Relative Strength Filter
Global Summary

Group Selection
Priced as of December 9, 2019

Note: Group tickers incorporate hyperlinks to decile charts, and then a link to our Toolkit of the group members.

See back pages for user guide and disclaimer.
Sources for all charts: BMO Capital Markets
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Strength

Momentum

2015-12-09

Energy 19% / 22% / 22% 8% / 6% / 12%
Materials 36% / 39% / 39% 9% / 9% / 14%
Industrials 43% / 47% / 48% 9% / 8% / 12%
CMR Disc 41% / 46% / 46% 4% / 3% / 8%
CMR Stap 40% / 42% / 45% 0% / -2% / 5%
Health Care 35% / 38% / 38% 10% / 11% / 15%
Financials 37% / 41% / 43% 6% / 5% / 13%
Info Tech 51% / 56% / 57% 3% / 4% / 8%
Comm Srv 30% / 35% / 36% -4% / -4% / 1%
Utilities 42% / 47% / 47% -10% / -9% / -3%
Real Estate 50% / 57% / 56% 2% / 2% / 7%

*Three terms define the relative performance Z-Score rating versus the markets (US = S&P 500; GBL = MSCI AC World; CDA = S&P/TSX Composite)

(a) % Outperforming - what percentage of sector members is outperforming the market,
(b) Reward/Risk - how consistent is the median relative strength performance of the sector membership ( / ranking),
(c) Trend Psn - what is the net percentage of the sector members which are breaking above/below relative strength channels.

The strength z-Score is weighted 60% towards the trend parameters (% outperforming and reward/risk ratios) and 40% towards the trend positions (reversals of trends). Gridlines are placed at 0.5 increments.

See Help Pages for further details.
December 9, 2019

**Materials**

- **PrecMet**: 12 stocks; $56bn
- **Silver**: 3 stocks; $23bn
- **Gold**: 70 stocks; $273bn
- **PapProd**: 32 stocks; $101bn
- **PaperPkg**: 19 stocks; $105bn
- **CstrMat**: 33 stocks; $255bn
- **Copper**: 14 stocks; $88bn
- **FrstPrd**: 10 stocks; $22bn
- **Alumin**: 10 stocks; $31bn
- **DiversChm**: 20 stocks; $162bn
- **ComdChm**: 50 stocks; $395bn
- **IndusGas**: 7 stocks; $240bn
- **Fert&Ag**: 34 stocks; $156bn
Group Strength
Our Global Group analysis is based on bottom-up equity relative strength analysis as opposed to industry group (index) relative strength analysis.

Strength Decile Defined By
1. What percentage of a group's members are outperforming
2. How consistent that outperformance is
3. How the members are positioned (above/below) vs. their trend channels.

Momentum Decile
Rate of change of strength (change in 5-day moving average)

The Underlying Equity Relative Strength Analysis
Each day, for every equity we cover, our relative strength system assesses the best fit trend from a spectrum which covers a minimum trend duration of six months, and a maximum of 4-years. The "best fit" is the trend which maximizes duration, and minimizes deviation from the trend. Our process is flexible, thorough, and because it is run daily, timely.

The Dataset:
- Over 5,700 securities.
- Groups have a:
  ...Median depth of 28
  ...Average depth of 36

Heat Map Colour and Symbol Guide
Strength is highlighted by the background of the group title
- Bright green = best (1st decile) transitions towards...
- Bright red = worst (10th decile)

Momentum is highlighted in the border of the group title
- Colour map for momentum is the same as strength

Symbols to the right of the group ticker show where a group moved from in the previous session. Below the group symbol we highlight the number and total market capitalization of the members in a group. Clicking on the group, which brings up the chart via a hyperlink, will help to clarify the moves.
**User Guide 2 - Momentum**

Our Goals:
- To buy outperforming stocks in favoured groups
- To avoid underperforming stocks in unfavoured groups
- To be alerted of and act on the changes

#1 Rule of Momentum: You can use it only if it exists

- In stable/trending markets, one can buy stocks with high strength and momentum and hold them as long as momentum does not turn negative (trend following).

- In very rotational markets (e.g., where credit, currency, commodity conditions are choppy/changing):
  - Buying high strength and high momentum may be dangerous (buying yesterday’s winners).
  - One is better off buying stocks with moderate strength and high momentum (bottom fishing).
**User Guide 3 - Buy/Hold/Sell**

**Buy**
- Groups with high strength and high positive momentum (top left) - “In Favour”
- Groups with moderate strength and high positive momentum - “Transitioning to Positive”
- Groups with mediocre strength and high positive momentum - “Gaining Favour”

**Buy/Hold**
- Groups with high strength and neutral momentum (middle left) - “Maintaining Favour”

**Sell**
- Groups with low strength and high negative momentum (bottom right) - “Out of Favour”
- Groups with moderately negative strength and high negative momentum - “Transitioning to Negative”
- Groups with mediocre strength and high negative momentum - “Losing Favour”
User Guide 4 - Hyperlinks To Decile Charts & Stock Selection

- Each group is hyperlinked to a chart that shows the relative strength decile as a function of time, and the moving average (momentum).

- Each chart is hyperlinked to the group membership, in our RS Filter Toolkit.
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<td>43.2%</td>
<td>22.8%</td>
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<td>Sell</td>
<td>Underperform</td>
<td>3.7%</td>
<td>9.5%</td>
<td>2.0%</td>
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<td>1.6%</td>
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