

HedgeChatter

Case Study: *Stock Price Manipulation Detection*



Case Study: Stock Price Manipulation Detection

Company: Galena Biopharma, Inc.

Ticker: GALE

Focus: Risk Mitigation



# HedgeChatter

## Case Study: *Stock Price Manipulation Detection*

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## ABSTRACT

Stock manipulation, ie. “pump and dump”, has been around for decades. Novice and experienced investors alike have been caught up in these types of scams resulting in small financial losses to complete bankruptcy.

There are many different methods and approaches to which this scheme can take shape. One method commonly used consists of Company A buying a low value stock then hiring Company B to distribute large amounts of positive and/or misleading information to the investor community in hopes of driving the price of the stock up and then Company A selling out thus leaving the last informed investors “holding the bag.”

With the advent of social media, millions of people can be reached in an instant. Since a traditional “pump and dump” scheme success depends on enticing a large number of people into buying a particular stock, it’s no wonder that companies have taken to social media to seek out their next victims.

In today’s fast paced information driven trading environment, investors and traders need new tools to help mitigate their exposure to potential “pump and dump” schemes.

## SEC Investor Alert: Social Media and Investing

### \* Investor Alert: Social Media and Investing -- Stock Rumors July 25, 2014

*The U.S. Securities and Exchange Commission's (SEC) Office of Investor Education and Advocacy ("OIEA") is issuing this Investor Alert to warn investors about fraudsters who may attempt to manipulate share prices by using social media to spread false or misleading information about stocks.*

Social media and the Internet in general have become important tools for investors. Investors may use social media to research particular stocks, look up background information on a broker-dealer or investment adviser, find guidance on investing strategies, receive up-to-date news, and discuss the markets with others.

While social media can provide many benefits for investors, it also presents opportunities for fraudsters. Through social media, fraudsters can spread false or misleading information about a stock to large numbers of people with minimum effort and at a relatively low cost. They can also conceal their true identities by acting anonymously or even impersonating credible sources of market information.

One way fraudsters may exploit social media is to engage in a market manipulation, such as spreading false and misleading information about a company to affect the stock's share price. Wrongdoers may perpetuate stock rumors on social media, as well as on online bulletin boards and in Internet chat rooms.

The false or misleading rumors may be positive or negative. For example, in a "pump-and-dump" scheme, promoters "pump" up the stock price by spreading positive rumors that incite a buying frenzy and they quickly "dump" their own shares before the hype ends. Typically, after the promoters profit from their sales, the stock price drops and the remaining investors lose money. In other instances, fraudsters start negative rumors urging investors to sell their shares so that the stock price plummets and the fraudsters take advantage of buying shares at the artificially low price.

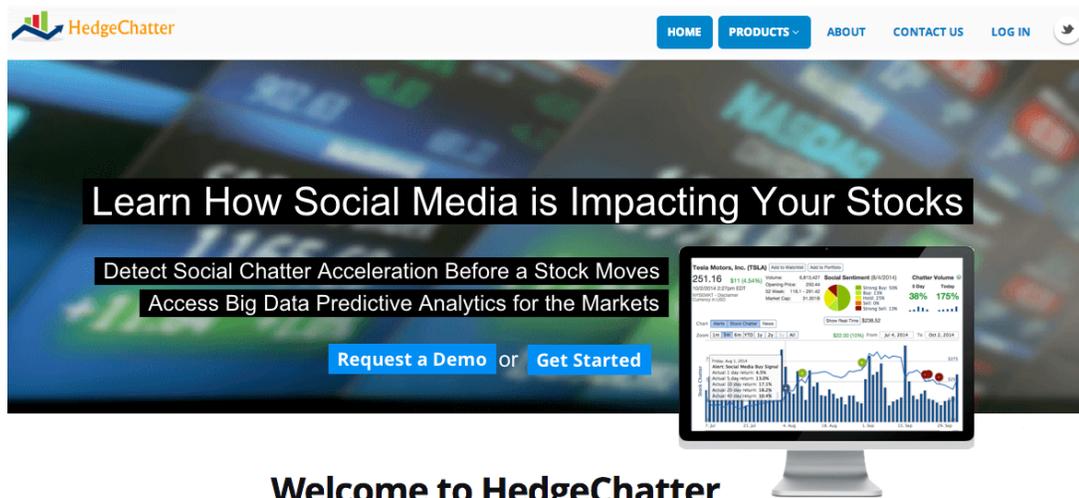
Investors should be aware that fraudsters may use social media to impersonate an established source of market information. For example, fraudsters may set up an account name, profile, or handle designed to mimic a particular company or securities research firm. They may go so far as

to create a webpage that uses the company's logo, links to the company's actual website, or references the name of an actual person who works for the company.

\* Source: [http://www.sec.gov/oiea/investor-alerts-bulletins/ia\\_rumors.html#.VMgDFWR4opM](http://www.sec.gov/oiea/investor-alerts-bulletins/ia_rumors.html#.VMgDFWR4opM)

## HedgeChatter - Overview

HedgeChatter is a SaaS platform which mines and monitors keywords, trends, conversations and social media stock sentiment to predict stock price. Data is mined and correlated across a range of social media sources allowing traders/investors to view and analyze trending activity for social influence on their portfolios.



### Welcome to HedgeChatter

The Trusted Provider of Social Media Signals for the Stock Market

## How Important is Social Media Stock Sentiment Analytics?

Fundamentals and technical indicators don't paint a complete picture anymore. Social Media is an important transport mechanism of how people and analysts think of brands and companies and is full of rich predictive data.



*“Traders need to understand who’s influencing the market, when stocks are about to move, and the volume behind this move. HedgeChatter provides a deep social media analytical intelligence platform to collect and evaluate this data.”*

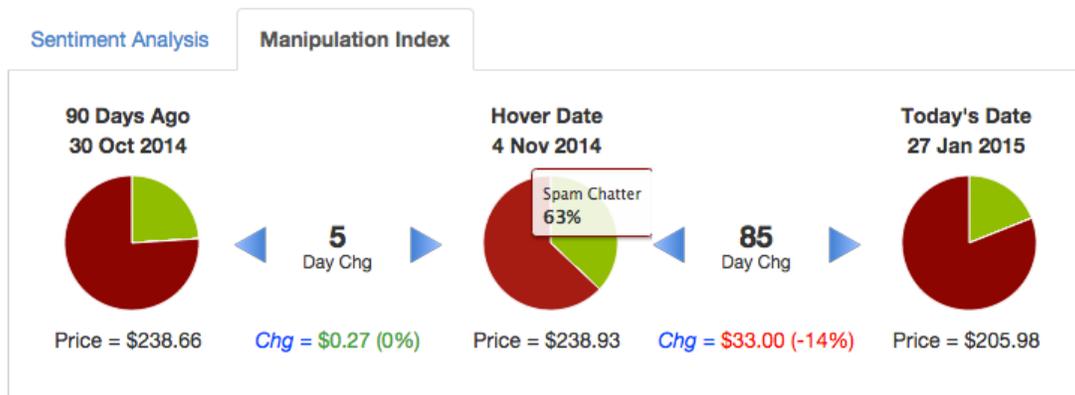
In today's Big Data environment it's critical to be able to clearly mine and evaluate the impact social has, or has detected on a given stock or an overall portfolio.

