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Abstract

The aim of this article is to establish the level of independence that each of the Estonian, Latvian and Lithuanian central banks enjoy according to law and in practice. The rationale behind this is the well-known both empirically and theoretically verified relationship between central bank independence (CBI) and inflation rate arising from the increased monetary policy credibility that is possible to obtain by strengthening the position of the central bank (CB). In this paper two different indices of central bank independence are used to measure the level of legal CBI of the Baltic central banks, namely Grilli - Masciandro - Tabellini (1991) and Cukierman (1992). Ex-post turnover rates of central bank governors are then calculated as an indicator of actual CBI or more precisely the lack of it.

The main findings of the study are firstly the results of the indexation process. It is safe to say that the Baltic central banks have been endowned with highly independent legal positions. Furthermore, there are no truly significant variations between the three countries in this respect. Secondly, a quite different picture arises when actual CBI is studied. The calculated turnover rate of the Lithuanian CB governors is far higher than the comparabale figure for Estonia and especially Latvia. Even though the time frame used in this study is rather short for obvious reasons the Lithuanian rate has to be taken as a sign of non-satisfactory level of autonomy of the CB. Apart from measuring the level of CBI this paper concentrates on the credibility of monetary and exchange rate policies pursued in the Baltic countries in recent years. It is argued that the reasons for the lower than desired credibility of the Lithuanian monetary system compared to Latvia or Estonia are the low level of actual CBI and the political nature and instability of monetary decision making in the country.

Keywords: Baltic countries, central bank independence, policy credibility

1 Introduction

Macroeconomic stabilization, generally considered a prerequisite to restoring economic growth, has made inflation fighting a central theme in the economic reform programs of transition economies. Some researchers have even suggested that no country can have positive economic growth unless its annual inflation is below 40%. Stabilizing prices usually takes priority in transition country reforms after the effects of initial price liberalization have worked their way through the economy.

Transition to a market economy implies other measures, of course. These include lowering barriers to trade, implementing a convertible currency, transforming the enterprise sector, erecting a social safety net and setting up institutions to ensure the smooth operation of a market economy.[1] The country must implement legislation and institutions that promote the welfare and rights of the citizens as well as the confidence of global investors. In this respect, the central bank shoulders a good deal of responsibility, yet it can only succeed if its actions are seen as credible.

With increased capital mobility, governments can embrace central bank independence (CBI) as a route to low inflation and market confidence. CBI policies emerged at the end of an era of fixed exchange rate arrangements such as Bretton Woods and EMS, when there was a need to find a new "anchor" for price stability and smooth operation of financial markets. The painful adjustments required of Latin American countries in taming high inflation also had created a general distaste for high inflation and hyperinflation. Thus, the anti-inflation performance of highly independent central banks such as the German Bundesbank validated the argument for CBI. Looking ahead, European integration, and especially European Monetary Union (EMU), demand that the EU's current members as well as potential future members secure the independence of their central banks. The result is that the importance of CBI has not been lost on former socialist countries, especially those that aspire to EU membership and the EMU.[2]

The theoretical background for CBI is found in the dynamic inconsistency theories of inflation introduced by Kydland-Prescott (1977) and later developed by Barro-Gordon (1983). They propose that an independent central bank is more likely to produce a lower rate of inflation than a less independent central bank. Lower inflation is obtained because the central bank is independent of political pressures, i.e. the government. The rationale here is that when politically motivated decision-makers get involved with monetary policy, they have an interest in affecting other economic factors besides price stability such as unemployment and production. Without an overt commitment to price stability, markets and the public expect that policy makers will eventually inflate to lock in a short-term gain in employment or increased production. In other words, policy actions must appear prudent, i.e. time-consistent, in the public's eyes. One answer to the credibility problem is granting independence to the monetary decision-maker and giving it a legal mandate to ensure price stability. Rogoff (1985) claims this commitment can be further advanced by appointing a "conservative central banker", i.e. someone who is known to consider inflation fighting more important than employment considerations.

Does an increased level of independence inherently lead to lower inflation? To answer this, one first needs to be able to measure independence. This is usually done by means of special indices of legal CBI. Here we shall apply the Grilli-Masciandro-Tabellini (1991) and Cukierman (1992) indices, as both are widely popular means of evaluating legal CBI. As Cukierman (1995) points out, there is also the further problem of determining actual independence of the central bank. Following Cukierman, this article uses (the rather crude measure of) turnover rates of Baltic central bank governors as indicator of actual independence.

[1] Fischer - Sahay -Vegh 1996, 46-47.

[2] Cukierman 1995, 3.

1.1 A short note on Baltic monetary systems

With the collapse of the Soviet Union, the Baltics re-established their central banks and reintroduced their national currencies. Comparison of monetary approaches in recent history show that all three of the Baltic states exhibit differences in timing, paths of transformation and monetary policy emphasis.

Estonia (in June 1992) and Lithuania (in April 1994) set up currency boards, i.e. an independent currency authority.[3] A currency board is a system whereby a separate institution is given the task of ensuring the exchangeability of the domestic currency to the chosen anchor currency at a fixed rate. In both Lithuania and Estonia, the functions of the currency board are taken care of by the central bank – no separate institution in line with an orthodox currency board exists. Under a currency board regime, all domestic currency in circulation must be backed with foreign reserves. In order to maintain credibility to the system reserves should add up to at least 100% of the liabilities of the currency board, especially in an unstable environment. A traditional currency board only backs the notes it has issued. In Estonia and Lithuania, both the cash in circulation and commercial bank deposits with the central bank are backed. Thus, the currency board assures that the supply of domestic currency always follows the amount of foreign currency reserves. By making the money supply essentially endogenous, the intellectual demands of monetary policy are quite modest. Basically, the need for other types of monetary intervention are unneeded, although on occasion both Estonia and Lithuania have adjusted their reserve requirements to affect the liquidity of the banking sector and thereby the supply of loan funds. The currency board regime denies the government any possibility of using credits from the central bank in financing its budget deficit and thereby forces it to raise financing from the capital markets. This is the case at present in Estonia and Lithuania. Under a pure currency board regime, the notion of central bank independence is tautological: the government can not affect monetary policy, because there is no monetary policy. However, the central banks of both Lithuania and Estonia have reserved limited possibilities to affect money supply and the operation of financial markets (in more detail in section 5.2.2).

Latvia applies a more traditional central bank structure with a fixed exchange rate. The Latvian central bank can use monetary policy like most other central banks – there are no institutional restrictions to central bank lending to the government. Since its introduction, the Latvian lat (LVL) has nominally been a floating currency, although in fact its value has been fixed to the IMF's Special Drawing Rights (SDR) unit since February 1994 (1 LVL = 0.7997 SDR). The Latvian central bank operates quite closely to currency board rules by keeping the currency in circulation almost fully backed with foreign reserves (see section 5.2.2).

1.2 Research goal

This study seeks to establish the level of independence Baltic central banks enjoy, legally and in practice. To measure legal independence we use the Grilli - Masciandro - Tabellini (1991) and Cukierman (1992) indices. We then consider the turnover rates for central bank governors as a measure of actual independence (or lack thereof). Finally, this article considers the monetary and exchange rate policy credibility of the Baltic countries.

Radzyner - Riesinger (1997) conduct a similar study on central banks of Poland, Czech Republic, Hungary, Slovakia and Slovenia using a comparable time period. They, however, do not use the actual indices as a way of comparison the way that is done in this study. Loungani - Sheets (1997) apply some aspects of the indices to Lithuania and Estonia along with several other Eastern European countries leaving Latvia out of their research. They do not give Lithuania and Estonia the sort of weight that is done in this study concentrating solely on the Baltic countries. The present article was written almost entirely before the publication of the Radzyner - Riesinger and Loungani - Sheets studies.

[3] Osband - Villanueva 1992, 3-5.

1.3 The structure of the article and material used

Chapters 2-4 contain the relevant features from each country's central bank law needed to compile the indices. Persons with backgrounds in law have checked the legal interpretations of the author. A short history of the central bank and monetary reform is added to each chapter in order to give the reader some background information. Chapter 5 begins with compiling the two indices for the three countries. After the indices are presented, the level of actual independence is studied. Concluding remarks are presented in Chapter 6.

The most important source materials for this study were the central bank laws of each country studied. Other published sources included BIS information on Eastern Europe's central banks and the articles by Camard (1996), Rudgalvis (1996) and Dale (1997). A valuable interview was done with Mr. Hannu Mäkeläinen, an IMF advisor to the Bank of Lithuania during 1993-1994. The chief economist at the Bank Policy Department of the Bank of Lithuania, Mr. Sigitas Šiaudinis, also generously provided valuable information on the backgrounds and activities of the governors of the Bank of Lithuania. Many of my colleagues at the Bank of Finland's Unit for Eastern European Economies helped considerably in making this a better study.

