

**Is there a premium for firms that consistently increase dividends?**

**David Michayluk\***  
Finance Discipline Group  
University of Technology  
PO Box 123, Broadway, NSW  
Australia 2007  
+61 2 9514-7761  
[David.Michayluk@uts.edu.au](mailto:David.Michayluk@uts.edu.au)

**Karyn Neuhauser**  
College of Business  
Lamar University  
Beaumont, Texas, USA  
+1 409 880 8632  
[klneuhauser@my.lamar.edu](mailto:klneuhauser@my.lamar.edu)

**Scott Walker**  
Finance Discipline Group  
University of Technology  
PO Box 123, Broadway, NSW  
Australia 2007  
+61 2 9514-4039  
[Scott.Walker@uts.edu.au](mailto:Scott.Walker@uts.edu.au)

\*Corresponding author

This version: September 29, 2014

*JEL Classification:* G14; G35

*Keywords:* Dividends; repetition; abnormal returns; patterns

## ABSTRACT

Managers of dividend-paying firms express a desire for dividend consistency, motivated by a belief that the stock market rewards such a dividend policy. To investigate this hypothesis we identify firms with a track record of consistent annual dividend increase announcements. We document significant positive abnormal returns for the twelve months following the first through the fifth dividend increase in the track record but not after this period. This finding confirms dividend consistency is rewarded by the capital market but that the size of the reward declines with each subsequent increase, and completely disappears after five years of dividend-increase consistency.

## 1. Introduction

Managers of dividend-paying firms surveyed by Brav et al. (2005) report that the most important consideration is to maintain a consistent dividend policy. This claim may be motivated by a belief among managers that a stock market premium accrues to firms that follow a policy of gradually increasing the dividend (Lintner, 1956). We investigate this belief by exploring whether firms with a consistent dividend policy are rewarded by the market. Inspection of firms' dividend track records reveals a large number of firms with long track records of increasing the dividend every year. This empirical observation is consistent with the views also expressed in Lintner's survey that although firms pay dividends quarterly, they tend to confine increases to an annual frequency, as opposed to a quarterly increase cycle. For example, consider the following announcement by TJX Companies, Inc., "I am pleased to report that our Board of Directors has approved this 27% increase in our quarterly dividend, which reflects our confidence in the business and marks our 15th consecutive year of dividend increases." (TJX Companies, 2011). Although future cash dividends are uncertain, dividend consistency implicitly manages investors' expectations. The firm's publicity of the length of the dividend track record and a desire to maintain consistency with the well-established historic policy of increasing the dividend in the same quarter suggests that the firm is likely to maintain the same policy in the future.

Consistency of dividend increases indicates that managers deliberately choose this pattern. The fact that we identify large number of firms with a long track record of consistently increasing dividends suggests that managers believe there is some benefit to embarking on, and even extending, a well-established dividend increase pattern. For a sample of firms that exhibit dividend consistency we calculate abnormal returns following a dividend increase by using a matched-firm analysis. If a consistent dividend policy is rewarded then we would expect firms with this policy to display a stock market premium. Furthermore,

examining changes in the size of the premium following each successive dividend increase can reveal whether firms continue to be rewarded the longer they maintain a track record of dividend-increase consistency.

Firms with a track record of consistently increasing earnings receive market rewards (Barth et al., 1999; Myers et al., 2007). Myers et al. also document that when firms announce an earnings decrease causing the track record to terminate, market returns are more negative the longer the track record length. To avoid announcing an earnings decrease managers use a variety of accounting tools at their discretion to manage earnings and consequently sustain the record of earnings-increase consistency. In contrast, dividends are paid in cash and not subject to accounting manipulation. It is well-known that firms follow a carefully crafted dividend policy to ensure that increases can be maintained and decreases avoided. For example, Brav et al. (2005) discover that a majority of managers would not cut the dividend to finance a valuable project, but instead raise new capital, demonstrating firms' aversion to dividend cuts. Analysing the returns associated with dividend consistency sheds light on the relative importance the market attaches to earnings consistency compared to dividend consistency.

We investigate whether the capital market rewards firms that sustain a consistent dividend policy. Specifically, we seek to answer the question: Do firms with a history of repeated dividend increases earn long-term positive abnormal returns, and if so, how long do the returns persist? We identify firms with a track record of consecutive once-a-year dividend increases and then measure abnormal returns for the five years following each successive dividend increase announcement within the track record. Our sample firms exhibit significantly positive abnormal returns following each of the first five annual dividend increases. This result suggests that firms that maintain a predictable dividend track record are rewarded with a market premium, but the reward lasts for a limited time only.

This paper contributes to the dividend literature by demonstrating that firms with a consistent dividend policy attract a market premium. The remainder of the paper is laid out as follows. Section I explains how our investigation of repeated dividend patterns builds on the existing dividend literature, and relates our analysis to other repeating corporate events such as earnings increases patterns. The construction of our sample of firms with a record of dividend consistency, and the calculation of abnormal returns for these firms is explained in detail in Sections II and III, respectively. In Section IV we present evidence that positive and significant annual abnormal returns are confined to the first five consecutive dividend increases. Section V demonstrates that the positive abnormal returns following consistent dividend increases are not explained by the returns that are known to accrue to firms with a corresponding record of consistent earnings increases. Section VI concludes the study.

## **2. Related Literature**

### *2.1. Stock Returns Following Dividend Increases*

Our study contributes to the understanding of dividend-increase repetition and long-term returns, an issue that existing studies have not investigated. We draw motivation from existing studies of dividend changes and from analysis of other repeated corporate events such as earnings increases. For example, Benartzi et al. (1997), and Grullon et al. (2002), each using a slightly different technique, report positive and significant abnormal returns in the three-year window following a dividend increase. However, these studies are unable to reveal whether positive abnormal returns are associated with each dividend increase in a dividend track record. Our investigation builds on the analysis of Benartzi et al. but with two important differences. First, by pooling all dividend increases together Benartzi et al. are unable to explore the relevance of the dividend track dividend prior to an increase. Although

they document positive returns subsequent to an increase suggesting firms continue to earn a positive reward for several years after the increase, it is unclear if firms are rewarded for multiple increases. By counting the number of dividend increases that precede an increase we can discover whether the market rewards differ with each consecutive dividend increase. We isolate one particular, and common, dividend track record consisting of once-a-year dividend increases and calculate the length of the prior track record. A second key difference is that we monitor returns in the five years following each increase in the track record. This five-year post-increase interval is split into five twelve-month intervals. This way we can identify whether abnormal returns are confined to any particular post-increase year-long period. Benartzi et al. analyse returns in the three-year interval following dividend increases but do not partition the time interval. The significant returns that they observe for the three years after an increase appears to be explained by the fact that returns are significant by the end of year one. When we decompose the post-increase period into non-overlapping intervals we observe that the significant positive abnormal returns documented by Benartzi et al. are mostly confined to each of the first two years following only the first five consecutive dividend increases.

