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The Jewish Holiday Effect: Sell Rosh Hashanah, Buy Yom Kippur

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This paper investigates the validity of the old Wall Street adage, "Sell Rosh Hashanah, buy Yom Kippur." The authors examine daily returns of the Dow Jones Industrial Average (DJIA) between 1907 and 2008 and evaluate a strategy, based on this heuristic, of selling short before Rosh Hashanah and covering after Yom Kippur. They find that such a strategy would have produced statistically and economically significant returns.

On September 19, 1915, The New York Times published one of the earliest stories on the effect of the Jewish High Holy Days on stock market trading. In an article titled, "The London Market Quiet - Jewish Holiday Causes Small Attendance on the Exchange", the newspaper reported that money and discount rates on the London Stock Exchange were "easy today" and attendance at the exchange was low due to the Jewish holiday of Rosh Hashanah (New York Times, 1915). On September 27, 1935, the Altoona, Pennsylvania Mirror referred to a Wall Street adage, "Sell before Rosh Hashanah; buy before Yom Kippur" (Popik, 2008). On September 17, 1936, the Chester, Pennsylvania Times stated that some of the previous session's selling on the New York Stock Exchange came from Jewish traders who wanted to get out of the market before the Rosh Hashanah holiday (Popik, 2008).

The belief that some Jewish religious holidays impact stock market trading has persisted among Wall Street practitioners, despite the fact that such effects would seem to violate the Weak Form of the Efficient Market Hypothesis (EMH). For example, Schatz (2010) noted in The New Haven Register that "the market tends to be on the weak side" during the period between the two religious holidays. The Almanac Investor discussed on August 29, 2006 the "old saying on the Street, Sell Rosh Hashanah, Buy Yom Kippur" (Hirsch and Brown, 2006). A September 18, 2006 article on The Street.com attempted to explain the rationale behind the Sell Rosh Hashanah, Buy Yom Kippur adage, stating that the days starting with Rosh Hashanah and ending with Yom Kippur are a "period of intense reflection", during which prominent Jewish financiers such as the Loebs would liquidate their investment portfolios so as to concentrate instead on their prayers (Greenberg, 2006). A biographer of Bernard Baruch notes that, on one occasion, he refrained for religious reasons from covering a short sale on Yom Kippur, despite news which he thought would cause the shorted stock to rise. However, the stock instead fell precipitously during the holiday, and when he finally covered on the following day, he had become a millionaire (Smith, 1947).

The explanation of religious holiday observance as the reason behind the Wall Street adage was expanded in the September 14, 2007 edition of The Street.com, which added that the absence of Jewish investors could be perceived negatively outside the Jewish community, since it would reduce the number of potential buyers (Schiller, 2007). Finally, the September 11, 2007 edition of The Wall Street Journal discussed the conventional explanation that traders close out positions prior to Rosh Hashanah "in advance of spending the holidays with family", but noted that other forces might also be at work, such as the end-of-quarter restructuring of fund portfolios, the beginning of new fiscal years for some businesses, and the return of traders from summer vacations (Gaffen, 2007).

In contrast to the plethora of writings by Wall Street practitioners on the supposed Jewish Holiday Effect, there has been scant treatment of this subject by academic researchers. There is, however, evidence to support the influence of holidays on the behavior of stock returns. For example, Lakonishok and Smidt (1984), Ariel (1990), and Cervera and Keim (2000) found higher returns on days preceding market holidays. They attributed this effect to pre-holiday short-covering, as well as positive trader sentiment preceding joyful occasions. Kim and Park (1994) extended these findings to markets in the United Kingdom and Japan; Oguzsoy and Guven (2004) discovered similar effects for Muslim holidays on the Istanbul Stock Exchange; while Cadsby and Ratner (1992), Brockman and Michayluk (1998), Meneu and Pardo (2004), and Lucey (2005) found evidence of this effect on other international markets.

In one of only two academic studies of trading on Jewish religious holidays, Loughran and Schultz (2004) examined localized trading behavior in Nasdaq-listed firms headquartered in each of 25 U.S. cities, and found evidence to support the hypothesis of reduced participation by Jewish traders on the most solemn Holy Day, Yom Kippur. Using data from the years 1984-1997, they examined trading volumes on days when Yom Kippur fell on a weekday. The authors found that on such occasions trading in the securities of "firms located in cities with high Jewish population concentrations" experienced a significantly greater decline than did trading in the shares of companies headquartered in cities with smaller Jewish populations. Loughran and Schulz saw evidence in these results of reduced market activity by Jewish investors during Yom Kippur as well as evidence of investors' tendency to hold securities of local firms with which they may be more familiar (see, for example, Coval and Moskowitz (2001); Grinblatt and Keloharju (2001); Huberman (2001); Zhu (2003); and Barker and Loughran (2007)).

