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The Relationship Between Investor Holding Period, and Stock and Stockholder Characteristics

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A Thesis in the Faculty of Commerce and Administration

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ABSTRACT

The Relationship Between Investor Holding Period, and Stock and Stockholder Characteristics

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This thesis systematically explores the relationship between investor holding behavior and stock as well as stockholder characteristics. It formulates a new estimator of the holding period. It examines the data for stocks listed in the Toronto Stock Exchange 300 index over the 1986-1996 period by using two methodologies; namely, regression analysis and screen-sorted portfolios. The holding period is found to be related to four families of characteristics of stock returns based on the regression results. These characteristics are relative price level (value and growth, or in-favor and out-of-favor stocks), past return performance, trade costs and liquidity, and risk. The holding period is strongly affected by stockholder characteristics, especially the proportion of trades effected by large institutional investors.

The empirical results support the overreaction hypothesis which assumes that some investors are overly optimistic about firms which have done well in the past, and are overly pessimistic about those that have done poorly. These findings add to the behavioral finance literature. The results support the "trend-chaser" hypothesis which suggests that momentum investors make their investment decisions only on stock return movements, and not on fundamental factors. Stocks with larger spreads or smaller sizes or less risk have longer holding periods. Stocks with a larger percent of institutional trading have shorter holding periods since investors in these stocks trade more frequently.

This study makes a strong case for examining stock market and investor behavior together. It suggests that this may best be done by using both the paradigms of modern finance theory and of behavioral finance.

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The Relationship Between Investor Holding Period, and Stock and Stockholder Characteristics

1. Introduction

In the security market, both individual investors and professional money managers have to make basic decisions on what to buy, sell or hold. Investment performance is determined by the ability to correctly make basic investment decisions, including decisions on the holding period. In this study, we focus on two aspects of investor holding behavior; namely, what to hold and how long to hold it.

Amihud and Mendelson (1986) examine the effect of bid-ask spreads on an investor's expected holding period. They provide proofs of two propositions. The first proposition (clientele effect) states that assets with higher spreads are allocated in equilibrium to portfolios with (the same or) longer expected holding periods. The second proposition (spread-return relationship) states that, in equilibrium, the observed market (gross) return is an increasing and concave piecewise-linear function of the (relative) spread. Amihud and Mendelson (1986) provide empirical evidence to support their proposition 2. They conclude that investors with long holding periods benefit from holding assets with low liquidity.

Atkins and Dyl (1997) test proposition 1, and find that the length of the holding period of investors is positively related to bid-ask spreads. This is consistent with proposition 1 of Amihud and Mendelson. Atkins and Dyl (1997) find that holding periods are also related to the market value of the stock and the variance of daily stock returns.

This thesis is the first to systematically explore the relationship between investor

holding behavior and stock as well as stockholder characteristics. We examine the data for stocks listed on the Toronto Stock Exchange 300 index over the 1986-1996 period by using two methodologies; namely, regression and screen-sorted portfolios. The holding period is found to be related to four families of characteristics of stock returns based on the regression results. These characteristics are relative price level (value and growth, or in-favor and out-of-favor stocks), past return performance, trade costs and liquidity, and risk. The holding period also is strongly affected by stockholder characteristics, especially the proportion of trades effected by large institutional investors.

We find that stockholders who hold this year's growth stocks have a longer holding period. This year's value stocks and last year's growth stocks have shorter holding periods. The price-to-book ratio and the earnings yield are more important in determining the holding period than price-to-cash flow and dividend yield. Holding period is positively related with this year's price-to-book ratio, negatively related with this year's earnings yield, and positively related with last year's earnings yield. We find that this year's winner and loser stocks have shorter holding periods which supports the "trend-chasers" hypothesis. This kind of "trend-chasing" behavior continues into the next year.

We find that investors on average like to hold stocks with good performance as measured by this year's cumulative abnormal returns (CAR) but that this result is not robust. We find reversal behavior in the following year for stocks which have survival ability (i.e, stocks with larger CAR have longer holding periods in current year and shorter holding periods in the next year and vice versa). We find that holding period is positively correlated with spread and listing length on the TSE, negatively correlated with

size and institutional activity, and insignificantly correlated with the standard deviation of stock return and debt-to-equity ratio. A firm's cash flow stability is a significant determinant of the holding period. Since low price stocks are risky, they have shorter holding periods. We test the relationship between holding period and possible determinants by using screen-sorted portfolios. Compared with the regression results, consistent results are found for last year's dividend yield, winner and loser, and institutional activity. Different results are found for standard deviation of monthly return.

The remainder of this paper is organized as follows. Section 2 defines investor holding period and details how it is calculated. Section 3 identifies the stock and stockholder characteristics that may influence an investor's holding period. Section 4 presents the regression model and the hypotheses. Section 5 describes the data and test methodology. Section 6 presents and analyzes the empirical findings. Our concluding remarks are offered in section 7.

2. Definition and Measurement of the Holding Period

Each firm is held by many investors who may have different holding periods. In studying the relationship between the investor's holding period behavior measured by length of investor holding period and stock characteristics, we only observe the average investor's holding period. The holding period of this average investor is used as a proxy for the holding period of all investors.

In Atkins and Dyl (1997), the average holding period (henceforth A-D estimator) for each firm **for each year** is computed by dividing the number of outstanding shares for a firm by the firm's annual trading volume. More formally:

Holding Period = Shares Outstanding /Trading Volume

This formulation of the holding period measures the average holding period for the whole life (not one year) of the stock by implicitly assuming that the average investor's behavior during year T will not change thereafter. The measure can take values in the range of $(0,\infty)$. If there is no trading in year T, the average investor is assumed to hold the stock forever.

Atkins and Dyl estimate the mean and standard deviation of holding periods as 6.99 and 15.6 years, respectively, for Nasdaq, and 4.01 and 10.46 years for NYSE firms, respectively. Since investor holding period behavior continuously changes, it may not be appropriate to say that the average investor owns a stock for ten years based on the observed behavior over a one-year period.

To get their results for Nasdaq, Atkins and Dyl (1997) delete firms with reported trading volumes less than 25,000 shares per year. The Atkins and Dyl measure for holding period may not be appropriate for a market characterized by thin trading, as is the case for the Canadian market. Thus, we now develop a measure that can deal with relatively low trading volumes (henceforth our estimator).

To accurately describe the investor's holding period behavior during time T, the holding period could be bounded so that it never exceeds the time horizon used in its calculation. In this case, the measure lies in the range [0,1], where 0 indicates infinite trading and 1 indicates no trading over the period T. These correspond to the shortest and longest possible holding periods, respectively.

To calculate holding periods, shares outstanding should be included in the denominator of the calculation. To simplify the calculation, we assume that all the shares of firm i are held by one investor (the average investor) at any given time during T. Trades can occur only N-1 times if N investors held the total shares during a given period T. The trading volume is equal to N-1 times the total shares outstanding. Thus, the average holding period for stock i during time T is given by:

$$\mathbf{HP}_{it} = \mathbf{T/N}$$

Where: **T** is the length of the time period under consideration; and

N is the number of **average investors** who hold all the shares during T.

To illustrate, suppose T is one year and firm i has 100 million shares outstanding which are totally owned by investor A at the end of year t. Suppose further that A decides to sell all the shares at the very beginning of year t+1 to B; that is, during the first minute of the first trading day of year t+1. If all the transactions are finished within one minute, then investor A is still considered as an investor who owned the shares in year t+1. Now suppose B sells all the shares at the end of June to C, and C holds the shares until the end of year t+1. Since three shareholders owned the shares during year t+1, the average holding period is 12/3 = 4 months. If T =1, then the result should be 1/3.

The above formula for calculating the holding period can be modified to use trading volume as follows:

$$\mathbf{HP}_{it} = (T * \text{total shares outstanding})/(N * \text{total shares outstanding})$$

$$= (T * \text{total shares outstanding})/(\text{Trading volume} + \text{total shares outstanding}),$$

because trading volume =(N-1) * total shares outstanding.

Differences between the two calculation methods are examined in section 6.

3. Possible Determinants of Investor Holding Period

Factors that affect the return and risk of an investor's portfolio potentially may affect the length of the investor's holding period. Research shows that the relationship between expected return and beta is weak. For example, Fama and French (1992), and Haugen (1995) find that higher beta stocks tend to produce lower returns in recent decades. Other factors display reliable power in explaining the cross-section of average returns. The list of empirically determined factors identified by Fama and French (1994) include size, leverage, earnings/price, cash flow/price, book-to-market equity and past sales growth. Fama and French find that the most important variables are size and book-to-market equity. Haugen (1996) groups 28 firm characteristics that cause differentials in expected stock returns into five families: risk, liquidity, price level, growth potential, and technical price history. He does not include some important variables such as book-to-market value, and the bid-ask spread.

In this study, we classify the factors that may determine stock returns into four families: relative price level (value and growth, or in-favor and out-of favor stocks), past return performance, trade costs and liquidity, and risk.

The characteristics of major stockholders for a given stock also should affect the average holding period for that stock. Large institutional investors allegedly have shorter time horizons than individual investors.

For a given stock, the average investor's holding period depends upon the net influence of a number of related variables. Investors need to consider several factors in

their investment decision process. To determine the effect of one particular factor on holding period, we need to assume away the impact of all other variables.

We now discuss the factors in each of the families.

3.1. Relative Price Level

The choice of investment style is considered to be an important step in the investment decision-making process. Equity investing generally is grouped into one of the followings three styles: value, growth, and income.

Typically, value stocks are those with low market prices relative to earnings per share (Basu, 1977), low price-to-cash-flow per share (Lakonishok, Shleifer and Vishny, 1994), low book value per share (Rosenberg, Reid, and Lanstein,1985; Fama and French, 1992 and 1998) and high dividends per share (Blume,1980; Rozeff,1984).

Growth stocks have relatively high prices in relation to the above fundamental factors as well as high past rates of growth in EPS, return on equity, and sales. The pursuit of a growth strategy has been popular during the post-war period, especially during periods of strong economic growth. Proponents of this approach claim that investing in companies with above average growth leads to superior returns even if the price of growth stocks is relatively higher than other stocks.

In practice, it is not easy to find stocks that simultaneously have high (low) price to earnings, price to cash flows, dividend yield and price to book. Stocks with a high price-to-book ratio may have low P/E. Sharpe (1993) uses a simple classification scheme based on the current price per share divided by the most recently reported book value per share to categorize stocks on a value/growth dimension. Lakonishok, Shleifer and Vishny (1994) note that, while the return on the book-to-market value strategy is impressive,

book-to-market value is not a "clean" variable. This variable is not uniquely associated with economically interpretable characteristics of firms. Lakonishok, Shleifer and Vishny argue that the most important of such economically interpretable characteristics are the market's expectations of future growth and the past growth of these firms. According to Lakonishok, Shleifer and Vishny, differences in cash flow-to-price or earnings-price ratios across stocks should proxy for differences in expected growth rates between value and growth stocks.

The traditional explanation of why value strategies outperform growth strategies, according to Fama and French (1993), is to compensate for higher systematic risk. Fama and French suggest that book-to-market (and size) proxy for distress, and that distressed firms may be more sensitive to certain business cycle factors like changes in credit conditions than firms that are financially less vulnerable. Lakonishok, Shleifer and Vishny (1994) suggest that the high returns associated with high book-to-market (or value) stocks are generated by investors who incorrectly extrapolate the past rates of growth in earnings of firms. According to their overreaction hypothesis, investors allegedly are overly optimistic about firms which have done well in the past and are overly pessimistic about those that have done poorly. Since low book-to-market (or growth) stocks supposedly are more glamorous than value stocks, they may attract naive investors who push up prices and lower the expected returns of these stocks.

Bauman and Miller (1997) observe that the EPS growth rate has a mean-reverting tendency over time. The high growth rates associated with growth stocks tend to decline, and the low growth rates associated with value stocks tend to increase. Bauman and Miller find that investment analysts (or investors) systematically overestimate the future

EPS of growth stocks relative to that of value stocks. Therefore, growth stocks experience lower returns when realized EPS growth rates are below expectations.

Rozeff and Zaman (1998) find that insider buying climbs as stocks change from the growth to value category. This supports their modified overreaction hypothesis which predicts that insiders focus their buying on value stocks and selling on growth stocks, so that they can profit by the eventual reversion of market prices to their fundamental values. When stocks perform poorly, some non-insiders sell the stocks due to overreaction or other psychological factors.

The traditional explanation is the efficient market hypothesis in which security prices reflect all information. No undervalued or overvalued securities exist. In contrast, the overreaction hypothesis proposed by Lakonishok, Shleifer and Vishny and the adaptive expectation hypothesis proposed by Bauman and Miller are consistent with a growing body of literature on behavioral finance. Behavioral finance does not define "rational" behavior or label decisions as being biased or faulty. Instead, it seeks to understand and predict systematic financial market implications of psychological decision-making processes.

Studies in behavioral finance find that, when faced with a complex purchase, decision-makers tend to anchor on prices and prices changes as indicators of value. Decision-makers overweight more recent evidence, and over-rely on past trends when formulating future expectations. Being loss averse, investors tend to focus on negative information when under stress by over-weighting the probability of negative events. They become more loss averse as downward value movements remind them of their incomplete personal control. Thus, this implies that the average holding period will be

longer for growth compared to value stocks.

We use two approaches to define relative price level (or investment style).

The first definitional approach is value and growth. We define value stocks as those with market-to-book values less than one, and growth stocks as those with price earnings ratios higher than the benchmark.

In the second definitional approach, we classify stocks into two groups; namely, in-favor and out-of-favor. Stocks with high P/E, MV/BV, P/CF, P/D or low earnings yield, BV/ MV, dividend yields and CF/P are classified as in-favor stocks. Stocks with low P/E, MV/BV, P/D, P/CF or high earnings yield, BV/MV, dividend yield and CF/P are classified as out-of-favor stocks. We assume that the stocks with relative high price levels have longer holding periods according to the theory of behavioral finance.

3.2.Past Return Performance

Many papers document the relationship between the cross-section of stock returns and past returns. Jegadeesh and Titman (1993) document a short-term continuation behavior. Momentum strategies which buy stocks that have performed well in the past and sell stocks that have performed poorly generate significant positive returns over 3 to 12 month holding periods. De Bondt and Thaler (1985) document a long-term reversal behavior. Over 3 to 5 year holding periods, stocks that performed poorly over the previous 3 to 5 years achieve higher returns than stocks that performed well over the same period. This contrariant strategy which buys past losers and sells past winners over a long-term investment horizon yields abnormal returns. For Canadian markets, Kryzanowski and Zhang (1992) find statistically significant continuation behavior for the next one or two years for winners and losers, and insignificant reversal behavior over

longer periods up to 10 years. Lakonishok and Smidt (1986) examine turnover on the NYSE and AMEX for winners and losers over the period 1971-1982. They find that investors seem reluctant to trade losers. Bremer and Kato (1996) find similar results for investors on the Tokyo Stock Exchange. They report that winners are traded and losers are held. This implies that losers have longer holding periods and winners have shorter holding periods compared with other stocks.

Chan (1988) and Ball and Kothari (1989) find that the winner-loser effect is due almost entirely to intertemporal changes in risks and expected returns. Chan, Jegadeesh and Lakonishok (1996) suggest that the predictability of future returns using past returns is due to the market's underreaction to short-term information (particularly past earning news) and overreaction to information on long-term prospects. Delong, Shleifer, Summers and Waldman (1990) propose that the profitability of momentum strategies results from overreaction induced by positive feedback trading strategies. Thus "trend-chasers" reinforce movements in stock prices even in the absence of fundamental information, so that the returns for past winners and losers are temporary in nature. If the "trend-chaser" hypothesis holds, then the average holding period will be shorter for both winner stocks and loser stocks than for other stocks.

3.3 Trade Costs and Liquidity

Differences in trade costs for stocks play an important role in investment decision making. According to Haugen (1996), relative liquidity depends upon price per share, daily turnover, the bid-ask spread, the amount of institutional ownership, and firm size.

Although transaction costs are material, the bid-ask spread represents the major

part of trade costs. According to Amihud and Mendelson (1986), stocks with larger (smaller) bid-ask spreads should be owned by investors who expect to hold the security for a longer (shorter) time period. If this is true, stocks with higher (lower) bid-ask spreads should have longer (shorter) average holding periods. Wilcox (1993) examines the relationship among trade costs and holding period, and argues that the optimal holding period depends on the difficulty of executing the trade and how quickly the information on which the trade is based becomes stale. If the holding period is too short, the active return will be suboptimally offset by transaction costs. If the holding period is too long, much of the higher active return attainable from a fresh holding is forgone. In this paper, we investigate the relationship between spread and average holding period.

It is well known that spread and firm size are inversely related. Smaller firms are less liquid. One explanation is that since small firms are more risky, a risk averse specialist sets a higher spread to compensate for the added risk exposure. A second explanation is information based. Large firms are followed by more analysts and private information-based trading is more likely for smaller firms. A final explanation is that market-impact costs are much higher for smaller firms. Thus, specialists set larger spreads for small firms to manage the market impact cost.

3.4. Risk

We use six proxies for risk herein; namely, standard deviation of returns, earnings and cash flow stability, number of years listed in the TSE 300, debt-to-equity ratio, and low price stock. While β also should be a risk factor, we do not test it due to a lack of data.

The standard deviation is based on monthly returns over a one-year period. We use

the Stock Guide definition of earnings stability, or the coefficient of determination, which measures how well earnings are related over a period of five or ten fiscal years. This ratio gives some indication of the stability of earnings and the reliability of earnings growth. We use a similar definition for cash flow stability. Debt-to-equity ratio is expected to be positively correlated with the risk of common equity across firms (Bhandari,1988). This expectation is based on the belief that the greater the use of debt financing, the greater the probability that a decline in earnings will lead to financial distress. An increase in the probability of financial distress lowers the value of a firm. If we assume that low price stocks are more risky, then such stocks will have shorter holding periods. We define a stock with a price less than $5 as being a low price stock herein. We assume that firms with longer listing periods are less risky because they are more seasoned. We expect such firms to have longer holding periods. We use a similar logic for stocks which are included in the TSE 300. Such stocks must attain a minimum total market capitalization to enter the TSE 300, and must subsequently maintain a certain minimum total market capitalization to remain in the TSE 300 index.

3.5 Stockholder Characteristics

Institutional investors play an increasingly important role in the security market. Since the institutional manager is in the business of investing other people's money, he is influenced by both the attitudes and actions of his clientele. If the source of the institution's capital is from investors who can add or withdraw money at any point in time, then short-run performance may be very important. Mutual fund sales tend to be high during periods of strong market performance when the public is motivated to buy based on past performance. In such situations, the fund manager is forced to invest

incoming monies because a large cash position dimishes fund performance. In a bear market or if the fund performs poorly, investors become fearful and/or motivated to redeem. To meet this demand for cash, the institutional manager may need to liquidate stock positions at low prices. In both cases, the institutional mangers may be forced by the institution's structure to trade. This liquidity-motivated trading also applies to bank trust departments, pension funds and so on.

The income for institutional asset management firms is based on the amount of assets under management. Thus, sales are the institution's most import task since this results in more income for the institution. The primary institutional sales tool is image. For those institutions that publish their holdings, the easiest way to project the image of superiority is for the holdings to have appreciated in value since their purchase. To maintain image prior to the publication of holdings, managers strive to buy stocks that are up the most and are receiving the most positive media attention. The process of adjusting portfolio holdings for the sake of appearance is called window dressing. The end result of window dressing is a published portfolio that is tilted towards winners and the "hottest" current stocks.

Short-term investment performance is very important to the fund's sales and redemption behavior. Therefore, institutional investor performances are measured over short time intervals. Since employment and income also are tied to short-term performance (from three months to one year), it is difficult for an institutional investment manager to adopt value and contrarian investment strategies which may take over three years to get their expected returns. The short-term investment horizon of money managers causes them to trade more frequently than those individual investors who have

long-term investment horizons.

Thus, our expectation is that a stock with larger institutional investor ownership will have a shorter holding period.

We can use another variables to test above hypothesis. Very large firms such as the firms in TSE35 may have shorter holding period due to basket trading by institutional investors. We can define a dummy variable which equal to one if the stock is in TSE35 index and 0 otherwise. This test is not conducted in this thesis due to a lacks of data.

3.6 Interaction effects

When two or more of the independent variables are correlated, interaction effects or multicollinearity may exist among these independent variables. Tests of significance of these variables are not reliable if interaction effects exist. The estimated regression coefficients may even change sign. The best way to check for interaction effects is to examine the correlation matrix for the variables. If multicollinearity exists, interaction terms should be added to the model as we do herein.

3.7 Other Considerations

The length of the investment holding period is dependent on investor decisions to buy, hold, or sell a security. To make these decisions, the investor needs information about the past, present, and expected future performance of the stock. Thus, this year's holding period can be effected by last year's, this year's and next year's price-to-earnings ratio, price-to-book ratio and so on.

This year's holding period also is effected by last year's buying and holding activities. How long the stockholder holds the same stock this year partly depends on the investor's investment style, and what happened to the firm and the stock market over the last year.

For example, suppose that investor A bought a stock during the last year because the stock was a winner. She may sell the stock this year if the price declines. Similarly, if investor B bought a stock last year because the stock was a growth stock, this investor may not sell the stock if the price declines. Investor B may only sell the stock when he is convinced that the stock is no longer a growth stock Thus, last year's values for some of the determinants should be included in the model.

In this study, we assume that last year values for trade costs and liquidity, risk and stockholder characteristics are not relevant or important in an investor's determination of this year's holding period. Only the most important financial ratios related to relative price level (value and growth) (or in-favor and out-of-favor) and last year's return performance are included in our model.

However, past performance is not a reliable guide to future performance. Market expectations for future relative rates of growth in earnings and dividends per share are discounted into the current market price per share. Thus, when investors make re-balancing decisions based on earnings or dividend yield, they are likely to use forecasted values. Studies show (Haugen,1997) that forecasts of earnings and dividends for horizons of less than one year by professionals in the US are relatively reliable, but that the accuracy decreases rapidly as the time horizon for the forecast gets longer. Some professional investors believe that the present market price discounts the projected financial ratios of the next three to six months. Not all investors use forecasted earnings and dividends to calculate financial ratios for decision-making purposes. The ratios published by various stock exchanges often use figures for the past 12 months in calculating the financial ratios.

If the majority of investors use forecast data to calculate financial ratios, both the time horizon of the forecast and forecast reliability are aspects of interest. We use two approaches to investigate these two issues. First, we assume that the average investor uses this year's forecasted data for earnings and dividends and that these forecasts are reliable. To examine the validity of this assumption, we use calendar year data to calculate the holding period. The measurement period is from January to December for firms with a fiscal year ending between July and December. Actual ratios of the fiscal year are used. Second, we assume that the forecast for this year is reliable only in the third and fourth quarters of the fiscal year since it is based on the actual data for the first and second quarters and the remaining time horizon is short. For this approach, the measurement period is from the July of year t to June of year t+1. From July to December of year t, the average investor uses forecast data for fiscal year t because such data are reliable. From January to June of year t + 1, the average investor uses last year's (i.e., year t data) to calculate the ratios since the forecasts of the first and second quarter for year t+1 are not reliable. If the first assumption holds, we should observe that the holding period measured by calendar year is significantly related to ratios of year t. Otherwise, either investors do not use the fiscal data of the same year or the forecasts are not reliable. If the second assumption holds, then we should observe that a holding period measured from July of year t to June of year t+1 is significantly related to the ratios for year t. As reported in section 6, while our empirical test support both assumptions, the relationship between holding period measured by calendar year and financial ratios of year t is weaker than the other one. The results suggest two possibilities--either the average investor use less forecast data for a horizon beyond six

month or the forecasts over more than a six months period are not very reliable.

4. The Regression Model and the Null Hypotheses

Based on the above discussion, the following model is postulated to describe the relationship between the holding period of the average investor, $\mathbf{HP}_{it}$, for stock i based on year t, and various determinants of the length of the holding period. Specifically:

$$\mathbf{HP}_{it} = a_0 + a_1\mathbf{Val}_{it} + a_2\mathbf{Val}_{it-1} + a_3\mathbf{GR}_{it} + a_4\mathbf{GR}_{it-1} + a_5\mathbf{PB}_{it} + a_6\mathbf{PB}_{it-1} + a_7\mathbf{EY}_{it}$$
$$+ a_8\mathbf{EY}_{it-1} + a_9\mathbf{DY}_{it} + a_{10}\mathbf{DY}_{it-1} + a_{11}\mathbf{PC}_{it} + a_{12}\mathbf{PC}_{it-1} + b_1\mathbf{LOS}_{it}$$
$$+ b_2\mathbf{LOS}_{it-1} + b_3\mathbf{WIN}_{it} + b_4\mathbf{WIN}_{it-1} + b_5\mathbf{CAR}_{it} + b_6\mathbf{CAR}_{it-1} + c_1\mathbf{SP}_{it} + c_2\mathbf{SIZE}_{it}$$
$$+ d_1\mathbf{STDV}_{it} + d_2\mathbf{R2E}_{i} + d_3\mathbf{R2C}_{i} + d_4\mathbf{ListY}_{i} + d_5\mathbf{LowP}_{it} + d_6\mathbf{DE}_{it}$$
$$+ e_1\mathbf{Large}_{it} + \varepsilon_{it} \qquad \textbf{(4-1)}$$

Where: $\mathbf{Val}_{it}$ is a dummy variable equal to 1 if the price-to-book value of stock i for year t is less than 1 and 0 otherwise;

$\mathbf{GR}_{it}$ is a dummy variable equal to 1 if the price-to-earnings ratio for stock i for year t is greater than the market and is equal to 0 otherwise;

$\mathbf{PB}_{it}$ is stock i's price-to-book ratio for year t ;

$\mathbf{EY}_{it}$ is stock i's earnings yield for year t, and is set to zero if negative;

$\mathbf{DY}_{it}$ is stock i's dividend yield for year t ;

$\mathbf{PC}_{it}$ is stock i's price-to-cash flow ratio for year t (the value can not be negative);

$\mathbf{LOS}_{it}$ is a dummy variable equal to 1 if stock i is a loser during year t and is set to 0 otherwise;

$\mathbf{WIN}_{it}$ is a dummy variable equal to 1 if stock i is a winner in year t and is equal

to 0 otherwise;

CAR$_{it}$ is the market-adjusted excess return at year t;

SP$_{it}$ is stock i's weighted-average relative spread in year t;

SIZE$_{it}$ is stock i's size for year t;

STDV$_{it}$ is stock i's standard deviation of daily or monthly return for year t;

R2E$_{i}$ is stock i's earnings stability;

R2C$_{i}$ is stock i's cash flow stability;

ListY$_{i}$ is the number of years that stock i is listed on a stock exchange or included in a stock index;

LowP$_{it}$ is a dummy variable equal to 1 if stock i's price in year t is less than \$5 and is equal to 0 otherwise;

DE$_{it}$ is stock i's debt-to-equity ratio for year t;

Large$_{it}$ is stock i's percentage that large trade volume represents of total trade volume for year t;

$a_0 \cdots a_{12}, b^1 \cdots b_6, c_1, c_2, d_1 \cdots d_6$ and e_1 are coefficients to be estimated, and

ε_{it} is the error term, which is assumed to be distributed normally with mean equal to zero, constant variance, and zero correlation between the error terms both across and over time.

As in previous studies (Kryzanowski and Zhang,1992), winners and loser are identified as those firms (stocks) in the top and bottom decile of firms (stocks) ranked by **CAR**$_i$, respectly. **CAR**$_i$ is the market-adjusted excess returns summed over the y (e.g., 12) months up to and including the portfolio formation month. More formally,

$$\mathbf{CAR}_i = \sum (R_{it} - R_{mt}), \qquad \textbf{(4-2)}$$

Where: R_{it} is the realized return on stock i at time t, and

R_{mt} is the realized return on the market at time t

The null hypotheses tested herein are:

$H_{0(1)}$: **HP**$_{it}$ is negatively related with **Val**$_{it}$,**Val**$_{it-1}$,**EY**$_{it}$,**EY**$_{it-1}$,**DY**$_{it}$,**DY**$_{it-1}$,

WIN$_{it}$,**WIN**$_{it-1}$, **LOS**$_{it}$, **LOS**$_{it-1}$, **SIZE**$_{it}$, **STDV**$_{it}$, **LowP**$_{it}$,**DE**$_{it}$, **Large**$_{it}$.

$H_{0(2)}$: **HP**$_{it}$ is positively related with **GR**$_{it}$, **GR**$_{it-1}$, **PB**$_{it}$, **PB**$_{it-1}$, **PC**$_{it}$,**PC**$_{it-1}$

,**CAR**$_{it}$,,**CAR**$_{it-1}$, **SP**$_{it}$,**R2E**$_{i}$, **R2C**$_{i}$,**ListY**

Independent variable combinations which can not be used jointly include: **PB**$_{it}$ with **Val**$_{it}$, **GR**$_{it}$ with **EY**$_{it}$, and **CAR**$_{it}$ with **LOS**$_{it}$ and **WIN**$_{it}$. This also applies to combinations including the lagged values of these variable combinations.

5. Data and Test Methodology

Three factors are considered for choosing the sample and the data; namely, data availability, survivorship and small size bias. Fama and French (1992) report that size and the book-to-market ratio capture the cross-sectional variation of average stock returns for the universe of NYSE, AMEX and Nasdaq securities. Fama and French assert that their findings have powerful implications for portfolio formation and performance evaluation for investors. However, Loughran (1997) reports that a substantial portion of the book-to-market effect is driven by low returns on small newly listed growth stocks. These stocks represent less than 1% of the total market capitalization of all publicly traded equity in the U.S. For the largest size quintile of all firms, which account for 75% of the total market value of all publicly traded firms, book-to-market has no significant explanatory power for the cross-section of realized returns. Thus, book-to-market as such has less importance for money managers than the literature suggests. Loughran argues

that small growth firms perform differently and have different characteristics than large firms. As such, researchers should be careful in drawing inferences based on these small growth firms.

In this paper, we use the stocks in the Toronto Stock Exchange 300 index from July of 1986 to June of 1996. These stocks account for over 70% of the total capitalization of the TSE. Since equity traded on the TSE accounts for 80% to 90% of national equity trading and some TSE300 firms are listed on the other exchanges, our sample represents the major part of the Canadian stock market. To avoid survivorship bias, our data includes delisted stocks.

The fiscal year (month) end for most firms is in the last two quarters of the calendar year, particularly in December. The financial data for these firms is not available before the end of March of the next year. As mentioned previously, the calendar year may not a good period for studying the effect of financial ratios on the holding period although it also is tested herein. This paper considers the beginning of July as the beginning of the studied year, and the end of June of the next year as the end of the studied year. Thus, year t is from July of this year to June of the next year. For the variables from the firm's annual report, the financial ratios for year t are taken from year t-1 for the firm's fiscal year ending during the third and fourth quarters and from year t for those fiscal years ending during the first and second quarters.

To obtain the data needed especially for delisted stocks, several data sources are used in this study. These include the TSE Monthly Review, Stock_Guide, TSE/Western database, Computstat and TSE8696 (i.e, a daily summary file for TSE listed securities).

To calculate the holding period for stock i for year t, trading volume and shares

outstanding are required. Trading volumes are taken from TSE 8696, and shares outstanding are taken from Stock_Guide and the TSE Monthly Review. Financial ratios (such as price-to-book and earnings yield) are taken mostly from Stock_Guide and Compustsat for both listed and delisted stocks. Only about 1800 stocks in our sample have financial ratios in these two databases. From the TSE Monthly Review and TSE 8696, we obtain many missing values of earnings, dividends and closing prices. Thus, the earnings yield and dividend yield are calculated from these databases. In a cross-sectional study, the values of the earnings yield and price-to-cash flow ratio can not be negative. As in previous studies, negative values of earnings yield are set to zero, and price-to-cash flow ratios with negative values are excluded.

The monthly returns for stock i and the market are taken from the TSE/Western database. These returns are used to calculate the market-adjusted excess returns at year t and year t-1 (i.e. $\mathbf{CAR}_{it}$ and $\mathbf{CAR}_{it-1}$). Losers and winners at year t and year t-1 are identified from $\mathbf{CAR}_{it}$ and $\mathbf{CAR}_{it-1}$. Stock i's standard deviation of monthly returns is calculated from these returns. To calculate the weighted-average spread, the daily relative spread and trading volume are taken from TSE8696.

Although data on the percentage of large institutional ownership in each stock is unavailable, data on daily large trade volumes are drawn from TSE 8696. The volume of large trades for year t are divided by total trading volume for year t to get the percentage of large trades for stock i for year t. This variable is a proxy for large institutional ownership for stock i. Specifically, our proxy is:

$\mathbf{Large}_{it}$ = Volume of large trade of year t/Total trading volume of year t **(5-1)**

The weighted-average spread for stock i for year t is given by:

$$\mathbf{SP}it = \Sigma\ (\mathbf{ASK}_{ij} - \mathbf{BID}_{ij})/(\ \mathbf{ASK}_{ij} + \mathbf{BID}_{ij})/2 * \mathbf{Weight}_{ij} \qquad \textbf{(5-2)}$$

where: $\mathbf{ASK}_{ij}$ and $\mathbf{BID}_{ij}$ are the ask and bid prices reported on TSE 8696 for stock i on day j;

$$\text{Weight}_{ij} = \text{Volume}ij/\text{Trading volume}_{it} \qquad \textbf{(5-3)}$$

Where: Volume_{ij} is the trading volume for stock i on day j and $\text{Trading volume}_{it}$ is the total trading volume for stock i for year t.

Size equals the average number of shares outstanding multiplied by the average price (or yearly closing price) for stock i for year t. Most of the average number of shares outstanding are taken from Stock_Guide. The remainder is taken from the TSE Monthly Review. The average prices are calculated from the prices reported in TSE 8696. This source also is used to define low price stocks for calculating the dummy variable $\mathbf{LowP}_{it}$.

$\mathbf{R2E}_i$ and $\mathbf{R2C}_i$, which describe earnings and cash flow stability, are taken from Stock_Guide. $\mathbf{ListY}_i$ is used to calculate the number of years for which stock i is included in the TSE 300 index for the test period. If a stock is included in the TSE 300 more than once, the first listing period is used to calculate the list year. For example, stock A was included in the TSE 300 from 1988 to 1990 removed from 1991 to 1992,and reentered thereafter. Then its list year is 3 years.

Spread, standard deviation and size are expressed as logarithms to eliminate the severe skewness present in the raw data, and to make the distributions of these variables more normal. A conflict exists between the number of observations and the number of testable variables in our model. The conflict is caused by the use of many variables and the frequency of missing data for some of these variables. The dilemma in the empirical tests was to use more observations and less testable variables or to use more testable

variables and fewer observations. We formed five sample sets with a different number of observations and variables to deal with this dilemma.

The first data set has about 2800 observations and 12 independent variables. The tested model is :

$$\mathbf{HP}_{it} = a_0 + a_1\mathbf{Val}_{it} + a_2\mathbf{Val}_{it-1} + a_3\mathbf{GR}_{it} + a_4\mathbf{GR}_{it-1} + b_1\mathbf{LOS}_{it} + b_2\mathbf{LOS}_{it-1} + b_3\mathbf{WIN}_{it}$$

$$+ b_4\mathbf{WIN}_{it-1} + c_1\mathbf{SP}_{it} + d_4\mathbf{ListY}_i + d_5\mathbf{LowP}_{it} + e_1\mathbf{Large}_{it} + \varepsilon_{it} \qquad \textbf{(5-4)}$$

Where all the variables are as described earlier.

The second data set has 2500 observations and 14 variables. Added variables include earnings yield and dividend yield. Two testable models are estimated since $\mathbf{GR}_{it}$ and $\mathbf{EY}_{it}$,and $\mathbf{GR}_{it-1}$ and $\mathbf{EY}_{it-1}$ can not be used jointly. The tested models are:

$$\mathbf{HP}_{it} = a_0 + a_1\mathbf{Val}_{it} + a_2\mathbf{Val}_{it-1} + a_3\mathbf{GR}_{it} + a_4\mathbf{GR}_{it-1} + a_9\mathbf{DY}_{it} + a_{10}\mathbf{DY}_{it-1} + b_1\mathbf{LOS}_i \qquad \textbf{(5-5)}$$

$$+ b_2\mathbf{LOS}_{it-1} + b_3\mathbf{WIN}_{it} + b_4\mathbf{WIN}_{it-1} + c_1\mathbf{SP}_{it} + d_4\mathbf{ListY}_i + d_5\mathbf{LowP}_{it} + e_1\mathbf{Large}_{it} + \varepsilon_{it}$$

and:

$$\mathbf{HP}_{it} = a_0 + a_1\mathbf{Val}_{it} + a_2\mathbf{Val}_{it-1} + a_7\mathbf{EY}_{it} + a_8\mathbf{EY}_{it-1} + a_9\mathbf{DY}_{it} + a_{10}\mathbf{DY}_{it-1} + b_1\mathbf{LOS}_{it} \qquad \textbf{(5-6)}$$

$$+ b_2\mathbf{LOS}_{it-1} + b_3\mathbf{WIN}_{it} + b_4\mathbf{WIN}_{it-1} + c_1\mathbf{SP}_{it} + d_4\mathbf{ListY}_i + d_5\mathbf{LowP}_{it} + e_1\mathbf{Large}_{it} + \varepsilon_{it}$$

The third data set has 2000 observations and 16 independent variables. CAR, size and standard deviation are added to the list of variables. Adding $\mathbf{CAR}_{it}$ and $\mathbf{CAR}_{it-1}$ means that $\mathbf{WIN}_{it}$,$\mathbf{WIN}_{it-1}$,$\mathbf{LOS}_{it}$ and $\mathbf{LOS}_{it-1}$ are dropped from the model. The two testable models for the third data set are:

$$\mathbf{HP}_{it} = a_0 + a_1\mathbf{Val}_{it} + a_2\mathbf{Val}_{it-1} + a_7\mathbf{EY}_{it} + a_8\mathbf{EY}_{it-1} + a_9\mathbf{DY}_{it} + a_{10}\mathbf{DY}_{it-1} + b_5\mathbf{CAR}_{it} \qquad \textbf{(5-7)}$$

$$+ b_6\mathbf{CAR}_{it-1} + c_1\mathbf{SP}_{it} + c_2\mathbf{SIZE}_{it} + d_1\mathbf{STDV}_{it} + d_4\mathbf{ListY}_i + d_5\mathbf{LowP}_{it} + e_1\mathbf{Large}_{it} + \varepsilon_{it}$$

and:

$$\mathbf{HP}_{it} = a_0 + a_1\mathbf{Val}_{it} + a_2\mathbf{Val}_{it-1} + a_3\mathbf{GR}_{it} + a_4\mathbf{GR}_{it-1} + a_9\mathbf{DY}_{it} + a_{10}\mathbf{DY}_{it-1} + b_1\mathbf{LOS}_{it}$$
$$+ b_2\mathbf{LOS}_{it-1} + b_3\mathbf{WIN}_{it} + b_4\mathbf{WIN}_{it-1} + c_1\mathbf{SP}_{it} + c_2\mathbf{SIZE}_{it}$$
$$+ d_1\mathbf{STDV}_{it} + d_4\mathbf{ListY} + d_5\mathbf{LowP}_{it} + e_1\mathbf{Large}_{it} + \varepsilon_{it} \qquad \textbf{(5-8)}$$

The fourth data set has 1600 observations. Three variables, $\mathbf{PB}_{it}$,$\mathbf{PB}_{it-1}$ and $\mathbf{DE}_{it}$ are added to models (5-7) and (5-8). Since $\mathbf{PB}_{it}$ and $\mathbf{Val}_{it}$,$\mathbf{PB}_{it-1}$ and $\mathbf{Val}_{it-1}$ can not be used jointly, the two testable models for the fourth data set are:

$$\mathbf{HP}_{it} = a_0 + a_5\mathbf{PB}_{it} + a_6\mathbf{PB}_{it-1} + a_7\mathbf{EY}_{it} + a_8\mathbf{EY}_{it-1} + a_9\mathbf{DY}_{it} + a_{10}\mathbf{DY}_{it-1} + b_5\mathbf{CAR}_{it}$$
$$+ b_6\mathbf{CAR}_{it-1} + c_1\mathbf{SP}_{it} + c_2\mathbf{SIZE}_{it} + d_1\mathbf{STDV}_{it} + d_4\mathbf{ListY} + d_5\mathbf{LowP}_{it} + d_6\mathbf{DE}_{it}$$
$$+ e_1\mathbf{Large}_{it} + \varepsilon_{it;} \qquad \textbf{(5-9)}$$

$$\mathbf{HP}_{it} = a_0 + a_3\mathbf{GR}_{it} + a_4\mathbf{GR}_{it-1} + a_5\mathbf{PB}_{it} + a_6\mathbf{PB}_{it-1} + + a_9\mathbf{DY}_{it} + a_{10}\mathbf{DY}_{it-1} + b_1\mathbf{LOS}_{it}$$
$$+ b_2\mathbf{LOS}_{it-1} + b_3\mathbf{WIN}_{it} + b_4\mathbf{WIN}_{it-1} + c_1\mathbf{SP}_{it} + c_2\mathbf{SIZE}_{it} + d_1\mathbf{STDV}_{it} + d_4\mathbf{ListY}_i$$
$$+ d_5\mathbf{LowP}_{it} + d_6\mathbf{DE}_{it} + e_1\mathbf{Large}_{it} + \varepsilon_{it;} \qquad \textbf{(5-10)}$$

The fifth data set has 1350 observations and all of the independent variables. Two models are also estimated for this data set. One model includes the dummy variables (like $\mathbf{GR}_{it}$),while other model does not. The two models are :

$$\mathbf{HP}_{it} = a_0 + a_1\mathbf{Val}_{it} + a_2\mathbf{Val}_{it-1} + a_3\mathbf{GR}_{it} + a_4\mathbf{GR}_{it-1} + a_9\mathbf{DY}_{it} + a_{10}\mathbf{DY}_{it-1} + a_{11}\mathbf{PC}_{it}$$
$$+ a_{12}\mathbf{PC}_{it-1} + b_1\mathbf{LOS}_{it} + b_2\mathbf{LOS}_{it-1} + b_3\mathbf{WIN}_{it} + b_4\mathbf{WIN}_{it-1} + c_1\mathbf{SP}_{it} + c_2\mathbf{SIZE}_{it}$$
$$+ d_1\mathbf{STDV}_{it} + d_2\mathbf{R2E}_i + d_3\mathbf{R2C}_i + d_4\mathbf{ListY}_i + d_5\mathbf{LowP}_{it} + d_6\mathbf{DE}_{it} + e_1\mathbf{Large}_{it} + \varepsilon_{it}$$

(5-11)

$$\mathbf{HP}_{it} = a_0 + a_5\mathbf{PB}_{it} + a_6\mathbf{PB}_{it-1} + a_7\mathbf{EY}_{it} + a_8\mathbf{EY}_{it-1} + a_9\mathbf{DY}_{it} + a_{10}\mathbf{DY}_{it-1} + a_{11}\mathbf{PC}_{it}$$
$$+ a_{12}\mathbf{PC}_{it-1} + b_5\mathbf{CAR}_{it} + b_6\mathbf{CAR}_{it-1} + c_1\mathbf{SP}_{it} + c_2\mathbf{SIZE}_{it}$$

$$+d_1\mathbf{STDV}_{it} + d_2\mathbf{R2E}_i + d_3\mathbf{R2C}_i + d_4\mathbf{ListY}_i + d_5\mathbf{LowP}_{it} + d_6\mathbf{DE}_{it}$$

$$+e_1\mathbf{Large}_{it} + \varepsilon_{it} \qquad \textbf{(5-12)}$$

The fourth and fifth data sets only contain stocks that survived until the end of the testing period.

