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108. This is the preface, Chapter 1 and 4 of Lars Jonung, Steve Hanke and Kurt Schuler *Monetary Reform for a Free Estonia. A Currency Board Solution*, 1992, SNS. The book was also published in Estonian as *Rahareform Vabale Eestile*, Tartu University Press. Tartu 1992.

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Monetary Reform for a Free Estonia

A Currency Board Solution

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Monetary Reform for a Free Estonia
A Currency Board Solution
Steve H. Hanke, Lars Jonung and Kurt Schuler
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Preface

The Estonian-Swedish Fund arranged a seminar in Tallinn in October 1991 on the future Estonian monetary system. Lars Jonung was invited to give a talk on monetary reform. After examining a number of proposals for currency arrangements, he suggested that a currency board would be the most promising route for the newly independent Estonia. When preparing a written summary of his talk, Lars Jonung contacted Steve Hanke and Kurt Schuler (who had been writing jointly about currency board systems) to discuss details of his proposal.

This report grew out of transatlantic cooperation among the three of us. Lars Jonung has adopted and extended the approach developed by Steve Hanke and Kurt Schuler to fit the case of Estonia. We have specifically considered the role that the Swedish government can play to foster credibility in the Estonian Currency Board that we recommend.

We are indebted to many people for help. Ingemar Ståhl at the University of Lund has been a source of inspiration and comments. Avo Viiol of Tartu University has furnished us with comments and recent data on the Estonian economy. He has translated an earlier version of this report into Estonian which is now being published by the Tartu University Press.

Roy Batchelor, Michael Bordo, Barry Eichengreen, Hans Genberg, Carl B. Hamilton, Lars Hörngren, Rudolf Jalakas, Bo Kragh, David Laidler, Axel Leijonhufvud, Carl-Göran Lemne, Hallar Lind, Nils Lundgren and Torsten Persson have furnished us with valuable and critical comments. We respond in Appendix III to some of the questions and objections raised by them as well as by commentators in the Swedish and Estonian financial press when summaries of our proposal were presented in December

1991 and January 1992. Of course, we take sole responsibility for all remaining idiosyncrasies. We have also been inspired by Christofer Halldin's interest in our work. We owe a special thanks to Britt-Marie Eisler for her patient work of turning our transatlantic faxes into a readable manuscript.

We greatly appreciate generous financial support by the Skandinaviska Enskilda Banken that made the printing of this report possible.

We regard our proposal as a contribution to the present debate concerning the support and aid to be given by Sweden and other Western nations to the newly independent Baltic states. Here we focus on Estonia but our recommendations could easily be extended to the cases of Latvia and Lithuania (see Schuler, Selgin and Sinkey [1991]).

This report is a study in comparative monetary systems. It amounts to a comparison between two alternative monetary arrangements: a currency board versus a central bank solution. Given Estonia's present chaotic economic and political situation – the disarray of its economy, its lack of financial markets and the public's distrust of domestic institutions – we argue here that a currency board solution is the better alternative.

Baltimore, Stockholm, and Fairfax, February 1992

Steve H. Hanke Lars Jonung Kurt Schuler

1. Estonia's choice of monetary order

1.1 Introduction

Estonia faces an important choice. Like every new nation, Estonia must establish a monetary system. This choice is crucial, for it will largely determine Estonia's future economic performance. History provides many examples of new nations setting up badly working monetary systems that have led to high inflation, thus contributing to economic instability, social unrest, and political conflict. That was the outcome in many new European nations formed after World War I. Lack of monetary and budgetary discipline caused hyperinflation, which quickly became the major economic, social, and political problem. Virtually all colonies that gained independence in the 1950s and 1960s have experienced high inflation. On the other hand, history provides examples of successful monetary systems that have encouraged rapid economic growth, social cohesion, and political stability.

Our analysis of alternative monetary systems and our interpretation of their historical performance lead us to conclude that the currency board system is the most promising monetary option for a free Estonia under present circumstances and for the foreseeable future. Under the currency board system, Estonia would establish a currency board rather than a central bank.¹ The currency board would issue notes and coins in the new Estonian currency, the kroon, backed 100 per cent by a "reserve" currency, which we propose should be the Swedish krona. The currency board would be required to exchange kroons for kronor at a fixed exchange rate that would be "permanently" locked in.