In what is perhaps the most comprehensive study to date of market behavior around religious holidays on which U.S. stock exchanges remain open, Frieder and Subrahmanyam (2004) studied market volume and daily returns for the Standard and Poor's 500 Stock Index (S&P 500) on three such occasions, St. Patrick's Day, Rosh Hashanah, and Yom Kippur. Using data from the years 1946-2000, they examined returns for the S&P 500 on the day of the religious holiday itself, and on each of the two preceding and following days. Their results corroborate those of Loughran and Schulz with respect to the decline in trading volume on Yom Kippur. They found similar declines for Rosh Hashanah as well, but not for St. Patrick's Day. The authors attribute the declines on the Jewish High Holy Days to traders exiting the market for religious observance, and conclude that their nonfinancial opportunity cost of trading during those occasions outweighs the possibility of financial gains.

In examining the daily returns of the S&P 500 during the three religious occasions, Frieder and Subrahmanyam found that median returns on Rosh Hashanah and St. Patrick's Day were persistently higher than the median returns during other days in the sample period, while returns on Yom Kippur were persistently lower. The authors attribute these results to investor sentiment, which they view as being upbeat on the festive occasions of Rosh Hashanah and St. Patrick's Day, but more subdued on the somber occasion of Yom Kippur. They also discern investor optimism in the days leading up to the two festive religious holidays: returns on the two days prior to St. Patrick's Day and Rosh Hashanah were found to be positive and significant; in contrast, returns on the two days prior to Yom Kippur were negative but insignificant. There is evidence in Frieder and Subrahmanyam's findings that trader sentiment persists on the days following the religious holidays, as well. Positive returns were recorded on the two days following St. Patrick's Day and Rosh Hashanah, and negative ones on the two days following Yom Kippur, although all these were significant at only the 10% level.

The authors also disaggregated their sample into two subperiods, 1946-1972 and 1973-2000, but found that results in these subperiods were similar to those obtained with the full data set. They also examined returns for the Israeli Share and Convertible Index (SCI), and found positive returns on the trading day following Rosh Hashanah and negative ones on the day after Yom Kippur (stock markets in Israel are closed on both of the High Holy Days). As might be expected, the returns were greater in both directions for the SCI than for the S&P 500. Frieder and Subrahmanyam also tested for a possible "Autumn Effect" in the data, but found their results to be robust to regressions that included proxies for return seasonalities. They concluded that the behavior of investors around festive religious holidays suggests optimism, increased confidence, and decreased risk aversion, while the opposite occurs during and after more somber and reflective occasions like Yom Kippur.

Analysis

Daily closing values for the Dow Jones Industrial Average (DJIA) were obtained for the three trading days before Rosh Hashanah and the three trading days after Yom Kippur during the 102-year period between 1907 and 2008. The DJIA is the oldest stock index compiled in the United States, and was made up of 12 large-capitalization stocks until 1928, when its components were increased to 30, the same number that the index includes today. During this period, the index was adjusted on numerous occasions to delete merged or acquired companies and substitute others in their place.

Since Jewish religious holidays begin and end at sundown, the last trading day before Rosh Hashanah was considered to be the day of the sundown marking the start of that holiday. Likewise, the first trading day after Yom Kippur is that which follows the sundown marking the holiday's end. When any of the three days preceding Rosh Hashanah fell on a weekend or on Labor Day, the preceding Friday was considered to be the prior trading day. An analogous process was applied to observations following Yom Kippur. In 1918, after the United States entered World War I, markets were closed on Thursday, September 12, to facilitate registration for the military draft. Since this market holiday was announced well in advance, it was treated similarly to a weekend or Labor Day. No observations exist for 1914, since markets were closed between July 31 and November 28 of that year, following the outbreak of World War I in Europe. Likewise, markets were closed for four days in 2001 following the attack on the Twin Towers. Since the 2001 closings fell during the Jewish religious holiday period and were unforeseen, the 2001 data were removed from the series so as to avoid a possible distortion of the results due to this extraneous event. The lack of data for 1914 and the removal of the 2001 data reduced the series to 100 observations.