## *2.2. Stock Returns and Earnings Track Records*

Studies of earnings patterns by Barth et al. (1999) and Myers et al. (2007) reveal that long-term abnormal returns accrue to firms with a record of at least five consecutive years of earnings-per-share increases. Firms reporting earnings that repeatedly equal or exceed analysts' earnings forecasts also earn market rewards (Bartov et al. 2002), and Kasznik and McNichols (2002) report that the size of the market reward decreases the more often the firm has a history of announcing earnings that exceed forecast earnings. Myers et al. provide evidence that managers engage in earnings management in order to maintain the rewards associated with long earnings patterns. In the case of dividends, however, a carefully-

managed pattern of steady dividend increases is an explicit objective by managers (Lintner, 1956 and Brav et al., 2005) but the reason *why* firms maintain a policy of regular dividend increases is not clear. Interestingly, even though Barth et al. themselves state that “patterns of increasing dividends also could be associated with market rewards,” there is no current study that investigates this idea.

Our examination of abnormal returns for firms with patterns of repeated dividend increases uses a similar technique to calculate abnormal returns as the examination of earnings increase sequences in Myers et al. (2007), but avoids the look-ahead bias inherent in their sample. They study the next five years of earnings-per-share figures to build a sample of firms with non-decreasing earnings and *then* measure abnormal returns for the twelve months following each earnings increase. Our sample of dividend-increasing firms avoids this bias because we use information that is only known at the time of each dividend-increase number in a track record.

### *2.3. Repeating Corporate Events*

The concept that the returns following a dividend increase may be different depending on the dividend track record prior to the increase is inspired by research showing the short-term stock market reaction to an event’s announcement is different depending on the frequency of prior occurrences of the event as in the case of stock splits (Pilotte and Manuel, 1996), rights issues (Iqbal, 2008) and seasoned equity offerings (D’Mello et al., 2003). These studies report that the abnormal returns are largest around the first announcement of the event and with each subsequent announcement the abnormal returns decay towards zero.

Early studies (e.g., Pettit 1972; Aharony and Swary 1980; Eades et al. 1985) report significant short-term abnormal returns around dividend change announcements. However, as

Dielman and Oppenheimer (1984) point out, the expectation of a dividend change is different depending on the firm's prior dividend history.

The repetitive nature of dividend announcements is used by Baker and Wurgler (2012) to argue that investors use the sequence of past dividends as a reference point to benchmark against the current dividend. In this setting, each announcement within a streak of constant quarterly dividends reinforces the dividend's level in investors' memory. Therefore, any changes in the dividend level are newsworthy events, and abnormal returns are larger the longer the streak of unchanged dividend amounts. Like us, Bessembinder and Zhang (2013) also recognise that dividend increases are often repeated in the future. They report significant positive abnormal monthly returns for firms with a high probability of a dividend increases. Our analysis reveals that the probability of a dividend increase becomes larger for longer dividend-increase track records, and that positive abnormal returns do not follow all dividend increases.

#### *2.4. Dividend Track Records*

DeAngelo and DeAngelo (2007) suggest that the presence of a “strong” track record indicates a willingness to continue paying dividends into the future. Although DeAngelo and DeAngelo do not define “strong” we propose that regular quarterly dividend payments with a pattern of regularly-repeated dividend increases represents one particular type of dividend policy that may be considered “strong”.<sup>1</sup> If the capital markets judge a track record to be important, then perhaps a “strong” track record is even better. This paper contributes to the literature and demonstrates that there is a tangible reward for firms that maintain a strong dividend track record. Our sample firms increase the dividend in the same quarter each fiscal

---

<sup>1</sup> The most stable dividend policy possible would be a history of equal-sized dividends but since managers do express a preference for such a dividend policy, and that it could not legitimately be considered a ‘strong’ policy, we do not study it.



year and we examine the returns following each dividend increase for firms with a track record of one dividend increase up to a ten-year track record of consecutive dividend increases.

## *2.5. Comparison of Results with Existing Literature*

The abnormal returns of approximately three to four percent per annum for each of the first three years of a track record that we document are substantially higher than the short-term abnormal returns for the two or three days around dividend increases of approximately one to two percent (e.g., Aharony and Swary 1980; Dielman and Oppenheimer 1984; Lang and Litzenberger 1989; Yoon and Starks 1995; and many others). Thus dividend-increasing firms continue to earn significant abnormal returns for the remainder of the year even after considering the portion of the annual return that is contributed by the short-term dividend-increase announcement return.

It is also unlikely that our results are simply a manifestation of the higher abnormal returns that accrue to firms with a five-year track record of annual earnings increases documented by Barth et al. (1999) or a track record of twenty consecutive quarters of non-decreasing earnings studied by Myers et al. (2007). By the fifth consecutive annual dividend increase, approximately thirty percent of the dividend-increasing firms also maintain a corresponding track record of annual earnings increases. Since most of the firms with longer dividend track records are not the same firms as those that also maintain long earnings track records we can be confident that the rewards to regularly dividend-increasing firms that we identify in this paper are not simply the same rewards that are earned by regularly earnings-increasing firms. Nevertheless, we conduct a more detailed analysis of the potential overlapping abnormal returns between earnings track records and dividend track records. Our sample firms' earnings patterns are typically characterised by short records of consecutive

earnings increases and very few long records. In some ways, this finding is not surprising because firms change dividends only when earnings are expected to permanently change (Lintner, 1956). Thus the short earnings records that result as a consequence of an interruption in a pattern of consecutive earnings increases support the contention that dividends are ‘immune’ to temporary earnings decreases.<sup>2</sup>

Our results support the notion that firms earn a reward for embarking and building a dividend track record.

### **3. Sample Selection**

We use the Center for Research in Securities Prices (CRSP) database and select all taxable quarterly dividends (i.e., CRSP distribution code = 1232) from 1971 to 2011 to identify instances of a dividend increase. Using the CRSP/Compustat Merged (CCM) database we then determine in which fiscal quarter the dividend increase occurs. For each dividend increase we identify the closest fiscal quarter-end that follows the dividend declaration date (i.e., DCLRDT in CRSP) and assign the increase to that particular quarter. We then identify firms that increase the dividend in a particular fiscal quarter, maintain the dividend at the new level for the next three quarters, then increase the dividend in the same fiscal quarter of the following year, and maintain this pattern of dividend increases that occur in the same fiscal quarter up to a maximum of ten consecutive years.<sup>3</sup> We refer to this

---

<sup>2</sup> However, rather than dividend changes being a forward-looking indicator of future earnings as suggested by Lintner’s (1956) survey participants and first tentatively verified by Watts (1973), more recent empirical evidence disputes the view that managers use dividend changes as a way to signal their belief about future earnings and indicates that dividend changes more reflect present earnings, and to some extent, past earnings (Benartzi et al., 1997; Koch and Sun, 2004). For initiations and omissions, which are the more extreme version of increases and decreases, respectively, Healy and Palepu (1988) report that initiations do precede future earnings increases and omissions act as an indicator of reduced future earnings.

<sup>3</sup> As a technical issue, forty-one consecutive quarterly dividend amounts are necessary to identify firms with a ten-year dividend-increase track record. The required dividends are: the four dividends before the first increase, the thirty-six quarterly dividends starting with the first increase and ending with the dividend prior to the tenth

particular pattern of dividend increases as a ‘track record’ and our sample firms have a track record length ranging from one up to ten years.

