

**THE DESCRIPTIVE ANALYSIS  
OF THE SECONDARY SECURITIES MARKET IN LITHUANIA.  
TESTING OF EFFICIENT MARKET HYPOTHESIS**

VIOLETA MOŠČINSKIENĖ\*

**I. Institutional Background**

**The Secondary Securities Market Supervision**

The regulatory authority of the securities market – the Lithuanian Securities Commission (LSC) – was established by the Government decree on 26 June 1992. The legal framework for the securities market was created with the “Temporary Regulations on Issuance, Public Trading in Securities and Stock Exchange in the Republic of Lithuania.” The Law on Public Trading in Securities of the Republic of Lithuania that was adopted by Seimas 16 January 1996 replaced the Regulations.

The stock exchange may be established only with the prior approval of the Government (Law on Public Trading in Securities of the Republic of Lithuania, 1996). The entity running the stock exchange shall be established in the form of a non-profit-making organization, and shall engage only in this activity. Both the Statute and the Internal Regulations of stock exchange require the prior approval of the LSC. The Internal Regulations shall include the procedures regarding membership, listing requirements, trading, clearing, settlement, and arbitration.

According to Article 8 of the Law on Public Trading in Securities, secondary public trading of securities shall be concluded only through the intermediaries of the public trading of securities. Secondary public trading of securities shall be concluded on a Securities Exchange, where:

- a) the authorized capital of the issuer whose securities are traded, exceeds one million litas (LTL)
- b) securities are listed on the Official Trading List of a securities exchange

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Former regulations used to require that the secondary trading in securities of the issuers with equity capital more than 250 thousand Lt, may occur only on the stock exchange. If both the transferor and transferee are physical persons, the transfer of ownership might be conducted either in an organized over-the-counter market or through a direct transaction. According to the Law on Public Trading in Securities, the new regulations for the transfer of ownership outside the securities exchange shall be established by LSC.

### **The Stock Exchange**

There is only one stock exchange in Lithuania, the National Stock Exchange of Lithuania. The establishment of NSEL began in September 1992, and the first trading session occurred on 14 September 1993. The rights of the NSEL founders and the right to organize the issue of shares were granted to the Ministry of Finance, the Investment Bank of Lithuania, the Lithuanian Commodity Exchange, and the Baltic Commodity Exchange. NSEL was registered by the LSC in May 1993. The authorized capital of NSEL is 1.23 million LTL. It is divided into 246 ordinary registered shares without dividends. One share of stock exchange grants one seat on the trading floor. The owner of a share may use this seat either him/herself (in the case that the owner is a licensed brokerage company) or may lease his/her seat to another licensed brokerage company. The Ministry of Finance owns 110 shares, or, 44.7 %, of the authorized capital. The remaining shares belong to other natural and legal persons, mainly to the private brokerage companies and banks.

### **Trading Rules**

#### *Exchange Transactions*

The trading system of NSEL is based on the concept of a centralized order-driving market operation on a fixed basis (French model). Exchange transactions are concluded on the basis of orders transmitted by brokerage companies, called *broker's orders* (Regulations of the National Stock Exchange of Lithuania, 1994). A broker's order means the offer to buy or sell securities traded on the NSEL. The price specified in the order is considered the maximum price in the case of offering to buy, and the minimum price in the case of offering to sell.

The broker's orders are the following: limit orders when the broker specifies the exact price at best which must be executed at the market price of the trading session. Information contained in the broker's order must be available exclusively for the authorized personnel of the NSEL and LSC. Before opening the session, the authorized employees of the NSEL, called "quoters" on the basis of the broker's received orders, prepare the list of orders. On the basis of the received signed lists of orders, quoters prepare the final lists of orders. In determining the market price, the quoter must take the following points into consideration:

- Maximize the volume of turnover
- Minimize the difference between the volume of securities in buy and sell orders to be executed
- Minimize the difference between the current market price and the previous market price

All these principles are applied, one after another, in case the previous principle did not allow him/her to fix the market price. The market price should be established so that the following conditions are fulfilled:

- All "at best" must be fully executed; all buy orders with the price limit higher than the market price, and sell orders with the price limit lower than the market price must be fully executed.
- Orders with the price limit which has become the market price can be fully or partially executed, or not executed at all.
- Buy orders with the price limit lower than the market price and sell orders with the price limit higher than the market price are not executed.

