

# Let's Go for a Hike!

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## Fed Rate Hikes – The Past 30 Years

In her recent testimony, Federal Reserve Chairwoman Janet Yellen indicated:

- The Fed is likely to raise rates sometime this year, if the economy evolves as they expect... *thereby beginning to normalize the stance of monetary policy.*
- They will determine the timing of the initial increase depending on the Fed's assessment of realized and expected progress toward its *objectives of maximum employment and 2% inflation.*
- The initial step to raise rates should not be overemphasized. *What matters is the entire expected path of interest rates, not any particular move, including the initial increase.*

So, here we are parsing the Chairwoman's testimony and trying to divine when the next increase will occur, consensus seems to be September. Meanwhile, Ms. Yellen tells us it doesn't matter, and investors worry that the first rate increase in almost a decade will presage havoc on their investment portfolios. Rather than getting caught up in the drama, we thought we would let the data do some talking:

| History of Federal Reserve Rate Hikes - Last 30 Years |                      |        |           |            |                 |             |             |             |
|-------------------------------------------------------|----------------------|--------|-----------|------------|-----------------|-------------|-------------|-------------|
| Rate Hike Period                                      |                      |        |           |            | Fed Funds Rate% |             |             |             |
| #                                                     | Start                | End    | Length    | # of Hikes | Starting        | Ending      | Change      | Avg Change  |
| 1                                                     | Aug-85               | Dec-85 | 4         | 1          | 7.75            | 8.00        | 0.25        | 0.25        |
| 2                                                     | May-86               | Jul-86 | 2         | 1          | 6.75            | 6.88        | 0.13        | 0.13        |
| 3                                                     | Dec-86               | Oct-87 | 10        | 7          | 5.88            | 7.25        | 1.37        | 0.20        |
| 4                                                     | Mar-88               | Jun-89 | 15        | 8          | 6.50            | 9.75        | 3.25        | 0.41        |
| 5                                                     | Feb-94               | Jul-95 | 17        | 7          | 3.00            | 6.00        | 3.00        | 0.43        |
| 6                                                     | Mar-97               | Sep-98 | 18        | 1          | 5.25            | 5.50        | 0.25        | 0.25        |
| 7                                                     | Jun-99               | Jan-01 | 19        | 6          | 4.75            | 6.50        | 1.75        | 0.29        |
| 8                                                     | Jun-04               | Sep-07 | 38        | 17         | 1.00            | 5.25        | 4.25        | 0.25        |
| Median                                                | (#hikes=1)           |        | 4         | 1          | 6.75            | 6.88        | 0.25        | 0.25        |
| <b>Median</b>                                         | <b>(#hikes&gt;1)</b> |        | <b>17</b> | <b>7</b>   | <b>4.75</b>     | <b>6.50</b> | <b>3.00</b> | <b>0.29</b> |
| Median                                                | (all)                |        | 16        | 6.5        | 5.57            | 6.69        | 1.56        | 0.25        |

Over the past 30 years, there were eight distinct rate hike periods, with length of each tightening period defined by the month of the initial rate hike and lasting until the month the Fed reverses policy and cuts rates. There were three periods where the Fed hiked rates just once before reversing policy. More relevant to today are the periods where there was a rate hike cycle with multiple hikes over time... as Ms. Yellen is telling us in her testimony, the entire rate cycle is what is important. So we present the data with summaries for all tightening periods, and then separately for periods with just one hike (#hikes=1) and periods with multiple hikes (#hikes>1).

Let's go right to the question in the hearts of investor: "What does this mean for my investments?" In the tables that follow, U.S. stocks are represented by the Russell 3000 Index, foreign stocks by the MSCI All Country World Index excluding the U.S., and the balanced portfolio reflects our Pure Gamma Balanced allocation – a broad 50/50 allocation to equities and fixed income where the 50% equity allocation is biased toward U.S. stocks with a 43% weight, while foreign stocks have just a 7% weight.