Table 1 reports the year and the fiscal quarter of the tenth dividend increase for the sample of firms with a prior track record of nine increases. Dividend increases occur most often in the first fiscal quarter, consistent with firms setting the annual dividend amount for the forthcoming fiscal year, following the end of the prior fiscal year. The final year tabulated is 2006 because we calculate abnormal returns for the following five years, ending in 2011, which is the final year of our dividend sample. Our sample firms are a good representation of the universe of firms listed in the CCM database. For example, we identify a total of 763 dividend increases in the year 2006 with a median market value of \$1.34 billion. The CCM database reports 1,107 dividend-paying firms in 2006, with a median market value of \$1.33 billion. The longest uninterrupted track record of 42 years starts in the year 1970 and is still ongoing as at the end of 2011, indicating that for some firms the dividend-increase habit is especially hard to break.

<<TABLE 1 GOES HERE>>

We examine patterns of once-a-year dividend increases for two main reasons. First, managers surveyed by Lintner (1956) state that dividends are determined annually - but paid quarterly, and second, since we examine returns for the twelve months following each increase we can be assured that there are no other dividend changes occur during this time period that may otherwise potentially bias our results. Forming a sample of firms with once-a-year dividend payment patterns eliminates the possibility that the higher annual returns for regular dividend-increasing firms that we observe are driven by the abnormal returns

---

increase, and the dividend representing the tenth increase. We require that the four quarterly dividends before the first dividend are all equal to ensure the first dividend increase is not preceded by any other type of dividend change.

associated with firms that announce multiple increases within a year. Our sample firms increase the dividend exactly once every four quarters.

#### **4. Measuring Abnormal Returns**

Following the method explained in Barber and Lyon (1997) we use buy-and-hold returns rather than cumulative abnormal returns to measure long-term abnormal performance following a dividend increase. Their preferred method involves first matching a firm that experiences a particular corporate event to a firm that does not experience the event but has a similar size and market-to-book ratio, called the control firm. Then, the difference between the monthly compounded returns for the sample firm and the control firm is a measure of abnormal returns. For earnings patterns, Myers et al. (2007) use this method to detect positive abnormal returns for a sample of consistent earnings-increasing firms and we use a similar procedure to determine a matching firm to ultimately examine the returns that accrue to firms following a dividend increase based on the prior track record. We first explain the process used to identify a matching firm to a dividend-increase firm and then give details of the technique we use to calculate annual returns for both the sample and matching firm.

##### *4.1. Control Firm Identification*

For each dividend increase in our sample we identify the fiscal quarter-end date immediately prior to the declaration date of the increase and calculate the market value and the market-to-book ratio of the firm as at that date. Market value equals the product of the stock price (CRSP: PRCQ) and the number of shares outstanding (CRSP: CSHOQ), and the market-to-book ratio equals the market value divided by stockholders' equity (CRSP: SEQQ). We use quarterly data throughout our study rather than annual data so that the market

value and market-to-book ratio are a more timely measure of the financial characteristics of the sample firm, and its matching firm, at the time of the dividend increase. Myers et al. (2007) measure the financial characteristics of their earnings-increase track record firms using year-end COMPUSTAT data, potentially causing their descriptive statistics to depict their sample's characteristics up to nearly twelve months before the earnings increase actually occurs. We then identify a pool of potential matching firms from the CRSP universe based on two criteria: (i) its market value is between 70% and 130% of the sample firm's market value, and (ii) it pays regular quarter dividends but maintains a constant dividend for the closest quarter preceding the sample firm's dividend increase and for the following four quarters, for a total of five consecutive quarters.<sup>4</sup> Then, from the pool of potential matches we identify the firm with the closest market-to-book ratio to the sample firm, and call it the control firm. Once a sample firm has been assigned a control firm, that particular control firm is then discarded from the pool of potential matches ensuring that all control firms are unique.

Table 2 reports the market value (in Panel A) and market-to-book ratio (in Panel B) for the sample and control firms for the quarter prior to each dividend increase for dividend-increase record length group  $i$ , where  $i = 1$  to 10. The following discussion focuses on the median measure rather than the mean because the distribution, in particular of the market value of equity, is heavily right-skewed. Around the time of the first dividend increase sample firms have a median market value of \$284 million compared to their matching counterparts' median of \$272 million. The difference between these two figures is not significant ( $p$ -value = 0.12), which is expected since the purpose of the matching process is to identify a control firm with a similar market value to each sample firm. The median market value of equity of the sample firm increases monotonically as the number of consecutive

---

<sup>4</sup> Since our goal is to measure annual abnormal returns in the year following a dividend increase, we require that the matching firm does not change its dividend in the same time period. Of course, the matching firm may then increase its dividend in the second year because the identification of a matching firm requires the firm to have four quarters of equal-sized dividends in the first year only.

dividend increases (i.e., the track record) gets longer. At the time of the tenth dividend increase sample firms' median market value has risen to \$1.15 billion. These figures indicate that with each extension of the dividend-increase track record by one additional year the median firm's market value increases. There is no significant difference between the sample and matching firm's size at any dividend-increase group length, indicating that the matching technique has successfully identified a comparable sized firm to the dividend-increase firm.

<<TABLE 2 GOES HERE>>

The median market-to-book ratio of the sample firms and control firms are 1.62 and 1.62, respectively, and again, by design the difference in these two medians is not significant ( $p$ -value = 0.90). The market-to-book ratio also increases as the dividend-increase track record lengthens, but the relationship is not quite a monotonic increase, with the ratio marginally dropping from 1.74 to 1.73 when progressing from the third to the fourth dividend increase. Consistent with declining growth opportunities, \_\_\_\_\_ report that the market-to-book ratio for their sample decreases with firm age; however, our sample firms don't exhibit this pattern. Again, by construction the sample and matching firm's market-to-book ratio are not significantly different. The results in Table 2 indicate extending the track record of regular dividend increases is associated with increasing financial success, measured in terms of two common financial characteristics. We examine long-term stock market returns in the following section.

#### *4.2. Annual Returns Measurement*

We use the buy-and-hold methodology of Barber and Lyon (1997) to calculate annual returns for the five years following the  $i^{\text{th}}$  dividend increase announcement for firms with a prior track record of  $i-1$  dividend increases ( $i = 1$  to 10). Benartzi et al. (1997) calculate abnormal returns for overlapping intervals of different lengths. Their intervals all start from

the announcement month but end at different points in time - from 6 up to 36 months later. In this case, the significant abnormal returns they report for the period from month zero to month 36 may be a manifestation of the significant abnormal returns that they compute in the first six months following the increase. To combat the possibility that returns are different for each interval we follow Myers et al. (2007) and calculate returns for each of the five consecutive twelve-month intervals following the increase.

For each of our dividend-increasing sample firms we use the CRSP monthly returns database to identify the monthly return (including dividends) for each of the twelve months starting in the month that contains the dividend increase announcement (i.e., month 0) and ending 11 months later. We then use these twelve monthly return figures to form an annual buy-and-hold return, as shown in equation (1). The annual buy-and-hold return for the first year following a dividend increase,  $r_{s,j}$ , for sample firm  $j$  is calculated as follows:

$$r_{s,j} = \prod_{k=0}^{11} (1 + r_{j,p+k}) - 1 \quad (1)$$

where  $p$  is the month of the dividend increase and  $r_{j,p+k}$  is the CRSP monthly return (including dividends) for sample firm  $j$  for month  $p + k$ . This return calculation is then repeated for the second year following the dividend increase, (i.e., from  $k = 12$  to 23 in equation (1)), and similarly for years 3, 4 and 5. Since our sample firms increase the dividend in the same quarter each fiscal year, each twelve month returns window contains exactly one dividend increase followed by a further three quarterly dividends of the same amount. If the sample firm delists during a year then we identify the firm's CRSP market capitalisation decile at the time of the delisting month and then use the CRSP size-decile returns for the remainder of the year in place of the (missing) sample firm's CRSP monthly returns. For subsequent years we discard the delisted dividend-increasing firm from the sample.