We also use the calculation of holding period by Aktin and Dyl as the dependent variable to run our model for the five data sets. We run the regression by using logged (like Aktin and Dyl did) and unlogged holding periods for the A-D estimator.

In addition to the regression method, we use the screen-sorted portfolio method to test the relationship between holding period and the variables defined in section 4. Ten portfolios (deciles) are formed based on the ascending order of values of each determinant for each year and the entire test period. We calculate the average holding period of each decile for all stocks by year and for the entire time period. We produce tables and plots for each of the three calculation methods of holding period for each holding period determinant.

The hypotheses for tests using the screen-sorted portfolio are:

Ho1: Holding period is monotonically increasing for the ten portfolios in ascending order of their $\mathbf{Pb}_{it}$, $\mathbf{PB}_{it-1}$, $\mathbf{Pe}_{it}$,$\mathbf{PE}_{it-1}$,$\mathbf{SP}_{it}$ and $\mathbf{ListY}_{it}$.

Ho2: Holding period is monotonically decreasing for the ten portfolios in ascending order of their $\mathbf{EY}_{it}$,$\mathbf{EY}_{it-1}$, $\mathbf{DY}_{it}$, $\mathbf{DY}_{it-1}$, $\mathbf{SIZE}_{it}$, $\mathbf{STDV}_{it}$, $\mathbf{DE}_{it}$ and $\mathbf{Large}_{it}$.

Ho3: Holding periods for the winner and loser deciles are shorter than for the other eight deciles.

6. The Empirical Results

Using an example, we present summary statistics for holding periods calculated using A-D and our calculation methods in panel A of Table 6-1. When trading volume is large compared with the number of shares outstanding, the difference in the holding periods estimates between the two methods is small (see panel B of Table 6-1). In contrast, when trading is thin as shown in panel B of Table 6-1 and Figure 1 and Figure 2, the difference in the holding period estimates gets larger.

6.1 The Results for the Screen-Sorted Portfolios

We examine the holding periods calculated using the A-D, A-D logged and our estimator for various screen-sorted portfolios. As is evident from Table 1 to Table 8 of the Appendix 1, no discernible pattern exists across the A-D holding period estimates for each set of ten screen-sorted portfolios. Since the holding period estimates for the A-D (logged) estimates and our estimates are very similar, we only discuss our estimates. The logged holding period estimates for the A-D estimator are presented in Tables 6-2 to 6-9, and are plotted in Figure19 to Figure 34.

The holding period estimates for the ten portfolios screened by this year's and last year's price-to-book (PB) ratios are presented in panels A and B of Table 6-10, and are plotted in figures 3 and 4. The null hypothesis is that the holding period is monotonically increasing with $\mathbf{PB}_{it}$ (and with $\mathbf{PB}_{it-1}$). The results show that the holding period neither increases nor decreases monotonically with PB. This does not support the null hypotheses. On a yearly base, we observe that in the first six years of the test period the deciles with lowest $\mathbf{PB}_{i}$ have the shortest holding period in each year. This phenomenon disappears in the last four years. This may suggest that low price-to-book stock's holder

changed their holding behavior due to many experimental researches conducted in 90's which indicate value investing outperform growth investing on average

The holding period estimates for the ten portfolios formed using each of the single screens, this year's P/E and last year's P/E, are reported in Table 6-11 and are plotted in Figures 5 and 6. The results do not support the null hypotheses that the holding period is monotonically increasing with $\mathbf{PE}_{it}$ and with $\mathbf{PE}_{it-1}$.

The holding period estimates for the ten portfolios formed using each of the single screens, this year's EY and last year's EY, are presented in Table 6-12 and are plotted in Figures 7 and 8.While the expectation is that the holding period is monotonically decreasing with $\mathbf{EY}_{it}$ and with $\mathbf{EY}_{it-1}$, the holding period estimates neither increase nor decrease monotonically with either of these two determinants.

The holding period estimates for the ten portfolios formed using each of the single screens, this year's dividend yield and last year's dividend yield, are reported in Table 6-13 and are plotted in Figures 9 and 10. While no monotonical relationship is observed for this year's dividend yield (see panel A), the holding period increases monotonically with last year's dividend yield, except for deciles three and nine (see panel B of Table 6-13). This latter result supports our null hypothesis.

According to the "trend-chaser" hypothesis, the holding periods of the winner and loser deciles should be shorter than the others. Based on Panel A of Table 6-14 and Figure 11 the hypothesized relationship exists between the holding period and this year's CAR. On a yearly basis losers have shorter holding periods for nine years, winners for six years.

Based on Panel B of Table 6-14 and Figure 12, and as expected, last year's winners and losers have shorter holding periods in the current year. This result supports our null hypothesis that "trend-chaser" behavior continues to the next year. On a yearly basis we observe continuation behavior for losers for seven of the ten years, and for winners for six of the ten years.

The holding period estimates for the ten portfolios formed using each of the single screens, spread and size, are reported in Table 6-15 and are plotted in Figures 13 and 14. Since the holding period does not change monotonically with either spread or size, these findings do not support our hypothesis that the holding period is monotonically increasing (decreasing) with spread (size).

The holding period estimates for the ten portfolios formed using each of the single screens that reflect standard deviation and number of years listed in the TSE300 are reported in Table 6-16 and are plotted in Figures 15 and 16. The holding period decreases monotonically with the standard deviation of monthly return, except for decile five. In contrast, the holding period does not increase monotonically with **ListY**$_{it}$. (This is the case except for the smallest decile which has the shortest holding period. This phenomenon exists for nine of the ten years).

The holding period estimates for the ten portfolios formed using each of the single screens, Debt-to-Equity ratio and large trade, are reported in Table 6-17 and are plotted in Figures17 and 18. We observe that the holding period does not increase monotonically with the Debt-to-Equity ratio (see panel A of Table 6-17) as we expected. We find that the holding period monotonically decreases with the proportion of large trades (except for decile five). This is as we hypothesized.

6.2 The Multiple Regression Results

The multiple regression results for each of the five data sets are summarized in Tables 6-18 for our holding period estimates, in Table 6-19 for logged A-D estimates, and in Table 6-20 for the unlogged A-D estimates. We obtain comparable results for all estimates for most of the determinants in Table 6-18 (A-D estimator) and Table 6-19 (our estimator). Most determinant coefficient estimates are insignificant, and the fit is very poor for the unlogged A-D (see Table 6-20).

To eliminate or reduce the interaction effects or multicollinearity in our model, we produce a correlation matrix for all independent variables (see Appendix 2). A cross-products term is added to the model if the value of correlation between two independent variables is over 0.4. We run the regression with all these cross-products terms and drop the insignificant cross-products terms. Then we rerun the regression and get the final results. The estimated coefficients of cross-products terms are not shown in the tables.

We also conducted a partial regression by using holding period measured by calendar year as the dependent variable for model (4-1). The purpose of this regression is to test the two assumptions mentioned at the end of section 3. While our empirical test supports both assumptions, the relationship between holding period measured by calendar year and financial ratios of year t is weaker than when the holding period is measured from July of year t to June of year t+1. Therefore, it is better to use the latter measure as the dependent variable in model (4-1).

We now analyze these results for each of the five families of variables described in section 3 for our holding period estimates (Table 6-18). We indicate any differences between Table6-18 and Table 6-19 when they exist.

The null hypothesis that the holding period is negatively related to $\mathbf{Val}_{it}$ is grounded in the over-reaction hypothesis. The estimated coefficient of $\mathbf{Val}_{it}$ is negative and significant for four of the testable data sets. This suggests that a significant number of investors become overly pessimistic about value stocks, and that their selling activity causes the average holding period to shorten.

The null hypotheses that $\mathbf{HP}_{it}$ is negatively related to $\mathbf{Val}_{it-1}$ (last year's value stock) is tested next, and the estimated coefficient is not significant. If buyers or holders of last year's value stocks are value investors, these value investors are expected to keep these value stocks longer. However, the results suggest that last year's value stock buyers and holders do not keep these stocks longer on average during the next year.

By buying growth stocks at a relatively expensive price (compared to earnings per share), growth investors hope to make an abnormal return through faster stock price growth. If true, rational growth investors are expected to keep growth stocks longer to realize their price appreciation expectations. The null hypothesis that $\mathbf{HP}_{it}$ is positively related to $\mathbf{GR}_{it}$ (this year's growth stock) is tested and is supported at the 0.05 level for all data sets. These results suggest that a significant number of investors in Canadian markets buy or hold growth stocks. Holding periods are relatively longer for growth stocks as their holders attempt to make extra profits from the long-term growth of such stocks.

We test the hypothesis that growth stockholders during year t still hold such stocks longer during next year (year t+1). The coefficient estimate is significant at the 0.05 level but is negative and not positive as we expected. The correlation between last and this year's growth stocks is 0.411 (see the correlation metrics in the Appendix 2).

This suggests that continued growth from one year to the next year is quite uncertain. This year's average holding period becomes shorter for last year's growth stocks since a large number of last year's growth stock holders sell their holdings during this year.

We now examine the relationship between our estimates of holding periods and four variables used to describe in-favor and out-of-favor stocks. Based on the correlation matrix, we find that the correlation among the four variables (price-to-book, earnings yield, dividend yield, and price-to-cash flow ratio) is very weak.

The null hypothesis that the holding period is positively related to this year's price-to-book ratio is based on the belief that average investors like to hold in-favor stocks. This hypothesis is tested for data sets four and five. The results can not reject the hypothesis at the 0.05 level. The relationship is not significant between this year's holding period and last year's price-to-book ratio.

The relationship between holding period and this year's earnings yield and last year's earnings yield is tested for all but the first data set. A strong significant negative relationship, as expected, is found between the holding period and this year's earnings yield. The average investor tends to hold in-favor stocks, as proxied by stocks with low earnings yield, longer. Counter to expectations, the holding period of last year's in-favor stocks (as measured by earnings yield) are significantly shorter at the 0.05 level. These results suggest that last year's stockholders of in-favor stocks tend to hold these in-favor stocks shorter during the next year.

The relationship between holding period and this year's dividend yield is tested for all but the first data set. No significant results are found except for one testable model in data set two. The relationship between holding period and last year's divided yield is

significant for data sets two and three, and for one testable model in data set four at the 0.05 level. It is not significant for data set five. These results suggest that either last year's out-of-favor stockholders (as classified by dividend yield) hold the same stock longer or this year's buyer of the stocks holds them longer. The screen sorted portfolio results are consistent with these regression results.

No significant relationship is found between the holding period and either this year's or last year's price-to-cash flow ratio.

We now examine the coefficient estimates for the second family which are based on past return performance. If "trend-chasing" occurs, then the holding period is expected to be negatively correlated with $\mathbf{WIN}_{it}$ and with $\mathbf{LOS}_{it}$ due to excess buying of winners and excess selling of losers. These hypotheses are tested for all the data sets. The results for losers support our hypothesis and are significant at the 0.05 level for all the cases. The results for winners are significant in set one, two and three at the 0.05 level. Insignificant results are found in data sets four and five. The results from the screen-sorted portfolios support these hypotheses. Thus, we can accept the 'trend-chaser' hypothesis although the results for winners are not as robust as those for losers. We also tested the 'trend-chaser' hypothesis by classifying stocks according to $\mathbf{CAR}_{it}$ into five groups instead of ten. The results for $\mathbf{WIN}_{it}$ was only supported for two data sets at the 0.05 level. As expected, the estimated coefficients for $\mathbf{LOS}_{it}$ are negative and significant at the 0.05 level for all of the data sets. Possible explanations why the average holding periods of this year's losers are shorter include: investors are risk averse, investors overreact to possible loss, and possible margin calls. Our findings are different from those already reported in the literature (see in section 2), which suggest that winners are traded and losers are held.

Continuation behavior for momentum investors can be tested by examining whether or not the holding period is negatively related to $\mathbf{WIN}_{it-1}$ and $\mathbf{LOS}_{it-1}$. The estimated coefficients are significant and negative for all data sets at the 0.05 level. We conclude that continuation behavior is exhibited by winner and loser stocks in the next year. This kind of continuation behavior also is supported in the screen-sorted portfolio results. Similar tests using three and six month $\mathbf{CAR}_{it}$ to determine last year's winners and losers yield insignificant results.

We also regress $\mathbf{HP}_{it}$ on $\mathbf{CAR}_{it}$ and $\mathbf{CAR}_{it-1}$. The null hypothesis is that $\mathbf{HP}_{it}$ is positively related to $\mathbf{CAR}_{it}$ and to $\mathbf{CAR}_{it-1}$ is tested using data sets three to five. These hypotheses state that the average investor prefers to hold stocks with good past return performances. For $\mathbf{CAR}_{it}$, significant results are found for data set three at the 0.05 level. For the logged A-D estimators, the null hypothesis can not be rejected for all the tested data sets at the 0.05 level.

The results for $\mathbf{CAR}_{it-1}$ are negative (not positive) and significant in data sets four and five (not three) at the 0.05 level. Investors holding stocks with relatively good performance over the last year tend to sell these holdings this year. For those who hold stocks with relatively poor performance over the last year, they tend to hold these stocks over the current year. This investor behavior only is identified for stocks which can survive until the end of the testing period.

The null hypothesis that $\mathbf{HP}_{it}$ is positively related with the spread is tested for all of the data sets. The estimated coefficients are significant at the 0.05 level for all the data sets. Our findings are consistent with proposition I of Amihud and Mendelson and the findings reported by Aktins and Dyl. Unlike Aktins and Dyl, we find a strong interactive

effect between size and spread. The estimated coefficients of the cross product term for size and spread are significant at the 0.05 level.

The hypothesized positive relationship between holding period and size is tested for data sets three to five. As expected, the estimated coefficients for **SIZE**$_{it}$ are positive and significant at the 0.05 level. These results are consistent with the results of Atkins and Dyl. Atkins and Dyl provide two explanations for their results. The first explanation is that larger firms are assumed more likely to be considered investment grade than smaller firms.The second one is that larger firms are followed by more analysts who may reduce the divergence of investor's expectations, this results in less trading, and hence in longer holding periods. In addition, some studies suggest that larger firms are generally less risky than smaller ones (Fama and French ,1994). Another possible explanation is that larger firms are held more by institutional investors. Therefore, they are more liquid.

Our model contains one or more of six variables that are related to risk. These variables are a stock's standard deviation of monthly returns, earnings stability, cash flow stability, number of years included in the TSE300, debt-to-equity ratio, and low price.

The hypothesized relationship between holding period and standard deviation is tested for data sets three, four and five using the six associated models. The coefficient estimate for the standard deviation is only significant for two of the six models (3b and 4b).This may be due to the interaction effects between the independent variables, especially between size, spread and standard deviation. To test for interaction effects, we first regress holding period on size, spread and standard deviation without any cross-product terms. We find a strong relationship between **HP**$_{it}$ and **STDV**$_{it}$. Then, we add three cross-product terms (size and standard deviation, spread and standard deviation, and

size and spread) and rerun the regression with these cross-product terms. The relationship of $\mathbf{HP}_{it}$ and $\mathbf{STDV}_{it}$ becomes insignificant (see the Appendix 3). These results indicate that the standard deviation has no explanational power for changes in the holding period after accounting for factors like spread and size.

The effects of earnings stability and cash flow stability on the holding period can only be tested for data set five. We find a positive and significant relationship at the 0.05 level between holding period and cash flow stability. This is consistent with our null hypothesis. The relationship between holding period and earnings stability is insignificant. These results suggest that the average investor may be more concerned with cash flow stability.

The null hypothesis that the holding period is positively related with $\mathbf{ListY}_i$ is tested for all the data sets. The relationship is positive and significant at the 0.05 level for all the data sets as expected.

If a higher debt to equity ratio signifies more risk to an average stockholder, then $\mathbf{HP}_{it}$ is expected to be negatively related with $\mathbf{DE}_{it}$. This hypothesis is tested for data sets four and five. The results do not support our hypothesis. They suggest that the debt-to-equity ratio is not a significant determinant of the holding period.

If an optimal range of debt-to-equity exists, we might observe that firms with such an optimal debt structure have longer holding periods. We define a dummy variable $\mathbf{D\_EO}_{it}$ which is equal to 1 if the debt-to-equity ratio is between 40% to 50%, and is 0 otherwise, to replace $\mathbf{DE}_{it}$ in our tests. If 40% to 50% of the debt-to-equity ratio is an optimal range, we expect that the stocks falling into this range will exhibit longer holding periods. The estimated coefficient is not significant. Thus, a debt-to-equity ratio of 40%

to 50% may not be the optimal range. We test other ranges, and obtain similar insignificant coefficient estimates.

We hypothesize that, since low price stocks (with prices less than $5) are more risky, they have shorter holding periods. This hypothesis is tested for all the data sets. The results are significant at the 0.05 level for the first two groups only. This may occur because the variable size is added to the testable model from group three. Since low price stocks usually are small stocks, it effect may be subsumed by size.

The null hypothesis that $\mathbf{HP}_{it}$ is negatively related with $\mathbf{Large}_{it}$ is based on the belief that institutional investors trade more frequently than other investors. This hypothesis is tested. It is significant at the 0.05 level for all the data sets. This finding is consistent with the findings reported earlier for the screen-sorted portfolios based on $\mathbf{Large}_{it}$.

Concluding Comments

This thesis studies the relationship between investor holding period behavior and stock and stockholder characteristics. We formulate a new estimator of the holding period, and formulate various regressions model based on four families of stock characteristics and one family of stockholder characteristics. The model is tested using the data for stocks included in the TSE 300 index over the 1986-1996 period for different holding period estimators.

Modern finance theory assumes that the market is efficient. The only factor considered by investors is β. Our results suggest that many factors other than β appear to have a strong influence on the holding period behavior of investors.

We find that investor psychology may play an important role in investor holding

period behavior. Our empirical results support the overreaction hypothesis which assumes that some investors are overly optimistic about firms which have done well in the past, and are overly pessimistic about those that have done poorly. We find that the average investor likely holds stocks that have done well (like growth stocks or in-favor stocks with high price-to-book ratios and low earnings-yields). These glamour stocks have longer holding periods. On the other hand, an average investor does not like to hold stocks that have done poorly, such as value stocks or those with low price-to-book ratios or high earnings yields. We also find that last year's average investor in glamour stocks reverse their holding behavior during the next year. These findings add to the behavioral finance literature.

Investment strategy also influences the length of an investor's holding period. We find that both winner and loser stocks have shorter holding periods and that this behavior continues into the next year. These results support the "trend-chaser" hypothesis which suggests that momentum investors make their investment decisions only on stock return movements, and not on fundamental factors.

We find that investors are concerned about trade costs and liquidity when they decide how long to hold stocks. Stocks with large spreads have longer holding periods. Small firms that are less liquid also are held longer by investors on average.

The length of the holding period also is affected by the risk of the stock. We find that investors tend to hold less risky stocks longer, when risk is measured by longer membership in the stock index, and more stable cash flows. Investors do not like to hold risky stocks, which are low priced. The relationships between holding period and the standard deviation of monthly returns, debt-to-equity ratio, and earnings stability are not

significant.

We find that stockholder characteristics also are an important determinant of the holding period. Stocks with a larger percent of institutional trading have shorter holding periods since these investors trade more frequently. We find very similar results using the logged A-D estimator of holding period, and very poor results using the unlogged form of the A-D estimator.

We use screen-sorted portfolios to examine the relationship between the holding period and it's determinants. We obtain consistent or similar results for variables like dividend yield, winner and loser, and proportion of institutional trading. We find that the holding period is monotonically decreasing with the standard deviation of monthly return. This result is different from the regression results where the estimated coefficient is insignificant related to holding period.

We believe that this study makes a strong case for examining stock market and investor behavior by using both the paradigms of modern finance theory and of behavioral finance.

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Table 6-1

A Comparison of the Two Methods to Estimate Holding Period

Panel A :The summary statistics for holding period estimates using the two estimators

	Mean	Median	STDV	Minimum	Maximum
A-D	30.2	4.8	560	0.017	24569
OUR	0.7957	0.8278	0.149	0.017	0.9999

Panel B: Holding period estimates for different share traded volume for the two holding period estimators

Traded Volume	10	50	100	200	300	400	500	750	1000	1250	1500	2000
A-D	100	20	10	5	3.33	2.52	2	1.33	1	0.8	0.667	0.5
Our	0.99	0.95	0.91	0.831	0.76	0.71	0.667	0.57	0.5	0.44	0.4	0.33

Note: Assumes one million shares outstanding, a trading volume between 10,000 and 2 million shares per year, a volume unit of 1000,and that a unit of holding period is one year.

Table 6-2

Holding Periods Estimates Using Logged A-D Estimator for the Screen-Sorted Portfolios for the Price-to-Book Ratio

The data includes stocks in the Toronto Stock Exchange 300 index over the 1986-1996 period. Stocks of each year and the entire time period are ranked in ascending order of their price-to-book ratio (PB), and ten portfolio are formed based on this year's PB (Panel A) and last year's PB (Panel B). Calculations of the average holding periods for each decile for all stocks in that decile by year and for the entire time period are reported below. Decile 1 is the lowest and decile 10 is the highest. Year1 is from July of 1986 to June of 1987.Year 10 is from July 1995 to June of 1996. Number is the average number of stocks in each decile.

Panel A: Price-to-Book (Current Year) is used as the screen

Decile	Year1	Year2	Year3	Year4	Year5	Year6	Year7	Year8	Year9	Year10	Average
1	1.0702	1.0484	1.1563	1.3666	1.1466	1.3677	1.5251	1.1318	1.244	1.4014	1.454
2	1.7007	1.4629	1.89785	1.7293	1.8806	2.0977	1.621	1.0921	1.5593	1.4936	1.6584
3	1.1879	1.8516	1.97579	1.5356	2.1271	2.1893	1.6443	1.3503	1.0511	1.1546	1.5353
4	1.6141	2.0406	1.52404	1.9554	1.9828	1.8453	1.1992	1.216	1.2648	1.0846	1.494
5	1.5669	1.9555	1.94084	1.6118	2.1486	1.802	1.6398	0.9721	1.2877	1.2464	1.5599
6	1.5469	1.2789	1.69389	2.1883	2.0077	2.0246	1.1876	1.1766	1.3485	0.9721	1.3882
7	3.3111	2.1077	1.67012	1.837	1.9585	1.5468	1.3413	1.4418	0.9415	0.8509	1.4959
8	1.6163	1.9328	1.84685	1.8089	1.783	2.2425	1.612	0.9208	1.2948	1.246	1.6208
9	2.945	2.849	2.95697	2.4882	2.478	2.355	1.8687	1.19	1.159	0.9909	1.9122
10	2.1693	2.289	2.63377	2.7291	2.7346	2.4464	2.0064	1.7661	1.8948	1.3929	2.1444
Mean	1.8848	1.8647	1.9323	1.9143	2.0421	1.9984	1.5669	1.2262	1.2985	1.1783	1.6286
Number	12	13	15	17	19	20	22	23	24	26	188

Panel B: Price-to-Book (Last Year) is used as the screen

Decile	Year1	Year2	Year3	Year4	Year5	Year6	Year7	Year8	Year9	Year10	Average
1	1.7656	1.5833	1.71011	1.9494	2.245	1.6208	1.4249	1.1148	1.8494	1.4581	1.7376
2	1.3175	1.7002	1.70332	1.6785	1.9455	2.2147	1.2965	1.6525	1.2419	1.4675	1.5869
3	1.768	2.2463	2.0651	1.9388	1.8635	2.0484	1.2224	1.7603	1.2963	1.145	1.7508
4	1.7052	1.7914	2.47166	2.061	1.5918	2.1019	2.1851	0.9914	1.475	1.169	1.6992
5	2.1442	2.1756	1.72353	1.7298	2.5126	2.1159	1.7373	1.1367	1.3118	1.5196	1.6989
6	1.9443	1.7377	1.90675	2.4152	1.8254	2.1151	1.6398	0.8805	1.4802	1.2359	1.6667
7	1.2687	1.6691	1.56908	2.0815	2.6691	1.9267	1.1645	1.2595	1.0609	0.8061	1.5875
8	2.2445	1.447	2.29321	1.4096	2.0996	1.9055	1.9387	1.3007	0.9706	0.8972	1.6417
9	2.9587	1.9606	2.08022	2.1909	1.9856	2.1383	1.4784	1.1201	1.0259	0.9225	1.4402
10	1.674	2.1275	1.79027	1.6839	1.8745	1.6807	1.5805	1.3332	1.2008	1.0449	1.4735
Mean	1.8743	1.8627	1.94543	1.9264	2.0662	1.997	1.5703	1.2508	1.3018	1.1677	1.6277
Number	11	13	14	16	18	20	22	23	24	26	186

Table 6-3

Holding Periods Estimates Using Logged A-D Estimator for the Screen-Sorted Portfolios for the Price-Earnings Ratio

The data includes stocks in the Toronto Stock Exchange 300 index over the 1986-1996 period. Stocks of each year and the entire time period are ranked in ascending order of their price-earnings ratio (PE), and ten portfolio are formed based on this year's PE (Panel A) and last year's PE (Panel B). Calculations of the average holding periods for each decile for all stocks in that decile by year and for the entire time period are reported below. Decile 1 is the lowest and decile 10 is the highest. Year1 is from July of 1986 to June of 1987.Year 10 is from July 1995 to June of 1996. Number is the average number of stocks in each decile.

Panel A: Price-Earnings (Current Year) is used as the screen

Decile	Year1	Year2	Year3	Year4	Year5	Year6	Year7	Year8	Year9	Year10	Average
1	1.8206	1.4999	1.59773	1.544	1.3458	1.6556	1.871	1.1163	1.0528	0.9636	1.4785
2	1.6225	2.1121	1.92303	2.0248	1.9877	2.3301	1.8404	1.6031	1.5556	1.0394	1.8679
3	2.4456	2.0574	2.49704	1.8386	2.5453	2.0225	1.5128	1.2553	1.5254	1.505	1.9582
4	1.5305	2.2047	2.17542	2.6378	2.6354	2.1835	1.7556	1.3259	1.1092	1.3361	1.7207
5	1.6807	1.8676	1.90308	1.7419	1.6891	1.6968	1.1154	1.1877	1.5375	1.145	1.7528
6	1.6509	1.8517	1.98003	1.988	2.4395	1.4011	1.5036	1.5828	1.593	1.3483	1.6278
7	1.5791	1.5731	1.90862	1.8921	2.2019	2.2682	1.7827	0.961	1.1405	0.97	1.584
8	1.7213	1.7696	2.2618	2.1361	2.267	2.4048	1.7073	1.242	1.4873	1.2616	1.7544
9	1.7834	2.1766	2.13478	2.337	2.3442	1.8731	1.5406	1.3235	1.3088	1.101	1.7161
10	1.8747	1.488	1.9713	1.8877	2.0511	2.2471	1.517	1.1338	1.3804	1.2408	1.6084
Mean	1.7567	1.8586	2.02138	2.0028	2.1468	2.0202	1.6175	1.2731	1.3674	1.1881	1.7076
Number	21	22	24	23	24	21	25	25	24	28	235

Panel B: Price-Earnings (Last Year) is used as the screen

Decile	Year1	Year2	Year3	Year4	Year5	Year6	Year7	Year8	Year9	Year10	Average
1	1.7932	2.0684	1.62285	1.8389	1.831	1.952	1.64	1.7398	1.4127	0.9784	1.7484
2	1.7065	1.9281	1.89848	2.1499	2.1152	2.147	2.1796	1.5384	1.7912	1.6609	1.984
3	2.1267	2.1954	2.98052	2.0757	1.9067	2.4673	1.7428	1.428	1.6922	1.3017	2.1
4	3.4586	2.4235	2.22746	2.27	2.6423	2.2645	1.8252	1.4548	1.3288	1.3967	1.9432
5	2.4176	1.7271	2.26444	2.1436	2.116	1.974	1.0484	0.6396	1.138	1.3801	1.6856
6	1.3694	2.4082	1.629	2.1714	2.6881	1.555	1.8532	1.029	1.3349	0.807	1.4587
7	1.7393	2.155	2.58808	1.798	1.9598	1.7064	1.005	1.2648	0.8007	0.8651	1.2234
8	1.2953	0.94	1.49539	1.5652	1.7649	1.9616	1.4623	1.1535	1.2653	1.2668	1.3229
9	1.3352	1.6797	1.203	1.2861	1.6047	1.6754	1.3736	1.0735	1.0984	0.8122	1.2029
10	1.4562	1.1888	1.64331	1.8606	2.0653	2.4485	1.7563	1.152	1.1655	1.2806	1.6502
Mean	1.8743	1.8627	1.94297	1.9253	2.0732	2.0175	1.5714	1.238	1.3094	1.1668	1.6315
Number	11	13	14	16	18	19	21	22	24	25	182

Table 6-4

Holding Periods Estimates Using Logged A-D Estimator for the Screen-Sorted Portfolios for the Earnings Yield

The data includes stocks in the Toronto Stock Exchange 300 index over the 1986-1996 period. Stocks of each year and the entire time period are ranked in ascending order of their earnings yield (EY), and ten portfolio are formed based on this year's EY (Panel A) and last year's EY(Panel B). Calculations of the average holding periods for each decile for all stocks in that decile by year and for the entire time period are reported below. Decile 1 is the lowest and decile 10 is the highest. Year1 is from July of 1986 to June of 1987.Year 10 is from July 1995 to June of 1996. Number is the average number of stocks in each decile.

Panel A: Earnings Yield (Current Year) is used as the screen

Decile	Year1	Year2	Year3	Year4	Year5	Year6	Year7	Year8	Year9	Year10	Average
1	1.1894	1.4278	1.75654	1.994	2.0402	1.6727	1.2132	1.2164	1.2858	1.0951	1.6184
2	1.728	1.4111	1.8743	1.8166	2.1701	2.2485	1.8606	1.0517	1.4574	1.1055	1.6588
3	1.6933	2.3247	2.40861	2.167	3.211	2.2835	1.8132	1.9176	1.5021	1.1249	2.1503
4	1.5875	2.2558	2.39941	2.2545	1.8211	2.583	1.7608	1.3634	1.3925	0.9539	1.8562
5	1.7496	1.8031	2.32716	2.3432	2.3887	2.2044	1.7011	1.162	1.3143	1.1807	1.8535
6	2.3781	2.5114	2.28545	2.0332	2.5884	1.2303	2.0368	1.3722	1.4	1.5307	1.7328
7	1.8827	1.8281	2.42051	2.1737	2.3776	2.3497	1.275	1.445	1.3282	1.1491	1.7267
8	1.627	1.7526	1.42909	2.0907	1.8453	2.0808	1.4569	1.4437	1.3007	1.6121	1.6651
9	1.8444	1.9995	2.10118	1.9827	2.0455	1.9068	1.5599	1.2122	1.6812	1.0955	1.7467
10	2.418	1.3915	1.56693	1.4163	1.5331	1.4331	2.0233	0.94	0.9699	1.0238	1.3689
Mean	1.7964	1.8695	2.04974	2.0369	2.1948	2.0063	1.6681	1.3009	1.3603	1.187	1.7396
Number	19	21	22	21	20	14	18	20	24	24	210

Panel B: Earnings Yield (Last Year) is used as the screen

Decile	Year1	Year2	Year3	Year4	Year5	Year6	Year7	Year8	Year9	Year10	Average
1	1.1894	1.2141	2.10687	1.4235	2.1166	1.9152	1.3719	1.0928	1.3874	0.812	1.4307
2	1.728	1.3631	1.85835	2.0925	2.0434	2.0163	1.6996	1.1681	1.2747	1.297	1.7038
3	1.6933	1.8068	2.29672	2.3816	2.5628	2.7696	1.8878	2.0283	1.7021	1.1286	2.0776
4	1.5875	2.3735	2.28082	2.0707	2.1429	1.8935	2.3058	0.9779	0.9298	1.068	1.8195
5	1.6588	2.0294	1.35285	1.5594	1.8856	1.8729	0.7993	1.3864	1.0389	0.9334	1.3798
6	1.4673	1.3923	1.92263	1.8894	2.2223	1.4604	1.7083	0.6758	1.2243	1.4716	1.4885
7	1.4986	2.2904	2.01443	2.0294	2.2559	2.2505	1.8971	1.4178	1.3771	1.2524	1.8035
8	2.3071	1.9492	2.29356	2.2865	2.244	2.2925	1.9257	1.4375	1.5538	1.2634	1.9661
9	2.9644	2.1836	2.7156	2.0313	2.0662	2.2612	2.1561	1.4934	1.9637	1.8717	2.1062
10	1.7022	1.837	1.56395	2.054	2.0479	1.9632	1.4523	1.7147	1.405	1.0159	1.7301
Mean	1.7742	1.8683	2.03439	2.0036	2.1555	2.0651	1.7068	1.3315	1.3822	1.2053	1.7512
Number	19	22	22	23	22	20	16	20	21	24	211

Table 6-5

Holding Periods Estimates Using Logged A-D Estimator for the Screen-Sorted Portfolios for the Dividend Yield

The data includes stocks in the Toronto Stock Exchange 300 index over the 1986-1996 period. Stocks of each year and the entire time period are ranked in ascending order of their dividend yield (DY), and ten portfolio are formed based on this year's DY (Panel A) and last year's DY (Panel B). Calculations of the average holding periods for each decile for all stocks in that decile by year and for the entire time period are reported below. Decile 1 is the lowest and decile 10 is the highest. Year1 is from July of 1986 to June of 1987.Year 10 is from July 1995 to June of 1996. Number is the average number of stocks in each decile

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Panel A: Dividend Yield (Current Year) is used as the screen

Decile	Year1	Year2	Year3	Year4	Year5	Year6	Year7	Year8	Year9	Year10	Average
1	0.9781	0.9473	1.36384	1.6245	1.7319	1.9284	1.0327	0.8282	0.7883	0.538	0.9478
2	2.0331	1.2294	1.71171	1.6009	1.6962	1.7303	1.4029	0.7786	0.6754	0.6249	1.5948
3	1.7644	2.2021	2.56771	1.9454	2.0346	2.3531	2.0287	1.2171	1.2453	1.1439	1.4233
4	1.9054	1.8202	2.09312	2.3646	2.5583	2.2378	1.6235	1.6129	1.2791	1.4406	2.0522
5	1.999	1.9209	2.2872	2.2056	2.2462	2.2242	1.8802	1.4098	1.7076	1.4662	1.9002
6	1.3188	1.7534	1.91691	2.178	2.24	2.5237	1.5601	1.6212	1.5055	1.4503	1.8644
7	1.6875	1.7982	2.05767	1.8461	1.9897	1.5459	1.7739	1.6186	1.391	1.5425	1.7292
8	2.2508	1.7575	1.66845	1.8649	2.429	2.3835	1.7336	1.3224	1.6783	1.3319	1.8764
9	1.6885	2.3236	2.12859	2.2115	2.2012	2.0296	1.6513	1.2471	1.6042	1.2684	1.9129
10	1.7144	1.9756	1.91052	1.8143	1.9956	1.8782	1.5234	1.7229	1.7076	1.7435	1.8667
Mean	1.7452	1.7796	1.9781	1.955	2.1141	2.0922	1.6473	1.3338	1.3628	1.2616	1.7197
Number	25	25	27	27	27	27	27	27	30	27	269

Panel B: Dividend Yield (Last Year) is used as the screen

Decile	Year1	Year2	Year3	Year4	Year5	Year6	Year7	Year8	Year9	Year10	Average
1	0.9258	1.074	1.49733	1.599	1.7322	1.8783	1.0978	0.7293	0.9714	0.6032	0.9362
2	2.0873	1.0229	1.42765	1.4316	1.5794	1.5975	1.5483	0.7611	0.8179	0.6363	1.5876
3	1.289	1.5987	1.86122	1.8129	1.7241	2.0624	1.8206	1.2187	0.9077	0.9425	1.5158
4	1.6751	1.8531	2.00899	2.0558	2.3066	1.9144	1.6036	1.6181	1.6816	1.3766	1.5092
5	1.676	1.9537	2.05036	2.1495	2.2465	1.8301	1.7536	1.3216	1.2747	1.5016	1.8451
6	1.783	2.0478	2.21266	2.0907	1.9547	2.6425	1.5505	1.7221	1.6742	1.3437	1.8229
7	1.7941	2.1229	1.92602	2.0754	2.0736	2.5182	1.7547	1.2726	1.373	1.4168	1.9997
8	2.4858	1.9629	2.0512	2.1702	1.8791	2.1365	2.1679	1.6438	1.8574	1.4445	2.0304
9	1.6516	1.7808	2.62596	1.9537	2.5728	2.2125	1.5993	1.6026	1.5712	1.3895	1.9587
10	1.8282	2.124	1.95892	2.1914	2.8238	2.0442	1.4194	1.5537	1.8245	1.8571	2.0167
Mean	1.7378	1.7647	1.97404	1.9522	2.0974	2.0868	1.6382	1.336	1.39	1.2525	1.7212
Number	24	25	26	27	27	27	27	26	26	27	264

Table 6-6

Holding Periods Estimates Using Logged A-D Estimator for the Screen-Sorted Portfolios for the Market-Adjusted Excess Return (CAR)

The data includes stocks in the Toronto Stock Exchange 300 index over the 1986-1996 period. Stocks of each year and the entire time period are ranked in ascending order of their Market-Adjusted Excess Return (CAR), and ten portfolio are formed based on this year's CAR (Panel A) and last year's CAR (Panel B). Calculations of the average holding periods for each decile for all stocks in that decile by year and for the entire time period are reported below. Decile 1 is the lowest and decile 10 is the highest. Year1 is from July of 1986 to June of 1987.Year 10 is from July 1995 to June of 1996. Number is the average number of stocks in each decile.

