

**Divergent Paths of Inflation Stabilization:  
The Role of Currency Board Arrangements (CBAs)  
Case Comparison of Estonia and Poland**

By  
Uriintuya Batsaikhan

Submitted to  
Central European University  
Department of International Relations and European Studies

In partial fulfillment of the requirements for the Degree of  
Master of International Relations and European Studies

Supervisor: Professor László Csaba

Budapest, Hungary  
2009

Word count: 14,644

## Abstract

This thesis will present an analysis of the diverging trends in the macroeconomic stabilization processes in two transition countries, Poland and Estonia. It will argue that in the case of Estonia, a short-cut stabilization measure was overtaken, whereas Poland opted for a gradual evolutionary approach. In doing so, the paper will examine and outline the role of the Currency Board Arrangement (CBA) in the stabilization process as well as list the advantages and disadvantages of the regime when applied to a transition economy. Furthermore, the thesis will present the arguments on the benefits of the gradual, evolutionary institutional approach that was successfully employed in the stabilization process in Poland.

Subsequently, a conclusion will be drawn, that first, the currency board arrangement coupled with hyperliberalization and neglect for the structural changes in part of the authorities resulted in de-stabilization of the Estonian economy, *second*, structural changes and institution-building measures served as a catalyst in the stabilization process in the Polish case and *finally*, gradual institutional change that occurred in Poland proves to be a more effective strategy in stabilizing the macroeconomic performance.

## Acknowledgments

I owe my sincerest gratitude to my supervisor, Laszlo Csaba, who showed encouragement, support and guidance throughout the academic year, which enabled me to write this thesis. The depth of his knowledge and inspiration greatly influenced my academic and professional development.

Also, I would like to thank my family and friends for loving and supporting me from afar.

# **Table of Contents**

<b>INTRODUCTION .....</b>	<b>1</b>
<b>CHAPTER I: CURRENCY BOARD ARRANGEMENT: DEFINITION AND FUNCTIONS .....</b>	<b>6</b>
1.1. Advantages of Currency Board Arrangements (CBAs) .....	8
1.2. Disadvantages of Currency Board Arrangements (CBAs) .....	10
1.3. Conclusion.....	11
<b>CHAPTER II: INFLATION STABILIZATION IN ESTONIA: LOOKING AT PRACTICE OF CURRENCY BOARD ARRANGEMENT (CBA) IN THREE STAGES.....</b>	<b>13</b>
2.1. First Stage of Stabilization (1991-1994): Opting for a Safer Solution? .....	14
2.2. Second Stage of Stabilization (1995- 2005).....	18
2.3. Third Stage of Stabilization (2005-2008): From Stabilization to De-stabilization	20
2.3.1. So close, yet so far: Rejection of Estonian membership in the Euro zone in 2006 .....	22
2.3.2. Exiting the Currency Board Arrangement (CBA): Opportunity vs. Incentive	25
2.4. Conclusion.....	26
<b>CHAPTER III: GRADUALISM: POLISH ROAD TO STABILIZATION IN THREE STAGES .....</b>	<b>29</b>
3.1. First Stage of Stabilization (1989-1993): From Shock to Therapy .....	29
3.2. Second Stage of Stabilization (1994-2002): Setting on Gradualism .....	34
3.3. Third Stage of Stabilization, 2003-2008.....	39
3.4. Conclusion.....	42
<b>CHAPTER IV: SHORT-CUT vs. GRADUALISM.....</b>	<b>44</b>
4.1. Role of Institution-Building in Transition Process .....	44
4.2. Comparing Stabilization Performances in Estonia and Poland.....	48
<b>CONCLUSION.....</b>	<b>52</b>
<b>APPENDIX.....</b>	<b>54</b>
<b>BIBLIOGRAPHY .....</b>	<b>58</b>

## List of Tables and Figures

Table 1: A typical Currency Board versus a typical Central Bank .....	7
Table 2: Inflation performance in the countries with a CBA, 1990-1998.....	10
Table 3: Estonia: Macroeconomic indicators, 1991-1998.....	17
Table 4: Estonia: Selected macroeconomic indicators, 1999-2005 .....	18
Table 5: Polish economic performance, 1989-1993.....	33
Table 6: Gross Household Saving (% of gross household disposable income).....	36
Table 7: Polish Economic Performance, 1994-2002.....	38
Table 8: Polish economic performance, 2003-2008.....	40

Figure 1: Inflation performance in the countries with a CBA, 1993-1999.....	10
Figure 2: Inflation performance in the three Baltic states, 1992-1999.....	15
Figure 3: Real GDP per capita Growth in the three Baltic states, 1990-1999.....	16

## INTRODUCTION

Total reformation and re-building of the economy was the hardest and most important task facing countries of the Former Soviet Union (FSU). There was no exact model or an established way to make this difficult transition, but the step to “uncertainty” had to be made immediately, without losing any time, and with or without external help from the international community. Thus, when looking after almost 2 decades of transition one can make observations and evaluations of the strategies the transition countries employed in the path to achieve stabilization.

Within the transition debate the distinction can be made between countries that resorted to sudden, short-cut measures in stabilizing their macroeconomic indicators and those that adopted a more gradual approach, namely by building effective institutions and applying structural changes. In my thesis, I compare macroeconomic stabilization strategies in Poland and Estonia. Estonia opted for a short-cut solution by adopting a Currency Board Arrangement (CBA), whereas in the case of Poland gradual evolutionary institutional approach was used.

Estonia, among Baltic countries, serves as an example of success in post-Cold War inflation stabilization. After gaining its independence from the Soviet Union, Estonia experienced hyperinflation reaching 1075%, bankruptcies and growth of unemployment. Thus, the authorities of the newly independent state had to seek ways of bringing popularity and credibility of the new currency –the kroon, which resulted in transition to the Currency Board Arrangement (CBA) on June 20, 1992. The Estonian kroon was pegged to the German Mark at a rate of 1DEM=8EEK, the pre-war gold reserves put in Bank of England formed the initial backing of the kroon.<sup>1</sup> “Inflation, which had reached four-digit levels in 1992, came down rapidly by the mid 1990s [...]

---

<sup>1</sup> Iikka Korhonen, “Currency boards in the Baltic countries: What have we learned?”, BOFIT, discussion papers, 1999, no.6, p. 16

matched by dynamic export performance and successful reorientation of trade towards Western Europe, which motivated the choice of the deutsche mark rather than the US dollar”.<sup>2</sup> The supportive fiscal policies, reserves from pre-war savings and growing international trade helped to successfully establish and maintain the arrangement, which in turn created credibility and stability for the new currency.

However, recent data on the macroeconomic the performance of Estonia suggest the long-term default of the country’s unique arrangement. Although immediate arrangements resulted in a sudden drop in hyperinflation, the low inflation level could not be sustained in the long term having resulted in an average 8.8% from 1996-2000, peaking at 11% in 2008.<sup>3</sup> Having inflation of 4.4 per cent did not allow the country to enter the Euro zone in its projected date of 2006, being above the Maastricht inflation criteria of 2.6%. Moreover, hyperliberalization of the economy in line with western standards resulted in consumerism and excess of external debt, which surpassed 100 per cent in 2008, thus making it even more difficult to meet Maastricht criteria of 60% for joining the Euro zone. The evident downfall is largely due to the negligence of the authorities to cool down the economy when they had the chance as well as the failure to build necessary market institutions and introduce long overdue structural reforms.

In contrast, in Poland macroeconomic stabilization was gradual but successful in the long-run. Poland experienced as high as 580% inflation in 1990, significantly decreasing to 20% in 1996 and going down further, leading to 2.7% on average from 2001 to 2005 and 3.6% in 2008.<sup>4</sup> Poland was able to implement gradual stabilization in a sustainable fashion. Thus, after almost two decades of stabilization efforts, Poland is now able to enjoy stable growth and low inflation. According to Kolodko, 7 major strategies

---

<sup>2</sup> H. C. Wolf, A. R. Ghosh, H. Berger, A-M Gulde, “Currency Boards in Retrospect and Prospect”, MIT press 2008, p.154

<sup>3</sup> European Central Bank, statistical handbook, 2008

<sup>4</sup> Ibid.

can be drawn from the Polish case including *first*, institution building, which allowed growth to occur in Poland earlier than elsewhere; *second*, a proper mix of system change policy and development policy towards the accumulation and efficient allocation of capital; *third*, return to the path of rapid development and integration with the European Union in 2002-2004; *fourth*, legal and organizational framework for creating effective policies; *fifth*, appropriate design of both fiscal and monetary policy; *sixth*, minimizing threats and maximizing opportunities in the global economic game; *seventh*, appropriate mix of financial and social engineering, technocratic macroeconomic governance and genuine social dialog.<sup>5</sup> Therefore, Poland is an example of success, bringing long-term stabilization as a result of endless efforts in institution-building and structural reforms.

While both countries succeeded in escaping from hyperinflation to a relatively stable period, on the one hand it is important to study the benefits of building accountable market institutions as a panacea for long-term positive economic performance. On the other hand, the role of the Currency Board Arrangement (CBA) as an intermediary short term solution will be assessed and evaluated in the case of Estonia.

Thus, my thesis will examine the grounds for successful inflation stabilization in transition economies, focusing on the short-term vs. gradual path followed by Poland and Estonia. Based on the findings and research, first I will be able to claim that a currency board works best if it is perceived as an intermediary arrangement and second, by analyzing institutional measures taken by the transition country contribute to the argument that gradualism is a more effective strategy to employ in the stabilization process.

To approach the question raised in the thesis I will divide the research into four chapters. The first chapter will provide a general framework on the functions of a

---

<sup>5</sup> Kolodko G. "The Polish Miracle, Lessons for the Emerging Markets", Ashgate publishing, 2005, pp. xvii-xxiv

Currency Board Arrangement (CBA) as well as outline the existing research on the major advantages and disadvantages of this unique arrangement when applied to the transition economies. The second chapter will analyze the role of the currency board arrangement in macroeconomic stabilization process in Estonia. The research is divided into three main stages: 1/ period from 1992 to 1994, when Estonia opted for a currency board regime, 2/ from 1995 and 2005, characterized by above-potential growth and expansionary monetary conditions, 3/ between 2005 and 2008, when the economy entered a recession and ended up in a bust. Furthermore, based on the above findings, I provide an explanation of Estonia's failure to join the Euro zone in 2006, as well as examining the possible ways the country could have exited the currency board arrangement without high costs to the economy.

Similarly, the third chapter will outline the research on the Polish case in three stages: 1/ from 1989 to 1993, period of directing stabilization methods from shock to therapy, 2/ from 1994 to 2002, period characterized by the shift to positive performance by applying gradual strategy of institution-building and structural reforms, 3/ from 2003 to 2008, period of stable economic performance in Poland as well as increasing prospects of joining the Euro zone.

The fourth chapter will look at the general framework on the benefits of institution-building measures in transition economies, which will facilitate the argument on the Polish gradualist approach. Furthermore, based on the findings on both strategies, short-cut vs. gradualism, I analyze and compare the overall stabilization performances of both countries. The final part of the thesis will conclude with a summary of the results and findings.

To conduct this research, I will compare the economic performances of the two countries based on the bulk of available empirical data since the beginning of the

transition process. Moreover, relying on recent statistics on the macroeconomic indicators of both countries as well as recent publications, working papers of various research institutions and financial organizations, I will be able to conduct an up-to-date study on the stabilization performances of the two countries.

Ultimately, the importance of this research lies in uncovering the overall debate on macro-economic stabilization process as well as showing why gradualism is a more effective strategy in tackling major tasks of building solid market infrastructure in the transition economies.

## CHAPTER I: CURRENCY BOARD ARRANGEMENT: DEFINITION AND FUNCTIONS

The aim of this chapter is to give a definition of Currency Board Arrangements (CBAs) as well its working functions along with the reason why countries resort to adopting such systems. In particular, list the advantages and disadvantages of CBAs in light of transition economies during the period of implementing macroeconomic stabilization policies and initiatives. Giving an overall picture of CBAs is crucial when looking at the case of the macroeconomic stabilization process in Estonia, which will be outlined in the second chapter of this thesis.

A currency board is a monetary institution that issues notes and coins (and in some cases deposits) that are fully backed by a foreign reserve currency and are fully convertible into the reserve currency at a fixed exchange rate on demand.<sup>6</sup> Currency boards were fashionable prior to WWII and then replaced by floating exchange rate regimes from Bretton Woods onwards under the monetary authority of the central bank (See Annex 1).

However, it came back into fashion in the beginning of the 1990s in several emerging market economies, including Bosnia and Herzegovina, Bulgaria, Estonia and Lithuania, which chose an extremely pegged exchange rate against the background of rising inflation. Currency boards are different from other regimes in three defining features: *first*, the nominal exchange rate is fixed at a given parity against an anchor currency, with the domestic money fully convertible into the reserve currency; *second*, the monetary liabilities of the central bank are subject to a specified foreign exchange backing requirements; *third*, CBA are always codified in law, occasionally even in the

---

<sup>6</sup> Steve Hanke and Alan Walters (1992), Currency Boards in the New Palgrave Dictionary of Money and Finance, London, Macmillan

constitution, giving rise to very high institutional costs of exiting the regime.<sup>7</sup> Unlike other pegged exchange rate regimes, countries with a currency board system are obliged by law to keep the minimum reserve requirements. Moreover, unlike central banks, CBA do not have a right to independent monetary policy, thus it is bound by the policy of the country their currency is pegged to. Table 1 is taken from Hanke and shows the key differences between functions of a central bank and that of a currency board, on which I will stress more attention when explaining the main advantages and disadvantages of Currency Board Arrangements (CBA) as opposed to that of central banks.

