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Olga Luštšik\*

## The Anatomy of the Tallinn Stock Exchange

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### Abstract

This article gives an overview of the role, microstructure and the present state of development of the Tallinn Stock Exchange (TSE). This topic has not been discussed widely enough by foreign media because the TSE is still quite young, having commenced operations on 31 May 1996. The rules of the TSE allow a certain degree of freedom but at the same time entail fairly high standards for participants. That is one of the reasons why activity on the TSE is growing so rapidly. For the year, the TSE outperformed the stock exchanges in Riga and Vilnius in many areas, as measured by most indicators. The TSE has also provided numerous benefits to both Estonia and companies whose shares are traded. For instance, Estonia's financial system is now considered to have reached a developed stage and companies are finding it easier to raise capital because the TSE provides an objective assessment of their value.

Keywords: Equities markets, stock exchanges, Estonia

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\* Student Olga Luštšik of the Tartu University prepared this paper while visiting at the Bank of Finland.

### Introduction

This article gives an overview of the role, microstructure, and present level of development of the Tallinn Stock Exchange (TSE). It is intended as a practical introduction for foreign readers and is based on information provided by Estonian media and the Internet. The TSE is still quite young, having started up on 31 May 1996, and is thus not yet widely covered in the foreign media.

There are four main sections. Section 1 includes a short overview of the securities market prior to the TSE and reasons for establishing the TSE. Section 2 introduces the main rules and requirements of the TSE and is divided into eight subsections, covering the following areas: (1) eligibility and requirements for TSE membership, (2) eligibility and listing procedures, (3) overview of disclosure requirements, (4) investor protection: requirements and problems, (5) the electronic trading system: one of the greatest achievements of the TSE, (6) trading procedures, (7) Clearing and

settlement, (8) default procedures. Section 3 describes the TSE's free market. Section 4 discusses the current state of the TSE and includes four subsections dealing with (1) main indicators of the TSE, (2) the TSE's price index: the TALSE index, (3) comparison of the TSE and other Baltic stock exchanges, (4) benefits from the TSE.

### 1 Opening of the TSE

Issuance and trading of financial instruments started in Estonia in early 1993. The instruments involved were commercial paper issued by banks and enterprises and an EEK 300 million issue of government bonds. The Securities Market Law of June 1993 forms the regulatory basis for the securities market. The law provides a legal basis for approving the following normative acts in October 1993: Chapter 7 of the State Securities Board, Rules on Issuing State Operating Licenses to Professional Participants in Securities Markets,

Procedures for the Public Issue of Securities, and Procedures for Public Registration of Securities (1).

Initially, trading was done via banks acting as brokers. Then in November 1994, the Estonian Central Depository (EVK) was opened following a delay caused by the need to create a legal framework for trading and to adapt the requisite software. But everything was ready in time for the start of privatization of state-owned enterprises via share issues in 1995.

Dematerialized securities were also introduced in the EVK (14). This raised a problem since, under the Law on Securities Markets, shares were treated in the context of 'paper-based' shares. As this was a serious contradiction in definitions, the matter had to be clarified in the legislation as soon as possible (13).

In the initial stage, when secondary trading of securities took place on an OTC basis, the depository's role was to confirm trades arranged by the brokers themselves. The central depository accommodated both equities and bonds, including issues of enterprises, banks, municipalities and the government as well as units issued by investment funds. By the start of 1996 a total of 120 such instruments had been registered (privatization vouchers are traded through a separate registry). Trading via the central depository became active in autumn 1995, with daily volumes averaging about EEK 10 million (1).

The aim of the EVK was mainly to keep a register of securities holders. With the increase in securities turnover, the need arose for a new institution that would establish trading rules and provide for investor protection (14). The TSE was opened on 31 May 1996. In the first official transaction on the TSE, Estonia's President, Lennart Meri, bought four Compensation Fund VI bonds (9).

The TSE is a legal entity that provides facilities for trade in securities and currencies, a forum for determining prices, and disclosure rules. It lists securities and brings brokers together (11). The new exchange is following the tradition of the original Tallinn Exchange, which operated from 1872 to 1940 (7).

The TSE's main objectives are to provide facilities for:

- trading securities according to fixed rules and quoted prices;

- transactions and official registration thereof;
- quotation of securities prices;
- efficient and reliable trading, settlement and information flows;
- ensuring transparency (10).

Share capital of the TSE amounts to EEK 2.3 million. Ownership is divided into 230 shares held by 23 shareholders, including a number of combinations of banks and investment funds, the Bank of Estonia and the Ministry of Finance (1). In its first year, the TSE recorded a loss of EEK 427 000 (about USD 30 000). The size of the loss was limited because the software was produced in Estonia at relatively little cost (12).

## 2 TSE rules and requirements

### 2.1 Member firms

Investors deal with the TSE via member firms, which can use the trading system in three principal ways:

- to enter bid and offer quotes;
- to report transactions in securities traded on the TSE;
- to obtain information about listed companies and transactions.

A TSE member firm must be a *legal entity* registered in Estonia. The legal position of a firm applying for membership must be in accord with the laws and regulations of Estonia and investment activity must be included in its charter (36).

A member firm or applicant for membership must have a state license to operate as a professional securities intermediary and must hold at least ten shares in the TSE (36), and must have at least EEK 400 000 (about USD 30 000) in share capital (34).

A member firm must have at least one full-time *Approved Trader*. To obtain the status of Approved Trader, one must possess a qualification certificate as a securities specialist and must pass an exam on the rules of the TSE (34). The management of a company must consist of persons of good repute who have the necessary education, work experience and expertise in the securities business.

A member firm pays the TSE an annual membership fee equivalent to about USD 600 as well as individual transaction fees.

There are two important areas concerning requirements for member firms:

a) Guarantees and trading limits

In connection with its transactions, a member firm must:

- submit a bank guarantee,
- post a deposit in the guarantee fund,
- adhere to trading limit requirements.

A member firm must submit a *bank guarantee* to the TSE to ensure settlement of transactions (37).

Before a member firm can begin effecting transactions on the TSE, it must make a deposit (about USD 5 700) in the *guarantee fund* account at the Bank of Estonia. The purpose of the guarantee fund is to cover expenses incurred by the TSE in the settlement of transactions.

The combined daily volume of a member firm's own- and client-account transactions executed on the TSE must not exceed *ten times* the amount of the bank guarantee provided to the TSE. If the limit is exceeded, the TSE has the right to impose sanctions on the member firm (34).

b) Reporting requirements

Reporting requirements are imposed on both member firms and other stock exchange participants.

A member firm is required to submit the following reports to the TSE: quarterly (due two months after end of period), semiannual (four months) and audited annual (six months). In addition, a member firm is required to inform the TSE immediately of any changes in its business activities or financial condition that might have a material impact on its financial health (34).

## 2.2 Listing

TSE rules stipulate the requirements for companies wishing to list their securities. The Listing Committee, consisting of five members elected by

the Council of the Exchange, determines whether a security is suitable for listing.

All securities listed on the TSE must be dematerialized, freely negotiable and registered with the Securities Board of Estonia and the EVK (34).

An issuer registering with the *EVK* provides the EVK with a stockholder ledger and the *Securities Board of Estonia* with information on its past and present activities and future prospects. The Securities Board checks whether the issue conditions comply with Estonian legislation (4).

Before its securities are listed, the issuer must publish listing particulars.

Listing particulars, which ensure that investors get adequate information on the company and its financial condition, must be published not later than *five days prior* to initial listing (34). Listing particulars cannot be published until approved by the TSE. An issuer must send one copy of the listing particulars or prospectus to each TSE member firm (35).

### 2.2.1 Listing shares

Shares can be included on the Main List or Secondary List.

#### Main List

Admission to the Main List requires that the issuer has carried on an independent business for at least *three years* (35). The company must submit audited annual reports for the preceding three years and show a net profit for the preceding financial year. Market capitalization of the listed shares must be at least *EEK 100 million* (about USD 7.4 million) (34). The shares must be held by at least *200 investors* and at least 25 per cent of the shares must be held by the public.

