U.S. Company Fundamentals and Stock Selection:

Using MarketGrader Ratings to Construct Equity Portfolios for Long-Term Capital Appreciation

MarketGrader
RESEARCH & INDEXES

In 2003 MarketGrader introduced a ratings system that combined quantitative and fundamental analysis of U.S. publicly traded companies with the goal of giving investors an objective rating system as a tool to implement stock selection. At its core, the ratings system is based on a growth-at-a-reasonable price (GARP) methodology combined with quality factors and is based on the premise that consistent creators of economic value are also the best creators of long-term shareholder value. Thus, the main goal of MarketGrader's rating system is to assist investors in identifying and owning the best public companies in the U.S. that are the best generators of long-term capital appreciation.

MarketGrader's rating system analyzes the universe of all publicly traded stocks in the U.S. (listed on major national exchanges and excluding the over-the-counter market) based on their fundamentals and maps them into three broad categories: Buy, Hold and Sell. By the end of 2018, MarketGrader's rating system had 15 years of published history. This document, which summarizes the results of a comprehensive analysis of the historical performance of all publicly traded companies covered by MarketGrader in the last 15 years, answers two questions. First, have MarketGrader's stock ratings been effective in achieving their primary objective of assisting shareholders in building wealth by helping them discern between 'good' stocks and 'poor' stocks, thus helping them identify and invest in the companies that are the best generators of long-term capital appreciation? In other words, in the last 15 years, were investors better off owning stocks rated as 'Buy' by MarketGrader than those rated 'Hold' and 'Sell'? The second question this document answers is whether MarketGrader's ratings have a performance signal that can be used by investors for stock selection. In other words, is it clear that 'good' stocks according to MarketGrader's ratings perform better than 'poor' stocks? The comprehensive study presented in this document answers these questions.

Investors know, and most experts would agree, that stock selection is challenging. Selecting the "right" stocks is easier said than done and this begins with the most basic question: what exactly is a good stock? MarketGrader's ratings seek to answer that basic question by reframing it as: what are the attributes that make for a "good" company thereby making its stock a potential and worthwhile candidate to be selected into an investor's portfolio? MarketGrader approaches this question objectively. It analyzes companies using only quantitative company fundamentals as inputs, which are by definition devoid of any subjective opinion as to the investment merits of a given stock. The quantitative company fundamentals used as inputs into the ratings are time-tested and proven hallmarks of company quality and financial health. All of the fundamentals used as inputs by MarketGrader can be mapped into four major categories that encapsulate the quality and financial health of a company and the attractiveness of its stock, namely, Growth, Value, Profitability and Cash Flow (for more on the ratings methodology, please refer to Appendix 1). Therefore, at the very least, the objective and agnostic approach taken by MarketGrader in generating its ratings is useful in defining the minimum hurdle that a company needs to cross so as to be considered a "good" investment by those considering owning its shares.

Construction of Sample Portfolios by MarketGrader Grades

Having described MarketGrader's approach to calculating company ratings in Appendix 1, this section presents the methodology used to test whether the ratings are associated with a performance signal over the last 15 years. MarketGrader's ratings are real-time (updated daily), so all of the historical ratings used in our analysis are 'as they were' on the day they were calculated and published by MarketGrader. In other words, none of the ratings used in this analysis are back-tested. However, despite a ratings history that has been updated daily for 15 years, and given that portfolios constructed based on company fundamentals should have relatively low turnover, we made a decision to use two snapshots of the ratings for each calendar year for testing the validity of the performance signal: the first taken at the start of the year (January 1st) and the other taken mid-year (July 1st). Therefore, over the 15 years, we took 30 snapshots of the U.S. equity universe

and their corresponding MarketGrader ratings. The analysis presented in this document is based on these 30 snapshots.

To the 30 snapshots, we applied the following three screens for the purpose of removing outlier companies to ensure the robustness of the analysis:

- We excluded all companies with a market capitalization less than USD 100 million (size screen)
- We excluded all companies with an average 3-month daily trading volume less than 1,000 shares (liquidity screen)
- We excluded all companies with a price less than 10 cents (penny stocks)

After having taken the 30 snapshots we next mapped each stock into four portfolios based on MarketGrader's assigned overall Grade at the time of the snapshot. This overall Grade, between 0 and 100, is based on MarketGrader's analysis of each stock based on the company fundamentals. The higher the grade, the better the quality and financial health of the company and the more attractive its shares are to prospective investors. The four portfolios were defined as follows:

- **Portfolio 1**: MarketGrader Grade greater than or equal to 75
- **Portfolio 2**: MarketGrader Grade greater than 50 and less than 75
- **Portfolio 3**: MarketGrader Grade greater than 25 and less than equal to 50
- **Portfolio 4**: MarketGrader Grade less than or equal to 25

Figure 1 shows the total company count by portfolio for each of the 30 snapshots by calendar year.