Panel A: CAR (Current Year) is used as the screen

Decile	Year1	Year2	Year3	Year4	Year5	Year6	Year7	Year8	Year9	Year10	Average
1	1.2132	1.3905	1.1841	1.6495	1.6897	1.6754	1.1514	0.7784	0.8151	0.9263	1.3064
2	1.6123	1.6657	1.88	2.0329	1.964	1.9662	1.7269	1.3361	1.3994	1.1458	1.6258
3	1.7494	1.9694	2.0692	1.9637	1.7847	2.0989	2.0374	1.0362	1.3293	1.302	1.756
4	2.2564	1.9406	1.7476	1.9205	1.9177	2.0402	2.2199	1.5035	1.5793	1.4299	1.8571
5	3.0092	1.8376	2.4437	2.2835	2.4133	2.325	1.6873	1.4359	1.7556	1.142	1.8745
6	1.9678	2.1461	1.854	2.3264	2.3159	2.2574	1.8715	1.5677	1.6885	1.484	1.9602
7	1.6469	1.8674	2.2719	2.4908	2.451	2.3834	1.861	1.6825	1.3402	1.3736	1.8698
8	1.6075	2.1433	2.5685	1.9331	2.3606	1.9719	1.3739	1.6084	1.1935	1.5379	1.8585
9	1.5323	2.0398	2.2704	2.0513	2.3778	2.1503	1.1859	1.3217	1.2371	1.2336	1.7382
10	1.4098	1.2688	2.1853	1.6613	1.9874	1.7952	0.9414	1.1838	1.4038	0.9879	1.4028
Mean	1.8102	1.8483	2.0518	2.0161	2.1115	2.0571	1.6141	1.3463	1.3831	1.2471	1.7278
Number	23.1	23.5	22.7	22.8	23.4	23.8	24.9	25.4	25.4	26.2	241.2

Panel B: CAR (Last Year) is used as the screen

Decile	Year1	Year2	Year3	Year4	Year5	Year6	Year7	Year8	Year9	Year10	Average
1	1.9916	1.5897	1.8664	1.3237	1.5609	1.9759	1.0601	1.3622	0.6805	0.8933	1.4324
2	1.7268	1.8722	2.1637	1.6925	2.3488	2.0464	1.572	1.4041	1.3343	1.334	1.6891
3	1.6372	2.0372	2.0289	2.1635	2.104	2.0415	1.8091	1.8018	0.9615	1.1345	1.7582
4	1.8106	1.8741	2.2111	1.4849	2.0399	1.7984	1.5082	1.502	1.4858	1.6317	1.8364
5	1.9327	2.9632	2.226	2.2053	2.5194	2.1179	1.8811	1.6031	1.5125	1.4996	1.938
6	1.4145	1.9634	2.0197	2.101	2.1955	2.2274	2.0565	1.5945	1.814	1.4508	1.8864
7	2.4519	1.6405	2.0159	2.3652	2.4214	2.231	1.5807	1.4543	1.5756	1.137	1.8471
8	2.1201	1.6503	1.9994	2.2803	2.1473	2.254	1.5987	1.2661	1.6561	1.1109	1.919
9	1.6786	1.4722	2.2788	2.8887	2.165	1.9342	1.8029	0.7163	1.3609	1.2423	1.7395
10	1.661	1.3563	1.6867	1.8306	1.8121	2.235	1.3896	0.6755	1.2818	1.0955	1.2985
Mean	1.8266	1.8469	2.0647	2.0161	2.1308	2.0934	1.6365	1.3463	1.3831	1.2471	1.7386
Number	23.2	23.3	23.3	22.9	23.5	24	25	25.4	25.4	26.2	242.2

Table 6-7

Holding Periods Estimates Using Logged A-D Estimator for the Screen-Sorted Portfolios for the Spread and Size

The data includes stocks in the Toronto Stock Exchange 300 index over the 1986-1996 period. Stocks of each year and the entire time period are ranked in ascending order of their spread or size, and ten portfolio are formed based on spread (Panel A) or size (Panel B). Calculations of the average holding periods for each decile for all stocks in that decile by year and for the entire time period are reported below. Decile 1 is the lowest and decile 10 is the highest. Year1 is from July of 1986 to June of 1987.Year 10 is from July 1995 to June of 1996. Number is the average number of stocks in each decile.

Panel A: Spread is used as the screen

Decile	Year1	Year2	Year3	Year4	Year5	Year6	Year7	Year8	Year9	Year10	Average
1	1.3702	1.4717	1.7096	1.5477	1.8336	1.7	1.2573	0.8596	0.9126	0.9567	1.47
2	1.4978	1.4865	1.7978	1.6283	2.1942	1.8714	1.5869	1.1922	1.172	1.1256	1.5663
3	1.5781	1.3944	1.6125	1.6806	2.2156	1.683	1.30125	1.3463	1.3125	1.2522	1.7415
4	1.8422	1.9433	2.3807	2.417	1.9133	1.9295	1.25898	1.1043	1.5708	0.7474	1.6262
5	1.5933	1.7677	2.336	1.7971	1.2936	1.754	1.48786	1.3498	1.689	1.222	1.3478
6	1.6563	1.7689	2.1349	1.8722	2.1129	1.8096	1.51728	0.93	0.8837	1.0697	1.5408
7	1.5506	1.4269	1.5931	1.6294	2.5334	2.1074	1.2985	1.2031	1.4449	0.8372	1.8994
8	2.0098	1.8209	1.9788	2.202	2.0598	2.4432	1.70076	1.2281	1.381	1.3277	1.9766
9	1.777	1.9634	2.0556	1.9792	2.3545	2.252	1.66356	1.6143	1.2943	1.4761	2.5462
10	2.3317	2.724	2.2348	2.7835	2.4947	3.1202	3.07339	2.2266	1.9734	2.0372	3.0652
Mean	1.7469	1.7718	1.9764	1.947	2.1009	2.0664	1.62002	1.3048	1.3628	1.2165	1.7012
Number	27	27	28	29	28	28	29	30	29	29	285

Panel B: Size is used as the screen

Decile	Year1	Year2	Year3	Year4	Year5	Year6	Year7	Year8	Year9	Year10	Average
1	2.165	1.8766	1.827	1.9015	1.4987	1.5329	1.10408	1.0076	1.1531	0.9783	1.6724
2	1.3097	1.2712	1.7889	1.7087	1.9923	2.3603	1.69499	1.1617	1.3069	1.3004	1.62
3	1.2971	1.4882	1.8065	1.9407	2.01	2.3898	1.56925	1.2067	1.4983	1.5796	1.6807
4	1.6295	2.0042	2.0323	2.1364	2.3486	1.7012	1.50409	1.5943	1.7311	1.2309	1.7066
5	1.9864	1.9866	1.9691	1.9486	2.2157	2.2141	1.77046	1.4118	1.4309	1.3628	1.909
6	1.683	1.6179	2.2032	2.2215	2.4826	2.2068	1.54661	1.2602	1.2797	1.011	1.7776
7	1.798	1.7452	2.0467	1.9947	2.5052	2.2255	1.79547	1.3068	1.213	1.1534	1.6691
8	1.3501	1.9859	2.2358	2.0265	2.066	2.0683	1.94536	1.3396	1.6007	0.9712	1.7069
9	1.5415	1.7259	1.9737	1.9821	1.9244	2.0206	1.68468	1.2457	1.1666	1.4921	1.5692
10	2.7083	1.9169	1.7973	1.7369	1.8974	1.8424	1.51756	1.4201	1.1285	1.1087	1.6367
Mean	1.7416	1.7668	1.9689	1.9475	2.0937	2.0712	1.61493	1.2949	1.3516	1.2181	1.6953
Number	22	23.1	25	26	27	27	28	28	28	28	262

Table 6-8

Holding Periods Estimates Using Logged A-D Estimator for the Screen-Sorted Portfolios for the Standard Deviation and List Year in TSE 300

The data includes stocks in the Toronto Stock Exchange 300 index over the 1986-1996 period. Stocks of each year and the entire time period are ranked in ascending order of their standard deviation of monthly returns or list year in TSE 300, and ten portfolio are formed based on standard deviation (Panel A) or list year in TSE 300 (Panel B). Calculations of the average holding periods for each decile for all stocks in that decile by year and for the entire time period are reported below. Decile 1 is the lowest and decile 10 is the highest. Year1 is from July of 1986 to June of 1987.Year 10 is from July 1995 to June of 1996. Number is the average number of stocks in each decile.

Panel A: Standard Deviation is used as the screen

Decile	Year1	Year2	Year3	Year4	Year5	Year6	Year7	Year8	Year9	Year10	Average
1	2.2187	2.5885	2.2522	2.7716	2.637	2.528	2.348	1.7092	1.923	1.8685	2.2674
2	1.8882	2.289	2.7734	2.4074	2.3891	2.341	1.92	1.8092	1.9216	1.8286	2.0709
3	1.7298	2.1991	1.9381	2.3543	2.3963	2.307	1.944	1.6644	1.8054	1.2878	1.9283
4	1.8679	2.3609	2.3451	2.2372	1.9572	2.292	1.881	1.4896	1.3192	1.166	1.7723
5	1.4378	1.4974	1.9031	2.2802	1.5648	1.944	1.47	1.3654	1.4051	1.3143	1.6194
6	2.3766	1.695	1.8851	1.9886	2.1887	1.947	1.375	1.0131	1.2667	0.9702	1.5791
7	1.9305	2.4074	2.0083	1.5194	1.9605	1.87	1.583	1.2841	1.0104	1.0099	1.6686
8	1.6258	1.3815	1.9556	1.859	2.4112	1.823	1.058	0.9146	1.1853	1.0815	1.476
9	1.3499	0.9357	1.5531	1.2475	1.8997	1.845	1.607	1.0013	1.2842	0.9199	1.4926
10	1.4906	0.9831	1.6274	1.3591	1.2949	1.742	0.908	1.1369	0.6881	0.9181	1.265
Mean	1.7953	1.8381	2.0346	2.0161	2.0951	2.057	1.607	1.3463	1.3831	1.2414	1.72
Number	22.8	23.2	22.5	22.7	23.2	23.8	24.8	25.4	25.3	26.4	240.1

Panel B: List Year in TSE 300 is used as the screen

Decile	Year1	Year2	Year3	Year4	Year5	Year6	Year7	Year8	Year9	Year10	Average
1	2.0847	1.4615	1.6008	1.7158	1.9616	1.804	1.567	0.7447	0.6943	0.724	1.2128
2	1.958	1.762	2.1753	2.4262	2.4982	2.109	1.547	1.2324	1.3171	1.1082	1.4556
3	1.6196	1.8932	1.8702	1.8066	2.2121	1.834	1.557	1.4291	1.3421	0.9032	1.9318
4	1.8133	1.2685	1.9029	1.5988	1.8438	2.412	1.836	1.2218	1.3252	1.1729	1.6618
5	1.4886	1.7708	1.9498	2.1637	2.2709	2.546	1.677	1.3884	1.4656	1.1883	1.7746
6	1.5151	1.8162	2.2649	2.037	2.4129	2.17	1.663	1.5984	1.3562	1.3427	1.9894
7	1.7004	1.9068	1.9838	2.0459	2.1119	2.001	1.653	1.4459	1.7558	1.6159	1.7654
8	1.591	1.6025	1.8296	1.7451	1.8265	2.003	1.463	1.2521	1.3842	1.2892	1.4228
9	1.6639	1.8743	1.6923	1.8123	1.8214	1.763	1.663	1.3459	1.4037	1.4731	1.8573
10	2.1135	2.197	2.2462	2.0877	2.0674	2.015	1.634	1.376	1.5847	1.4272	1.8886
Mean	1.7469	1.7682	1.9718	1.947	2.1057	2.07	1.628	1.3048	1.3628	1.2272	1.7033
Number	29.9	30.1	30	30.1	30.1	30.1	30.1	30.1	30	30	300.5

Table 6-9

Holding Periods Estimates Using Logged A-D Estimator for the Screen-Sorted Portfolios for the Debt-Equity Ratio and Large Trade

The data includes stocks in the Toronto Stock Exchange 300 index over the 1986-1996 period. Stocks of each year and the entire time period are ranked in ascending order of their debt-to-equity ratio or percentage of large trade, and ten portfolio are formed based on debt-to-equity ratio (Panel A) or large trade (Panel B). Calculations of the average holding periods for each decile for all stocks in that decile by year and for the entire time period are reported below. Decile 1 is the lowest and decile 10 is the highest. Year1 is from July of 1986 to June of 1987.Year 10 is from July 1995 to June of 1996. Number is the average number of stocks in each decile.

Panel A: Debt-Equity Ratio is used as the screen

Decile	Year1	Year2	Year3	Year4	Year5	Year6	Year7	Year8	Year9	Year10	Average
1	1.641	2.0448	1.3292	1.6848	1.9159	2.039	1.586	1.2984	1.1619	0.8881	1.5126
2	2.1138	1.7917	2.8203	2.5983	2.6416	2.033	1.922	1.5917	1.4687	1.3324	1.9742
3	1.5666	1.6546	1.7717	1.8593	1.8259	2.233	1.519	1.4708	1.978	1.4423	1.6804
4	2.3251	1.9022	1.9088	2.0511	2.384	2.334	1.629	1.334	1.3594	0.8153	1.5942
5	1.2904	2.2311	1.5256	1.5855	2.0427	1.835	0.98	0.7656	1.4764	1.0293	1.5777
6	1.8262	1.7223	2.196	2.0039	1.8651	1.874	1.326	0.8844	1.1591	1.102	1.5427
7	1.5935	1.7013	2.1474	1.6597	1.982	1.99	1.794	1.3933	1.0608	1.0715	1.4789
8	1.9821	1.6849	1.6853	1.9943	1.5063	1.81	1.763	1.167	1.161	1.3015	1.6687
9	1.8948	2.368	2.1935	2.1595	2.4047	2.119	1.664	1.4259	1.5337	1.447	1.8537
10	1.8701	1.8398	1.9038	1.5663	1.8173	1.716	1.233	0.9867	1.3104	1.2978	1.4981
Mean	1.8848	1.8647	1.9551	1.9199	2.0353	1.997	1.556	1.2468	1.3628	1.1792	1.6388
Number	11.6	12.7	17	18.7	20.1	21	22.6	23.4	29.6	26.2	202.9

Panel B: Large Trade is used as the screen

Decile	Year1	Year2	Year3	Year4	Year5	Year6	Year7	Year8	Year9	Year10	Average
1	2.19411	2.3567	2.5827	2.3653	2.6065	2.5774	1.9306	1.7718	1.9806	2.0121	2.2556
2	1.70053	1.7477	2.4127	2.547	2.3009	2.3752	1.8153	1.6384	1.7896	1.7058	2.0137
3	1.75678	1.9712	2.1361	2.0419	2.0524	1.8141	1.7036	1.7551	1.3595	1.5146	1.8872
4	1.78034	1.8931	1.8338	1.7454	2.4159	2.1672	1.5926	1.5504	1.3473	1.224	1.8009
5	1.5759	1.5963	1.8552	1.669	2.0126	2.0344	1.3344	1.2876	1.3218	1.2764	1.6433
6	1.70091	1.6935	1.548	1.8209	2.0015	2.3309	1.7432	1.1579	1.2395	0.8858	1.5999
7	1.4828	1.363	2.1019	1.9443	1.8007	2.0002	1.4161	1.12	1.4101	0.7397	1.49
8	1.4107	1.7665	1.7222	1.6236	1.8969	1.8173	1.4631	1.0401	1.0331	0.891	1.4348
9	1.60211	1.7463	1.5369	1.489	1.7033	1.4444	1.2984	0.9359	0.9759	1.2055	1.2054
10	1.19296	1.1136	1.5239	1.7303	1.4159	1.5344	1.2613	0.8148	1.1864	0.7904	1.2188
Mean	1.63807	1.7344	1.9204	1.8979	2.0232	1.9925	1.567	1.299	1.3628	1.2272	1.6558
Number	26.2	27	27.4	28.4	28	27.9	28.6	29.6	29.1	29.4	281.6

Table 6-10

Holding Periods Estimates Using Our Estimator for the Screen-Sorted Portfolios for the Price-to-Book Ratio

The data includes stocks in the Toronto Stock Exchange 300 index over the 1986-1996 period. Stocks of each year and the entire time period are ranked in ascending order of their price-to-book ratio (PB), and ten portfolio are formed based on this year's PB (Panel A) and last year's PB (Panel B). Calculations of the average holding periods for each decile for all stocks in that decile by year and for the entire time period are reported below. Decile 1 is the lowest and decile 10 is the highest. Year1 is from July of 1986 to June of 1987.Year 10 is from July 1995 to June of 1996. Number is the average number of stocks in each decile.

Panel A: Price-to-Book (Current Year) is used as the screen

Decile	Year1	Year2	Year3	Year4	Year5	Year6	Year7	Year8	Year9	Year10	Average
1	0.7144	0.7113	0.6861	0.7364	0.6806	0.7291	0.7744	0.7123	0.7314	0.7674	0.74842
2	0.80859	0.7865	0.8202	0.8165	0.8315	0.8586	0.7849	0.7314	0.8022	0.7835	0.80555
3	0.75403	0.8504	0.8517	0.799	0.8559	0.8654	0.8179	0.7673	0.7201	0.7348	0.79445
4	0.79699	0.8429	0.8079	0.8491	0.8643	0.8411	0.7446	0.7352	0.744	0.7128	0.7825
5	0.80477	0.7922	0.8379	0.8148	0.8617	0.821	0.8008	0.6908	0.7658	0.7486	0.79004
6	0.80149	0.7683	0.8036	0.8342	0.8503	0.848	0.7278	0.7422	0.7509	0.6604	0.74728
7	0.85718	0.8561	0.8123	0.8283	0.7878	0.7999	0.7506	0.7484	0.6956	0.6778	0.77351
8	0.7994	0.8295	0.8435	0.8084	0.8144	0.8656	0.7875	0.6888	0.7336	0.7319	0.78021
9	0.8927	0.9108	0.8826	0.8727	0.8824	0.8677	0.8128	0.73	0.726	0.6867	0.79648
10	0.84884	0.8742	0.9208	0.875	0.8925	0.8818	0.8263	0.7994	0.8333	0.7264	0.84491
Mean	0.81039	0.8206	0.8284	0.8232	0.8345	0.8394	0.783	0.7342	0.7496	0.7219	0.78667
Number	12	13	14	16	19	20	22	23	24	26	188

Panel B: Price-to-Book (Last Year) is used as the screen

Decile	Year1	Year2	Year3	Year4	Year5	Year6	Year7	Year8	Year9	Year10	Average
1	0.77479	0.7844	0.7818	0.8268	0.8438	0.7496	0.7545	0.7051	0.8218	0.7724	0.79335
2	0.77651	0.7992	0.8124	0.7974	0.8528	0.873	0.7617	0.7756	0.76	0.7832	0.79517
3	0.81853	0.8745	0.8394	0.845	0.833	0.8685	0.7497	0.8289	0.7538	0.7147	0.81447
4	0.81614	0.8359	0.8795	0.8569	0.8017	0.8523	0.8633	0.7021	0.7463	0.7338	0.79781
5	0.87791	0.8668	0.7932	0.8307	0.8743	0.8486	0.7989	0.7247	0.7413	0.7566	0.79939
6	0.83437	0.7935	0.8514	0.8806	0.8273	0.8529	0.7978	0.6689	0.7812	0.7322	0.78528
7	0.76092	0.8108	0.797	0.8393	0.8438	0.8332	0.7369	0.7399	0.7179	0.6385	0.77863
8	0.88113	0.7796	0.8591	0.7595	0.8463	0.8361	0.8129	0.737	0.6959	0.6767	0.78203
9	0.80562	0.8352	0.8429	0.8043	0.8171	0.8427	0.7764	0.7149	0.6978	0.6849	0.75002
10	0.77565	0.8006	0.8302	0.7896	0.8306	0.8159	0.7855	0.7383	0.7371	0.6981	0.76334
Mean	0.81104	0.8196	0.831	0.8243	0.8395	0.8396	0.7838	0.7331	0.747	0.7199	0.78586
Number	11	13	14	16	18	20	22	23	24	26	185

Table 6-11

Holding Periods Estimates Using Our Estimator for the Screen-Sorted Portfolios for the Price-Earnings Ratio

The data includes stocks in the Toronto Stock Exchange 300 index over the 1986-1996 period. Stocks of each year and the entire time period are ranked in ascending order of their price-earnings ratio (PE), and ten portfolio are formed based on this year's PE (Panel A) and last year's PE (Panel B). Calculations of the average holding periods for each decile for all stocks in that decile by year and for the entire time period are reported below. Decile 1 is the lowest and decile 10 is the highest. Year1 is from July of 1986 to June of 1987.Year 10 is from July 1995 to June of 1996. Number is the average number of stocks in each decile.

Panel A: Price-Earnings (Current Year) is used as the screen

Decile	Year1	Year2	Year3	Year4	Year5	Year6	Year7	Year8	Year9	Year10	Average
1	0.81508	0.7785	0.7765	0.7636	0.7638	0.796	0.7967	0.7209	0.7061	0.696	0.76364
2	0.8038	0.8392	0.8299	0.8263	0.8191	0.8855	0.8242	0.7801	0.7948	0.6734	0.81047
3	0.80353	0.8483	0.8836	0.8325	0.8218	0.8554	0.7858	0.7422	0.796	0.7779	0.82851
4	0.7962	0.8542	0.8546	0.9006	0.8906	0.8777	0.8184	0.7531	0.7223	0.7712	0.80128
5	0.82393	0.8213	0.8408	0.8265	0.8229	0.8116	0.706	0.7237	0.7898	0.7216	0.81176
6	0.8205	0.8253	0.8469	0.8418	0.8868	0.7458	0.7746	0.774	0.7758	0.7509	0.79265
7	0.77976	0.7819	0.8355	0.8218	0.8719	0.875	0.7896	0.6832	0.7349	0.6971	0.78097
8	0.79513	0.8028	0.8665	0.8401	0.8613	0.8801	0.8053	0.7453	0.7573	0.7057	0.78926
9	0.81068	0.8548	0.8525	0.8596	0.8705	0.8423	0.7979	0.7604	0.7346	0.7041	0.79456
10	0.80741	0.7642	0.8276	0.814	0.8463	0.8372	0.7867	0.7203	0.7641	0.7237	0.78886
Mean	0.80415	0.8171	0.8399	0.8327	0.8453	0.8419	0.7888	0.7403	0.7572	0.7219	0.7964
Number	21	22	24	23	24	21	25	25	24	28	235

Panel B: Price-Earnings (Last Year) is used as the screen

Decile	Year1	Year2	Year3	Year4	Year5	Year6	Year7	Year8	Year9	Year10	Average
1	0.83612	0.862	0.8017	0.814	0.8312	0.8329	0.7916	0.8018	0.7734	0.706	0.80902
2	0.83764	0.8522	0.8392	0.8599	0.8484	0.8665	0.8531	0.7903	0.8301	0.76	0.8285
3	0.86809	0.8723	0.9314	0.84	0.8257	0.8985	0.815	0.729	0.7761	0.7288	0.84722
4	0.8629	0.8577	0.8643	0.8859	0.8402	0.8719	0.8187	0.7633	0.745	0.772	0.82688
5	0.88261	0.8176	0.8712	0.8437	0.8608	0.8188	0.711	0.6191	0.7244	0.7542	0.78297
6	0.75439	0.8585	0.7999	0.845	0.8984	0.8029	0.8083	0.7001	0.7496	0.6712	0.7589
7	0.78683	0.8557	0.8926	0.8108	0.8075	0.8243	0.7211	0.7446	0.6719	0.685	0.73477
8	0.76766	0.7121	0.7933	0.7664	0.8115	0.8583	0.7668	0.7276	0.7366	0.734	0.74763
9	0.7522	0.7719	0.7247	0.7236	0.8092	0.8081	0.7687	0.7066	0.7266	0.6689	0.73539
10	0.75879	0.7386	0.8042	0.8373	0.8559	0.8504	0.8234	0.7446	0.7376	0.7353	0.79541
Mean	0.81104	0.8196	0.8313	0.8239	0.8399	0.8434	0.785	0.7314	0.7485	0.7205	0.78669
Number	11	13	14	16	18	19	21	22	24	25	183

Table 6-12

Holding Periods Estimates Using Our Estimator for the Screen-Sorted Portfolios for the Earnings Yield

The data includes stocks in the Toronto Stock Exchange 300 index over the 1986-1996 period. Stocks of each year and the entire time period are ranked in ascending order of their earnings yield (EY), and ten portfolio are formed based on this year's EY (Panel A) and last year's EY(Panel B). Calculations of the average holding periods for each decile for all stocks in that decile by year and for the entire time period are reported below. Decile 1 is the lowest and decile 10 is the highest. Year1 is from July of 1986 to June of 1987.Year 10 is from July 1995 to June of 1996. Number is the average number of stocks in each decile.

Panel A: Earnings Yield (Current Year) is used as the screen

Decile	Year1	Year2	Year3	Year4	Year5	Year6	Year7	Year8	Year9	Year10	Average
1	0.73328	0.7631	0.8246	0.8397	0.8512	0.797	0.7238	0.724	0.7278	0.6944	0.76398
2	0.8144	0.7681	0.8408	0.8334	0.8547	0.8777	0.8247	0.7066	0.7516	0.7044	0.79995
3	0.82309	0.8455	0.8816	0.833	0.9267	0.8496	0.7939	0.817	0.7782	0.7004	0.83915
4	0.79144	0.8688	0.8712	0.849	0.8085	0.8888	0.812	0.769	0.7654	0.6693	0.81093
5	0.80781	0.8101	0.8536	0.866	0.8696	0.8672	0.7914	0.715	0.7446	0.7325	0.80345
6	0.8628	0.888	0.8696	0.8277	0.8937	0.7214	0.8285	0.7391	0.7608	0.7785	0.79265
7	0.80966	0.8066	0.871	0.8506	0.8846	0.8837	0.7348	0.7752	0.7661	0.7412	0.80307
8	0.81176	0.823	0.7839	0.8546	0.8258	0.866	0.7785	0.7731	0.7568	0.797	0.79776
9	0.78859	0.8335	0.8528	0.8486	0.8105	0.8515	0.792	0.7344	0.8187	0.6927	0.80709
10	0.85576	0.7614	0.7847	0.771	0.7874	0.7831	0.8312	0.6941	0.6949	0.7064	0.75733
Mean	0.80846	0.8169	0.8424	0.8367	0.8503	0.8399	0.7908	0.7431	0.7563	0.7214	0.79772
Number	19	21	22	21	20	14	18	20	23	24	210

Panel B: Earnings Yield (Last Year) is used as the screen

Decile	Year1	Year2	Year3	Year4	Year5	Year6	Year7	Year8	Year9	Year10	Average
1	0.73328	0.6612	0.8406	0.7074	0.8606	0.7668	0.7571	0.7059	0.7452	0.6545	0.73876
2	0.8144	0.7573	0.8443	0.8594	0.8438	0.8334	0.8124	0.7066	0.7358	0.7315	0.80149
3	0.82309	0.8367	0.8691	0.8651	0.8594	0.8979	0.7962	0.8372	0.8099	0.7232	0.83729
4	0.79144	0.8227	0.8516	0.8411	0.839	0.8383	0.8516	0.7052	0.6845	0.7021	0.80339
5	0.79037	0.8429	0.7405	0.7678	0.8188	0.8488	0.6671	0.7644	0.7095	0.6998	0.75193
6	0.78002	0.7559	0.8404	0.8187	0.8532	0.7856	0.8029	0.6291	0.7426	0.7677	0.76401
7	0.76204	0.8534	0.8321	0.8292	0.8561	0.8547	0.8279	0.7588	0.7521	0.7442	0.79923
8	0.87002	0.8319	0.8727	0.8826	0.8294	0.8788	0.8098	0.7251	0.763	0.7233	0.82414
9	0.87918	0.863	0.9131	0.8354	0.8398	0.8785	0.8761	0.7794	0.8471	0.7921	0.84783
10	0.8307	0.8439	0.7981	0.8439	0.8434	0.8453	0.7734	0.8077	0.7708	0.7142	0.81009
Mean	0.8069	0.8083	0.8396	0.8267	0.8442	0.8421	0.7965	0.7411	0.7559	0.7248	0.79795
Number	19	22	22	23	22	20	16	19	21	24	210

Table 6-13

Holding Periods Estimates Using Our Estimator for the Screen-Sorted Portfolios for the Dividend Yield

The data includes stocks in the Toronto Stock Exchange 300 index over the 1986-1996 period. Stocks of each year and the entire time period are ranked in ascending order of their dividend yield (DY), and ten portfolio are formed based on this year's DY (Panel A) and last year's DY (Panel B). Calculations of the average holding periods for each decile for all stocks in that decile by year and for the entire time period are reported below. Decile 1 is the lowest and decile 10 is the highest. Year1 is from July of 1986 to June of 1987.Year 10 is from July 1995 to June of 1996. Number is the average number of stocks in each decile.

Panel A: Dividend Yield (Current Year) is used as the screen

Decile	Year1	Year2	Year3	Year4	Year5	Year6	Year7	Year8	Year9	Year10	Average
1	0.69567	0.6999	0.751	0.7753	0.8109	0.8353	0.6875	0.6809	0.6692	0.6174	0.68108
2	0.81676	0.7279	0.8037	0.7859	0.7971	0.7751	0.7562	0.6436	0.649	0.637	0.77119
3	0.80198	0.8563	0.8981	0.8239	0.8257	0.861	0.803	0.7249	0.7072	0.7093	0.75723
4	0.81905	0.7978	0.8578	0.8463	0.8596	0.8679	0.7999	0.7796	0.7269	0.7597	0.83797
5	0.83849	0.8444	0.864	0.8622	0.8745	0.868	0.8206	0.7689	0.7865	0.7541	0.8118
6	0.76196	0.8121	0.8388	0.8783	0.8557	0.87	0.7807	0.7853	0.7782	0.7512	0.82234
7	0.80662	0.825	0.8493	0.8401	0.8472	0.7955	0.8226	0.7774	0.7653	0.7806	0.81299
8	0.82164	0.8094	0.8156	0.8274	0.8374	0.8606	0.8197	0.7549	0.809	0.7684	0.8235
9	0.80849	0.8472	0.8623	0.8418	0.8577	0.849	0.7914	0.7506	0.7929	0.753	0.8203
10	0.82089	0.8522	0.7973	0.7957	0.8377	0.8438	0.7886	0.8117	0.8185	0.7894	0.82271
Mean	0.80033	0.8079	0.8348	0.8272	0.8404	0.8437	0.7898	0.7477	0.7513	0.7331	0.7966
Number	25	25	27	27	27	27	27	27	30	27	268.8

Panel B: Dividend Yield (Last Year) is used as the screen

Decile	Year1	Year2	Year3	Year4	Year5	Year6	Year7	Year8	Year9	Year10	Average
1	0.69339	0.7228	0.7468	0.7743	0.8215	0.7917	0.6909	0.6632	0.7033	0.6311	0.68441
2	0.83347	0.6933	0.7658	0.7635	0.7696	0.7756	0.7708	0.6427	0.672	0.6321	0.77045
3	0.75572	0.6848	0.8353	0.7988	0.8119	0.8339	0.789	0.7217	0.68	0.6849	0.76532
4	0.80057	0.8118	0.8443	0.7998	0.8577	0.8422	0.7982	0.783	0.8087	0.747	0.77157
5	0.79178	0.8318	0.8436	0.8619	0.8394	0.8056	0.7999	0.7509	0.7452	0.7826	0.80911
6	0.79794	0.8334	0.8521	0.8479	0.8389	0.8975	0.7865	0.7798	0.7764	0.7278	0.81509
7	0.8334	0.848	0.8394	0.8323	0.8515	0.8452	0.8142	0.7495	0.7752	0.766	0.83235
8	0.83671	0.8467	0.8513	0.8221	0.8018	0.8527	0.8401	0.7902	0.8014	0.775	0.83102
9	0.80887	0.8261	0.8785	0.8376	0.8715	0.862	0.803	0.7757	0.7718	0.7592	0.81764
10	0.83879	0.8465	0.8447	0.8303	0.9035	0.8505	0.7726	0.7999	0.8339	0.8059	0.84146
Mean	0.80046	0.7964	0.8313	0.8176	0.8376	0.8365	0.7877	0.7448	0.7562	0.7311	0.79368
Number	24	25	26	27	27	27	27	26	26	27	264

Table 6-14

Holding Periods Estimates Using Our Estimator for the Screen-Sorted Portfolios for the Market-Adjusted Excess Return (CAR)

The data includes stocks in the Toronto Stock Exchange 300 index over the 1986-1996 period. Stocks of each year and the entire time period are ranked in ascending order of their Market-Adjusted Excess Return (CAR), and ten portfolio are formed based on this year's CAR (Panel A) and last year's CAR (Panel B). Calculations of the average holding periods for each decile for all stocks in that decile by year and for the entire time period are reported below. Decile 1 is the lowest and decile 10 is the highest. Year1 is from July of 1986 to June of 1987.Year 10 is from July 1995 to June of 1996. Number is the average number of stocks in each decile.

Panel A: CAR (Current Year) is used as the screen

Decile	Year1	Year2	Year3	Year4	Year5	Year6	Year7	Year8	Year9	Year10	Average
1	0.7574	0.7297	0.6878	0.7841	0.7965	0.7375	0.7321	0.6377	0.6793	0.6902	0.7311
2	0.7958	0.7967	0.8392	0.8347	0.7834	0.8479	0.8294	0.7636	0.7653	0.7282	0.7944
3	0.7945	0.7919	0.8376	0.8475	0.8156	0.8432	0.8359	0.7096	0.7735	0.7609	0.8038
4	0.8864	0.8201	0.8166	0.8285	0.8008	0.8501	0.8613	0.7787	0.7817	0.7574	0.8167
5	0.8877	0.7646	0.8717	0.8745	0.8806	0.8337	0.8143	0.7776	0.8201	0.7217	0.8091
6	0.743	0.8224	0.8311	0.8479	0.8582	0.8677	0.8335	0.7798	0.7967	0.7731	0.8146
7	0.7515	0.8194	0.8743	0.8615	0.8813	0.8946	0.8278	0.7975	0.7568	0.7617	0.8185
8	0.7865	0.8059	0.8913	0.8487	0.8961	0.8518	0.7694	0.7767	0.7296	0.7716	0.8152
9	0.7951	0.8466	0.866	0.7894	0.8686	0.8507	0.7129	0.7348	0.7299	0.7474	0.7966
10	0.7191	0.744	0.8719	0.7957	0.8176	0.8081	0.6815	0.7433	0.766	0.6775	0.7499
Mean	0.7929	0.7978	0.8392	0.829	0.838	0.839	0.7906	0.7502	0.7611	0.7373	0.7955
Number	23.1	23.5	22.7	22.8	23.4	23.8	24.9	25.4	25.4	26.2	241.2

Panel B: CAR (Last Year) is used as the screen

Decile	Year1	Year2	Year3	Year4	Year5	Year6	Year7	Year8	Year9	Year10	Average
1	0.7787	0.7956	0.7781	0.7209	0.767	0.7801	0.7112	0.7462	0.6419	0.6769	0.7432
2	0.79	0.828	0.8586	0.8068	0.8779	0.8387	0.7877	0.7686	0.7636	0.7471	0.8004
3	0.8132	0.8537	0.8263	0.8145	0.8401	0.8545	0.8147	0.8024	0.7064	0.7335	0.799
4	0.7224	0.7873	0.8473	0.7932	0.8043	0.7873	0.7764	0.7778	0.7904	0.7857	0.8143
5	0.824	0.9151	0.8596	0.8517	0.8897	0.8398	0.8146	0.7837	0.7976	0.7919	0.8164
6	0.7559	0.7439	0.8595	0.8532	0.845	0.8565	0.8476	0.7947	0.8089	0.7775	0.8172
7	0.8221	0.8035	0.8308	0.889	0.8996	0.8606	0.7966	0.7791	0.7825	0.714	0.8157
8	0.8216	0.736	0.848	0.8754	0.8507	0.8885	0.7941	0.7387	0.7956	0.7239	0.814
9	0.7785	0.7786	0.8829	0.9073	0.8043	0.8349	0.8072	0.6452	0.7529	0.7173	0.7902
10	0.8114	0.7228	0.7546	0.7517	0.8006	0.8437	0.7493	0.6465	0.7499	0.7157	0.7312
Mean	0.7891	0.7971	0.836	0.8252	0.8387	0.8404	0.7915	0.7502	0.7611	0.7373	0.7948
Number	23.2	23.3	23.3	22.9	23.5	24	25	25.4	25.4	26.2	242.2

Table 6-15

Holding Periods Estimates Using Our Estimator for the Screen-Sorted Portfolios for the Spread and Size

The data includes stocks in the Toronto Stock Exchange 300 index over the 1986-1996 period. Stocks of each year and the entire time period are ranked in ascending order of their spread or size, and ten portfolio are formed based on spread (Panel A) or size (Panel B). Calculations of the average holding periods for each decile for all stocks in that decile by year and for the entire time period are reported below. Decile 1 is the lowest and decile 10 is the highest. Year1 is from July of 1986 to June of 1987.Year 10 is from July 1995 to June of 1996. Number is the average number of stocks in each decile.