#### Secondary List

For admission of shares to the Secondary List, the issuer must have carried on an independent business for at least *two years* (35). The company must submit audited annual reports for the preceding two years. Market capitalization of the shares must be at least *EEK 10 million* (about USD 740 000) (34). The shares must be held by at least 100 investors and at least 25 per cent of the shares must be held by the public.

### 2.2.2 Listing bonds

In order to be listed, debt securities must be freely transferable and registered with the Securities Board of Estonia and EVK (35). The total volume of the issue must be at least *EEK 10 million*.

To list corporate bonds, the company must present audited annual reports for the preceding two years, and show a net profit for the preceding financial year (34).

### 2.2.3 Listing fund units

In order to be listed, fund units must be fully paid-up, freely transferable and registered with the Securities Board of Estonia and EVK. They must be held by a suitable number of investors, ie normally at least 150 (35), and their total market value must be at least *EEK 5 million* (about USD 370 000) (34).

A fund's management company must submit to the TSE semiannual, quarterly and audited annual accounts for the last financial year. As an exception to the requirement, the Listing Committee may admit to listing a new, recently established fund if it is assured that the persons responsible for investment decisions have satisfactory expertise and experience and the fund's investment report shows adequate risk diversification (35). This option has however not yet been used.

### 2.2.4 Listing securities of foreign issuers

A foreign issuer wishing to list securities on the Main or Secondary List must meet the same requirements as domestic issuers registered in Estonia. However, the Listing Committee can for good cause make exceptions to the requirements in order to facilitate listing of foreign securities or to protect investors (34).

All documents submitted to the TSE must be in the Estonian language or must be accompanied by a notarized translation into Estonian (35). So far, there have not been any TSE listings of securities of foreign issuers.

### 2.2.5 Summary of listing requirements

The following table brings together the main requirements for listing different kinds of securities on the TSE.

## 2.3 Information disclosure

A stock exchange reflects the level of an economy's development as well as the ethics of the society. Around the world, companies generally try to advertise and disclose much information about themselves in order to attract investors. Estonian companies, on the contrary, tend to keep information to themselves. This policy is justified by pointing the finger at 'ill-disposed and unscrupulous competitors' (16).

In an effort to stabilize and regulate the disclosure of information, TSE rules pay particular attention to these matters. All listed companies are required to provide adequate information about their business activities. All information submitted to the TSE must be distributed immediately through the information system (34).

The TSE provides real-time price and transaction information via Reuters and Dow Jones Telerate. In addition, the TSE maintains a Web Site on the Internet (<http://www.tse.ee>), which provides up-to-the-minute price and transaction information (34).

Information disclosure requirements are based on the following three concepts:

1. price-sensitive information,
2. equal access to information,
3. insider information.

#### a) Price-sensitive information

The issuer is required to disclose immediately information about any of its activities that might have an effect on the price of its listed securities. The members of the management and supervisory bodies of the issuer are required to assess all changes in the company to determine what information is to be disclosed immediately (34). Information can be made public by telefax, e-mail or personal delivery (33).

Table 1 Listing requirements

		Independent business	Net profit	Annual reports	Market capitalization	Investors
<b>Shares</b>						
	Main List	at least 3 years	for preceding financial year	for preceding 3 years	100 million EEK	at least 200 investors
	Secondary List	at least 2 years	–	for preceding 2 years	10 million EEK	at least 100 investors
<b>Bonds</b>		–	for preceding financial year	for preceding 2 years	10 million EEK	–
<b>Fund Units</b>		–	–	for preceding year	5 million EEK	at least 150 investors

## b) Equal access to information

The issuer must ensure that no price-sensitive information is disclosed to unauthorized parties before it is disclosed through the TSE information system. Undisclosed information should not be made public in interviews, statements, or commentaries. An issuer whose securities are listed on another exchange is required to ensure that the same information is given to all the exchanges simultaneously.

If the issuer learns that undisclosed information has become known to unauthorized persons before its planned publication, it is required to disclose the information immediately (34).

## c) Inside information

The term *inside information* refers to any information concerning an issuer or its securities, that has not been made public, including information concerning the issuer's business operations, management, securities, products and services or market conditions, which, if published, would be likely to have a significant effect on the price of any of the issuer's listed securities (33).

The following *persons* are considered to be *in possession* of inside information:

- members of management, board and council of an issuer,
- a person who himself has substantial holdings in the capital of the issuer,

- a person who has access to inside information by virtue of the exercise of his employment tasks or duties (33).

According to the rules of the TSE, no person in possession of inside information is allowed to undertake transactions or give recommendations based on confidential information. An issuer must keep a list of such persons. Upon request from the TSE, an issuer is required to submit such a list to the TSE (33).

Members of the council, board and management, the auditors and those associated with them are not allowed to undertake transactions in the issuer's securities from the end of the relevant accounting period *till one week after* disclosure of semi-annual or annual financial results (34).

It is practically impossible to antedate transactions made on the basis of confidential information. Only afterwards it is possible to check if there was any increase in transactions before disclosure of price-sensitive information (15).

In the developed countries *insider trading* is controlled by state supervisory authorities. In Estonia the concerned body is the State Securities Inspectorate (SSI). However, according to the head of the SSI, his organization does not have sufficient resources and so the TSE should be responsible for such supervision. Moreover, Estonian law does not provide for punishment for the use of confidential information by natural persons. The Ministry of Finance is planning to

change the law in this respect by the end of this year (15).

The classic meaning of *insider trading* is the use of undisclosed inside information in order to gain advantage in securities trade (6). In Estonia *insiders* are persons in the banking and financial sectors. Such persons have ready access to official reports ahead of others, which obviously gives them opportunities for personal gain.

The first *insider trading* scandal on the TSE occurred in January 1997, when news of the merger between North-Estonian Bank and Union Bank of Estonia reached investors prior to disclosure via the TSE trading system (8). Afterward, the SSI made a thorough study that led to surprising results. In October 1996 the relative share of 'suspicious' transactions was 12 per cent and in January 1997 over 50 per cent (6).

### 2.3.1 Information to be made public

Information concerning the following major areas is to be made public:

- information to be published by an issuer
- financial statements
- changes in business activities of an issuer

#### 2.3.1.1 Information to be published by an issuer

The issuer must inform the TSE of *changes* in:

- issuer's bylaws;
- composition of the board, council or management of the company;
- structure of the company's share capital and securities issued;
- rights of holders of the listed securities, including changes in interest rates on listed bonds.

The issuer is also required to inform the TSE on:

- major legal proceedings;
- initiation of bankruptcy proceedings; any decision by a general meeting of shareholders to propose termination of activities of the issuer;

- application to list the securities on another stock exchange (34).

#### 2.3.1.2 Financial reports

The issuer must publish the following financial reports:

- a. annual reports and financial statements,
- b. auditors' reports,
- c. semiannual reports.

Annual and semiannual reports must be compiled in accord with applicable legislation and TSE guidelines (33). These reports must be also disclosed in at least in one daily newspaper within 7 days (32).

#### a) Annual reports and financial statements

An issuer must submit to the TSE *an audited annual report* in compliance with the provisions of the Commercial Code and the Law on Bookkeeping.

The TSE requires that such reports be audited by one of the following auditing firms: Price Waterhouse, KPMG Estonia, Arthur Andersen Estonian Ltd, Cooper's & Lybrand, Deloitte & Touche Estonian Ltd, or Ernst & Young (17).

An issuer must make annual reports available to all TSE member firms and to investors immediately after publication.

If an issuer discusses its anticipated development for the next accounting year in the annual report, it is required to provide information regarding any special provisions on which it has based its assumptions (33).

#### b) Auditors' report

The auditors' report must be published together with the annual report. An issuer must also make public immediately an auditors' report if the auditors:

- make a significant remark on the basis of an audit; or
- do not recommend that the balance sheet, income statement or report on the issuer's activities be confirmed; or



- find that interim reports published by the issuer during the accounting period have not been prepared in accord with the Law on Book-keeping (33).

#### c) Semiannual report

An issuer must publish a semiannual report covering its activities and financial results for the first six months of each financial year (33).

The semiannual report must be submitted to the TSE immediately after the board meeting in which it is adopted and no later than 2 months after the end of the relevant period (31).

