



Invest **Rationally** , Not **Rashly**

**Man and AI: trading foes or friends?**

December 7, 2020

# Disclosures



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As portfolio managers, we constantly faced the challenge of inadequate infrastructure to cope with the growing mountain of data.

- Downloading data from a variety of disparate sources
- Maintaining and refreshing oodles of macro-enabled spreadsheets
- Writing ad-hoc code to answer questions like “If this happens, what next?”

It felt like sipping from an ocean with a straw.

Smart assistants are ubiquitous in our daily lives...Why don't they exist in investing?

- Machines are really good at monitoring and processing **large amounts of information**
- They can **uncover price patterns in assets** around events/data changes
- They can **test each relationship for robustness** ...in seconds
- They can **deliver curated insights** tailored to specific users

## CAN SMART MACHINES HELP ACTIVE INVESTORS/TRADERS?



Human intelligence is very good at strategy (the “big picture”) but AI can be helpful with the tactics (the “details”).

For example, a portfolio manager decides they want to be long risk in equities and let the machine highlight the assets that are most undervalued/have strongest momentum.

# STATISTICAL ANALYSIS AND BACK TESTING

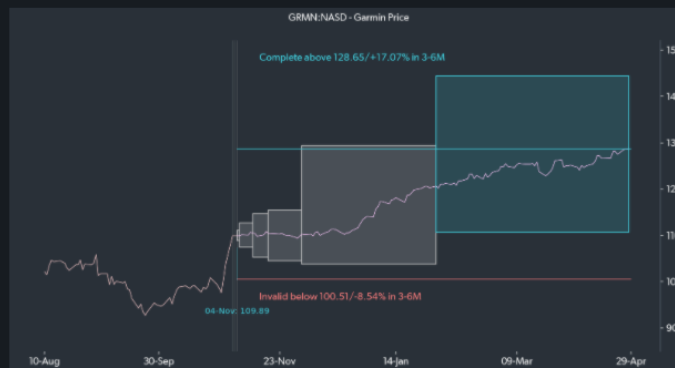


Instead of competing with them, machines can empower users by replicating – fast – the work investors are already doing

## GRMN - Garmin momentum turned positive, in the past this led to a increase in price

by Toggle A.I. 17h ago

Momentum indicators for Garmin turned positive. Historically this led to a increase in Garmin price, as shown in the chart below. This conclusion is based on 42 similar occasions in the past when this occurred, most recently on 2020-11-02. In our quality assessment this insight received 8 out of 8 stars. Insights with 6 stars and above exhibit the most compelling statistical properties. (What is a star rating?)



# CAN SMART MACHINES HELP ACTIVE INVESTORS/TRADERS?



Where in the investment process can machines add most value

- Idea generation (“What assets best reflect my thesis?”)
- Hypothesis testing (“Is my hunch/instinct correct?”)
- Asset due diligence (“What am I missing?”)
- Portfolio risk management (“Do I really want to sell here? Should I get out?”)

# IDEA GENERATION



Machine-generated ideas can connect a view to specific assets that best reflect it

The dashboard features a left-hand navigation panel with the following sections:

- POPULAR INSIGHTS**
  - Popular Insights
  - Bookmarked
- POPULAR SCREENS**
  - US Equity Benchmarks
  - Macro G7
  - Macro EM
  - Remove single names
- STARS**
  - ★ 5
  - ★ 6
  - ★ 7
  - ★ 8
- DIRECTION**
  - ↑ Bullish
  - ↓ Bearish
- ASSET CLASS**
  - Equities
  - Currencies
  - Commodities
  - Fixed Income
- GEOGRAPHY**
  - US
  - Canada
  - UK + Europe

The main content area, titled "All Insights NEW (0)", displays three insight cards:


- Equity Yields** (Communications): "9432 - NIPPON TELEGRAPH's Equity Risk Premium on trailing EPS reached a recent high of 10.58, in the past this led to a increase in price". Includes a price chart for 9432:PX - NIPPON TELEGRA... with a price range from 2100 to 2700.
- Earnings Growth** (Health Care): "4568 - DAIICHI SANKYO's analyst expectations for EPS Forward Growth are low, in the past this led to a increase in price". Includes a price chart for 4568:PX - DAIICHI SANKYO... with a price range from 2000 to 10000.
- Momentum** (Health Care): "7733 - OLYMPUS CORP momentum turned positive, in the past this led to a increase in price". Includes a price chart for 7733:PX - OLYMPUS CORP P... with a price range from 1900 to 2500.



## Translating macro-environment into actionable ideas

ECONOMICS | News Wire Oct 21, 2020

### Inflation ticks up but price pressures stay muted in Canada

Shelly Hagan, Bloomberg News   

**Canada's annual inflation rate up in September, but retail sales data weighs**

The soft inflation figures are the backdrop for stimulus the Bank of Canada has rolled out since the start of the pandemic, slashing its key policy rate to 0.25 per cent and snapping up government debt at an unprecedented rate.

