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Market Confirmation Using Outperformance Breadth

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Market Confirmation Using Outperformance Breadth

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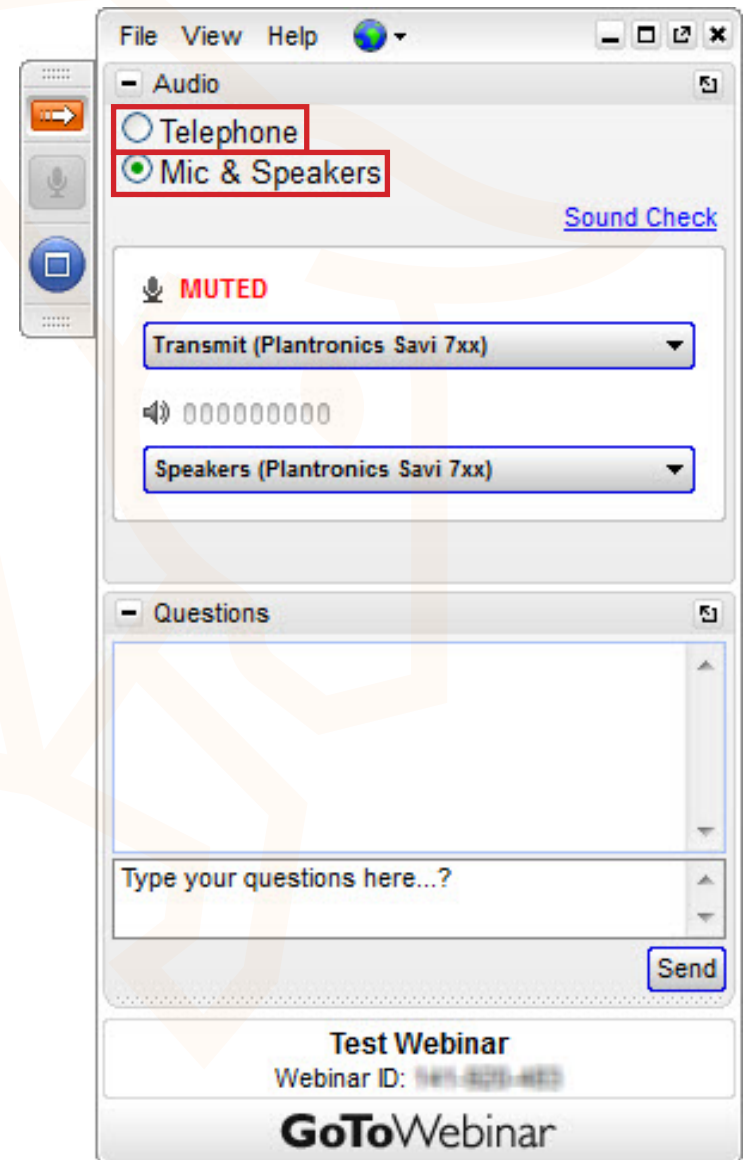
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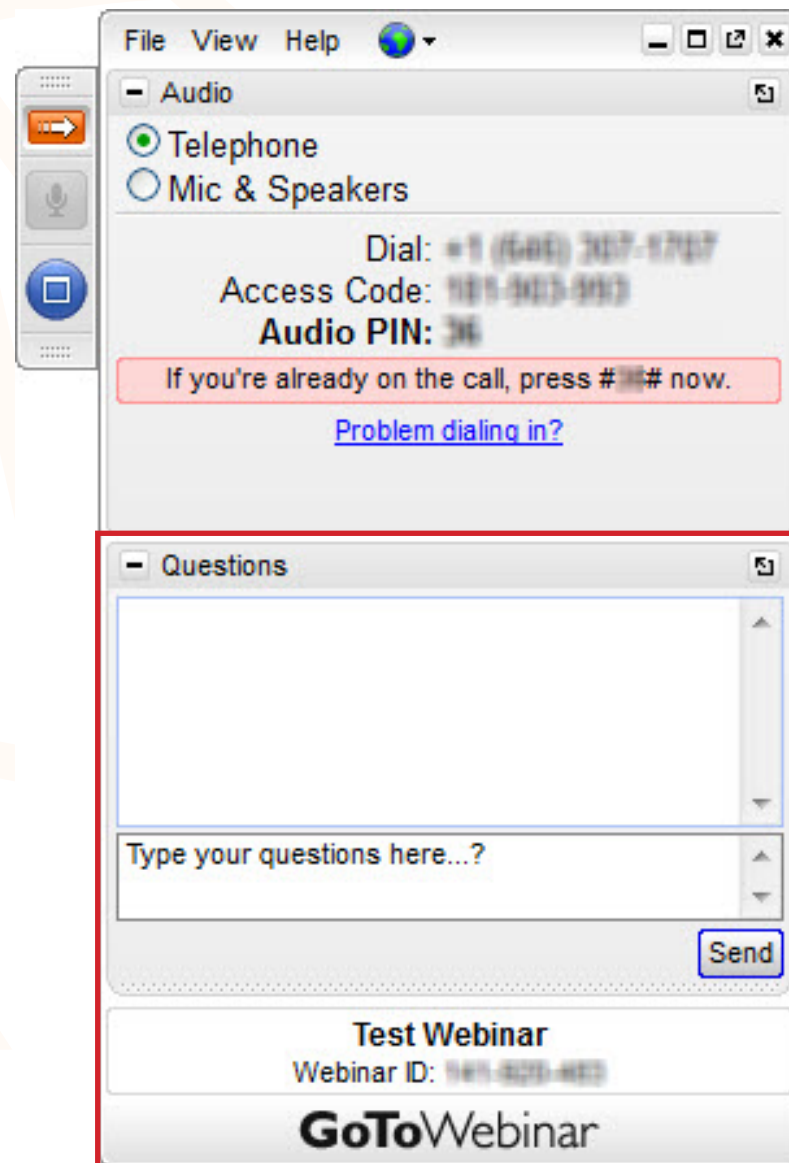
Audio Instructions.

- Select “Telephone” to dial in via phone
OR
- Select “Mic & Speakers” for VOIP



Today's Attendee Control Panel.

- Grab Tab
- Questions / Chat



Preview

1. Breadth basics
2. Inconvenient breadth arithmetic
3. Outperformance breadth
4. Horse race

Some measures of stock market breadth.