Returns were calculated based on short-selling the DJIA Index on one of the three trading days before Rosh Hashanah and then covering on one of the three trading days following Yom Kippur. Since there are 10 days from the start of the first Holy Day to the end of the second, the holding periods for these investments ranged from 12 to 16 days. Nine scenarios were considered, covering the entire range of possibilities of selling short between one and three days before Rosh Hashanah and covering the short sales between one and three days following Yom Kippur. The nine scenarios are listed in Table 1, below.

Table 1: Trading Scenarios for Shorting Before Rosh Hashanah and Covering After Yom Kippur

Scenario	Day of Short Before Rosh Hashanah (R = 0)	Day of Cover After Yom Kippur (Y =0)
1	R-3	Y+1
2	R-3	Y+2
3	R-3	Y+3
4	R-2	Y+1
5	R-2	Y+2
6	R-2	Y+3
7	R-1	Y+1
8	R-1	Y+2
9	R-1	Y+3

Descriptive statistics were calculated on the returns for each trading scenario (Table 2). The mean returns over the 100 years were positive for all nine scenarios, and ranged from 0.47% for Scenario 2, representing shorting three days before Rosh Hashanah and covering two days after Yom Kippur; to 1.01% for Scenario 4, representing shorting two days before Rosh Hashanah and covering one day after Yom Kippur.

Table 2: Descriptive Statistics of Returns: All Trading Scenarios, All Data

Scenario	Strategy	N	Mean	Std. Deviation	Std. Error Mean
1	R-3, Y+1	100	0.0082	0.0540	0.0054
2	R-3, Y+2	100	0.0047	0.0559	0.0056
3	R-3, Y+3	100	0.0064	0.0554	0.0055
4	R-2, Y+1	100	0.0101	0.0496	0.0050
5	R-2, Y+2	100	0.0066	0.0521	0.0052
6	R-2, Y+3	100	0.0083	0.0518	0.0052
7	R-1, Y+1	100	0.0088	0.0438	0.0044
8	R-1, Y+2	100	0.0054	0.0488	0.0049
9	R-1, Y+3	100	0.0071	0.0483	0.0048

The returns of the nine scenarios had ranges of between 32.1% (Scenario 7) and 47% (Scenario 1), with a minimum return of -24.4% for any one year (Scenarios 8 and 9), and a maximum return of 31.9% (Scenario 4). The distributions of the 100 observations were found to be positively skewed for three of the scenarios, while no statistically significant skewness was evident in the other six. However, all nine distributions were leptokurtic (fat tailed) at highly significant levels, implying non-normality (Table 3).

Table 3: Additional Descriptive Statistics: All Trading Scenarios, All Data

	N	Range	Minimum	Maximum	Skewness		Kurtosis	
Scenario	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
1	100	0.470	-0.166	0.304	2.102	0.241	10.752	0.478
2	100	0.466	-0.235	0.230	0.415	0.241	7.184	0.478
3	100	0.442	-0.235	0.207	0.052	0.241	6.146	0.478
4	100	0.391	-0.073	0.319	3.077	0.241	15.634	0.478
5	100	0.439	-0.242	0.197	0.206	0.241	8.125	0.478
6	100	0.438	-0.241	0.197	-0.009	0.241	7.657	0.478
7	100	0.321	-0.095	0.227	2.129	0.241	8.213	0.478
8	100	0.442	-0.244	0.197	-0.301	0.241	9.877	0.478
9	100	0.449	-0.244	0.206	-0.598	0.241	9.278	0.478

Starting with the complete data set of 100 years, one-tailed t-tests were performed to test for the existence of significant positive returns for strategies of shorting before Rosh Hashanah and covering after Yom Kippur. The coefficients of all nine scenarios indicated small but positive excess returns. Three of the nine trading scenarios showed positive returns that were statistically significant at the 90% confidence level, while the returns of another two were significant at the 95% level (Table 4).