## HedgeChatter - Manipulation Index

HedgeChatters algorithms have found numerous instances of schemes attempting to inflate sentiment on stocks.



To mitigate risk from fictitious and malicious parties, HedgeChatter developed the Manipulation Index to show the percent of messages, on a given day, which are classified as **Validated Chatter** or **Spam Chatter**.



Manipulation is generally considered negative regardless of intent by the person, group, or multi-groups creating it and is determined by multiple factors.

Example based on a fictitious username AlphaStock007:

- **AlphaStock007** generates a social message, with his/her username, across MULTIPLE channels, multiple times per day. (less sophisticated)
- **AlphaStock007** generates a social message, with DIFFERENT usernames, across a single social channel, multiple times per day. (more sophisticated)
- **AlphaStock007** generates a social message, with DIFFERENT usernames, across MULTIPLE social channels, multiple times per day. (very sophisticated)
- **AlphaStock007** generates DIFFERENT social messages, with DIFFERENT usernames, across MULTIPLE social channel, multiple times per day. (extremely sophisticated)

## Case Study: Stock Price Manipulation Detection

Galena Biopharma, Inc. (GALE) had an exceptional price run up between the periods of November 1st, 2013 and April 11th, 2014 when its price skyrocketed from the \$2 range up to its peak January 16th 2014 at \$7.48, before crashing back down.

The following timeline of events will detail the rise and subsequent fall of GALE and how HedgeChatter detected GALE as a profitable trading opportunity and simultaneously displayed the financial risk as heavy social media manipulation drove the stock up.

### Timeline of Events: (The RUN UP)

-> Nov. 5th, 2013 - GALE Price \$2.36

**Strong Buy Sentiment Spikes to 95% & SpamChatter is at 54%**

#### Galena Biopharma, Inc. (GALE)

Add to Watchlist

Add to Portfolio

**1.71** \$0.01 (-0.58%)

1/27/2015 7:47pm EST

NYSEMKT - Disclaimer  
Currency in USD

Volume: 755,625

Opening Price: 1.72

52 Week: 1.43 - 5.7

Market Cap: 207.7M

#### Social Sentiment (11/5/2013)



Strong Buy: 95%  
Buy: 0%  
Hold: 5%  
Sell: 0%  
Strong Sell: 0%

Chart Alerts Stock Chatter News

Show Real-Time \$2.36

Zoom 1m 3m 6m YTD 1y 2y 5y All

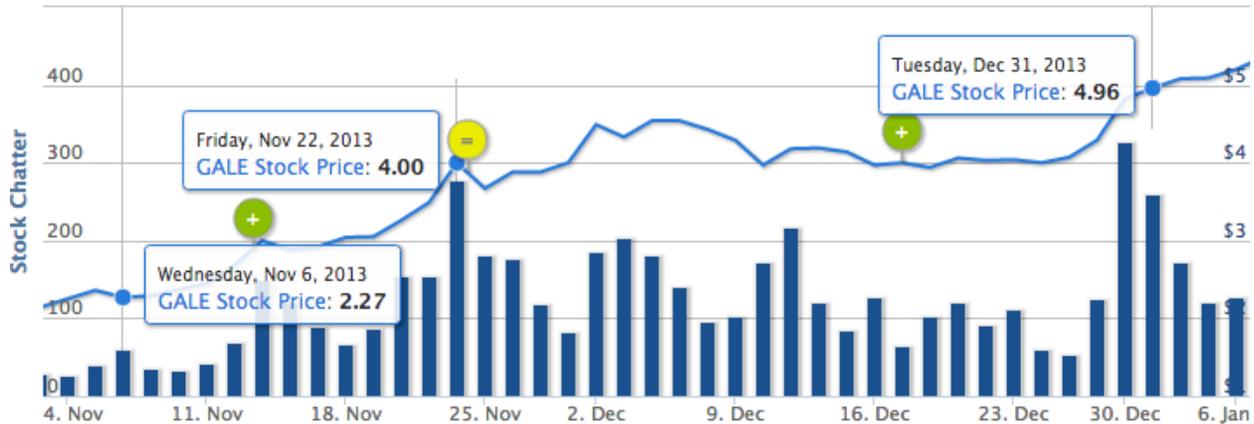
\$0.67 (-28%) From Sep 10, 2013



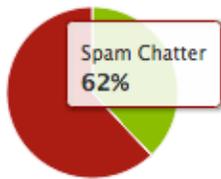
## Timeline of Events: (The RUN UP)