Figure 1. Portfolio size by MarketGrader Rating: US Equity Universe

	Company Counts for Semi-Annual Portfolios									
	Portfolio 1		Portfolio 2		Portfolio 3		Portfolio 4		Universe	
Counts on:	**Jan 1st**	**July 1st**	**Jan 1st**	**July 1st**	**Jan 1st**	**July 1st**	**Jan 1st**	**July 1st**	**Jan 1st**	**July 1st**
2004	40	40	1176	1210	1750	1705	370	473	3336	3428
2005	73	97	1725	1601	1766	1641	363	409	3927	3748
2006	156	181	1606	1516	1849	1797	394	438	4005	3932
2007	169	120	1710	1494	1819	1902	394	511	4092	4027
2008	127	158	1550	1352	1768	1775	485	476	3930	3761
2009	217	97	1280	877	1359	1795	316	537	3172	3306
2010	55	105	890	1145	1905	1812	656	496	3506	3558
2011	123	160	1351	1488	1761	1521	453	453	3688	3622
2012	167	137	1424	1390	1386	1461	475	539	3452	3527
2013	88	84	1420	1378	1556	1637	514	566	3578	3665
2014	75	113	1465	1526	1648	1647	558	529	3746	3815
2015	111	91	1558	1503	1583	1714	506	538	3758	3846
2016	77	71	1327	1329	1686	1699	568	601	3658	3700
2017	58	84	1335	1395	1696	1702	541	529	3630	3710
2018	97	93	1348	1624	1598	1630	567	456	3610	3803
Average	**109**	**109**	**1411**	**1389**	**1675**	**1696**	**477**	**503**	**3673**	**3697**

Source: MarketGrader Research

Figure 1 presents a succinct snapshot of the distribution of MarketGrader grades over the 15-year period for the U.S. equity universe. The following points are worth noting:

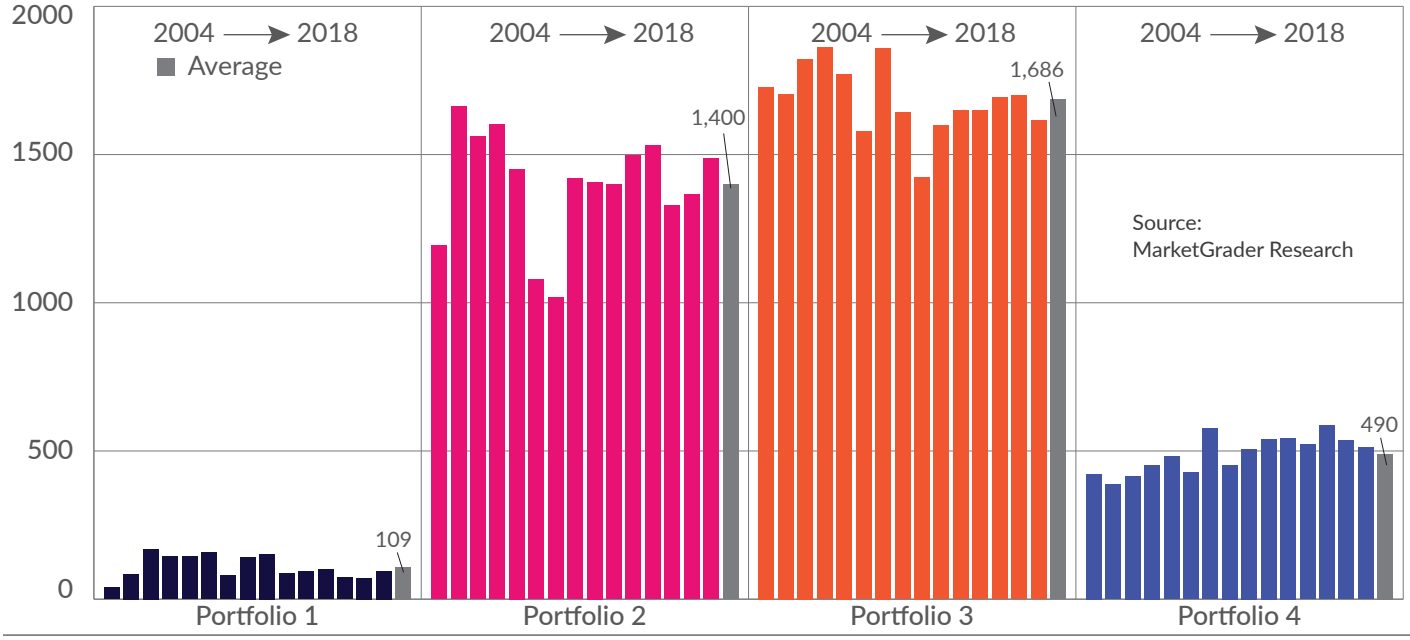
- The equity universe covered in this 15-year analysis totaled, on average, 3,700 companies after screening for outliers.
- Only around 100 companies on average, or approximately 3% of the coverage universe, received a grade greater than 75 from MarketGrader.
- Around 38% or 1,400 companies or so on average received grades between 50 and 75. Notice that Portfolios 1 and 2 make up about 40% of the entire universe. In other words, about 4 in every 10 stocks are in either of these two portfolios.
- Another 46% or 1,700 companies on average received grades between 25 and 50. This portfolio makes up about half the universe.
- The remaining 13% or 500 companies or so on average were graded below 25.