##### 2.3.1.3 Changes in business activities of an issuer

In addition, a member firm must inform the TSE immediately of any changes in its business activities or financial position that could have a material impact on its financial health (34). Some examples of such circumstances and events are

- the purchase or sale of major fixed assets, including real property that is outside the normal business activities of the issuer;
- fluctuations in prices of goods or services that are of major importance to the issuer;
- the conclusion, termination or cancellation of a major contract;
- entry into a major new market or loss of or withdrawal from such a market;
- investments outside the normal business activities of the issuer;
- a proposed merger, separation or reorganization, or offers made to the issuer to purchase all or a whole class of shares and the issuer's response;
- a major reorientation of the issuer's field or sphere of activity (33).

##### 2.3.2 Additional requirements for an issuer of shares

##### 2.3.3 Additional requirements for an issuer of bonds

An issuer of bonds must inform the TSE immediately of

- a decision not to pay in full the interest on a listed bond;
- a decision to redeem a listed bond prior to the redemption date;
- a new issue of bonds and guarantees given on such bonds;
- the intent to decrease share capital (34).

##### 2.3.4 Additional requirements for an issuer of fund units

The management company of the fund must inform the TSE of

- any proposal to reorganize the fund;
- termination, suspension or liquidation of the fund;
- changes in the council, board or management of the managing company;
- any decision by the Securities Board to suspend or revoke its license;
- major changes in the fund's investment strategy.

The management company of a fund is also required to present to the TSE the fund's quarterly reports, semiannual reports and audited annual reports and to publish weekly the net value of the fund's units (34).

## 2.4 Investor protection

The TSE rules include a set of *Conduct of Business Rules*, which stipulate that a member firm, its employees and members of its supervisory bodies are required to observe the principles of fair and equitable trading, to act with skill and care in the best interests of its clients and to uphold the integrity of the securities markets. A member firm must not make inaccurate, unsubstantiated or defamatory statements about an issuer, another member firm or an employee thereof (36).

An issuer of shares must inform the TSE immediately of:

<b>Subject</b>	<b>Explanation</b>
<i>General meetings of shareholders</i>	The TSE must be informed immediately upon determination of the date of the annual general meeting. Information announced at the general meeting must be published via the TSE information system no later than the announcement.
<i>Dividends proposed at the general meeting</i>	The TSE must be informed immediately when the issuer's board decides on the amount or nonpayment of dividends.
<i>Proposed increases or decreases in share capital</i>	The TSE must be informed immediately of planned increases or decreases in the issuer's capital.
<i>Bond issues</i>	The information shall include at least the following: a) volume, maturity and interest rate of debt securities to be issued; b) any guarantee or security given in respect of debt securities; c) subscription conditions and offer price.
<i>Business transactions effected with persons connected to issuer</i>	These are significant transactions between the issuer and a share-holder or member of the council, board or management or people connected with them or companies controlled by them. ( <i>A transaction is considered significant if its monetary value is equal to or greater than 10 % of the issuer's equity capital or income from operations in the last financial year.</i> )
<i>Reporting on major holdings</i>	If the issuer becomes aware that a shareholder has acquired or disposed of shares and that as a result his holdings rise above or drop below the 10 %, 20 %, 33 %, 50 % or 66 % threshold, the issuer is required to inform the TSE immediately (34).
<i>Shareholder agreements</i>	A shareholder controlling more than 5 % of voting rights of the issuer must publish information regarding any shareholder agreement aimed at influencing the free negotiability of shares or which could have a significant effect on the price of a listed security (31).
<i>Information on mergers</i>	An issuer must make public any proposal made to the council and general meeting on merging the issuer with another company and related decisions of the general meeting (33).

#### 2.4.1 Clients' interests

A member firm is required to execute a client order without undue delay and at the best price obtainable (34).

Any relationship between a member firm and its client must be specified in a *written contract* between the parties. A member firm must inform the client about commissions and other service fees.

All information and investment advice given to a client by a member firm must be truthful, timely, complete and comprehensible, so as to enable the client to make informed decisions (36).

#### 2.4.2 Conflict of interest

*Conflict of interest* arises when the interests of a member firm in connection with an intended investment transaction for its own account conflict with its duties to its client and when the realization of its interests could damage the interests of its client. A situation wherein the responsibilities of a member firm to one client will damage the interests of another client is also considered a conflict of interest (36).

A member firm must disclose to its client any possible conflict of interest. A member firm is prohibited from executing a client's order when the member firm, a member of its supervisory body or

its employee is a party to the transaction, which could be contrary to the interests of the client. The contract notes provided to the client must so specify if a member firm or person connected with it is a party to the transaction.

A member firm is not allowed to execute an order for its own account or the account of its employee at a price that is the same or better than the limit order price set by its client, prior to executing the client's order. When different orders specify the same conditions, the orders first shall be executed in the order of receipt (34).

### 2.4.3 Dispute resolution

If a dispute between the member firm and its client arises, the member firm is required to follow these procedures:

- All complaints about the activities of a member firm are *registered* by the member firm and the TSE is informed thereof.
- All complaints by clients are *considered* by the member firm.
- The member firm issues a written *report* to both the client and the TSE on its consideration of a complaint and any corrective actions taken.

If the client is not satisfied with the action taken or resolution offered by the member firm, he may request a change by the TSE disciplinary committee. The member firm is required to inform the client of this option (34).

## 2.5 Electronic trading system

The TSE has developed an electronic trading system that displays quotes for listed stocks and in which brokers have interactive terminals entering new quotes and orders or changing existing ones. It also distributes news about issuers of listed securities and provides information on completed transactions. All transactions are negotiated over the phone and reported to the TSE via the trading system. The reporting system issues instructions to

the EVK on securities for the purpose of clearing and settling trades.

The electronic trading system has been implemented as a client/server network of computers. The TSE is connected to brokerage firms by a dedicated frame relay network with virtual TCP/IP channels linking the TSE LAN to brokerage firms' LANs (34).

The trading system consists of the *Stock Exchange Server*, *Site Database Servers* and *Broker Terminals* for each member company.

The *Stock Exchange Server* consists of two parts: a *communications server* and a *database server*. The *database server* holds the main stock exchange databases of listed companies, member firms and market makers, as well as orders entered into the public order book, market maker quotations, trades, trade details, news, security statistics etc. The *communications server* handles TCP connections with clients.

*Site Database Servers* are intended to reduce TCP/IP traffic on the network and the load on the Stock Exchange Server. A server may, in the case of a small site, run on the same computer with a Broker terminal.

The *Broker Terminal* is designed as a native Windows application. A Broker Terminal shares data files with a Site Database Server over LAN and displays real-time synchronized updates of information on all screens.

Much emphasis was placed on the security of the system. Every trader has a personal password which must be entered at each log-in. Every message from the trading system to the TSE is encrypted, and each message carries its source and destination addresses, which are checked before a message is accepted. The Stock Exchange Server has full audit trail capability and ensures the logging of all transactions processed by the information system (34).

To use the trading system, a member firm must have at least one designated terminal. The TSE may permit a member firm to use another member firm's designated terminal if one member is having technical problems with the terminal or communication systems.

In order to connect additional terminals to the trading system, a member firm must get the approval of the TSE (39).

The trading system is organized in modules so that new partial systems can be easily added without changing the existing system. In the next stage of development, the TSE is to add a small-order executing system and automatic order matching capability (34). The system has thus far worked well, without a single breakdown.

## 2.6 Trading models

Member firms effect transactions in accord with two different trading models: the *dealer market* and the *public order book*. At the present time trading of all listing securities is done on the dealer market.

### 2.6.1 Dealer market

When a security listed on the TSE has at least two Recognized Dealers (RDs), the security is traded on *the dealer market*. In this market, transactions are effected via member firms that are registered as RDs for the security in question and have assumed the obligation to provide continuous bid and offer quotes. At present, all transactions are negotiated by phone (34).

An RD must at all times employ at least two Approved Traders employed full-time, of whom at least one must be immediately available throughout the TSE trading period at the phone number used for effecting transactions (39).

For each security, the TSE sets the minimum amount (lot) on which a market maker quotes two-way prices. Bid and offer quotes are displayed for integral numbers of lots (34). Lots vary in size. For example, for Rakvere LK a lot is 10 000 shares, for Kalev 100 shares, and for all other shares a lot is 1000 shares (19).

