar/data/1000045/0001193125-13-029629.txt
1000045|NICHOLAS FINANCIAL INC|8-K|2013-02-19
|edgar/data/1000045/0001193125-13-064817.txt
1000045|NICHOLAS FINANCIAL INC|8-K|2013-03-20
|edgar/data/1000045/0001193125-13-117362.txt
1000045|NICHOLAS FINANCIAL INC|SC 13G|2013-02-14
|edgar/data/1000045/0000846087-13-000024.txt
```

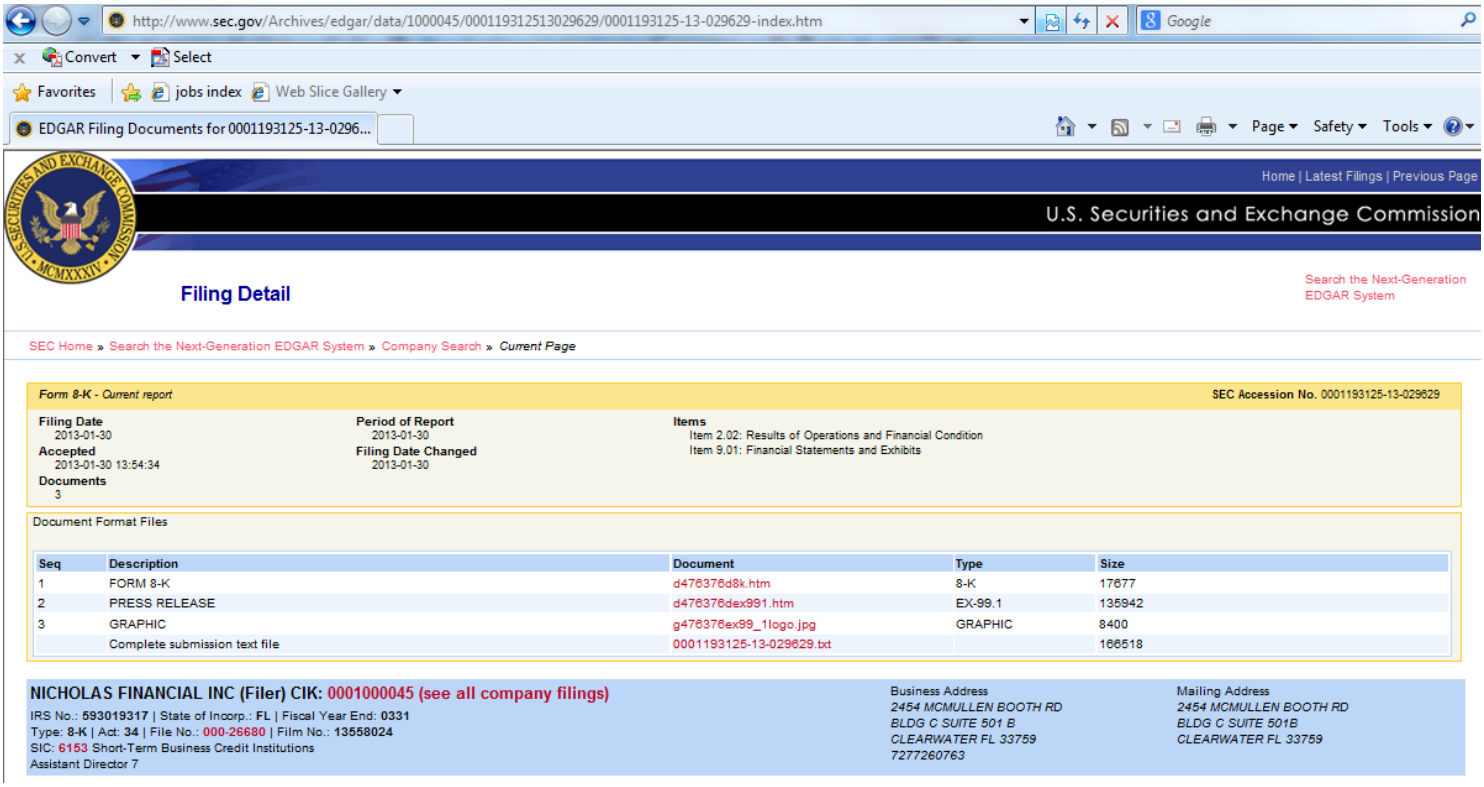
Source: SEC Edgar, July 2014.

- **Downloading Form Page**: The next step involves downloading only those Form 8-K's which are for the Items discussed earlier (i.e. Item 2.02, Item 7 or Item 12). This information about the item is present on the Form Page of the filing. The form page is the index page which provides other information of when a particular form is filed, what are the different attachments in the filing, period for which the filing is for, SEC Accession Number etc., For all Form 8-Ks we download the Form Pages. The Form Page is identified by a unique html address. This address is derived from the filename for the filing. For example, in the screenshot for Index file provided earlier, the Form Page for the 8-K filing for Nicholas Financial Inc on 30th of January 2013 is as below. The part of web link highlighted in bold is the file name associated with the filing.

  *http://www.sec.gov/Archives/edgar/data/1000045/**000119312513029629/0001193125-13-029629**-index.htm*

  The below is the screenshot of the Form Page for this particular filing. As can be seen from below screenshot this filing is for Results of Operations and Financial Condition and Financial Statement and Exhibits. This particular filing should thus contain the Earnings Press Release (Ex 99.1).

Fig 2 Form Page of SEC Filing



Source: SEC Edgar, July 2014.

- **Downloading Earnings Press Release**: Having identified the set of Form 8-K's containing earnings press releases, we finally download all Earnings Press Releases for the Russell 3000 Universe. The Earnings Press Release is usually a short document which provides a brief summary and commentary of earnings. There is no specific format for the earnings press release. Fig 3 shows the screenshot for the earnings of Nicholas Financial Inc. Earnings Press Releases are in standard html format which we process to obtain information in plain text.

Fig 3 Earnings Press Release

EX-99.1 2 d476376dex991.htm PRESS RELEASE

Exhibit 99.1

NICHOLAS

Nicholas Financial, Inc.
Corporate Headquarters

2454 McMullen-Booth Rd.
Building C, Suite 501
Clearwater, FL 33759

Contact: Ralph Finkenbrink
Sr. Vice President, CFO
Ph # - 727-726-0763

NASDAQ: NICK
Web site: www.nicholasfinancial.com

FOR IMMEDIATE RELEASE

Nicholas Financial Reports
3rd Quarter Results

January 30, 2013 – Clearwater, Florida – Nicholas Financial, Inc. (NASDAQ: NICK) announced that for the three months ended December 31, 2012 net earnings decreased 15% to $4,566,000 as compared to $5,363,000 for the three months ended December 31, 2011. Per share diluted net earnings decreased 18% to $0.37 as compared to $0.45 for the three months ended December 31, 2011. Revenue increased 4% to $17,889,000 for the three months ended December 31, 2012 as compared to $17,140,000 for the three months ended December 31, 2011.

For the nine months ended December 31, 2012, net earnings decreased 7% to $15,101,000 as compared to $16,186,000 for the nine months ended December 31, 2011. Per share diluted net earnings decreased 9% to $1.24 as compared to $1.35 for the nine months ended December 31, 2011. Revenue increased 4% to $52,940,000 for the nine months ended December 31, 2012 as compared to $50,985,000 for the nine months ended December 31, 2011.

"During the three months ended December 31, 2012, our results were affected by an increase in the net charge-off rate and an after-tax charge of $747,000 or $0.06 per share, which is related to a 5% withholding tax associated with the one-time special cash dividend of $2.00 per share paid in December 2012. The withholding is required under the Canada-United States Income Tax Convention. While competition remains fierce, we are committed to maintaining our conservative underwriting principles. We will continue to develop additional markets and expect to continue our branch network expansion", stated Peter L. Vosotas, Chairman and CEO.

Nicholas Financial, Inc. is one of the largest publically traded specialty consumer finance companies in North America. The Company operates branch locations in both the Southeastern and the Midwestern states. The Company has approximately 12,100,000 shares of common stock outstanding. For an index of Nicholas Financial, Inc. news releases and public filings please visit our web site at www.nicholasfinancial.com.

Except for the historical information contained herein, the matters discussed in this news release include forward-looking statements that involve risks and uncertainties including general economic conditions, access to bank financing, and other risks detailed from time to time in the Company's filings and reports with the Securities and Exchange Commission including the Company's Annual Report on Form 10-K for the year ended March 31, 2012. Such statements are based on the beliefs of the Company's management as well as assumptions made by and information currently available to Company management. Actual events or results may differ materially. All forward looking statements and cautionary statements included in this document are made as of the date hereby based on information available to the Company as of the date hereof, and the Company assumes no obligation to update any forward looking statement or cautionary statement.

More

Nicholas Financial, Inc.
Condensed Consolidated Statements of Income
(Unaudited, Dollars in Thousands, Except Share and Per Share Amounts)

Source: SEC Edgar, July 2014.

Coverage for Earnings Press Release

Coverage of Earnings Press Releases has been above 90% for R1000 Universe and above 85% for R2000 Universe.

As discussed earlier, prior to the Sarbanes-Oxley Act in 2002, coverage of Earnings Press Releases was limited to those firms who had volunteered to file an Earnings Press Release. We note improved coverage following the introduction of the regulation; hence for analysis we choose 2004 as the starting period. Similarly, we index all earnings press releases with the respective IBES Surprise Score associated with the earnings. We encounter two issues in our coverage for Earnings Press Releases:

1. For some stocks with minimal analyst coverage the IBES score is missing. This problem is relevant for small cap stocks only. However this is still limited within 10% of the overall sample.
2. Lack of availability of Earnings Press Releases for certain stocks. However, this is limited to less than 2% of overall sample of stocks and is more common prior to 2004.

Overall, we obtain a 90%+ coverage in R1000 and 85%+ coverage in R2000 stocks for the entire sample period (see Fig 4 and Fig 5).

Fig 4 Earnings Press Release Coverage (R1000)

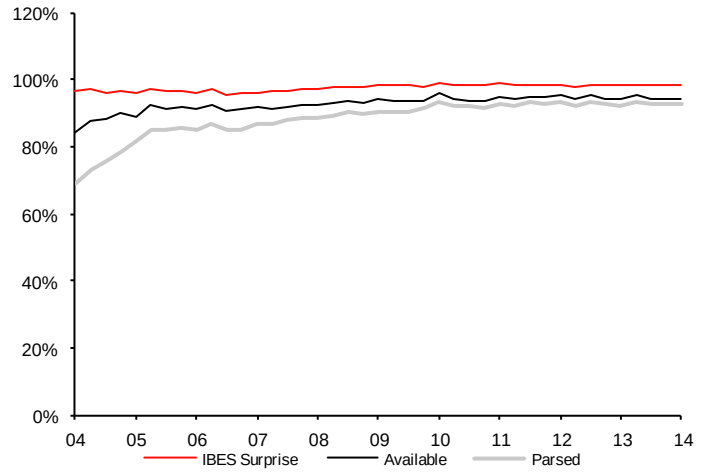
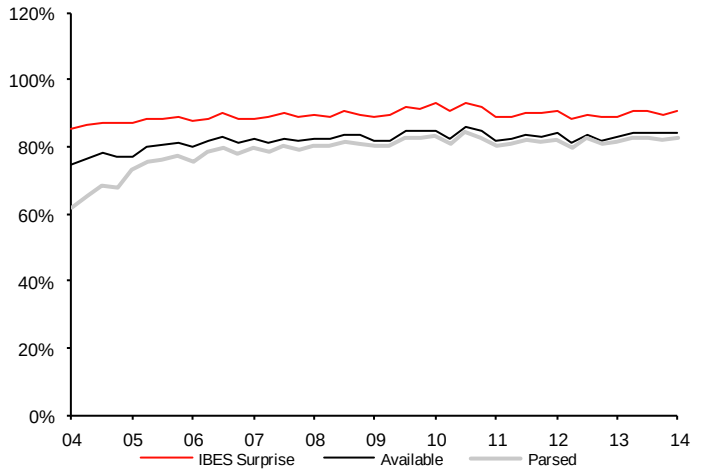


Fig 5 Earnings Press Release Coverage (R2000)



Source: SEC Edgar, Russell, IBES, Compustat , Macquarie Capital (USA), July 2014.

Computing Tone

We use Diction, Loughran & McDonald and LIWC dictionaries to obtain Positive Tone and Negative Tone.

Using our earlier work on Quantamentals: Positively Persuasive, we employ the following dictionaries to compute Positive Tone and Negative Tone.

- Loughran and McDonald (LM)
- Net Optimism using Diction
- Positive Emotion and Negative emotion using LIWC

We note that LM dictionary derives a list of positive and negative words that have greater relevance in a financial sense. The remaining two dictionaries are also commonly used in academic research. Through all dictionaries we compute list of positive words and negative words. We then scale them total words to obtain the tone.

$$Positive\ Tone = \frac{Total\ Count\ of\ Positive\ Words}{Total\ Words} \quad (1)$$

$$Negative\ Tone = \frac{Total\ Count\ of\ Negative\ Words}{Total\ Words} \quad (2)$$

$$Net\ Tone = Positive\ Tone - Negative\ Tone \quad (3)$$

Tone Trend in Earnings Press Release

Positive and Negative Tone have remained fairly stable through time.

From Fig 6 through Fig 17, we see that positive tone and negative tone has remained fairly stable through time using the different word lists. During the peak of the Financial Crisis (2008-09) we do observe a pick-up in negative tone in all dictionaries.

Fig 6 Positive Tone with LM Dictionary (R1000)

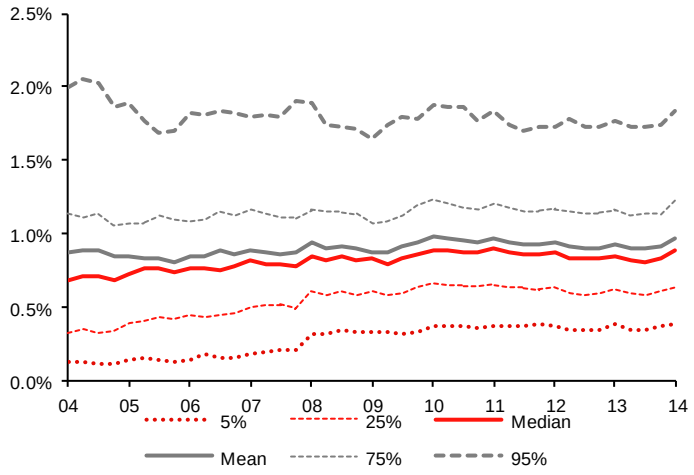


Fig 7 Negative Tone with LM Dictionary (R1000)

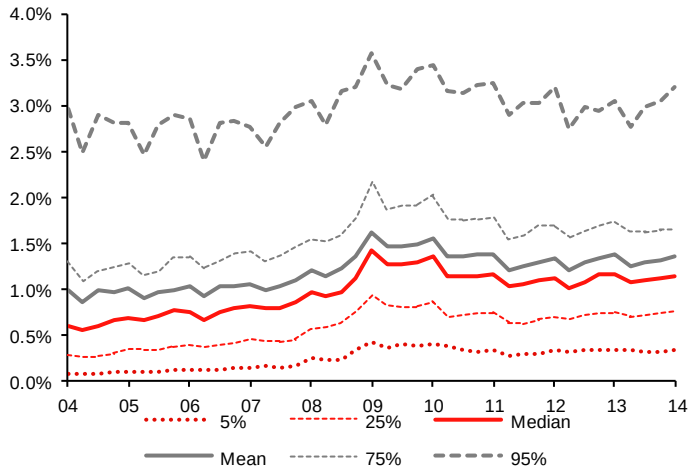


Fig 8 Positive Tone with Diction Dictionary (R1000)

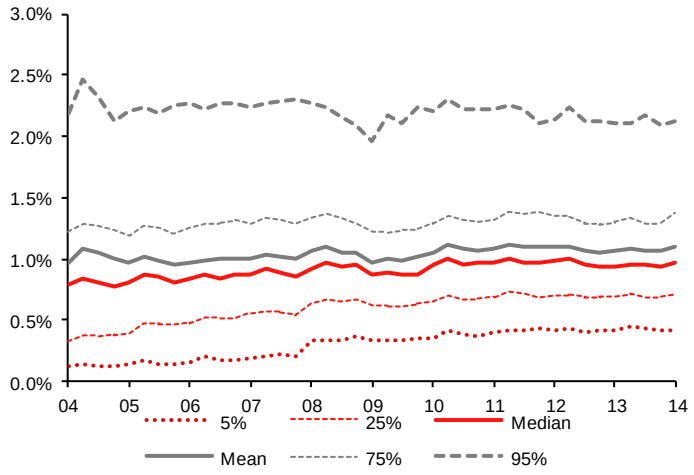


Fig 9 Negative Tone with Diction Dictionary (R1000)

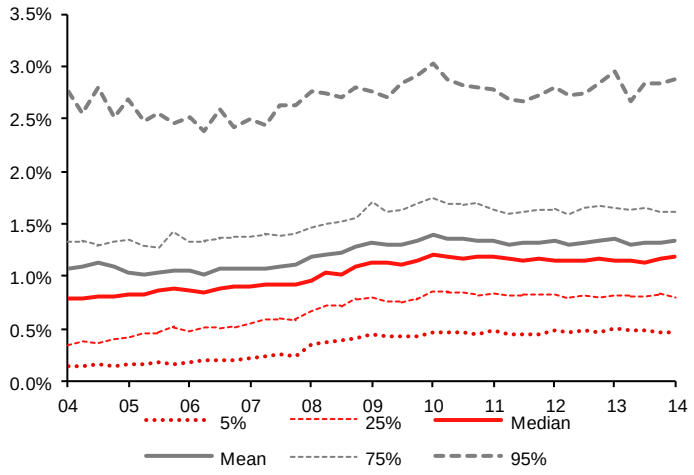


Fig 10 Positive Tone with LIWC Dictionary (R1000)

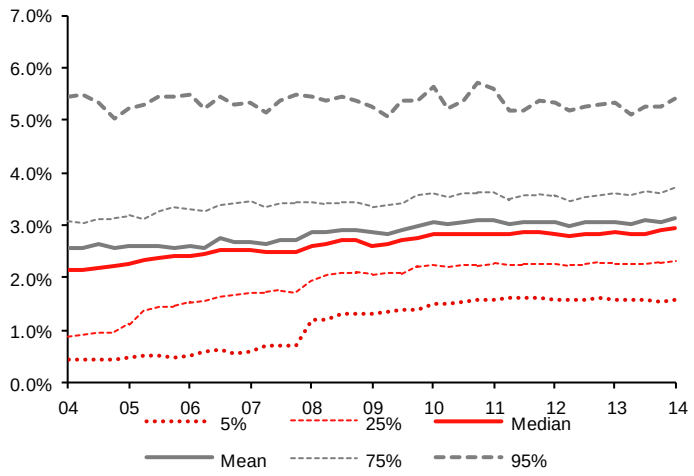
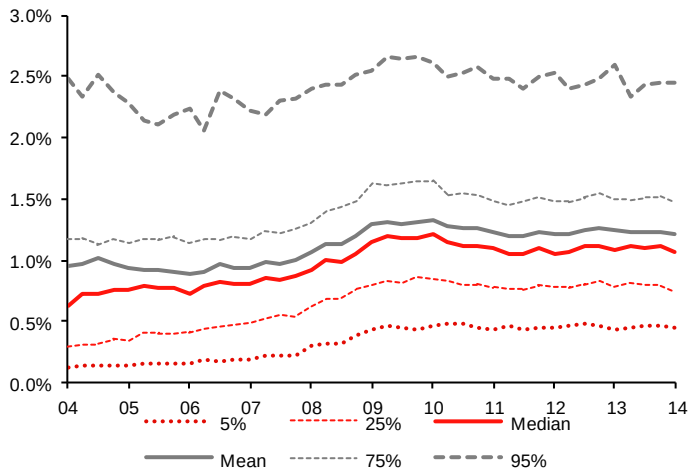


Fig 11 Negative Tone with LIWC Dictionary (R1000)



Source: SEC Edgar, Russell, IBES, Compustat , Macquarie Capital (USA), July 2014.

Fig 12 Positive Tone with LM Dictionary (R2000)

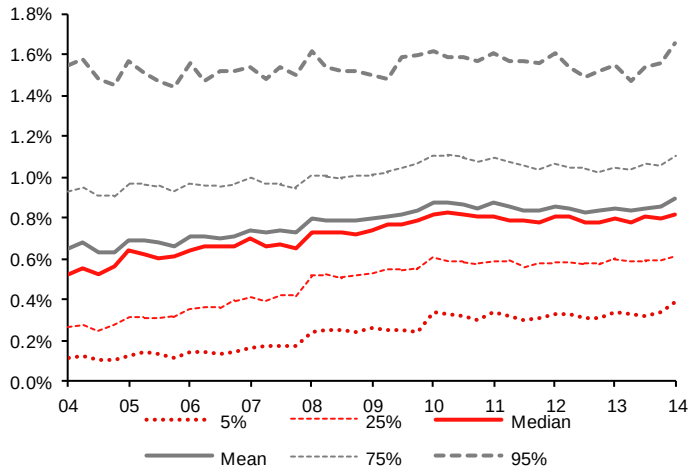


Fig 13 Negative Tone with LM Dictionary (R2000)

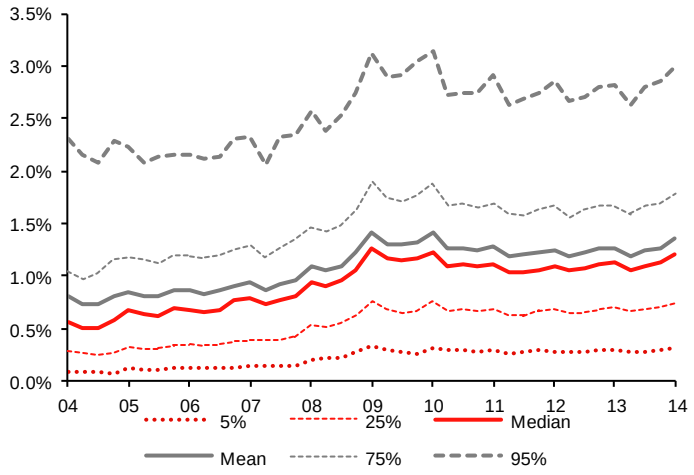


Fig 14 Positive Tone with Diction Dictionary (R2000)

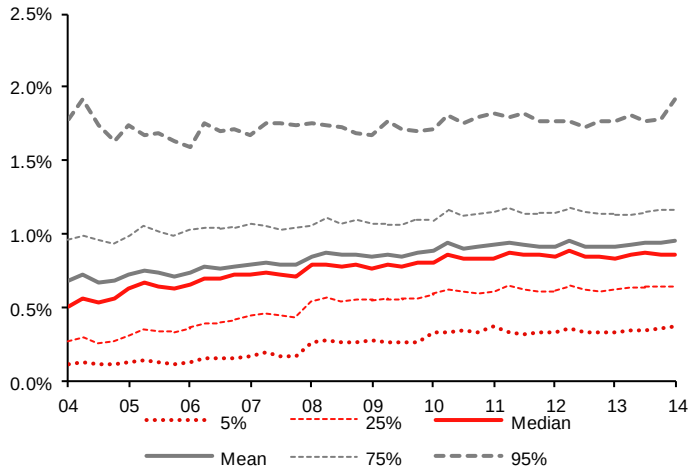


Fig 15 Negative Tone with Diction Dictionary (R2000)

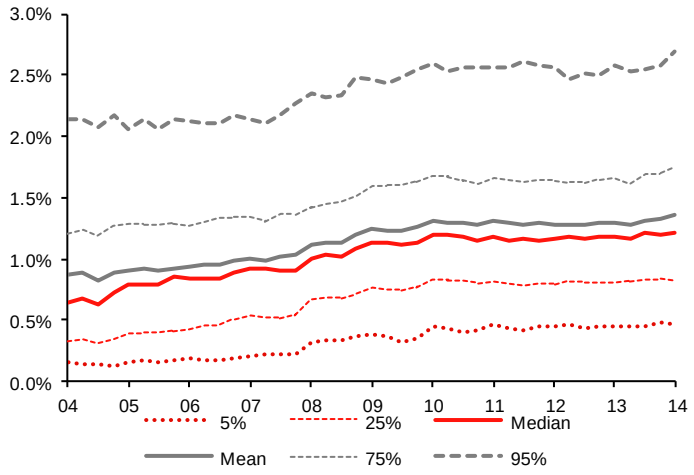


Fig 16 Positive Tone with LIWC Dictionary (R2000)

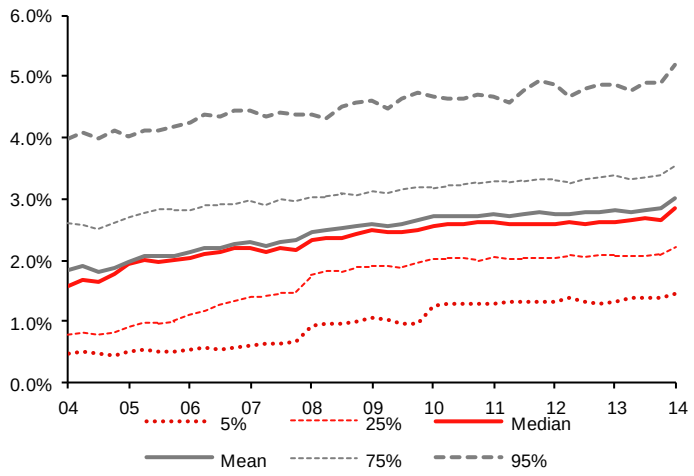
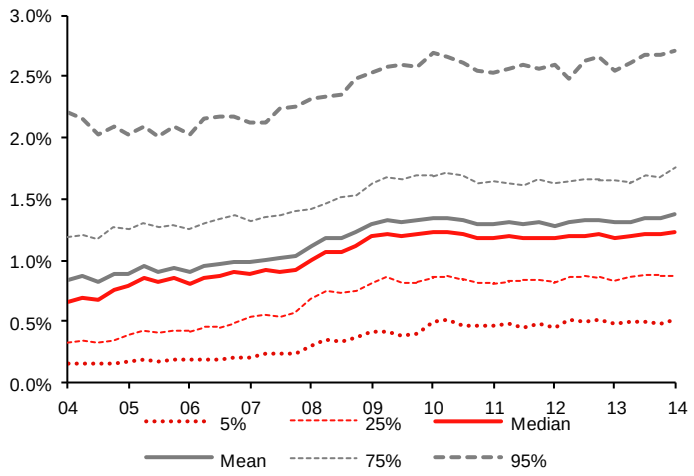


Fig 17 Negative Tone with LIWC Dictionary (R2000)



Source: SEC Edgar, Russell, IBES, Compustat, Macquarie Capital (USA), July 2014.

On Average Financials tend to have Negative Tone. Negative and Positive tones are comparable across different dictionaries.

Sector Tone in Earnings Press Release

Fig 18 and Fig 19 provide coverage of Positive Tone by Sector for each word list and Fig 20 and Fig 21 provide coverage of Negative Tone by Sector for each word list. We observe that negative tone remains comparable across word lists. Similarly for positive tone with LM and Diction remains comparable. A higher positive tone with LIWC does not impact our calculation as we using a relative ranking methodology (as explained later) for tone.

