2019

BY FRED MARTIN, CFA
(with contributions from the investment team)

DGINV.COM

Much of our lives are consumed by the daily challenges of living. Even seasonal weather plays a major role. In Minnesota we wear light clothing and sunscreen in the summer and parkas and gloves in the winter. A couple of weeks ago a sleet storm turned our roads into skating rinks. As I drove just a short distance my entire focus was on keeping the car on the road. This was not a time for quiet reflection!

Daily challenges get in the way of a valuable exercise, the practice of examining the past. I have found this activity more valuable than making a forecast. Most forecasts are futile (like New Year's resolutions), whereas a true understanding of the past can help us prepare for the vagaries of the future.

For me, the two best times to examine the past are the end of each calendar year and the end of each calendar decade. There is something magical about the end of each year/decade and the beginning of a new one. Today I have chosen to focus on what lessons we can take away from the year just ended, 2019. In a subsequent piece I intend to ruminate on the decade that began in 2010.

For our purposes here we will focus solely on the investment world.

In some years the markets' messages are subtle, almost like a whisper. In other years the message is loud and clear. 2019 spoke loudly and clearly.

There were three investment messages. One was specific to how we invest on behalf of our clients at DGI. The other two were things that happened within the larger world of investing.

MESSAGE #1: OUR PORTFOLIOS ENDED 2019 WITH A LOT OF GAS IN THE TANK

Our portfolios had a heck of a year. Our Mid Cap Growth Composite was up over 30% and our Small Cap Growth Composite was up about 18%.

The stock market was narrow, (i.e. only a relatively few stocks went up a lot) and fortunately we owned enough of the favored stocks to have a fine year.

Here is the exciting and largely unnoticed story of 2019. Many, many stocks were left out of the huge price increases. The stocks of many good companies simply bided their time.

We were focused last year (especially in the second half) on reducing our exposure to those stocks which had sizzling price increases (but are now expensive) and invested in some existing and new ideas where the company has terrific prospects and a lackluster stock price.

To use a poker analogy, we finished the year with a good hand and continue to draw good cards.

MESSAGE #2: GRANDADDY OF INDEX FUNDS BECAME DANGEROUS

We confess we have been fans of index funds for many years, especially Vanguard's version of the S&P 500 index. Index funds were a reasonable solution for many investors, especially when their expense ratios are far lower than active managers.

In 2019 the S&P 500 had a terrific year, increasing over 31%, including dividends. The five largest companies in the index enjoyed fanstastic price appreciation. Apple was the standout, increasing 88%. Facebook and Microsoft tied for second, increasing about 57% each. Google increased 28%. Amazon was the laggard, increasing a "mere" 23%. The index weighted performance of these stocks exceeded 50% last year.

The price appreciation of only five stocks (out of 500) accounted for nearly one quarter of the total price increase of the S&P 500 in 2019.

Further, the collective market value of these five companies now exceeds $5 trillion and comprises over 17% of the S&P 500 index. Normally, the top five companies have equaled about 12.5% of the index's market value; we cannot find a time when this index has been so concentrated.

The market value of these companies suggests they are large, mature companies, but their stocks are priced like small growth companies.

It gets worse. Fifteen years ago, the top five companies were very different businesses with distinct end markets-Exxon, Wal-Mart, Pfizer, General Electric, and Microsoft. Today, Apple, Google, Amazon, Facebook and Microsoft may appear to be very different companies. But we find commonality in their extraordinary success. If the trend towards centralizing various functions on the web, via a concept called the "cloud" slows or reverses, this group of companies will be hard-pressed to duplicate their past successes.

Dangerous, indeed.

MESSAGE #3: SOMETHING STRANGE IS HAPPENING IN THE BOND MARKET.

About $17 trillion face amount of bonds are trading at negative yields.

Let's unpack negative yields. I want to borrow money from you. You lend me the money. And you *pay* me to borrow money from you. (If any of you have a desire to lend me money and pay me to borrow from you, let's talk. I cannot, in good conscience take your money, but I will recommend a good psychiatrist).

Negative bonds yields are ridiculous.

In 2019 the bond market sent a clear message: too much money is chasing too few borrowers. The lender has become subservient to the borrower.

WE ARE RELIEVED THAT WE DO NOT OWN THE S&P 500 INDEX FUNDS OR BONDS WITH NEGATIVE YIELDS.

