

Appointment Procedures and FOMC Voting Behavior*

GEOFFREY M. B. TOOTELL
Federal Reserve Bank of Boston
Boston, Massachusetts

Introduction

An important issue for the conduct of monetary policy in the United States is whether the various appointment procedures of members of the Federal Open Market Committee help determine their voting behavior. It is usually asserted that the method by which district bank presidents are appointed leads to more independence and/or more conservative behavior. Increased independence is generally believed to reduce suboptimal short-run manipulation of monetary policy, but at the cost of reducing the central bank's accountability to the country's short-run and long-run objectives. The social desirability of any potential differences in monetary policy resulting from these appointment procedures, and the optimality of discretionary policy in general, are not addressed in this paper, however. Instead, the effect on monetary policy of the different appointment procedures currently in place within the Federal Reserve System is examined. Does the increased independence that the district bank presidents supposedly possess produce significantly different monetary policy from that of the politically appointed board governors?

Many studies have examined the effects various appointment procedures may have on voting at the FOMC, and the results have been somewhat mixed; Belden [2], Chappell, Havrilesky, and McGregor [3], Havrilesky and Gildea [6], and Puckett [8] find that bank presidents tend to vote for tighter policy than Board governors, while Tootell [10] finds no differences between the two groups. Most of the literature has concluded that in some unclearly defined way, and for no clear theoretical reason, the more independent district presidents are more "conservative" than the Board governors. In this paper, "conservative" is defined over several clear dimensions in order to test whether district presidents vote more conservatively than Board governors. Some slight variation in the voting behavior of bank presidents and board governors is found, but the causes of any dissimilarities are shown to be much different from those asserted in the earlier literature.

Alesina and Sachs [1] examine an alternative distinction among FOMC members, where partisan heritage may produce different policy. The importance of this distinction is tested in Chappell, Havrilesky, and McGregor [3], and Havrilesky [4; 5]. These previous examinations of partisan behavior at the Fed have analyzed only board governors' behavior, since their party af-

*The author wishes to thank Faith Kasirye for her valuable research assistance. I also wish to thank John Gildea and Stephen McNees for helpful comments and suggestions. The analysis and conclusions of this paper are not necessarily endorsed by the Federal Reserve Bank of Boston or the Federal Reserve System.

filiation can be easily deduced from the party of the White House that appointed them. Because only the affiliation of board governors has previously been examined, partisan association could not be used to explain any differences in voting behavior between governors and presidents. This paper, however, includes the partisan affiliations of district bank presidents; the inclusion of this variable sheds new light on the old debate over the differences between presidents and governors. The view that district presidents are independent of political considerations is shown to be naive, which helps explain why board governors and bank presidents do, in fact, act so much alike.

Unlike the previous work in this area, this paper analyzes the importance of the appointment procedure to FOMC voting when the partisan affiliation of every member of the FOMC is included in the model. In the first section, the different models of voting behavior and their implications for comparisons of bank presidents and board governors are discussed. The second section describes the data and the statistical tests used to analyze the potential difference in voting behavior between these two groups. The next section uncovers new evidence that helps explain the apparent differences between these types of FOMC members found in the previous literature. Then, the hypothesis that the selection of bank presidents is immune to national political influences is examined. It is shown that, as with most important government appointments, partisan considerations seem to play a role in these appointments, and this role explains the differences that appear to occur between the voting behavior of presidents and governors. A conclusion follows.

II. Models of FOMC Voting Behavior

The hypothesis that bank presidents are more conservative than board governors is rooted in a belief that bank presidents are more independent. To assess the relative independence of these two groups, it is necessary to examine their exact appointment procedures. Since both bank presidents and board governors are relatively protected from political pressure once they are appointed to office, and their terms are long, the hypothesis that the two groups vote differently when serving on the FOMC rests on the assumption that they are selected from different distributions.

Board governors are nominated by the president and these appointments are ratified by the Congress. Bank presidents are nominated by the district bank's board of directors, but the Federal Reserve Board, particularly the chairman, must approve each nomination. Thus, the chairman has significant influence over the selection of the district bank presidents. Since the Federal Reserve Board chairman is a political appointee, it can be argued that the chairman's appointees are equivalent to political appointments. In part, this paper examines whether the FOMC voting behavior of the district presidents tends to reflect the politics of the chairman who helped to select them. Upon close inspection of the appointment process, it is not clear that the selection of district bank presidents should be any more removed from political considerations than that of board governors.

Furthermore, the effect of politics on the FOMC is more complicated than the issue of whether presidents are more conservative than governors, as the previous literature has concluded. Although the board governors, who are directly appointed by an elected official, may vote differently from the district presidents, it is not clear why greater independence of bank presidents, if it does exist, should produce more "conservative" policy. One common explanation for the increased conservativeness of bank presidents is that their more indirect political appointment procedure removes them from the political concerns faced by board governors; these political

considerations supposedly compel board governors to care about the reelection prospects of the party that appointed them, while the more independent bank presidents have no such concerns. This hypothesized extra political sensitivity of board governors is assumed to manifest itself as a bias toward more expansionary policy since a stronger economy increases votes for the incumbent.