Sweden should play an active role in creating and operating the Estonian Currency Board. We propose that Sweden grant Estonia the initial reserves to establish the new currency board, which

would guarantee a smooth and credible start for the board.

To ensure that the new currency is widely used and that Estonia can attract an inflow of foreign capital and finance, the new Estonian kroon must be convertible and possess credibility. Credibility in this context means that the Estonian public and foreign investors believe that the kroon will be as good as the krona.

A currency board established along the lines we suggest will guarantee convertibility from the day it opens. The fixed exchange rate will be an "anchor" that will keep inflation and interest rates fairly low, as they are in Sweden. Moreover, foreign-exchange risk with respect to the Swedish krona will vanish. Because the krona is linked to the currencies in the European Monetary System, foreign-exchange risk with respect to those currencies will also be quite small. Domestic and foreign investment in Estonia and foreign trade will therefore be higher than if Estonia issues its currency through a central bank of its own that lacks credibility. Higher investment will lift the ratio of capital to labor; consequently, labor productivity and real wages will rise. Economic growth will be higher and emigration out of Estonia will be lower than if an Estonian central bank issued what would certainly be a less credible currency (Hanke and Schuler [1991b]).

With a currency board, Estonia will immediately take a great step towards monetary stability. Estonia should recognize, however, that monetary stability is not the only element of a successful transition to a market economy. A coherent and comprehensive reform package, including budgetary and tax reforms, is necessary (see Hanke and Walters [1991a]). We limit the scope of our inquiry to matters of monetary reform because they are the most urgent. If Estonia does not quickly attain monetary stability, all other reforms will be in jeopardy.

This study explains how a currency board operates and how to establish a currency board for Estonia. Chapter 2 shows how a currency board works. Chapter 3 contains our proposal for the Estonian Currency Board. We discuss how the Board should be established, how it should initially distribute its currency, and what part Sweden should play in the process. Chapter 4 sum-

marizes our proposal. Appendix I contains a proposed constitution for the Estonian Currency Board. Appendix II responds to criticisms that have been raised against currency boards, including some objections towards our proposal recently put forward in Sweden and Estonia. Appendix III is a technical analysis of money supply in a currency board system. Appendix IV explains how to convert a central bank into a currency board, if it is not politically possible to establish a currency board at the start.

The remainder of this chapter reviews economic conditions in Estonia at present and explains the role of a credible and efficient currency in fostering economic growth.

Economic conditions in Estonia today

As a former republic of the Soviet Union, Estonia is currently an integral part of the former Soviet economy, using the ruble as its currency. Consequently, Estonia is now experiencing very rapid inflation. The annual inflation rate in Moscow was reported to be in the range of 500 to 700 per cent as of November 1991. Price increases in Estonia will be of roughly the same magnitude as long as the ruble remains the main currency of Estonia.

Estonian data show the inflation rate to be rising in past years (Table 1). In the fourth quarter of 1991 the annual inflation rate was about 260 per cent. According to many reports, price increases have accelerated since then. Nominal wages have lagged behind the inflation rate, causing real wages to fall.

Table 1. Inflation in Estonia.

| <i>Period</i> | <i>Annualized inflation rate</i> |
|---------------------|----------------------------------|
| 1990, first quarter | 60 % |
| 1991, first quarter | 101 % |
| second quarter | 174 % |
| third quarter | 270 % |
| fourth quarter | 258 % |

Source: Statistical Bureau of Estonia.

The reported inflation rate, though high and increasing, understates the true underlying inflation in Estonia. There are persistent shortages of goods and commodities in Estonia, which suggests the presence of "repressed" inflation. Recent reports give ample proof that the accelerating inflation rate is accompanied by shortages of goods and commodities.