Fig 18 Positive Tone by Sector (R1000)

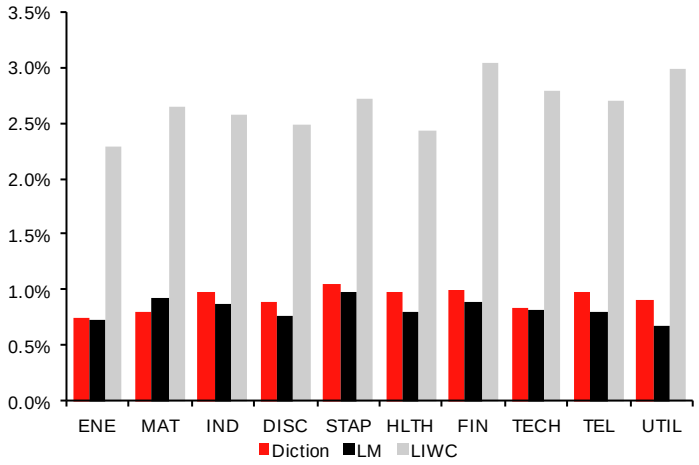


Fig 19 Positive Tone by Sector (R2000)

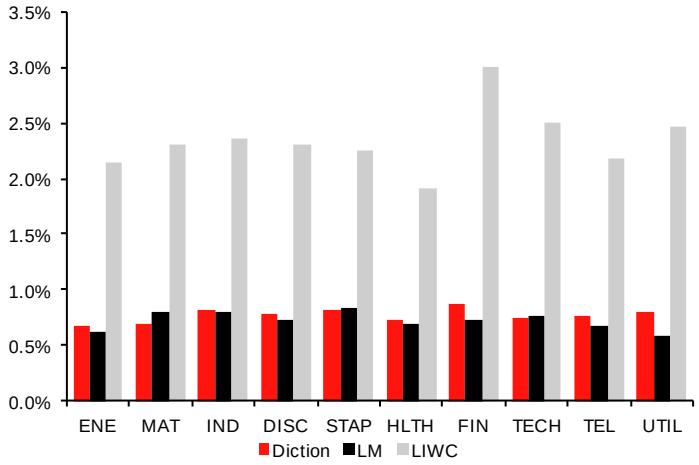


Fig 20 Negative Tone by Sector (R1000)

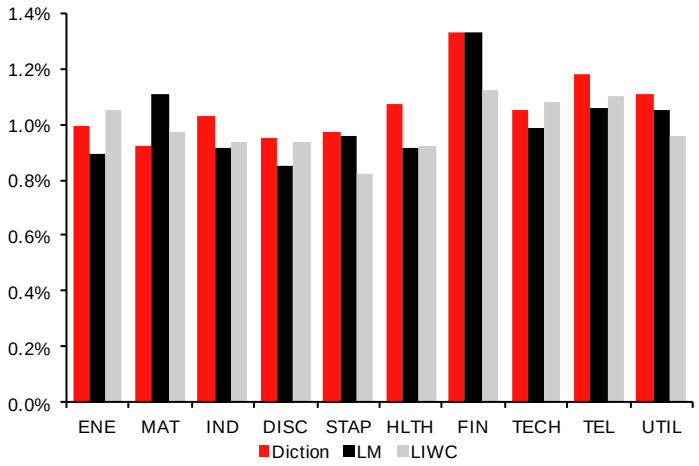
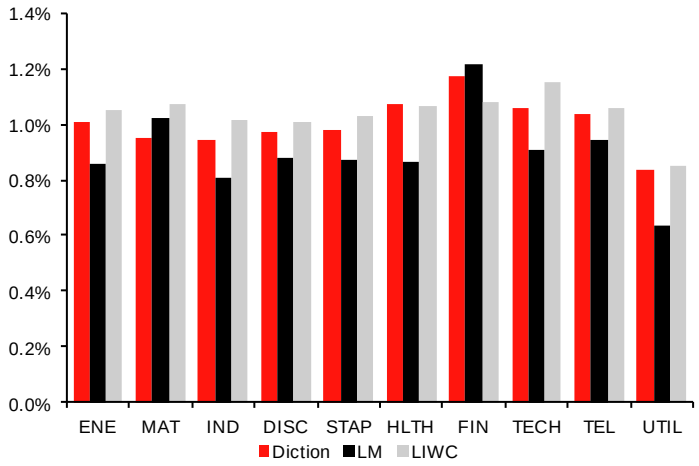


Fig 21 Negative Tone by Sector (R2000)



Source: SEC Edgar, Russell, IBES, Compustat , Macquarie Capital (USA), July 2014.

Autocorrelation between tone measures is high and decays with time.

Autocorrelation in Tone in Earnings Press Releases

Since Tone will try to capture management perspective about current and future performance, we expect do not expect huge changes in Tone over successive quarters. We evaluate autocorrelation over one period and the prior corresponding period (i.e. four quarters before). Overall we find higher persistence of Tone through time. The persistence of tone decreases through time, i.e. one period autocorrelation measures are usually higher than same period autocorrelation measures.

Fig 22 Tone Autocorrelation (One Period) (R1000)

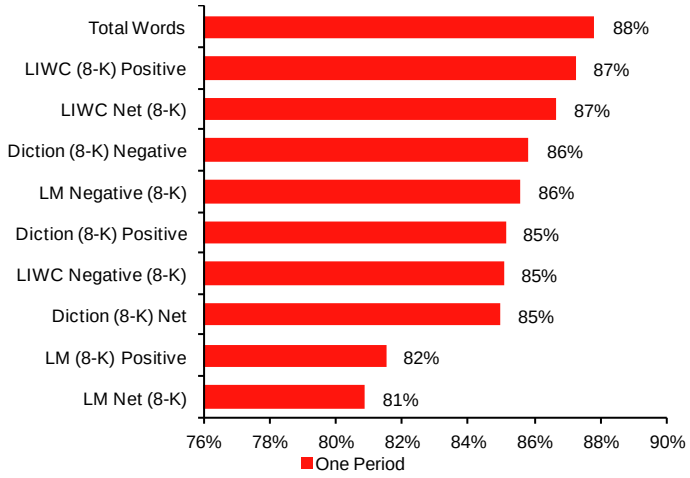


Fig 23 Tone Autocorrelation (One Period) (R2000)

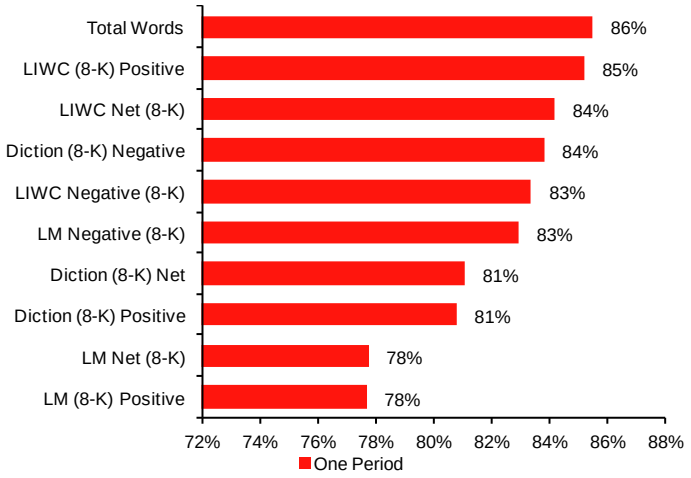


Fig 24 Tone Autocorrelation (Same Period) (R1000)

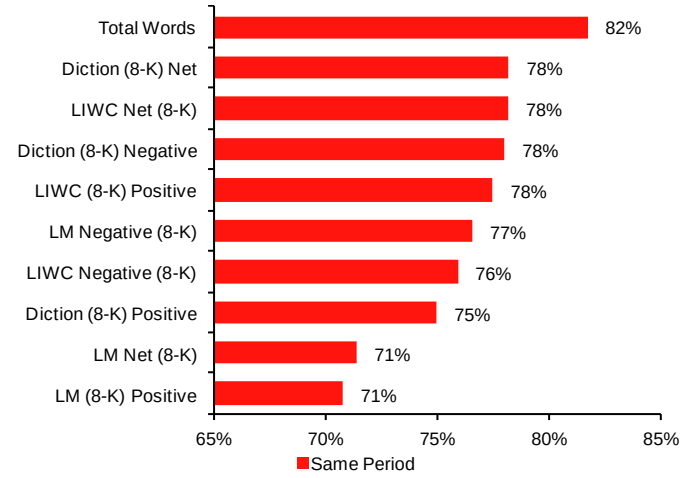
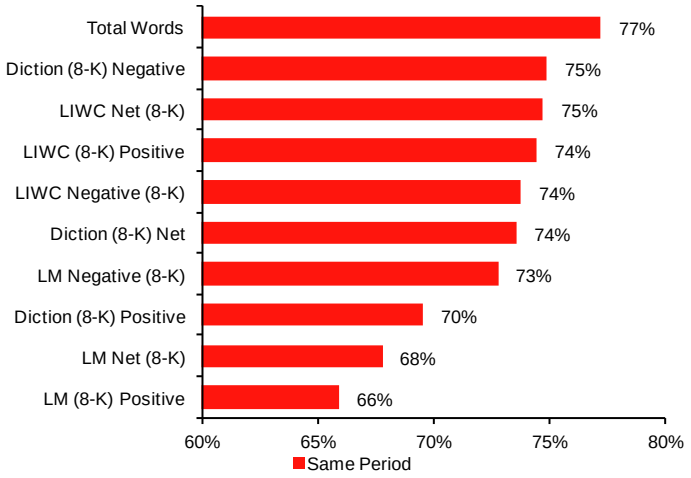


Fig 25 Tone Autocorrelation (Same Period) (R2000)



Source: SEC Edgar, Russell, IBES, Compustat , Macquarie Capital (USA), July 2014.

Positive Tone and Negative Tone remain highly correlated Positive Tone and Negative Tone respectively from other dictionaries.

Cross Correlation in Tone in Earnings Press Release

We use the different tone measure to evaluate cross correlation among them as shown in Fig 26 and Fig 27. Similar to our expectation, we observe higher cross correlation between positive tones using the three word lists. We similarly see higher correlation between negative tone measures using the three word lists. The total length of document on average is more negatively correlated with positive tone than negative tone. This is likely to happen as management may try to highlight unnecessary details in order to mitigate poorer earnings while positive earnings would mostly be precise.

Fig 26 Cross Correlation Tone (R1000)

Level	Total Words	Diction Positive (8-K)	LM Positive (8-k)	LIWC Positive (8-K)	Diction Negative (8-K)	LM Negative (8-K)	LIWC Negative (8-K)	Diction Net (8-K)	LM Net (8-K)	LIWC Net (8-K)
Total Words	100.00%	-12.51%	-17.86%	-22.30%	-10.04%	1.48%	-22.58%	-2.96%	-11.53%	-11.88%
Diction Positive (8-K)	-12.51%	100.00%	59.74%	55.49%	25.21%	27.57%	24.12%	55.02%	6.92%	49.52%
LM Positive (8-k)	-17.86%	59.74%	100.00%	57.98%	33.44%	37.69%	35.50%	18.71%	17.87%	40.59%
LIWC Positive (8-K)	-22.30%	55.49%	57.98%	100.00%	44.57%	44.52%	44.66%	7.11%	-10.68%	81.59%
Diction Negative (8-K)	-10.04%	25.21%	33.44%	44.57%	100.00%	72.24%	84.39%	-61.55%	-52.62%	0.64%
LM Negative (8-K)	1.48%	27.57%	37.69%	44.52%	72.24%	100.00%	69.35%	-37.29%	-80.05%	8.44%
LIWC Negative (8-K)	-22.58%	24.12%	35.50%	44.66%	84.39%	69.35%	100.00%	-49.80%	-47.61%	-7.65%
Diction Net (8-K)	-2.96%	55.02%	18.71%	7.11%	-61.55%	-37.29%	-49.80%	100.00%	50.96%	39.27%
LM Net (8-K)	-11.53%	6.92%	17.87%	-10.68%	-52.62%	-80.05%	-47.61%	50.96%	100.00%	16.39%
LIWC Net (8-K)	-11.88%	49.52%	40.59%	81.59%	0.64%	8.44%	-7.65%	39.27%	16.39%	100.00%

Fig 27 Cross Correlation Tone (R2000)

Level	Total Words	Diction Positive (8-K)	LM Positive (8-k)	LIWC Positive (8-K)	Diction Negative (8-K)	LM Negative (8-K)	LIWC Negative (8-K)	Diction Net (8-K)	LM Net (8-K)	LIWC Net (8-K)
Total Words	100.00%	-21.41%	-26.61%	-22.80%	-24.39%	-10.08%	-34.63%	8.17%	-5.28%	-4.64%
Diction Positive (8-K)	-21.41%	100.00%	60.21%	60.97%	27.21%	25.80%	30.64%	41.45%	7.37%	50.33%
LM Positive (8-k)	-26.61%	60.21%	100.00%	57.00%	34.20%	35.29%	40.01%	9.36%	18.80%	37.97%
LIWC Positive (8-K)	-22.80%	60.97%	57.00%	100.00%	46.22%	47.42%	47.92%	3.05%	-14.60%	78.20%
Diction Negative (8-K)	-24.39%	27.21%	34.20%	46.22%	100.00%	78.33%	88.27%	-72.84%	-59.41%	-5.77%
LM Negative (8-K)	-10.08%	25.80%	35.29%	47.42%	78.33%	100.00%	76.12%	-50.62%	-83.33%	4.84%
LIWC Negative (8-K)	-34.63%	30.64%	40.01%	47.92%	88.27%	76.12%	100.00%	-59.95%	-55.12%	-9.99%
Diction Net (8-K)	8.17%	41.45%	9.36%	3.05%	-72.84%	-50.62%	-59.95%	100.00%	57.89%	41.57%
LM Net (8-K)	-5.28%	7.37%	18.80%	-14.60%	-59.41%	-83.33%	-55.12%	57.89%	100.00%	18.77%
LIWC Net (8-K)	-4.64%	50.33%	37.97%	78.20%	-5.77%	4.84%	-9.99%	41.57%	18.77%	100.00%

Source: SEC Edgar, Russell, IBES, Compustat, Macquarie Capital (USA), July 2014.

Correlation with Earnings Surprise

Positive Tone is highly correlated with positive earnings surprise and Negative Tone is highly correlated with negative earnings surprise.

The management commentary is more likely to be aligned with earnings. Earnings which beat are most likely to be bullish, while earnings which have missed will mostly be pessimistic. We use the different tone measure to evaluate correlation with earnings surprise. Similar to our expectation, from Fig 28 and Fig 29, we see positive tone is positively correlated with positive earnings surprise and negative tone is negatively correlated with negative earnings surprise. We further see that net tone measures are more positively correlated than positive tone measures, as they capture more information than positive tone. From Fig 30 and Fig 31, we see slight decrease in the correlation when using changes in tone in one period. Correlation with earnings surprise further decreases when we use changes in tone measured over same period (not shown here).

Fig 28 Levels in Tone Correlation with Earnings Surprise(R1000)

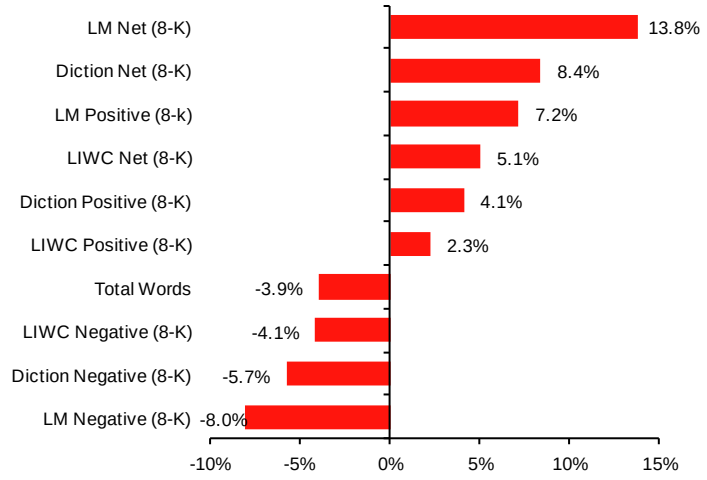


Fig 29 Levels in Tone Correlation with Earnings Surprise (R2000)

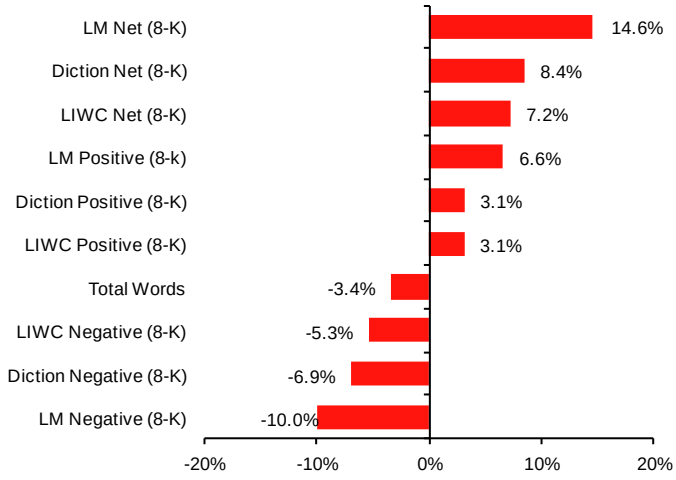


Fig 30 Changes in Tone (One Period) Correlation with Earnings Surprise (R1000)

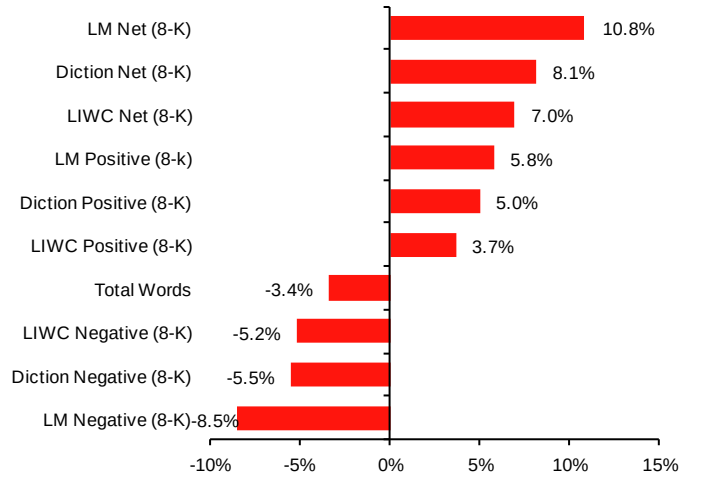
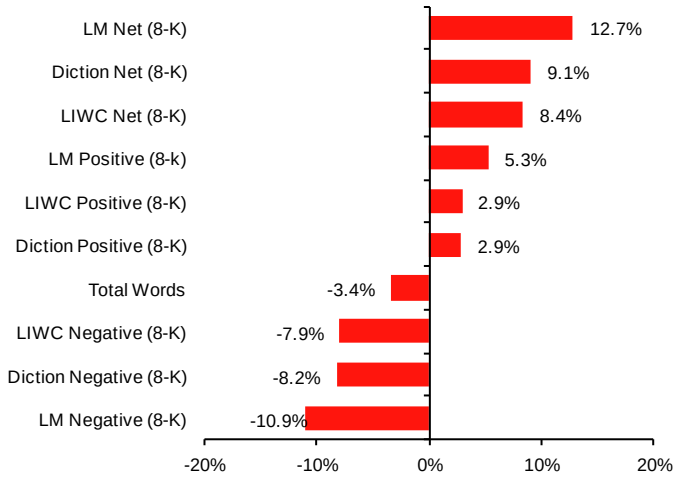


Fig 31 Changes in Tone (One Period) Correlation with Earnings Surprise (R2000)



Source: SEC Edgar, Russell, IBES, Compustat , Macquarie Capital (USA), July 2014.

Tone Correlation with Stock Attributes

Since tone measures management's assessment of current and future earnings, we believe tone can be related to different firms' attributes. We use the different measures of levels in tone to evaluate correlation with stock attributes. A profitable firm is likely to be more upbeat about its performance. Consequently we see higher correlation between Net Tone measure for each word list with profitability metrics such as ROA, ROE, Net Margin etc. The management of a firm which is positively covered by analysts or which has had steady momentum are also likely to be upbeat about the firm's performance. We observe positive correlation between tone and analyst sentiment and momentum. Finally, we see larger companies or riskier companies are likely to be negatively associated with tone.

Fig 32 Levels in Tone Correlation with Stock Attributes(R1000)

Stock Attribute	Style	Total Words	Diction Positive	LM Positive	LIWC Positive	Diction Negative	ML Negative	LIWC Negative	Diction Net	ML Net	LIWC Net
P/E	VALUE	-11.57%	-8.66%	-2.64%	-4.42%	5.79%	-2.43%	2.76%	-11.51%	-2.15%	-5.70%
P/B	VALUE	10.43%	-11.94%	-3.13%	-1.64%	19.63%	25.75%	11.29%	-26.53%	-26.44%	-9.82%
P/Sales	VALUE	10.56%	-7.44%	-0.35%	-2.11%	2.63%	11.04%	5.05%	-9.63%	-10.92%	-8.33%
P/CF	VALUE	-10.10%	0.06%	-0.34%	-5.58%	-2.33%	-12.09%	-3.84%	3.37%	10.25%	-2.48%
Past five-year EPS growth	GROWTH	4.25%	2.10%	-3.89%	-3.99%	-28.67%	-31.61%	-24.34%	23.75%	29.67%	11.37%
Past five-year CF growth	GROWTH	3.86%	4.41%	-0.76%	-0.74%	-22.62%	-27.77%	-20.76%	21.13%	27.68%	13.17%
YoY Trailing 4Q EPS growth	GROWTH	-1.97%	-2.20%	-5.94%	-3.86%	-15.21%	-20.75%	-17.07%	10.95%	16.92%	6.73%
YoY Trailing 4Q Dividend growth	GROWTH	-8.14%	7.54%	-1.24%	-9.47%	-22.34%	-28.69%	-15.39%	20.30%	24.45%	-2.42%
Total return from 9m ago	MOMENTUM	-3.98%	4.13%	2.78%	1.12%	-7.62%	-10.63%	-7.04%	10.17%	12.54%	4.60%
Total Return Momentum 12M-1M	MOMENTUM	-0.64%	5.72%	2.07%	1.38%	-9.88%	-15.10%	-11.24%	12.32%	16.01%	6.74%
Price relative to 9M Avg	MOMENTUM	-6.34%	4.12%	3.31%	-0.19%	-7.49%	-9.40%	-5.03%	9.78%	11.41%	3.46%
IBES FY1 Average EPS 3M Revision	ANALYST	-6.52%	5.57%	1.48%	0.84%	-7.36%	-14.51%	-7.59%	11.14%	15.76%	6.07%
IBES FY1 EPS Up/Down Ratio 3M	ANALYST	-0.48%	4.99%	1.50%	1.59%	-13.60%	-17.32%	-13.01%	15.51%	18.99%	8.94%
IBES FY1 Average CPS 3M Revision	ANALYST	-3.36%	3.12%	-3.70%	-0.91%	-9.81%	-13.79%	-9.07%	10.40%	11.69%	3.17%
Earnings stability coefficent of determination	QUALITY	-10.95%	-1.07%	-8.65%	-9.06%	-18.40%	-27.86%	-16.38%	14.65%	20.21%	2.77%
Coefficient of Variation FY1 EPS	QUALITY	-6.32%	12.39%	2.40%	3.20%	-23.98%	-21.42%	-14.78%	30.56%	25.76%	15.78%
Interest coverage	QUALITY	-5.81%	15.59%	-1.15%	-7.19%	-30.30%	-32.36%	-23.13%	36.45%	32.33%	7.11%
Accruals/total assets annual	QUALITY	-15.20%	-3.38%	3.70%	7.02%	7.22%	4.20%	8.11%	-7.42%	-5.37%	3.45%
Trailing ROE	PROFITABILITY	-4.36%	22.22%	8.19%	8.22%	-29.63%	-27.06%	-17.69%	44.70%	33.15%	21.30%
Trailing ROA	PROFITABILITY	-15.02%	13.94%	4.52%	-4.25%	-29.81%	-32.74%	-16.55%	37.18%	35.16%	8.55%
Net margin	PROFITABILITY	-11.40%	15.78%	2.99%	10.01%	-14.46%	-18.47%	-13.39%	26.45%	21.09%	21.30%
Beta 5 Year	RISK	3.73%	-15.83%	-4.06%	-1.62%	17.28%	7.97%	8.48%	-27.19%	-12.87%	-7.49%
# of days to cover short	LIQUIDITY	0.39%	4.48%	0.43%	5.65%	-0.24%	0.80%	-1.13%	4.45%	0.21%	5.99%
Market cap (float) log	LIQUIDITY	6.24%	-24.62%	-8.54%	-14.76%	11.41%	18.55%	9.32%	-31.64%	-24.62%	-24.34%

Source: SEC Edgar, Russell, IBES, Compustat , Macquarie Capital (USA), July 2014.

Fig 33 Levels in Tone Correlation with Stock Attributes(R2000)

Stock Attribute	Style	Total Words	Diction Positive	LM Positive	LIWC Positive	Diction Negative	ML Negative	LIWC Negative	Diction Net	ML Net	LIWC Net
P/E	VALUE	8.14%	5.60%	3.30%	0.77%	7.65%	4.76%	1.68%	-2.71%	-3.73%	-2.58%
P/B	VALUE	-0.94%	-6.37%	-1.44%	4.76%	10.24%	18.61%	11.56%	-15.53%	-20.43%	-3.27%
P/Sales	VALUE	0.88%	1.56%	9.11%	9.03%	15.75%	27.19%	19.43%	-15.38%	-25.54%	-4.74%
P/CF	VALUE	1.41%	6.16%	2.02%	1.87%	1.07%	-5.88%	-0.85%	3.88%	6.86%	0.53%
Past five-year EPS growth	GROWTH	-2.31%	1.99%	0.12%	-2.61%	-17.27%	-19.31%	-13.87%	18.61%	21.08%	8.95%
Past five-year CF growth	GROWTH	-1.32%	1.68%	1.14%	-1.92%	-16.49%	-19.31%	-13.72%	17.15%	21.06%	9.90%
YoY Trailing 4Q EPS growth	GROWTH	-3.34%	6.23%	4.48%	1.75%	-6.71%	-11.02%	-6.45%	11.67%	14.70%	7.43%
YoY Trailing 4Q Dividend growth	GROWTH	-6.36%	7.41%	-0.14%	5.38%	-5.19%	-8.03%	-1.81%	11.02%	10.17%	6.97%
Total return from 9m ago	MOMENTUM	0.80%	4.67%	5.29%	0.94%	-11.45%	-12.84%	-11.98%	14.44%	16.62%	10.43%
Total Return Momentum 12M-1M	MOMENTUM	0.09%	4.41%	6.30%	0.61%	-12.56%	-14.13%	-13.39%	15.18%	18.08%	11.27%
Price relative to 9M Avg	MOMENTUM	-0.19%	5.34%	4.84%	1.79%	-9.49%	-10.55%	-9.02%	13.56%	14.36%	9.57%
IBES FY1 Average EPS 3M Revision	ANALYST	-6.48%	2.88%	5.28%	1.99%	-4.80%	-8.61%	-4.38%	7.06%	11.50%	4.92%
IBES FY1 EPS Up/Down Ratio 3M	ANALYST	-1.53%	3.90%	4.49%	3.01%	-7.25%	-9.88%	-6.53%	9.65%	12.24%	8.06%
IBES FY1 Average CPS 3M Revision	ANALYST	-2.36%	-1.38%	-0.04%	-1.58%	-7.47%	-8.85%	-6.72%	4.21%	9.15%	2.35%
Earnings stability coefficent of determination	QUALITY	-4.60%	4.11%	0.56%	0.36%	-5.70%	-8.86%	-3.23%	10.00%	9.04%	2.45%
Coefficient of Variation FY1 EPS	QUALITY	1.01%	9.25%	-1.65%	3.54%	-23.27%	-24.39%	-20.29%	29.44%	25.36%	19.91%
Interest coverage	QUALITY	-10.57%	2.71%	-6.34%	-4.63%	-35.94%	-39.91%	-26.86%	40.37%	40.13%	17.89%
Accruals/total assets annual	QUALITY	6.33%	0.35%	5.16%	3.85%	13.01%	19.01%	11.04%	-12.44%	-17.41%	-5.62%
Trailing ROE	PROFITABILITY	-5.77%	6.47%	-0.45%	-0.98%	-35.04%	-34.81%	-28.43%	39.84%	37.71%	22.47%
Trailing ROA	PROFITABILITY	-10.81%	3.11%	-3.89%	-6.07%	-40.75%	-42.20%	-33.04%	43.62%	44.32%	21.17%
Net margin	PROFITABILITY	-5.90%	0.73%	-6.39%	-4.01%	-39.24%	-40.89%	-34.90%	38.93%	41.01%	24.03%
Beta 5 Year	RISK	4.62%	-0.97%	5.00%	8.50%	20.24%	17.87%	18.71%	-21.68%	-16.16%	-4.77%
# of days to cover short	LIQUIDITY	4.38%	-0.99%	-1.20%	5.19%	-0.75%	-0.55%	-0.55%	0.23%	-0.52%	4.60%
Market cap (float) log	LIQUIDITY	-4.54%	-7.81%	-7.37%	-9.63%	14.26%	7.73%	8.90%	-19.17%	-13.59%	-18.47%

Source: SEC Edgar, Russell, IBES, Compustat, Macquarie Capital (USA), July 2014.

