— PD ABE-303 —

Deloitte & Touche

Privatization Policy and Management Support Government of Estonia

BiMonthly Report, January/February 1993

Delivery Order No. 12
Privatization Policy and Management Support to the Government of Estonia

Project No. 180-0014
Contract No. EUR-0014-I-00-1056-00
Eastern European Enterprise Restructuring and Privatization Project

U.S. Agency for International Development
EUR/RME/ER

March 1993

Deloitte Touche Tohmatsu International

file

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March 8, 1993

Michael Brooks
EUR/RME/ER/PF
Agency for International Development
320 21st St., N.W.
Washington, DC 20523

Subject: Estonia Privatization Project, Delivery Order No. 12, Contract No. EUR-0014-I-00-1056-00. Bi-Monthly Report, January/February 1993.

Dear Mike:

Attached please find a brief summary of the activities carried out by the Deloitte & Touche technical assistance team in Estonia, under the subject delivery order.

These activities have been discussed with you during our different meetings we have had in January and February this year.

We are now in the process of finalizing the Automated Voucher System. We expect it will be in execution late next month.

If you have any questions or comments, please contact me at (202)879-5343 or Anne Nisenson at (202)879-5661.

Regards,

Art Warman
Senior Manager
Central and Eastern Europe

Enclosures

Deloitte Touche Tohmatsu International

SUMMARY OF ACTIVITIES CARRIED OUT UNDER THE ESTONIA PRIVATIZATION PROJECT, DELIVERY ORDER No. 12
CONTRACT No. EUR-0014-I-00-1056-00

TASK ONE

Privatization Policy Guidance

The Deloitte & Touche consortium team composed by our subcontractor Multinational Strategies, Inc., a our resource firm Milbank, Tweed, Hadley, and McCloy reviewed and presented the final version of the "Privatization and Reform of the Estonian Banking Sector."

Copy of the draft deliverable was presented to the Agency for International Development in Washington and in Estonia, to the Bank of Estonia, the Ministry of Economy, and the Ministry of Reform.

Deloitte & Touche recently recruited a consultant to assist the Ministry of Reform. The consultant will assist her in the identification, formulation, and analysis of economic and political policy issues. The consultant will also assist the Minister review proposed policy and legislation and analyze the economic effects of the proposals. This consultant will be traveling to Tallinn early in March 1993. She will provide D&T a bi-weekly summary outlining her activities and responses to requests for assistance by the Minister.

TASK TWO

Privatization Management System

The consultant providing technical assistance to the Estonian Government on Privatization Management System, met during the reporting period with the Government's working group. They discussed the needs of information systems for privatization securities.

Based on the different meetings, the consultant prepared a management memorandum #2 on Privatization Securities (Attachment 1 includes copy of management memorandum No. 1 and 2).

TASK THREE

Asset Distribution Program

Task 3-A: Policy and Procedural Assistance

Deloitte & Touche consortium team prepared and presented the draft final report for the Task 3-A. This report was sent to AID/Washington and the USAID Representative in Estonia. One copy

was also sent to the Ministry of Economy, Ministry of Reform, and the State Property Board of the Government of Estonia.

Task 3-B: Asset Distribution Computer System Development

The Deloitte & Touche team presented the design document of the Estonian Automated Voucher System " Housing Voucher Manager." This document was discussed with the Estonian State Computing Center (ESCC). Based on this document, the ESCC has been preparing the computer program to keep track of voucher issued by the Government.

The Estonian State Computing Centre keep working in the design of the Automated Voucher System. Attached please find copy of the memorandum prepared by the Deloitte & Touche consultant. This memorandum mentions the status of the programming and some changes suggested the ESCC (see Attachement 2).

The D&T consultant met with the General Secretary of the Exchange Association of Estonia to discuss setting up a computerized stock exchange. The consultant has suggested to the Secretary to use the voucher system as a starting point.