Panel A: Spread is used as the screen

Decile	Year1	Year2	Year3	Year4	Year5	Year6	Year7	Year8	Year9	Year10	Average
1	0.7713	0.7208	0.8161	0.7624	0.8288	0.8236	0.7559	0.6834	0.6953	0.6975	0.74903
2	0.7567	0.7803	0.8245	0.8108	0.8479	0.8232	0.7883	0.7372	0.718	0.7256	0.76679
3	0.7891	0.7325	0.8085	0.7587	0.8375	0.7732	0.7504	0.7489	0.7411	0.7317	0.78017
4	0.75	0.8045	0.8804	0.868	0.8294	0.835	0.7346	0.7156	0.7906	0.6591	0.78545
5	0.7498	0.8123	0.8651	0.8137	0.7377	0.7768	0.7707	0.7508	0.8009	0.7077	0.77951
6	0.7977	0.8137	0.8485	0.8376	0.8162	0.8218	0.7753	0.6919	0.688	0.7016	0.7484
7	0.7485	0.7743	0.7798	0.7095	0.9027	0.8469	0.7567	0.7387	0.7522	0.6841	0.76431
8	0.7132	0.7721	0.8334	0.8384	0.8336	0.8636	0.8007	0.6975	0.7803	0.737	0.80831
9	0.8155	0.7894	0.8314	0.7889	0.8605	0.8671	0.7878	0.7536	0.7257	0.7849	0.81074
10	0.8388	0.8957	0.8369	0.8962	0.8754	0.9103	0.9216	0.8525	0.8466	0.8542	0.88035
Mean	0.7754	0.7883	0.8321	0.8076	0.8374	0.8341	0.7853	0.7377	0.754	0.7293	0.78722
Number	26.9	27.3	28	28.9	28.4	28.1	28.8	29.7	29.2	29.2	284.5

Panel B: Size is used as the screen

Decile	Year1	Year2	Year3	Year4	Year5	Year6	Year7	Year8	Year9	Year10	Average
1	0.8319	0.8172	0.8102	0.8214	0.7585	0.7541	0.7006	0.6859	0.7125	0.7052	0.78367
2	0.7621	0.735	0.8112	0.8117	0.8434	0.8478	0.7539	0.7254	0.7622	0.7433	0.77695
3	0.7496	0.7727	0.8196	0.818	0.8165	0.8433	0.7695	0.7299	0.7863	0.7874	0.7926
4	0.7666	0.8338	0.8284	0.84	0.8664	0.8092	0.7712	0.754	0.7774	0.6963	0.7933
5	0.8303	0.8345	0.8227	0.8222	0.864	0.8491	0.8162	0.7585	0.785	0.7583	0.81733
6	0.8046	0.7747	0.8583	0.8498	0.867	0.87	0.7862	0.7456	0.7478	0.708	0.80663
7	0.8295	0.8241	0.8638	0.8252	0.8751	0.8378	0.8216	0.7276	0.7174	0.7193	0.78835
8	0.7644	0.8303	0.862	0.8273	0.8373	0.8599	0.8256	0.7549	0.7823	0.6607	0.79662
9	0.7989	0.8122	0.8455	0.8439	0.8121	0.8483	0.7945	0.7368	0.7284	0.7645	0.78276
10	0.8567	0.8134	0.8119	0.8122	0.8291	0.8275	0.7838	0.7597	0.7137	0.7171	0.78231
Mean	0.7991	0.8055	0.8335	0.826	0.8373	0.8377	0.7837	0.7379	0.7524	0.7261	0.79225
Number	22	23.1	25	25.8	26.8	26.9	27.9	28	27.5	28.4	261.4

Table 6-16

Holding Periods Estimates Using Our Estimator for the Screen-Sorted Portfolios for the Standard Deviation and List Year in TSE 300

The data includes stocks in the Toronto Stock Exchange 300 index over the 1986-1996 period. Stocks of each year and the entire time period are ranked in ascending order of their standard deviation of monthly returns or list year in TSE 300, and ten portfolio are formed based on standard deviation (Panel A) or list year in TSE 300 (Panel B). Calculations of the average holding periods for each decile for all stocks in that decile by year and for the entire time period are reported below. Decile 1 is the lowest and decile 10 is the highest. Year1 is from July of 1986 to June of 1987.Year 10 is from July 1995 to June of 1996. Number is the average number of stocks in each decile.

Panel A: Standard Deviation is used as the screen

Decile	Year1	Year2	Year3	Year4	Year5	Year6	Year7	Year8	Year9	Year10	Average
1	0.8649	0.8572	0.8689	0.9166	0.9062	0.8873	0.875	0.809	0.8408	0.8244	0.8617
2	0.8452	0.8327	0.9177	0.8747	0.8707	0.8861	0.8382	0.8215	0.8422	0.815	0.8474
3	0.8151	0.8746	0.8287	0.8795	0.8785	0.8695	0.8302	0.7929	0.8163	0.7553	0.8322
4	0.8007	0.891	0.8732	0.8648	0.8433	0.8889	0.8371	0.7852	0.7571	0.731	0.813
5	0.7697	0.7986	0.8309	0.8863	0.7809	0.8566	0.7721	0.761	0.7716	0.7643	0.7937
6	0.8159	0.8053	0.8276	0.8441	0.8598	0.8413	0.7658	0.7051	0.7522	0.6858	0.7747
7	0.7905	0.8205	0.8336	0.7941	0.7839	0.7862	0.792	0.742	0.7046	0.706	0.7887
8	0.8002	0.7123	0.8329	0.7763	0.8805	0.8119	0.7105	0.678	0.7379	0.7092	0.7639
9	0.7676	0.697	0.7946	0.7326	0.8308	0.7973	0.7948	0.6953	0.7433	0.6705	0.7579
10	0.7178	0.7119	0.7513	0.743	0.7129	0.7625	0.6851	0.7109	0.6415	0.6654	0.7151
Mean	0.7998	0.8004	0.8379	0.8329	0.8367	0.839	0.7899	0.7502	0.7611	0.7333	0.7957
Number	23	23	23	23	23	24	25	25	25	26	241

Panel B: List Year in TSE 300 is used as the screen

Decile	Year1	Year2	Year3	Year4	Year5	Year6	Year7	Year8	Year9	Year10	Average
1	0.7438	0.7335	0.6519	0.6784	0.7537	0.754	0.7353	0.6642	0.6494	0.6501	0.7028
2	0.7965	0.6417	0.8649	0.7805	0.831	0.8154	0.7893	0.7353	0.751	0.6648	0.7268
3	0.7509	0.834	0.84	0.7923	0.8503	0.8348	0.7813	0.76	0.7334	0.6951	0.798
4	0.7675	0.6876	0.814	0.7756	0.8173	0.7753	0.7876	0.7426	0.7638	0.73	0.771
5	0.7467	0.8091	0.8254	0.8354	0.8521	0.8539	0.7931	0.7176	0.743	0.7321	0.7929
6	0.7381	0.7813	0.8677	0.8354	0.8645	0.8573	0.7754	0.7854	0.7557	0.7249	0.8243
7	0.7538	0.821	0.8345	0.8343	0.8497	0.8485	0.7984	0.7306	0.8013	0.7749	0.7936
8	0.7902	0.7881	0.8211	0.8065	0.8167	0.8439	0.7669	0.7401	0.7523	0.7288	0.7637
9	0.7677	0.788	0.807	0.8147	0.8133	0.8164	0.7887	0.7357	0.7646	0.7731	0.8262
10	0.8391	0.8655	0.8707	0.8651	0.858	0.859	0.809	0.7586	0.7986	0.7778	0.8209
Mean	0.7723	0.7788	0.8253	0.8047	0.8321	0.8287	0.7834	0.7377	0.7513	0.7256	0.7832
Number	30	30	30	30	30	30	30	30	30	30	300

Table 6-17

Holding Periods Estimates Using Our Estimator for the Screen-Sorted Portfolios for the Debt-Equity Ratio and Large Trade

The data includes stocks in the Toronto Stock Exchange 300 index over the 1986-1996 period. Stocks of each year and the entire time period are ranked in ascending order of their debt-to-equity ratio or percentage of large trade, and ten portfolio are formed based on debt-to-equity ratio (Panel A) or large trade (Panel B). Calculations of the average holding periods for each decile for all stocks in that decile by year and for the entire time period are reported below. Decile 1 is the lowest and decile 10 is the highest. Year1 is from July of 1986 to June of 1987.Year 10 is from July 1995 to June of 1996. Number is the average number of stocks in each decile.

Panel A: Debt-Equity Ratio is used as the screen

Decile	Year1	Year2	Year3	Year4	Year5	Year6	Year7	Year8	Year9	Year10	Average
1	0.7414	0.8191	0.7219	0.7616	0.7965	0.8031	0.7799	0.7391	0.7285	0.6807	0.7589
2	0.8498	0.8225	0.9099	0.9047	0.8965	0.8504	0.8274	0.7704	0.7613	0.7374	0.8183
3	0.7979	0.8186	0.8291	0.7892	0.8101	0.8514	0.7531	0.714	0.7977	0.7564	0.7822
4	0.8068	0.8196	0.8071	0.8232	0.8564	0.8629	0.7789	0.7305	0.7446	0.6438	0.7638
5	0.775	0.84	0.8015	0.7939	0.859	0.8408	0.6986	0.6689	0.7442	0.7022	0.7754
6	0.8365	0.7942	0.8771	0.8402	0.8242	0.8274	0.7534	0.6825	0.7341	0.7099	0.7803
7	0.8009	0.8225	0.8455	0.7986	0.8557	0.8546	0.8001	0.7591	0.7214	0.7126	0.7773
8	0.8332	0.8157	0.7932	0.8517	0.7775	0.8483	0.8346	0.7409	0.7274	0.7555	0.8033
9	0.8379	0.8623	0.8652	0.8596	0.881	0.8548	0.8193	0.7849	0.7955	0.7499	0.8251
10	0.8246	0.8209	0.8132	0.771	0.7595	0.7638	0.7465	0.7152	0.7568	0.7621	0.7665
Mean	0.8104	0.8206	0.8267	0.82	0.8305	0.8356	0.7813	0.7327	0.7513	0.7222	0.7853
Number	12	13	17	19	20	21	23	23	30	27	203

Panel B: Large Trade is used as the screen

Decile	Year1	Year2	Year3	Year4	Year5	Year6	Year7	Year8	Year9	Year10	Average
1	0.8407	0.8652	0.8834	0.8441	0.8853	0.8492	0.7942	0.8186	0.8188	0.8446	0.8395
2	0.7423	0.7855	0.8814	0.8574	0.8587	0.8636	0.81398	0.7882	0.8246	0.8028	0.8212
3	0.7994	0.7664	0.8554	0.7961	0.8438	0.8267	0.80357	0.7994	0.7553	0.7461	0.8208
4	0.8099	0.8149	0.8295	0.7732	0.8465	0.864	0.77517	0.7768	0.7543	0.7354	0.8058
5	0.7571	0.8043	0.8173	0.7793	0.8296	0.8531	0.76502	0.7077	0.7428	0.7613	0.7829
6	0.825	0.806	0.7646	0.8136	0.8368	0.8937	0.8025	0.7349	0.7375	0.6815	0.7866
7	0.7538	0.7549	0.8596	0.8116	0.8206	0.8195	0.7744	0.7122	0.7698	0.6553	0.7778
8	0.7424	0.8227	0.8136	0.7913	0.8324	0.8371	0.77366	0.7075	0.7223	0.6691	0.763
9	0.7986	0.7856	0.7974	0.7892	0.8088	0.775	0.76371	0.6964	0.704	0.7328	0.741
10	0.7537	0.6387	0.7911	0.8225	0.7815	0.7614	0.75244	0.6429	0.7378	0.6682	0.7289
Mean	0.7815	0.7856	0.8286	0.8079	0.8346	0.8323	0.78336	0.737	0.7566	0.7305	0.7867
Number	26	27	27	28	28	28	29	30	29	29	282

Table 6-18

Estimated Coefficients of the Determinants of Our Holding Period Estimates Based on Regression Model (4-1)

The dependent variable in the regression is the average investor holding period calculated using our estimator. The definitions of the independent variables are explained in section 4. The regression uses data for stocks listed on the Toronto Stock Exchange 300 index over the 1986-1996 period. The model is tested by using five data sets and the testable models which are described in section 5. Each data set has two testable models with the exception of data set one. There are 9 columns to report the estimated coefficients. * indicates significance at the 0.05 level, and ** indicates significance at the 0.01 level. No obv is the number of observations in each data set. R square is the adjusted R-square.

	SET1	SET2a	SET2b	SET3a	SET3b	SET4a	SET4b	SET5a	SET5b
Intercept	1.207**	1.202**	1.199**	0.206**	0.105**	0.130**	-0.07**	0.61**	0.38**
VALit	-0.042**	-0.035**	-0.041**	-0.035**	-0.028**			-0.034**	
VALit-1	-0.000	-0.0188*	-0.002	0.000	-0.009	0.011		0.013	
GRit	0.025**		0.031*	0.039**		0.040**		0.041**	
GRit-1	-0.047**		-0.044*	-0.044**		-0.042**		-0.038**	
PBit						0.004**	0.004**	0.003**	0.004**
PBit-1						0.000	0.000	0.000	0.000
EYit		-0.003**			-0.004**		-0.003**		-0.003**
EYit-1		0.005**			0.003**		0.005**		0.004**
DYit		0.002*	0.001	-0.001	0.001	-0.001	0.000	-0.001	0.000
DYit-1		0.002**	0.002**	0.001*	0.001	0.001*	0.001	0.001	0.000
PCit								0.000	0.000
PCit-1								0.000	0.000
LOSit	-0.047**	-0.045**	-0.046**	-0.045**		-0.052**		-0.045**	
LOSit-1	-0.052**	-0.046**	-0.047**	-0.027**		-0.028**		-0.032**	
WINit	-0.025*	-0.032**	-0.028**	0.006**		-0.010		0.000	
WINit-1	-0.035**	-0.034**	-0.034**	-0.025**		-0.030**		-0.033**	
CARit					0.026**		0.014		0.014
CARit-1					-0.013		-0.019*		-0.031**
SPit	0.088**	0.086**	0.086**	0.202**	0.194**	0.246**	0.224**	0.229**	0.190**
SIZEit				0.322**	0.336**	0.366**	0.39*	0.215**	0.242**
STDVit				-0.09	-0.11*	-0.102	-0.131**	0.000	-0.064
R2Ei								0.005	0.003
R2Ci								0.024*	0.029**
ListYi	0.010**	0.007**	0.009**	0.003**	0.003**	0.005**	0.004**	0.005**	0.004**
LowPit	-0.052**	-0.050**	-0.051**	0.008**	-0.001	-0.002	-0.008	-0.006	-0.011
DEit						-0.001	0.000	0.001	-0.002
Largeit	-0.198**	-0.193**	-0.193**	-0.262**	-0.261**	-0.253**	-0.252**	-0.274**	-0.276**
No Obv	2793.	2474	2475	1992	1990	1616	1615	1347	1346
R Square	0.177	0.224	0.216	0.441	0.410	0.447	0.445	0.426	0.43

Table 6-19

Estimated Coefficients of the Determinants of Logged A-D Holding Period Estimates Based on Regression Model (4-1)

The dependent variable in the regression is the average investor holding period calculated using logged A-D estimator. The definitions of the independent variables are explained in section 4. The regression uses data for stocks listed on the Toronto Stock Exchange 300 index over the 1986-1996 period. The model is tested by using five data sets and the testable models which are described in section 5. Each data set has two testable models with the exception of data set one. There are 9 columns to report the estimated coefficients. * indicates significance at the 0.05 level, and ** indicates significance at the 0.01 level. No obv is the number of observations in each data set. R square is the adjusted R-square.

	SET1	SET2a	SET2b	SET3a	SET3b	SET4a	SET4b	SET5a	SET5b
VALit	-0.114**	-0.101**			-0.079**	-0.092**		-0.094**	
VALit-1	-0.019	-0.082**	-0.031	-0.009	-0.04	-0.021		-0.009	
GRit	0.095**		0.101**	0.139**		0.151**		0.15**	
GRit-1	-0.142**		-0.143**	-0.146**		-0.145**		-0.127**	
PBit						0.012**	0.013**	0.011**	0.012**
PBit-1						0.000	0.000	0.000	0.000
EYit		-0.008**			-0.009**		-0.007**		-0.007**
EYit-1		0.019**			0.012**		0.017**		0.015**
DYit		0.001	-0.001	-0.006**	-0.002	-0.006**	-0.004	-0.005*	-0.003
DYit-1		0.006**	0.006**	0.003	-0.003	0.003*	0.002	0.002	0.001
PCit								0.000	0.000
PCit-1								0.000	0.000
LOSit	-0.166**	-0.152**	-0.154**	-0.136**		-0.154**		-0.124**	
LOSit-1	-0.164**	-0.154**	-0.151**	-0.066*		-0.066*		-0.083*	
WINit	-0.095**	-0.093**	-0.082**	0.046		-0.002		0.010	
WINit-1	-0.115**	-0.114**	-0.11**	-0.082**		-0.093**		-0.1**	
CARit					0.111**		0.084**		0.066*
CARit-1					-0.045		-0.057*		-0.081**
SPit	0.311**	0.316**	0.314**	0.334**	0.32*	0.457**	0.404**	0.36*	0.257
SIZEit				1.148**	1.186**	1.267**	1.338**	0.823**	0.916**
STDVit				-0.018	-0.084**	-0.051	-0.155**	0.147	0.064
R2Ei								0.063	0.056
R2Ci								0.116**	0.129**
ListYi	0.029**	0.025**	0.029**	0.009**	0.006*	0.013**	0.01**	0.015**	0.012**
LowPit	-0.217**	-0.202**	-0.206**	0.038	-0.016	0.037	0.023	0.028	0.015
DEit						-0.008	-0.0157*	-0.002	-0.012
Largeit	-0.839**	-0.811**	-0.809**	-1.117**	-1.12**	-1.094**	-1.091**	-1.106**	-1.109
No Obv	2679	2473	2474	1992	1990	1616	1615	1347	1346
R Square	0.257	0.258	0.254	0.482	0.477	0.515	0.509	0.498	0.493

Table 6 - 20

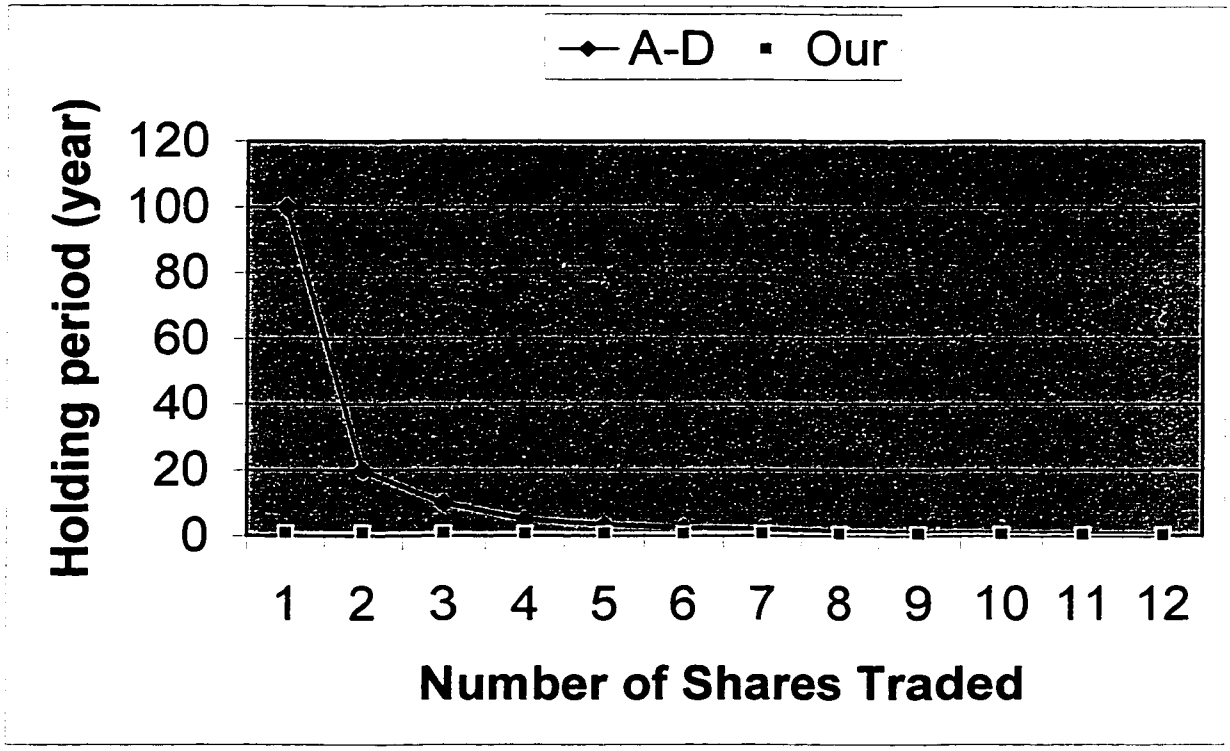
Estimated Coefficients of the Determinants of A-D Holding Period Estimates Based on Regression Model (4-1)

The dependent variable in the regression is the average investor holding period calculated using A-D estimator. The definitions of the independent variables are explained in section 4. The regression uses data for stocks listed on the Toronto Stock Exchange 300 index over the 1986-1996 period. The model is tested by using five data sets and the testable models which are described in section 5. Each data set has two testable models with the exception of data set one. There are 9 columns to report the estimated coefficients. * indicates significance at the 0.05 level, and ** indicates significance at the 0.01 level. No obv is the number of observations in each data set. R square is the adjusted R-square.

	SET1	SET2a	SET2b	SET3a	SET3b	SET4a	SET4b	SET5a	SET5b
VALit	23556	-2.354	-2.683	-2.104	-1.695	-2.557		-1.345	
VALit-1	10044	-2.539	-1.852	0.688	0.341	1.473		0.434	
GRit	26129.75		0.802	2.252		2.821		2.711	
GRit-1	12587		-0.051	-0.018		-0.717		1.410	
PBit						0.298	0.322*		0.217
PBit-1						-0.007	0.000		-0.013
EYit		-0.028			-0.019		-0.005		-0.032
EYit-1		0.575			0.486*		0.529**		0.320
DYit		-0.189	0.158	-0.318	0.333	-0.271	0.000	-0.181	-0.210.
DYit-1		0.05	-0.067	-0.004	-0.014	-0.032	0.006**	0.005	-0.039
PCit								-0.003	0.003
PCit-1								-0.007	0.000
LOSit	-358	-2.753	-2.844	-1.373		-1.307		-2.950	
LOSit-1	-8280	-3.457	-3.137	1.014		1.323		-1.500	
WINit	7574	-3.278	-3.332	1.252		0.202		3.305	
WINit-1	878	-2.027	-1.910	-4.324		-5.092		-4.634	
CARit					2.536		0.027		7.011**
CARit-1					-3.673		-0.039		-2.040
SPit	-24253*	12.204*	11.909*	-26*	-26*	-22	0.385	6.579	6.262
SIZEit				82.57*	83.79*	107*	108*	181*	182*
STDVit				26.364	22.152	16.9	0.138	-9.594	182
R2Ei								-4.150	-4.987
R2Ci								15.272*	14.75*
ListYi	-1154	0.836*	0.913*	-0.047	-0.088	-0.064	0.008	0.002	-0.036
LowPit	3025	-8.222*	-8.652*	4.346	4.766	8.074	8.557*	8.347	9.713
DEit						0.0072	-0.008	-1.408	-1.008
Largeit	63646*	-35*	-35*	-55*	-55*	-60.08*	-60.69*	-53.*	-52*
No obv	2785	2473	2473	1992	1992	1615	1615	1345	1345
R Square	0.014	0.063	0.06	0.168	0.171	0.173	0.176	0.188	0.19

Figure 1

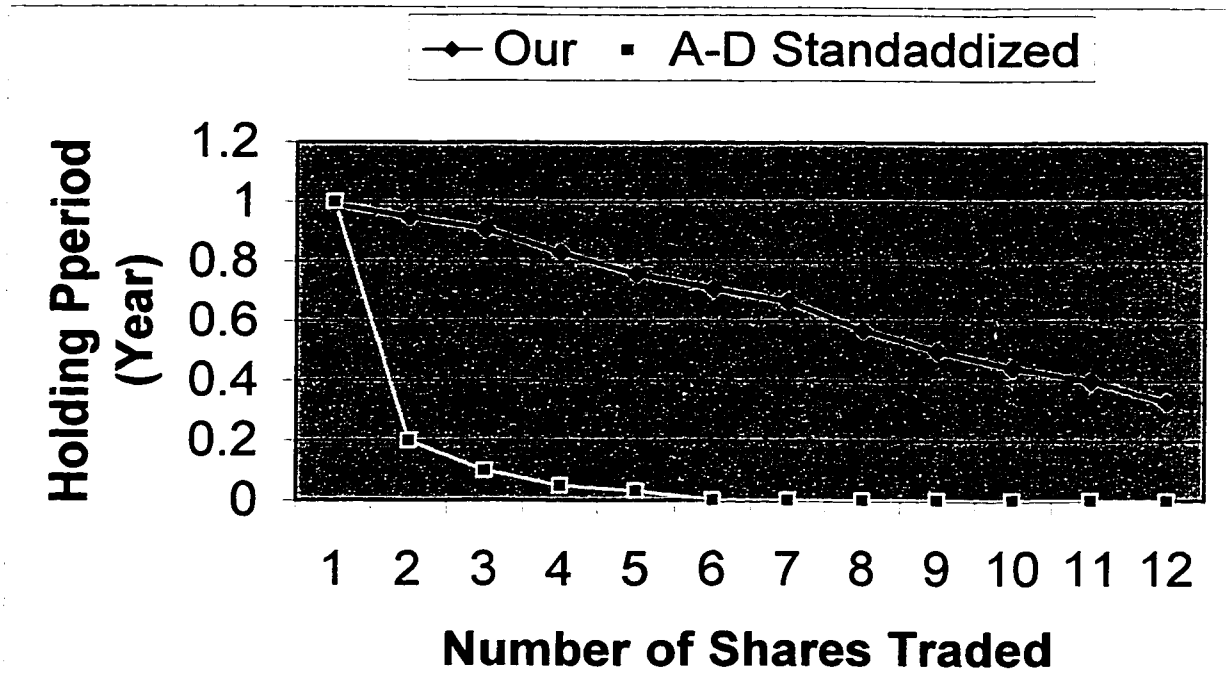
A Comparison of the Two Methods to Estimate the Holding Period



Note: Assumes one million shares outstanding, a trading volume between 10,000 and 2 million shares per year, a volume unit of 1000, and a unit of holding period of one year. The X-axis show the number of shares traded as in table 6-1. 1 is the smallest trading volume (10,000) and 10 is the largest trading volume (2 million).

Figure 2

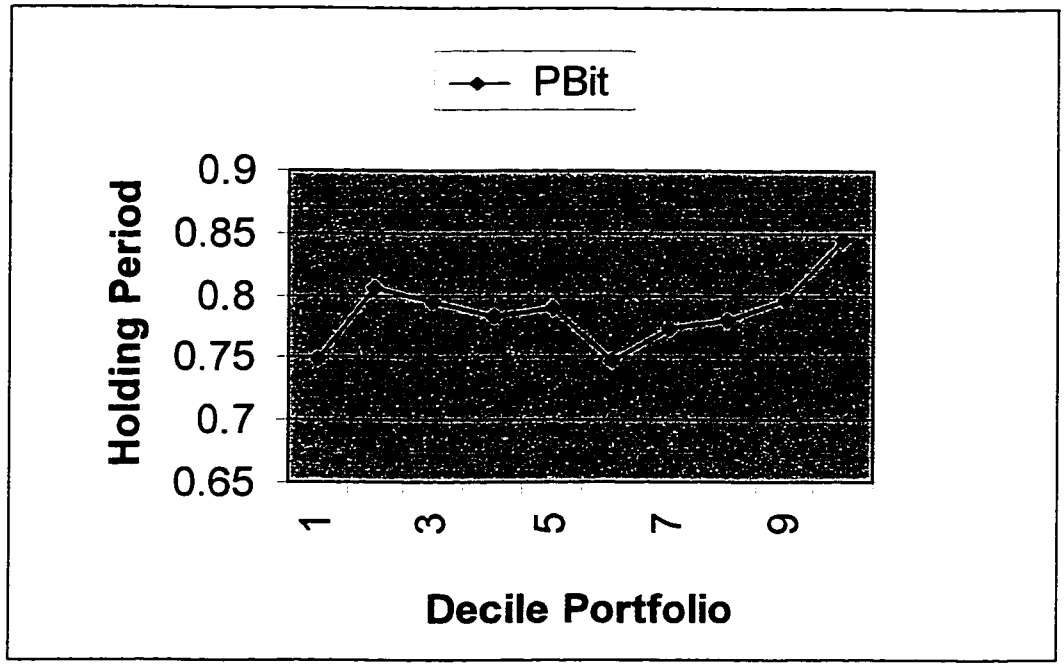
A Comparison of the Two Methods to Estimate the Holding Period (Standardized)



Note: Assumes one million shares outstanding, a trading volume between 10,000 and 2 million shares per year, a volume unit of 1000,and a unit of holding period of one year. The X-axis show the number of shares traded as in table 6-1. 1 is the smallest trading volume (10,000) and 10 is the largest trading volume (2 million).

Figure 3

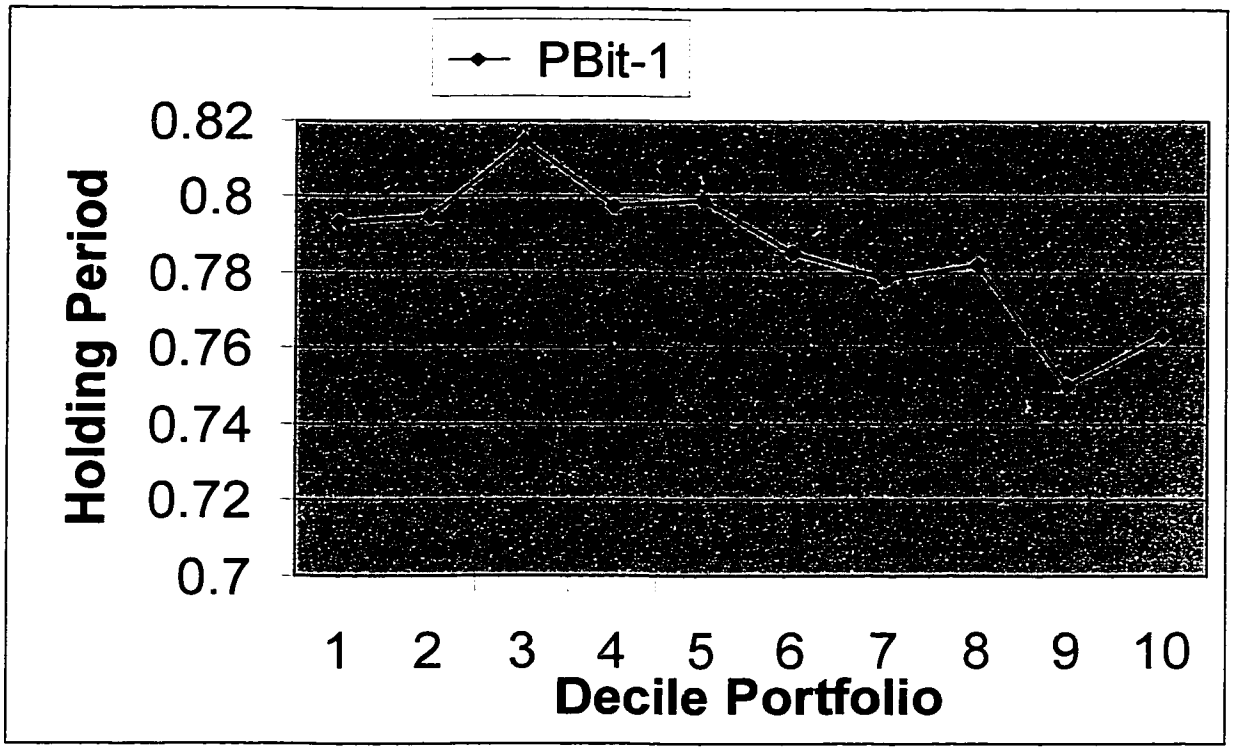
Plot of Holding Period Estimates Using Our Estimator for the Screen-Sorted Portfolios for the Price-to-Book Ratio (Current Year)



The data includes stocks in the Toronto Stock Exchange 300 index over the 1986-1996 period. Stocks of the entire time period are ranked in ascending order of their price-to-book ratio , and ten portfolio are formed based on this year's PB (PBit). Plots of the average holding periods for each decile for the entire time period are graphed below. The X-axis is the number of the decile. Decile 1 is the lowest and decile 10 is the highest PBs. The Y-axis is the holding period (proportion of a year).

Figure 4

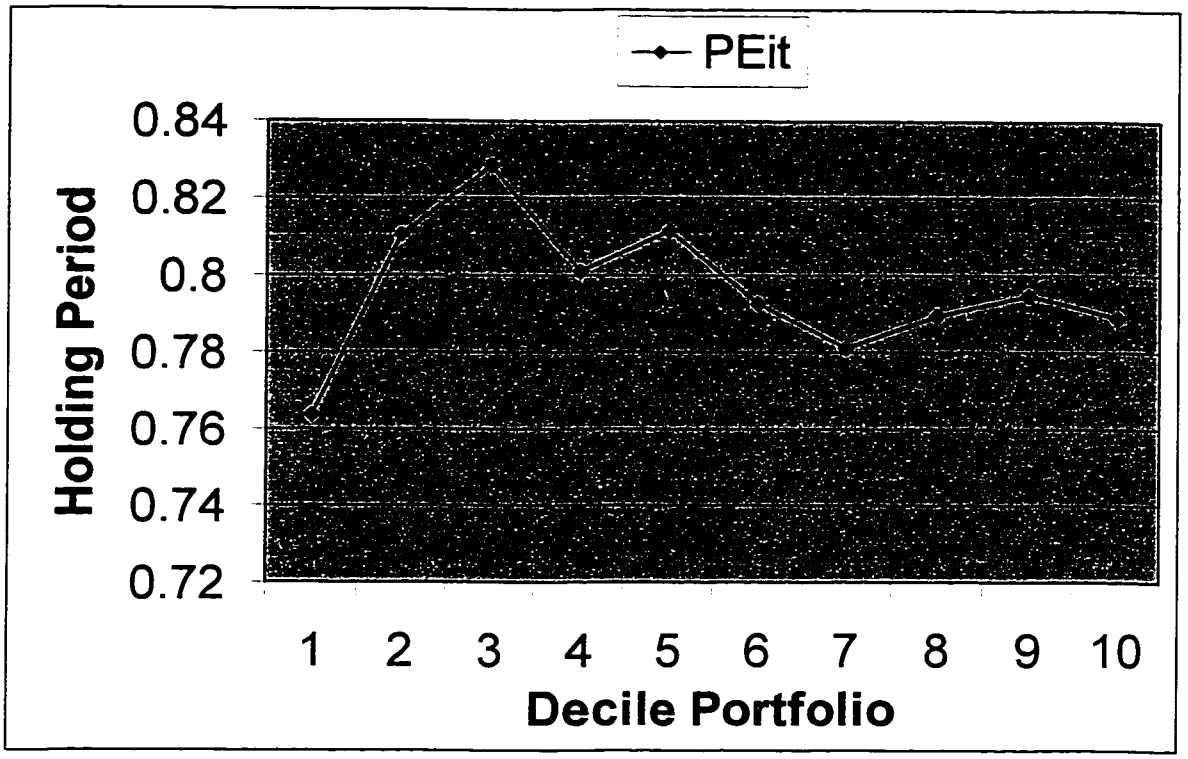
Plots of Holding Periods Estimates Using Our Estimator for the Screen-Sorted Portfolios for the Price-to-Book Ratio (Last Year)



The data includes stocks in the Toronto Stock Exchange 300 index over the 1986-1996 period. Stocks of the entire time period are ranked in ascending order of their price-to-book ratio, and ten portfolio are formed based on last year's PB (PBit-1). Plots of calculations of the average holding periods for each decile for all stocks in that decile for the entire time period are graphed above. The X-axis is the number of the deciles. Decile 1 is the lowest and decile 10 is the highest. The Y-axis is the holding period (unit is year).

Figure 5

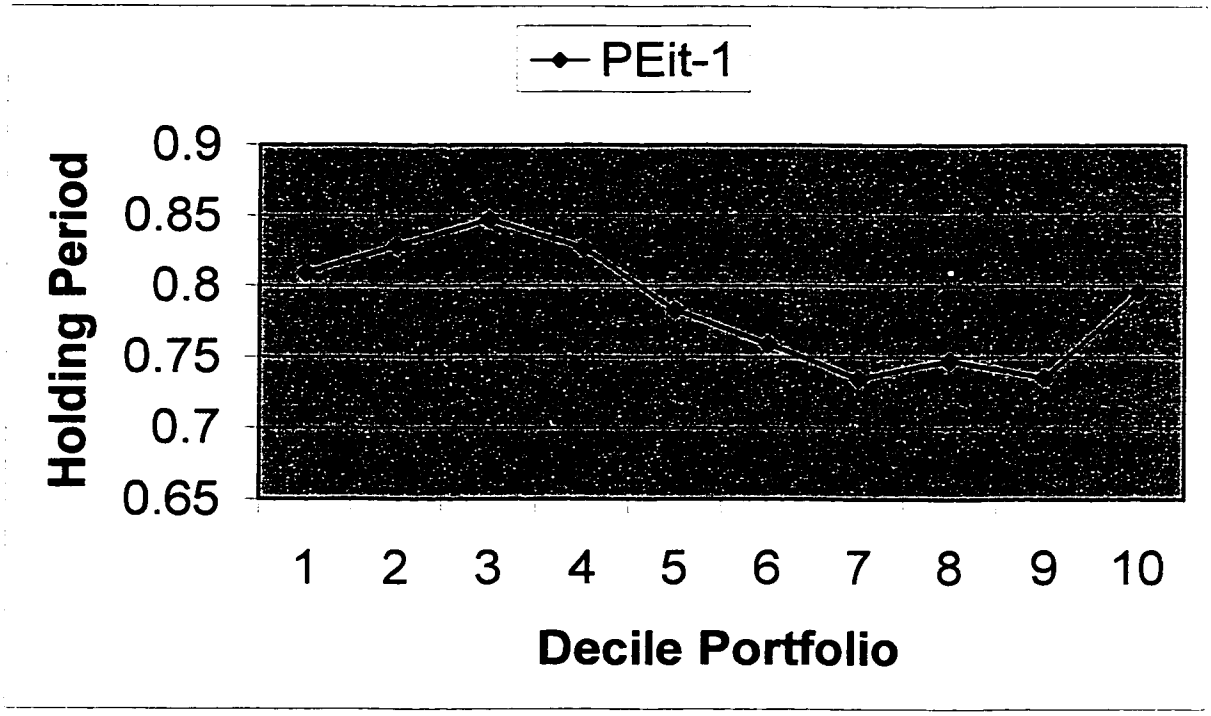
Plot of Holding Period Estimates Using Our Estimator for the Screen-Sorted Portfolios for the Price-Earnings (Current Year)



The data includes stocks in the Toronto Stock Exchange 300 index over the 1986-1996 period. Stocks of the entire time period are ranked in ascending order of their price-earnings ratio, and ten portfolio are formed based on current year's PE (PEit-1). Plots of the average holding periods for each decile for the entire time period are graphed above. The X-axis is the number of the decile. Decile 1 is the lowest and decile 10 is the highest PEs. The Y-axis is the holding period (proportion of a year).