However, studies of the influence of politics on the economy traditionally examine the timing of policy, not simply its expansionary bias. The political business cycle, as found in Nordhaus [7], predicts a cycle around elections, not a base shift in preferences. If the political business cycle were the correct behavioral model for board governors, and if the distaste for inflation and unemployment were assumed to be identical for bank presidents and board governors, then the politically appointed governors and the independent presidents would differ only over the timing of policy. On average, their votes would look alike; the governors would appear more conservative in the year after an election and more liberal in the year before the election. This hypothesis does not, however, explain why bank presidents would be more “conservative” on the whole.

The partisan political model does offer an explanation for why some members of the FOMC would be, in the aggregate, different from others. In this paradigm, the tastes of the policymakers determine their votes. For example, it is often presumed that Democrats vote for more expansionary policies while Republicans vote for tighter ones. Specifically, Democrats are often assumed to care less about inflation and more about real growth than their Republican counterparts. The definition of conservative is also more intelligible in this model, unlike in the political business cycle paradigm or the previous empirical work; a conservative can, for example, be defined as someone who cares more about inflation than the rest of the FOMC, as opposed to someone who simply votes for tighter policy more often. Given this model of voting behavior, differences between Democrats and Republicans could be detected in their voting, or reaction functions.

In a partisan political model, whether bank presidents are more conservative than board governors depends on whether bank presidents are more likely than board governors to be Republicans. The political association of bank presidents will depend, in part, on the political affiliation of the various district boards of directors and the party association of the Reserve Board chairman in power when the bank presidents were selected. If the district banks’ boards of directors tended to be dominated by Democrats and the Reserve Board chairman in power when these bank presidents were appointed was a Democrat, while a Republican White House appointed most of the board governors, then the partisan political model would predict that the board governors would be more conservative than the bank presidents, exactly opposite to the conclusions now drawn in the literature.¹ Theoretically, in the partisan model, whether bank presidents are more conservative than board governors has less to do with the nuances of the appointment procedures than with who does the appointing, and when it is done.

1. It is often assumed that the District Bank boards tend to be Republican, but that is not at all clear from the structure of these boards. One-third of these directors are bankers, while the other two-thirds are general “representatives of the public.” These other six members can come from labor unions, academia, or any other business. Furthermore, whether, for example, Republicans always appoint other Republicans is not the real issue; elected officials will tend toward the mean of their party, and they will appoint people with similar tastes, whether they are in their party or not. Thus, a Republican could easily appoint a conservative Democrat, a Democrat who is an outlier for his or her party but toward the mean of the Republican party.

III. Data and Methodology

The methodology used in this paper is similar to that in Puckett [8] and Tootell [9; 10]. The dependent variable is the vote of each FOMC member.² These votes were culled from the minutes of the FOMC directives; the directives give both the stance of monetary policy for the committee as a whole and the votes of each FOMC member. Dissenting voters provide reasons for their disagreement with the chosen policy. Votes on monetary policy can take three courses, to tighten, to loosen, or to keep policy the same. A trinomial logit is, therefore, used to determine the effect of various forecasted and predetermined variables on the votes of each FOMC member. At each FOMC meeting five bank presidents and all seven board governors, including the chairman, should be voting.³ Thus, in general, there are 12 observations for each meeting, spanning the period from 1965 to 1986.

This study uses *Green Book* forecasts to represent the FOMC's shared expectations and estimates the effect of the forecasted variables on member voting.⁴ Estimation of an FOMC voting function constrains the coefficients on these variables to be identical across the entire group. Whether sets of FOMC members should be grouped together depends on whether subgroups within the set behave similarly and, thus, on whether the coefficients in their voting functions are the same; tests are performed to examine that hypothesis.

Observing the FOMC's reaction to these forecasted and predetermined variables through time also allows comparisons between individuals who were FOMC members at different times. Since the FOMC as a whole can change, as does the chairman, its response to certain variables can evolve; a simple analysis of dissents, as in Belden [2] and Havrilesky and Gildea [6], neglects the fact that the behavior of the FOMC majority can change over time, so that a dissent in one period is not equivalent to a dissent in another. By examining reactions to the *Green Book* forecasts, however, dissents in the 1970s can be compared to dissents in the 1980s.

All previous work in this area has examined the differences between bank presidents and board governors by comparing the constant term in each group's voting function. These authors conclude from these tests that one group of FOMC members is more "conservative" than another. The description of a policymaker as conservative implies something about tastes, yet the tastes of the FOMC members are not identified in these statistical models, particularly in their constant terms. Voting behavior will depend on the policymaker's tastes, model of the economy, and expectations about the future performance of the target variables.