Earnings Surprises: An Event Study

Empirical research shows that companies that beat investor expectations outperform the market whilst those missing consensus numbers struggle over the coming quarters. In this section we firstly analyse how the earnings surprise effect, a measure of hard information, has played out in the US. Secondly we want to test whether the soft information - measured through various tone measures defined earlier - can provide additional insights into earnings of reported numbers. Lastly we analyse the efficacy of combining both the hard and soft information to improve the earnings surprise strategies.

Empirical literature defines earnings surprise as the difference between actual EPS and expected EPS scaled by the dispersion of consensus estimates, which they refer to as the standardized unexpected earnings (SUE) score. For our study we define earnings surprise as the difference between actual EPS and expected EPS scaled by the absolute of expected EPS, which we call the 'Beat/Miss" score. Both the measures encapsulate the "hard" information in earnings and are widely utilised within academic and investor community.

Earnings Ranking Methodology

In order to form a uniform comparison basis, we rank each earnings announcement based on the recent one year period (i.e. four quarters). Thus, for each stock percent beat/miss is compared to the percent beat/miss of all stocks in the past one year in that universe (We note that our results remain unchanged with SUE Score).

By using a one year rolling history we standardize abnormal net tone measure and traditional earnings measure through time.

Similarly for net tone measures we first obtain abnormal tone by eliminating effect of earnings surprise and thereafter ranking the residual. We obtain the residual using the following regression

$$Tone_{i,t} = \alpha + \beta_{i,t} Percent\ Beat/\ Miss\ _{i,t} + \epsilon_{i,t} \qquad (4)$$

In the above equation, at each point in time we use a one-year look-back period for determining the residual (i.e. four quarters), which are linearly ranked (Our results are not affected by a longer look-back period). Thus, for R1000 universe we expect ~4000 events and for R2000 universe ~8000 events in the regression at any given point-in-time.

Our methodology enables us to compare earnings throughout our sample period by removing any systemic effect. For example, stocks in a period with higher proportion of percent beat/miss or abnormal tone can be compared with stocks in other periods which may not have a similarly disproportionate number of higher percent beat/miss or abnormal tone. From Fig 34 and Fig 35 we see varying proportion of abnormal net tone using the LM Dictionary through time. Fig 36 and Fig 37 show a fairly uniform coverage with the ranking methodology for net abnormal tone.

Fig 34 Quintile Coverage without Ranking Methodology for Net Abnormal Tone using LM (R1000)

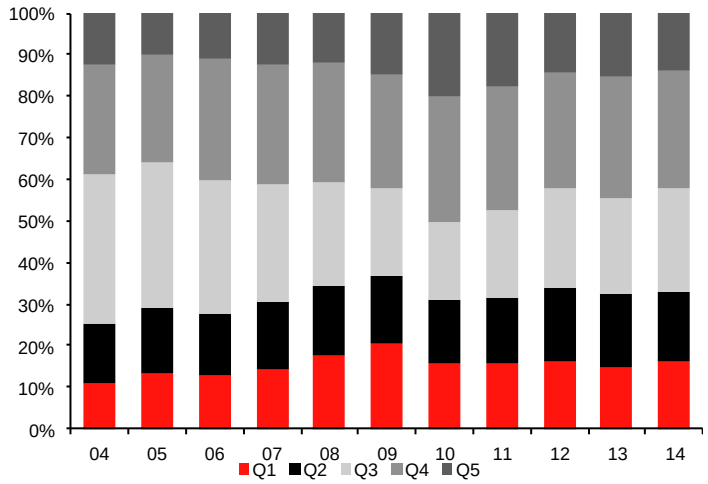


Fig 35 Quintile Coverage without Ranking Methodology for Net Abnormal Tone using LM (R2000)

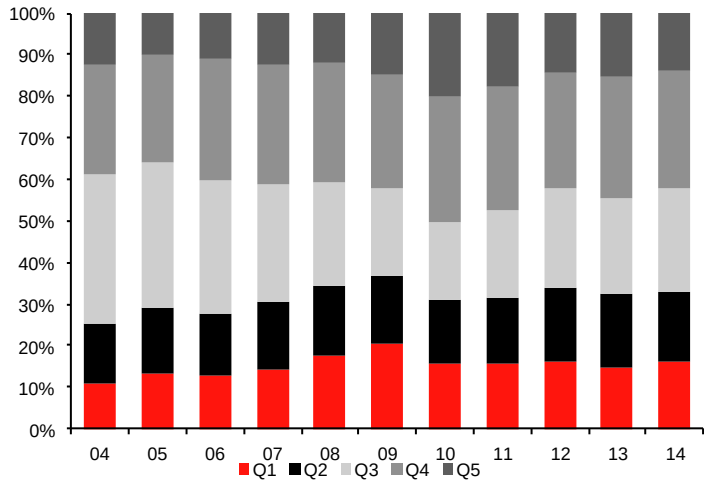


Fig 36 Quintile Coverage with Ranking Methodology for Net Abnormal Tone using LM (R1000)

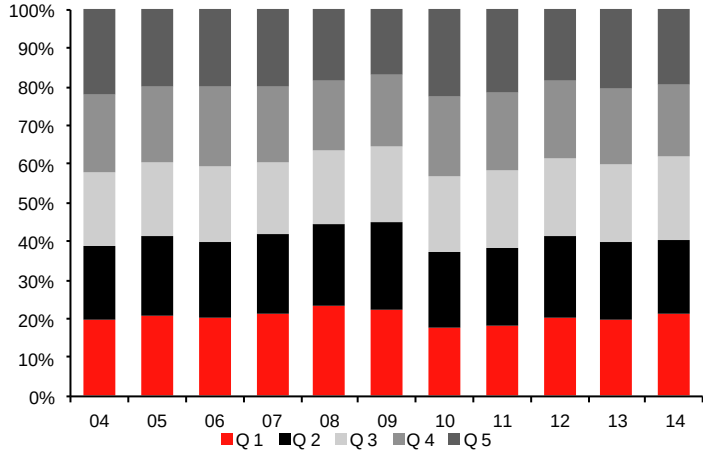
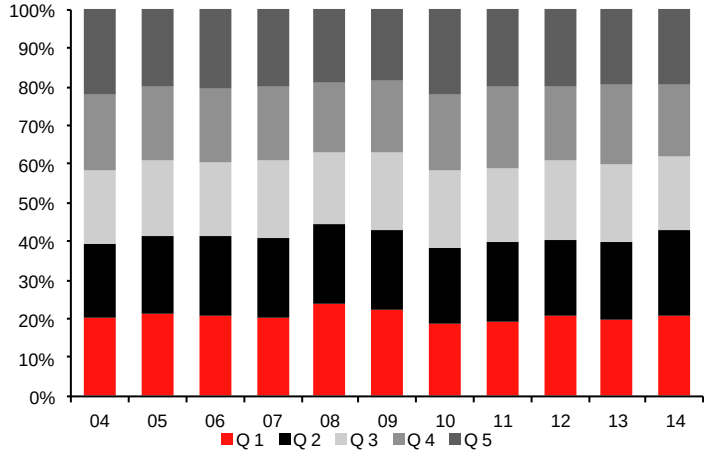


Fig 37 Quintile Coverage with Ranking Methodology for Net Abnormal Tone using LM (R2000)



Source: SEC Edgar, Russell, IBES, Compustat, Macquarie Capital (USA), July 2014.

Earnings Effect with Percent Beat/Miss

Good earnings outperform poorer earnings by 0.88% and 1.92% in the R1000 and R2000 Universes respectively over a three-month period.

We perform an event study surrounding quarterly earnings announcement using the percent beat/miss signal. To avoid issues relating to overlapping events, we compute the buy-and-hold returns from day 2 to day 60. Lastly, we compute excess returns as stock return less equal weighted index returns.

Prior academic research shows that companies which beat (miss) consensus expectations out (under) perform, which is confirmed by our analysis (see Fig 38 to Fig 41). For example, from Fig 40 and Fig 41 we see that stocks beating expectations on average outperform those missing by 0.88% and 1.92% within the R1000 and R2000 universes over a 60-day window post earnings announcement. We also observe asymmetry between positive and negative surprises within large-caps, but lesser so within small-caps. Moreover, the earnings surprise effect is more pronounced within small relative to large-caps.

Fig 38 Performance with Percent Beat/Miss (R1000)

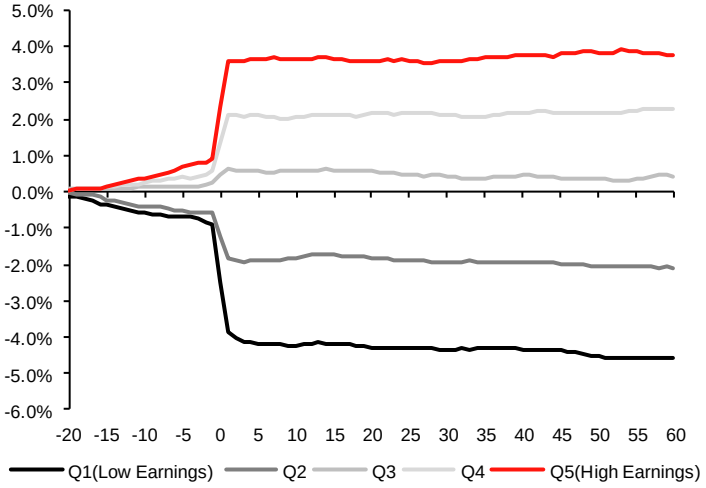


Fig 39 Performance with Percent Beat/Miss (R2000)

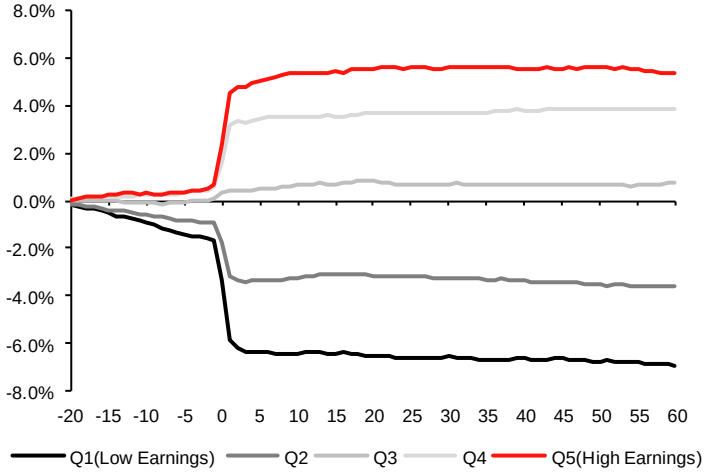


Fig 40 Excess Returns with Percent Beat/Miss (R1000)

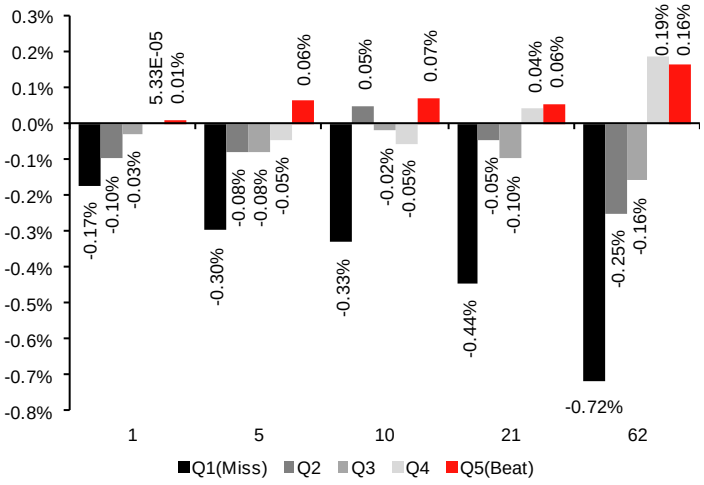
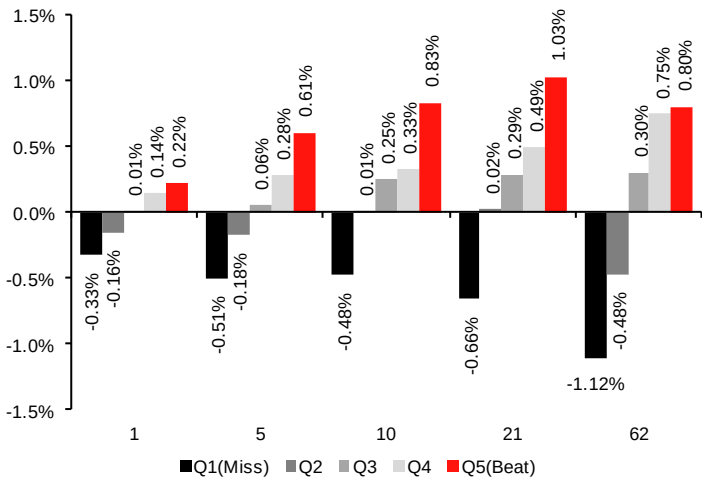


Fig 41 Excess Returns with Percent Beat/Miss (R2000)



Source: Russell, IBES, Compustat, Macquarie Capital (USA), July 2014.

On a quarterly basis, we see similar trend of earnings which have missed underperforming more than earnings which have beaten expectations (Fig 42 and Fig 43**Error! Reference source not found.**). We also see greater underperformance for earnings which have missed in the first quarter. This could be attributed to the greater uncertainty in the first quarter of the fiscal year. On a yearly basis (Fig 44 and Fig 45) earnings which have beaten expectation have mostly outperformed earnings which have missed expectation. On a sector basis (Fig 46 and Fig 47), we see positive earnings in general outperform negative earnings across all sectors.

Fig 42 Quarterly Excess Returns (R1000)

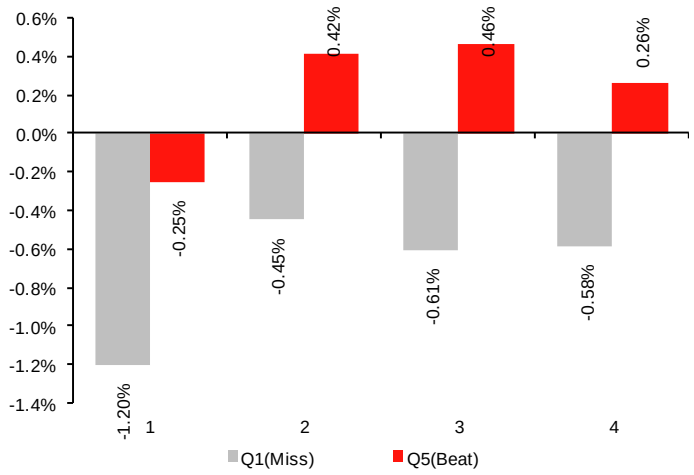


Fig 43 Quarterly Excess Returns (R2000)

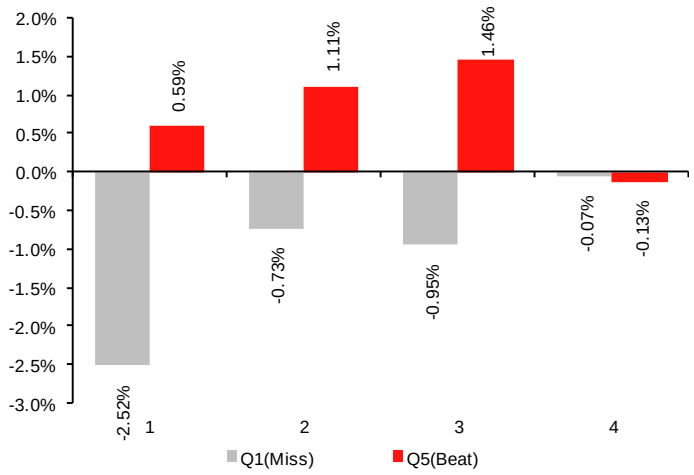


Fig 44 Yearly Excess Returns (R1000)

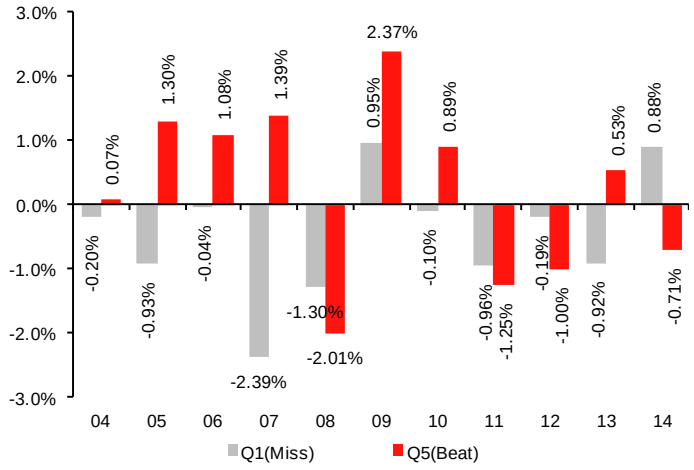


Fig 45 Yearly Excess Returns (R2000)

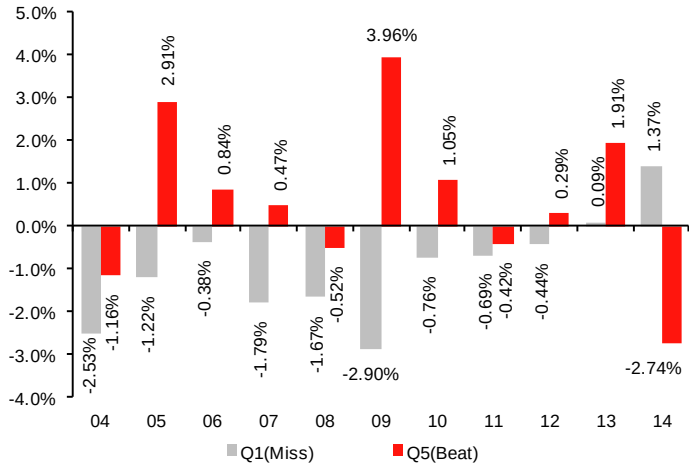


Fig 46 Sector Excess Returns (R1000)

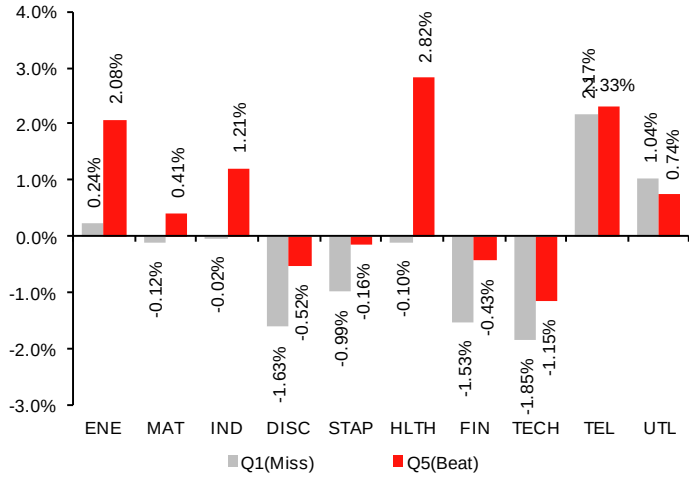
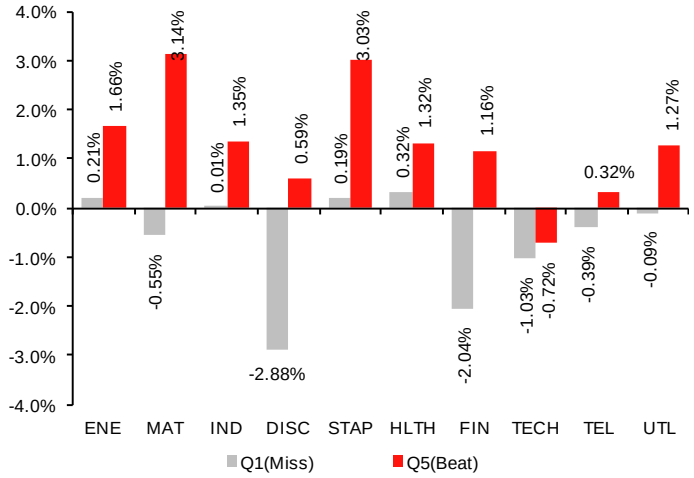


Fig 47 Sector Excess Returns (R2000)



Source: SEC Edgar, Russell, IBES, Compustat, Macquarie Capital (USA), July 2014. Key: ENE = Energy, MAT = Materials, IND = Industrials, DISC = Consumer Discretionary, STAP = Consumer Staples, HLTH = Health Care, TECH = Information Technology, TEL = Telecommunication Services, UTIL = Utilities.

Abnormal Net Positive Tone outperforms Abnormal Net Negative Tone by 1.15% and 1.07% in the R1000 and R2000 Universes respectively over a three-month period.

Earnings Effect with Abnormal Net Tone Measures

We perform a similar event study using the different net tone measures discussed in the previous section. We use abnormal net tone measures as determined by (1) in all of our analysis. From Fig 50 and Fig 51, we see that even after controlling for percent beat/miss, earnings with net positive abnormal tone outperforms earnings with net negative abnormal tone using LM dictionary. Specifically, net abnormal positive tone (Q5) outperforms net abnormal negative tone (Q1) by 1.15% and 1.07% in Russell 1000 and Russell 2000 universes respectively.

We see similar results using Diction and LIWC abnormal net tone measures which are presented in the Appendix. We, however, note that the scale of excess returns is highest for abnormal net tone measures using the LM Dictionary.

Fig 48 Performance with LM Abnormal Net Tone (R1000)

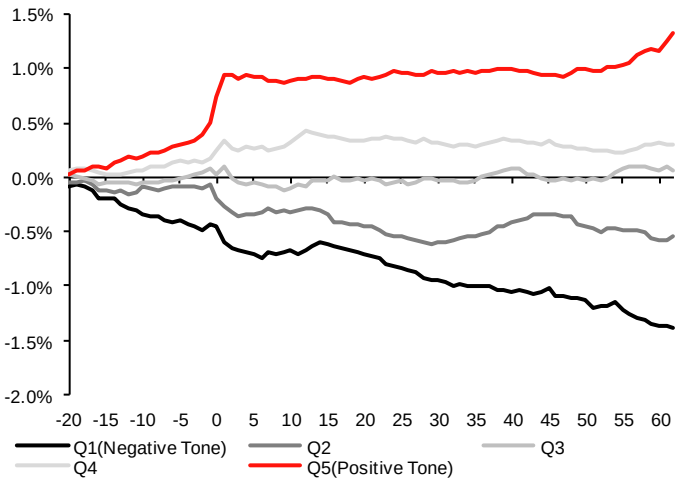


Fig 49 Performance with LM Abnormal Net Tone (R2000)

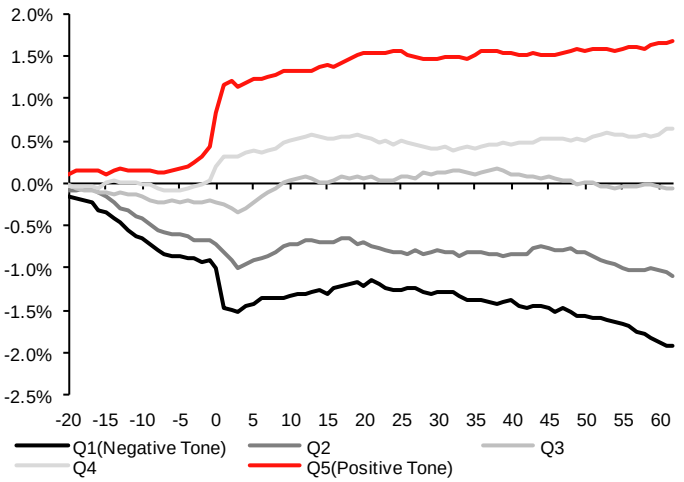


Fig 50 Excess Returns with LM Abnormal Net Tone (R1000)

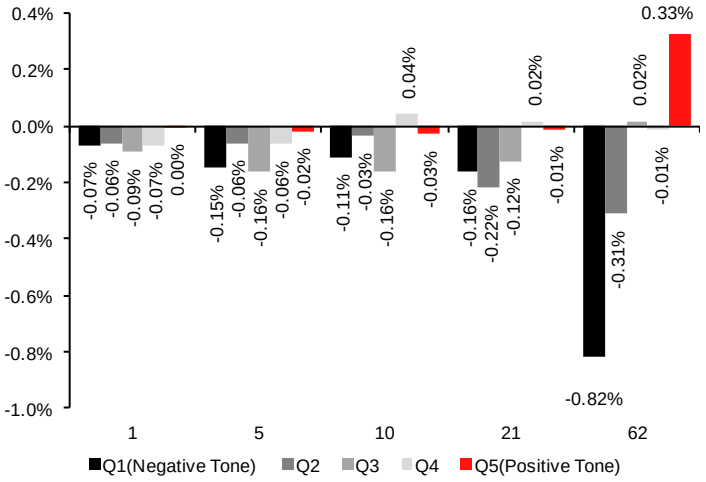
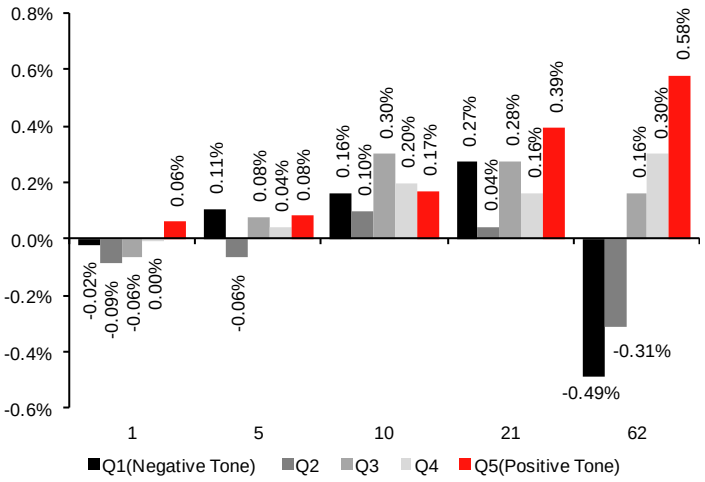


Fig 51 Excess Returns with LM Abnormal Net Tone (R2000)



Source: SEC Edgar, Russell, IBES, Compustat, Macquarie Capital (USA), July 2014.

