The Presidential Term: Is the Third Year the Charm?

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ABSTRACT

This study examines the relationship between security returns and the year of the presidential term. We confirm the existence of a prominent pattern in stock returns relative to the presidential term. Specifically, we show that equities have generally prospered in the second half of a president’s term and especially during the third year. Further analysis reveals evidence that monetary policy actions correspond with the identified return pattern. In particular, Fed policy has generally been significantly more accommodative during the third year of a presidential term. Overall, our evidence strongly supports the view that investors should carefully monitor the actions of policy-makers before making investment decisions that are based on the political calendar.

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The Presidential Term: Is the Third Year the Charm?

The relation between security returns and elections has been a favorite topic of Wall Street pundits for years. Throughout history, a myriad of election characteristics have been tied to the performance of the security markets. One prominent relationship that has been noted by business publications and financial-market commentators is the “3rd year effect” or the “presidential cycle,” which refers to the positive stock-market performance observed during the second half of a presidential term. For example, in a March 2004 *Time Magazine* article, Zweig [2004] notes “…stocks have gained an average of 14.5% in year three of a presidency and 7.7% in year four vs. less than 6% in year one and year two …” Likewise, in a 2004 *US News* article, Pethokouis [2004] suggests that “…a pre-election year is a sure bet.…”

Investment news letters indicate that investment professionals have also recognized the existence of a presidential cycle in stock returns. In 2003, *US Global Investors* issued a special report devoted to the presidential election cycle. Northern Trust, in its *Market Signals* monthly report, June 2004, indicates that stock returns are notably higher in the last two years of a presidential term. In its January 8, 2003 *News & Views*, Smith Barney’s Richie Freeman states “…In terms of the presidential cycle, the third year of a presidential term is historically the strongest for the stock market. …”

A rationale advanced for the presidential cycle is that the return patterns are created by systematic variation in fiscal policy across a president’s term. For example, in a January 2, 2006, *Barron’s* article, Abelson [2006] claims that presidents are “keen on getting the ugly stuff out of the way early in their tenure so they can act expansively the rest of the way.”
He argues that in the latter part of their terms, presidents opportunistically strive to pump up the market with “every means, fair or foul, at their disposal.” Sanford [2005] advocates a similar rationale, and also provides a possible monetary policy dimension to the presidential cycle. In particular, Sanford quotes Bob German, vice-president of managed investment solutions at TD Bank Financial Group, as indicating that the Fed does not want “. . . to be seen as getting in the way of politics during the election cycle.” German claims that if the Fed is “going to pull up rates” it will happen early in a president’s term. Stovall [1992] provides an alternative explanation for the presidential cycle that is unrelated to macroeconomic considerations. Specifically, Stovall suggests that investor optimism is heightened in the latter part of a presidential term as it becomes more apparent that a popular president will be reelected or an unpopular president will be replaced.

We examine security returns relative to the presidential cycle to determine the size of the return patterns and their consistency over time. In addition, we investigate the contention that the return patterns are affiliated with systematic changes in monetary and fiscal policy across the presidential term. We find prominent patterns exist in equity returns relative to the presidential cycle. On average, stock returns are higher in the second half of a president’s term, and are especially pronounced during the third year of a term. Consistent with our conjecture, we find that small cap equities display a much more prominent return pattern than large cap equities. Interestingly, bond returns are generally lower during the third year of a presidential term; however, the return differences for bonds are not statistically significant. Further, we find evidence that the patterns in equity returns are comparable in the first and second half of our sample period, indicating the results are robust across time. Finally, we find support for the contention that the presidential cycle in equity
returns corresponds with comparable patterns in monetary policy measures. Specifically, we find that Fed policy is systematically most accommodative when equity returns are highest, the third year of the presidential term.