Figure 6

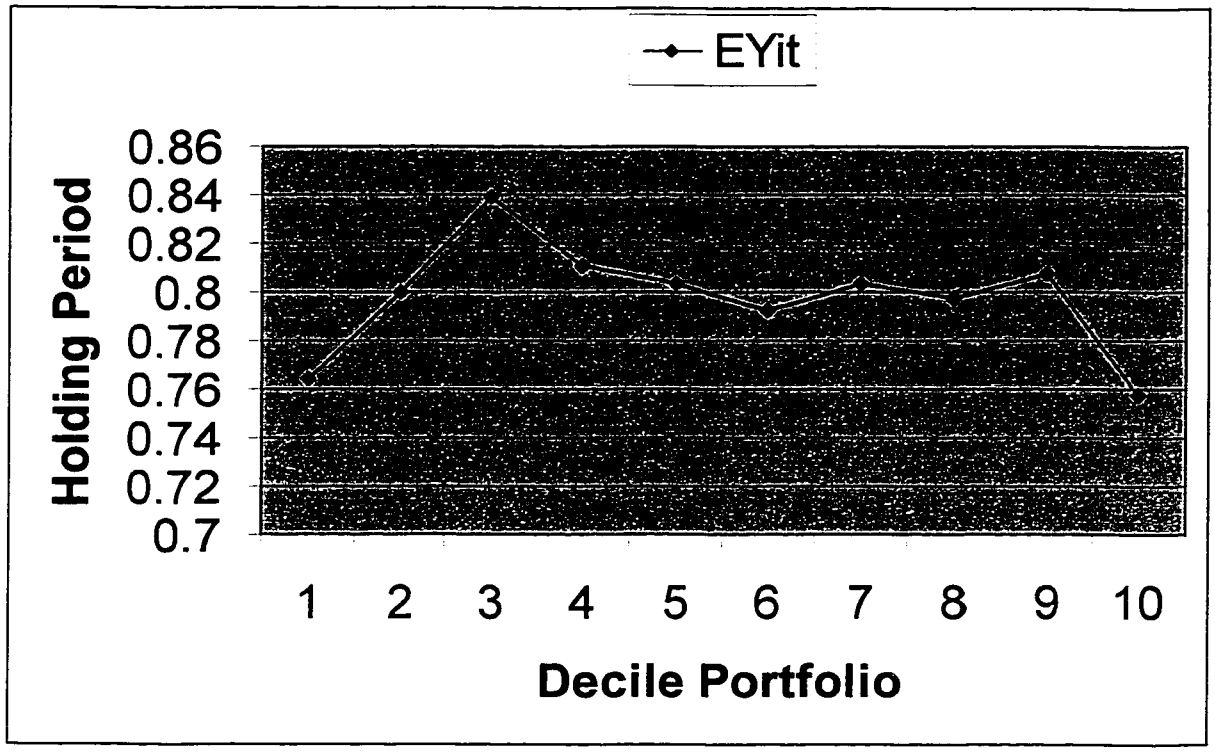
Plot of Holding Period Estimates Using Our Estimator for the Screen-Sorted Portfolios for the Price-Earnings (Last Year)



The data includes stocks in the Toronto Stock Exchange 300 index over the 1986-1996 period. Stocks of the entire time period are ranked in ascending order of their price-earnings ratio, and ten portfolio are formed based on last year's PE (PEit). Plots of the average holding periods for each decile that for the entire time period are graphed above. The X-axis is the number of the decile. Decile 1 is the lowest and decile 10 is the highest PEs. The Y-axis is the holding period (proportion of a year).

Figure 7

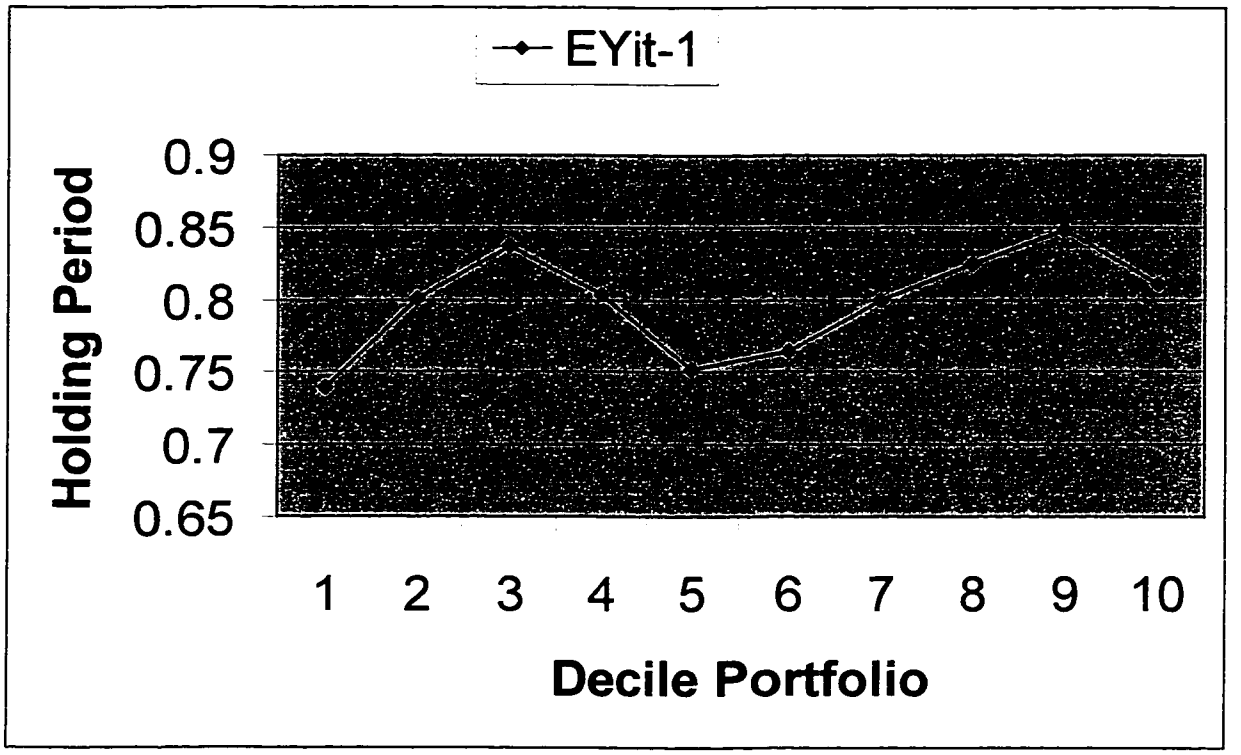
Plot of Holding Period Estimates Using Our Estimator for the Screen-Sorted Portfolios for the Earnings-Yield (Current Year)



The data includes stocks in the Toronto Stock Exchange 300 index over the 1986-1996 period. Stocks of the entire time period are ranked in ascending order of their earnings-yields (EY), and ten portfolio are formed based on this year's EY (EYit). Plots of the average holding periods for each decile for the entire time period are graphed below. The X-axis is the number of the decile. Decile 1 is the lowest and decile 10 is the highest EYs. The Y-axis is the holding period (proportion of a year).

Figure 8

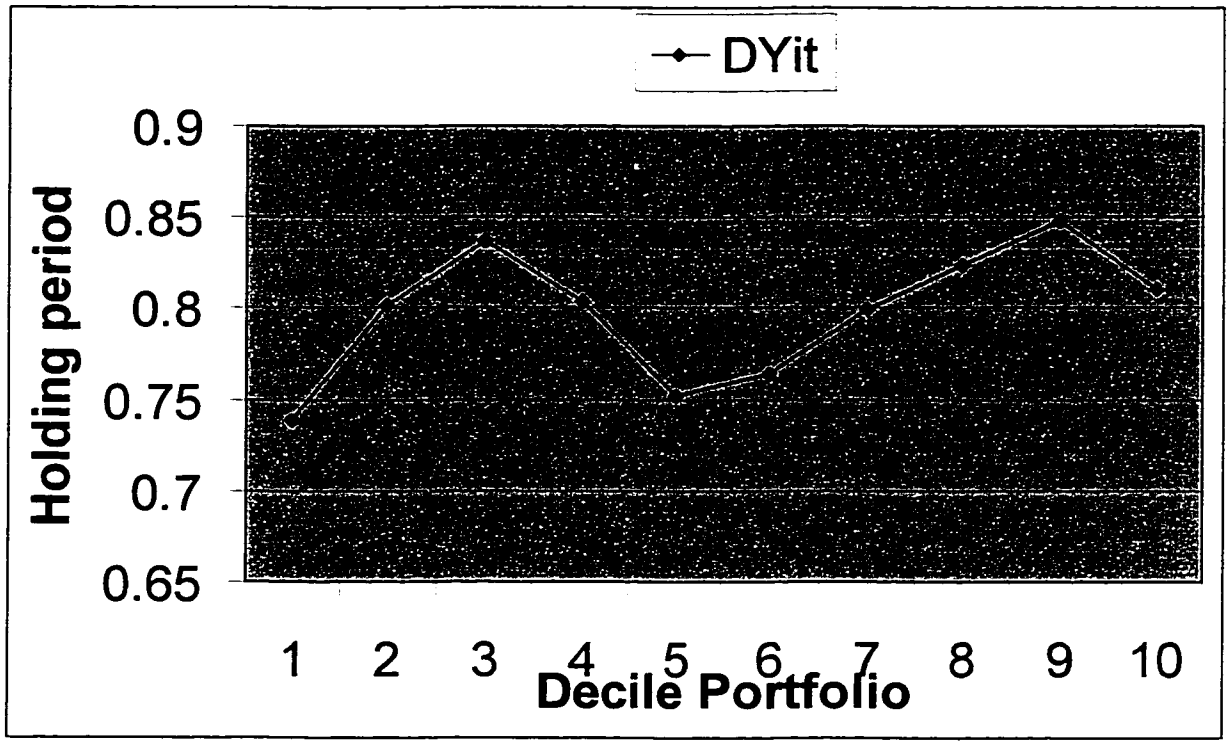
Plot of Holding Period Estimates Using Our Estimator for the Screen-Sorted Portfolios for the Earnings-Yield (Last Year)



The data includes stocks in the Toronto Stock Exchange 300 index over the 1986-1996 period. Stocks of the entire time period are ranked in ascending order of their earnings-yields (EY) , and ten portfolio are formed based on last year's EY (EYit). Plots of the average holding periods for each decile for the entire time period are graphed above. The X-axis is the number of the decile. Decile 1 is the lowest and decile 10 is the highest EYs. The Y-axis is the holding period (proportion of a year).

Figure 9

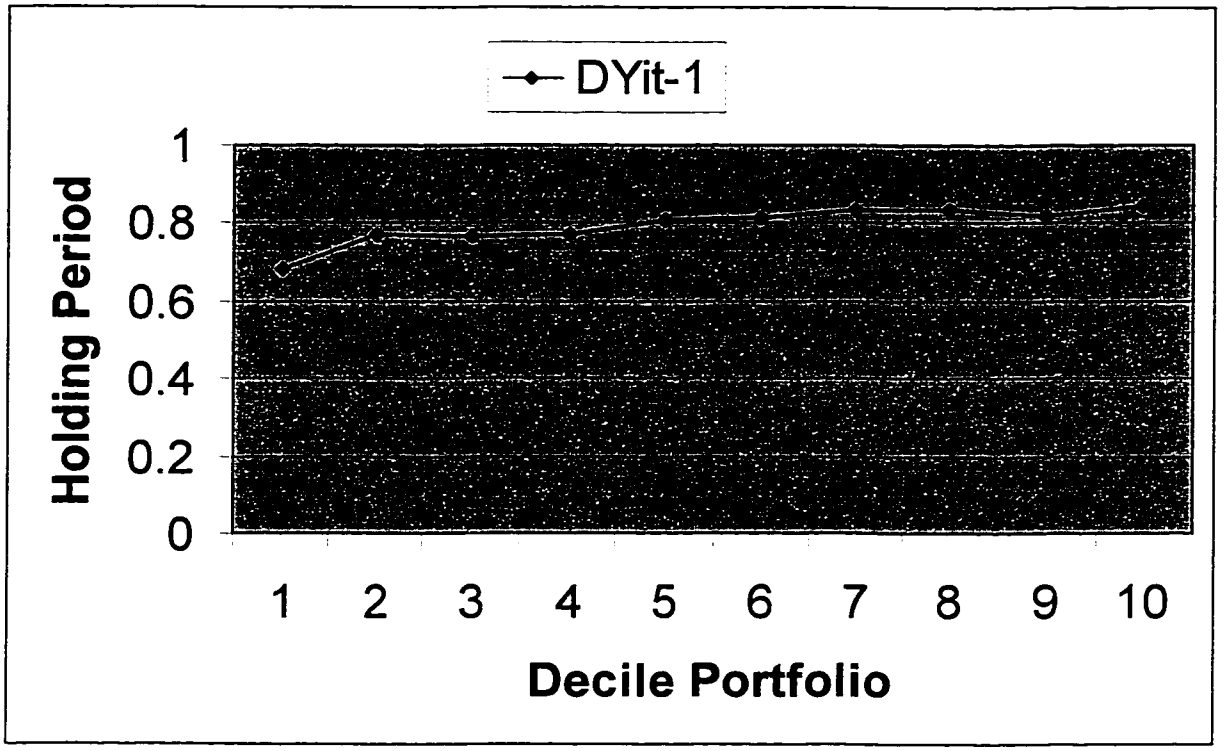
Plot of Holding Period Estimates Using Our Estimator for the Screen-Sorted Portfolios for the Dividend Yield (Current Year)



The data includes stocks in the Toronto Stock Exchange 300 index over the 1986-1996 period. Stocks of the entire time period are ranked in ascending order of their dividend yield (DY), and ten portfolio are formed based on this year's DY (DYit). Plots of the average holding periods for each decile for the entire time period are graphed above. The X-axis is the number of the decile. Decile 1 is the lowest and decile 10 is the highest DYs. The Y-axis is the holding period (proportion of a year).

Figure 10

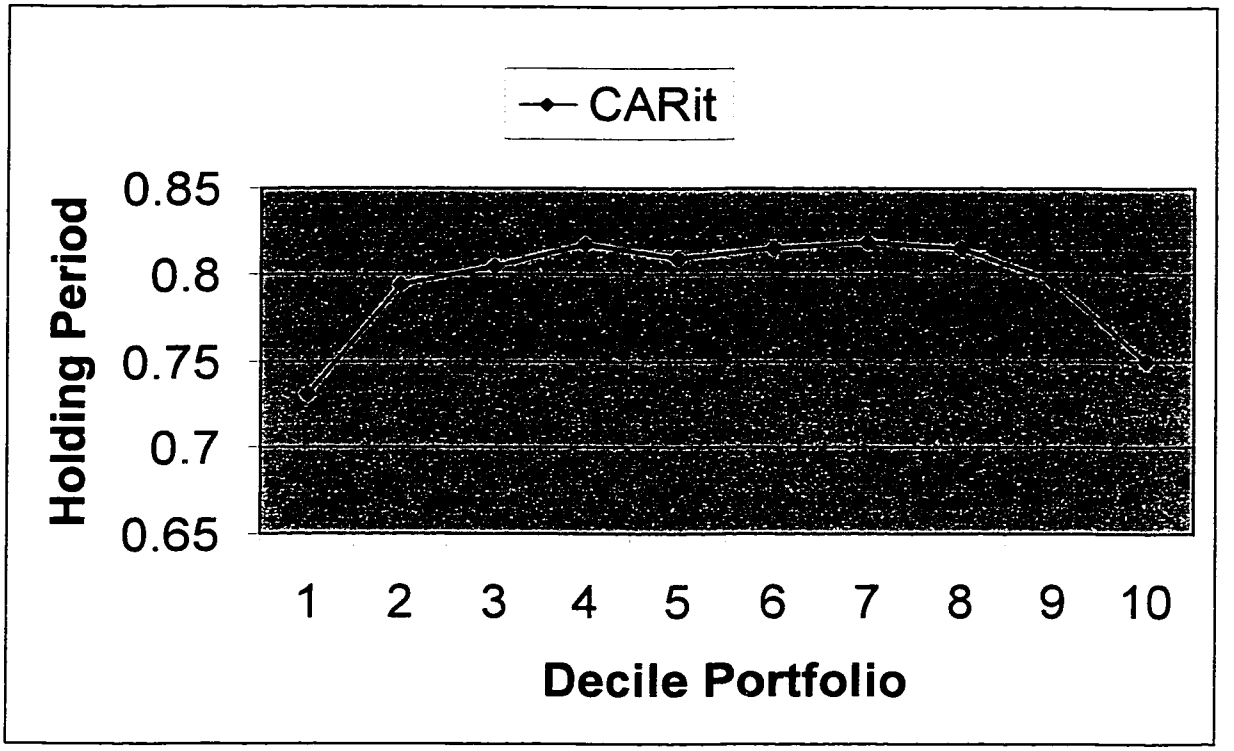
Plot of Holding Period Estimates Using Our Estimator for the Screen-Sorted Portfolios for the Dividend Yield (Last Year)



The data includes stocks in the Toronto Stock Exchange 300 index over the 1986-1996 period. Stocks of the entire time period are ranked in ascending order of their dividend yield (DY), and ten portfolio are formed based on last year's DY (DYit-1). Plots of the average holding periods for each decile decile for the entire time period are graphed above. The X-axis is the number of the decile. Decile 1 is the lowest and decile 10 is the highest DYs. The Y-axis is the holding period (proportion of a year).

Figure 11

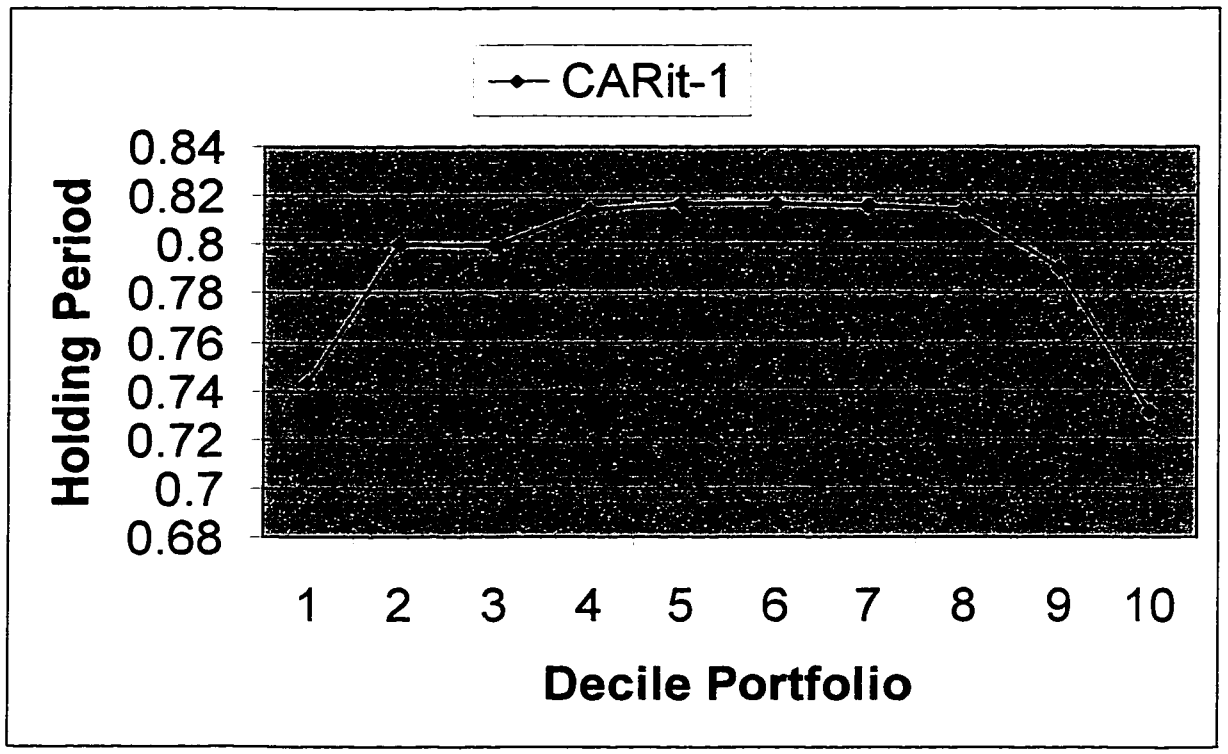
Plot of Holding Period Estimates Using Our Estimator for the Screen-Sorted Portfolios for the CAR (Current Year)



The data includes stocks in the Toronto Stock Exchange 300 index over the 1986-1996 period. Stocks of the entire time period are ranked in ascending order of their market-adjusted excess return (CAR), and ten portfolio are formed based on this year's CAR (CARit). Plots of the average holding periods for each decile for the entire time period are graphed above. The X-axis is the number of the decile. Decile 1 is the lowest and decile 10 is the highest CARs. The - axis is the holding period (proportion of a year).

Figure 12

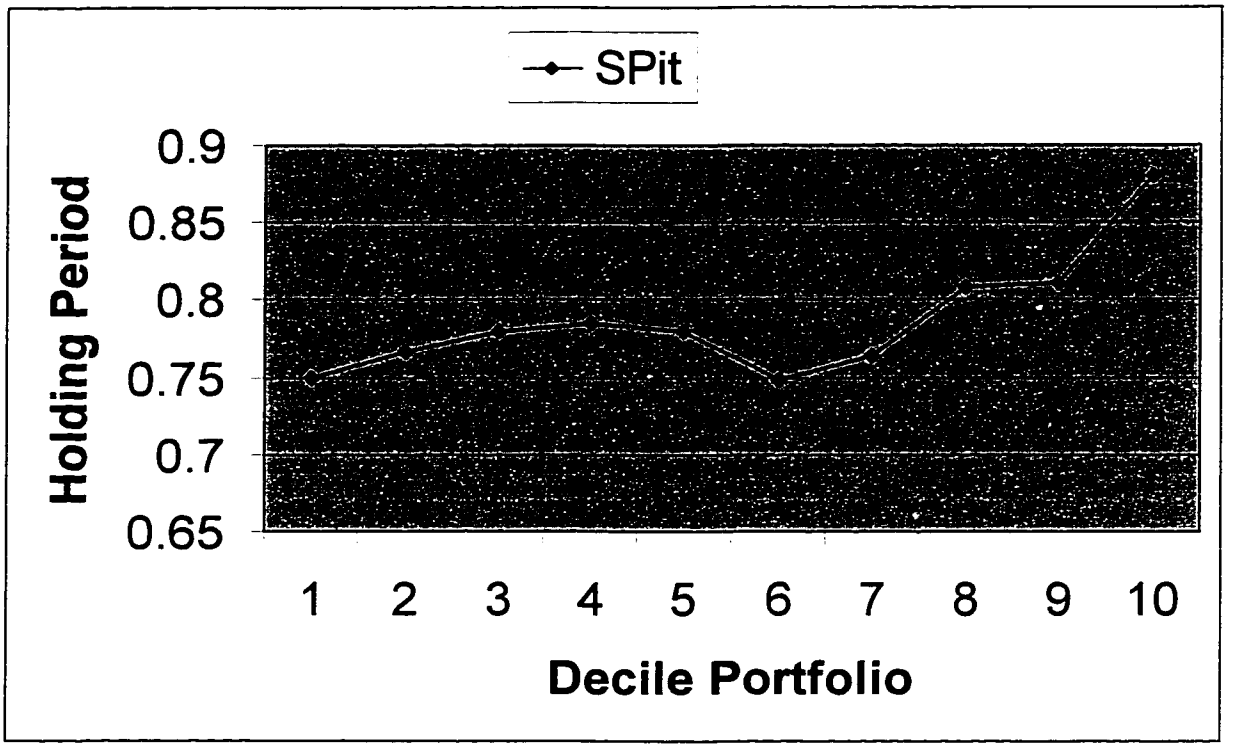
Plot of Holding Period Estimates Using Our Estimator for the Screen-Sorted Portfolios for the CAR (Last Year)



The data includes stocks in the Toronto Stock Exchange 300 index over the 1986-1996 period. Stocks of the entire time period are ranked in ascending order of their market-adjusted excess return (CAR), and ten portfolio are formed based on last year's CAR (CARit). Plots of the average holding periods for each decile for the entire time period are graphed above. The X-axis is the number of the decile. Decile 1 is the lowest and decile 10 is the highest CARs. The Y-axis is the holding period (proportion of a year).

Figure 13

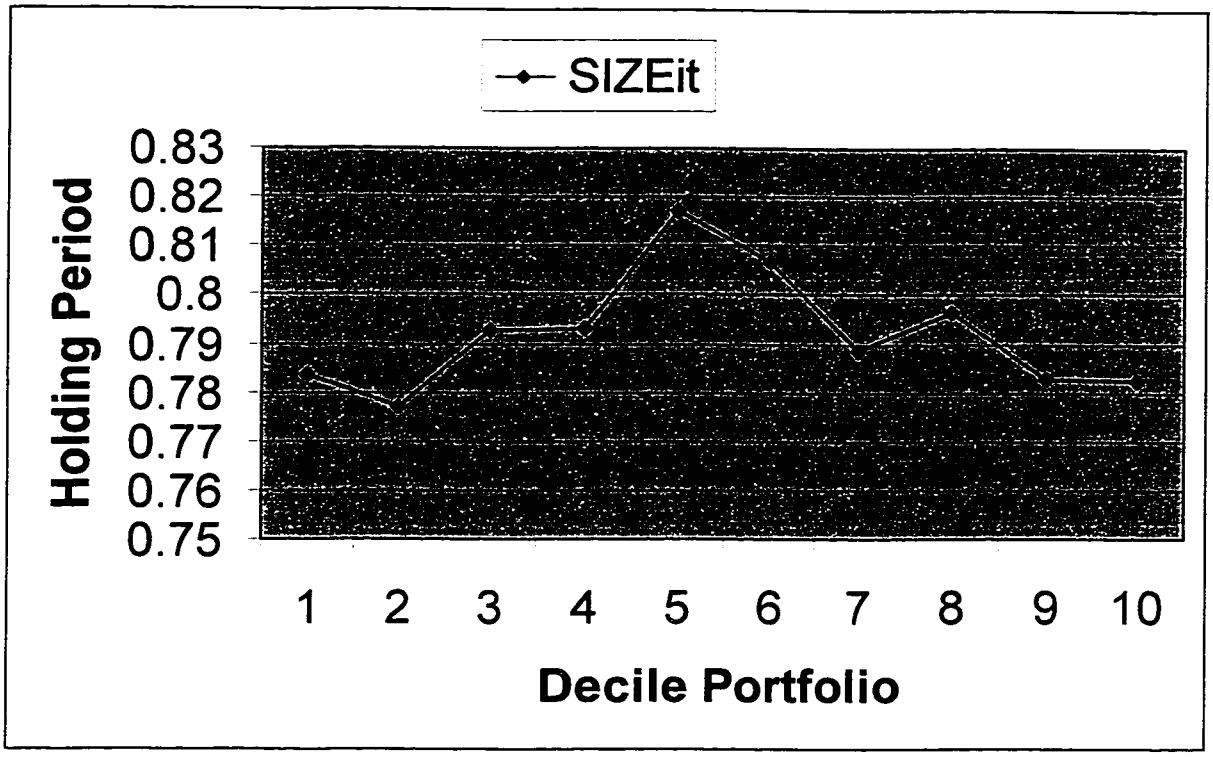
Plot of Holding Period Estimates Using Our Estimator for the Screen-Sorted Portfolios for the Spread



The data includes stocks in the Toronto Stock Exchange 300 index over the 1986-1996 period. Stocks of the entire time period are ranked in ascending order of their spread (SP), and ten portfolio are formed based on this year's SP (SPit). Plots of the average holding periods for each decile for the entire time period are graphed above. The X-axis is the number of the decile. Decile 1 is the lowest and decile 10 is the highest SPs. The Y-axis is the holding period (proportion of a year).

Figure 14

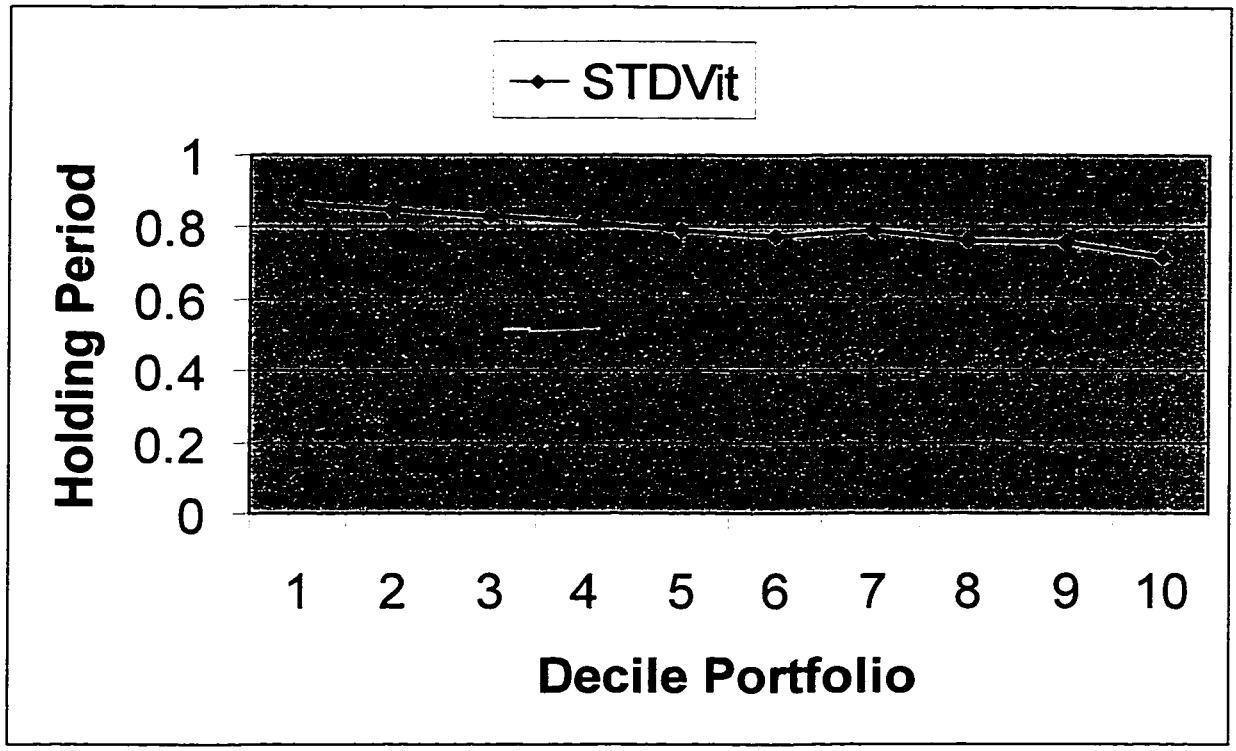
Plot of Holding Period Estimates Using Our Estimator for the Screen-Sorted Portfolios for the Size



The data includes stocks in the Toronto Stock Exchange 300 index over the 1986-1996 period. Stocks of the entire time period are ranked in ascending order of their size, and ten portfolio are formed based on this year's size (SIZEit). Plots of the average holding periods for each decile for the entire time period are graphed below. The X-axis is the number of the decile. Decile 1 is the lowest and decile 10 is the highest sizes. The Y-axis is the holding period (proportion of a year).

Figure 15

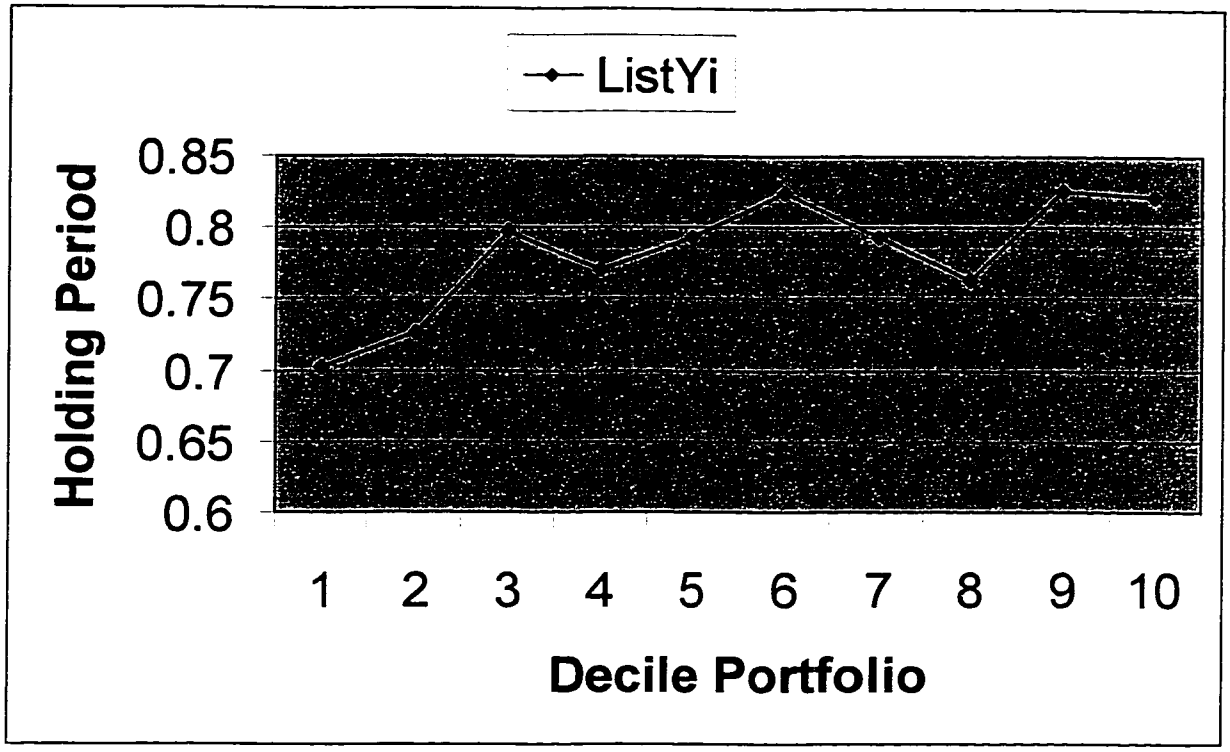
Plot of Holding Period Estimates Using Our Estimator for the Screen-Sorted Portfolios for the Standard Deviation of Monthly Return



The data includes stocks in the Toronto Stock Exchange 300 index over the 1986-1996 period. Stocks of the entire time period are ranked in ascending order of their standard deviation of monthly return (STDV), and ten portfolio are formed based on this year's STDV (STDVit). Plots of the average holding periods for each decile for the entire time period are graphed below.The X-axis is the number of the decile. Decile 1 is the lowest and decile 10 is the highest STDVs. The Y-axis is the holding period (proportion of a year).

Figure 16

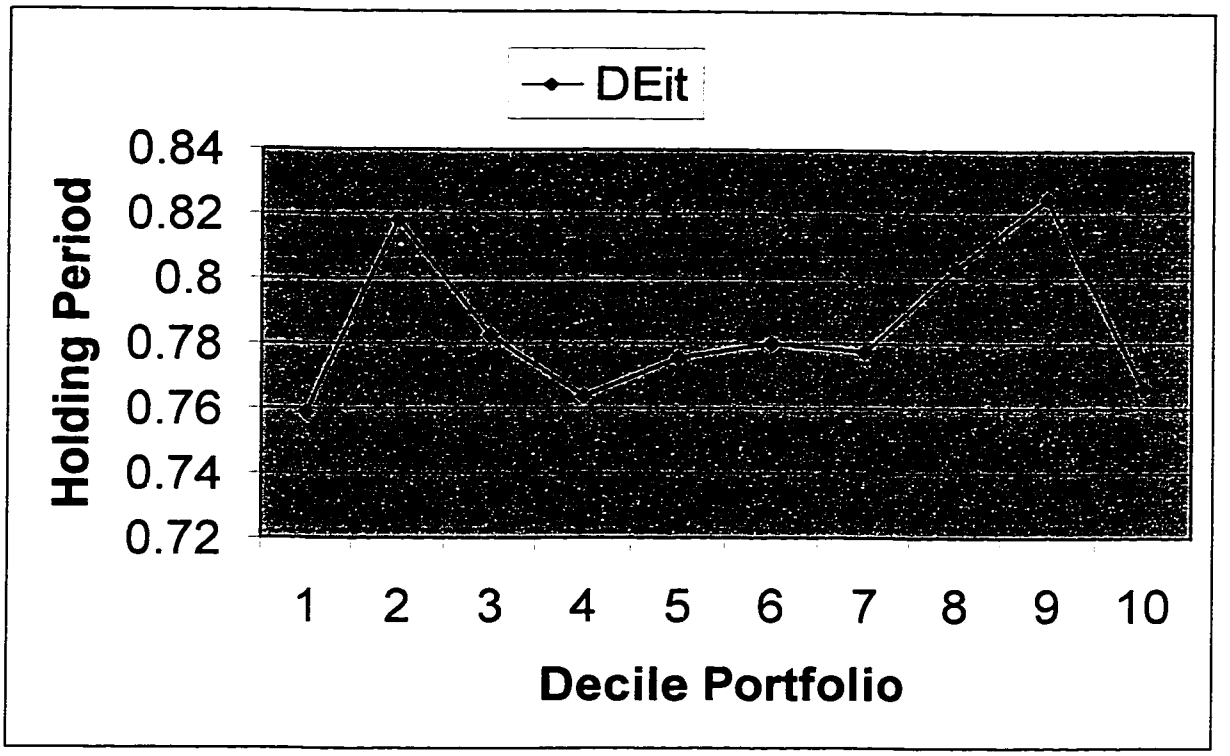
Plot of Holding Period Estimates Using Our Estimator for the Screen-Sorted Portfolios for the List Year in TSE300



The data includes stocks in the Toronto Stock Exchange 300 index over the 1986-1996 period. Stocks of the entire time period are ranked in ascending order of their number of list years in TSE300 during the test period (ListYi), and ten portfolio are formed based on ListYi. Plots of the average holding periods for each decile for the entire time period are graphed above. The X-axis is the number of the decile. Decile 1 is the lowest and decile 10 is the highest ListY. The Y-axis is the holding period (proportion of a year).

Figure 17

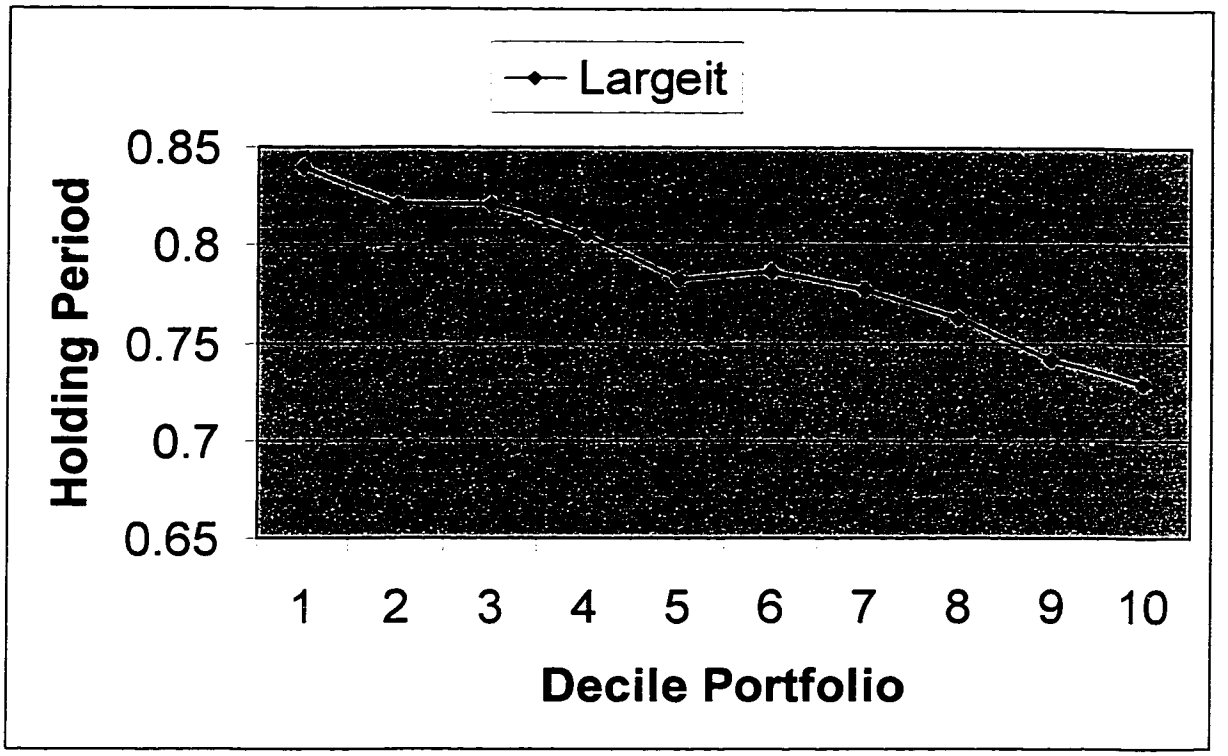
Plot of Holding Period Estimates Using Our Estimator for the Screen-Sorted Portfolios for the Debt-to-Equity Ratio



The data includes stocks in the Toronto Stock Exchange 300 index over the 1986-1996 period. Stocks of the entire time period are ranked in ascending order of their debt-to-equity ratio (DE), and ten portfolio are formed based on this year's DE (DEit). Plots of the average holding periods for each decile for the entire time period are graphed above. The X-axis is the number of the decile. Decile 1 is the lowest and decile 10 is the highest DEs. The Y-axis is the holding period (proportion of a year).

