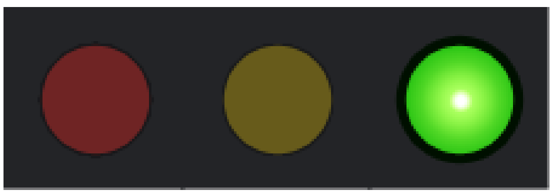
The Economy Matters®

The first and only research report that shows you how your investments relate to the economy.

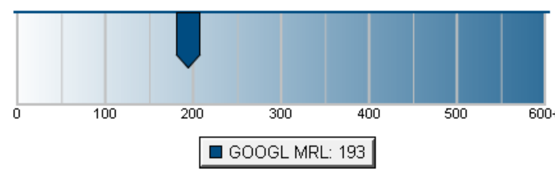
September 11, 2016

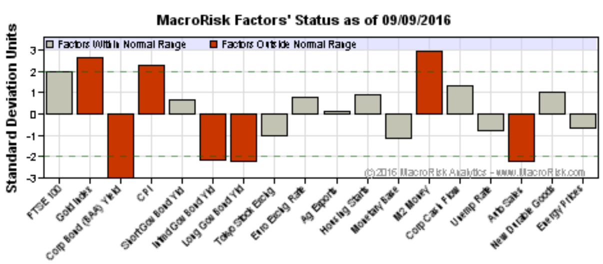
Alphabet Inc A

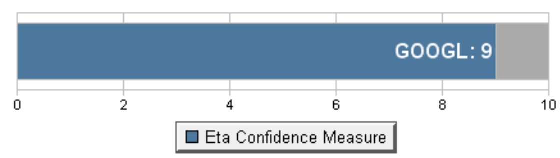
Symbol: GOOGL | Market: NASDAQ | SIC Code: 7375



(Equity Stoplight)







CAPM Statistic	
Alpha (Jensen's)	0.135
Beta	0.971
Up-Market Alpha	-0.106
Up-Market Beta	1.053
Down-Market Alpha	0.383
Down-Market Beta	1.021

The Economy Matters® Reports are powered by:

MacroRisk ANALYTICS

These services are based on Eta® Analysis, a patented and proprietary analytical tool from c4cast.com, Inc. that identifies how specific components of the economy impact the price of stocks, funds, indices, and portfolios.

Our View

FiveRisks Analysis

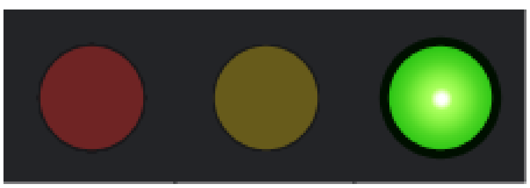
FiveRisks Measure	Current	Min*	Mean*	Median*	Max*
MacroRisk Level	193	5	270	207	1853
Eta Confidence	9	1	8	8	10
Price/High Price (Momentum)	98%	1%	78%	87%	100%
Down-Market Beta	1.021	-21.702	0.943	0.963	11.250
Eta Value at Risk	9%	0%	16%	13%	100%

*For all assets in the NASDAQ market

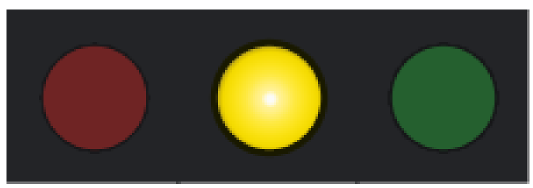
The Five Risks are designed to help you gauge the market risk, sensitivity to the economy, momentum, attribution instability, and Eta Value at Risk of a collection of holdings. These five risks help to predict the long term price behavior of your investments. For more information on these five risks, see the published peer reviewed work on the MacroRisk site (**http://www.macrorisk.com/publications/**). You can find these papers on the home page by looking under the Research Tab and clicking Publications.

MacroRisk Stoplights

Equity Stoplight: Green



Non-Equity Stoplight: Yellow



The Stoplights are indicators summarizing the statistical probability of excess return (alpha) over the next 3-5 years based on several MacroRisk measures. Research on the Stoplight shows a tendency for assets with a "Green" Stoplight to perform the best. Of course, statistical results are based on many assumptions and might not hold over time, and your results may differ. The Equity Stoplight was developed using common stocks, while the Non-Equity Stoplight was developed using other investable assets. Some equities behave more like bonds (non-equities), and some mutual funds have both equity and non-equity components. We provide both stoplights for your convenience.