On a quarterly basis (Fig 52 and Fig 53) we see that positive abnormal net tone outperforms negative abnormal net tone. Similar to earnings surprise, we see higher spread return in quarter 1. On a yearly basis (Fig 54 and Fig 55), we see that positive abnormal net tone in general has outperformed negative abnormal net tone.

Fig 52 Quarterly Excess Returns (R1000)

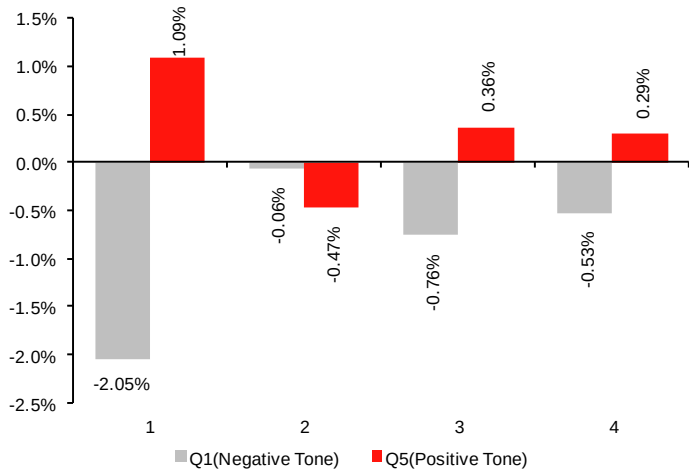


Fig 53 Quarterly Excess Returns (R2000)

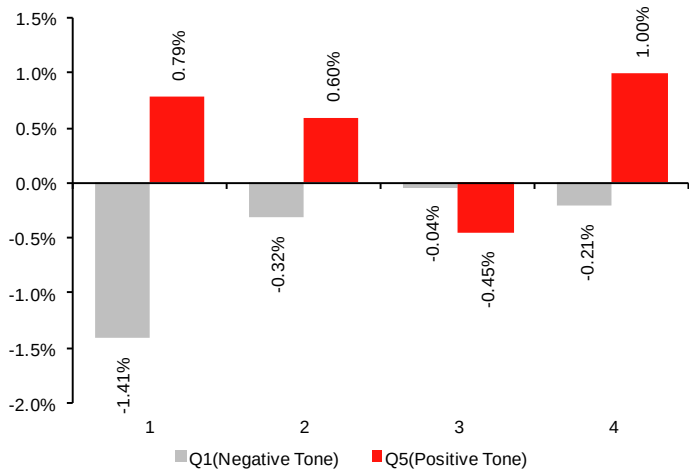


Fig 54 Yearly Excess Returns (R1000)

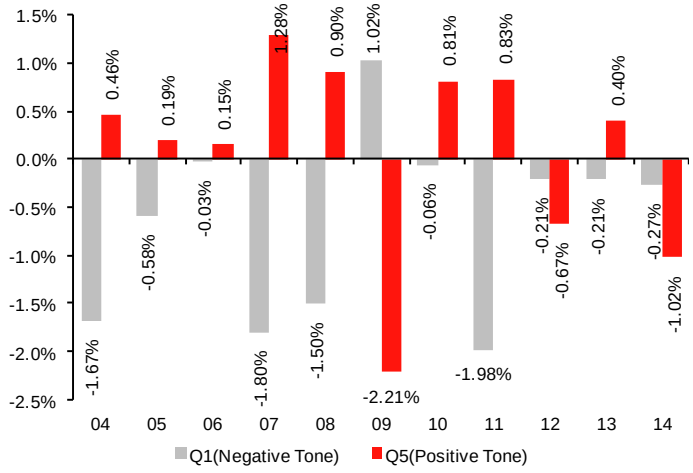


Fig 55 Yearly Excess Returns (R2000)

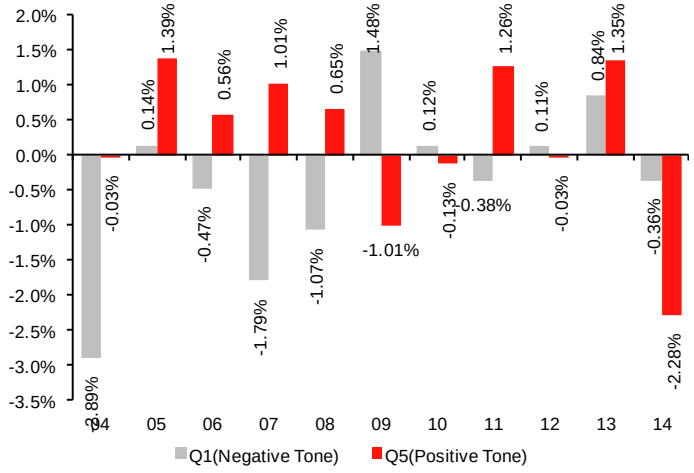


Fig 56 Sector Excess Returns (R1000)

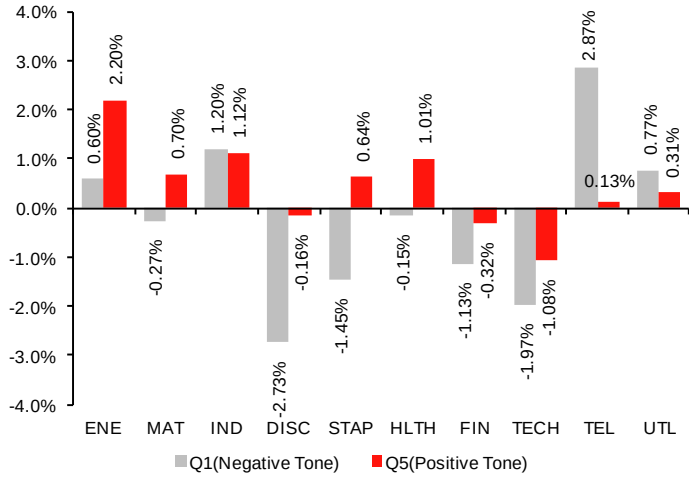
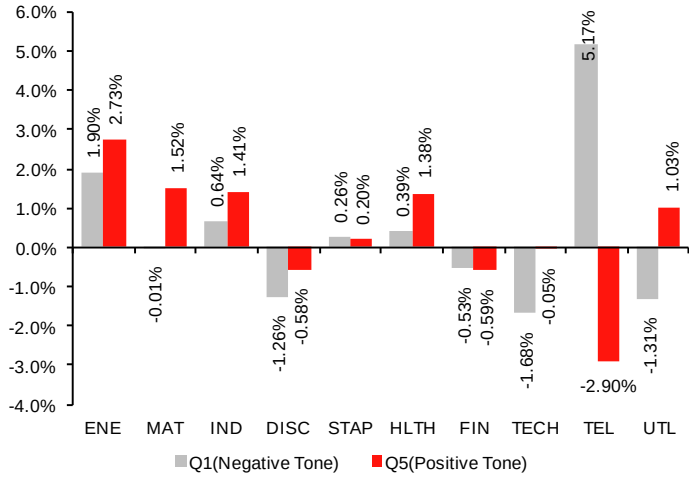


Fig 57 Sector Excess Returns (R2000)



Source: SEC Edgar, Russell, IBES, Compustat, Macquarie Capital (USA), July 2014. Key: R1: Russell 1000 Universe. Key: ENE = Energy, MAT = Materials, IND = Industrials, DISC = Consumer Discretionary, STAP = Consumer Staples, HLTH = Health Care, TECH = Information Technology, TEL = Telecommunication Services, UTIL = Utilities.

Combining Abnormal Net Tone with Percent Beat/Miss

Combining Abnormal Net Tone in Earnings Press Releases with Earnings Surprise can help to identify "Good" and "Bad" earnings.

Having tested the efficacy of abnormal net tone measures on a standalone basis, we now investigate the effect of combining abnormal tone measures with a percent beat/miss factor. Our goal is test whether additional information present in abnormal net tone can be used to further differentiate between "good" and "bad" earnings.

We use abnormal net tone measures using the LM dictionary for our analysis and results using the Diction and LIWC dictionaries are present in appendix. To summarise:

- From Fig 58, Fig 59, Fig 64 and Fig 65, we notice that for most positive and most negative earnings surprises, net positive or negative abnormal tone is associated with greater initial reaction surrounding earnings announcement.
- From Fig 60 and Fig 66, we see that net positive abnormal tone outperforms net negative abnormal tone in the most positive earnings group (Q5) by 1% and 0.42% for the R1000 and R2000 universes respectively.
- From Fig 59 and Fig 65, we see that net negative abnormal tone underperforms net positive abnormal tone in the most negative earnings group (Q1) by 0.48% and 0.98% for the R1000 and R2000 universes respectively.

Abnormal Net Tone in more effective is for Large Cap Stocks compared with Small Cap Stocks.

- Fig 62 and Fig 68, we detail the spread returns possible within each earnings group (Q1 to Q5) based on abnormal net tone measure. We see that on average higher spread returns between positive and negative abnormal net tone measures for stocks with higher and lower earnings surprises.
- Lastly from Fig 63 and Fig 69, we note that the usual spread between most positive and most negative earnings is amplified when using net negative abnormal tone for most negative earnings surprises (Q1) and net positive abnormal tone for most positive earnings surprises (Q5) in both R1000 and R2000.

Our investigation helps to formulate below observations:

- Soft information captured by abnormal net tone provides incremental information
- Abnormal net tone can help to identify "good" and "bad" earnings
- Abnormal net tone measure is more effective towards extreme earnings than average earnings.
- Abnormal Net Tone is more effective in Large Cap Stocks compared with Small Cap Stocks.

Abnormal Net Tone in Earnings Press Releases is more effective towards extreme earnings than average earnings.

Fig 58 Abnormal Net Tone - Most Positive Earnings(R1)

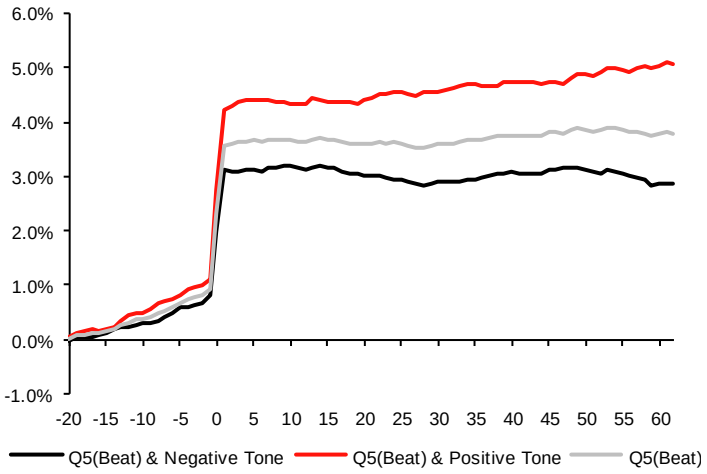


Fig 59 Abnormal Net Tone - Most Negative Earnings(R1)

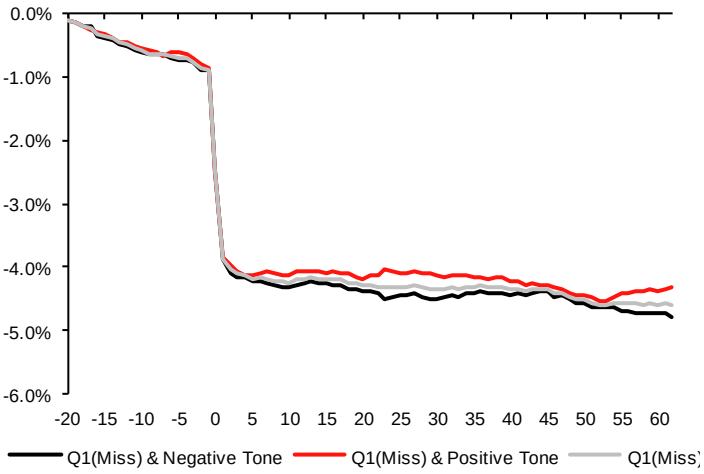


Fig 60 Excess Returns - Most Positive Earnings(R1)

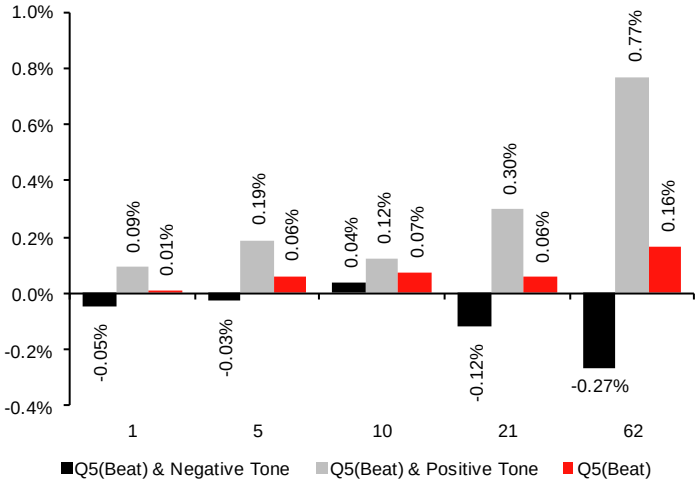


Fig 61 Excess Returns - Most Negative Earnings(R1)

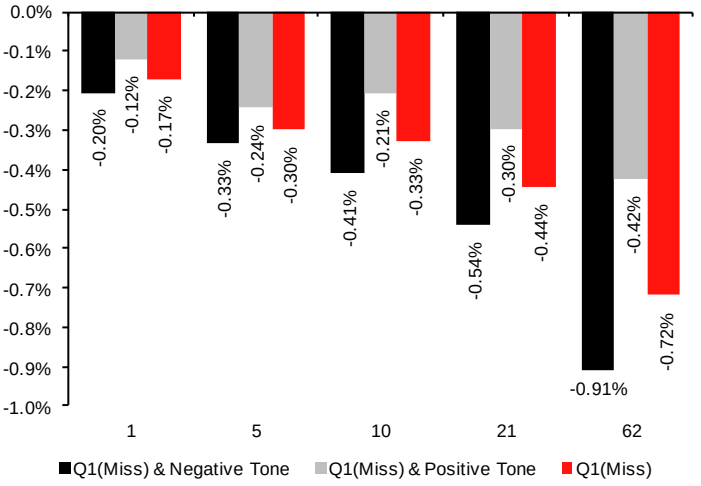


Fig 62 Spread Returns with Tone in All Earnings(R1)

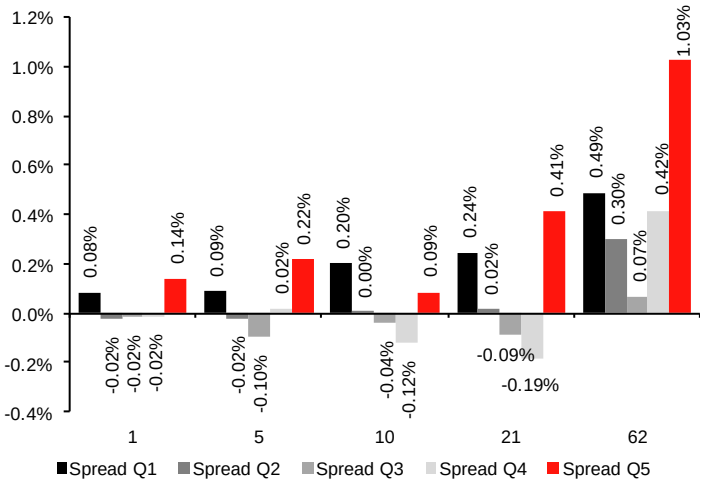
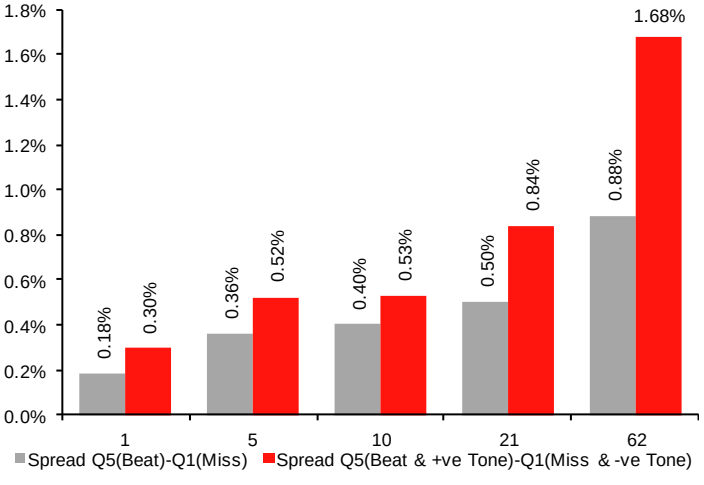


Fig 63 Spread Returns with Tone Comparison(R1)



Source: SEC Edgar, Russell, IBES, Compustat , Macquarie Capital (USA), July 2014. Key: R1: Russell 1000 Universe

Fig 64 Abnormal Net Tone - Most Positive Earnings(R2)

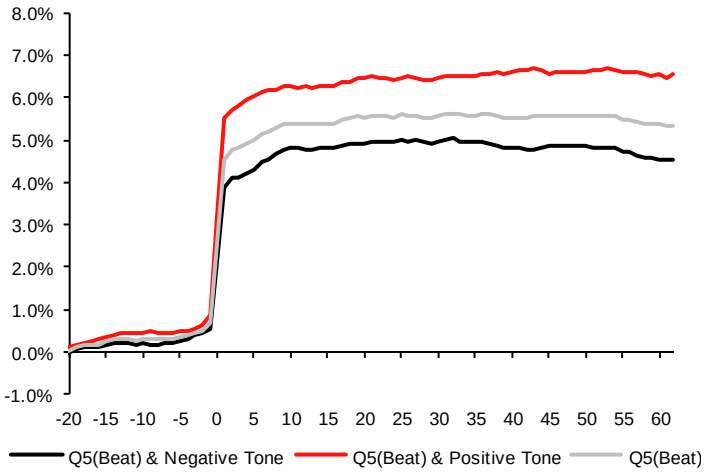


Fig 65 Abnormal Net Tone - Most Negative Earnings(R2)

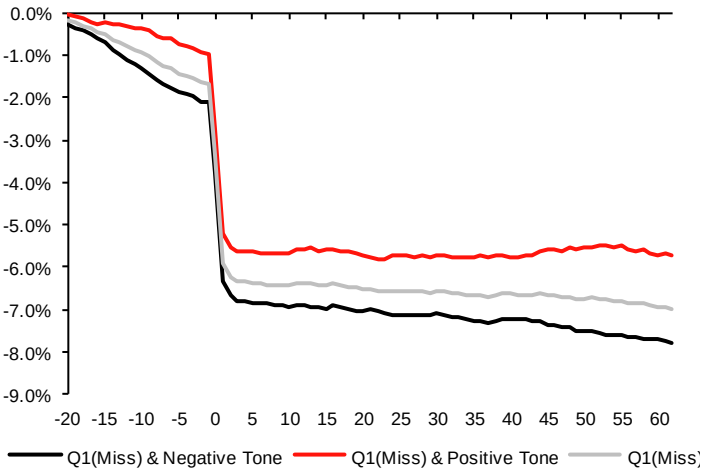


Fig 66 Excess Returns - Most Positive Earnings(R2)

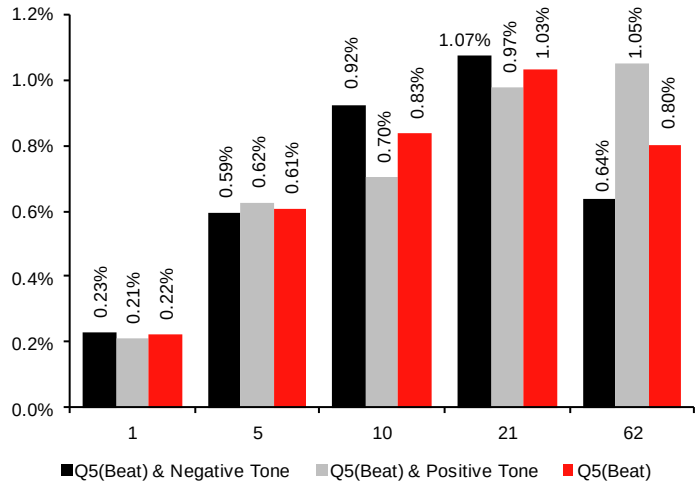


Fig 67 Excess Returns - Most Negative Earnings(R2)

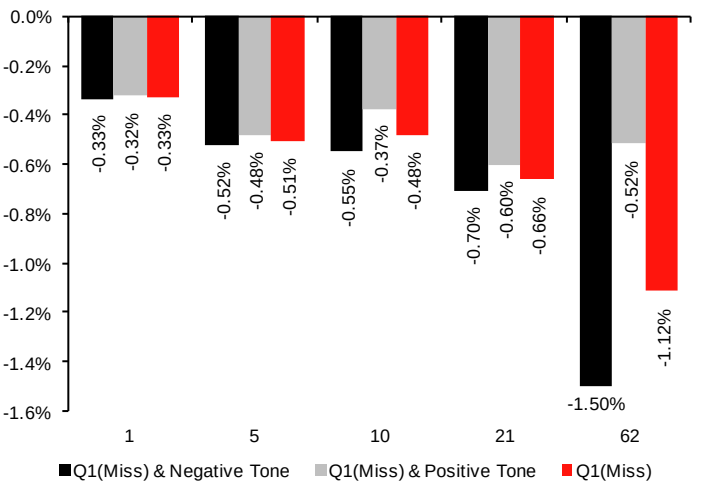


Fig 68 Spread Returns with Tone in All Earnings(R2)

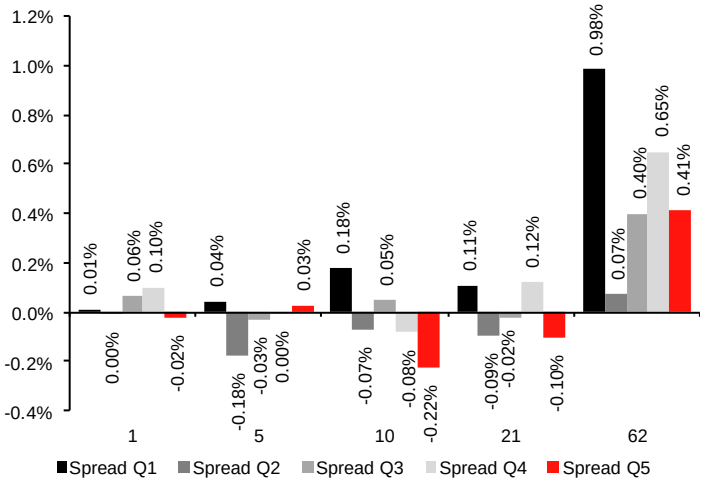
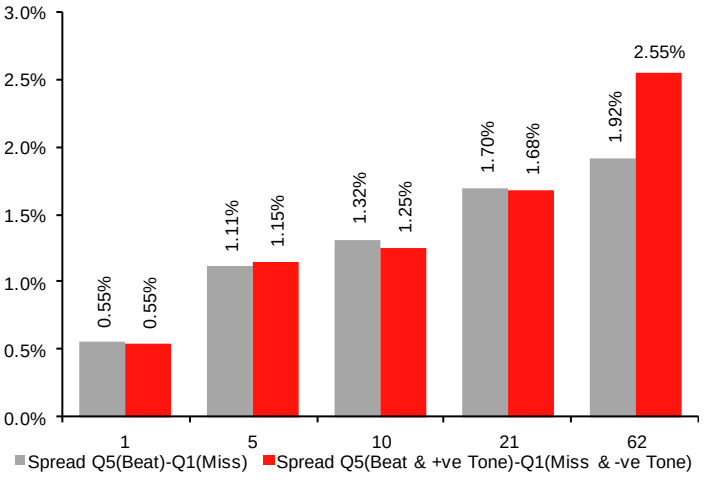


Fig 69 Spread Returns with Tone Comparison(R2)



Source: SEC Edgar, Russell, IBES, Compustat , Macquarie Capital (USA), July 2014. Key: R2: Russell 2000 Universe

Do Other Factors Capture Tone Information?

In this section we explore whether the price effect we have observed in the previous section is driven by other factors like reaction around reporting dates, prior earnings revisions and price momentum.

Is Abnormal Net Tone Effect due to Initial Reaction?

Initial reaction following earnings surprise has no impact on drift due to Abnormal Tone in Earnings Press Release.

A study by Brandt, Kishore, Santa-Clara and Venkatachalam has found that significant reaction surrounding earnings announcement is related to post earnings drift in stock prices. We want to test whether post earnings drift associated with abnormal tone is not due to initial reaction surrounding earnings announcement. To test this, we quantify initial reaction as 3-day excess cumulative abnormal returns (CAR) around earnings surprise date over an equal weighted benchmark. We include this as one more explanatory variable in (4) to obtain abnormal net tone.

