



# Noxa AME: Google Style

December 9, 2013

## Overview

The following headline grabbed our attention lately and possibly yours:

*“An uptick in [Google searches](#) on finance terms reliably predicted a fall in stock prices”*

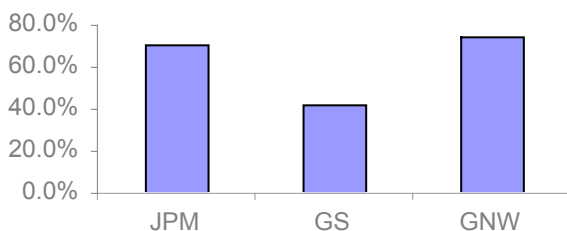
Here is our two cents towards explaining why ...  
Because of our aversion to loss, we tend to spend more time researching a losing trade. There are more efforts being spent collecting information before seeing a market drop.

We put that idea to the test and show the results of a strategy that mines Google for the term “*unemployment*”.

The strategy:

- Download the Google [Unemployment Index](#)
- Plug the index into the [AME](#) as underlying security

Annual Return (Jan. 2009 to today)



Above are Annual Returns achieved on Finance stocks.

See Appendix A for more results on a selection of Equities and Exchange Traded Products (ETPs).

For screenshots of equity curves, see [Equities](#) and [ETPs](#).

## Key takeaways

- The terms people search for on Google can be used to predict the direction of the stock market.
- Worried traders will likely seek out informations on financial issues before trying to dump their shares, therefore creating extensive digital traces of our collective behavior.
- Collective attention to topics such as “unemployment” can be measured by various indexes into online information flow.
- Newer, bigger and faster data is more predictive.

# 69.7%

Annual Return on  
JPMorgan Chase & Co.  
(JPM) by timing the  
Google Unemployment  
Index

## Chart Description

**Chart Name** AME #350 Google Unemployment Index Dec 2, 2013

**Platform** NeuroShell Daytrader®

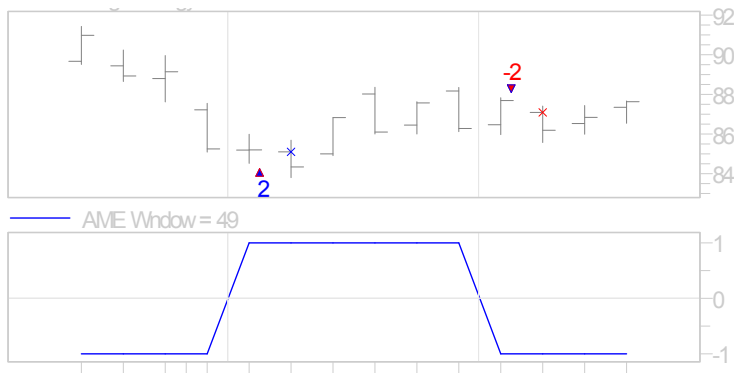
**Instruments** Equities (x8) and ETPs (x18)

**Type** Timing GOOGLEINDEX\_US:UNEMPL.

Chart #350 uses the Google Unemployment Index as underlying security, meaning that the AME is applied to UNEMPL (the proxy) as opposed to the instrument; the resulting entry/exit signals are then used to trade the instrument.

**Position Sizing** Fixed Size: Shares/Contracts = 1

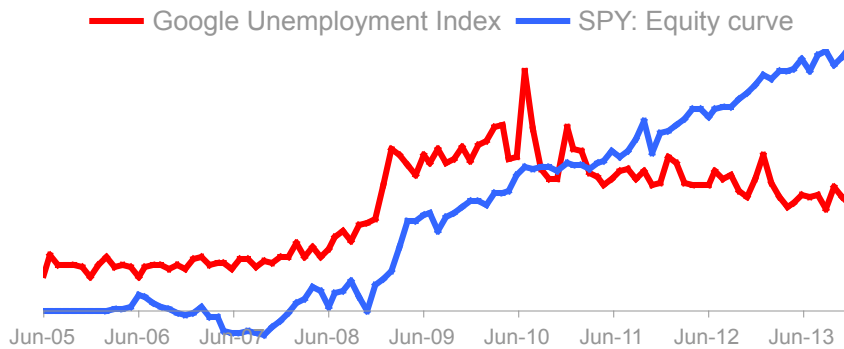
Figure 1 | Strategy rules



Go Long at the next available Open if AME of UNEMPL (Window parameter set to 20) crosses over above the zero line.