**Table 1: A typical Currency Board versus a typical Central Bank**

Typical Currency Board	Typical Central Bank
Supplies notes and coins only	Supplies notes, coins, and deposits
Fixed exchange rate with reserve currency	Pegged or floating exchange rate
No conflicts between exchange rate policies and monetary policies	Frequent conflicts between exchange rate policies and monetary policies
No balance of payments crises	Frequent balance of payments crises
Foreign reserves of 100 percent	Variable foreign reserves
Cannot become insolvent	Can become insolvent
Does not hold domestic assets	Does hold domestic assets
Full convertibility	Limited convertibility driven
Rule-bound monetary policy	Discretionary monetary policy
Not a lender of last resort	Lender of last resort
Does not regulate commercial banks	Often regulates commercial banks
Transparent	Opaque

<sup>7</sup> Honger C.Wolf, Atish R.Ghosh, Helge Berger and Anne Marie Gulde,” Currency Boards in Retrospect and Prospect”, MIT Press, 2008, p. 26

Typical Currency Board	Typical Central Bank
Immune from corruption scandals	Prone to corruption scandals
Protected from political pressure	Politicized
High credibility	Low credibility
Earns seigniorage only from interest	Earns seigniorage from interest and inflation
Cannot create inflation	Can create inflation
Cannot finance spending by domestic government	Can finance spending by domestic government
Requires no preconditions for monetary reform	Requires preconditions for monetary reform
Rapid monetary reform	Slow monetary reform
Small staff	Large staff driven

*Source: Steve Hanke, “Currency Boards”<sup>8</sup>*

### 1.1. Advantages of Currency Board Arrangements (CBAs)

Currency boards are mainly used as mechanisms for contributing to policy discipline, gaining credibility for the local currency and quickly bringing down inflation. Furthermore, a fixed exchange rate regime guarantees high transparency with authorities committed to simple monetary rule, therefore limiting any possibility of excess money printing.

On the other hand, CBAs are usually adopted by small open economies, for a number of reasons: *first*, the fixed nominal exchange rate establishes highly visible and simple rule in monetary policies of countries that usually have high inflation (in some cases hyperinflation) after gaining independence from their colonial powers and do not

<sup>8</sup> Steve Hanke, “Currency Boards”, ANNALS, AAPSS, 579, January 2002, p. 90

have a history of operating a complicated monetary system; *second*, CBA assures full convertibility of the local currency to the anchor by reserve cover of 100 per cent (or more in some countries), which creates trust in the local currency by assuring that there is a sufficient reserve to back the currency; *third*, for political reasons maintaining their local currency rather than adopting foreign currency is seen as a symbol of independence.

Moreover, according to Atish Ghosh, Anne-Marie Gulde and Holger Wolf, other benefits of the arrangement include: *a/* pre-commitment to no bail-out policy, regarding distressed banks, resulting in less moral hazard in bank's risk-taking; *b/* cost savings in real or financial transactions if the anchor currency is widely used in international trade and or/ financial markets; *c/* simple management of monetary policy resulting in saving of valuable human capital.<sup>9</sup>

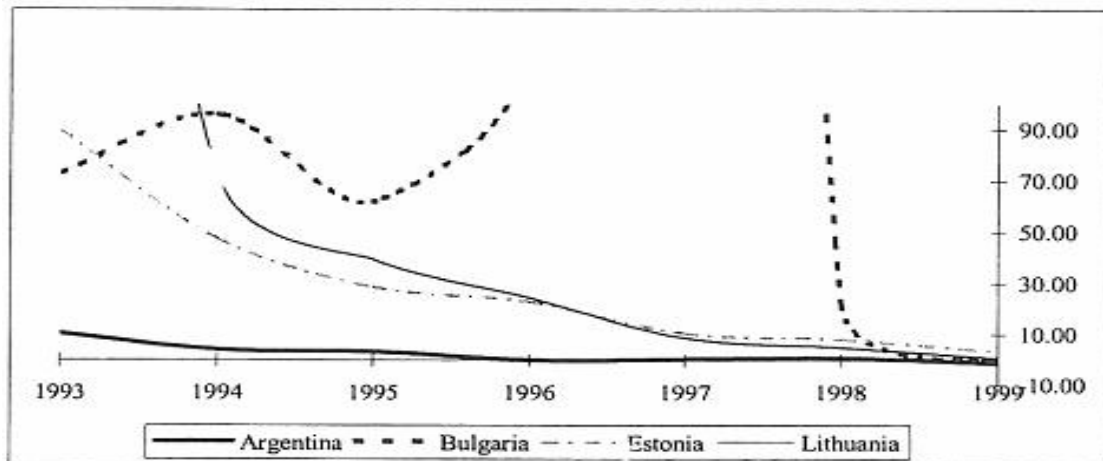
As for inflation, CBAs serve as an effective part of the macroeconomic stabilization package. Empirical studies have found that "inflation under currency boards is around 4 percentage points lower than that in any other pegged regime countries".<sup>10</sup> Maintaining control over inflation is mainly due to discipline and credibility effects. In all of the cases the argument seems to be valid when looking at the past numbers and indicators (See Figure 1, Table 2).

---

<sup>9</sup> Atish R. Ghosh, Anne-Marie Gulde, Holger C. Wolf, "Currency Boards: More than a Quick Fix?", *Economic Policy*, Vol. 15, No.31, Oct. 2000, p. 324

<sup>10</sup> Ghosh, Atish, Anne Marie Gulde and Holger Wolf (1998) "Currency Boards, the Ultimate Fix? IMF Working paper WP/98/8, IMF, p.7

**Figure 1: Inflation performance in the countries with a CBA, 1993-1999**



**Table 2: Inflation performance in the countries with a CBA<sup>11</sup>, 1990-1998**

Inflation %	1990	1991	1992	1993	1994	1995	1996	1997	1998
<b>Argentina</b>	2325.4	171.67	24.90	10.61	4.18	3.38	0.16	0.53	0.92
<b>Bulgaria</b>	23.80	338.45	91.30	72.88	96.06	62.05	123.01	1082.2	22.29
<b>Estonia</b>	17.20	211.00	1076.0	89.81	47.65	28.78	23.05	10.58	8.21
<b>Lithuania</b>	8.40	225.00	1021.0	410.24	72.19	39.66	24.64	8.86	5.07

*Source: IMF, International Financial Statistics*

## 1.2. Disadvantages of Currency Board Arrangements (CBAs)

Although currency boards are successful in increasing growth, trade, investment and lowering the inflationary pressure, like any other system it has its flaws. As Roubini describes, “while these days CBAs are being proposed as the Holy Grail that will cure ever ill and give bliss to a country, their shortcomings are serious and their adoption may actually harm a country rather than improve its long-run economic performance”.<sup>12</sup>

<sup>11</sup> Argentina adopted a CBA in 1990 with the peso pegged to the US dollar; in Bulgaria CBA started operating in 1997, with leva linked to deutsche mark at 1000, later 1.95583 to euro; Estonia switched to a CBA in 1992, kroon anchored to the deutsche mark at a rate of 8 to 1; Lithuania adopted its CBA in April 1994, fixed parity of four litas per UD dollar.

<sup>12</sup> Roubini, Nouriel, (1998) “The case against Currency Boards: Debunking 10 Myths About the Benefits of CBs”, [www.stern.nyu.edu/~nroubini](http://www.stern.nyu.edu/~nroubini), last accessed on April 24th, 2009

The main disadvantages of the system as opposed to a Central Bank are: *first*, the impossibility to conduct effective, independent monetary policy, making the interest rate and capital controls the main tools for controlling the monetary stance of a given country; *second*, CBAs do not act as a lender of last resort (LOLR), depriving the monetary authorities of the right and ability to lend to the government or financial institutions in times of deficit; *third*, due to near impossibility to control the money flow, capital inflows and FDI and lower interest rates leads to higher lending, creating a consumption boom and credit expansion, in which CBAs do not have the means and instruments to control or prevent.

Thus, merely introducing a currency board alone in a country experiencing severe economic turmoil will not lead to stabilization in the long-run, instead it will be viewed as a short-term solution for weak governments seeking an easy way out. Therefore, CBA should be introduced as part of a comprehensive reform package, alongside solid banking supervision and stable financial institutions. “Even with properly designed and rightly implemented CBAs the result will not necessarily be positive unless policies consistent with the maintenance of a fixed exchange rate regime are followed”.<sup>13</sup>

### 1.3. Conclusion

This unique arrangement of an extremely fixed exchange rate has its advantages as well as downsides. In small open economies CBAs are proven to be effective in bringing down the inflation and starting up growth much faster than any other regime, by creating credibility of the currency and committing the monetary authorities to a simple rule.

---

<sup>13</sup> Desislava Dragomirova, “Currency Board Arrangements and the Way to EU Accession: The case of Bulgaria”, MA Thesis, CEU, June 2000, p. 20

However, on the other hand, the system can be extremely harmful in the long-run if not accompanied by structural changes when applying to the transition economies, considering that exit strategies from the peg will be politically and economically very costly.

## CHAPTER II: INFLATION STABILIZATION IN ESTONIA: LOOKING AT PRACTICE OF CURRENCY BOARD ARRANGEMENT (CBA) IN THREE STAGES

This chapter looks at the macroeconomic stabilization process in Estonia in three stages. The Estonian transition process started with the adoption of the currency board regime in 1992, which served as an automatic stabilizer for the economy. Based on the positive performance brought by the CBA in the years following its introduction, the authorities were not keen on abolishing the system in the process of further stabilization, thus neglecting the importance of structural changes, which should accompany any transition process, namely the process of building independent market institutions and instruments for maintaining stable performance of economic processes. During the second stage of stabilization, in parallel with excessive growth and low inflation, the Estonian economy experienced a boost in consumerism and credit expansion, which led to an increasing burden of external debt. Furthermore, hyperliberalization of the economy without implementing major structural changes did not leave any instruments in the hands of the authorities when dealing with the overheating and recession, which the country faced in 2008.

Moreover, Estonia was not able to meet the Maastricht criteria of joining the Euro zone in 2006. Thus, the negative performance of the economy in the recent years left no choice but to question the effectiveness of the country's Currency Board Arrangement (CBA).

## 2.1. First Stage of Stabilization (1991-1994): Opting for a Safer Solution?

*By giving up some monetary autonomy [under a currency board], we received monetary stability in return.*

- Bank of Estonia, 1992

After gaining political independence from the Soviet Union in 1992, Estonia started its reform process in the face of severe economic turmoil. In May 1992 the Estonian parliament passed three laws on monetary and fiscal policy, including currency law, the law on backing the newly established currency, the kroon, and the foreign exchange law. In these laws they define the working functions and procedures of a currency board arrangement (CBA). In practice, countries anchoring local currency into foreign must have sufficient reserves to meet the large demands. In the case of Estonia, it started with 90 per cent backing and slowly increased to over 110 per cent, made possible by its large foreign currency reserves put in deposit in the Bank of England before the Cold War and also the reserve made possible by converting deposits from commercial banks.

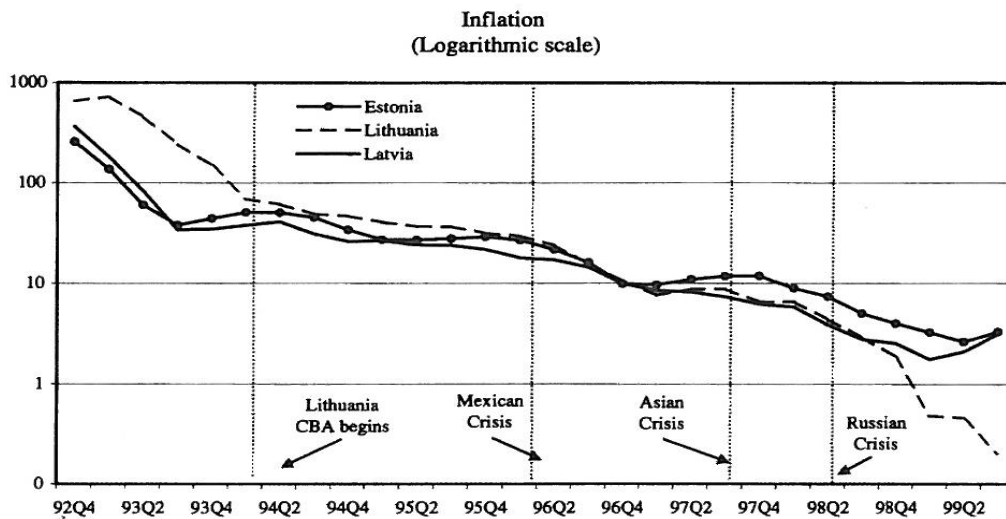
The reason for choosing to adopt a CBA was, first of all, that the Estonian economy was tiny with an estimated annual GDP of 1.04 billion USD<sup>14</sup> in 1992 and also highly open to trade, especially in services, which remains the most effective driving force behind economic performance. With the reform in June 1992, the Estonian kroon was pegged to the German mark at the rate 1 DEM= 8 EEK. The choice of the currency to which to peg, “depends, among other things, on the character of the currency as well as on prospective trading partnerships, thus, the deutsche mark was ultimately chosen because of its strength and respectability”.<sup>15</sup>

<sup>14</sup> EBRD, National statistical authorities (1999)

<sup>15</sup> Bennett, Adam, Operation of the Estonian Currency Board, IMF Staff papers, Vol.40. No.2, June 1993, p. 453

The fixed exchange rate system was particularly attractive for the macroeconomic stabilization process in Estonia due to a number of reasons. First, the currency board seemed a clean-cut solution in avoiding any post-Soviet transitory arrangements and the rouble zone with its hyperinflation. Second, with extremely pegged exchange rate system and simple monetary rule the Estonian authorities were seeking a quick fix for the country's mounting inflation rate by bringing credibility and stability to the newly established currency- the kroon. As former Estonian Prime Minister, Mart Laar, puts it, "the enthusiasm for their "own" money helped people live through all the difficulties and the unpopular decisions following the currency reform".<sup>16</sup> By 1994 the results were showing the evident success of shock disinflation where the currency board arrangement worked as optimists had predicted. The inflation went down to 47 per cent in 1994 from its initial 1075 per cent in 1992<sup>17</sup> (See Figure 2).