| Return Impact of Federal Reserve Rate Hikes - Last 30 Years |          |        |        |            |                                      |        |         |          |
|-------------------------------------------------------------|----------|--------|--------|------------|--------------------------------------|--------|---------|----------|
| Rate Hike Period                                            |          |        |        |            | Returns (%) in Month of Initial Hike |        |         |          |
| #                                                           | Start    | End    | Length | # of Hikes | 7-10 Year                            | U.S.   | Foreign | Balanced |
|                                                             |          |        |        |            | Govt Bonds                           | Stocks | Stocks  | 50S/50B  |
| 1                                                           | Aug-85   | Dec-85 | 4      | 1          | 2.2                                  | (0.4)  | 3.2     | 1.1      |
| 2                                                           | May-86   | Jul-86 | 2      | 1          | (3.5)                                | 5.2    | (4.4)   | 0.3      |
| 3                                                           | Dec-86   | Oct-87 | 10     | 7          | 0.1                                  | (2.7)  | 5.3     | (0.7)    |
| 4                                                           | Mar-88   | Jun-89 | 15     | 8          | (1.7)                                | (2.1)  | 6.3     | (1.2)    |
| 5                                                           | Feb-94   | Jul-95 | 17     | 7          | (3.0)                                | (2.4)  | (0.8)   | (2.5)    |
| 6                                                           | Mar-97   | Sep-98 | 18     | 1          | (1.6)                                | (4.5)  | (0.2)   | (2.7)    |
| 7                                                           | Jun-99   | Jan-01 | 19     | 6          | (0.5)                                | 5.1    | 4.7     | 2.3      |
| 8                                                           | Jun-04   | Sep-07 | 38     | 17         | 0.6                                  | 2.0    | 2.2     | 1.3      |
| Average                                                     | #hikes=1 |        | 8.0    | 1.0        | (1.0)                                | 0.1    | (0.5)   | (0.4)    |
| Average                                                     | #hikes>1 |        | 19.8   | 9.0        | (0.9)                                | (0.0)  | 3.5     | (0.2)    |
| Average                                                     | (all)    |        | 15.4   | 6.0        | (0.9)                                | 0.0    | 2.0     | (0.3)    |
|                                                             |          |        |        | # Up       | 3                                    | 3      | 5       | 4        |
|                                                             |          |        |        | # Down     | 5                                    | 5      | 3       | 4        |

In the month of the initial rate hike, as shown above, the results are mixed. The Balanced portfolio was up as many times it was down, with the average across all tightening periods being down just 0.3%. U.S. stocks, on average, were flat but they fell 5 out of 8 times and worst case was down 4.5%, a big number for single month. The surprise was foreign stocks, which won more than they lost and were up on average by 2 to 3.5%, depending on which set you look at. Bonds performed the worst, as expected, falling 5 out of 8 times with an average loss of 0.9% – not too much to be concerned about. The worst case for bonds was down 3%, a lot for a single month, but let's see how this evolves.

Six months after the initial hike, as shown below, U.S. stocks are up across all periods, as is the balanced portfolio. Foreign stocks had one down period, but the highest returns on average, and some tightening episodes with very large six month returns. Bonds had positive returns more than not, and on average were positive.

| Return Impact of Federal Reserve Rate Hikes - Last 30 Years |          |        |        |            |                                         |        |         |          |
|-------------------------------------------------------------|----------|--------|--------|------------|-----------------------------------------|--------|---------|----------|
| Rate Hike Period                                            |          |        |        |            | Returns (%) 6 Months after Initial Hike |        |         |          |
| #                                                           | Start    | End    | Length | # of Hikes | 7-10 Year                               | U.S.   | Foreign | Balanced |
|                                                             |          |        |        |            | Govt Bonds                              | Stocks | Stocks  | 50S/50B  |
| 1                                                           | Aug-85   | Dec-85 | 4      | 1          | 17.4                                    | 22.4   | 40.6    | 20.9     |
| 2                                                           | May-86   | Jul-86 | 2      | 1          | 10.1                                    | 0.3    | 21.9    | 6.6      |
| 3                                                           | Dec-86   | Oct-87 | 10     | 7          | (2.5)                                   | 24.7   | 32.1    | 11.2     |
| 4                                                           | Mar-88   | Jun-89 | 15     | 8          | 2.8                                     | 7.0    | (3.4)   | 4.2      |
| 5                                                           | Feb-94   | Jul-95 | 17     | 7          | (2.6)                                   | 2.3    | 4.4     | 0.1      |
| 6                                                           | Mar-97   | Sep-98 | 18     | 1          | 8.2                                     | 27.7   | 11.9    | 16.5     |
| 7                                                           | Jun-99   | Jan-01 | 19     | 6          | (0.7)                                   | 8.6    | 21.9    | 4.9      |
| 8                                                           | Jun-04   | Sep-07 | 38     | 17         | 4.8                                     | 8.1    | 16.6    | 7.0      |
| Average                                                     | #hikes=1 |        | 8.0    | 1.0        | 11.9                                    | 16.8   | 24.8    | 14.7     |
| Average                                                     | #hikes>1 |        | 19.8   | 9.0        | 0.4                                     | 10.1   | 14.3    | 5.5      |
| Average                                                     | (all)    |        | 15.4   | 6.0        | 4.7                                     | 12.6   | 18.2    | 8.9      |
|                                                             |          |        |        | # Up       | 5                                       | 8      | 7       | 8        |
|                                                             |          |        |        | # Down     | 3                                       | 0      | 1       | 0        |