Risk Correspondence Score

The Risk Correspondence Score for Alphabet Inc A is 52.835.

The Risk Correspondence Score is a statistical mapping of various MacroRisk statistical measures into a score that corresponds with some popular risk tolerance survey results. For example, if a client has a risk tolerance score of 50 (on a 1 to 100 scale), then the Risk Correspondence Score could be used to see how much riskier overall an asset or portfolio is than the client's preferred risk tolerance.

MacroRisk Level (MRL) measures the overall exposure to the economy. For more information, see page 3.

Eta Confidence describes the extent to which the economy influences this asset. For more information, see page 5.

Price/High Price is the ratio of an asset's current price to its 52 week high price and is an indicator of an asset's momentum. Higher values are associated with forward momentum. Note the largest possible value is 100%.

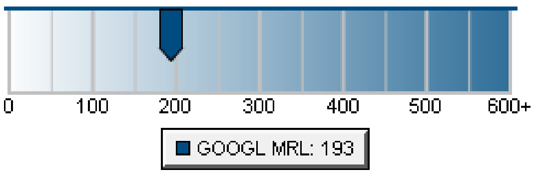
Down-Market Beta measures the relative risk on days when the market goes down. For more information, see page 6.

Eta Value at Risk is the expected percent change in an asset's value that is due to an unexpected (1 in 20) event. For more information, see page 5.

MacroRisk Profile: Measuring Economic Risk

Overview

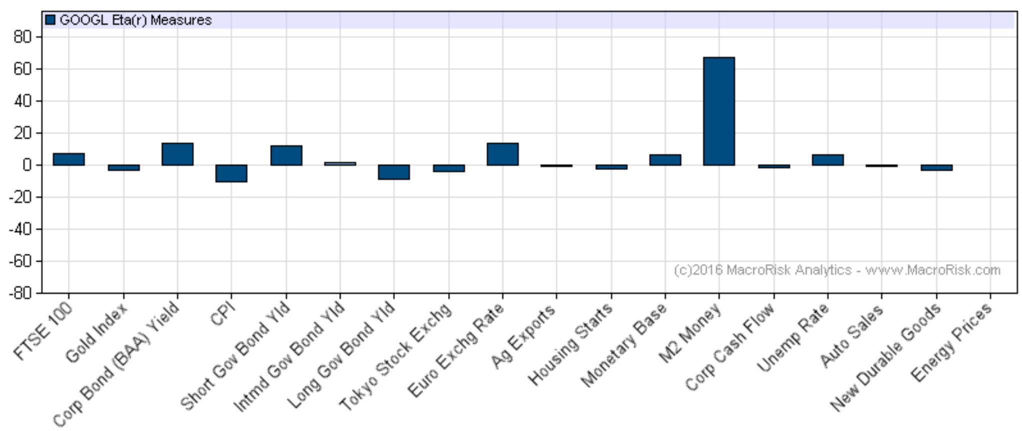
MacroRisk Level: 193



Economic Climate Rating: 5

Eta® Measures

Eta Measures are where economic risk measurement gets specific. Eta Analysis is based on 18 MacroRisk Factors which together are used in our model to represent the overall economy. Each asset has 18 Eta Measures (one for each of the Factors), which show the sensitivity of the asset to each of the underlying Factors. The values of the MacroRisk Factors are publicly available and often reported in the news, so when you know which of these Factors your investment is especially sensitive to, you know what to watch for (or diversify away, or hedge against).



MacroRisk Comparison

Name	Symbol	MRL
Jpmorgan Emerging Markets Debt Fd Sel	JEMDX	23
DJ Industrial Ave Actual	DJIAA	51
Ishares S&P Smallcap 600 Growth ETF	IJT	54
S&P 500 Index	SPX	56
NASDAQ Global Select Market Composite In	NQGS	74
DJ Internet Service Index	DJSVC	151
Wal-Mart Stores Inc	WMT	153
Alphabet Inc A	**GOOGL**	**193**
Intel Corp	INTC	302
Dow Jones Corporate Bond TR Index	@DJCI	366

MacroRisk Level (MRL): Measures the overall exposure to the economy. The higher the MRL, the more sensitive the asset is to the economy (and the more volatile it is in its response to major economic changes).