**Figure 2: Inflation performance in the three Baltic states, 1992-1999**



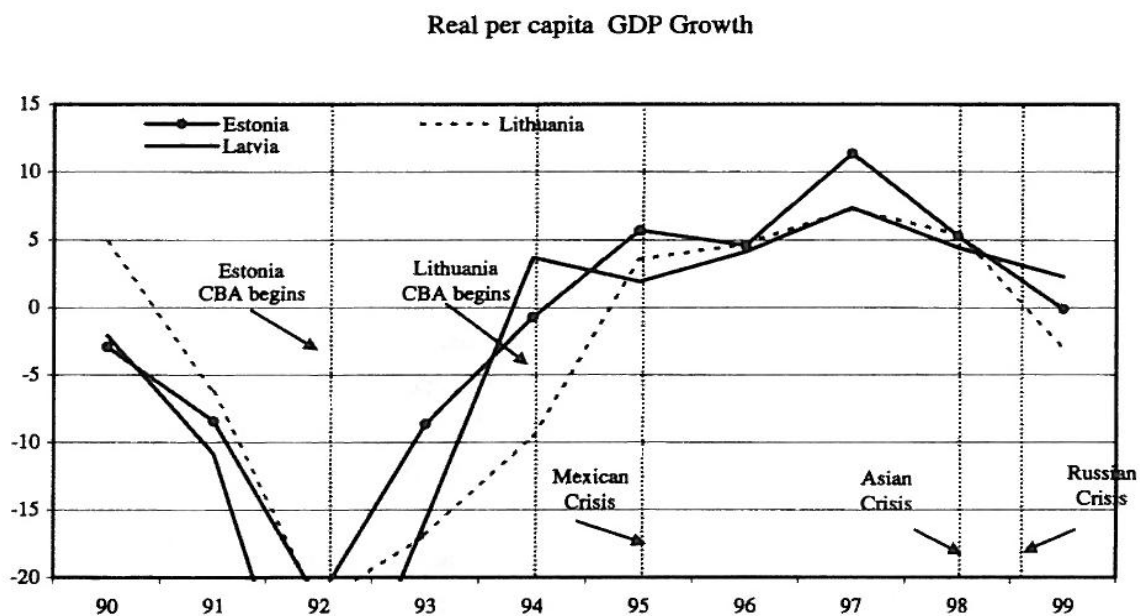
<sup>16</sup> Mart Laar, "Little Country That Could", Center for Research into Post-Communist Economies, July 2002, p.125

<sup>17</sup> International Monetary Fund, IFS databases

The recipe for success includes, most importantly, amongst all, the newly established system, which enhanced credibility of the hard peg. Moreover, as part of the reform package Estonia adopted an extremely liberal trade policy, which helped to boost exports, improve the quality and increase the price of traded goods over time.

Moreover, according to David Burton and Stanley Fischer, “with the process of relative price adjustment and convergence, exports continued to do well, output growth picked up” and growth resumed to 4.5 per cent in 1995, which was -21.6 per cent in 1999<sup>18</sup> (See Figure 3, Table 3).

**Figure 3: Real GDP per capita Growth in the three Baltic states, 1990-1999**



<sup>18</sup> Ibid.

**Table 3: Estonia: Macroeconomic indicators, 1991-1998**

<b>Estonia</b>	<b>1991</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>
<b>Inflation (%)</b>	211	1075.9	89.8	47.7	29.0	23.1	11.2	8.2
<b>GDP Growth (%)</b>	-11.8	-21.6	-5.7	-1.6	4.5	4.4	11.1	4.4
<b>Unemployment</b>	-	4.8	6.5	7.6	9.7	10.0	9.6	9.8
<b>Current account balance</b>	-	3.9	1.2	-6	-4.2	-8.6	-11.4	-8.7
<b>Exports (in percent of GDP)</b>		65.2	62.5	71.7	68.4	63.0	73.2	75.1
<b>Imports (in percent of GDP)</b>		70.0	66.4	82.1	76.0	73.8	84.0	84.9

*Source: International Monetary Fund, IFS databases*

Thus, despite Estonia facing a politically and economically turbulent period in its history with the newly established currency in weak economic circumstances, the transition and reform process started early in Estonia and was immensely successful in the early period of the new monetary system. CBA proved to be effective in disinflating the economy in a quick fashion while keeping price stability.

However, according to Iikka Korhonen, introducing a currency board arrangement is not enough to achieve a stable economic environment and growth in the medium and long run, thus, “a CBA works best as a part of a comprehensive reform package (albeit often the most credible part of the package)”.<sup>19</sup>

<sup>19</sup> Iikka Korhonen, Assessing the Baltic Currency Board, BOFIT discussion papers, 1999. no. 6, p. 32

## 2.2. Second Stage of Stabilization (1995- 2005)

By the end of 1999 inflation in Estonia decreased to 3.3 percent from the previous 29 per cent in 1995. Growth also resumed reaching 7.9 percent in 2000, 9.8 percent in 2005 compared to average growth of 2.28 percent between 1993 and 1998.<sup>20</sup> “Strong growth was matched by a dynamic export performance with trade reoriented towards Western Europe motivating the choice of the deutsche mark, rather than the US dollar”.<sup>21</sup> Growth in export of goods and services continued to grow with impressive numbers picking up at 28.4% in 2000 and ending up with 21.3.<sup>22</sup>

Moreover, Estonia’s impressive growth was credited to the large inflows of foreign capital. Since introducing a currency board in 1992, investment doubled from 8.4% to 17.7% in 2005.<sup>23</sup> As such, both growth and low inflation owes much to the effective macroeconomic stabilization package, a cornerstone of which was the establishment of the currency board arrangement (See Table 4).

**Table 4. Estonia: Selected macroeconomic indicators, 1999-2005**

<b>Estonia</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>
<b>Inflation (%)</b>	3.3	4.0	5.8	3.6	1.3	3.0	4.1
<b>GDP growth (%)</b>	0.3	7.9	6.5	7.2	6.7	7.8	9.8
<b>Current account balance</b>	-4.4	-5.5	-5.6	-10.2	-12.1	-13.0	-10.7
<b>Gross household savings*</b>	2.57	4.08	3.06	0.46	-1.61	-4.77	-3.80
<b>Investment in per cent of GDP</b>	3.9	6.0	5.6	2.2	8.4	6.9	17.7

*Source: International Monetary Fund, IFS databases \* Eurostat*

<sup>20</sup> International Monetary Fund, IFS databases

<sup>21</sup> Holger C. Wolf, Atish R. Ghosh, Helge Berger and Anne Marie Gulde, *Currency Boards in Retrospect and Prospect*, MIT press, 2008, p. 154

<sup>22</sup> International Monetary Fund, IFS databases

<sup>23</sup> Ibid.

Thus, in terms of macroeconomic performance Estonia indeed made a huge step ahead from the previous decade, “considering that the transformational recession, which was in the range of 20 percent of GDP elsewhere, was about twice as grave for the Baltics in 1992-1994 [...] the Baltics have not only started from scratch, as postwar Japan or Germany, but from the weighty heritage of Soviet past, with fully distorted, non-viable economic structure”.<sup>24</sup>

However, despite impressive macroeconomic indicators the Estonian economy was heading for trouble from the beginning of the new century with growth proven to be unsustainable and inflation unstable, which leads to the other side of the story that has been overshadowed by the lure of success. Looking back at the CBAs, merely introducing it as an exchange rate mechanism does not guarantee sound and stable economic performance in the medium-long run. Again, if one looks at the numbers, the Estonian current account balance reached -10.7% in 2005 from -4.2% in 1995 contributing to the total external debt, which reached 84.1% of GDP in 2005 from 4.3% in 1995.<sup>25</sup> As part of the comprehensive reform package, sound financial systems and tight fiscal policy, as well as effective financial intermediation seemed to have been neglected since the start of stabilization process in Estonia.

Moreover, extension of credits to private sectors and households accelerated with increasing consumption. As a result, household savings rates dropped from 8 per cent in 1996 to – 3.8 per cent in 2005.<sup>26</sup> Fast credit growth further boosted domestic demand and consumption. Loans granted to households progressively accelerated further to more than 50 bln EEK in 2005 from 18 bln in 2000.<sup>27</sup>

---

<sup>24</sup> Csaba, Laszlo, “Crisis in Economics?” Akademiai Kiado, 2009, p.70

<sup>25</sup> International Monetary Fund, IFS databases

<sup>26</sup> Ibid.

<sup>27</sup> Eesti Bank, 2007

Estonia's short-cut solution worked as predicted, resulting in low inflation and high growth. However, in the last 5-10 years numbers indicate an increasing level of external indebtedness and ever-growing extension of credit to households, resulting in consumerism and debt. This neglect by the national government is in part caused by the "overall growth euphoria, appreciated by public and foreign investors, [even if the authorities want to put their feet on the break] foreign dominance of the banking sector and the *de facto* euroization inherent in the currency board do not leave the instruments in the hands of central banks".<sup>28</sup>

### 2.3. Third Stage of Stabilization (2005-2008): From Stabilization to De-stabilization

Estonia's accession to the European Union in May 2004 and NATO in March 2004 led to a period of above-potential growth, fostered by expansionary monetary conditions.<sup>29</sup> Growth has been steadily increasing and picked up at 10.3 per cent in 2006. Inflation rose to 4.4 per cent in 2006 with a further increase to 10.8 in 2008.<sup>30</sup> As such, inflation has proven to be unsustainable despite growth indicating impressive numbers.

Thus, over the period 2005-2007 Estonia's economy showed signs of overheating, which is down to a number of factors, namely an excessive growth, rising inflation and external debt. According to Lamine, "expansionary monetary conditions resulted in a credit boom and bullish real-estate investment activity financed by foreign banks [...] at the same time optimistic expectations about future income, as wages only increased, boosting domestic demand".<sup>31</sup> The current account deficit grew to -17.4 per cent in 2007

<sup>28</sup> Csaba, Laszlo, "Crisis in Economics?" Akademiai Kiado, 2009, p.106

<sup>29</sup> ECFIN Country Focus, Baudouin Lamine, Estonia: overheating and sectoral dynamics, Volume 5, Issue 7, Aug, 2008, p. 1

<sup>30</sup> Eurostat., 2008

<sup>31</sup> ECFIN Country Focus, Baudouin Lamine, Estonia: overheating and sectoral dynamics, Volume 5, Issue 7, Aug, 2008, p. 1

from -10.3 per cent in 2005.<sup>32</sup> “These numbers are staggering and about three times the levels that can be securely financed according to established standards”.<sup>33</sup>

Contributing to the overheating, massive financial inflows were directed towards the real estate sector, which fostered consumption credit and consumption expansion. Credit growth on average between 2004-2007 was 34.6 per cent with gross debt liabilities having been increased on average by 32 per cent annually over the 2005-2007 period, compared with around 20 per cent over the 2000-2004 period.<sup>34</sup> Furthermore, loans granted to individuals rose more than twofold from 50 bln in 2005 EEK to 110 bln EEK in 2007.<sup>35</sup>

According to Charles Enoch and Oetker-Robe, “the bulk of credit growth was financed by foreign capital inflows, as domestic savings did not cover the domestic credit demand, this boosted growth in external debt, and the current account deficit deteriorated to 12 per cent of GDP in 2004 in the strong growth environment”.<sup>36</sup> As such, over the period of 2005-2007 households were accumulating debt as a result of soaring consumption and accelerating credit expansion.

Moreover, the foreign owned domestic banking sector allowed massive credit inflows from regional parent banks, which partly contributed to the soaring unhedged external, foreign currency denominated debt constituting 77.8 per cent of total loans in 2008. The domestic net saving rate fell to -6.9 per cent in 2006 from previous -2.9 per cent in 2000, while the deposit rate was steadily decreased from 11.5 per cent in 1994 to 2.1 per cent in 2005.<sup>37</sup>

---

<sup>32</sup> Eurostat., 2008

<sup>33</sup> Csaba, Laszlo, “Crisis in Economics?” Akademiai Kiado, 2009, p.71

<sup>34</sup> Eesti Bank and Commission services’ calculations.

<sup>35</sup> Ibid.

