How to use Ez Probability Calculator

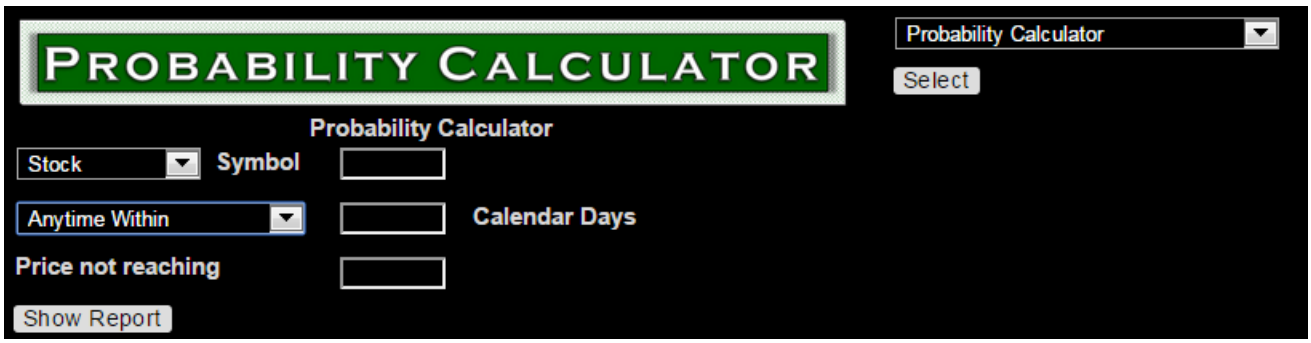
Any trading as you well aware involves risk. What differentiates experience, season trader from a novice one is ability to mitigate this risk.

To be successful every trader before entering the trade has to set the proper expectations. If you want to stay in trading business for a long time, you have to learn how to manage and protect your trades from the downside. If you learn how to minimize your potential loses, profit side will come alone.

Before entering into the long/short trade you have to calculate probability of underlying asset not reaching certain price within time frame that you want to stay in the trade. And if underlying is moving in the right for you direction, you can adjust your timeframe by calculating exit point, using the same methodology.

Ez Probability Calculator by providing in-depth probability analysis for underlying assets not reaching certain price within set time frame allows traders manage and minimize their risk.

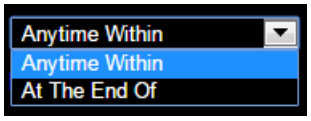
Now let's show how to master Ez Probability Calculator and take advantage of this powerful tool.



Ez Probability Calculator allows you to:

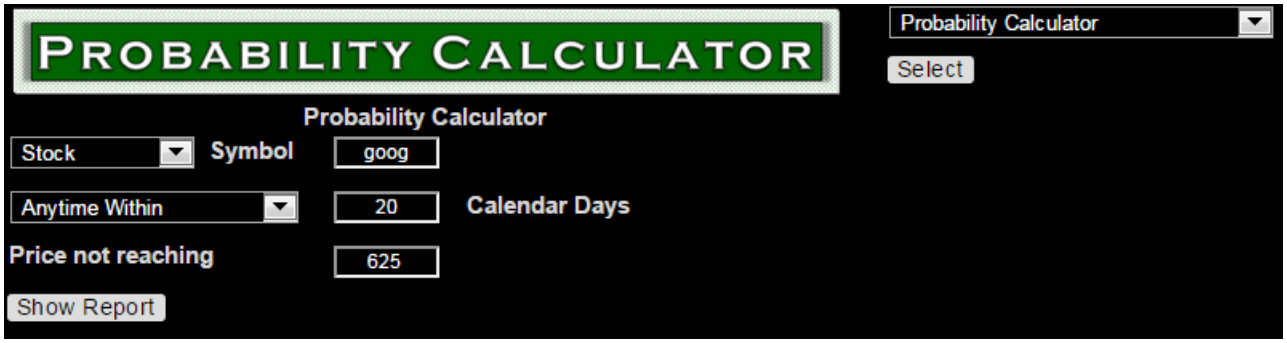
- Analyze Stocks and Indexes

- Select Timeframe.
  - "Anytime Within" - means anytime within set period of calendar days underlying will not reach set price.
  - "At The End Of" - means on the last of set period of calendar days underlying will not reach set price.