The historical distributions of MarketGrader grades presented in Figure 2 provide insight into MarketGrader's 'Buy', 'Hold' and 'Sell' stock ratings, which are based on each company's overall grade, and use the following cutoffs:

- **Buy Rating:** Overall Grade greater than or equal to **60**
- **Hold Rating:** Overall Grade greater than or equal to **50** and less than **60**
- **Sell Rating:** Overall Grade less than **50**

Recall that Portfolio 1 is a collection of the companies with grades greater than 75. Therefore it consists of the very best companies in MarketGrader's U.S. coverage universe. However, since it is only about 3% of the universe, this category is not the best representation of the 'typical' MarketGrader 'Buy' rated stock. The typical MarketGrader 'Buy' rated stock is instead represented by Portfolio 2, which includes all companies graded between 50 and 75. Even though this portfolio, which in average comprises 38% of the underlying universe, includes both Buy and Sell-rated stocks, it is from here that MarketGrader gets the lion's share of constituents to the family of MarketGrader Indexes. For example, the average overall grade at each semi-annual reconstitution of MarketGrader's flagship index, the Barron's 400 Index(B400), is 65.5 dating back to its base date of December 31, 1997 [1]. The average highest grade among all B400 constituents at every semi-annual reconstitution has been 88.8 and the average lowest grade has been 59.5, also since the index's inception.

Figure 2. Average Company Count by MarketGrader Portfolio Between 2004 and 2018.



1. The Barron's 400 Index was first published on August 29, 2007. All estimated historical values prior to that date are based on back-testing, beginning on the Index's base date of December 31, 1997.

Performance of the Portfolios

Having mapped each of the stocks in the 30 snapshots into the four portfolios described above, we calculated the average six-month performance of each of the portfolios using the six-month performance of all stocks in each portfolio. Essentially, the average performance of each portfolio can be thought of as the six-month performance of the portfolio investing an equal dollar amount in all stocks within the portfolio, i.e., an equally weighted portfolio.

Using the two six-month performances of each of the portfolios (the portfolio at the start the year and that at the middle of the year), we calculated the full calendar year performance of each of the portfolios defined by MarketGrader Grades. For example, consider Portfolio 2 in 2004. We first calculated the average six-month performance of the 1,176 stocks (components of Portfolio 2 at the start of 2004) for the period January 1st through June 30th. Then we calculated the average six-month performance of the 1,210 stocks (components of Portfolio 2 at mid-year for the period July 1st through December 31st). Using the two six-month performances, we calculated the calendar year performance of Portfolio 2 for 2004. This would essentially be the price performance for 2004 of an investor who would have bought equal dollar amounts of all stocks in Portfolio 2 at the start of the year, held them for six months and then at mid-year rolled over the entire portfolio into the updated Portfolio 2 buying equal dollar amounts of all stocks and held that portfolio for six months. In addition to the four portfolios based on MarketGrader grades, we also calculated the performance of the equally weighted version of a broad portfolio using the entire universe by calendar year.

Figure 3 presents the calendar year performance of the four portfolios by MarketGrader grades and of the broad (all-company) equally weighted portfolio and compares the results against a broad benchmark as represented by the Russell 3000 Index. For a comparison against the large cap benchmarks (the Russell 1000 Index and S&P 500 Index) and small cap benchmark (the Russell 2000 Index), see Appendix 2.

Figure 3. Performance of the Portfolios by MarketGrader Grades

	Portfolio 1	Portfolio 2	Portfolio 3	Portfolio 4	Universe	Russell 3K
2004	27.6%	21.2%	14.2%	12.8%	16.6%	10.1%
2005	37.3	14.2	11.1	0.6	12.0	4.3
2006	9.3	11.3	14.7	6.0	12.1	13.7
2007	21.2	4.6	-2.7	-8.7	0.1	3.3
2008	-51.8	-48.7	-51.5	-58.6	-52.0	-38.7
2009	35.0	23.6	26.2	48.2	28.6	25.5
2010	5.2	11.1	10.7	3.4	9.8	14.8
2011	-14.1	-6.5	-12.5	-30.2	-12.5	-0.9
2012	16.5	16.5	20.0	20.8	18.5	14.0
2013	35.1	27.5	28.5	24.6	27.6	30.9
2014	12.0	7.9	6.6	4.5	6.9	10.5
2015	-5.1	-0.3	-7.7	-16.1	-5.9	-1.5
2016	-3.0	12.7	17.1	9.7	14.0	10.4
2017	16.0	17.6	14.2	16.1	15.7	18.9
2018	-18.1	-3.8	-1.5	-5.3	-3.2	-7.0
Average	**8.2%**	**7.2%**	**5.8%**	**1.9%**	**5.9%**	**7.2%**