Task 3-C: Implementation Assistance

A team of Deloitte & Touche continued its investigation to provide technical assistance needed to implement the computer program to be designed under Task 3-B. This team is working in developing an implementation plan for using county-local housing offices as control points for acceptance and evaluation of voucher applications instead of centralizing this process at the State Computing Centre in Tallinn. They will also utilize data to be collected in February and March 1993, to develop training programs for the participating institutions and Ministry staff.

ATTACHMENT 1

T E L E F A X

To: Gus Vega

Date: 5 Jan, 1993

Fax No.: 202-879-5607
Washington DC, USA

From: Thomas Daldersion

Subject: Our Phone conversation

Tom

Attached are the two documents we discussed, namely:

1. "The Concept of Verify Privatization Securities". This is the document I comment on in my management memo on privatization securities.

2. AVS Management Memo #1.

I will send you another fax tomorrow about two things:

1. The status of programming the Automated Voucher System; and possibility of some kind of extension of the present contract to verify completion.

2. The need for work under some future contract to follow-on the systems work we did under this present contract.

No. of pages (incl this one):
Reply to Fax Number: 442 521 or 602 492 Tallinn, ESTONIA

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THE CONCEPT OF USING PRIVATIZATION SECURITIES

A privatization security verifies the ownership right to a part of the property being privatized. Privatization securities (hereinafter: PS) are divided into popular capital obligations (hereinafter: PCO) and compensation securities (hereinafter: CS). Privatization securities have been issued by the Government of the Republic of Estonia and the state guarantees the rights related to them.

Privatization securities bear the name of the person who owns them and they are heritable.

Popular capital obligations are issued to each permanent resident of the Republic of Estonia on the basis of the popular capital voucher card in accordance with Article 10 of the Housing Privatization Law. For the PCO's one can acquire privatized housing, shares or sole proprietorship of state-owned or municipal enterprises, shares of investment funds (hereinafter: IF), on certain conditions also land (housing lots). It is possible to deposit PCO's in the Pension Fund.

PCO's are valid for a definite period of time (up to [illegible] years). PCO's are erased when they are exchanged for the privatized property. The PCO's not used up by the expiration deadline will be canceled. PCO's are not tradable in the stock-market.

Compensation securities are issued to compensate for nationalized property which will not be physically returned to the owner.

Compensation will be carried out by means of Compensation Fund (hereinafter: CF) bonds, which actually serve as compensation securities. A distinction is made between three different types of CS's, depending on whether they have been issued as compensation for the value of preserved property, destroyed property, or land. All CS's may function as bonds being paid out by the CF on certain conditions within a certain period of time. CS's will not expire and after a certain period of time they may become tradable in the stock-market. If CS's are issued to compensate for preserved property, they can also be used for acquisition of the same objects that can be purchased for PCO's. The CS's issued as compensation for land can also be used to purchase housing or lots, or they can be deposited in the Pension Fund. Compensation for destroyed property will take place only by means of redemption of CF bonds.

When determining the amount of compensation , the value of the property being compensated for is determined as its value at the present time. In the case of preserved property and land, this value is considered in its entirety; in the case of destroyed property, it is considered on the basis of a

decreasing scale (depending on the value of the property, a certain part of it is being compensated for).

The Compensation Fund is a non-budgetary state institution having local units in the counties. The income of the CF is formed from the following sources:

1. 10% of the shares of each enterprise being privatized is given to the CF. Dividends from these shares form a part of the CF's income.

2. Up to 50% of the return obtained from selling privatized state-owned enterprises.

3. Reparation payments from other countries.

4. The differences in values, as provided for in Article 13-5 of [ORAS], payable by persons to whom the kind of property was returned the value of which had increased.

The field of usage of [illegible] modified according to the accumulation of payments in the CF and the situation in the privatization security market. The interest rate of CF bonds is related to inflation.

Property Privatized for Privatization Securities

The general concept of privatization, defining the priorities of the process, should be taken as the basis for determining the said property. The enterprise development plans, to be drawn up by order of the Department of State Property and the corresponding ministry, should play an important role in passing these decisions. Based upon that, these organizations will decide, which part of which enterprise is to be privatized, and how.

