The impact of the Great Lent and of the Nativity Fast on the Bucharest Stock Exchange

Stefanescu, Răzvan and Dumitriu, Ramona

"Dunarea de Jos" University of Galati, "Dunarea de Jos" University of Galati

17 November 2016

THE IMPACT OF THE GREAT LENT AND OF THE NATIVITY FAST ON THE BUCHAREST STOCK EXCHANGE

Lecturer Stefanescu Razvan

Lecturer Dumitriu Ramona

Abstract: *This paper explores the behavior of the Romanian capital market during the two period of fasting: the Great Lent and of the Nativity Fast. In this investigation we employ closing values of five indexes from Bucharest Stock Exchange for the period January 2007 - August 2016. The sample of data is divided into two sub-samples: the first sub-sample, from January 2007 to June 2012 is associated to a turbulent period on the financial markets, while the second sub-sample, from July 2012 to June 2016, corresponds to a rather quiet period of Romanian capital market. For the first sub-sample we found, only for one index, an increase of the mean returns during the Great Lent and a decline of volatility during the Nativity Fast. For the second sub-sample, the results indicate, for four indexes, the decrease of the mean returns during the Great Lent. We conclude that such evolutions could be associated to the practices of fasting but also to the impact of other factors such as the holiday spirit, the seasonal affective disorder or the year-end stock market behavior.*

Keywords: *Calendar effects; Great Lent; Nativity Fast; Romanian capital market*

JEL classification codes: *G02, G14, G19*

INTRODUCTION

Since Max Weber (1905) seminal work, various aspects of the relation between religion and economics were approached in the economic literature. Among them it was the behavior of the capital markets during the periods of fasting. Many religions prescribed periods of fasting as ways of purifying the bodies and the souls. The fasting could involve many practices such as the abstinence or reducing some or all food and drink, praying and intensive meditation or avoiding the activities considered as sins (Pargament, 2001). For some of the most spread religions (Catholic Church, Eastern Orthodoxy, Islam etc.) there are precisely delimited periods of fasting which last for many weeks. Some researches from the field of the Behavioral Finance investigated the possibility that such periods of fasting could generate, by affecting investors' behavior, calendar effects. Obviously, such forms of seasonality contradict the principles of Fama (1970) Efficient Market Hypothesis.

The knowledge about any calendar effect could be exploited in successful strategies of investment. However, the performances of such strategies depend on the persistence in time of seasonality. Sometimes, calendar effects disappeared or even went

to reverse (e.g. Dimson and Marsh, 1998). Empirical researches revealed that the seasonality of a capital market could be affected by the financial crisis (e.g. Holden et al., 2005).

From the perspective of the potential impact on capital markets, one of the most studied periods of fasting is the Ramadan which occurs in the ninth month of the Islamic Calendar. During each of the 29 – 30 days of Ramadan the Muslims are fasting (by refrain from consuming food and drinks, smoking etc.) from dawn until sunset. They are also expected to purify their souls by praying, introspection and refraining from sinful behavior. Husain (1998) studied the behavior of the Pakistani equity market from 1989 to 1993. The results indicated that during Ramadan the volatility of the stock returns significantly decreased, while the mean returns didn't suffer relevant changes. The decline in the volatility was explained by a lower economic activity in the days of the Ramadan and by the fact that Muslims avoid the stock market speculation during this sacred period. Seyyed et al. (2005) also found a significant decline in volatility in the Muslim holy month of Ramadan for the Saudi Arabian stock market from 1985 to 2000. Białkowski et al. (2012) investigated the evolution of the capital markets from 14 predominantly Muslim countries from 1989 to 2007, finding that during Ramadan the stock returns were significantly higher and less volatile than for the rest of the year. Such behavior was explained by the impact of the religious month on the investors' mood through encouraging optimistic beliefs.

In this paper we approach the effects of two periods of fasting on the Bucharest Stock Exchange (BSE). More than 80 percents of the Romanian population belong to the Eastern Orthodoxy which has two main periods of fasting: the Great Lent and the Nativity Fast. The Great Lent lasts for seven weeks before the day of the Easter which vary from a year to another. The Nativity Fast starts, every year, at November 15 and it lasts until the day of Christmas, December 25. During these two periods of fasting, the Eastern Orthodoxy believers are expected to pray more often than in the rest of the year and to refrain from meat and dairy products. As in the case of Ramadan, refraining from specific foods could affect investors' metabolism (Sarri et al., 2003). However, the influence of the increasing intensity of praying and meditation on investors' mood could not be the same as those revealed from Ramadan. During the Great Lent, the meditation on the Passion of Jesus would induce rather pessimist beliefs than optimistic ones. Instead, in the case of Nativity Fast, the meditation on the birth of Jesus could, indeed, generate optimistic beliefs.

