Relative Rotation Graphs
RRG <go>
A new tool to visualize
Relative Strength

MTA symposium May 2011

Julius de Kempenaer
This time it’s different

-1987 black Monday

-1990 gorby crash

-2000 .com bubble

-2008 credit crunch
Today’s youth loves luxury. They are bad mannered, despise all authority, show no respect and talk when they should be working. The youngsters do not rise from their seats when elderly people enter, they go against their parents, chat in company, gobble down their food and tyrannize their teachers.

Socrates 400 bC
This time it’s different

STUDY HARD...
LISTEN TO YOUR
TEACHERS... RESPECT
YOUR PARENTS

THIS IS SO
TOTALLY
UN-AMERICAN!
This time it’s different

PLANNED ECONOMY OR PLANNED DESTRUCTION?

WHOOPEE!

DEPLETING THE RESOURCES OF THE SOUNDEST GOVERNMENT IN THE WORLD

PLAN OF ACTION FOR U.S.

SPEND! SPEND! SPEND!
UNDER THE GUARD OF RECOVERY = BUST THE GOVERNMENT = BLAME THE CAPITALISTS = THE FAILURE = JUNK THE CONSTITUTION AND DECLARE A DICTATORSHIP

1934 chicago tribune
This time it’s different

PRICES

THEN
UP HERE

STOCKS
BACK
AND BUYS
BULLISH
TURNS
TRADER
AND EVERY
OR TWO
IN A DAY
OR TWO
A POINT.
THEY RISE
THEN

FALL
A POINT
OR TWO
IN A
DAY OR
TWO AND
EVERY
TRADER
TURNS
BEARISH
ON THE
MARKET
AND
SELLS
STOCKS
DOWN HERE
History repeats itself !!!

It does make sense to look at history.....

You might learn something
Tomorrow is the most important thing in life. Comes into us at midnight very clean. It's perfect when it arrives and puts itself in our hands. It hopes we've learned something from yesterday.

John Wayne
Choice consists of the mental process of thinking involved with the process of judging the merits of multiple options and selecting one of them for action. Some simple examples include deciding whether to get up in the morning or go back to sleep, or selecting a given route for a journey. More complex examples (often decisions that affect what a person thinks or their core beliefs) include choosing a lifestyle, religious affiliation, or political position.

Most people regard having choices as a good thing, though a severely limited or artificially restricted choice can lead to discomfort with choosing and possibly, an unsatisfactory outcome. In contrast, unlimited choice may lead to confusion, regret of the alternatives not taken, and indifference in an unstructured existence; and the illusion that choosing an object or a course leads necessarily to control of that object or course can cause psychological problems.
A difficult choice.

Some choices are more difficult than others 😊
A choice made by someone else.....
Their own choice ......
Investors face many, many choices!

• First big question to answer is to invest or not to invest?
• For private investors it’s a real choice

If the choice is TO INVEST then the fun starts now

If the choice is NOT TO INVEST the added value of this presentation stops here
What if your business card looks like this:

johnny goodtimes

Portfolio manager

Mike Devine | 4.30.08
To invest or not to invest....?

- Pension fund or comparable institutions with long-term liabilities have no real choice.... they have to invest.
- Serious risk of not being able to see the forest from the trees.
- Structured approach is needed.
Where does your return come from?

- Asset Allocation, 91.50%
- Security Selection, 4.60%
- Tactical Asset Allocation, 1.80%
- Other, 2.10%

Brinson, Hood and Beebower 1986
Simple Asset Allocation choice.
What do we (technicians) have in our toolbox?

- Graphs, many different graphs
- Ranging from very simple to very complex
Simple graph of S&P 500 index
Same S&P 500, a bit more complex.
KISS ..... Keep It Simple Stupid!

"I'm taking you to a magical never-never land that is unaffected by events in the real world."