Evidently it is wise to sell to foreign capital everything they want to purchase on reasonable terms. At the same time interests of local investors should also be taken into consideration. To do this, it is necessary that 25 % of the shares of each privatized enterprise (RAS) be set aside to be sold for PS's (in addition to the 10 % allocated for the CF). The share being privatized for PS's may be larger in an enterprise which has no foreign investor foreseen in its development plan, or which is not planning to sell for cash the shares remaining after the deal with the PS's.

Privatization of enterprises for PS's may proceed in several waves. If in the first wave the number of shares bought for cash was smaller than the number of shares offered, then the remaining shares may be sold for PS's in the second (third) wave. A sufficiently large number of enterprises (30-

40) should participate in each wave. Before the beginning of the first wave the extent of privatization taking place in the following waves should be basically fixed.

Both state-owned and municipal property can be purchased for PS's. PS's can be used for acquisition of both the shares and the sole proprietorship of an enterprise, i.e. they can be used also in small privatization. It is also possible to acquire housing and land (housing lots, building lots on investment terms) for PS's.

The so-called clean selling (puhas variant) is used when selling shares for PS's, which means that the shares to be sold for PS's only will be determined. In such a case there is a separate subscription.

When auctions are used to privatize sole proprietorship of enterprises, the minimum part to be paid for in cash or with PS's will be determined. The auction participation fee and 50 % of the deposit must be paid in cash.

The Mechanism for Using Privatization Securities

A Central Register of Securities (hereinafter: CRS) with sub-units in the counties will be established in order to register the PS's and to record their circulation, erasing (cancellation) and transaction with them. All transactions with the PS's, including transfer to close relatives, will become effective after having been registered in the CRS. The Pension Fund and IF's will also have their PS' accounts in the CRS. In all transactions with the PS's the minimum amount is the equivalent of one year worked (PCO).

As a rule, PCO's are not issued in the form of physical securities. All transactions are fixed on popular capital voucher cards and in the CRS.

The usage of CS's is carried out through the CF. The owner of the CS's orders the transfer of CS's from his or her account in the CRS to the investment object chosen by him/her.

PS's may be used to purchase privatized property either directly or through intermediary institutions. The latter include two types of investment funds and the Pension Fund.

1. The so-called Risk Investment Funds (RIF's) perform the functions of an active owner (entrepreneur). Supposedly the founders of RIF's are a group of people and/or private enterprises. RIF's operate only as close-end stock companies, with a closed subscription to their shares. One RIF may possess up to 100 % of the shares of one enterprise, but the number of investment objects is limited (3-4). RIF's have the right to participate in the auctions of sole proprietorship. RIFs' shares can also be obtained for cash.

2. The Traditional IF's (FIF's) are founded, as a rule, by banks, insurance companies and other financial institutions in the form of stock companies. They specialize in an as extensive as possible accumulation of resources and performing the functions of financial check-up in privatized enterprises. The FIF's start off as close-end-type funds turning into traditional mutual funds after a certain time and after having achieved some success. Subscription to FIFs' shares is always public.

Only legal persons registered in the Republic of Estonia qualify as founders of FIF's. Monetary participation of the founder(s) in the initial capital of a FIF is obligatory. Certain definite requirements are established for FIF's as to the emission of shares and making public their activities.

FIF's deal only with acquisition of shares, in the future also of other securities. Participation in auctions of sole proprietorship is not allowed for FIF's. One FIF is allowed to own up to 20 % of the capital of one investment object. Up to 10 % of the investment capital of one FIF may be deposited in one investment object.

One person may be the founder of one FIF only. Neither is participation of an IF in the share capital of other IF's allowed. As an exception, the PF is allowed to allocate its resources in the shares of FIF's.

3. The Pension Fund (PF) is a state institution the main aim of the creation of which is to start off the pension security system.