RELATED RESEARCH

A prominent body of research examines the relationship between the political party of the president and stock-market performance. For instance, Riley and Luksetich [1980] examine short-term returns around presidential elections and identify negative stock returns associated with presidential elections won by a democrat and positive stock returns associated with elections won by a republican. In contrast, subsequent studies by Huang [1985], Johnson, Chittenden, Jensen [1999], and Santa-Clara and Valkanov [2003] examine long-term stock returns following presidential elections and report evidence supporting the contention that democratic presidents are better for long-term equity returns than republican presidents. Beyer, Jensen, Johnson [2004], however, find that after controlling for monetary policy, party of the president is not significant in explaining equity returns. The authors conclude that previous studies were mis-specified since they failed to control for changes in monetary policy, and thus, the identified relationship between party of the president and stock returns was spurious.

Allvine and O’Neill [1980], Huang [1985], Stovall [1992], and Booth and Booth [2003] identify a presidential cycle in stock returns. In particular, these studies find that equity returns tend to be greater during the final two years of a presidential term relative to

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1 Cooper, McConnell and Ovtchinnikov (2006) confirm that there is not a robust relationship between party of the president and stock returns.
the first two years. Booth and Booth [2003] investigate whether the observed presidential cycle can be attributed to systematic changes in business conditions across the presidential term. The authors conclude that the presidential cycle exists even after controlling for changing business conditions. Thus, their evidence suggests the return patterns are independent of variations in general business conditions. While most proposed explanations for the presidential cycle are based on hypothesized changes in economic conditions, Stovall [1992] suggests that the return patterns displayed across the presidential term are created due to a “pendulum pattern” in the popularity of the president. He attributes the strong market performance in the third and fourth years to an increased likelihood that a popular president will be reelected, while an unpopular president will be turned out.

This paper contributes evidence relevant to several aspects of the relationship between the presidential term and security returns. First, while previous studies have focused exclusively on the returns to a broad equity index, we examine returns for several equity and fixed-income indexes over the presidential term. Based on previous research, we divide the fixed-income market relative to maturity and credit risk and divide the equity market into large cap and small cap equities. Given the strong link between interest rates and fiscal and monetary policy, we believe there is strong justification for evaluating fixed-income returns along with both small and large cap equity returns. Clearly, if the actions of politicians and the Federal Reserve create a presidential cycle in a broad equity index, a more thorough analysis of alternative indices is likely to identify more compelling patterns.

2 Beyer, Jensen and Johnson [2006] show that the relationship between stock returns and political gridlock varies noticeably across stocks of various market capitalizations, while Conover, Jensen, Johnson and Mercer [2005] find that the relationship between monetary conditions and stock returns is dependent on market capitalization.
Second, to examine the robustness, and recent relevance, of the presidential cycle, we divide the sample period into an earlier and later sub-period; and furthermore, we examine returns through the most recent full presidential term, 2004. Finally, we investigate the relationship between the presidential cycle and monetary and fiscal policy developments. This final analysis allows us to determine the extent to which the presidential cycle is consistent with monetary and fiscal policy actions.

SAMPLE AND METHODOLOGY

We evaluate quarterly returns from 1957 through 2004 for two equity indices, three fixed-income indices, and an inflation index. Given prior evidence linking market capitalization with temporal security return patterns, we evaluate both a small cap and a large cap equity index. The fixed-income indices include long-term government and corporate bond indices and a Treasury bill index. Thus, comparisons across the fixed-income indices allow for consideration of changes in credit and maturity spreads across the presidential term. Finally, we report inflation data to allow the reader to assess real returns in addition to the nominal returns that are reported in the exhibits.

We evaluate quarterly returns for each index relative to the four years of the presidential term. In addition, to evaluate the robustness of our findings, we consider two alternative sub-periods, 1957 through 1980 and 1981 through 2004.

In order to assess monetary policy relative to the presidential cycle, we select prominent measures that have been widely used in past studies to identify variations in

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3 The quarterly equity and fixed-income returns are obtained from Ibbotson Associates. Indexes are value weighted and taken directly from the Ibbotson and Associates Stocks, Bonds, Bills, and Inflation yearbook.

