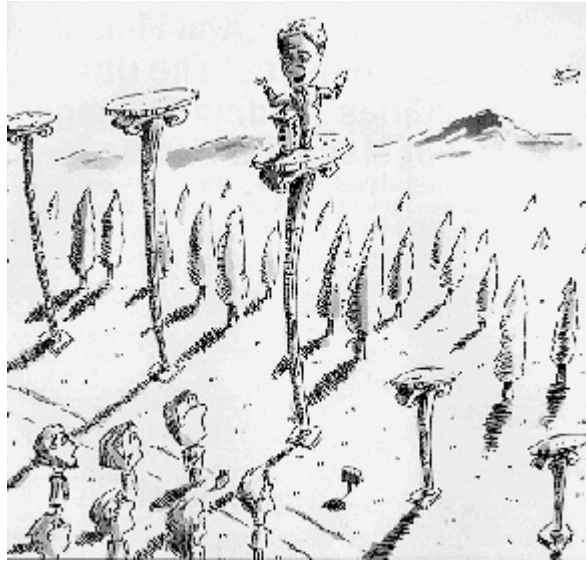


# The Eight-Year Presidential Election Pattern

by Adam White



*That seasonal patterns exist cannot be denied. But there may be patterns within those patterns, depending on how you look at them. The four-year Presidential cycle is a prime example — or are we only looking at half the pattern there? Here's a new look at the Presidential cycle.*

People plan, project and predict the future using past trends in most everything they do, from whether to grab an umbrella in the morning all the way to timing a turn through oncoming traffic. But how far can the practice of relying on past trends be taken when sizing up the future of the stock market? Many interesting historical patterns seem to abound: the Presidential election cycle, the decennial pattern, the Monday effect and so on. The key for the investor, however, is to determine which of these patterns are valid enough to base at least part of one's investing decisions on.

Let us look at two variations of the Presidential election pattern, the traditional four-year pattern and an eight-year pattern. Let's look at two subjects: Introducing the eight-year pattern and offering a simple means by which to measure the validity of any historical pattern.

## JUSTIFYING PATTERNS

Most stock market investors are familiar with the four-year Presidential election cycle. This pattern suggests that the two years leading up to a Presidential election are generally better years for investing than the two years that follow. The underlying rationale is that the political party in power wants the economy and market to do well before the next election and is willing to apply restrictive economic policies only after the election. This four-year pattern has earned credence over the years partly because of this compelling logic and partly because of its statistical robustness.

This is an important point, as the confidence of any historical pattern must be based either on a logical explanation or reasoning behind the pattern, or on the statistical character of the data that makes up the

pattern. Either line of thought gives us confidence that the current application of the pattern will sufficiently resemble past experiences. With that in mind, then, let's take a brief look at the construction of both the four-year and eight-year Presidential election patterns.

### **THE TWO PATTERNS**

To form the four-year Presidential election pattern, I took 80 years of the annual return of the Dow Jones Industrial Average (DJIA) index, starting from 1912 and continuing to 1992. I then organized them into four columns, each representing a type of year relative to a Presidential election:

- 1 Year before an election
- 2 Year of the election
- 3 Year after the election
- 4 Mid-term year

The 80 years thus form 20 complete trips through the four-year cycle. Over these 80 years, the annual Standard & Poor's 500 index returns have varied from -51.7% to +38.7%, but the average of the four types of years break down as follows:

Pre-election 11.0%

Election 7.0

Post-election 4.7

Mid-term 2.3

**Average 6.3**

The average return of each type of year is close to what was expected. The pre-election and election years are indeed more attractive on average for investors than the post-election and mid-term years are. In my analysis, the mid-term year performed worse than the post-election year. Other studies, however, have found the reverse.

Constructing the eight-year pattern is similar, but the annual returns are organized into eight distinct columns, not four. The average of each column represents the return for each type of year of the pattern. The results were:

- 1 First pre-election year: 16.5%
- 2 First election year: 12.3
- 3 First post election year: 5.7
- 4 First mid-term year: 3.3
- 5 Second pre-election year: 5.5
- 6 Second election year: 1.7
- 7 Second post election year: 3.7
- 8 Second mid-term year: 1.3

Bar charts can help visualize the two patterns. [Figure 1](#) is the traditional four-year pattern shown twice

consecutively, while [Figure 2](#) is the eight-year pattern. Each bar represents the average return of the various types of years of the patterns.