Price variations are limited. The difference between the market price and the previous market price or reference price is determined by the NSEL Board and published in the Bulletin of NSEL the day before it goes into effect. At present, prices cannot fluctuate more than 20% between weekly sessions if the volume of trading is more than 1% of the whole issue of security. In the case of lower volumes of trading, the fluctuations may be higher, but, in any case, cannot exceed 60 per cent.

If the determined market price is within the limits of variation, it is called natural. If the determined market price is outside the limit of variation, the quoters fix it according to a limit. Such a price is called a *forced price*. In the

case of an imbalance and a natural price, the allocation of orders is executed, and, in the case of an imbalance and forced price, the reduction is executed.

In the case that a forced price and an imbalance, the Board of NSEL determines the minimal execution rate at which the transactions can be executed. If the exchange transactions cannot be executed due to great market imbalance, the Exchange announces the reference price for the next trading session.

The chairperson of the session must confirm the market price fixed by quoters and, wherever appropriate, allow allocation and reduction or allow brokers to give additional orders. Once a price is announced, it becomes a binding market price for a given security at a given session, at which exchange transactions are executed. Executed transactions cannot be recalled.

Since the opening of NSEL, the trading on the central market (execution of the exchange transactions) used to occur on Tuesdays. Since 21 September 1995, (the 145th session) the trading on the central market has been occurring twice a week, on Tuesdays and Thursdays.

#### *Direct (Block Trading) Transactions*

The Regulations of NSEL also permit the execution of direct transactions.

The execution of a direct transaction occurs if at least one brokerage company simultaneously presents a buy and sell order for the same number of securities of that same issuer at the same price, while acting on a third account.

The execution of direct transactions is permitted, if the difference between the offer price and the market price of a given security at the last trading session does not exceed the difference determined by the NSEL Board, and if the value of the direct transaction is bigger than the amount determined by the NSEL Board, and published in the Bulletin in advance.

At present, brokers are authorized to transact directly between themselves, in the case of a deal not less than 50,000 LTL. The price at which the direct transaction is executed as well as the number of securities traded are published in the Bulletin. The direct transactions are registered at NSEL every workday. The fees for direct and exchange transactions are equal at the NSEL.

### **The Central Depository of Securities**

Trading and Information Systems of NSEL require a contemporary mechanism of settlement. Seeking to manage the securities issues data base and to ensure the Delivery versus Payment process, the Central Depository was established (parallel with the Clearing Bank for cash settlement). At first, it operated inside the NSEL. The Central Securities Depository of Lithuania was registered like an independent entity, non profit organization on 25 February 1994. The authorized capital is 6.053 million LTL (1.5 million USD) which was subscribed and fully paid by the Lithuanian Bank (Central bank ), 60%, the Ministry of Finance, 32%, and the NSEL, 8%.

The Central Depository initiates operations between brokerage companies according to information received from the NSEL. A statement of account has to be sent by the Depository to the brokerage companies after each session. Clearing–settlement operations are performed by the Central Depository, according to international standards. In this respect, the main function of the Central Depository is to ensure that the delivery will take place simultaneously with the cash transfer, in a fixed time limit of 4 days after quotation day.

### **Brokerage Services**

Permission for stock broker enterprises (SBE) and stock broker departments of banks (SBD) for the carrying out of securities transactions are granted by the LSC. A SBE may choose any of the existing legal forms of an enterprise permitted in the Republic of Lithuania.

A SBE or SBD may engage in the following activities:

- Offering securities for public circulation
- Managing a portfolio by an order of the investor, and holding the securities of their clients
- Consultation on the matters of securities issue (consulting may also include the drawing up of an issue prospectus or a memorandum)
- Consultation on the matters of securities turnover (consulting of investors and issuers);

– Purchasing and selling of securities on behalf of the customer, and on his/her own behalf

A financial requirement is imposed upon all enterprises: to have liquid assets in the amount of 1 thousand LTL in a bank account. At least one stock broker certified by the LSC must be on the staff of a SBE or SBD. Additional requirements in respect to the initial capital were set on 1 April 1996: the enterprises must meet the capital requirements corresponding to the activities in which the SBE is engaged. The first level of initial capital for all the different activities is 30,000 ECU, and it must be gradually increased up to the amount, 730,000 ECU ,equivalent in LTL, until 1 January 2000.