4 The presidential calendar data is obtained from the Congressional Quarterly Almanac (2005).
monetary policy. Specifically, we use the federal funds premium to depict monetary conditions in the short-term market, while the Fed’s broad policy stance is gauged by the most recent change in the Fed discount rate. Ho and Saunders [1985], Laurent [1988] and Bernanke and Blinder [1992] support the use of the federal funds premium as a measure that accurately identifies the stringency of Fed monetary policy based on interest rates in the short-term market. Similarly, Jensen, Mercer and Johnson [1996] and Conover, Jensen, Johnson and Mercer [2005] use directional changes in the discount rate to identify broad shifts in Fed policy. Patelis [1997] contends that policy-induced changes in short-term interest rates impact equity risk premiums differently in policy periods that are generally restrictive versus expansive. Thus, to appropriately assess the relationship between Fed monetary policy and security returns, it is necessary to consider both a measure of policy stringency and a broad policy measure. We include both types of monetary policy measures in this analysis.

The primary mechanisms by which the Federal Government provides stimulus to the economy are through its spending and tax policies. In order to gauge the amount of stimulus provided by government actions, our fiscal policy variables are measured as the percent change in Federal Government spending and the percent change in federal tax receipts.5 There exists a well-established relationship between macroeconomic state variables and security returns (Campbell [1999], Cochrane [1996], Fama [1990]), and between fiscal policy variables and macroeconomic variables (Ramey and Shapiro [1997], Blanchard and Perotti [1999]). It is therefore logical to expect security returns may be linked to changes in

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5 The monetary policy data is obtained from the Federal Reserve Statistical Release H.15, Selected Interest Rates, while the fiscal policy data comes from the 2006 DRI Basic Economics database. Federal funds data is available starting in 1954, which restricts our sample start date to the subsequent first full presidential term.
fiscal policy, particularly since elected officials have significant influence over fiscal policy actions.

We evaluate security returns along with fiscal and monetary policy measures over the presidential term to determine whether systematic patterns exist. Difference-in-means tests and the Chi-square test are used to test for the existence of statistically significant patterns in security returns and monetary and fiscal policy measures. In addition, we extend the statistical analysis by estimating a regression to examine the relationship between the presidential cycle and monetary and fiscal policy. The regression allows us to consider the extent to which the presidential cycle in security returns is explained by changes in our monetary and fiscal policy measures. When estimating the regressions, we use the Newey-West (HAC) matrix to augment regression results for heteroskedasticity.

RESULTS

Exhibit 1 reports average equity performance for each year of the presidential term over the 48-year study period. We follow the widely adopted approach of reporting performance data for both large cap and small cap equities. Previous studies (e.g. Gertler and Gilchrist [1994], Beyer, Jensen and Johnson [2006]) suggest that, relative to large cap equities, small caps are more sensitive to changes in political and monetary conditions, thus motivating a separate examination of the two equity indices.

The mean returns reported in Panel A indicate the existence of a prominent pattern in returns relative to the presidential term. Our findings are consistent with previous claims in that the reported returns in the latter half of a presidential term (Year 3 and 4) are noticeably higher than returns during the first two years. A year-by-year analysis of the results,
however, clearly indicates that the return pattern can be primarily attributed to the very prominent returns reported in Year 3. Specifically, Year 3 returns (23.8% for large firms and 38.0% for small firms) dominate the returns in the other three years. The extreme Year 3 return reported for the small cap index is consistent with the contention that small cap equities are more sensitive to the underlying factors that produce the return pattern.

While a presidential cycle in equity returns seems apparent, we employ difference -in-means tests to confirm that the return pattern is statistically significant. The hypotheses tested and the resulting p-values associated with the t-tests are reported at the bottom of Exhibit 1. T-tests confirm that Year 3 returns are significantly higher (at the 1% level) than returns in the other three years for both the large cap and small cap index. Additional t-tests on the large and small cap index confirm that none of the other Years’ returns are consistently significantly different (at the 5% level) from the other three years. Thus, our findings strongly support the view that the presidential cycle is more accurately a “third-year effect.”