<sup>36</sup> Charles Enoch, Inci Oetker-Robe, “Rapid Credit Growth in Central and Eastern Europe, Endless Boom or Early Warning?”, Palgrave Macmillan, 2007, p. 178

<sup>37</sup> International Monetary Fund, IFS databases

Estonia's history of rapid growth, influenced by massive credit flows, was constrained by capacity issues and lack of financial and regulatory instruments to stop the real estate and consumption booms. With a poorly supervised banking sector and limited capabilities of the central authorities to cool down the credit expansion, capital flows associated with currency boards can bring instability to the system and prove to be an ineffective instrument in the medium-long term as the experience with overheating and economic recession speaks for itself in Estonia.

Furthermore, in 2007 in an IMF staff paper, Marcos Chamon, Paolo Manasse and Alessandro Prati found out the "robust leading indicator role" and identified three variables- international reserves, current account balance and short-term external debt. According to the findings, the external vulnerability indicator for Estonia reached 338.7%, the highest among its Central and Eastern European peers, and compared to Poland which is slightly below 150%.<sup>38</sup> The result shows the high level of vulnerability resulting from soaring external indebtedness and declining investors' confidence resulting from it.

### **2.3.1. So close, yet so far: Rejection of Estonian membership in the Euro zone in 2006**

Introduction of the Euro was the biggest priority for Estonia after its accession to the EU in May 2004. The prospects of joining the eurozone for such a small open economy as Estonian seemed incredibly high.

To reach the desired goal, members have to undergo three stages : 1/ EU accession, when member countries have to adopt the *acquis communautaire* (the complete legislative and institutional framework of the EU); 2/ After two years in the EU members

---

<sup>38</sup> Marcos Chamon, Paolo Manasse, Alessandro Prati, "Can We Predict the Next Capital Account Crisis?", IMF staff papers, Vol. 54, No.2, 2007, p.270

are allowed to participate in Exchange Rate Mechanism II (ERM II), when they have to fulfill the Maastricht criteria, namely<sup>39</sup>:

- Adoption of legislation prohibiting monetary financing for public sector activities by the central bank;
- Requirement for avoiding excessive government deficits- the government deficit should not be more than 3 per cent of GDP in normal circumstances and public debt should not surpass 60% of GDP;
- Achievement of a high degree of price stability, i.e. a rate of inflation observed over the preceding twelve-month period which is not more than 1.5 percentage points above that of the average for the three best performing member states;
- Durability of the interest rate convergence- long term interest rate (averaged over the preceding 12 months) should not be above that of the three best performing member states by more than 2 percentage points;
- Adoption of the national legislation, providing for the statutory independence of the central bank so as to ensure compatibility with the statutes of the European system of Central Banks.

Furthermore, countries aiming at joining the Euro zone are not restricted by their existing choice of exchange rate regimes. However, member countries have to “limit the exchange rate fluctuations so as to keep it stable within a band of 15 per cent above and below the central parity against the euro”.<sup>40</sup> In this respect, currency boards can, in principle, be compatible with the prospects of euro adoption as condoned by the European Central Bank. Thus, as an exchange rate CBAs should satisfy a number of requirements: “facilitating the nominal convergence; allowing a market test for exchange

<sup>39</sup> European Commission, Directorate General II, “The Euro: Explanatory Notes”, 1998, [www.europa.eu/comm/economy\\_finance](http://www.europa.eu/comm/economy_finance)

<sup>40</sup> Susan Schadler, “Charting a Course Toward a Successful Euro Adoption, Newest EU Entrants Should Reap Net Gains from Joining the Euro Area”, June 2004, p.32

rate stability; helping to ensure that countries enter the Euro zone at an appropriate exchange rate; and preparing central banks for operating within a Euro zone”.<sup>41</sup>

As such, for Estonians, having a dynamically emerging economy with high growth and open liberal market balanced with conservative monetary policy and stable, extremely pegged exchange rate, a road to adopting the euro seemed to be without any obstacles. In addition, “once the Euro zone entry is achieved, the external financing constraint would no longer have mattered [therefore], financial markets were not bothered at the slightest by the accumulation of external obligations in the Baltics...on the contrary, the continuous talk about the Baltic Miracle helped to sweep problems under the carpet”.<sup>42</sup>

However, for Estonia, inflation proved to be the major obstacle in fulfilling the Maastricht criteria. Steadily accelerating inflation from 4.1 per cent to 4.4 per cent in 2005 and 7.5 per cent in 2007<sup>43</sup> was far from meeting the Maastricht inflation criteria of 2.6 per cent. Moreover, the feasibility of fulfilling the inflation criteria faded away with a further increase in inflation reaching double digit numbers, 11 per cent in 2008, followed by overheating and recession.

The prospects of joining the Euro zone got delayed further when the growing current account deficit equaled -17.4 per cent in 2007 and increasing external debt, which is above 100 per cent in 2008. Adding to the downfall, low interest rates, coupled with massive capital inflows, allowed for growing credit expansion, which is being financed by foreign borrowing due to the inability of domestic savings to provide loans.

In conclusion, the Estonian derailment is partly due to the overconfidence of the authorities in relying on the currency board to do all the heavy lifting till the adoption of

---

<sup>41</sup> Anne Marie Gulde, Juha Kahkonen and Peter Keller, “Pros and Cons of Currency Board Arrangements in the Lead-up to EU Accession and Participation in the Euro Zone”, IMF Policy Discussion Paper, PDP/00/1, p. 3

<sup>42</sup> Ibid. p. 105

<sup>43</sup> International Monetary Fund, IFS databases

the euro, while disregarding the need for strict policy discipline required by the CBA, including tight fiscal policy to reduce external vulnerabilities and domestic credit expansion. However, once the economy entered recession and having limited or no leverage over the monetary policy, there is little room for maneuver for the authorities practicing a CBA on implementing restrictive policies. According to Csaba, “the Estonian case is a clear scenario of a boom-bust cycle”, resulting in a consumption boom and neglect of the foreseeable and serious ramifications of doing nothing,<sup>44</sup> on account of the authorities seeking a short-cut solution. On the other hand, one may wonder “if the currency board arrangement has actually backfired”<sup>45</sup> by having tied the hands of the authorities in implementing effective policy disciplines.

In any case, the question is whether it is time for Estonians to undergo major structural changes, namely, an exit from the long operating currency board arrangement by introducing a softer exchange rate arrangement.

### **2.3.2. Exiting the Currency Board Arrangement (CBA): Opportunity vs. Incentive**

*Currency boards represent a start, more than a destination, for the design of monetary authorities. They can offer emerging economies a temporary shield for cultivating reputable central banks and financial institutions.*<sup>46</sup>

Kopcke, New England Economic Review

Once a country chooses a currency board as the main monetary discipline, exiting from the arrangement would require significant institutional and legal changes as well as being economically and politically very costly. The arrangement itself serves as a short-term stabilizing mechanism by bringing credibility to the currency and committing the

<sup>44</sup> Csaba, Laszlo, “Crisis in Economics?” Akademiai Kiado, 2009, p. 107

<sup>45</sup> Ibid. p.107

<sup>46</sup> Kopcke Richard, “Currency Boards: Once and Future Monetary Regimes?” New England Economic Review, May/June, 1999, p.36

authorities to a simple monetary rule. In the case of Estonia, the CBA was successfully introduced and performed well in stabilizing inflation and ushering in growth for a number of years. Thus, exiting from the arrangement would risk losing the credibility and transparency of the system, as well as the stability and good performance of the economy that was achieved for years. Moreover, the lack of experience in operating an independent central bank would cause serious difficulties for the authorities.

For Estonians the right time to exit from the arrangement was perhaps in 2002, when macroeconomic indicators were showing extremely good performance, growth in the range of 7.2 per cent alongside inflation, which was 3.6 per cent. Moreover, the prospects of joining the EU and NATO were abundantly clear. The exit would have signaled successful completion of the stabilization program and an opportunity to implement comprehensive structural reforms and improve the flexibility of the economy. When given the right opportunity the incentive to take the lead on the reforms seems to have lacked. Instead, lured by high growth performance and overall positive economic indicators, the authorities chose a way to neglect opportunity to carry on the structural reforms by exiting from the intermediary arrangement.

With the changing conditions in the world economy it is getting difficult to grasp the opportunity and to lay foundations for more secure arrangements in the long term despite given the incentive to do so. In the case of Estonia, opportunity and incentive seemed to have failed to exist at the same time.

## 2.4. Conclusion

Among all former Soviet Union countries, Estonia was one of the fastest to bring down the inflation in a short period of time after introducing its own currency, the kroon, and the exchange rate system fixed under the currency board arrangement. “CBA has

been used successfully in a) gaining rapid credibility for economic policies (or at least national currencies) in a situation of severe economic turmoil and b) preventing monetary expansion (and thus inflation) in excess of the increase in the foreign currency reserves by committing the domestic policy makers to a simple monetary rule”.<sup>47</sup>

Indeed, Estonia experienced over potential growth performance averaging 8-10 per cent a year from 1996 to 2005 while keeping inflation at low levels. Simple rules inherent to CBAs brought the country monetary stability and guaranteed memberships in European Union and NATO by 2004. With high capital inflow, peaking growth and increasing availability of credit the Baltic miracle seemed endless boom, thus the authorities were not keen on slowing it down and implementing the structural reforms that had been long overdue. Instead, the decision to maintain the currency board until Euro zone entry was achieved, while indulging in hyper liberalization and consumerism, which are not in line with the conservative and limited ability of conducting monetary policy in part of the currency board.

Steadily accelerating growth has proven to be unsustainable and the rapidly decreasing inflation was unstable, all contributing to the overheating of the economy, which ended in a bust by 2008. The hope for early euro entry that seemed plausible by 2005 seems to have faded with accelerating inflation and increasing external debt.

Thus, maintaining the currency board might have become a burden, i.e. that the CBA is incapable of solving major problems the Estonian economy is facing in the recent 2-3 years ending with overheating and recession. It should be noted that the currency board arrangement works as an automatic stabilizer in the short term, as well as being part of the comprehensive reform package, in the sense that the arrangement should be accompanied by a consistent set of economic policies, including strengthening of the

---

<sup>47</sup> Iikka Korhonen, Assessing the Baltic Currency Board, BOFIT discussion papers, 1999. no. 6, p. 32

financial sector, implementing structural reforms, building up accountable institutions in order to avoid large external debt and to keep the conservative monetary policy.

To conclude, Estonian derailment was caused by unwillingness to implement the necessary reforms while economic conditions were relatively sound and choosing to maintain the short-cut solution until their entry to the Euro zone. Moreover, CBA tied the hands of the authorities when it came to enforcing strict policy disciplines and preventing further economic downfall.

On the contrary, the next chapter will outline and develop arguments on the Polish road to stabilization. Unlike Estonia, Poland chose a gradual approach in the transition process, applying conservative strategy along with implementing structural changes by building necessary market institutions. Thus, Poland on the eve of financial turmoil is not experiencing a major crisis due to the benefit of learning-by-doing.

## CHAPTER III: GRADUALISM: POLISH ROAD TO STABILIZATION IN THREE STAGES

In the current chapter I will analyze the post-transition macroeconomic stabilization process in Poland. In doing so, I will outline the major strategies in three stages, starting from so-called “shock therapy” in 1990, but later opting for more gradual approach that emerged from the *Strategy of Poland* in 1994 during the second stage, and finally the third stage, which is defined by consolidated market institutions, stable and positive macroeconomic performance.

Thus, looking at the gradual strategy that applies evolutionary approach along with implementing structural changes and institution-building, a conclusion can be drawn that Poland is indeed an example of success in post-transition stabilization performance. Moreover, owing to the building of solid market institutions along with commitment to the obligations to act accordingly with EU laws and regulations, the country’s prospect of joining the Euro Zone by 2010 is becoming ever more evident.

### 3.1. First Stage of Stabilization (1989-1993): From Shock to Therapy

*We are too poor to experiment. If the rich countries want to experiment, let them. For us, it is better to take proven models.*

- Leszek Balcerowicz, 1989

With hyperinflation reaching 251.1 per cent per annum in a condition of highly depleted market and the economy facing severe chronic shortages, the Polish task of macroeconomic stabilization was not an easy one. Desperate situations needed urgent actions. Thus, in August 1989, Minister of Finance, Leszek Balcerowicz, of the first Post-communist government led by Tadeusz Mazowiecki proposed a radical set of approaches, which came to be known as the “shock therapy” or the “Balcerowicz plan”. The end goal

of the program was to build a western-type of market economy, by abolishing central planning along with minimum intervention of the state in the economic activities. In other words, “Shock therapy” implied a sudden cut with the past arrangements and building a free market economy from a scratch. The newly designed program received much enthusiasm from the people, as they thought the situation with shortages and constant queues could not get worse than it was in the end of 1980s.

According to Balcerowicz, the phase of the radical jump was called as a brief period of “extraordinary politics”, which implies that “given the typical initial conditions of a socialist economy, a country will be better off politically and economically in the medium to long run (thus, giving way to “normal” politics) if it adopts a radical and comprehensive economic reform program as soon as possible and then continues the reform by implementing far reaching institutional changes”.<sup>48</sup>

In his plan, Balcerowicz called for “a sharp deflation to reduce rapidly rising prices, the wide opening of trade to ensure a realistic price structure, and the rapid turnover of state assets to private hands to create forces interested in profit-maximization”.<sup>49</sup> Thus, according to the program: a/ an independent central bank was established, b/ tax reforms were implemented, abolishing taxes on capital movements, c/ fixed exchange rate was introduced as a nominal anchor, d/ enterprise reform was overtaken along with immediate privatization measures.