$$Tone_{i,t} = \alpha + \beta_{i,t,1} Percent\ Beat/\ Miss\ _{i,t} + \beta_{i,t,2} CAR_{i,t} + \epsilon_{i,t} \qquad (5)$$

Fig 70 Excess Returns - Most Positive Earnings after controlling for Initial Reaction (R1000)

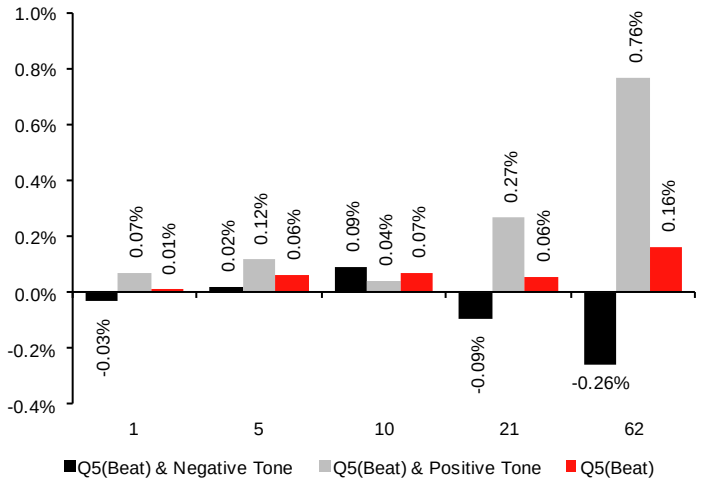


Fig 71 Excess Returns - Most Negative Earnings after controlling for Initial Reaction (R1000)

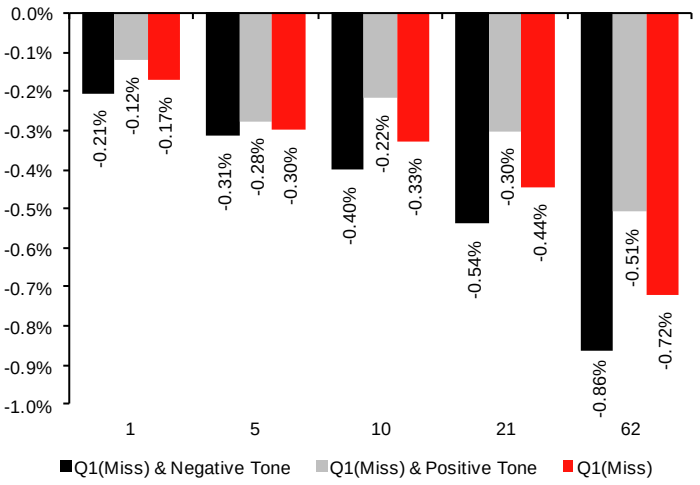


Fig 72 Spread Returns with Tone in All Earnings after controlling for Initial Reaction (R1000)

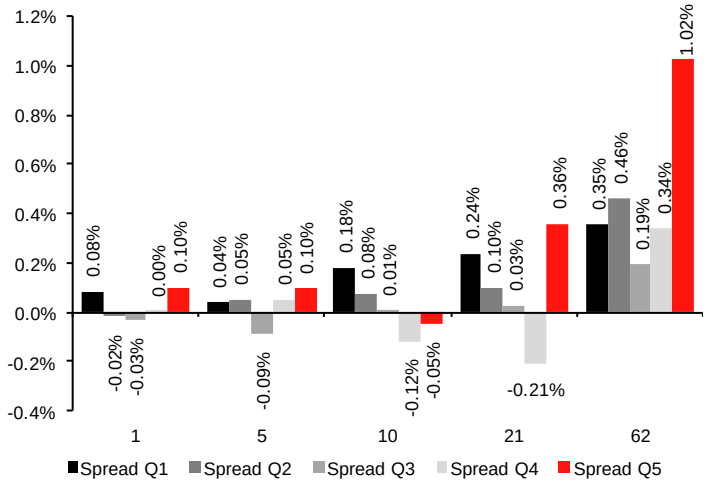
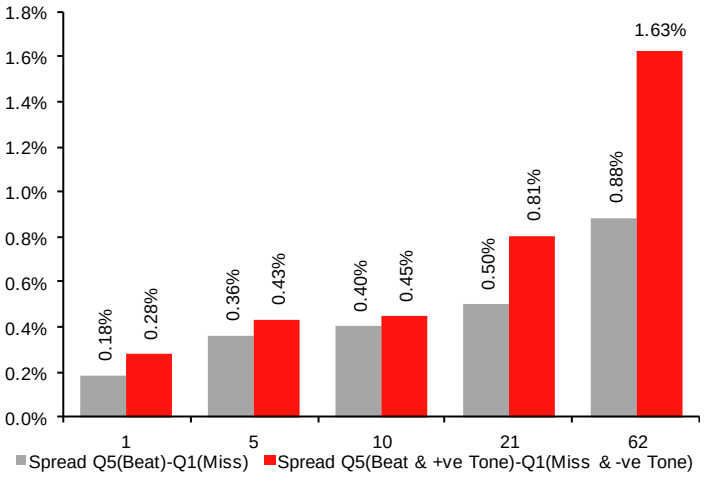


Fig 73 Spread Returns with Tone Comparison after controlling for Initial Reaction (R1000)



Source: SEC Edgar, Russell, IBES, Compustat , Macquarie Capital (USA), July 2014.

Fig 74 to Fig 77**Error! Reference source not found.** summarize the performance for R1000 after controlling for CAR in addition to earnings surprise using LM dictionary. Comparing the excess returns with those obtained without controlling for CAR (Fig 60 to Fig 63 on Page 23) we observe no significant change in excess returns. Similarly, from Fig 74 to Fig 77, we observe that the drift associated with abnormal net tone is not impacted by CAR for R2000 universe.

Fig 74 Excess Returns - Most Positive Earnings after controlling for Initial Reaction (R2000)

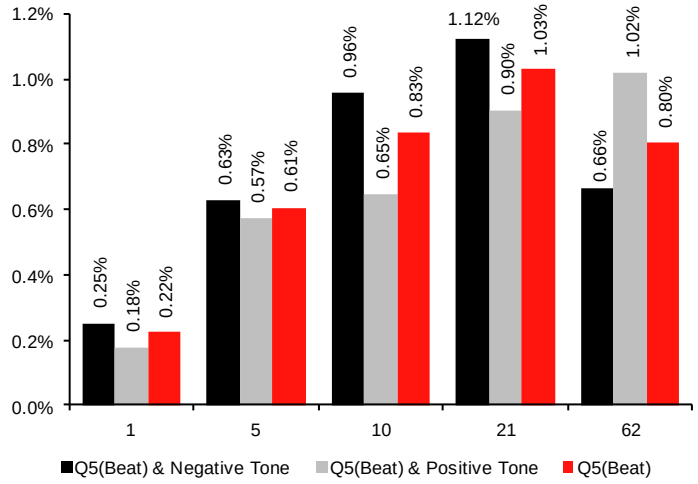


Fig 75 Excess Returns - Most Negative Earnings after controlling for Initial Reaction (R2000)

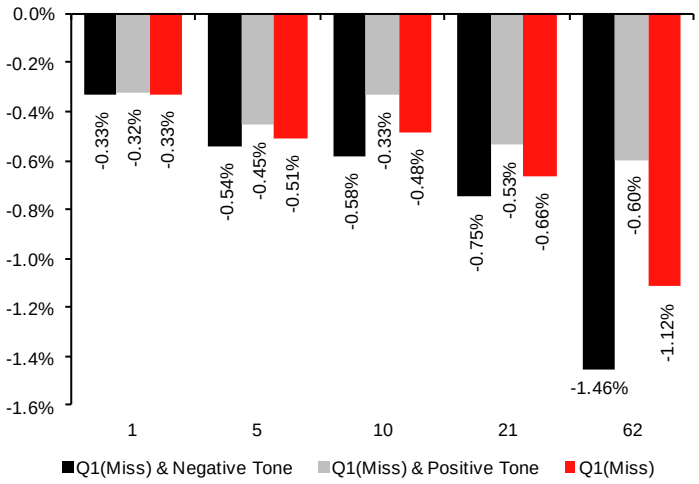


Fig 76 Spread Returns with Tone in All Earnings after controlling for Initial Reaction (R2000)

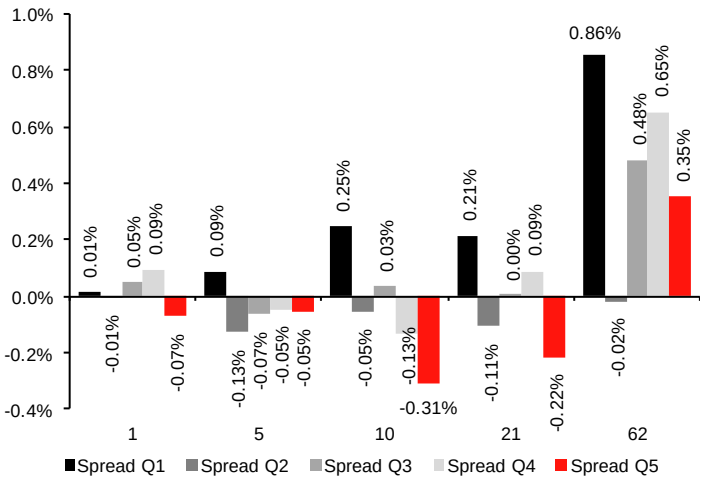
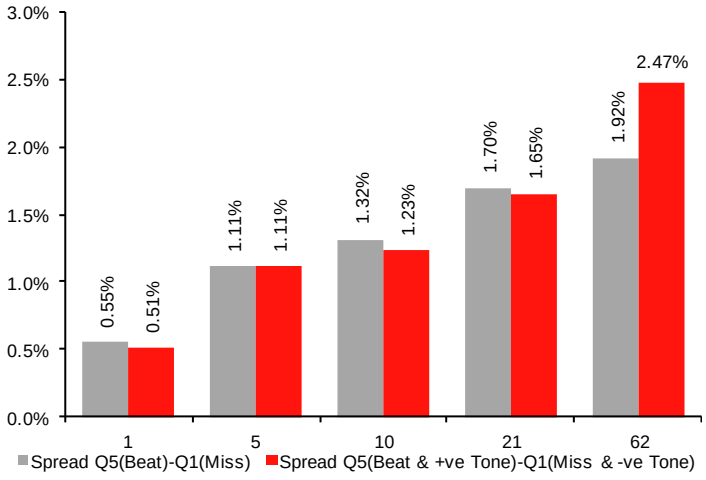


Fig 77 Spread Returns with Tone Comparison after controlling for Initial Reaction (R2000)



Source: SEC Edgar, Russell, IBES, Compustat , Macquarie Capital (USA), July 2014.

Controlling Tone Measures for Earnings Revision

Drift due to Abnormal Net Tone in Earnings Press Releases is unaffected by Earnings Revision.

When analysts have favourable view of a company's quarterly results, they are likely to revise up their estimates. If the company indeed has a good quarter its tone will mostly be optimistic. If this is the case then abnormal net tone measure could be similar to earnings revisions. To verify this we control for earnings revisions in addition to percent beat/miss. Specifically we employ the following regression which is a modification of (6). We consider 3M month earnings revisions.

$$Tone_{i,t} = \alpha + \beta_{i,t,1} Percent\ Beat/\ Miss\ _{i,t} + \beta_{i,t,2} Earnings\ Revision_{i,t} + \epsilon_{i,t} \quad (6)$$

We employ the same procedure as earlier of ranking the residuals at each point in time by looking back over a period of one year. From Fig 78 to Fig 81, we see that the excess returns and spread returns with abnormal net tone measure after controlling for earnings revisions along with percent beat/miss yields are unaffected for R1000 Universe.

Fig 78 Excess Returns - Most Positive Earnings after controlling for Earnings Revisions (R1000)

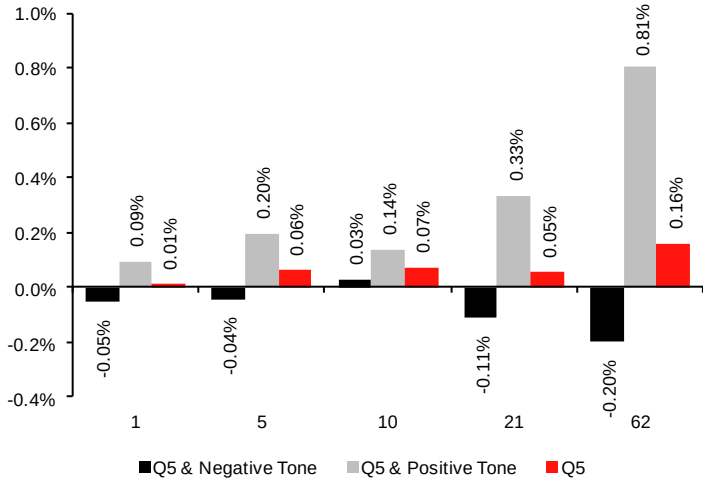


Fig 79 Excess Returns - Most Negative Earnings after controlling for Earnings Revisions (R1000)

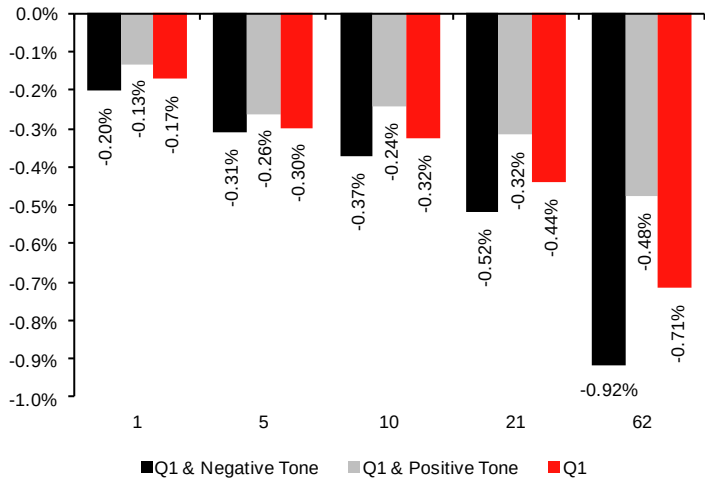


Fig 80 Spread Returns with Tone in All Earnings after controlling for Earnings Revisions (R1000)

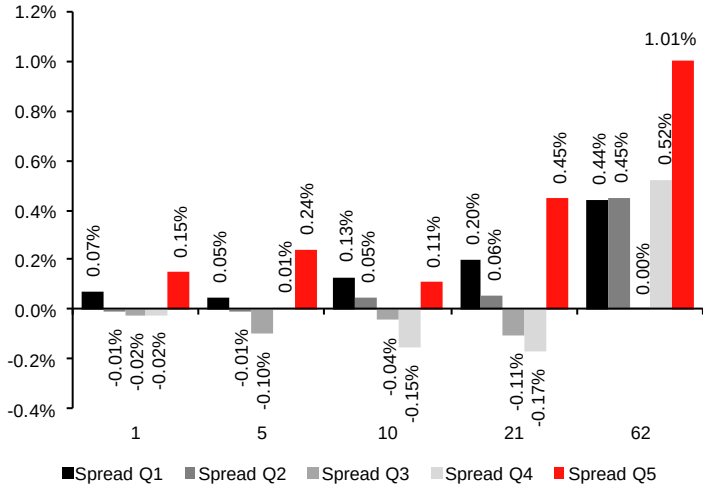
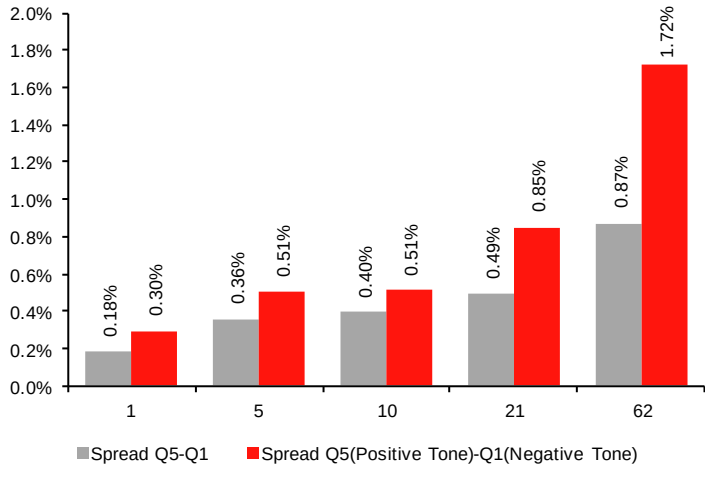


Fig 81 Spread Returns with Tone Comparison after controlling for Earnings Revisions (R1000)



Source: SEC Edgar, Russell, IBES, Compustat, Macquarie Capital (USA), July 2014.

Similarly, in the R2000 Universe excess returns and spread returns retain similar magnitude after controlling for earnings revisions (Fig 82 to Fig 85).

Fig 82 Excess Returns - Most Positive Earnings after controlling for Earnings Revisions (R2000)

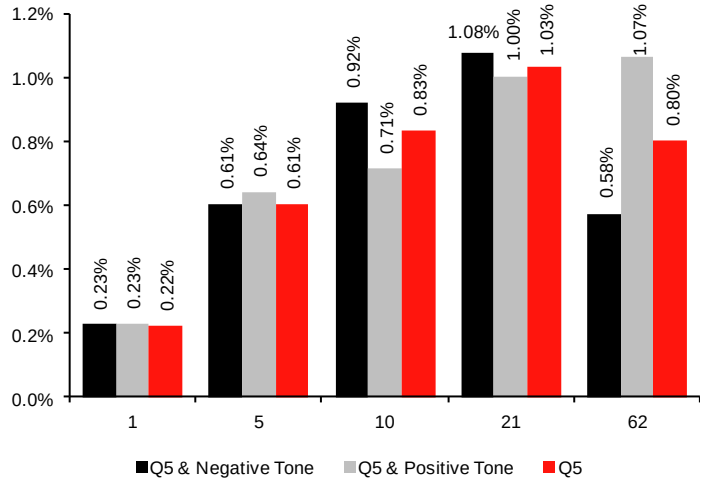


Fig 83 Excess Returns - Most Negative Earnings after controlling for Earnings Revisions (R2000)

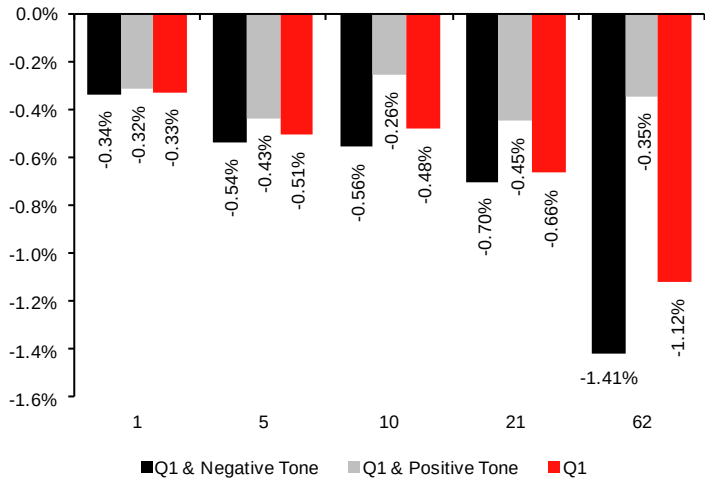


Fig 84 Spread Returns with Tone in All Earnings after controlling for Earnings Revisions (R2000)

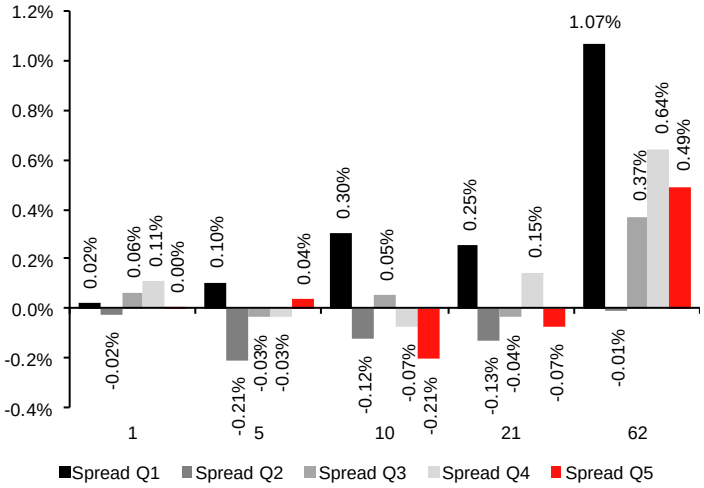
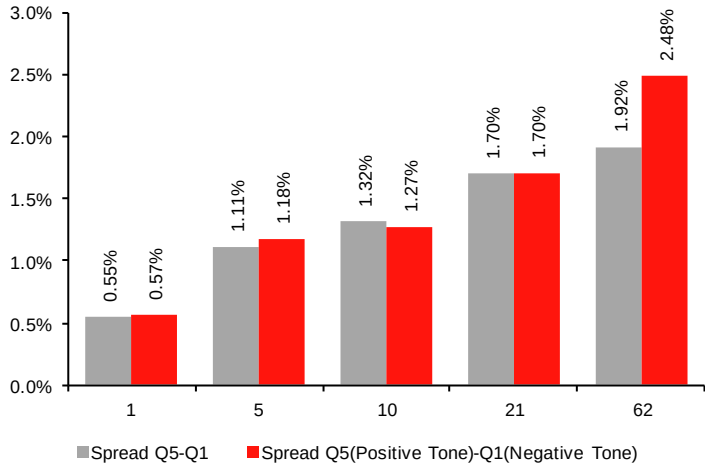


Fig 85 Spread Returns with Tone Comparison after controlling for Earnings Revisions (R2000)



Source: SEC Edgar, Russell, IBES, Compustat , Macquarie Capital (USA), July 2014.

Controlling Tone Measures for Momentum

Drift due to Abnormal Net Tone in Earnings Press Releases is unaffected by Momentum in stocks.

Our correlation analysis had shown that tone is positively related to momentum. Stocks which have trended up are likely to have positive commentary from the management. Controlling for momentum could thus be warranted to distinguish the effect of abnormal net tone from momentum. Continuing on a similar framework for earnings revision, we reformulate (4) by including 12-month momentum in the regression equations. (Our results are not affected by including short-term momentum (3 month)).

$$Tone_{i,t} = \alpha + \beta_{i,t,1} Percent\ Beat/\ Miss\ _{i,t} + \beta_{i,t,2} 12\ M\ Momentum_{i,t} + \epsilon_{i,t} \quad (7)$$

We employ the same procedure as earlier of ranking the residuals at each point in time by looking back over a period of one year.

Fig 86 Excess Returns - Most Positive Earnings after controlling for Momentum (R1000)

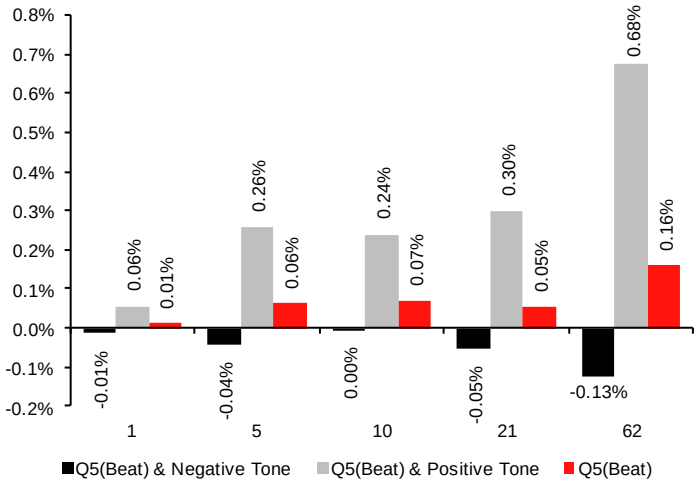


Fig 87 Excess Returns - Most Negative Earnings after controlling for Momentum (R1000)

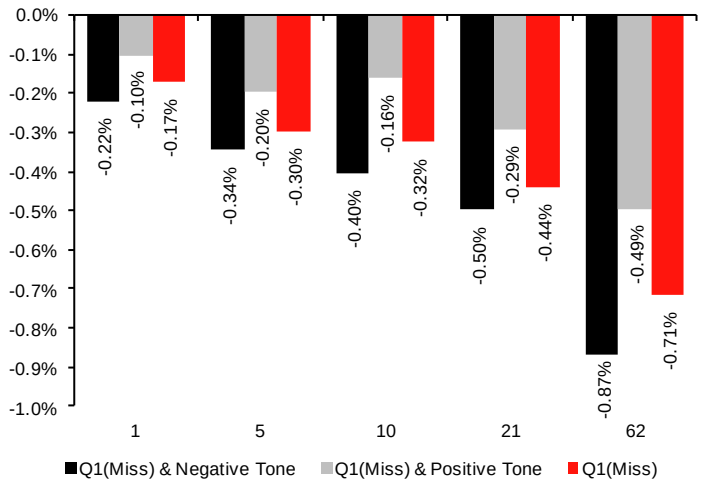


Fig 88 Spread Returns with Tone in All Earnings after controlling for Momentum (R1000)

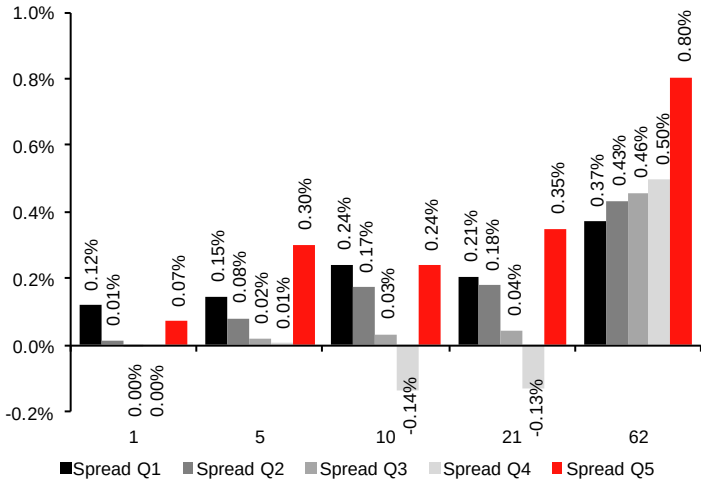
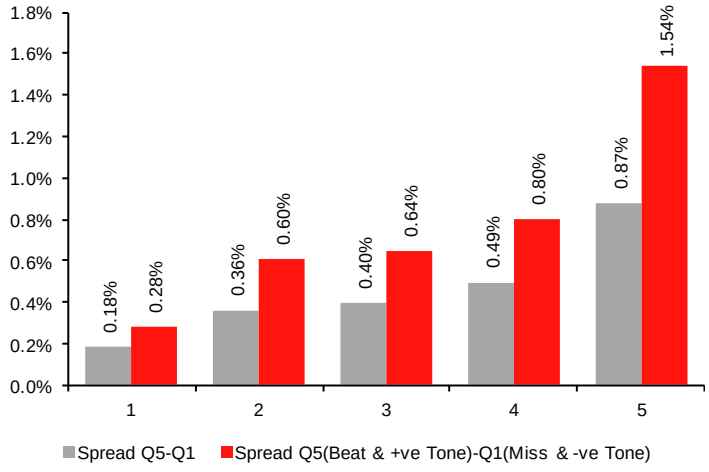


Fig 89 Spread Returns with Tone Comparison after controlling for Momentum (R1000)



Source: SEC Edgar, Russell, IBES, Compustat , Macquarie Capital (USA), July 2014.

From Fig 86 to Fig 89 for the R1000 Universe and Fig 90 to Fig 93 for the R2000 Universe, we see that drift due to abnormal net tone remains unaffected after controlling for momentum.