Go Short at the next available Open if AME of UNEMPL (Window parameter set to 20) crosses over below the zero line.

## Discussion



The graph above shows the result of going long/short the S&P500 (SPY) in blue. We also show the Google Unemployment Index in red.

For screenshots of equity curves, go to [Equities](#) and [ETPs](#).

Note that the equity curve started trending up around early 2009. Prior to 2009, the strategy was meandering around the zero line, going nowhere.

The question, of course, is why the difference? In theory, the answer may have more to do with the fine-tuning Google's reporting has undergone over the past five years, along with the sheer "mass" of data now available. In other words, bigger data is more predictive.

### One issue...

The Unemployment index is not designed with traders in mind. Among other things, the index is rescaled from day to day changing the data by a fraction of a percentage point. Fortunately there are ways around this limitation that we are investigating.

But we hope that we've sparked some ideas for folks interested in exploring "proxying" further in their own trading,

## Appendix

### Appendix A | Summary Statistics: Equities\*

Results are given for the period Jan .2, 2009 to Nov. 21, 2013

	Symbol	Annual Return on Trades	Annual Return on Account	% Profitable Trades	Ratio Gross Profit/Loss
CME Group Inc.	CME	27.2%	22.2%	56.7%	1.41
Coach, Inc.	COH	45%	46.9%	54.8%	1.62
General Electric Company	GE	51.2%	47.4%	51.6%	1.94
General Motors Company	GM	33.3%	23.2%	54.6%	1.52
Genworth Financial Inc.	GNW	87.9%	74.4%	53.6%	1.76
The Goldman Sachs Group, Inc.	GS	40.3%	41.3%	55.2%	1.61
JPMorgan Chase & Co.	JPM	60.1%	69.7%	55.2%	1.86
AT&T, Inc.	T	22.9%	26.4%	53.6%	1.74

\* Transaction costs are ignored; but because the strategy trades only once per 6 bars on average, transaction costs are minimal assuming a decent sized account.

## Appendix

### Appendix B | Summary Statistics: Exchange Traded Products (ETPs)\*

Results are given for the period Jan .2, 2009 to Nov. 21, 2013

	Symbol	Annual Return on Trades	Annual Return on Account	% Profitable Trades	Ratio Gross Profit/Loss
iShares FTSE China	FCHI	39.4%	49.4%	54.4%	1.91
Market Vectors Junior Gold Miners ETF	GDXJ	51%	38.8%	53.8%	1.61
iShares Core S&P 500	IVV	24.2%	29.4%	52.4%	1.76
iShares Russell 2000	IWM	31.6%	40.6%	54.4%	1.74
Market Vectors Coal ETF	KOL	53.1%	69.1%	57.5%	1.92
Guggenheim S&P 500 Pure Growth	RPG	26.9%	36.4%	56%	1.65
Guggenheim S&P 500 Pure Value	RPV	36.8%	46.5%	54%	1.73
SPDR Dow Jones Intl Real Estate	RWX	32.8%	36.7%	53.6%	1.78
ProShares UltraShort S&P500	SDS	46.3%	29.7%	52.4%	2.26
VelocityShares Daily Inverse VIX MT ETN	SPHB	33.3%	30.3%	60.4%	1.74
SPDR S&P 500	SPY	25.2%	31%	54%	1.81
SPDR S&P 500 Value ETF	SPYV	23.8%	28.7%	54.8%	1.74
ProShares Ultra S&P500	SSO	49%	73.2%	52.8%	1.73
ProShares UltraPro QQQ	TQQQ	49.4%	58%	51.3%	1.55
VelocityShares 3x Long Gold ETN	UGLD	78.7%	45.3%	56.2%	1.72
ProShares UltraPro S&P500	UPRO	48.8%	81%	53.9%	1.64
Vanguard Total Stock Market ETF	VTI	24.8%	31.8%	54.4%	1.72
VelocityShares Daily Inverse VIX MT ETN	ZIV	37.7%	42.1%	55.3%	1.67

\* Transaction costs are ignored; but because the strategy trades only once per 6 bars on average, transaction costs are minimal assuming a decent sized account.