Technical Definition **MRL:** Sum of the absolute values of the statistically significant Eta Measures.

Economic Climate Rating: Measure of how favorable the current economic climate is for the asset. 1 = most unfavorable, 5 = most favorable.

Technical Definition
Eta Measures: Expected % change in asset value from a major (2-standard deviation) change in the corresponding MacroRisk Factor.

Positive Eta Measures indicate a positive relationship. As the Factor goes up, so does the asset value. As the Factor goes down so does the asset value.

Negative Eta Measures indicate an inverse relationship. As the Factor goes up, the asset value goes down. As the Factor goes down, the asset value goes up.

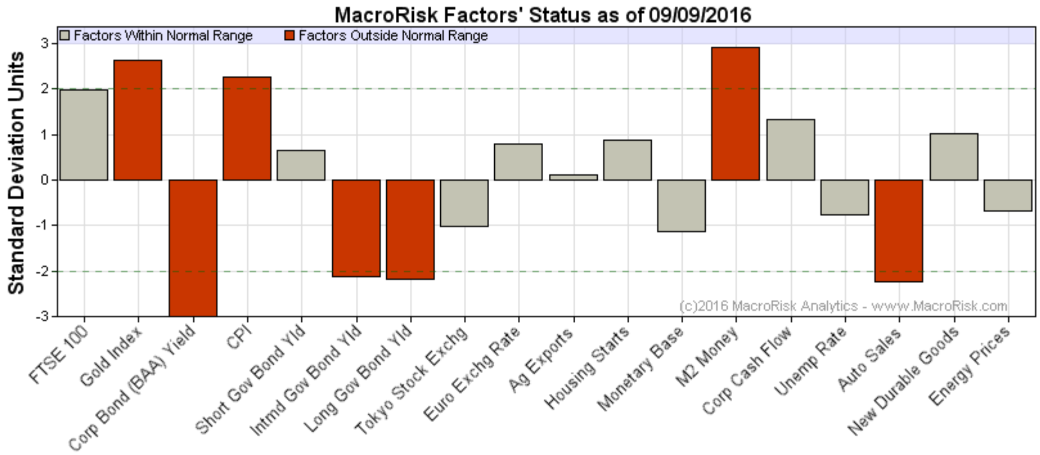
Shading of the Eta Measures indicates statistical significance. On the graph, very light Eta Measures can be ignored and are not included in the MRL.

The stocks, funds and indices listed here are picked to cover a wide range of investments and give a broad base for comparison. Individual reports are available on each of the stocks and funds listed here.

Note: While similar MRLs indicate similar overall sensitivity to the MacroRisk Factors, the individual Eta Measures may be quite different.

Economic Status: Measuring the Current Economy

Current Economic Status



This graph gives you a snapshot of the current economy. Each of our 18 MacroRisk Factors has a corresponding bar on the graph; these bars signal whether the value of each Factor is higher or lower than normal. If the bar sits on top of the line, the value is higher than average, if the bar hangs down from the line, the value is lower than average.

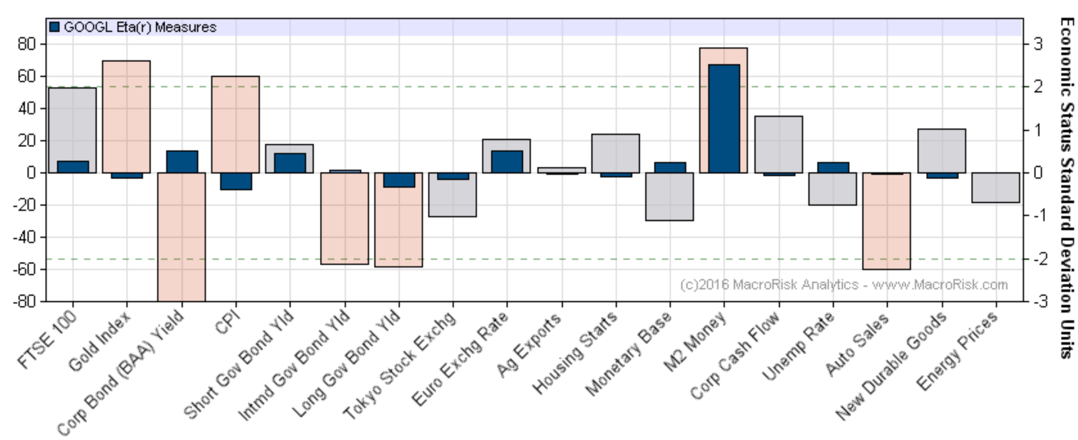
On the graph, any MacroRisk Factors that are between the dashed lines are behaving normally. These are colored gray. You generally don't need to worry about these. It's good to know, however, that the closer the bar is to the edge of the "normal" zone, the more it has been changing recently.

