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IQS Commentary for May 2017

Markets/Economy

The S&P 500 achieved its' fifth consecutive month of positive returns to start the year. The last time this was achieved was in 2013, and you have to go all the way back to 1996 to find a year where the S&P 500 had the first six consecutive months of positive returns.

The S&P 500 has returned 8.7% year to date, with the technology heavy NASDAQ returning 15.1% year to date. Small caps continue to lag, having negative returns for May, and a small positive return for the year. Growth continues to dominate over value. No real significance to these media reported numbers, but the DOW has stayed above 21,000, the NASDAQ passed 6,000 and the S&P 500 is above 2,400.

The VIX jumped above 14, but only for a fleeting moment, and is down around the dangerous 10 mark again. While a "low" VIX signals decreased volatility, history has shown that large down movements in the S&P 500 have occurred when the VIX has been at low levels. The Fed still intends to raise rates, but not sure how much that will affect the markets going forward. Geopolitical risks are clearly much higher at this point, as terror events continue around the world, with high political uncertainty at home.

With the markets rising steadily, the Chart of the Month looks at the annual drawdowns of the S&P 500 Index. So far, in 2017, the maximum drawdown has been a modest 2.8%.

US Market Summary

Technology Strong, Large over Small, Growth over Value

	YTD	May
S&P 500	8.7%	1.4%
DOW	6.3%	0.3%
NASDAQ	15.1%	2.5%
Russell 1000	7.9%	1.3%
Russell 2000	1.1%	-2.0%
Russell 1000 Growth	13.8%	2.6%
Russell 1000 Value	2.2%	-0.2%

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Chart of the Month:

Annual Drawdowns in the S&P 500 Index

Drawdowns can be a positive or negative, or a little of each, depending upon which side of the trade you are on. If you have money to invest, they are an opportunity to purchase securities at a lower price. If you need to sell, they may seem like bad timing. On a positive note, they may give you the chance to realize a tax loss.

There are many different metrics about a market, a fund, or a security that investors follow. These include beta, volatility, downside volatility, sharpe ratio, and various other less known ratios. However, downside risk may be the measurement investors are concerned with the most. Partly because of the funny investment math where a 20% decline needs a 25% return to return back to even, partly because of the need to sell when the market is down, or simply the psychological awareness that one's wealth has declined, many investors prefer to limit downside risk.

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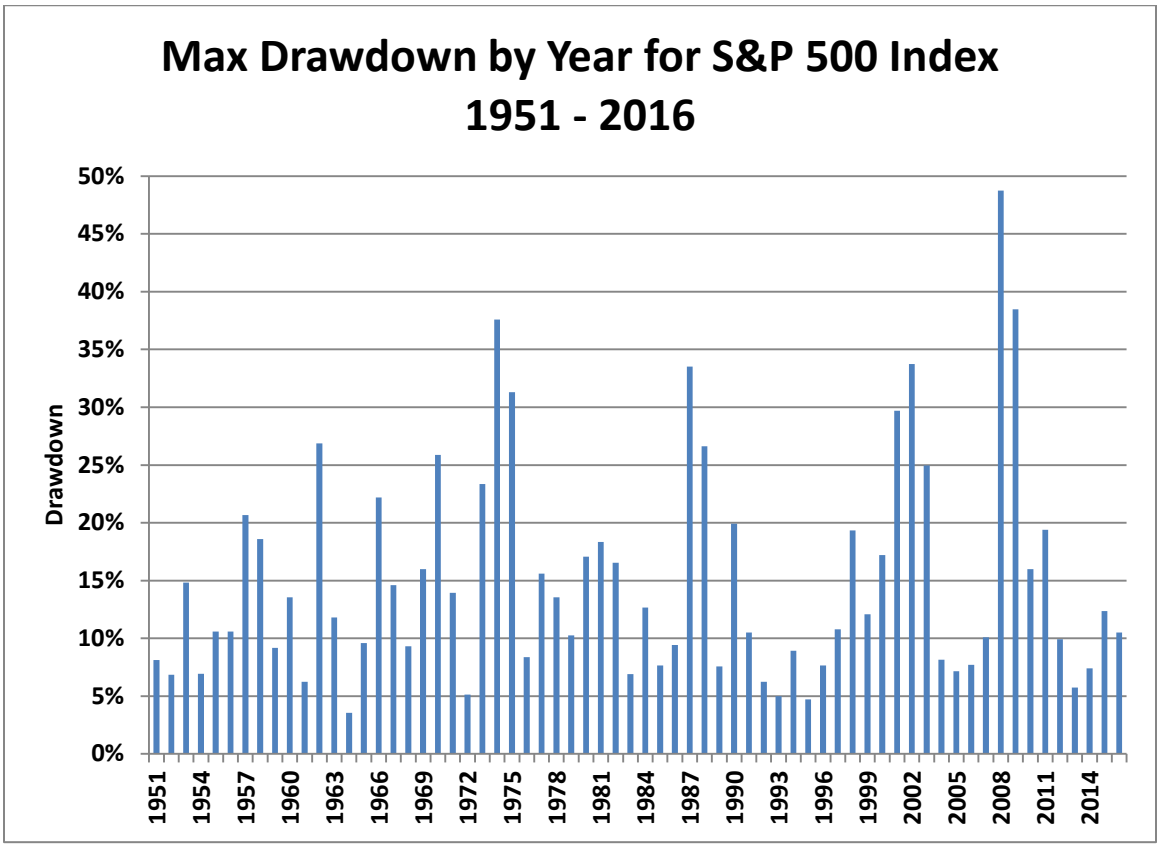
Graph 1 – Max Drawdown by Year for the S&P 500 Index, calculated as the largest drop during the year (peak to trough).

Using the S&P 500 Index from 1951 through 2016, we calculated the drawdowns as the maximum peak to trough return during a calendar year. For clarity, a drawdown of 40% on the charts belows refers to a -40% return from peak to trough.

