To Buy, Or Not To Buy- An Investors Guide to QE 4

?*In no sense is this QE*? ? Jerome Powell

On October 9, 2019, the Federal Reserve announced a resumption of quantitative easing (QE). Fed Chairman Jerome Powell went to great lengths to make sure he characterized the new operation as something different than QE. Like QE 1, 2, and 3, this new action involves a series of large asset purchases of Treasury securities conducted by the Fed. The action is designed to pump liquidity and reserves into the banking system.

Regardless of the nomenclature, what matters to investors is whether this new action will have an effect on asset prices similar to prior rounds of QE. For the remainder of this article, we refer to the latest action as QE 4.

To quantify what a similar effect may mean, we start by examining the performance of various equity indexes, equity sectors, commodities, and yields during the three prior QE operations. We then normalize the data for the duration and amount of QE to project what QE 4 might hold in store for the assets.

Equally important, we present several factors that are unique to QE 4 and may result in different outcomes. While no one has the answers, we hope that the quantitative data and the qualitative commentary we provide arms you with a better appreciation for asset return possibilities during this latest round of QE.

How QE 1, 2, and 3 affected the markets

The following series of tables, separated by asset class, breaks down price performance for each episode of QE. The first table for each asset class shows the absolute price return for the respective assets along with the maximum and minimum returns from the start of each QE. The smaller table below it normalizes these returns, making them comparable across the three QE operations. To normalize the data, we annualize the respective QE returns and then scale the returns per $100 billion of QE. For instance, if the S&P 500 returned 10% annualized and the Fed bought $500 billion of assets during a particular QE, then the normalized return would be 2% per $100 billion of QE.

Data in the tables are from Bloomberg. Click on any of the tables to enlarge.

Equity Index Returns								
	Large Cap Dow Jones	Large Cap S&P 500	Large Cap NASDAQ	Large Cap S&P 100	Mid Cap S&P 400	Small Cap S&P 600	Small Cap Russell 2k	All Equity
QE3	18.3%	23.6%	19.6%	19.7%	30.1%	35.6%	31.5%	25.5%
QE3 Max	18.3%	23.6%	19.6%	19.7%	30.4%	35.6%	31.5%	25.5%
QE3 Min	-7.3%	-6.9%	-11.4%	-7.9%	-5.3%	-8.5%	-9.3%	-8.1%
QE2	7.3%	6.0%	2.6%	5.0%	10.5%	9.9%	8.7%	7.1%
QE2 Max	14.5%	13.7%	12.4%	12.6%	20.3%	19.5%	20.3%	16.2%
QE2 Min	-0.9%	-0.8%	-0.1%	-1.2%	0.0%	0.0%	0.0%	-0.4%
QE1	25.6%	33.2%	65.8%	26.0%	58.0%	45.9%	47.3%	43.1%
QE1 Max	25.6%	33.2%	65.8%	26.0%	58.0%	45.9%	47.3%	43.1%
QE1 Min	-23.3%	-22.0%	-9.6%	-23.4%	-18.1%	-25.0%	-23.9%	-20.7%
QE Avg.	17.1%	20.9%	29.3%	16.9%	32.9%	30.5%	29.1%	25.2%
QE Avg. Max	19.5%	23.5%	32.6%	19.4%	36.2%	33.7%	33.0%	28.3%
QE Avg. Min	-10.5%	-9.9%	-7.1%	-10.9%	-7.8%	-11.2%	-11.0%	-9.8%
Average vs. S&P 500	-3.9%	0.0%	8.4%	-4.0%	11.9%	9.5%	8.2%	4.3%

Equity Factors	
Growth	Value
21.4%	26.3%
21.4%	26.3%
-7.6%	-6.0%
5.4%	6.7%
12.5%	15.0%
-0.1%	-1.6%
38.9%	26.9%
38.9%	26.9%
-14.4%	-29.8%
21.9%	20.0%
24.3%	22.7%
-7.3%	-12.5%
1.0%	-1.0%

Equity Indexes - Annualized and Normalized Returns per $100bn of QE								
	Large Cap Dow Jones	Large Cap S&P 500	Large Cap NASDAQ	Large Cap S&P 100	Mid Cap S&P 400	Small Cap S&P 600	Small Cap Russell 2k	All Equity
QE3	1.34%	1.72%	1.43%	1.44%	2.18%	2.56%	2.28%	1.85%
QE2	1.83%	1.51%	0.64%	1.24%	2.67%	2.52%	2.20%	1.80%
QE1	1.42%	1.82%	3.45%	1.44%	3.07%	2.47%	2.54%	2.33%
QE Avg.	1.53%	1.68%	1.84%	1.38%	2.64%	2.52%	2.34%	1.99%