Exhibit 1, Panel B indicates that while Year 3 returns dominate the returns reported for the other three years, the variation in returns in Year 3 is about average. Clearly, the higher returns earned in Year 3 are not compensation for a higher level of risk. Interestingly,

6 When relevant, t-tests were performed with a difference-in-variance adjustment. For expositional purposes, the hypotheses and test results are reported for only those cases where statistical significance is confirmed.
7 We also examine equity returns for two alternative time periods, 1957-1980 and 1981-2004. The results indicate similar equity return patterns exist during each sub-period. Specifically, in the first and second sub-period returns for large cap equities across the four year presidential term are -0.68%, 1.82%, 22.08% and 17.49% in the first sub-period, and 14.84%, 8.02%, 25.61% and 9.16% in the second sub-period. As expected, small-cap equities exhibit the same pattern in each sub-period, but with greater magnitude. Due to the similarity in findings across sub-periods and for conciseness purposes, the full results for the sub-periods are not reported, but are available from the authors upon request.
8 In spite of the rather large mean returns reported in Year 4, t-tests indicate that Year 4 returns are not significantly different (at the 5% level) from the returns in Years 1 and 2.
Year 2 reports a below average return and an above average level of risk, thus, on a return per unit of risk basis, Year 2 has clearly been a laggard.

Exhibit 2 reports the performance data for the fixed-income indices, including the inflation index. Panel A presents the mean returns and shows that, in contrast to the equity returns, fixed-income returns are below average in the third year of a presidential term. T-tests, however, indicate that there are no years in which bond returns differ significantly (at the 5% level) from the other years. The standard deviations (in Panel B) indicate that the volatility in fixed-income returns is comparable across the four years of the presidential term. Finally, the inflation index indicates that the average inflation rate is fairly constant across the four years of the term, thus the nominal return pattern reported for the equity indices is very similar to the pattern in real returns.

Exhibit 3 reports monetary and fiscal policy data across the presidential term. The monetary policy measures are reported in Panel A and include both a measure of general Fed policy stance (Expansive Quarters) and a measure of the degree of monetary policy stringency (Mean Federal Funds Premium). As indicated earlier, the policy stance measure follows a well-established past precedent and is based on directional changes in the Fed discount rate. Specifically, a quarter is classified as having an expansive (restrictive) monetary policy if the most recent change in the Fed discount rate was a decrease (increase). The reported value indicates the number of quarters in each year in which the Fed maintained an expansive stance. Since the study period covers 48 years, each of the four years of the presidential term are represented by 12 years or 48 quarters. Our second monetary policy measure, the federal funds premium, is included to indicate the degree of
stringency of Fed policy. The premium is measured as the federal funds rate less the three-month T-bill rate.\(^9\)

The monetary policy measures display patterns that align fairly closely with the equity return patterns identified previously. Specifically, both the broad measure of Fed policy stance and the measure of monetary stringency suggest that Fed policy has generally been most expansive during the third year of a presidential term. In particular, while the Fed’s general policy stance was expansive in 23 of 48 quarters (48% of the time) during Years 1, 2 and 4, Fed policy was expansive in 31 of 48 quarters (65% of the time) during Year 3. Chi-square test results, reported at the bottom of Exhibit 3, confirm that the number of expansive quarters in Year 3 is significantly different from the other three years (\(p\)-value = 0.046). Furthermore, the average federal funds premium in Year 3 is less than half its value in Years 1 and 2, which suggests that the degree of monetary stringency is far more relaxed in Year 3 relative to the first two years. A difference-in-means test, reported at the bottom of Exhibit 3, confirms that the fed funds premium in Year 3 differs significantly from the other three years (\(p\)-value = 0.020). Overall, the evidence in Exhibit 3 indicates that the Fed has traditionally assumed its most expansive policy during the third year of a presidential term.