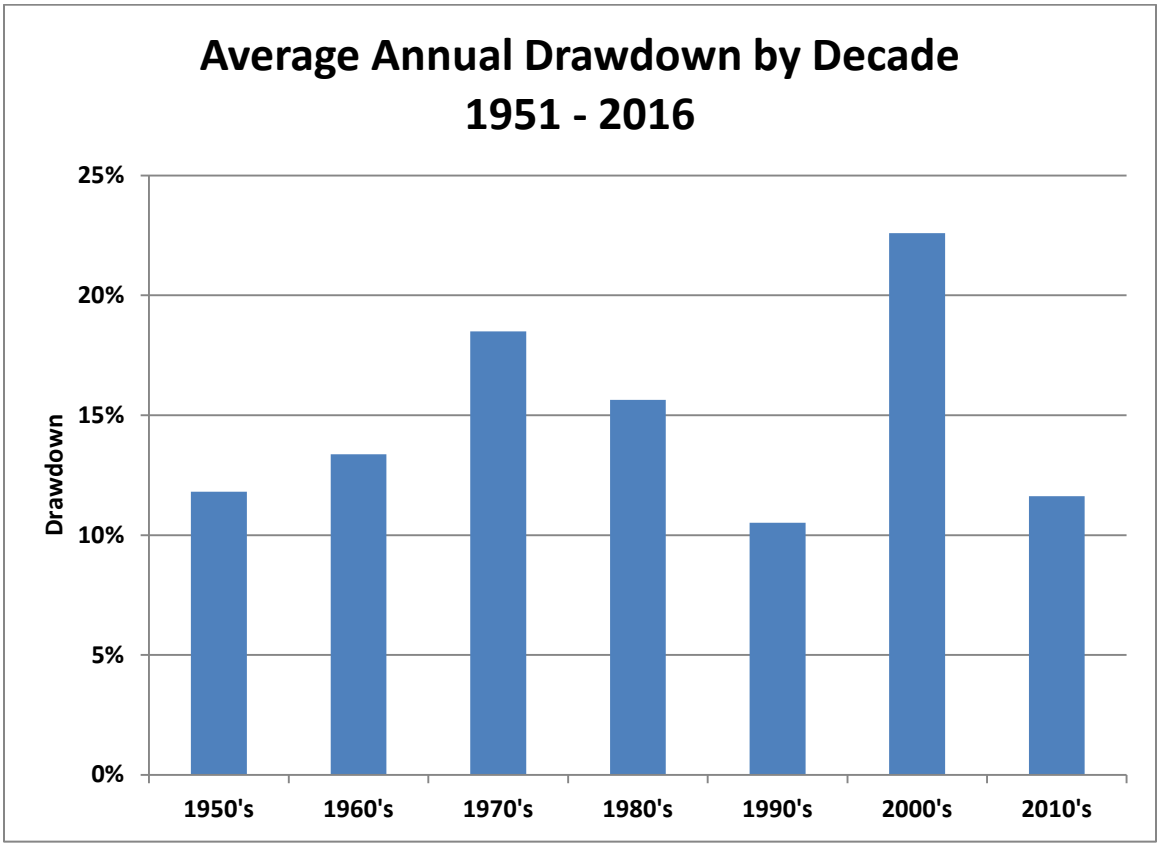
Drawdown Statistics:
Average: 15.1%
Standard Deviation: 9.4%
Maximum: 48.8% (2008)
Minimum: 3.5% (1964)



Drawdown by Decade

In graph 2 below, we depict the average annual drawdown by decade. Not surprisingly, the 2000's had the highest average drawdown at 23%, while the roaring bull market of the1990's had the lowest at just over 10%.

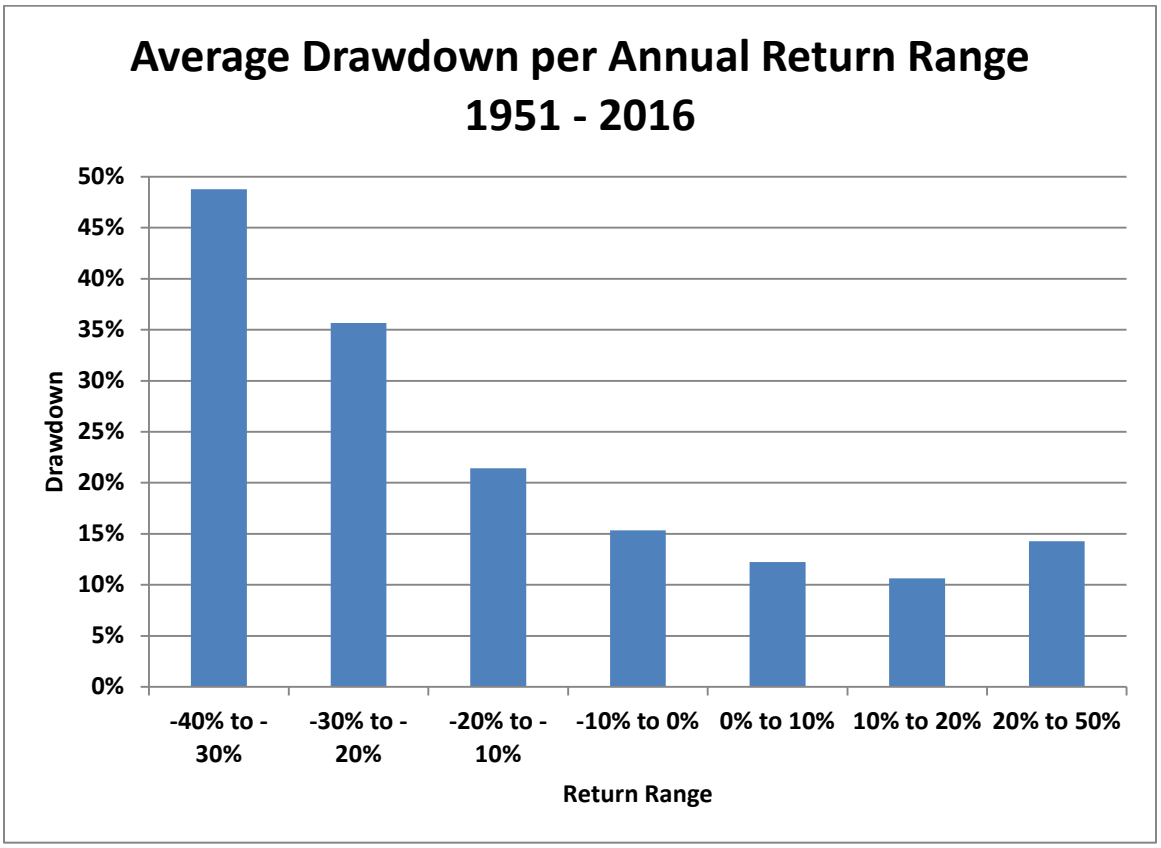
Graph 2 – Average Annual Drawdown by Decade (1950's through 2010's)



Drawdowns for various Returns of the S&P 500

Should the drawdown vary based on the return of the S&P 500? One may expect that the higher the return, the less the drawdown, while the lower the return, the higher the drawdown. In graph 3 below, we chart the average annual drawdown based on the return range of the S&P 500. In the most negative return category, -40% to -30%, the average drawdown was 48%, while in the highest return category, 20% to 50%, the average drawdown was 14%. The relationship between more negative returns and higher drawdowns persists for the negative returns, but once the returns are positive, the drawdowns are roughly equal.