- Set Min / Max price point that you do not want to be reached.

Report for “Anytime” Analysis.



To view in-depth Probability and Volatility analysis report click “Show Report” button.

DETAIL PROBABILITY ANALYSIS REPORT.

GOOG - GOOGLE INC
519190 - All Other Information Services
Closing Price - 657.12
All data as of closing on Friday, 08/14/15

Probability based on Historical Readings									
1 Year		2 Years		3 Years		4 Years		5 Years	
Hist	ST	Hist	ST	Hist	ST	Hist	ST	Hist	ST
80.8	56.4	82.8	57.4	84.67	55.07	80.8	50.8	77.76	48.16

Field Description	Current	400 Days			300 Days		
		High	Low	% Read	High	Low	% Read
Implied Volatility	22.84	36.9	10.69	58.75	34.95	10.69	59.67
4 Days Stat. Vol.	41.94	70.37	2.68	91	63.92	2.68	94.67
5 Days Stat. Vol.	37.63	64.3	2.53	88.75	56.16	2.53	92
6 Days Stat. Vol.	36.56	59.66	5.76	88.25	50.86	5.76	92
10 Days Stat. Vol.	30.44	56.46	8.66	77.75	46.99	11	81
20 Days Stat. Vol.	30.15	43.05	11.6	78.75	35.73	13.37	86.33
40 Days Stat. Vol.	29.55	35.17	15.36	87.75	31.55	16.31	95.33
50 Days Stat. Vol.	27.61	33.73	15.24	78.25	33.01	18.16	86
90 Days Stat. Vol.	25.57	30.9	17.57	61.25	30.17	20.31	62
100 Days Stat. Vol.	25.07	30.04	17.64	59	30.04	20.86	58.33

Field Description	Current	200 Days			100 Days		
		High	Low	% Read	High	Low	% Read
Implied Volatility	22.84	27.94	10.69	65	26.71	10.69	62
4 Days Stat. Vol.	41.94	63.92	4.25	93.5	45.77	4.25	95
5 Days Stat. Vol.	37.63	56.16	4.48	90	41.99	5.08	91
6 Days Stat. Vol.	36.56	50.86	6.54	88.5	45.72	7.51	90
10 Days Stat. Vol.	30.44	46.99	11	77.5	46.99	12.42	77
20 Days Stat. Vol.	30.15	35.73	13.37	81.5	35.72	14.64	84
40 Days Stat. Vol.	29.55	31.55	16.31	93.5	29.76	16.31	97
50 Days Stat. Vol.	27.61	29.47	18.16	84.5	27.91	18.16	93
90 Days Stat. Vol.	25.57	27.05	20.59	68.5	26.85	20.59	54
100 Days Stat. Vol.	25.07	26.83	21.04	68	26.81	21.11	65

In this example we are trying to define probability of Google stock not falling below the price of $625 anytime within next 20 calendar days considering that closing price on Friday Aug. 14, 2015 was $657.12.

How these results can be interpreted.

As it can be seen from the probability table Historical probability that takes into consideration the specificity of each underlying historical behavior, is ranging between 77% and 84%, depending on how many years of historical readings were taken into consideration.

On the other hand Stress Test probability that calculates based on magnitude of the historical moves and represents capability of the underlying to perform certain moves without taking into consideration direction of this move, is ranging between 48% and 57%.

Why is it such a big difference between the Historical and Stress Test probabilities?

The reason is in the definition of the Stress Test probability. It designed to provide you with Probability of surviving, or ending up profitable, in a trade when underlying exhibits the worst case behavior. That's why we called it the Stress Test Probability.