Accelerating inflation has caused Estonians' real savings held in rubles to plummet. Estonians do not want to hold ruble notes and coins. Nor do they want their savings accounts to be denominated in rubles, particularly when the interest on those accounts is far below the inflation rate. Hence, Estonians hoard goods and foreign currency as substitutes for ruble savings. The breakdown of willingness to accept rubles is hindering internal and external trade. Food shortages in Estonia at present seem to be occurring not so much because of lack of food as lack of willingness on the part of food suppliers to accept rubles. Trade with other former Soviet republics has also slowed greatly because the parties trading want goods or hard currency rather than rubles as payment.

Another manifestation of the hyperinflation of the ruble is that Estonia's financial system is presently "repressed" and cannot efficiently intermediate between savers and investors. Domestic savings are not being channeled into much-needed productive investments (Hanke and Walters [1991b]). Until Estonia reforms its monetary system it will be unable to transform itself into a market economy.

To sum up, Estonians are presently expecting a currency reform replacing the ruble with a domestic currency. These expectations cause producers to withdraw supplies while consumers try to get rid of ruble holdings. This process creates accelerating inflationary pressure.

When discussing monetary reform in Estonia, we must remember that Estonia is a small, poor country. It has about 1.6 million inhabitants. Its gross domestic product (GDP) per person is roughly 10 to 20 per cent of that of Sweden (whose GDP per person is US\$21,600). Real income comparisons are difficult because Estonia lacks a market-based price system. Even so, most

observers conclude that Estonia is basically a less developed economy.² It is difficult for such a small country as Estonia to launch successfully a new currency and a new central bank while simultaneously transforming its economy into a market economy. This change of economic system would be greatly facilitated by a currency board, as we argue below.

1.2 Monetary reform and the development of a market economy

Estonia is struggling to throw off the shackles of a command economy so that it can become a market economy. The transformation will be difficult. To achieve it, Estonia must rid itself of the ruble and establish a sound currency—a currency that is stable and convertible into major international hard currencies.

The role of a sound currency in a market economy

A sound currency is vital for a well-functioning market economy. It serves as a satisfactory store of value, medium of exchange, and unit of account. The ruble at present fulfills none of those functions satisfactorily.

The ruble is not a reliable store of value because inflation makes its value highly unpredictable. As a result, Estonians save by hoarding commodities, which retain their value better than the ruble. Although commodity hoarding slows economic growth, it is rational for people in a nation with an unstable currency. Finnish marks, Swedish kronor, U.S. dollars, and other stable currencies also serve as substitute stores of value in Estonia. At present the volume of foreign currency circulating in Estonia is estimated to be equal to at least US\$80 million. Most of the foreign currency is Finnish marks. “Markization” or “dollarization” is costly from an Estonian viewpoint, however. It requires Estonians to give up real goods and services to obtain bits of paper that Western central banks print at almost no cost. It generates a form of foreign aid that flows from Estonia to Western central banks.

The ruble is not a good medium of exchange. The outside world refuses to accept it. This impedes foreign investment and trade, and hence economic growth. Nor is the ruble a good unit of account. Inflation distorts the structure of relative prices and makes business calculation more difficult. Without a good unit of account, it is impossible to make meaningful accounting calculations or to write contracts that will be enforced. In sum, then, the ruble is an "unsound" currency that will prevent important elements of a market economy from working well in Estonia.

Two further aspects of a sound currency that we wish to stress here are convertibility and credibility. Let us first consider convertibility. A convertible currency allows people to carry out decentralized plans, which are more efficient than central planning. In nations with so-called internally convertible currencies, all that is usually required to buy goods in the domestic market is to have currency to pay a domestic seller. Internal convertibility implies that it is not necessary to obtain authorization from any central planner to buy or sell goods available inside the country. The exchange of goods is much more extensive, rapid, and efficient where internal convertibility exists, as in the United States, Germany, and Sweden, than where it does not, as in Estonia and Russia until recently.

The foreign-trade counterpart of internal convertibility is external convertibility—the ability to convert as much domestic currency into foreign currency as one wishes, at market rates rather than at much higher or lower official rates. External convertibility can be unlimited, as in the major Western countries, or it can be limited, as in Czechoslovakia and Poland at present. Czechoslovakia and Poland allow most current account purchases, in which people buy foreign goods for import, but they prohibit many capital account purchases, in which people buy foreign financial assets.