Graph 3 – Distribution of Positive Monthly S&P 500 Returns per Year



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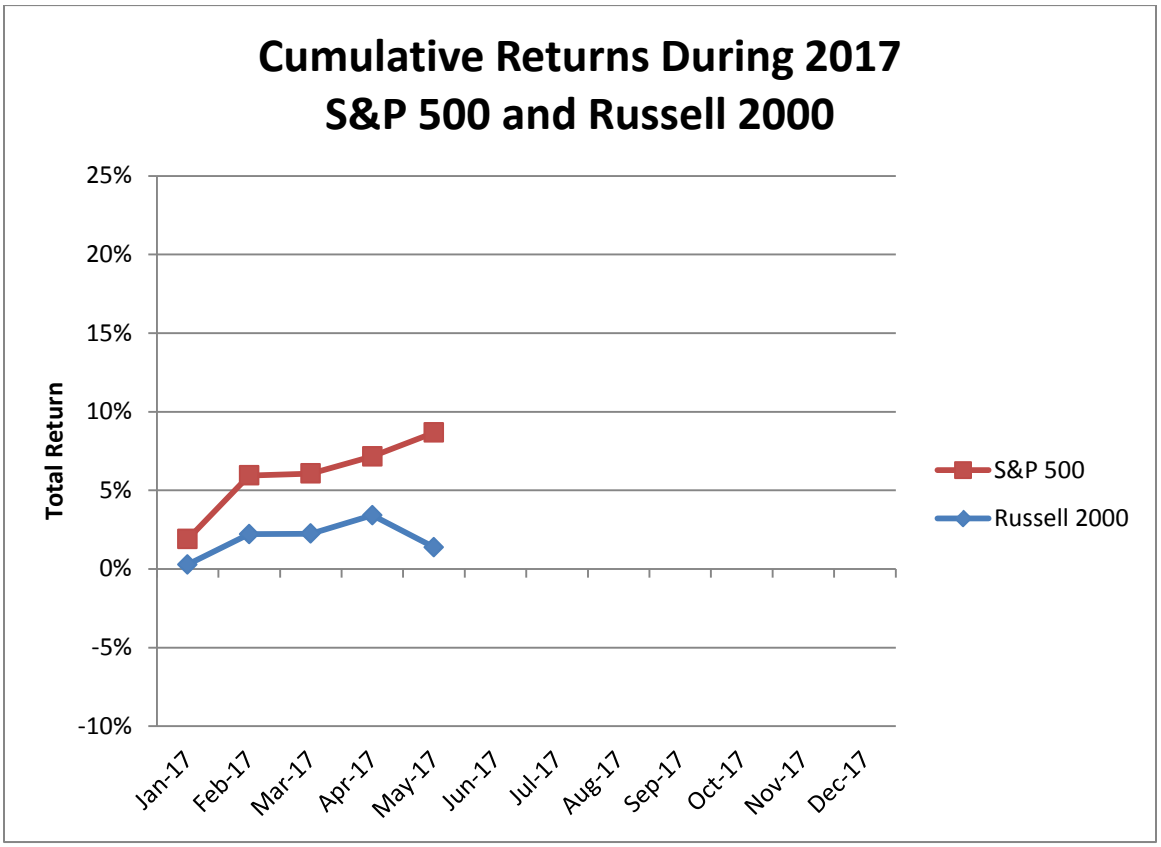
S&P 500 vs Russell 2000

The Winning Streak Continues for S&P 500, Small Cap Pulls back



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Model Results

IQS

- The IQS model returned 2.1% for the 5 weeks ending June 3. The Top Decile returned 9.9% YTD, the Bottom Decile returned -.5%, and the Universe returned 7.0% YTD.
- The sector-neutral IQS model returned 1.1% for the 5 weeks ending June 3. The Top Decile returned 9.4% YTD, the Bottom Decile returned 2.9%, and the Universe returned 7.0% YTD.
- During May, Balance Sheet Strength, Sentiment, Improving Financials and Momentum outperformed. Value underperformed.

IQS 1000

- The IQS 1000 model returned 1.7% for the 5 weeks ending June 3. The Top Decile returned 12.2% YTD, the Bottom Decile returned 4.2%, and the Universe returned 8.0% YTD.

IQS No Momentum Model

- The IQS Nomom model (IQS model without Momentum Category) model returned 2.0% for the 5 weeks ending June 3. The Top Decile returned 10.5% YTD, the Bottom Decile returned -.8%, and the Universe returned 8.6% YTD.

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Factor Weights

The IQS Weighting Scheme:

As of June:
The reweighting for June is a combination of new trends, reversions and market environment. Momentum is starting to outperform, and more weight is given to this category for June. Value, on the other hand, has been a laggard, yet the current environment and likely reversion lead the algo to add weight to the Value category. After large returns to Improving Financials and Balance Sheet categories, there was a small reduction in each of those categories. As a result of the above changes, the IQS dynamic factor model has a more balanced, diversified set of weights across the five main categories.

Notes:

- IQS model includes the IQS top 3000 stocks by capitalization.
- IQS 1000 includes the IQS top 1000 stocks by capitalization.
- IQS No Momentum includes all IQS factor categories except Momentum. The results for this model are based on the IQS 3000 stock universe.

Note: Results are specific to the IQS analysis. Real time results will vary depending on universe, frequency of trading, and other manager specific strategies.

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Summary of IQS Results for 5 Weeks Ending 6/3/2017

All returns are equal-weighted
The results below are from paper portfolios, and are not based on actual trading.
No transaction costs are included.

Weekly Top and Bottom Decile Returns for IQS Composite Model

	IQS Universe		
Week Ending	Top Decile	Bottom Decile	Net
6-May	-0.23%	-0.39%	0.16%
13-May	-0.19%	-0.23%	0.04%
20-May	-1.13%	-0.10%	-1.03%
27-May	0.98%	-0.83%	1.81%
3-Jun	1.61%	0.52%	1.09%
MTD	1.02%	-1.03%	2.05%
YTD	9.94%	-0.54%	10.48%

Weekly Top and Bottom Decile Returns for IQS Composite Model, Sector Neutral

	Sector Neutral		
Week Ending	Top Decile	Bottom Decile	Net
6-May	-0.17%	-0.22%	0.05%
13-May	-0.08%	-0.64%	0.56%
20-May	-1.12%	-0.74%	-0.38%
27-May	0.93%	0.16%	0.77%
3-Jun	1.28%	1.18%	0.10%
MTD	0.82%	-0.27%	1.10%
YTD	9.36%	2.86%	6.50%

Weekly IC for IQS Composite Model and Components

Week Ending	IQS	BAL	VAL	MOM	IMP	SEN
6-May	0.055	0.118	-0.051	0.006	0.016	0.058
13-May	0.003	0.037	-0.041	-0.040	0.015	0.010
20-May	-0.038	-0.047	-0.027	-0.088	0.004	0.006
27-May	0.072	0.091	-0.076	0.103	0.034	0.075
3-Jun	0.067	0.176	-0.126	0.019	0.028	0.067
MTD	0.032	0.075	-0.064	0.000	0.019	0.043
YTD	0.025	0.037	-0.003	-0.016	0.048	0.015

Weekly Top and Bottom Decile Returns for IQS Component Models

	BALANCE SHEET			VALUE		
Week Ending	Top Decile	Bottom Decile	Net	Top Decile	Bottom Decile	Net
6-May	0.58%	-1.21%	1.79%	-0.66%	0.91%	-1.57%
13-May	0.12%	-0.51%	0.63%	-0.99%	0.00%	-0.99%
20-May	-0.87%	0.21%	-1.08%	-0.76%	-0.20%	-0.56%
27-May	1.31%	0.02%	1.29%	0.77%	1.35%	-0.58%
3-Jun	1.89%	-0.06%	1.95%	0.58%	1.87%	-1.29%
MTD	3.04%	-1.55%	4.59%	-1.07%	3.98%	-5.05%
YTD	7.84%	-0.87%	8.71%	5.21%	11.02%	-5.81%

	MOMENTUM			IMPROVING FINANCIALS		
Week Ending	Top Decile	Bottom Decile	Net	Top Decile	Bottom Decile	Net
6-May	-0.43%	-0.18%	-0.25%	-0.55%	-0.68%	0.13%
13-May	0.25%	-0.23%	0.48%	-0.29%	-0.66%	0.37%
20-May	-1.40%	-0.92%	-0.48%	-0.88%	-0.70%	-0.18%
27-May	1.04%	0.17%	0.87%	0.87%	-0.43%	1.30%
3-Jun	1.26%	0.61%	0.65%	1.31%	0.92%	0.39%
MTD	0.70%	-0.56%	1.25%	0.44%	-1.55%	1.99%
YTD	6.77%	6.43%	0.33%	9.99%	-1.14%	11.13%