WE LIKE OUR PORTFOLIO'S LONG-TERM PROSPECTS

DISCIPLINED GROWTH INVESTORS

ANNUAL COMPOSITE PERFORMANCE

JANUARY 1, 2009 THROUGH DECEMBER 31, 2018

Global Investment Performance Standards

DGI – MID CAP GROWTH COMPOSITE

Year	Composite Performance Gross of Fees	Composite Performance Net of Fees	Russell Midcap Index	Russell Midcap Growth Index	Number of Portfolios in Composite	Composite Dispersion	Total Composite Assets at End of Period ($ in Millions)	Composite Percentage of Total Firm Assets	Total Firm Assets at End of Period ($ in Millions)
2009	61.2%	60.3%	40.5%	46.3%	25	0.89%	$516.7	34.8%	$1,484.5
2010	34.9%	34.1%	25.5%	26.4%	24	0.86%	$665.2	33.2%	$2,002.2
2011	2.4%	1.8%	-1.5%	-1.6%	29	0.26%	$1,035.3	43.5%	$2,382.6
2012	20.4%	19.7%	17.3%	15.8%	43	0.43%	$1,159.0	41.6%	$2,788.0
2013	35.1%	34.4%	34.8%	35.8%	48	0.81%	$2,150.5	53.0%	$4,054.4
2014	15.2%	14.6%	13.2%	11.9%	55	0.58%	$2,538.1	56.9%	$4,459.7
2015	-5.5%	-6.0%	-2.4%	-0.2%	56	0.45%	$2,265.8	54.5%	$4,158.5
2016	17.8%	17.2%	13.8%	7.3%	56	0.59%	$2,517.9	52.9%	$4,756.6
2017	21.5%	20.9%	18.5%	25.3%	65	0.50%	$2,796.3	51.4%	$5,444.1
2018	-3.23%	-3.72%	-9.06%	-4.75%	68	0.54%	$2,611.8	51.1%	$5,106.3

Disciplined Growth Investors, Inc. (DGI) claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. DGI has been independently verified for the period February 28, 1997 throughDecember 31, 2018. Verification assesses whether (1) the firm has complied with all the composite construction requirements of the GIPS standards on a firm-wide basis and (2) the firm's policies and procedures are designed to calculate and present performance in compliance with the GIPS standards. The Mid Cap Growth Composite has been examined for the periods February 28, 1997 through December 31,2018. The verification and performance examination reports are available upon request. GIPS® is a registered trademark of CFA Institute. CFA Institute has not been involved in the preparation or review of this report/advertisement. Benchmark returns are not covered by the report of independent verifiers.

Notes:

1. Disciplined Growth Investors, Inc. (DGI) is an investment adviser registered with the U.S. Securities and Exchange Commission specializing in small cap growth equity, mid cap growth equity and balanced growth portfolio management. DGI was founded in February 1997.
2. Benchmark comparisons are presented using the following: The Russell Mid Capitalization Growth Index and Russell Mid Capitalization Index. Management considers these indices to parallel both associated risk and the investment style represented by the composites.
3. Valuations are computed in U.S. dollars.
4. The Mid Cap Growth Composite was created on February 28, 1997.
5. The dispersion of annual returns is measured by the standard deviation across asset-weighted portfolio returns represented within the composite for the full year.
6. Gross performance results are presented before management and custodial fees but after all trading costs. Performance is based on trade-date valuation and is size weighted. Net performance results are presented before custodial fees but after actual management fees and all trading costs. Some accounts include a performance-based fee; net performance results are presented after actual performance-based fees. The management fee schedule is as follows:

   MID CAP GROWTH ACCOUNT FEES

   1.00% on the first $5 million

   0.75% on the next $20 million

   Over $25 million fees are negotiable
7. The historical rates of return should not be relied on as indicative of future results.
8. The Mid Cap Growth strategy is to invest in equities with market capitalizations between $1 billion and $10 billion at initial purchase. The primary investment objective is to achieve long-term capital appreciation. The Mid Cap Growth composite is an equity-only composite with cash. The composite contains all fully-invested, tax-exempt discretionary portfolios in the strategy. Accounts are included in the composite after the first calendar month of fully invested performance. No alteration of the composite as presented here has occurred because of changes in personnel or other reasons at any time. A complete list of firm composites and performance results is available upon written request. A minimum account size of $1 million was removed as of 9/30/2012.
9. DGI's Policies and procedures for valuing portfolios, calculating performance, and preparing compliant presentations are available upon request.
10. Three-year annualized standard deviation:

Year	DGI Mid Cap Growth Composite	Russell Mid Cap Growth Index	Russell Mid Cap Index
2012	18.93	17.91	17.20
2013	15.98	14.62	14.03
2014	12.01	10.87	10.14
2015	11.99	11.31	10.85
2016	12.63	12.18	11.55
2017	11.07	10.89	10.36
2018	14.14	12.82	11.98

11. This presentation was updated in March 2018 to correct an error. In a previous version, the 2015 and 2016 annual returns for the RusselMidcap Benchmark Index and the Russell Midcap Growth Index were transposed. For more information, please contact Disciplined Growth Investors at (612) 317-4100.