On [Figure 1](#), bar 1 is the pre-election year, bar 2 is the election year, bar 3 is the post-election year and bar 4 is the mid-term year. Bars 5 through 8 are repeats of bars 1 through 4. Note how the four-year pattern forms a neat formation where the average return of each successive year is less than the year before. The pre-election year is the strongest, down to the mid-term year as the weakest.

The eight-year pattern in [Figure 2](#) helps illustrate important differences between the two patterns. The first four years follow the same pattern as the corresponding four-year pattern, but the second four years are different; the returns are less. Year six, the second election year, is unusually weak. Had it been stronger, say an average of 4.9, it would have continued the orderly pattern of progressively weaker years. Finally, the eight-year cycle reveals quite a bit more variation in return (between 16.5 and 1.3) than the four-year pattern (between 11.0 and 2.3).

Seeing the Presidential election pattern in this new way suggests a different interpretation of the data. Rather than a single pattern that repeats each four years, perhaps it should be seen as half of a larger and more meaningful eight-year pattern. Knowing which four-year leg of the larger pattern we are in makes an important difference.

What does this eight-year pattern suggest for the remainder of the 1990s? This year, 1994, is represented by bar 4, suggesting that the past three years, 1990 to 1993, were more favorable than what we can expect from 1994 to 1998. Then according to the pattern, 1999 and 2000 should be the next unusually strong years.

### **THE LIMITATIONS OF PATTERNS**

These sorts of statements can be made only by taking the pattern at face value. Of course, the stock market is not this simple. Historical patterns may be visibly compelling and easy to apply, but they suffer from four important limitations.

The first limitation is that historical patterns can only represent the past. Though the past can be known and expressed with precision, future results can never be known. No matter how helpful a given pattern is at understanding the past, the possibility that the future structure of the pattern could be substantially different always exists.

Second, a historical pattern only represents general tendencies of the data. Although any given type of year is expressed as a single number, it actually represents a wide range of results. For example, look at the summary below and take note of the number of times that each year type of the four-year pattern fell within a certain range of annual return. The point is that the distribution of annual returns is so wide as to make the one average return figure almost meaningless as a guide to specific expectations.

The third limitation to be aware of is that any set of data will produce a pattern. That there is a pattern does not indicate it is meaningful. Patterns can emerge from the data of even totally unrelated phenomena. For example, combining the yearly change in the Arctic bobcat population with the annual change in the price of gold will still produce one distinct and well-formed pattern. A pattern of this kind, obviously, would be meaningless, but simply looking at the pattern itself would not tell us that. Making inferences about the future with historical patterns always requires going beyond the pattern's visible character alone.

The fourth, and final, limitation in using historical patterns is that the interpretation of the pattern is a function of its presentation, not a function of the data. By careful but honest manipulation, the same data can suggest different conclusions. For example, [Figure 3](#) is the eight-year pattern presented a little differently. The eight types of years are still in the same order, but the bars have been shifted forward so that bar 6 now appears as bar 1.

Looking at [Figure 3](#), our mind's eye might favor a different conclusion than those previously. Rather than seeing two four-year patterns, one might now see two abnormally strong years dominating six quite average years. Which of the two interpretations of the pattern is more valid? Clearly, basing our conclusion on presentation alone may be insufficient and misleading.

With these concerns in mind, can we take either the four- and eight-year Presidential election patterns seriously? We turn now to a search to justify the patterns based either on the market's environment or on a statistical study of the relationships of the pattern's data.

#### **PATTERN VALIDITY**

Quite frankly, it is difficult to establish a neat and clean argument for the eight-year pattern based only on actual political or economic factors. Using [Figure 3](#)'s presentation, the pattern must be explained as six average years and two strong years. One answer might involve market valuation; after six average years of price appreciation, the natural growth of earnings, dividends and book values could cause the market to reach undervalued levels.