Differences in the constant term between board governors and bank presidents measure FOMC members' relative tastes only if every member shares the same expectations about future economic performance based on these variables and shares the same economic model, particularly their model of how monetary policy affects the economy. It is extremely unlikely, however, that all FOMC members share the same view on the workings of the economy. Because of this identification problem, a conclusion that one member of the FOMC is more conservative than

2. As discussed in Tootell [9; 10], examining votes is a more accurate indicator of policy intentions. The variability in the relationship between the instrument of monetary policy and its objectives means that instruments can change for purely technical reasons. In fact, votes to keep policy the same but allow a "technical" change in the instrument are usually clearly articulated in the minutes of the FOMC meetings. Furthermore, examining votes is the only way to get at the reaction functions of individuals, rather than the FOMC as a whole.

3. The bank votes are rotated among the 12 district banks. The Federal Reserve Bank of New York is the only district bank that votes at every FOMC meeting.

4. Before every FOMC meeting the Board staff produces forecasts of several key economic variables. These forecasts are contained in a green book, thus its moniker.

another can only be consistent with the data; it cannot be tested or proved by the data. Some FOMC members may tend to vote for tighter policy, they may have different constant terms in the trinomial logit estimation, but the researcher cannot distinguish between whether they do so because, for example, they are more concerned about inflation or because they believe monetary policy, in the short and long run, affects only the price level.

For this reason, this paper will be careful about conclusions concerning the tastes of FOMC members. The policy question to be answered here is whether FOMC members with different appointment procedures tend to vote differently. Certainly not all FOMC members are the same—governors Wallich and Seger obviously voted differently. The issue is whether differences occur systematically between bank presidents and board governors.

IV. Traditional Comparisons: Bank versus Board

Two basic voting functions will be highlighted in this section: model I, a simple form of nominal GNP targeting where the FOMC cares only about real output growth and inflation, and model II, a more comprehensive equation where the FOMC also reacts to money growth and the pace of policy change.⁵ Table I provides the estimated voting function for the FOMC as a whole, as well as for bank presidents and board governors separately.

Joint Tests

The most obvious test of whether the two groups act similarly is a log likelihood test of the hypothesis that the coefficients in the voting functions of board governors and bank presidents are identical. The likelihood ratio for each voting equation is given at the bottom of Table I; it is distributed as a χ^2 , with 6 degrees of freedom for the nominal GDP targeting model and 10 degrees of freedom for the less parsimonious model. For either model, it cannot be rejected at the 5 percent level that the two sets of coefficients are the same; the data suggest that the two groups vote identically.

The effect of these variables on the probabilities of voting for different policies can be viewed graphically. Doing so also highlights another point; though the log likelihood tests examine whether statistically significant differences exist, they do not examine whether economically significant differences exist. Figure 1 uses the bank and board equations, provided in the second and third columns of Table I, to show the probability of each group voting to tighten and loosen as inflation expectations vary, given that real GNP grows at its mean level. The slope of these curves provides the marginal effect on the voting probabilities of a change in inflation, given average growth in real GNP. Allowing GNP to vary and fixing inflation at its mean level produces a similar pattern; inflation is shown here because it is the variable to which the two groups react most differently. As can be seen, over the relevant range of inflation, board governors are slightly more apt to ease and slightly less apt to tighten than are bank presidents. At an inflation rate of 6 percent, the presidents are about 4 percentage points more likely to tighten, and 2 percentage points less likely to loosen. These differences in voting probabilities do not suggest that substantively different policy would occur if all members of the FOMC were appointed in the

5. Estimation was also performed on models using the gap between actual and potential GNP. The results are essentially identical as those reported in the paper.

Table I. Multinomial Logit Estimation of FOMC Voting

| | Model I | | | Model II | | |
|-------------------------------|-------------------|------------------|-------------------|-------------------|------------------|-------------------|
| | (1) FOMC | (2) Bank | (3) Board | (4) FOMC | (5) Bank | (6) Board |
| Tightening^a | | | | | | |
| <i>C</i> | -2.41 (-14.55) | -2.16 (-8.99) | -2.63 (-11.48) | -3.23 (-14.71) | -3.03 (-9.43) | -3.41 (-11.31) |
| <i>Q^E</i> | 0.15 (8.68) | 0.14 (5.57) | 0.16 (6.68) | 0.16 (8.79) | 0.15 (5.64) | 0.17 (6.78) |
| <i>P^E</i> | 0.18 (8.29) | 0.16 (5.10) | 0.20 (6.58) | 0.16 (6.80) | 0.15 (4.26) | 0.18 (5.34) |
| <i>M</i> | | | | 0.10 (7.87) | 0.10 (5.59) | 0.09 (5.57) |
| <i>LDFF</i> | | | | 0.59 (7.15) | 0.62 (4.99) | 0.57 (5.15) |
| Loosening^a | | | | | | |
| <i>C</i> | 0.03 (.19) | -0.008 (-.03) | 0.06 (.27) | 0.45 (2.19) | 0.46 (1.43) | 0.45 (1.70) |
| <i>Q^E</i> | -0.21 (-11.79) | -0.22 (-8.02) | -0.20 (-8.66) | -0.17 (-8.84) | -0.17 (-5.86) | -0.16 (-6.62) |
| <i>P^E</i> | -0.15 (-5.58) | -0.15 (-3.69) | -0.15 (-4.20) | -0.18 (-6.30) | -0.20 (-4.41) | -0.17 (-4.56) |
| <i>M</i> | | | | -0.07 (-4.92) | -0.07 (-3.27) | -0.07 (-3.71) |
| <i>LDFF</i> | | | | -0.98 (-9.82) | -1.13 (-7.01) | -0.89 (-6.97) |
| Log Likelihood | -2430.02 | -1056.27 | -1368.95 | -2283.67 | -982.79 | -1294.65 |
| Observations | 2698 | 1171 | 1527 | 2698 | 1171 | 1527 |
| Likelihood Ratio | 9.60 | | | 12.46 | | |