Moving Average Breadth: percent of stocks in the index with prices above their (200-day) moving averages.

Other measures of breadth:

- **Net New Highs:** Percent new highs – new lows.
- **Net Rising:** percent rising issues - falling issues.

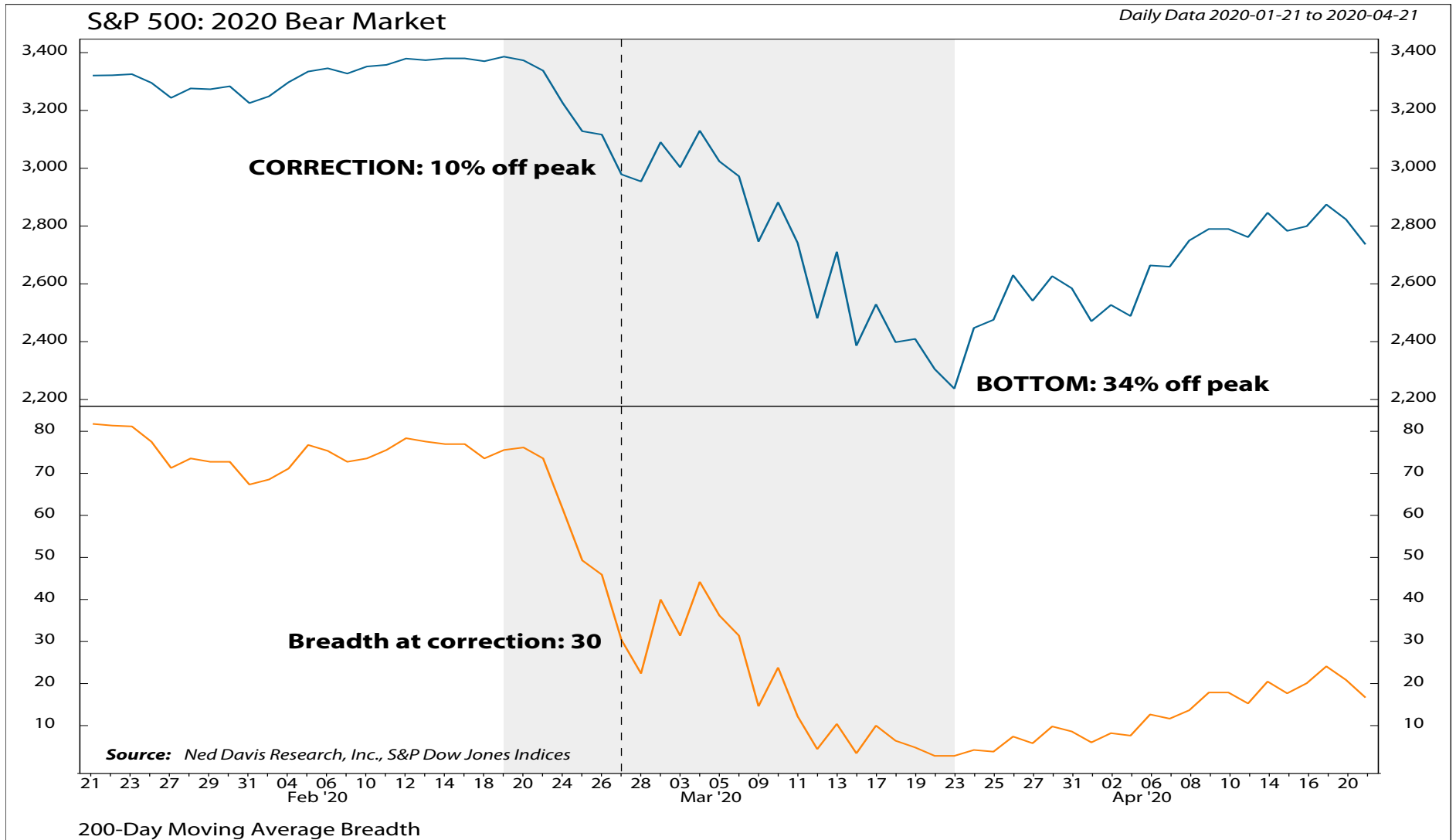
These must be out there somewhere...

High Volatility Breadth: percent of stocks in the index with increasing price return volatility.

Skewness Breadth: percent of stocks in the index with price returns leaning in a certain direction.

Correlation Breadth: percent of stocks in the index with highly correlated price returns versus the index.

Moving average breadth in 2020.