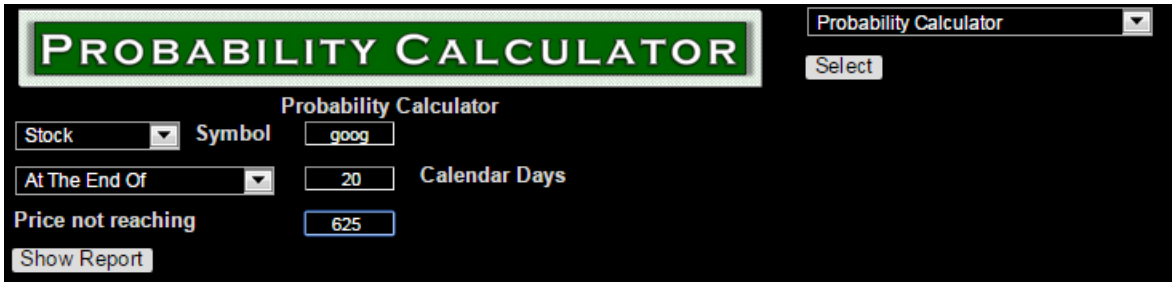
In our example we are trying to determine probability that Google will not fall from $657.12 up to $625 at any time during the next 20 calendar days. If you look into Google historical behavior in the last 5 years you will notice an uptrend. That is why Historical Probability is ranging between 77% and 84%.

At the same time during these 5 years stock did a lot of big up moves. It means that potentially stock can make these high magnitude moves in opposite direction also. In this case stock can easily fall at or below $625. That's what Stress Test probability is showing! Would Google in the next 20 days reverse itself and exhibit the same behavior to the downside, as it exhibited to the upside, we do not know. But if it will happen your probability to stay above $625 would be in a range of 47% - 57%.

Only our Stress Test probability that takes into consideration the magnitude of the move to determine your chances of surviving the trade is telling you to be careful. If the stock turns against you, you do not have a lot of chances to survive in this trade.

It's always your decision to "pull the trigger" and get or not in to the trade, so before you act it is very important to know your risk and set your expectations properly!

Report for “At The End Of” Analysis.



In this case we are trying to analyze probability at the end of 20 calendar days period or probability of Google price to be above $625 on closing of Friday Sep. 11, 2015.

DETAIL PROBABILITY ANALYSIS REPORT.

GOOG - GOOGLE INC
519190 - All Other Information Services
Closing Price - 657.12
All data as of closing on Friday, 08/14/15

Probability based on Normal Distribution				Probability based on Historical Readings									
				1 Year		2 Years		3 Years		4 Years		5 Years	
IV	SV10	SV20	SV100	Hist	ST	Hist	ST	Hist	ST	Hist	ST	Hist	ST
82.57	75.91	76.12	80.34	92.4	80.4	91.2	75.4	92.13	72.27	89.9	69.1	87.36	65.6

Field Description	Current	400 Days			300 Days		
		High	Low	% Read	High	Low	% Read
Implied Volatility	22.84	36.9	10.69	58.75	34.95	10.69	59.67
4 Days Stat. Vol.	41.94	70.37	2.68	91	63.92	2.68	94.67
5 Days Stat. Vol.	37.63	64.3	2.53	88.75	56.16	2.53	92
6 Days Stat. Vol.	36.56	59.66	5.76	88.25	50.86	5.76	92
10 Days Stat. Vol.	30.44	56.46	8.66	77.75	46.99	11	81
20 Days Stat. Vol.	30.15	43.05	11.6	78.75	35.73	13.37	86.33
40 Days Stat. Vol.	29.55	35.17	15.36	87.75	31.55	16.31	95.33
50 Days Stat. Vol.	27.61	33.73	15.24	78.25	33.01	18.16	86
90 Days Stat. Vol.	25.57	30.9	17.57	61.25	30.17	20.31	62
100 Days Stat. Vol.	25.07	30.04	17.64	59	30.04	20.86	58.33