We study the potential effects of the fasting practices on the mean and volatility of BSE returns by employing GARCH models. We use closing daily values of five BSE indexes for a period of time that starts in January 2007, when Romania became a member of the European Union, and end in August 2016. During this period of time the Romanian capital market was affected by various circumstances. From January 2007 until the middle of year 2012, the effects of some processes (Romania's adhesion to European Union, the 2007 - 2008 global financial crises, a hard recession of the national economy etc.) induced significant turbulences on BSE. The evolution of the Romanian capital market after the middle of the year 2012 could be considered as relative quiet. We perform our analysis separate for turbulent and quiet times.

The rest of this paper is organized as it follows: the second part describes the data and the methodology employed to investigate BSE behavior during the two periods of fasting, the third part presents the empirical results and the fourth part concludes.

DATA AND METHODOLOGY

In this investigation about the effects of fasting on the Romanian capital market we use the closing values of five important indexes of BSE: BET, BET FI, BET XT, BET NG and BET BK (the Table 1 offers the compositions of these indexes). We study the evolutions of these indexes for a sample of data from January 2007 to August 2016. In order to reveal the differences between a quiet period and a turbulent one, we split this sample in two sub-samples:

- the first sub-sample, from January 2007 to June 2012, corresponding to a turbulent period;
- the second sub-sample, from July 2012 to August 2016, corresponding to a relative quiet period (Figure 1).

The values of BET BK, which was compounded since July 2012, are employed only for the analysis on the second sub-sample.

Tab. 1. Compositions and sub-samples of the five BSE indexes

Index	Composition	First sub-sample	Second sub-sample
BET	Contains the shares of most liquid 10 companies listed on the BSE regulated market	January 2007 – June 2012	July 2012 – August 2016
BET FI	The five investment funds (SIFs)	January 2007 – June 2012	July 2012 – August 2016
BET XT	Contains the most liquid 25 shares traded on the BSE, including SIFs	January 2007 – June 2012	July 2012 – August 2016
BET NG	Contains the shares of companies which have the main business activity located in the energy sector and the related utilities	January 2007 – June 2012	July 2012 – August 2016
BET BK	Contains the shares of the most liquid 25 companies purposed, but it is calculated in a different way than BET XT; it is meant to be a benchmark for investment on BSE	x	July 2012 – August 2016

Source: Bucharest Stock Exchange

For each index the logarithmic returns ($r_{i,t}$) are calculated as:

$$r_t = [\ln(P_t) - \ln(P_{t-1})] * 100 \qquad (1)$$

where P_t and P_{t-1} are the closing prices of an index on the days t and t-1, respectively.

We analyze the stationarity of the indexes returns by employing the Augmented Dickey – Fuller (1979) unit root test with intercept as deterministic term. For each of the test regressions we use the Akaike (1973) Information Criteria to choose the number of lags.

Fig. 1. Evolutions of the five BSE indexes between January 2007 and August 2016

Source of data: Bucharest Stock Exchange

The fasting effect impact on the returns mean and volatility is revealed by the Engle (1982) and Bollerslev (1986) GARCH model with two dummy variables:

-   GL_t is a dummy variable which takes value 1 for every day of the period of Great Lent and zero otherwise;

-   NF_t is a dummy variable which takes value 1 for every day of the period of Nativity fasting and zero otherwise.

The impact of the fasting on returns mean is captured by the GARCH conditional mean equation:

$$r_t = \mu_0 + \mu_1 \times GL_t + \mu_2 \times NF_t + \sum_{k=1}^{n}(\xi_k \times r_{t-k}) + \varepsilon_t \qquad (2)$$

where:

- μ_0 is a constant reflecting the returns from the days without Great Lent and Nativity fasting periods;

- μ_1 is a coefficient which reflects the differences between the returns from the days of Great Lent fasting and those from the days without the two fasting periods;

- μ_2 is a coefficient which reflects the differences between the returns from the days of Nativity fasting and those from the days without the two fasting periods;

- ξ_k is a coefficient of the k-order lagged returns;

- n represents the number of lagged returns;

- ε_t is the error term.