If an investor gives a market maker an order to buy or sell securities, an RD executes it at the best displayed price in at least in the amount displayed. RDs continually adjust their quotes in response to changing market conditions. If an RD receives two orders for the same security during the same telephone call, he is not obliged to execute the second order; if he rejects the second order, he is obliged to immediately change the quote displayed in the trading system (34).

The TSE recommends that all RDs use voice recording equipment on the phones used for negotiating and taking transaction orders and record all phone calls connected with the execution of transactions (39). This helps to avoid conflicts and misunderstandings between dealer and client.

An RD who does not fulfil the market maker obligations stipulated in the TSE rules will lose his status as RD and cannot apply for reinstatement for a period of three months (34). Thus far, no suspensions have occurred.

### 2.6.2 Public order book

*The public order book* is a trading model for transactions in less liquid securities, ie securities for which only one RD is registered. If a security is trading on the public order book, member firms can enter corresponding limit orders into the trading system. An entered order is displayed for one or more lots for the security in question (39). All trades are negotiated by phone (34).

An RD is not allowed to enter orders on the public order book at prices that differ substantially from those of other members. An RD is generally required to enter a client's order immediately into the trading system (38).

Before entering an order, the member firm must check whether there is a matching order displayed in the system that would allow it to execute the client's order at the specified or better price. If more than one order at the same price is displayed in the system, the member firm is required to execute the order entered first.

A member firm is not allowed to combine different client orders for display in the trading system unless it has the consent of all concerned clients or the order is for less than one lot. If order conditions allow, a member firm can execute orders in parts (34).

## 2.7 Clearing and settlement of TSE transactions

*TSE transactions* are buy, sell, repurchase and securities-lending transactions effected by a member firm for securities listed on the TSE or admitted to trading on the free market.

*Clearing and settlement of TSE transactions* refers to the transfer of securities and payments in accord with the terms of contracts that have been concluded and submitted to the TSE, on which member firms submit reports. Transactions involving securities listed on the TSE or admitted to trading on the free market must be settled on the settlement date, ie T+3 (39).

### 2.7.1 Clearing account

A *clearing account* is a bank account of a member firm that is used in clearing TSE transactions. Every member firm must have a clearing account (39).

For clearing clients' transactions, a member firm uses one or more client accounts. A *client clearing account* is a special account opened by a member firm for holding the deposits of one or more clients.

A member firm cannot use client money for clearing transactions executed in its own name on its own account. Nor can a member firm use a client's funds for clearing another client's transactions (39).

### 2.7.2 Trade reporting

All TSE transactions must be reported to the TSE within *five minutes* after conclusion of the transaction (34).

Immediately after receiving the seller's *trade report* the TSE must publish information on the security in question, the price and the volume.

After sending a trade report, a member firm must by the end of the post-trading session forward to the TSE a *settlement report* covering all transactions effected during the trading session on its clients' accounts and own accounts. The TSE trading system is connected with the EVK's system, which carries out the settlement transactions (34).

The TSE forwards settlement reports received from member firms to the EVK for data checking and confirmation. The TSE informs member firms immediately as to reports received from the EVK and conformation decisions on transactions (39).

The following figure shows the TSE reporting procedure.

### 2.7.3 Short selling and securities lending

A *short position* is a negative balance on a member firm's securities account resulting from a sell transaction for securities that are not registered in the account at the moment the transaction is concluded and on which no confirmation has been given by the trading system on the matching of transaction details after effecting a buy transaction (39).

Only RDs have the right to take short positions. An RD is allowed to take short positions within limits specified by the TSE and only in securities for which two-way price quotes are required (34).

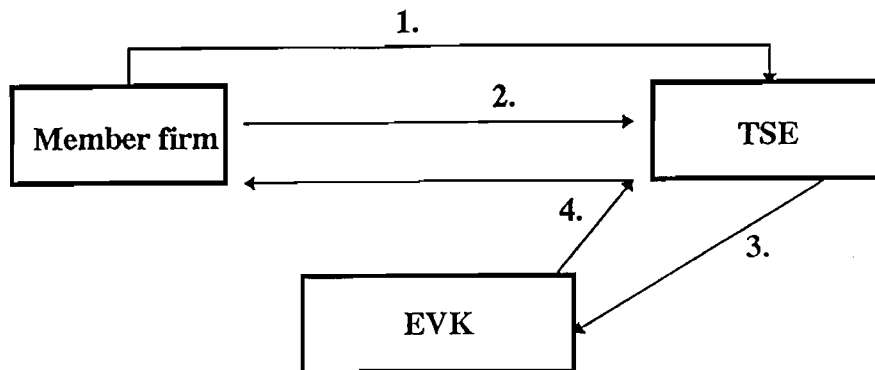
An RD can cover a short position via *securities borrowing*. The TSE has drawn up a *Master Lending Agreement* model for use by its members. A lending agreement must be concluded by the end of the trading day preceding settlement (S-1). Securities can be borrowed *only* for the purpose of covering short positions (37).

In a securities lending transaction, the proceeds from sale of the borrowed securities are used by the TSE as *collateral*. The TSE transfers the collateral to an account at the Bank of Estonia, where it is held on behalf of the lender until the loaned securities are returned. In the event that the borrower does not return the securities to the lender, the lender has the right to claim the collateral. In addition to the collateral, the borrower is required to submit to the TSE *margin in the amount of 10 per cent* of the value of the collateral. The TSE returns the collateral and the margin to the borrower only after the borrower has returned the securities to the lender. At the end of each trading day, the TSE determines the market value of the borrowed securities. If that value exceeds the amount of the collateral by more than 5 per cent, an additional payment is required from the borrower in order to raise the amount of collateral to the value of the securities (34).

## 2.8 Default procedures

At the end of the trading day preceding settlement, the EVK checks the settlement details sent by member firms on transactions effected for their own and clients' accounts. A transaction is consi-

Figure 1 Settlement



1. Trade report (Member firm to TSE)
2. Settlement report (Member firm to TSE)
3. Settlement reports (TSE to EVK)
4. Reports from EVK (EVK to TSE, TSE to member firms)

dered a failed transaction if:

- a member firm does not have the necessary amount of securities to cover the transaction; or
- a member firm has effected a transaction on a client's account beyond the authority granted by the client; or
- an account operator has not entered the transaction confirmation (37).

In order to guarantee settlement of transactions, the TSE has the right to implement the following procedures:

- a. settlement by the member firm
- b. automatic lending
- c. buy-in
- d. guarantee fund and sell-out (34).

In practice, only settlement by the member firm and automatic lending are used.

- a) Settlement by the member firm

If at the end of trading on S-1 a client of a member firm does not have the necessary securities, the account of the member firm is debited on the settlement day by the amount of the securities in question and corresponding funds are credited to the member firm. If at the end of trading on S-1 an

account operator has not confirmed a client's purchase transaction, the EVK informs the TSE immediately. The TSE then credits the member firm's account for the securities and holds it responsible for the transaction payment (34).

- b) Automatic lending

*Automatic securities lending* refers to lending of securities by the TSE in order to guarantee settlement of transactions effected by member firms (37).

In the event that a member firm does not have the necessary securities in its account, the TSE has the right to use automatic lending to effect settlement (34). In this case the general procedures defined for securities lending relating to the holding of collateral and margins are implemented. The member firm in respect of which automatic lending is used is required to return the securities by the fifth trading day following the automatic lending transaction (T+5). The TSE has the right to effect a buy-in against a defaulting member firm. The collateral held by the TSE and, if necessary, by the Guarantee Fund is used to pay for the bought-in securities (34).

If the TSE effects an automatic lending transaction to guarantee fulfilment of obligations of a member firm, the member firm is required to compensate the TSE for interest payable on the

borrowed securities and for all other expenses incurred (37).

#### c) Buy-in of securities

If automatic lending is not possible, the TSE may effect a buy-in procedure.

A *buy-in of securities* is the purchase of securities by the TSE in order to effect settlement of a transaction.

A person authorized by the TSE effects a buy-in transaction on the settlement date of the failed transaction or, if that is impossible, on the earliest possible date thereafter (37).