Current account convertibility exposes domestic producers to foreign competition. It is thus an important measure to foster competition. Current account convertibility also introduces into the domestic economy the structure of relative prices that prevails in world markets. The structure of prices in world markets in-

duces a nation that is open to foreign trade to specialize in making the goods it is best at producing. It can then trade those goods for other goods, which increases wealth all around.

Capital account convertibility helps attract foreign investment, because unless foreigners can repatriate profits they will be reluctant to invest. Foreign capital investment can offset a large current account deficit and speed the introduction of urgently needed foreign goods to modernize the Estonian economy. The present stock of usable physical capital in Estonia is low. If only domestic investment is available to augment the stock of capital, the Estonian economy will grow much less rapidly than if foreign investment can also augment it.

The ability to purchase both domestic and foreign goods of all sorts readily is what makes Western currencies fully convertible currencies; it is also what makes them so highly prized in Eastern Europe. To reap the full benefits of participation in world markets, Estonia needs a domestic currency that is fully convertible, including for capital account transactions.

Credibility

Every new nation that starts to issue its own currency faces the problem of establishing credibility, that is, belief that future inflation in its currency will be fairly low. Recent events in Poland illustrate the difficulty of establishing credibility. Poland has allowed most formerly subsidized prices to rise to market levels and has linked the zloty to the U.S. dollar, yet inflation remains very high because the Polish central bank lacks credibility. It has already devalued the zloty twice since establishing the link with the dollar. Like Poland, other East European nations also have long histories of bowing to political pressures for inflation.

A new central bank has been set up in Estonia, although it is still in an embryonic stage because it has not yet issued any currency. This new bank does not have the handicap of bad past performance, but it faces other problems concerning credibility.³ So far, it has not announced any definite plan for keeping its currency stable.⁴ Also, the general experience of central banks in developing nations suggests that both established central banks and

new central banks face overwhelming political pressures for inflation. For the 99 nations that the World Bank classifies as low- and middle-income, average annual inflation was 16.7 per cent from 1965 to 1980 and 53.7 per cent from 1980 to 1989. These figures are much higher than the comparable figures for developed nations. We thus expect that if the new central bank of Estonia issues currency, it will soon cause high inflation of its own.

The poor performance of central banks explains why Paul Volcker, the former chairman of the U.S. Federal Reserve System, has indicated that he has little faith that central banks in Eastern Europe can achieve full convertibility. Addressing central bankers in Jackson Hole, Wyoming, in 1990, Mr Volcker noted that markets developed long before central banks, and stressed that Eastern Europe and the USSR might actually retard their transition to markets by relying on central banks.⁵ Central banks with legal monopolies of note issue are essentially not market institutions, which is why Marx and Engels said in the *Communist Manifesto* that one of the steps for achieving communism was “Centralization of credit in the hands of the state, by means of a national bank with state capital and an exclusive monopoly”.⁶

The problem of credibility threatens to lock the Estonian public and the new central bank of Estonia, if it issues currency, into a game that promises to have no winners. If the central bank's attempts to maintain currency stability, even by means of fixed exchange rates, are not credible, prices will continue to rise quickly because wage-earners will base their wage demands on well-founded skepticism of promises of good behavior given by the central bank. State-owned enterprises and government ministries will probably spend freely because they will correctly expect that the Estonian government will rescue them by ordering the central bank to print money. Workers and enterprises will anticipate that this “soft budget constraint” will continue, and they will behave accordingly. Inflationary expectations will remain high, enforcing inflation.

If the central bank of Estonia against strong odds actually does

manage to maintain currency stability, the consequences could almost be worse than under continued inflation. Because the central bank will lack credibility, Estonians will remain skeptical of it for years. To gain credibility, the central bank will have to keep the kroon overvalued and keep real (inflation-adjusted) interest rates high. That may plunge the Estonian economy into a depression during the transition to a market economy. In such a depression, the export sector will suffer more than other sectors.⁷ A credible monetary reform that has *no* devaluation risk can keep real interest rates in single digits or (for riskier loans) low double digits, as they are in Sweden, and hence can save Estonia much pain.