### Correlation Summary of Price Movement and SpamChatter on GALE

For the time period of Nov. 6th, Nov. 23rd, Dec. 16th, & Dec. 31st 2013

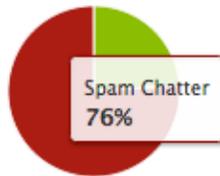


**6 Nov 2013**



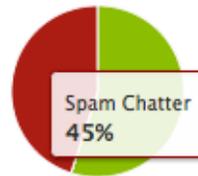
Price = \$2.27

**22 Nov 2013**



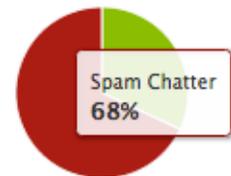
Price = \$4.00

**16 Dec 2013**



Price = \$3.97

**31 Dec 2013**



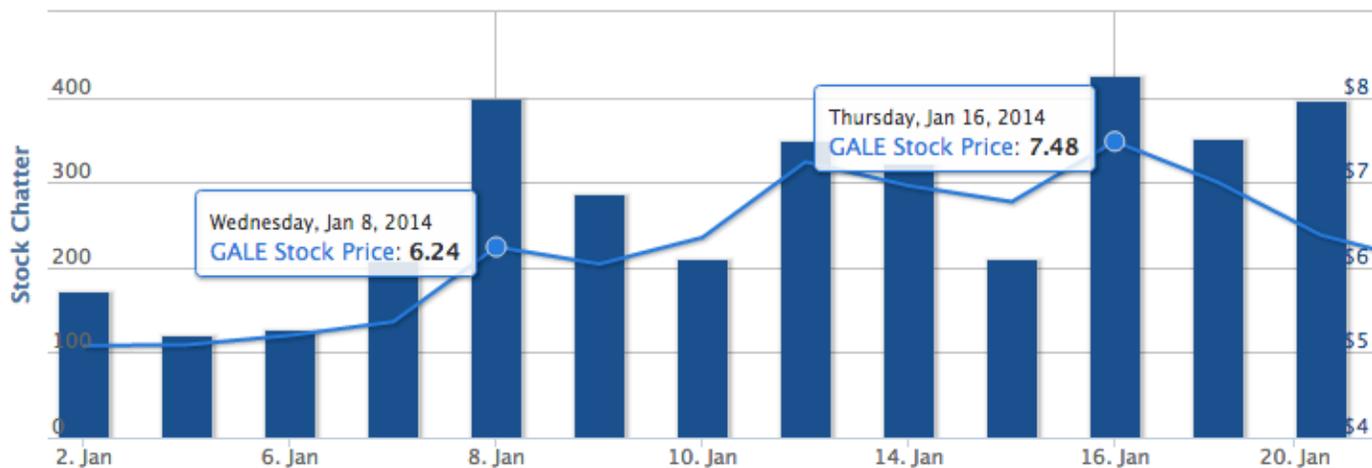
Price = \$4.96

- **Nov. 6th, 2013** - GALE Price \$2.27 Then Sudden Spike of SpamChatter to 62%
- **Nov. 22nd, 2013** - GALE Continues Climb to \$4.00 (SpamChatter/Manipulation had increased to 76%)
- **Dec. 16th, 2013** - GALE at \$3.97 & Social Media Buy Signal Triggered Again
- **Dec. 31st, 2013** - GALE climbs to \$4.96 as SpamChatter climbs again

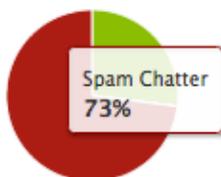
## Timeline of Events: (The PEAK)

### Correlation Summary of Price Movement and SpamChatter on GALE

For the time period of Jan. 8th & Jan. 16th 2014

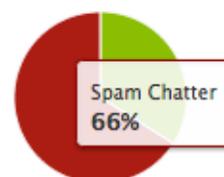


**8 Jan 2014**



Price = \$6.24

**16 Jan 2014**



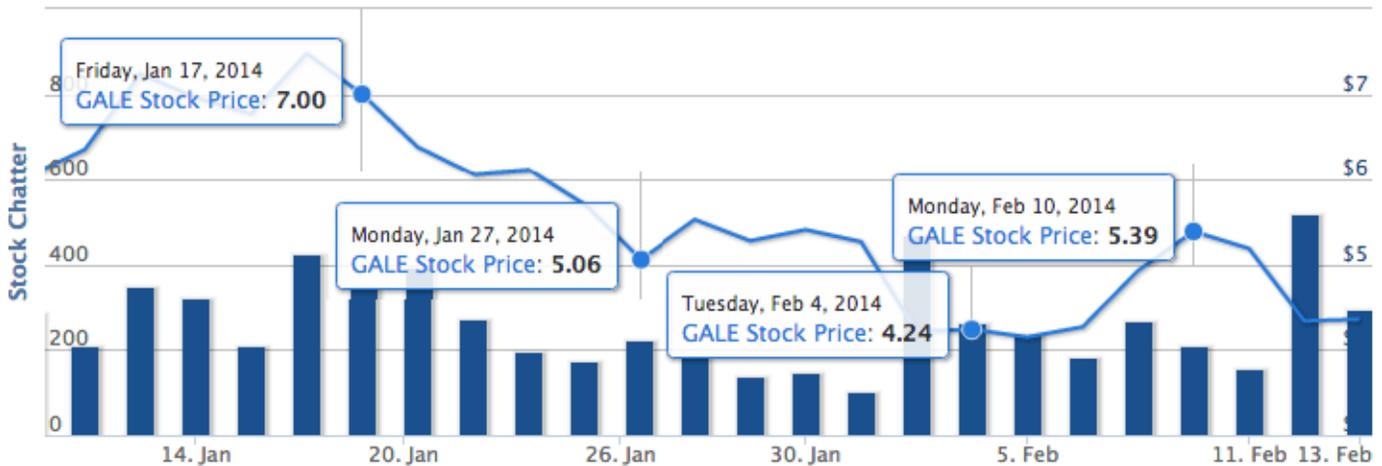
Price = \$7.48

- **Jan. 8th, 2014** - GALE climbs to \$6.24 as SpamChatter climbs again to 73%
- **Jan. 16th, 2014** - GALE peaks at \$7.48 & SpamChatter drops to 66%

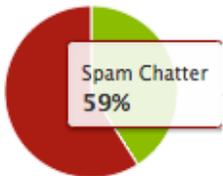
## Timeline of Events: (The DECLINE)