Money received from the sale of bought-in securities is transferred directly to the seller.

If the buy-in price is higher than the contract price, the difference is withdrawn from the Guarantee Fund (34). If the buy-in price is lower than the contract price, the TSE transfers the difference to the Guarantee Fund account (37).

#### d) The role of the Guarantee Fund in a sell-out

If a transaction has failed because of a lack of funds in the member firm's account, the TSE uses the Guarantee Fund to settle the transaction and transfers the securities to the TSE account.

In the event that the member firm does not return the funds by the end of the third trading day following the transaction, the TSE has the right to sell out the securities it is holding as collateral or realize the bank guarantee given to it on behalf of the member firm (34).

In addition to covering the payment made from the Guarantee Fund, the member firm must pay all other expenses incurred by the TSE within three days after the payment has been made (T+3) (37).

### 3 Free market

Trading on the *free market* refers to transactions effected via the TSE trading system in securities that are not listed on the TSE, with the approval of the Listing Committee. The Listing Committee can approve trading on the free market if at least three members of the TSE report their intention to deal in these securities (35).

The free market was established for the purpose of allowing use of the trading system for securities that do not qualify for listing or for which an issuer has not yet applied for listing (34).

The free market is intended primarily as a transient stage prior to quotation on the TSE. It was established because there had been times when there were insufficient securities on the market and some manufacturers wanted to activate their shares (16). Permission for trading on the free market is given to companies for one year. During this period they should decide whether to quote securities on the TSE lists. If the company does not apply for a listing within a year, the TSE has the right to cease trade in those securities (30). (For a foreign issuer who wants its securities traded on the free market, there is no time limit.)

Prices of securities traded on the free market are published separately from the official TSE statistics (35). There are no fees for participation in the free market (16).

Requirements for trading on the free market First, an issuer must prove that he is knowledgeable of the Information Disclosure Requirements and prepared to observe them. Six months after starting to trade in securities on the free market, the Listing Committee assesses whether the issuer has met the requirements on Information Disclosure (foreign investors are not required to meet TSE Information Disclosure Requirements but must observe the rules of their own states (16)). If the trading has not been satisfactory, it can be stopped (30). These rigid requirements were introduced in April 1997. Before that time, Information Disclosure rules for free market participants had more or less the status of recommendations. As a result, some companies did not want to disclose any information about their activities. So, to protect the interests of investors, the TSE decided to change the requirements for trading on the free market (16).

The requirements for distribution of shares between investors are the same as for shares on the Secondary List: shares admitted to the free market must be distributed among at least 100 investors, with at least 25 per cent belonging to the public. A company must present audited annual reports for the preceding year and start publishing its business reports once per quarter (30).

Table 2 **Summary of default procedures**

<b>Type of default procedure</b>	<b>Cases of implementation</b>
settlement by member firm	A client of the member firm does not have the necessary securities
automatic lending	The member firm does not have the necessary securities in its account.
buy-in	The member firm does not have the necessary securities in its account.
guarantee fund and sell-out	A lack of funds in the member firm's account

Table 3 **Brokers' trading activity on the TSE**

	<b>Trading volume</b>		<b>No of traded shares</b>		<b>No of trades</b>	
	<b>1996</b>	<b>June 1997</b>	<b>1996</b>	<b>May 1997</b>	<b>1996</b>	<b>June 1997</b>
HANSA	36.0 %	36.0 %	29.0 %	34.0 %	22.5 %	23.0 %
HOIU	18.9 %	13.0 %	17.1 %	9.0 %	16.2 %	19.0 %
YHIS	5.3 %	10.0 %	8.1 %	16.0 %	11.2 %	14.0 %
FOREX	11.1 %	9.0 %	13.7 %	14.0 %	13.8 %	11.0 %
ICI	–	5.0 %	–	–	–	5.0 %
TP	9.1 %	5.0 %	8.1 %	13.0 %	13.0 %	11.0 %
EMP	–	5.0 %	–	5.0 %	–	–
EE	4.9 %	–	5.9 %	–	7.1 %	–
Total	85.3 %	83.0 %	82.6 %	91.0 %	83.8 %	82.0 %
Others	14.7 %	17.0 %	17.4 %	9.0 %	16.2 %	18.0 %

Source: <http://tse.ee/news/733.txt> and <http://tse.ee/stat/share/1996.htm>

FOREX-Estonian Foreksbank Ltd., HANSA- Hansabank Ltd., YHIS-Union Bank of Estonia Ltd., HOIU-Estonian Savings Bank Ltd., TP-Bank of Tallinn Ltd., EE-Estonian Express Investment Ltd., ICI-ICI Trust Ltd., EMP-Estonian Maabank Ltd.



Table 4 Securities traded on the TSE

	31 May 1996	9 August 1997
<b>Main List – Common Shares</b>	Estonian Foreksbank Hansabank Union Bank of Estonia Estonian Savings Bank Bank of Tallinn	Estonian Foreksbank (banking) Hansabank (banking) Union Bank of Estonia (banking) Estonian Savings Bank (banking) Bank of Tallinn (banking) Tallinn Pharmaceutical Plant (pharmaceuticals manufacturing) Estonian Fairs (fairs) Baltika (clothing) EMV (construction) Merko Ehitus (construction)
<b>Secondary List – Common Shares</b>	–	EVEA Bank (banking) Pennu Computer Technology (computer assembly) Klementi (clothing) Viisnurk (ski and furniture manufacturing) Fakto (auto dealer) Leks Insurance (insurance)
<b>Bond List</b>	Compensation Fund I Compensation Fund II Compensation Fund III Compensation Fund IV Compensation Fund V Compensation Fund VI (state privatization investment funds)	Compensation Fund I Compensation Fund II Compensation Fund III Compensation Fund IV Compensation Fund V Compensation Fund VI Compensation Fund VII Compensation Fund VIII
<b>Fund List</b>	–	Hansa Privatization Investment Fund (closed-end) Baltic Growth Fund (open-end) HP Investment Fund (open-end)
<b>Free Market – Common Shares</b>	–	Norma (seat belt manufacturing) Rakvere Meat Processing Plant (meat processing) Saku Brewery (beer and soft drinks production) Kalev (confectionary) Tallinn Department Store (retail) Estiko (E-type) (retail, plastics manufacturing) Tallinn Cold Store (ice cream production, refrigeration) Viru Rand (fishery)

Source: <http://tse.ee/company/>

Initially only 11 securities were listed on the TSE; subsequently, the number has roughly tripled.

## 4 Current state of the TSE

### 4.1 The TSE's first year of activity

In this section I will discuss the main indicators and parameters of the TSE. First, TSE member

firms are discussed, followed by a description of securities quoted on the TSE and possible changes in this area. After that, I will deal with trading volumes and possible market trends. Finally, the breakdown of securities between domestic and foreign and between corporate and individual investors will be discussed.

### Brokerage Firms

Initially there were 13 TSE member firms: 12 from Tallinn and 1 from Tartu. Now there are 19: 16 from Tallinn and 3 from Tartu. If we compare trading volumes of the large brokerage firms, we see that Hansabank AS has the highest trading volume, measured by number of shares traded. Over the course of a year, there were some changes in the order: The Estonian Savings Bank Ltd brokerage firm is now more oriented toward small investors (number of shares traded decreased and number of trades increased); the Estonian Forexbank Ltd and the Bank of Tallinn Ltd are more oriented toward large investors (number of shares traded increased and number of trades decreased). The majority of securities traded on the TSE are bank shares. In June 1997 transactions in Hansabank shares accounted for 29 per cent of TSE trading volume (12).

On the one hand, the banking sector is the most developed sector in the Estonian economy. On the other hand, the concentration in ownership in this sector means high risk exposure. In other words, a banking crisis would have severe consequences for the TSE. The situation is changing gradually: at first, the Main and Secondary Lists included five bank shares and six bonds (7). Now there are six bank and ten company shares on the Main and Secondary Lists as well as six bonds and three fund units. There are eight company shares on the Free Market.