The influence of the period of fasting on the volatility of the returns is expressed by the GARCH conditional variance equation:

$$\sigma_t^2 = \omega + v_1 \times GL_t + v_2 \times NF_t + \sum_{k=1}^{q} \alpha_k * \varepsilon_{t-k}^2 + \sum_{l=1}^{p} (\beta_l * \sigma_{t-l}^2) \quad (3)$$

where:

- σ_t^2 is the conditional variance of the returns;

- ω is a constant term reflecting the volatility of the returns from the days without the two periods of fasting;

- v_1 is a coefficient which reflects the Great Lent effects on the stocks volatility;

- v_2 is a coefficient which reflects the Nativity fasting effects on the stocks volatility;

- α_k (k = 1, 2, …q) are the coefficients associated to the squared values of the lagged values of error term from the conditional mean equation;

- q is the number of lagged values of the error term;

- β_l (l = 1, 2, …p) are coefficients associated to the lagged values of the conditional variance;

- p is the number of lagged values of conditional variance.

The values of k, p and q are determined by Ljung and Box (1978) methodology.

EMPIRICAL RESULTS

The Table 2 presents the results of the Augmented Dickey – Fuller unit root test for the returns of BSE indexes. They indicate the stationarity, for both sub-samples, of the returns for all indexes.

Tab. 2. Results of ADF tests for the returns

Index	First sub-sample		Second sub-sample	
	Number of lags	Test statistics	Number of lags	Test statistics
BET	6	-9.75974***	4	-15.3383***
BET FI	4	-12.3891***	3	-17.5589***
BET XT	6	-9.72955***	2	-19.1243***
BET NG	2	-10.2575***	3	-16.4412***
BET BK	x	x	2	-17.9774***

Note: *** means significant at 0.01 level.

The coefficients of conditional mean equation for the first sub-sample are reported in the Table 3. We found a significant positive value of the coefficient of the GL variable for BET NG index.

Tab. 3. Coefficients of conditional mean equation for the first sub-sample

Index	BET	BET FI	BET XT	BET NG
Constant term	0.0093 (0.0434)	0.0127 (0.0638)	0.0001 (0.0467)	0.0013 (0.0430)
Coeff. of GL variable	0.1354 (0.0850)	0.0129 (0.1277)	0.1142 (0.0916)	0.1601* (0.0940)
Coeff. of NF variable	-0.0573 (0.0889)	-0.0640 (0.1505)	-0.0804 (0.1154)	0.0051 (0.0833)
First order lagged returns	0.0642** (0.0306)	0.1054*** (0.0296)	0.0726** (0.0301)	x

Notes: Standard errors in round brackets;
*** , ** , * mean significant at 0.01, 0.05, and 0.1 levels, respectively.

The Table 4 presents the coefficients of the conditional variance equation for the first sub-sample. For the same BET NG index we found a significant negative value for the NF variable.

Tab. 4. Coefficients of the conditional variance equation for the first sub-sample

Index	BET	BET FI	BET XT	BET NG
Constant term	0.1412** (0.0562)	0.1677** (0.0698)	0.1123** (0.0485)	0.1558* (0.0912)
Coeff. of GL variable	-0.0663 (0.0455)	-0.0930 (0.0685)	-0.0516 (0.0435)	-0.0406 (0.0574)
Coeff. of NF variable	-0.0770 (0.0509)	0.0051 (0.1151)	-0.0318 (0.0596)	-0.1106* (0.0662)
alpha	0.2149*** (0.0550)	0.1451*** (0.0397)	0.1742*** (0.0478)	0.2051*** (0.0682)
beta	0.7719*** (0.0545)	0.8394*** (0.0424)	0.8146*** (0.0480)	0.7778*** (0.0759)

Notes: Standard errors in round brackets;
*** , ** , * mean significant at 0.01, 0.05, and 0.1 levels, respectively.

The coefficients of the conditional mean equation for the second sub-sample are reported in the Table 5. For four indexes (BET, BETFI, BET XT and BET BK) the coefficients of the GL variable are significant negative.