Table 4: T-test Results for Returns of Trading Scenarios, Using All Data

Test Value = 0					
Scenario	**Strategy**	**t**	**df**	**Sig. (1-tailed)**	**Mean Difference**
1	R-3, Y+1	1.5236	99	0.0654*	0.0082
2	R-3, Y+2	0.8369	99	0.2023	0.0047
3	R-3, Y+3	1.1575	99	0.1249	0.0064
4	R-2, Y+1	2.0321	99	0.0224**	0.0101
5	R-2, Y+2	1.2620	99	0.1050	0.0066
6	R-2, Y+3	1.6053	99	0.0558*	0.0083
7	R-1, Y+1	2.0071	99	0.0237**	0.0088
8	R-1, Y+2	1.0980	99	0.1374	0.0054
9	R-1, Y+3	1.4673	99	0.0727*	0.0071

Because statistical tests pointed to the possible distortion of results by outliers, the entire data set was sorted and all values outside three standard deviations from the mean return were discarded. On average, four data points were removed from each scenario's results, and the analysis was repeated with the truncated data sets. Descriptive statistics were again calculated for returns obtained with the nine trading scenarios (Table 5). The mean returns for the different strategies ranged from 0.12% for Scenario 2 to 0.76% for Scenario 9. As expected, the mean returns and standard deviations of the truncated data sets were lower than those calculated for the entire series.

Table 5: Descriptive Statistics of Returns: All Trading Scenarios, Truncated Data

Scenario	Strategy	N	Mean	Std. Deviation	Std. Error Mean
1	R-3, Y+1	96	0.0033	0.0336	0.0034
2	R-3, Y+2	96	0.0012	0.0384	0.0039
3	R-3, Y+3	96	0.0068	0.0390	0.0040
4	R-2, Y+1	97	0.0038	0.0321	0.0033
5	R-2 Y+2	96	0.0036	0.0341	0.0035
6	R-2 Y+3	97	0.0070	0.0371	0.0038
7	R-1, Y+1	97	0.0033	0.0306	0.0031
8	R-1, Y+2	97	0.0042	0.0333	0.0034
9	R-1, Y+3	98	0.0076	0.0365	0.0037

The returns of the nine scenarios based on the truncated data had ranges of between 19.8% (Scenario 1) and 31.6% (Scenario 2), with a minimum return of -16.1% for any one year and a maximum return of 15.5%, both for Scenario 4. The truncated distributions showed no statistically significant skewness or kurtosis; the removal of the outliers rendered the truncated series approximately normal (Table 6).

Table 6: Additional Descriptive Statistics: All Trading Scenarios, Truncated Data

	N	Range	Minimum	Maximum	Skewness	Kurtosis		
Scenario	**Statistic**	**Statistic**	**Statistic**	**Statistic**	**Statistic**	**Std. Error**	**Statistic**	**Std. Error**
1	96	0.1981	-0.0657	0.1324	0.6470	0.2462	1.4568	0.4877
2	96	0.3161	-0.1611	0.1550	0.1212	0.2462	5.4542	0.4877
3	96	0.2324	-0.0808	0.1516	1.1125	0.2462	2.8595	0.4877
4	97	0.2097	-0.0726	0.1371	0.6604	0.2450	2.1332	0.4853
5	96	0.2443	-0.1140	0.1303	0.5548	0.2462	3.6709	0.4877
6	97	0.2294	-0.1047	0.1247	0.5345	0.2450	1.6964	0.4853
7	97	0.2130	-0.0947	0.1183	0.2573	0.2450	1.8223	0.4853
8	97	0.2384	-0.1268	0.1116	0.0964	0.2450	3.2693	0.4853
9	98	0.2386	-0.1176	0.1209	0.2652	0.2438	1.7080	0.4830

Three scenarios based on the truncated data showed returns significant at the 95% confidence level (Table 7). Scenario 3, with a trading strategy of shorting three days before Rosh Hashanah and covering three days after Yom Kippur, had a mean return of 0.68%; Scenario 6, with a trading strategy of shorting two days before Rosh Hashanah and covering three days after Yom Kippur, had a mean return of 0.70%; and Scenario 9, with a trading strategy of shorting one day before Rosh Hashanah and buying three days after Yom Kippur, had a mean return of 0.76%.

Table 7: T-test Results for Returns of Trading Scenarios, Using Truncated Data

Test Value =0					
Scenario	Strategy	t	df	Sig. (2-tailed)	Mean Difference
1	R-3, Y+1	0.9665	95	0.1681	0.0033
2	R-3, Y+2	0.3168	95	0.3761	0.0012
3	R-3, Y+3	1.7028	95	0.0459**	0.0068
4	R-2, Y+1	1.1594	96	0.1246	0.0038
5	R-2, Y+2	1.0341	95	0.1519	0.0036
6	R-2, Y+3	1.8591	96	0.0330**	0.0070
7	R-1, Y+1	1.0617	96	0.1455	0.0033
8	R-1, Y+2	1.2341	96	0.1101	0.0042
9	R-1, Y+3	2.0712	97	0.0205**	0.0076

* represents 90 percent confidence level.
** represents 95 percent confidence level.