### Trading volume

TSE trading volume increased from EEK 89 million in June 1996 to EEK 2.1 billion in July 1997, ie by 2350 per cent (12). The Chart 1 shows monthly trading volumes on the TSE. The decrease in May and June was natural after the long uptrend to the end of January 1997. Because of the long period of buoyancy, the securities market had become exploited and illiquid (28). The same can be said of the decrease in trading volume in February 1997. After such a rapid increase in late 1996 and January 1997, the decline was to be expected.

Although the TSE was founded later than were the stock exchanges in both Vilnius and Riga, it has proved to be the most active thus far. For example, in April 1997 TSE turnover was USD 107.8 million, compared to USD 25.9 million in Vilnius and USD 4.7 million in Riga

(12). But in terms of market capitalization, the National Stock Exchange of Lithuania (NSEL) exceeds the TSE. At the end of 1997, market capitalization of the NSEL was USD 1480 million, of the TSE USD 842 million and of the Riga Stock Exchange USD 221 million (1).

### Distribution of securities between domestic and foreign investors

Approximately two-thirds of shares listed on the TSE are owned by Estonian investors. During the last half year, the number of domestic investors has declined. Investor interest in Estonian shares has increased in some countries, including the US, UK, Switzerland, Gibraltar, Latvia and Luxembourg. The number of 'undetermined' shareholders has decreased markedly: at end-1996 it was 4.7 per cent, in June 1997 only 1.5 per cent (Table 6). This shows that trading and supervision system have developed during this time period.

### Corporate and individual investors

The distribution of securities between corporate and individual investors is shown in Table 7. The company most tied to corporate investors (95 per cent of outstanding shares) is Saku Brewery. At the opposite extreme, the company most tied to individual investors (70 per cent) is Pennu Computer Technology. Shareholder structure by investor type changed significantly for Tallinn Pharmaceutical Plant, EMV (corporate-investor share increased) and for Bank of Tallinn, Estonian Savings Bank, Estonian Forexbank, and Estiko (individual-investor share increased).

- a) It might appear that individual investors hold a relatively large percentage of securities traded on the TSE, but in fact their share is only 5 per cent. At least 10–15 per cent is accounted for by the TSE's normal and insured work. The statistics indicate that there are about 1200 individual investors, but the true figure must be at least 10 times larger or 15 000–20 000 (2).

## 4.2 TALSE index

On 3 June 1996 the TSE established a share price index, the TALSE index, which reflects price movements in shares listed on the TSE Main and

Chart 1 TALSE index

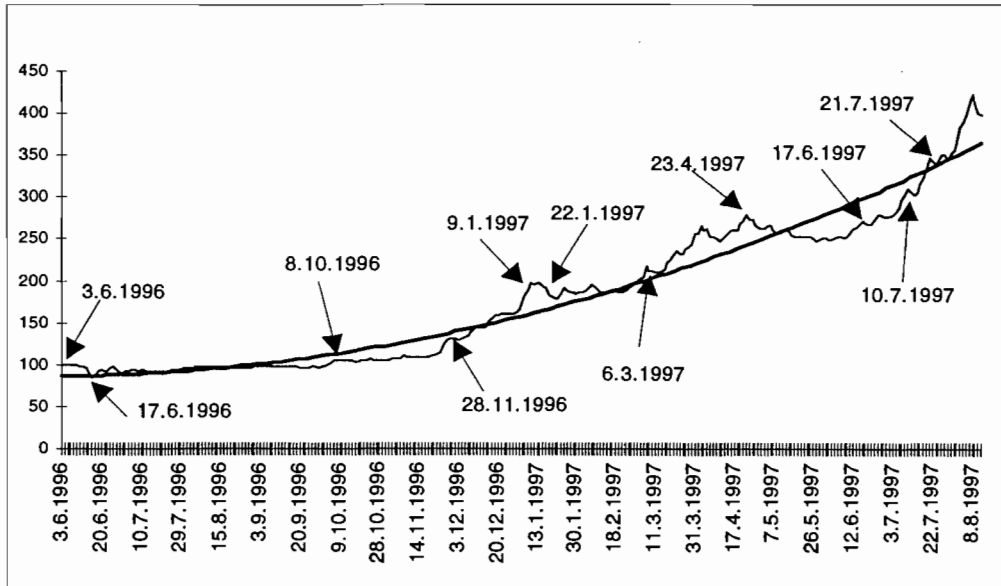


Chart 2 Trading volume on the TSE (from June 1996 to July 1997, mill.\$)

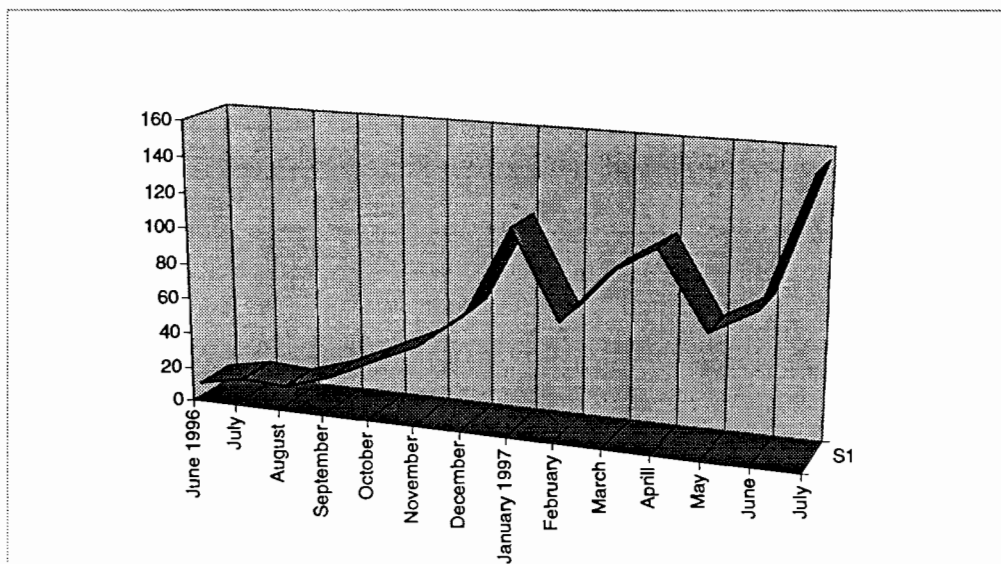


Table 5 Total shareholder structure by country

State	07.11.96	24.12.96	13.03.97	30.06.97	Change
Estonia	61.37 %	60.28 %	59.61 %	61.32 %	
Finland	11.88 %	11.92 %	10.48 %	10.28 %	↓
Sweden	7.21 %	7.23 %	8.08 %	6.21 %	
UK	4.8 %	3.87 %	8.19 %	8.14 %	↑
Undetermined	4.73 %	4.36 %	0.92 %	1.54 %	↓
Switzerland	1.27 %	1.3 %	1.45 %	1.12 %	↑
US	1.27 %	3.11 %	2.44 %	2.98 %	↑
Italy	1.17 %	1.1 %	1.15 %	0.85 %	↓
Ireland	1.12 %	0.81 %	1.48 %	0.95 %	↓
Liechtenstein	0.97 %	0.68 %	0.55 %	0.03 %	↓
Bahamas	0.95 %	1.19 %	1.87 %	1.82 %	
Belize	0.92 %	0.96 %	0.85 %	0.08 %	↓
Turks and Caicos Islands	0.53 %	0.33 %	0.66 %	0.92 %	↑
Laos	0.52 %	0.53 %	0.2 %	0.04 %	↓
Virgin Islands	0.33 %	0.33 %	0.35 %	0.57 %	
Russia	0.24 %	0.26 %	0.07 %	0.1 %	↓
Gibraltar	0.16 %	0.34 %	0.5 %	0.7 %	↑
Cayman Islands	0.11 %	0.11 %	0.1 %	0.75 %	↑
Luxembourg	0.09 %	0.09 %	0.13 %	0.13 %	↑
Latvia	0 %	0 %	0.6 %	0.2 %	↑

Source: <http://tse.ee/stat/share/coun.htm>, <http://tse.ee/stat/share/iosal.htm> and <http://tse.ee/stat/share/300697.htm>

Secondary Lists. Each share represented in the TALSE index is weighted by its market value. The greatest impact on the index comes from Hansabank's shares (3).