Source: MarketGrader Research

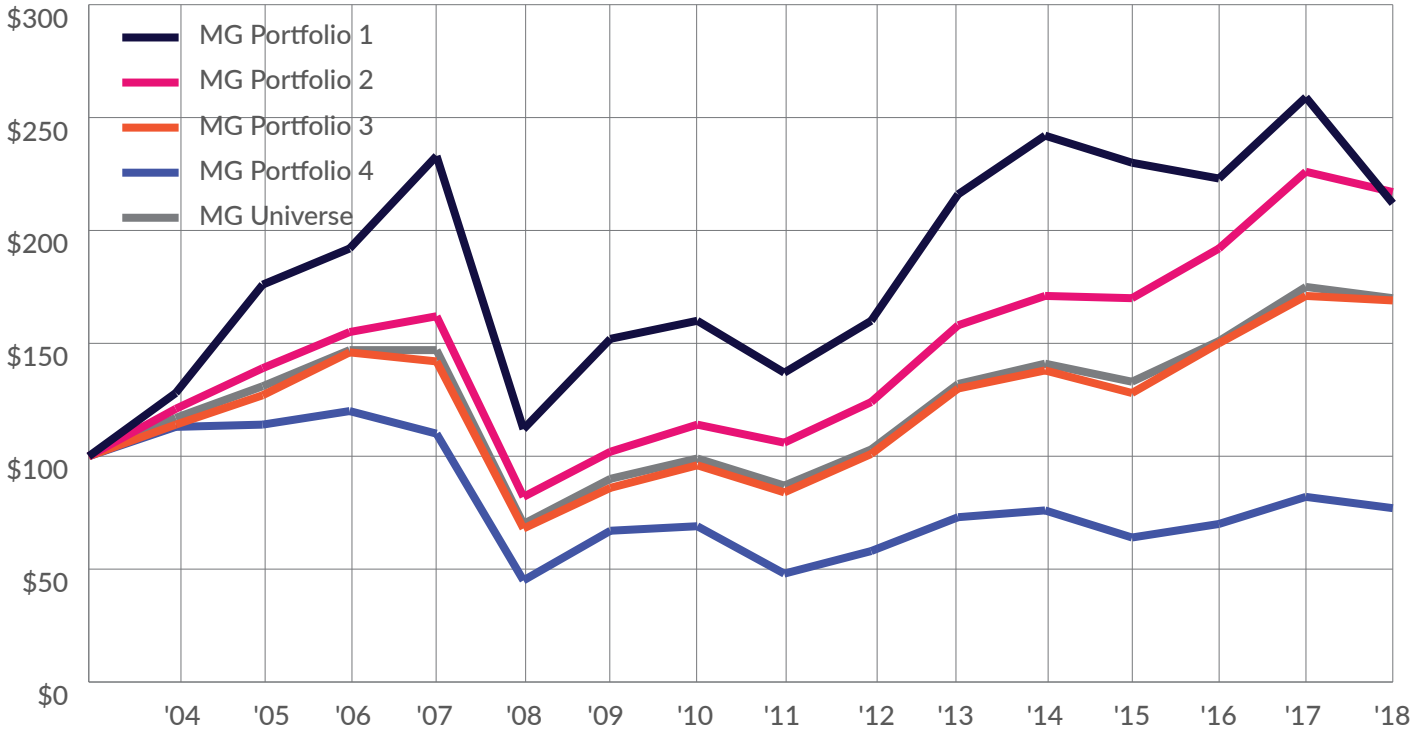
Starting in 2004 and ending in 2018, an investor owning an equally weighted portfolio of all companies with a MarketGrader grade of at least 75 (Portfolio 1) would have achieved an average annual price return of 8.2%. An investor owning Portfolio 2, the portfolio including all companies with a MarketGrader grade between

50 and 75, would have realized an average annual price return of 7.2%. Portfolio 3, containing all companies with a MarketGrader overall grade between 25 and 50, would have resulted in an average annual price return of 5.8%. While, Portfolio 4, containing all companies with a MarketGrader overall grade no greater than 25, achieved an average annual price return of only 1.9%. Lastly, an equally weighted portfolio made up of all stocks in MarketGrader resulted in an average annual price return of 5.9%.

Overall, Figure 3 provides a comprehensive longitudinal analysis of the performance of the universe of U.S. stocks by MarketGrader grade over the last 15 years. The results indicate that MarketGrader grades answer the two key questions raised earlier: First, can 'good' stocks be identified using a methodology that is purely quantitative with no qualitative inputs that is based on company fundamentals? And, second, assuming the answer to the prior question is 'yes', do 'good' stocks perform better, overall, than 'poor' stocks?