Both money and PS's may be used for making payments in the Pension Fund. Money and PS's are deposited in the PF not only by pensioners but also by persons nearing the pension age. Pensioners may make the whole payment in PS's, others are obliged to make a part of the payment in money. Evidently payments made by enterprises are also possible.

For the PS's deposited in it, the PF will acquire shares of privatized enterprises. Strict resource allocation limits must be set for the PF (e.g.: 2-3 % of the resources of the PF into not more than one investment object and the right to own not more than 10 % of the capital of one investment object.).

On certain conditions and to a certain extent the PF may sell the PS's deposited in it (e.g.: at auctions). All physical and legal persons having PS's in the CRS are entitled to buy PS's from the PF.

<u>Exchanging PS's for Shares.</u>

The size of the share capital and the part privatized for PS's (minimum 25 %) will first be determined. Subscription to

shares privatized for PS's will take place separately from those sold for money. The basis for determining the size of the share capital is the cost on the balance sheet, on condition that re-evaluation of the main stock has been carried out.

The share subscription period (1-2 months), during which closed subscription is carried out, will be determined. Demands are placed by residents, IF's and the PF. The owners of PS's will send to the subscription commission a sealed envelope containing their application for the subscription to a certain number of shares and a certificate verified in the CRS on reservation of PS's for payment for the shares being purchased and in the amount of the whole sum of subscription. Withdrawal of applications is not provided for. On a fixed day the envelopes will be opened by the commission and the results of the subscription made clear.

1. If the demand is less than, or equal to, the supply of shares, the demand will be satisfied in its entirety. The shares not having been subscribed to will enter a next round.

2. If the demand exceeds the supply, but not more than by 100 %, the price of the shares in PS's will be corrected, i.e. a reduced number of shares will fall on each PS unit.

3. If the demand exceeds the supply by more than 100 %, the subscription will be canceled, the value of the share capital of the enterprise will be raised, and the shares of the enterprise will be subscribed to in the next round of privatization.

Usage of Shares Purchased for Privatization Securities

Generally the shares purchased for PS's are ordinary shares bearing voting rights. Restrictions may be set for their sale by a resolution of the Bank of Estonia or of the Government. Within three years the Bank of Estonia will establish an interest limit to these stock companies in the privatization of which the percentage of PS's used exceeded 50.

Financing the Privatization Process

The privatization process may be financed from the state budget or by way of charging the privatization procedures to such an extent that would guarantee self-financing of the whole process. In the latter case it might mean charging of the transactions carried out with PS's.

Alari Purju, Veiko Tali

December 9, 1992

Deloitte & Touche

Suite 350N
1001 Pennsylvania Avenue, N.W.
Washington, D.C. 20004-2594
Telephone: (202) 879-580
Facsimile: (202) 879-530

Date: 18 December, 1992

From: Thomas Balderston

To: All Interested Parties

Subject: Automated Voucher System Management Memo

Attached is the first Management Memorandum for the Automated Voucher System. It highlights some of the issues involved in the implementation and expansion of the system; and offers some recommendations for addressing the issues.

We hope that this memo will prove helpful for the Government of Estonia's planning.

T Balderston

Deloitte Touche Tohmatsu International

AUTOMATED VOUCHER SYSTEM
MANAGEMENT MEMO #1

18 December 1992

Status of Automated Voucher System

Deloitte & Touche first proposed the Automated Voucher System in the "Conceptual Design Document", dated April 17, 1992. The Deloitte & Touche team analyzed the system during the period June through September 1992, culminating in the "Requirements Assessment" of September 9, 1992. They began the design work in October 1992 and completed it with the "Design Document" of 18 December 1992. The Estonian State Computing Center began programming the system in November and will complete the programming at the end of February 1993.

It remains to train the users, document the system, and install and implement it. This will be the work of the State Computing Center in the coming months.

Issues remaining to resolve

For the voucher system to be a success, a number of issues should be addressed. Following are our understanding of the issues, and recommendations for them.