### Correlation Summary of Price Movement and SpamChatter on GALE

For the time period of Jan. 17th, Jan. 27th, Feb. 4th, & Feb. 10th 2014

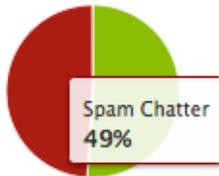


**17 Jan 2014**



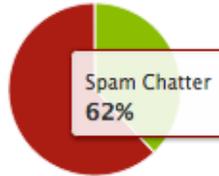
Price = \$7.00

**27 Jan 2014**



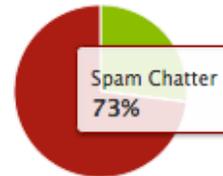
Price = \$5.06

**4 Feb 2014**



Price = \$4.24

**10 Feb 2014**



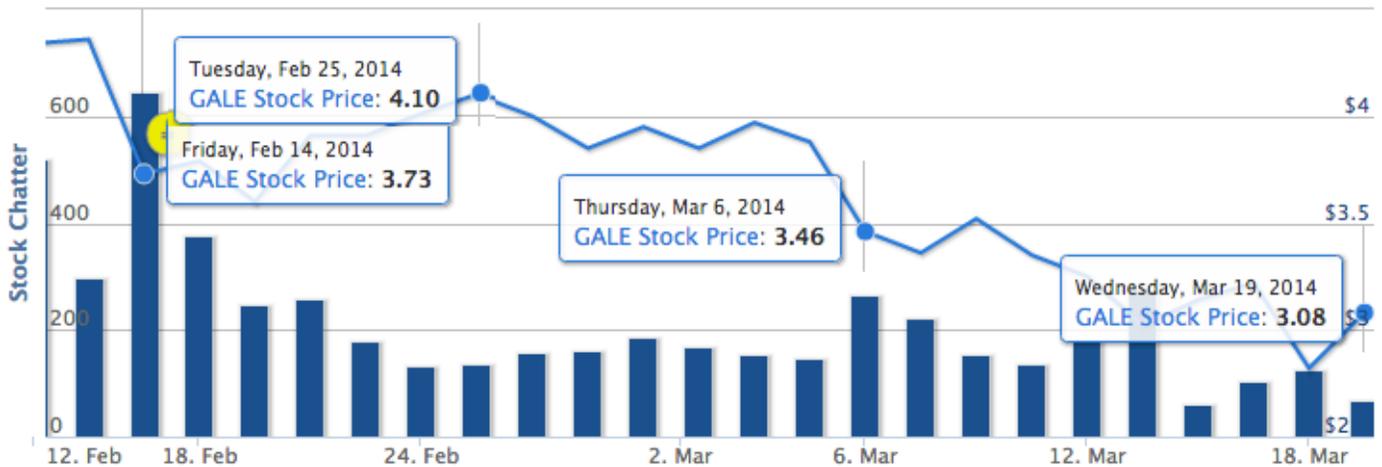
Price = \$5.39

- **Jan. 17th, 2014** - GALE drops to \$7.00 as SpamChatter drops to 59%
- **Jan. 27th, 2014** - GALE drops to \$5.06 as SpamChatter continues to drop down to 49%
- **Feb. 4th, 2014** - GALE drops to \$4.24 and SpamChatter shoots up to 62% causing the stock price to jump 25% 6 days later on Feb. 10th.
- **Feb. 10th, 2014** - GALE climbs to \$5.39 with SpamChatter at 73%

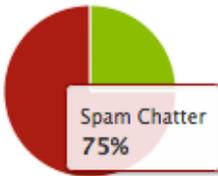
## Timeline of Events: (The DECLINE)

### Correlation Summary of Price Movement and SpamChatter on GALE

For the time period of Feb 14th, Feb. 25th, Mar. 6th & Mar. 19th 2014

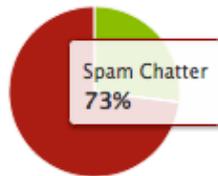


14 Feb 2014



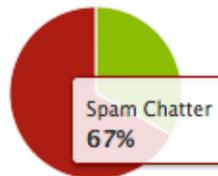
Price = \$3.73

25 Feb 2014



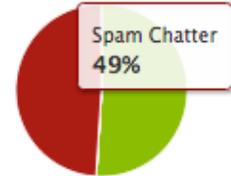
Price = \$4.10

6 Mar 2014



Price = \$3.46

19 Mar 2014



Price = \$3.08

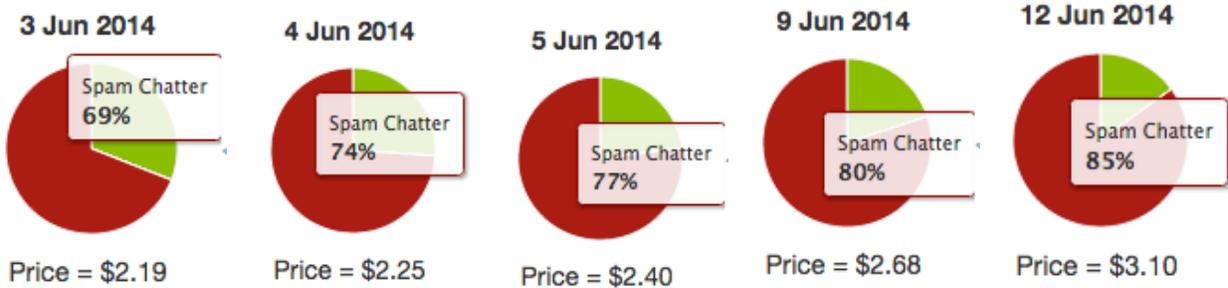
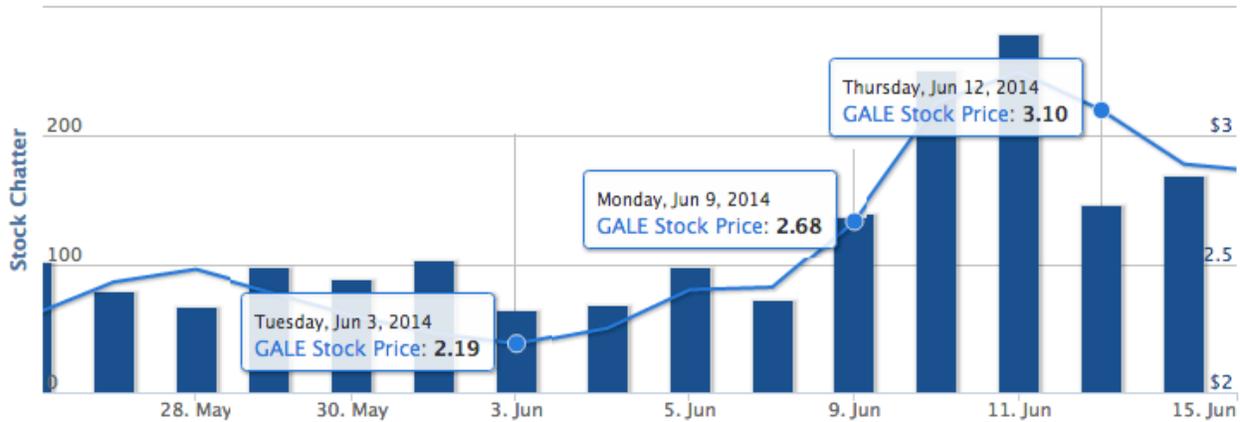
- **Feb. 14th, 2014** - GALE begins to lose footing and the stock is hit with a massive spike in chatter as the price begins to drop to a low of \$3.73, 50% of what its peak was just one month earlier. SpamChatter is at 75% which props the stock up slightly over the next few days before it continues its decline.
- **Feb. 25th, 2014** - Eleven days later, GALE rises up to \$4.10 with 73% SpamChatter before the price declines further.
- **Mar. 6th, 2014** - Class Action Lawsuits against GALE announced citing GALE management hired a promotion company to "promote" the stock from Nov. 6th 2013 - Feb. 14th 2014
- **Mar. 19th, 2014** - GALE declines to \$3.08 and SpamChatter has dropped to 49%

**April & May:** GALE hovers around \$1.90, then in June we see another run up.

### Timeline of Events: (Run Up)

## Correlation Summary of Price Movement and SpamChatter on GALE

For the time period of Jun. 3rd, Jun. 4th, Jun. 5th, Jun 9th, Jun 12th 2014



- June 3rd, 2014 GALE hovered around \$2.19
- A significant spike in SpamChatter ensued, shooting from 69% to 85% and carrying the stock price up to \$3.10 on June 12th, 2014 before it began its decline again.

(Continued on next page)

**-> August 21st, 2014 GALE CEO forced out of the company.**

**-> January 28th, 2015 GALE Stock Price hovers around \$1.65**

In the beginning the stock had huge promise and potential but in the end the company ended up with multiple class action lawsuits, an ousted CEO, and a below \$2 per share stock. Social Media Conversations can have a substantial impact on stock price. By properly monitoring Sentiment, Chatter Volumes, and Individuals Reputations, traders and investors can be better prepared to participate in opportunities and help mitigate financial risk.

