

# MarketGrader U.S. 100 2015 Performance Review

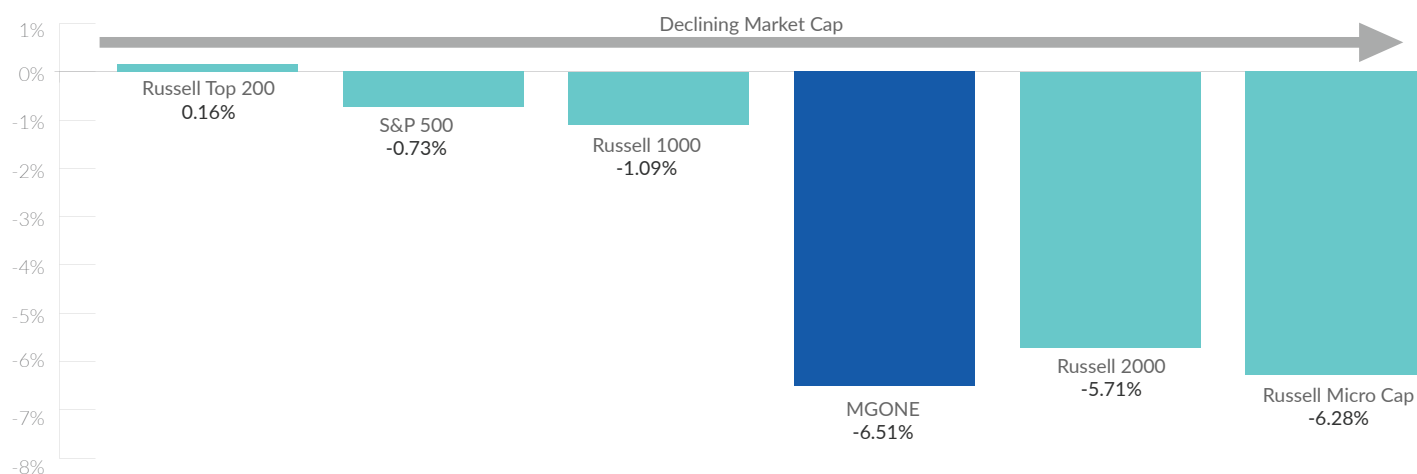
By Francis Gupta, Ph. D.

Research Note - January 2016

With respect to stock market capitalization, 2015 was definitely a “large cap” year. Put differently, U.S. equity markets last year were more favorable to large capitalization companies than to small capitalization companies. Actually, “more favorable” is incorrect; to be more precise, the only segment of the equity market that investors did not penalize in terms of price was the largest market cap segment made up of mega cap stocks. All other market cap segments were down in 2015.

Figure 1 presents the 2015 price performance of the Russell size indexes, the S&P 500—included since it is a widely used large cap equity index—and the MarketGrader U.S. 100 (MGONE), of course. The indexes are arranged from the largest market cap segment (Russell Top 200) to the smallest market cap segment (Russell Micro Cap). The average market cap of MGONE is smaller than the large cap Russell 1000 index, but larger than the small cap Russell 2000 index.

**Figure 1. Price Performance (%) by Market Cap Index – 2015**



Source: MarketGrader Research. Price return data from FactSet. Note: The MarketGrader U.S. 100 (MGONE) is not a Market Cap Index but is positioned appropriately in the figure by its average market cap.

This figure says it all. In 2015, portfolio size was the single most important determinant of portfolio performance. The only portfolios that managed to squeeze out positive returns were those that held mega large cap stocks. All other portfolios, were down. In particular, mid cap and small cap portfolios, irrespective of the stocks they held, posted losses as it was virtually impossible to find winners in the mid cap and small cap stock selection universes. Therefore, irrespective of stock selection skill, it proved to be a very challenging year for mid cap and small cap portfolios and even more challenging for

equally-weighted portfolios such as the MG 100 (more on that later).

