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Outsourcing Central Banking: Lessons from Estonia

Sarkis Joseph Khoury
University of California - Riverside

Clas Wihlborg
Chapman University, wihlborg@chapman.edu

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OUTSOURCING CENTRAL BANKING:
THE CASES OF ESTONIA, AND ARGENTINA

Sarkis Joseph Khoury
University of California-Riverside
and
Clas Wihlborg
Copenhagen Business School

With Contributions by

Mart Sorg
University of Tartu
Vello Vensel
Tallinn Technical University

In memory of Vello Vensel, 1941-2004

Abstract.
The functions of a central bank have traditionally involved the setting of exchange rates and interest rates, as well as a strong supervisory role by the central bank over the banking sector. The Currency Board arrangement: orthodox or Estonian or Argentinian style, has rendered the central banking function redundant in terms of interest rate and exchange rate determination. Foreign direct investment, when substantially targeted to the banking sector, and supported by the local authorities can serve as an effective substitute for the supervisory function of the indigenous central bank. This possible outsourcing of the essential functions of the central bank leaves it with functions limited to the management of the foreign exchange portfolio, data collection, moral suasion, and other minor functions. This eliminates local political intervention if the appropriate legal and legislative frameworks are established, and if the independence of the Central Bank and the permanency of the Currency Board arrangement are absolutely committed to, independent of political currents and ideology. These are big ifs, however. We illustrate the conditions for outsourcing reviewing the Estonian and the Argentinian experiences with Currency Boards and banking crises. These experiences serve as legitimate cases for supporting the outsourcing of central banking functions despite the rough roads traveled by their economies and their commercial banks.

Key words**:** Currency Board, Foreign Banks, Supervision, Regional Integration

I. Introduction

A currency board (CB) arrangement for balance of payments and money supply adjustment is effectively an institution for the "outsourcing" of monetary policy by a central bank. A number of European emerging market economies have established CBs after the withdrawal of the iron curtain[1]. The main argument for a CB arrangement is that – if properly handled – it establishes credibility of a low inflation policy rapidly within a country with weak political institutions and, accordingly, where trust in pronounced economic policy objectives is lacking.

Monetary policy is one area of central bank responsibility. A second important area is banking supervision. Although this function in some countries is the responsibility of a separate financial supervisory authority (FSA) we will consider it one aspect of central banking in this paper. We ask whether both functions of central banks can be outsourced and under what conditions outsourcing is appropriate.

We review the experiences of two CB countries – Estonia and Argentina – in order to identify factors that contribute to the success or failure of the outsourcing of monetary policy and banking supervision. The CB arrangement implies in itself a high degree of outsourcing of monetary policy while outsourcing of the supervisory role of the central banks depends on an important presence of foreign owned banks as well as on the organization of the banks and the supervisors. The CB arrangement influences banking supervision indirectly through the constraints the CB puts on bailouts of banks. In this setting we ask whether the principles favoring outsourcing of monetary policy applies to bank supervision as well.

Outsourcing of important economic policy tools to a neighbouring, well established country with a strong tradition of economic management contributes to the regional

[1] Argentina, Bulgaria, Bosnia-Herzegovina, Djibouti, Estonia and Lithuania at present maintain such a monetary system.

integration of institutions for economic policy. The EU has inspired debate and calls for regional integration in other parts of the world, Asia in particular. Outsourcing of policy in the sense discussed here is a special form of regional integration in that institutions in another country substitute for domestic institutions. The principles we discuss apply as well to cases where regional integration is manifested through multinational institutions. In both cases, national sovereignty in an important policy area is relinquished.

Our choice of countries to examine - Estonia and Argentina - is based on the general observation of Estonia as the success case among CB countries, while Argentina's CB is commonly viewed as a case of failure. Both countries have banking systems dominated by foreign-controlled banks, and are, consequently, better candidates for outsourcing.

The structure of the paper is as follows. Section II describes the foundations of CB structures, the potential benefits of outsourcing of central banking, and the institutional set-up that would lead to almost complete outsourcing of both monetary and supervisory authority. Section III discusses how and why outsourcing generally is partial. The considerations here are both economical and political. Section IV turns to Estonia, a country with strong outsourcing of monetary authority and an almost completely foreign controlled banking system, but the banking supervisor has retained substantial supervisory powers. Argentina, discussed in Section V, went from a relatively strong CB arrangement to a severe currency and banking crisis in 2001. The banking system is not dominated by foreign banks to the extent it is in Estonia. We argue that the "rules of the game" of a currency board were not followed in Argentina and by being a more closed and less liberal economy the conditions for outsourcing of central banking were not met. We draw conclusions with respect to advantages and disadvantages of central bank outsourcing in Section VI. Finally, in the concluding Section VII, we summarize the discussion and draw implications for issues of regional integration.