**\*DISCLAIMER: HedgeChatter can neither confirm or deny the identity of the responsible party or parties involved with the social media manipulation or attempted manipulation of GALE stock. HedgeChatter can also neither confirm or deny if any employee, director, officer, management, or anyone affiliated either directly or indirectly with Galena Biopharma, Inc. had any intentional or unintentional interest or involvement with the social media manipulation or attempted manipulation of GALE stock.**

The following is a detailed step by step progression of the above timeline summary. The Social Media Buy Signals are shown here:

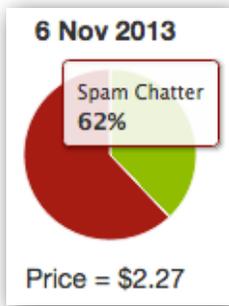
**-> Nov. 6th, 2013 - GALE Price \$2.27 Then Sudden Spike of SpamChatter to 62%**

**Galena Biopharma, Inc. (GALE)** [Add to Watchlist](#) [Add to Portfolio](#)

**1.71** \$0.01 (-0.58%) Volume: 755,625 **Social Sentiment (11/6/2013)**  
 1/27/2015 7:53pm EST Opening Price: 1.72  
 NYSEMKT - Disclaimer 52 Week: 1.43 - 5.7  
 Currency in USD Market Cap: 207.7M

**Social Sentiment (11/6/2013)**

- Strong Buy: 79%
- Buy: 7%
- Hold: 11%
- Sell: 0%
- Strong Sell: 4%



**-> Nov. 12th, 2013 - GALE Climbs to \$2.68 & Social Media Buy Signal Triggered**

**Galena Biopharma, Inc. (GALE)** [Add to Watchlist](#) [Add to Portfolio](#)

**1.71** \$0.01 (-0.58%) Volume: 755,625 **Social Sentiment (11/18/2013)**  
 1/27/2015 7:57pm EST Opening Price: 1.72  
 NYSEMKT - Disclaimer 52 Week: 1.43 - 5.7  
 Currency in USD Market Cap: 207.7M

**Social Sentiment (11/18/2013)**

- Strong Buy: 81%
- Buy: 13%
- Hold: 6%
- Sell: 0%
- Strong Sell: 0%



**-> Nov. 12th, 2013 - Social Media Buy Signal Triggered ( Shown below with IRR View)**

**Galena Biopharma, Inc. (GALE)**

Add to Watchlist

Add to Portfolio

**1.71** \$0.01 (-0.58%)

1/27/2015 8:27pm EST

NYSEMKT - Disclaimer  
Currency in USD

Volume: 755,625

Opening Price: 1.72

52 Week: 1.43 - 5.7

Market Cap: 207.7M

**Social Sentiment (11/14/2013)**



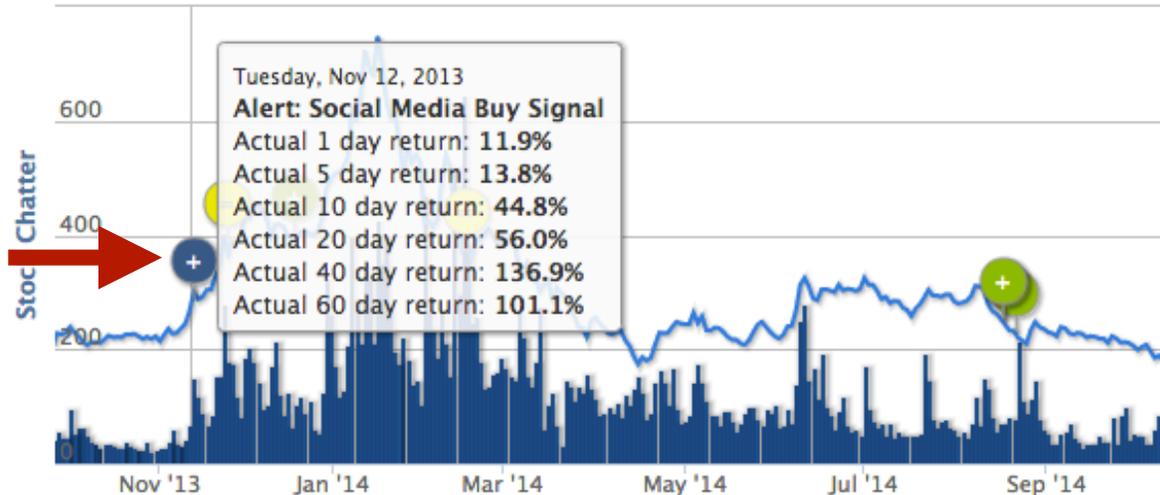
Strong Buy: 57%  
Buy: 22%  
Hold: 13%  
Sell: 2%  
Strong Sell: 6%

Chart Alerts Stock Chatter News

Show Real-Time \$2.88

Zoom 1m 3m 6m YTD 1y 2y 5y All

\$0.57 (-25%) From Sep 29, 2013



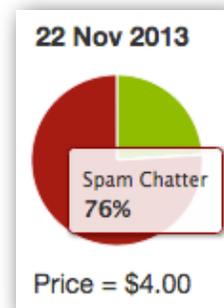
Substantial profits were generated 10, 20, and 40 trading days after the Social Media Buy Signal Alert was triggered.

**-> Nov. 23rd, 2013 - GALE Continues Climb to \$4.00**

**Sentiment Volume Spikes and an Alert is generated for possible change in direction (Shown below with IRR View)**



The previous day, Friday Nov. 22nd, SpamChatter/Manipulation had increased to 76%



**-> Dec. 16th, 2013 - GALE at \$3.97 & Social Media Buy Signal Triggered Again**

**Galena Biopharma, Inc. (GALE)** [Add to Watchlist](#) [Add to Portfolio](#)

**1.65** \$0.06 (-3.51%) Volume: 1,483,853 **Social Sentiment (9/10/2013)** **Chatter Volume** 

1/28/2015 4:41pm EST Opening Price: 1.73 **5 Day** **Today**  
 NYSEMKT - Disclaimer Currency in USD 52 Week: 1.43 - 5.7 **21%** **-23%**  
 Market Cap: 200.4M **Strong Buy: 59%** **Buy: 15%** **Hold: 0%** **Sell: 11%** **Strong Sell: 15%**