In summary, a strategy of selling short before Rosh Hashanah and covering the short sale after Yom Kippur was shown to produce statistically significant returns for five trading scenarios when the full data set was used in the analysis, and for three scenarios using the truncated data (Table 8). The returns of all nine trading strategies were highly correlated, suggesting that a shorting strategy with positive returns could have been implemented on any of the days preceding Rosh Hashanah, with the covering of the short sale being executed on any of the three days following Yom Kippur.

Table 8: Summary of Return Results for the Nine Trading Strategies

Scenario	Shorting before Rosh Hashanah	Buying after Yom Kippur	Results with Complete Data Set	Results with Truncated Data Set
1	3 days before	1 day after	Significant	
2	3 days before	2 days after		
3	3 days before	3 days after		Significant
4	2 days before	1 day after	Significant	
5	2 days before	2 days after		
6	2 days before	3 days after	Significant	Significant
7	1 day before	1 day after	Significant	
8	1 day before	2 days after		
9	1 day before	3 days after	Significant	Significant

Additional analysis was performed to test for a weekend effect that might be influencing the results. We tested whether returns might be significantly different if either of the Holy Days occurs on a weekend as compared to a weekday. Regression analysis was performed on the returns for the nine trading strategies, using a dummy variable to test for a weekend effect. No weekend dummies were found to be significant in any of the nine scenarios, implying that the results are robust to a possible weekend effect. To test for robustness over time, a dummy variable was used to represent the last 50 years of the data (1957-2008). This dummy was also insignificant, implying that returns are not significantly different over the two time periods.

CONCLUSION

This study utilized 100 years of data covering the period between 1907 and 2008 and evaluated trading strategies of selling short the DJIA index before Rosh Hashanah and covering the short sale after Yom Kippur. Mean returns for the nine strategies considered ranged from 0.47 percent for shorting three days before Rosh Hashanah and covering two days after Yom Kippur, to 1.01 for shorting two days before Rosh Hashanah and covering one day after Yom Kippur. In tests done with the complete data set, five of the nine scenarios yielded statistically significant results. In tests using the truncated data set, three of the nine trading strategies were significant.

The results of this study are in line with the conclusions of Frieder and Subrahmanyam (2004) inasmuch as they substantiate the comparatively stronger performance of markets prior to the joyous religious holiday of Rosh Hashanah, and their weakness following the somber occasion of Yom Kippur. They also tend to support the findings of Loughran and Schultz (2004), who observed a reduction of trader participation during the High Holy Days. Finally, they confirm the existence of a Jewish Holiday Effect and the accuracy of the Wall Street adage, "Sell Rosh Hashanah, Buy Yom Kippur."

In the last three decades, researchers have identified a number of "anomalies" in the Efficient Market Hypothesis, similar to the one described in this paper. However, as Fama (1980) and Malkiel (2003) point out, while such situations may be statistically significant, very few have proven to be economically significant as well, since transaction costs usually negate the returns of trading strategies based on these anomalies. The Jewish Holiday Effect seems, however, to withstand such criticism. For example, the strongest strategy identified in this study, that of shorting the DJIA two days before Rosh Hashanah and covering the day after Yom Kippur, yields a mean return of 1.01% for a holding period of just 13 days.

Before the establishment of discount brokerage, a strategy of shorting the DJIA based on the Jewish Holiday Effect would probably not have been economically viable. A trader wishing to take advantage of this anomaly would have had to take positions in all 30 of the DJIA components, and the transaction costs may have equaled or exceeded the trading returns. However, the development of discount brokerage over the last several decades reduced transaction costs substantially. For example, one of the more popular discount brokers, Scottrade™ charges a fee of $7 irrespective of the value or volume of a trade, so the total transaction cost of short selling and then covering each of the 30 component stocks of the DJIA would have been $420. Given a mean return of 1.01%, it would have taken an investment of about $41,600 to cover transaction costs; however, an investment of $1 million would have produced a return of $10,095 in just 13 days. The creation of the Diamonds Trust Exchange Traded Fund (ETF, stock symbol: DIA) in 1998 made it possible to reduce transaction costs even further. By trading just this one security in place of the Index's 30 components, a trader would have reduced transaction costs at a discount broker from $420 to $14. An investment of $1386 would have covered transaction costs, and one of $1 million would, on average, have yielded a return of $10,086 for a holding period of under two weeks. Other, newer discount brokers are now offering even lower transaction fees.