II. The institutional set-up for outsourcing of monetary and supervisory authority

A number of countries have established currency boards (CB) in recent years. Argentina, Bulgaria, Bosnia-Herzegovina, Djibouti, Estonia and Lithuania at present maintain such a monetary system. The IMF staff has discussed the introduction of currency board arrangements with post-conflict Somalia and Liberia. The pros and cons of a currency board for Russia have been also discussed. In some cases a currency board arrangement has been a major element of a stabilisation programme (Currency Board Arrangements, 1997, p.54). In Estonia, a stable currency based on a CB-arrangement was the cornerstone of the successful program for economic reforms.

Currency boards are not a new phenomenon in economics. The CB-principle was established in the Bank Charter Act of 1844, where the Issue Department of the Bank of England acted as a CB. For this reason, many of the British colonies in Africa, Asia and the Caribbean used CBs on introduction of their own currencies. The first CB was established in Mauritius in 1849. More than 70 such boards operated at one time. Among the best known examples of territories which still have a CB of some kind are Hong-Kong and Argentina. There is also a large literature for the experiences with currency boards in various countries (see Kwan and Lui, 1996; Camard, 1996; Balino and Enoch, 1997; Perry, 1997; Enoch and Gulde, 1997; Eichengreen et al., 1998; Ghosh et al, 1998; Schuler, 1998; Dobrev, 1999; Avramov, 1999; Korhonen, 1996 and 1999; Gulde, 1999; Backe, 1999; Dubauskas et al 1999, Gulde, Kähkönen and Keller, 2000 etc.).

A CB is equivalent to a country specific gold standard. The exchange rate is fixed. Under a gold standard the monetary base depends on the size of the gold reserves, and the interest rate is determined by the forces of supply and demand with no interference from the Central bank or any other government agency. The expansion in the monetary base would depend on the increase in gold reserves and on the ratio between the unit of currency and the unit of gold. This ratio is typically fixed absolutely. Substitutuing a strong convertible currency (an anchor currency) such as the dollar or the euro for gold, and the cornerstone of the Currency Board is obtained. The home currency is fully convertible to the anchor currency at a fixed rate and on demand.

An orthodox CB is a monetary authority that does not have to be the Central Bank, nor housed in it or even in its country. Kurt Schuler (1996) argued that an orthodox arrangement involves the following:

> ‘ A typical, orthodox currency board holds foreign reserves, such as foreign bonds, equal to 100 percent of its liabilities (or in some historical cases up to 115%), as set by law. It has no ability to conduct open market operations , establish required reserve ratios for commercial banks, or engage in other discretionary monetary policies.’

The orthodox CB is not subordinated to a central bank but only backs bank notes with foreign assets. Therefore, some observers do not consider present-day CB arrangements to be “real” currency boards (Hanke, Jonung, Schuler, 1993a, p. 12). The aim of any CB system is to achieve currency convertibility and a fixed exchange rate, and thereby help to stabilise the economy, bring about structural change and integrate the country into the world economy as quickly as possible

The Estonian CB was not orthodox, although very close. The Bank of Estonia (BOE) relied on a classical CB model where it is prohibited by law from devaluing the Kroon or financing any government debt. The Kroon was fully secured by gold and DM reserves. BOE used reserve requirements, prudential measures, loans to banks in distress in rather restrictive fashion.

Under the Estonian CB, like any other CB with considerable orthodoxy, the Monetary authority sets the exchange rate and monetary policy is on automatic pilot. As official foreign exchange reserves increase, so will the monetary base. There is, consequently, no conflict between exchange rates and monetary policy.

The remaining functions of the central bank--bank supervision, currency management activity, settlement system, statistical compilation, etc.-- justify the continuing existence of the central bank. However, we shall argue below that significant foreign direct investment in the banking sector makes the domestic supervisory function redundant diminishing in the process the need to maintain a central bank.

Any fixed exchange rate system implies a degree of outsourcing of control over monetary conditions in a country. The degree of outsourcing depends on the intended time horizon of the fixed rate, the credibility of the rate, the degree of capital mobility, and the share in GDP of international trade. These factors are well known and they will not be discussed at length. The most complete outsourcing is membership of a currency area with one central bank as in the EU. An orthodox currency board comes close. Under such an arrangement there is a one-to-one correspondence between foreign exchange reserves and the money supply.

CBs in practice have a number of “wedges” between the money supply and foreign exchange reserves and these wedges are subject to some discretionary authority by domestic policy authorities. For example, in a fractional reserve banking system, reserve requirements can be used to influence monetary conditions. The strong linkage between foreign exchange reserves and the monetary base can be broken by the issuing of securities by the central bank. A prohibition on lending to fiscal authorities and on open market operations in government securities may be subject to parliamentary authority and, therefore, not always credible.