Stocks included in Portfolios 1 and 2 pass the basic threshold for being considered 'good' stocks for investors' portfolios according to MarketGrader's fundamental analysis. Over a period of 15 years these stocks outperformed not only the two categories of 'poor' stocks, but also the average of all stocks in MarketGrader's coverage universe. More specifically, the Portfolio most representative of MarketGrader's best companies, broadly speaking, outperformed, on average, the second worst Portfolio by 140 basis points per year and the worst portfolio by 530 basis points per year. This Portfolio also outperformed the overall, equally weighted Portfolio by 130 basis points per year. Furthermore, MarektGrader's very best, yet smaller, Portfolio 1, outperformed the second worst portfolio, or Portfolio 3, by 240 basis points, the worst portfolio by 630 basis points and the overall portfolio by 230 basis points, per year. Thus, as illustrated in Figure 4, an investor owning a portfolio of the average stocks in the 'good' stock category would have done much better than an investor holding all stocks, on average, not to mention the stocks that could systematically be identified as 'poor' stocks.

Figure 4. Growth of $100 Invested in All Four MarketGrader Portfolios



Source: MarketGrader Research

Canadian Company Fundamentals and Stock Selection Using MarketGrader Ratings

We applied the same comprehensive approach that we used to analyze the U.S. equity universe to Canada's equity universe as covered by MarketGrader, which dates back to 2010. Consequently, through the end of 2018, we were able to take 18 snapshots of the universe – nine on 1st January and another nine on July 1st. We then applied the following three screens to the universe:

- We excluded all companies with a market capitalization less than CAD 100 million (size screen)
- We excluded all companies with an average 3-month daily trading volume less than 1,000 shares (liquidity screen)
- We excluded all companies with a price less than 10 cents (penny stocks in local currency)

After having taken the 18 snapshots we next mapped each stock into four portfolios based on MarketGrader's assigned overall Grade at the time of the snapshot. This overall Grade, between 0 and 100, is based on MarketGrader's analysis of each stock based on the company fundamentals. The higher the grade, the better the quality and financial health of the company and the more attractive its shares are to prospective investors. The four portfolios were defined as follows:

Portfolio 1: MarketGrader Grade greater than or equal to 75
Portfolio 2: MarketGrader Grade greater than 50 and less than 75
Portfolio 3: MarketGrader Grade greater than 25 and less than equal to 50
Portfolio 4: MarketGrader Grade less than or equal to 25

Figures 5 shows the total company count by portfolio for each of the 18 snapshots by calendar year.

Figure 5. Portfolio size by MarketGrader Rating: Canada Equity Universe

	Company Counts for Semi-Annual Portfolios									
	Portfolio 1		Portfolio 2		Portfolio 3		Portfolio 4		Universe	
Counts on:	**Jan 1st**	**July 1st**	**Jan 1st**	**July 1st**	**Jan 1st**	**July 1st**	**Jan 1st**	**July 1st**	**Jan 1st**	**July 1st**
2010	4	7	61	78	135	166	66	53	266	304
2011	6	13	114	125	167	189	63	77	350	404
2012	19	24	169	154	199	185	170	147	557	510
2013	17	19	158	185	210	267	157	174	542	645
2014	16	15	144	179	192	206	156	52	508	452
2015	11	10	125	186	199	264	74	71	409	531
2016	6	10	94	157	219	233	81	102	400	502
2017	4	10	86	179	218	250	80	83	388	522
2018	10	16	102	211	206	251	69	53	387	531
Average	**10**	**14**	**117**	**162**	**194**	**223**	**102**	**90**	**423**	**489**

Source: MarketGrader Research

Figure 5 presents a succinct snapshot of the distribution of MarketGrader grades over the nine-year period for the Canada equity universe. The following points are worth noting:

- On average, the Canadian equity universe covered around 450 companies annually after screening for outliers.
- Only around 3% of those 450 companies, or about 12 companies on average, received a grade greater than 75 by MarketGrader.
- Around 30%, or 140 companies or so on average, received grades between 50 and 75. Notice that Portfolios 1 and 2 make up about 34% of the entire universe.
- Another 46% or 208 companies, on average, received grades between 25 and 50. This portfolio makes up a little bit less than half the universe.
- The remaining 21%, or 95 companies or so on average, were graded below 25.

Having mapped each of the stocks in the 18 snapshots into the four portfolios described above, we calculated the average six-month performance of each of the portfolios using the six-month performance of all stocks in each portfolio. Essentially, the average performance of each portfolio can be thought of as the six-month performance of the portfolio investing an equal dollar amount in all stocks within the portfolio, i.e., an equally weighted portfolio.

Using the two six-month performance of each of the portfolios (the portfolio at the start the year and that at the middle of the year), we calculated the full calendar year performance of each of the portfolios defined by MarketGrader Grades. Figure 6 presents the calendar year performance of four portfolios together with the entire universe and compares the performance to the S&P/TSX Composite and the S&P/TSX 60 Index.