We compute the annual buy-and-hold return for sample firm  $j$ 's control firm,  $r_{c,j}$ , as the twelve-month compounded return using the following equation:

$$r_{c,j} = \prod_{k=0}^{11} (1 + r_{j,q+k}) - 1 \quad (2)$$

where  $q$  is the month of the control firm's fiscal quarter-end immediately prior to the sample firm's dividend increase announcement date and  $r_{j,q+k}$  is the CRSP monthly return (including dividends) for firm  $j$  for month  $q + k$ . We then recalculate equation (1) and (2) for each of the five years following the first dividend increase in a track record, up to the tenth. Different month subscripts are necessary for the return measures in equations (1) and (2) because the twelve month windows used to calculate the buy-and-hold returns for each dividend-increasing firm in equation (1) and its non-dividend-increasing counterpart in equation (2) do not coincide.<sup>5</sup> The buy-and-hold abnormal return for each twelve-month interval is calculated using equation (3):

$$ar_j = r_{s,j} - r_{c,j} \quad (3)$$

We assess the statistical significance of the buy-and-hold abnormal returns each year using the parametric  $t$ -test and the non-parametric Wilcoxon  $Z$ -test.

## 5. Empirical Results

Table 3 reports sample sizes and annual returns for the five years following the first dividend increase through to the tenth dividend increase in a track record. We identify over 9,000 first-time dividend increases and of this quantity 3,700, or 40.9%, then announce

---

<sup>5</sup> Approximately three-quarters, or 15476, of the full sample of dividend-increasing firms have twelve-month return windows that correspond exactly with the matching firm. The remaining, non-matching, windows are offset by one or two months only, mostly caused by either the sample or matching firm having a fiscal quarter not ending in March, June, September or December.



another increase four quarters' later, resulting in a track record length that equals two. The proportion of firms extending the track record length by one additional year increases as the prior track record gets longer, suggesting that firms are more reluctant to deviate from their historical payout policy the longer the policy has been in place. For example, out of the 501 firms announcing a ninth increase, 400 (or, 80%) announce another increase in the same quarter of the following year, extending the track record length to ten.

<<TABLE 3 GOES HERE>>

Turning now to the buy-and-hold returns that accrue to dividend-increasing firms, we present statistics for both the mean and median return. For the sample of firms announcing the first dividend increase the mean abnormal return for the first, second, third, fourth and fifth year following the increase is 6.3%, 3.5%, 2.3%, 3.0% and 2.6%, respectively. These abnormal returns are significantly positive for each of the first three years after the increase, with the level of significance declining during this three-year post-increase interval.

Abnormal returns are not statistically different from zero in the fourth and fifth years following the first dividend increase. For the group of firms that announce a second dividend increase abnormal returns are significantly positive for only the first twelve months following the increase. For subsequent consecutively-numbered dividend increases significant abnormal returns are then mostly confined to the twelve months immediately following the third, fourth and fifth dividend increase in a track record. Firms announcing their sixth consecutive increase and beyond earn returns that are no different from control firms. These results indicate that dividend-increasing firms do earn positive abnormal returns but they eventually become statistically indistinguishable from zero as the dividend-increase pattern gets longer.

<< TABLE 4 GOES HERE>>

Our results demonstrate that returns decrease when classifying dividend increases by the past history. This result is not evident in Benartzi et al. (1997) because they pool all dividend increases without considering the dividend track record prior to the increase. To demonstrate that in recent times the track record is still an important factor in explaining the magnitude of long-term abnormal returns following dividend increases, in Table 4 we ignore the dividend track record and combine all dividend increases into one single sample containing over 20,000 observations. We also examine the performance of dividend-increasing firms by forming several overlapping post-increase intervals in the same way as Benartzi et al. We measure returns for the sample and matching firm starting from the dividend increase month and finishing one, two, three, four and five years later, yielding five post-increase intervals.<sup>6</sup> The figures in Panel A indicate that one year following the increase sample firms earn an average return of 21.2%, compared to 17.1% for matching firms giving an abnormal return of 4.1%. Similarly, abnormal returns are 5.5% for two years, 6.4% for three years, 6.8% for four years and 8.6% for the entire five-year post-increase interval, and all are all strongly significant ( $p$ -value of the difference in returns between the sample firm and the matching firm is less than 0.001). These returns are similar in magnitude to the significant abnormal returns in Benartzi et al. of 2.1%, 4.6% and 8% corresponding to the one, two, and three-year post-increase interval and illustrate that dividend-increasing firms outperform their non-dividend-increasing counterparts. However, one limitation of using overlapping post-increase intervals is that it is not obvious if the abnormal returns are significant for *each* year, or if returns for longer intervals are significant simply because returns are significant for a shorter interval. For example, the abnormal return for the four years following the increase is 6.8%, increasing by 1.8% to 8.6% for the five years after the

---

<sup>6</sup> We subtract the control firm's return from the sample firm's return to yield an abnormal return whereas Benartzi et al. (1997) instead subtract the return on a benchmark portfolio. Another important difference is that their sample consists of all dividend increases, regardless of the prior track record, whereas our sample contains only once-a-year increases.

increase. The intervals used in Panel A do not indicate whether this implied 1.8% abnormal return for the fifth year is significant or not. To overcome this limitation in Panel B we construct five non-overlapping one-year long intervals allowing us to identify the duration of the significance of the post-increase abnormal returns. In the first year after the increase abnormal returns are 4.1%, which is the same figure as that reported using Panel A's figures because the intervals are identical. Abnormal returns then decrease monotonically for each subsequent year dropping to 2.3% in the second year following the increase, 1.3% for the third year, 0.6% for the fourth year and 0.4% for the fifth year. The  $p$ -values indicate that abnormal returns following dividend increases are confined to each of the first three years only and are insignificant in the fourth and fifth year after the increase. These results reveal that the size of the abnormal returns diminish as time passes, but do not remain significant as might be interpreted from the figures in Panel A.

Although the analysis in Panel B indicates that significant abnormal returns are restricted to the three-year post-increase interval only, pooling all dividend increases conceals the relevance of the prior track record. As we show in Table 3, forming dividend-increase samples based on the number of prior dividend increases reveals that returns are mostly concentrated in the twelve months after an increase for just the first through to the fifth dividend increase. The insignificant abnormal returns that follow the sixth, and subsequent, increases are consistent with the market learning to anticipate that the firm will increase the dividend in the same quarter of the following year, leading to abnormal returns that are no different from zero. Identifying the size and duration of the abnormal returns that accrue to dividend-increasing firms is a new contribution to the literature and reinforces evidence of market learning. The learning that we identify is consistent with that documented for other corporate events such as announcements of splits and seasoned equity offerings, and indicates that the more often the event is repeated, the less significant the market reaction.

