

Candidate Exit During the Presidential Nomination Process

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Political scientists have studied the current presidential nomination process intensely for well over two decades (e.g. Aldrich 1980*a*), but our understanding of the process remains incomplete, in part because while the process continues to change, systematic analyses of the process remain rooted in our first examinations of the reformed process. While some authors have shifted their focus to the period before the primaries (e.g. Buell 1987; Buell 1996; Mayer 1996; Paolino 1995), our scholarly understanding is still informed largely by the pioneering work of Aldrich (1980*a*) and Bartels (1988). The common view of the process revolves around momentum gained during the primary season and is reflected in Morris Udall's colorful description:

It's like a football game, in which you say to the first team that makes a first down with ten yards, "Hereafter your team has a special rule. Your first downs are five yards. And if you make three of those you get a two-yard first down. And we're going to let your first touchdown count twenty-one points. Now the rest of you bastards play catch-up under the regular rules." (quoted in Aldrich 1980*a*; Bartels 1988; Orren and Polsby 1987; Patterson 1994; Popkin 1991)

Momentum remains essential to understanding the nomination process, but an exclusive focus upon this older view of momentum is limiting because it ignores the dynamics of the process *before* the first race is run. Recently, greater front-loading of the primaries, rather than allowing candidates to use momentum to their advantage across a greater number of states, has forced lesser-known candidates, generally the main beneficiaries of momentum, to compete in states where they do not have the resources in place to compete effectively.¹ As a result, lesser-known candidates with momentum are ill-equipped to follow up on earlier success, meaning they cannot meet expectations, which leads to a loss of their momentum. Consequently, we need to, first, re-examine how we use momentum and, second, include

¹Contrary to the arguments made by some political scientists (e.g. Keeter and Zukin 1983; Popkin 1991), it does not appear that unknown candidates with momentum can regularly beat out well-known candidates with a salient political record. Carter in 1976 and Hart in 1984 may have had some success turning momentum into victories in states where they had hardly spent any time, but we cannot think of any examples in nomination races since then. In fact, the 1988 Bush and 1996 Dole campaigns indicate that prominent, well-financed candidates can easily withstand disappointing starts and eliminate their opponents once the candidates have to contest many states on the same day.

other means by which to examine the primary campaign.

One obvious way to re-examine momentum is to include activity that occurs prior to the year of the general election. In this way, we could examine how candidates' chances of winning the nomination respond to their fund-raising success (or lack of it), media coverage, standing in public opinion polls, performance in campaign events, such as straw polls, and endorsements. Candidates who raise more money, become the focus of many stories in the media, or attract more support from party faithful than expected would be seen as generating momentum.

In extending our concept of momentum to include activity before the primary season, we certainly want to pay attention to other influences upon a candidate's viability, such as other candidates' decisions to enter or withdraw from the race. In our view, exit reflects a phenomenon whose value is comparable to momentum in understanding the presidential nomination process because the two are so tightly intertwined. In both parts of the nomination campaign, exit can be both a cause and result of momentum. Candidates can receive a jolt of momentum when a major challenger decides to withdraw from the race or may lose momentum when a potential competitor decides to join the race. Likewise, candidates' momentum, both positive and negative, can cause candidates to exit the race. Because we believe that exit and momentum are so closely (though not inextricably) tied to one another, we prefer to view the nomination process as one where candidates ultimately seek a means, momentum, to obtain an ends, the withdrawal of all other candidates from the race.

As such, we argue that the nomination process needs to be thought of as a process of elimination where candidates win the nomination by driving their opponents from the field. The idea of the nomination process as a process of elimination is not novel. Aldrich (1980*a*, 212) writes, "A presidential election can be thought of as an attempt to survive. The candidate who does so longest wins the presidency." Polsby (1983, 67) echoes this,

“The task of a presidential hopeful, threading a path through the minefield of successive primary elections, is not to win a majority outright but rather to survive.” A consequence of works prior to (e.g. Brady and Johnston 1987) and after (e.g. Popkin 1991) Bartels’s (1988) seminal work on momentum is that the “survival” aspect of the nomination process, while implied, has received little attention. The goal of this paper, therefore, is reorient our view of momentum to one that focuses upon the survival aspect of the campaign.

In the first section, we examine momentum and elimination as integral parts of the nomination campaign and develop our arguments for examining how the elimination process affects candidates differently. In the second, we lay out the quantitative model that we use for investigating the hypothesis that well-known candidates benefit most when candidates exit the nomination campaign. In the third section, we present our findings. Finally, we discuss our conclusions in terms of how they broaden our understanding of the nomination process.

1 The Primary Process as a Process of Elimination

The argument of our paper is simple: candidates ultimately win the nomination not by generating momentum — many candidates who have generated momentum during the primaries have ended up losing the nomination — but by knocking all of their competitors out of the race. By this argument, momentum retains a central position in our understanding of the nomination race because momentum is often the means by which candidates knock their opponents out of the race. Our goal, then, is to show how momentum and exit are two aspects of the strategies that candidates use to win the nomination. One way of seeing this is to consider Gurian’s (1986) view of candidate strategy.

Gurian (1986) argues that candidates pursue one of two strategies: a *delegate-maximizing* or a *momentum-maximizing* strategy. The former is generally favored by front-runners, who allocate their resources to win as many delegates as possible in each race in order to obtain

a majority of the delegates as quickly as possible. By contrast, lesser-known challengers concentrate on allocating resources in early states in order to finish better-than-expected and generate momentum with which to obtain more resources for the next set of states. At some point, candidates with momentum may switch their strategy to one that concentrates upon delegate-maximization, but this happens only when there are one or two candidates remaining in the race. As such, both strategies are concerned with the quick elimination of opponents. To better understand how candidate behavior is best understood as part of a process of elimination, we need, first, to provide a brief review of how momentum has been used previously and, second, how candidate exit influences the nomination process.

1.1 Momentum and the Nomination Process

Momentum is a central feature of the nomination process because the campaign takes place across a series of elections. Aldrich (1980*a*, 129) defines momentum as “[referring] to increases in a candidate’s chances of winning the nomination.” Bartels (1988) expanded the notion, also described by Aldrich (1980*b*) as “decay,” to include “negative momentum” — effectively, decreases in a candidate’s chances of winning the nomination. Bartels (1988) demonstrates the importance of momentum in a sequential electoral process by showing that Jimmy Carter would almost certainly not have been the Democratic nominee in 1976 had the nomination been decided in a national primary.