If a Factor goes up or down significantly, the bar crosses the dashed-line boundary line and turns red. Red MacroRisk Factors tell you to keep an eye on your investments: They may be impacted by this economic change.

Technical Definition
"Normal" Zone (between the dashed lines): Represents the 2-standard deviation ("normal") range of the Factor based on a 1-year average with a 3-month lag.

Why a 3-month lag?
By using a 3-month lag for computing the "normal" range of the Factor we are better able to capture all of the recent changes in the factors.

Eta® Measures w/ Status Overlay



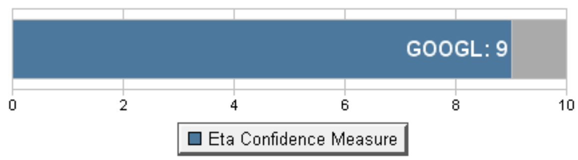
Significant changes in a MacroRisk Factor tend to lead to price changes in investments with high Eta Measures for that variable. For instance, if the Unemployment Rate increases dramatically, stocks with a highly positive Eta Measure for that MacroRisk Factor will tend to increase in price, while stocks with a corresponding highly negative Eta Measure will tend to decrease in price.

Favorable Exposures:
When an Eta Measure and an Economic Status bar are in the same direction this indicates a favorable exposure for the security.

Unfavorable Exposures:
When an Eta Measure and the corresponding Economic Status bar are in opposite directions this indicates an unfavorable exposure for the security.

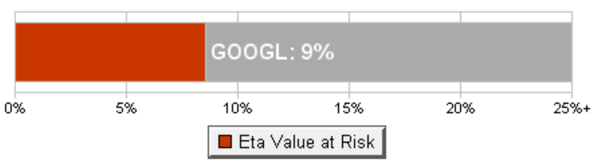
Eta® Price Report: Measuring the Economy's Influence

Eta® Confidence



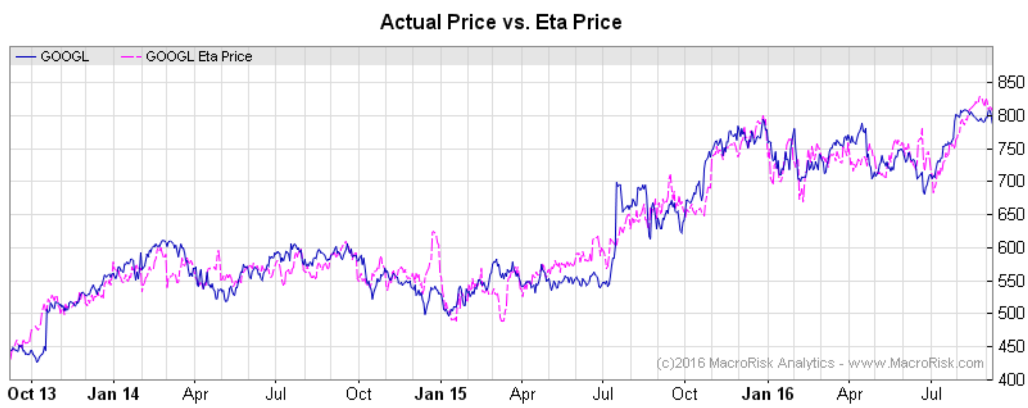
Two types of information can explain most asset prices: Information related to the overall economy and information related to unique company characteristics. Using rankings from 1 to 10, the Eta Confidence measure indicates the importance of economic factors in determining this asset's price.

Eta® Value at Risk



The Eta Value at Risk is the expected percent change in an asset's value that is due to an unexpected (1 in 20) event (black swan risk). The average Eta Value at Risk over all assets since the year 2000 is about 6%. Any values over 25% are shown in the graph as 25%+.