Field Description	Current	200 Days			100 Days		
		High	Low	% Read	High	Low	% Read
Implied Volatility	22.84	27.94	10.69	65	26.71	10.69	62
4 Days Stat. Vol.	41.94	63.92	4.25	93.5	45.77	4.25	95
5 Days Stat. Vol.	37.63	56.16	4.48	90	41.99	5.08	91
6 Days Stat. Vol.	36.56	50.86	6.54	88.5	45.72	7.51	90
10 Days Stat. Vol.	30.44	46.99	11	77.5	46.99	12.42	77
20 Days Stat. Vol.	30.15	35.73	13.37	81.5	35.72	14.64	84
40 Days Stat. Vol.	29.55	31.55	16.31	93.5	29.76	16.31	97
50 Days Stat. Vol.	27.61	29.47	18.16	84.5	27.91	18.16	93
90 Days Stat. Vol.	25.57	27.05	20.59	68.5	26.85	20.59	54
100 Days Stat. Vol.	25.07	26.83	21.04	68	26.81	21.11	65

How these results can be interpreted.

In this report we are adding four more probability values. We call them Theoretical probabilities and calculate them based on assumption that underlying asset, in this case Google, has Normal distribution. To calculate these four probabilities we are using Implied, 10 Days, 20 Days and 100 Days Statistical volatilities.

Probability table allows comparing these Theoretical probabilities to our Historical and Stress Test probabilities. Most of market participants are using Theoretical probability to define probability of their trades. Ability to compare and take advantage of discrepancies between Theoretical and Historical / Stress Test probabilities gives our users competitive advantage that we called Probability Arbitrage.

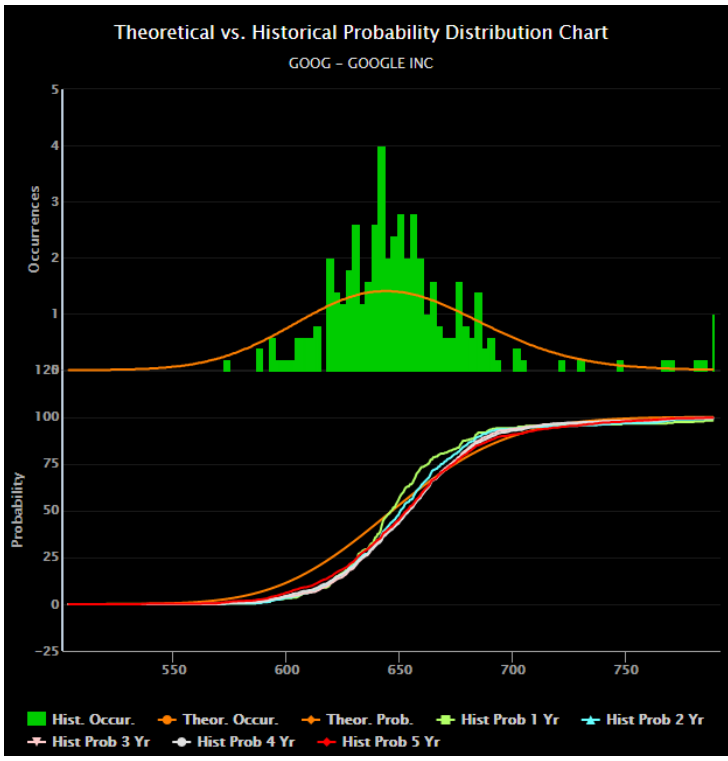
To provide an even better understanding of Historical and Stress Test probabilities, EzTrade tools calculate 5 different values. Each value is based on a different duration of the historical reading. This can range from 1 to 5 years.

Based on your view on the future behavior of the market, you can define how much of the underlying history should be taken into consideration when calculating risk.