1 Training and Implementation

The voucher system will be primarily administered at the local level of housing offices, and Vald and county governments. Some of these offices are well-prepared and have a large enough staff to administer the vouchers easily; many others do not. It will be important to find out at the earliest possible date exactly how many offices are understaffed and to plan ways for them to cope with the system. Even the offices with large staffs will need good training in the use of the Automated Voucher System.

Likewise, some offices have computers; many do not. We need to find out exactly how many sites have computers and will use the Automated Voucher System for data entry, as opposed to sending hard-copy information to the State Computing Center for data entry there. We need a list of these sites first of all to plan the training; we will not know how many students need training until we have the list. Secondly, we need the list to estimate how much data entry the State Computing Center will have to do itself.

1.1 Recommendations

The State Computing Center will send a letter to all the local self-governments and counties asking which ones have computers and will do their own data entry. This information allow us to plan training, and data entry.

We also recommend surveying the offices to find out staffing and other readiness problems. Then solutions should be planned for the problems uncovered.

2 Compensation securities and other uses of Popular Capital Vouchers

The Minister of Reform is currently planning legislation to create the Compensation Securities that will be used in the Restitution process; and to expand the use of Popular Capital Vouchers from housing privatization only to privatization of enterprises. For all the same reasons that vouchers for housing needed to be computerized, these new securities will need to be computerized, too. Luckily, the Automated Voucher System was planned from the beginning to accommodate them.

2.1 Recommendations

The new securities should be planned in such a way that the Automated Voucher System can be expanded to cover them. Otherwise, a whole new computerized system would need to be designed, which would be wasteful and confusing.

3 Organization Responsibilities

The State Computing Center is at the moment dealing directly with the local governments, and preparing instructions for use of Popular Capital Vouchers. This is not the best organizational structure; it asks the computer center to do something which is outside its usual function. An example of a better organizational structure would be a computerized bank. The banking personnel run the bank, and do the banking; the computer personnel keep the records.

The situation would be even worse if the State Computing Center were asked to take similar responsibility for Compensation Securities, and for the use of vouchers for industrial privatization.

3.1 Recommendations

The Government of Estonia should give responsibility for computerization of Privatization Securities to the State Computing Center. It should give responsibility for administering the securities, issuing them and using them, to another competent organization. This administrative organization

should direct the work of the State Computing Center with the securities.

4 Funding the Automated Voucher System

The development of the Automated Voucher System will be paid for by a USAID contract. But no special moneys have been set aside for implementing and operating the system. Operations can be accommodated to some extent within existing budgets of various organizations: housing offices, local and county governments, and the State Computing Center. But that puts a severe strain on the resources of these organizations, and may well exceed their resources.

4.1 Recommendations

We recommend finding a funding source other than the State budget. It might be possible to find more funding from foreign aid, but it would not be wise to plan on it. It would be better to depend on a system of funding from the privatization process. Funds are generated as government properties are sold for privatization. Some of these funds should be set aside for expenses of administration and computerization.

The government should also consider the possibility of instituting some kind of user fees in the privatization process. For example, there might be a special fee for registering privatized property, or a fee for keeping a balance in the Automated Voucher System.

Whatever funds are available should be shared by the State Computing Center, the local self governments, and any other offices who must perform services for computerized record-keeping.

5 Control of Fraud, Abuse and Error

There will be some fraud and abuse during the privatization process, as well as much simple error. If these become too prevalent, they would threaten the whole process, and shake public confidence. It may be impossible to avoid all fraud; but every effort should be made to minimize it.

5.1 Recommendations

There are so many possible sources of fraud and error, that a broad approach is needed to deal with it. We recommend that a small group should be set up to consider the question and recommend actions. The group might include representatives of the Department of State Property, the State Computing Center, the National Housing Office, and local governments.

We also recommend that their should be an independent audit of the process from time to time, perhaps annually. The auditor

could be either an Estonian government organization, or some private accounting company.