a. Q^E is the greenbook forecast of output growth. P^E is the forecast of inflation. M is money growth. $LDFF$ is lagged change in the Federal Funds rate.

same manner. Not only do joint tests show that any differences are statistically insignificant, but Figure 1 shows that any differences are of little economic significance.

The graph also implicitly highlights the problem of defining “conservative” voting. Is it that one group cares more about inflation, less about real growth, or more about money than another? Conservative must be defined along some dimension. In the previous literature, it has simply been designated as a higher probability of voting to tighten, which would be reflected in differences in the constant term; even then, however, this definition requires further identifying restrictions to be meaningful.⁶ Yet a more precise definition of what is “conservative” might require a more precise

6. Assume that all members care about the expected divergence of real growth and inflation from some desired levels. The constant terms in the regressions in this paper will then contain these base desired levels. If the *Green Book* data perfectly represented each member's expectations, then differences in members' constants would represent differences in their desired levels of output growth and inflation. If not, the constant term will be a mixture of the members' target levels and that part of their expectations missed by the *Green Book*. One cannot identify the desired levels without further information on the omitted expectations.

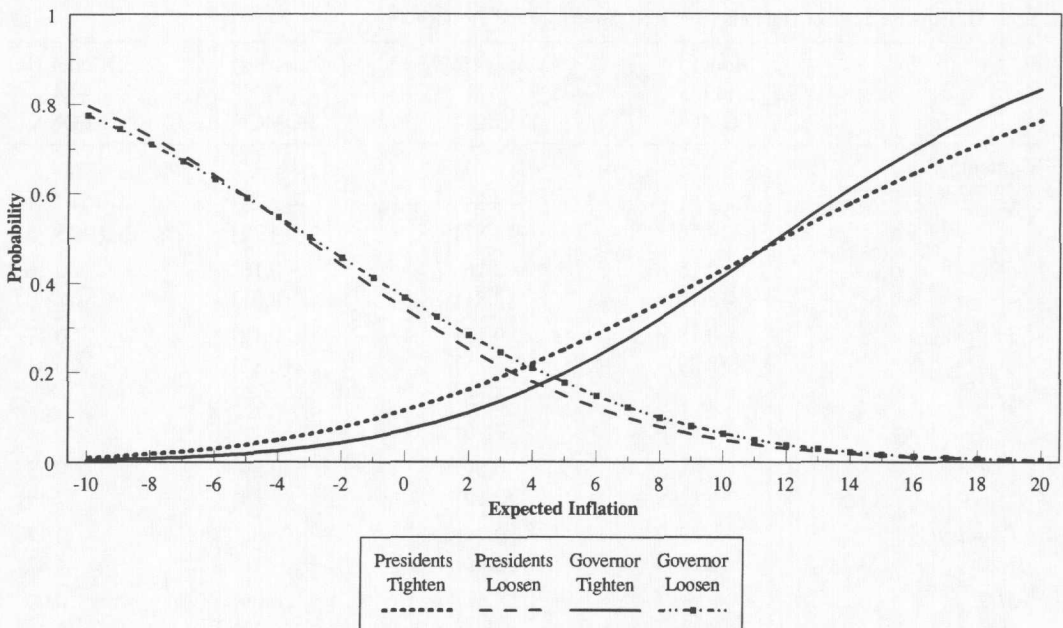


Figure 1. FOMC Voting Probabilities with Expected GNP at Its Mean While Varying Inflation

test of any differences between the two groups; in this case, a pairwise test of each coefficient's equality might be in order.⁷

Pairwise Tests

Of all the variables tested pairwise between bank presidents and board governors, three coefficients in either model showed some signs of statistically significant differences. Most of these pairwise differences were sensitive to the model chosen. Consistent with the previous literature, the constant terms differ. The first two equations in Table II reveal that bank presidents' constant term for tightening is statistically significantly different from that for the board governors in both models. Bank presidents are more likely to vote to tighten versus no change but are not significantly more or less likely to vote to loosen relative to board governors. Again, however, the economic importance of this difference is slight; it only raises the probability of tightening for bank presidents about 3 or 4 percentage points near the mean of the independent variables.