The total number of SBE and SBD on 1 January 1996 was 102. The number of SBE and SBD which have the right to trade on NSEL was 63 on the same date. The number of SBE and SBD which have the right to trade on NSEL was 63 on the same date. The number of SBE and SBD members of the Central Depository of Securities amounted to 80 for the same time (see Table1). Participation of foreign capital in the founding of SBE – joint ventures is still not marked. On 1 January 1996 there were 5 joint venture intermediaries on the securities market. The geographic distribution of SBE in Lithuania is quite uneven. Most of them are based in Vilnius (60 SBE and 11 SBD) and in Kaunas (16 and 2 respectively). The large number of SBE in Vilnius creates keen competition.

**Table 1. Development of stock broker enterprises**

	01 01 1994	01 01 1995	01 01 1996
Total number of SBE and SBD	76	102	102
Number of SBE and SBD having the right to trade on NSEL	35	59	63
Number of SBE and SBD members of the Central Depository of Securities	40	67	80

Source: "Department of Market Regulation of LSC."

## II. The Analysis of the Data of NSEL

### Equity Market

The dominating tendencies throughout the whole period of existence of the NSEL shows that the turnover of the NSEL grew, the number of issuers on the current list of the NSEL increased and market capitalization came to 630 million LTL (see Table 2 ). If, at the end of 1994, market capitalization constituted 1.5% of the GDP, then, at the end of 1995, it accounted for 2.7% of the projected GDP.

Table 2. Main aggregate characteristics of the NSEL in the period 1993–1995

	1993 4 Q	1994	1995
NSEL Market Capitalization (in million LTL)		246.32	630.00
NSEL Market Capitalization as % of the GDP <sup>1</sup>		1.5	2.7
Turnover of NSEL in central market and direct transactions (in million LTL)	1.192	78.10 12.32	499.9 351.5
Turnover of Government securities			
Turnover of stocks	1.192	65.78	499.9
Average turnover per session in central market and direct transactions (in million LTL)	0.085	1.556	3.45
Number of issuers in the trading list of NSEL	48	180	351
Number of quoted securities	7	43	143

<sup>1</sup> Expected GDP for 1995

The supply side has been predominant on NSEL (see Figure 1). The total supply of shares at the end of 1995 amounted to 17.5 million shares, and the demand of shares amounted to 2.6 million. The average monthly amount of shares for 1995 were 8.9 million on the supply side, and 1.6 million on the demand side. The change of supply side during 1995 reached 260 %, and the change of demand side, 1.98%.

On the share market, bloc trading transactions prevailed during the entire history of the NSEL (see Figure 2). The total amount of direct transactions during the period from September 1993 to January 1996 amounted to 214 million LTL. The average amount of session trading was 1.7 million LTL, and

QUANTITY OF SECURITIES OF THE SUPPLY AND DEMAND SIDES  
AT THE NSEL IN THE PERIOD SEPTEMBER 1993 - JANUARY 1996

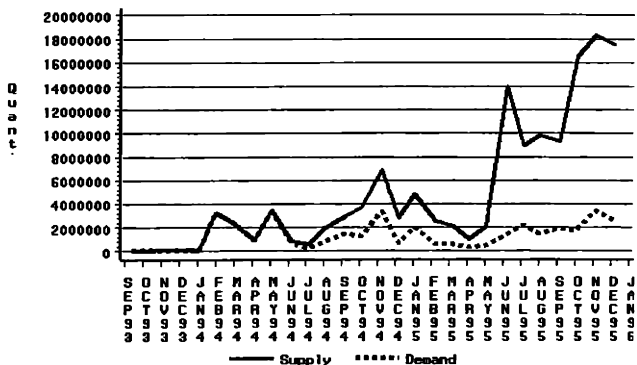


Figure 1

THE AMOUNT OF TRANSACTIONS OF THE NSEL IN THE PERIOD  
SEPTEMBER 1993 - JANUARY 1996 (in LTL)