Currently, a limit of relying upon momentum to describe the nomination process is that momentum has been used solely to describe changes in candidates’ chances of winning the nomination as the result of the outcomes of the primaries and caucuses. Aldrich’s (1980*b*) definition of momentum fundamentally depends upon a comparison of the number of delegates a candidate wins with the delegates that candidate was expected to win in any given contest. Aldrich (1980*a*, 116) goes even further writing, “At the first event . . . no candidate has momentum.” Bartels (1988, 11) defines momentum as “a neat encapsulization

of ‘the demonstration effect of winning important primaries,’” and Brady’s (1993) model of the nomination campaign generally requires “harsh judgments” by the media of the primary outcomes for momentum to occur.

Obviously, momentum remains a central factor for explaining candidate exit, and therefore who wins the nomination campaign, once the primaries begin. For example, Aldrich (1980*b*, 661) points out that the instability that momentum creates in multi-candidate races means that “in large fields attention tends to narrow quickly to one or a very few candidates . . . The rest find it increasingly harder to gather sufficient resources to conduct viable campaigns and, presumably, they are eventually forced out of the competition.” We do not believe, however, that the definition of momentum has to be limited to activity during the primaries. For instance, the media could evaluate a candidate who raises a record amount of money in the year preceding the general election as have exceeding their expectations for that candidate’s fund-raising, and we could say on that basis that the candidate “has momentum.” In fact, Arterton (1984) has argued that the media behave in this manner before elections provide “hard results” by which we can evaluate candidate success.² At some level, the amount of money raised could be so large that such a candidate would be in a better position to win early primaries, or in the event of early losses, have less need to “gather sufficient resources to conduct viable campaigns.” In the 2000 campaigns, both George W. Bush and Bill Bradley appear to have received a boost in other actors’ perceptions of their chances of winning because of their fund-raising success.

But extending the definition of momentum in this way still leaves other critical influences upon candidates’ chances of winning the nomination undefined. Colin Powell’s decision not to run for the Republican nomination in 1996 certainly had an impact upon Bob Dole’s ability to win the nomination, but Powell’s decision to stay out of the race was not the result of his negative momentum or any announced candidate’s positive momentum. If anything,

²In this sense, the media’s behavior prior to the primaries allows us to extend momentum, resulting from Brady’s (1993) “harsh media judgments,” back to the pre-primary period.

Powell's exit *provided* Dole with momentum, rather than the other way around because of other actors' expectations about how Powell's absence would affect the allocation of the resources, money, media coverage, and both elite and popular support, that candidates need to win the nomination. Because exit can lead to momentum and *vice versa*, it makes sense to examine their relationship to one another.³ For the purposes of this paper, exit is the event that occurs when a candidate either decides not to run or withdraws from running for the presidential nomination and momentum refers to a significant change in a candidate's chances of winning the nomination.

As long as our understanding of momentum is intertwined with elections, then momentum can only help our understanding of activity that takes place once the primary season has begun. It is clear, however, that events preceding the Iowa caucuses and the New Hampshire primary have some bearing on what happens in those contests and beyond. We need, therefore, to incorporate events that take place before the first contests in order to better understand the role of momentum in the nomination process. An obvious place to start is by examining who chooses to run and who stays out of the race.

1.2 Candidate Exit

Our view of elimination extends the focus upon the nomination process back to the year before the primaries because activity in this period can affect a candidate's chances of winning the nomination as much as anything that takes place during the primaries. For instance, we believe that the withdrawal of candidates, such as Jack Kemp, Dan Quayle, and Colin Powell, had as much to do with Bob Dole winning the Republican nomination in 1996 as anything that happened once the primary season officially began. Once these candidates chose not to run, Bob Dole faced a field of relatively inexperienced candidates,

³One should also note that exit can occur without any change in momentum (Bob Smith leaving the 2000 Republican nomination campaign, for example) and momentum can occur without any candidate exiting (as happened several times during the 1976 Republican campaign).

none of whom had the combined resources and experience in national politics as Dole. With these candidates out of the race, voters were left with few credible options once Dole's campaign stumbled during the early primaries.

As a result, Dole was probably the ultimate beneficiary of these other candidates' decisions not to run. Whatever the long-term benefit, we will show that the exit of these candidates helped Dole's viability more than the viability of the remaining lesser-known candidates running against Dole. For lesser-known candidates, we expect exit to have much smaller benefits. On the one hand, as challengers to a well-known front-runner leave the field, the remaining candidates will be able to pick up a greater share of the vote, as supporters of the departing candidates look elsewhere to shift their support. On the other hand, lesser-known candidates can often benefit from a split in the support among the factions within the party that are amenable to the front-runner. For lesser-known candidates, we believe that the effects of exit upon candidate viability will be conditional upon the ideological proximity of a departing candidate from the other candidates.

For all candidates, candidate exit is essential in a decisive nomination process because the winning candidate needs a majority of the party delegates, but we believe that it favors front-running candidates the most. In multi-candidate races, there is no guarantee that this will occur unless candidates withdraw. As Aldrich (1980*b*) points out, the fundamental reason why candidates withdraw is that a lack of viability leads to a lack of resources. Obviously, this means that candidates with the resources to last through a long part of the primary season, withstanding losses if necessary, are best able to survive. Furthermore, because campaign resources are relatively fixed commodities, candidates who can attract the resources to insure survival through a significant number of primaries may also be able to deprive as many of their competitors, all if possible, of the resources needed to win.⁴

⁴Resources are relatively fixed because there is only so much space that journalists are willing to use for campaign coverage, voters are only willing to devote limited attention to the campaign, there are so many political officials available to provide endorsements, and relatively few people give financial contributions to campaigns (Brown, Powell and Wilcox 1995; Verba, Schlozman and Brady 1995). While the pool may be

Because front-running candidates start the nomination campaign with ample resources, they do not need to rely upon momentum for generating new resources and extending their stay in the campaign. Such candidates are also those who are best able to monopolize the resources that their competitors need to survive. For this reason, candidate exit is one indicator of a front-runner's success.

Another reason that exit will benefit front-runners is because we assume that a well-known candidate in a field of lesser-known candidates will usually be the Condorcet winner. Because Condorcet winners can lose in multi-candidate races (for specific examples, see Brams and Fishburn 1983), a front-runner has a strong incentive to eliminate candidates as soon as possible to get an election down to a two-candidate race. One can also see this in that there is little question that Condorcet efficiency, the probability that a Condorcet winner will be chosen in a plurality election, decreases as the number of alternatives increases. Lesser-known candidates, whatever qualities they may possess, almost never start the primary season as a Condorcet winner because voters are not inclined to vote for someone about whom they have little information. The relationship between Condorcet efficiency and the number of alternatives also implies that candidates who are not Condorcet winners have a non-negative increase in the probability of winning as the number of candidates increases. As a result, a well-known candidate's goal should be to get the race down to a two-candidate affair as soon as possible.