One can also reject at the 5 percent level that the inflation coefficient is identical for bank presidents and board governors in the larger model. As mentioned earlier, although some statistical difference in the inflation coefficient exists, its economic significance is suspect, increasing the probability of tightening by only around 3 or 4 percentage points at an inflation rate of 6 percent.

Finally, comparing the third equation of Table II with the fourth equation of Table I shows

7. As far as public policy goes, the important distinction for determining the effects of the appointment procedure probably is whether all the coefficients together are identical, a joint test. Does the appointment procedure make a difference as a whole? The nuances of any differences, however, may be examined by the pairwise test. One problem with the pairwise test, however, is that it is not optimal when the coefficient estimates of the independent variables are correlated, as with the constant and the other variables or real growth and inflation; so I proceed with this caveat.

Table II. Pairwise Tests of Difference between Governors and Presidents

| | (Model I) (1) FOMC | (Model II) (2) FOMC | (Model IIa) (3) FOMC | (Model IIb) (4) FOMC |
|-------------------------------|--------------------------|---------------------------|----------------------------|----------------------------|
| Tightening^a | | | | |
| <i>C</i> | -2.51 (-14.56) | -3.34 (-14.82) | -3.23 (-14.72) | -3.31 (-13.78) |
| <i>Q^E</i> | 0.15 (8.70) | 0.16 (8.81) | 0.16 (8.81) | 0.16 (8.80) |
| <i>P^E</i> | 0.18 (8.29) | 0.17 (6.81) | 0.17 (6.82) | 0.17 (6.81) |
| <i>M</i> | | 0.10 (7.90) | | |
| <i>LDFP</i> | | 0.59 (7.19) | 0.59 (7.18) | 0.59 (7.19) |
| <i>President</i> | 0.22 (2.26) | 0.24 (2.45) | | 0.17 (.82) |
| <i>MG</i> | | | 0.09 (6.39) | 0.09 (5.67) |
| <i>MP</i> | | | 0.11 (8.09) | 0.10 (5.77) |
| Loosening^a | | | | |
| <i>C</i> | 0.09 (.54) | 0.52 (2.49) | 0.45 (2.20) | 0.52 (2.31) |
| <i>Q^E</i> | -0.21 (-11.81) | -0.17 (-8.86) | -0.17 (-8.83) | -0.17 (-8.85) |
| <i>P^E</i> | -0.15 (-5.59) | -0.18 (-6.30) | -0.18 (-6.29) | -0.18 (-6.30) |
| <i>M</i> | | -0.07 (-4.94) | | |
| <i>LDFP</i> | | -0.98 (-9.84) | -0.98 (-9.83) | -0.98 (-9.84) |
| <i>President</i> | -0.15 (-1.34) | -0.18 (-1.55) | | -0.16 (-.74) |
| <i>MG</i> | | | -0.06 (-4.05) | -0.07 (-3.78) |
| <i>MP</i> | | | -0.08 (-4.77) | -0.07 (-3.24) |
| Log Likelihood | -2425.74 | -2278.64 | -2279.28 | -2278.55 |
| Observations | 2698 | 2698 | 2698 | 2698 |

a. Where *President* = 1 if the FOMC member is a regional bank president and zero otherwise. *MG* is coefficient on money for governors and *MP* is coefficient on money for presidents.

that the coefficient on money growth is occasionally statistically significantly different between these two groups.⁸ This difference occurred in the expected direction; the coefficient on money tended to be larger for bank presidents, as one would expect with much of the monetarist impetus at the Fed coming from St. Louis. Yet, the money coefficients are small, and their differences had almost no effect on the voting probabilities of the two groups. Of the three differences in coefficients between bank presidents and board governors, the constant term has by far the largest economic impact.

One problem with pairwise tests is that a finding of a difference between one variable's coefficients for bank presidents and for board governors may actually be caused by a difference in another variable's coefficients. The fourth equation in Table II examines the differences in the constant term when the money coefficient is allowed to differ. Because many of the reserve banks tend to be monetarist, constraining the coefficient on money to be identical for the two groups could produce a higher constant term since money growth was relatively high over the sample period. As shown in equation (4), when the money coefficient is allowed to vary along with the constant term, the dummy variable indicating bank presidents becomes insignificant. Note that believing in a monetarist model says nothing about a policymaker's tastes, since monetarists need not be conservative.

The evidence presented here does not support the hypothesis that economically significant differences exist between the voting behavior of bank presidents and that of board governors. The appointment procedure does not seem to have a large effect on the monetary policy advocated by different members of the FOMC. Still, the difference in the results from the joint and the pairwise tests begs explaining. Furthermore, although the use of the constant term to measure this difference is debatable both theoretically and empirically, different coefficients on money are not the only possible reason for the previous finding of a significant difference in the constant term. The next section provides an alternative explanation of why differences in the constant term may have been misinterpreted in the past; it will be shown that the partisan political model can also explain the significance of the bank president indicator variable.