2 Lithuania

Lithuania was the last of the Baltic countries to leave the rouble zone and introduce its own currency (the litas). Like Latvia, Lithuania chose a two-stage monetary reform, first introducing a temporary currency, the talonas. Up to 1993, Lithuania's practice of monetary policy was erratic and the position of the Bank of Lithuania was dubious at best. Since the present currency, the litas, was put into circulation in June 1993, monetary policy has been tight and the external value of the currency has remained stable or appreciated with respect to the US dollar. The litas was pegged to the dollar at a rate of 1-to-4 in April 1994. The central bank law, which came into force in December 1994, gave the Bank of Lithuania[4] a strongly independent position (in principle at least).

2.1 Currency reform and the establishment of the central bank

After a lengthy discussion, Lithuania introduced the talonas in May 1992. The initial impetus for a gradual reform came from the Bank of Lithuania. As grounds for the chosen way of reform have been mentioned the lack of needed international agreements for the introduction of a permanent currency and the acute lack of cash roubles in early 1992. In September 1992, the Lithuanians started to withdraw roubles from circulation. The rouble had been used as means of payment alongside the talonas at a rate of 1:1. After October 1992, when the Lithuanians were allowed to change their remaining roubles to talonas during a period of one week, the rouble ceased to be legal tender in Lithuania. The original plan was to switch directly from the rouble to the litas, but the widespread import of roubles from the CIS countries convinced the authorities to announce the talonas as the sole legal tender in the country. Starting 25 June 1993, the talonas was converted litas at a rate of 100:1. According to plans the use of talonas in payments ended on the 20 July 1993. The use of convertible currencies in payments was banned in late July 1993, and the litas became the legal tender on 1 August 1993.[5]

The Bank of Lithuania was originally founded in Kaunas in 1922. It started its operations again in 1990 having been closed since World War II. The first tasks for the Bank included the introduction of a two-tier banking system to Lithuania and preparations for the currency reform after the Soviet power structure collapsed. Up to late 1992, the Bank had

[4] The official name of the Lithuanian central bank is Lietuvos Bankas, or the Bank of Lithuania in English.

[5] Lainela-Sutela 1994, 59-60.

also served as a commercial bank, but since it has stuck to central banking.[6]

Getting inflation under control took much longer in Lithuania then in Estonia or Latvia. Only in 1994 did the Lithuanians manage to reach inflation levels comparable with the two other Baltic countries. With high inflation, the value on the currency evaporated: between October 1992 and May 1993 from 250 talonas per dollar to 550 talonas per dollar. During the summer of 1993, the Bank of Lithuania tightened its monetary policy and stabilized the exchange rate of the currency (now litas) in following autumn after a period of nominal appreciation in the summer of 1993. Problems with credibility made the Lithuanians search for a solution that would ensure monetary stability. As a consequence, the parliament passed a law on the credibility of the litas[7] in March 1994 and a new law on the Bank of Lithuania[8] in December 1994. The first of the two laws mentioned meant in essence a start for a currency board in Lithuania. When analysing Lithuania's present monetary legislation one has to bear in mind its time of enactment. This implies that the position given to Bank of Lithuania with it has no bearing to the years 1992–1993.

2.2 The law on the central bank

According to article three of the Lithuanian central bank law, the Bank of Lithuania is independent with respect to the government of Lithuania: "In implementing the objectives established to it by this law and carrying out its functions, the Bank of Lithuania shall be governed by the Constitution and laws of the Republic of Lithuania and shall be independent from the Government of the Republic of Lithuania and other institutions of executive authority."[9] The two first subsections of this part of the article cover the criteria needed to compile the GMT index of political independence and the third subsection concentrates on the economic independence and the criteria of the Cukierman index.[10]

2.2.1 The principal objective

By law, the Bank of Lithuania is the central bank of the country and has the principal objective to ensure the stability of the national currency. The Bank has to take into account in fulfilling its duty the functioning of both the foreign exchange markets and the banking system. It also has to determine that economic policies conducted by the government are not in conflict with the Bank's objectives. Even though the law says that Bank of Lithuania does not have to back the government in its economic policy, the wording of the law is poor in this respect. The ruling concerning possible conflicts of interest between the Bank and the government is added to a subordinate clause in which it is said that the government's policy has to be "in compliance with" the Bank's objective (for comparison, see section 4.2.1). Nevertheless, Lithuanian law otherwise fulfils the criteria on policy objectives and on conflict resolution in the GMT (7 and 8) and Cukierman indices (*obj* and *conf*).

2.2.2 The management of the Bank

The law states that the Bank of Lithuania shall be directed by a board made up of a chairman (governor), three deputy chairmen and ten other members. The parliament (Seimas) elects the governor for a period of five years and decides on his salary on the basis of a proposal from the President. The deputy chairmen and

[6] BIS 1996, Lithuania, II.

[7] Law of the Republic of Lithuania on The Credibility of the Litas. Came into force on 1.4.1994.

[8] Law on The Bank of Lithuania. Enacted in 1994, later modified in 1996. Both versions of the law were used as sources for this article.

[9] This section is based on Lithuania's national legislation and material published by the Bank for International Settlements. BIS 1996, Lithuania, II, V, VI, VII, XII and XVI.

[10] The GMT index is produced in chapter 5. The Cukierman index is presented in detail in appendix 1.

members are appointed by the president for terms of nine years based on the Governor's proposal. The law prescribes that the President, members of the Seimas, government ministers or members of board of others banks can not be members of the Bank of Lithuania board. No requirements apart from Lithuanian citizenship are mentioned. The board is entrusted with monetary policy decision-making, bank supervision and administration of the Bank. It can make decisions on issues within its sphere of competence without the prior consent of the government (GMT 6). Dismissal from the board can take place on grounds of health or conviction of criminal activity. Other possible grounds are membership in managing organs of another financial institution and the board member's own request. The governor's duties include day-to-day management of the Bank. Interestingly, the law *requires* the governor to take part in the meetings of the government of Lithuania and to participate in its decision making in an advisory role (article 17). According to BIS, the government may send its representative to the meetings of the board of the Bank of Lithuania upon the Board's invitation.

Based on law, the Bank's management can be said to have a good amount of independence vis-à-vis the government. However, the bank's subordination to the Seimas and its powers in the appointment procedure tie the Bank of Lithuania to political pressures. More worrying is the obligation given to the Bank to back government policy, even though under certain provisions. Criteria (1-6) of the GMT index of political independence concerning the appointment procedure and relationships with the government are fulfilled according to the author's interpretation. In this way, the law on Bank of Lithuania receives a full eight as its measure of political independence in the GMT index. Under Cukierman index criteria, the Lithuanian law meets criterion groups *OBJ* and *PF* apart from the requirement *adv*, which covers the central bank's role in deciding on government budget. *CEO* criteria (or variables as Cukierman calls them) are met in the following manner: *too* (governor's term of office) brings 0.5 out of a maximum of one, *app* (appointment of the governor) is given 0.5 and *diss* (grounds for dismissal) are given 0.83. The criterion *off* (restrictions on holding other offices) receives a value of one.

2.2.3 Economic independence

The Lithuanian central bank has the freedom to choose the tools of its monetary policy. Articles 25-28 guide the Bank's monetary policy operations. The Bank may set discount rates and the interest rates it uses in lending. In its open market operations, the Bank of Lithuania has the right to buy and sell debt instruments issued by the Lithuanian State. The Bank of Lithuania also rediscounts in normal situations bills of exchange and other litas-denominated debt instruments payable in Lithuania issued by solvent parties. Article 27 gives guidelines on lending for the Bank. According to it Bank of Lithuania may grant loans to Banks and other financial institutions holding the set reserves in Bank of Lithuania if the stability of the financial system requires this. Direct credits to government are not explicitly mentioned in the law. However, article 2 of the Law on the Credibility of the litas states a maximum level for the money supply and therefore limits the government's possibilities to get funding from the Bank. This law revoked the former possibility of the Bank to extend credits to the government. It is important to note that the central bank law does not explicitly prohibit Bank of Lithuania from lending to government – the option to lend is only made redundant with the currency board. It therefore is possible for Bank of Lithuania to extend funding to the government providing that the law on the credibility of the litas is amended or cancelled. According to article 48 of the central bank law, only those parts of the law apply that are not in conflict with the currency board. This has to be taken into consideration in analysing the monetary policy rulings of the law. The credibility of Lithuania's currency board is weakened by the fact that exchange rate of the litas can be changed by a government decision, although the decision has to made in consultation with the Bank. The Bank of Lithuania operates as an agent in issuing government securities and acts as the government's advisor in economic issues. The central bank law (articles 33-38) places bank supervision solely to the Bank of Lithuania's responsibilities which is thought to lessen its independence.[11] In other words, the GMT criterion 7 is not fulfilled by Lithuanian law. The sixth requirement is met: the Bank of Lithuania has the right in principle to set discount rates. Criterion 5 is not fulfilled, although issuing loans to the government is not possible under the present system. Criteria 1-4 (direct credits to government) are not relevant for Lithuania due to the currency board and nothing is said about them in the law. For economic independence, Bank of Lithuania receives only one out of eight on the GMT scale. In the Cukierman index the law on Bank of Lithuania does not meet a single criterion of the group *LM*, furthermore the currency board makes the criterion group non-relevant.