Candidate exit is also essential to the sub-group competition that takes place between certain candidates within the nomination field, and it is here where the effect of exit upon lesser-known candidates will be conditional upon the ideological proximity of a remaining candidate to the departing one. Brams (1978) has described the nomination race as one that involves candidates of various ideological groups vying to become *the* representative of large enough for several candidates to attract sufficient resources, any candidate who is successful in amassing a significant proportion of these resources will leave fewer competitors who do have sufficient resources to provide a serious challenge.

that group in the final field. In short, the moderate candidates fight among one another to become the surviving candidate against the surviving extreme candidate, who also faces a similar battle among the more extreme candidates. Without this, a majority faction would split its votes among several candidates, leading to a unified minority faction candidate's nomination. Similarly, a divided minority faction could lose an opportunity to nominate its preferred candidate when the majority faction cannot agree upon a single candidate. The logic of competition between potential representatives of a party faction follows the logic of Duverger's law.⁵

In this paper, these two observations about candidate exit inform our basic hypotheses: other things equal, the front-runner is the primary beneficiary of candidate exit and the degree to which surviving candidates benefit from a candidate's exit is a function of the latter's ideological proximity to the candidates remaining in the race. To better understand the role of candidate exit in the nomination process, it makes sense to break the process down into two periods: the period before the first contest and the period during the primaries.

1.2.1 Candidate Exit — Before the Primaries

Without momentum, even before the race begins and momentum can be assessed, candidates can do much to win the nomination. One way is to get candidates to withdraw before the first contest or not to enter in the first place — the latter a *de facto* form of exit.⁶ Aldrich (1980a) points out that poor previous political performances can be a liability to candidates seeking the presidency. Candidates facing an uphill battle against better

⁵One can also see how front-runners will benefit from exit because they are almost always are always targeted by other candidates (Gurian, Dunn and Haynes 1998), particularly those with similar ideological views. The only way that exit could harm a front-runner is if the exit leaves another candidate as the sole representative of an ideological faction within the party while the front-runner must still compete with other candidates to become that faction's representative. While a potential problem in the short-term, Abramson, Aldrich, Paolino and Rohde's (1992) findings indicate that this should not be a chronic problem.

⁶There is certainly a long line of literature in the area of Congressional elections that discusses incumbents' abilities to preempt strong challengers (e.g. Kazee 1983). We see very little reason why the logic of this literature cannot provide insights for presidential nomination campaigns.

endowed opponents may decide that a campaign is more likely to do damage to future prospects than to lead to victory in the current period.

Rather than sticking to Udall's football game metaphor, we argue that a more appropriate, if not necessarily original, metaphor for the current nomination process is a horse race. Certainly, the horse race metaphor has been used before, but usually starting from the horses arriving at the post. There are, however, many other considerations that go into a race apart from the running. The same is true for the nomination process. In both, a sophisticated handicapper must consider the preparation that the competitors have had prior to the race and the conditions under which the race will be run, including which contenders have been scratched from the field.

In the year or two before the first contest, candidates' preparation involves raising money, building campaign organizations, and testing out messages. Candidates also have to devise a strategy for allocating their resources, and this depends upon the conditions of the race, including the schedule, the suitability of particular states to their message, and their beliefs about which competitors will form their primary opposition. An oft-quoted passage from a 1974 memorandum by Hamilton Jordan (cited in Bartels 1988, 172-73) shows the importance of determining a strategy before the beginning of the primaries is to generating momentum during the primaries. In Jordan's memo, we can see that Carter's strategy was influenced greatly by Carter's initial weakness, the presence of an ideologically similar candidate, George Wallace, and, the prospect of a crowded field splitting up the early votes.

The composition of the field will almost always influence candidates' strategies. A front-runner without any strong challengers may try for a quick knockout. Such a strategy may work especially well if the lesser-known candidates are fighting among themselves to become the alternative to the front-runner. On the other hand, a front-runner who needs to eliminate a strong challenger may have to focus upon beating that challenger first and

before worrying about eliminating the remaining (weaker) candidates. Similarly, a strong challenger to the front-runner could hurt a weak challenger by making it more difficult for the weaker candidate to receive necessary campaign resources, but it could also help such a candidate by allowing the weaker candidate to appear as a preferable alternative to top candidates who have degenerated into slinging mud. In this way, candidates' strategies are contingent upon the other candidates in the field, and so a candidate's decision to enter or stay out of the field has a great impact upon candidates' viability prior to the primary season.

1.2.2 Candidate Exit — During the Primaries

As we pointed out above, candidates' momentum during the primaries often causes candidates to withdraw from the race — particularly those “decay” or with “negative momentum.” But we have also made the case that candidate momentum and candidate exit can be both causes of and caused by the other. Because there are relatively few “events” by which observers can gauge candidate momentum in the pre-primary period, exit more often precedes momentum than momentum leads to exit.⁷

The primary season, however, presents a different story. Here, candidates generally withdraw because negative momentum, for the reasons that Aldrich (1980*b*) describes, leads to an evaporation of resources that prevents candidates from continuing in the race.⁸ But exit can also provide a successful candidate with additional momentum. In the cases of primaries that do not prompt any candidates to withdraw, voters and others may channel their resources to a candidate with positive momentum and away from those with negative momentum, but this direction of resources may not be complete, as some supporters

⁷There are, however, some cases where momentum can lead to exit during the pre-primary period. Lamar Alexander's withdrawal from the 2000 race was almost surely precipitated by his poor performance in the Iowa straw poll.

⁸There are also instances where candidates choose to exit, not because of resource constraints, but because, like Phil Gramm in 1996, they believe that continuing a hopeless campaign may damage their political careers in other ways.

of the least successful candidates will continue to place some faith, and resources, with these candidates. Candidates trying to reverse their fortunes may look to attack the candidates with the momentum, and these attacks could be damaging. So while momentum provides successful candidates with additional resources, the victory is not complete unless the candidate withdraws.