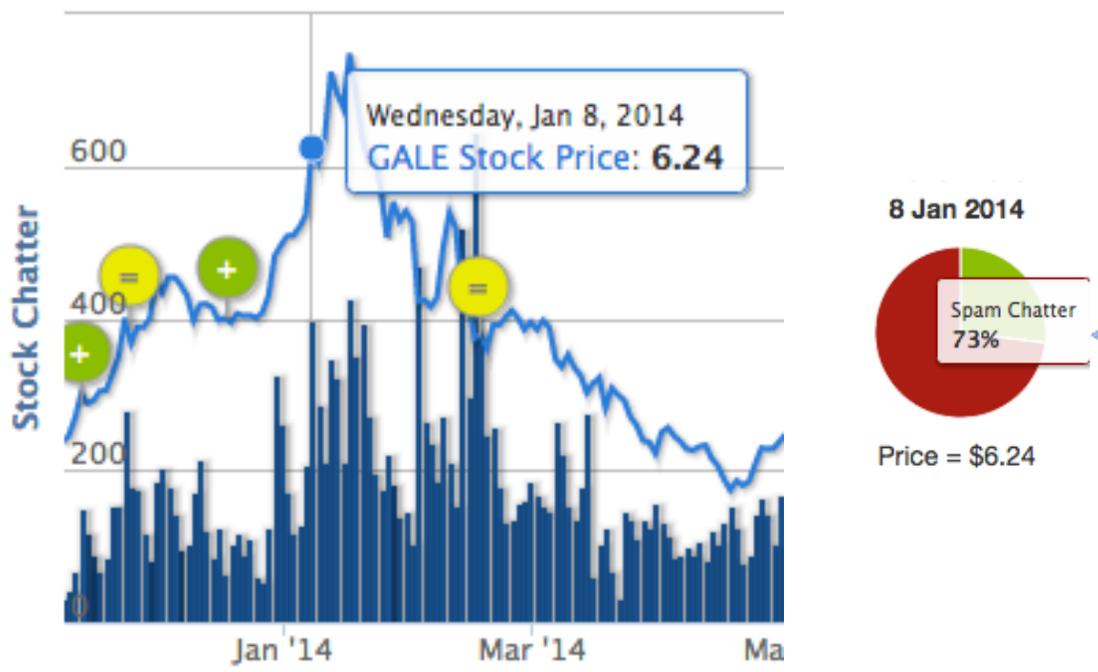




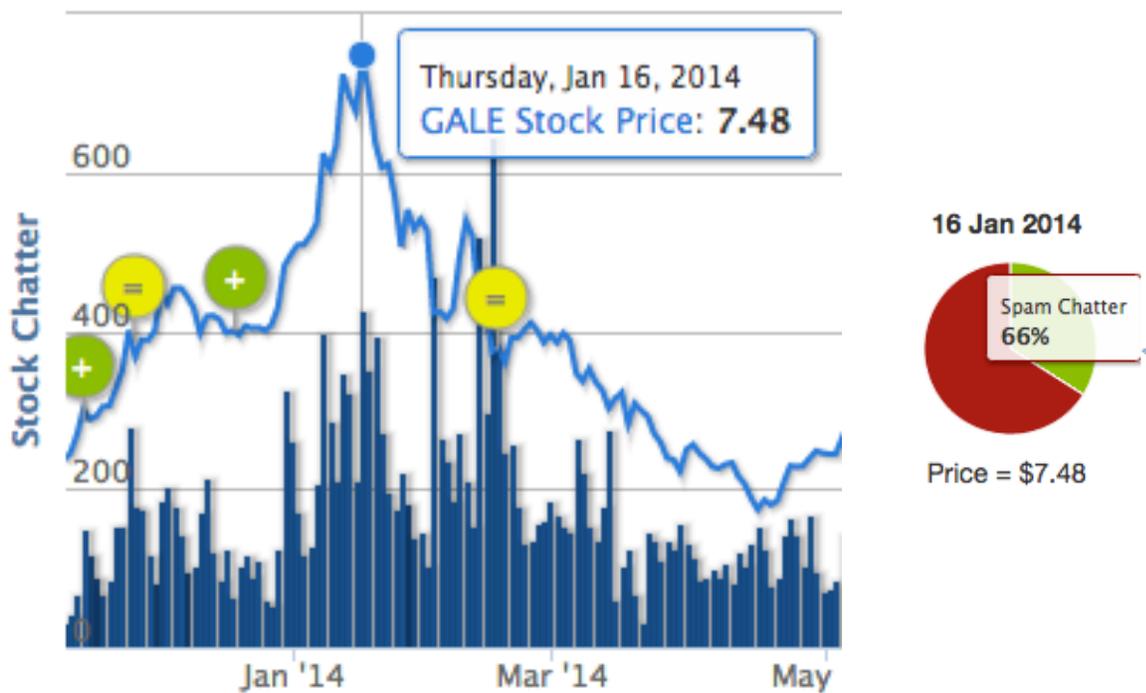
**-> Dec. 31st, 2013 - GALE climbs to \$4.96 as SpamChatter climbs again**