Equity Factors	
Growth	Value
1.56%	1.91%
1.35%	1.69%
2.12%	1.49%
1.68%	1.70%

S&P Equity Sector Returns											
	Staples	Utilities	Financials	Industrials	Energy	Health Care	Comm.	Discret.	Technology	Real Estate	Materials
QE3	19.4%	3.9%	37.5%	36.2%	15.4%	36.8%	-0.7%	40.2%	9.1%	0.2%	19.8%
QE3 Max	20.6%	12.5%	37.6%	36.3%	15.4%	36.8%	6.5%	40.2%	9.7%	18.4%	21.4%
QE3 Min	-4.3%	-6.9%	-2.3%	-3.6%	-8.1%	-3.5%	-9.9%	-3.5%	-13.0%	-2.9%	-5.8%
QE2	6.1%	5.9%	-0.3%	9.3%	13.8%	12.4%	6.8%	6.6%	-0.6%	13.6%	7.2%
QE2 Max	11.6%	9.7%	15.9%	18.8%	27.4%	16.4%	11.1%	12.3%	11.9%	19.8%	16.3%
QE2 Min	-1.1%	-1.0%	-2.5%	-0.3%	-1.1%	-1.2%	-1.0%	0.0%	-0.6%	0.0%	-1.0%
QE1	21.5%	5.3%	34.2%	38.8%	17.8%	26.8%	0.4%	58.1%	69.2%	42.1%	50.8%
QE1 Max	21.5%	10.5%	34.2%	38.8%	26.3%	28.3%	5.9%	58.2%	69.2%	42.6%	52.6%
QE1 Min	-14.7%	-19.5%	-49.4%	-32.5%	-13.5%	-12.5%	-15.9%	-22.8%	-8.2%	-41.1%	-20.4%
QE Avg.	15.6%	5.1%	23.8%	28.1%	15.7%	25.4%	2.2%	35.0%	25.9%	18.6%	25.9%
QE Avg. Max	17.9%	10.9%	29.2%	31.3%	23.0%	27.2%	7.9%	36.9%	30.2%	27.0%	30.1%
QE Avg. Min	-6.7%	-9.1%	-18.1%	-12.1%	-7.6%	-5.7%	-8.9%	-8.8%	-7.2%	-14.7%	-9.1%
Avg vs. S&P 500	-5.3%	-15.9%	2.9%	7.2%	-5.3%	4.4%	-18.8%	14.0%	5.0%	-2.3%	5.0%

S&P Equity Sector Returns - Annualized and Normalized Retruns per $100bn of QE											
	Staples	Utilities	Financials	Industrials	Energy	Health Care	Comm.	Discret.	Technology	Real Estate	Materials
QE3	1.41%	0.29%	2.70%	2.61%	1.13%	2.65%	-0.05%	2.89%	0.67%	0.02%	1.44%
QE2	1.54%	1.49%	-0.09%	2.35%	3.52%	3.17%	1.71%	1.66%	-0.14%	3.47%	1.82%
QE1	1.20%	0.30%	1.87%	2.11%	1.00%	1.48%	0.02%	3.08%	3.61%	2.28%	2.72%
QE Avg.	1.38%	0.69%	1.50%	2.36%	1.88%	2.44%	0.56%	2.54%	1.38%	1.92%	1.99%

Treasury Bonds and Commodities Returns							
	2yr*	10yr*	30yr*	Copper	Crude Oil	Gold	Silver
QE3	0.02	0.99	0.89	-15.5%	2.1%	-29.9%	-42.5%
QE3 Max	0.20	1.18	0.92	0.0%	19.0%	0.2%	0.0%
QE3 Min	(0.05)	(0.17)	(0.21)	-19.8%	-8.6%	-31.7%	-45.8%
QE2	(0.13)	0.16	(0.08)	5.4%	9.6%	12.7%	37.8%
QE2 Max	0.33	0.85	0.44	17.6%	34.2%	14.0%	87.3%
QE2 Min	(0.13)	-	(0.10)	-3.7%	-4.0%	-1.8%	0.0%
QE1	0.12	1.14	1.62	150.4%	96.0%	47.1%	79.7%
QE1 Max	0.38	1.15	1.62	151.1%	102.8%	56.5%	96.7%
QE1 Min	(0.24)	(0.58)	(0.58)	-5.9%	-17.0%	0.0%	0.0%
QE Avg.	0.00	0.76	0.81	46.8%	35.9%	10.0%	25.0%
QE Avg. Max	0.30	1.06	1.00	56.2%	52.0%	23.5%	61.4%
QE Avg. Min	(0.14)	(0.25)	(0.30)	-9.8%	-9.9%	-11.2%	-15.3%
Avg vs. S&P 500	n/a	n/a	n/a	25.8%	15.0%	-11.0%	4.1%