This sets the scene for the two strong years, which in turn leads to an overvalued market. Overvaluation then sets up on the six average years of price appreciation, and the pattern then repeats. The reader is left to judge the merits of this or similar arguments.

Many sophisticated ways exist to probe data relationships. Here, however, are two simple and intuitive approaches that utilize standard deviation. In an ideal world, a historical pattern would be perfectly strong and uniform, repeating itself over and over. In such a case, the several annual returns that make up each year of the pattern would be identical. The standard deviation of each column of annual returns would therefore be zero.

Conversely, when a pattern is weak and the returns of the years that make up each year of the pattern vary over a wide range, the standard deviation would be high. Thus, we can use the standard deviation of the years that make up each year of the pattern as a measure for the historical consistency of the pattern. The higher the standard deviation, the less consistent that pattern has been, and the lower the standard deviation, the more consistent.

Going a step further, how might the standard deviations of the actual pattern compare with a sampling of the same data divided into four types of years at random? If the Presidential election effect actually has an

impact on the data, its standard deviation should be less than the standard deviation of the same data ordered at random.

I generated two such random reorderings. Many random reorderings would give us a more conclusive picture than just these two, but at least this illustrates the main approach. The results of both the actual pattern and the two randomly produced patterns were as follows:

<b>Year</b>	<b>Actual</b>	<b>Random 1</b>	<b>Random 2</b>
Pre-Election	16.5	12.5	11.9
Election	19.1	21.7	15.1
Post-Election	13.6	14.0	21.0
Mid-Term	15.8	12.1	14.7
<b>Average</b>	<b>16.2</b>	<b>15.1</b>	<b>15.7</b>

Both random samples had slightly lower standard deviations than the actual pattern did. This suggests that the historical Presidential election pattern was less consistent than what would be expected by pure chance and thus is not necessarily intrinsically meaningful.

This same type of analysis was repeated for the eight-year pattern. The results:

<b>Year</b>	<b>Actual</b>	<b>Random 1</b>	<b>Random 2</b>
Pre-Election	10.1	9.0	16.7
Election	15.8	14.4	14.6
Post-Election	15.4	20.0	16.6
Mid-Term	13.4	22.8	21.1
Pre-Election	20.1	12.3	11.3
Election	21.4	20.1	12.0
Post-Election	12.2	16.3	20.0
Mid-Term	18.6	10.9	11.5
<b>Average</b>	<b>15.9</b>	<b>15.7</b>	<b>15.5</b>

The results are probably too similar with which to make any firm conclusions, but once again the historical consistency of the actual pattern was not lower than the two years at random, and therefore there is also room to question the statistical meaningfulness of the eight-year pattern.

The second main way to use standard deviation is to assume that only historical patterns with character and depth Ñ that is, with clear favorable and unfavorable periods Ñ are valuable to the investor. Such a pattern would show a wide variance of yearly returns, and thus, the standard deviation of those returns would be higher than for a pattern that was fairly similar year to year.

Here, a higher standard deviation suggests more meaningfulness. The results for the two patterns and two random reorderings for each were:

<b>Pattern</b>	<b>Four-Year</b>	<b>Eight-Year</b>
Actual	3.4	5.4
Random	6.2	5.1
Random	4.9	6.5
<b>Total average standard deviation: 5.3</b>		

While standard deviation of the actual eight-year pattern was within the bounds of pure chance, the four-year pattern was well below it, another indication that the eight-year perspective might be a more powerful interpretation of the data than the four-year pattern. And even though the four-year pattern is favorable and unfavorable in logical spots, it is far smoother than what could be expected by chance. This line of thinking once again calls into question the statistical meaningfulness of the four-year pattern.

### CONCLUSIONS

A simple and brief analysis of 80 years of DJIA annual returns was sufficient to introduce an eight-year perspective of the familiar Presidential election pattern. The eight-year pattern is different enough from the four-year pattern to deserve attention from investors who use historical patterns.