The TALSE index was initially calculated on the basis of average share prices. In February 1997 the method was changed in line with the general international practice, so that closing prices are now used (13).

#### 4.3 The Baltic Stock Exchanges: What's Different?

The TSE is the youngest of the Baltic stock exchanges, having opened on 31 May 1996. The National Stock Exchange of Lithuania (NSEL) opened on 14 September 1993 and the Riga Stock

Exchange (RSE) 25 July 1995. Each of these independent markets focus on distinct areas, reflecting the various reasons behind their development.

Let us examine the main differences between the Baltic stock exchanges.

##### 1. The exchanges have different backgrounds

The NSEL was set up to facilitate privatization via free vouchers. The initial purpose of the to facilitate public sales of minority shares in state-owned enterprises. However, because many privatized enterprises in Lithuania and Latvia were not yet strong enough to be traded on the stock exchange, the percentage of stocks actively traded on the NSEL is very small, and on the RSE only 5 per cent attract any attention.

Table 6 Companies shareholder structure by investor type

	Corporate Dec 1996	investors Apr 1997	Individual Dec 1996	investors Apr 1997
Saku Brewery	94.1 %	94.4 %	5.9 %	5.5 %
Norma	93.9 %	93.7 %	6.1 %	6.3 %
Rakvere Meat Processing Plant	93.7 %	92.5 %	6.3 %	7.5 %
Hansabank	92.7 %	91.8 %	7.3 %	8.2 %
Kalev	91.5 %	91.5 %	8.5 %	8.5 %
Tallinn Department Store	91 %	90.6 %	9.0 %	9.4 %
Estonian Fairs	88.4 %	89.1 %	11.6 %	10.9 %
Tallinn Pharmaceutical Plant	86.7 %	87.6 %	13.3 %	12.4 %
Bank of Tallinn	89.8 %	87.4 %	10.2 %	12.6 %
Estonian Savings Bank	90.1 %	87.1 %	9.9 %	12.9 %
Estonian Forexbank	88.0 %	84.1 %	12.0 %	15.9 %
Union Bank of Estonia	75.6 %	74.0 %	24.4 %	26.0 %
EMV	51.3 %	52.9 %	48.7 %	47.1 %
Estiko (E type)	54.7 %	50.1 %	45.3 %	49.9 %
Pennu Computer Tech.	26.3 %	29.5 %	73.7 %	70.5 %

Source: <http://tse.ee/stat/share/e140397.htm> and <http://tse.ee/stat/share/sharee.htm>

In Estonia the TSE is not meant to play a large role in privatization. Therefore, the state has been relatively inactive in promoting a securities market and stock exchange in Estonia. The securities market has developed on its own and with quite limited regulation. Because of this, many attractive public enterprises had already emerged before the TSE was opened (40).

The TSE was established specifically for the private sector whereas the other Baltic and eastern Europe countries have been much more dependent on state institutions (2).

The original value of the TALSE index was 100 points. Up till now its value has increased more than threefold. It is useful to look at the movements that have occurred in the index.

## 2. The exchanges use different models

The NSEL, RSE and the central depositories of Latvia and Lithuania were established with the help of the Paris Bourse and French Depository (SICOVAM). As a result, the NSEL and RSE

follow the trading practices of the Paris Bourse. The TSE is based on a different trading model. In setting up the TSE, much help was obtained from foreign advisers, including the UK knowhow company Ernst & Young and Jonathan Miller, a private adviser (5).

Trading on both the NSEL and RSE is paper-free and order-driven. All orders are centralized on the RSE market and are included in the price-determination mechanism. The purpose of the price-determination mechanism is to achieve maximum trading volume. Both exchanges have set a maximum range of price fluctuation relative to the previous trading session: for the NSEL the range is 20–60 per cent and for the RSE 15 per cent.

For orders submitted via brokers, the client indicates the number of securities he wishes to buy or sell and the maximum or minimum price. A client may also submit an 'at best,' order, which means he is willing to buy or sell at any price.

For large deals, brokers are authorized to carry out transactions directly between themselves. However, the price of a direct deal can differ from

Date	Value of TALSE	Explanation
03.06.1996	100.00	Opening of the TSE.
17.06.1996	84.24	The first 'Black Friday' on the TSE. Average prices of all shares fell more than 2.5 per cent to the lowest value of the TALSE index in the history of the TSE. One reason for the fall was the political vacuum before the Russian presidential election. Indices in other countries were also affected (18).
08.10.1996	104.87	First sharp increase in the TALSE index, caused by growing interest among foreign investors and good financial results for some companies.
28.11.1996	131.44	Index started to rise rapidly on 26 November when Hansabank announced trading the start of trading in its shares on the free market of the Frankfurt stock exchange. Hansabank's share prices increased 17 per cent in two days. Moreover, BNS, Ballmaier&Schultz Wertpapier AGS (German securities agent) announced its intent to quote shares of other Estonian banks.
09.01.1997	196.89	News of merger of two large Estonian banks, Estonian Union Bank and North-Estonian Bank, created an upheaval in the market. Union Bank's shares prices rose 432 per cent in the first 10 minutes of trading on the morning of 6 January. After that, the prices of all other shares started to rise.
22.01.1997	178.97	The second serious decline in the TALSE index. One reason was increased interest by Estonian investors in Latvian and Lithuanian securities markets. Many Estonian investors realized their investments in early January and moved their funds to stock exchanges in other Baltic states (rapid increase in turnover of Latvian and Lithuanian stock exchanges). The second major reason was Hansabank's worse-than-expected financial results for 1996.
06.03.1997	217.06	TALSE index rose rapidly after the disclosure of February financial reports.
23.04.1997	278.10	Strong quarterly reports caused increase in share prices, pushing the index up. But before long, investors began to take profits and prices retreated.
17.06.1997	271.51	Estonian Savings Bank announced that its intent to buy the Bank of Tallinn. This news woke up a market that had been sluggish since end-April.
10.07.1997	310.46	The TALSE index surged after the disclosure of banks' semiannual financial reports, which were better than expected. Also, a notable increase in interest in Estonian securities market among foreign investors. (Trading on the Helsinki Stock Exchange in Union Bank and Hansabank shares also increased significantly increased.)
21.07.1997	346.14	Disclosure of Estonian macroeconomic indicators for 1996 again increased interest among foreign (mostly Finnish) investors. Their decisions were also influenced by the EU attitude toward Estonia. (Some very large deals were done by foreign investors involving Union Bank shares.)

the latest central market price only within certain limits set by the exchange. Direct transactions are fairly widespread at the NSEL, especially for government securities. In February the first direct deals were recorded on the RSE as well (40).

Trading on the *TSE* is based on market makers and is centralized, paperless and electronically effected. On 10 June 1997 the *RSE* also started to use an electronic trading system. The first few days were

marked by numerous misunderstandings and technical problems (29).

### 3. Different trading frequencies

The *NSEL* holds trading sessions in shares twice a week: at noon on Tuesdays and Thursdays. However, Treasury bill issues are traded throughout the week.

Table 7 Listing requirements in Baltic stock exchanges

	TSE	RSE	NSEL
<b>Main List</b>			
history	audited annual accounts for the 3 previous years, showing profits for the last year	audited annual accounts for the 2 previous years	issue has been traded for at least 6 months on the secondary list
capital	USD 9 million	USD 0.9 million	USD 187 500
division of shares	25 % of shares owned by public, eith at least 200 investors	25 % of shares owned by public, number of investors not specified	25 % of shares owned by public, number of investors not specified
<b>Secondary List</b>			
history	audited annual accounts for the 2 previous years	no special requirements	no special requirements
capital	USD 0.9 million		
division of shares	25 % of shares owned by public, with at least 100 investors		
<b>Free market</b>			
precondition for trading	at least 3 brokers to bring the issue to the free market	not introduced	not introduced
history	audited account for the previous year		
division of shares	25 % of shares owned by public, with at least 100 investors		

Since May 1995 the *RSE* has also held twice-weekly trading sessions: on Tuesdays and Thursdays at 10 am. Previously, *RSE* trading sessions were held once a week. By contrast, the *TSE* is open Monday–Friday from 10 am to 4 pm.