Fig 90 Performance with LM Abnormal Net Tone (R1000)

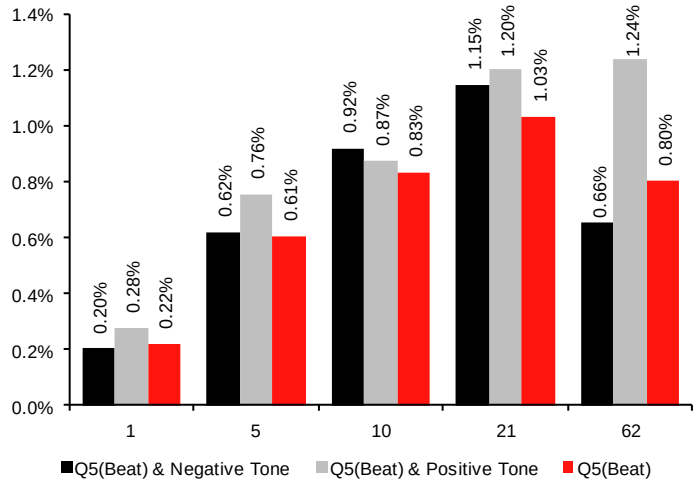


Fig 91 Performance with LM Abnormal Net Tone (R2000)

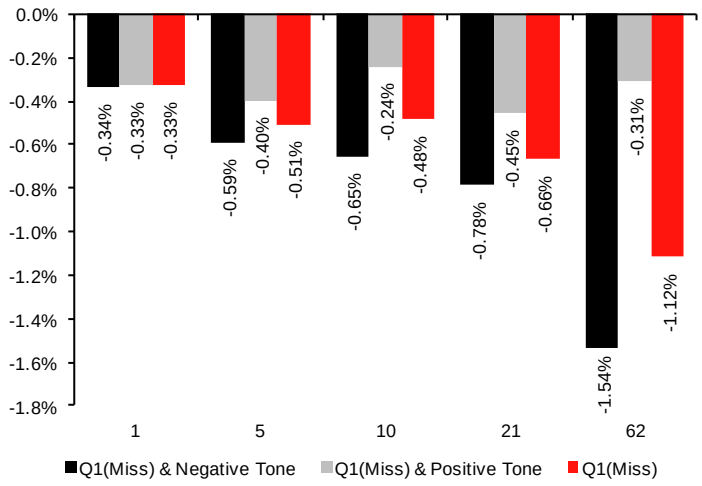


Fig 92 Performance with LM Abnormal Net Tone (R1000)

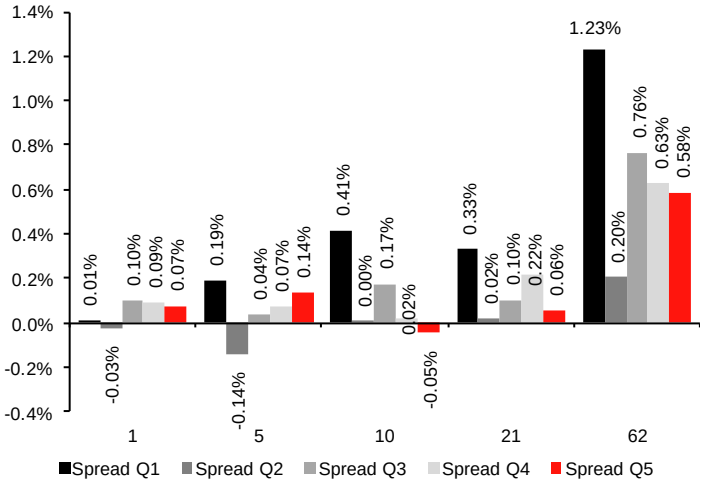
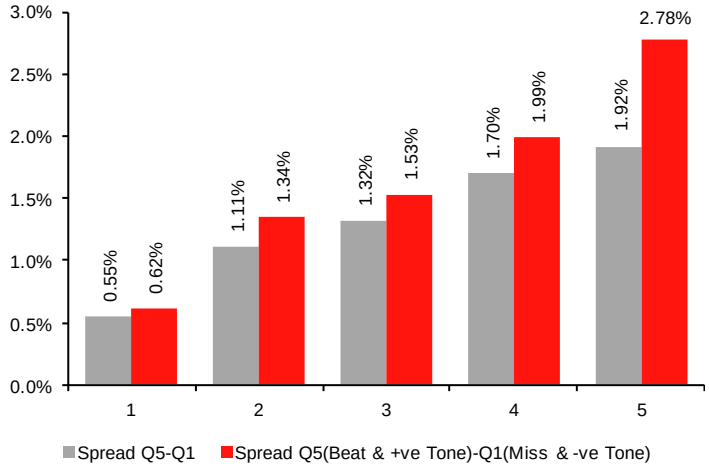


Fig 93 Performance with LM Abnormal Net Tone (R2000)



Source: SEC Edgar, Russell, IBES, Compustat , Macquarie Capital (USA), July 2014.

Conclusion

We conclude in this section that abnormal net tone has incremental information which is not captured in traditional earnings surprise measures. The incremental information content is strongest in LM dictionary while it is weaker in case of Diction and LIWC dictionaries.

Positive Earnings outperform Negative Earnings by 1.47% and 8.81% in the R1000 and R2000 Universes respectively over a three-month period.

Exploiting Abnormal Tone: A Trading Strategy

Using the insights derived from previous section, we now focus on exploiting the incremental information content present in abnormal tone in a portfolio context. We expect portfolios formed with abnormal net positive tone to outperform portfolios formed with abnormal net negative tone. We restrict our analysis on using the LM dictionary.

As we evaluate each earnings based on the abnormal net tone associated with earnings exhibit, we maintain a 60-day holding period for each stock. Positions in stocks are revised based on the new information contained in the next quarter's earnings.

Portfolio performance Based on Percent Beat/Miss

We first examine the performance of portfolio formed due to percent beat/miss only. From Fig 96 and Fig 97 we see on average a portfolio of stocks with higher percent beat/miss outperforms a portfolio with lower percent beat/miss on average by 1.47% and 8.81% in the R1000 and R2000 universes respectively.

Fig 94 Portfolio Performance of Most Positive and Most Negative Earnings using Percent Beat/Miss (R1000)

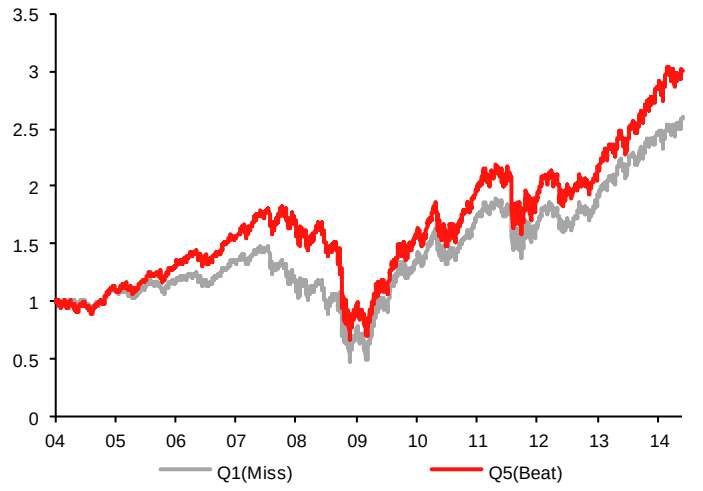


Fig 95 Portfolio Performance of Most Positive and Most Negative Earnings using Percent Beat/Miss (R2000)

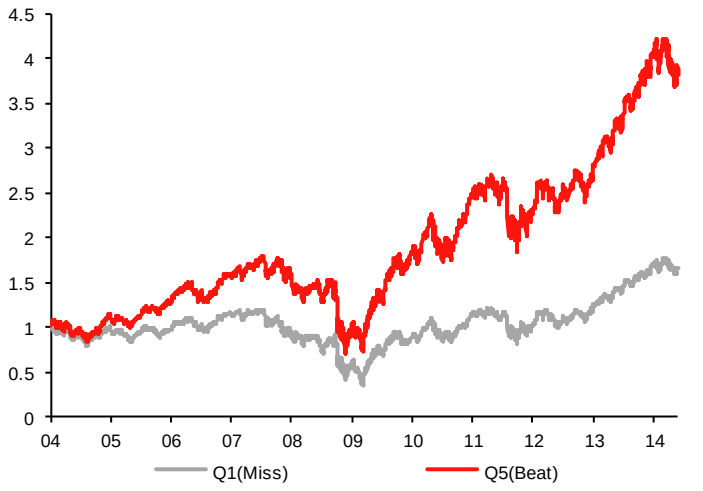


Fig 96 Recent Performance(Excess Returns) of all Earnings (R1000)

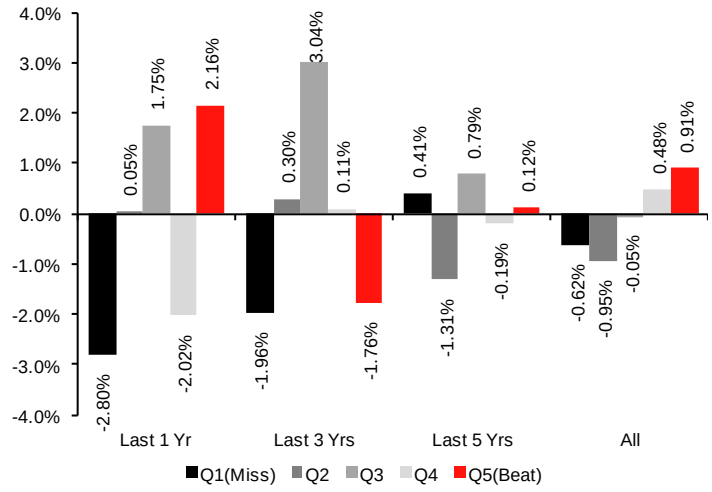
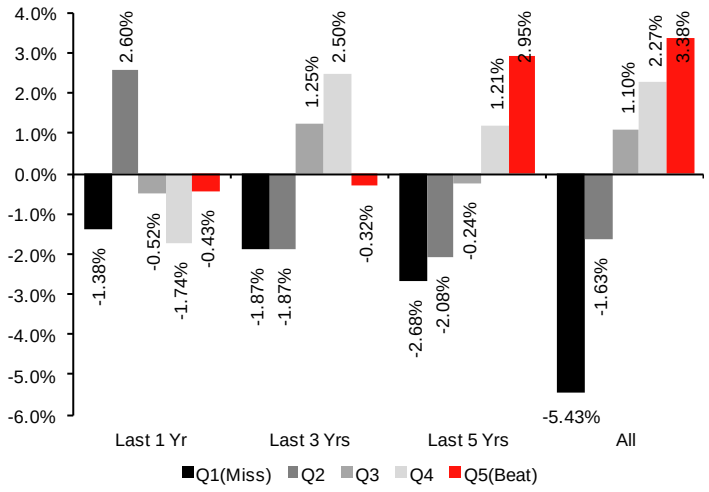


Fig 97 Recent Performance(Excess Returns) of all Earnings (R2000)



Source: SEC Edgar, Russell, IBES, Compustat , Macquarie Capital (USA), July 2014.

Abnormal Net Positive Earnings outperform Abnormal Net Negative Earnings by 2.34% and 2.43% in the R1000 and R2000 Universes respectively over a three-month period.

Portfolio performance Based on Abnormal Net Tone

Similar to percent beat/ miss portfolios we construct five portfolios based on abnormal net tone. While we note that below portfolios are formed after controlling for any earnings surprise, we see higher abnormal net tone outperform lower abnormal net tone on average by 2.34% and 2.43% in R1000 and R2000 Universes respectively. We thus see that the incremental information in abnormal net tone leads to excess returns.

Fig 98 Portfolio Performance of Most Positive and Most Negative Abnormal Net Tone (R1000)

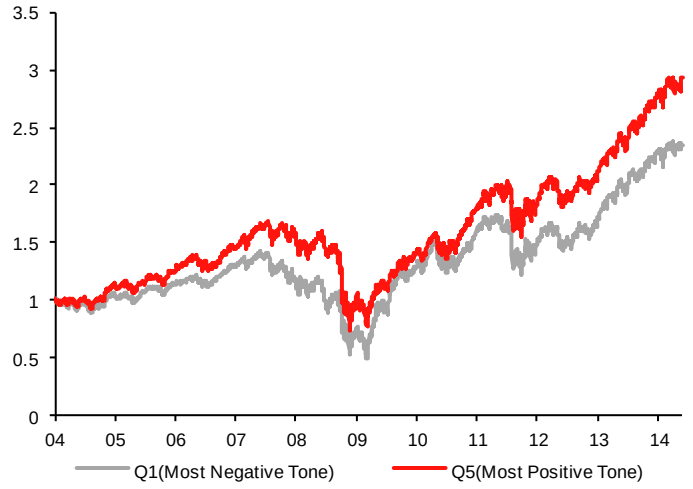


Fig 99 Portfolio Performance of Most Positive and Most Negative Abnormal Net Tone (R2000)

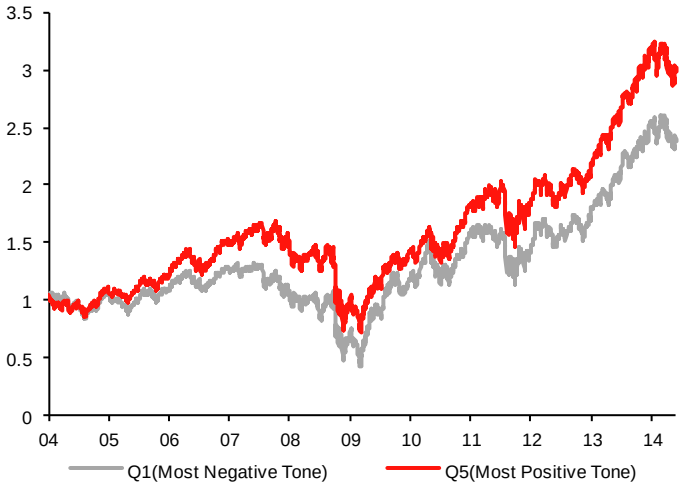


Fig 100 Recent Performance of All Net Abnormal Tone Portfolios (R1000)

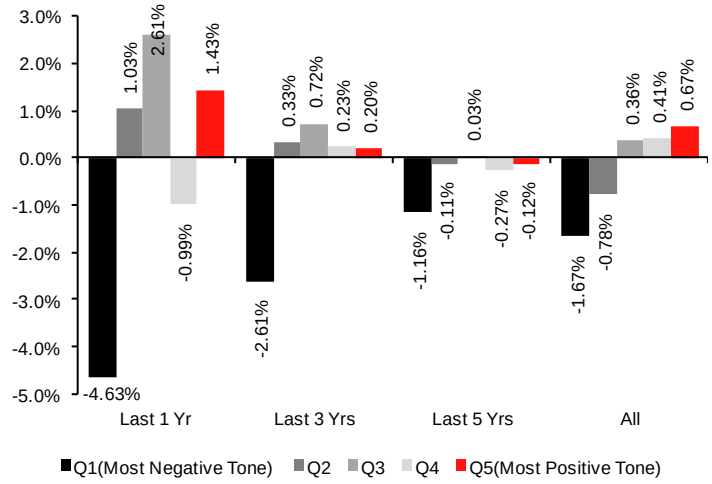
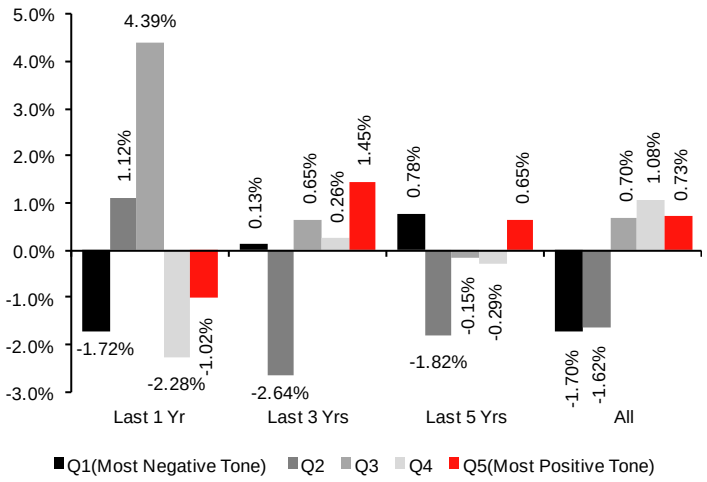


Fig 101 Recent Performance of All Net Abnormal Tone Portfolios (R2000)



Source: SEC Edgar, Russell, IBES, Compustat , Macquarie Capital (USA), July 2014.

Combining Abnormal Net Tone with Percent Beat/Miss

Combining Abnormal Net with Earnings Surprise yields a higher spread return than the spread returns between positive and negative earnings.

As abnormal net measure is incremental information not captured using traditional earnings surprise measures, we intend to use it in conjunction with traditional earnings surprise measures to enhance portfolio returns.

As highlighted in our event study analysis, we had seen that combining abnormal net tone with percent beat/miss can further help to isolate and "good" and "bad" earnings. Thus within each quintile for earnings obtained from percent beat/miss we further consider earnings with higher and lower abnormal net tone. Specifically for most positive earnings (Q5), we choose earnings with higher net abnormal tone (>0.5) and for most negative earnings (Q1), we choose earnings with lower net abnormal tone (<0.5). We then compare the spread returns of the two portfolios with usual spread returns in earnings surprise (i.e. Most Positive Earnings – Most Negative Earnings). From Fig 104 and Fig 105, we see that on average abnormal net tone helps to increase the spread returns between most positive and most negative earnings by 3.58% and 2.36% in the R1000 and R2000 universes respectively.

Fig 102 Portfolio Performance of High Earnings & Tone and Low Earnings & Tone (R1000)

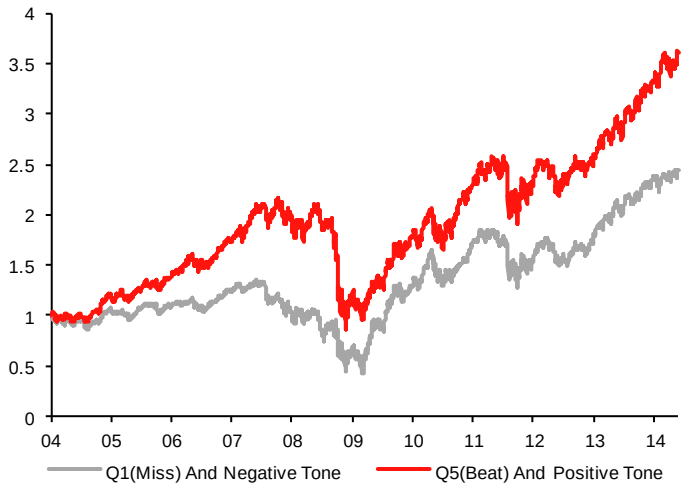


Fig 103 Portfolio Performance of High Earnings & Tone and Low Earnings & Tone (R2000)

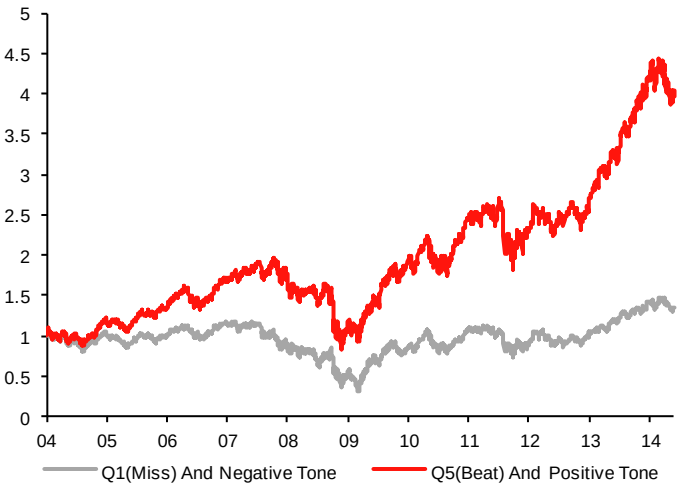


Fig 104 Recent Performance(Excess Returns) Comparison with High and Low Earnings Spread (R1000)

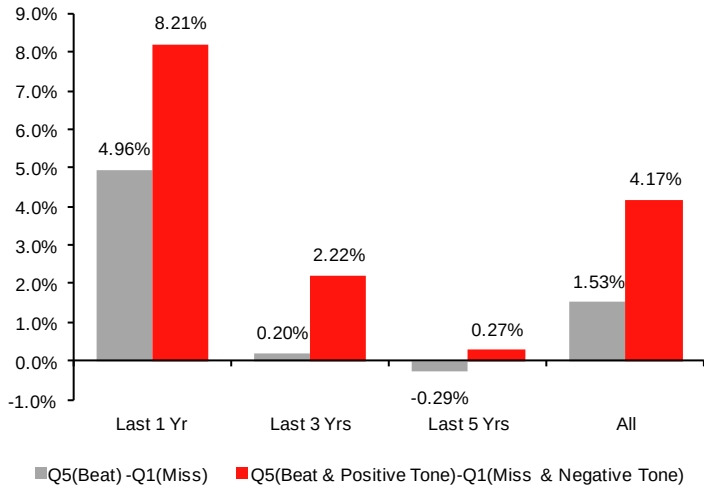
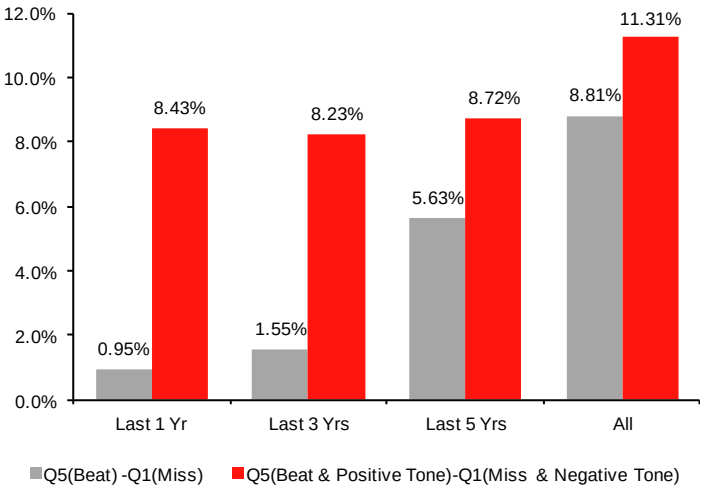


Fig 105 Recent Performance(Excess Returns) Comparison with High and Low Earnings Spread (R2000)



Source: SEC Edgar, Russell, IBES, Compustat , Macquarie Capital (USA), July 2014.

Using Tone to Identify Turnaround Candidates

In the previous section we found that combining abnormal net tone with percent beat/miss enabled us to form portfolios that outperformed portfolios formed simply on the basis of earnings. In this section we explore whether investors can utilise the soft information contained within the tone signal to identify turnaround candidates? Our hypothesis is that cases where companies miss (beat) investor expectations but have a positive (negative) tone may signal a turnaround in operational performances. That is, we explore the cases where the tone contradicts the direction of the earnings surprise. Moreover, we should expect greater uncertainty in analyst numbers post these events as they struggle to reconcile these conflicting information sets, which should reduce over the coming quarters as they price changing outlooks within their models.

Fig 60 and Fig 61 (see page 23) showed that stocks with negative surprises but positive tone underperform by 0.42%, which is less than stocks with negative surprises (-0.72%) as well as those with negative tone and negative surprises (-0.91%). Similarly, those with positive surprises and negative tone underperform by 0.27%, which is substantially worse than those with positive surprises (0.16%) or those with positive surprises and positive tone (0.77%). This shows that investors treat these cohorts differently and next we explore each of these cases separately.

Spotting Turnaround Candidates amongst Value Stocks

Value Trap can enable investors to add position in stocks with most negative earnings but having a positive Tone.

We define Value Trap as those companies with most negative earnings surprises but a positive tone. More specifically positive tone could be a signal to investors of improving future operational performance. If this is the case investors may want to take position in such stocks.

To test our hypothesis, we consider all stocks with the most negative earnings surprises and positive abnormal net tone and review the percentage of firms with positive earnings eight quarters prior and post the quarter. If our hypothesis is correct, then we should observe a “V”-shaped profile where leading into the quarter companies would have had poor hit rates whilst an improving profile post the current quarter.

From Fig 106 and Fig 107 we note a progressive drop in earnings for these companies leading into the current reporting period. The positive tone in the current quarter (i.e. Quarter 0 which is not shown in chart) signals an end to the continuing drop in earnings as they report positive surprises in the subsequent quarters. The effects are stronger for smaller companies relative to large-caps.

Fig 108 and Fig 109 show the analyst dispersion for these groups of stocks. We observe an increase in dispersion post the quarter as analysts assimilate conflicting soft and hard information. After current quarter (i.e. quarter with negative earnings but positive tone) we observe a decline in earnings dispersion. This suggests greater conviction in the outlook presented earlier.

Fig 106 Earnings in Value Trap (R1000)

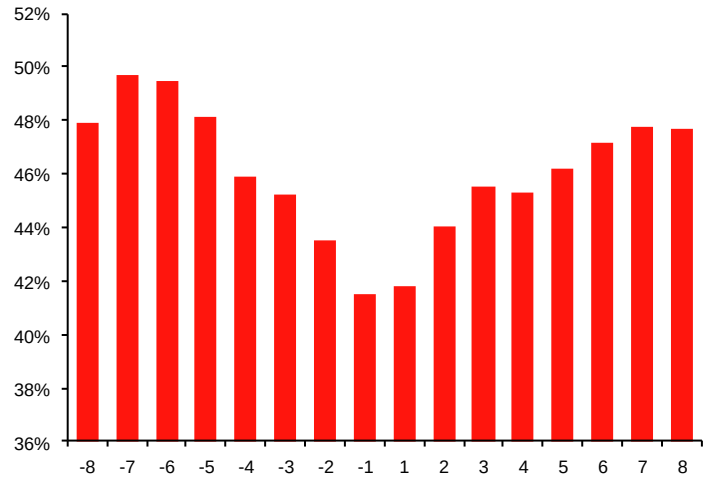


Fig 107 Earnings in Value Trap (R2000)

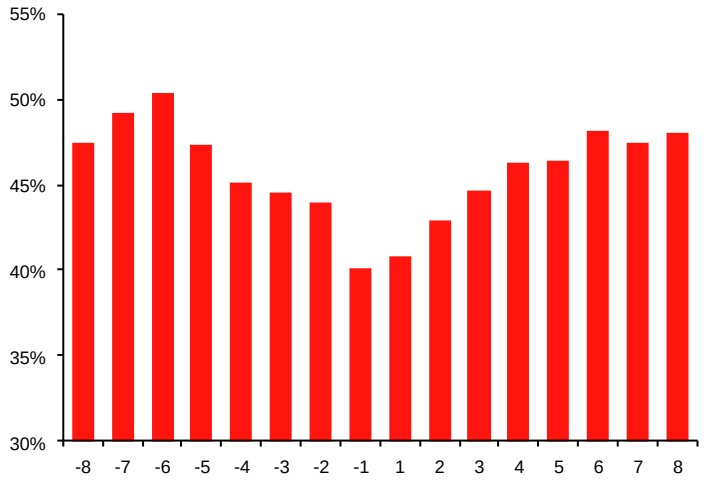


Fig 108 Earnings Dispersion In Value Trap (R1000)

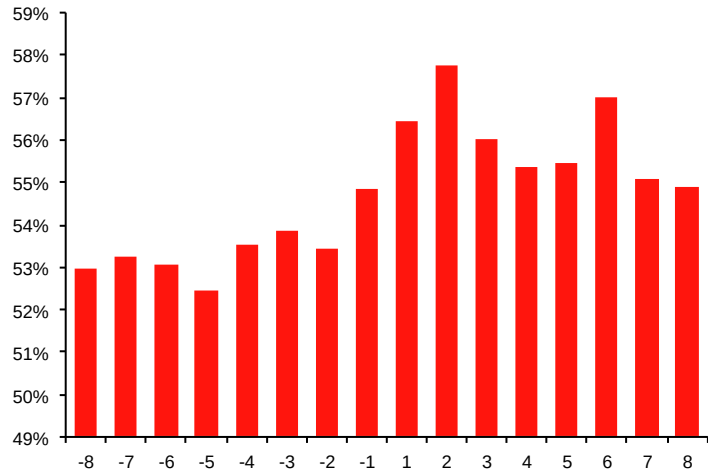
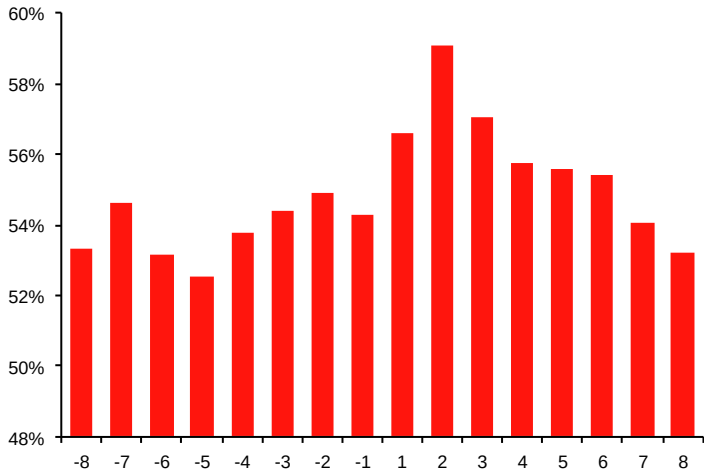


Fig 109 Earnings Dispersion In Value Trap (R2000)



Source: SEC Edgar, Russell, IBES, Compustat , Macquarie Capital (USA), July 2014.

Glamour Trap enables investors to avoid stocks with most positive earnings but with negative tone.