**-> Jan. 8th, 2014 - GALE climbs to \$6.24 as SpamChatter climbs again to 73%**

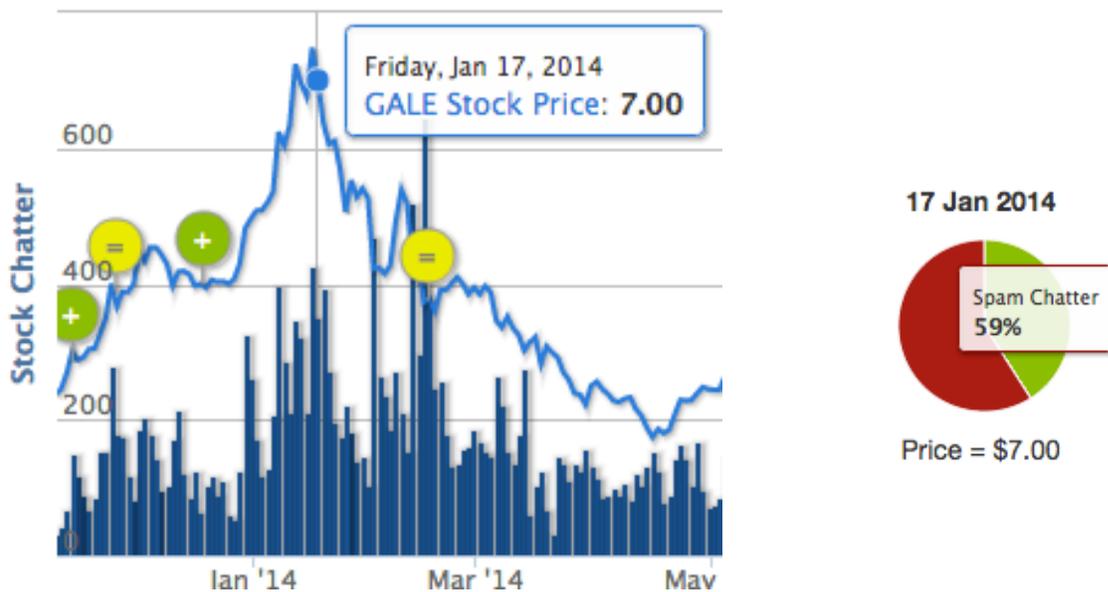


**-> Jan. 16th, 2014 - GALE peaks at \$7.48 & SpamChatter drops to 66%**

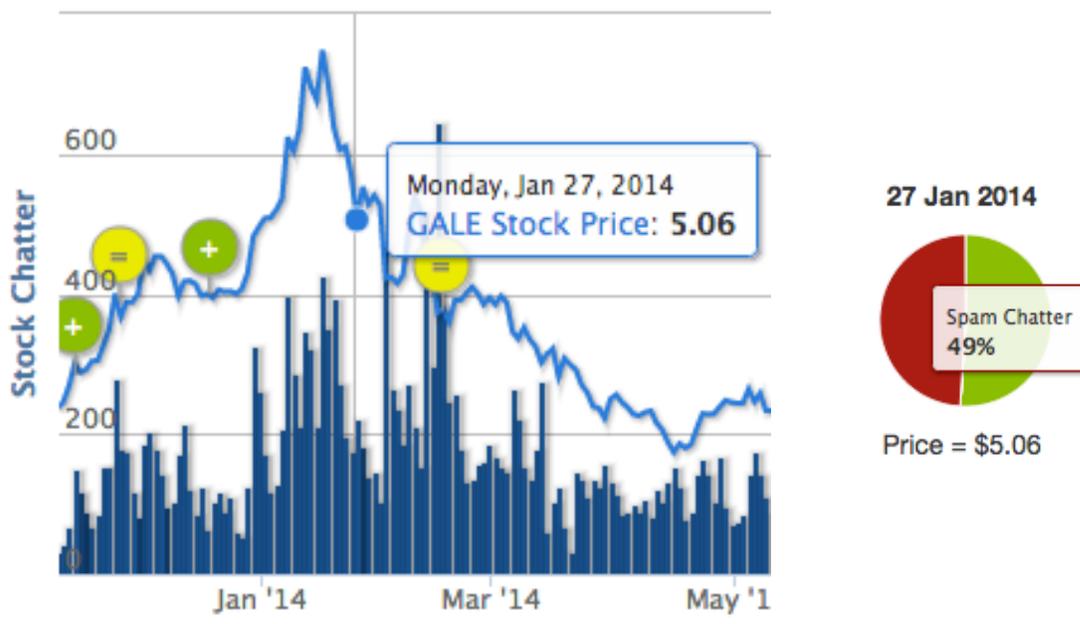


## Timeline of Events: (The DECLINE)

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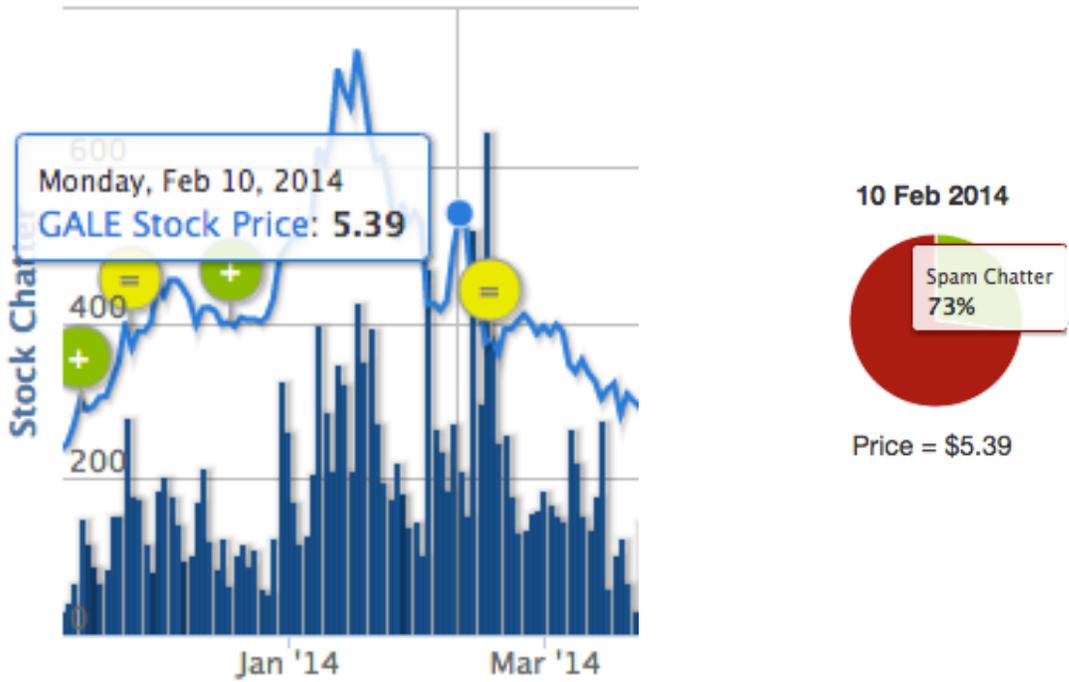
**-> Jan. 27th, 2014 - GALE drops to \$5.06 as SpamChatter continues drop to 49%**



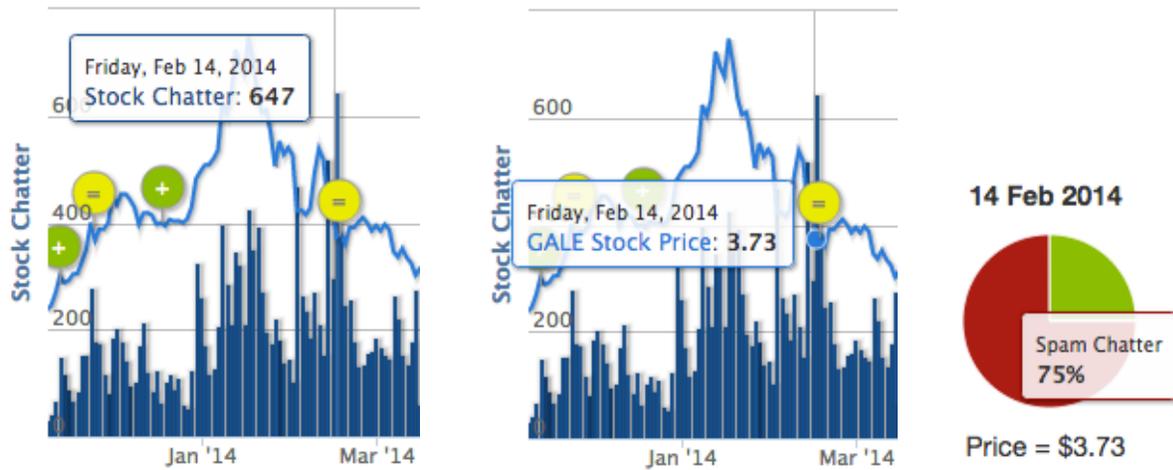
**-> Feb. 4th, 2014 - GALE drops to \$4.24 and SpamChatter shoots up to 62% causing the stock price to jump 25% 6 days later on Feb. 10th.**