| Return Impact of Federal Reserve Rate Hikes - Last 30 Years |            |        |        |            |                                          |        |         |          |  |
|-------------------------------------------------------------|------------|--------|--------|------------|------------------------------------------|--------|---------|----------|--|
| Rate Hike Period                                            |            |        |        |            | Returns (%) 12 Months after Initial Hike |        |         |          |  |
| #                                                           | Start      | End    | Length | # of Hikes | 7-10 Year                                | U.S.   | Foreign | Balanced |  |
|                                                             |            |        |        |            | Govt Bonds                               | Stocks | Stocks  | 50S/50B  |  |
| 1                                                           | Aug-85     | Dec-85 | 4      | 1          | 30.4                                     | 37.2   | 103.7   | 37.5     |  |
| 2                                                           | May-86     | Jul-86 | 2      | 1          | 6.3                                      | 16.4   | 75.1    | 15.0     |  |
| 3                                                           | Dec-86     | Oct-87 | 10     | 7          | (0.7)                                    | 1.9    | 24.9    | 3.7      |  |
| 4                                                           | Mar-88     | Jun-89 | 15     | 8          | 4.2                                      | 17.3   | 11.8    | 10.4     |  |
| 5                                                           | Feb-94     | Jul-95 | 17     | 7          | 0.7                                      | 5.9    | (5.7)   | 2.6      |  |
| 6                                                           | Mar-97     | Sep-98 | 18     | 1          | 14.2                                     | 47.7   | 16.3    | 27.9     |  |
| 7                                                           | Jun-99     | Jan-01 | 19     | 6          | 4.5                                      | 9.6    | 18.1    | 7.8      |  |
| 8                                                           | Jun-04     | Sep-07 | 38     | 17         | 8.4                                      | 8.1    | 17.0    | 8.9      |  |
| Average                                                     | (#hikes=1) |        | 8.0    | 1.0        | 17.0                                     | 33.8   | 65.0    | 26.8     |  |
| Average                                                     | (#hikes>1) |        | 19.8   | 9.0        | 3.4                                      | 8.6    | 13.2    | 6.7      |  |
| Average                                                     | (all)      |        | 15.4   | 6.0        | 8.5                                      | 18.0   | 32.6    | 14.2     |  |
|                                                             |            |        |        | # Up       | 7                                        | 8      | 7       | 8        |  |
|                                                             |            |        |        | # Down     | 1                                        | 0      | 1       | 0        |  |

As shown in the table above, twelve months later, U.S. stocks were up in every case, as was the balanced portfolio. Bonds and foreign stocks were down in just one tightening cycle. On average, both bonds and foreign stocks were up, and foreign stocks significantly outperformed both U.S. stocks and bonds. Overall, the median results over twelve months are within the realm normalcy for the for the multiple rate hike periods and excellent for the single hike periods.

To enable investor choice with regard to the allocation strategy tied to their financial plans, we offer several allocation alternatives in our Principled Wealth Solutions lineup that is tied to our planning services and patented planning software, *Financeware*.

- **Domestic Core – Pure Gamma:** The Pure Gamma 50/50 Stock/Bond portfolio is shown in the above tables. This allocation model use 7-10 year Treasuries for fixed income, and broad market low-cost ETFs to minimize costs and managed tax consequences. In all, there are just three ETFs in this strategy. It is not domestic only, but domestic biased, with 14% of the equities allocated to foreign stocks – both developed and emerging.
- **Domestic Core:** This is a more conventional allocation utilizing a diversified fixed income benchmark that includes mortgages and credits along with the full spectrum of government securities. It is also domestic biased with 14% of equities allocated to foreign markets, but excludes emerging markets, whereas Pure Gamma includes them.
- **Domestic Core-Plus:** Adds high yield bonds, emerging market equities, REITS and commodities to the Domestic Core model.
- **Global Core:** Same asset classes as Domestic core; however, at 44% of total equities, the foreign weight, is closer to but still below the global market weight for foreign stocks.
- **Global Core-Plus:** Adds high yield bonds, emerging market equities, REITS and commodities to the Global Core model.