	SENTIMENT		
Week Ending	Top Decile	Bottom Decile	Net
6-May	0.16%	-0.26%	0.42%
13-May	-0.54%	-0.92%	0.38%
20-May	-0.81%	-0.93%	0.12%
27-May	1.50%	0.31%	1.19%
3-Jun	1.60%	1.00%	0.60%
MTD	1.90%	-0.81%	2.71%
YTD	8.59%	2.36%	6.22%

Notes:
IQS represents the IQS composite model.
IC or Information Coeffficient is calculated as the Spearman rank correlation between the forecasted returns and actual returns.
IQS Universe includes approximately the largest 4000 stocks by market capitalization
Sector definition is determined by Zacks Information Research

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Summary of IQS Results (Top 1000 Stocks) for 5 Weeks Ending 6/3/2017

All returns are equal-weighted
The results below are from paper portfolios, and are not based on actual trading.
No transaction costs are included.

Weekly Top and Bottom Decile Returns for IQS Composite Model

	IQS Universe		
Week Ending	Top Decile	Bottom Decile	Net
6-May	0.71%	0.05%	0.66%
13-May	-0.69%	-0.24%	-0.45%
20-May	-0.03%	0.35%	-0.38%
27-May	1.15%	0.17%	0.98%
3-Jun	1.10%	0.25%	0.85%
MTD	2.25%	0.58%	1.67%
YTD	12.23%	4.20%	8.03%

Weekly IC for IQS Composite Model

Week Ending	IQS
6-May	0.043
13-May	-0.033
20-May	-0.066
27-May	0.058
3-Jun	0.084
MTD	0.017
YTD	0.031

Notes:
IQS represents the IQS composite model.
IC or Information Coeffficient is calculated as the Spearman rank correlation between the forecasted returns and actual returns.
IQS Universe includes approximately the largest 1000 stocks by market capitalization
Sector definition is determined by Zacks Information Research

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Summary of IQS No Momentum Model Results for 5 Weeks Ending 6/3/2017

All returns are equal-weighted
The results below are from paper portfolios, and are not based on actual trading.
No transaction costs are included.

Weekly Top and Bottom Decile Returns for IQS Composite Model

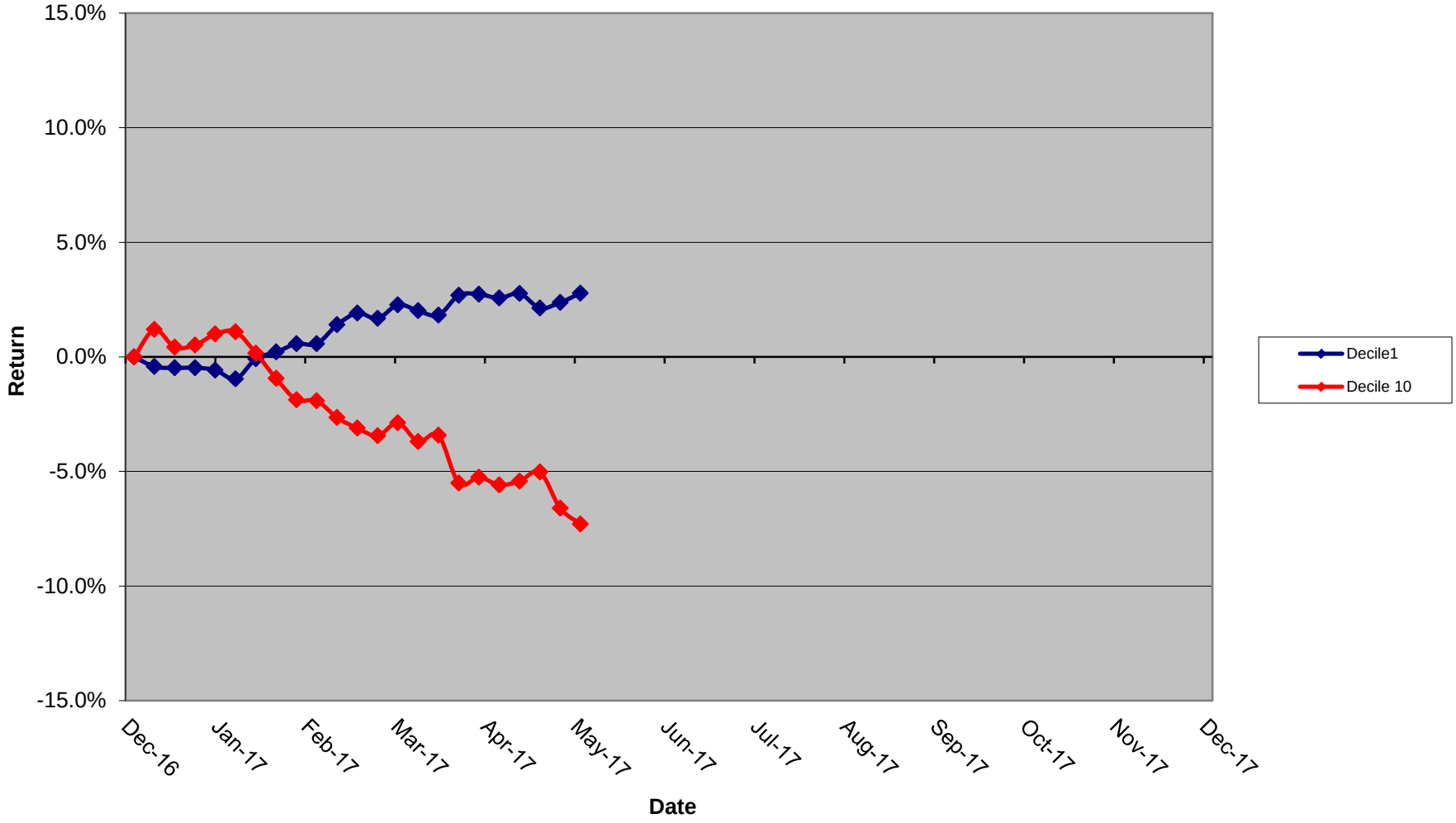
	IQS Universe		
Week Ending	Top Decile	Bottom Decile	Net
6-May	0.09%	-0.21%	0.30%
13-May	-0.15%	-0.59%	0.44%
20-May	-1.06%	0.09%	-1.15%
27-May	0.93%	-0.30%	1.23%
3-Jun	1.47%	0.33%	1.14%
MTD	1.27%	-0.68%	1.95%
YTD	10.45%	-0.84%	11.29%