When a candidate's momentum is great enough to force a contender from the race, potentially damaging attacks will be less of a problem. Obviously, the degree to which the remaining candidates benefit from another candidate's withdrawal will depend upon that candidate's ideological proximity. One candidate cannot be expected to benefit from another's exit is that withdrawal will allow a major competitor to consolidate support and resources, making it easier to finish ahead of that candidate. Still, the candidate who wins the nomination in a decisive primary process will need all opponents to withdraw sooner or later. And we cannot expect that an unsuccessful candidate will deliberately remain in the race to make life more difficult for an ideologically similar candidate if that might make it more likely that a less-preferred candidate becomes more likely to win the nomination. The question for us, then, is the size of the marginal value of a candidate's exit for other candidates' viability, beyond the effect that they would obtain given momentum. We believe that there should some marginal effect of driving candidates out of the race for the reasons we have laid out above. If so, we need to understand changes in candidates' viability not just in terms of exceeding expectations, but also from forcing other candidates to withdraw. Similarly, we should also expect to see some dampening in candidates' momentum because of the differentially beneficial effects of candidate exit that may fall to other candidates.

2 Estimating the Effect of Candidate Exit

To examine our hypotheses, we examine information from public opinion polls and data from the Iowa Electronic Markets. The model that we use to examine these hypotheses

is one that King (1989) describes as a “random-shock” model and is known elsewhere in the time-series literature – see Box and Tiao (1975) – as an “intervention model.” The underlying logic of a random-shock model is that a time-series process moves along as a function of some set of explanatory variables, possibly including the lag of the dependent variable. At times during the series, events occur that dramatically alter the values in the system.

In our case, candidates’ probabilities of winning the nomination are a function of such things as media coverage and fund-raising success.⁹ Without any changes in the information about candidates’ assets, there is little reason to reevaluate their chances of winning the nomination. From time to time, however, events take place, such as candidates withdrawing from the field, that significantly alter candidates’ prospects for winning the nomination. Results of straw polls and candidate entry are just two such events.¹⁰ Random-shock models specify the underlying process, but include variables to model these changes in the system that result from non-systemic forces. By modeling the effect of such shocks, we can estimate the influence of candidate exit upon the viability of the candidates remaining in the race. Such an analysis would further our understanding of the presidential nomination process and could also be applied to Congressional elections.

2.1 The Value of the Iowa Electronic Markets

The election probabilities used in our empirical model are taken directly from the average daily candidate share prices in the “winner-take-all” (WTA) Iowa Electronic Markets (IEM) Presidential Nomination market. The IEM offers traders the opportunity anonymously to buy and sell shares tied to the electoral fortunes of either individual or groups of candidates (e.g., “rest of field”). The WTA market, as the name implies, is an all or nothing

⁹In our quantitative model, we do not have measures of media coverage or fund-raising. Rather, we believe these factors are captured by using the lag of the dependent variable as an independent variable.

¹⁰We estimated models including dummy variables for the Iowa and Florida straw polls. These results were not substantively different from the results that we will present below.

opportunity that pays \$1.00 for a winning candidate share and \$0.00 for losing candidate shares. At any given moment prior to the vote on the convention floor the share price of a given candidate in the WTA market reflects that candidate's probability of winning the Republican Party's nomination. Recent work on presidential campaigns demonstrates the sensitivity and seemingly rational response of IEM share prices to "significant" campaign events (Forsythe, Nelson, Neumann and Wright 1992; Shaw and Roberts 1996). Another interesting and important finding, one consistent with a reasonably strong claim of market efficiency, is that the release opinion poll data had no discernible effect on market prices (Forsythe et al. 1992).

The predictive power and general superiority of IEM share prices relative to poll data in the context of US presidential elections is well documented (Forsythe, Nelson, Neumann and Wright 1991; Forsythe et al. 1992).¹¹ In spite of such evidence of accuracy and market efficiency, there remains plenty of room to question whether the observed IEM reactions to campaign events such as candidate exits are meaningful in any substantive sense. To bolster such claims considerably, recent studies of the 1992 election have found a significant relationship between movement of WTA share prices in the IEM and changes in politically sensitive industry portfolio returns in US equity markets (Cram, Heron, Lavin and Silver 1994; Roberts 1994). This link to national financial markets lends significant weight to the claim that IEM traders are reacting to "real" events. Financial market reactions are inherently prospective and discount completely the impact of any campaign event that is not likely to have a lasting effect on voter preferences.

For the purposes of our study, the IEM provides wonderful data because, unlike public opinion polls, which measure shifts in public preference when candidates leave the race, the

¹¹The predictive power of the IEM political markets is demonstrated in a second, concurrent presidential market, called the "Vote Share" market, in which candidates' share prices pay off in direct proportion to the share of the popular vote received by the candidates. In the 1988 and 1992 presidential election markets the closing prices (the predicted vote shares) in the IEM (known then as the Iowa Presidential Stock Market) came within less than 1% of the actual vote share. This far surpassed the accuracy of public opinion polls.

IEM provides estimates of the changes in the candidates' viability when a another candidate leaves the race. Without question, the two measures are linked, but they are certainly not the same. To illustrate, imagine a hypothetical three-person nomination campaign. Let's say we have two moderate candidates and a conservative candidate. Furthermore, let's say that the public support for the moderate candidates is split 30-30, leaving 40% for the conservative candidate. Under these circumstances, it is probable that the moderate candidates are focused on knocking each other out of the race in order to take the other's support and beat the conservative 60-40. Under a winner-take-all system, the conservative may be the most likely to win as long as there are two equally popular moderates in the race. Once one of the moderates forces the other out of the race, it is likely that perceptions of the conservative's chances of winning will drop, even if he suffers no loss in public support. If we were to rely upon public opinion polls, the revised prospects of only two candidates, the moderates, in this race would be apparent. Using the IEM data, the new viability of all three candidates is accounted for.

Clearly, this is an extreme example, but a less hypothetical situation from the 1996 campaign provides an even better example. Because of his potential fund-raising power, some people thought that Gov. Pete Wilson might provide some challenge to Sen. Bob Dole for the Republican nomination. Wilson did not have much support in public opinion polls when he left the race, so public opinion polls with and without Wilson would not be likely to show any differences in support for Dole. Because Wilson was seen as someone who might be able to challenge Dole in the long-term, however, Wilson's exit from the race might be seen by traders as increasing Dole's chances of winning the nomination. Furthermore, it is not clear that Wilson's exit would necessarily affect the chances of all other candidates in the field. Again, because Wilson had little public support when he dropped out of the race, public opinion polls would obscure the new situation in the race. But, any change would be picked up in the Iowa market.