V. Partisan Effects

If the FOMC members care about deviations of output growth and price inflation from target values, then a linear combination of these targets will be contained in the constant. A case can be made that conservatives and liberals possess different target levels of output growth and inflation. If so, the constant in these regressions can reveal information on whether an individual or group is conservative. Unfortunately, the constant would be composed of a linear combination of the target levels, so interpreting differences in the constant as an indicator of the conservative nature of the group is unclear. The models and expectations of the members could also differ, and these differences would be contained in the estimated value of the constant. If "conservative" is simply defined as someone with a lower nominal GDP target, and it is assumed that both groups share the same models and expectations, then comparing the constants as is done in the literature is a valid approach.

8. The likelihood ratio of the hypothesis that the money coefficient is identical for bank presidents and board governors, calculated by comparing the third equation in Table II with the fourth equation of Table I, is 8.78, which is distributed as a X^2 with two degrees of freedom, strongly rejecting that the coefficients are the same.

FOMC voting could also depend on party affiliation. Specifically, Democrats might care more about real growth and less about inflation, or deviations of these variables from their targets, than their Republican counterparts. If FOMC members in fact share identical, *Green Book* expectations, then the partisan voting model would be supported by a rejection of the pairwise and joint tests of the hypotheses that the coefficients on expected inflation and real GNP growth are identical between FOMC members with different partisan loyalties. On the other hand, members of each party might react similarly to changes in these *Green Book* forecasts, but their long-run targets for these variables could differ; specifically, Republicans could have a lower target for inflation than their Democratic counterparts, or Democrats may believe a higher level of real growth is possible. In this case, the coefficients on expected inflation and output growth would be the same across these two groups, but the constant terms for FOMC members appointed by Republicans and Democrats would differ, all else equal.⁹

Tests of whether the constants differ by party affiliation for both the parsimonious and more comprehensive models are contained in Table III. The variable "party" equals a one if the Board governor was appointed by a Democrat and a zero otherwise, and a one if the bank president's nomination was approved by a Reserve Board chairman who was originally appointed by a Democrat, and a zero otherwise. Thus, note, the assessment of the board governors' party is the party in the White House when the person is nominated, while the designation of the bank presidents' party is the party of the Reserve Board chairman when the bank president is appointed. There is a statistically significant difference in the constants of FOMC members with different political heritages. The effect is also in the predicted direction; the probability of a Democrat voting to tighten is lower than that for a Republican. Unlike most of the pairwise tests in the bank president/board governor comparison, this difference holds in both empirical models.

The data also support the method for designating the party of bank presidents. When separate voting functions are estimated for governors and for presidents, the coefficient on the party variable is correctly signed and statistically significant well beyond the 1 percent level in the equation over the sample of presidents. In the governor equation, the coefficient is correctly signed but of borderline significance. In equations where the GDP gap is examined, rather than the growth rate of output, the coefficient on the party variable is statistically significant for both the governor equation and the president equation.¹⁰ The instrument used for selecting the presidents' party affiliation seems to be appropriate.

As with presidents and governors, it can be tested whether the two political groups behave differently. A joint test of the hypothesis that the coefficients for the two groups are identical is presented in Table IV. The hypothesis is strongly rejected, no matter which model is examined. Democrats and Republicans as a whole do vote significantly differently. The rejection of the joint hypothesis that all coefficients are identical between the two groups, which did not occur for either model under the bank president/board governor distinction, provides evidence that the party affiliation of the FOMC member is a more important distinction than that concerning the exact appointment procedure of the member.

Furthermore, when the pairwise tests of the coefficients between bank presidents and board

9. As mentioned in footnote 6, the estimated constant contains a combination of the long-run targets, the part of FOMC members' forecasts that differ from the *Green Book* forecasts, and any disagreements they may have about the model of the economy. Differences in the constant alone cannot tell us which of these potential explanations is the cause, but all else held constant, if the long-run goals of the FOMC members differed, their constants would differ, assuming their coefficients were identical.

10. These results are available from the author upon request.

Table III. Partisan Effects on FOMC Voting

| | (Model I) (1) | (Model II) (2) |
|-------------------------|-------------------|-------------------|
| | FOMC | |
| Tightening ^a | | |
| <i>C</i> | -2.23 (-12.64) | -2.98 (-13.10) |
| <i>Q^E</i> | 0.14 (8.29) | 0.15 (8.20) |
| <i>p^E</i> | 0.17 (7.66) | 0.14 (5.85) |
| <i>M</i> | | 0.10 (8.06) |
| <i>LDFP</i> | | 0.63 (7.50) |
| <i>Party</i> | -0.31 (-2.95) | -0.43 (-3.89) |
| Loosening ^a | | |
| <i>C</i> | -0.005 (-0.03) | 0.43 (1.99) |
| <i>Q^E</i> | -0.21 (-11.73) | -0.17 (-8.83) |
| <i>p^E</i> | -0.15 (-5.42) | -0.18 (-6.17) |
| <i>M</i> | | -0.07 (-4.92) |
| <i>LDFP</i> | | -0.97 (-9.76) |
| <i>Party</i> | 0.05 (0.48) | 0.02 (0.20) |
| Log Likelihood | -2424.97 | -2275.51 |
| Observations | 2698 | 2698 |

a. *Party* = 1 if the member was installed by a Democrat and zero otherwise.