Spotting Turnaround Candidates amongst Glamour Stocks

We define Glamour Trap as those companies with most positive earnings surprises but a negative tone. More specifically negative tone could be a signal to investors of deteriorating future operational performance. If this is the case investors may not want to take position in such stocks.

To test our hypothesis, we consider all stocks with the most positive earnings surprises and negative abnormal net tone and review the percentage of firms with positive earnings eight quarters prior and post the quarter. If our hypothesis is correct, then we should observe a **"Λ"** shaped profile where leading into the quarter companies would have had good hit rates whilst an declining profile post the current quarter.

From Fig 110 and Fig 111, we note a progressive increase in earnings for these companies leading into the current reporting period. The negative tone in the current quarter (i.e. Quarter 0 which is not shown in chart) signals an end to the continuing increases in earnings as they report negative surprises in the subsequent quarters. The effects are not as stronger or pronounced as for Value Traps we discussed earlier.

Fig 112 and Fig 113 show the analyst dispersion for these groups of stocks. Similar to Value trap we note an increase in earnings dispersion followed by decrease in earnings dispersion.

Fig 110 Earnings in Glamour Trap (R1000)

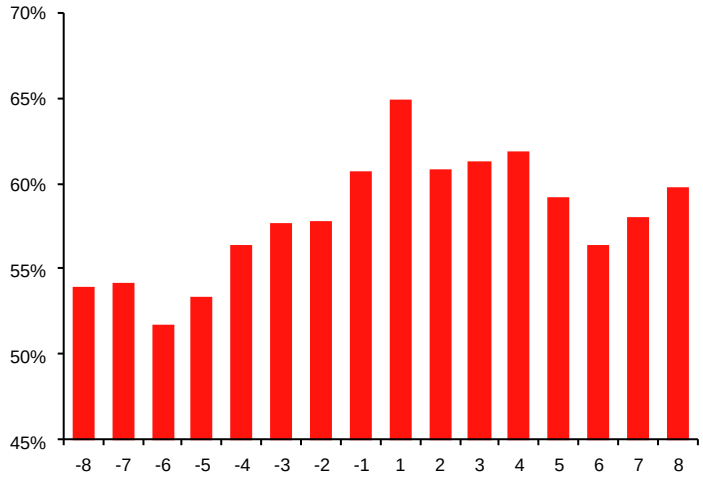


Fig 111 Earnings in Glamour Trap (R2000)

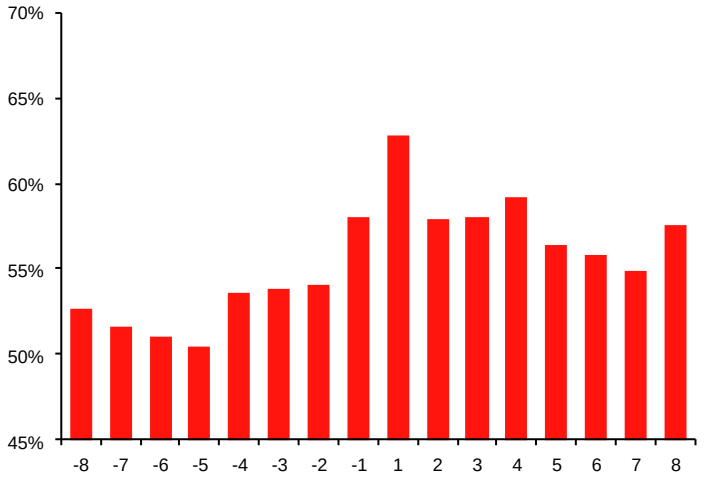


Fig 112 Earnings Dispersion In Glamour Trap (R1000)

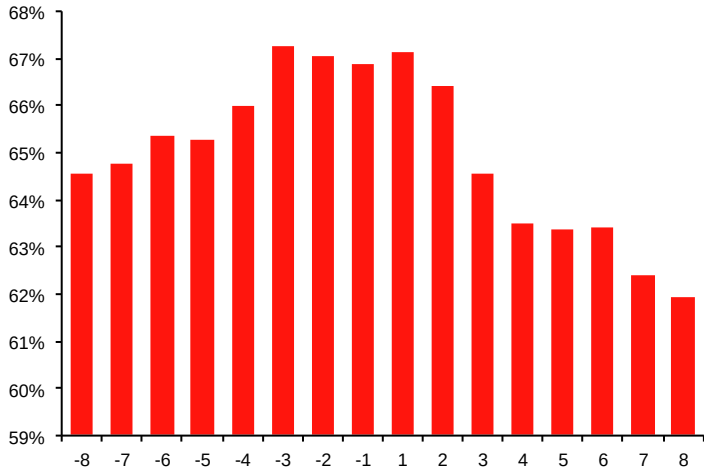
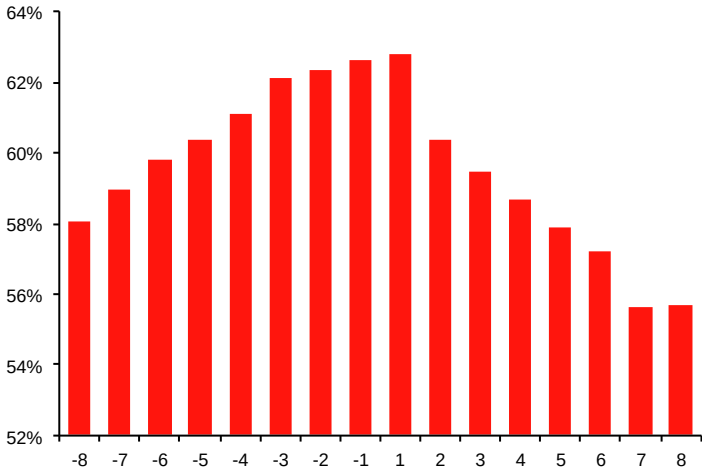


Fig 113 Earnings Dispersion In Glamour Trap (R2000)



Source: SEC Edgar, Russell, IBES, Compustat , Macquarie Capital (USA), July 2014.

Conclusion

The presence of Value Trap and Glamour Trap further reinforce our understanding of tone in the Earnings Press Release.

Stock List

Our analysis of abnormal tone in Earnings Press Release suggests that abnormal net tone is incremental information which is not captured by traditional signals. Combining Abnormal Net Tone with traditional earnings signals can provide superior performance.

- Fig 114, highlights recent most positive earnings and positive abnormal net tone
- Fig 115, shows recent most negative earnings (Top Quintile) and negative abnormal net tone

Fig 114 Stocks with Most Positive Earnings and Positive Net Abnormal Tone

Ticker	Company	Index	GICS Sector	Market Cap (In $MM)	Earnings Date	Percent Beat/Miss Score	Abnormal Tone Score
CMTL	Comtech Telecommunications	2000	Information Technology	$ 569	6/5/2014	97.46%	88.69%
BH	Biglari Holdings Inc	2000	Consumer Discretionary	$ 614	5/16/2014	77.26%	91.37%
MLAB	MESA LABS INC	2000	Information Technology	$ 224	6/2/2014	90.86%	81.96%
PBY	Pep Boys-Manny Moe & Jack	2000	Consumer Discretionary	$ 590	6/9/2014	93.95%	88.63%
AGX	ARGAN INC	2000	Industrials	$ 502	6/5/2014	97.47%	85.44%
TOL	Toll Brothers Inc	1000	Consumer Discretionary	$ 6,539	5/28/2014	70.12%	91.56%
ADBE	Adobe Systems Inc	1000	Information Technology	$ 36,360	6/17/2014	83.07%	87.70%
TIF	Tiffany & Co	1000	Consumer Discretionary	$ 11,152	5/21/2014	99.89%	88.07%
XLRN	ACCELERON PHARMA INC	2000	Health Care	$ 246	5/15/2014	81.86%	89.76%
VEEV	VEEVA SYSTEMS INC	1000	Health Care	$ 365	5/29/2014	78.03%	90.89%
GIII	G-III Apparel Group Ltd	2000	Consumer Discretionary	$ 1,378	6/3/2014	92.51%	99.59%
CBK	Christopher & Banks Corp	2000	Consumer Discretionary	$ 328	6/10/2014	82.52%	93.88%
PERY	Perry Ellis Intl Corp	2000	Consumer Discretionary	$ 215	5/22/2014	90.59%	90.83%
EGHT	8X8 Inc	2000	Telecommunication Servi	$ 685	5/21/2014	77.37%	82.97%
OVTI	OMNIVISION TECHNOLOGIES	2000	Information Technology	$ 1,190	5/29/2014	78.36%	82.05%
ZUMZ	Zumiez	2000	Consumer Discretionary	$ 573	5/22/2014	75.11%	90.70%

Fig 115 Stocks with Most Negative Earnings and Negative Net Abnormal Tone

Ticker	Company	Index	GICS Sector	Market Cap (In $MM)	Earnings Date	Percent Beat/Miss Score	Abnormal Tone Score
GEF	Greif Bros Corp	1000	Materials	$ 1,703	6/4/2014	11.79%	8.26%
HOV	HOVNANIAN ENTERPRISES	2000	Consumer Discretionary	$ 556	6/4/2014	1.10%	2.53%
NAV	NAVISTAR INTL CORP NEW	1000	Industrials	$ 2,128	6/5/2014	5.67%	3.40%
SHLD	SEARS HOLDINGS CORP	1000	Consumer Discretionary	$ 1,684	5/22/2014	12.30%	7.38%
RENT	RENTRAK CORP	2000	Consumer Discretionary	$ 561	6/3/2014	24.69%	8.15%
ZQK	Quiksilver Inc	2000	Consumer Discretionary	$ 465	6/2/2014	9.63%	7.26%
CNSI	COMVERSE INC	2000	Information Technology	$ 574	6/9/2014	23.17%	7.76%
SPLS	Staples Inc	1000	Consumer Discretionary	$ 7,257	5/20/2014	11.69%	9.08%
EVRY	EVERYWARE GLOBAL INC	2000	Consumer Discretionary	$ 13	5/15/2014	6.61%	7.59%
FCSC	FIBROCELL SCIENCE INC	2000	Health Care	$ 86	5/19/2014	25.23%	15.31%
NCS	NCI BUILDING SYSTEMS INC	2000	Industrials	$ 393	6/10/2014	4.27%	11.94%
LAYN	LAYNE CHRISTENSEN CO	2000	Industrials	$ 258	6/16/2014	11.37%	8.27%
SPDC	SPEED COMMERCE INC	2000	Information Technology	$ 151	6/16/2014	29.13%	3.12%
SEAC	SEACHANGE INTERNATIONAL	2000	Information Technology	$ 255	6/5/2014	3.30%	7.09%
UTIW	UTi Worldwide Inc.	2000	Industrials	$ 911	6/5/2014	12.04%	10.06%
DMND	Diamond Foods	2000	Consumer Staples	$ 625	6/5/2014	22.87%	10.87%
NX	Quanex Building Products Corporation	2000	Industrials	$ 663	6/5/2014	4.67%	4.19%
EXPR	EXPRESS INC	2000	Consumer Discretionary	$ 1,400	5/29/2014	31.41%	3.19%

Source: SEC Edgar, Russell, IBES, Compustat, Macquarie Capital (USA), July 2014.

- Fig 116 presents most recent stocks which are Value Trap i.e. they present a case for future outperformance
- Fig 117 shows most recent stocks which are Glamour Trap i.e. they present a case for future underperformance

Fig 116 Value Trap(Stocks with Most Negative Earnings and Positive Net Abnormal Tone)

Ticker	Company	Index	GICS Sector	Market Cap (In $MM)	Earnings Date	Percent Beat/Miss Score	Abnormal Tone Score
BBY	Best Buy Co Inc	1000	Consumer Discretionary	$ 8,345	5/22/2014	9.21%	95.07%
ASNA	Ascena Retail Group Inc.	1000	Consumer Discretionary	$ 2,175	6/3/2014	19.73%	92.63%
LUB	LUBYS INC	2000	Consumer Discretionary	$ 100	6/12/2014	23.94%	81.24%
MOD	MODINE MANUFACTURING CO	2000	Consumer Discretionary	$ 736	5/29/2014	10.83%	88.05%
FWM	FAIRWAY GROUP HLDGS CORP	2000	Consumer Staples	$ 103	5/29/2014	18.78%	96.28%
WDAY	WORKDAY INC	1000	Information Technology	$ 3,518	5/27/2014	11.99%	84.85%
VNCE	VINCE HOLDING CORP	2000	Consumer Discretionary	$ 408	6/5/2014	11.67%	97.27%
ISLE	ISLE OF CAPRI CASINOS	2000	Consumer Discretionary	$ 165	6/17/2014	16.24%	86.21%
JBL	Jabil Circuit Inc	1000	Information Technology	$ 4,227	6/18/2014	1.36%	95.69%
WSTL	WESTELL TECHNOLOGIES INC	2000	Information Technology	$ 101	5/21/2014	5.42%	95.06%
GES	Guess? Inc	1000	Consumer Discretionary	$ 1,619	5/29/2014	15.77%	99.34%
CIEN	CIENA Corp	2000	Information Technology	$ 2,186	6/5/2014	31.68%	80.04%
RH	RESTORATION HARDWARE	2000	Consumer Discretionary	$ 1,579	6/11/2014	31.27%	87.95%
VRNT	VERINT SYS INC	2000	Information Technology	$ 2,616	6/4/2014	28.64%	80.64%
ARO	Aeropostale Inc	2000	Consumer Discretionary	$ 272	5/22/2014	15.23%	87.60%
BLOX	INFOBLOX INC	2000	Information Technology	$ 683	5/29/2014	27.62%	91.63%
GWRE	GUIDEWIRE SOFTWARE INC	2000	Information Technology	$ 1,947	6/2/2014	17.66%	93.95%

Fig 117 Glamour Trap(Stocks with Most Positive Earnings and Negative Net Abnormal Tone)

Ticker	Company	Index	GICS Sector	Market Cap (In $MM)	Earnings Date	Percent Beat/Miss Score	Abnormal Tone Score
GHM	GRAHAM CORP	2000	Industrials	334.76694	5/30/2014	88.01%	16.17%
HRL	Hormel Foods Corp	1000	Consumer Staples	6519.55304	5/21/2014	93.95%	13.36%
UBA	Urstadt Biddle Prop Inc A	2000	Financials	513.22634	6/9/2014	73.16%	6.97%
PIR	PIER 1 IMPORTS INC	2000	Consumer Discretionary	1265.6331	6/19/2014	89.55%	19.08%
QSII	Quality Systems Inc	2000	Health Care	643.66765	5/29/2014	72.59%	16.48%
THO	Thor Industries Inc	1000	Consumer Discretionary	2523.95696	6/5/2014	82.29%	18.45%
WMT	Wal-Mart Stores	1000	Consumer Staples	121773.9108	5/15/2014	72.95%	17.35%
TJX	TJX Cos Inc	1000	Consumer Discretionary	38248.73722	5/20/2014	82.65%	17.91%
TECD	Tech Data Corp	1000	Information Technology	2299.26729	5/29/2014	95.27%	5.69%
PLAB	PHOTRONICS INC	2000	Information Technology	533.01429	5/19/2014	96.22%	6.87%
SGM	STONEGATE MORTGAGE CORP	2000	Financials	117.2494	5/15/2014	75.51%	18.14%
SFXE	SFX ENTERTAINMENT INC	2000	Consumer Discretionary	161.2	5/15/2014	86.32%	8.07%
DSW	DSW INC	1000	Consumer Discretionary	1973.71944	5/28/2014	89.91%	9.87%
KSS	Kohl's Corp	1000	Consumer Discretionary	11005.60566	5/15/2014	88.76%	19.61%
CHS	Chico's Fas Inc	1000	Consumer Discretionary	2513.902	5/28/2014	71.87%	13.15%
DAKT	Daktronics Inc	2000	Information Technology	438.408	5/28/2014	95.17%	1.34%
DKS	Dick's Sporting Goods Inc	1000	Consumer Discretionary	4413.396	5/20/2014	70.78%	17.51%
NWY	NEW YORK & CO INC	2000	Consumer Discretionary	105.3348	5/22/2014	86.58%	5.50%

Source: SEC Edgar, Russell, IBES, Compustat, Macquarie Capital (USA), July 2014.

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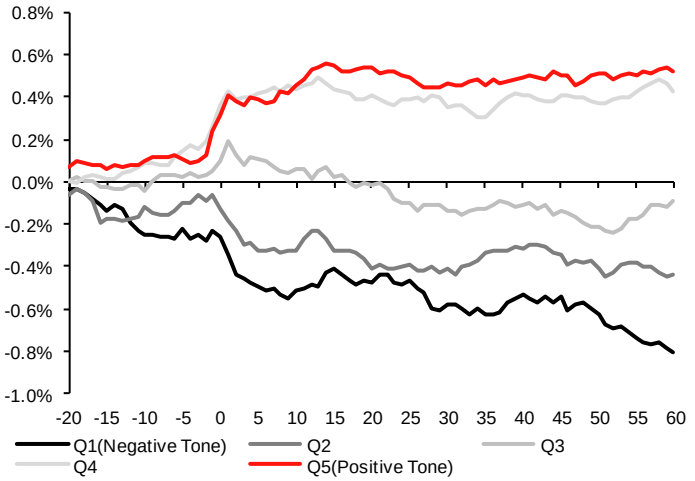
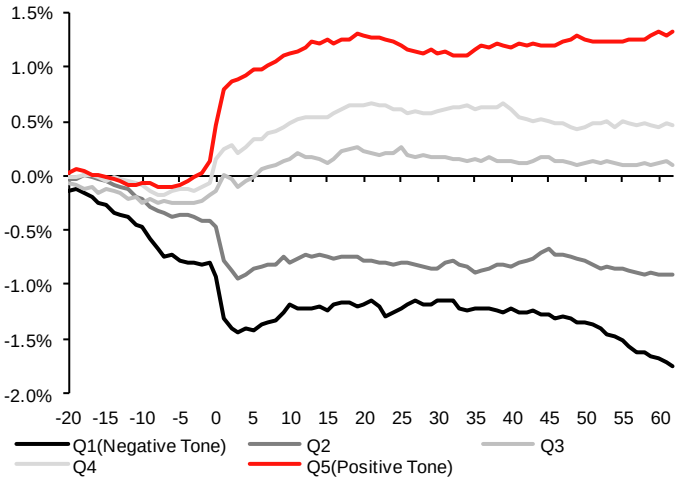
Appendices

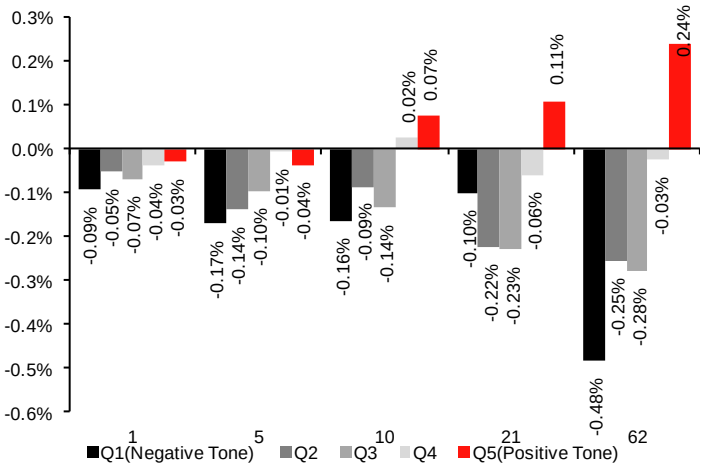
Performance with Diction Abnormal Net Tone (R1000)



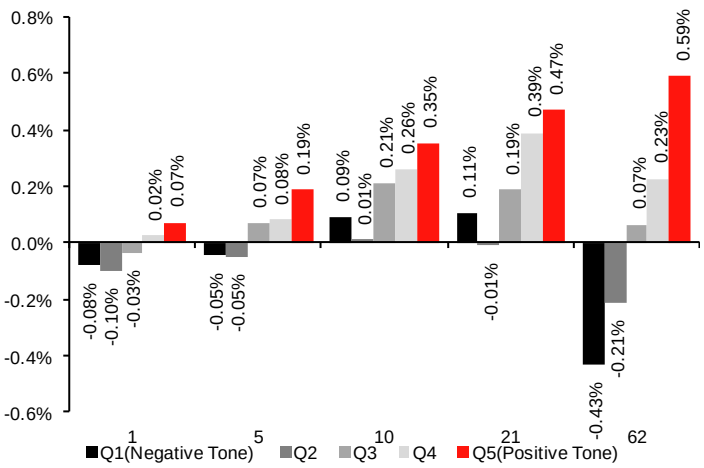
Performance with Diction Abnormal Net Tone (R2000)



Excess Returns with Diction Abnormal Net Tone (R1000)

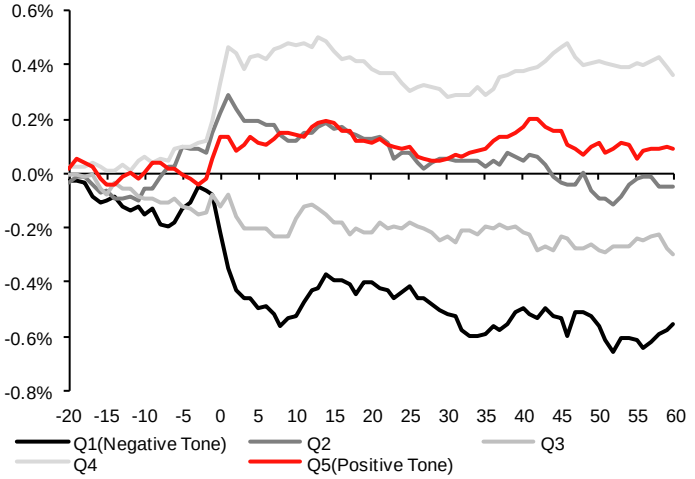


Excess Returns with Diction Abnormal Net Tone (R2000)



Source: SEC Edgar, Russell, IBES, Compustat , Macquarie Capital (USA), July 2014.

Performance with LIWC Abnormal Net Tone (R1000)



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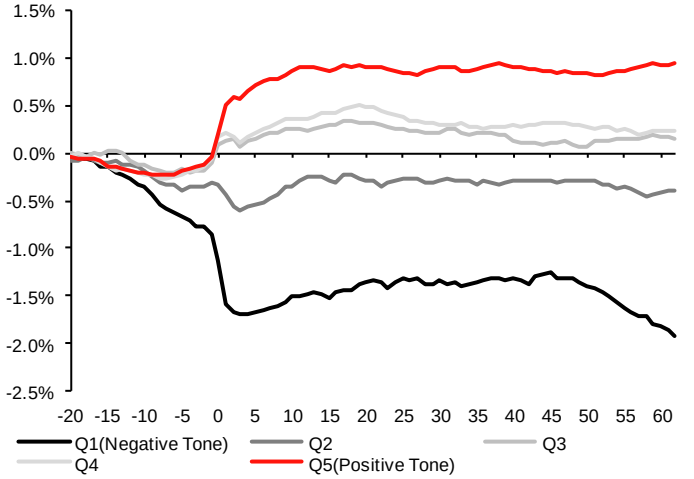

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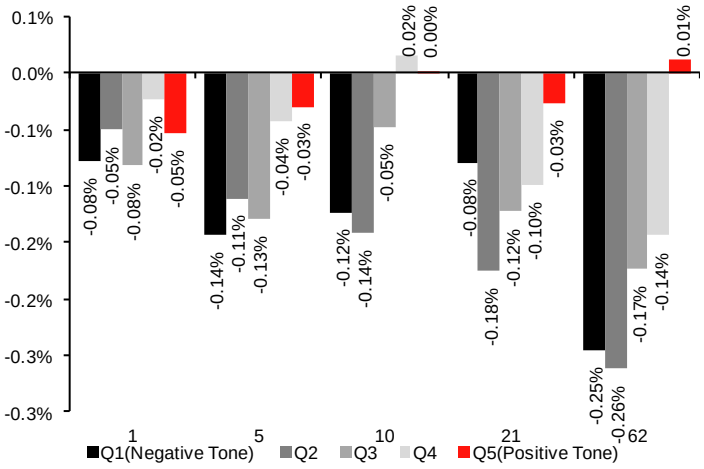
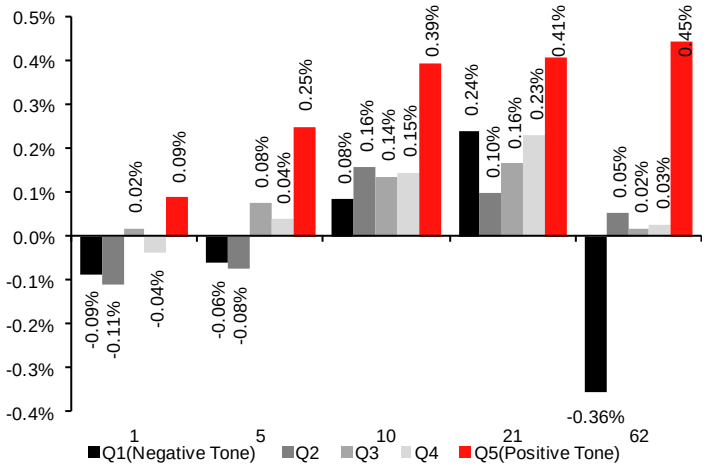
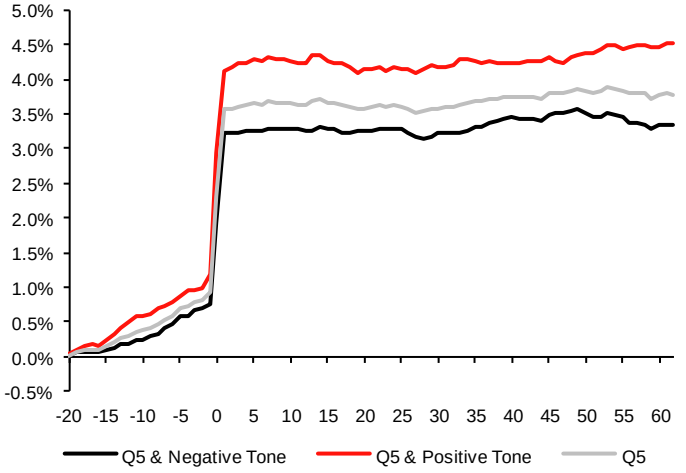


Excess Returns with LIWC Abnormal Net Tone (R2000)

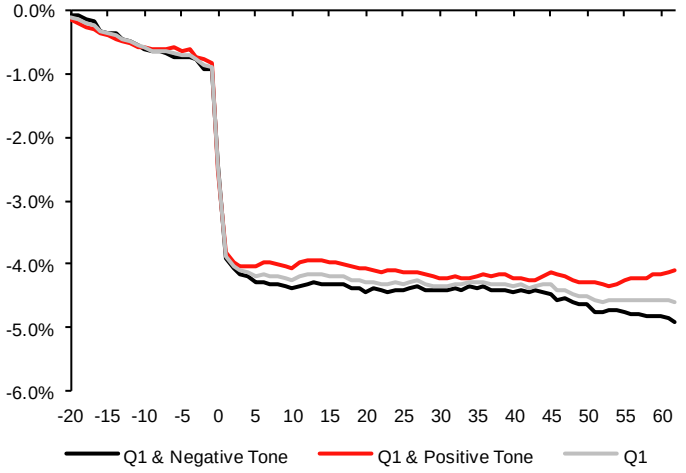


Source: SEC Edgar, Russell, IBES, Compustat , Macquarie Capital (USA), July 2014.