#### 4. Different listing requirements

The *TSE* has set demanding listing requirements compared to its Baltic neighbours. Differences in listing requirements for shares are shown in Table 8.

##### 4.4 Benefits from the *TSE*

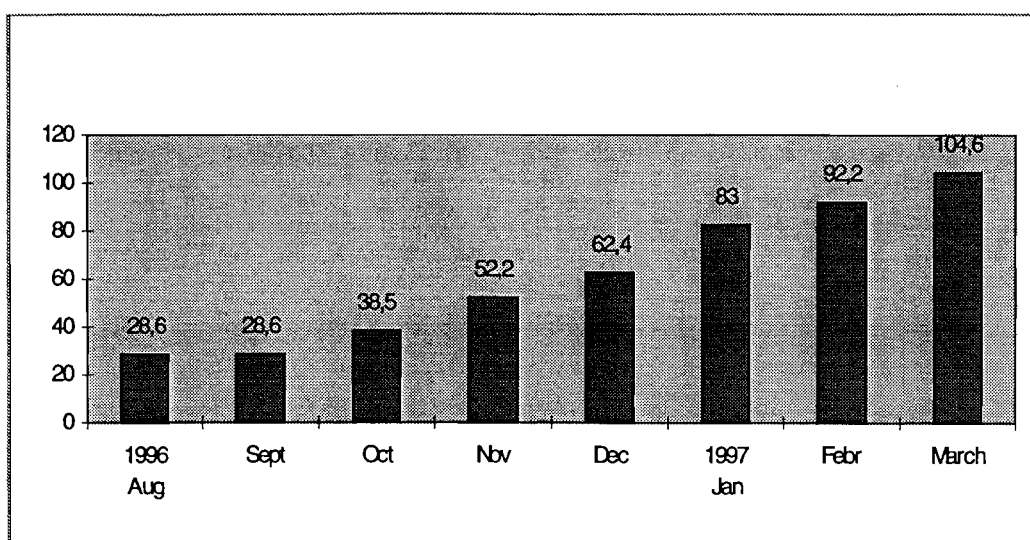
During its 14 months of operation, the *TSE* has succeeded well for three particular reasons, according

to analysts: the positive attitude of the public and media, the use of an electronic trading system (as in most leading stock exchanges, eg the *NASDAQ*), and a well articulated set of rules applied by the *TSE*. All of these are combined with a relatively high degree of freedom (12).

The *TSE* generates the following benefits:

1. Estonia is now considered as a country with a developed financial system. This is important for investors who want to invest capital in Estonia not only by buying shares on the *TSE* but also for the privatization of companies.
2. The existence of the *TSE* is a sign of a market economy that enables successful companies to list their securities and improve their financial results (see eg discussion of *Pennu* below).

Chart 3 Pennu market value (August 1996 – March 1997, mill. EEK)



3. The TALSE index, calculated by the TSE, is an important economic indicator that (a) provides an objective assessment of companies: what they are worth and how to correctly price their knowhow. The TSE makes it easy since the value of a company is its price on the TSE. 3. The TSE provides an opportunity for a company to raise extra capital. A good example is the computer technology company Pennu: without the TSE it would never have succeeded in expanding its capital, the value of which has quadrupled.
4. It makes it possibility for investors to invest their savings and earn a return. Money supply and demand are brought into balance.
5. Companies quoted on the TSE become more reliable. They must disclose information on their business activities and financial condition (2).

Some of these benefits can be illustrated by the

example of Pennu Computer Technology. Pennu's shares were listed on the TSE Secondary List in autumn 1996 with an initial price EEK 47 per share. At this price, the market value of the company was EEK 28.5 million. After listing its securities on the TSE Pennu's financial outcome improved. At the end of 1996 the share price was EEK 140. Economic indicators had not improved substantially, and thus the market value had increased mainly because of participation on the TSE.

Another benefit from the TSE is the public attention that companies gain. The media regularly cover all TSE activities and, because of this, the name of every company easily reaches potential clients. In addition, public quotation on the TSE improves a company's reputation and image. The TSE also provides a new source of funds for companies. Non-quoted companies can raise funds from banks and owners, whereas publicly quoted companies can also raise funds from domestic and foreign investors in the capital market (4).

The rise in the market value of Pennu Computer technology is shown in Chart 3.



## References

1. **Baltic Securities Markets.** Iikka Korhonen, Toivo Kuus & Villu Zirnask.
2. **Eesti Ekspress.** Nr 22, May 30, 1997. 'Tallinna börs saab aastaseks'.
3. **Eesti Päevaleht.** June 17, 1996. 'Tallinna börsil oli 'must reede'' Villu Zirnask .
4. **Eesti Päevaleht: Ärioleht.** February 7, 1997. 'Börsile minek: raske aga tasuv' Villu Zirnask.
5. **Kaubaleht.** June 3, 1996. 'Tallinna väärtpaberibörs alustas tööd' Reigo Kuivjogi.
6. **Luup.** March 31, 1997. 'Aktsiarulett börsil' Kaarel Tarand, Mai Vöörmann.
7. **Postimees.** May 31, 1996. 'Eesti saab endale taas börsi' Jaan Kelder, Argo Ideon.
8. **Postimees.** January 9, 1997. 'Sobralikud soovitusel aktsiaturul'.
9. **Sonumileht.** June 1, 1996. 'Börsi esimese tehingu sooritas president Meri' Urmas Simson.
10. **Tallinna Väärtpaberibörsi Aktsiaseltsi põhikiri.**
11. **Äriolu.** Nr 4, April 1996. 'Väärtpaberiturug areneb börsiks' Urve Repp.
12. **Äriolu.** Nr 11, November 1996. 'Börsi tõttu arenenud finantssüsteemiga riigi staatus' Helve Laasik.
13. **Äriolu.** Nr 3, March 1997. 'Börsi kymme tegutsemiskuud' Peeter Teder.
14. **Äripäev.** April 26, 1996. 'Depositooriumist on joutud börsini' Teet Uuemois.
15. **Äripäev.** January 14, 1997. 'Ühispank pani väärtpaberituru keema' Toomas Truuverk.
16. **Äripäev.** April 3, 1997. 'Börs ühtlustab nõuded firmadele' Kaja Koovit.
17. **Äripäev.** May 29, 1997. 'Börs nouab firma aruannet' Kaja Koovit.
18. **Äripäeva lisa: 'Väärtpaberi eri'.** May 28, 1997. 'Indeksite arvutamine Eesti väärtpaberiturul laieneb' Toomas Truuverk.
19. **Äripäeva lisa 'Väärtpaberi eri'.** May 28, 1997. 'Varahaldus – täna veel alates 100000 kroonist' Sven Kuning.
20. <http://tse.ee/company/>
21. <http://tse.ee/news/733.txt>
22. <http://tse.ee/stat/share/1996.htm>
23. <http://tse.ee/stat/share/300697.htm>
24. <http://tse.ee/stat/share/coun.htm>
25. <http://tse.ee/stat/share/e140397.htm>
26. <http://tse.ee/stat/share/iosal.htm>
27. <http://tse.ee/stat/share/sharee.htm>
28. <http://www.mbp.ee/cgi-bin/rt?1997/05/28>
29. <http://www.mbp.ee/cgi-bin/rt?1997/06/10>
30. <http://www.tse.ee/rules/change1.htm>
31. <http://www.tse.ee/rules/change2.htm>
32. <http://www.tse.ee/rules/Info.htm>
33. [http://www.tse.ee/rules/Info\\_e.htm](http://www.tse.ee/rules/Info_e.htm)
34. <http://www.tse.ee/rules/.\intro\Guide.htm>
35. <http://www.tse.ee/rules/Listinge.htm>
36. [http://www.tse.ee/rules/Member\\_e.htm](http://www.tse.ee/rules/Member_e.htm)
37. [http://www.tse.ee/rules/Settle\\_e.htm](http://www.tse.ee/rules/Settle_e.htm)
38. <http://www.tse.ee/rules/Trading.htm>
39. <http://www.tse.ee/rules/Tradinge.htm>
40. <http://www.zzz.ee/tbr/issues/vol10/tallinnstockexch.html>

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