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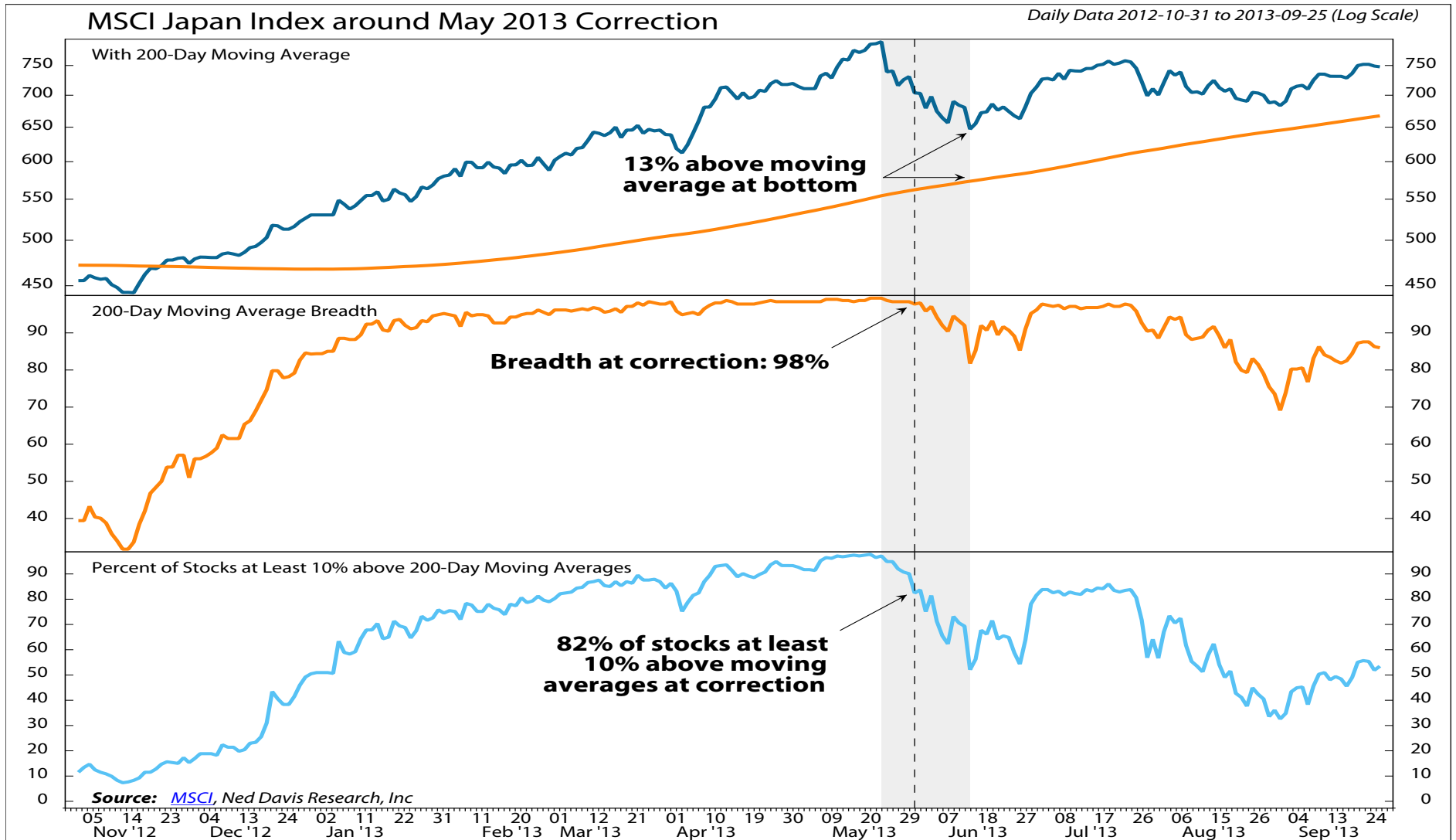
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Moving Average Breadth can get “sticky”.

After strong market runs:

- Many stocks prices could be well above their moving averages.
- These stocks prices would have to travel far to go below their moving averages.
- Moving Average Breadth remains high for too long.

Example of sticky breadth in Japan.



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A couple of slow curveballs...

Sticky breadth more likely when index has higher concentration of high beta stocks.

Can breadth be sticky when it is low? Probably not.

Outperformance Breadth.

Percent of stocks in the index that have outperformed the index (over the last 200 days).

Application:

- Use on market correction (index 10% off 52-week high).
- If Outperformance Breadth > 50 , bet market rally.
- If Outperformance Breadth < 50 , bet bear market.

List of MSCI country indexes studied.

Australia

Japan

Canada

Singapore

France

Switzerland

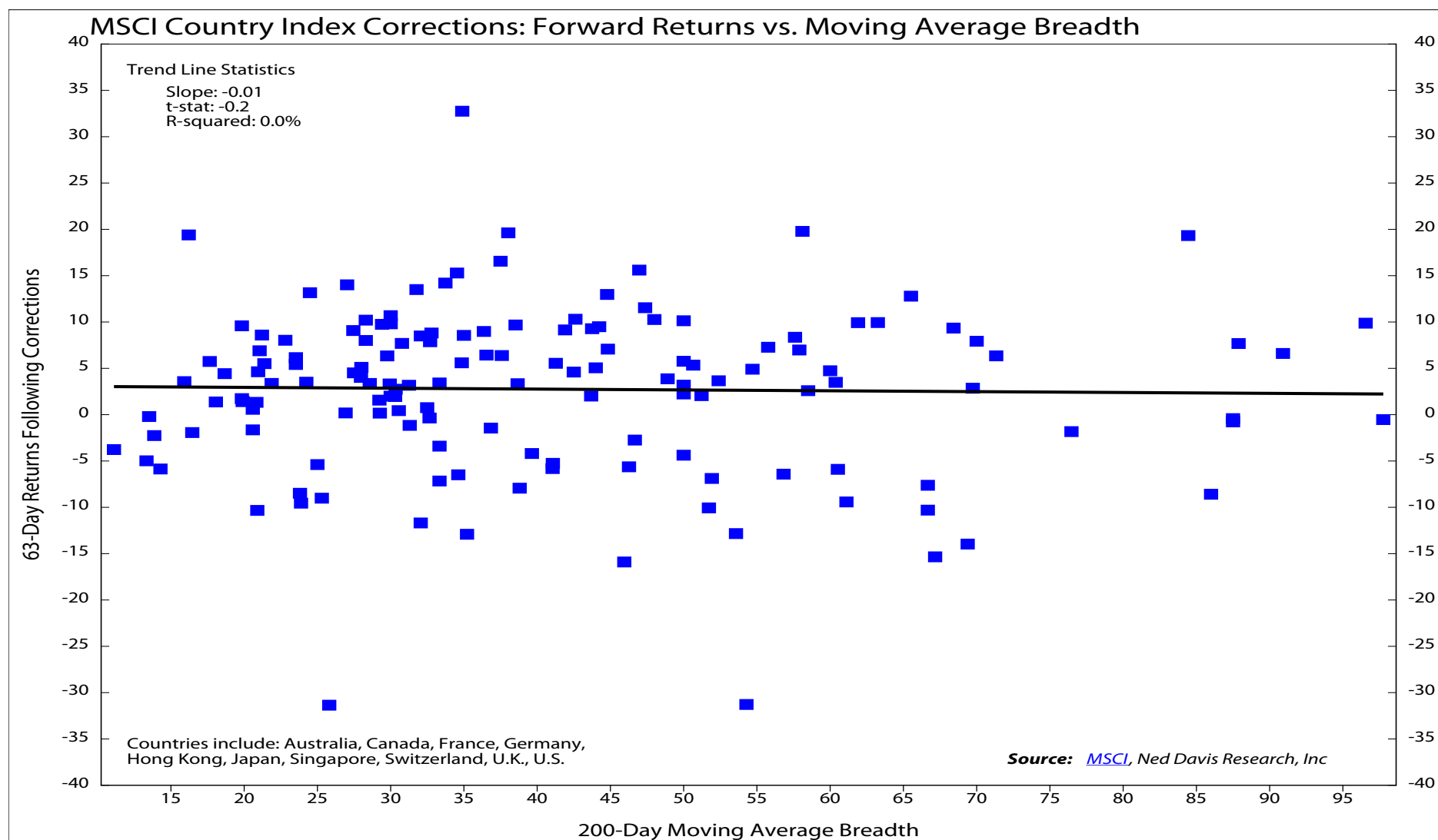
Germany

United Kingdom

Hong Kong

United States

Moving Average Breadth and forward returns uncorrelated.