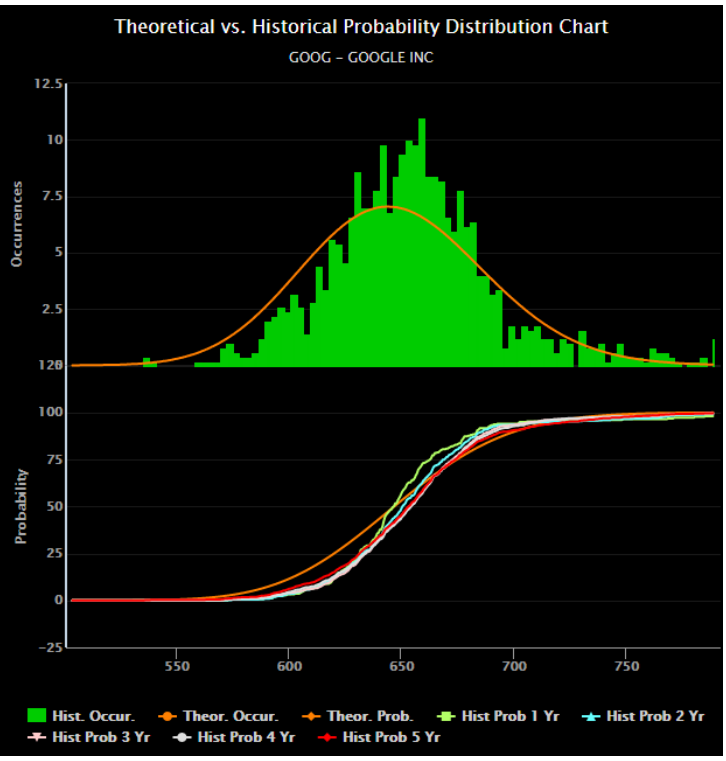
Let's say, you're thinking that in the next few months until expiration, the market will behave as it was behaving in the past year or two. In this case, your probability should be based on the 1 or 2 years of historical readings.

Now, let's say you think that because of the Fed or government actions, there is a potential of a big move for this underlying. In this case, you'll want to consider the longer period of history that has already covered large volatility swings.

To see how you can take advantages of Probability Arbitrage take a look at Theoretical vs Historical Distribution Charts.