Tab. 5. Coefficients of the conditional mean equation for the second sub-sample

Index	BET	BET FI	BET XT	BET NG	BET BK
Constant term	0.04029 (0.0256)	0.0454 (0.0307)	0.0437* (0.0233)	0.0112 (0.0270)	0.0517** (0.0221)
Coeff. of GL variable	-0.1110* (0.0613)	-0.1749*** (0.0589)	-0.1397** (0.0572)	-0.1063 (0.0682)	-0.1873*** (0.0564)
Coeff. of NF variable	-0.0008 (0.0675)	0.0144 (0.1014)	0.0181 (0.0502)	-0.0175 (0.0777)	0.0016 (0.0620)
First order lagged returns	0.0811** (0.0321)	0.0764** (0.0329)	0.0850*** (0.0316)	x	0.07658** (0.0333)

Notes: Standard errors in round brackets;
*** , ** , * mean significant at 0.01, 0.05, and 0.1 levels, respectively.

For the second sub-sample we found, for the conditional variance equation, no significant value of the coefficients of GL and NF variables (Table 6).

Tab. 6. Coefficients of conditional variance equation for the second sub-sample

Index	BET	BET FI	BET XT	BET NG	BET BK
Constant term	0.0847** (0.0373)	0.1738 (0.1127)	0.0950** (0.0474)	0.0661** (0.0314)	0.1340* (0.0758)
Coeff. of GL variable	-0.0077 (0.0250)	-0.0297 (0.0506)	-0.0100 (0.0257)	0.0283 (0.0270)	-0.0003 (0.0294)
Coeff. of NF variable	0.0123 (0.0347)	-0.0300 (0.0686)	0.0219 (0.0311)	0.0256 (0.0253)	0.0012 (0.0435)
alpha	0.1171*** (0.0346)	0.2309*** (0.0750)	0.12980*** (0.0381)	0.1302*** (0.0407)	0.1990*** (0.0655)
beta	0.7549*** (0.0732)	0.5915*** (0.1780)	0.7083*** (0.1001)	0.7772*** (0.0687)	0.5446*** (0.1862)

Notes: Standard errors in round brackets;
***, **, * mean significant at 0.01, 0.05, and 0.1 levels, respectively.

CONCLUSIONS

In this paper we investigated the Romanian capital market evolution during two periods of fasting: Great Lent and Nativity Fast. The results revealed significant differences between the turbulent and the quiet times. For the first sub-sample, which corresponds to the turbulent times, we found different behavior during the fasting periods only for one of the five indexes. The returns of BET NG index experienced an increase of the mean returns during the Great Lent and a decline in volatility during the Nativity Fast. Instead, for the second sub-sample, associated to the relative quiet times, we found, for the other four indexes, declines of the mean returns during the Great Lent. The significant turbulences from the first sub-sample could annihilate the effects of fasting on BSE. The different evolution of BET NG index comparing to the other BSE indexes could be explained by its composition. This index reflects the share prices of companies related to the energy sector which were affected by the significant changes from the oil markets.

The BSE behavior during the two fasting periods could be explained by several facts. The impact of the fasting on investors' metabolism could affect their propensity to the capital market transactions. We can't totally exclude a pessimist mood induced by the Great Lent (this could explain the decrease in mean returns for the second sub-sample) and an optimist mood generated by the Nativity Fast. Usually, in Romania, the schools have holidays around the Easter and for the last week of the Nativity Fast. As Coakley et al. (2007) revealed many investors are distracted, in such periods, by child care activities. Moreover, the last week of Nativity Fast coincides with a period of holiday for a large proportion of Romanian employees. There are also many employees that take short holidays around the Easter. The holiday spirit could have a significant influence on some investors' behaviors (e.g. Hong and Yu, 2009).

Sometimes, the Great Lent ends near the beginning of May when, according to Bouman and Jacobsen (2002), the stock returns began to decrease. The stock returns during the Nativity Fast are sometimes affected by the so-called "year-end stock market behavior" which refers to the substantial selling of stocks whose prices experienced recently descendant evolutions (e.g. Dyl, 1977). The public holidays for the day of Easter and Christmas also influenced the stock returns for the two fasting periods.

The eventual optimist moods induced to the investors by Nativity Fast could be annihilated by the interferences of some classical calendar effects. According to Hirshleifer and Shumway (2003) the winter specific weather causes a decline on the stock returns. Kamstra et al. (2003) also considered that Seasonal Affected Disorder (SAD) effect was responsible for the stock prices descendant evolutions during the winter.

The analysis of fasting period impact on BSE has to take into consideration the fact that in Romania the religion rules are not strictly followed as, for example, in the Muslim countries. Quite often, the Eastern Orthodoxy believers practise the fasting only for the first and for the last week of Great Lent and of Nativity Fast. Usually, the investors from Romanian capital market are not very rigid in the practice of fasting. It also has to be taken into consideration the substantial influence of the foreign capitals on BSE.