governors are reexamined including the partisan affiliation of each FOMC member, the rejections in the pairwise tests of similar coefficients between bank presidents and board governors disappear. The first two columns of Table V repeat both models of FOMC voting behavior allowing the constant term to differ between bank presidents and board governors. Again, the coefficient on the bank president dummy is statistically significant in both models, which has been the basis for the conclusion that bank presidents and board governors have different constant terms. The next two columns of Table V add each member's party affiliation to the models. The significance of the bank president dummy disappears, while the party affiliation coefficient remains significant in both the large and small models.

In fact, all pairwise differences found between governors and presidents disappear when the party variable is included; the statistically significant differences between bank president and

Table IV. Partisan Effects on Coefficients of the Voting Function

| | Model I | | | Model II | | |
|---|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| | (1) FOMC | (2) Republican | (3) Democrat | (4) FOMC | (5) Republican | (6) Democrat |
| Tightening | | | | | | |
| <i>C</i> | -2.41 (-14.55) | -2.00 (-9.71) | -3.06 (-10.40) | -3.23 (-14.71) | -2.72 (-10.15) | -4.11 (-10.17) |
| <i>Q^E</i> | .15 (8.68) | 0.11 (5.69) | 0.22 (6.49) | 0.16 (8.79) | 0.11 (5.21) | 0.25 (6.92) |
| <i>P^E</i> | 0.18 (8.29) | 0.15 (5.57) | 0.22 (5.49) | 0.16 (6.80) | 0.13 (4.30) | 0.19 (4.25) |
| <i>M</i> | | | | 0.10 (7.87) | 0.10 (6.20) | 0.11 (5.35) |
| <i>LDFE</i> | | | | 0.59 (7.15) | 0.72 (6.21) | 0.57 (4.47) |
| Loosening | | | | | | |
| <i>C</i> | 0.03 (0.19) | 0.10 (0.43) | -0.14 (-0.51) | 0.45 (2.19) | 0.27 (1.00) | 0.65 (1.98) |
| <i>Q^E</i> | -0.21 (-11.79) | -0.22 (-10.18) | -0.18 (-5.77) | -0.17 (-8.84) | -0.16 (-6.79) | -0.17 (-5.31) |
| <i>P^E</i> | -0.15 (-5.58) | -0.16 (-4.70) | -0.12 (-2.70) | -0.18 (-6.30) | -0.17 (-4.73) | -0.20 (-3.87) |
| <i>M</i> | | | | -0.07 (-4.92) | -0.05 (-2.83) | -0.08 (-4.13) |
| <i>LDFE</i> | | | | -0.98 (-9.82) | -1.03 (-6.72) | -0.95 (-7.04) |
| Log Likelihood | -2430.02 | -1552.01 | -868.84 | -2283.67 | -1470.41 | -797.47 |
| Observations | 2698 | 1706 | 992 | 2698 | 1706 | 992 |
| Likelihood Ratio for Democrats and Republicans having the same coefficients | 18.34 | | | 31.60 | | |

board governor coefficients for money and inflation also vanish when the party affiliation variable is accounted for in the model. For example, the final two equations in Table V show that the equality in the coefficient on money can no longer be rejected once the party affiliation of the FOMC member is included in the analysis.¹¹ Inflation and money coefficients differed between Republicans and Democrats, not between board governors and bank presidents. Any perceived difference between board governors and bank presidents originated almost solely from the party affiliations of the two groups.

The correlation between bank presidents and Republicans is not a bias. During the time of this sample, it was simply the luck of the draw; a Democratic White House appointed only one Reserve Chairman, Volcker, although Democrats appointed a surprisingly large number of board

11. Again the likelihood ratio of this tested is distributed as a X^2 with two degrees of freedom. It cannot be rejected at the 5 percent level that the money coefficients are the same for bank presidents and board governors.