In this paper we study abnormal returns following each sequentially-numbered dividend increase within a track record of dividend increases. Although Myers et al. (2007) study track records of earnings increases, like us they also measure abnormal returns following each sequentially-numbered earnings increase. However, their sample is biased because it is constructed ex-post, in contrast to our sample that is constructed ex-ante. They first identify a sample of 746 firms with a track record of at least twenty consecutive quarters (i.e., five years) of non-decreasing earnings per share (EPS) and then study abnormal returns for each of the first five years of the track record. Their sample firms exhibit positive abnormal returns exceeding 25% in each of the first three years of the five-year EPS track record; however the level of significance of these figures are not supplied. These large positive returns are not unexpected because their sample firms survive for at least five years and consequently would be expected to be financially successful, as evidenced by the reported increase in asset value and market-to-book ratio throughout the five-year period. Nevertheless, it is instructive to compare the magnitude of returns that accrue to firms with a five-year earnings-track record with the returns for firms with a comparable five-year dividend track record. We use the 1125 firms identified in Table 3 with a five-year track record of dividend increases. Note that this number represents a survival rate of just 5% of the approximately 20,000 firms that announce a first dividend increase. Requiring CRSP/Compustat Merged (CCM) data to compute the sample firm's market value and market-to-book ratio around the time of each of the five dividend increases that form the five-year track record reduces the sample size to 818. Table 5 indicates that abnormal returns are significantly positive and monotonically decline in the twelve months following each consecutively numbered dividend increase in the five-year track record. The magnitude of the average abnormal returns are 4.8%, 5.0%, 5.0% and 3.9% and 2.6% following the first, second, third, fourth and fifth increase, respectively. These figures are substantially smaller

than the corresponding figures for earnings track records of 22.2%, 17.8%, 19.0%, 18.2% and 12% reported in Myers, et al. (see Table 3). Notwithstanding the fact that the two analyses suffer from look-ahead bias, the figures suggest that dividend-increase consistency is also rewarded, but the rewards are not as large as those demonstrated for earnings-increase consistency.

<<TABLE 5 GOES HERE>>

## **6. Earnings Track Records and Dividend Track Records**

As a check on the reliability of our results we explore the possibility that our sample firms also have long earnings track records. If firms do follow the Lintner (1956) model with dividends being, in part, a function of current earnings then firms with a track record of consistent earnings increases may also display a track record of steady dividend increases. In this case, the regularly dividend-increasing firms that we identify may substantially overlap with firms that exhibit consistent earnings increases. In the extreme case where the two groups contain the same firms then the abnormal returns following earnings increases for firms with unbroken prior track records of earnings increases in Myers et al. (2007) and Barth et al. (1999) are the same abnormal returns following dividend increases that we observe. To identify the length of the uninterrupted record of annual earnings increases for our sample of dividend-increasing firms we gather adjusted annual earnings-per-share figures (excluding extraordinary items) from the COMPUSTAT database starting with the year-end before the year containing the first dividend increase announcement and finishing with the year-end before the  $i^{\text{th}}$  dividend increase announcement (where  $i = 1$  to 10). We compute the number of consecutive years of non-decreasing, adjusted, annual earnings per share (EPS) when measured relative to the previous fiscal year's adjusted annual EPS.

<<TABLE 6 GOES HERE>>

Consistent with Myers et al. we identify the longest earnings track record for each firm and the distribution of maximum track record length is reported in Table 6. Of the 9,041 firms that announce their first dividend increase 69% (i.e.,  $6278 \div 9041$ ) also announce an increase in annual earnings.<sup>7</sup> As the dividend track record length increases the proportion of firms that also maintain corresponding earnings increases of the same length declines monotonically, with just 15% ( $61 \div 400$ ) of firms with a ten-year dividend-increase track record also maintaining a ten-year EPS-increase track record. The frequency distribution across each dividend-increase track record length reveals an interesting point. The EPS track record length category of zero contains the least number of observations and the number steadily increases to a local peak that is around half the dividend track record length. After this local peak mid-way, the frequency then steadily decreases until the next-to-last maximum earnings track record length. Then, in contrast to the expectation that the frequency would continue to decrease when proceeding from the next-to-last to the last earnings track record length, the maximum number of observations actually occurs when the earnings-increase track record length has the same length as the dividend-increase track record. Long records of uninterrupted earnings increases are extremely unlikely to observe by chance, as shown by Myers et al. (2007). They argue that the presence of a large number of firms with such a record and the rewards that are associated with these firms suggests that earnings are being carefully managed year-to-year in order to maintain and extend the length of the record. We do not investigate whether the long earnings chains firms in our sample engage in earnings management. Instead, we identify these firms to explore whether the abnormal returns for these firms are different from the abnormal returns for firms with shorter chains. We

---

<sup>7</sup> Due to missing earnings per share (EPS) figures we cannot form a complete EPS history to then determine the EPS track record length and report the number of cases in the third last row titled 'Incomplete EPS data' in Table 6.

calculate the abnormal returns for the twelve months following the dividend increase for two groups of firms based on their earnings track record length and present the results in Table 7.<sup>8</sup>

The first group, 'EPS Track Record =  $i$ ' contains firms that have an earnings track record length equal to the dividend track record length  $i$ , and the second group, 'EPS Track Record <  $i$ ' consists of firms with a maximum EPS track record length that is less than the dividend track record length  $i$ , where  $i = 1$  to 10. These two groups of earnings patterns represent a partitioning of the abnormal return in the twelve months following each dividend increase.

<<TABLE 7 GOES HERE>>

Table 3 reveals that the mean abnormal return in the twelve months following the first dividend increase ( $i = 1$ ) is 5.8%. Table 7 demonstrates that this figure can be broken down into an average abnormal return of 6.8% for firms with an EPS track record of one (i.e., firms with the same or higher EPS compared to the prior year) and an average abnormal return of 5.2% for firms with an EPS track record less than one (i.e., firms with lower EPS compared to the previous year). Both returns are highly significant ( $p$ -value < 0.001) however the difference between the two average return figures is significant at the 5% level only. Firms announcing a second consecutive dividend increase ( $i = 2$ ) also exhibit significantly positive twelve-month abnormal returns for both groups of earnings track record length firms. The average abnormal return for firms with a corresponding track record of two consecutive annual earnings increases of 3.7% is not significantly different from the average abnormal return of 3.2% for firms without an uninterrupted two-year earnings track record. Thus, although over half of firms announcing a second-time dividend increase also increase earnings for a second time, the abnormal returns for these two-time EPS-increasing firms are no different from firms without a two-time record of earnings increases. For all remaining

---

<sup>8</sup> We study abnormal returns in the first year only because the significance level is strongest in this first year, and declines in subsequent years.

dividend track record lengths ( $i = 3$  to  $10$ ) there is no significant difference between the abnormal return of firms with an uninterrupted record of earnings increases compared to the abnormal return of firms without such a record. This analysis confirms the positive abnormal returns following the second through the fifth consecutive dividend increase that we identify are not explained by the significant abnormal returns following earnings increases that have been reported by other researchers. The evidence presented in Table 7 confirms that dividend increase consistency is rewarded by the stock market and this reward is separate from any return for any contemporaneous earnings consistency.

## **7. Conclusion**

It is known that when setting the dividend the bulk of managers endeavour to maintain a dividend policy that is consistent with its historic policy. We document a large number of firms with a long track record of announcing regularly timed dividend increases, consistent with managers' stated objective.