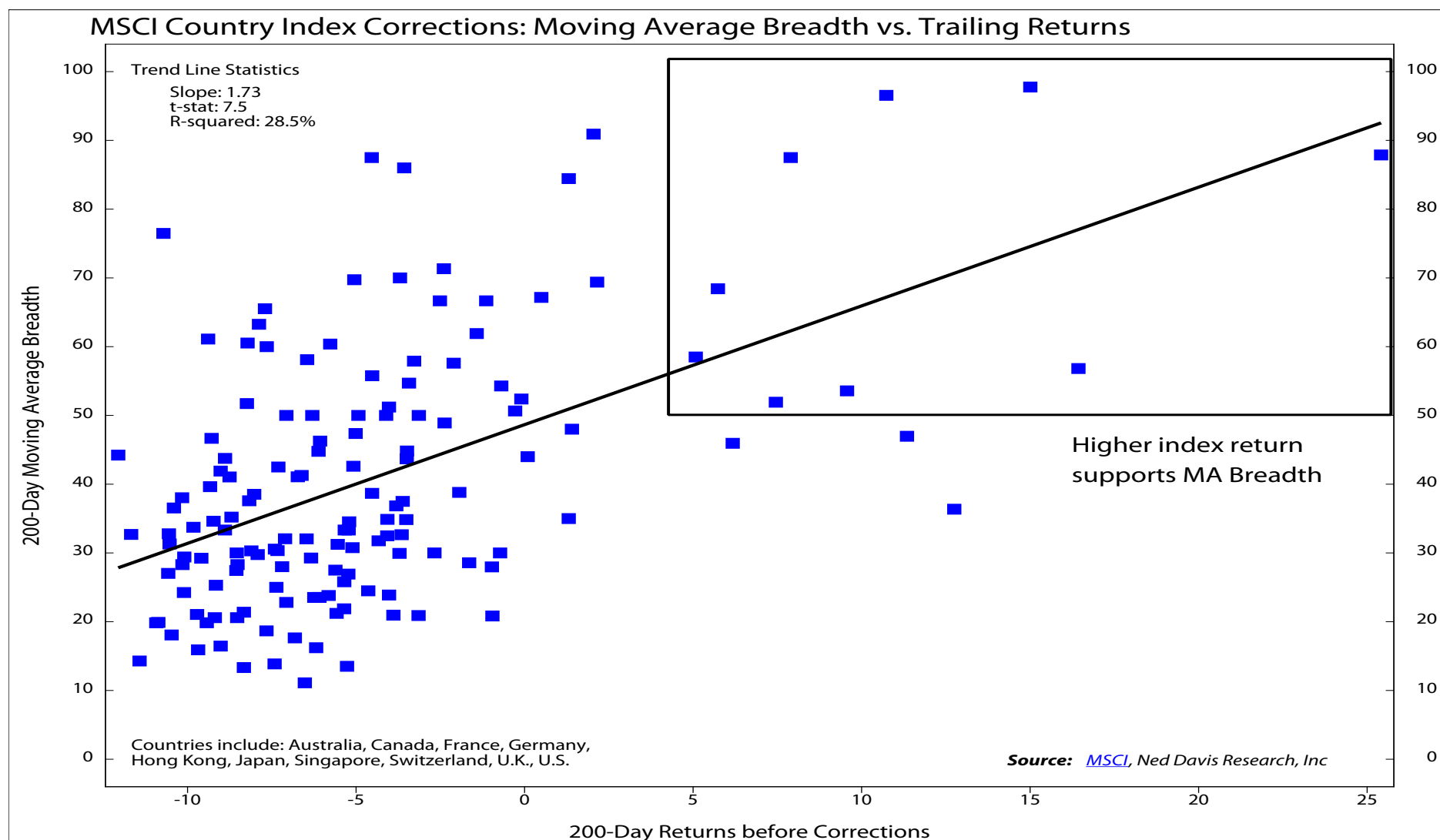


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Moving Average Breadth cushioned from higher trailing returns.