6 Links to other data bases

In the course of analyzing and designing the Automated Voucher System, the Deloitte & Touche team encountered a number of related computerized registers: the housing register; the personal register (Passport Numbers); the land register; and the enterprise register. Each of these deals with some of the same information that the Automated Voucher System deals with; but they do not talk to each other. Each one is separate, and even resides in a separate organization. This means duplication of effort, and conflicting information residing in different registers.

6.1 Recommendations

We recommend that there should be closer coordination among the different registers, both technically and organizationally. The registers should use information from one another: for example, a way should be set up for the Automated Voucher System to get passport numbers from the Personal Register.

21-01-1993 06:38 FROM TO 8-1012028795607

GV
AW
AN
LC

T E L E F A X

To: Gus Vega

Date: 21 Jan, 199:

Fax No.: 202 870 5607
Washington DC, USA

From: Thomas Balderston

Subject: Task 2

Tom

Attached is the second management memo I was asked to prepare for the working group on privatization securities, under Task 2. I'll deliver it today to the working group, and a copy to the local USAID office.

I'll be in Washington next week: hope to see you then.

No. of pages (incl this one): six (6)
Reply to Fax Number: 442 521 or 602 492 Tallinn, ESTONIA

MANAGEMENT MEMORANDUM #2 ON PRIVATIZATION SECURITIES

INFORMATION SYSTEMS NEEDS

FOR PRIVATIZATION SECURITIES

This is the second management memorandum on privatization securities prepared under Deloitte & Touche's Privation Policy and Management Support Project funded by USAID. It is intended as an estimate of the information systems needed to manage the proposed new securities, and of the cost of the information systems. This estimate will help the committee and the working group plan for a smooth implementation.

1 Assumptions

The estimates developed in this memorandum cannot be definitive because parliament has not yet passed the laws covering the new privatization securities. However, it is possible to make some estimates based on certain assumptions. In particular, this memo assumes the following:

1.1 The new securities, like the Popular Capital Vouchers (rahvakapitali obligatsiooni), will be "kinnisraha" with restricted uses; they will not be tradeable securities with monetary backing. This is the most important assumption. The computerization requirements for true securities are different from the computerization requirements for "kinnisraha". Tradeable securities with monetary backing could be issued as printed documents; dealing with such documents, which have an inherent value of their own, would be much simpler than dealing with "kinnisraha", and might not require a computerized system at all.

1.2 The central register for the new securities, like the register for Popular Capital Vouchers, will be located in, and maintained by, the State Computing Center (ESCC). And the new Central Register of Securities will include the old register of Popular Capital Vouchers.

1.3 Transactions involving the new securities will be carried out at many local offices throughout Estonia. In the case of the Popular Capital Vouchers, these offices are the local self-governments. In the case of the new securities, it is not certain what local offices will carry out transactions, although it is likely that they will be savings banks in each county. However, it is clear that there will be many local offices, perhaps twenty or more if there is one in each county. These local offices may send information directly to the Central Register, or the information may come through another central office, such as the Savings Bank central office.

1.4 Transactions will not be binding until they are cleared by the Central Register. In this way, the Central Register will always be the definitive list of the securities, and the list will always be accurate.

1.5 There will only be a few transactions involving the new securities, namely:

- issuing the securities to those who are qualified
- transferring them between certain qualified owners
- using them once to buy properties, shares of stocks, or other securities.

It is assumed that these transactions do not need to be carried out instantaneously; they can wait for the time it takes to send a form or diskette from the local office to the central register; check them at the central register; and send a confirmation back to the local office. This process will probably take at least one week, but such a delay should be acceptable. According to this assumption, no telecommunications are needed between the local offices and the Central Register.

1.6 Privatization securities will be used to buy only a few kinds of property, namely:

- shares of large enterprises
- sole proprietorship of small enterprises
- housing
- land
- shares of investment funds or the pension fund.

It is assumed that each one of these types of property will have its own system for keeping track of ownership. The register of shares of enterprises and funds may be derived from the Central Register of Securities, but even it will be separate.