The fact that 2015 was a “large cap” year is not in itself a noteworthy event. After all, in every calendar year, either large cap stocks outperform small cap stocks, or *vice versa*. However, what is noteworthy is that 2015 followed another “large cap” year, 2014, the first time back-to-back years of large cap price outperformance have occurred in this century.

Figure 2 reveals the entire large cap versus small cap picture for this century. Of the 16 years that have transpired so far (including 2000), only six have been large cap years on a price return basis. In the 2007, 2011, 2014 and 2015 calendar years, the difference between price performance of large cap performance and small cap stocks was greater than 4%, which is significant. In 2005, the large cap outperformance was 1%, which is marginal. In 2009, the price outperformance was an insignificant 0.3%. The remaining 10 years of the new century were all small cap years. In the 2001, 2003 and 2010 calendar years, the price difference was very significant with small caps outperforming large cap by more than 10%. In 2004 and 2013, with a difference between 5% and 10%, the outperformance was significant. In the four years – 2000, 2002, 2006 and 2008 – the outperformance between 1% and 5% was still relevant. Lastly, in 2012 the outperformance was an insignificant 0.7%.

**Figure 2. Calendar Year Price Returns – New Century**

Calendar Year	Russell 1000 %	S&P 500 %	MarketGrader U.S. 100 %	Russell 2000 %	Difference %	Outcome
2015	-1.1	-0.7	-6.5	-5.7	4.6	L
2014	11.1	11.4	8.5	3.5	7.5	L
2013	30.4	29.6	41.6	37.0	-6.6	S
2012	13.9	13.4	16.6	14.6	-0.7	S
2011	-0.5	0.0	-0.6	-5.5	4.6	L
2010	13.9	12.8	19.2	25.3	-11.4	S
2009	25.5	23.5	40.9	25.2	0.3	L
2008	-39.0	-38.5	-45.5	-34.8	-4.2	S
2007	3.9	3.5	14.0	-2.7	6.6	L
2006	13.3	13.6	6.2	17.0	-3.7	S
2005	4.4	3.0	18.5	3.3	1.0	L
2004	9.5	9.0	20.6	17.0	-7.5	S
2003	27.5	26.4	51.7	45.4	-17.8	S
2002	-22.9	-23.4		-21.6	-1.4	S
2001	-13.6	-13.0		1.0	-14.6	S
2000	-8.8	-10.1		-4.3	-4.5	S
Average	4.2	3.8		7.2	-3.0	S