Based on 1 year history



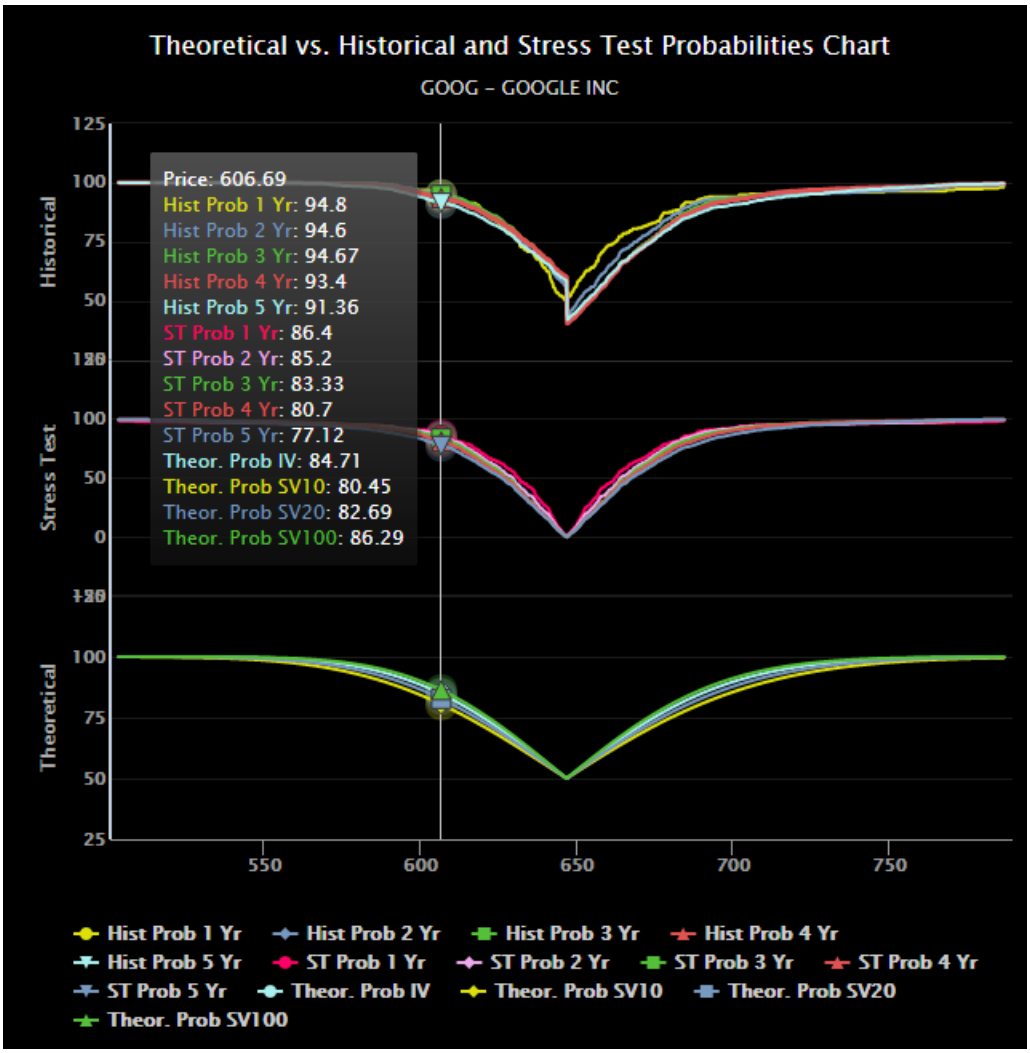
Based on 5 years history

As it's clearly can be seen from these charts real historical moves are not normally distributed. This allows taking advantage of discrepancies between market participants' anticipation and reality.