Eta® Price vs. Actual Price



This graph shows how well the Eta Analysis equation explains the actual price of the security for the current analysis window (the previous 3 years). The blue line shows the actual price, the pink line shows the Eta Price (economy determined price). The more these lines match up, the higher the Eta Confidence and the more important the economy is in determining the price of the security.

Importance of the Eta Confidence Measure: This measure helps to interpret the rest of the Eta Analysis statistics. The higher the Eta Confidence, the more important Eta Analysis is in understanding the value of the security.

Out of over 20,000 securities:
- 90% have Eta Confidence measures of 9 or 10
- 80% have Eta Confidence measures of 10

Technical Definition
Eta Value at Risk:
Residual risk of the Eta price model, which is 1.96 times the standard deviation of residuals from the underlying Eta model as a percent of recent asset value. This is an indication of the value at risk due to a 5% probability (or less) shock from factors not included in the Eta model.

Eta Price: The economy-determined, intrinsic value of the security.

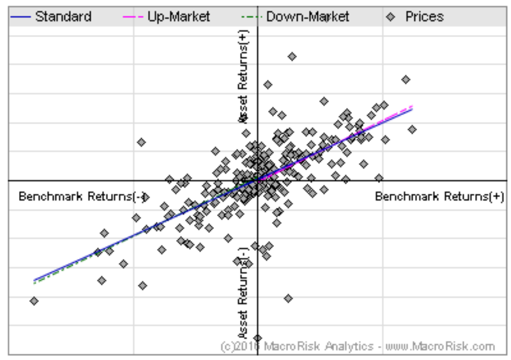
The Eta Confidence is determined by how closely the Eta Price matches up to the Actual Price over the past 3 years (the current analysis window).

Beta+ Report: Measuring Market Risk

CAPM Statistics

Standard	
Alpha (Jensen's)	0.135
Beta	0.971
R^2	0.433
Tracking Error	0.163

Beta+ Regressions



Up-Market	
Up-Market Alpha	-0.106
Up-Market Beta	1.053
Up-Market R^2	0.238
Up-Market Tracking Error	0.183

Down-Market	
Down-Market Alpha	0.383
Down-Market Beta	1.021
Down-Market R^2	0.403
Down-Market Tracking Error	0.137

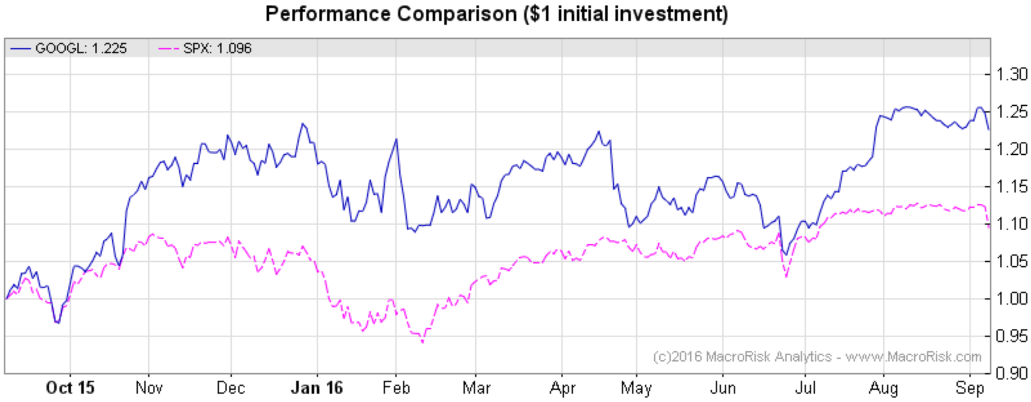
Ratios and Other Statistics

Ratios	
Sharpe Ratio	1.031
Generalized Sharpe	0.760
Sortino Ratio	1.008
Treynor Ratio	0.230

Other Statistics	GOOGL	SPX
Avg. Annual Ret.	0.225	0.096
Std. Deviation	0.216	0.147
Upper Semi-Dev.	0.212	0.148
Lower Semi-Dev.	0.221	0.146

Performance Graph

Performance Comparison ($1 initial investment)



CAPM Graph: This graph shows the regression lines for the CAPM. This allows you to see the difference in slope (Beta) between the Standard, Up- and Down-Market analysis.

Standard CAPM Statistics measure the market-based risk and return.