3 Latvia

Like Lithuania, Latvia's monetary reforms took place in two stages. The Latvians first moved from the Russian rouble to an interim Latvian rouble (rublis) and after that to the present currency, the lat. The central bank of Latvia[12] has kept monetary policy tight throughout the entire post- monetary reform period, and this is evidenced in the country's relatively good track in bringing down inflation. The present central bank law came into force in May 1992 and is therefore over two years older than its Lithuanian counterpart.[13]

3.1 Currency reform and the establishment of the central bank

The first Latvian roubles were introduced in May 1992. The ultimate reason for the introduction was the lack of cash Russian roubles which affected all the countries in the so called rouble zone especially in the early part of 1992. In the beginning the exchange rate of the rublis with Russian roubles was 1:1, and at that rate Bank of Latvia exchanged cash Russian currency to rublis until mid-July 1992. The rublis became the sole legal tender in Latvia on 20 July 1992 and deposits were transformed to Latvian roubles at the same rate for cash. The use of convertible currencies was not banned alltogether, but prices had to be stated in rublis from the start. Latvia succeeded in the introduction of its interim currency rather well.[14] The original plan was to introduce the lats as soon as the inflation rate had been brought under control and the economy stabilized. Though originally planned to happen by the end of 1992, lats were actually put into circulation gradually during spring and summer 1993. The exchange rate for rublis to lats was set at 200:1. The last of the Latvian roubles were taken out of circulation in October 1993 after which the lat has been in use as Latvia's national currency.[15]

The Latvian central bank was established on 31 July 1990 by a parliamentary decree. In the early period the Bank of Latvia had both central banking and commercial banking functions. After the present central bank law came into force and the privatization committee had taken over the branches that operated as com-

[11] Placing bank supervision to the central bank is thought to lessen the CB's possibilities to fight inflation. A possible conflict of interest may arise from the dual responsibilities to ensure low inflation with tight monetary policy and oversee banks that might be financially hurt from upward movements in interest rates. This is why supervisory duties are thought to lower the independence of the central bank in the GMT index.

[12] The official name of the Bank is Latvijas Bankas or Bank of Latvia. In this paper BoL is used for short.

[13] BIS 1996, Latvia, II.

[14] This was partly due to good luck, because there was a risk that large amount of cash roubles could have been imported from Russia. Apparently, the rublis was not credible enough, since no large-scale imports of roubles took place.

[15] Lainela - Sutela 1994, 53-55.

mercial banks, the Bank of Latvia started as the central bank for Latvia in December 1992. The Bank of Latvia considers itself as the legal successor to the Latvian central bank that operated during 1922-1940.[16]

Latvia's annual inflation fell from nearly 1,000% in 1992 to 35% in 1993. Since then it has been in line or lower than Estonia's inflation rate. Reasons for this are to be found in the successful currency reform and in Bank of Latvia's responsible monetary policy. The central bank's tough policies have been made possible by its independent status.

3.2 The law on the central bank

The present law on the Bank of Latvia came into force on 19 of May 1992. According to the law, the Bank of Latvia is independent in its decisions and in implementing them. In particular, the law states the Bank is independent with respect to the government of Latvia and its institutions.[17]

3.2.1 The principal objective

Article 3 gives the Bank a principal objective of taking care of Latvia's monetary policy with an aim of stability of the price level. While the law is very explicit in stating this objective, it also gives the bank an obligation to act as advisor to the government and the parliament in issues related to monetary policy and financial system which could in principle threaten the Bank's position by tying it to politics. Requirements on objectives included in both GMT (6) and Cukierman (*obj*) indices are met.

3.2.2 Management of the Bank

Chapter 3 of the law prescribes on the administration of the Bank. Under it, the Bank of Latvia is managed together by a Council (Board of Governors)[18] and a separate Executive Board.[19] The Council has eight members: Bank of Latvia's Governor, Deputy Governor and six members. Either the Governor or Deputy Governor acts as chairman for the council. Council members and the Deputy Governor are appointed by the parliament upon recommendation of the Governor for six years at a time. The chairman of the parliament gives a recommendation on the person to be elected as Governor who is then appointed by the parliament for a term of six years. No professional requirements are placed for persons holding the above mentioned positions. For the day-to-day management and operational efficiency, the Council appoints a six-member Executive Board whose chairman is elected upon recommendation from the Governor. The persons to be elected as regular members are proposed by the chairman of the Executive Board and appointed by the Council. They are selected from the senior management of the Bank and can be dismissed with a Council decision.

The Council makes its decisions on majority principles. It is responsible for the general monetary policy decisions, it sets interest rates and decides on other monetary policy issues. In addition, the Council decides on Bank of Latvia's management salaries and the Bank's own budget. The Board takes care of implementing the Councils decisions and prepares the issues that are presented to the Council. The Minister of Finance may participate in the Council meetings without voting rights. In case the Minister disagrees with the Council, he may demand the implementation of a Council decision to be postponed for up to ten days. If the Council does not change its view during this period, the decision goes ahead in its original

[16] BIS 1996, Latvia, II.

[17] As sources for this section and the following two subsection have been used the Law on The Bank of Latvia and material published by BIS (BIS 1996, Latvia, II, V, VI, XI and XVI).

[18] BIS calls this organ Bank Council.

[19] In BIS's material: The Board.

form. While the government has an automatic representation in the policy-making body of the Bank and this postponing veto, ultimately the Bank of Latvia does not need consent from the government in monetary policy decisions. The fact that the Minister of finance participates in the work of the Council diminishes the Bank's independence. Out of the criteria set in the GMT's index of political independence, the Latvian law meets requirements 1-4 and 6-8. From the three first criteria groups in the Cukierman index, the Latvian law fully meets criteria *diss*, *off*, *mon pol*, *conf* and *obj* which are given a value of one. Term of office criterion *too* is assigned a 0.75 and *app* for appointment procedures is given a 0.5. Criterion *adv* is not met and is given a zero.

3.2.3 Economic independence

Latvia it the only Baltic country without a currency board system. This implies that the Bank of Latvia has a greater degree of freedom in conducting its monetary policy because the money supply is not directly tied to foreign reserves as in Estonia or Lithuania.

The law gives in its articles 34-38 Bank of Latvia broad possibilities to operate in markets. The Bank may deal in both domestic and foreign money and currency markets, buy and sell precious metals and stocks and may offer banking services to foreign countries, their central banks, financial institutions and international organizations. The Bank has the right to accept as security and transact securities issued by the Latvian state, foreign financial institutions and central banks. Bank of Latvia operates as the government's banker and may grant the government short term loans that do not exceed one-twelfth of the government's annual budget.

The Law gives the Bank the responsibility to oversee banks in Latvia, which diminishes its independence according to GMT. The Bank of Latvia has opportunity to choose the tools it uses in monetary policy and therefore can be said to be economically independent in the GMT sense. The worst part of the law in terms of credibility is the possibility given to finance government budget deficits by central bank funding. Out of seven criteria in the GMT index of economic independence, four are met in the Latvian law (1, 3, 4 and 6). Criterion 2 concerning the interest rates charged for loans to the government remains unclear. *LM* requirements in the Cukierman index are met as follows: *lls* (securities based lending to the government), *lmat* (maturity), *lprm* (lending in the primary markets) must be left blank for nothing is said about them in the law. A 0.66 is given for *lla* (limitations on advances) and *ldec* (terms of lending). The criterion *lwidth* (width of the circle of potential borrowers) is fully met and assigned a value of one. Finally, a 0.33 is given for *ltype* (type of lending limitation) and a value of 0.25 for *lint* (interest rates on advances).

4 Estonia

Estonian monetary reform was implemented as a one-off operation with no interim currency. As Estonia was the first of the Baltic countries to introduce its national currency, the kroon, the Estonians found themselves repudiating the IMF view that they should retain the rouble until their economy had stabilized. By spring 1992, the IMF relaxed its stand and gave Estonia the needed technical assistance for introduction process of the kroon.[20] The Estonian central bank[21] was re-established in 1990 and its present central bank law dates back to May 1993.

[20] The IMF's view was based on the then popular idea of retaining the rouble zone in the ex-Soviet Union. Also the Russian government changed its view and started to back the introduction of sovereign currencies in former Soviet republics. Check: Lainela - Sutela 1994, 40-41 and Hanke - Jonung - Schuler 1993, 75-76.

[21] The Bank's official name in Estonian is Eesti Pank, Bank of Estonia in English. Bank of Estonia is used for short in this paper.