In other words, this memo assumes that the Central Register of Securities will only keep track of the privatization securities. After the privatization securities are used to buy something, they will disappear from the register. Other systems will keep track of housing, land, shares of stock, or shares of investment funds after these things are bought with the privatization securities.

1.7 In addition to the Central Register of Securities, there will also have to be a computerized system to manage the Compensation Fund. This system will be quite different from the Central Register. It must keep track of monies coming into the Compensation Fund from several different sources. It must keep records about investments with those monies, including interest earned. It will probably record the securities issued with the financial backing of the fund.

However, the details of how the Compensation Fund will work are even less definite than the details of the Privatization Securities. Therefore, this memo will not attempt to estimate the computerization needs and costs of the Compensation Fund. If possible, a later memo may make that attempt when the Compensation Fund is better defined.

Note that all the points above, numbers 1.1 to 1.7, are assumptions. If the actual privatization vouchers and Central Register turn out differently, the following estimates of computer support will have to be changed, too.

2 Computer hardware and software needs

Following is an estimate of how much and what kind of hardware and software will be needed for the Central Register of privatization securities:

2.1 The computer hardware for the central register at ESCC will be a new and larger version of the PC "server" that presently serves the Automated Voucher System. This computer will have a great deal of hard disk capacity. It should include several work stations for programmers and for data input.

2.2 Data collection for computerization of the privatization vouchers will be done with smaller, slower PC computers. These PC's will be located at the local offices where transactions take place.

2.3 The program for computerizing the privatization securities will be written in the same language as the Automated Voucher System which presently handles Popular Capital Vouchers used for housing privatization. This new program will include the old Automated Voucher System, but also some new features. One new feature, for example, is that data from the OVR, the register of former owners, will be included in the new program. This program for the Central Register will require substantial design and programming work.

Again, the information system for managing the Compensation Fund will have its own needs for hardware and software, in addition to those listed above. A later memo may estimate those needs, but this memo will not.

3 Costs

The preceding discussion consists of many assumptions, that make it difficult to estimate costs with great accuracy. However, the following cost estimates should be at least within the correct order of magnitude (costs are expressed in Estonian kroons or EEK):

Large "server" for Central Register	350,000
Additional data collection PC's: 5 @ 20,000 . .	100,000
Additional software licenses	250,000
Analysis & design: 15 person-months @ 10,000 . .	150,000
Programming: 20 person-months @ 7500	150,000
	========
TOTAL	1,000,000

Note that these figures include only hardware and software costs of computerization for the Central Register of Securities; they do not include costs for data collection clerks, for management of local and central offices, nor for many other costs. And they do not include any of the costs of computerizing the Compensation Fund.

4 Sources of funding

If the figures above are at all accurate, it will cost a substantial amount to computerize the privatization securities. It is unlikely that the money can be found in the national budget, which is severely limited and excludes many items more urgent than this computer system.

Where then can the money be found? One possible source, particularly for the software analysis, design, and programming, is foreign aid. USAID provided these kinds of technical assistance already for the Automated Voucher System which computerized the Popular Capital Vouchers for housing privatization. USAID may be willing to provide similar assistance for the new privatization securities.

A second possible source of funding is a private investor. An investor might put up the money in advance for the computer hardware and software, if he would be repaid later by fees on transactions during the process of privatization. Local IBM representatives in Tallinn have expressed an interest in providing this kind of support if financial conditions can be agreed to.

A third possible source of funding is the Compensation Fund itself. The Compensation Fund would receive money from sale of state-owned enterprises, and from other sources, possibly including fees for privatization transactions. Some of this money might be made available for the computerization.

We recommend that the Government of Estonian should first seek funding for computerization from foreign technical assistance, particularly USAID. Such assistance is provided on a grant

basis and would cost the least from the point of view of the Estonian government.

Secondly, the government should discuss with IBM or other investors the possibility of investment by a private company, to be repaid from the Compensation Fund.

If neither foreign assistance nor a private investor steps forward, the computerization would have to be paid for directly from the Compensation Fund when enough money is received in it to pay the costs.