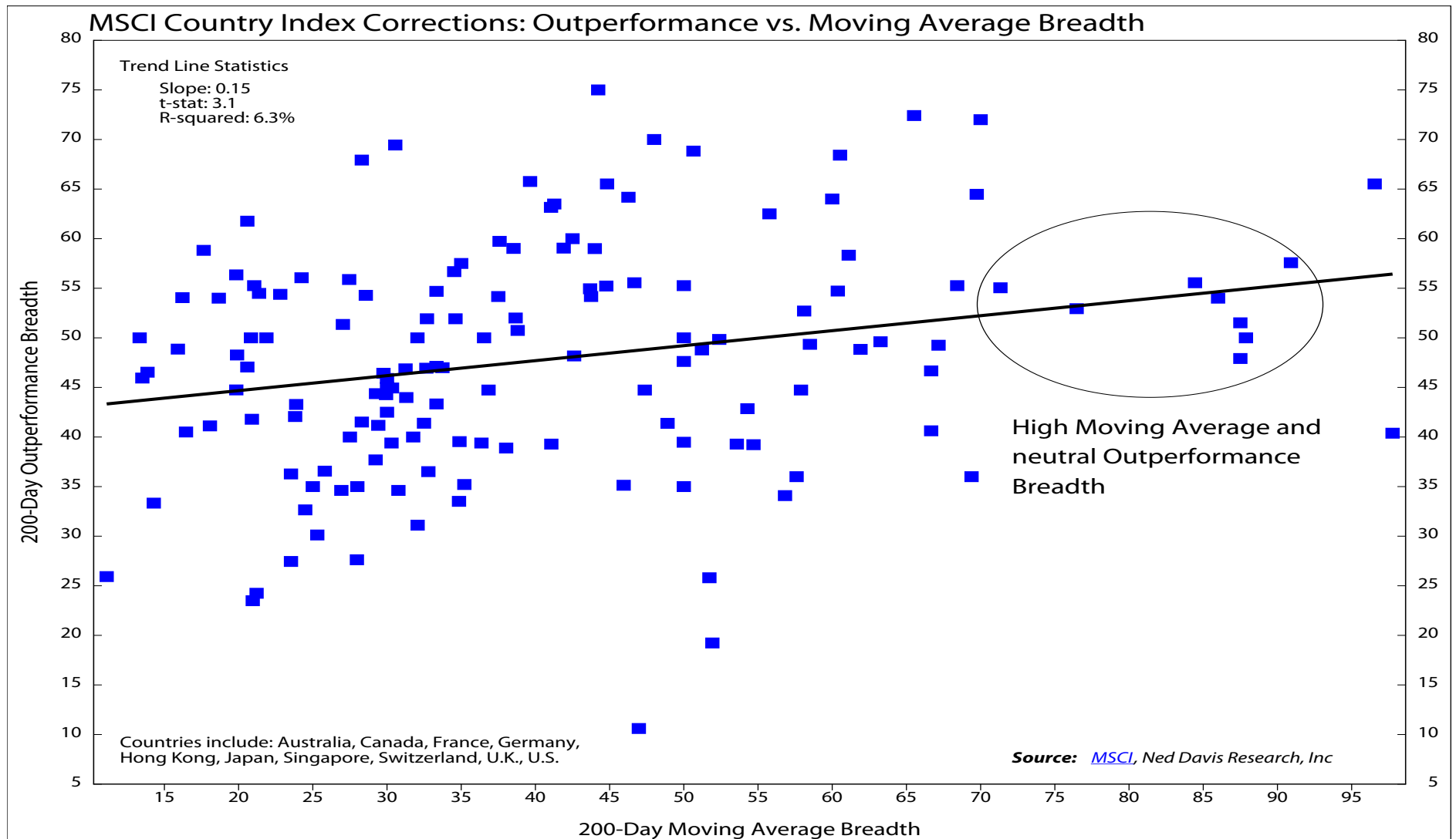


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Outperformance vs. Moving Average Breadth.

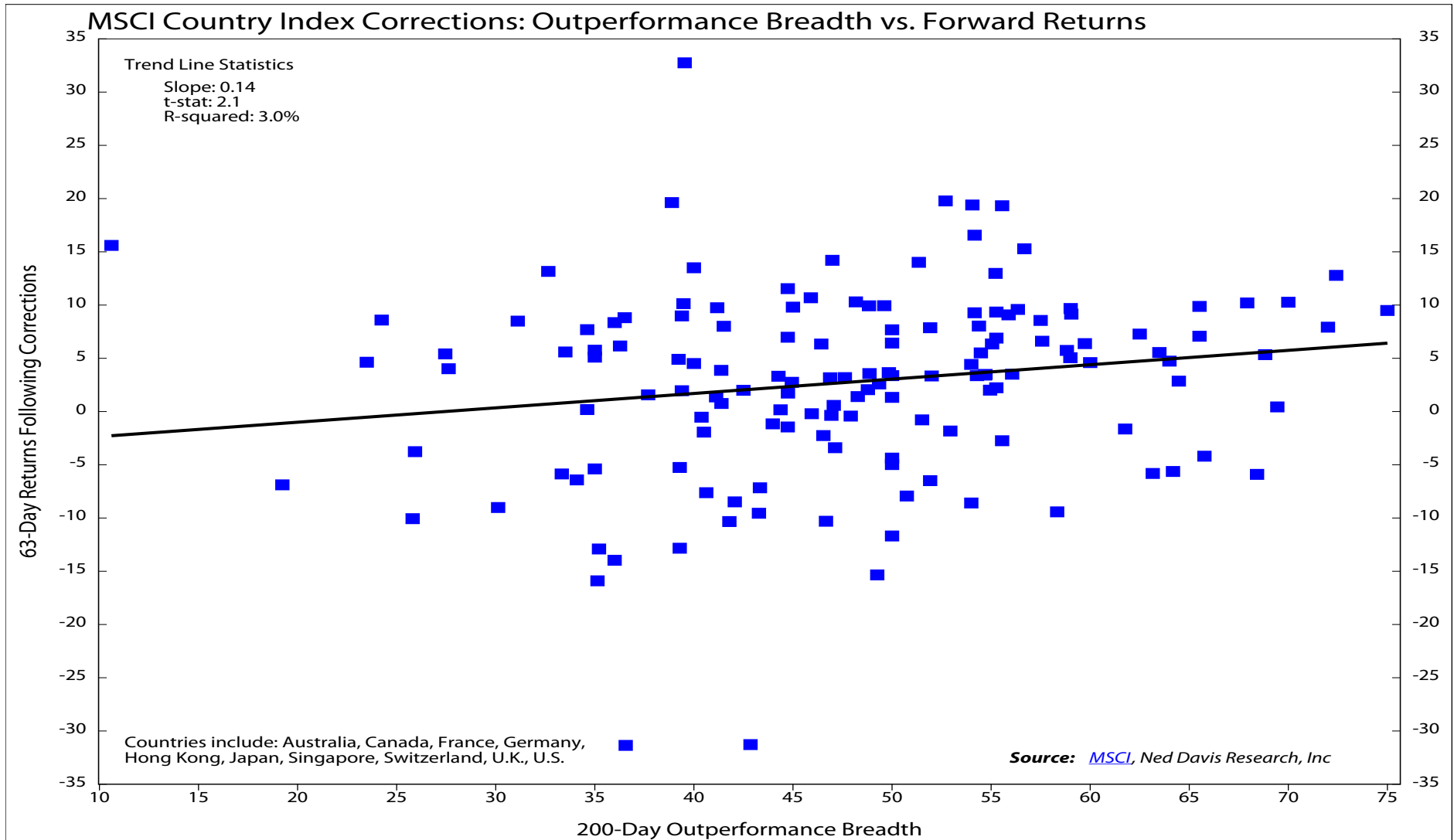


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Outperformance Breadth and forward returns move together.