Figure 18

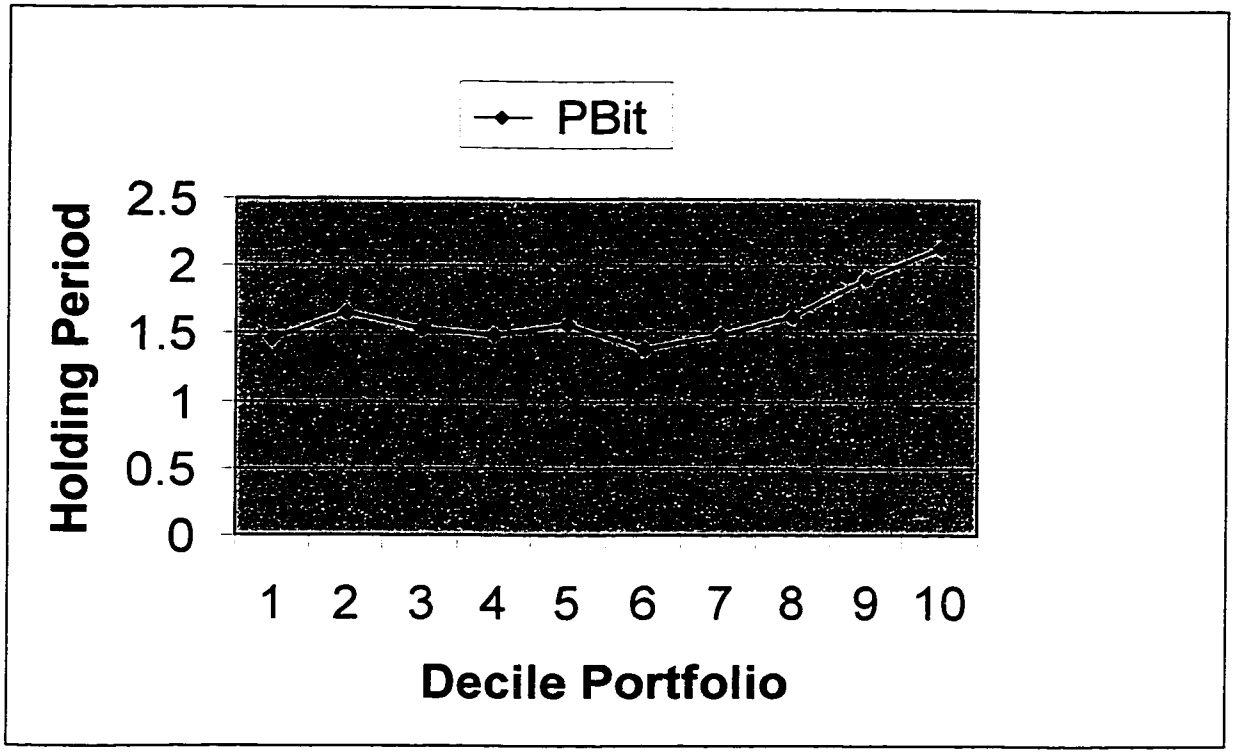
Plot of Holding Period Estimates Using Our Estimator for the Screen-Sorted Portfolios for the Large Trade



The data includes stocks in the Toronto Stock Exchange 300 index over the 1986-1996 period. Stocks of the entire time period are ranked in ascending order of their percentage of large trade, and ten portfolio are formed based on this year's percentage of large trade (Largeit). Plots of the average holding periods for each decile for the entire time period are graphed above. The X-axis is the number of the decile. Decile 1 is the lowest and decile 10 is the highest large trade. The Y-axis is the holding period (proportion of a year).

Figure 19

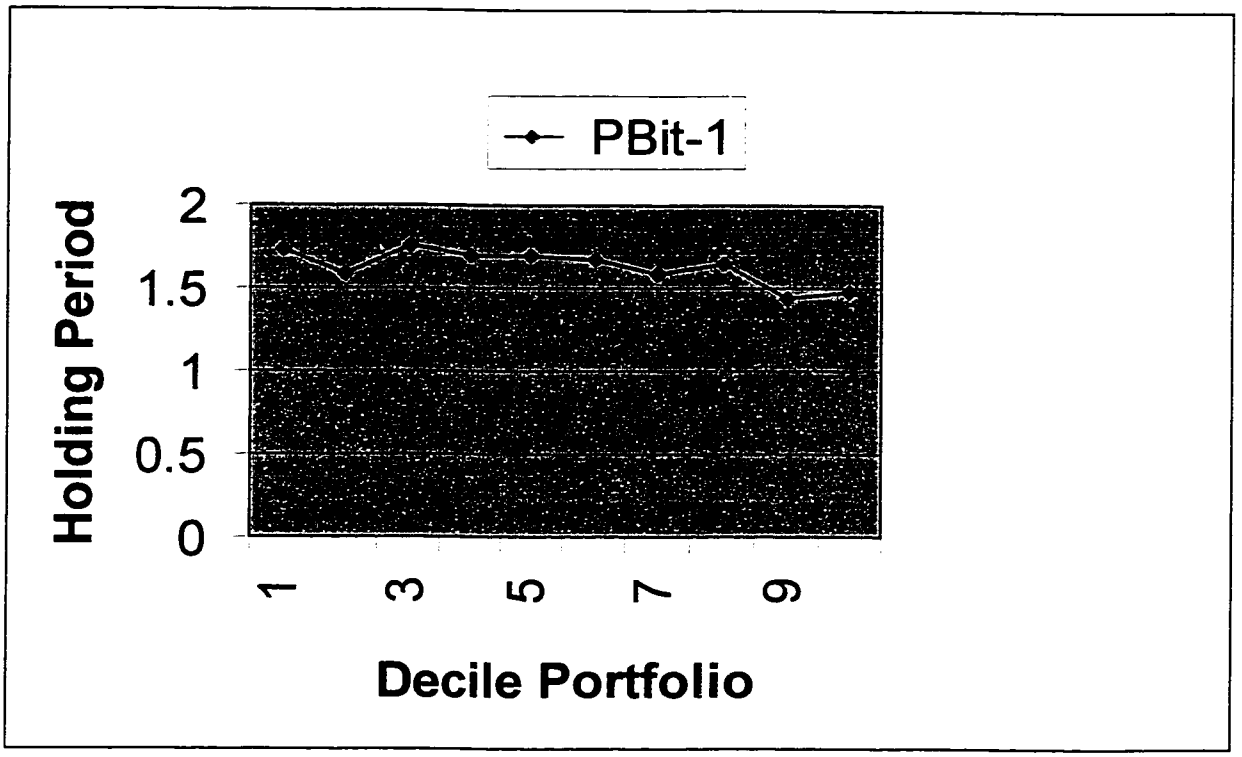
Plot of Holding Period Estimates Using Logged A-D Estimator for the Screen-Sorted Portfolios for the Price-to-Book Ratio (Current Year)



The data includes stocks in the Toronto Stock Exchange 300 index over the 1986-1996 period. Stocks of the entire time period are ranked in ascending order of their price-to-book ratio , and ten portfolio are formed based on this year's PB (PBit). Plots of the average holding periods for each decile for the entire time period are graphed above. The X-axis is the number of the decile. Decile 1 is the lowest and decile 10 is the highest PBs. The Y-axis is the holding period calculated using logged A-D estimator

Figure 20

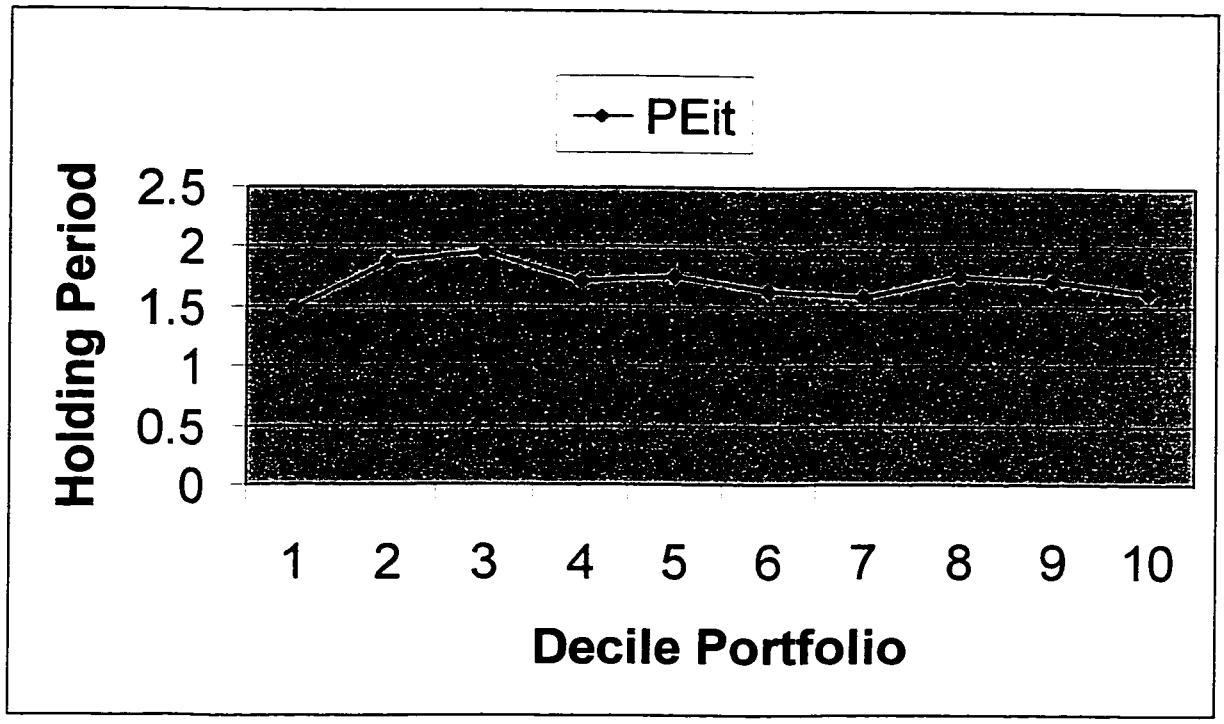
Plot of Holding Period Estimates Using Logged A-D Estimator for the Screen-Sorted Portfolios for the Price-to-Book Ratio (Last Year)



The data includes stocks in the Toronto Stock Exchange 300 index over the 1986-1996 period. Stocks of the entire time period are ranked in ascending order of their price-to-book ratio , and ten portfolio are formed based on last year's PB (PBit). Plots of the average holding periods for each decile for the entire time period are graphed below. The X-axis is the number of the decile. Decile 1 is the lowest and decile 10 is the highest PBs. The Y-axis is the holding period calculated using logged A-D estimator.

Figure 21

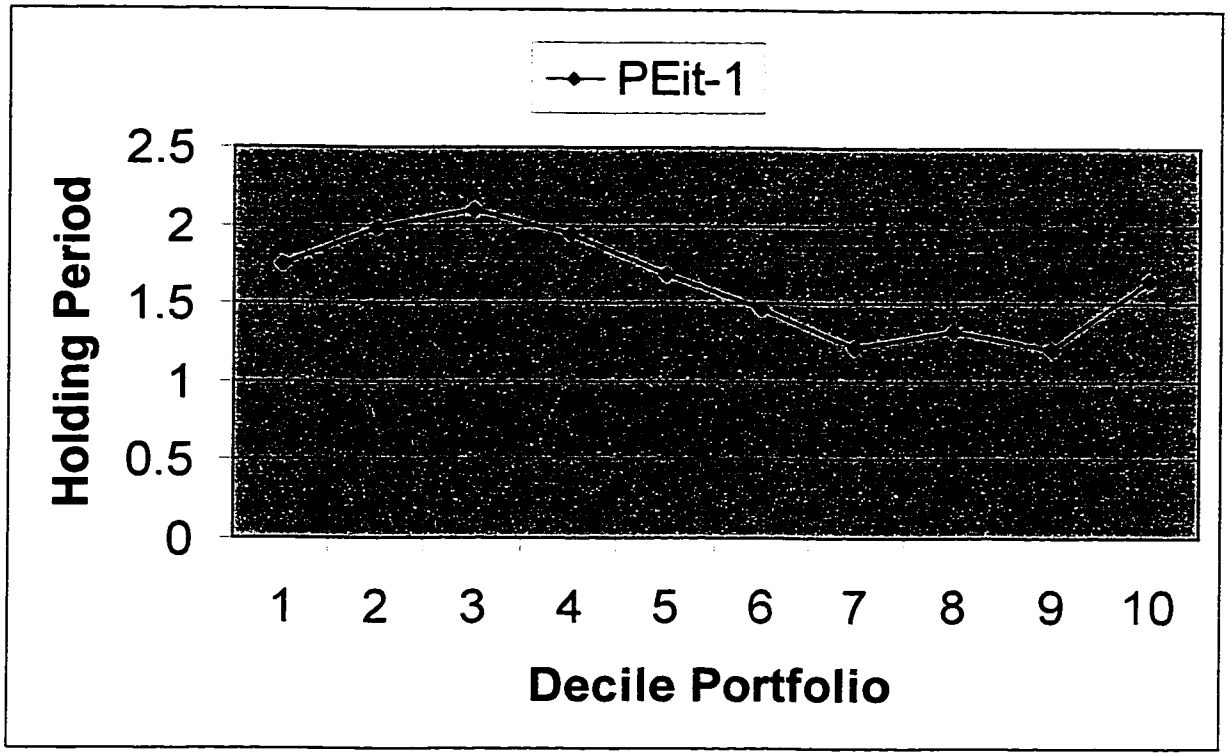
Plot of Holding Period Estimates Using Logged A-D Estimator for the Screen-Sorted Portfolios for the Price-Earnings (Current Year)



The data includes stocks in the Toronto Stock Exchange 300 index over the 1986-1996 period. Stocks of the entire time period are ranked in ascending order of their price-earnings ratio (PE), and ten portfolio are formed based on this year's PE (PEit). Plots of the average holding periods for each decile for the entire time period are graphed below. The X-axis is the number of the decile. Decile 1 is the lowest and decile 10 is the highest PEs. The Y-axis is the holding period calculated using logged A-D estimator.

Figure 22

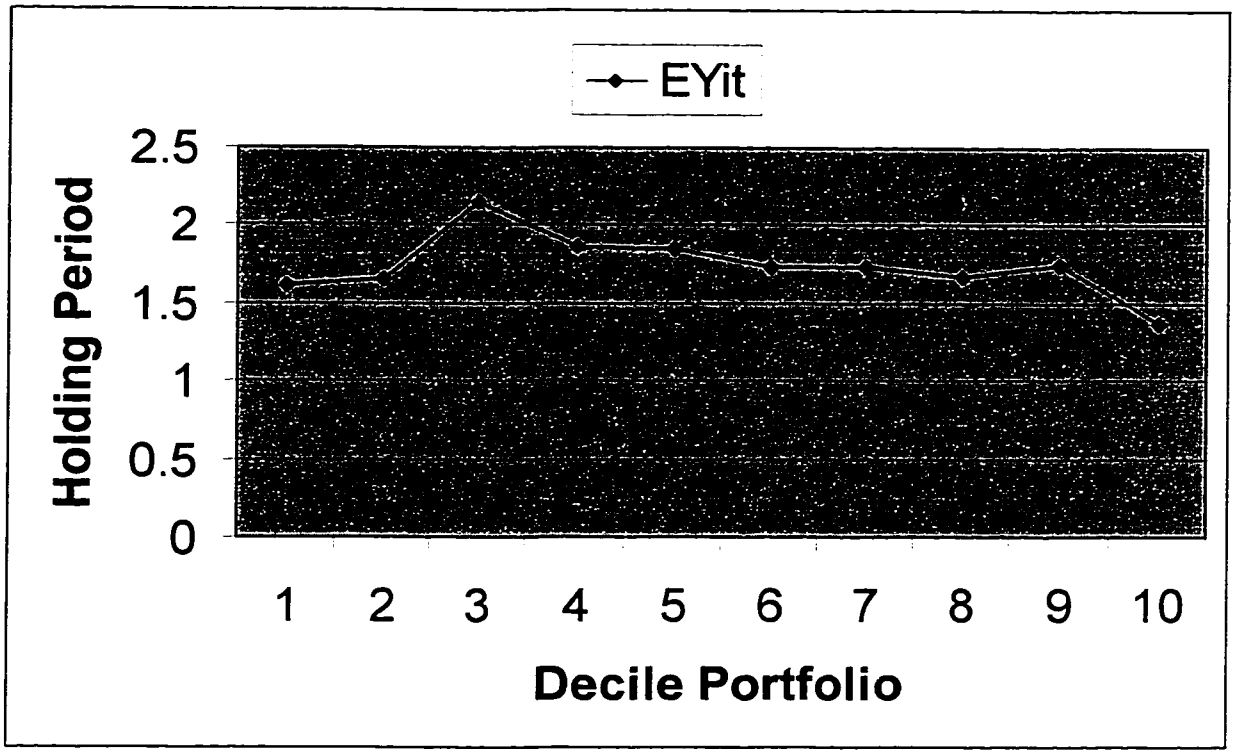
Plot of Holding Period Estimates Using Logged A-D Estimator for the Screen-Sorted Portfolios for the Price-Earnings (Last Year)



The data includes stocks in the Toronto Stock Exchange 300 index over the 1986-1996 period. Stocks of the entire time period are ranked in ascending order of their price-earnings ratio (PE), and ten portfolio are formed based on last year's PE (Peit-1). Plots of the average holding periods for each decile for the entire time period are graphed above. The X-axis is the number of the decile. Decile 1 is the lowest and decile 10 is the highest PEs. The Y-axis is the holding period calculated using logged A-D estimator.

Figure 23

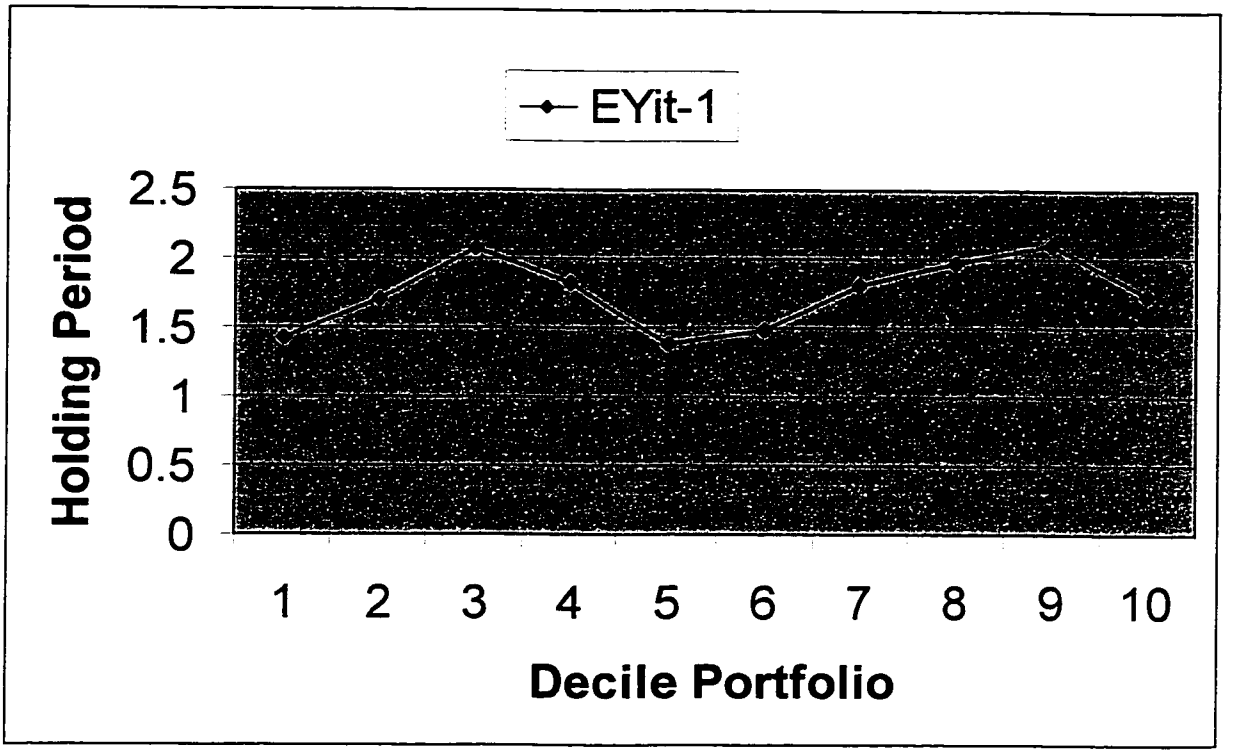
Plot of Holding Period Estimates Using Logged A-D Estimator for the Screen-Sorted Portfolios for Earnings-Yield (Current Year)



The data includes stocks in the Toronto Stock Exchange 300 index over the 1986-1996 period. Stocks of the entire time period are ranked in ascending order of their earnings yields(EY), and ten portfolio are formed based on this year's EY (EYit). Plots of the average holding periods for each decile for the entire time period are graphed above. The X-axis is the number of the decile. Decile 1 is the lowest and decile 10 is the highest EYs. The Y-axis is the holding period calculated using logged A-D estimator

Figure 24

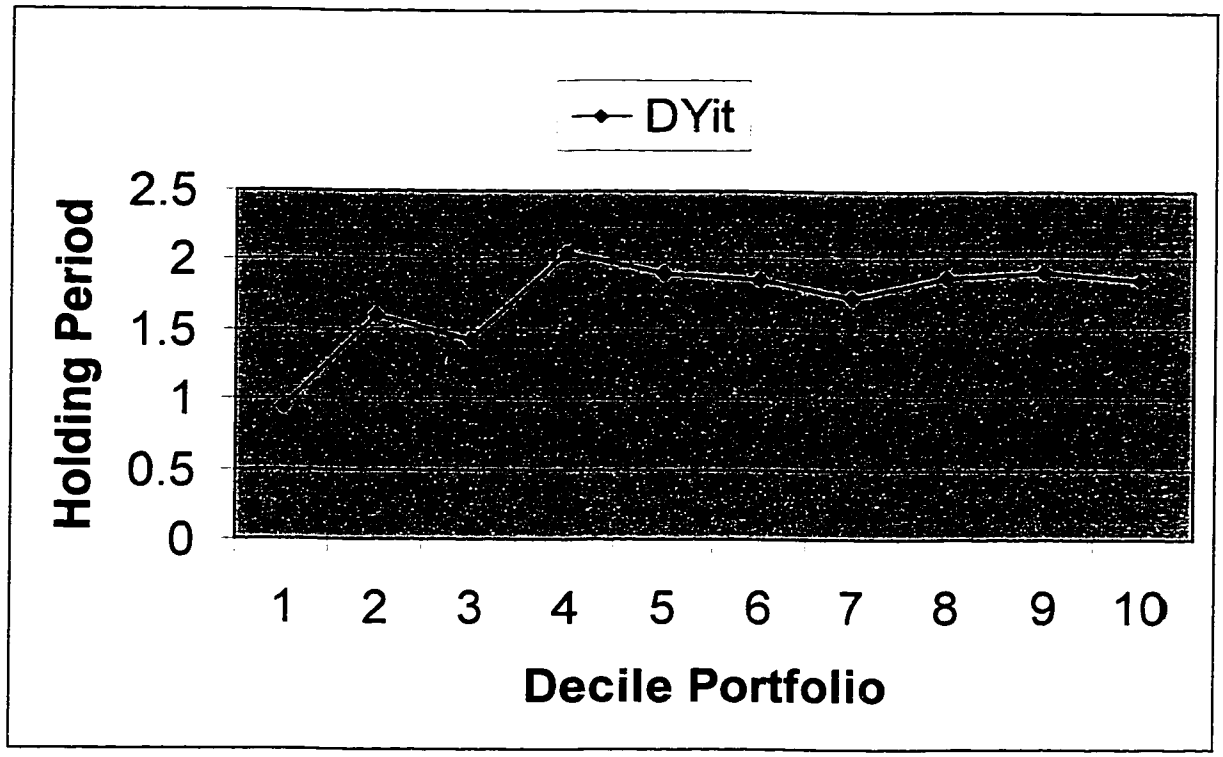
Plot of Holding Period Estimates Using Logged A-D Estimator for the Screen-Sorted Portfolios for the Earnings Yield (Last Year)



The data includes stocks in the Toronto Stock Exchange 300 index over the 1986-1996 period. Stocks of the entire time period are ranked in ascending order of their earnings yields (EY), and ten portfolio are formed based on Last year's EY (EYit-1). Plots of the average holding periods for each decile for the entire time period are graphed above. The X-axis is the number of the decile. Decile 1 is the lowest and decile 10 is the highest EYs. The Y-axis is the holding period calculated using logged A-D estimator

Figure 25

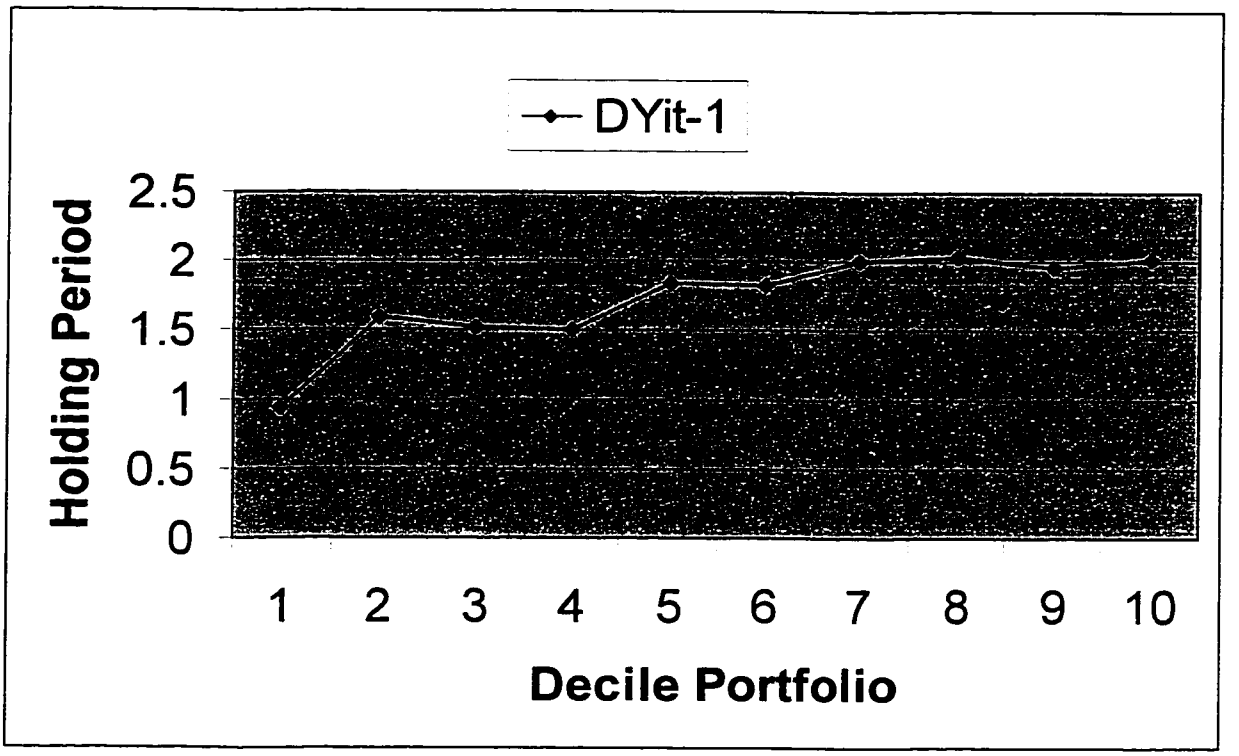
Plot of Holding Period Estimates Using Logged A-D Estimator for the Screen-Sorted Portfolios for the Dividend Yield (Current Year)



The data includes stocks in the Toronto Stock Exchange 300 index over the 1986-1996 period. Stocks of the entire time period are ranked in ascending order of their dividend yields (DY), and ten portfolio are formed based on this year's DY (DYit). Plots of the average holding periods for each decile for the entire time period are graphed above. The X-axis is the number of the decile. Decile 1 is the lowest and decile 10 is the highest DYs. The Y-axis is the holding period calculated using logged A-D estimator.

Figure 26

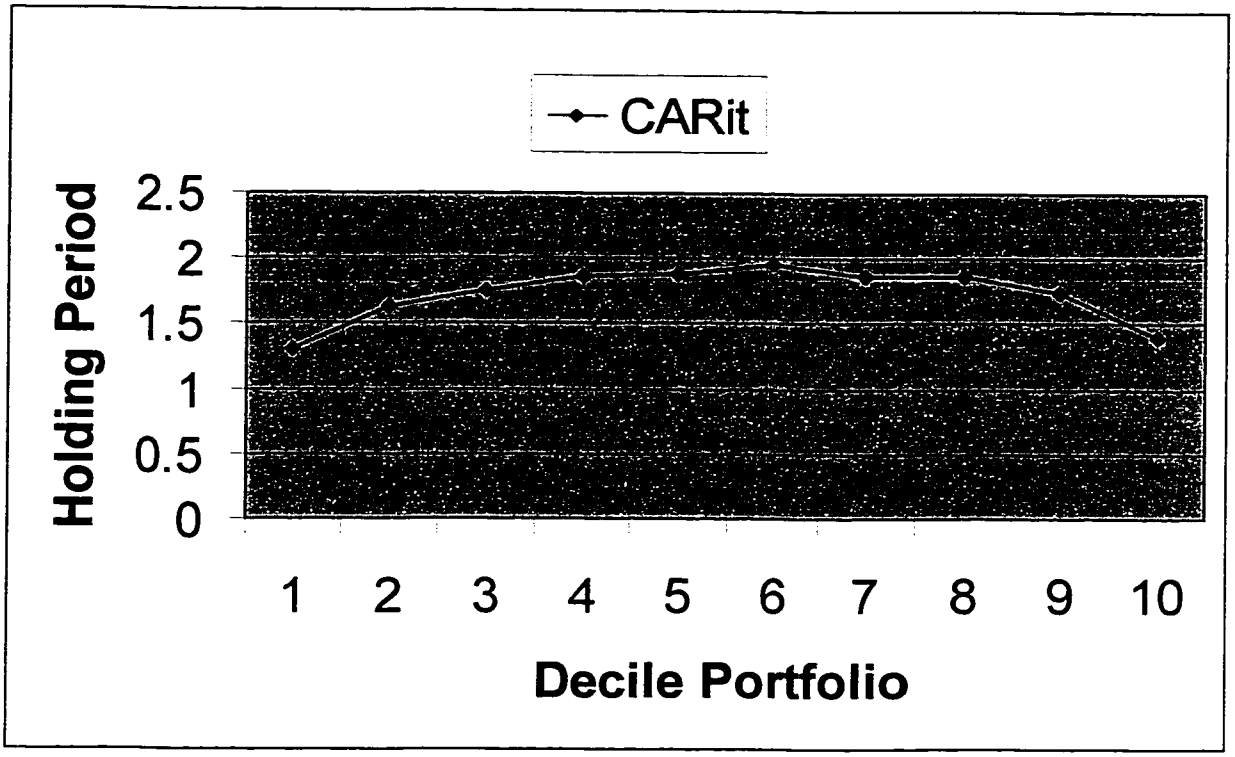
Plot of Holding Period Estimates Using Logged A-D Estimator for the Screen-Sorted Portfolios for the Dividend Yield (Last Year)



The data includes stocks in the Toronto Stock Exchange 300 index over the 1986-1996 period. Stocks of the entire time period are ranked in ascending order of their dividend yields (DY) , and ten portfolio are formed based on last year's DY (DYit-1). Plots of the average holding periods for each decile for the entire time period are graphed above. The X-axis is the number of the decile. Decile 1 is the lowest and decile 10 is the highest DYs. The Y-axis is the holding period calculated using logged A-D estimator

Figure 27

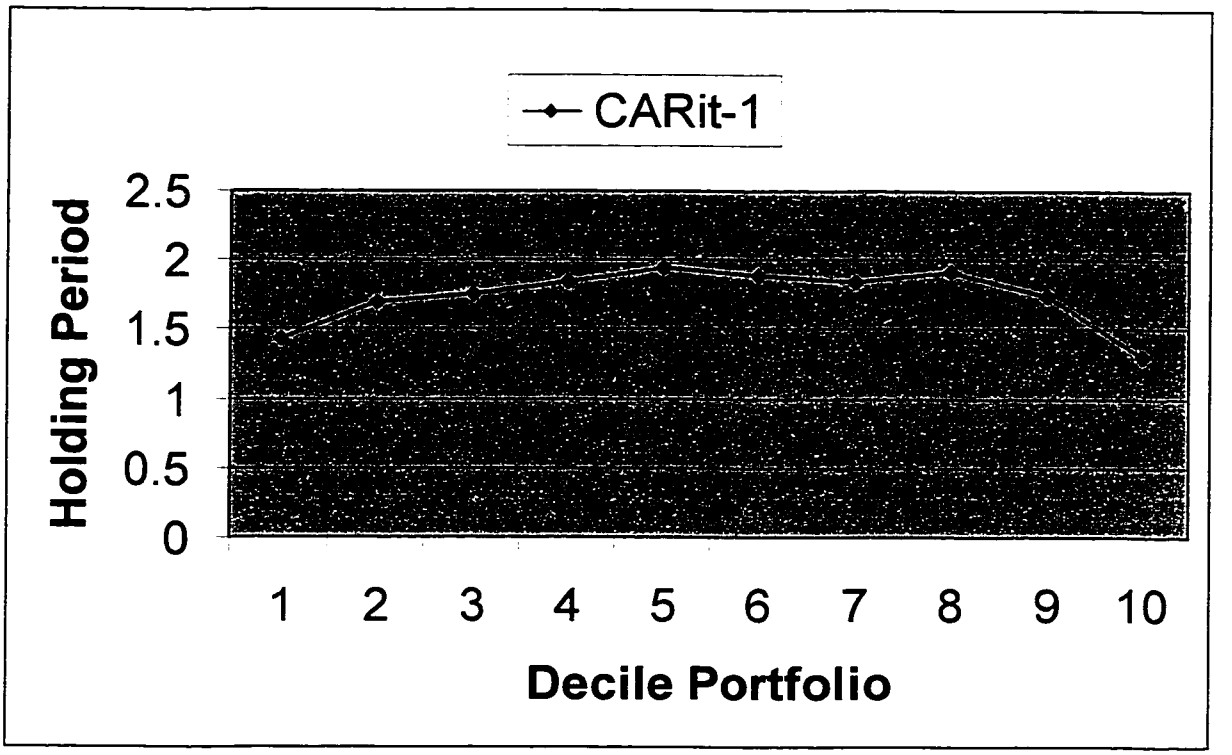
Plot of Holding Period Estimates Using Logged A-D Estimator for the Screen-Sorted Portfolios for the CAR (Current Year)



the data includes stocks in the Toronto Stock Exchange 300 index over the 1986-1996 period. Stocks of the entire time period are ranked in ascending order of their market-adjusted excess return (CAR), and ten portfolio are formed based on this year's CAR (CARit). Plots of the average holding periods for each decile for the entire time period are graphed above. The X-axis is the number of the decile. Decile 1 is the lowest and decile 10 is the highest CARs. The Y-axis is the holding period calculated using logged A-D estimator

Figure 28

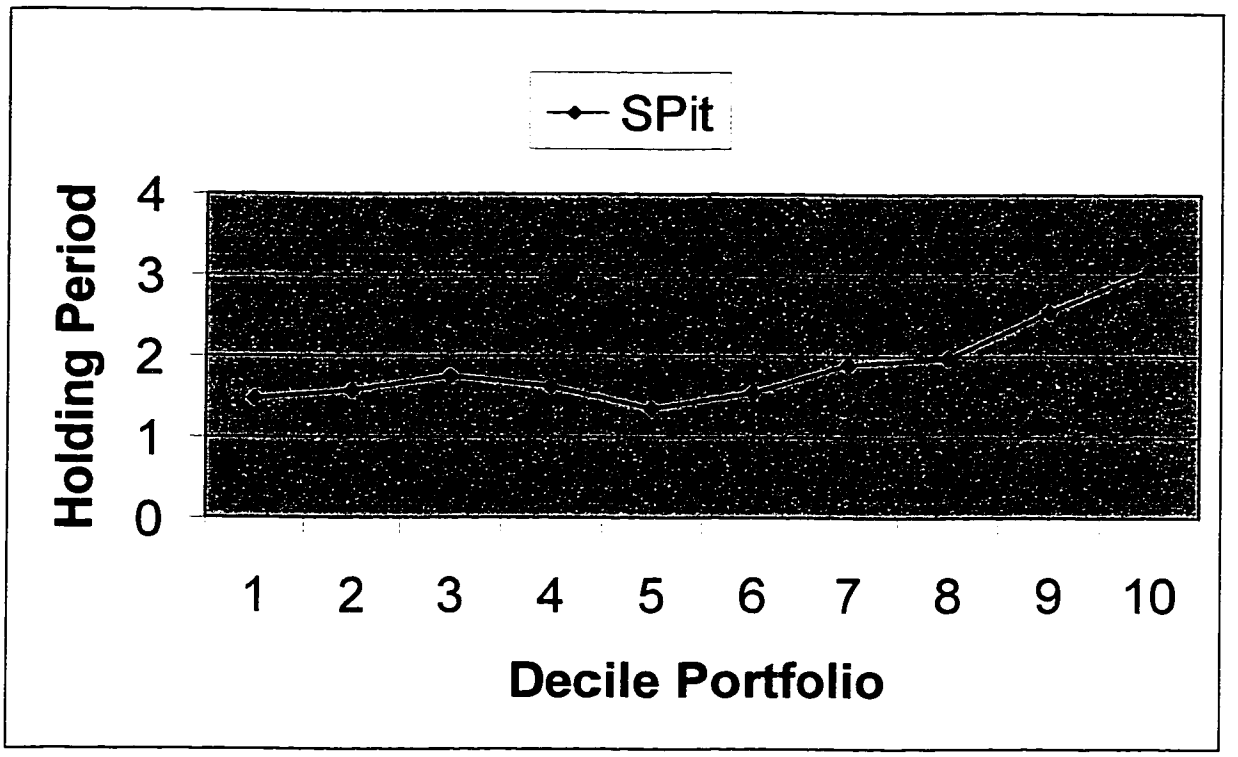
Plot of Holding Period Estimates Using Logged A-D Estimator for the Screen-Sorted Portfolios for CAR (Last Year)



The data includes stocks in the Toronto Stock Exchange 300 index over the 1986-1996 period. Stocks of the entire time period are ranked in ascending order of their market-adjusted excess return (CAR) , and ten portfolio are formed based on last year's CAR (CARit-1). Plots of the average holding periods for each decile for the entire time period are graphed above. The X-axis is the number of the decile. Decile 1 is the lowest and decile 10 is the highest CARs. The Y-axis is the holding period calculated using logged A-D estimator.