4.1 Currency reform and setting up the central bank

Estonia chose the currency board system as model for its monetary system from the start. Through it, Estonia was quickly able to acquire the essential credibility and stability for its currency. The success of the currency reform was ensured by creating simple and transparent rules and by limiting the amount of cash roubles each citizen was allowed to exchange for kroons to 1,500 roubles. In this way, any possibilities of wrongdoing were minimized. The exchange rate for private persons was set at 1:10 and people were able to exchange their roubles freely during three days (20-22 June 1992). Larger amounts were changed later at a poorer rate (1:50). Deposits were transformed at a rate of 1:10, a part from deposit of over 50,000 roubles made after first of May 1992 which were dealt with on a discretionary basis. The kroon became the sole legal tender in Estonia immediately on 20.6.1992. Success of the reform was evidenced with the fact the kroon was virtually the only currency used in payments in Estonia after the reform unlike the two other Baltic countries where convertible currencies were still widely used. The kroon was immediately pegged to the German mark at a rate of 1 D-Mark to 8 kroons, which almost certainly meant that the new currency was strongly undervalued. The new exchange rate implied a monthly salary of 30 US dollars which was about one seventh of the Polish average monthly salary at the time.[22]

The Bank of Estonia was founded originally in 1919. The operations were discontinued in the summer of 1940 when Soviet Union occupied Estonia. The Bank was re-established on 1 January 1990 and in December of the same year Eesti Pank, or the Bank of Estonia, was pronounced as the legal successor of the former Bank of Estonia. The present law on the Bank of Estonia[23] was passed in Riikikogu (the parliament) on 18 May 1993. The Bank of Estonia's obligations and position are also defined with its Statute (Statute of the Bank). The law on the security of the Estonian kroon also gives guidelines for the currency board system.[24]

4.2 The law on the central bank

According to the law on the Bank of Estonia, Bank of Estonia is independent from the government but the parliament has certain powers over the Bank. The Bank of Estonia acts as the government advisor and takes part in the economic policy preparation. The government does not make important decisions without consulting the Bank of Estonia. The Bank cannot be made responsible for government financial liabilities and the government will not accept responsibility over Bank of Estonia's liabilities.[25]

4.2.1 The principal objective

The law prescribes as Bank of Estonia's principal objectives as care of currency circulation and ensuring the stability of the national currency: "Eesti Pank manages the currency circulation both internally as well as with foreign countries and is responsible for maintaining the stability of the legal tender of The Republic of Estonia." According to law, the Bank of Estonia must back the government's economic policy when this is not in conflict with Bank of Estonia's objective. The part about having to back government in its policies is somewhat dubious in terms of the Bank of Estonia's independence, but the clause added about possible conflicts and their resolution is clear. It was written into the law as a separate subarticle (4.4) and can be said to enhance the Bank's position. The law meets criteria on objectives and conflict resolution of

[22] Lainela - Sutela 1994, 45-47 and Saavalainen 1996, 2.

[23] Law of the Central Bank of the Republic of Estonia. Came into force 18.6.1993.

[24] BIS 1995, Estonia, II.

[25] As before, this section and the two following subsections are based on Estonian national legislation and on material published by BIS. Law on the Central Bank of Estonia and BIS 1996, Estonia, II, V, VI, VII, XVI.

both GMT and Cukierman indices.

4.2.2 The management of the Bank

The Bank of Estonia is managed together by the Board and the President of the Bank. The eight members of the Board and its chairman are elected by the parliament for terms of five years. The members are chosen upon recommendation from the Chairman of the Board, the person to be appointed as Chairman is proposed by the President of Estonia. Every member of the Board and the President of Bank of Estonia has to be Estonian citizen with a university degree. In addition, the Chairman and the President of the Bank have to possess a degree in either law or economics. The President of Estonia appoints the President of the Bank, whose term in office is five years, upon proposal from the Chairman of the Board. The President of the Bank is an ex-officio member of the Board of the bank and his membership is terminated upon resignation from presidency. The Minister of finance of Estonia may participate in the meetings of the Board and express his views there.[26] Government ministers or Bank of Estonia's employees can not be members of the Board. The President of the Bank, Chairman of the Board or its members can be dismissed due to conviction of criminal offence (article 12). The Board is Bank of Estonia's supreme decision making organ that directs the work of the Bank, formulates monetary policy and decides on banking supervision independently. The President takes care of routine management and implements the Boards decisions. Both the Chairman and the President have to report regularly to the Parliament on the Banks activities.

The Bank of Estonia enjoys a high level of political independence. The main weak points are the conditional obligation to back government policies and Finance Minister's participation in the Board meetings. The Estonian law fulfils GMT criteria: 1-4 and 6-8. Criterion 5 concerning government representation in the policy-making organ is not met. Items *mon pol*, *conf* and *obj* fully meet the Cukierman criteria. All get a value of one. A 0.5 is assigned to *too* and *app*. For grounds for dismissal of the President the Estonian law is given a 0.83 together with Lithuania.

4.2.3 Economic independence

According to article 2 of the central bank law Bank of Estonia is responsible for monetary policy and issues related to the banking system. In the Estonian case, one has to take into account the nature of the present monetary system which effectively curtails Bank of Estonia's possibilities to practice monetary policy by making the money supply endogenous.

Article 17 of the law prescribes banking supervision duties of the Bank. Supervision is practised both through the Bank of Estonia's own organization and the Banking Supervision, which operates on directions from the Board of the Bank of Estonia and therefore can not be regarded as a separate institution. The Bank of Estonia has the right to set interest rates but it is not done in present circumstances. The law explicitly *forbids* the Bank of Estonia from lending to the public sector, which makes the position of the Bank stronger (article 16). The Board of the Bank may decide independently on the budget of the Bank. Of the GMT index of economic independence the Estonian law meets requirements five and six. Criteria 1-4 are not relevant for the Estonian case. The same limitations apply to Cukierman's criterion group *LM*.

5 Independence and credibility

In this chapter, the level of legal independence is presented for each of the three countries with GMT and Cukierman indices. We then concentrate on the actual independence of the Baltic central banks. After producing a picture

[26] In The Statute of the Bank dated in September 1996 The Finance Minister's prior membership of the Board was changed right to participate. Statute of Eesti Pank, article 2.1.

of the position of the central banks, we consider the credibility of the monetary systems of Estonia, Latvia and Lithuania and its meaning to economic policies practised.

5.1 Legal independence

Tables 1a and 1b describe the formation of GMT indices of political and economic independence for the three countries studied. Table 2 contains the overall index values produced in the two other tables. Political independence of the Baltic central banks can be said to be of an equally high level. Lithuanian law seems to grant its central bank the highest degree of autonomy, simply because the Lithuanian government does not have the right to participate in the meetings of the central bank's board. Prior to the 1996 amendments to the Statute on the Bank, the Estonian Minister of Finance had the possibility to take part in decision-making of the Board.

Table 1a Political independence

Country	*Appointments*				*Relationship with the government*		*Law*		*Index value*
	(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*	*(9)*
Estonia	*	*	*	*		*	*	*	**7**
Latvia	*	*	*	*		*	*	*	**7**
Lithuania	*	*	*	*	*	*	*	*	**8**

Notes: If the country's central bank law meets the numbered requirement a star is placed to the respective cell. An empty cell indicates that the requirement is not met. (1) Governor is not appointed by the government, (2) Governors term in office is at least five years, (3) Government does not appoint all the members of the board, (4) Term in office of the board members is at least five years, (5) Government representation in the board is non-automatic, (6) No need for prior government approval in monetary policy decisions, (7) Price stability mentioned as one of the central bank objectives, (8) The law contains provisions that strengthen the Banks position in conflicts with the government, (9) Index of political independence (a sum of the stars on each row). Sources: GMT 1991, 368 and national legislation.

Table 1b Economic independence

Country	*Monetary financing of government budget deficit*					*Instruments of monetary policy*		*Index value*
	(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*
Estonia	-	-	-	-	*	*		**2**
Latvia	*	-	*	*		*		**4**
Lithuania	-	-	-	-		*		**1**

Notes: If the country's central bank law meets the numbered requirement a star is placed to the respective cell. A line placed in a cell indicates non-availability of information (Latvia) or non-relevancy (Lithuania and Estonia). Empty cell as before. (1) Direct credit possibility non-automatic, (2) Direct credits carry market level interest rates, (3) Direct credits are temporary, (4) The amount of direct credit is limited, (5) The central bank does not take part in the primary market for government debt, (6) The central bank sets discount rates, (7) Banking supervision is not the central banks duty = **, Banking supervision is not the central banks duty alone = * , (8) Index (sum of columns 1 -7). Sources: GMT 1991, 369 and national legislation.

Measured by the GMT index, certain differences can be found in the economic independence of the Baltic central banks. The Latvian central bank seems to posses the highest level of independence among the Baltic countries whereas the Estonian and Lithuanian central banks seem noticeably dependent on their governments. When measuring the level of economic independence it is essential to remember that both Lithuania and Estonia have set up currency boards which render the four first requirements in the index non-relevant. A more fruitful way to compare the three countries is to concentrate on criteria 5-7. Thus, the Estonian central bank comes out on top. All the banks are assigned with banking supervision duties, which lowers their independence according to GMT. Every bank has the right to set interest rates. The Bank of Latvia is the only one that can use this right even in theory for the currency board solution does not allow the use of interest rates in monetary policy. The Estonian law alone forbids the central bank from lending to the government and therefore from buying government securities in the primary markets. In Latvia, the central bank has granted credits to the government according to the law. In 1996, the government and the bank made an agreement on the use of the credit facility but no loans have been extended during 1996-1997.[27] In Lithuania, the possibility for monetary financing with direct credits was abolished with introduction of the currency board in 1994.