The fiscal policy measures are reported in Panel B of Exhibit 3. In contrast to the monetary policy measures, variations in the fiscal policy measures do not clearly align with the equity return patterns previously identified. On average, government spending has generally increased at a slower rate in the final two years of a presidential term relative to the first two years, which may indicate some desire to portray fiscal restraint prior to an election. The percentage change in tax receipts is considerably lower in Year 3 relative to the other

\(^{9}\) More exactly, the quarterly values for the federal funds premium are derived as the average monthly premium
three years, which provides some support for the contention that, through tax policy, the federal government provides a fiscal policy stimulus in Year 3. Statistical tests on the fiscal policy measures, however, identify no years for which there is statistical support for the claim that the measures in a specific year are unique from the other three years. Thus, we are unable to find evidence supporting the view that the presidential cycle in stock returns corresponds with detectable changes in fiscal policy.

Of course, measuring policy stimulus is very difficult for a variety of reasons. First, policy stimuli frequently rely on the interaction of several alternative national and international factors. Second, policy stimuli frequently work with considerable lag in affecting the economy. Third, correctly gauging the extent of a stimulus is difficult. For example, a tax decrease (a positive stimulus) may result in an increase in aggregate tax receipts as taxpayers take advantage of the tax benefit. Fourth, the government may shift priorities to provide a stimulus that targets a sector that will have the greatest effect on the economy. For example, by reallocating spending, the government may be able to provide an effective policy stimulus without changing aggregate spending. Overall, one needs to recognize that any monetary or fiscal policy proxy variable is unlikely to accurately capture the economic influence of Federal Reserve and Federal Government policy changes.

In order to more accurately assess the contribution that the monetary and fiscal policy measures have in explaining the presidential cycle, we report (in Exhibit 4) the results of two separate multiple regressions. The results of the first regression are reported on the left side of Exhibit 4. The dependent variable in the first regression is quarterly return, and the independent variable is the Year 3 dummy variable. The results confirm the significant Year
3 effect in equity returns identified in Exhibit 1. Specifically, the Year 3 dummy variable is significant (at the 1% level) for both the large and small cap index. Further, consistent with Exhibit 2 values, the Year 3 dummy is insignificant for the fixed-income indexes.

The objective of the second regression is to determine how much of the third year effect is explained by the variation in monetary and fiscal policy measures. To examine this issue, we perform a two-step regression process. The first step removes the influence of the monetary and fiscal policy measures on quarterly stock returns, while the second step investigates the prominence of the remaining third-year effect. Specifically, the procedure involves a first-step regression that includes quarterly returns as the dependent variable and the two monetary and two fiscal policy measures as independent variables. The residuals from this preliminary regression are then included in the second (reported) regression as the dependent variable, and the independent variable is the Year 3 dummy variable. The results of the second regression are reported on the right side of Exhibit 4. The results indicate that monetary and fiscal policy accounted for a considerable amount of the third-year effect. After removing the influence of the monetary and fiscal policy measures, the Year 3 dummy coefficients dropped substantially (from 0.0348 to 0.0285 for the large cap index and from 0.0557 to 0.0461 for the small cap index).\(^{10}\) Clearly, however, a significant third-year effect still remains after removing the influence of our monetary and fiscal policy measures.

Overall, our findings support the conjecture that monetary and fiscal policy actions contribute to the third-year effect. A significant effect, however, remains even after removing the influence that the monetary and fiscal policy measures have on returns. In

\(^{10}\) The model employed in the first-step regression (to obtain the residuals) included quarterly return as the dependent variable and four independent variables (the two monetary policy variables and the two fiscal policy variables defined previously). In the first-step regression, the two monetary policy measures were significant.
interpreting these findings, our previous caveat regarding monetary and fiscal policy proxy variables is relevant. Specifically, fiscal and monetary policy proxy variables should be viewed as rough indicators of the actions of the Federal Reserve and Federal Government. The fact that we identify systematic patterns in Fed monetary policy that correspond with the third-year effect provides a policy-based explanation for a pattern that has previously been unexplained. Our results should serve as motivation for additional research to determine whether alternative measures of monetary and fiscal policy may explain more of the effect.