Powerful charting capabilities

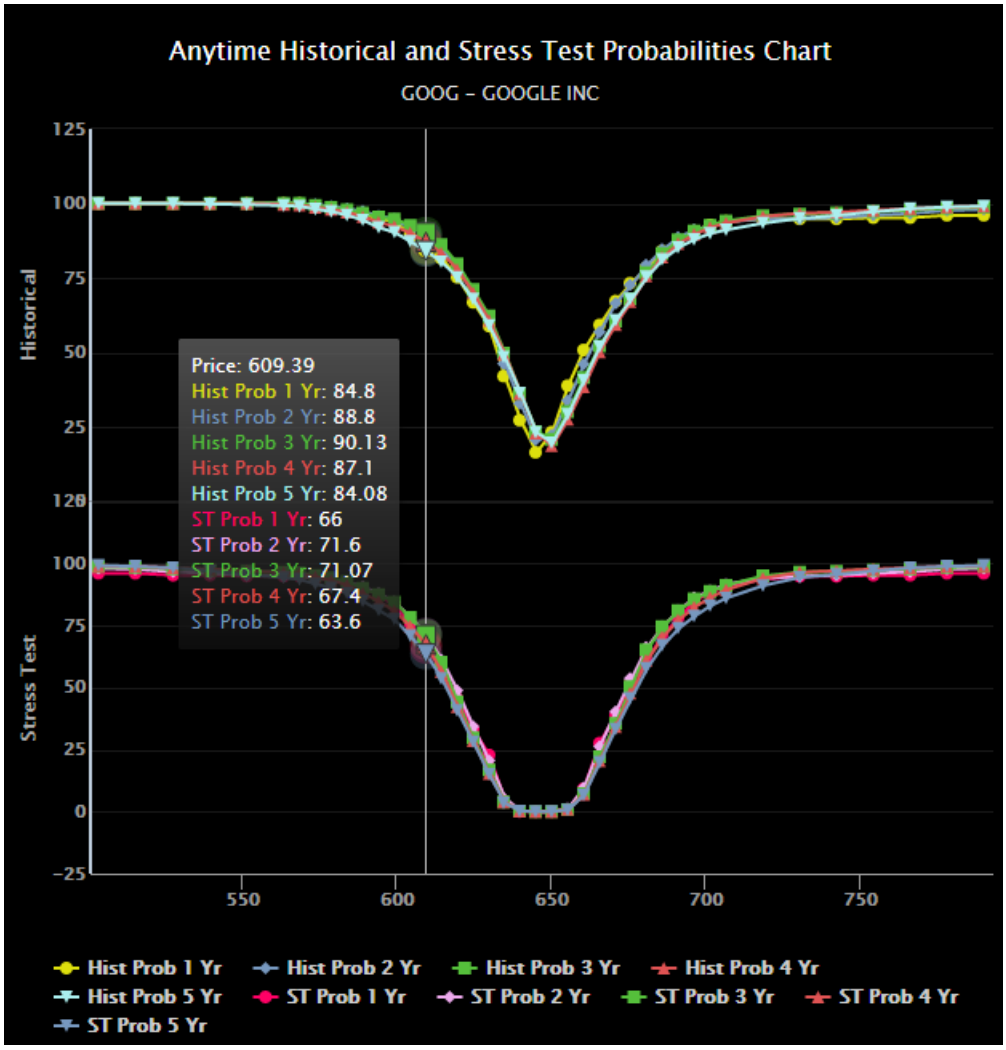
Theoretical vs Historical and Stress Test Probabilities Chart.

This chart allows comparison analysis of 3 probabilities. It produces results similar to the probability table “At The End Of” set number of calendar days period, but you can view them for different price points.



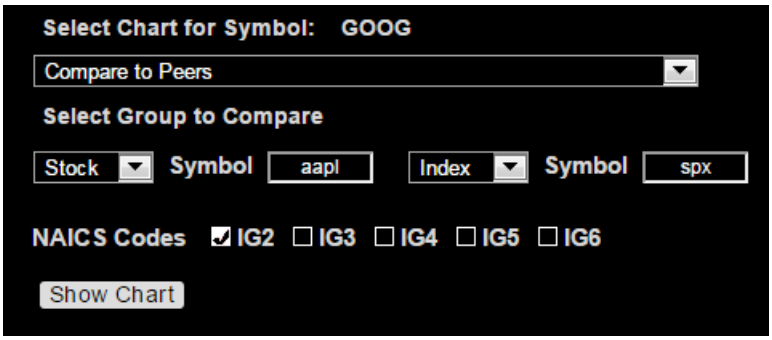
Anytime Historical and Stress Test Probabilities Chart.

This chart allows comparison analysis of Historical and Stress Test probabilities. It produces results similar to the probability table “Anytime Within” set number of calendar days period, but you can view them for different price points.