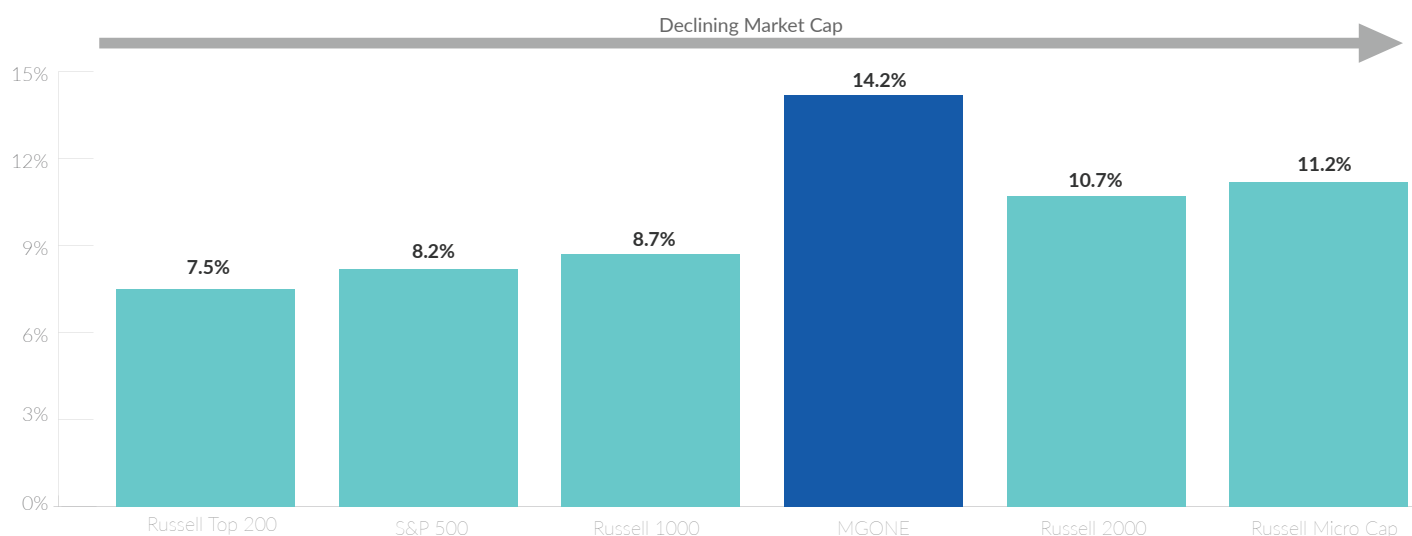
Source: MarketGrader Research. Price return data from FactSet. “Outcome” for the year is denoted by “L” for large cap, if the “Difference” between the Russell 1000 and the Russell 2000 is greater than 0%. Otherwise, the “Outcome” is “S” for small cap. The inception date for the MarketGrader U.S. 100 (MGONE) is August 8, 2002, so the calendar year returns are only available 2003 onwards. Consequently, to keep the data comparable, the “Average” of the index is excluded from the table. The average of MGONE for the 2003 through 2015 is 14.2%.

Also note that the average annual price performance of large caps over the entire 16 years, as measured by the Russell 1000, is 4.2%. While the average annual performance of small cap over the same period, as measured by the Russell 2000, is 7.2%. This means that the average annual price outperformance of small caps over large caps over this period is 3.0%. This 3.0% can be considered as the estimated annualized small cap risk price premium over this 16-year period.

Finally, the average outperformance of small cap stocks relative to large cap stocks over this period is also highlighted in the average performance of the Russell 1000 as compared to the S&P 500. Even though both of the indexes are measures of the large cap segment, the average annual price performance of the Russell 1000 was 4.2% during this period while the average annual price performance of the S&P 500 was only 3.8%. This is consistent with the S&P 500 having an average market cap larger than the Russell 1000.

However, the same reasoning did not hold for MGONE. Even though its average market cap is smaller than the large cap Russell 1000 index and larger than the small cap Russell 2000 index, it outperformed the Russell 2000 index in the 2003 through 2015 period (the complete calendar years, since inception, in August 2002, of MGONE). Whereas, the average annual performance of the Russell 2000 was 10.7% during this 13-year period, the average annual performance of MGONE was 14.2%. In fact, Figure 3, which presents the average annual performance of the indexes by market capitalization, reveals that MGONE actually outperformed even the Russell Micro Cap index (the smallest publicly traded market cap segment), which returned on average 11.2%. This outperformance is a direct consequence of MGONE's stock selection methodology that uses growth at a reasonable price (GARP) to select the highest quality companies from both the large cap and small cap equity universes.

**Figure 3. Average Annual Price Returns by Market Capitalization Index – 2003 Through 2015**



Source: MarketGrader Research. Total return data from FactSet. Note: The MarketGrader U.S. 100 (MGONE) is not a Market Cap Index but is positioned appropriately in the figure by its average market cap.

### A Look at the 10 Largest Components by Market Cap

To gain a better understanding of why it was such a challenge for non-large cap portfolios, such as MGONE, to post a positive return in 2015, Figure 4 presents the summary statistics of the market cap, weight, and average price performance for the 10 largest components by market cap of MGONE and compares them to the summary statistics of the 10 largest components of the S&P 500.