SUMMARY AND CONCLUSIONS

We evaluate quarterly returns from 1957 through 2004 and confirm the existence of a prominent presidential cycle in equity returns. In particular, our evidence indicates that equity returns are significantly higher in the final two years of the presidential term relative to the first two years. Returns are shown to be especially pronounced during the third year of the presidential term with small-cap stocks generating an average annual return that exceeds 38%. While equities are shown to prosper during the last half of the presidential term, on average, bond returns are higher (but not statistically higher) during the first two years of the presidential term. Further analysis indicates that equity returns during the third year of the presidential term are dominant in both the first and second half of the sample period, thus supporting the temporal robustness of the third-year effect.

To shed light on possible explanations for the presidential cycle, we evaluate fiscal and monetary policy measures during the presidential term. Our evidence indicates that the presidential cycle is strongly aligned with movements in Federal Reserve monetary policy (at the 5% level) for both equity indexes, whereas the two fiscal policy variables were insignificant.
variables. Thus, our results provide support for the contention that policy changes are instrumental in the identified security-return patterns. A multivariate regression analysis confirms that much of the presidential cycle can be explained by changes in our monetary and fiscal policy proxy variables.

Overall, our evidence confirms the view that effective portfolio strategies require investors to carefully monitor both monetary and fiscal policy developments. While we find a presidential cycle exists in security returns, our evidence also implies that investors could have most effectively capitalized on the pattern by examining the actions of policy-makers.
References


EXHIBIT 1

Equity Returns over the Presidential Term: 1957 thru 2004

<table>
<thead>
<tr>
<th></th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panel A. Mean Annual Returns</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Large Cap</td>
<td>6.87%</td>
<td>4.89%</td>
<td>23.84%</td>
<td>13.27%</td>
<td>12.04%</td>
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<tr>
<td>Small Cap</td>
<td>12.07%</td>
<td>3.39%</td>
<td>38.02%</td>
<td>20.82%</td>
<td>17.93%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panel B. Annual Standard Deviation of Returns</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Large Cap</td>
<td>14.40%</td>
<td>21.15%</td>
<td>15.34%</td>
<td>10.31%</td>
<td>16.01%</td>
</tr>
<tr>
<td>Small Cap</td>
<td>22.27%</td>
<td>26.07%</td>
<td>25.05%</td>
<td>22.46%</td>
<td>24.47%</td>
</tr>
</tbody>
</table>