Latvia has been given two different values in Table 2 because of the problem of comparison that arises from the different monetary systems. If we ignore the difference, the Latvian central bank can be said to be the most independent of the Baltic central banks. If we do take into account this difference Estonia together with Lithuania scores slightly better than Latvia which is understandable concerning the similarities in Estonian and Lithuanian systems and the fact that Lithuania designed its system after Estonian model in 1994. In practice the intra-country differences in independence measured by GMT index are small and it does not pay off to make conclusion solely on the basis of legal index values.

I will now turn to compiling Cukierman's index of legal independence for the Baltic countries. In table 3 two separate index values are calculated for each country. This is done because of the criterion group *LM*'s non-relevance for Lithuania and Estonia. If we take that group of indicators in to the overall index Latvia receives a higher score implying a stronger level of independence in practice only because its central bank may issue credits to the government. This problem is solved by giving each country a value of zero for the group LM in the aggregate index. Values obtained in this manner are presented in column (Index 1) in table 3. The other obvious possibility is to leave the group LM out altogether from the aggregation process, which is done with values under (Index 2). The problem that has to be accepted when using either GMT or Cukierman indices in the Baltic case is that we have leave out the criteria concerning monetary financing of budget deficit in order to be able to compare between the Baltic countries. Obviously by doing this we lose strict comparability with prior studies on different countries. The meanings of the criteria can be found in appendix 1, table A. A value of 1 indicates maximum level of independence. A zero is denotes minimum independence. By concentrating on the three first groups of indicators *CEO*, *PF* and *OBJ* it is possible to make meaningful comparisons between the Baltic countries. The only differences can be found in the group *CEO* that deals with the governor's position: in the Estonian law the governor is not prohibited from holding an other government office unlike in the two other countries. In Estonian law, there are no other rulings made that prevent the governor from having other employment besides the governorship but the article 8.4 that prohibits the members of the board from being members of boards in other financial institutions. The reason behind Estonia's lower score on the Cukierman index. The one year longer term in office of the Latvian central bank governor ensures a slightly higher degree of independence for Latvia according to the index.

[27] BIS 1996, Latvia, XVI and Medvedeskiha 1997.

Table 2 Central Bank Independence in the Baltic countries according to the GMT index

Country	**Latvia**	**Lithuania**	**Estonia**
Index value	**11 / 8**	**9**	**9**

Sources: GMT 1991, 370 and Tables 1 a and b.

Table 3 Baltic central bank independence measured by Cukierman's index of legal independence

Criterion	***CEO***				***PF***			***OBJ***	***LM***			
	too	*App*	*diss*	*off*	*mon pol*	*conf*	*adv*	*obj*	*Lla*	*lls*	*Lds*	*lwidht*
Latvia	*0,75*	*0,5*	*1*	*1*	*1*	*1*	*0*	*1*	*0,66*	-	*0,66*	*1*
Lithuania	*0,5*	*0,5*	*0,83*	*1*	*1*	*1*	*0*	*1*	*0*	-	-	-
Estonia	*0,5*	*0,5*	*0,83*	*0*	*1*	*1*	*0*	*1*	*1*	-	-	-

Criterion	***LM***				***Index 1***	***Index 2***
	ltype	*Lmat*	*lint*	*Lprm*		
Latvia	*0,33*	-	*0,25*	-	**0,64**	**0,85**
Lithuania	-	-	-	-	**0,61**	**0,82**
Estonia	-	-	-	-	**0,55**	**0,74**

Sources: Cukierman 1992, 373-375 and national legislation.

When comparing the values produced with GMT and Cukierman indices for the Baltic countries two interesting issues come up. First, the Estonian central bank's position is the weakest with the Cukierman index, but equal with Lithuania on the GMT index. Second, Latvia receives the highest rating with Cukierman index even if the criteria concerning monetary financing of government is left out which was not the case with GMT index. Both differences result from the greater weight given to the governor's position by Cukierman. The position of the governor is weaker in Estonia in terms of central bank independence because of the above mentioned differences in limitations to hold other employment. The Latvian central bank governor has the strongest position according to law for his longer term in office.

In general, differences between the Baltic countries in legal CBI are not large measured either by GMT or Cukierman indices. The level of legal independence is high in every country. The similarities in position of the banks are easily understood bearing in mind the similarities in the background and time of enactment. All the laws were written at the beginning of 1990s as part of a move towards market economy and required institution building. The other common factor is the desire to closer cooperation with the European Union, which places requirements on CBI as stated in the Maastricht treaty. It can not be forgotten that all the law studied above have been prepared in cooperation with IMF. It is therefore easy to assume that the Fund's pro-CBI views have had an influence on lawmaking.

5.2 Actual level of independence and credibility

The level of legal independence studied in the previous sections is merely a necessary condition for actual independence. In measuring practical CBI, we are in essence interested in the degree of deviation from the letter of law. How different is the practical position of a central bank from the one prescribed by law? That seems to depend on your choice of indicators – and the fact that we may be trying to quantify something not quantifiable in an objective manner. Like Cukierman, we use the ex-post turnover rate of central bank governors as a proxy of actual independence. The intuitive rationale behind this indicator is that, beyond some level, the turnover rate must imply a lack of independence; i.e. governors are compelled to leave their posts prior to the expiry of their legal term in office. At the very least, high governor turnover deprives the central bank from any sense of needed continuity in its work.

5.2.1 Turnover and background of central bank governors

Notable differences are found in turnover rates for central bank governors of Baltic countries in the post-monetary reform period. In Latvia, the same person has held to post during the whole period. Estonia witnessed one change while Lithuania had six governors (two of them temporary) since 1992. The turnover rate in Lithuania will necessarily have a negative influence on the position of the bank and especially on the public's perception of it. We include here those governors who have been active between January 1992 and the end of April 1997. The period is chosen for two reasons: the currency reforms began in 1992 and the banks started their normal central banking operations then.

Einars Repše (b. 1961) has been governor of the Bank of Latvia since September 1991. Trained as physicist, Repše was elected to the Latvian parliament in 1990 and acted as chairman for the Banking and Finance subcommittee. During 1991-1993, he was a member of the monetary reform committee and was a central figure in the planning and implementation of the reform.[28] Even though Repše's position as governor has been generally strong, his actions were called into question during the banking crisis of 1995. At that time, the parliament opposition wanted to oust him for alleged mismanagement of the crisis and overly tight monetary policy leading to an over-valued currency. The attempt failed and Repše kept his job. He was re-elected on 28 August 1997 for another six-year term.

The Estonian central bank has had two governors during the research period. Siim Kallas began his term as governor on 1 October 1991 when the previous governor Rein Otsason stepped down. Kallas was heavily involved with the monetary reform like his Latvian counterpart. His term came to end in April 1995 when he was elected to the parliament as chairman for the Reform party and submitted his resignation. The present governor Vahur Kraft was appointed on 27.4.1995. Kraft has a long career in Estonian banks: he has been active in the Savings Bank (1984-1990), as deputy manager for Social bank (1990-1991) and vice-president of Bank of Estonia (1991-1995). Kraft is the first governor of Bank of Estonia who can be said to have started his term in normal conditions and during the time when the present central bank law is in force.

Since 1990, the Bank of Lithuania has had seven governors. The first was Bronius Povilaitis (b. 1948) who held the job between March and July 1990. Povilaitis is a graduate of University of Vilnius and worked in various Soviet banks earlier. He resigned after having ran in to problems with renewing Bank of Lithuania's organization. Since then he has continued working in the central bank. In July 1990, Vilius Baldišis (b. 1961) was appointed as governor. Baldišis, also a graduate of University of Vilnius had been teaching in the University and was a member of parliament. He was discharged in March 1993 because according to chief economist Šiaudinis he wanted to postpone the introduction of the litas until the economy had been stabilized. The other reason given by Šiau-

[28] Bank of Latvia, Biographical note, www.bank.lv 1.7.1997.