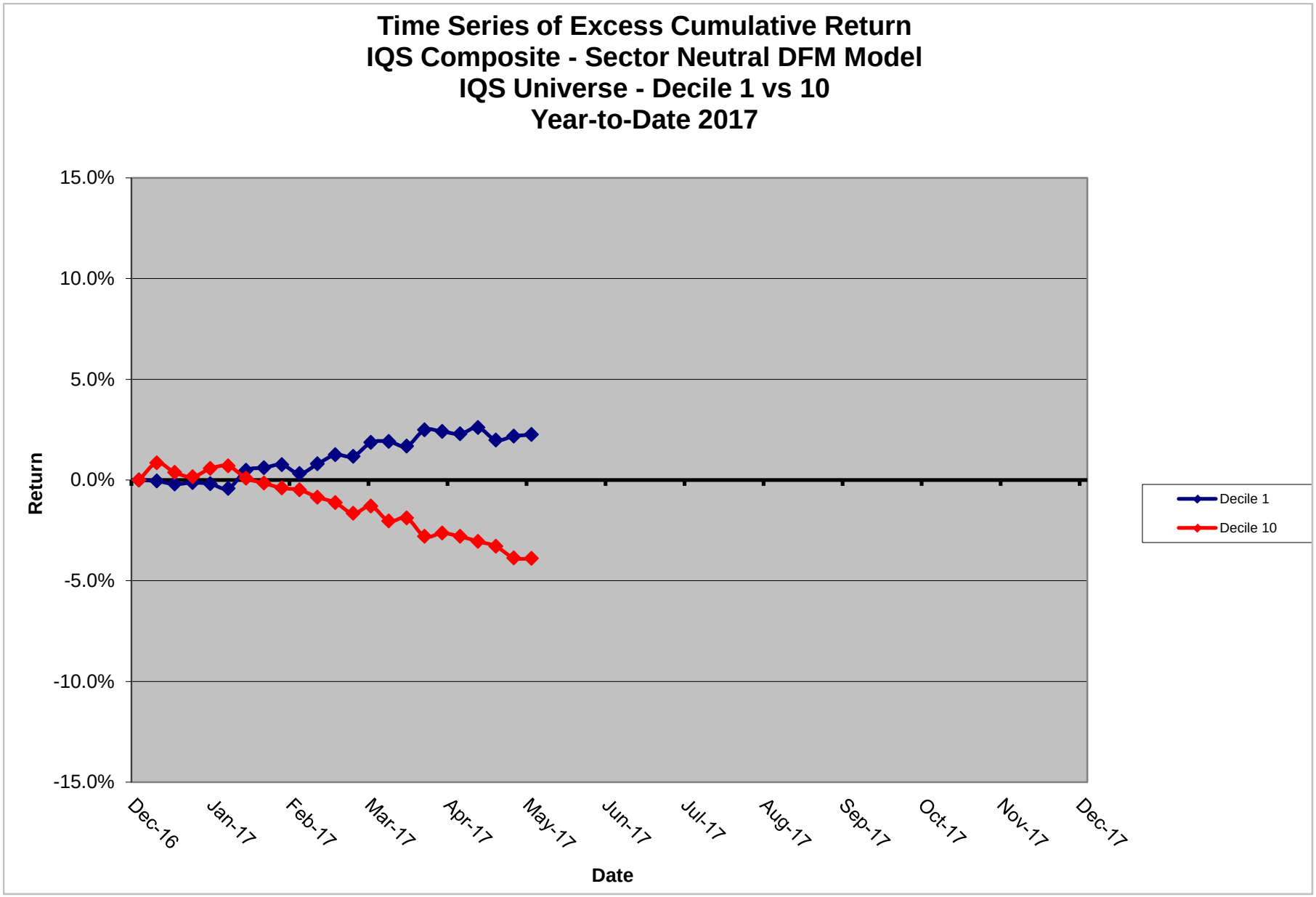
Weekly IC for IQS Composite Model

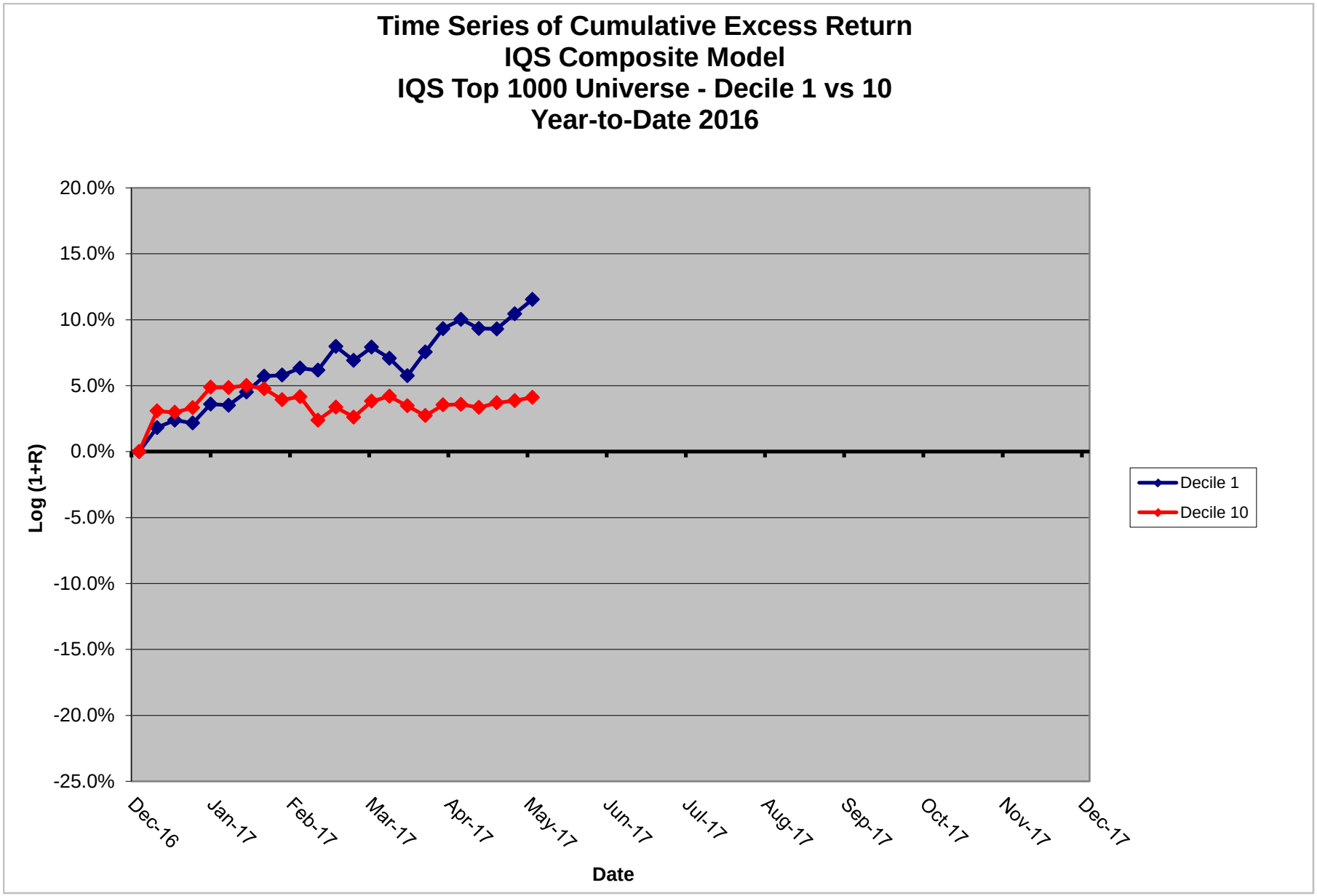
Week Ending	IQS
6-May	0.036
13-May	0.036
20-May	-0.047
27-May	0.043
3-Jun	0.080
MTD	0.030
YTD	0.020