Significant Difference-in-Means Tests

Large Cap: Ho: $R_3 = R_1$, $R_2$ & $R_4$; P-value = 0.009

Small Cap: Ho: $R_3 = R_1$, $R_2$ & $R_4$; P-value = 0.008

Where $R_t = \text{mean quarterly return in year } t.$
EXHIBIT 2

Fixed-Income Returns over the Presidential Term: 1957 thru 2004

<table>
<thead>
<tr>
<th></th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Panel A. Mean Annual Returns</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Long-term Corporate Bond</td>
<td>7.43%</td>
<td>9.07%</td>
<td>5.58%</td>
<td>8.74%</td>
<td>7.70%</td>
</tr>
<tr>
<td>Long-term T-Bond</td>
<td>7.58%</td>
<td>9.39%</td>
<td>4.14%</td>
<td>8.61%</td>
<td>7.42%</td>
</tr>
<tr>
<td>T-Bill</td>
<td>5.85%</td>
<td>5.45%</td>
<td>5.15%</td>
<td>5.27%</td>
<td>5.43%</td>
</tr>
<tr>
<td>Inflation</td>
<td>4.20%</td>
<td>4.20%</td>
<td>3.99%</td>
<td>4.08%</td>
<td>4.12%</td>
</tr>
<tr>
<td><strong>Panel B. Annual Standard Deviation of Returns</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Long-term Corporate Bond</td>
<td>8.70%</td>
<td>9.94%</td>
<td>8.10%</td>
<td>11.04%</td>
<td>9.46%</td>
</tr>
<tr>
<td>Long-term T-Bond</td>
<td>9.75%</td>
<td>11.24%</td>
<td>8.65%</td>
<td>11.93%</td>
<td>10.43%</td>
</tr>
<tr>
<td>T-Bill</td>
<td>1.59%</td>
<td>1.33%</td>
<td>1.18%</td>
<td>1.37%</td>
<td>1.37%</td>
</tr>
<tr>
<td>Inflation</td>
<td>1.59%</td>
<td>1.88%</td>
<td>1.70%</td>
<td>1.59%</td>
<td>1.68%</td>
</tr>
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</table>
## EXHIBIT 3

Monetary and Fiscal Policy Measures over the Presidential Term: 1957 thru 2004

<table>
<thead>
<tr>
<th></th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Panel A. Monetary Policy Measures</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expansive Quarters</td>
<td>23</td>
<td>23</td>
<td>31</td>
<td>23</td>
<td>100</td>
</tr>
<tr>
<td>Mean Federal Funds Premium</td>
<td>0.68</td>
<td>0.66</td>
<td>0.32</td>
<td>0.44</td>
<td>0.52</td>
</tr>
<tr>
<td><strong>Panel B. Fiscal Policy Measures</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change in Current Spending (in %)</td>
<td>1.91%</td>
<td>2.08%</td>
<td>1.80%</td>
<td>1.73%</td>
<td>1.88%</td>
</tr>
<tr>
<td>Change in Tax Receipts (in %)</td>
<td>2.10%</td>
<td>1.25%</td>
<td>1.07%</td>
<td>2.52%</td>
<td>1.73%</td>
</tr>
</tbody>
</table>

**Significant Chi-Square Test**

Expansive Quarters: \( H_0: NE_3 = NE_1, NE_2, NE_4; \) P-value = 0.046

**Significant Difference-in-Means Test**

Fed Funds Premium: \( H_0: FFP_3 = FFP_1, FFP_2, FFP_4; \) P-value = 0.020

Where \( NE_t \) = number of expansive quarters in year \( t \) and \( FFP_t \) = average fed funds premium in year \( t \).
### EXHIBIT 4

Regression Results 1957 thru 2004

<table>
<thead>
<tr>
<th>Index</th>
<th>Dependent Variable Nominal Returns</th>
<th>Dependent Variable Model Residuals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Intercept</td>
<td>Year 3 Dummy</td>
</tr>
<tr>
<td>Large Cap</td>
<td>0.0201</td>
<td>0.0348</td>
</tr>
<tr>
<td></td>
<td>(0.004)</td>
<td>(0.003)</td>
</tr>
<tr>
<td>Small Cap</td>
<td>0.0282</td>
<td>0.0557</td>
</tr>
<tr>
<td></td>
<td>(0.002)</td>
<td>(0.005)</td>
</tr>
<tr>
<td>Long-term Corporate Bond</td>
<td>0.0204</td>
<td>-0.0067</td>
</tr>
<tr>
<td></td>
<td>(0.000)</td>
<td>(0.384)</td>
</tr>
<tr>
<td>Long-term Govt. Bond</td>
<td>0.0207</td>
<td>-0.0105</td>
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<td>(0.000)</td>
<td>(0.238)</td>
</tr>
<tr>
<td>T-Bill</td>
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<td>-0.0009</td>
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<tr>
<td></td>
<td>(0.000)</td>
<td>(0.578)</td>
</tr>
</tbody>
</table>

P-values are reported in parentheses.