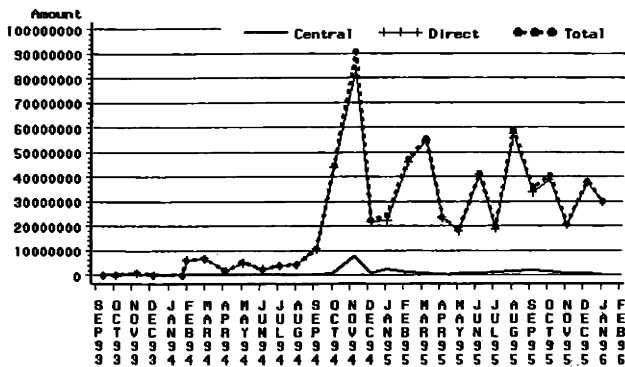


Figure 2



the average amount of transactions appointed 224 thousand LTL (the requirements are not less than 50 thousand). The direct transactions between holders of large amounts of securities was the quickest way to become securities control packet (the exchange of blocks of securities was not allowed). The popularity of direct transactions is predetermined, because the processes of redistribution and concentration of capital, as well as that of becoming the owner for companies, are presently taking place in Lithuania.

From September 1993 to January 1996, trading on the central market reached 20.6 million LTL. The average amount of transactions was 7.9 thousand LTL, and the average amount of session trading was 174.8 thousand LTL. The first pick of trading on the central market was determined in November 1994, the second, in January 1995, and the third, in September 1995 (see Figure 3). The end of 1995 did not see such excitement on the central market. Problems that emerged in the banking system at the end of 1995 also had an impact on the liquidity of, not only banks, but of other issuers and shares. No that it so much affected the financial state of the

THE AMOUNT OF CENTRAL MARKET TRANSACTIONS OF THE NSEL  
IN THE PERIOD SEPTEMBER 1993 – JANUARY 1996 (in LTL)

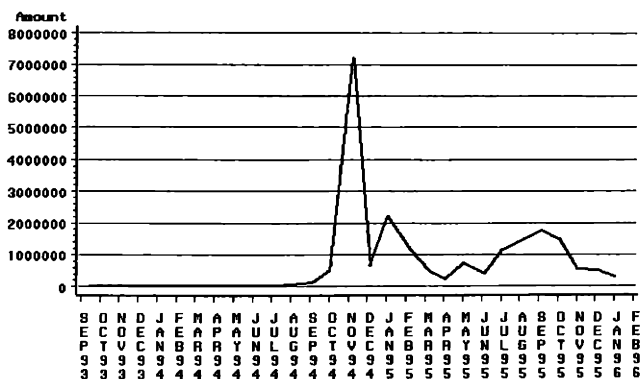


Figure 3

companies, but it reduced the general confidence in security investments. Furthermore, a rare company used to disclose full information about its activities, and it used to invite auditors to check their financial results, which hindered (and hinders) the attraction of foreign investors.

### **The Government Securities**

In the middle of July 1994, the Government of the Republic of Lithuania, in order to cover the state budget, issued short term bonds; so-called "Government Securities (GS)." GS are short-term securities, with a term of redemption of 3 months set for most of them. The par value of a GS is 100 LTL. On the secondary market, trading was started in August 1994 when the GS issue was included in the current trading list of the Exchange. The liquidity of GS and the high profitability are the most attractive sides of this type of investment.

The turnover at the National Stock Exchange of Lithuania (NSEL) shows a rapid increase of GS turnover in the secondary market. The trading volume of GS amounted to 351.6 million LTL, or 70%, of the total turnover at NSEL in 1995. The average turnover of GS per month amounted, in the first quarter of 1995, to 12.1 million LTL, while, in the fourth quarter to 61.9 million LTL.

During the entire history of the NSEL, 13 GS appeared on the central market and 24 quotations were made. One of the GS (No 53078) was quoted 5 times, one three times (No 53080), and others, only once.

### **The Selecting of Data for the Testing of the Efficient Market Hypothesis**

For the analysis, we are using a NSEL data sample, which includes date from the 1st to the 235th session. We were interested in NSEL central market transactions, where a NSEL trading model was realized. During the period mentioned above, only 118 sessions had the quotation of an even share. One hundred forty three shares of industrial companies, banks, and investment companies were quoted during this very period.