**-> Feb. 10th, 2014 - GALE climbs to \$5.39 with SpamChatter at 73%**



**-> Feb. 14th, 2014 - GALE begins to loose footing and the stock is hit with a massive spike in chatter as the price begins to drop to a low of \$3.73, 50% of what it's peak was just one month earlier. SpamChatter is at 75% which props the stock up slightly over the next few days before it continues its decline.**

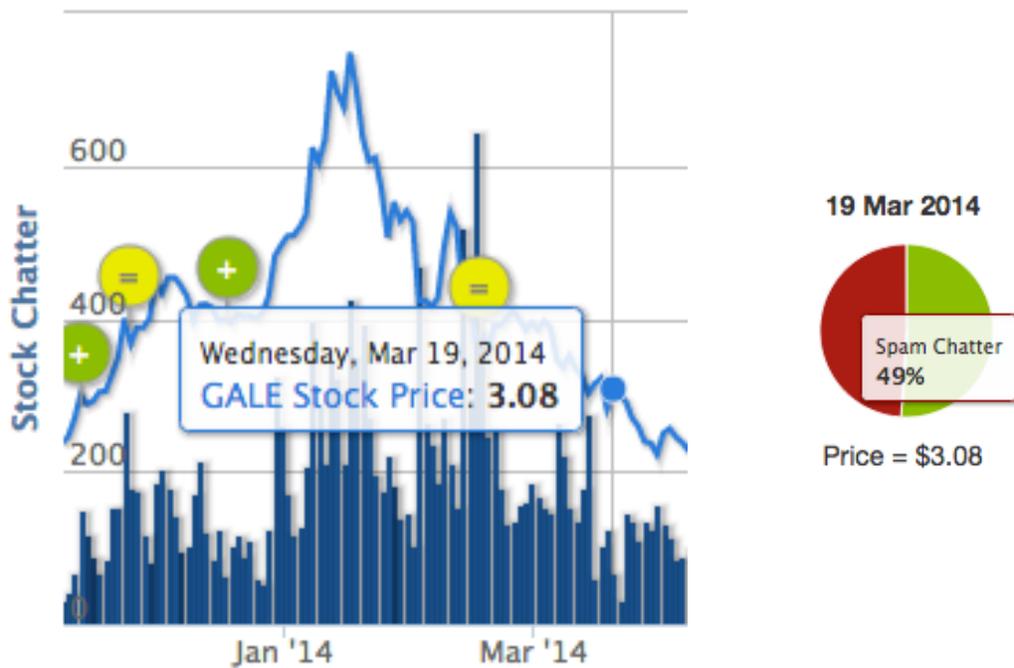


**-> Feb. 25th, 2014 - Eleven days later, GALE rises up to \$4.10 with 73% SpamChatter before the price declines further.**



**-> Mar. 6th, 2014 - Class Action Lawsuits against GALE announced citing GALE management hired a promotion company to “promote” the stock from Nov. 6th 2013 - Feb. 14th 2014**

**-> Mar. 19th, 2014 - GALE declines to \$3.08 and SpamChatter has dropped to 49%**

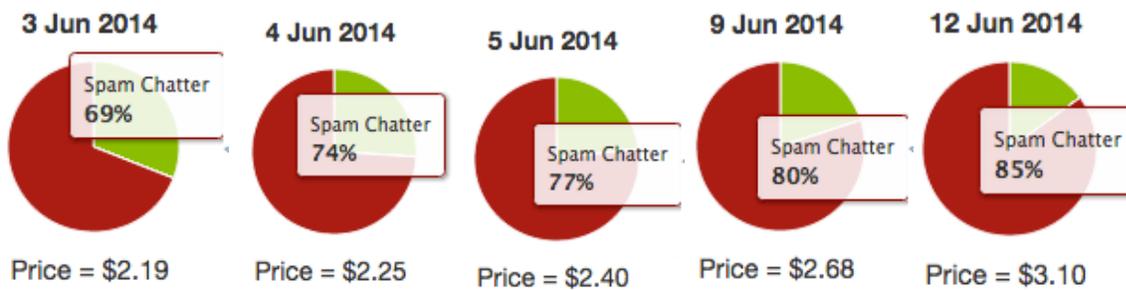
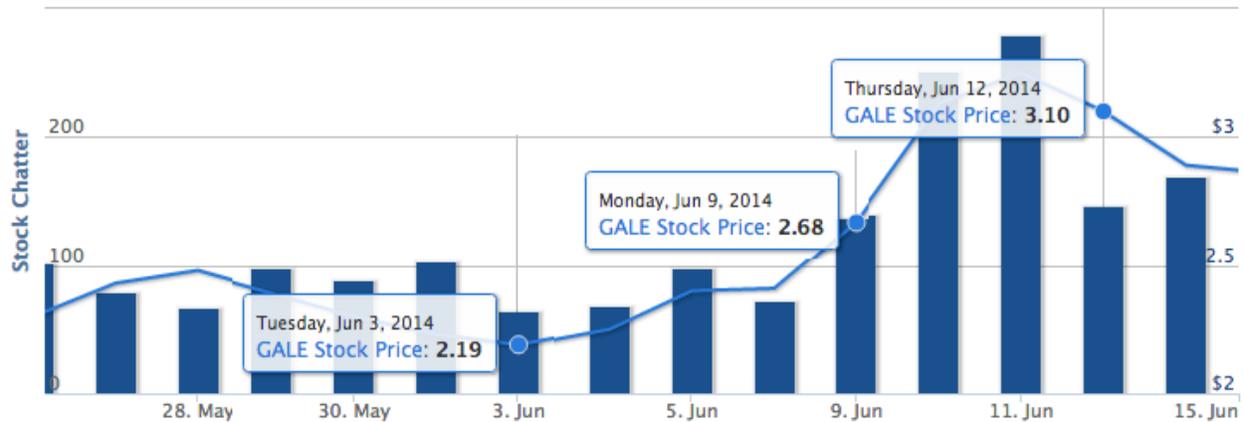


**-> April & May GALE hovers around \$1.90, then in June we see another run up.**

**(Continued on next page)**

**-> June 3rd, 2014 GALE hovered around \$2.19**

**A spike in SpamChatter ensued, shooting from 69% to 85% and carrying the stock price up to \$3.10 before it's decline again on June 12th, 2014.**



**End of detailed timeline events**



## HedgeChatter

For additional information, including our Retail Investor and HedgeFund platforms or API's, please contact us at 1-678-744-9720 or by visiting [www.HedgeChatter.com](http://www.HedgeChatter.com)



[You may also download our HedgeChatter Overview Collateral here:](#)