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Performance evaluation.

What happens to the market after it corrects and

- Outperformance Breadth > 50 ?
- Outperformance Breadth < 50 ?

How often does market rally after correction and

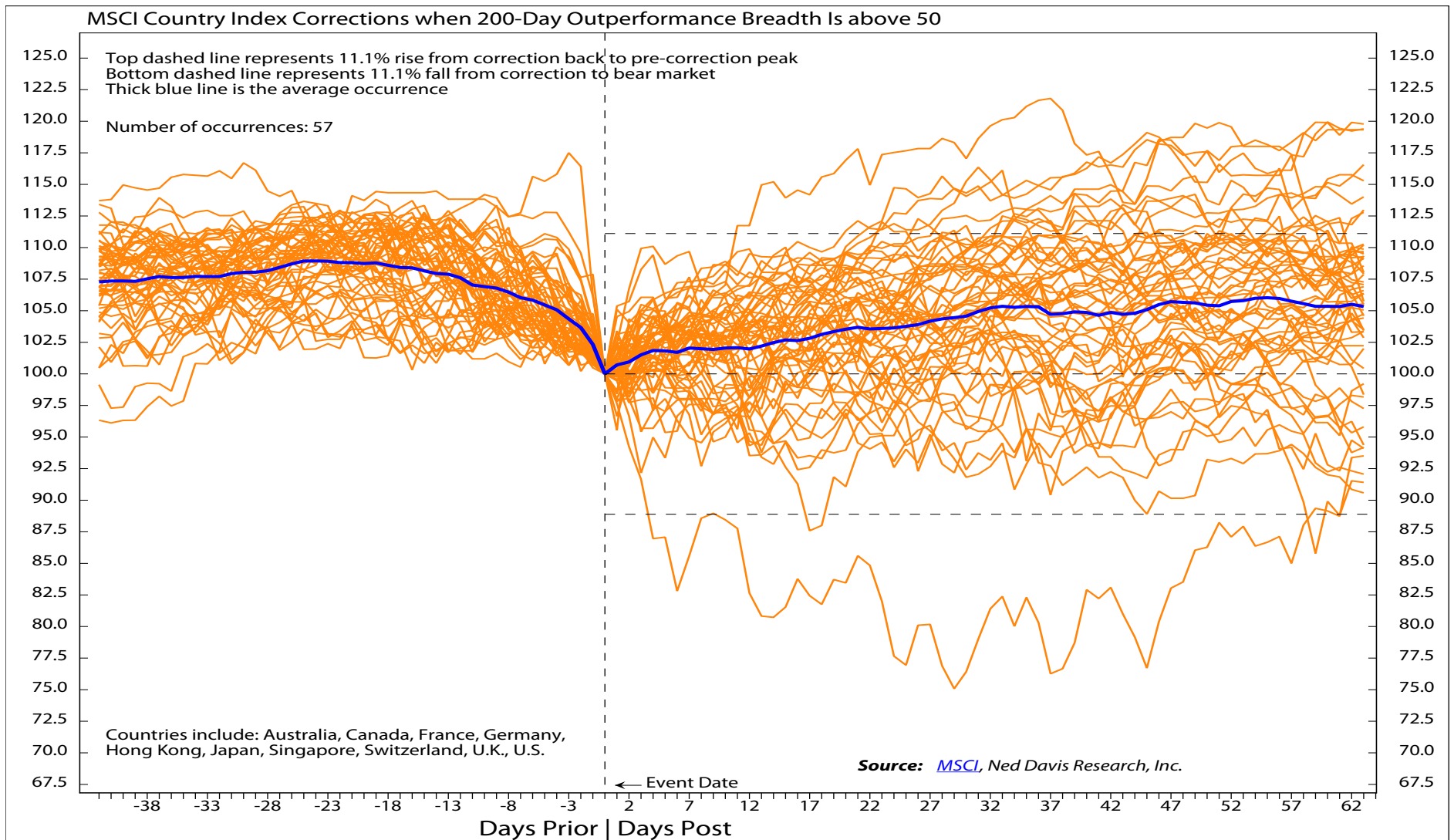
- Outperformance Breadth > 50 ?
- Outperformance Breadth < 50 ?

How often does bear market occur after correction and

- Outperformance Breadth > 50 ?
- Outperformance Breadth < 50 ?

(correction: index down 10% from 52-week high, rally: return to previous peak after correction, bear market: index down 20% from 52-week high)

Correction + high Outperformance Breadth = usually positive returns.