Up-Market CAPM Statistics measure the relative risk (Beta) and risk-adjusted return (Alpha) on days when the market goes up.

Down-Market CAPM Statistics measure the relative risk (Beta) and risk-adjusted return (Alpha) on days when the market goes down.

It is especially helpful to note the difference between Up- and Down-Market Beta. Minimizing the Down-Market Beta is a much more effective way to reduce down-side volatility than minimizing the Standard Beta.

Benchmark: For these statistics we use the S&P 500 Index as the benchmark.

Returns Series: For these statistics we use 1-year of daily returns.

Riskless Rate: We use the Federal Funds Rate as our Riskless (Risk-Free) rate in these statistics.

This performance graph shows the performance of the asset and the market for the 1-year CAPM analysis period.

About Eta® Analysis

What Eta® Analysis Is

Eta Analysis is a patented and proprietary analytical tool that identifies how specific components of the economy impact the price of a stock, fund, index, or portfolio.

This model measures how 18 key macroeconomic factors (MacroRisk Factors) impact an asset. From the applied economic analysis, numerical ratings are computed to summarize the asset's overall economic exposure and to indicate appreciation potential. Eta Analysis provides specific analysis to help investors act directly on economic information as it impacts their investments.

The model was developed using an extensive statistical process with data from the early 1980s and has since undergone rigorous back-testing and regular scrutiny. The 18 MacroRisk Factors were identified in this process as the set of macroeconomic factors to best represent the relationship of the economy across all stocks, mutual funds and indices.

Using this model, we obtain an R^2 of over 90% for more than 90% of the securities and indices covered in our database (meaning that at least 90% of asset price is economy determined, leaving 10% or less to be company or industry specific information). Portfolios built using the Eta Analysis model are routinely examined against, and have consistently outperformed, historical data covering a span of over 20 years (over bull and bear markets).

What Eta® Analysis Is Not

Most research is dedicated to fundamental analysis, such as forecasting earnings or screening on company and industry financial data. Eta Analysis does not replace fundamental analysis. By combining the information in traditional research with Eta Analysis the investor has a unique opportunity to further enhance the investment process.

It is also important to note that Eta Analysis is not technical analysis, which looks only at price/returns history. Our analysis is macro-quantitative, applying a well-tested macroeconomic model to the assets in our database. This gives a view of asset value which is much more robust than that of technical analysis and focuses not merely on the variation of price itself, but on economic forces which impact value.

Where Eta® Analysis Is Available

MacroRisk ANALYTICS

All information found in this report, and much more, is available with a subscription to MacroRisk Analytics®. View our subscriptions at **http://www.macrorisk.com/subscriptions/**.

DISCLAIMER, TERMS, AND CONDITIONS

CUSTOMER AGREES NOT TO PUBLISH, REPRODUCE OR OTHERWISE DISCLOSE ANY DATA, INFORMATION OR REPORTS GENERATED BY OR BASED ON THE ECONOMY MATTERS. EXCEPT TO THE EXTENT OTHERWISE STATED IN THIS AGREEMENT, THE ECONOMY MATTERS AND ALL OTHER THE ECONOMY MATTERS SERVICES ARE PROVIDED TO CUSTOMER "AS IS" AND WITHOUT ANY WARRANTIES, EXPRESS OR IMPLIED, AND C4CAST.COM, INC. ("C4CAST.COM") AND THE APPLICABLE MANUFACTURERS AND AUTHORS OF THE UNDERLYING THE ECONOMY MATTERS TECHNOLOGY ("TEM TECHNOLOGY") OR DATA INFORMATION DISCLAIM ANY AND ALL WARRANTIES REGARDING THE ECONOMY MATTERS OR ANY RESULTS THEREFROM, EITHER EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR USE OR FOR A PARTICULAR PURPOSE.