Notes:
IQS represents the IQS financial sustainability model, which is essentially the IQS composite model without momentum.
IC or Information Coeffficient is calculated as the Spearman rank correlation between the forecasted returns and actual returns.
IQS Universe includes approximately the largest 3000 stocks by market capitalization
Sector definition is determined by Zacks Information Research

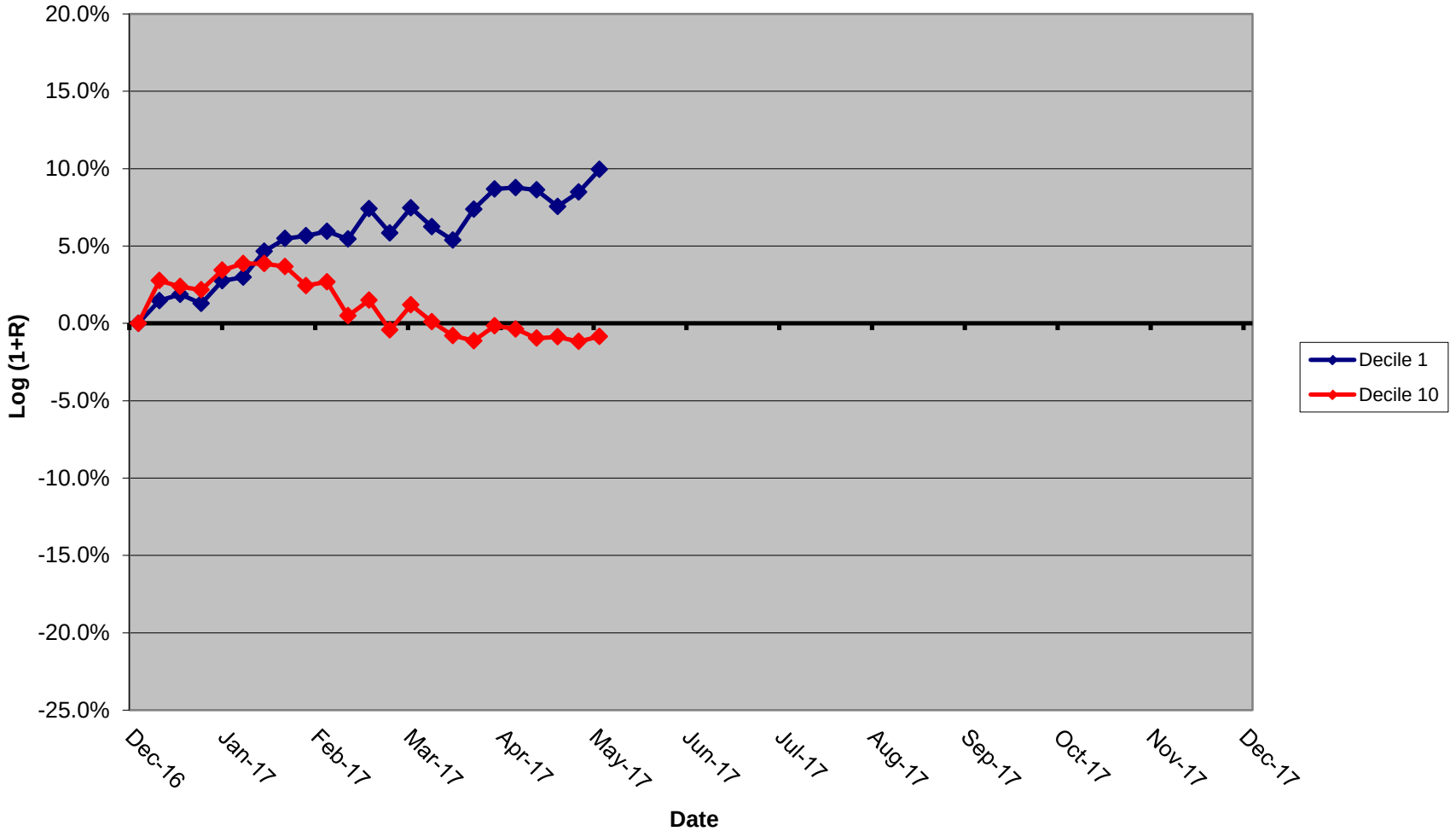
Time Series of Excess Cumulative Return
IQS Composite DFM Model
IQS Universe - Decile 1 vs 10
Year-to-Date 2017