Statistically the differences are stark. The total market cap of the 10 largest components of MGONE is \$1,508 billion. In comparison, the 10 largest components of the S&P 500 totaled a market cap of \$3,901 billion, which is nearly two times

greater. However, note that the 10 largest components of MGONE contributed a total weight of 11.01% to the index which is only slightly more than 10%, or the weight of 10 components within a 100 component equally weighted index at rebalance. Meanwhile, the 10 largest components of the S&P 500 contributed a weight of 17.50%, which is a little less than a sixth the index's total weight.

Recall, only mega cap stocks posted positive returns in 2015. This is one again evident from the average price returns of the 10 largest companies in MGONE and the S&P 500, respectively. The average 2015 price return of the 10 largest stocks in MGONE was 7.74%. Whereas, the average return of the 10 largest stocks of the S&P 500 (which are on the average much larger stocks) was 26.29%. This mega cap stock outperformance combined with the larger contribution (weight) of the 10 largest stocks to the index resulted in the S&P 500 outperforming MGONE (-0.73% versus -6.51%). In terms of return attribution, it was both the massive contribution (weight) of these mega cap stocks and the outperformance of the mega stocks relative to all other market cap size segments that that played a role in the performance of the S&P 500.

**Figure 4. The MarketGrader U.S. 100 (MGONE): Summary Statistics of the 10 Largest Components as of December 31, 2015**

<b>Largest 10 Components</b>	<b>MGONE</b>	<b>S&amp;P 500</b>
<i>Market Cap (in USD Billions)</i>		
Average	\$150.83	\$390.13
Total (rounded to the nearest billion)	\$1,508	\$3,901
<i>Weight in Index</i>		
Total	11.01%	17.51%
<i>2015 Price Return</i>		
Average	7.74%	26.29%
<b>Price Return of Index</b>	-6.51%	-0.73%

Source: MarketGrader Research. Market cap and price returns from FactSet.

Though the summary statistics of the 10 largest components by market cap is incredibly useful in explaining the difference in the performance between MGONE and S&P 500, an analysis of the list of the component names actually tell the whole story. Figure 5 presents the 10 largest holdings by market cap for the two indexes as of December 31, 2015.

**There are two significant differences between the two lists that are worth noting:**

First, only Google is the only company common to both the top 10 lists. The second largest component in MGONE (Walt Disney) with a market cap of 177.36 billion doesn't make it into the largest 10 S&P 500 components (in fact it is the 19<sup>th</sup> largest component).

Second, the five largest components of the S&P 500 (Apple, the two shares classes of Alphabet, Microsoft and Exxon) contribute a weight of 10.09% of the index. This is only slightly less than the entire weight that the largest 10 components contribute to MGONE. This also means that for the S&P 500, 1% of the components (five components make up more than a tenth of the index).

**Figure 5. MarketGrader U.S. 100 (MGONE): Largest 10 Components as of December 31, 2015**

MGONE				
Ticker	Company Name	Market Cap (USD Billions)	Weight (%)	2015 Price Return (%)
GOOGL	Google Inc	535.13	1.2%	46.61
DIS	Walt Disney Co	177.36	1.1%	11.56
INTC	Intel Corp	162.57	1.3%	-5.07
GILD	Gilead Sciences	145.83	1.0%	7.35
UNH	UnitedHealth Group	112.12	1.1%	16.37
BA	Boeing Co	96.87	1.1%	11.24
NKE	Nike Inc	95.81	1.2%	30.01
BIIB	Biogen Inc	68.29	1.1%	-9.75
UNP	Union Pacific Co	66.79	0.9%	-34.36
TJX	TJX Cos Inc	47.48	1.0%	3.40
	Average	<b>\$150.83</b>	<b>1.10%</b>	<b>7.74%</b>
	Total	<b>\$1,508</b>	<b>11.01%</b>	