dinis was the agreements done by Baldišis on printing new low quality notes.[29] Formally Baldišis resigned himself, but his discharge was taken up in the parliament at least three times before during his tenure of the office. Since leaving the central bank, Baldišis has been active in various commercial banks and in the securities business. The next governor was Romualdas Visokavicius (b. 1943) who was appointed in March 1993. Educated as economist, Visokavicius previously managed the Litimpex commercial bank. His term in office was the shortest in the Baltic countries during the research period, only seven months. According to chief economist Šiaudinis he was fired in October 1993 due to a scandal that emerged from channelling loans to his previous employer.[30] Today he is the manager of State Savings Bank after working in various other commercial banks. Rudgalvis writes about the same episode in a rather differently: Visokavicius was fired not because the scandal, but because Visokavicius would not release the Bank of Lithuania's profits to the government budget. The scandal was merely a cover-up for the true reason. History could be interpreted to back Rudgalvis' view: Visokavicius was not allowed to take up his post after the court had cleared him from any wrongdoing even though the investigation promised the possibility to return afterwards if he was cleared.[31] Mäkeläinen says that the ousting was mainly due to the popularity Visokavicius had gained from stabilizing the currency during the summer and early fall of 1993. Generally, the Bank's operations became increasingly efficient under Visokavicus' leadership, and the Bank of Lithuania emerged as a true player in the Lithuanian economy. The government wanted to halt this process and regain its position as the sovereign economic decision-maker in the country.[32] After Visokavicius, the Bank of Lithuania had a temporary governor (Jouzas Sinkevicius) until November 1993 when Kazys Ratkevicius (b. 1957) was appointed governor. He was allowed to hold the post until January 1996, when the president of Lithuania suggested the parliament to accept Ratkevicius' resignation. In Šiaudinis′ view the reason for this change in leadership was the worsening situation in the banking sector.[33] A committee set up by the parliament blamed the government and the central bank for the banking crisis. Since his resignation, Ratkevicius has been working in a commercial bank. Before the next governor Reinoldius Šarkinas (b. 1946) was appointed in February 1996, the Bank of Lithuania had its second temporary governor (Jonas Niaura). Economist by training Šarkinas acted as Minister of finance for Lithuania before his appointment to the central bank.

Table 4 shows turnover rates for central bank governors in the Baltic countries. Note that this only cover a period of about five years, because it has a bearing on the validity of the results.[34]

Latvia naturally receives the lowest turnover rate for there has only been one person on the job during the period. The value is of the same order with some of the highest turnover rates calculated for industrial countries by Cukierman (1992). The Estonian rate is a higher implying a change of leadership with intervals of slightly under three years. We have to remember that the governor resigned there from his own will. The Lithuanian figure is on a "South American" level. Indeed in Cukierman's study, only Argentina (0.93) got a higher rate than Lithuania. Costa Rica did better with a value of (0.58). Of course, we have to cionsider that Cukierman (1992) used a much longer time period (1950-1989). Radzyner-Riesinger (1997) produced turnover rates for Poland (0.49), Hungary (0.38), Czech Republic (0.23) and Slovenia (0.17) in their study for the 1990's.[35] Latvia is at

[29] Šiaudinis 1997.

[30] Same as above.

[31] Rudgalvis 1996, 42.

[32] Mäkeläinen, Hannu, discussion with the author on 22.7.1997. Check also section 8.2.2.

[33] Šiaudinis 1997.

[34] I have included to the calculations those governors who have held the post between January 1992 and April 1997. Temporary governors for the Bank of Lithuania are excluded because their terms are set to be shorter to start with.

[35] Radzyner - Riesinger 1997, 77.

Table 4 Turnover rates for Baltic central bank governors 1/1992-4/1997

Country	A: Number of governors	B: Average tenure	C: Turnover rate
Latvia	1	67	**0.19**
Lithuania	4 (+ 2)	18.5	**0.75**
Estonia	2	33	**0.38**

Sources: Šiaudinis 1997, Eesti Pank, Annual report 1995, 3-4 and Latvias Banka: Biographical note: Einars Repse, http://www.banl.lv 1.7.1997. Notes: Tenure is calculated as the number of full calendar months on the governor's post. Turnover rate = number of governors divided by the length of the whole period (5,333 years).

par with Slovenia, Estonia in ranks in the middle and Lithuania is clearly the worst in this respect. The average number of months on the governor's post naturally tells of the same problem as turnover rates: Lithuanian central bankers have had to leave their post much sooner than in Latvia or Estonia. Since the present law on the central bank came into force (December 1994) one governor has been pressured to resign.

5.2.2 Policy Credibility

Estonia, Latvia and Lithuania have all given their central banks strongly autonomous positions with the present legislation. In Latvia and Estonia, this has been enough to assure the safeguarding of the governors from various political pressures, which may be taken as a sign of CBI in practice. Lithuania, on the other hand, provides ample evidence of weakness of the central bank when its actions have not pleased the politicians. Legal independence measured by the indices and calculated turnover rates are still not enough to form a picture of monetary policy credibility of a country. Central bank independence is only a part of that. We still need to focus on the durability of made solutions, the content of the policies themselves and on the sustainability of the monetary systems.

The Estonian currency board system has been functioning well from the start. The authorities have kept to the rules of the game in both their actions and statements. There is no real evidence of lower actual central bank independence from the strong legal position. An important difference between the Estonian and Lithuanian systems is that in Estonia a parliamentary decision in required in order to change the exchange rate, whereas in Lithuania the government and central bank can do it in a discretionary way. This has been said to strengthen the credibility of the Estonian monetary system compared to Lithuania.[36] In addition, the Estonians have made a clear institutional difference between the part of Bank of Estonia that acts as the currency board (Issue Department = ID) and the other sections of the bank. The ID department only exchanges foreign currency to Estonian kroons and vice versa. In essence, the ID department ensures that in all times the amount of kroons in circulation and other domestic liabilities of the Bank of Estonia (mainly commercial bank deposits) are fully backed with foreign reserves. The Estonians have been able to underline their commitment to the currency board. The more "normal" central banking functions such as banking services for commercial banks and banking supervision are handled by other departments of Bank of Estonia. The Bank of Estonia has limited possibilities to aid commercial banks in troubles with lending for the Bank of Estonia only can use its "extra reserves" to do this. Here, extra reserves means those reserves that are not needed to back the liabilities handled by the ID department. This implies that the Bank of Estonia does not have real chances to act as "lender of the last resort". In fact, the Bank of Estonia only lends to commercial banks in truly exceptional cir-

[36] Dale 1997, 33.

cumstances. The public sector is not extended any credits because of the prohibition included in the law (check section 4.2.3). Monetary policy is almost solely done by adjusting the reserve requirements imposed to commercial banks. In order to stimulate the economy Bank of Estonia may lower the set percentage of reserve requirement and in the opposite circumstances the Bank of Estonia would raise the requirement. Another area where Bank of Estonia could influence the markets is the CD auctions (certificates of deposits) for commercial banks it started in 1993. The commercial banks may invest their cash holdings to these instruments and deal in them between themselves. In addition, the CDs offer a reliable form of security for the banks to be used in interbank operations. The CD auctions were started with an aim to push forward the development of the financial markets. On top of the above mentioned Bank of Estonia offers the banks short term credits for evening out liquidity positions of the banks. Even though Bank of Estonia has possibilities to influence the money supply developments by adjusting the liquidity of the commercial banks it has until recently opted not use this chance and to adhere to the rules of the currency board. Thus, the Bank of Estonia has let the money supply follow the amount of foreign reserves.[37] This passive policy combined with the wide public support for the fixed exchange rate has created a strongly credible system for Estonia.

Although the Estonians have not stated any plans to abandon the currency board or to give up the present exchange rate, it is clear that the possible introduction of the euro currency will force the Estonians to abolish their peg to the German mark. In addition, the relatively high Estonian inflation compared to Western Europe in a fixed exchange rate system erodes the country's competitiveness together with the worsening trade and current account situations bring up recurring speculation on possible devaluation.

Latvia has kept its policies tight and stable. There is no evidence of political pressures having had any impact on monetary or exchange rate policies. A good indication of the actual strength of the central bank's position is provided by the low turnover of the governor(s) for not even the banking crisis of 1995 forced to changes in leadership. While Latvia does not rely to a currency board system, the Bank of Latvia has held its domestic liabilities almost 100% covered with foreign reserves.[38] The most notable difference compared to Estonia is the fact that the government may be issued credits by the central bank in Latvia (see section 3.2.3). The most important instrument of monetary policy for Bank of Latvia in present is foreign exchange market intervention. From February 1994, the Bank of Latvia has announced buying and selling rates against the SDR basket to which the lat is pegged. Since then, the Bank of Latvia has intervened without limits at the edges of the band (presently ±1%). Other tools in use: the short-term credit and deposit facilities for liquidity control of the banking system and the reserve requirements set to commercial banks. In the early years, adjustments of the reserve requirement were used as a tool of monetary policy with the intention to influence the money supply developments, but this role has since been removed. Since November 1992, no significant changes have been made to the capital adequacy requirement, i.e. 8% of deposits. The Bank of Latvia says that it aims to act passively in the markets with an intention to further reduce inflation and preserve the stability of the lat.[39]

The same doubts as in the case of Estonia can be said to apply to Latvia as well: is the present level of the exchange rate sustainable if inflation does not come closer to levels of Western Europe? The erosion of competitiveness gives reason to question whether a fixed rate can remain credible in a country with consistently higher inflation; at some time there must come speculation, and ultimately a forced devaluation. Further, the trade and current accounts have turned negative in Latvia.

Lithuania differs from the two other Baltic states in this respect. There are clear signs of

[37] Dale 1997, 30-32.