Most importantly, stabilizing the inflation as the highest priority was planned to be achieved by tight fiscal policy, which aimed at halting the budget deficits by introducing a fixed exchange rate as a nominal anchor in the process.

However, exchange rate anchor did not start to work until the end of 1990, averaging in record high indicator as 584.7 per cent throughout the year due to the

<sup>48</sup> Leszek Balcerowicz, “Socialism, Capitalism, Transformation”, CEU Press, 1995, p. 165

<sup>49</sup> Kazimierz Z. Poznanski, “Poland’s Protracted Transition, Institutional Change and Economic Growth, 1970-1994”, p. 169

liberalization of prices and sharp fall in production. In addition, facing severe competition from imported goods, the quality of which was higher, home production drastically declined resulting in an adverse effect on the budget. Total imports continued to rise throughout the year reaching 15.5 million USD in 1991 from 8.3 million USD in 1990 while gross fixed investment fell to -10.0 per cent in 1990 from previous -4.5 per cent in 1989 respectively.<sup>50</sup> Furthermore, industrial output fell to -24.2 per cent in 1991 from -0.5 per cent in 1989 alongside GDP that was down at -11.6 per cent in 1991 from previous -0.2 per cent indicator in 1989.<sup>51</sup> The steady rise in unemployment was also one of the negative outcomes of the radical stabilization approach- in 1990 the rate of unemployment was registered at 6.5 per cent, which grew further to 11.5 per cent by 1991.<sup>52</sup>

Looking at the past numbers, Fahrid Dhandi from the World Bank asks whether the “shock therapy” implied more “shock” and little “therapy”, as “price liberalization and the dismantling of central coordination can happen overnight as a sudden shock applied to the economy, but establishment of new legal systems, restructuring of enterprises, generating changes in the population that is the “therapy” part, takes much time and effort to implement.<sup>53</sup> Moreover, numbers in terms of macroeconomic performance indicate negative performance resulting in mass scale unemployment, declining GDP growth, a sharp drop in industrial output, rising inflation and decreasing gross fixed investment compared to the performance before adopting a “shock therapy” approach.

For Gregorz Kolodko, one of the known critics of the program, “the policy package delivered a shock to the economy, indeed several different identifiable shocks:

<sup>50</sup> Economic Bulletin for Europe, ECE (New York: United Nations), vol.44 (1992) and vol.46 (1994)

<sup>51</sup> Ibid.

<sup>52</sup> Ibid.

<sup>53</sup> Farid Dhanji, “Transformation Programs: Content and Sequencing”, *The American Economic Review*, Vol. 81, No. 2 (May, 1991), p. 323, p. 324

the foreign trade regime shock, the exchange rate shock and the credit and interest rate shock [moreover] the promised early end to inflation and recession was not delivered”.<sup>54</sup> He asserts that by the autumn of 1989 the stabilization and transformation of the “Polish economy still had some way to go but did not actually need much of a shock”<sup>55</sup> and thus the therapy process indicated a distortion of a kind in an already stabilizing economy.

In 1993 a new government was formed and carried on with the stabilization plan, while keeping its commitment to tight fiscal policy, building-up market institutions and most importantly policies were based on the learning from previous errors and mistakes. In terms of economic recovery GDP growth picked up again reaching 4.7 per cent in 1993 from -7.6 per cent in 1991, so did inflation decrease, although not impressively, to 36.9 per cent from 70 per cent in 1991 and 43.5 per cent in 1992 respectively.<sup>56</sup> Industrial output also picked up in 1993 hitting 5.6 per cent, far better performance from 1991 when it was in the range of -11.9 per cent.<sup>57</sup> Thus, by 1993 Polish economy was gradually getting back on track showing better performance year by year (See Table 5).

Thus, Poland’s transition to a market economy is thought to have started with so-called “shock therapy”, which aimed at price liberalization, bringing down the hyperinflation and trade liberalization through radical opening up of the economy and limiting previous state interference in economic activities. However, some prominent scholars in the field of transition, such as Gregorz Kolodko and Jan Winiecki would argue that the transition process and efforts of economic stabilization started earlier in 1989 and that “Balcerowicz plan” with its drastic measures only created additional shocks to the already difficult transition process.

---

<sup>54</sup> Gregorz Kolodko, “The Polish Alternative: Old Myths, Hard Facts, and New Strategies in Successful Transformation of the Polish Economy” in *Post-Communist Transition*, The Thorny Road, University of Rochester Press, 2000, p. 17

<sup>55</sup> Ibid. p. 15

<sup>56</sup> *Economic Bulletin for Europe*, ECE (New York: United Nations), vol.44 (1992) and vol.46 (1994)

<sup>57</sup> Ibid.

Furthermore, numbers indicate negative performance throughout 1990 and 1991 in terms of growth, production output, employment, while inflation went down from 584.7 per cent to double digit numbers in 1991, perhaps due to a fixed exchange rate anchor. Starting from early 1993, economic performance started showing fairly positive numbers and figures, which according to Jeffrey Sachs, one of the biggest enthusiasts of the program, is due to the lagged effects of the radical stabilization program and that “it is winning the test of time”<sup>58</sup>, i.e. gradually giving way to “normal politics”.

However, the purpose of this section is not to engage in academic debate concerning the pros and cons of the “shock therapy”, but to point out the outcomes that positively influenced the macroeconomic condition in the medium long term. These include establishment of an independent central bank and passing a law on a balanced budget, enterprise and tax reforms along with implementing exchange rate stabilization policies. These positive measures in turn served as a solid ground for further efforts in institution-building and stabilization of market activities.

**Table 5: Polish economic performance, 1989-1993**

<b>Poland</b>	<b>1988</b>	<b>1989</b>	<b>1990</b>	<b>1991</b>	<b>1992</b>	<b>1993</b>
<b>Inflation (%)</b>	60.2	251.1	584.7	70.3	43.0	36.9
<b>GDP Growth (%)</b>	4.1	-0.2	-11.6	-7.6	2.6	4.7
<b>Industrial Output</b>	5.3	-0.5	-24.2	-11.6	3.9	5.6
<b>Unemployment</b>	-	-	6.1	11.5	13.6	16.4
<b>Gross Fixed Investment</b>	5.4	-2.3	-10.0	-4.5	0.7	2.2

*Source: Economic Bulletin for Europe, ECE (New York, United Nations)*

<sup>58</sup> Jeffrey Sachs, “Shock Therapy in Poland: Perspectives of Five Years”, Tanner Lectures on Human Values, April 6, 1994, p. 276 [www.tannerlectures.utah.edu/lectures/documents/sachs95.pdf](http://www.tannerlectures.utah.edu/lectures/documents/sachs95.pdf), last accessed on 16.05.2009

### 3.2. Second Stage of Stabilization (1994-2002): Setting on Gradualism

The second stage of stabilization can be divided into two time frames between 1994 and 1997, when the Strategy for Poland was adopted with its gradual approach to stabilization, which brought in the “golden years” of economic performance, followed by temporary “cooling-off” period from 1998 to 2002. The slowdown of the latter period was overcome on the basis of sound fundamentals laid down during the years of implementation of the Strategy.

Polish economic performance from 1994 to 1997 is counted as a qualified success story judging from the macroeconomic indicators. GDP growth accelerated from 5.3 per cent in 1994 to 6.9 per cent in 1997, already overtaking its 1989 level, so did inflation showed positive results going gradually down to 15.9 per cent in 1997 from previous 33.3 per cent in 1994.<sup>59</sup> Both exports and imports have boosted, while unemployment went down to 13.6 per cent in 1996 from as high as 16 per cent of the overall labor force in 1994<sup>60</sup> (See Table 6).

The country’s increasing positive performance led to membership in OECD in late 1996, thus making it a part of the club that includes countries with developed free market economies.

What was the recipe behind the success?

In 1994 under the government of Pawlak, First Deputy Prime Minister Gregorz Kolodko issued a stabilization program entitled *Strategy for Poland*. In the document he called for a more gradual approach to the economic consolidation process. Thus, instead of complete elimination of the role of the state in the market while expecting an invisible hand to take control in a still fragile transforming economy, he called for participatory involvement of the state in building necessary market institutions, in implementing

---

<sup>59</sup> Economic Intelligence Unit databases

<sup>60</sup> EBRD official databases

financial restructuring, so that private sector and private initiative can emerge gradually taking over the old system of central planning. Furthermore, the Strategy aimed at promotion of investment through lowering interest rates, which was brought down to 25 per cent in 1996 from 33.0 per cent in 1994 along with a policy of reducing tax rates. The latter strategy allowed for an accelerating increase of private sector share in the GDP, which reached 70 per cent in 1996 from the previously recorded 53.0 per cent in 1994.<sup>61</sup>

Furthermore, another major element of the gradual approach was to consolidate and stabilize activities of the independent National Bank of Poland, which in the words of an earlier NBP governor Baka, is “regarded as one of the most empowered central banking institutions in the world”.<sup>62</sup> Moderate monetary relaxation pursued by the central bank, including reduced interest rates and zloty devaluation along with the microeconomic and sectoral measures has enabled Poland to achieve reduction in inflation as it was aimed for in the *Strategy for Poland*.<sup>63</sup>

Moreover, strong economic growth and effective consolidation efforts stemming from the outcomes of the strategy, improved the financial standing of the households and individuals while active interest policy was maintained, which eventually led to a credit expansion from 1996 to 1997. According to Enoch and Oetker-Robe, “if this process of high demand for borrowing and fast growing supply of credits continued further at the pace it was growing from 1996 to 1997, this could have created problems for the stability of the banking sector and macroeconomic stability of the country”.<sup>64</sup> Thus, a set of measures were created “to limit the expansion and focus on the gradual disinflation, the adopted measures included: 1/ conventional tools such as required reserve ratios, 2/ an

---

<sup>61</sup> Ibid.

<sup>62</sup> Baka quoted in Gregorz Kolodko, “The Polish Alternative: Old Myths, Hard Facts, and New Strategies in Successful Transformation of the Polish Economy” in “Post-Communist Transition, The Thorny Road”, University of Rochester Press, 2000, p. 32

<sup>63</sup> Ibid. p.33

<sup>64</sup> Charles Enoch, Inci Oetker-Robe, “Rapid Credit Growth in Central and Eastern Europe, Endless Boom or Early Warning?”, Palgrave Macmillan, 2007, p. 204

unconventional measure of deposit collection, which supported interest rate policy and increased its efficiency, 3/ the unchanged pace of exchange rate devaluation was maintained.<sup>65</sup> Needless to say, it was due to the institutional strength of the central bank and efficient use of monetary instruments further expansion of credit and borrowing was limited, which in the long run could have harmed the process of stabilization. Therefore, episode of 1996-1997 was rather a positive experience in the process of consolidation. According to eurostat indicators, gross household savings rates in the portion of gross disposable income was 14.21 per cent in 1996 and was maintained till 1998 reaching 14.41 per cent, then slightly going down to 12.92 per cent in 1999, indicating that the saving rate was one of the highest in Poland than compared to that of other transition economies (See Table 6).<sup>66</sup>

**Table 6: Gross Household Saving (% of gross household disposable income)**

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
<b>Poland</b>	14.21	14.08	14.41	12.92	10.73	12.12	8.40	7.77	7.20	7.20	6.56
<b>Czech Republic</b>	11.25	11.04	9.22	8.55	8.50	7.41	8.05	7.43	5.74	8.10	9.12
<b>Estonia</b>	8.00	6.50	4.52	2.57	4.08	3.06	0.46	-1.61	-4.77	-3.80	-3.03
<b>Slovakia</b>	13.46	13.85	12.37	11.24	11.14	9.11	8.88	7.11	6.26	6.94	6.12

*Source: Eurostat*

The period of designing and implementing Strategy for Poland was highly successful, macroeconomic performance showed positive results, growth resumed, inflation went down, though not impressive owing to the independent and gradual policy of disinflation.

<sup>65</sup> Ibid. p.212

<sup>66</sup> Eurostat

Furthermore, upon accepting membership in the OECD in 1997, Poland liberalized current and capital accounts alongside a strategy of gradual yet effective building of market institutions. Thus, as part of the institution-building process, an independent financial regulatory agency was established in 1998 under the name of Monetary Policy Council (MPC), a purpose of which is “to abolish parliament’s influence on the basic documents defining monetary policy targets and shaped a new strategy that aimed for direct inflation targeting (DIT) measures”.<sup>67</sup> Furthermore, “*The Medium-Term Strategy for Monetary Policy 1999-2003*” designed by the MPC set a goal of below 4 per cent for the inflation rate in 2003 and announced floating the zloty exchange rate in April 2000, departing from the crawling peg.<sup>68</sup> As Jakub Borowski, Michal Brzoza-Brzezina claim, “floating exchange rate was a good choice for the Polish economy, it not only provided the full autonomy of antiinflationary monetary policy (constrained by the “impossible trinity problem”), but also immunized the economy against external shocks that could have otherwise caused a currency crisis”.<sup>69</sup>

However, the “golden period” of economic growth did not last for long and was followed by a phase of temporary “cooling-off” between 1999 and 2002. Accelerating GDP growth went down to 1.4 per cent in 2002 and current account balance reached lowest scale of 11 bln USD in deficit in 1999 (See Table 7). The slowdown was due to the price sensitivity and intense competition put on country’s exports, which gradually declined further to – 5 bln USD in 2002.<sup>70</sup> On the positive side, inflation continued to go down gradually and reached a single digit level in 1999 with 7.3 per cent later slowly getting to 1.9 per cent in 2002, which was truly a desired achievement after years of pursuing persistent disinflation policies.