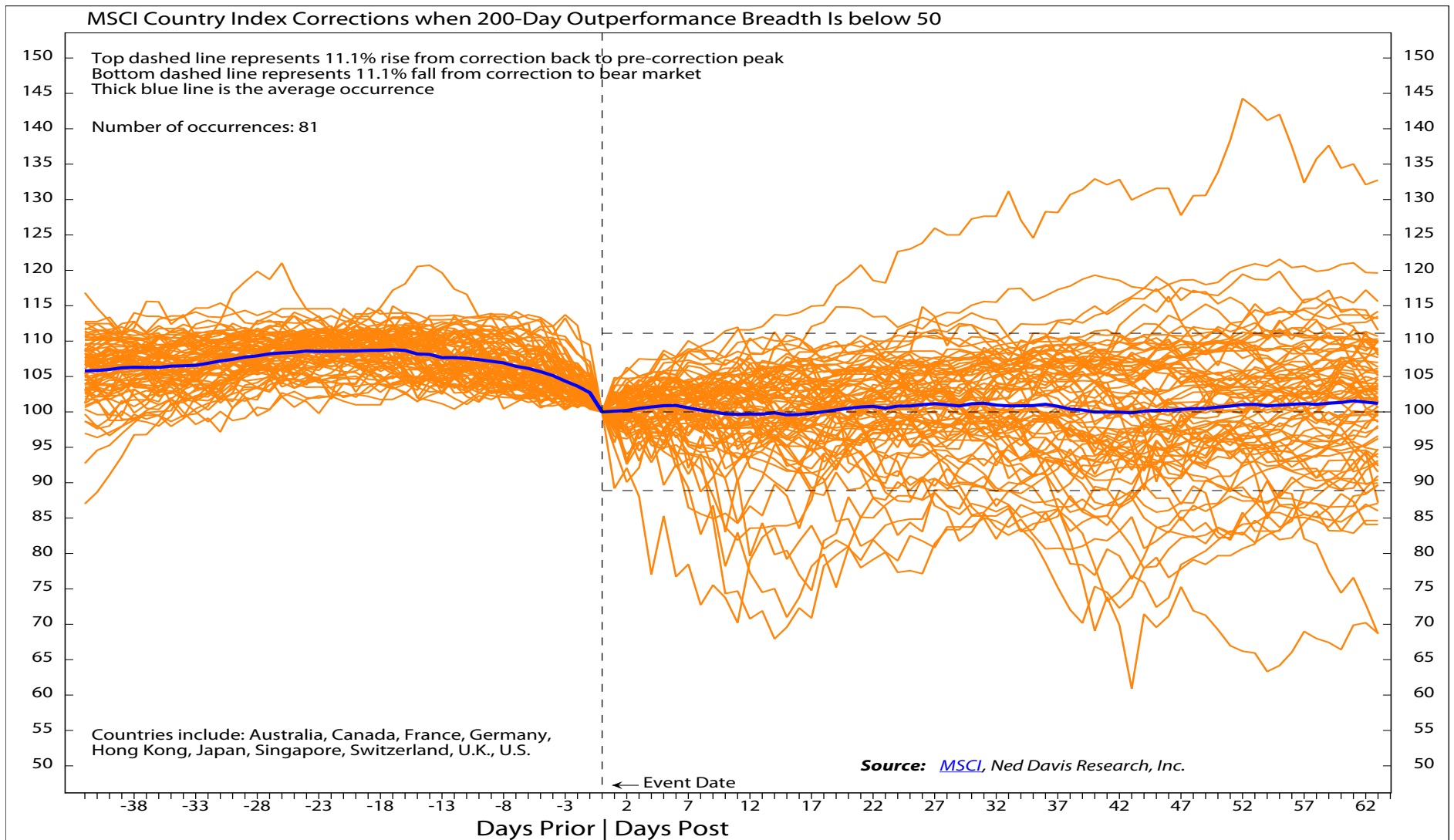


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Correction + low Outperformance Breadth = usually flat returns.

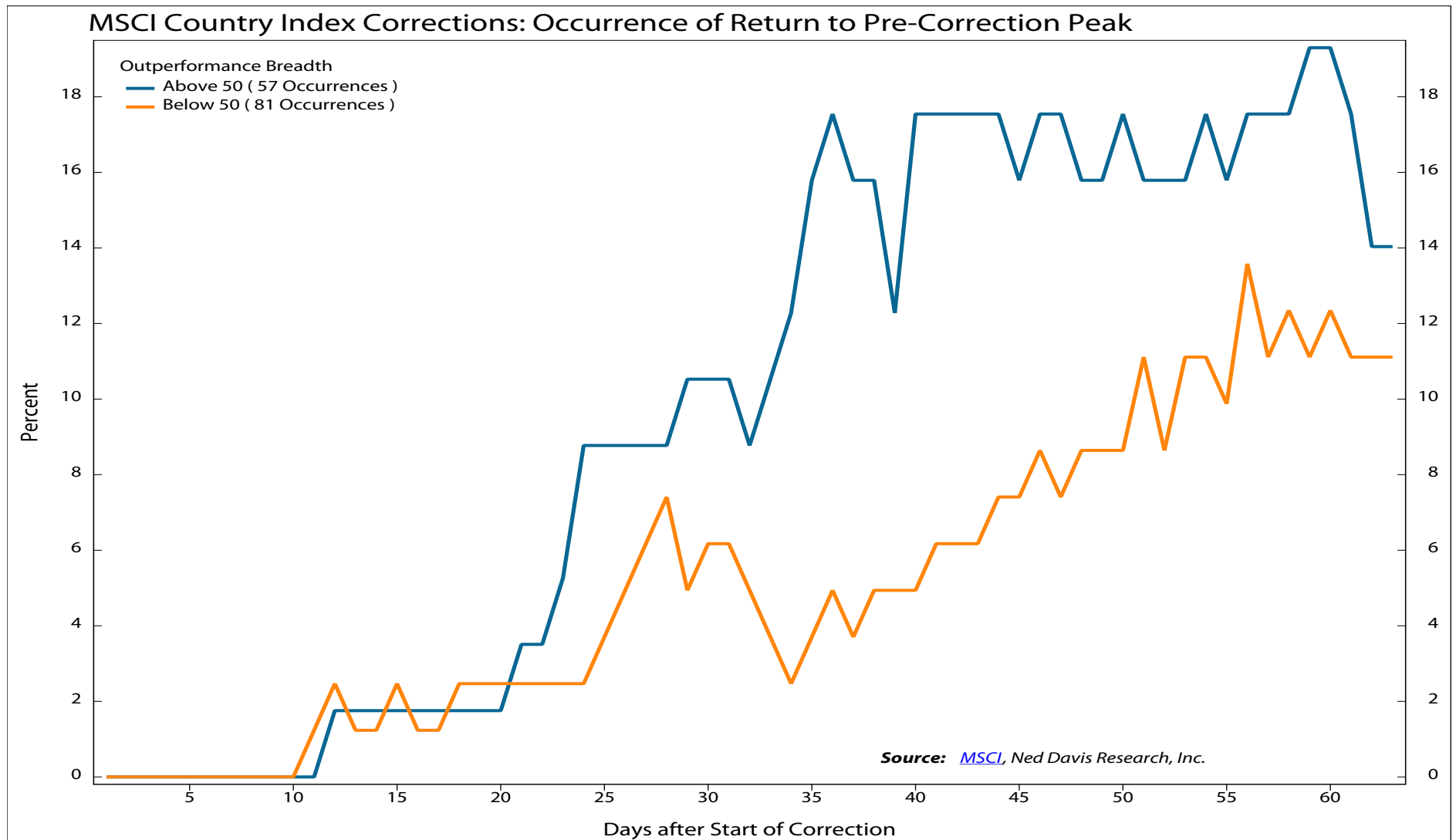


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If there's a rally, what was Outperformance Breadth?