2.2 Independent Variables

A thorny question that we have to address in doing our analysis is what constitutes candidate exit. Prior to the primary period, this is not a problem. Candidates' announcements of exit are often unanticipated. During the primary period, however, exit is a different matter. Few candidates get out of the race when think they have a good chance of winning. Consequently, if we only look for changes in perceptions of candidate viability on the day that a candidate makes his farewell statement, we are not likely to find much effect of exit upon candidate viability because events have occurred that have already altered perceptions of viability.¹² Furthermore, many candidates go into a contest knowing that they need to finish in the upper half of the field in order to continue, and this information is carried over through the media (Robinson and Sheehan 1983). It is, therefore, much easier for traders to anticipate a candidate's exit in the aftermath of a primary defeat, but in advance of the candidate's actual announcement. Our rule of thumb, therefore, is to take the date on which the candidate last participated in a contest prior to his announcement as the *de facto* date of exit. In other words, the date when a candidate still hoped for some chance of success going into a contest, but who, after failing to do well in that contest, decided it was time to end the campaign.

Another problem with determining the effects of exit concerns separating out a candidate's exit that is the result of a poor showing in a primary that benefits another candidate with the boost that the surviving candidate would receive from his showing in the primary. Consequently, we must be very careful about controlling for one candidate's success. One way of doing this is to include variables to account for the "intervention" of the primaries into the time series. But how does one count the influence of a candidate's performance on a primary day? A simple solution is to construct a measure of primary success that

¹²In addition, candidates will often "suspend" their campaign in order to continue to raise funds to pay off debts. Similarly, candidates often do not withdraw from the race, even after they have ceased to campaign actively. In 1996, Pat Buchanan only officially withdrew from the race days before the Republican convention.

accounts for a candidate’s momentum in the wake of the day’s results. In this light, we construct a three-point variable which equals 0 on days without a primary or in instances where a candidate did not compete actively in a contest, 1 when an active competitor gained momentum from a primary, and -1 when an active competitor lost momentum.¹³

We have also included measures of public support, as measured by public opinion polls. We rely primarily on the polls for the period from the beginning of the campaign up until the New Hampshire primary. The polls are a simple average of the most recent New Hampshire, Iowa, and national polls. In the models, we include the poll-standing and a poll intercept for the period after the Louisiana caucus. The idea is that the effect of the polls upon perceptions of viability is greater during the primary period than before.¹⁴

Finally, we include the predicted values of the other contracts using an instrumental variables approach. Because the market values of the contracts are set so that the sum of the bid values do not exceed 1 and the sum of the ask values do not fall below 1, it is not reasonable to assume that the individual candidate values are independent of each other. For this reason, we have chosen to specify a non-recursive model where all the candidate values are simultaneously related to each other.

In order to judge the effects of candidate exit for each period, we estimate two models: one only for dates preceding the primary period and one for the entire period with an exit variable for candidate withdrawal prior to the primary period and another exit variable for candidate withdrawal during the primary period. The fundamental model is specified accordingly:

$$\begin{aligned} \text{Price}_{j,t} = & \alpha + \rho \text{Price}_{j,t-1} + \sum_{i=1}^{k-1} \beta_i \widehat{\text{Price}}_{i \neq j,t} + \beta_k \text{Exit}_t + \\ & \beta_{k+1} \text{Poll}_{j,t} + \beta_{k+2} \text{Momentum}_{j,t} + \epsilon_t \end{aligned} \tag{1}$$

¹³The coding is contained in the appendix. Scores were awarded based upon the authors’ interpretation of the results. The coding was confirmed by examining newspaper stories in the *New York Times*.

¹⁴For the “rest of the field” contract, we do not include a variable for poll-standing. Instead, there is a dummy variable controlling for the introduction of contracts spun-off from the rest of the field contract.

There are, of course, a number of problems with this specification. The most obvious one involves the likely autocorrelation between the errors. Another potential problem involves the use of the lagged dependent variable. In particular, basic econometric procedures for dealing with time series data assume that the series is stationary. Briefly stated, stationarity presumes that memory is limited; the relationship between y_t and another y_{t-k} at some point in the past declines as k increases. This implies that $|\rho|$ in equation 1 is less than 1. If $|\rho| = 1$, or is even close to 1 (DeBoef and Granato 1997), then there is a great danger of rejecting true null hypotheses (i.e. Type I error).

The first question to address is whether the series is stationary or non-stationary. One indicator of a non-stationary time series is autocorrelation functions that decay slowly (Judge, Hill, Griffiths, Lutkepohl and Lee 1988, 697). These results suggest that this is the case, with autocorrelations that are within 2 standard deviations by the 10th and 9th lags for Alexander and Buchanan, respectively, and are still not within 2σ by the 15th lag for Dole, Gramm, and the rest of the field.¹⁵ Given that each of the series appear to be non-stationary, one recommended fix is to difference the data (DeBoef and Granato 1997), and this appears to solve the problem.¹⁶ The analysis, then, will be carried out upon a revised model using OLS:

$$\Delta\text{Price}_{j,t} = \alpha + \sum_{i=1}^{k-1} \beta_i \Delta\widehat{\text{Price}}_{i \neq j,t} + \beta_k \Delta\text{Exit}_t + \beta_{k+1} \Delta\text{Poll}_{j,t} + \beta_{k+2} \Delta\text{Momentum}_{j,t} + \epsilon_t \quad (2)$$

For this analysis, the critical variable is candidate exit. In this case, we are examining the effect of a change in the number of candidates in the race upon the change in each candidate's viability, as perceived by the traders in the market.

¹⁵Further investigation using the Augmented Dickey-Fuller (ADF) test does not reject the hypothesis of a unit root for the series.

¹⁶Autocorrelation functions start low, albeit greater than 2 standard deviations in the first lag, and then dampen down.

3 The Effects of Candidate Exit

The Iowa Republican Convention Market started with 5 contracts: for Dole, Gramm, Quayle, Kemp, and the rest of the field. Contracts were subsequently “spun off” for Alexander (2/16/95), Buchanan (7/8/95), Powell (10/9/95), and Forbes (1/12/96). For the first model, we use contracts for Dole, Gramm, Alexander, and the rest of the field in order to maximize both the number of observations and the number of contracts.¹⁷ The time series for the first set of estimates runs through the day before the first contest of the 1996 race, the Louisiana caucus in order to estimate the effects of candidate exit before any candidates have gained any momentum.