<sup>67</sup> Ryszard Kokoszczyński, “Poland before the Euro”, *Journal of Public Policy*, Vol.22, No.2, 2002, p. 211

<sup>68</sup> Jakub Borowski, Michal Brzoza-Brzezina, “Designing Poland’s Macroeconomic Strategy on the Way to the Euro Area”, *Bank i Kredyt* 1/2003, National Bank of Poland, p. 3

<sup>69</sup> *Ibid.*, p. 4

<sup>70</sup> Economic Intelligence Unit databases

**Table 7: Polish Economic Performance, 1994-2002**

<b>Poland</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>
<b>Inflation (%)</b>	33.3	26.8	20.1	15.9	11.7	7.3	10.1	5.5	1.6
<b>GDP Growth (%)</b>	5.3	7.0	6.1	6.9	4.8	4.1	4.0	1.0	1.4
<b>Current Account Balance (bln USD)</b>	-0.9	5.5	-1.4	-4.3	-6.8	-11.5	-9.9	-7.1	-5.0
<b>Unemployment</b>	16.0	14.9	13.6	10.9	10.2	13.4	16.4	18.5	19.8

*Source: Economic Intelligence Unit databases*

Consolidation efforts put forward by the Strategy for Poland along with the legacy of gradualism went beyond its timeline of 1994-1997. In terms of macroeconomic performance this was a “golden period” in Polish stabilization and signaled the end of the painful post-communist transition period. The above success was largely due to building of sound fundamentals, shaping and defining the role of independent institutions, such as the Monetary Policy Council and the central bank, that were capable of facing constraints put forward by the period of temporary slowdown from 1999-2002.

To conclude, “Poland on the eve of new millennia was a member of OECD and WTO and an associate member of the EU, had highly educated labor force, proximity to rich markets and strategic investors, and openness to investment and trade”.<sup>71</sup> Thus, the strategy of gradual disinflation, thus stabilization, worked as predicted though carefully guided policies and building effective institutions that ensure active participation in executing those policies.

<sup>71</sup> Gregorz Kolodko, “The Polish Alternative: Old Myths, Hard Facts, and New Strategies in Successful Transformation of the Polish Economy” in “Post-Communist Transition, The Thorny Road”, University of Rochester Press, 2000, p. 46

### 3.3. Third Stage of Stabilization, 2003-2008

Starting from 2003, after a period of “cooling off” from 1999 to 2002, economic indicators began to show positive performance. Growth resumed to 3.8 per cent from previous 1 per cent in 2001 and 1.4 per cent in 2002 along with inflation at 0.7 per cent in 2003<sup>72</sup> hitting its lowest since the beginning of the transition process. With an increasing prospect of joining the EU, robust economic growth in Poland was supported by further institution-building measures, including a new tax system in line with the EU *acquis communautaire*. Moreover, active accession talks that started in 2002 ended successfully with a full membership in May in 2004.

Following the EU entry economic performance further accelerated with growth picking up at 5.3 per cent in 2004, due to increasing consumption and investment spending. Additionally, “inflow of FDI sharply increased in line with competitive labor costs and improving business environment”.<sup>73</sup> In 2004 Poland attracted 12 billion USD of FDI, a quarter of which was directed towards financial intermediation.<sup>74</sup> As for inflation, 2006 was marked as having lower inflation rate of 1.5 per cent compared to 2002 when it hiked to 3.5 per cent<sup>75</sup> (See Table 8).

Upon accession to the EU in 2004, a pledge to join the EMU became an immediate priority. Thus, the government and the central bank set a goal of adopting the euro by mid 2009, which was entirely plausible as macroeconomic performance indicated quite a convergence with the Maastricht criteria already in 2008, with the exception of a slight increase in inflation. The general government deficit was at -2.3 per cent of GDP, which is below Maastricht criteria of -3 per cent of GDP and external debt is at 50.2 per cent again below the criteria of 60 per cent of. However, inflation went up to 3.4 per cent

<sup>72</sup> Economic Intelligence Unit databases

<sup>73</sup> EBRD Transition Report, April 2006, p.16

<sup>74</sup> Ibid. p. 19

<sup>75</sup> Economic Intelligence Unit

in 2008 from previous 1.5 per cent in 2006<sup>76</sup> (See Table 8). The sudden hike in inflation is attributed to the external circumstances, namely the global economic slowdown, which resulted in slight delay in Euro zone membership being set at 2010, instead of the initial projections of 2009.

In terms of economic performance during the crisis, which sprung up in 2008, no signs of recession or major imbalances in the economy were recorded. Inflation did not skyrocket, instead it stayed at 3.4 per cent, a decrease from 3.9 per cent in 2007.<sup>77</sup> Growth remained strong at 5 per cent of GDP, due to high domestic demand and investment, though output weakened, but did not collapse. Furthermore, in the eve of the crisis, fiscal consolidation action were taken by the government along with central bank's efforts of keeping the inflation at low levels through tightening of the monetary policy.

Thus, strong and resistant economic performance is due to the firm fundamentals and gradual building of market institutions as well as availability of instruments in the hands of these institutions to monitor economic activities with the aim of avoiding major downfalls.

**Table 8: Polish economic performance, 2003-2008**

<b>Poland</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>
<b>Inflation (%)</b>	0.7	3.5	2.1	1.5	3.9	3.7
<b>GDP Growth (%)</b>	3.8	5.3	3.5	6.2	6.7	5.0
<b>External Debt (%)</b>	49.3	50.8	43.8	49.6	55.3	50.2
<b>Government Balance (%)</b>	-4.5	-4.6	-3.7	-3.3	-2.0	-2.3
<b>FDI (bln USD)*</b>	4.0	12.8	8.2	15.0	16.6	9.8

*Source: Economic Intelligence Unit; \*Ministry of Economy, Analysis and Forecasting Department, Poland*

<sup>76</sup> Ibid.

<sup>77</sup> Economic Intelligence Unit databases

To conclude, Polish growth recovered from the previous period of “cooling-off” and caught up again in 2003 further giving way to a steady increase until 2008. The third stage of stabilization can be characterized as a continuation of efforts in stabilization and consolidation of market institutions especially when the prospect of joining the EU became evident. Moreover, membership in the EU in May 2004 granted access to mass inflow of FDI supported by strong economic growth. Joining the EMU upon accession to the EU still remains the highest priority in the monetary policy field. The prospects of adopting the euro got slightly delayed by the global economic crisis, which started in 2008.

Moreover, according to a survey conducted by the European Economy, inflation is likely to decrease further to 2.5 per cent in 2009, general government deficit is forecasted to deteriorate slightly to 2.5 per cent of GDP in 2009, which is counted as the expected outcome of a worse economic situation, gross debt is projected to decrease gradually from 50.2 per cent of GDP in 2008 to about 43 per cent in 2010.<sup>78</sup> According to the forecasts, Poland will be able to join the Euro zone by 2010, except for a slight increase in inflation.

Thus, the crisis does not lead to serious imbalances as soaring inflation, deteriorating current account balance or an output collapse. The successful performance is due to gradual and persistent efforts of building solid independent market institutions as well as obligations on part of the authorities to act accordingly with the goals set to join the Euro zone at a due date.

---

<sup>78</sup> European Economy, “Poland: Slower growth despite sound fundamentals”, No.6, Autumn 2008, p. 102-103

### 3.4. Conclusion

The macroeconomic stabilization process in Poland is qualified as a success story, mainly owing to the gradual, conservative strategy of slowly applying institutional changes by adopting a market mentality through time.

However, the Polish transition process is thought to have started with a radical strategy of “shock therapy” in 1990, which implied a sudden opening up of the economy through price liberalization, rapid turnover of state assets to private hands and liberalization of trade. Macroeconomic indicators following the strategy of the “shock therapy” in 1990 showed worse performance compared to the beginning of transition in 1989. Thus, critics of the radical liberalization plan argue that it created multiple shocks to the economy delivering negative outcomes.

Either way, by 1992 economic performance started to show slightly better performance with growth shifting to a positive scale -2.6 per cent from previous -7.6 per cent in 1992 and industrial output increased to 3.9 per cent in 1992 to -11.6 per cent in 1991. However, inflation continued to remain high though the hyperinflation reaching 584.7 per cent in 1990 was brought down to 36 per cent by 1993.<sup>79</sup> On the other hand, in terms of policies, the establishment of an independent Central Bank, passing laws on balanced budget, tax reforms and exchange rate stabilization policies delivered positive outcomes in the medium-long run.

The second stage of the stabilization process was characterized by implementing a gradual approach to the stabilization process. Starting from 1994, more gradual approach to stabilization was introduced bringing the “golden years” to Polish economic performance from 1994 to 1997, during which effective institution-building measures were undertaken. Additionally, an independent financial regulatory agency, Monetary

---

<sup>79</sup> Economic Bulletin for Europe, ECE (New York, United Nations)

Policy Council with the aim of direct inflation targeting and abolishing state's influence on monetary policy was established in 1998 a year after Poland gained membership in the OECD. However, the "golden period" was followed by a phase of "cooling off" from 1998 to 2002, but this was overcome on the basis of sound fundamentals laid by the policy of implemented during years of gradualist approach. Furthermore, by 2002 increasing aspects of joining the EU further intensified activities in stabilization and consolidation of market institutions.

In the final stage of the stabilization process from 2003 to 2008, success in macroeconomic performance was evident. Not impressive, yet stable growth, which is a result of the constant process of learning-by-doing, is averaging between 4 to 6 per cent along with low inflation. In addition, the inflow of FDI has increased following EU accession in May 2004 and was helped by "robust economic growth, competitive labor costs and improving business improvement".<sup>80</sup>

Moreover, the strategy of slowly applying evolutionary institutional changes in the stabilization process is helping Poland to overcome major downfalls created by the global economic crisis that started in 2008. Owing to the building of solid market institutions, Poland will not experience recession, as a result it will be able to enter the Euro zone in the projected date of 2010.

In the next chapter I will outline the major arguments on the importance of institution-building in the transition economies. Moreover, institutions matter and countries that develop on the grounds of learning-by-doing, trial and error processes do benefit from the effective institutions building process, as demonstrated in the case of Poland.

---

<sup>80</sup> EBDP Transition Report, April 2006, p.19

## CHAPTER IV: SHORT-CUT vs. GRADUALISM

Institution-building matters as a part of the macroeconomic stabilization process in transition economies. Moreover, the establishment of formal and informal institutions constitutes the major factor in the stabilization process. The first part of the following chapter gives more abstract arguments on the benefits of building institutions. As formal and informal rules of behavior between various agents in the economic process evolve through time, so do institutions change shapes and functions as a result of the slow process based on learning, observation and evaluation. For post-transition countries adopting a market economy by abolishing the centrally planned one means adapting to the “market mentality”, which requires a slow change in the mentality of the actors who have an incentive to structure the emerging institutions.

The second part of the chapter will outline the implications of the institution-building process in the case of Poland. Unlike Estonia, which seems to have neglected the importance of building solid institutional infrastructure, Poland with its commitment to evolutionary gradual approach in shifting to the market economy is now qualified as a success story in terms of macroeconomic stabilization performance.

### 4.1. Role of Institution-Building in Transition Process

*Successful political/economic systems have evolved flexible institutional structures that can survive the shocks and changes that are a part of successful evolution.*<sup>81</sup>

- Douglass C. North

---

<sup>81</sup> Lee J. Alston, Thrainn Eggertsson, Douglass C. North, “Empirical Studied in Institutional Change”, Cambridge University Press, 1996, p. 354

Institutions are comprised of rules of the repeated game, in other words they “imply the humanly devised constraints that structure human interaction [and] are made up of formal constraints (rules, laws, constitutions), informal constraints (norms of behavior, conventions and self imposed codes of conduct), and their enforcement characteristics”.<sup>82</sup> Why of a repeated game? Because rules and norms evolve through time with changes and modifications applied in the economic activities.

Therefore, the institutional matrix does not emerge spontaneously, but rather is constituted as an outcome of a gradual process of learning, through which actors are able to identify the measures that best fits their interest. In other words, institution-building is a slow process of learning-by-doing and of trial and error. Similarly, Douglass North, in his paper entitled “Economic Performance Through Time”, compares the process of building institutions to that of “forming mental framework in a child”, he notes that “classifications gradually evolve from earlier childhood to organize perceptions and keep track of the memory of analytic results and experiences, which further leads to formation of mental models to explain and interpret the environment, typically in ways relevant to some goal”.<sup>83</sup> By the same token, institutions enact as a part of *path dependence* and emerge as an outcome of gradual learning process, of observation and evaluation. Moreover, according to North, “learning constitutes the long run source of change, in economics the rate of learning will reflect the intensity of competition among organizations, therefore if the degree of monopoly is great, the lower is the incentive to learn”.<sup>84</sup>

In a similar way, the role of institution-building should constitute a crucial part of the transition process from centrally planned to free market economy as entering the latter arrangement implies learning the market mentality, i.e. in transition economies the

---

<sup>82</sup> Ibid., p. 344

<sup>83</sup> Ibid., p. 347

<sup>84</sup> Ibid., p. 346

“learning the market” will imply real long-term change with an abolition of the monopoly power and emergence of the competitive mentality. However, scholars claim that institution-building process was largely neglected by policy-makers at the beginning of the transition process, during which the Washington Consensus or shock therapy/ “jump to the market economy” type of policies were most fashionable. It should be noted that liberalization and stabilization policies work best when it is preceded by or accompanied with significant efforts in building accountable institutions.