[38] During the banking crisis this ratio came down to about 60-70% temporarily . Dale 1997, 34.

[39] Medvedevskiha 1997, 9.

political pressure on the central bank. Perhaps the most vivid example of this is the disagreement between the Bank and the government on whether Bank of Lithuania should turn its profits over to government budget that led to de facto discharging the governor in 1993. The high governor turnover also indicates that the Bank of Lithuania's position is not as strong as the law prescribes. A fundamental weakness of the Lithuanian system is that the exchange rate of the litas may be changed with relative ease (section 2.2.3). The apparent lack of commitment on the part of the country's ruling circles in the rules they have themselves made translates directly into a lack of systemic credibility. The hand-tying effect of Lithuanian legislation is questionable at best.[40]

A prime example of the politics behind monetary policy is given by the introduction of the currency board itself. In Lithuania, no one outside the government wanted to fix the exchange rate in this manner. The prime minister announced in October 1993 that he would like to see the litas "pegged in the Estonian manner". The Bank of Lithuania was openly against the currency board because it was not willing to give up its chances of pursuing independent monetary policy having finally succeeded in stabilizing the currency. The earlier governor (Visokavicius) together with the new one (Ratkevicius) both opposed the currency board. The commercial banks, too, wanted to keep the litas floating for volatility had pushed up their profits for foreign exchange operations. Camard argues that the reason for introducing the currency board was the general hope of having a stable currency. The government urge to fulfil those hopes was probably a contributing factor.[41] We have to keep in mind that the Bank of Lithuania had already managed to stabilize the exchange rate prior to the prime minister's announcement. Rudgalvis says that the actual reason behind the currency board was the government desire to deprive the Bank of its powers in monetary policy, while retaining the possibility to adjust the value of the litas.[42] Mäkeläinen agrees with Rudgalvis on this point.[43] The government used the public's hopes of a stable currency in its own good by removing the central bank from the increasingly strong position it was acquiring. It is still important to remember that no actual currency board was ever set up. In Lithuania, no institutional difference (unlike Estonia) is made between the part of the central bank that handles the foreign exchange operations and the rest of the Bank. In essence, the Lithuanian system is a normal system of fixed exchange rate with certain limitations on money supply. Otherwise, the Lithuanian system meets the normal criteria of a currency board and Lithuania is generally said to have a currency board while in fact this is not the case.

During the late months of 1994 and the winter of 1995, several less-than-reassuring actions were seen on the Lithuanian monetary scene. First, the largest commercial bank in the country was given a permission not meet the reserve requirements in exchange for extending loans to a state-owned energy company. In addition, all the banks were than permitted to use government bonds in meeting the requirement. In December 1994, the government used the Bank of Lithuania's currency reserves as collateral for a USD 30 million loan it took from a German bank.[44] The above mentioned actions could have gone without serious consequences had they been taken in a time of strong confidence in the monetary system. In fact, since November 1994 there had been speculations on a imminent devaluation. Even in the central bank, voices had been raised about the sustainability of the exchange rate. A major impact came from an open letter *demanding devaluation and placement of the currency reserves in domestic banks* signed by 32 members of parliament in December 1994. These episodes led to sizeable outflow of capital from the country that stopped only in February 1995 when the authorities announced that there would not be a

[40] Mäkeläinen 1997, discussions with the author 22 July 1997.

[41] Camard 1996, 3.

[42] Rudgalvis 1996, 44.

[43] Mäkeläinen, 1997, discussions with the author 22 July 1997.

[44] Camard 1996, 9-10.

devaluation under any circumstances. As capital flowed out, interest rates rose considerably – annual yields on Lithuanian T-bills rose from 15-20% to 25-30%. It is hard to understand why the authorities waited until February 1995 before they made their announcement; the problems had started months earlier. In any case, the credibility of the monetary system took a bad hit and the future of the currency board was jeopardized.[45]

A similar chain of events took place in late 1996 during the parliamentary elections held then as the currency board became a part of the election campaign. The conservative party (which later won the elections held in October and November 1996) announced during the campaign that it planned to discontinue the currency board arrangement. The government led by the Lithuanian democratic labour party (LDDP) had agreed to uphold until the end of 1997 with the IMF. The discussions concerning the future of the currency board immediately launched rumours about a possible devaluation of the litas. The IMF announced that it considered the agreement binding for the coming conservative government. The present conservative-led government later announced that it will honour the agreement and that the abolition of the currency board would not mean that the litas would be devalued.[46] This announcement calmed the devaluation speculation, but the episode showed how *political* decision-making about monetary and exchange rate policies are in Lithuania.

Today the most important tool of monetary policy for the Bank of Lithuania is the reserve requirement set to commercial banks. The requirement is 10% of both domestic and foreign currency denominated deposits. Bank of Lithuania arranged auctions of short-term credits and deposits for the commercial banks in 1993-1994 with a view to smooth the liquidity developments of the banking sector. These operations were discontinued in April 1994 when the currency board was started. Additionally, the Bank of Lithuania operates as governments agent in arranging the T-bill auctions.[47]

Currently, Lithuania follows a program aiming to change the foundation of its monetary set-up published by the Bank of Lithuania. The Bank of Lithuania wants gradually to restore its power to pursue monetary policy in a normal way. At the same time, the program has a goal of preserving the stability of the litas. In the first stage, the Bank of Lithuania will strengthen its market operations within the bounds of the present litas credibility law. The second stage would entail a change or discontinuation of the law (abandoning the currency board) and a start of independent monetary policy, while keeping the litas pegged to the dollar. The third and final stage would mean pegging the litas to a basket of currencies where the D-Mark would gradually become the main currency. Later the litas would be pegged to the euro currency.[48] The rationale of the program is said to be the need to have a possibility to help commercial banks in trouble with lending for which Bank of Lithuania has only limited possibilities to do in the present system. Like the two other Baltic countries, Lithuania's trade and current account balances have been deteriorating and, in addition, Lithuania's export industry has complained about losing competitiveness because of the high external value of the litas. Lithuania is said to face credibility problems as soon as doubts rise of the capability of the central bank to maintain the present exchange rate.[49]

6 Concluding remarks

This article has sought to determine the legal and actual levels of independence that the Baltic central banks have according to the present legislation. The rationale for this study is the theoretically and empirically verified negative relationship between central bank independence

[45] Camard 1996, 10-11.

[46] The Baltic Times, 31 Oct. 1996 - 6 Nov. 1996, 10 and BNS 3 Dec.1996.

[47] BIS 1996, Lithuania, VI.

[48] The Baltic Review, Autumn 1996, p. 47, Financial Times 23.7.1997, p. 3 and PlanEcon Report 17.1.1997.

[49] The Economist, 3 May 1997, 85.

and credibility (and therefore inflation).

Baltic central bank laws were presented in Chapters 2-4 and with the indexation procedure was discussed in the first part of Chapter 5. My finding is that there are no significant variations in the level of legal CBI between the three Baltic countries at present. All three banks are given a rather strong position according to law. This applies especially to political independence characterized by GMT. The Lithuanian central bank law meets all the criteria set in the GMT index of political independence. The weak point in the law from the Bank of Lithuania's view is the obligation to support the government in its economic policies which could lead to conflicts of interest in the anti-inflationary policies of the central bank. Of the criteria included in the index of economic independence, Lithuanian law meets only the one concerning the right to set interest rates. It is important to note that the present currency board system in Lithuania renders the first four criteria in the index of economic independence non-relevant. Latvian law fulfils all but one of the criteria of the GMT index of political independence. The right of the government to be present at the meetings of the central bank board is the reason for Latvia's slightly lower level of political central bank independence. The most concerning detail in the Latvian law is the postponing veto right given to the finance minister as it gives the government a possibility to influence the monetary policy decisions of the Bank. Latvian law meets four out of seven requirements of the index of economic independence with worst part in the law being the possibility – although limited – to use central bank credits in financing the government budget. In Estonia, the present situation in the political independence level is similar with Latvia: the finance minister may participate in the central bank board meetings (but without veto rights). The measure of economic independence in Estonia is hampered by the currency board as is the case with Lithuania. Estonia is the only Baltic country where the central bank is explicitly prohibited from extending credit to the public sector. In Lithuania, this possibility was also taken away with introduction of the currency board in 1994, even though the central bank law does not state explicitly that the Bank must not lend to the government. Thus, overall the Estonian system provides the central bank with the most shelter and is thus the most credible. Measured by the GMT index the Lithuanian and Estonian law receive scores of 9 out of 16, while Latvian law scores 8 or 11 out of 16 (depending on whether we take in to account the criteria concerning direct central bank credits to the government).