Figure 6. Performance of the Portfolios by MarketGrader Grades

	Portfolio 1	Portfolio 2	Portfolio 3	Portfolio 4	Universe	S&P/TSX	S&P/TSX 60
2010	62.7%	16.3%	14.4%	43.8%	21.1%	21.6%	17.8%
2011	-8.8	-11.5	-20.2	-37.4	-20.5	-13.0	-13.4
2012	6.9	8.6	1.4	-16.6	-1.8	6.3	7.1
2013	-12.3	1.2	-10.3	-34.0	-14.2	2.6	2.8
2014	-7.9	4.0	2.3	-2.1	2.5	-1.7	-0.2
2015	-9.9	-17.2	-27.7	-19.8	-22.2	-25.3	-24.9
2016	10.9	20.9	39.1	24.3	30.9	20.8	21.0
2017	8.8	42.6	28.0	17.0	28.6	13.8	14,5
2018	-7.9	-14.6	-21.7	-23.9	-20.4	-18.8	-17.7
Average	**4.7%**	**5.6%**	**0.6%**	**-5.4%**	**0.4%**	**0.7%**	**0.8%**

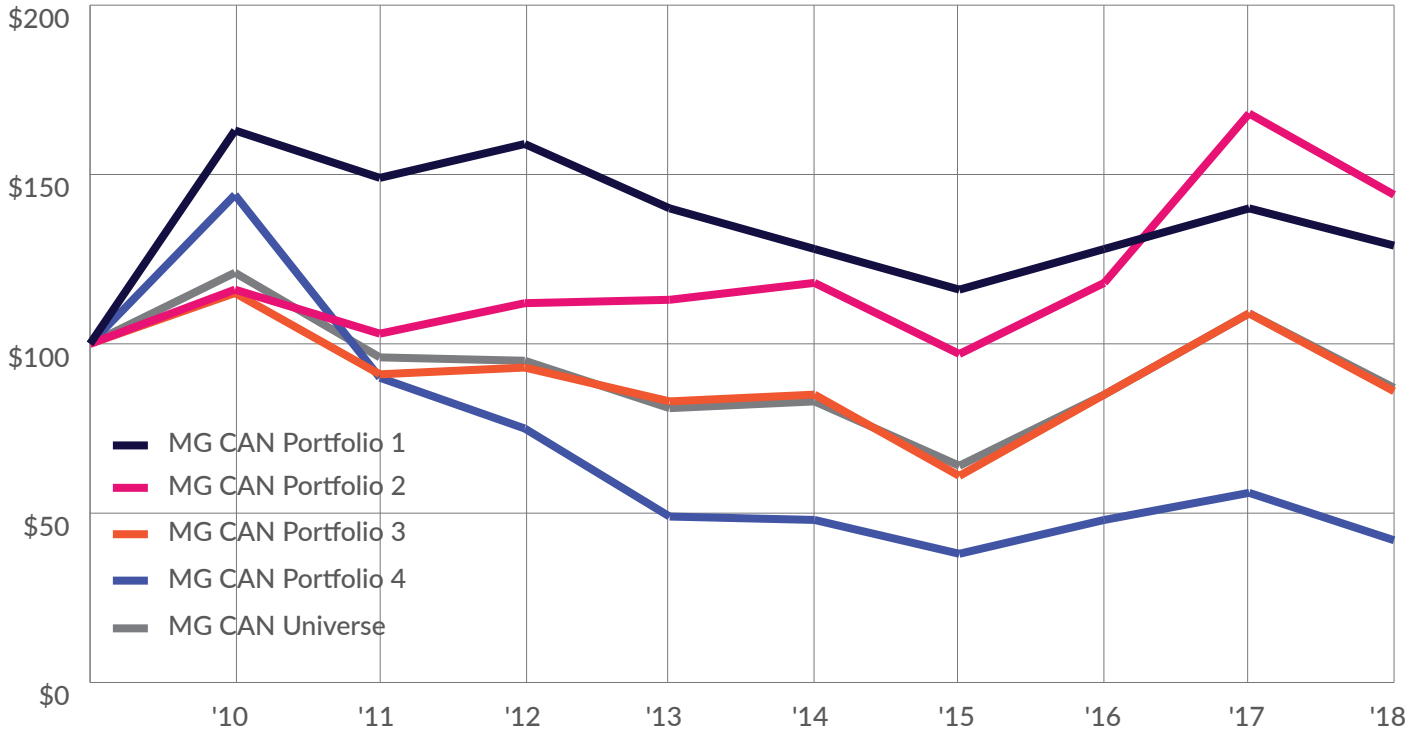
Source: MarketGrader Research

Starting in 2010 and ending in 2018, an investor owning an equally weighted portfolio of all companies with a MarketGrader grade of at least 75 (Portfolio 1) would have achieved an average annual price return of 4.7%. An investor owning Portfolio 2, the portfolio including all companies with a MarketGrader grade between 50 and 75 would have realized an average annual price return of 5.6%. Portfolio 3, containing all companies with a MarketGrader overall grade between 25 and 50, would have resulted in an average annual price return of only 0.6%. While, Portfolio 4, containing all companies with a MarketGrader overall grade no greater than 25, would have been in the red, with an average annual price return of -5.4%. Lastly, an equally weighted portfolio made up of all stocks in MarketGrader resulted in an average annual price return of 0.4%.