Table V. Multinomial Logit Estimation of FOMC Voting

| | (Model I) (1) | (Model II) (2) | (Model I) (3) | (Model II) (4) | (Model IIa) (5) | (Model IIb) (6) |
|----------------------|-------------------|-------------------|-------------------|-------------------|--------------------|--------------------|
| FOMC | | | | | | |
| Tightening | | | | | | |
| <i>C</i> | -2.51 (-14.56) | -3.34 (-14.82) | -2.31 (-12.02) | -3.06 (-12.68) | -3.01 (-13.15) | -2.98 (-13.10) |
| <i>Q^E</i> | 0.15 (8.70) | 0.16 (8.81) | 0.14 (8.34) | 0.15 (8.25) | 0.15 (8.25) | 0.15 (8.20) |
| <i>P^E</i> | 0.18 (8.29) | 0.17 (6.81) | 0.17 (7.73) | 0.15 (5.93) | 0.15 (5.93) | 0.14 (5.85) |
| <i>M</i> | | 0.10 (7.90) | | 0.10 (8.06) | | 0.10 (8.06) |
| <i>LDF F</i> | | 0.59 (7.19) | | 0.63 (7.46) | 0.63 (7.47) | 0.63 (7.50) |
| <i>Party</i> | | | -0.26 (-2.25) | -0.38 (-3.24) | -0.39 (-3.39) | -0.43 (-3.89) |
| <i>President</i> | 0.22 (2.26) | 0.24 (2.45) | 0.12 (1.16) | 0.11 (1.01) | | |
| <i>MG</i> | | | | | 0.09 (6.90) | |
| <i>MP</i> | | | | | 0.11 (7.76) | |
| Loosening | | | | | | |
| <i>C</i> | 0.09 (0.54) | 0.52 (2.49) | 0.10 (0.51) | 0.58 (2.46) | 0.47 (2.13) | 0.43 (1.99) |
| <i>Q^E</i> | -0.21 (-11.81) | -0.17 (-8.86) | -0.21 (-11.77) | -0.17 (-8.88) | -0.17 (-8.85) | -0.17 (-8.83) |
| <i>P^E</i> | -0.15 (-5.59) | -0.18 (-6.30) | -0.15 (-5.50) | -0.18 (-6.28) | -0.18 (-6.23) | -0.18 (-6.17) |
| <i>M</i> | | -0.07 (-4.94) | | -0.07 (-4.92) | | -0.07 (-4.92) |
| <i>LDF F</i> | | -0.98 (-9.84) | | -0.98 (-9.81) | -0.98 (-9.79) | -0.97 (-9.76) |
| <i>Party</i> | | | -0.01 (-0.11) | -0.07 (-0.55) | -0.03 (-0.23) | 0.02 (0.20) |
| <i>President</i> | -0.15 (-1.34) | -0.18 (-1.55) | -0.15 (-1.25) | -0.21 (-1.62) | | |
| <i>MG</i> | | | | | -0.06 (-3.95) | |
| <i>MP</i> | | | | | -0.08 (-4.75) | |
| Log Likelihood | -2425.74 | -2278.64 | -2423.13 | -2273.32 | -2273.38 | -2275.51 |
| Observations | 2698 | 2698 | 2698 | 2698 | 2698 | 2698 |
| Likelihood Ratio | | | | | 4.26 | |

governors, with long tenure. Specifically, board governor turnover under Carter was high, but very little bank president turnover occurred under Volcker.

VI. Conclusion

Partisan affiliation seems to play some role in FOMC voting, while the appointment procedure seems to have little effect. The small differences that do exist between the voting behavior of bank presidents and board governors disappear when the party affiliation of the FOMC member is known. The party affiliations of the two groups are intimately intertwined with the outcomes in the general elections. Politics do, and should, play a role at the Fed. Fed policy may be independent of short-run political considerations, but its long-run goals are determined by the democratic process. This paper provides support for the finding that the Fed, as an institution in a democracy, is sensitive to these considerations. It provides no support for the position that the appointment procedure for an FOMC member, whether a bank president or a board governor, is an important determinant of monetary policy.

References

1. Alesina, Alberto and Jeffrey Sachs, "Political Parties and the Business Cycle in the United States, 1948-1984." *Journal of Money, Credit and Banking*, February 1988, 63-81.
2. Belden, Susan, "Policy Preferences of FOMC Members as Revealed by Dissenting Votes." *Journal of Money, Credit and Banking*, November 1989, 432-41.
3. Chappell, Henry W., Thomas M. Havrilesky, and Rob Roy McGregor, "Partisan Monetary Policies: Presidential Influence Through the Power of Appointment." *Quarterly Journal of Economics*, February 1993, 185-218.
4. Havrilesky, Thomas M., "A Partisanship Theory of Fiscal and Monetary Regimes." *Journal of Money, Credit and Banking*, August 1987, 308-25.
5. ———, "Monetary Policy Signaling from the Administration to the Federal Reserve." *Journal of Money, Credit and Banking*, February 1988, pp. 83-101.
6. ——— and John Gildea, "Packing the Board of Governors." *Challenge*, vol. 33, no. 2, 1990, 52-55.
7. Nordhaus, William D., "The Political Business Cycle." *Review of Economic Studies*, April 1975, 169-90.
8. Puckett, Richard S., "Federal Open Market Committee Structure and Decisions." *Journal of Monetary Economics*, July 1984, 97-104.
9. Tootell, Geoffrey M. B., "Regional Economic Conditions and the FOMC Votes of District Presidents." Federal Reserve Bank of Boston, *New England Economic Review*, March/April 1991, 3-16.
10. ———, "Are District Presidents more Conservative than Board Governors?" Federal Reserve Bank of Boston, *New England Economic Review*, September/October 1991, 3-12.