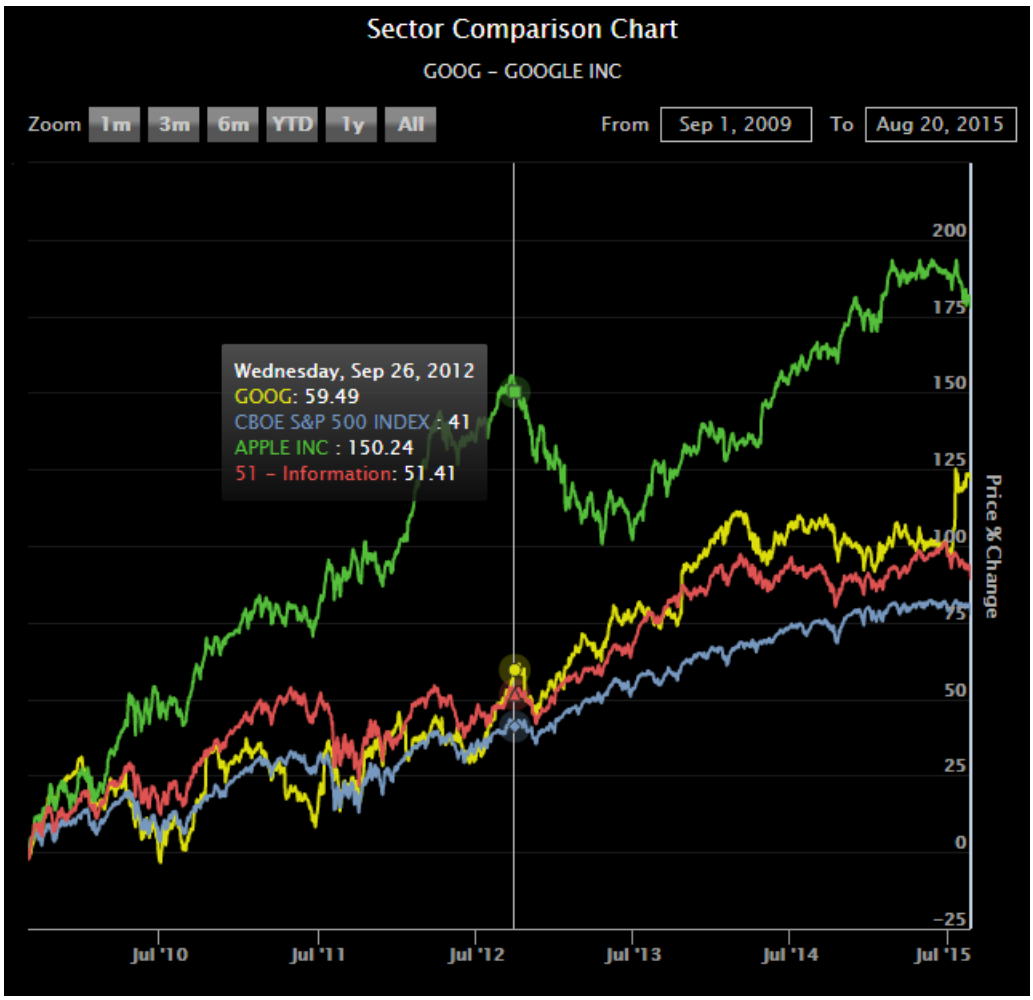


Compare to Peers.

This chart allows comparison historical behavior of Stock to another stock, index and Industry Group this stock is in.

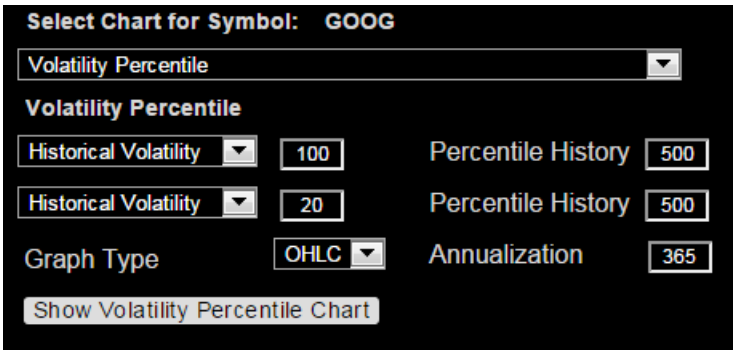


In this case we are comparing Google to Apple S&P 500 Index and Information industry group, based on NAICS codes.



Volatility Percentile.

This chart allows comparing Implied and different Historical volatilities and their percentiles.



In this case we are set to compare 20 Days Historical Volatility vs. long term 100 Days Historical Volatility and their 500 trading days (2 years) percentiles.