When using the Cukierman index, the picture of legal central bank independence in the Baltic countries changes somewhat. This is because of Cukierman's greater concentration on central bank governor tenure. The Bank of Latvia seems more independent than the two other central banks in question. The differences arise mainly from the first criterion group *CEO* of the Cukierman index. The term in office given to the governor in Latvia is one year longer and it is harder to dismiss the Latvian central bank governor. Under Estonian law, the governor is not prohibited from holding other public offices, which is the reason for Estonia's lower ranking in the Cukierman index compared to the two other countries. When applying the Cukierman index in the Baltic cases, one ends up with similar problems of comparison as with GMT index because of the currency board systems in Lithuania and Estonia. The measured independence values for the Baltic countries without the last criterion group LM covering central bank lending were: Latvia (0.64), Lithuania (0.61) and Estonia (0.55) out of a maximum of (1.00). As stated before the differences in the level of legal CBI between the Baltic states are relatively small both with the GMT and Cukierman indices.

In measuring the level of actual independence, the turnover rate of the central bank governors is used as an indicator. In this comparison, Lithuania ranks on a clearly differing level from the two other Baltic countries. The calculated turnover rate for the Lithuanian central bank governors (0.75) predicts a change of leadership to take place in the Bank of Lithuania with intervals of slightly over a year. This sort of turnover has to be taken as a sign of lack actual independence. For Estonia the comparable figure is (0.38) and for Latvia (0.19). The Bank of Estonia has had two governors during the research period, the Latvian central bank has had one and the Bank of Lithuania has had six governors (two of them temporary). When one takes into account the political pressures and the unclear circumstances in which the Lithuanian governors have been compelled to leave their posts, it is fair to say that the actual position of the Lithuanian central bank is inferior to what is prescribed by law. In Estonia or Latvia, no such evidence of lack of independence is to be found.

The credibility of the monetary and exchange rate policies of the Baltic states was also studied. Estonia and Latvia have done better than Lithuania mainly because they have not been beset by the short-sightedness and overt politics that characterize monetary decision-making in Lithuania. The credibility of the Lithuanian currency board has been further weakened by the relative ease of exchange rate changes. In contrast to Estonia, where a decision is required from the parliament, the Lithuanian government and central bank can change the exchange rate of the domestic currency. Both Latvia and Estonia have stayed on a passive path in their monetary and exchange rate policies and have not let the credibility of their monetary systems be weakened by politics.

The Baltic countries are good examples of how to gain the needed monetary system credibility in economically challenging environment. While much of this article deals with central bank independence, CBI alone does not make a country's monetary or exchange rate policies worth the confidence of the public. It is merely a good signal of a wider economic policy commitment to stability. By making the central bank independent (in actual terms) and giving it an obligation to ensure price stability, it is possible to signal the policies pursued are responsible and stability oriented.

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Appendix

Cukierman's Index Of Legal Central Bank Independence

Table A in this appendix is based on table 19.1 in Cukierman (1992), pages 373 - 376. Table (B) is taken from Table 19.2 in the same book, p. 380.

Table A Cukierman's index of legal independence

Group	Definition of the variable	Variable	Levels of independence and their meaning	Numerical codings	Weights used
1. *CEO*	Term in office of CEO in years	***too***	1. $too \geq 8$ 2. $8 > too \geq 6$ 3. $too = 5$ 4. $too = 4$ 5. $too < 4$	1 0.75 0.50 0.25 0	The variables in group CEO are aggregated by calculating a simple arithmetic average
	Who appoints the CEO	***app***	1. CEO appointed by central bank (CB) board. 2. CEO appointed by council composed of members from executive and legislative branches as well as from CB board. 3. CEO appointed by legislative branch (parliament / king). 4. CEO appointed by executive branch (council of ministers / government). 5. CEO appointed though decision of one or two ministers (prime minister and/or minister of finance).	1 0.75 0.50 0.25 0	
	Provision for dismissal of CEO	***diss***	1. No provision for dismissal 2. Dismissal only for nonpolitical reasons (e.g. incapability or violation of law) 3. Dismissal possible and at discretion of CB board. 4. Dismissal for policy reasons at legislative branch,' discretion . 5. Unconditional dismissal possible at legislative branch's discretion. 6. Dismissal for policy reasons at executive branch's discretion. 7. Unconditional dismissal possible at executive branch's discretion.	1 0.83 0.67 0.50 0.33 0.17 0	

	Is CEO allowed to hold another office	*off*	1. CEO prohibited by law from holding any another office in government 2. CEO not allowed to hold any other office in government unless authorized by executive branch 3. Law does not prohibit CEO from holding another office	1 0.50 0	
2. ***PF***	Who formulates monetary policy	*mon pol*	1. CB has alone the authority to formulate monetary policy 2. CB participates in formulation of monetary policy together with government. 3. CB participates in formulation of monetary policy in an advisory capacity 4. Government alone formulates monetary policy.	1 0.66 0.33 0	0.25
	Government directives and resolution of conflict	*conf*	1. CB given final authority over issues clearly defined in the law as CB goals or in case of conflict within CB. 2. Government has final authority only over policy issues that have not been clearly defined as CB goals or in case of conflict within CB. 3. In case of conflict final decision up to a council whose members are from CB, legislative branch, and the executive branch. 4. Legislative branch has final authority on policy issues. 5. Executive branch has final authority on policy issues, but subject to due process and possible protest by CB. 6. Executive branch has unconditional authority over policy.	1 0.8 0.6 0.4 0.2 0	0.50
	Is CB given an active role in the formulation of government's budget?	*adv*	1. Yes. 2. No.	1 0	0.25

3. *OBJ*	CB objectives	***obj***	1. Price stability mentioned as the only or major goal, and in case of conflict with government CB has final authority to pursue policies aimed at achieving this goal. 2. Price stability mentioned as the only goal. 3. Price stability mentioned along with other objectives that do not seem to conflict with price stability (e.g. stable banking). 4. Price stability mentioned with a number of potentially conflicting goals (e.g. full employment). 5. CB charter does not contain any objectives for CB. 6. Some goals appear in the charter, but price stability is not one of them.	1 0.8 0.6 0.4 0.2 0	Value is taken to the compilation of the aggregate index as it is.
4. *LM*	Limitations on advances	***lla***	1. Advances to government prohibited. 2. Advances permitted but subject to limits in absolute cash amounts or other types of relatively strict limits (e.g. up to 15% of government revenues). 3. Advances subject to relatively accommodative limits (e.g. advances can exceed 15% of government revenues or are specified as fractions of government expenditures). 4. No legal limits on advances; their quantity subject to periodic negotiations between government and CB.	1 0.66 0.33 0	An non-weighted average
	Limitations on securitized lending	***lls***	Specification of levels identical to those for advances	Same as above	
	Who decides control of terms of lending?	***ldec***	1. CB controls terms and conditions of government borrowing from it. 2. Terms of CB lending specified in law, or CB given final authority to set these terms. 3. Law leaves the decision about terms of CB lending to government and imposes them on CB. 4. Executive branch alone decides the terms of CB lending to government and imposes them on CB.	1 0.66 0.33 0	

	How wide is the circle of potential borrowers from CB?	***lwidth***	1. Only central government can borrow from CB. 2. Central and state governments as well as political subdivisions can borrow. 3. In addition to the institutions mentioned under 2 public enterprises can borrow from CB. 4. CB can lend to all of the above as well as to the private sector.	1 0.66 0.33 0	
	Type of limit when such limit exists	***Ltype***	1. Limit specified as an absolute cash amount. 2. Limit specified as a percentage of CB capital or other liabilities. 3. Limit specified as a percentage of government revenues. 4. Limit specified as a percentage of government expenditures.	1 0.66 0.33 0	
	Maturity of loans	***Lmat***	1. Maturity of CB loans limited to a maximum of 6 months. 2. Maturity of CB loans limited to a maximum of one year. 3. Maturity of CB loans limited to a maximum of more than one year. 4. No legal upper bounds on the maturity of CB loans.	1 0.66 0.33 0	
	Restrictions on interest rates	***Lint***	1. Interest rate on CB loans must be at market rate. 2. Interest rate on CB loans cannot be lower than a certain floor. 3. Interest rate on CB loans cannot exceed a certain ceiling. 4. No explicit legal provisions regarding the interest rate on CB loans. 5. Law stipulates no interest rate charge on government's borrowing from the CB.	1 0.75 0.50 0.25 0	
	Prohibition on lending in the primary market	***Lprm***	1. CB prohibited from buying government securities in primary market. 2. CB not prohibited from buying government securities in primary market.	1 0	

A note on aggregation

Cukierman indices criterion groups can be aggregated with or without specific weights. The non-weighted index is calculated by producing a simple arithmetic average from the four weighted group averages of the 16 criteria in four groups of Table A as in chapter five. In the compilation of the weighted index, the weights presented in the following Table B are used. The weights are not used in calculating the aggregate index in this paper. In any case, criterion group LM has to be left out in the Baltic case.

Table B Weights used in aggregation

Criterion group:		*Weights*
CEO	chief executive officer	**0,20**
PF	policy formulations	**0,15**
OBJ	Objectives	**0,15**
lla	limitations on lending (advances)	**0,15**
lls	limitations on lending (securitized)	**0,10**
ldec	limitations on lending (who decides)	**0,10**
lwidth	limitations on lending (width)	**0,05**
lm	limitations on lending (miscellaneous)	**0,10**

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