Identifying beneficiaries of sector rotation, undervalued or lagging stocks

MAD MONEY

## **Jim Cramer breaks down Monday's rotation: 'Value has lagged'**

The Tell

## **Investors need to brace for a 'violent rotation into' cyclicals, value stocks, says Lee**

Last Updated: Nov. 10, 2020 at 1:07 p.m. ET

First Published: Nov. 10, 2020 at 10:32 a.m. ET

# HYPOTHESIS TESTING



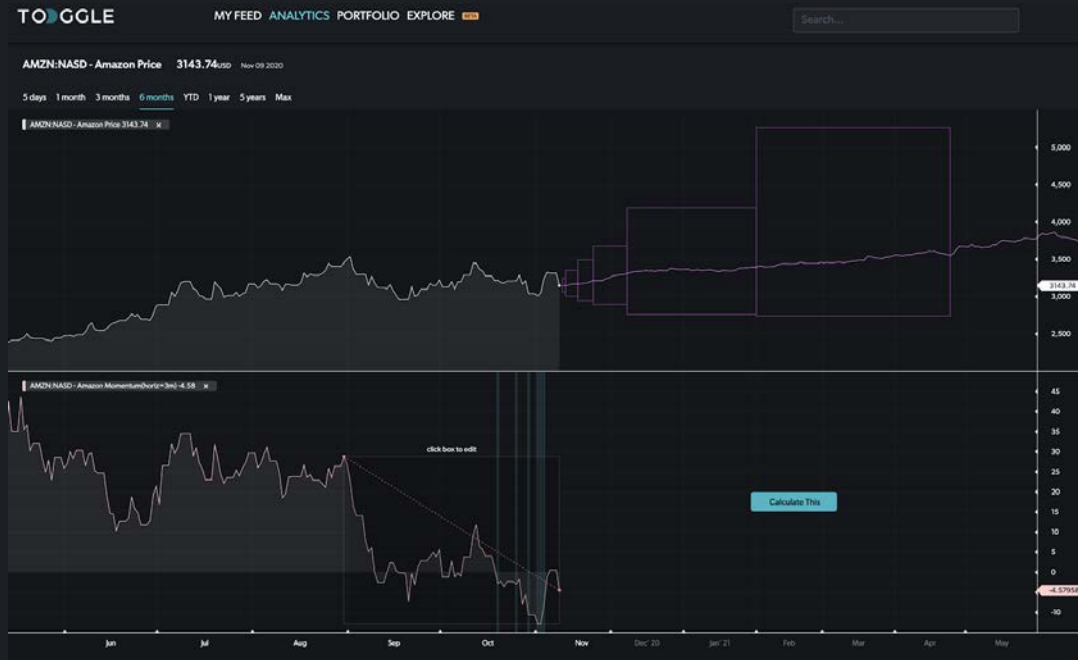
Machines can help you test your instincts against the data: is the economic environment bad for stocks?



# HYPOTHESIS TESTING



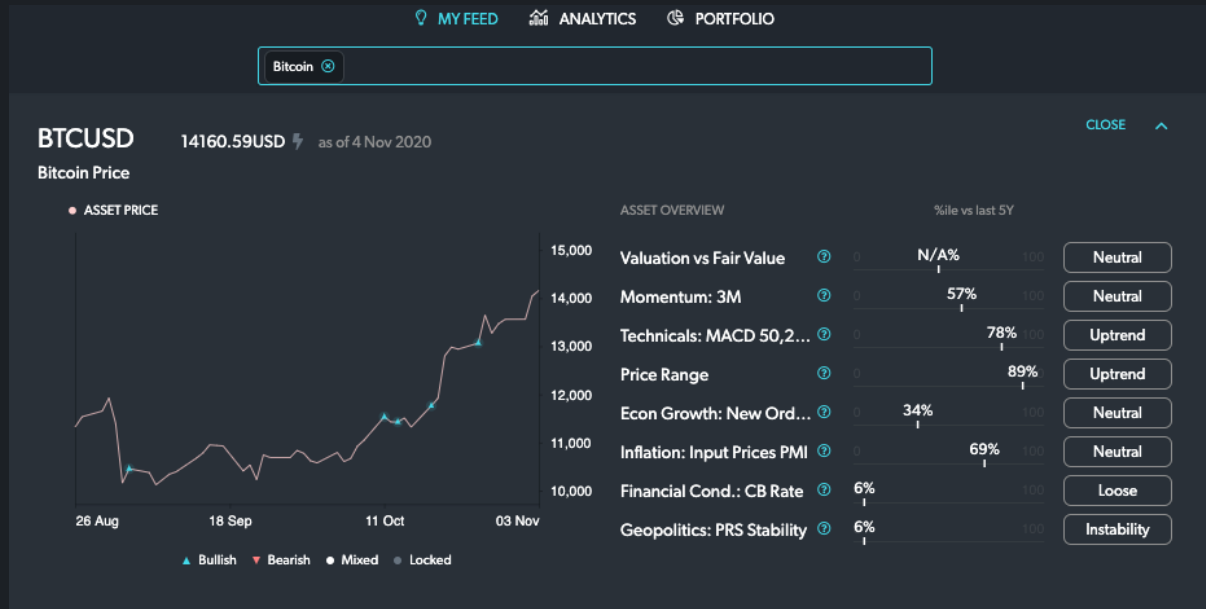
Machines can help you test your instincts against the data: is weakening momentum a problem for the stock?