Overall, Figure 6 provides a comprehensive longitudinal analysis of the performance of the universe of Canadian stocks by MarketGrader grade over the last nine years. The results indicate that for Canadian stocks, MarketGrader grades actually provide a more emphatic answer to the two key questions raised earlier than they do for MarketGrader's U.S. universe: First, can 'good' stocks be identified using a methodology that is purely quantitative with no qualitative inputs that is based on company fundamentals? And, second, assuming the answer to the prior question is 'yes', do 'good' stocks perform better, overall, than 'poor' stocks?

Stocks included in Portfolios 1 and 2 in MarketGrader's Canadian coverage universe pass the basic threshold for being considered 'good' stocks for investors' portfolios according to the company's fundamental analysis. Over a period of nine years these stocks outperformed not only the two categories of 'poor' stocks, but also the average of all stocks in MarketGrader's Canadian coverage universe. More specifically, the Portfolio most representative of MarketGrader's best companies (Portfolio 2), broadly speaking, outperformed, on average, the second worst Portfolio by 500 basis points per year and the worst portfolio by a remarkable 1100 basis points per year, underscoring both the importance of company fundamentals when investing for the long term in Canada as well as the opportunities that abound in the country's stock market to a much higher degree than those in the highly efficient U.S. market. This Portfolio, by the way, also outperformed the overall, equally weighted Portfolio by 520 basis points per year. Thus, as illustrated in Figure 7, an investor owning a portfolio of the average stocks in the 'good' stock category would have done much better than an investor holding all stocks, on average, not to mention the stocks that could systematically be identified as 'poor' stocks.

Figure 7. Growth of $100 invested in All Four MarketGrader Canadian Portfolios



Source: MarketGrader Research

Appendix 1. MarketGrader's Grades: Methodology

MarketGrader's research is based on the idea that consistent creators of economic value are the best long-term creators of shareholder value. Our goal, therefore, is to help investors identify such companies so that they may form the basis of fundamentally sound investment portfolios focused on long-term capital appreciation. MarketGrader's fundamental analysis adheres to a growth at a reasonable price (GARP) investment approach, which seeks to identify companies that exhibit strong growth and value attributes, rather than having to select between the two. We also believe that GARP is most useful when combined with measures of quality such as profitability and cash flow. The company's methodology, therefore, is based on a comprehensive fundamental analysis of any public company's financials statements according to these four categories: Growth Value, Profitability and Cash Flow.

MarketGrader's fundamental analysis of every company is comprised of 24 fundamental indicators across the four categories described above (six indicators in each category). Each indicator is individually graded and assigned a letter grade on a nine-point scale (A+ being the highest and F the lowest). Each letter grade is then assigned a numerical score, which is used to calculate a company's overall MarketGrader fundamental grade, between zero (0) and one hundred (100). In summary, if a company were to earn an A+ in each of the 24 fundamental indicators, its overall grade would be 100, or a perfect score. Conversely, if a company were to earn an F in each indicator, its overall grade would be zero. This final score is the sole basis of the rating MarketGrader assigns each stock under coverage, with all companies scoring above 60 rated 'Buy,' all companies scoring above 50 but below 60 rated 'Hold' and all companies scoring below 50 rated 'Sell.' Figures 1A and 1B illustrate how the 24 fundamental indicators for two U.S. based retailers are blended into a final overall grade, resulting in 'Buy' and 'Sell' ratings for each company, respectively.

Figure 1A. 'Fundamental Quadrant' of TJX Companies Inc (TJX) – Overall Grade: 70.0 (05/06/2019)

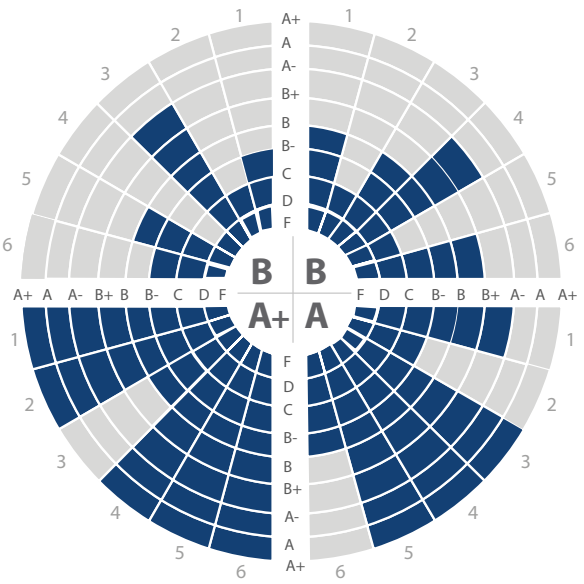
Rated ● BUY Since: 11/05/2007

GROWTH = B

1. Market Growth Long Term	B-
2. Market Growth Short Term	C
3. EPS Weighted Growth	A-
4. Growth Potential	D
5. Earnings Impact	B
6. Earnings Surprise	B-

PROFITABILITY = A+

1. Asset Utilization	A+
2. Capital Utilization	A+
3. Operating Margins	B
4. Relative Margin	A+
5. Return On Equity	A+
6. Gross Profitability	A+