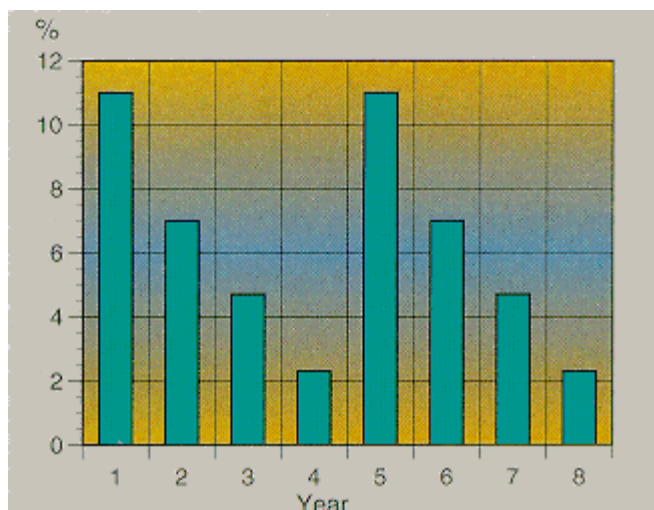
While both the four- and eight-year patterns are visually compelling guides for future stock market prospects, both the natural limitations of historical patterns and a standard deviation analysis suggest both of these patterns must be used with caution by investors looking for an edge.

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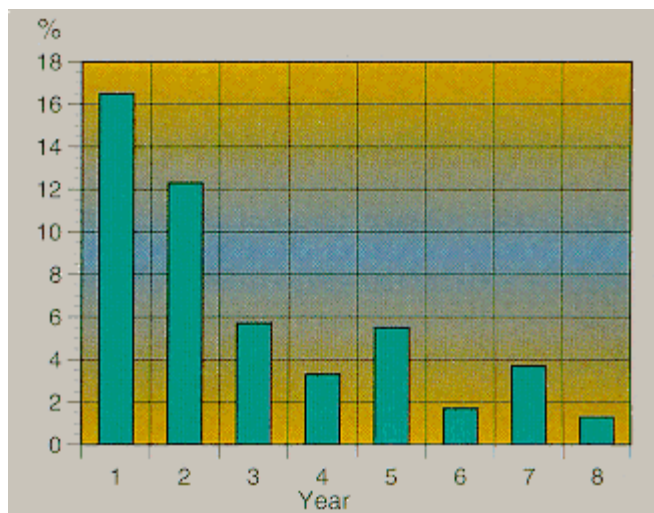
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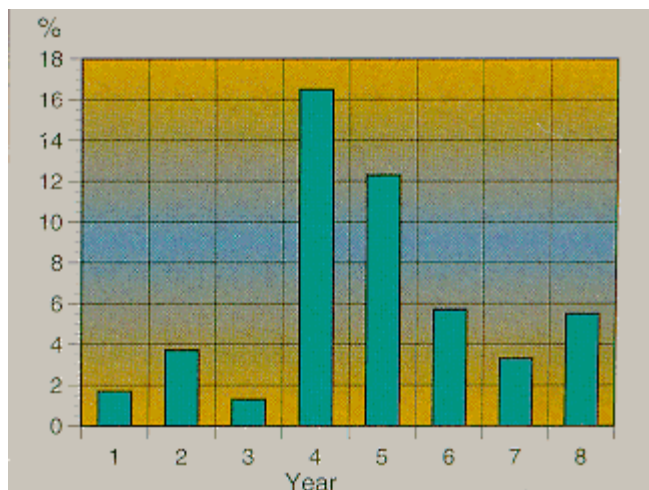
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**FIGURE 1: TWO FOUR-YEAR PATTERNS.** Here's the traditional four-year pattern shown twice consecutively. Bar 1 is the pre-election year, bar 2 is the election year, bar 3 is the post-election year, and bar 4 is the mid-term year. Bars 5 through 8 repeat bars 1 through 4.



**FIGURE 2: ONE EIGHT-YEAR PATTERN.** In the eight-year pattern, the first four years follow the same pattern as the corresponding four-year pattern, but the second four years are different. Most noticeably, the returns are less. And year six, the second election year, is unusually weak.



**FIGURE 3: TWO ABNORMAL YEARS.** Here's the eight-year pattern presented a little differently. The eight types of years are still in the same order but the bars have been shifted forward so that bar 6 now appears as bar 1. Rather than seeing two four-year patterns, one might now see two abnormally strong years dominating six quite average years. Which interpretation is more valid?