# ASSET DUE DILIGENCE



Asset due diligence – where are the price pressures? – can be done instantly



The trickiest part often is assessing which assets will be impacted by the changing environment

TO GGLE MY FEED ANALYTICS PORTFOLIO

My Portfolio AAPL ALRS AMZN AUD.JPY BYND (Interacti... CNCR DIS EUR.USD EXPE GC NFLX OBLN PIMCO ACTIVE... SUI TGT

November 5, 2020

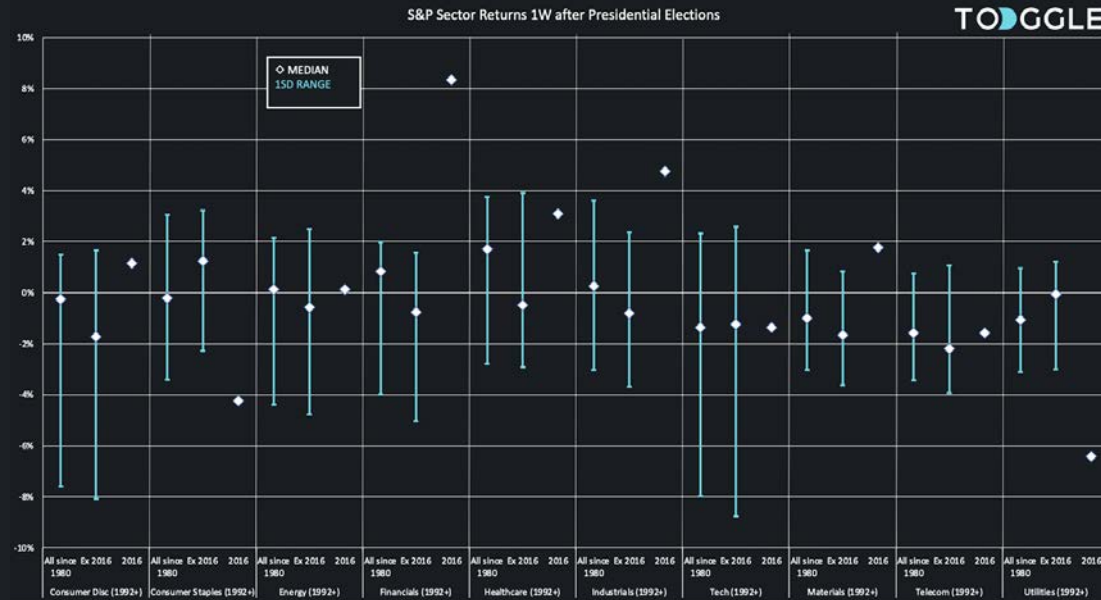
Latest market events impacting your positions