Estonia could make the kroon convertible by maintaining a floating exchange rate rather than a fixed rate. But though a floating rate would roughly balance supply and demand for domestic currency against foreign currency, it would not restrain the central bank's powers to cause inflation. On the contrary, a floating rate would increase pressure from political groups and ambitious politicians who favor inflation rather than stable money and prices. Inflation would rise and prices would become increasingly unreliable indicators for guiding economic activity. The transition to a market economy would become extremely difficult because a market economy needs fairly stable prices to work well.

To have a stable currency, Estonia at this point in its history needs to remove its monetary policy from political influence. It needs to give its monetary reforms instant credibility to avoid the dangers of continuing inflation on the one hand and depression on the other hand. The most promising way to do so is to strip its central bank of currency-issuing functions, and to establish a *currency board*, whose only task will be to issue a convertible currency according to strictly defined rules. The Estonian Currency Board that we propose is explicitly designed to maintain a fixed exchange rate. It will be easy to establish and operate. Historically, currency boards have *always* been able to maintain fixed-rate currency convertibility, even during the most trying times.

A currency board will quickly establish a hard domestic currency and instill monetary confidence in Estonia. As a result, economic agents will alter their expectations. If the Swedish krona becomes the reserve currency for the Estonian Currency Board, as we recommend, Swedish prices will become the anchor for Estonian prices. Also, wages will increase at about the same rate as in Sweden, plus an allowance for gains in productivity or quality. (Real wages can thus grow quickly under the currency board system, as they have in Hong Kong, if productivity or quality increases.) If Estonia establishes secure property rights and removes barriers to foreign investment, interest rates will also be close to Swedish levels.

Linking the Estonian currency to the Swedish currency will not subject Estonia to Swedish political domination, as some people may think. (We discuss this important point in more detail in Appendix III.B.) Rather, it will restore an element of national dignity by giving Estonia a stable currency. By establishing an Estonian currency as sound as the Swedish krona, the currency board system offers a quick way for the new Estonian currency to become attractive as a store of value and to displace foreign currencies from circulation.

A currency board is essential to wider fiscal and economic reforms in Estonia. History indicates that the usual cause of hyperinflation is large budget deficits financed by central banks. The Estonian government under a currency board system will not be able to finance deficits by means of the printing press. Consequently, the government will have to maintain its expenditures in line with its tax revenues and borrowing. This will require a successful tax reform in Estonia. During the transition to a market economy under a currency board, Estonia should receive aid to establish an efficient system of taxation.

A stable monetary environment provided by a currency board will make it easier for Estonia to successfully take further steps towards a market economy. With an unstable monetary environment such as we fear a central bank would produce, Estonia risks suffering low economic growth and continuing misery.

4. *Summary and conclusion*

Estonia is now facing one of its most important decisions as a free nation. It must decide what monetary system to adopt. The ruble is rapidly losing value. The embryonic Estonian central bank has no definite plan for producing a stable, convertible currency. The experience of many newly independent countries indicates that probably no form of central bank can produce a stable, convertible currency in Estonia in the foreseeable future. Estonia, being a small and developing country trying to move towards a market economy, faces great problems in creating confidence in and credibility for its new currency.

We recommend that Estonia, jointly with Sweden, establish the Estonian Currency Board. The currency board system, as used in Hong Kong and elsewhere, is a simple and proven vehicle for promoting price stability and economic growth.

The Estonian Currency Board has the following advantages: it can be established quickly, it can almost immediately circulate its notes through a nationwide distribution of the new notes to every Estonian citizen, it is simple to operate, it will constitute a credible monetary system that will reduce uncertainty about the future value of the Estonian currency, and it will open Estonia to Western banking and finance. In our opinion, our proposal has no major disadvantages compared to the alternative of establishing a central bank. We believe that the main text and Appendix III answer the major objections to the Estonian Currency Board.