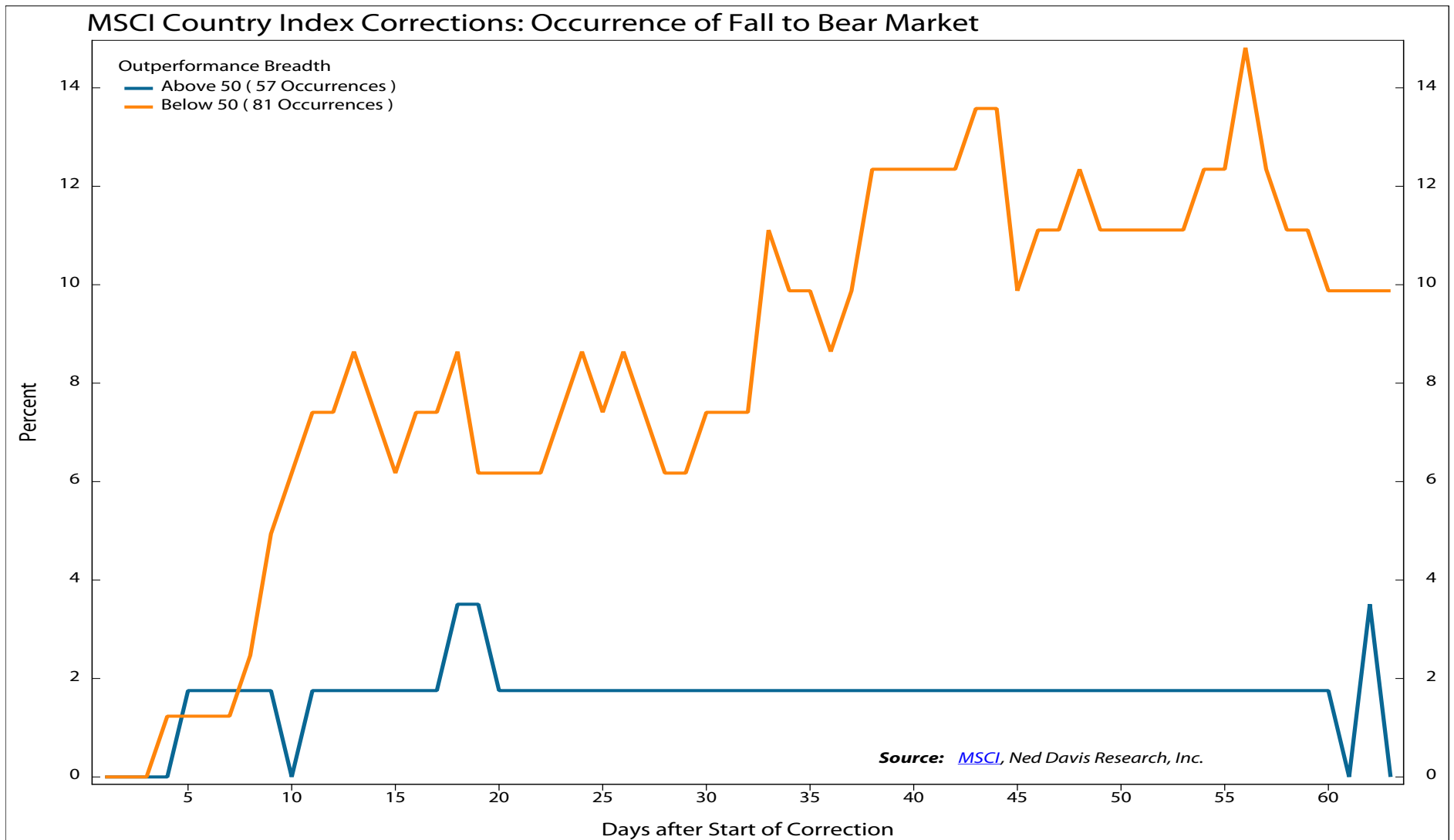


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If there's a bear market, what was Outperformance Breadth?



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Performance evaluation by breadth measure.

30 Days after Correction

Measure	Level	Average Return	Occurrence of Rally	Occurrence of Bear Market
Outperformance Breadth	> 50	4.94	8.77	1.75
	< 50	1.23	4.94	8.64
Moving Average Breadth	> 50	3.23	10.53	7.89
	< 50	2.34	5.88	4.90
High / Low Breadth	< -10	3.86	6.06	4.55
	> -10	1.70	7.59	6.33
Rising / Falling Breadth	< 0	3.80	7.69	5.49
	> 0	1.13	6.12	4.08

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Conclusions

Outperformance breadth:

1. Works the way we'd expect it to
2. Should continue to work (?)
3. Should be used with other indicators
4. Does it work under different circumstances?



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Q & A



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Dan Chin, PhD, Senior Research Analyst, Custom Research Solutions, conducts quantitative research on behalf of the firm's clients, including asset allocation modeling, equity selection, and in-depth market analysis. Dan is also the lead editor for the series of white papers published each year by the Custom Research team.

As a member of NDR Investment Solutions ("NDRIS"), Dan manages several portfolio strategies. NDRIS leverages NDR's market research, data, and quantitative modeling expertise to power ETFs, SMAs, UITs, and mutual funds.

Before joining NDR, Dan was an Assistant Professor of Economics at Methodist University in North Carolina. Prior to that, he was a Senior Quantitative Analyst and Associate Portfolio Manager with Kenwood Capital Management where he designed quantitative stock selection models. He was also a Research Analyst at the Federal Reserve Bank of Minneapolis with primary responsibilities in macroeconomic forecasting.

Dan earned his PhD in Economics from the University of South Florida. He has also received a Master of Business Administration with a concentration in Finance from the University of Minnesota, a Master of Science in Public Management and Policy from Carnegie-Mellon University, and Bachelor of Arts degrees in Mathematics and Economics from the University of Rochester.



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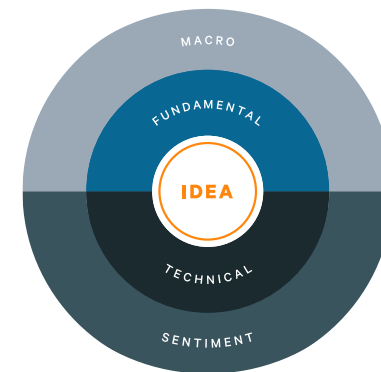
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