<p><b>USDJPY</b> 104.71 <span>↓</span> <span>&lt;1%</span></p> <p><b>Sentiment</b> <span>↓</span> <span>★ 2</span></p> <p>\$ - Sentiment is weak for a related economy, 54% of the time this led to a sideways move in USDJPY price (last: 105.47)</p>	<p><b>TGT:NYSE - Target</b> 159.04 <span>↑</span> <span>+4.67(+3.02%)</span> <small>as of 11:32 AM Eastern</small></p> <p><b>Sentiment</b> <span>↓</span> <span>★ 1</span></p> <p>\$TGT - Sentiment is strong for a related economy, 57% of the time this led to a sideways move in Target price (last: n.a.)</p>	<p><b>DIS:NYSE - Disney</b> 127.20 <span>↑</span> <span>+7.05(+5.87%)</span> <small>as of 11:32 AM Eastern</small></p> <p><b>Momentum</b> <span>↑</span> <span>★ 6</span></p> <p>DIS - Disney momentum turned positive, in the past this led to a increase in price</p>	<p><b>AUDJPY</b> 73.90 <span>↑</span> <span>1%</span></p> <p><b>Economic Growth</b> <span>↑</span> <span>★ 7</span></p> <p>- AUSTRALIA Citi Economic Surprise Index near highs, in the past this led to a increase in AUDJPY price</p>
<p><b>EURUSD</b> 1.16 <span>↑</span> <span>1%</span></p> <p><b>Sentiment</b> <span>↓</span> <span>★ 4</span></p> <p>\$ - Sentiment is strong for a related economy, 86% of the time this led to a decrease in EURUSD price (last: 1.17)</p>	<p><b>CNCR:NASD - LONCAR CANCER IMTH.ETF</b> 15.81 <span>↓</span> <span>&lt;1%</span></p> <p><b>Key Price Level</b> <span>↓</span> <span>★ 5</span></p> <p>CNCR - LONCAR CANCER IMTH.ETF is at a recent high of 29.67, 100% of the time this led to a decrease in price (last: 29.67)</p>	<p><b>Key Yield Level</b> <span>↓</span> <span>★ 5</span></p> <p>\$DIS - Disney's yield is at a recent low of 0.81, 98% of the time this led to a decrease in price (last: 132.09)</p>	<p><b>WABC:NASD - Westamerica Bancorp</b> 52.82 <span>↑</span> <span>1%</span></p> <p><b>Entry Point</b> <span>↑</span> <span>★ 5</span></p> <p>\$WABC - Westamerica Bancorp is oversold, 82% of the time this led to a increase in price (last: 52.84)</p>
<p><b>SUN COMMUNITIES</b> 0.02 <span>↑</span> <span>&lt;1%</span></p> <p><b>Momentum</b> <span>↑</span> <span>★ 5</span></p> <p>\$SUI - SUN COMMUNITIES has strong negative momentum, 94% of the time this led to a increase in price (last: 140.90)</p>	<p><b>Technical Analysis</b> <span>↓</span> <span>★ 5</span></p> <p>CNCR - LONCAR CANCER IMTH.ETF's 14D, 3D Stochastic KD spread just crossed below 0, 81% of the time this led to a decrease in price (last: 28.74)</p>	<p><b>Sentiment</b> <span>↓</span> <span>★ 1</span></p> <p>\$DIS - Deteriorating sentiment for a related economy, 74% of the time this led to a sideways move in Disney price (last: 125.40)</p>	<p><b>Momentum</b> <span>↑</span> <span>★ 8</span></p> <p>\$WABC - Westamerica Bancorp momentum turned negative, 82% of the time this led to a increase in price (last: 51.84)</p>

# EVENT STUDIES



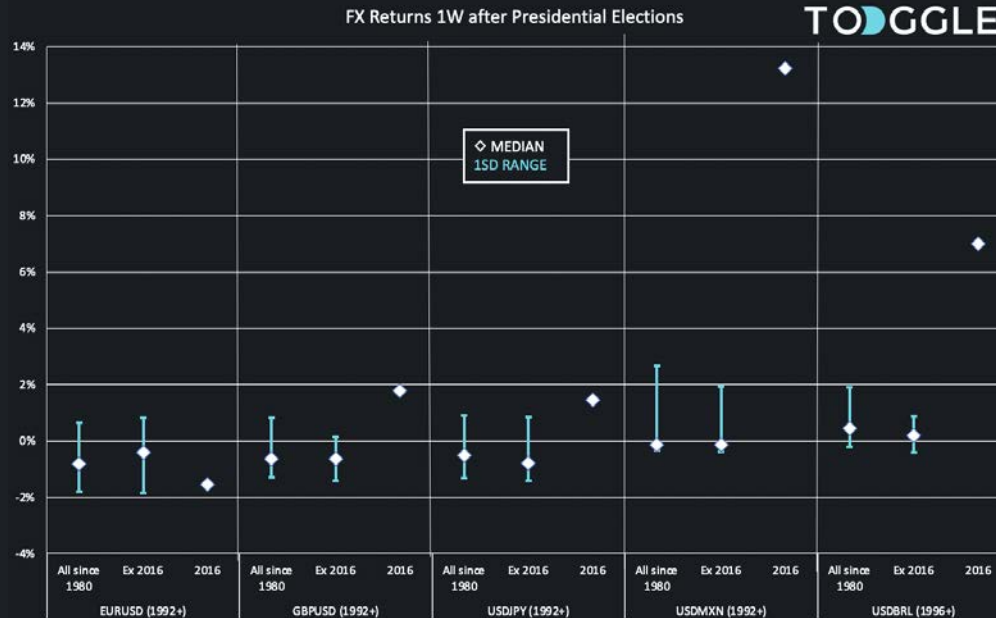
Around big events – like the recent election – crunching the numbers can be crucial to performance



# EVENT STUDIES



Machines are able to cover a large number of assets and pinpoint those most sensitive to catalysts





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