While short-term abnormal returns around dividend increases are well known we provide new evidence that firms with a policy of consistent dividend increases also attract longer-term returns, or rewards, and that the reward dissipates over time and eventually vanishes. The positive long-term abnormal returns that follow a sample of dividend increases are usually interpreted as empirical evidence confirming dividend increases are "good news". However, the existing research does not consider the role of dividend consistency and consequently cannot answer whether returns change depending on the frequency of past dividend behaviour.



Our results confirm that dividend consistency is rewarded, but the reward decreases as the track record of dividend-increase consistency becomes longer. Following the first dividend increase our sample firms exhibit significantly positive abnormal returns for the next three years. From the first-time dividend-increasing firms we identify those that next increase the dividend in the same quarter of the following year to give sample of firms with a two-year track record of dividend increases. These sample firms display significant positive abnormal returns, but smaller in magnitude and significance compared to first-time dividend increases. Then, as the dividend-increase track record gets longer the size and statistical significance of the abnormal returns declines. Following the sixth dividend increase abnormal returns in the next twelve months are no different from zero.

We argue that these abnormal returns represent a market reward for embarking on a dividend policy that has predictable regularity. Firms first attract and then retain a reward because each increase in the track record further enhances the firm's credibility regarding its commitment to maintain the dividend-increase pattern. By the sixth increase the firm has fully established high credibility for future dividend increases and no longer attracts a reward. Indeed, the proportion of firms that fail to continue the record decreases as the record becomes longer. For firms with track record of ten years of consistent annual dividend increases the main reason for not continuing the track record are exogenously determined such as being the target of takeover and subsequent delisting. Very few track records terminate due to a dividend cut suggesting that managers are extremely unlikely to deviate from such a well-established dividend-increase pattern.

Our results help to answer the questions why dividend consistency is so important. Embarking on such a carefully-crafted dividend policy is rewarded with a stock price premium. The abnormal returns that we detect are not the same abnormal returns that have been reported for earnings increases since a very small number of firms in our sample of

dividend-increasing firms maintain a corresponding pattern of consistent earnings increases. Our returns are restricted to dividend increases only and, consistent with the situation with earnings, show that dividend consistency also attracts market rewards. Our results contribute to a greater understanding of why firms announce with great fanfare their track record of dividend consistency. Interestingly, firms do not appear to be as enthusiastic when they declare year-after-year of earnings increases.

## References

- Aharony, J., Swary, I., 1980. Quarterly dividend and earnings announcements and stockholders' returns: An empirical analysis. *Journal of Finance* 35, 1-12.
- Baker, M., Wurgler, J., 2012. Dividends as reference points: A behavioral signaling approach. National Bureau of Economic Research Working Paper.  
<<http://www.nber.org/papers/w18242>>
- Barber, B.M., Lyon, J.D., 1997. Detecting long-run abnormal stock returns: The empirical power and specification of test statistics. *Journal of Financial Economics* 43, 341-372.
- Barth, M.E., Elliott, J.A., Finn, M.W., 1999. Market rewards associated with patterns of increasing earnings. *Journal of Accounting Research* 37, 387-413.
- Bartov, E., Givoly, D., Hayn, C., 2002. The rewards to meeting or beating earnings expectations. *Journal of Accounting and Economics* 33, 173-204.
- Benartzi, S., Michaely, R., Thaler R., 1997. "Do changes in dividends signal the future or the past?" *Journal of Finance* 52, 1007-1034.
- Bessembinder, H., Zhang, F., 2013. Predictable corporate distributions and stock returns. University of Utah Working Paper.  
<[http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2287642](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2287642)>
- Brav, A., Graham, J.R., Harvey, C.R., Michaely, R., 2005. Payout policy in the 21st century. *Journal of Financial Economics* 77, 483-527.
- D'Mello, R., Tawatnuntachai, O., Yaman, D., 2003. Does the sequence of seasoned equity offerings matter? *Financial Management* 32, 59-86.

Deangelo, H., L. Deangelo, L., 2007. Capital Structure, Payout Policy, and Financial Flexibility. University of Southern California Working Paper.

[http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=916093](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=916093)

Dielman, T.E., Oppenheimer, H.R., 1984. An examination of investor behavior during periods of large dividend changes. *Journal of Financial and Quantitative Analysis* 19, 197-216.

Eades, K.M., Hess, P.J., Kim, E.H., 1985. Market rationality and dividend announcements. *Journal of Financial Economics* 14, 581-604.

Fama, E.F., Babiak, H., 1968. Dividend Policy: An Empirical Analysis. *Journal of the American Statistical Association* 63, 1132-1161.

Grullon, G., Michaely, R., Swaminathan, B., 2002. Are dividend changes a sign of firm maturity? *Journal of Business* 75, 387-424.

Healy, P.M., Palepu, K.G., 1988. Earnings information conveyed by dividend initiations and omissions. *Journal of Financial Economics* 21, 149-175.

Iqbal, A., 2008. The importance of the sequence in UK rights issues. *Journal of Business Finance & Accounting* 35, 150-176.

Kasznik, R., McNichols, M.F., 2002. Does meeting earnings expectations matter? Evidence from analyst forecast revisions and share prices. *Journal of Accounting Research* 40, 727-759.

Koch, A., Sun, A., 2004. Dividend changes and the persistence of past earnings changes. *Journal of Finance* 59, 2093-2116.

Lang, L.H.P., Litzenberger, R.H., 1989. Dividend Announcements: Cash flow signaling vs. Free cash flow hypothesis? *Journal of Financial Economics* 24, 181-191.

Leary, M.T., Michaely, R., 2011. Determinants of Dividend Smoothing: Empirical Evidence. *Review of Financial Studies* 24, 3197-3249.

Lintner, J., 1956. Distribution of incomes of corporations among dividends, retained earnings, and taxes. *American Economic Review* 46, 97-113.

Myers, J.N., Myers, L.A., Skinner, D.J., 2007. Earnings momentum and earnings management. *Journal of Accounting, Auditing & Finance* 22, 249-284.

Pettit, R.R., 1972. Dividend announcements, security performance, and capital market efficiency. *Journal of Finance* 27, 993-1007.

Pilotte, E., Manuel, T., 1996. The market's response to recurring events: The case of stock splits. *Journal of Financial Economics* 41, 111-127.

TJX Companies, 2011. The TJX Companies, Inc. Announces 27% Increase in Common Stock Dividend. <<http://investor.tjx.com/phoenix.zhtml?c=118215&p=irol-newsArticle&ID=1546926&highlight=>>

Yoon, P.S., Starks, L.T., 1995. Signaling, investment opportunities, and dividend announcements. *Review of Financial Studies* 8, 995-1018.

Watts, R., 1973. The information content of dividends. *Journal of Business* 46, 191-211.

**Table 1**

Distribution of the announcement year and fiscal quarter of the tenth consecutive dividend increase.