The results in Table 1 provide support for the paper’s primary hypothesis. Certainly, the remaining candidates benefit when there are fewer candidates in the race, but the greatest benefit goes to the front-runner, Bob Dole. Further examination of the table also reveals that the benefit that Dole receives is significantly greater than the corresponding benefit to either Gramm or Alexander, $p < .05$. These results indicate that, in the early stages of the campaign, the front-runner increased his lead as other candidates withdrew from the race. Further analysis of the data (not shown) indicates that most of Dole’s advantage came from Colin Powell’s withdrawal, but his benefit is also significantly greater than the other candidates when Arlen Specter withdrew from the race.

The other results in the table show that the polls do not have much effect upon the candidates’ viability once other factors are taken into account. Obviously, candidates’ standing in the public opinion polls are very strongly related to their viability. These results, instead, reflect that candidates’ initial contract values, i.e. viability, are related to traders’ expectations of candidates’ public support. Similarly, our measures of the polls are sufficiently infrequent that, with little change in the polls during this period, it is not

¹⁷This does mean that the first model misses the exits from the field of Kemp and Quayle. The substantive results, however, are not affected by whether or not we add Buchanan and start from a later date or exclude Alexander and start from the beginning of the market.

surprising that changes in the polls have little effect upon changes in share prices.

In Table 2, the results indicate that the exit of other candidates, both before and after the beginning of the primaries, provides a significant benefit to the front-runners, i.e. Dole's, candidacy. The benefit for Dole remains significantly greater than for the other candidates in the period before the first contest. After the primaries have begun, however, Dole's advantage remains statistically significant when compared to Buchanan and Gramm — the latter being no surprise — but not when compared with the boost that Alexander receives from the exit of Gramm (Alexander certainly did not receive any benefit from his own withdrawal). The finding that Dole was not the sole beneficiary of candidates' exit during the primary period is consistent with the argument we made about candidate exit generating momentum for both lesser-known and well-known candidates.¹⁸

Overall, there are two ways to interpret these results. First, it may be that the well-known candidate benefits most from candidate exit during the period before the first primaries because the lesser-known candidates' viability is not very clear during this period. As a result, it should be more difficult for other political actors to judge how a candidate's withdrawal affects these candidates. Once the primaries begin and some candidates have been forced to end their campaigns, perceptions about these other candidates' viability is more certain. This might explain why Alexander received a boost from Gramm's withdrawal, but Buchanan did not. Buchanan was never a credible nominee. If Dole were not to succeed, Alexander, at least as of early February, was a much more plausible candidate to get the nomination than Buchanan. A second one revolves around the ideological proximity of the candidates in the Republican field. Gramm's supporters, economically, as well

¹⁸The effects of Gramm's exit upon Dole's, Alexander's, and Buchanan's viability also provide some support for our claim that the momentum variable provides an effective control. In a separate analysis, the results for the primary exit variable are related most strongly to Gramm's exit, not Alexander's. This means that, while Alexander received a positive bump from Gramm's exit, while also receiving positive momentum, Dole also received a bump, even though his momentum score on the day of Gramm's exit is -1. Finally, even though Buchanan received positive momentum from Iowa, there is no evidence that Gramm's exit helped him at all.

as socially, conservative, were not nearly as likely to defect to Buchanan as to Alexander. Unfortunately, the data are not sufficient to test this possibility, so we will have to remain agnostic on this point until we have more elections (and more data) to examine.

Other results from Table 2 provide expected results. First, momentum is statistically significant, indicating that momentum is an important quality for viability. While exit before the primaries provides a source of momentum for many of the candidates, exit appears to have much less effect during the primaries. One explanation is that exit, because of how we have defined it, is tied up with momentum during the primaries. A second part of the explanation is that the candidates who exit have such low viability when they do exit that there's not likely to be much effect upon the remaining candidates' viability. Finally, it may be the case that our modeling strategy needs to incorporate some persistence into exit to capture information that people gain as polls after the primary provide some information about which candidates are helped most by a candidate's exit, as people begin to see to which of the remaining candidates the exiting candidate's remaining supporters defect.

4 Conclusions

The results in this paper indicate that we need to consider more closely the impact of candidate exit upon the nomination process. The data presented are consistent with our hypothesis that well-known candidates benefit most from other candidates leaving the field. Our findings, however, represent only a first look at this question. The data are currently available may be too limited to examine other refinements to this theory. In particular, we did not find evidence that candidate exit had a significantly greater effect upon Bob Dole's viability than Lamar Alexander's during the primary season. In this section, we consider three other factors that may affect the impact of candidate exit upon the remaining candidates in the field: the strength of the candidate exiting, the ideological relationship between the candidate exiting and those remaining, and the number of candidates left in

the field.

The large effects of candidate exit during the pre-primary period are notable in that they indicate how candidate exit may play a role similar to momentum during the primary season. Admittedly, Colin Powell's exit was, in large part, very much responsible for this finding, but this relatively late decision not to run has very strong implications for reactions to other candidates' earlier decisions not to run. The effect of Powell's decision not to run upon Dole's viability is most likely similar to the effect of candidates' decisions to stay on the sidelines in other races. Richard Gephardt's decision not to challenge Al Gore for the 2000 presidential nomination, most assuredly had a great effect upon Gore's prospects for winning the nomination.

This probably indicates that, particularly with early decisions to exit the race, the greatest impact upon candidate exit is with respect to a form of momentum it gives the remaining candidates among political elites, such as the media and, more importantly, financial contributors. While the public's attention to the race is not terribly strong during these early periods of the campaign, elites wait to see which candidates have throw their hats into the ring before allocating their resources. When a potentially strong challenger, like Gephardt, to a presumed front-runner, like Gore, decides not to run, that makes it very likely that a wealth of campaign contributions and media attention will immediately be directed to the remaining candidates, with the front-runner the primary beneficiary.

The strength of the candidate exiting clearly is related to the effect upon the viability of the remaining candidates. Strength can be divided into two components: the amount of public support and the *potential* for gaining public support. The amount of public support of the candidate exiting will clearly have an effect because a candidate with a fair amount of public support will have supporters who will have to move to other candidates. By the same token, a candidate with little support will not produce a great shift in public opinion by his exit. A candidate without much public support can, however, also affect other candidates'

viability if he has the potential to attract support because of great financial resources, for example. The effect of these factors is quite likely dependent upon the ideological relationship of the candidate to the other candidates in the field.

While we did not find much support for the ideological proximity hypothesis, the results suggest a “competitiveness” hypothesis. The fact that Buchanan defeated Gramm in Louisiana, starting Gramm on his way to exit, did not appear to help the conservative television commentator. Rather, the withdrawal of Gramm appears to have bolstered people’s beliefs in Alexander’s viability, perhaps as he was viewed as more of a potential challenger to Dole than Buchanan. With Gramm out of the race, people may have reasonably concluded that Alexander remained as the sole candidate with any chance of stopping Dole. This interpretation is supported inasmuch as Powell’s exit did not do anything to change beliefs about Buchanan’s viability, but did for Dole, Alexander, and Gramm. While the ideological proximity hypothesis would also lead to the prediction of little change for Buchanan, it is not consistent with Gramm’s increased viability.