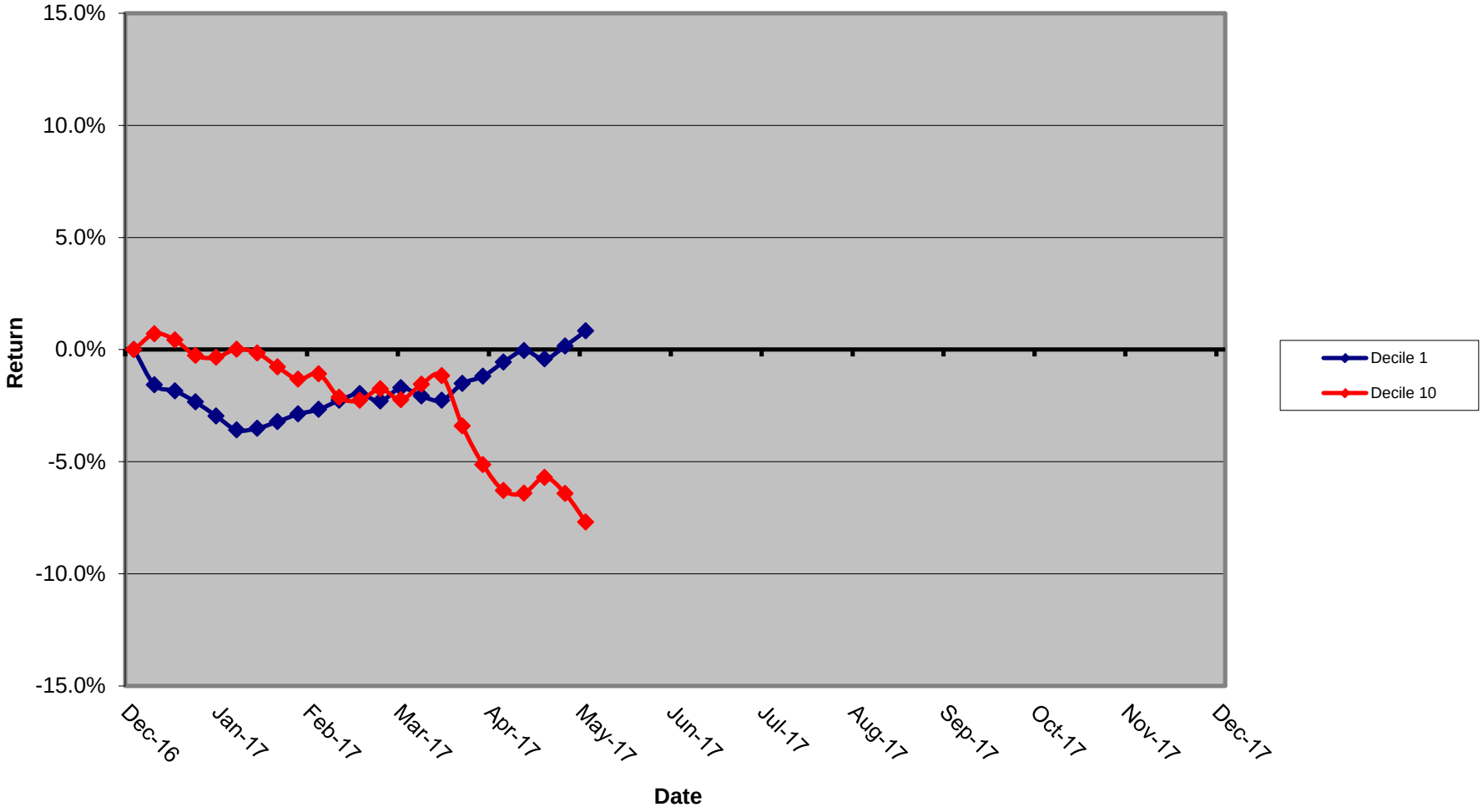

Time Series of Excess Cumulative Return
IQS Composite - Sector Neutral DFM Model
IQS Universe - Decile 1 vs 10
Year-to-Date 2017
15.0%
10.0%
5.0%
0.0%
-5.0%
-10.0%
-15.0%
Return
Dec-16
Jan-17
Feb-17
Mar-17
Apr-17
May-17
Jun-17
Jul-17
Aug-17
Sep-17
Oct-17
Nov-17
Dec-17
Date
Decile 1
Decile 10


Time Series of Cumulative Excess Return
IQS Composite Model
IQS Top 1000 Universe - Decile 1 vs 10
Year-to-Date 2016
20.0%
15.0%
10.0%
5.0%
0.0%
-5.0%
-10.0%
-15.0%
-20.0%
-25.0%
Log (1+R)
Dec-16
Jan-17
Feb-17
Mar-17
Apr-17
May-17
Jun-17
Jul-17
Aug-17
Sep-17
Oct-17
Nov-17
Dec-17
Date
Decile 1
Decile 10

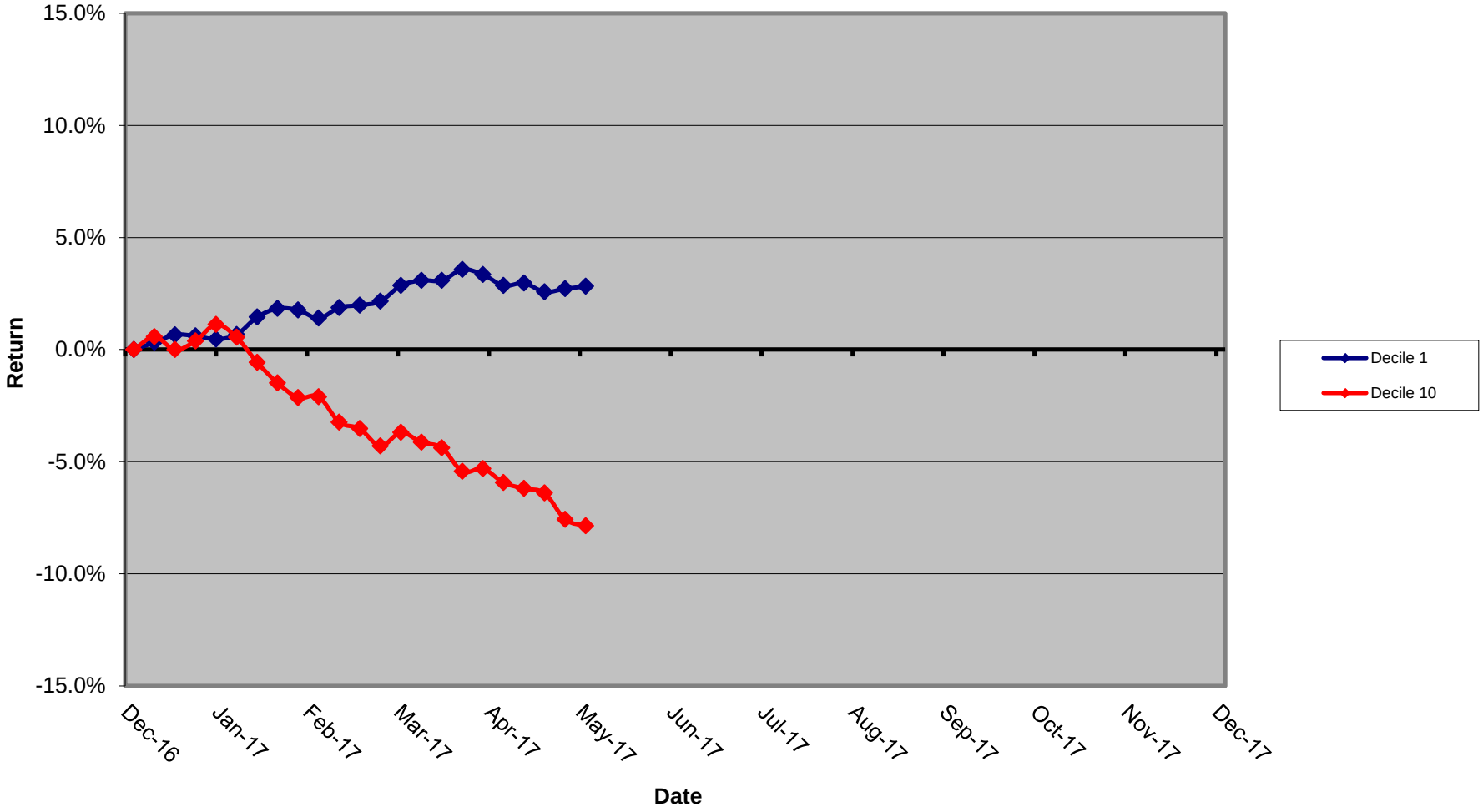
Time Series of Cumulative Excess Return
IQS Composite No Momentum Model
IQS Universe - Decile 1 vs 10
Year-to-Date 2016