Figure 29

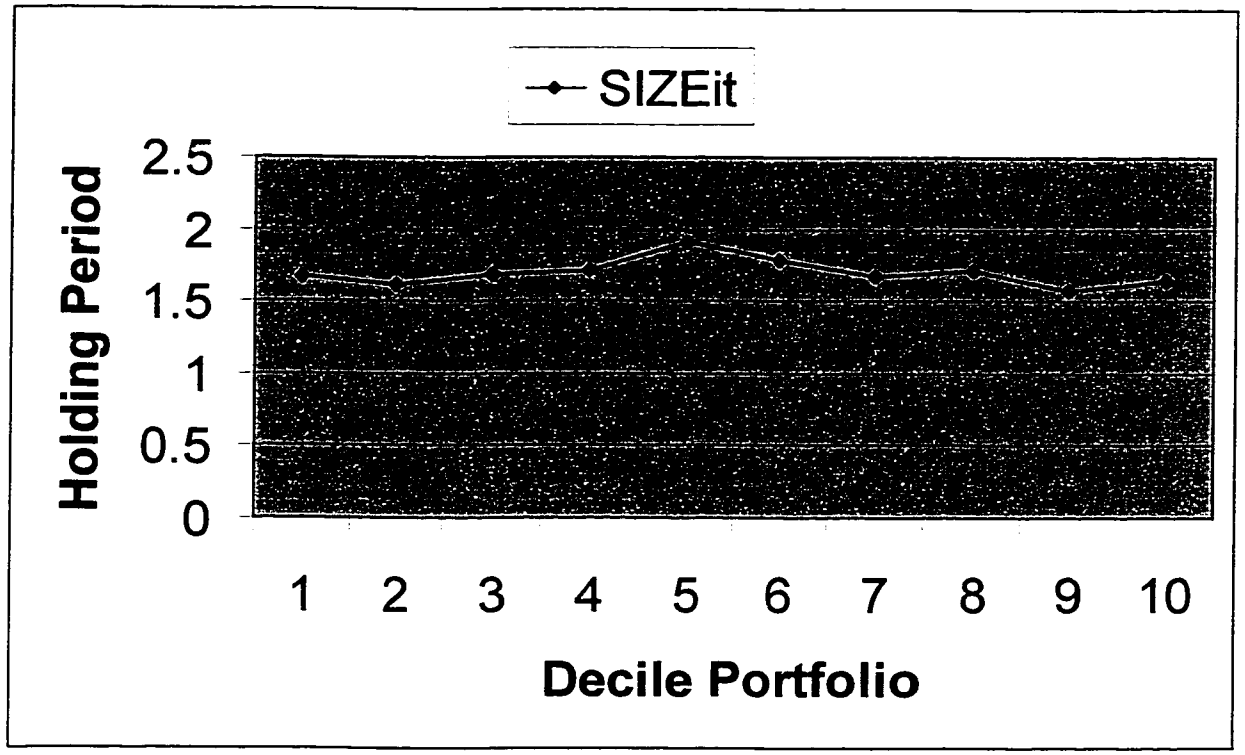
Plot of Holding Period Estimates Using Logged A-D Estimator for the Screen-Sorted Portfolios for the Spread



The data includes stocks in the Toronto Stock Exchange 300 index over the 1986-1996 period. Stocks of the entire time period are ranked in ascending order of spread (SP), and ten portfolio are formed based on this year's SP (SPit). Plots of the average holding periods for each decile for the entire time period are graphed above. The X-axis is the number of the decile. Decile 1 is the lowest and decile 10 is the highest SPs. The Y-axis is the holding period calculated using logged A-D estimator.

Figure 30

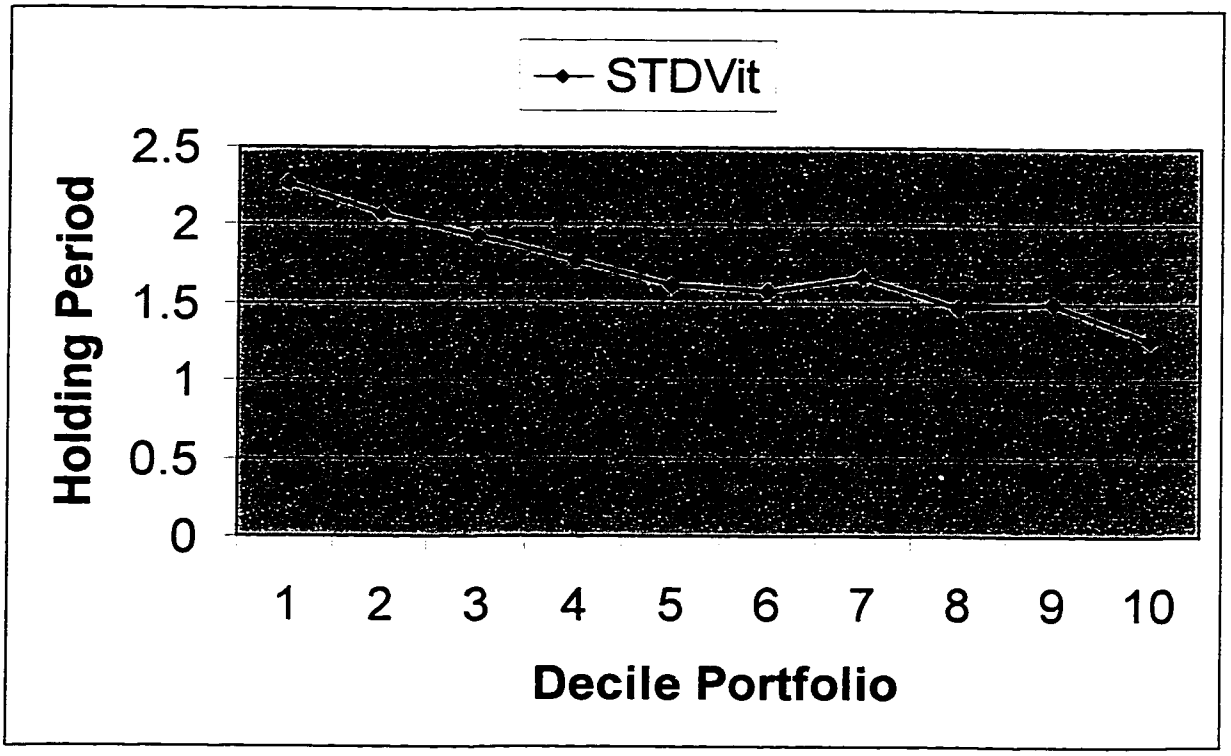
Plot of Holding Period Estimates Using Logged A-D Estimator for the Screen-Sorted Portfolios for Size



The data includes stocks in the Toronto Stock Exchange 300 index over the 1986-1996 period. Stocks of the entire time period are ranked in ascending order of their sizes, and ten portfolio are formed based on this year's size (SIZEit). Plots of the average holding periods for each decile for the entire time period are graphed above. The X-axis is the number of the decile. Decile 1 is the lowest and decile 10 is the highest sizes. The Y-axis is the holding period calculated using logged A-D estimator.

Figure 31

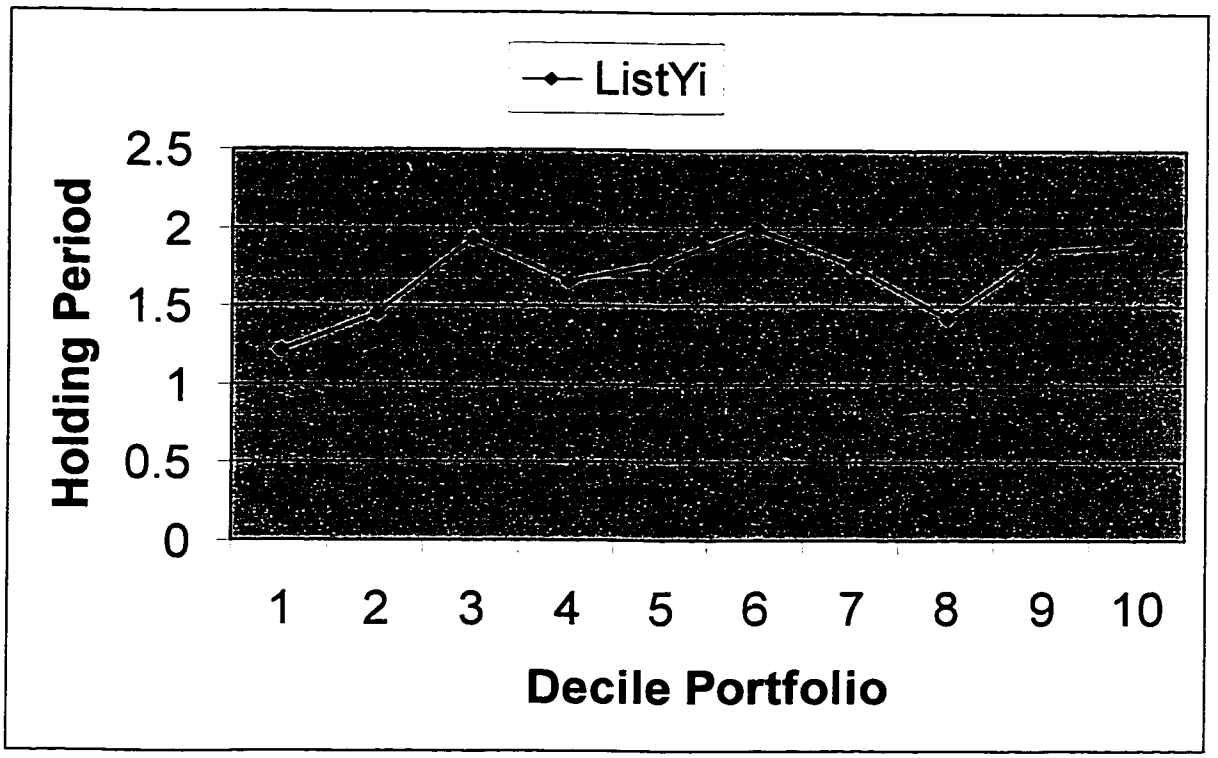
Plot of Holding Period Estimates Using Logged A-D Estimator for the Screen-Sorted Portfolios for the Standard Deviation of Monthly Return



The data includes stocks in the Toronto Stock Exchange 300 index over the 1986-1996 period. Stocks of the entire time period are ranked in ascending order of their standard deviation of monthly return (STDV), and ten portfolio are formed based on this year's STDV (STDVit). Plots of the average holding periods for each decile for the entire time period are graphed above. The X-axis is the number of the decile. Decile 1 is the lowest and decile 10 is the highest STDVs. The Y-axis is the holding period calculated using logged A-D estimator.

Figure 32

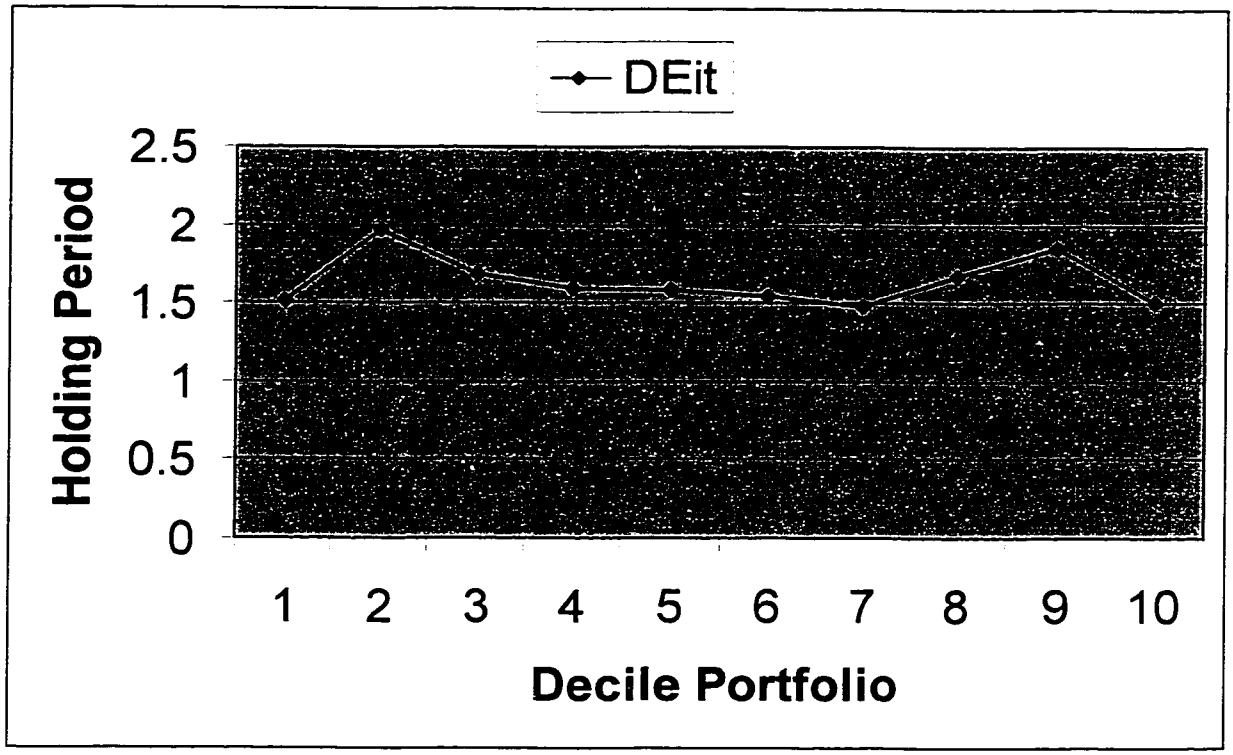
Plot of Holding Period Estimates Using Logged A-D Estimator for the Screen-Sorted Portfolios for the List Year in TSE300



The data includes stocks in the Toronto Stock Exchange 300 index over the 1986-1996 period. Stocks of the entire time period are ranked in ascending order of their number of list years in TSE 300 during the test period (ListY), and ten portfolio are formed based on ListYi. Plots of the average holding periods for each decile for the entire time period are graphed above. The X-axis is the number of the decile. Decile 1 is the lowest and decile 10 is the highest ListY. The Y-axis is the holding period calculated using logged A-D estimator.

Figure 33

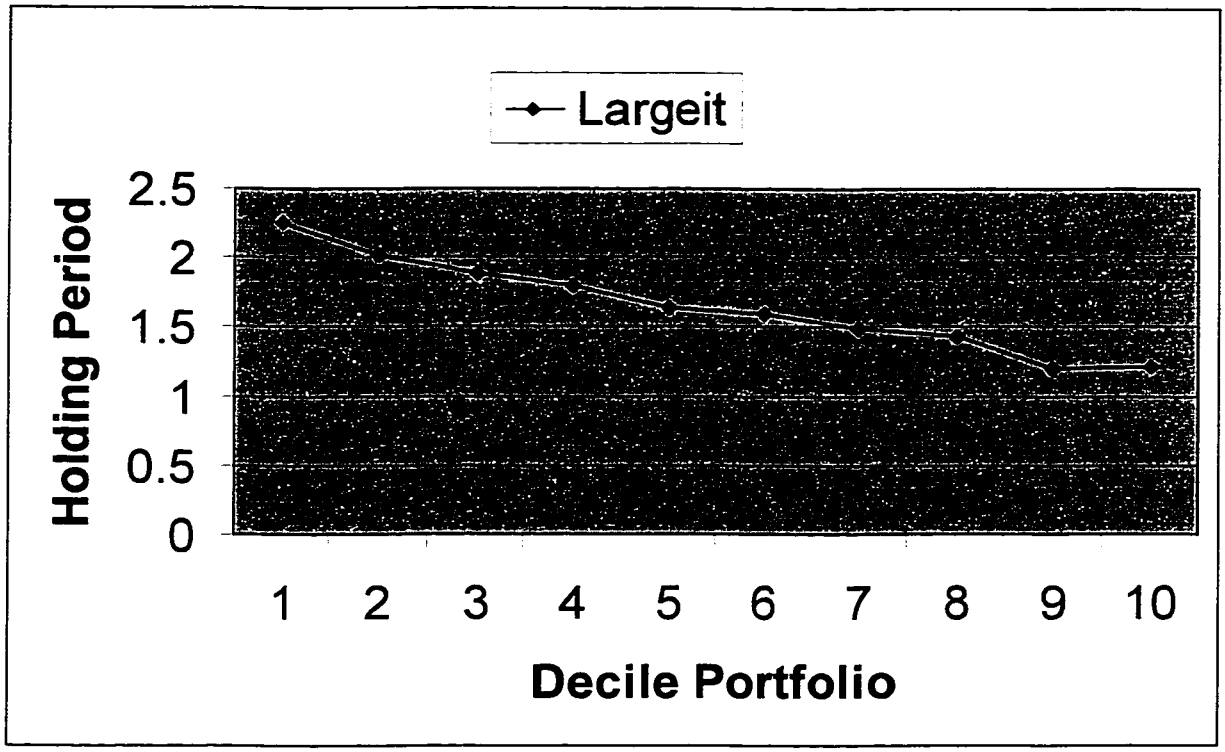
Plot of Holding Period Estimates Using Logged A-D Estimator for the Screen-Sorted Portfolios for the Debt-to-Equity Ratio



The data includes stocks in the Toronto Stock Exchange 300 index over the 1986-1996 period. Stocks of the entire time period are ranked in ascending order of their debt-to-equity ratio (DE), and ten portfolio are formed based on this year's DE (DEit). Plots of the average holding periods for each decile for the entire time period are graphed above. The X-axis is the number of the decile. Decile 1 is the lowest and decile 10 is the highest DEs. The Y-axis is the holding period calculated using logged A-D estimator

Figure 34

Plot of Holding Period Estimates Using Logged A-D Estimator for the Screen-Sorted Portfolios for Large Trade



The data includes stocks in the Toronto Stock Exchange 300 index over the 1986-1996 period. Stocks of the entire time period are ranked in ascending order of their percentage of large trade during one year (Large), and ten portfolio are formed based on this year's Large (Largeit). Plots of the average holding periods for each decile for the entire time period are graphed above. The X-axis is the number of the decile. Decile 1 is the lowest and decile 10 is the highest large trade. The Y -axis is the holding period calculated using logged A-D estimator.

Appendix 1

Holding Period Estimates Using A-D Estimator for the Screen- Sorted Portfolios (Table 1 to Table 8)

Table 1

Holding Period Estimates Using A-D Estimator for the Screen-Sorted Portfolios for the Price-to-Book Ratio

The data includes stocks in the Toronto Stock Exchange 300 index over the 1986-1996 period. Stocks for each year and the entire time period are ranked in ascending order of their price-to-book ratio (PB), and ten portfolio are formed based on this year's PB (Panel A) and last year's PB (Panel B). Calculations of the average holding periods for each decile for all stocks in that decile by year and for the entire time period are reported below. Decile 1 is the lowest and decile 10 is the highest PBs. Year 1 is from July of 1986 to June of 1987. Year 10 is from July 1995 to June of 1996. Number is the average number of stocks in each decile.

Panel A: Price-to-Book (Current Year) is used as the screen

Decile	Year1	Year2	Year3	Year4	Year5	Year6	Year7	Year8	Year9	Year10	Average
1	8.223	6.654	13.799	10.507	8.21	23.02	52.73	3.5075	6.581	6.859	10.83
2	6.122	5.932	10.764	6.5285	17.74	35.449	7.174	5.4957	3.808	4.7739	7.3597
3	12.28	16.96	5.9131	10.994	9.659	9.614	4.095	5.387	5.651	4.8212	7.3258
4	6.284	116.5	12.858	6.6037	18.03	8.9984	8.229	4.4746	4.297	4.6854	7.7686
5	5.764	4.137	12.136	19.577	12.61	15.018	5.273	3.9691	7.224	6.1328	15.231
6	4473	13.83	7.7185	9.7009	13.09	5.6536	6.731	7.9332	3.887	4.167	8.5688
7	7.168	8.984	9.4411	13.054	13.03	16.03	9.559	3.1675	8.715	4.4737	275.92
8	44.56	24.57	45.274	25.779	14.7	22.378	12.49	6.2536	5.206	4.7993	20.521
9	16.5	16.91	19.956	46.737	46.04	21.834	16.37	16.069	11.21	7.2427	18.188
10	9.691	10.25	15.593	26.291	11.31	26.257	11.87	4.2122	3.386	24.073	10.823
Mean	454.4	22.44	14.771	15.808	18.09	18.054	13.38	6.4242	6.191	5.8697	38.811
Number	11.5	12.5	14.7	16.4	18.8	20.2	22	22.7	23.5	25.9	188.2

Panel B: Price-to-Book (Last Year) is used as the screen

Decile	Year1	Year2	Year3	Year4	Year5	Year6	Year7	Year8	Year9	Year10	Average
1	5.353	6.135	11.063	10.279	9.142	27.5	4.669	7.8609	4.404	6.3826	7.4296
2	10.16	18.75	14.401	10.384	11.65	10.24	4.586	9.0039	4.673	4.2488	9.9856
3	7.493	8.302	27.966	13.736	7.103	11.72	56.28	4.2607	5.804	4.6647	16.584
4	9.78	12.74	8.0764	6.8465	23.84	14.177	8.46	4.2884	9.639	6.7763	12.197
5	13.46	12.05	18.932	24.202	12.3	19.493	9.959	4.9791	6.714	8.2631	10.885
6	4.913	6.571	7.4558	15.994	25.9	35.934	4.445	6.2809	4.282	3.4935	10.097
7	9.474	7.083	24.466	7.8387	16.89	9.4832	14.2	8.2639	5.274	4.9536	14.021
8	4475	20.11	12.361	41.068	24	25.134	9.223	4.2582	4.602	3.8322	276.73
9	15.5	120.3	8.997	13.464	13.09	7.6217	8.26	12.361	5.296	5.6098	15.836
10	7.187	9.526	14.011	6.1052	9.065	8.2165	25.39	2.9288	6.602	4.1253	6.1996
Mean	470.3	22.69	14.673	16.026	17.61	18.341	13.5	6.8258	6.173	5.8411	39.39
Number	11.2	12.5	13.9	16.2	17.9	19.5	21.8	23	23.9	25.5	185.4

Table 2

Holding Period Estimates Using A-D Estimator for the Screen-Sorted Portfolios for the Price-Earnings Ratio

The data includes stocks in the Toronto Stock Exchange 300 index over the 1986-1996 period. Stocks for each year and the entire time period are ranked in ascending order of their price-earnings ratio (PE), and ten portfolio are formed based on this year's PE (Panel A) and last year's PE (Panel B). Calculations of the average holding periods for each decile for all stocks in that decile by year and for the entire time period are reported below. Decile 1 is the lowest and decile 10 is the highest PEs. Year1 is from July of 1986 to June of 1987. Year 10 is from July 1995 to June of 1996. Number is the average number of stocks in each decile.

Panel A: Price-Earnings (Current Year) is used as the screen

Decile	Year1	Year2	Year3	Year4	Year5	Year6	Year7	Year8	Year9	Year10	Average
1	10.1	9.369	15.06	63.483	27.91	21.14	9.678	10.645	5.836	4.7978	22.788
2	2468	74.5	39.436	8.7929	22.85	12.183	7.273	5.7988	7.15	9.0104	23.159
3	6.4	22.69	16.598	29.807	116.8	12.843	9.927	6.7252	4.631	5.2206	222.07
4	6.254	14.05	11.223	8.4078	6.804	10.335	6.051	6.3477	7.843	5.3565	10.595
5	6.796	12.3	13.347	11.438	18.4	10.716	5.401	10.351	11.76	8.8741	10.214
6	7.967	8.279	14.272	14.673	15.6	12.936	16.55	4.9254	4.206	4.6162	10.953
7	11.3	10.24	17.285	25.349	23.78	25.554	11.45	4.9721	10.56	5.1258	13.532
8	10.91	18.08	17.299	24.265	23.93	9.4671	6.84	5.7897	6.472	7.001	13.676
9	22.33	11.18	17.236	16.879	11.83	39.276	7.617	7.9252	6.041	6.793	12.44
10	1.8	10.82	7.4751	12.154	37.19	146.95	3.667	6.1867	10.9	6.1068	13.405
Mean	253.7	19	17.049	21.593	27.59	17.937	13.55	6.8865	6.972	6.0966	35.626
Number	20.6	22.1	23.5	23.2	24.1	20.6	24.7	25	23.5	27.5	234.8

Panel B: Price-Earnings (Last Year) is used as the screen

Decile	Year1	Year2	Year3	Year4	Year5	Year6	Year7	Year8	Year9	Year10	Average
1	6.423	10.17	6.4405	19.106	16.5	13.963	61.69	8.3992	9.503	10.569	14.184
2	13.51	9.835	34.788	16.49	12.79	18.701	9.389	7.6728	9.401	5.1211	294.53
3	4474	25.54	10.752	15.071	36.87	14.768	11.65	9.0308	7.032	5.3584	14.229
4	23.51	8.937	25.9	18.448	15.82	22.764	4.797	3.8718	4.944	10.745	13.832
5	7.842	118.1	10.633	29.224	30.59	6.0671	13.81	4.966	8.185	3.0693	17.647
6	23.24	19.28	30.704	15.121	23.96	8.2308	4.531	5.6594	3.019	3.0139	6.2416
7	4.972	2.903	6.5006	18.05	12.64	9.1972	7.994	4.8103	6.474	5.9588	7.348
8	8.182	17.75	5.9521	8.685	6.552	8.6158	4.952	8.5619	4.352	2.9635	5.7517
9	8.494	4.569	6.3785	11.069	10.32	44.263	8.37	3.8525	4.379	7.0193	13.44
10	9.067	4.91	12.18	12.418	37.19	267.94	4.266	3.9268	3.965	5.8424	5.6293
Mean	470.3	22.69	14.546	16.076	17.79	18.117	13.72	6.7333	6.208	5.7624	39.931
Number	11.2	12.5	14.1	16.1	17.6	19	20.5	22.4	23.5	25.3	182.2

Table 3

Holding Period Estimates Using A-D Estimator for the Screen-Sorted Portfolios for the Earnings Yield

The data includes stocks in the Toronto Stock Exchange 300 index over the 1986-1996 period. Stocks for each year and the entire time period are ranked in ascending order of their earnings yield (EY), and ten portfolio are formed based on this year's EY (Panel A) and last year's EY(Panel B). Calculations of the average holding periods for each decile for all stocks in that decile by year and for the entire time period are reported below. Decile 1 is the lowest and decile 10 is the highest EYs. Year 1 is from July of 1986 to June of 1987. Year 10 is from July 1995 to June of 1996. Number is the average number of stocks in each decile.

Panel A: Earnings Yield (Current Year) is used as the screen

Decile	Year1	Year2	Year3	Year4	Year5	Year6	Year7	Year8	Year9	Year10	Average
1	7.403	5.8	9.07	8.6812	43.81	11.24	10.77	4.8307	9.958	5.6661	8.8675
2	7.768	23.85	20.289	28.939	108.8	32.61	15.58	13.712	7.318	7.0599	31.343
3	11.42	21.92	38.59	69.701	28.15	32.462	11.25	5.2133	6.313	3.4777	21.656
4	11.85	14.92	25.02	31.169	27.01	17.408	11.21	6.5104	7.282	5.2089	17.018
5	27.42	21.01	18.287	26.544	28.3	8.3467	17.64	8.9095	9.322	9.8649	13.501
6	14.2	10.58	27.665	18.843	17.29	14.181	6.613	6.6574	5.046	3.9335	11.687
7	7.113	14.22	5.4453	12.746	12.84	13.665	7.24	8.2373	5.377	10.015	243.75
8	5.24	71.8	15.884	11.043	14.4	8.3147	6.505	5.2945	7.106	4.2349	15.413
9	2741	7.053	8.3971	7.5339	7.769	7.8355	67.24	4.0918	4.048	3.5512	11.356
10	5.881	4.004	1.3269	3.8727	5.172	3.0404	2.95	2.752	2.655	25.363	12.763
Mean	270.8	19.57	17.707	22.695	30.08	15.148	15.96	6.9466	6.913	6.094	73.461
Number	19.3	21.1	22.1	20.8	20.1	13.9	18	20.4	23.4	24	209.8

Panel B: Earnings Yield (Last Year) is used as the screen

Decile	Year1	Year2	Year3	Year4	Year5	Year6	Year7	Year8	Year9	Year10	Average
1	7.403	6.673	8.4221	11.691	37.72	15.145	7.379	6.6269	9.55	7.8978	9.6618
2	7.768	7.515	23.958	28.145	60.06	50.427	19.7	14.413	8.178	4.772	21.023
3	11.42	26.6	33.486	63.773	69.1	9.6623	21.25	3.7189	4.213	5.0451	25.058
4	11.88	17.12	9.6524	12.959	16.06	9.0573	5.118	5.8859	4.392	2.8832	14.077
5	6.803	11.1	13.743	21.775	19.78	5.8555	10.31	4.6311	5.181	11.1	16.327
6	16.47	76.58	18.573	24.625	24.48	22.814	12.23	8.7573	8.234	5.6054	14.668
7	16.52	10.34	20.027	18.391	20.83	17.272	75.07	7.8675	6.036	4.8257	253.93
8	2741	18.71	24.016	16.528	14.18	14.441	10.28	8.7961	11.43	10.437	14.338
9	7.488	9.368	7.6291	14.964	15.99	11.915	9.318	8.5424	6.248	5.0956	10.347
10	2.196	23.96	3.7797	1.9744	3.775	7.2243	2.4	2.1668	4.504	1.7333	6.0262
Mean	275.8	18.93	17.833	21.474	29.14	20.101	17.19	7.411	7.016	6.1725	40.525
Number	19	21.6	22	22.6	22.1	20.2	15.6	19.2	21.2	24.2	210.7

Table 4

Holding Period Estimates Using A-D Estimator for the Screen-Sorted Portfolios for the Dividend Yield

The data includes stocks in the Toronto Stock Exchange 300 index over the 1986-1996 period. Stocks for each year and the entire time period are ranked in ascending order of their dividend yield (DY), and ten portfolio are formed based on this year's DY (Panel A) and last year's DY (Panel B). Calculations of the average holding periods for each decile for all stocks in that decile by year and for the entire time period are reported below. Decile 1 is the lowest and decile 10 is the highest DYs. Year1 is from July of 1986 to June of 1987.Year 10 is from July 1995 to June of 1996. Number is the average number of stocks in each decile

Panel A: Dividend Yield (Current Year) is used as the screen

Decile	Year1	Year2	Year3	Year4	Year5	Year6	Year7	Year8	Year9	Year10	Average
1	144	7.614	8.4957	10.805	12.99	11.998	8.678	7.387	2.458	2.3814	76.94
2	11.01	16.8	27.328	20.243	36.54	56.254	576.9	8.1347	6.736	6.2874	21.971
3	18.76	15.56	14.975	28.694	39.68	18.913	9.55	10.296	8.743	7.8344	17.492
4	12.39	11.24	21.444	17.095	12.25	21.394	11.92	6.8779	7.056	5.9339	17.463
5	6.144	9.831	12.761	11.236	21.37	49.055	12.42	9.1048	9.011	11.902	14.376
6	12.33	11.66	12.021	7.6997	11.23	8.9895	9.835	12.079	7.243	9.4735	10.536
7	2053	14.19	10.834	12.084	77.82	2659.7	8.206	4.827	9.078	5.3618	456.96
8	10.35	72.97	13.82	68.649	40.85	18.993	5.781	6.3837	8.994	5.3331	30.688
9	8.393	10.5	32.076	16.561	16.87	8.4575	46.7	7.1703	6.933	8.1969	13.446
10	19.59	2.165	4.8172	2.8002	3.131	4.1523	18.31	3.4881	15.53	12.681	5.1273
Mean	234.1	17.52	16.296	20.295	27.96	293.23	71.01	7.6733	6.98	6.5748	67.338
Number	24.5	25.3	27	26.9	27.3	26.8	27.2	26.6	30	27.2	268.8

Panel B: Dividend Yield (Last Year) is used as the screen

Decile	Year1	Year2	Year3	Year4	Year5	Year6	Year7	Year8	Year9	Year10	Average
1	144.4	6.708	8.1278	9.4316	12.82	28.094	11.3	7.4524	3.444	2.9063	76.725
2	4.976	7.604	9.8138	20.851	15.74	23.236	573.5	8.1056	3.629	4.7506	21.919
3	8.838	11.65	13.374	13.191	21.59	11.831	9.576	10.288	9.104	7.622	8.8753
4	10.76	12.3	14.311	14.917	24.26	18.419	10.26	6.3234	5.538	6.8013	12.365
5	13.12	66	22.26	15.995	14.49	45.602	8.573	8.8546	8.626	5.9254	17.497
6	10.52	17.46	10.431	60.531	15.06	2658.6	11.29	5.9884	5.087	8.9751	16.896
7	2057	11.64	18.003	15.462	11.6	26.681	50.01	10.834	15.31	8.062	473.48
8	13.84	8.057	43.384	15	85.97	23.542	7.306	10.832	6.276	9.1739	24.415
9	9.051	15.8	13.142	22.369	65.8	13.52	7.541	6.3746	8.135	8.4005	18.115
10	19.59	88.07	3.8425	4.6406	12.33	4.2579	2.502	2.4356	7.241	17.584	11.121
Mean	237.7	17.08	16.338	20	27.82	290.89	71.25	7.7018	6.92	6.572	68.32
Number	24.1	25.4	26	27.3	27.4	27	27.1	26.4	26.2	26.6	263.5

Table 5

Holding Period Estimates Using A-D Estimator for the Screen-Sorted Portfolios for the Market-Adjusted Excess Return (CAR)

The data includes stocks in the Toronto Stock Exchange 300 index over the 1986-1996 period. Stocks for each year and the entire time period are ranked in ascending order of their Market-Adjusted Excess Return (CAR), and ten portfolio are formed based on this year's CAR (Panel A) and last year's CAR (Panel B). Calculations of the average holding periods for each decile for all stocks in that decile by year and for the entire time period are reported below. Decile 1 is the lowest and decile 10 is the highest CARs. Year1 is from July of 1986 to June of 1987.Year 10 is from July 1995 to June of 1996. Number is the average number of stocks in each decile.

Panel A: CAR (Current Year) is used as the screen

Decile	Year1	Year2	Year3	Year4	Year5	Year6	Year7	Year8	Year9	Year10	Average
1	14.934	12.696	10.498	14.248	19.014	19.643	7.4182	6.0186	6.93	5.0978	8.9615
2	6.8569	15.769	14.684	10.968	9.1648	23.101	13.533	4.079	4.662	5.2492	12.032
3	13.313	20.427	9.6376	10.496	9.2601	17.159	17.183	9.9965	7.333	7.1694	222.07
4	2246.3	13.98	27.276	22.511	24.678	17.088	7.6976	5.6954	8.937	5.6999	14.902
5	14.383	14.761	16.707	30.732	24.464	13.678	10.839	10.597	11.95	6.9815	14.321
6	7.723	11.274	18.912	16.103	28.189	16.436	9.8944	10.525	5.876	7.2438	13.551
7	15.102	66.693	22.849	18.506	14.6	9.7516	6.0346	10.836	5.801	12.386	18.112
8	6.4539	12.125	23.314	14.609	21.904	17.315	10.769	8.1829	7.264	4.8817	12.392
9	8.3018	5.5057	11.056	13.275	23.123	10.118	4.0899	4.3362	6.608	5.9787	8.5014
10	0	9.0653	14.405	1.9999	4.0708	3.3306	0.6251	1.1669	1.157	1.1537	0.8547
Mean	251.18	18.347	16.006	16.189	18.412	17.951	9.4895	7.5797	6.942	6.4191	34.032
Number	23.1	23.5	22.7	22.8	23.4	23.8	24.9	25.4	25.4	26.2	241.2

Panel B: CAR (Last Year) is used as the screen

Decile	Year1	Year2	Year3	Year4	Year5	Year6	Year7	Year8	Year9	Year10	Average
1	13.977	14.689	17.182	10.086	21.383	25.938	9.8302	5.4581	5.367	6.6733	11.714
2	6.8287	12.307	15.976	12.611	19.775	12.407	12.241	15.128	2.991	4.0267	11.62
3	7.4763	8.9667	25.336	6.1562	15.928	9.5397	9.1058	6.6397	6.972	9.382	17.693
4	13.566	83.787	20.992	18.851	27.012	20.844	48.609	10.722	6.044	6.3133	18.2
5	14.442	16.365	10.393	18.655	24.325	25.127	12.336	8.4305	11.84	7.4961	13.573
6	2346.5	9.9455	17.637	15.051	13.356	24.5	7.6589	5.8494	7.596	4.7352	14.285
7	13.702	15.402	18.983	12.171	23.18	11.9	8.5584	4.9166	10.32	5.0854	221.08
8	7.5551	7.4566	16.146	45.239	16.06	12.038	12.397	7.8666	9.954	11.334	13.647
9	6.8689	6.3587	9.2094	9.961	36.373	45.84	8.1572	2.9559	5.665	5.1132	9.5954
10	5.9132	2.8378	11.055	4.1696	5.8786	0	2.2251	3.398	0.831	1.2171	4.9682
Mean	264.45	18.452	16.434	16.115	21.153	22.239	13.746	7.5797	6.942	6.4191	36.447
Number	23.2	23.3	23.3	22.9	23.5	24	25	25.4	25.4	26.2	242.2

Table 6

Holding Periods Estimates Using A-D Estimator for the Screen-Sorted Portfolios for the Spread and Size

The data includes stocks in the Toronto Stock Exchange 300 index over the 1986-1996 period. Stocks for each year and the entire time period are ranked in ascending order of their spread or size, and ten portfolio are formed based on spread (Panel A) or size (Panel B). Calculations of the average holding periods for each decile for all stocks in that decile by year and for the entire time period are reported below. Decile 1 is the lowest and decile 10 is the highest spreads and sizes. Year 1 is from July of 1986 to June of 1987. Year 10 is from July 1995 to June of 1996. Number is the average number of stocks in each decile.

Panel A: Spread is used as the screen

Decile	Year1	Year2	Year3	Year4	Year5	Year6	Year7	Year8	Year9	Year10	Average
1	6.1788	7.5669	10.015	6.7061	42.675	10.941	9.7865	5.4429	6.6791	5.0221	9.8923
2	8.4665	6.2347	6.5734	10.045	57.794	8.8624	7.3795	7.1492	7.4662	7.1628	27.582
3	137.18	13.945	19.993	24.846	19.478	16.504	5.2492	5.7009	8.0739	2.8274	11.806
4	13.586	10.699	23.287	8.762	7.6237	13.064	8.097	7.0227	10.497	7.1446	7.2794
5	8.8867	9.0992	19.656	10.396	15.729	9.1484	7.8071	4.0511	3.2628	5.5196	8.1022
6	8.1763	7.4419	10.863	7.6663	18.69	14.364	5.5115	4.434	8.793	2.7008	193.24
7	5.5341	10.608	15.049	27.011	23.588	2765.6	9.9231	7.5574	4.9387	7.5339	275.33
8	2243.8	19.647	19.942	55.948	34.927	22.38	8.2786	10.936	5.4147	6.4788	97.107
9	20.887	73.946	25.215	35.739	44.257	99.943	57.516	16.802	11.828	10.521	27.637
10	9.1352	29.269	28.343	33.949	23.636	13.144	7627.7	35.497	7.3768	61.531	47.879
Mean	221.68	16.548	15.896	19.578	27.422	275.35	67.067	7.3793	7.0044	6.2369	63.967
Number	26.9	27.3	28	28.9	28.4	28.1	28.8	29.7	29.2	29.2	284.5

Panel B: Size is used as the screen

Decile	Year1	Year2	Year3	Year4	Year5	Year6	Year7	Year8	Year9	Year10	Average
1	4.8731	7.8631	13.245	8.7253	13.314	51.575	593.77	5.3743	6.0077	6.4368	76.095
2	5.6394	9.6822	14.002	12.768	32.47	2778.2	7.1006	5.5119	5.9572	7.8956	278.7
3	18.467	15.213	30.414	26.978	44.027	8.406	10.575	10.066	8.6158	8.4405	13.241
4	12.874	17.405	13.645	20.091	16.989	19.54	10.934	8.7038	5.6508	6.503	15.923
5	8.8164	10.763	20.39	61.737	37.019	16.781	7.7404	5.2866	5.566	4.2503	19.473
6	9.8708	7.9622	9.9824	17.904	63.813	45.595	10.072	10.604	5.8505	5.3376	16.316
7	5.9168	16.44	19.808	16.059	36.03	11.64	45.894	6.8641	10.08	5.2668	14.263
8	6.2356	9.4532	12.695	11.694	12.815	15.073	11.588	6.8399	7.4989	9.8656	8.9345
9	2350.7	66.956	14.079	13.679	12.463	14.823	8.7469	8.1765	6.6774	5.9683	211.81
10	0	9.0129	0	10.974	10.704	21.871	3.7492	4.8957	3.2993	3.8672	4.7473
Mean	252.73	17.837	16.191	20.416	27.665	285.49	69.072	7.4439	6.8563	6.3293	67.565
Number	22	23.1	25	25.8	26.8	26.9	27.9	28	27.5	28.4	261.4

Table 7

Holding Period Estimates Using A-D Estimator for the Screen-Sorted Portfolios for the Standard Deviation and List Year in TSE 300

The data includes stocks in the Toronto Stock Exchange 300 index over the 1986-1996 period. Stocks for each year and the entire time period are ranked in ascending order of their standard deviation of monthly returns or list year in TSE 300, and ten portfolio are formed based on standard deviation (Panel A) or list year in TSE 300 (Panel B). Calculations of the average holding periods for each decile for all stocks in that decile by year and for the entire time period are reported below. Decile 1 is the lowest and decile 10 is the highest STDV or LIstY. Year1 is from July of 1986 to June of 1987. Year 10 is from July 1995 to June of 1996. Number is the average number of stocks in each decile.