We counted the quotation frequencies for mentioned companies, and found out that the six highest quotation frequencies were as follows: 70, 50, 49, 44,

39, and 38 (see Table 3). The cumulative percent of the quotations of these shares is 29.9%. The highest quotation frequencies were determined for the shares of the four banks and three industrial companies (see Table 4).

**Table 3. Frequencies of quotations for selective stocks at NSEL in the period 1993–1995 (sessions 1–235)**

Security code	Frequency	Percent	Cumulative Percent
10235	70	6.3	6.3
10065	50	4.5	10.8
10134	49	4.4	15.1
10078	44	3.9	19.1
10203	44	3.9	23.0
10041	39	3.5	26.5
10247	38	3.4	29.9

**Table 4. Prolonged listed securities at NSEL in the period 1993–1995 (sessions 1-235)**

Security code	Security	Field of activity	Face value (LTL)	Issue volume
10235	CB Ukio bankas ONS	Banking	10	1000000
10065	Litimpeks Bank ONS	Banking	10	17000000
10134	CB Vilniaus bankas ONS	Banking	500	47800
10078	Litekšas ir Calw ONS	Production of textile	1	18707489
10203	Grigiskes ONS	Production of paper and cardboard	1	27895416
10041	Medienos plausas ONS	Production of construction materials	1, 10	3465056
10247	Lithuanian Joint-stock Innovation Bank ONS	Banking	100, 10	3465056

ONS – ordinary named shares

The frequencies of the market states were examined for these seven shares. The biggest part (27%) can be seen when there were no quotations, because the buy orders with the price limit were lower than the market price, and the price of sell orders was higher, respectively (see Table 5). The imbalanced market amounted to 26.45%, with regard to the selling side's

Table 5. Frequencies of market states for selective securities at NSEL in the period september 1993 – January 1996

Frequency Percent Row Pct Col Pct	Market States								
	*	aS	aB	B	S	v	rB	rS	Total
10134	34	27	23	18	15	12	1	0	130
	4.71	3.74	3.19	2.49	2.08	1.66	0.14	0.00	18.01
	26.15	20.77	17.69	13.85	11.54	9.23	0.77	0.00	
	17.44	14.14	24.21	20.93	20.27	16.90	14.29	0.00	
10041	32	6	23	38	1	14	4	0	118
	4.43	0.83	3.19	5.26	0.14	1.94	0.55	0.00	16.34
	27.12	5.08	19.49	32.20	0.85	11.86	3.39	0.00	
	16.41	3.14	24.21	44.19	1.35	19.72	57.14	0.00	
10078	59	23	12	0	7	8	0	1	110
	8.17	3.19	1.66	0.00	0.97	1.11	0.00	0.14	15.24
	53.64	20.91	10.91	0.00	6.36	7.27	0.00	0.91	
	30.26	12.04	12.63	0.00	9.46	11.27	0.00	33.33	
10203	40	23	15	3	16	8	1	2	108
	5.54	3.19	2.08	0.42	2.22	1.11	0.14	0.28	14.96
	37.04	21.30	13.89	2.78	14.81	7.41	0.93	1.85	
	20.51	12.04	15.79	3.49	21.62	11.27	14.29	66.67	
10235	16	56	11	4	9	9	0	0	105
	2.22	7.76	1.52	0.55	1.25	1.25	0.00	0.00	14.54
	15.24	53.33	10.48	3.81	8.57	8.57	0.00	0.00	
	8.21	29.32	11.58	4.65	12.16	12.68	0.00	0.00	
10065	8	28	9	20	3	13	1	0	82
	1.11	3.88	1.25	2.77	0.42	1.80	0.14	0.00	11.36
	9.76	34.15	10.98	24.39	3.66	15.85	1.22	0.00	
	4.10	14.66	9.47	23.26	4.05	18.31	14.29	0.00	
10247	6	28	2	3	23	7	0	0	69
	0.83	3.88	0.28	0.42	3.19	0.97	0.00	0.00	9.56
	8.70	40.58	2.90	4.35	33.33	10.14	0.00	0.00	
	3.08	14.66	2.11	3.49	31.08	9.86	0.00	0.00	
Total	195	191	95	86	74	71	7	3	722
	27.01	26.45	13.16	11.91	10.25	9.83	0.97	0.42	100.00

\* – no quotation; B – demand market, S – supply market (transactions suspended); aB – imbalanced market on buying side, aS – imbalanced market on selling side (the allocation of orders is executed); rB – reduced market on buying side, rS – reduced market on selling side (the reduction is executed); V – balanced market (equilibrium).

cases, when the allocation of orders was executed. The imbalanced market on the buying side had 13.16% of the whole market states among seven analyzed shares. The lowest part, 0.42%, was found out for the cases of the reduced market on the selling side, when the reduction was executed.