This investigation on the impact of the two period of fasting on the Romanian capital markets could be extended to other countries.

References

Agrawal, A. and Tandon, K., 1994. Anomalies or illusions? Evidence from stock markets in eighteen countries. Journal of International Money and Finance, 13(1), pp. 83-106.

Akaike, H., 1969. Fitting autoregressive models for prediction. Annals of the Institute of Statistical Mathematics, 21(1), pp. 243-247.

Akaike, H., 1998. Information theory and an extension of the maximum likelihood principle. in B. Petrov and F. Csáki (eds), 2nd International Symposium on Information Theory, Académiai Kiadó, Budapest, pp. 267-281.

Akaike, H., 1974. A new look at the statistical model identification. IEEE transactions on automatic control, 19(6), pp. 716-723.

Al-Hajieh, H., Redhead, K. and Rodgers, T., 2011. Investor sentiment and calendar anomaly effects: A case study of the impact of Ramadan on Islamic Middle Eastern markets. Research in International Business and Finance, 25(3), pp. 345-356.

Al-Ississ, M., 2015. The holy day effect. Journal of Behavioral and Experimental Finance, 5, pp. 60-80.

Ariel, R.A., 1987. A monthly effect in stock returns. Journal of Financial Economics, 18(1), pp. 161-174.

Ariel, R.A., 1990. High stock returns before holidays: Existence and evidence on possible causes. The Journal of Finance, 45(5), pp. 1611-1626.

Ariss, R.T., Rezvanian, R. and Mehdian, S.M., 2011. Calendar anomalies in the Gulf Cooperation Council stock markets. Emerging Markets Review, 12(3), pp. 293-307.

Ball, R., Kothari, S.P. and Watts, R.L., 1993. Economic determinants of the relation between earnings changes and stock returns. Accounting Review, pp. 622-638.

Beladi, H., Chao, C.C. and Hu, M., 2016. The Christmas effect—Special dividend announcements. International Review of Financial Analysis, 43, pp. 15-30.

Berger, P.L., 2001. Reflections on the sociology of religion today. Sociology of Religion, 62(4), pp. 443-454.

Białkowski, J., Bohl, M.T., Kaufmann, P. and Wisniewski, T.P., 2013. Do mutual fund managers exploit the Ramadan anomaly? Evidence from Turkey. Emerging Markets Review, 15, pp. 211-232.

Białkowski, J., Etebari, A. and Wisniewski, T.P., 2012. Fast profits: Investor sentiment and stock returns during Ramadan. Journal of Banking & Finance, 36(3), pp. 835-845.

Birg, L. and Goeddeke, A., 2014. Christmas economics—a sleigh ride. Economic Inquiry, 54(4), pp. 1980-1984

Bley, J. and Saad, M., 2010. Cross-cultural differences in seasonality. International Review of Financial Analysis, 19(4), pp. 306-312.

Bollerslev, T., 1986. Generalized autoregressive conditional heteroskedasticity. Journal of econometrics, 31(3), pp. 307-327.

Bouman, S. and Jacobsen, B., 2002. The Halloween indicator "Sell in May and go away": Another puzzle. The American Economic Review, 92(5), pp. 1618-1635.

Box, G.E., Jenkins, G.M., Reinsel, G.C. and Ljung, G.M., 2015. Time series analysis: forecasting and control. Fourth Edition, John Wiley & Sons.

Campante, F.R. and Yanagizawa-Drott, D.H., 2013. Does religion affect economic growth and happiness? Evidence from Ramadan, NBER Working Paper No. 19768.

Coakley, J., Kuo, J.M. and Wood, A., 2007. The School's Out Effect in East-Asian Stock Markets. EFMAEFM, Vienna Papers/0615.

Dickey, D.A. and Fuller, W.A., 1979. Distribution of the estimators for autoregressive time series with a unit root. Journal of the American statistical association, 74(366a), pp. 427-431.

Dickey, D.A. and Fuller, W.A., 1981. Likelihood ratio statistics for autoregressive time series with a unit root. Econometrica: Journal of the Econometric Society, pp. 1057-1072.

Dimson, E. and Marsh, P., 1998. Murphy's law and market anomalies. Journal of Portfolio Management, 25, pp. 53-69.