Malkiel (2003) has posited that arbitrage tends to make trading profits from anomalies in the EMH disappear once these become known and tradable. To test whether the Jewish Holiday Effect has persisted into the age of ETFs and discount brokerage, the truncated data was disaggregated into two periods: 1907 to 1997, the period before the creation of the Diamonds ETF, and 1998 to 2008, when the ETF and discount brokers were in existence. A t-test for differences in mean returns showed that significant, positive returns continued to be recorded for the period 1998 to 2008; these were in fact higher than those recorded for the 1907-1988 period for six of the nine scenarios (Table 9). For example, the mean return for Scenario 1 between 1998 and 2008 was 4.21 percent, while the mean return for 1907 to 1997 was 0.45 percent. The standard deviations for all nine scenarios were also higher in the 1998-2008 periods than those for 1907 to 1997, possibly due to the stock market boom during the latter years.

Table 9: T- tests for Differences in Mean Returns, 1907-1997 vs. 1998-2008

		1-tailed test				
Scenarios	**t-statistic**	**p-value**	**Mean 1998 - 2008**	**Std. Deviation**	**Mean 1907 - 1997**	**Std. Deviation**
1	2.1266	0.0180**	0.0421	0.0974	0.0045	0.0463
2	1.3344	0.0926*	0.0270	0.0598	0.0022	0.0552
3	1.8132	0.0364**	0.0362	0.0666	0.0031	0.0535
4	2.0834	0.0199**	0.0406	0.1017	0.0067	0.0397
5	1.2078	0.1150	0.0254	0.0639	0.0045	0.0506
6	1.7109	0.0451**	0.0346	0.0706	0.0054	0.0489
7	1.6328	0.0529*	0.0301	0.0744	0.0064	0.0390
8	0.7110	0.2394	0.0158	0.0422	0.0042	0.0495
9	1.2370	0.1095	0.0250	0.0518	0.0051	0.0478

* represents 90 percent confidence level.
** represents 95 percent confidence level.

The results of this study raise questions as to the possible reason(s) for the observed Jewish Holiday Effect. An examination of the academic literature, as well as the writings of practitioners, reveals several plausible explanations. The simplest of these is that the results are simply picking up other, already-identified anomalies, such as weekend, seasonal, or end-of-month effects. However, tests for these factors demonstrate that they are not significant and that the results are robust to any influence which they may exert. Another plausible explanation is that the findings are unduly affected by a few outliers, such as the cascading crash of 2008. But truncating the data so as to filter out these outliers fails to change the conclusion. Nor is the Jewish Holiday Effect an artifact of selective data mining, since the analysis uses 100 years of data for the DJIA Index. Moreover, disaggregation of the 100-year series into the two periods described above shows that the "Sell Rosh Hashanah, Buy Yom Kippur" heuristic remained valid during both periods.

One plausible explanation is perhaps that of nonfinancial opportunity cost cited by Frieder and Subrahmanyam (2004); another is holiday sentiment, discussed by Lakonishok and Smidt (1984) and Cervera and Keim (2000). According to the first explanation, traders observing the High Holy Days would exit the market prior to Rosh Hashanah so as to focus on spiritual matters; their departure would in turn exert selling pressure on securities. An alternative explanation may be found in Ritter's (1988) suggestion that investor decisions often cluster around holidays. Since the High Holy Days mark the beginning of the Jewish New Year, observant investors might execute previously contemplated sales at yearend, during the days before Rosh Hashanah. An astute trader could sell short in advance of the anticipated decline and cover the short position after Yom Kippur, when the mood of observant traders would remain reflective and cautious, exerting a negative influence on stock prices.

These justifications, however, are based on the presumed actions of observant Jewish traders, who in any event comprise a minority of all market participants. One would also probably have to postulate a momentum effect caused by noise traders who were not observing the holidays, but were simply piling on to take advantage of short-term movements sparked by traders influenced by religious considerations. The actions of the more numerous noise traders would, in turn, amplify the impact of the observant traders' behavior.

Finally, the absence of even a minority of traders and the resulting reduction in volume, which has been documented by both Loughran and Schultz (2004) and Frieder and Subrahmanyam (2004), would tend to make markets thinner, more volatile and presumably less efficient. Risk-averse traders would want to avoid participating in those markets and might also exit in advance of the holidays, magnifying further the impact of the observant traders' departure. The perception that these factors cause markets to decline during the holiday period might thus become a self-fulfilling prophecy, as traders close their positions to avoid losses.

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