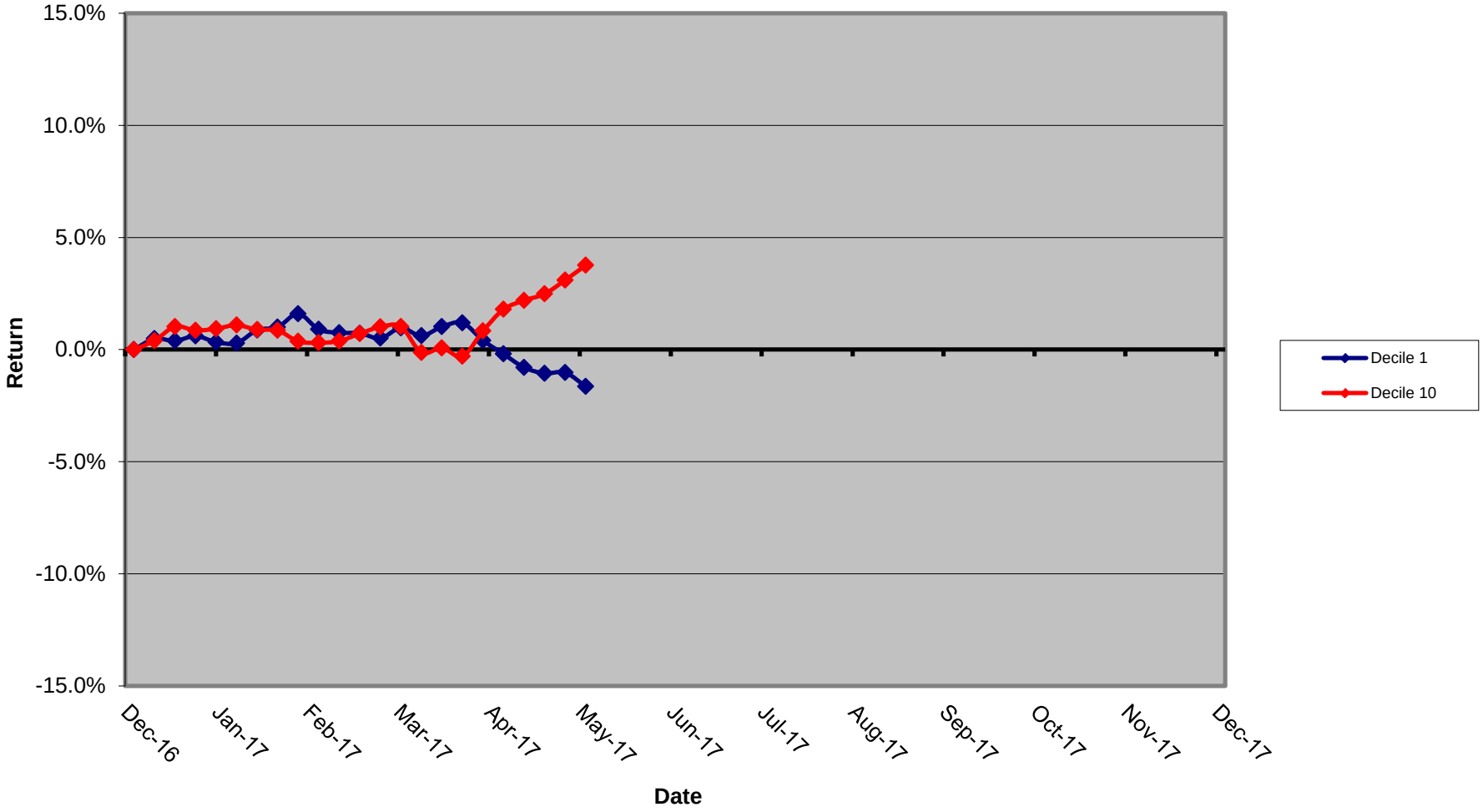
Time Series of Excess Cumulative Return
IQS Component - Balance Sheet
IQS Universe - Decile 1 vs 10
Year-to-Date 2017



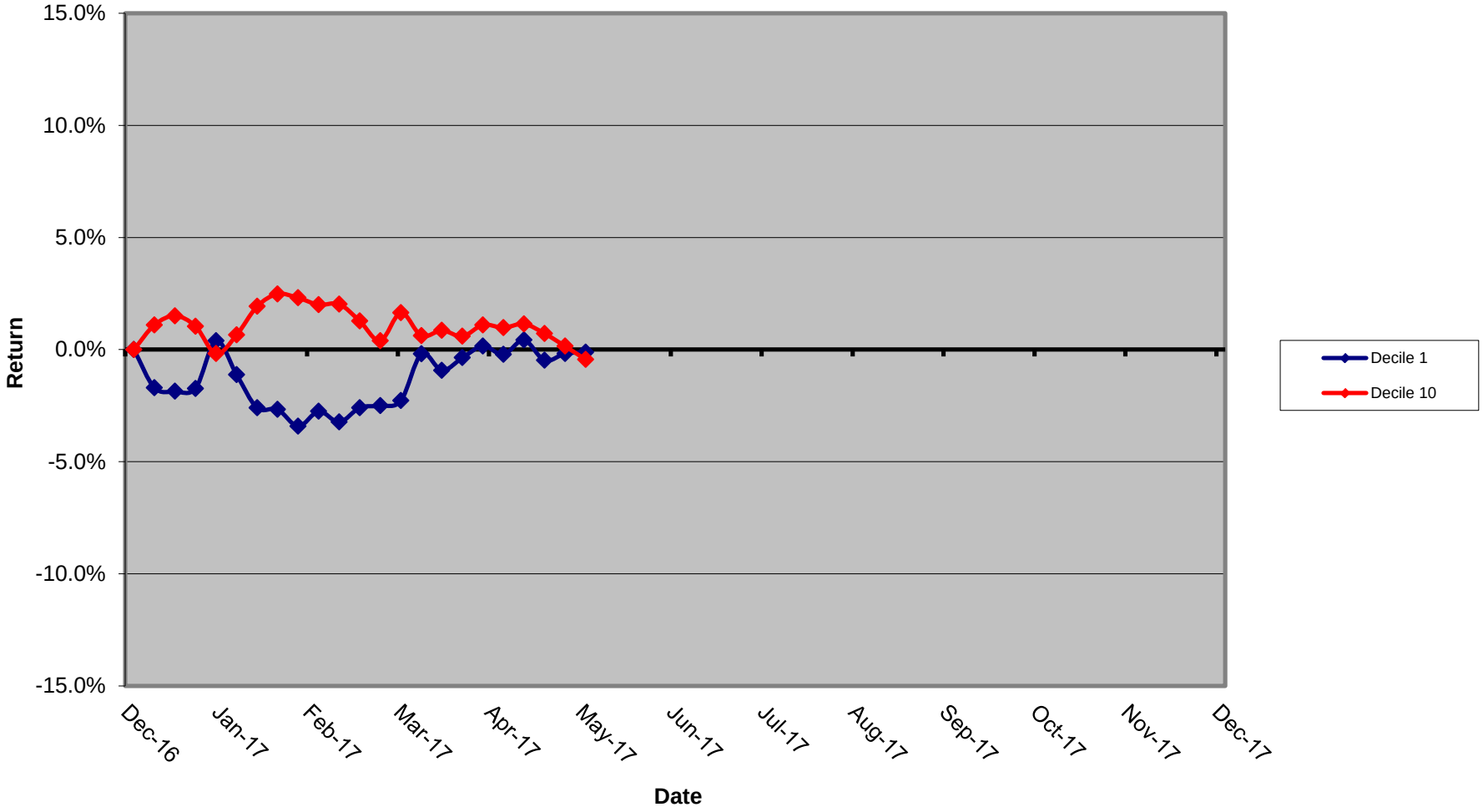
Time Series of Excess Cumulative Return
IQS Component - Improving Financials
IQS Universe - Decile 1 vs 10
Year-to-Date 2017



Time Series of Excess Cumulative Return
IQS Component - Value
IQS Universe - Decile 1 vs 10
Year-to-Date 2017



Time Series of Excess Cumulative Return
IQS Component - Momentum
IQS Universe - Decile 1 vs 10
Year-to-Date 2017



Time Series of Excess Cumulative Return
IQS Component - Sentiment
IQS Universe - Decile 1 vs 10
Year-to-Date 2017