This fact may be telling in that the recent nomination campaigns have not involved any great battles between ideological factions within each party, such as we saw in 1976 with Ford against Reagan and 1980 with Carter against Kennedy. While there have been candidates who have been able to stir the more extreme activists in each party, Jesse Jackson in 1984 and 1988, Pat Robertson in 1988, and Pat Buchanan in 1992 and 1996, these candidates have not been regarded as viable competitors. Once we ignore such activist candidates (notable by not having held elective office), the recent nomination campaigns have been relatively tame ideological affairs. This may very well corroborate Abramowitz and Stone’s (1984) findings regarding activists’ pragmatic behavior. The results in this paper may also speak to a greater influence of organizational behavior on the part of party elites during the nomination process that makes the campaign less vulnerable to grass-roots campaigning that is more common among outsider candidates.

Finally, the number of candidates in the field, together with these other factors, may be related to the effect of exit upon the other candidates' viability. With many other candidates in the field, the effect of one candidate's exit may not be great because a number of other candidates remain to benefit, and so the benefits could be spread thinly among the remaining candidates. These effects are obvious for candidates close ideologically to an exiting candidate, but the effect could also be small for candidates on another wing of the party because the candidates on the exiting candidate's wing may become stronger challengers. In other words, we can imagine a situation where a well-known candidate could be hurt by another candidate's exit if the exiting candidate was helping to divide the opposition.

Undoubtedly, there are other factors that we have not considered. Unfortunately, the empirical data are not sufficient to consider all of these combinations because we quickly run into a degrees of freedom problem. Possibilities for future research may require waiting for more data, developing formal models, or even simulating elections. We hope, however, that the work here will lead other researchers to consider more seriously the effect of candidate exit and other activity in the period before the primary season upon the outcome of the nomination process.

A Appendix

A.1 Variable Codes

1. **Candidate Exit** is a dummy variable coded 0 over most of the period, and coded 1 on the following dates:
 - September 29, 1995 (Pete Wilson),
 - November 8, 1995 (Colin Powell),
 - November 21, 1995 (Arlen Specter),

- February 12, 1996 (Phil Gramm), and
- March 5, 1996 (Lamar Alexander and Richard Lugar)

2. **Momentum** is a three-value variable coded 0 over most of the period, and coded as follows for each candidate:

- For Bob Dole, -1 on February 12, 1996 (Iowa), February 20, 1996 (New Hampshire), February 24, 1996 (Delaware), and February 27, 1996 (Arizona) and +1 on March 2, 1996 (South Carolina), March 5, 1996 (Georgia), and March 7, 1996 (New York).
- For Phil Gramm, -1 on February 6, 1995 (Louisiana) and February 12, 1996.
- For Lamar Alexander, -1 on February 27, 1996, March 2, 1996, and March 5, 1996 and +1 on February 12, 1996 and February 20, 1996.
- For Pat Buchanan, -1 on February 27, 1996, March 2, 1996, and March 5, 1996 and +1 on February 6, 1996, February 12, 1996, and February 20, 1996.

References

- Abramowitz, Alan I. and Walter J. Stone. 1984. *Nomination Politics: Party Activists and Presidential Choice*. New York: Praeger Publishers.
- Abramson, Paul R., John H. Aldrich, Phil Paolino and David W. Rohde. 1992. "Sophisticated Voting in the 1988 Presidential Primaries." *American Political Science Review* 86(1):55-69.
- Aldrich, John H. 1980a. *Before the Convention*. Chicago: University of Chicago.

- Aldrich, John H. 1980b. "A Dynamic Model of Presidential Nomination Campaigns." *American Political Science Review* 74(3):651–669.
- Arterton, F. Christopher. 1984. *Media Politics: The News Strategies of Presidential Campaigns*. Lexington, MA: Lexington Books.
- Bartels, Larry M. 1988. *Presidential Primaries*. Princeton: Princeton University.
- Box, G.E.P. and G.C. Tiao. 1975. "Intervention Analysis with Application to Economic and Environmental Problems." *Journal of the American Statistical Association* 70:70–79.
- Brady, Henry E. 1993. "Knowledge, Strategy, and Momentum in Presidential Primaries." *Political Analysis* 5:1–38.
- Brady, Henry E. and Richard Johnston. 1987. What's the Primary Message: Horse Race or Issue Journalism. In *Media and Momentum: The New Hampshire Primary and Nomination Politics*, ed. Gary R. Orren and Nelson W. Polsby. Chatham, NJ: Chatham House Publishers, Inc.
- Brams, Steven. 1978. *The Presidential Election Game*. New Haven: Yale University Press.
- Brams, Steven J. and Peter C. Fishburn. 1983. *Approval Voting*. Boston: Birkhauser.
- Brown, Clifford W. Jr., Lynda W. Powell and Clyde Wilcox. 1995. *Serious Money: Fundraising and Contributing in Presidential Nomination Campaigns*. Cambridge: Cambridge University Press.
- Buell, Emmett H. Jr. 1987. Locals' and 'Cosmopolitans': National, Regional, and State Newspaper Coverage of the New Hampshire Primary. In *Media and Momentum: The New Hampshire Primary and Nomination Politics*, ed. Gary R. Orren and Nelson W. Polsby. Chatham, NJ: Chatham House Publishers, Inc.