* Change in yield

Trsy Bonds & Commodities Returns - Ann. and Normalized Returns per $100bn of QE							
	2yr*	10yr*	30yr*	Copper	Crude Oil	Gold	Silver
QE3	0.00	0.07	0.06	-1.17%	0.16%	-2.30%	-3.33%
QE2	(0.03)	0.04	(0.02)	1.34%	2.43%	3.23%	10.17%
QE1	0.01	0.06	0.08	7.21%	4.86%	2.53%	4.11%
QE Avg.	(0.01)	0.06	0.04	2.46%	2.48%	1.15%	3.65%

QE 4 potential returns

If we assume that assets will perform similarly under QE 4, we can easily forecast returns using the normalized data from above. The following three tables show these forecasts. Below the tables are rankings by asset class as well as in aggregate. For purposes of this exercise, we assume, based on the Fed?s guidance, that they will purchase $60 billion a month for six months ($360 billion) of U.S. Treasury Bills.

Equity Indexes - Forecasted Annualized Returns Based on PRIOR QE								
	Large Cap Dow Jones	Large Cap S&P 500	Large Cap NASDAQ	Large Cap S&P 100	Mid Cap S&P 400	Small Cap S&P 600	Small Cap Russell 2k	All Equity
Forecasted QE 4	5.35%	5.89%	6.44%	4.81%	9.25%	8.82%	8.18%	6.98%

Equity Factors	
Growth	Value
5.87%	5.94%

S&P Equity Sector Returns - Forecasted Annualized Returns Based on PRIOR QE										
	Staples	Utilities	Financials	Industrials	Energy	Health Care	Comm.	Discret.	Technology	Real Estate	Materials
Forecasted QE 4	4.84%	2.43%	5.24%	8.24%	6.60%	8.52%	1.96%	8.89%	4.84%	6.72%	6.97%

Trsy Bonds & Commodities Returns - Forecasted Ann. Returns Based on PRIOR QE							
	2yr*	10yr*	30yr*	Copper	Crude Oil	Gold	Silver
Forecasted QE 4	(0.03)	0.19	0.14	8.61%	8.68%	4.04%	12.78%

Equity Index	QE4 Expected Return	vs. S&P 500	Index Rank	Total Rank
S&P 400	9.25%	3.35%	1	2
S&P 600	8.82%	2.92%	2	4
Russell 2k	8.18%	2.29%	3	9
All Equity Avg.	6.98%	1.08%	4	10
NASDAQ	6.44%	0.55%	5	14
Value	5.94%	0.04%	6	15
S&P 500	5.89%	-	7	16
Growth	5.87%	-0.03%	8	17
Dow Jones	5.35%	-0.54%	9	18
S&P 100	4.81%	-1.08%	10	22

Equity Sector	QE4 Expected Return	vs. S&P 500	Sector Rank	Total Rank
Discret.	8.89%	3.00%	1	3
Health Care	8.52%	2.63%	2	7
Industrials	8.24%	2.35%	3	8
Materials	6.97%	1.08%	4	11
Real Estate	6.72%	0.83%	5	12
Energy	6.60%	0.70%	6	13
Financials	5.24%	-0.66%	7	19
Staples	4.84%	-1.05%	8	20
Technology	4.84%	-1.06%	9	21
Utilities	2.43%	-3.46%	10	24
Comm.	1.96%	-3.94%	11	25

Treasury & Commodities	QE4 Expected Return	vs. S&P 500	Commodity Rank	Total Rank
2yr*	(0.03)	n/a	n/a	n/a
10yr*	0.19	n/a	n/a	n/a
30yr*	0.14	n/a	n/a	n/a
Silver	12.78%	6.88%	1	1
Crude Oil	8.68%	2.79%	2	5
Copper	8.61%	2.72%	3	6
Gold	4.04%	-1.85%	4	23

Takeaways

The following list provides a summarization of the tables.