S&P 500				
Ticker	Company Name	Market Cap (USD Billions)	Weight (%)	2015 Price Return (%)
AAPL	Apple Inc.	586.86	3.28	-4.64
GOOGL	Alphabet Inc. Class A	535.13	1.27	46.61
GOOG	Alphabet Inc. Class C	521.97	1.26	44.56
MSFT	Microsoft Corp	443.17	2.48	19.44
XOM	Exxon Mobil Corp	324.50	1.81	-15.68
AMZN	Amazon.com, Inc.	316.83	1.45	117.78
GE	General Electric Co	314.90	1.64	23.27
FB	Facebook, Inc. Class A	296.03	1.33	34.15
JNJ	Johnson & Johnson	284.22	1.59	-1.77
WFC	Wells Fargo & Co	277.66	1.41	-0.84
	Average	<b>\$390.13</b>	<b>1.75%</b>	<b>26.29%</b>
	Total	<b>\$3,901</b>	<b>17.51%</b>	

Source: MarketGrader Research. Market cap and price returns from FactSet.

### A Look at the 10 Smallest Components by Market Cap

To gain insight into how some of the smaller stocks impacted the performance of MGONE, Figure 6 presents the summary statistics of the market cap, weight, and average price performance for the 10 smallest components by market cap of MGONE and compares them to the summary statistics of the 10 smallest components of the S&P 500.

There are three attributes of MGONE worth noting that differentiate it from the S&P large cap index.

First, average market cap of the smallest 10 components of MGONE is less than 0.5 billion USD (\$442.3 million). The average market cap of the same for the S&P 500, at nearly 3 billion USD (\$2,812.7 million), is more than six times larger.

Second, as one would expect, the weight contributed by the 10 smallest components to the equally-weighted MGONE is about 10% (8.81% to be exact at the year-end snapshot). In comparison, the 10 smallest components of the S&P 500 contribute a weight of only 0.14% to the index. This means that 2% of the index's components have an impact on the return that is less than two thousandth of the total.

Third, even though large cap stocks underperformed small cap stocks, the average price return of the 10 smallest stocks in MGONE was positive and significant (8.81%) for 2015. The 10 smallest stocks of the S&P 500 had an average price return of -46.55% for 2015.

More importantly Figure 6, combined with the summary statistics of Figure 4 (for the 10 largest components), helps explain the difference in the 2015 performance of the two indexes. For the MGONE, the small exposure to outperforming mega cap stocks together with the significant weighting in the remaining underperforming size categories (large, mid and small) resulted in the index underperforming. For the S&P, the large exposure to outperforming mega cap stocks helped diminish the negative impact of the small weighting in underperforming large cap stocks, therefore resulting in the index ending only slightly in the red for the year.

**Figure 6. The MarketGrader U.S. 100 (MGONE): Summary Statistics of the 10 Smallest Components as of December 31, 2015**

Largest 10 Smallest	MGONE	S&P 500
<i>Market Cap (in USD Millions)</i>		
Average	\$442.3	\$2,812.7
Total (rounded to the nearest million)	\$4,423	\$28,127
<i>Weight in Index</i>		
Total	10.11%	0.14%
<i>2015 Price Return</i>		
Average	8.81%	-46.55
<b>Price Return of Index</b>	-6.51%	-0.73%

Source: MarketGrader Research. Market cap and price returns from FactSet.

Similar to the lists of the largest 10 stocks presented in Figure 6 earlier, Figure 7 completes the picture by presenting the list for the 10 smallest stocks of MGONE and the S&P 500. The most significant difference between the two lists, besides the differences in summary statistics already discussed, is that five of the 10 components for MGONE have a positive price return for 2015. While, none of the S&P components have a positive return for the 2015 year. This means that even in a dismal year for mid cap and small cap stocks, MGONE was able to find outperforming companies as a result of its GARP based component selection approach based on company fundamentals.