- Buell, Emmett H. Jr. 1996. The Invisible Primary. In *In Pursuit of the White House: How We Choose Our Presidential Nominees*, ed. William G. Mayer. Chatham, NJ: Chatham House Publishers, Inc.
- Cram, Donald P., Michael C. Heron, James Lavin and Jay Silver. 1994. "Measurement of Political Effects in the Stock Market: A Study of the 1992 United States Presidential Election." Working Paper. Graduate School of Business, Stanford University.
- DeBoef, Suzanna and Jim Granato. 1997. "Near-intergrated Data and the Analysis of Political Relationships." *American Journal of Political Science* 41(2):619–40.
- Forsythe, Robert, Forrest Nelson, George Neumann and Jack Wright. 1991. The Iowa Presidential Stock Market: A Field Experiment. In *Research in Experimental Economics*, ed. R.M. Isaac. Vol. 4 CT: JAI Press, Inc. pp. 1–43.
- Forsythe, Robert, Forrest Nelson, George Neumann and Jack Wright. 1992. "Anatomy of an Experimental Political Stock Market." *American Economic Review* 82:1142–61.
- Gurian, Paul-Henri. 1986. "Resource Allocation Strategies in Presidential Nomination Campaigns." *American Journal of Political Science* 30(3):802–21.
- Gurian, Paul-Henri, Richard E. Dunn and Audrey A. Haynes. 1998. "Targeting Opponents: Strategy in Presidential Primaries." Paper presented at the 1998 Annual Meeting of the American Political Science Association.
- Judge, George G., R. Carter Hill, William E. Griffiths, Helmut Lutkepohl and Tsoung-Chao Lee. 1988. *Introduction to the Theory and Practice of Econometrics*. 2nd ed. New York: John Wiley and Sons, Inc.
- Kazee, Thomas A. 1983. "The Deterrent Effect of Incumbency on Recruiting Challengers in U.S. House Elections." *Legislative Studies Quarterly* 8:469–480.

- Keeter, Scott and Cliff Zukin. 1983. *Uninformed Choice: The Failure of the New Presidential Nominating System*. New York: Praeger Publishers.
- King, Gary. 1989. *Unifying Political Methodology: The Likelihood Theory of Statistical Inference*. Cambridge: Cambridge University Press.
- Mayer, William G. 1996. Forecasting Presidential Nominations. In *In Pursuit of the White House: How We Choose Our Presidential Nominees*, ed. William G. Mayer. Chatham, NJ: Chatham House Publishers, Inc.
- Orren, Gary R. and Nelson W. Polsby. 1987. New Hampshire: The Springboard of Nomination Politics. In *Media and Momentum: The New Hampshire Primary and Nomination Politics*, ed. Gary R. Orren and Nelson W. Polsby. Chatham, NJ: Chatham House Publishers, Inc.
- Paolino, Philip O. 1995. Candidate Name Recognition and the Dynamics of the Pre-Primary Period of the Presidential Nomination Process PhD thesis Duke University.
- Patterson, Thomas E. 1994. *Out of Order*. New York: Vintage Books.
- Polsby, Nelson W. 1983. *Consequences of Party Reform*. Oxford: Oxford University Press.
- Popkin, Samuel L. 1991. *The Reasoning Voter: Communication and Persuasion in Presidential Campaigns*. Chicago: University of Chicago Press.
- Roberts, Brian E. 1994. "The Industrial Organization of the 1992 U.S. Presidential Election." Paper presented at the 1994 Annual Meetings of the Midwest Political Science Association. Chicago, Ill.
- Robinson, Michael J. and Margaret A. Sheehan. 1983. *Over the Wire and On TV: CBS and UPI in Campaign '80*. New York: Russell Sage Foundation.

Shaw, Daron and Brian Roberts. 1996. "Polls, Events, the Media, and Victory: Presidential Campaign Dynamics in 1992." Paper presented at the 1996 Annual Meetings of the Midwest Political Science Association. Chicago, Ill.

Verba, Sidney, Kay Lehman Schlozman and Henry E. Brady. 1995. *Voice and Equality: Civic Voluntarism in American Politics*. Cambridge: Harvard University Press.

Table 1: Candidate Exit Before the Primaries

OLS Estimates				
Contract	DOLE	GRAM	ALEX	RCROF
Independent Variable				
α	-0.000 (0.000)	-0.001* (0.001)	-0.000 (0.000)	0.003 (0.002)
\widehat{DOLE}		0.044 (0.058)	0.043 (0.037)	-0.106 (0.110)
\widehat{GRAM}	-0.004 (0.050)		-0.021 (0.035)	0.206** (0.104)
\widehat{ALEX}	0.278** (0.087)	-0.009 (0.092)		0.013 (0.174)
\widehat{RCROF}	0.010 (0.034)	-0.034 (0.037)	-0.049** (0.023)	
Exit	0.042** (0.006)	0.017** (0.007)	0.007 (0.004)	0.009 (0.013)
Poll	-0.002** (0.001)	-0.000 (0.001)	0.000 (0.002)	
New Contract				-0.002* (0.001)
R^2	.240	.034	.030	.021
σ	.009	.010	.006	.019
N	353	353	353	353

Note: Data from the 1996 Iowa Political Stock Market, Republican Convention Market (2/16/95-2/05/96). Standard errors in parentheses. All variables are differenced. Estimates are significant at ** $p < .05$, * $p < .1$. RCROF=contract for the rest of the field

Table 2: Candidate Exit During the Nomination Process

OLS Estimates					
Contract	DOLE	GRAM	ALEX	BUCH	RCROF
Independent Variable					
α	0.000 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.000 (0.001)	0.006 (0.007)
\widehat{DOLE}		-0.070 (0.058)	-0.116** (0.052)	-0.004 (0.036)	0.035 (0.111)
\widehat{GRAM}	-0.342** (0.108)		-0.119* (0.072)	0.017 (0.048)	0.211 (0.143)
\widehat{ALEX}	-0.019 (0.117)	-0.149* (0.083)		-0.057 (0.052)	0.135 (0.151)
\widehat{BUCH}	-0.515** (0.202)	-0.092 (0.143)	0.172 (0.136)		0.003 (0.151)
\widehat{RCROF}	0.075 (0.093)	-0.052 (0.065)	-0.055 (0.061)	-0.096** (0.042)	
Momentum	0.020** (0.007)	0.021** (0.010)	0.012** (0.005)	0.016** (0.003)	
Exit (Before Primaries)	0.059** (0.011)	0.024** (0.008)	0.018** (0.007)	-0.001 (0.005)	-0.001 (0.016)
Exit (During Primaries)	0.019* (0.010)	-0.001 (0.008)	0.018** (0.007)	0.002 (0.005)	0.003 (0.015)
Poll	-0.003* (0.001)	0.000 (0.002)	0.001 (0.004)	0.000 (0.002)	
Poll (During Primaries)	0.008 (0.006)	0.001 (0.003)	0.001 (0.005)	0.002 (0.005)	
New Contract					-0.002 (0.001)
R^2	.225	.100	.132	.121	.021
σ	.018	.012	.011	.008	.023
N	215	215	215	215	215

Note: Data from the 1996 Iowa Political Stock Market, Republican Convention Market (8/07/95-3/12/96). Standard errors in parentheses. All variables are differenced. Estimates are significant at ** $p < .05$, * $p < .1$. RCROF=contract for the rest of the field