"We're going to Wall Street?"
• Problem with single security graphs is that the only answer you will get is to invest or not to invest in that one security

• To view things in a broader context is more difficult

• In our technicians toolbox there is one single technique that helps you to make choices, distinguish between 2 securities.
Everything is **Relative strength** is Everything
Euro STOXX 50 index vs. Bund future
• Stock/bond question can (easily) be answered using RS
• Next step down the pyramid / decision tree

3 x 3 = 9 – 3 = 6 / 2 = 3 choices

3 we can handle by looking at 3 RS graphs
Relative Strength

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Relative Strength

• In AC equities next step could be to look at sectors.

• In Europe 19 Stoxx sectors

• In US for example 10 GICS L1 sectors or 24 GICS L2 industry groups etc.

• $19 \times 19 = 361 - 19 = 342/2 = 171$

• $10 \times 10 = 100 - 10 = 90/2 = 45$

• $24 \times 24 = 576 - 24 = 552/2 = 276$

• Now that’s more of a challenge
• Back to being Johnny Goodtimes
• And your decision tree looks something like this, you may need something else
Sector comparison: Banks vs. STOXX 600

The graph compares the performance of banks to the STOXX 600 index over the years 2004 to 2009. It shows the price movements and the performance ratio of STOXX Europe 600 Banks Price EUR vs. STOXX Europe 600 Price Index EUR.
Sector comparison: Utilities vs. STOXX 600
• The individual RS lines once again give pretty good clue about individual comparisons vs benchmark

• The RS lines answer “good” or “bad”

• They do not answer “how good” or “how bad”

• Or “best” and “worst”

• Raw RS values (sec A/sec B) are like apples and oranges they cannot be compared

• Normalizing the RS values enables “ranking”
  • JdK RS-Ratio
## JdK RS-Ratio

<table>
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<th>Sector</th>
<th>JdK RS-ratio</th>
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<tbody>
<tr>
<td>INSU</td>
<td>103.63</td>
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<td>OILG</td>
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<tr>
<td>TRLS</td>
<td>95.75</td>
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<tr>
<td>RETL</td>
<td>95.48</td>
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</tbody>
</table>

- **STOXX sectors (19) ranked by JdK RS-Ratio vs STOXX 600**

- High values are “good”

- Low values are “bad”

- How does this look over time?
We need to know the “direction” +/- of JdK RS-ratio
Retail with JdK RS-Ratio vs. STOXX 600 + trigger line

Use MACD technique to gauge direction of JdK RS-Ratio
Retail with JdK RS-Ratio vs. STOXX 600 + JdK RS-momentum

JdK RS-Momentum is a normalized version of the Rate of Change of JdK RS-Ratio.
Insurance with JdK RS-Ratio vs. STOXX 600 + JdK RS-Momentum
Putting it all together.

• We have a lot of information now; comparable across the universe

• The RS approach in general adds value to the investment process

• But we still have to flip thru charts to get an idea about what’s going on in the universe as a whole

• Add another Johnny Goodtimes problem:

  • This week is “technology” week

• Wouldn’t it be nice if we could put all this information together in one screen / graph?
RRG: STOXX 600 Europe

The diagram shows the STOXX 600 Europe index and the JdK RS-Ratio. The index is represented by a scatter plot with various sectors and companies marked with their respective symbols and labels. The x-axis represents the JdK RS-Ratio, while the y-axis shows the STOXX 600 Europe index value. The date 11/19/10 is indicated in the bottom right corner of the chart.

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RRG: Asset Classes vs. Cash index

[Graph showing Asset Classes vs. Cash with various asset classes represented by different lines and markers, including STOXX, HF, Bonds, COM, REAL, and STOXX EU.]

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RRG: Regional sectors STOXX 1800

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RRG : G10 Currencies vs EUR (base)

FX: G10 currencies (EUR base)

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• Visualize the relative positions of the elements in a universe in a unique way

• Not a trading system per se but a valuable tool to monitor what’s going on in a universe

• Shows that markets actually “rotate”

• Markets did that 100 years ago, 50 years ago, last year and they still do it at this very moment

• History is repeating itself! And it does that in circles...

• With this tool we can actually see it happening and possible make better informed choices.

• Hopefully make Johnny Goodtimes’ life a little easier!!
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www.TAMresearch.com
www.RelativeRotationGraphs.com (not active yet)
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