The impact of the Fed tightening cycles on the additional four allocations is shown on the next page using the Balanced (50/50) allocation. Overall, all allocations were up twelve months after the initial hike. Returns for the multiple hike episodes were reasonable, and for all episodes, returns were higher than normal for a Balanced allocation. The “Plus” asset classes – emerging market equities, high yield bonds, commodities and REITS – added at the margin for the multiple hike episodes, but lagged in the single hike episodes. The consistent winner was a greater allocation to non-U.S. stocks, as reflected in the more global oriented allocations.

| Return Impact of Federal Reserve Rate Hikes - Last 30 Years |        |        |        |            |                                          |                    |             |                  |            |            |
|-------------------------------------------------------------|--------|--------|--------|------------|------------------------------------------|--------------------|-------------|------------------|------------|------------|
| Rate Hike Period                                            |        |        |        |            | Returns (%) 12 Months after Initial Hike |                    |             |                  |            |            |
| #                                                           | Start  | End    | Length | # of Hikes | Domestic Core                            | Domestic Core Plus | Global Core | Global Core Plus |            |            |
| 1                                                           | Aug-85 | Dec-85 | 4      | 1          | 33.2                                     | 29.2               | 41.5        | 31.6             |            |            |
| 2                                                           | May-86 | Jul-86 | 2      | 1          | 16.3                                     | 14.5               | 23.5        | 17.3             |            |            |
| 3                                                           | Dec-86 | Oct-87 | 10     | 7          | 6.0                                      | 5.1                | 9.0         | 6.5              |            |            |
| 4                                                           | Mar-88 | Jun-89 | 15     | 8          | 10.9                                     | 11.4               | 10.2        | 11.8             |            |            |
| 5                                                           | Feb-94 | Jul-95 | 17     | 7          | 3.3                                      | 2.3                | 1.8         | 0.3              |            |            |
| 6                                                           | Mar-97 | Sep-98 | 18     | 1          | 26.6                                     | 23.4               | 22.7        | 18.5             |            |            |
| 7                                                           | Jun-99 | Jan-01 | 19     | 6          | 8.0                                      | 8.0                | 9.1         | 8.7              |            |            |
| 8                                                           | Jun-04 | Sep-07 | 38     | 17         | 7.7                                      | 10.1               | 8.7         | 11.8             |            |            |
| Average (#hikes=1)                                          |        |        |        |            | 8.0                                      | 1.0                | 25.3        | 22.3             | 29.2       | 22.5       |
| <b>Average (#hikes&gt;1)</b>                                |        |        |        |            | <b>19.8</b>                              | <b>9.0</b>         | <b>7.2</b>  | <b>7.4</b>       | <b>7.7</b> | <b>7.8</b> |
| Average (all)                                               |        |        |        |            | 15.4                                     | 6.0                | 14.0        | 13.0             | 15.8       | 13.3       |
|                                                             |        |        |        |            |                                          |                    |             |                  |            |            |
|                                                             |        |        |        |            | # Up                                     | 8                  | 8           | 8                | 8          | 8          |
|                                                             |        |        |        |            | # Down                                   | 0                  | 0           | 0                | 0          | 0          |

#### Summary:

The above analysis of Fed rate hikes over the past 30 years suggests that investors need not worry that the anticipated upcoming Fed tightening cycle will wreak havoc on their investment portfolios. Although the ride may be bumpy to start, within twelve months, the five balanced allocations we studied all produce positive and reasonable returns.

Of course, past performance is not a guarantee of future results. While we titled this article “Let’s Go for a Hike” since the data suggest that performance over the twelve months following an initial rate hike was reasonably good on average, the number of episodes available do not offer a level of statistical significance. Areas for further research include analysis of additional economic conditions impacted by a tightening cycle, including what a normalized stance of monetary policy looks like if the economy progresses with Fed’s expectations.

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*Data sources include Bloomberg, MPI Stylus and Wealthcare.*

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