### Testing the Efficient Market Hypothesis

We checked out the weak form of the Efficient Market Hypothesis (EMH) (Malkiel (1987) and Ross (1987)). We investigated 5 ordinary named shares, because the face values of 2 of the 7 shares selected by us had changed (see Table 4). We analyzed the prices of transactions for shares (code No 10235, 10065, 10134, 10078, 10203). The reasons for testing the price evaluation for the mentioned shares was as follows:

All shares belonged to the most regularly quoted shares (most of the quotations occurred once a week)

There were no dividends regularly paid during the entire history of the quotations.

We tested whether the evaluation of the prices of 3 bank shares and 2 company shares (production of textile and production of paper and cardboard) was going according to a random walk.

For computing the Dickey-Fuller (DF), the test's statistics 3 regression models were used (SAS/ETS Software, 1995):

Zero mean or no intercepted case

$$y_t = \alpha y_{t-1} + e_t$$

Single mean or intercept case

$$y_t = \alpha_0 + \alpha y_{t-1} + e_t$$

Intercept and deterministic time trend case

$$y_t = \alpha_0 + \alpha t + \alpha y_{t-1} + e_t$$

For the DF test, the following statistics were used.

The regression coefficient-based test statistic

$$RHO = n(\bar{\alpha} - 1)$$

and the studentized test statistic

$$T = (\bar{\alpha} - 1) / SE \bar{\alpha}, \text{ where}$$

$\bar{\alpha}$  is the estimated regression coefficient and

$SE \bar{\alpha}$  is the standard error of  $\bar{\alpha}$ .

The test statistics are computed somewhat differently from the augmented Dickey-Fuller (ADF) test (SAS/ETS Software, 1995). For this test, we used the regression of the differences of the series on the first and second lagged differences, and on the lagged value of the series.

Table 6 shows these statistics and their p-values. The p-values for bank securities (code 10235, 10065, 10078) allow us to conclude that the evaluation of the prices are going according to a random walk. The information about the historical prices is reflected in the price movements for these securities. The Lithuanian Law (Law on Public Trading of Securities of the Republic of Lithuania, 1996) and the stock exchange rules (Regulations of the National Stock Exchange of Lithuania (NSEL), 1994) allow the stock price to be influenced by using any amount of securities. We can interpret the movements of the prices of mentioned shares by also using information from the supervisory authority (LSC); the three banks have had stock broker departments and have been working actively as market makers for these securities. In the price movements of Grigiskes ONS (code 10203), a random walk could be found.

The highest probability was discovered for the trend case. For the movements of stock prices of the last company, Liteksas ir Calw (code 10078), the p-values for the ADF and DF tests' statistics show that the hypothesis of random walk could be rejected. The additional information about extraordinary events in the last two companies can be useful for a further interpretation of the testing results. Furthermore, the notice that the price of the Liteksas and Calw ONS is the most undervalued of the 5 investigated shares (the face value 1 LTL, the average price 0.4 LTL) could be important.

### **III. Conclusion**

The Lithuanian Secondary Securities Market, operating since 1993, has a developed infrastructure with functioning Law and market supervisory authorities. The institutional order and development of the infrastructure could create the premises for developing a free and competitive but centralized securities market in Lithuania. This is the reason that the stock exchange in Lithuania is the only place where we can analyze the transactions