Dumitriu, R., Stefanescu, R. and Nistor, C., 2011. Holiday effects on the Romanian stock market. Vanguard Scientific Instruments in Management, 1(4), pp. 35-40.

Dumitriu, R. and Stefanescu, R., 2013. Gone Fishin' Effects on the Bucharest Stock Exchange. Annals of the University of Petrosani, Economics, 13(1), pp. 107-116.

Dyl, E.A., 1977. Capital gains taxation and year-end stock market behavior. The Journal of Finance, 32(1), pp. 165-175.

Engle, R.F., 1982. Autoregressive conditional heteroscedasticity with estimates of the variance of United Kingdom inflation. Econometrica: Journal of the Econometric Society, pp. 987-1007.

Engle, R., 2002. New frontiers for ARCH models. Journal of Applied Econometrics, 17(5), pp. 425-446.

Fama, E.F., 1965. The behavior of stock-market prices. The Journal of Business, 38(1), pp. 34-105.

Fama, E. F., 1970. Efficient capital markets: A review of theory and empirical work, The Journal of Finance, 25(2), pp. 383-417.

Gultekin, M.N. and Gultekin, N.B., 1983. Stock market seasonality: International evidence. Journal of Financial Economics, 12(4), pp. 469-481.

Hansen, P.R., Lunde, A. and Nason, J.M., 2005. Testing the significance of calendar effects. Federal Reserve Bank of Atlanta, Working Paper No. 2005-02.

Hirshleifer, D. and Shumway, T., 2003. Good day sunshine: Stock returns and the weather. The Journal of Finance, 58(3), pp. 1009-1032.

Holden, K., Thompson, J. and Ruangrit, Y., 2005. The Asian crisis and calendar effects on stock returns in Thailand. European Journal of Operational Research, 163(1), pp. 242-252.

Hong, H. and Kacperczyk, M., 2009. The price of sin: The effects of social norms on markets. Journal of Financial Economics, 93(1), pp. 15-36.

Hong, H. and Yu, J., 2009. Gone fishin': Seasonality in trading activity and asset prices. Journal of Financial Markets, 12(4), pp. 672-702.

Husain, F., 1998. A seasonality in the Pakistani equity market: The Ramadhan effect. The Pakistan Development Review, pp. 77-81.

Jacobs, B.I. and Levy, K.N., 1988. Calendar anomalies: Abnormal returns at calendar turning points. Financial Analysts Journal, 44(6), pp. 28-39.

Kamstra, M.J., Kramer, L.A. and Levi, M.D., 2000. Losing sleep at the market: The daylight saving anomaly. The American Economic Review, 90(4), pp. 1005-1011.

Kamstra, M.J., Kramer, L.A. and Levi, M.D., 2003. Winter blues: A SAD stock market cycle. The American Economic Review, 93(1), pp. 324-343.

Lakonishok, J. and Smidt, S., 1984. Volume and turn-of-the-year behavior. Journal of Financial Economics, 13(3), pp. 435-455.

Lakonishok, J. and Smidt, S., 1988. Are seasonal anomalies real? A ninety-year perspective. Review of Financial Studies, 1(4), pp. 403-425.

Ljung, G.M. and Box, G.E., 1978. On a measure of lack of fit in time series models. Biometrika, 65(2), pp. 297-303.

Lucey, B.M. and Dowling, M., 2005. The role of feelings in investor decision-making. Journal of Economic Surveys, 19(2), pp. 211-237.

Lucey, B.M. and Zhao, S., 2008. Halloween or January? Yet another puzzle. International Review of Financial Analysis, 17(5), pp. 1055-1069.

Marquering, W., Nisser, J. and Valla, T., 2006. Disappearing anomalies: a dynamic analysis of the persistence of anomalies. Applied Financial Economics, 16(4), pp. 291-302.

McCleary, R.M. and Barro, R.J., 2006. Religion and economy. The Journal of Economic Perspectives, 20(2), pp. 49-72.

McGuckin, J.A., 2010. The Orthodox Church: An introduction to its history, doctrine, and spiritual culture. John Wiley & Sons.

Mitchell, M.C., Rafi, M.I.M., Severe, S. and Kappen, J.A., 2014. Conventional vs. Islamic finance: the impact of Ramadan upon sharia-compliant markets. Organizations and markets in emerging economies, 5(1), p. 9.