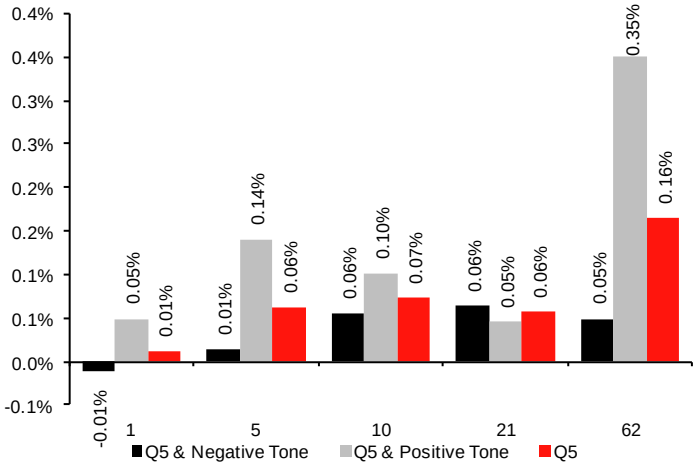
Abnormal Net Tone - Most Positive Earnings(R1) Diction



Abnormal Net Tone - Most Negative Earnings(R1) Diction



Excess Returns - Most Positive Earnings(R1) Diction



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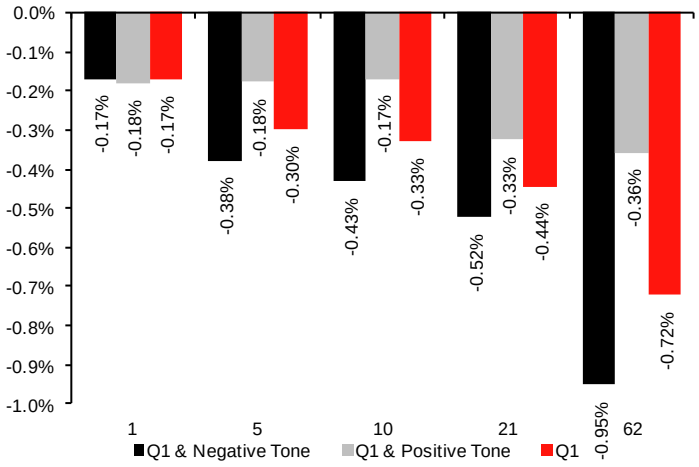
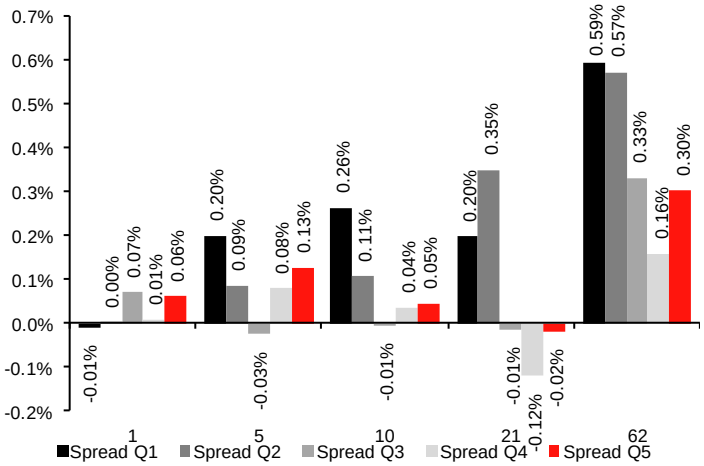
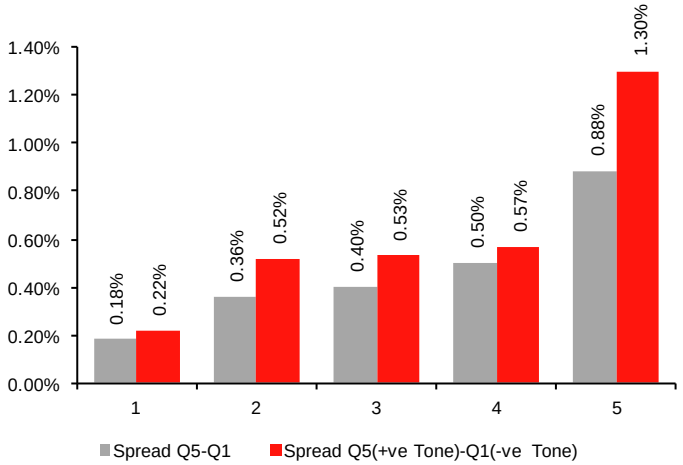


Spread Returns with Tone in All Earnings(R1) Diction

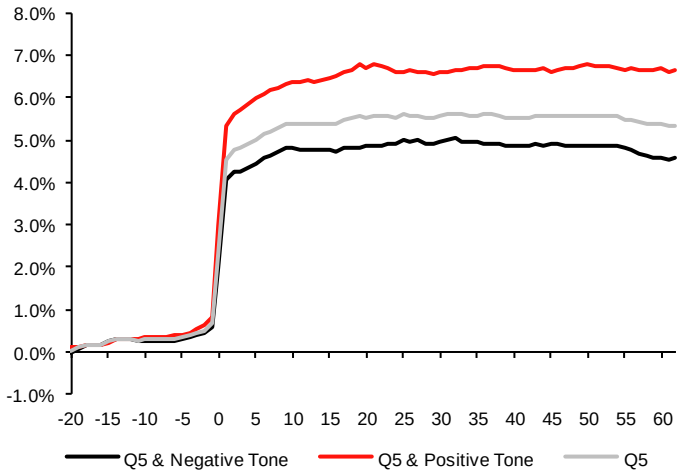


Spread Returns with Tone Comparison(R1) Diction

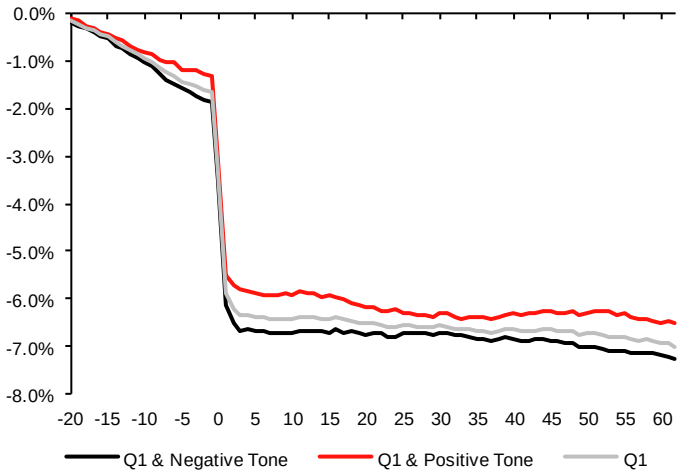


Source: SEC Edgar, Russell, IBES, Compustat , Macquarie Capital (USA), July 2014. Key: R1: Russell 1000 Universe

Abnormal Net Tone - Most Positive Earnings(R2) Diction



Abnormal Net Tone - Most Negative Earnings(R2) Diction



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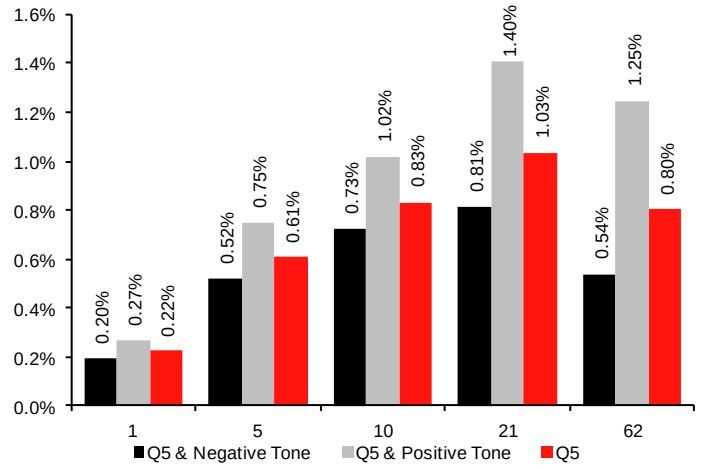
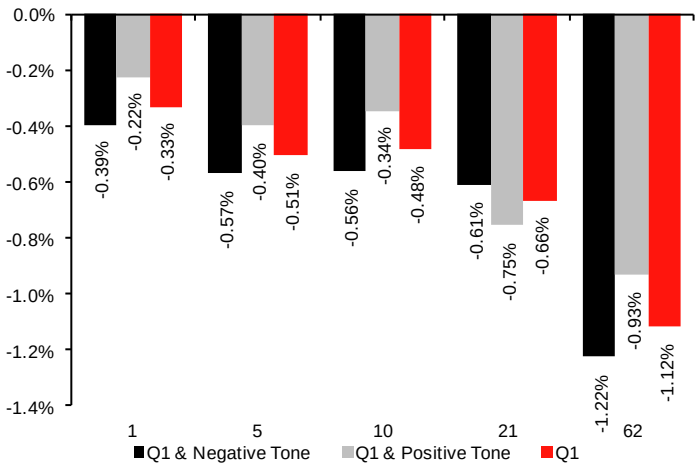
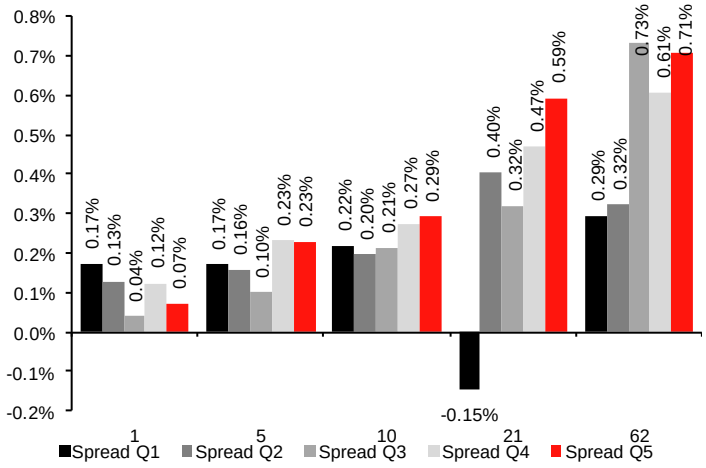


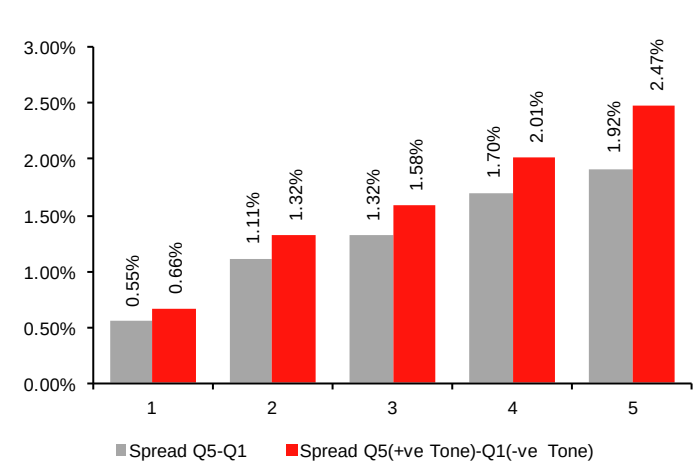
Excess Returns - Most Negative Earnings(R2) Diction



Spread Returns with Tone in All Earnings(R2) Diction

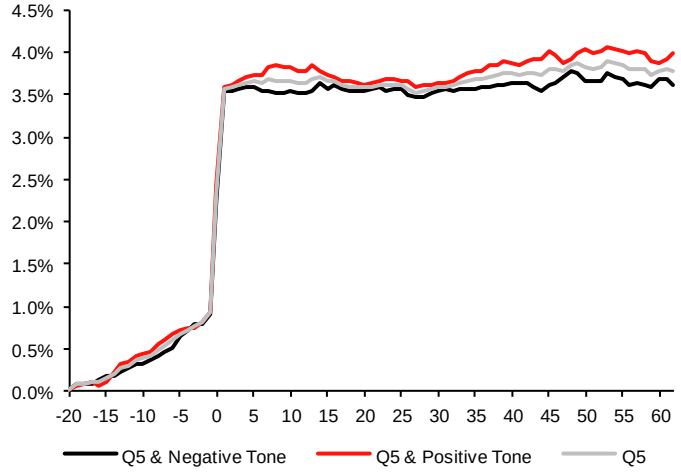


Spread Returns with Tone Comparison(R2) Diction



Source: SEC Edgar, Russell, IBES, Compustat , Macquarie Capital (USA), July 2014. Key: R2: Russell 2000 Universe

Abnormal Net Tone - Most Positive Earnings(R1) LIWC



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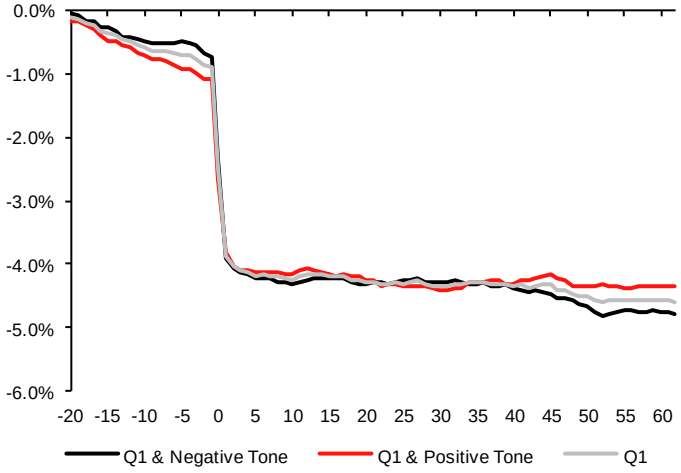
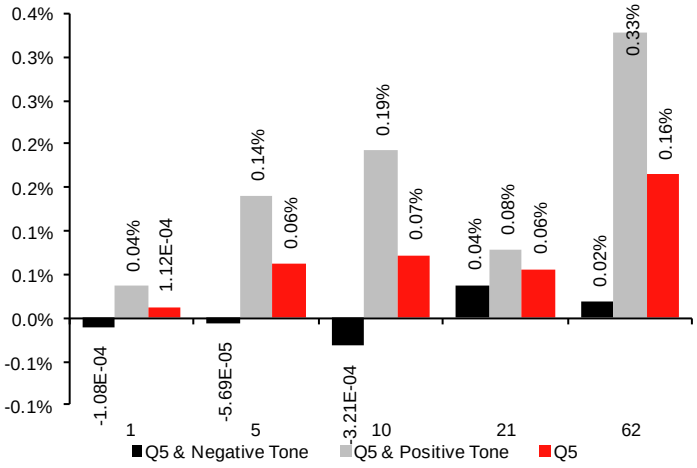
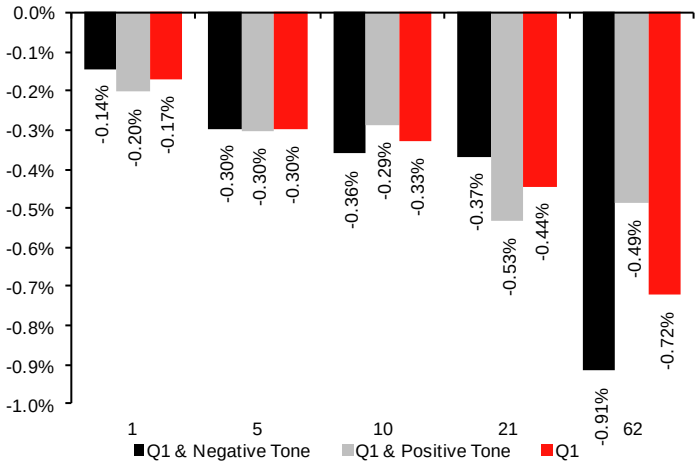


Excess Returns - Most Positive Earnings(R1) LIWC



Excess Returns - Most Negative Earnings(R1) LIWC



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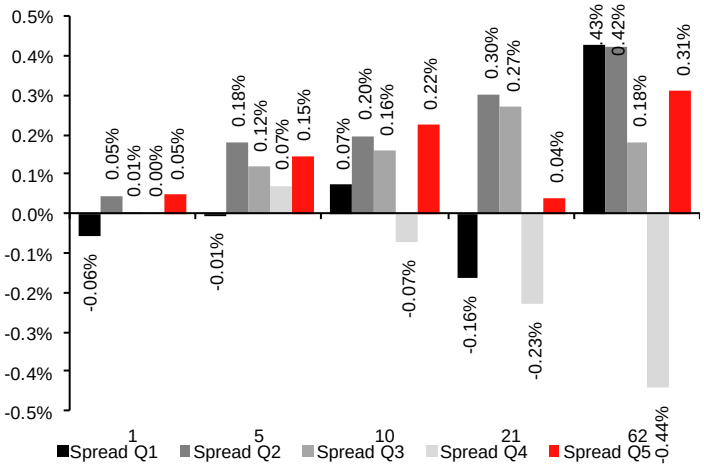
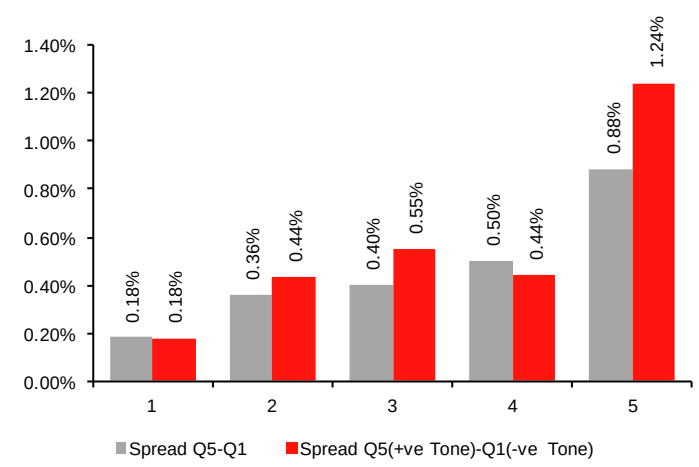


Spread Returns with Tone Comparison(R1) LIWC



Source: SEC Edgar, Russell, IBES, Compustat , Macquarie Capital (USA), July 2014. Key: R1: Russell 1000 Universe

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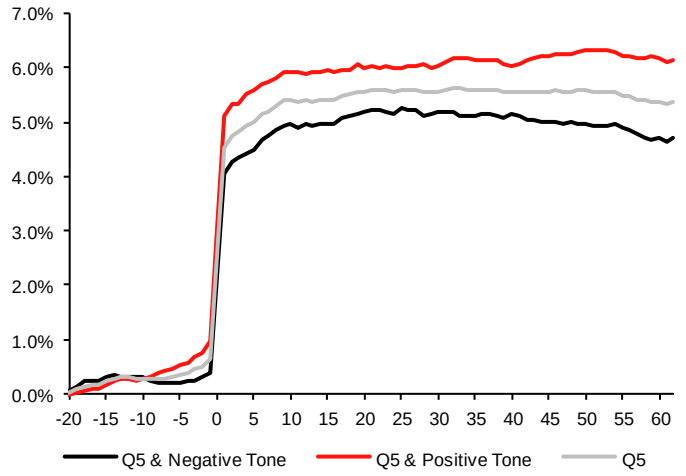
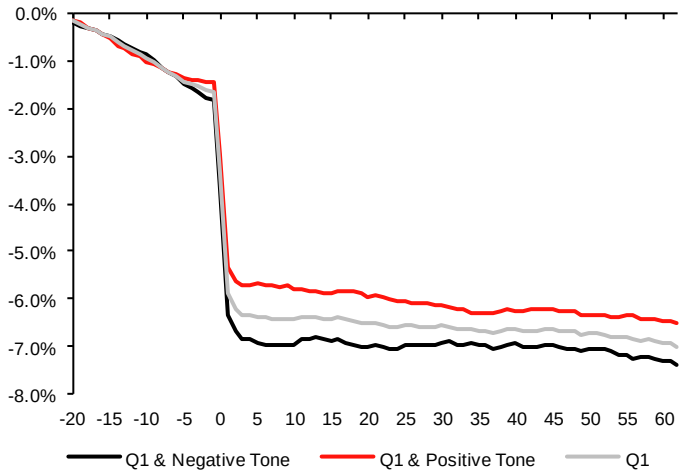
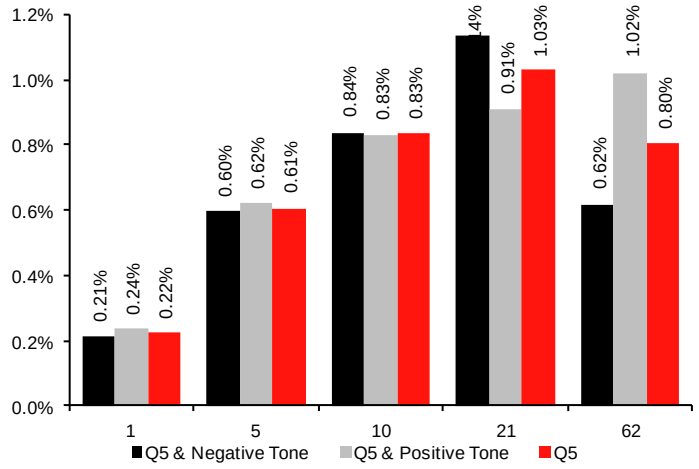


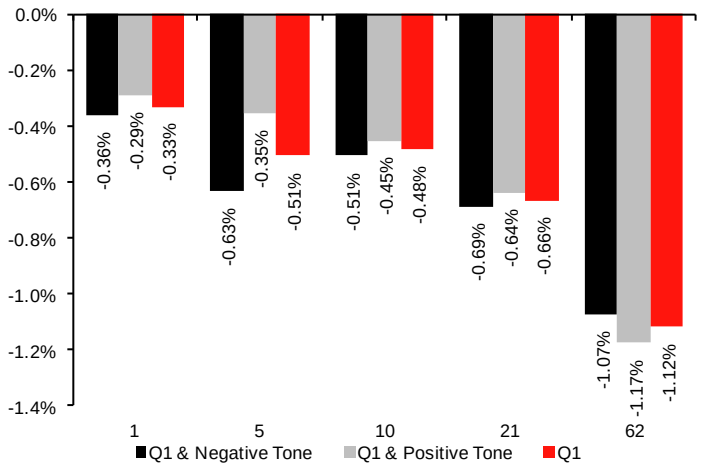
Abnormal Net Tone - Most Negative Earnings(R2) LIWC



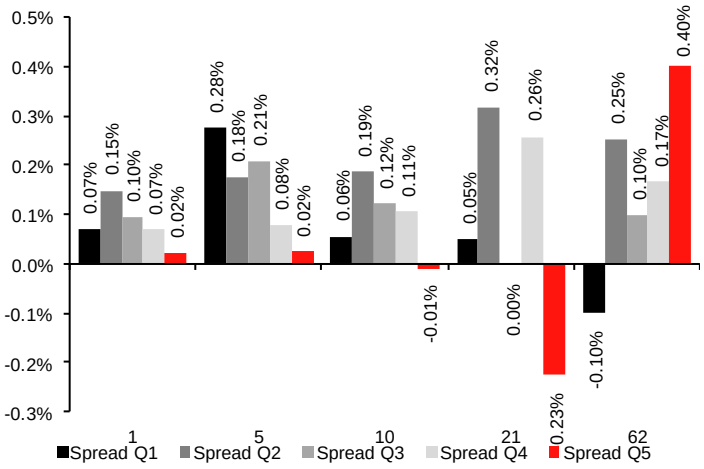
Excess Returns - Most Positive Earnings(R2) LIWC



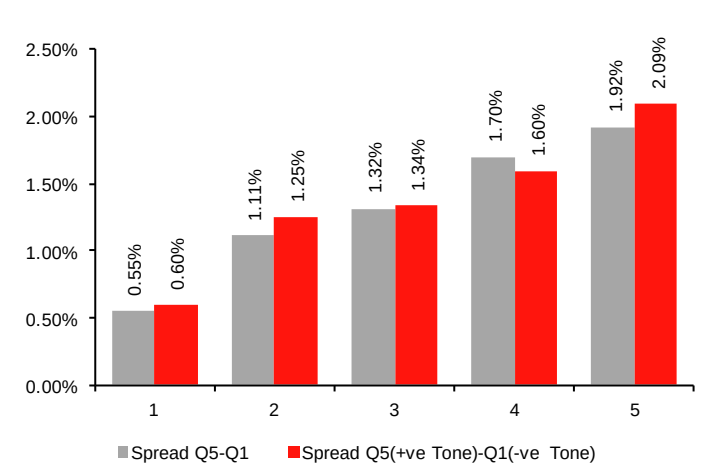
Excess Returns - Most Negative Earnings(R2) LIWC



Spread Returns with Tone in All Earnings(R2) LIWC



Spread Returns with Tone Comparison(R2) LIWC



Source: SEC Edgar, Russell, IBES, Compustat , Macquarie Capital (USA), July 2014. Key: R2: Russell 2000 Universe

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Recommendation definitions

Macquarie - Australia/New Zealand
Outperform – return >3% in excess of benchmark return
Neutral – return within 3% of benchmark return
Underperform – return >3% below benchmark return

Benchmark return is determined by long term nominal GDP growth plus 12 month forward market dividend yield

Macquarie – Asia/Europe
Outperform – expected return >+10%
Neutral – expected return from -10% to +10%
Underperform – expected return <-10%

Macquarie First South - South Africa
Outperform – expected return >+10%
Neutral – expected return from -10% to +10%
Underperform – expected return <-10%

Macquarie - Canada
Outperform – return >5% in excess of benchmark return
Neutral – return within 5% of benchmark return
Underperform – return >5% below benchmark return

Macquarie - USA
Outperform (Buy) – return >5% in excess of Russell 3000 index return
Neutral (Hold) – return within 5% of Russell 3000 index return
Underperform (Sell)– return >5% below Russell 3000 index return

Volatility index definition*

This is calculated from the volatility of historical price movements.

Very high–highest risk – Stock should be expected to move up or down 60–100% in a year – investors should be aware this stock is highly speculative.

High – stock should be expected to move up or down at least 40–60% in a year – investors should be aware this stock could be speculative.

Medium – stock should be expected to move up or down at least 30–40% in a year.

Low–medium – stock should be expected to move up or down at least 25–30% in a year.

Low – stock should be expected to move up or down at least 15–25% in a year.
* Applicable to Asia/Australian/NZ/Canada stocks only

Recommendations – 12 months
Note: Quant recommendations may differ from Fundamental Analyst recommendations

Financial definitions

All "Adjusted" data items have had the following adjustments made:
Added back: goodwill amortisation, provision for catastrophe reserves, IFRS derivatives & hedging, IFRS impairments & IFRS interest expense
Excluded: non recurring items, asset revals, property revals, appraisal value uplift, preference dividends & minority interests

EPS = adjusted net profit / efpowa*
ROA = adjusted ebit / average total assets
ROA Banks/Insurance = adjusted net profit /average total assets
ROE = adjusted net profit / average shareholders funds
Gross cashflow = adjusted net profit + depreciation
*equivalent fully paid ordinary weighted average number of shares

All Reported numbers for Australian/NZ listed stocks are modelled under IFRS (International Financial Reporting Standards).

Recommendation proportions – For quarter ending 30 June 2014

	AU/NZ	Asia	RSA	USA	CA	EUR	
Outperform	51.67%	60.69%	34.67%	42.33%	55.41%	44.84%	(for US coverage by MCUSA, 6.76% of stocks followed are investment banking clients)
Neutral	33.00%	23.93%	38.67%	50.92%	38.51%	35.87%	(for US coverage by MCUSA, 7.25% of stocks followed are investment banking clients)
Underperform	15.33%	15.38%	26.67%	6.75%	6.08%	19.28%	(for US coverage by MCUSA, 0.48% of stocks followed are investment banking clients)

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