Year	Fiscal Quarter				Total
	1	2	3	4	
1980	1	2	0	3	6
1981	3	3	1	1	8
1982	2	3	2	2	9
1983	8	4	1	1	14
1984	7	4	1	2	14
1985	5	3	2	3	13
1986	11	3	1	5	20
1987	8	5	1	4	18
1988	9	5	1	3	18
1989	11	6	0	3	20
1990	3	0	4	3	10
1991	4	5	3	0	12
1992	3	3	1	4	11
1993	5	3	4	1	13
1994	10	7	2	2	21
1995	6	8	5	6	25
1996	10	9	6	4	29
1997	15	3	6	3	27
1998	4	3	0	1	8
1999	3	1	0	3	7
2000	4	4	0	1	9
2001	5	1	3	6	15
2002	7	3	2	2	14
2003	6	4	1	7	18
2004	7	2	0	1	10
2005	6	4	3	5	18
2006	9	2	1	1	13
Total	172	100	51	77	400

The table reports the distribution of the fiscal quarter of the tenth dividend increase announced between 1980 and 2006 for firms with a prior track record of nine consecutive years of once-a-year dividend increases.

**Table 2**

Sample statistics for sample firm and matching firm.

		Mean			Median		
<i>Panel A: Market Value of Equity</i>							
Dividend Track Record Length, $i$	Sample Firm	Matching Firm	$p$ -value of difference	Sample Firm	Matching Firm	$p$ -value of difference	
1	2,484	2,309	0.241	284	272	0.115	
2	3,038	2,851	0.527	362	355	0.320	
3	3,452	3,311	0.763	464	443	0.385	
4	3,448	3,244	0.667	547	522	0.479	
5	3,603	3,291	0.585	612	595	0.517	
6	4,397	3,973	0.555	760	708	0.503	
7	4,507	4,113	0.588	824	789	0.566	
8	4,863	4,470	0.648	926	898	0.537	
9	5,105	4,716	0.664	1,060	981	0.647	
10	5,860	5,392	0.748	1,115	1,069	0.697	
<i>Panel B: Market-to-Book ratio</i>							
Dividend Track Record Length, $i$	Sample Firm	Matching Firm	$p$ -value of difference	Sample Firm	Matching Firm	$p$ -value of difference	
1	2.10	2.04	0.044	1.62	1.62	0.895	
2	2.36	2.18	0.178	1.70	1.69	0.937	
3	2.23	2.19	0.548	1.74	1.73	0.967	
4	2.25	2.21	0.485	1.73	1.72	0.940	
5	2.23	2.22	0.955	1.75	1.75	0.975	
6	2.30	2.26	0.625	1.79	1.78	0.958	
7	3.51	2.31	0.313	1.84	1.84	0.930	
8	2.52	2.38	0.444	1.84	1.83	0.950	
9	2.50	2.43	0.607	1.92	1.92	0.968	
10	2.55	2.47	0.554	1.99	2.01	0.925	

The table reports sample statistics for the market value of equity (Panel A) and the market-to-book ratio (Panel B) at the time of the  $i^{\text{th}}$  dividend increase for firms with a dividend track record of length  $i$  (for  $i = 1$  to 10). The market value of equity is calculated as the product of the stock price and the number of shares outstanding for the most recent quarter ended before the dividend increase declaration date. The market to book ratio is defined as the market value of equity divided by the book value of stockholders' equity for the most recent quarter prior to the dividend increase declaration date.

**Table 3**

Annual buy-and-hold abnormal returns for dividend-increasing firms classified by consecutively-numbered increase.

<b>Buy-and-Hold Return</b>					
Returns following the first dividend increase					
Year	Mean	<i>p</i> -value	Median	<i>p</i> -value	<i>n</i>
1	0.063	0.000	0.044	0.000	9041
2	0.019	0.001	0.016	0.004	8649
3	0.013	0.029	0.004	0.018	8161
4	0.008	0.225	0.006	0.239	7696
5	0.003	0.656	0.002	0.953	7268
Announcement Month	0.022	0.000	0.018	0.000	9037
Returns following the second dividend increase					
Year	Mean	<i>p</i> -value	Median	<i>p</i> -value	<i>n</i>
1	0.035	0.000	0.031	0.000	3701
2	0.008	0.334	0.005	0.085	3574
3	0.012	0.208	0.006	0.078	3371
4	0.006	0.571	0.001	0.279	3181
5	0.013	0.184	0.007	0.155	2996
Announcement Month	0.015	0.000	0.012	0.000	3700
Returns following the third dividend increase					
Year	Mean	<i>p</i> -value	Median	<i>p</i> -value	<i>n</i>
1	0.023	0.034	0.027	0.008	2188
2	0.021	0.064	0.015	0.027	2112
3	0.008	0.508	0.018	0.102	1999
4	0.001	0.942	0.002	0.470	1889
5	0.001	0.932	0.006	0.883	1799
Announcement Month	0.011	0.000	0.008	0.000	2188
Returns following the fourth dividend increase					
Year	Mean	<i>p</i> -value	Median	<i>p</i> -value	<i>n</i>
1	0.030	0.025	0.018	0.047	1493
2	-0.003	0.807	0.012	0.196	1440
3	0.025	0.068	0.018	0.054	1374
4	-0.011	0.503	0.012	0.766	1320
5	-0.015	0.281	-0.015	0.616	1254
Announcement Month	0.012	0.000	0.012	0.000	1493
Returns following the fifth dividend increase					
Year	Mean	<i>p</i> -value	Median	<i>p</i> -value	<i>n</i>
1	0.026	0.073	0.029	0.032	1125
2	0.009	0.544	0.009	0.165	1090
3	0.020	0.173	0.029	0.068	1048
4	-0.004	0.776	-0.029	0.816	997
5	0.008	0.583	0.019	0.451	970
Announcement Month	0.016	0.000	0.012	0.000	1125
Returns following the sixth dividend increase					
Year	Mean	<i>p</i> -value	Median	<i>p</i> -value	<i>n</i>
1	0.015	0.340	0.019	0.356	868
2	0.001	0.947	0.011	0.637	851
3	-0.009	0.585	0.004	0.557	814
4	0.011	0.543	0.027	0.154	787
5	0.004	0.819	-0.018	0.887	746
Announcement Month	0.003	0.414	0.002	0.362	868



Returns following the seventh dividend increase					
Year	Mean	<i>p</i> -value	Median	<i>p</i> -value	<i>n</i>
1	0.012	0.491	0.011	0.258	696
2	-0.013	0.458	0.006	0.965	680
3	0.012	0.477	0.023	0.381	662
4	0.018	0.362	0.014	0.331	630
5	-0.016	0.446	-0.012	0.632	608
Announcement Month	-0.001	0.785	0.001	0.495	696
Returns following the eighth dividend increase					
Year	Mean	<i>p</i> -value	Median	<i>p</i> -value	<i>n</i>
1	0.027	0.135	0.017	0.057	591
2	0.026	0.190	0.036	0.050	579
3	0.003	0.876	-0.001	0.553	550
4	0.019	0.367	-0.016	0.652	531
5	0.008	0.710	-0.012	0.273	507
Announcement Month	0.008	0.094	0.007	0.065	591
Returns following the ninth dividend increase					
Year	Mean	<i>p</i> -value	Median	<i>p</i> -value	<i>n</i>
1	-0.007	0.710	0.018	0.687	501
2	-0.010	0.634	-0.001	0.988	481
3	0.016	0.447	0.009	0.741	466
4	0.021	0.311	0.022	0.093	447
5	0.016	0.482	0.007	0.836	428
Announcement Month	0.006	0.230	0.010	0.034	501
Returns following the tenth dividend increase					
Year	Mean	<i>p</i> -value	Median	<i>p</i> -value	<i>n</i>
1	-0.016	0.481	0.013	0.985	400
2	0.017	0.477	0.017	0.358	389
3	0.008	0.739	0.020	0.458	373
4	0.011	0.664	0.016	0.470	357
5	0.039	0.113	0.047	0.113	347
Announcement Month	0.015	0.006	0.017	0.002	400