DISCIPLINED GROWTH INVESTORS

ANNUAL COMPOSITE PERFORMANCE

JANUARY 1, 2009 THROUGH DECEMBER 31, 2018

Global Investment Performance Standards

DGI – SMALL CAP GROWTH COMPOSITE

Year	Composite Performance Gross of Fees	Composite Performance Net of Fees	Russell 2000 Index	Russell 2000 Growth Index	Number of Portfolios in Composite	Composite Dispersion	Total Composite Assets at End of Period ($ in Millions)	Composite Percentage of Total Firm Assets	Total Firm Assets at End of Period ($ in Millions)
2009	54.2%	53.1%	27.2%	34.5%	14	2.42%	$158.3	10.7%	$1,484.5
2010	34.5%	33.6%	26.9%	29.1%	17	1.00%	$292.1	14.6%	$2,002.2
2011	6.1%	5.4%	-4.2%	-2.9%	16	1.75%	$266.7	11.2%	$2,382.6
2012	16.2%	15.3%	16.3%	14.6%	25	0.62%	$272.1	9.8%	$2,788.0
2013	49.2%	48.1%	38.8%	43.3%	23	1.31%	$354.7	8.7%	$4,054.4
2014	8.3%	7.5%	4.9%	5.6%	21	0.69%	$285.4	6.4%	$4,459.7
2015	-1.7%	-2.5%	-4.4%	-1.4%	21	0.94%	$253.3	6.1%	$4,158.5
2016	20.9%	19.9%	21.3%	11.3%	18	0.55%	$353.4	7.4%	$4,756.6
2017	20.6%	19.8%	14.7%	22.2%	13	0.50%	$362.2	6.7%	$5,444.1
2018	-9.33%	-10.01%	-11.01%	-9.31%	13	0.61%	$311.1	6.1%	$5,106.3

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2. Benchmark comparisons are presented using the following: The Russell 2000 Growth Index and Russell 2000 Index. Management considers these indices to parallel both associated risk and the investment style represented by the composites.
3. Valuations are computed in U.S. dollars.
4. The Small Cap Growth Composite was created on February 28, 1997.
5. The dispersion of annual returns is measured by the standard deviation across asset-weighted portfolio returns represented within the composite for the full year.
6. Gross performance results are presented before management and custodial fees but after all trading costs. Performance is based on trade-date valuation and is size weighted. Net performance results are presented before custodial fees but after actual management fees and all trading costs. The management fee schedule is as follows:

   SMALL CAP GROWTH ACCOUNT FEES

   1.00% on the first $10 million

   0.75% on the next $15 million

   Over $25 million fees are negotiable
7. The historical rates of return should not be relied on as indicative of future results.
8. The Small Cap Growth strategy is to invest in equities with market capitalizations between $100 million and $1 billion at initial purchase. The primary investment objective is to achieve maximum long-term capital appreciation. The Small Cap Growth composite is an equity-only composite with cash. The composite contains all fully-invested, tax-exempt discretionary portfolios in the strategy. Accounts are included in the composite after the first calendar month of fully invested performance. No alteration of the composite as presented here has occurred because of changes in personnel or other reasons at any time. A complete list of firm composites and performance results is available upon written request. A minimum account size of $1 million was removed as of 9/30/2012.
9. DGI's Policies and procedures for valuing portfolios, calculating performance, and preparing compliant presentations are available upon request.
10. Three-year annualized standard deviation:

Year	DGI Small Cap Growth Composite	Russell 2000 Growth Index	Russell 2000 Index
2012	22.96	20.72	20.20
2013	20.81	17.27	16.45
2014	14.86	13.82	13.12
2015	14.34	14.95	13.96
2016	15.03	16.67	15.76
2017	12.84	14.59	13.91
2018	16.85	16.48	15.79

11. This presentation was updated in October 2017 to correct an error. In a previous version, the 2015 and 2016 annual returns for the Russell 2000 Benchmark Index and the Russell 2000 Growth Index were transposed. For more information, please contact Disciplined Growth Investors at (612) 317-4100.