According to Kolodko, “even if the laws regulating the rules of an emerging market economy have already been adopted by the transition countries, and even if the organizations charged with enforcing observance of the laws have been established, there still remains the challenge of relatively lagging behind in the market culture and behavior”.<sup>85</sup> There is a difference between enforcing the formal rules and adopting the behavior of informal conduct, the latter constitutes much more lengthy process. As North notes, “transferring the formal political and economic rules of successful Western market economies to Third World and Eastern European economies is not a sufficient condition for good economic performance”.<sup>86</sup>

Therefore, the process of “learning the market” is indeed a gradual one, as it requires time to dismantle the old centrally planned institutional mentality and create a new one on the ground. In doing so, a simple process of liberalization or privatization does not serve as a panacea for successful transition, instead constant efforts need to be made in the process of creating effective institutions that operate along the logic of the market.

---

<sup>85</sup> Gregorz Kolodko, “Globalization and Catching-Up: From Recession to Growth in Transition Economies”, IMF Discussion papers, No.100, 2000, p. 20

<sup>86</sup> Lee J. Alston, Thrainn Eggertsson, Douglass C. North, “Empirical Studied in Institutional Change”, Cambridge University Press, 1996, p. 353

Furthermore, the process of building sound institutions requires a careful interplay of political, economic and legal bodies. These include creating an effective legal structure, including the establishment and development of new laws- trade and tax codes, capital market regulations, the protection of property rights, antitrust relations, consumer protection and environmental protection<sup>87</sup>; transparent and credible financial structure, including accounting standards, deposit requirements and banking supervision.

Moreover, according to Stiglitz, some “social glue” is necessary in “creating social institutions, social capital and trust as implicit contract, necessary to a market society, can not be simply legislated, decreed and installed by a reform government”.<sup>88</sup> Thus, the building of sound market institutions requires time and change in orderly fashion as it is dependent on the shift in mentality of the society.

To conclude, institution-building constitute a routine action that depends on the adaptive behavior of the actors in absorbing formal and informal rules of the game. As such, the transition process is successful when it is accompanied by effective institutional engineering. However, “the underlying assumption that after the transplantation of the “right” institutions, the Central and Eastern European societies would rapidly turn into “flourishing landscapes”<sup>89</sup> was misleading as building market institutions in transition economies is a slow process, which requires gradual change. In other words, “institutions happen, emerge, grow, contract, change, get perverted, are captured by interest groups, develop their own organizational structure, and are constantly influenced by and interacting with their environment”.<sup>90</sup>

<sup>87</sup> Gregorz Kolodko, “Globalization and Catching-Up: From Recession to Growth in Transition Economies”, IMF Discussion papers, No.100, 2000, p. 46

<sup>88</sup> Stiglitz quoted in “Institution-Building in the New Democracies, Studies in Post-Post-Communism”, Hans Georg Heinrich, Collegium Budapest, 1999, p. 7

<sup>89</sup> Hans Georg Heinrich, “Institution-Building in the New Democracies, Studies in Post-Post-Communism”, Collegium Budapest, 1999, p. 5

<sup>90</sup> Ibid., p. 12

## 4.2. Comparing Stabilization Performances in Estonia and Poland

Diverging patterns emerge when looking at the macroeconomic stabilization strategy in Estonia and Poland. In the case of the former numbers indicated a fast drop in inflation and accelerating growth shifting to positive numbers by 1995, whereas in the case of Poland, inflation gradually, although not impressively, went down along with growth resuming and stabilizing around 5 per cent annually by 2000.

Estonia opted for a currency board regime, which effectively brought down the inflation and restored growth by creating credibility for the newly established currency, the kroon, as well committing the authorities to a simple monetary rule. On the one hand, Estonia experienced above potential growth performance averaging 8-10 per cent annually since the beginning of 2000 up until 2007. In addition to the accelerating growth the country became a favorite target for the massive inflow of FDI due to its status of small open market economy with a stable fixed exchange rate. Moreover, the staggering macroeconomic performance led to membership in the EU in 2004. However, on the other hand, massive inflow of capital coupled with low interest rates resulted in a credit boom. Driven by consumption expansion households and individuals became increasingly indebted as numbers indicate gross household savings dropping to -3.03 per cent from 8 per cent in 1996 (See Table 6, p. 36), in the bottom third place among 27 countries of the EU, only after Romania -13.98 per cent and Latvia -3.65 per cent. Due to the inability of domestic financial systems to provide credit, domestic borrowers started looking for foreign sources, thus allowing the external debt to exceed 100 per cent in 2008. Growing macroeconomic imbalances triggered an overheating and recession in the beginning of 2008. The question is, whether the “currency board system has actually backfired”.<sup>91</sup> It should be noted that currency board arrangement works as a short-term

<sup>91</sup> Csaba, Laszlo, “Crisis in Economics?” Akademiai Kiado, 2009, p. 107

solution and should be accompanied by necessary structural reforms, so that the country can later effectively shift to more sophisticated arrangements. However, in the case of Estonia, *first*, lured by the talk of the “Baltic Miracle”, authorities were not keen on slowing down the growth and while building necessary market institutions, *second*, hyperliberalization policies inconsistent with the rules of the currency board arrangement did not leave any instruments in the hands of the authorities to prevent and stop the economic downturn.

However, in the case of Poland the conservative approach to macroeconomic stabilization worked as predicted allowing for gradual disinflation and steady, yet not impressive increase in economic performance. Institution-building was at the core of the stabilization process aiming for a slow shift to the market economy, thus market mentality. Polish authorities step by step implemented structural reforms starting with the introduction of the law on the central bank, law on balanced budget, exchange rate stabilization, tax reform and the enterprise reform. In 1998 an independent financial regulatory agency was established under the name Monetary Policy Council (MPC). Moreover, upon accession to the OECD, current then capital accounts were liberalized. Eventually sound fundamentals and effective institution-building measures led to membership in the EU in 2004. Overall, unlike Estonia, Poland opted for a conservative strategy aiming for building effective independent market institutions and allowing the emergence of a “market mentality”. When the global economy faced a crisis in 2008, Poland was proved to be resilient, whereas Estonia is still facing recession and unable to overcome the major imbalances.

In terms of Euro adoption strategies, both countries set a priority to meet the Maastricht criteria upon their accession to the EU in 2004. Perspective for early adoption of the euro was feasible by 2006 for both countries as indicators of 2004 were already

showing convergence. As for Poland, inflation was at 3.5 per cent and was expected to fluctuate around 2 per cent in the long run, interest rates have come down sharply fulfilling the interest rate criterion, public debt attained 50.8 per cent, which is below Maastricht criteria of 60 per cent, general government deficit -3.9 per cent exceeding -3.0 per cent.<sup>92</sup> According to Jakub Borowski and Michal Brzoza-Brzezina, to achieve “simultaneous fulfillment of the exchange rate, inflation and general government deficit, fiscal tightening seemed inevitable [...] fiscal austerity will not only increase the credibility of the exchange rate policy, but also give strong support to the interest rate policy in the process of final disinflation”.<sup>93</sup> Thus, the fiscal tightening brought general government deficit down and by 2008 Polish macroeconomic indicators showed a convergence with the Maastricht criteria (See Table 8). However, due to the global economic downturn inflation is slightly above the criteria, which will delay the Euro zone membership to 2010 from the initial 2009 predictions.

In contrast, Estonian status on the fulfillment of the Maastricht criteria has deteriorated since 2006, when the country’s membership in the Euro zone was rejected due to the high inflation, which was at 4.4 per cent above the criteria of 2.6 per cent. Estonian authorities were not able to control the capital flows and keep the conservative fiscal stance. With the de-stabilization, the prospects of joining the Euro zone is getting more difficult to foresee. In 2008, inflation rose to 10.8 per cent and external debt exceeded 100 per cent. In addition, once the champion of growth, the country shifted to a negative scale in growth performance reaching -1.3 per cent in 2008. Eventually, the considerable swings and changes in the macroeconomic performance disrupted the growth cycle. Thus, in the case of Estonia the neglect for major structural reforms, including effective market institutions coupled with policies that are inconsistent with the

<sup>92</sup> Jakub Borowski, Michal Brzoza-Brzezina, “Designing Poland’s Macroeconomic Strategy on the Way to the Euro Area”, Bank i Kredyt 1/2003, National Bank of Poland, p. 7

<sup>93</sup> Ibid., p. 23

policies of currency board arrangement are the main sources of the long-run de-stabilization.

## CONCLUSION

This thesis has analyzed the diverging trends in the macroeconomic stabilization paths followed by the two post-transition economies, Estonia and Poland. In the case of the former, it has argued that the stabilization was achieved fast, in comparison with Poland, by adopting the Currency Board Arrangement (CBA), which served as an automatic stabilizer in creating credibility and stability of the newly established currency. Whereas Poland opted for a conservative strategy, applying an evolutionary approach, thus allowing for the gradual emergence of market institutions and market mentality. After two decades of transition, by looking at the past macroeconomic indicators, one can see a stable pattern in the Polish stabilization process, while the Estonian path is characterized by a period of above potential growth followed by the collapse in economic performance.

The findings underlining the Estonian case suggest that the country opted for policies of hyperliberalization, which allowed for expansion in consumerism and led to a credit boom, however the country's unique Currency Board Arrangement did not leave any instruments in the hands of the authorities to control the monetary policy and increasing macroeconomic imbalances. Furthermore, due to the external circumstances, namely the global economic crisis, which started in 2008, the economy proved to be unable to tackle the major challenges and shows signs of overheating and recession. If the crisis continues to wreck the Estonian economy it will not only challenge its prospects of joining the Euro zone, but also pose a serious question of whether the country should exit from the arrangement and implement the long overdue structural reforms.

As for Poland, applying institutional changes from the outset ensured a smooth stabilization process. Institution building measures, such as establishing an independent

central bank and putting legal constraints on the deficit, setting an independent regulatory agency to secure the gradual shift to the market economy on the basis of slow process of learning-by-doing has been successful.

All in all, by comparing and analyzing the stabilization performances in two post-transition economies I have found that, *first*, the currency board arrangement coupled with hyperliberalization and neglect for the structural changes in part of the authorities resulted in de-stabilization of the Estonian economy, *second*, structural changes and institution-building measures served as a catalyst in the stabilization process in the Polish case and *finally*, gradual institutional change that occurred in Poland proves to be a more effective strategy in stabilizing the macroeconomic performance.

However, the topic of macroeconomic stabilization in post-transition countries is vast and thus creates considerable room for further research.

## APPENDIX

## Pre-1990 currency boards

ATISH R. GHOSH, ANNE-MARIE GULDE AND HOLGER C. WOLF

Country	Colony of	Independence	Years under CBA	Reserve ratio and assets	Basis currency
Abu Dhabi	UK	1971	1966–1973	100%+ Gold and Foreign Reserves	£
Aden (Yemen)	UK	1967	1951–1972	100%+ £	£
Anguilla	UK		1935–1983	100%+ £ and West Indies	£
Antigua and Barbuda	UK		1935–1983	100%+ £ and West Indies	£
Antigua and Barbuda	UK		1983–present	60% foreign reserves and gold	US\$
Argentina			1902–1914	100% Gold after 293m Pesos	Gold
Argentina			1927–1929	100% Gold after 293m Pesos	Gold
Bahamas	UK	1973	1916–1974	100%+ £	£ (\$ after 1966)
Bahrain	UK	1971	1965–1973	100%+ Foreign Reserves	£
Barbados	UK	1966	1937–1973	100%+ £	£
Bermuda	UK		1915–present	110%+ £ (1915–70) 115 \$(1970–present)	£ (\$ after 1970)
British Guiana (Guyana)	UK	1966	1937–1965	100%+ £ + 10% Guiana	£
British Honduras (Belize)	UK	1981	1894–1981	67% Gold, 33% £ and US Dollar, 100 £/Dollar after 1939	Dollar
British Solomon Islands	UK	1978	1930s–1940s	100%+ Australian and £	Australian £
British Somaliland (Somalia)	UK	1960	1942–1961	100% £	£
Brunei	UK	1983	1952–1973	110% £, 100% Gold and Foreign Exchange after 1967	Singapore \$
Brunei-Darussalam				Liquid foreign assets	£
Burma	UK	1948	1947–1952	100% £	£
Cameroon	UK	1959	1916–1959	110% £	£
(Cameroon/Nigeria)					
Cayman Islands	UK		1933–1961	100% £	Jamaica (£)
Cayman Islands	UK		1972–present	100% US Dollar	US Dollar
Ceylon (Sri Lanka)	UK	1948	1884–1950	110% £ and Rupees 1917–1950	Indian Rupee
Cyprus	UK	1960	1928–1964	110% £	£
Danzig (Gdansk)			1923–1924	100% £	£