VALUE = B

1. Capital Structure	B
2. PE Analysis	C
3. Price To Book Ratio	B
4. Price To Cash Flow Ratio	A-
5. Price To Sales Ratio	C
6. Market Value	B+

CASH FLOW = A

1. Cash Flow Growth	A-
2. EBITDA Margin	B-
3. Debt To Cash Flow Ratio	A+
4. Interest Coverage Ratio	A+
5. Economic Value Added	A+
6. Working Capital Ratio	B

Figure 2A. 'Fundamental Quadrant' of J. C. Penney Company, Inc. (JCP) - Overall Grade: 28.2 (05/06/2019)

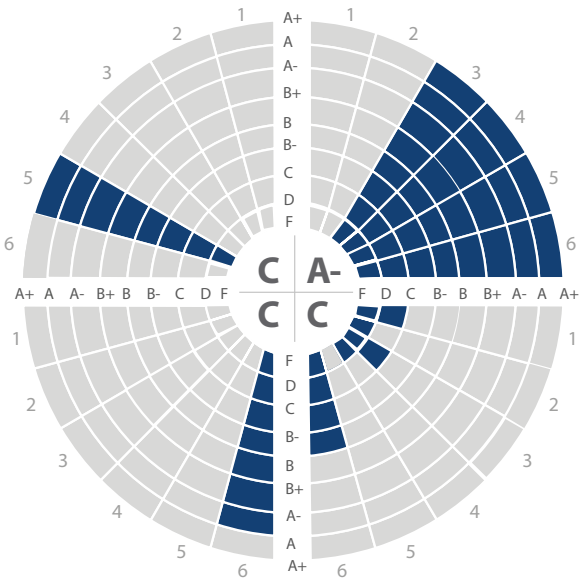
Rated ●SELL Since: 11/14/2008

GROWTH = C

1. Market Growth Long Term	F
2. Market Growth Short Term	F
3. EPS Weighted Growth	F
4. Growth Potential	F
5. Earnings Impact	A+
6. Earnings Surprise	F

PROFITABILITY = C

1. Asset Utilization	F
2. Capital Utilization	F
3. Operating Margins	F
4. Relative Margin	F
5. Return On Equity	F
6. Gross Profitability	A



VALUE = A-

1. Capital Structure	F
2. PE Analysis	F
3. Price To Book Ratio	A+
4. Price To Cash Flow Ratio	A+
5. Price To Sales Ratio	A+
6. Market Value	A+

CASH FLOW = C

1. Cash Flow Growth	C
2. EBITDA Margin	D
3. Debt To Cash Flow Ratio	C
4. Interest Coverage Ratio	D
5. Economic Value Added	F
6. Working Capital Ratio	B

Appendix 2. Performance of the Portfolios by MarketGrader Grades

	Portfolio 1	Portfolio 2	Portfolio 3	Portfolio 4	Universe	Russell 1K	S&P 500	Russell 2K	Russell 3K
2004	27.6%	21.2%	14.2%	12.8%	16.6%	9.5%	17.0%	10.1%	9.0%
2005	37.3%	14.2%	11.1%	0.6%	12.0%	4.4%	3.3%	4.3%	3.0%
2006	9.3%	11.3%	14.7%	6.0%	12.2%	13.3%	17.0%	13.7%	13.6%
2007	21.2%	4.6%	-2.7%	-8.7%	0.1%	3.9%	-2.7%	3.3%	3.5%
2008	-51.8%	-48.7%	-51.5%	-58.6%	-52.0%	-39.0%	-34.8%	-38.7%	-38.5%
2009	35.0%	23.6%	26.2%	48.2%	28.6%	25.5%	25.2%	25.5%	23.5%
2010	5.2%	11.1%	10.7%	3.4%	9.8%	13.9%	25.3%	14.8%	12.8%
2011	-14.1%	-6.5%	-12.5%	-30.2%	-12.5%	-0.5%	-5.5%	-0.9%	0.0%
2012	16.5%	16.5%	20.0%	20.8%	18.5%	13.9%	14.6%	14.0%	13.4%
2013	35.1%	27.5%	28.5%	24.6%	27.6%	30.4%	37.0%	30.9%	29.6%
2014	12.0%	7.9%	6.6%	4.5%	6.9%	11.1%	3.5%	10.5%	11.4%
2015	-5.1%	-0.3%	-7.7%	-16.1%	-5.9%	-1.1%	-5.7%	-1.5%	-0.7%
2016	-3.0%	12.7%	17.2%	9.7%	14.0%	9.7%	19.5%	10.4%	9.5%
2017	16.0%	17.6%	14.2%	16.1%	15.7%	19.3%	13.1%	18.9%	19.4%
2018	-18.1%	-3.8%	-1.5%	-5.3%	-3.2%	-6.6%	-12.2%	-7.0%	-6.2%
Average	**8.2%**	**7.2%**	**5.8%**	**1.9%**	**5.9%**	**7.2%**	**7.6%**	**7.2%**	**6.9%**

Source: MarketGrader Research