SECURITIES CODE	Type of test	Dickey-Fuller test				Augmented Dickey-Fuller test			
		RHO	Prob<RH0	T	Prob<T	RHO	Prob<RH0	T	Prob<T
10235	Zero Mean	-0.3686	0.596	-0.9359	0.308	0.4319	0.582	-1.1153	0.238
	Single Mean	-2.3174	0.735	-0.9837	0.755	-1.4881	0.833	-0.6372	0.855
	Trend	-9.1508	0.469	-2.2626	0.448	-7.6610	0.589	-1.8232	0.683
10065	Zero Mean	-0.7394	0.516	-1.1044	0.241	-0.2984	0.611	-0.4698	0.506
	Single Mean	-8.3448	0.179	-2.4109	0.144	-5.2070	0.397	-1.4386	0.556
	Trend	-11.2894	0.309	-2.5037	0.325	-10.1352	0.382	-2.1458	0.508
10134	Zero Mean	-0.5246	0.561	-1.1577	0.222	-0.3897	0.590	-0.8741	0.332
	Single Mean	-4.4035	0.479	-1.6211	0.464	-2.9516	0.651	-1.0476	0.728
	Trend	-9.1525	0.456	-2.1643	0.498	-9.2035	0.450	-2.0332	0.568
10078	Zero Mean	-2.1481	0.310	-2.1922	0.029	-1.0634	0.457	-1.2441	0.192
	Single Mean	-12.2348	0.060	-4.1306	0.002	-16.5907	0.016	-4.2039	0.002
	Trend	-12.8240	0.220	-3.6531	0.037	-16.4780	0.093	-3.9422	0.019
10203	Zero Mean	-2.1871	0.306	-1.8807	0.058	-3.6857	0.181	-3.1533	0.002
	Single Mean	-4.0255	0.519	-1.7997	0.376	-6.1818	0.309	-2.8198	0.064
	Trend	-7.0473	0.630	-1.8231	0.677	-6.2219	0.702	-1.6223	0.767

of the secondary market. The only stock exchange in Lithuania, the National Stock Exchange of Lithuania, functions according to the French model.

On the National Stock Exchange of Lithuania, the supply side has been predominant during the entire history of its functioning. A rapid securitization of the former state-owned enterprises subject to the mass privatization program called for the creation of a supply side on the stock exchange. The processes of redistribution and concentration of capital are presently taking place in Lithuania. That is the reason direct transactions are predominant in the Stock exchange. Small quantities of shares are traded on the central market. The number of quoted shares during the period from 1993 to 1995 was equal to 143. Most of the shares have had a short history of quotations.

We discovered the five securities with the highest number of quotations. For these five securities, the weak form of the EMH was examined. We investigated whether the evaluation of the prices of 3 bank shares and 2 company shares was going according to random walk. The p-values for ADF and DF tests' statistics show that, for 3 banks' ONS and for the ONS of one company, the hypothesis of random walk should be accepted. For the stock price movements of the last company, the p-values for ADF and DF tests' statistics show that the hypothesis of random walk could be rejected. An interpretation of the results should be done, investigating market makers' influence, extraordinary events, and comparing the levels of the stock's undervaluation.

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**LIETUVOS ANTRINĖS VERTYBINIŲ POPIERIŲ RINKOS DESKRIPTYVINĖ ANALIZĖ.  
EFEKTYVIOS RINKOS HIPOTEZĖS TIKRINIMAS**

**Violeta Moščinskienė**

**SANTRAUKA**

Lietuvos vertybinių popierių rinka yra "seniausia" tarp Baltijos šalių rinkų. Antrinės vertybinių popierių rinkos funkcionavimo principų analizė parodė, kad institucinė tvarka ir infrastruktūros plėtotė gali sukurti prielaidų egzistuoti saugiai ir konkurentiškai, bet centralizuotai rinkai. Deskriptyvinė analizė parodė, kad biržoje vyrauja akcijų pasiūla, vyriausybės vertybiniais popieriais tenka didžioji apyvartos dalis, o rinkos kapitalizacija yra nedidelė. Be to, buvo tikrinta efektyvios rinkos hipotezė (Efficient Market Hypothesis), tiriant akcijų kainų laiko eilutes. Ši hipotezė tikrinta akcijoms, kurioms nustatytas didžiausias kvotavimų skaičius. Iš penkių tirtų akcijų keturių kainų kitimas buvo atsitiktinio klaidžiojimo procesas (*random walk*), o vienos akcijos kainos kitimas šio proceso neparodė.