In summary, we recommend that Estonia, together with Sweden, take the following steps:

1. Establish the Estonian Currency Board with 600 million Swedish kronor in initial assets provided by the Swedish government.

2. Issue notes and coins in the new Estonian currency, the kroon, through the Estonian Currency Board. The kroon will equal one Swedish krona. These notes and coins will be distributed according to a set plan to every citizen of Estonia.
3. Allow free trading in all currencies. Abolish all restrictions on interest rates and financial intermediation, permitting foreign commercial banks free entry into Estonia.
4. Declare that the Estonian central bank shall serve as an agent for the Estonian Currency Board. The central bank shall have no power to create or destroy commercial bank reserves.
5. Allow the kroon to circulate as a parallel currency to the Soviet ruble. No fixed rate shall be set between the kroon and the ruble. Eventually, the kroon will drive the ruble out of circulation because of the hyperinflation in Russia.
6. Channel the profits of the Estonian Currency Board into the Estonian Research Fund whose functions we have described above.

We regard monetary reform of this kind as the first and the central step towards the establishment of a market economy that will generate growth and progress for the new independent Estonia.

About the authors

Steve H. Hanke is Professor of Applied Economics at The Johns Hopkins University in Baltimore and Chief Economist at Friedberg Commodity Management, Inc. in Toronto. He is recognized as a leading international authority on privatization, he was the main architect of president Reagan's privatization program, when he served on the President's Council of Economic Advisers at the White House (1981—82). He served as Personal Economic Adviser to Mr. Zivko Pregl, the Deputy Prime Minister of the Socialist Federal Republic of Yugoslavia, from 1990 until Mr. Pregl resigned on June 30, 1991. His most recent book is *Capital Markets and Development* (edited with Sir Alan Walters, 1991).

Lars Jonung is Professor in Economics and Economic Policy at the Stockholm School of Economics, Stockholm. Monetary economics, Swedish macroeconomic policy, and inflationary expectations are his main fields of research. He has published several books and articles in Swedish and English, including recently *The Long Run Behaviour of the Velocity of Money* (with Michael D. Bordo, 1987), *The Political Economy of Price Controls. The Swedish Experience 1970—1987* (1990), and (as editor) *The Stockholm School of Economics Revisited* (1991) and *Swedish Economic Thought. Explorations and Advances* (forthcoming 1992). Presently he is working on a study on Swedish central bank policy from 1945 to 1990. He also serves as economic adviser to the Skandinaviska Enskilda Banken and as editor of the *Skandinaviska Enskilda Banken Quarterly Review*. In March 1992 he assumed a new position as chief economic adviser to the prime minister of Sweden.

Kurt Schuler is a doctoral candidate in economics and holds the George Edward Durrell Assistantship at George Mason University in Fairfax, Virginia. He has been a Summer Fellow at G.T. Management in Hong Kong, where he worked with John Greenwood, who designed Hong Kong's currency board system. He has published several articles on the economics of currency boards.

Monetary Reform for a Free Estonia

Like every new nation, Estonia must now choose a monetary system. This choice is crucial, for it will largely determine Estonia's future economic performance. To break free of the ruble and of the lingering effects of Soviet central planning, Estonia needs a stable, convertible currency.

Steve H. Hanke, Lars Jonung, and Kurt Schuler propose that Estonia establish a currency board, which would issue an Estonian currency fully convertible into Swedish currency, backed 100 percent by Swedish bonds. Sweden would aid in establishing the currency board by providing the initial reserves. The initial supply of the new Estonian currency, the kroon, would be distributed free to Estonian citizens. The authors give detailed explanations of how the currency board could be established and how it would work.

A currency board such as that proposed by Hanke, Jonung, and Schuler is an excellent system for a country in Estonia's position.

MILTON FRIEDMAN
1976 Nobel laureate in economics

How does one install and ensure stable money in Estonia? In my view, the only sure-fire way is to establish a currency board. The Hanke-Jonung-Schuler volume presents a sound blueprint for doing just that.

SIR ALAN WALTERS
Professor of economics
Personal economic adviser to Margaret Thatcher

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