- Higher volatility and higher beta equity indexes generally outperformed during the first three rounds of QE.
- Defensive equity sectors underperformed during QE.
- On average, growth stocks slightly outperformed value stocks during QE. Over the last decade, inclusive of non-QE periods, growth stocks have significantly outperformed value stocks.
- Longer-term bond yields generally rose while shorter-term yields were flat, resulting in steeper yield curves in all three instances.
- Copper, crude oil, and silver outperformed the S&P 500, although the exceptional returns primarily occurred during QE 1 for copper and crude and QE 1 and 2 for Silver.
- On a normalized basis, Silver?s 10.17% return per $100bn in QE 2, is head and shoulders above all other normalized returns in all three prior instances of QE.
- In general, assets were at or near their peak returns as QE 1 and 3 ended. During QE 2, a significant percentage of early gains were relinquished before QE ended.
- QE 2 was much shorter in duration and involved significantly fewer purchases by the Fed.
- The expected top five performers during QE4 on a normalized basis from highest to lowest are: Silver, S&P 400, Discretionary stocks, S&P 600, and Crude Oil.
- Projected returns for QE 4 are about two-thirds lower than the average of prior QE. The lesser expectations are, in large part, a function of our assumption of a smaller size for QE4. If the actual amount of QE 4 is larger than current expectations, the forecasts will rise.

QE, but in a different environment

While it is tempting to use the tables above and assume the future will look like the past, we would be remiss if we didn?t point out that the current environment surrounding QE 4 is different from prior QE periods. The following bullet points highlight some of the more important differences.

- As currently planned, the Fed will only buy Treasury Bills during QE 4, while the other QE programs included the purchase of both short and long term Treasury securities as well as mortgages backed securities and agency debt.
- Fed Funds are currently targeted at 1.75-2.00%, leaving the Fed multiple opportunities to reduce rates during QE 4. In the other instances of QE, the Fed Funds rate was pegged at zero.
- QE 4 is intended to provide the banking system ***needed*** bank reserves to fill the apparent shortfall evidenced by high overnight repo funding rates in September 2019. Prior instances

of QE, especially the second and third programs, supplied banks with truly ***excess*** reserves. These excess reserves helped fuel asset prices.
- Equity valuations are significantly higher today than during QE 1, 2, and 3.
- The amount of government and corporate debt outstanding is much higher today, especially as compared with the QE 1 and 2 timeframes.
- Having achieved a record-breaking duration, the current economic expansion is old and best described as ?late-cycle?.

D&#2013265929;j&#2013265920; vu all over again?

The prior QE operations helped asset prices for three reasons.

- The Fed removed a significant amount of securities from the market, which forced investors to buy other assets. Because the securities removed were the least risky available in the market, investors, in general, moved into riskier assets. This had a circular effect pushing investors further and further into riskier assets.
- QE 4 appears to be providing the banks with needed reserves. Assuming that true excess reserves in the system do not rise sharply, as they did in prior QE, the banks will probably not use these reserves for proprietary trading and investing.
- Because the Fed is only purchasing Treasury Bills, the boost of liquidity and reserves is relatively temporary and will only be in the banking system for months, not years or even decades like QE 1, 2, and 3.

Will QE 4 have the same effect on asset prices as QE 1, 2, and 3?

Will the bullish market spirits that persisted during prior episodes of QE emerge again during QE 4?

We do not have the answers, but we caution that this version of QE is different for the reasons pointed out above. That said, QE 4 can certainly morph into something bigger and more akin to prior QE. The Fed can continue this round beyond the second quarter of 2020, an end date they provided in their recent announcement. They can also buy more securities than they currently allude to or extend their purchases to longer maturity Treasuries or both. **If the economy stumbles, the Fed will find the justification to expand QE4 into whatever they wish.**

The Fed is sensitive to market returns, and while they may not want excessive valuations to keep rising, they will do anything in their power to stop valuations from returning to more normal levels. **We do not think investors can blindly buy on QE 4, as the various wrinkles in Fed execution and the environment leave too many unanswered questions.** Investors will need to closely follow Fed meetings and Fed speakers for clues on expectations and guidance around QE 4.

The framework above should afford the basis for critical evaluation and prudent decision-making. The main consideration of this analysis is the benchmark it provides for asset prices going forward. Should the market disappoint despite QE 4 that would be a critically important contrarian signal.