**Figure 7. MarketGrader U.S. 100 (MGONE): Smallest 10 Components as of December 31, 2015**

MGONE					S&P 500				
Ticker	Company Name	Market Cap (USD Millions)	Weight (%)	2015 Price Return (%)	Ticker	Company Name	Market Cap (USD Millions)	Weight (%)	2015 Price Return (%)
HCLP	Hi Crush Partners Lp	218.8	0.49	-80.92	CNX	CONSOL Energy Inc.	1,809.5	0.01	-76.63
AFOP	Alliance Fiber Opti.	263.6	0.93	4.48	URBN	Urban Outfitters, Inc.	2,669.1	0.01	-35.24
VNDA	Vanda Pharmaceuticals	398.6	0.85	-34.99	SWN	Southwestern Energy	2,733.6	0.02	-73.95
NHTC	Natural Health Trends	410.4	1.51	192.84	OI	Owens-Illinois, Inc.	2,801.8	0.02	-35.46
FNHC	Federated National Ho	420.7	1.39	22.35	DO	Diamond Offshore Drill	2,894.1	0.01	-42.52
LION	Fidelity Southern Corp	514.6	1.20	38.49	GME	GameStop Corp. Class A	2,935.0	0.02	-17.04
NLS	Nautilus Inc	518.0	1.11	10.14	CHK	Chesapeake Energy Co	2,992.8	0.01	-77.01
WGO	Winnebago Industries	536.9	0.99	-8.55	THC	Tenet Healthcare Co	3,020.0	0.02	-40.20
CNOB	ConnectOne Bancorp	562.3	0.98	-1.63	R	Ryder System, Inc.	3,036.1	0.02	-38.79
PDLI	PDL BioPharma Inc	579.1	0.66	-54.09	PWR	Quanta Services, Inc.	3,235.1	0.02	-28.67
	<b>Average</b>	<b>\$442.3</b>	<b>1.01%</b>	<b>8.81%</b>		<b>Average</b>	<b>\$2,812.7</b>	<b>0.01%</b>	<b>-46.55%</b>
	<b>Total</b>	<b>\$4,423</b>	<b>10.11%</b>			<b>Total</b>	<b>\$28,127</b>	<b>0.14%</b>	

Source: MarketGrader Research. Market cap and price returns from FactSet.

## Francis Gupta, Ph.D.

Francis Gupta joined MarketGrader Capital in 2015 as Senior Advisor to lead intellectual property initiatives, identify applications of MarketGrader's company fundamentals-based Global Research for the benefit of the investment community and assist with development and commercialization of new MarketGrader Indexes. Prior, he was a Director with Dow Jones Indexes and served on the Index Oversight Committee. In this capacity, he built the firm's research group, was integral to new index development and lead landmark projects for institutional clients across equity, multi-asset class and other specialty indexes, such as income and hedge fund indexing. Francis also held strategic advisory positions in institutional investment management for Credit Suisse Asset Management and J.P. Morgan Investment Management. His work has been published in numerous journals including *The Journal of Portfolio Management*, *Journal of Indexes* and *The Journal of Investing*. He earned his B.Sc. in Mathematics from the University of Mumbai and his Ph.D. in Economics from New York University.

### Francis Gupta, Ph.D.

#### Senior Advisor

MarketGrader Capital, LLC

francis.gupta@marketgradercapital.com

+1. 917.364.4684

Information herein is provided for general informational purposes and not intended to be completely comprehensive regarding the particular subject matter. MarketGrader Capital does not represent, guarantee, or provide any warranties (express or implied) regarding the completeness, accuracy, or currency of information or its suitability for any particular purpose. Receipt of information does not create an adviser-client relationship between MarketGrader Capital and you. Neither MarketGrader Capital nor our advisory affiliates provide tax or legal advice or opinions. You should consult with your own tax or legal adviser for advice about your specific situation.

**p** | +1.888.529.1767

**e** | [research@marketgradercapital.com](mailto:research@marketgradercapital.com)

**w** | [marketgradercapital.com](http://marketgradercapital.com)