5 Time schedule

A computerized system such as the Central Register of Securities described in this memo can never be created overnight. It is true that no great technical difficulties can be foreseen, and a similar system, the Automated Voucher System, will already be operational when this new system is started.

Nevertheless, we estimate that it will take 9 months to develop the new register. This nine months is measured from the time when parliament passes the laws to institute the new privatization securities.

The nine months is composed of three equal pieces:

- Three months for analysis & design. This estimate is based on a five person analysis team.
- Three months for programming. This is based on a six or seven person programming team.
- Three months for starting up the new system. This includes time to train the users in the local offices, install the software, and iron out initial difficulties.

Based on experience gained with the implementation of Popular Capital Vouchers, this schedule is realistic and achievable.

Note once more that the time schedule does not include the time necessary to develop an information system for the Compensation Fund. A later memo may deal with that subject.

Thomas Balderston
Deloitte & Touche

21 January, 1993

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T E L E F A X

To: Gus Vega

Date: 7 Jan, 1993

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From: Thomas Balderston
Tom

Subject: Contract with State Computing Center

PS - Attached is page you got garbled yesterday.

Today I had a long review of the progress on programming the Automated Voucher System. I wanted to find out how close the programmers are to finishing the work defined in their Terms of Reference. Two problems emerged:

First, the contents of the "first set of programs" which must go out to the local self-governments has changed somewhat from what was defined in the terms of reference. One item has been dropped altogether, and a couple of others will be accomplished with the second set of programs. Note that the bulk of the items originally defined in the first set of programs will remain in it.

Second, the programming is going more slowly than planned. It now looks like the reduced first set of programs will be finished next week. The second set will not be finished until March 12, two weeks after the planned end of Deloitte's own contract.

The State Computing Center has therefore requested two changes to their contract:

- move some items from the first set of programs to the second
- change the deadline for the programming work.

Let me emphasize that the changes they request are in no way changes in the overall scope of the work they will do, or in the design. It is merely a question of moving some parts of the designed system from the first set to the second set of programs, and changing the deadlines.

Also, the delay should not impact on the progress of housing privatization. The housing privatization was already delayed by other factors, so this delay of the computer programs is not delaying other important things.

What should I tell the State Computing Center? Is it possible to make these two changes? What do we have to do to make the changes?

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Reply to Fax Number: 442 521 or 602 492 Tallinn, ESTONIA

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FUTURE INFORMATION SYSTEMS WORK IN ESTONIA

The Estonian government is evidently pleased with the assistance that USAID has provided for the past year in the development of the Automated Voucher System. USAID funded the planning, design, and programming work for the system; important functions which would not have been performed as well without American assistance. The Estonians would like this assistance to continue, specifically in the following forms:

1. They have already asked in writing for two specific types of assistance:

- training in modern information systems techniques;

- help in developing information systems at the lower levels of governments, the counties and the "local self-government units."

These requests remain valid. (These written requests are one indication of the government's satisfaction with current assistance.)

2. Continuing development of the Automated Voucher System. Due to a variety of delaying factors, the system as it exists at the end of the present contract will only cover the Popular Capital Vouchers used for housing privatization. The system must be expanded in the near future to handle at least two other functions:

- the use of Popular Capital Vouchers for industrial privatization; and

- Compensation securities.

These developments will be either impossible, or greatly delayed, without modern American technical assistance from USAID.

3. The Automated Voucher System should also be kept open for development beyond the two functions mentioned above, such as the future Estonian securities exchange system. Again, USAID technical assistance would be invaluable to insure a smooth transition to a Western-style securities system.

4. The Privatization Management System for the Department of State Property was once planned for initial development under the present contract (Task 2). Some terms of reference were even drawn up (see following pages). But the work was not undertaken because in November it appeared that the Department of State Property might be weakened or eliminated. It is now clear, however, that the Department will continue, and may be given greater powers than before, so that the Privatization Management System is again needed. The old terms of reference are still generally valid.

The four points outlined above should be incorporated in a future USAID assistance contract for Estonia.