Panel A : Standard Deviation is used as the screen

Decile	Year1	Year2	Year3	Year4	Year5	Year6	Year7	Year8	Year9	Year10	Average
1	8.7405	16.254	25.936	34.922	29.246	18.069	11.4735	9.337	9.8403	14.968	16.327
2	7.6969	12.837	14.043	19.632	19.812	24.884	10.8136	9.702	11.254	4.6164	14.19
3	9.652	16.573	26.381	20.492	14.254	10.907	10.6093	7.6073	5.8197	7.2568	9.9373
4	6.735	6.1888	11.374	11.999	8.8265	8.4425	7.67418	6.7865	5.5753	4.9766	9.0427
5	2239.6	10.657	14.306	14.142	18.817	13.257	5.97675	3.4973	5.8964	2.9044	222.85
6	9.9547	78.422	13.729	6.5064	19.633	9.9962	8.16734	6.1303	5.2538	4.2607	10.666
7	13.812	9.2583	14.349	12.172	26.877	33.864	4.95648	5.8509	5.0121	4.618	11.463
8	5.5639	3.4402	6.9877	6.6545	14.22	24.305	9.2564	9.6594	7.1065	5.2276	16.478
9	8.2077	3.1873	8.2775	8.3636	6.5068	11.012	5.10519	4.8694	3.0132	5.3377	8.2693
10	11.992	154.38	14.405	44.692	38.986	5.3368	10.1566	33.436	0	1.7642	15.181
Mean	254.35	18.366	15.538	16.265	18.077	17.951	9.41224	7.5797	6.9421	6.3731	33.988
Number	22.8	23.2	22.5	22.7	23.2	23.8	24.8	25.4	25.3	26.4	240.1

Panel B : List Year in TSE 300 is used as the screen

Decile	Year1	Year2	Year3	Year4	Year5	Year6	Year7	Year8	Year9	Year10	Average
1	1235.1	10.749	16.241	57.516	60.078	21.374	7.80614	4.9563	6.9226	4.7314	10.5
2	8.9626	10.985	9.2441	8.1984	36.036	8.7979	10.4042	10.175	5.7075	3.0248	21.713
3	6.9848	5.4802	24.111	17.35	11.371	69.177	534.943	5.4901	6.0723	5.3295	70.02
4	6.4682	13.217	15.584	27.271	28.981	2480.7	10.9891	8.8446	7.6822	5.2644	265.41
5	10.619	13.569	18.493	14.778	58.843	17.892	42.039	7.7729	6.9425	8.3505	23.572
6	16.958	15.39	18.65	18.749	18.793	13.099	9.67609	11.99	12.029	11.912	13.378
7	9.0049	10.392	11.969	14.059	12.796	16.498	9.04625	6.4093	7.5206	7.3606	7.4957
8	8.0529	13.255	12.383	12.764	12.072	9.9005	10.9228	8.5075	6.7043	7.1926	12.282
9	919.06	57.021	18.638	12.645	14.661	10.593	7.39573	6.8765	7.4604	7.0033	103.86
10	2.6107	2.2528	6.824	5.6318	6.4101	6.2636	5.27804	3.6398	5.24	4.2119	2.6107
Mean	220.78	16.313	15.745	19.508	27.144	271.43	66.5346	7.3793	6.9801	6.349	63.505
Number	29.9	30.1	30	30.1	30.1	30.1	30.1	30.1	30	30	300.5

Table 8

Holding Period Estimates Using A-D Estimator for the Screen-Sorted Portfolios for the Debt-Equity Ratio and Large Trade

The data includes stocks in the Toronto Stock Exchange 300 index over the 1986-1996 period. Stocks for each year and the entire time period are ranked in ascending order of their debt-to-equity ratio (DE) or percentage of large trade, and ten portfolio are formed based on debt-to-cquity ratio (Panel A) or large trade (Panel B). Calculations of the average holding periods for each decile for all stocks in that decile by year and for the entire time period are reported below. Decile 1 is the lowest and decile 10 is the highest DE or large trade. Yearl is from July of 1986 to June of 1987. Year 10 is from July 1995 to June of 1996. Number is the average number of stocks in each decile.

Panel A: Debt-to Equity Ratio is used as the screen

Decile	Yearl	Year2	Year3	Year4	Year5	Year6	Year7	Year8	Year9	Year10	Average
1	16.688	16.899	33.422	25.947	29.979	12.637	12.5298	13.353	9.7629	9.3511	16.863
2	7.4004	6.1313	9.42	30.53	14.923	23.625	13.621	13.004	14.139	7.9217	14.366
3	6.7708	11.968	22.067	19.753	35.234	23.656	11.8262	7.689	8.4866	3.6223	14.476
4	4470.3	9.9001	6.2045	12.651	12.207	13.052	5.24275	3.5979	8.3633	5.4861	260.35
5	15.705	119.09	12.972	12.059	12.46	9.7121	6.64021	4.5137	4.3585	7.4892	8.9326
6	7.8515	7.2549	20.339	8.2386	9.0107	10.44	54.9359	5.7158	3.4822	4.9099	7.4332
7	14.741	7.3201	9.8684	10.247	7.7661	6.9218	7.49852	5.3075	4.8925	5.7256	13.362
8	9.4341	20.571	13.381	16.575	21.576	14.295	7.08707	5.4198	6.4661	5.7654	10.835
9	9.9071	8.935	16.905	11.696	20.903	49.461	6.83248	3.2524	5.9397	5.2276	13.68
10	2.6097	2.3375	18.892	1.5833	5.6193	5.5513	2.97963	6.2337	4.6193	4.7204	10.612
Mean	454.35	22.44	15.075	15.684	17.619	17.801	13.272	6.771	6.9801	5.8608	37.225
Number	11.6	12.7	17	18.7	20.1	21	22.6	23.4	29.6	26.2	202.9

Panel B: Large Trade is used as the screen

Decile	Yearl	Year2	Year3	Year4	Year5	Year6	Year7	Year8	Year9	Year10	Average
1	7.6751	9.025	24.312	26.3485	22.448	41.632	13.174	10.937	8.203	10.4557	23.1714
2	14.034	67.842	18.419	19.0846	13.767	9.5536	9.8919	11.445	9.646	13.0818	12.5315
3	10.557	16.348	9.7361	11.6386	20.06	15.711	10.561	11.377	6.9514	7.13864	13.33
4	7.7831	6.6575	15.766	7.75917	35.22	12.548	4.6707	8.1177	7.7882	4.7265	10.7408
5	6.5682	9.7844	6.0175	11.6885	13.583	12.136	11.034	4.5058	6.4854	2.94425	8.72896
6	6.7317	6.6829	13.434	10.5102	13.721	10.976	6.3727	5.3597	5.9983	3.12669	7.6501
7	6.1486	9.3563	9.7539	8.7129	10.652	8.1815	7.1722	4.5306	3.4138	3.06013	6.54884
8	7.6397	8.102	5.976	6.51267	8.0045	6.6055	4.7065	3.5461	3.614	5.38246	4.67679
9	3.7193	4.5962	7.6628	7.67724	5.6947	6.3347	4.9768	3.444	4.8569	3.27226	5.17004
10	3.3977	0.2954	1.8825	3.42261	4.5386	6.1175	10.661	3.2172	1.5315	3.18781	2.41698
Mean	9.3696	15.735	13.283	13.9275	17.444	16.928	9.2121	7.3363	7.0288	6.39218	11.5425
Number	26.2	27	27.4	28.4	28	27.9	28.6	29.6	29.1	29.4	281.6

Appendix 2

Correlation Metrix of Variables

Note: The first column is the variables in the regression Model. The second column is the variable in the correlation matrix. E.g. Val*it* in the regression model is LOWPB in the correlation metrix

VALit	LOWPB
VALit	LOWPB
VALit-1	LOWPBL
GRit	HIGHPEN
GRit-1	HIGHPENL
PBit	P_B
PBit-1	P_BL
EYit	E_Y
EYit-1	E_YL
DYit	D-Y
DYit-1	D_YL
PCit	P_C
PCit-1	P_CL
LOSit	LOS
LOSit-1	LOSL
WINit	WIN
WINit-1	WINL
CARit	CAR
CARit-1	CARL
SPit	SPREAD2
SIZEit	SIZE1
STDVit	STDV2
R2Ei	R2_E
R2Ci	R2-C
ListYi	LISTYEAR
LowPit	LOWPRICE
DEit	D-EN
Largeit	LARGE

Correlations

		HIT	LOWPB	LOWPBL	HIGHPEN	HIGHPEL	P_B	P_BL	E_Y
HIT	Pearson Correlation	1.000	-.047*	.003	.008	-.095**	.073**	.020	-.095**
	Sig. (2-tailed)	.	.011	.871	.669	.000	.001	.388	.000
	N	2957	2957	2957	2957	2957	1932	1833	2653
LOWPB	Pearson Correlation	-.047*	1.000	.482**	-.021	.118**	-.213**	.063**	.125**
	Sig. (2-tailed)	.011	.	.000	.250	.000	.000	.007	.000
	N	2957	3099	3099	3019	3019	1963	1863	2679
LOWPBL	Pearson Correlation	.003	.482**	1.000	.055**	.171**	-.112**	-.035	.037
	Sig. (2-tailed)	.871	.000	.	.003	.000	.000	.129	.055
	N	2957	3099	3099	3019	3019	1963	1863	2679
HIGHPEN	Pearson Correlation	.008	-.021	.055**	1.000	.411**	.180**	.005	-.225**
	Sig. (2-tailed)	.669	.250	.003	.	.000	.000	.817	.000
	N	2957	3019	3019	3019	3019	1963	1863	2679
HIGHPEL	Pearson Correlation	-.095**	.118**	.171**	.411**	1.000	.095**	.056*	-.021
	Sig. (2-tailed)	.000	.000	.000	.000	.	.000	.015	.268
	N	2957	3019	3019	3019	3019	1963	1863	2679
P_B	Pearson Correlation	.073**	-.213**	-.112**	.180**	.095**	1.000	-.134**	-.096**
	Sig. (2-tailed)	.001	.000	.000	.000	.000	.	.000	.000
	N	1932	1963	1963	1963	1963	1963	1845	1955
P_BL	Pearson Correlation	.020	.063**	-.035	.005	.056*	-.134**	1.000	.034
	Sig. (2-tailed)	.388	.007	.129	.817	.015	.000	.	.148
	N	1833	1863	1863	1863	1863	1845	1863	1840
E_Y	Pearson Correlation	-.095**	.125**	.037	-.225**	-.021	-.096**	.034	1.000
	Sig. (2-tailed)	.000	.000	.055	.000	.268	.000	.148	.
	N	2653	2679	2679	2679	2679	1955	1840	2679
E_YL	Pearson Correlation	.099**	.074**	.125**	-.119**	-.256**	-.074**	-.039	.421**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.001	.093	.000
	N	2619	2643	2643	2643	2643	1901	1854	2619
D_Y	Pearson Correlation	.048*	.074**	.041*	-.165**	-.130**	-.099**	.042	.310**
	Sig. (2-tailed)	.014	.000	.035	.000	.000	.000	.071	.000
	N	2649	2688	2688	2688	2688	1905	1812	2627
D_YL	Pearson Correlation	.103**	.055**	.056**	-.118**	-.105**	-.064**	-.008	.112**
	Sig. (2-tailed)	.000	.005	.004	.000	.000	.006	.736	.000
	N	2598	2635	2635	2635	2635	1846	1795	2563
P_C	Pearson Correlation	.053*	-.055*	-.038	.147**	.143**	.356**	.003	-.140**
	Sig. (2-tailed)	.028	.022	.111	.000	.000	.000	.907	.000
	N	1723	1733	1733	1733	1733	1730	1680	1732
P_CL	Pearson Correlation	-.020	-.010	-.014	.096**	.191**	.098**	.013	-.071**
	Sig. (2-tailed)	.426	.676	.582	.000	.000	.000	.587	.004
	N	1632	1654	1654	1654	1654	1636	1652	1634
LOS12	Pearson Correlation	-.013	.143**	.064**	.056**	.092**	-.055*	.029	-.044*
	Sig. (2-tailed)	.492	.000	.000	.002	.000	.015	.210	.022
	N	2957	3019	3019	3019	3019	1963	1863	2679
LOS12P	Pearson Correlation	-.040*	.110**	.041*	.012	.098**	-.065**	.059*	.018
	Sig. (2-tailed)	.030	.000	.026	.525	.000	.004	.011	.360
	N	2957	3019	3019	3019	3019	1963	1863	2679
WIN12	Pearson Correlation	-.043*	-.115**	-.029	.102**	.049**	.169**	.032	.039*
	Sig. (2-tailed)	.020	.000	.109	.000	.007	.000	.162	.041
	N	2957	3019	3019	3019	3019	1963	1863	2679

Correlations

		HIT	LOWPB	LOWPBL	HIGHPEN	HIGHPEL	P_B	P_BL	E_Y
WIN12P	Pearson Correlation	-.029	-.054**	-.022	.514**	.278**	.210**	-.024	-.172**
	Sig. (2-tailed)	.118	.003	.234	.000	.000	.000	.300	.000
	N	2957	3019	3019	3019	3019	1963	1863	2679
MON12	Pearson Correlation	.004	-.138**	-.029	.089**	.033	.207**	-.048*	-.029
	Sig. (2-tailed)	.839	.000	.158	.000	.107	.000	.045	.172
	N	2378	2412	2412	2412	2412	1816	1740	2217
PRMON12	Pearson Correlation	-.020	-.109**	-.032	.022	.007	.151**	.002	.031
	Sig. (2-tailed)	.330	.000	.110	.269	.738	.000	.923	.147
	N	2388	2422	2422	2422	2422	1815	1741	2220
SPREAD2	Pearson Correlation	.190**	.171**	.065**	-.075**	-.003	-.063**	.023	-.127**
	Sig. (2-tailed)	.000	.000	.001	.000	.885	.006	.329	.000
	N	2831	2845	2845	2845	2845	1915	1805	2633
SIZE1	Pearson Correlation	.018	-.181**	-.124**	.031	-.017	.018	.021	.131**
	Sig. (2-tailed)	.358	.000	.000	.117	.389	.435	.358	.000
	N	2590	2614	2614	2614	2614	1929	1854	2595
STDV2	Pearson Correlation	-.228**	.091**	.044*	.109**	.143**	.123**	.033	-.163**
	Sig. (2-tailed)	.000	.000	.032	.000	.000	.000	.170	.000
	N	2367	2401	2401	2401	2401	1813	1738	2210
R2_C	Pearson Correlation	.098**	-.175**	-.069**	.066**	-.078**	.158**	.027	.053*
	Sig. (2-tailed)	.000	.000	.003	.005	.001	.000	.273	.028
	N	1748	1772	1772	1772	1772	1745	1666	1744
R2_E	Pearson Correlation	.145**	-.164**	-.014	.064**	-.081**	.191**	-.019	.028
	Sig. (2-tailed)	.000	.000	.555	.006	.001	.000	.443	.243
	N	1783	1807	1807	1807	1807	1780	1701	1779
LISTYEAR	Pearson Correlation	.094**	.053**	.114**	.079**	.122**	-.051*	-.052*	.140**
	Sig. (2-tailed)	.000	.004	.000	.000	.000	.024	.025	.000
	N	2957	3014	3014	3014	3014	1963	1863	2679
LOWPRICE	Pearson Correlation	-.044*	.125**	.068**	-.033	.056**	-.066**	.028	-.073**
	Sig. (2-tailed)	.017	.000	.000	.073	.002	.003	.231	.000
	N	2957	3099	3099	3019	3019	1963	1863	2679
D_EN	Pearson Correlation	-.085**	.084**	.074**	-.047*	.104**	-.034	.060**	.056*
	Sig. (2-tailed)	.000	.000	.001	.034	.000	.139	.010	.013
	N	1989	2024	2024	2024	2024	1954	1858	1996
LARGE	Pearson Correlation	-.197**	.031	-.039*	-.039*	-.016	-.093**	.038	-.003
	Sig. (2-tailed)	.000	.103	.039	.039	.389	.000	.103	.883
	N	2803	2816	2816	2816	2816	1908	1800	2609

Correlations

		E_YL	D_Y	D_YL	P_C	P_CL	LOS12	LOS12P	WIN12
HIT	Pearson Correlation	.099**	.048*	.103**	.053*	-.020	-.013	-.040*	-.043*
	Sig. (2-tailed)	.000	.014	.000	.028	.426	.492	.030	.020
	N	2619	2649	2598	1723	1632	2957	2957	2957
LOWPB	Pearson Correlation	.074**	.074**	.055**	-.055*	-.010	.143**	.110**	-.115**
	Sig. (2-tailed)	.000	.000	.005	.022	.676	.000	.000	.000
	N	2643	2688	2635	1733	1654	3019	3019	3019
LOWPBL	Pearson Correlation	.125**	.041*	.056**	-.038	-.014	.064**	.041*	-.029
	Sig. (2-tailed)	.000	.035	.004	.111	.582	.000	.026	.109
	N	2643	2688	2635	1733	1654	3019	3019	3019
HIGHPEN	Pearson Correlation	-.119**	-.165**	-.118**	.147**	.096**	.056**	.012	.102**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.002	.525	.000
	N	2643	2688	2635	1733	1654	3019	3019	3019
HIGHPEL	Pearson Correlation	-.256**	-.130**	-.105**	.143**	.191**	.092**	.098**	.049**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.007
	N	2643	2688	2635	1733	1654	3019	3019	3019
P_B	Pearson Correlation	-.074**	-.099**	-.064**	.356**	.098**	-.055*	-.065**	.169**
	Sig. (2-tailed)	.001	.000	.006	.000	.000	.015	.004	.000
	N	1901	1905	1846	1730	1636	1963	1963	1963
P_BL	Pearson Correlation	-.039	.042	-.008	.003	.013	.029	.059*	.032
	Sig. (2-tailed)	.093	.071	.736	.907	.587	.210	.011	.162
	N	1854	1812	1795	1680	1652	1863	1863	1863
E_Y	Pearson Correlation	.421**	.310**	.112**	-.140**	-.071**	-.044*	.018	.039*
	Sig. (2-tailed)	.000	.000	.000	.000	.004	.022	.360	.041
	N	2619	2627	2563	1732	1634	2679	2679	2679
E_YL	Pearson Correlation	1.000	.202**	.195**	-.105**	-.173**	-.058**	-.049*	.051**
	Sig. (2-tailed)	.	.000	.000	.000	.000	.003	.013	.009
	N	2643	2583	2584	1707	1647	2643	2643	2643
D_Y	Pearson Correlation	.202**	1.000	.267**	-.095**	-.070**	-.037	-.042*	-.103**
	Sig. (2-tailed)	.000	.	.000	.000	.005	.055	.028	.000
	N	2583	2688	2613	1689	1612	2688	2688	2688
D_YL	Pearson Correlation	.195**	.267**	1.000	-.061*	-.064*	-.060**	-.039*	-.021
	Sig. (2-tailed)	.000	.000	.	.013	.010	.002	.047	.287
	N	2584	2613	2635	1655	1595	2635	2635	2635
P_C	Pearson Correlation	-.105**	-.095**	-.061*	1.000	.448**	-.017	-.007	.112**
	Sig. (2-tailed)	.000	.000	.013	.	.000	.467	.772	.000
	N	1707	1689	1655	1733	1613	1733	1733	1733
P_CL	Pearson Correlation	-.173**	-.070**	-.064*	.448**	1.000	.033	.038	.028
	Sig. (2-tailed)	.000	.005	.010	.000	.	.175	.122	.247
	N	1647	1612	1595	1613	1654	1654	1654	1654
LOS12	Pearson Correlation	-.058**	-.037	-.060**	-.017	.033	1.000	.115**	-.282**
	Sig. (2-tailed)	.003	.055	.002	.467	.175	.	.000	.000
	N	2643	2688	2635	1733	1654	3019	3019	3019
LOS12P	Pearson Correlation	-.049*	-.042*	-.039*	-.007	.038	.115**	1.000	.112**
	Sig. (2-tailed)	.013	.028	.047	.772	.122	.000	.	.000
	N	2643	2688	2635	1733	1654	3019	3019	3019
WIN12	Pearson Correlation	.051**	-.103**	-.021	.112**	.028	-.282**	.112**	1.000
	Sig. (2-tailed)	.009	.000	.287	.000	.247	.000	.000	.
	N	2643	2688	2635	1733	1654	3019	3019	3019

Correlations

		E_YL	D_Y	D_YL	P_C	P_CL	LOS12	LOS12P	WIN12
WIN12P	Pearson Correlation	-.060**	-.143**	-.100**	.158**	.055*	-.029	-.031	.120**
	Sig. (2-tailed)	.002	.000	.000	.000	.025	.110	.088	.000
	N	2643	2688	2635	1733	1654	3019	3019	3019
MON12	Pearson Correlation	.023	-.034	-.028	.112**	.032	-.029	-.656**	.012
	Sig. (2-tailed)	.278	.117	.199	.000	.208	.160	.000	.560
	N	2179	2181	2130	1624	1544	2412	2412	2412
PRMON12	Pearson Correlation	.022	-.056**	-.006	.121**	.015	-.525**	.009	.562**
	Sig. (2-tailed)	.301	.009	.790	.000	.548	.000	.662	.000
	N	2185	2187	2140	1623	1545	2422	2422	2422
SPREAD2	Pearson Correlation	-.211**	-.075**	-.054**	.031	.070**	.202**	.174**	-.124**
	Sig. (2-tailed)	.000	.000	.006	.202	.005	.000	.000	.000
	N	2589	2583	2530	1708	1609	2845	2845	2845
SIZE1	Pearson Correlation	.202**	.060**	.057**	-.070**	-.075**	-.214**	-.156**	.093**
	Sig. (2-tailed)	.000	.003	.004	.004	.002	.000	.000	.000
	N	2578	2557	2519	1731	1649	2614	2614	2614
STDV2	Pearson Correlation	-.275**	-.175**	-.162**	.176**	.133**	.296**	.150**	.045*
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.026
	N	2171	2174	2122	1622	1542	2401	2401	2401
R2_C	Pearson Correlation	.164**	.046	.036	.051*	-.051*	-.064**	-.142**	.131**
	Sig. (2-tailed)	.000	.055	.142	.041	.049	.007	.000	.000
	N	1701	1745	1687	1573	1506	1772	1772	1772
R2_E	Pearson Correlation	.156**	.017	.067**	.069**	-.044	-.081**	-.141**	.132**
	Sig. (2-tailed)	.000	.462	.005	.007	.087	.001	.000	.000
	N	1736	1780	1722	1573	1506	1807	1807	1807
LISTYEAR	Pearson Correlation	.239**	.118**	.130**	-.098**	-.104**	-.042*	-.034	.012
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.020	.060	.525
	N	2643	2688	2635	1733	1654	3014	3014	3014
LOWPRICE	Pearson Correlation	-.174**	-.029	-.035	.077**	.113**	.193**	.139**	-.083**
	Sig. (2-tailed)	.000	.138	.069	.001	.000	.000	.000	.000
	N	2643	2688	2635	1733	1654	3019	3019	3019
D_EN	Pearson Correlation	.021	.135**	.052*	-.057*	-.015	.023	.016	-.070**
	Sig. (2-tailed)	.356	.000	.022	.017	.541	.306	.468	.002
	N	1961	1958	1905	1728	1649	2024	2024	2024
LARGE	Pearson Correlation	-.032	-.088**	-.084**	-.117**	-.052*	-.032	.016	-.053**
	Sig. (2-tailed)	.105	.000	.000	.000	.039	.089	.406	.005
	N	2564	2559	2505	1705	1607	2816	2816	2816

Correlations

		WIN12P	MON12	PRMON12	SPREAD2	SIZE1	STDV2	R2_C
HIT	Pearson Correlation	-.029	.004	-.020	.190**	.018	-.228**	.098**
	Sig. (2-tailed)	.118	.839	.330	.000	.358	.000	.000
	N	2957	2378	2388	2831	2590	2367	1748
LOWPB	Pearson Correlation	-.054**	-.138**	-.109**	.171**	-.181**	.091**	-.175**
	Sig. (2-tailed)	.003	.000	.000	.000	.000	.000	.000
	N	3019	2412	2422	2845	2614	2401	1772
LOWPBL	Pearson Correlation	-.022	-.029	-.032	.065**	-.124**	.044*	-.069**
	Sig. (2-tailed)	.234	.158	.110	.001	.000	.032	.003
	N	3019	2412	2422	2845	2614	2401	1772
HIGHPEN	Pearson Correlation	.514**	.089**	.022	-.075**	.031	.109**	.066**
	Sig. (2-tailed)	.000	.000	.269	.000	.117	.000	.005
	N	3019	2412	2422	2845	2614	2401	1772
HIGHPEL	Pearson Correlation	.278**	.033	.007	-.003	-.017	.143**	-.078**
	Sig. (2-tailed)	.000	.107	.738	.885	.389	.000	.001
	N	3019	2412	2422	2845	2614	2401	1772
P_B	Pearson Correlation	.210**	.207**	.151**	-.063**	.018	.123**	.158**
	Sig. (2-tailed)	.000	.000	.000	.006	.435	.000	.000
	N	1963	1816	1815	1915	1929	1813	1745
P_BL	Pearson Correlation	-.024	-.048*	.002	.023	.021	.033	.027
	Sig. (2-tailed)	.300	.045	.923	.329	.358	.170	.273
	N	1863	1740	1741	1805	1854	1738	1666
E_Y	Pearson Correlation	-.172**	-.029	.031	-.127**	.131**	-.163**	.053*
	Sig. (2-tailed)	.000	.172	.147	.000	.000	.000	.028
	N	2679	2217	2220	2633	2595	2210	1744
E_YL	Pearson Correlation	-.060**	.023	.022	-.211**	.202**	-.275**	.164**
	Sig. (2-tailed)	.002	.278	.301	.000	.000	.000	.000
	N	2643	2179	2185	2589	2578	2171	1701
D_Y	Pearson Correlation	-.143**	-.034	-.056**	-.075**	.060**	-.175**	.046
	Sig. (2-tailed)	.000	.117	.009	.000	.003	.000	.055
	N	2688	2181	2187	2583	2557	2174	1745
D_YL	Pearson Correlation	-.100**	-.028	-.006	-.054**	.057**	-.162**	.036
	Sig. (2-tailed)	.000	.199	.790	.006	.004	.000	.142
	N	2635	2130	2140	2530	2519	2122	1687
P_C	Pearson Correlation	.158**	.112**	.121**	.031	-.070**	.176**	.051*
	Sig. (2-tailed)	.000	.000	.000	.202	.004	.000	.041
	N	1733	1624	1623	1708	1731	1622	1573
P_CL	Pearson Correlation	.055*	.032	.015	.070**	-.075**	.133**	-.051*
	Sig. (2-tailed)	.025	.208	.548	.005	.002	.000	.049
	N	1654	1544	1545	1609	1649	1542	1506
LOS12	Pearson Correlation	-.029	-.029	-.525**	.202**	-.214**	.296**	-.064**
	Sig. (2-tailed)	.110	.160	.000	.000	.000	.000	.007
	N	3019	2412	2422	2845	2614	2401	1772
LOS12P	Pearson Correlation	-.031	-.656**	.009	.174**	-.156**	.150**	-.142**
	Sig. (2-tailed)	.088	.000	.662	.000	.000	.000	.000
	N	3019	2412	2422	2845	2614	2401	1772
WIN12	Pearson Correlation	.120**	.012	.562**	-.124**	.093**	.045*	.131**
	Sig. (2-tailed)	.000	.560	.000	.000	.000	.026	.000
	N	3019	2412	2422	2845	2614	2401	1772

Correlations

		WIN12P	MON12	PRMON12	SPREAD2	SIZE1	STDV2	R2_C
WIN12P	Pearson Correlation	1.000	.123**	.097**	-.097**	.087**	.047*	.133**
	Sig. (2-tailed)	.	.000	.000	.000	.000	.021	.000
	N	3019	2412	2422	2845	2614	2401	1772
MON12	Pearson Correlation	.123**	1.000	.023	-.205**	.139**	.018	.143**
	Sig. (2-tailed)	.000	.	.249	.000	.000	.379	.000
	N	2412	2412	2408	2354	2153	2399	1631
PRMON12	Pearson Correlation	.097**	.023	1.000	-.214**	.142**	-.097**	.077**
	Sig. (2-tailed)	.000	.249	.	.000	.000	.000	.002
	N	2422	2408	2422	2360	2156	2396	1631
SPREAD2	Pearson Correlation	-.097**	-.205**	-.214**	1.000	-.755**	.358**	-.141**
	Sig. (2-tailed)	.000	.000	.000	.	.000	.000	.000
	N	2845	2354	2360	2845	2560	2345	1733
SIZE1	Pearson Correlation	.087**	.139**	.142**	-.755**	1.000	-.387**	.057*
	Sig. (2-tailed)	.000	.000	.000	.000	.	.000	.018
	N	2614	2153	2156	2560	2614	2147	1718
STDV2	Pearson Correlation	.047*	.018	-.097**	.358**	-.387**	1.000	-.140**
	Sig. (2-tailed)	.021	.379	.000	.000	.000	.	.000
	N	2401	2399	2396	2345	2147	2401	1627
R2_C	Pearson Correlation	.133**	.143**	.077**	-.141**	.057*	-.140**	1.000
	Sig. (2-tailed)	.000	.000	.002	.000	.018	.000	.
	N	1772	1631	1631	1733	1718	1627	1772
R2_E	Pearson Correlation	.142**	.157**	.099**	-.074**	.022	-.120**	.660**
	Sig. (2-tailed)	.000	.000	.000	.002	.359	.000	.000
	N	1807	1666	1666	1768	1753	1662	1772
LISTYEAR	Pearson Correlation	.077**	.041*	-.018	-.320**	.393**	-.298**	.029
	Sig. (2-tailed)	.000	.044	.369	.000	.000	.000	.230
	N	3014	2412	2422	2845	2614	2401	1772
LOWPRICE	Pearson Correlation	-.075**	-.212**	-.195**	.332**	-.391**	.332**	-.083**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000
	N	3019	2412	2422	2845	2614	2401	1772
D_EN	Pearson Correlation	-.088**	-.068**	-.085**	.021	-.043	.024	.067**
	Sig. (2-tailed)	.000	.003	.000	.346	.058	.292	.005
	N	2024	1869	1868	1962	1967	1867	1736
LARGE	Pearson Correlation	-.001	-.049*	-.047*	.101**	.066**	-.126**	-.052*
	Sig. (2-tailed)	.965	.018	.024	.000	.001	.000	.031
	N	2816	2339	2340	2807	2538	2331	1729

Correlations

		R2_E	LISTYEAR	LOWPRICE	D_EN	LARGE
HIT	Pearson Correlation	.145**	.094**	-.044*	-.085**	-.197**
	Sig. (2-tailed)	.000	.000	.017	.000	.000
	N	1783	2957	2957	1989	2803
LOWPB	Pearson Correlation	-.164**	.053**	.125**	.084**	.031
	Sig. (2-tailed)	.000	.004	.000	.000	.103
	N	1807	3014	3099	2024	2816
LOWPBL	Pearson Correlation	-.014	.114**	.068**	.074**	-.039*
	Sig. (2-tailed)	.555	.000	.000	.001	.039
	N	1807	3014	3099	2024	2816
HIGHPEN	Pearson Correlation	.064**	.079**	-.033	-.047*	-.039*
	Sig. (2-tailed)	.006	.000	.073	.034	.039
	N	1807	3014	3019	2024	2816
HIGHPEL	Pearson Correlation	-.081**	.122**	.056**	.104**	-.016
	Sig. (2-tailed)	.001	.000	.002	.000	.389
	N	1807	3014	3019	2024	2816
P_B	Pearson Correlation	.191**	-.051*	-.066**	-.034	-.093**
	Sig. (2-tailed)	.000	.024	.003	.139	.000
	N	1780	1963	1963	1954	1908
P_BL	Pearson Correlation	-.019	-.052*	.028	.060**	.038
	Sig. (2-tailed)	.443	.025	.231	.010	.103
	N	1701	1863	1863	1858	1800
E_Y	Pearson Correlation	.028	.140**	-.073**	.056*	-.003
	Sig. (2-tailed)	.243	.000	.000	.013	.883
	N	1779	2679	2679	1996	2609
E_YL	Pearson Correlation	.156**	.239**	-.174**	.021	-.032
	Sig. (2-tailed)	.000	.000	.000	.356	.105
	N	1736	2643	2643	1961	2564
D_Y	Pearson Correlation	.017	.118**	-.029	.135**	-.088**
	Sig. (2-tailed)	.462	.000	.138	.000	.000
	N	1780	2688	2688	1958	2559
D_YL	Pearson Correlation	.067**	.130**	-.035	.052*	-.084**
	Sig. (2-tailed)	.005	.000	.069	.022	.000
	N	1722	2635	2635	1905	2505
P_C	Pearson Correlation	.069**	-.098**	.077**	-.057*	-.117**
	Sig. (2-tailed)	.007	.000	.001	.017	.000
	N	1573	1733	1733	1728	1705
P_CL	Pearson Correlation	-.044	-.104**	.113**	-.015	-.052*
	Sig. (2-tailed)	.087	.000	.000	.541	.039
	N	1506	1654	1654	1649	1607
LOS12	Pearson Correlation	-.081**	-.042*	.193**	.023	-.032
	Sig. (2-tailed)	.001	.020	.000	.306	.089
	N	1807	3014	3019	2024	2816
LOS12P	Pearson Correlation	-.141**	-.034	.139**	.016	.016
	Sig. (2-tailed)	.000	.060	.000	.468	.406
	N	1807	3014	3019	2024	2816
WIN12	Pearson Correlation	.132**	.012	-.083**	-.070**	-.053**
	Sig. (2-tailed)	.000	.525	.000	.002	.005
	N	1807	3014	3019	2024	2816

Correlations

		R2_E	LISTYEAR	LOWPRICE	D_EN	LARGE
WIN12P	Pearson Correlation	.142**	.077**	-.075**	-.088**	-.001
	Sig. (2-tailed)	.000	.000	.000	.000	.965
	N	1807	3014	3019	2024	2816
MON12	Pearson Correlation	.157**	.041*	-.212**	-.068**	-.049*
	Sig. (2-tailed)	.000	.044	.000	.003	.018
	N	1666	2412	2412	1869	2339
PRMON12	Pearson Correlation	.099**	-.018	-.195**	-.085**	-.047*
	Sig. (2-tailed)	.000	.369	.000	.000	.024
	N	1666	2422	2422	1868	2340
SPREAD2	Pearson Correlation	-.074**	-.320**	.332**	.021	.101**
	Sig. (2-tailed)	.002	.000	.000	.346	.000
	N	1768	2845	2845	1962	2807
SIZE1	Pearson Correlation	.022	.393**	-.391**	-.043	.066**
	Sig. (2-tailed)	.359	.000	.000	.058	.001
	N	1753	2614	2614	1967	2538
STDV2	Pearson Correlation	-.120**	-.298**	.332**	.024	-.126**
	Sig. (2-tailed)	.000	.000	.000	.292	.000
	N	1662	2401	2401	1867	2331
R2_C	Pearson Correlation	.660**	.029	-.083**	.067**	-.052*
	Sig. (2-tailed)	.000	.230	.000	.005	.031
	N	1772	1772	1772	1736	1729
R2_E	Pearson Correlation	1.000	-.009	-.097**	-.002	-.074**
	Sig. (2-tailed)	.	.696	.000	.937	.002
	N	1807	1807	1807	1771	1762
LISTYEAR	Pearson Correlation	-.009	1.000	-.148**	.007	-.032
	Sig. (2-tailed)	.696	.	.000	.764	.088
	N	1807	3014	3014	2024	2816
LOWPRICE	Pearson Correlation	-.097**	-.148**	1.000	.073**	-.091**
	Sig. (2-tailed)	.000	.000	.	.001	.000
	N	1807	3014	3099	2024	2816
D_EN	Pearson Correlation	-.002	.007	.073**	1.000	.023
	Sig. (2-tailed)	.937	.764	.001	.	.300
	N	1771	2024	2024	2024	1953
LARGE	Pearson Correlation	-.074**	-.032	-.091**	.023	1.000
	Sig. (2-tailed)	.002	.088	.000	.300	.
	N	1762	2816	2816	1953	2816

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Appendix 3

Interactive effect between standard deviation, spread and size

Note: These Regressions are to show that the interactive effect between standard deviation spread and size. The first regression has no cross-products term and STDV is significant related to holding period. The second regression adds the cross-products and the STDV is NOT significant related to holding period.
The dependent variable is logged A-D estimator

Regression

Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	LGSIZESD, SPREAD2, SIZE1, STDV2, LGSDSP, LGSIZESP[a]	.	Enter

a. All requested variables entered.

b. Dependent Variable: HITADLG

Regression

Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	SPREAD2, STDV2, SIZE1[a]	.	Enter

a. All requested variables entered.

b. Dependent Variable: HITADLG

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.495[a]	.245	.244	.4452

a. Predictors: (Constant), SPREAD2, STDV2, SIZE1

Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	SPREAD2, STDV2, SIZE1[a]	.	Enter

a. All requested variables entered.

b. Dependent Variable: HITADLG

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	135.582	3	45.194	227.972	.000[a]
	Residual	417.899	2108	.198		
	Total	553.481	2111			

a. Predictors: (Constant), SPREAD2, STDV2, SIZE1

b. Dependent Variable: HITADLG

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.159	.100		-1.595	.111
	SIZE1	.395	.026	.445	14.980	.000
	STDV2	-.305	.020	-.306	-14.915	.000
	SPREAD2	.520	.023	.683	23.096	.000

a. Dependent Variable: HITADLG

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.509[a]	.259	.257	.4414

a. Predictors: (Constant), LGSIZESD, SPREAD2, SIZE1, STDV2, LGSDSP, LGSIZESP

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	143.438	6	23.906	122.726	.000[a]
	Residual	410.042	2105	.195		
	Total	553.481	2111			

a. Predictors: (Constant), LGSIZESD, SPREAD2, SIZE1, STDV2, LGSDSP, LGSIZESP

b. Dependent Variable: HITADLG

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.938	.539		-3.594	.000
	SIZE1	1.078	.131	1.213	8.245	.000
	STDV2	-.194	.202	-.195	-.962	.336
	SPREAD2	.530	.154	.696	3.442	.001
	LGSIZESP	8.690E-02	.025	.993	3.483	.001
	LGSDSP	.195	.034	1.189	5.730	.000
	LGSIZESD	.122	.046	.870	2.651	.008

a. Dependent Variable: HITADLG