The table reports mean and median annual buy-and-hold abnormal return for each of the first five one-year long intervals, and the dividend-increase announcement month, following the  $i^{\text{th}}$  dividend increase in a track record of prior dividend increases, where  $i = 1$  to 10. For the  $i^{\text{th}}$  dividend increase the sample firm has a track record of increasing the dividend once a year, in the same quarter of each year for the past  $(i-1)$  years. Returns are determined using the matching-firm method. For each dividend-increase firm this method allocates a matching firm based on the procedure described in Barber and Lyon (1997). We first identify a group of potential matching firms that satisfy the following criteria: 1. It declares the same dividend amount for the two consecutive quarters prior to the dividend-increasing firm's dividend increase declaration date, and 2. It has a market value of equity between 70% and 130% of the dividend-increasing firm. From this group of potential matches we then select the firm that has the closest market-to-book to the sample firm's market-to-book ratio and call it the matching firm. Sample firm returns are calculated as monthly compounded buy-and-hold returns (including dividends) starting in the month that contains the dividend increase and ending in the month prior to the dividend increase in the following year. Control firm returns are calculated as monthly compounded buy-and-hold returns (including dividends) starting in the fiscal quarter immediately prior to the month that contains the sample firm's dividend increase and ending eleven months later.

**Table 4**

Comparison of annual buy-and-hold abnormal returns using overlapping and non-overlapping intervals.

<b>Buy-and-Hold Return</b>					
<i>Panel A: Accumulating yearly interval lengths</i>					
Interval relative to	Mean	<i>p</i> -value	Median	<i>p</i> -value	<i>n</i>
dividend increase month 0					
0 to 12	0.041	0.000	0.032	0.000	20604
0 to 24	0.053	0.000	0.043	0.000	19845
0 to 36	0.064	0.000	0.043	0.000	18818
0 to 48	0.067	0.000	0.035	0.000	17835
0 to 60	0.086	0.000	0.035	0.000	16923
<i>Panel B: Constant one-year interval lengths</i>					
Interval relative to	Mean	<i>p</i> -value	Median	<i>p</i> -value	<i>n</i>
dividend increase month 0					
0 to 12	0.041	0.000	0.032	0.000	20604
13 to 24	0.013	0.000	0.013	0.000	19845
25 to 36	0.013	0.001	0.009	0.000	18818
37 to 48	0.006	0.153	0.005	0.014	17835
49 to 60	0.004	0.320	0.002	0.277	16923
Announcement Month	0.016	0.000	0.013	0.000	20599

The table reports buy-and-hold abnormal returns for various interval lengths following a dividend increase announcement. The sample consists of dividend increases that are preceded by between zero and nine prior dividend increases in the same quarter of the previous year. Panel A forms five overlapping post-increase intervals that all start from the month containing the dividend increase but end at different periods from twelve up to sixty months later, in twelve-month increments. Panel B partitions the five-year post-increase period into five non-overlapping twelve-month-long intervals.

**Table 5**

Annual buy-and-hold abnormal return for firms known to survive to a fifth consecutive dividend increase.

Year of track record	<b>Buy-and-Hold Return</b>			
	Mean	<i>p</i> -value	Median	<i>p</i> -value
1	0.048	0.005	0.044	0.001
2	0.050	0.002	0.062	0.000
3	0.050	0.003	0.059	0.000
4	0.039	0.017	0.040	0.004
5	0.026	0.091	0.027	0.048
Announcement Month	0.018	0.000	0.013	0.000

The table reports the buy-and-hold abnormal returns for the twelve months following each dividend increase for the 819 sample firms with a five-year dividend track record, and possess complete COMPUSTAT data. A matching firm is identified based on the market value, market-to-book ratio, and prior dividend payment pattern at the time of the first dividend increase announced by the sample firm.

**Table 6**

Comparison of earnings track record length and dividend track record length.

Length of longest Earnings Track Record	Dividend Track Record Length									
	1	2	3	4	5	6	7	8	9	10
0	2259	110	8	1	0	0	0	0	0	0
1	6278	1101	433	156	78	31	16	8	4	2
2		2125	516	300	202	125	72	50	33	21
3			1006	299	198	170	128	78	65	46
4				567	173	106	97	98	68	53
5					344	98	63	60	65	47
6						236	64	45	40	36
7							163	51	38	31
8								115	32	24
9									81	18
10										61
Incomplete EPS data	504	365	225	170	130	102	93	86	75	61
Total	9041	3701	2188	1493	1125	868	696	591	501	400
% of firms with matching dividend and earnings track record length	69.4%	57.4%	46.0%	38.0%	30.6%	27.2%	23.4%	19.5%	16.2%	15.3%

The table reports the maximum length of the earnings increase track record for each group. For example, for firms announcing a sixth consecutive dividend increase, no firms have a longest earnings track record of zero (that is, all firms have one or more earnings increase during the six-year period), 106 have a longest earnings-increase track record of four years and 236 increase annual earnings per share each year corresponding to the six-year dividend track record.

**Table 7**

Comparison of abnormal returns based on earnings track record length.

Dividend track record length, $i$	<b>Non-Decreasing Annual EPS Track Record Length</b>								Difference in Means $p$ -value	Difference in Medians $p$ -value
	EPS track record length = $i$				EPS track record length < $i$					
	Mean BHAR	$p$ -value	Median BHAR	$p$ -value	Mean BHAR	$p$ -value	Median BHAR	$p$ -value		
1	0.068	0.000	0.041	0.000	0.052	0.000	0.040	0.000	0.035	0.162
2	0.037	0.001	0.031	0.001	0.032	0.014	0.031	0.001	0.740	0.905
3	0.024	0.167	0.037	0.125	0.022	0.104	0.023	0.125	0.943	0.486
4	0.028	0.206	0.015	0.127	0.031	0.063	0.023	0.127	0.890	0.647
5	0.033	0.208	0.041	0.100	0.024	0.186	0.026	0.100	0.732	0.838
6	0.029	0.353	0.024	0.519	0.009	0.594	0.016	0.519	0.517	0.592
7	-0.018	0.592	0.014	0.210	0.021	0.287	0.011	0.210	0.251	0.359
8	0.042	0.348	0.006	0.132	0.023	0.235	0.018	0.132	0.605	0.559
9	0.002	0.959	0.030	0.543	-0.009	0.670	0.015	0.543	0.806	0.860
10	0.001	0.986	-0.010	0.952	-0.019	0.444	0.017	0.952	0.716	0.720

The table compares the mean and median buy-and-hold abnormal return (BHAR) for the twelve months following a dividend increase for two groups of firms with different earnings track record lengths. Abnormal return is calculated as the sample firm's return minus the matching firm's return. The  $p$ -value for the differences in mean BHAR for each dividend track record length is based on a two-sample  $t$ -test of the difference between the mean return of firms with an earnings track record of the same length as the dividend track record and the mean return for firms with an earnings track record that is shorter than the dividend track record length. Similarly, the  $p$ -value of the difference in the corresponding median BHAR is based on the Wilcoxon test of a difference in the median abnormal return of the two earnings track record length samples.