Country	Colony of	Independence	Years under CBA	Reserve ratio and assets	Basis currency
Maldiv Islands	UK	1965	1849–1967	100% + £	Linked to Mauritius
Malta	UK	1964	1949–1965	33–50% Coin, 50–67% Mauritius rupees and £, 110% £ since 1934	£
Mauritius	UK	1964	1849–1967	100+ £ West Indies	Indian Rupee, £ since 1934
Montserrat	UK	1907	1935–1983	25% (min) coin, 75% (max) £	£
New Zealand	UK	1960	1850–1856	110% £	£
Nigeria	UK	1960	1913–1959	110% £	£
North Borneo (Malaysia)	UK	1963	1881–1942	110% £	Spanish 1\$, £ since 1906
North Russia			1946–1967	75% £, 25% Rubles	£
Northern Rhodesia (Zambia)	UK	1964	1918–1920 1940–1956	110% £ 1940–1942, 100% £ + 10% Rhodesian £ 1942–1947, min 50% £ + max 60% Rhodesian £ 1947–1956.	£
Nyasaland (Malawi)	UK	1966	1940–1956	110% £ 1940–1942, 100% £ + 10% Rhodesian £ 1942–1947, min 50% £ + max 60% Rhodesian £ 1947–1956.	£
Oman				100% + £	£
Palestine	UK		1970–1974 1927–1948	110% £	£
Panama			1904–1931	100% silver coin + 15% US\$ = 100% of gold	US\$
Philippines	USA	1946	1903–1918	100% silver coin + 15–25% US\$ 17.5 US\$ + 17.5% Pesos 1908–1918.	US\$
Philippines	USA	1946	1923–1942	100% silver coin + 15–25% US\$	US\$
Philippines	USA	1946	1945–1948	100% silver coin + 15–25% US\$	US\$
Qatar	UK	1971	1966–1973	100% gold and foreign exchange	Gold
St Helena	UK		1970s	100% + £	£
Sarawak (Malaysia)	UK	1963	1927–1942, 1946–1967	110% £	£
Seychelles	UK	1976	1849–1966	100+ £	Linked to Mauritius
Sierra Leone	UK	1961	1913–1964	110% £	£
Singapore	UK	1967	1899–1942, 1946–1973	50–67% coin + 33–50% Indian r and £ (1899–1923), 110% £ 1923–1942, 1946–1967, 100% gold and foreign exchange 1967–1973	£

## CURRENCY BOARDS

Southern Rhodesia (Zimbabwe)	UK	1965	1940–1956	110% £ 1940–1942, 100% £ + 10% Rhodesian £ 1942–1947, min 50% £ + max 60% Rhodesian £ 1947–1956.	£
St Kitts and Nevis	UK		1935–1983	100+ £ West Indies	£
St Kitts and Nevis	UK		1983–present	60% foreign reserves and gold	US\$
St Lucia	UK	1970s	1935–1983	110% £ 1951–64, 70% £ + 30% West Indies \$ 1964–68, 100% £ + some West Indies \$ 1968–71, 100% foreign exchange 1974–83.	Trinidad 1935–51, £ 1951–76, US\$ 1976–83
St Lucia	UK	1970s	1983–present	60% foreign reserves and gold	US\$
St Vincent	UK	1970s	1935–1983	110% £ 1951–64, 70% £ + 30% West Indies \$ 1964–68, 100% £ + some West Indies \$ 1968–71, 100% foreign exchange 1974–83.	Trinidad 1935–51, £ 1951–76, US\$ 1976–83
Grenadines	UK	1970s	1983–present	60% foreign reserves and gold	US\$
St Vincent	UK	1970s	1983–present	60% foreign reserves and gold	US\$
Grenadines	UK	1970s	1983–present	60% foreign reserves and gold	US\$
Sudan	Egypt, UK	1956	1957–1960	50% £ + 50% Sudanese £	£
Swaziland	UK	1968	1974–1986	100% South African Rands	Rand
Tanganyika	UK	1961	1920–1966	100% £	£
(Tanzania)	UK	1957	1914–1958	110% £	£
Togoland (Ghana)	UK	1957	1914–1958	110% £	£
Tonga	UK	1970	1936–1974	100+ % £ and Australian	Australian £
Transjordan	UK	1946	1927–1964	110 £	£
(Jordan)	UK	1962	1935–1964	100%+ £	£
Trinidad and	UK	1962	1935–1964	100%+ £	£
Tobago	UK	1962	1919–1966	100% £	£
Uganda	UK	1962	1919–1966	100% £	£
Western Samoa	NZ	1962	1920–1973	100% New Zealand	£ (1920–1967), NZ 1967–1973
Yemen Arab			1964–1971	100%+ £	£
Republic					
Zanzibar	UK	1961	1936–1966	100% £	£
(Tanzania)	UK	1961	1936–1966	100% £	£

Sources: Schuler (1992), web-version pages 65–70 and Ghosh *et al.* (1998).

Country	Colony of	Independence	Years under CBA	Reserve ratio and assets	Basis currency
Maldives Islands	UK	1965	1849–1967	100%+ £	Linked to Mauritius £
Malta	UK	1964	1949–1965	33–50% Coin, 50–67% Mauritius rupees and £, 110% £ since 1934	Indian Rupee, £ since 1934
Mauritius	UK	1964	1849–1967	100+ £ West Indies	£
Montserrat	UK		1935–1983	25% (min) coin, 75% (max) £	£
New Zealand	UK	1907	1850–1856	110% £	£
Nigeria	UK	1960	1913–1959	110% £	£
North Borneo (Malaysia)	UK	1963	1881–1942	110% £	Spanish 1\$, £ since 1906
North Russia			1946–1967	75% £, 25% Rubles	£
Northern Rhodesia (Zambia)	UK	1964	1918–1920	110% £ 1940–1942, 100% £ + 10% Rhodesian £	£
			1940–1956	1942–1947, min 50% £ + max 60% Rhodesian £	£
				1947–1956.	
Nyasaland (Malawi)	UK	1966	1940–1956	110% £ 1940–1942, 100% £ + 10% Rhodesian £	£
				1942–1947, min 50% £ + max 60% Rhodesian £	
				1947–1956.	
Oman				100%+ £	£
Palestine	UK		1970–1974	110% £	£
Panama			1927–1948	100% silver coin + 15% US\$ = 100% of gold	US\$
Philippines	USA	1946	1904–1931	100% silver coin + 15–25% US\$ 17.5 US\$ + 17.5% Pesos 1908–1918.	US\$
			1903–1918		
Philippines	USA	1946	1923–1942	100% silver coin + 15–25% US\$	US\$
Philippines	USA	1946	1945–1948	100% silver coin + 15–25% US\$	US\$
Qatar	UK	1971	1966–1973	100% gold and foreign exchange	Gold
St Helena	UK		1970s	100%+ £	£
Sarawak (Malaysia)	UK	1963	1927–1942, 1946–1967	110% £	£
Seychelles	UK	1976	1849–1966	100+ £	£
Sierra Leone	UK	1961	1913–1964	110% £	£
Singapore	UK	1967	1899–1942, 1946–1973	50–67% coin + 33–50% Indian r and £ (1899–1923), 110% £ 1923–1942, 1946–1967, 100% gold and foreign exchange 1967–1973	Linked to Mauritius £

## BIBLIOGRAPHY

- ALSTON L.J., EGGERTSSON T., North, D.C. (1996): *“Empirical Studied in Institutional Change”*, Cambridge University Press, p. 354
- BALCEROWICZ, L. (1995): *“Socialism, Capitalism, Transformation”*, CEU Press, p. 165
- BENNETT, A. (June 1993): “Operation of the Estonian Currency Board”, *IMF Staff papers*, Vol.40. No.2, p. 453
- BOROWSKI, J. and BRZOZA-BRZEZINA, M. (January 2003): “Designing Poland’s Macroeconomic Strategy on the Way to the Euro Area”, *Bank i Kredyt*, National Bank of Poland, p. 3
- CSABA, L. (2009): *“Crisis in Economics?”*, Akademiai Kiado, p. 10
- CHAMON, M., MANASSE, P. and PRATI, A. (2007): “Can We Predict the Next Capital Account Crisis?”, *IMF staff papers*, Vol. 54, No.2, p.270
- DHANJI, F. (May 1991): “Transformation Programs: Content and Sequencing”, *the American Economic Review*, Vol. 81, No. 2, pp. 323- 324
- DRAGOMIROVA, D. (June 2000): “Currency Board Arrangements and the Way to EU Accession: The case of Bulgaria”, *MA Thesis*, p. 20
- EUROPEAN COMMISSION, Directorate General II (1998): “The Euro: Explanatory Notes”, [www.europa.eu/comm/economy\\_finance](http://www.europa.eu/comm/economy_finance)
- ENOCH, C. and OTKER-ROBE, I. (2007): *“Rapid Credit Growth in Central and Eastern Europe, Endless Boom or Early Warning?”*, Palgrave Macmillan, p. 204
- EUROPEAN ECONOMY (autumn, 2008): “Poland: Slower growth despite sound fundamentals”, No.6, p. 102-103
- GHOSH, A.R., HOLGER C.W, BERGER, H., GULDE A-M. (2008): “Currency Boards in Retrospect and Prospect”, MIT press, p.154
- GHOSH, A.R., HOLGER C.W, BERGER, H., GULDE A-M. (Oct.2008): “Currency Boards: More than a Quick Fix?” *Economic Policy*, vol. 15, no.31, p. 324
- GHOSH, A.R., HOLGER C.W, BERGER, H., GULDE A-M. (1998): “Currency Boards, the Ultimate Fix?”, *IMF Working paper WP/98/8*, p.7
- GHOSH, A.R., HOLGER C.W, BERGER, H., GULDE A-M. (2000): “Pros and Cons of Currency Board Arrangements in the Lead-up to EU Accession and Participation in the Euro Zone”, *IMF Policy Discussion Paper*

- HANKE, S. (January 2002): "Currency Boards", *ANNALS, AAPSS*, 579, p. 90
- HANKE, S. and WALTERS, A. (1992): "*Currency Boards in the New Palgrave Dictionary of Money and Finance*", London, Macmillan
- HEINRICH H.G. (1999): "*Institution-Building in the New Democracies, Studies in Post-Post-Communism*", Collegium Budapest, p. 5
- KOKOSZCZYNSKI, R. (2002): "Poland before the Euro", *Journal of Public Policy*, Vol.22, No.2, p. 211
- KOLODKO, G. (2000): "The Polish Alternative: Old Myths, Hard Facts, and New Strategies in Successful Transformation of the Polish Economy" in the "*Post-Communist Transition, The Thorny Road*", University of Rochester Press, p. 46
- KOLODKO, G. (2000): "Globalization and Catching-Up: From Recession to Growth in Transition Economies", *IMF Discussion papers*, No.100, p. 20
- KOLODKO, G. (2005): "The Polish Miracle, Lessons for the Emerging Markets", Ashgate publishing, pp. xvii-xxiv
- KOPCKE, R. (May/June 1999): "Currency Boards: Once and Future Monetary Regimes?" *New England Economic Review*, p.36
- KORHONEN, I. (1999): "Currency boards in the Baltic countries: What have we learned?", BOFIT, discussion papers, no.6, p. 16
- KORHONEN, I. (1999): "Assessing the Baltic Currency Board", *BOFIT discussion papers*, no. 6, p. 32
- LAAR, M. (July 2002): "Little Country That Could", *Center for Reseach into Post-Communist Economies*
- LAMINE B. (August 2008): "Estonia: overheating and sectoral dynamics", *ECFIN Country Focus*, Volume 5, Issue 7, p. 1
- POZNANSKI, K.Z. (1996), "Poland's Protracted Transition, Institutional Change and Economic Growth, 1970-1994", Cambridge University Press, p. 169
- ROUBINI., N. (1998): "The case against Currency Boards: Debunking 10 Myths About the Benefits of CBs", [www.stern.nyu.edu/~nroubini](http://www.stern.nyu.edu/~nroubini)
- SACHS, J. (April 1994 ): "Shock Therapy in Poland: Perspectives of Five Years", *Tanner Lectures on Human Values*, p. 276  
[www.tannerlectures.utah.edu/lectures/documents/sachs95.pdf](http://www.tannerlectures.utah.edu/lectures/documents/sachs95.pdf)
- SCHADLER, S. (June 2004): "Charting a Course toward a Successful Euro Adoption, Newest EU Entrants Should Reap Net Gains from Joining the Euro Area", *Finance and Development*, p.32

## **Statistical databases**

EBRD (1999): National statistical authorities, [www.ebrd.com/pubs/general/series/ar.htm](http://www.ebrd.com/pubs/general/series/ar.htm)

EBDR (April 2006): Transition Report, p.19, [www.ebrd.com/pubs/econo/series/tr.htm](http://www.ebrd.com/pubs/econo/series/tr.htm)

ECB (2008): statistical handbook

ECE (1992): Economic Bulletin for Europe, (New York: United Nations). vol.44  
[www.unece.org/stats/](http://www.unece.org/stats/)

ECE (1994): Economic Bulletin for Europe, (New York: United Nations). vol.46  
[www.unece.org/stats/](http://www.unece.org/stats/)

EESTI BANK (2007) calculations  
[www.eestipank.info/pub/en/dokumendid/statistika/](http://www.eestipank.info/pub/en/dokumendid/statistika/)

EIU (Economic Intelligence Unit), [www.countryanalysis.eiu.com](http://www.countryanalysis.eiu.com)

EUROSTAT, [www.epp.eurostat.ec.europa.eu/portal/page/portal/statistics/](http://www.epp.eurostat.ec.europa.eu/portal/page/portal/statistics/)

IMF databases, [www.imf.org/data.htm](http://www.imf.org/data.htm)

MEAFD (Ministry of Economy, Analysis and Forecasting Department), Poland,  
[www.mg.gov.pl/English/ECONOMY/Economic+Analyses+and+Forecasts/](http://www.mg.gov.pl/English/ECONOMY/Economic+Analyses+and+Forecasts/)