Mustafa, K., 2008. The Islamic calendar effect on Karachi stock market. Global Business Review, 13(3), pp. 562-574

Nelson, D.B., 1991. Conditional heteroskedasticity in asset returns: A new approach. Econometrica: Journal of the Econometric Society, pp. 347-370.

Nofsinger, J.R., 2005. Social mood and financial economics. The Journal of Behavioral Finance, 6(3), pp. 144-160.

Oğuzsoy, C.B. and Güven, S., 2004. Holy days effect on Istanbul stock exchange. Journal of Emerging Market Finance, 3(1), pp. 63-75.

Pargament, K.I., 2001. The psychology of religion and coping: Theory, research, practice. Guilford Press, New York.

Parker, R.J., 1990. The relationship between dogmatism, orthodox Christian beliefs, and ethical judgment. Counseling and Values, 34(3), pp. 209-212.

Poterba, J.M. and Weisbenner, S.J., 2001. Capital gains tax rules, tax-loss trading, and turn-of-the-year returns. The Journal of Finance, 56(1), pp. 353-368.

Ritter, J.R., 1988. The buying and selling behavior of individual investors at the turn of the year. The Journal of Finance, 43(3), pp. 701-717.

Rozeff, M.S. and Kinney, W.R., 1976. Capital market seasonality: The case of stock returns. Journal Of Financial Economics, 3(4), pp. 379-402.

Sarri, K.O., Tzanakis, N.E., Linardakis, M.K., Mamalakis, G.D. and Kafatos, A.G., 2003. Effects of Greek Orthodox Christian Church fasting on serum lipids and obesity. BMC Public Health, 3(1).

Schifirneț, C., 1999. Religie şi tradiție. Revista Română de Sociologie (1-2), pp. 55-72.

Seyyed, F.J., Abraham, A. and Al-Hajji, M., 2005. Seasonality in stock returns and volatility: The Ramadan effect. Research in International Business and Finance, 19(3), pp. 374-383.

Shah, S. M. U. R. and Ahmed, S.N., 2014. The Ramadan effect on stock market. European Academic Research, 1(11), pp. 4712-4720.

Sias, R.W. and Starks, L.T., 1997. Institutions and individuals at the turn-of-the-year. The Journal of Finance, 52(4), pp. 1543-1562.

Stăniloae, D., 1990. Studii de teologie dogmatică ortodoxă. Editura Mitropoliei Olteniei, Craiova.

Stefanescu, R. and Dumitriu, R., 2011. The SAD cycle for the Bucharest Stock Exchange. International Conference "Risk in Contemporary Economy" XIIth Edition.

Stefanescu, R. and Dumitriu, R., 2013. MOY effects in returns and in volatilities of the Romanian capital market, Vanguard Scientific Instruments in Management, 2(7), pp. 57-67.

Stefanescu, R., Dumitriu, R. and Nistor, C., 2013. Prolonged holiday effects on Romanian capital market before and after the adhesion to EU. Vanguard Scientific Instruments in Management, 1(6), pp. 125-134.

Stulz, R.M. and Williamson, R., 2003. Culture, openness, and finance. Journal of financial Economics, 70(3), pp. 313-349.

Swinkels, L.L.A.P. and Van Vliet, P., 2010. An anatomy of calendar effects. Journal of Asset Management, 13(4), p. 2012.

Tamney, J.B., 1980. Fasting and modernization. Journal for the Scientific Study of Religion, pp. 129-137.

Timmermann, A. and Granger, C.W., 2004. Efficient market hypothesis and forecasting. International Journal of forecasting, 20(1), pp. 15-27.

Trepanowski, J.F. and Bloomer, R.J., 2010. The impact of religious fasting on human health. Nutrition Journal, 9(1).

Wach, J., 1945. The sociology of religion. reprinted as Wach, J., 1997. Sociologia religiei, Editura Polirom, Iasi.

Weber, M. 1905. The Protestant Ethic and the Spirit of Capitalism. London: Allen & Unwin. reprinted as Weber, M., 2002. The Protestant Ethic and the Spirit of Capitalism: and other writings. Roxbury Publishing Company, Los Angeles.

Weber, M., 1993. The sociology of religion. Beacon Press. reprinted as Weber, M., 1998. Sociologia Religiei, Editura Teora, Bucuresti.

White, H., 1980. A heteroskedasticity-consistent covariance matrix estimator and a direct test for heteroskedasticity. Econometrica: Journal of the Econometric Society, pp. 817-838.