C4CAST.COM REPRESENTS AND WARRANTS THAT IT OWNS OR OTHERWISE HAS THE RIGHT TO OFFER THE ECONOMY MATTERS AND TO DELIVER ALL THE ECONOMY MATTERS SERVICES DELIVERABLES, IF AND WHEN APPLICABLE, TO CUSTOMER. ANY AND ALL RESULTING ACTIONS OR OMISSIONS TAKEN BY CUSTOMER BASED ON THE USE OF OR RESULTS OBTAINED FROM THE ECONOMY MATTERS SERVICES ARE TAKEN BY CUSTOMER AT CUSTOMER’S SOLE AND EXCLUSIVE RISK AND DECISION, AND CUSTOMER WILL INDEMNIFY AND HOLD C4CAST.COM AND ITS DIRECTORS, OFFICERS AND EMPLOYEES HARMLESS FROM ANY AND ALL DAMAGES AND LIABILITIES OF CUSTOMER AND OF ALL THIRD PARTIES (EXCEPT TO THE EXTENT STATED ELSEWHERE) ARISING FROM CUSTOMER’S USE OF AND ACCESS TO THE ECONOMY MATTERS SERVICES. THE ECONOMY MATTERS IS NOT ERROR-FREE, AND IS ALSO NOT WARRANTED BY C4CAST.COM TO BE AVAILABLE FOR ANY MINIMUM PERIOD OF TIME.

THIRD PARTY DATA INFORMATION USED BY C4CAST.COM HAS NOT BEEN VERIFIED NOR IS C4CAST.COM RESPONSIBLE TO VERIFY THE ACCURACY OF SUCH INFORMATION. FURTHERMORE, C4CAST.COM IS NOT RESPONSIBLE FOR ANY UPDATES TO PREVIOUSLY USED THIRD PARTY DATA INFORMATION NOR ADVISING CUSTOMER OF ANY SUCH UPDATES. NEITHER C4CAST.COM NOR ANY MANUFACTURER OR AUTHOR OF THE TEM TECHNOLOGY SHALL BE LIABLE FOR ANY INDIRECT, CONSEQUENTIAL, PUNITIVE, SPECIAL OR INCIDENTAL DAMAGES, THIRD PARTY DAMAGES, OR FOR ANY LOSS OF PROFITS EVEN IF ADVISED OF SUCH POSSIBILITY ARISING FROM THIS AGREEMENT, THE ECONOMY MATTERS UNAVAILABILITY, THE USE OF OR ACCESS TO THE ECONOMY MATTERS OR ARISING FROM ANY OTHER THE ECONOMY MATTERS SERVICES. C4CAST.COM IS NOT RESPONSIBLE FOR THE PERFORMANCE OR QUALITY OF THE ECONOMY MATTERS SERVICES.

EXCEPT TO THE EXTENT RELATED TO THE PROPRIETARY INDEMNITY OBLIGATIONS STATED BELOW, SHOULD FOR ANY REASON, WHETHER UNDER CONTRACT OR TORT LAW OR OTHERWISE, C4CAST.COM IS LIABLE TO CUSTOMER, C4CAST.COM’S MAXIMUM LIABILITY SHALL NOT EXCEED THE AMOUNT(S) FOR THE AFFECTED THE ECONOMY MATTERS SERVICE(S) PAID BY CUSTOMER FOR THE RESEARCH REPORT OR DATA GIVING RISE TO SUCH DAMAGES OR LIABILITY. NOTWITHSTANDING THE FOREGOING IN THIS PARAGRAPH, C4CAST.COM SHALL HOLD CUSTOMER HARMLESS AND WILL DEFEND CUSTOMER FROM AND AGAINST ALL DAMAGES AND LIABILITIES (INCLUDING, BUT NOT LIMITED TO ALL THIRD PARTY REASONABLE AND ENTITLED ATTORNEYS' FEES AND LEGAL COSTS) AND CLAIMS MADE BY OR ACTIONS COMMENCED BY THIRD PARTIES THAT THE ECONOMY MATTERS INFRINGES ANY UNITED STATES PATENT, COPYRIGHT OR OTHER PROPRIETARY RIGHT, OR IS BASED ON TRADE SECRETS MISAPPROPRIATION OF SUCH THIRD PARTIES, PROVIDED THAT CUSTOMER (I) PROVIDES PROMPT NOTICE TO C4CAST.COM OF SUCH CLAIM OR ACTION, (II) PERMITS C4CAST.COM TO CONTROL THE DEFENSE OF SUCH CLAIM OR ACTION, (III) PROVIDES REASONABLE ASSISTANCE IN THE DEFENSE OR ANY CLAIM OR ACTION, AND (IV) C4CAST.COM IS GRANTED THE SOLE RIGHT TO SETTLE SUCH CLAIM OR ACTION.