Other fixed exchange rate arrangements provide the central bank with the authority to conduct open market operations to control the money supply and influence interest rates. The time horizon over which the central bank has the ability to determine the money supply depends on the degree of capital mobility. Under perfect capital mobility the central bank loses all independent monetary control. The CB arrangement provides an institutional setting for relinquishing monetary control at any degree of capital mobility. As noted, the credibility of the CB arrangement requires institutional support to prevent the monetary authority from influencing the money supply by means of various actions in the financial markets.[2]

[2] Sweeney (1999) discusses factors that influence the credibility of a CB arrangement.

The implications of the CB system on the banking system are very important to analyze, as the burden of performance shifts onto the banking sector. Meeting that challenge requires strong human capital, good and honest leadership, and solid strategies within the banking domain.

Under the CB the banking system has to react efficiently, effectively, and creatively to changing capital flows that are occasionally massive. Banks, by necessity have to become international banks in order to respond to changes in their environment dictated largely by international factors.

Turning to outsourcing of banking supervision it is in principle possible for a country to enter an arrangement with a foreign supervisory authority to take responsibility for the supervision of domestic banks. We are not interested in this type of outsourcing here. If a country lacks supervisory capability it is possible to buy (sub-contract) such capability in order to supervise domestic banks. Instead we are concerned with the situation when the banking system in a country is controlled to a large extent by foreign banks, as in many emerging market economics. In Estonia more than 90 percent of bank assets are held by Swedish and Finnish-owned banks. The situation is similar across Eastern and Central Europe where on average 70 percent of bank assets are held by foreign controlled banks. Is there a role for the domestic supervisor in this setting, especially when foreign owned banks are themselves often subject to a proven, effective supervisory authority in the home country?

Foreign control of a bank does not necessarily imply that it is supervised by the home country supervisor. There is in general a division of responsibility between home and host country supervisors. This division may be more or less formalized in memoranda of understanding. Formally, if a bank is incorporated in a country as a subsidiary of a foreign bank, the host country has the legal means to supervise and set rules to the extent it wishes. The subsidiary form of organization of foreign direct investments in the banking sector is by far the dominant organization. A bank considering foreign expansion may set up a representative office as a first step into the host country, but if the host country operations are to become full-fledged operations, the bank must choose either the branch or the subsidiary form of organization. Host countries generally require that foreign banks establish subsidiaries if they have more than a marginal market share. A branch does not have its own capital base, and assets and liabilities are part of a bank beyond the host country supervisor's control. It is difficult, if not impossible, for the supervisor and other authorities to remain informed about the soundness of total banking operations, and even to control whether the bank branches abide by country-specific banking rules. We must note, however, that the home country authorities are responsible for supervising the worldwide exposure and asset risk profile of their home chartered banks no matter the ownership structure abroad.

The complete outsourcing of banking supervision requires that host countries allow foreign banks to choose the branch organization even in cases when the foreign banks have large market shares. Furthermore, the foreign branches must have a dominant market share for the outsourcing to refer to the banking system rather than an individual bank. As long as foreign banks have subsidiaries, the outsourcing of supervision is bound to be incomplete since a subsidiary is a legal entity in the host country with its own capital base.

Deposit insurance schemes play an important role in banking. Does outsourcing of supervision of foreign banks require deposit insurance to be the responsibility of the home country? The European Union's deposit insurance regulation seems to be based on this assumption, since it places the responsibility for deposit insurance on the home countries of banks in the EU. In the US, on the other hand, foreign banks serving American customers must join the American deposit insurance system (the FDIC).

In our view the complete outsourcing of supervision requires that the insurance of host country depositors is the responsibility of the home country, as the EU deposit insurance directive stipulates. To the extent the host country runs the deposit insurance system, it has a financial stake in the safety and soundness of the bank. The financial stake implies that there is a strong incentive to supervise either the bank or the home country supervisor. Having faith in the ability of the home country supervisor may not be sufficient when the government has a direct financial stake in the soundness of the banks.

In the next section we discuss why outsourcing of supervision may not always be politically feasible, but it can be noted here that allowing the banking system to be supervised by foreign supervisors, and the deposit insurance system to be a foreign responsibility requires a great deal of trust in the ability and honesty of the foreign supervisors, including trust in crisis management capabilities, as well as trust in the sufficiency of their deposit insurance system.

The issue of trust in the capabilities and honesty of foreign policy authorities is relevant for the CB arrangement as well. The CB implies that monetary conditions, and hence inflation, are under the control of a foreign central bank. Furthermore, under a CB arrangement, the Lender of Last Resort (LOLR) role of the central bank is relinquished. Thus, foreign banks' subsidiaries in the CB country do not have a LOLR, while foreign banks' branches have one in the central bank of the home country. In this sense there is consistency between a CB arrangement and foreign banks operating through branches.

III. Economics and Politics of Central Bank Outsourcing

The main economic benefits and costs of a CB system are well-known from the Optimum Currency Area (OCA) literature[3]. There are potential costs of relinquishing mechanisms for macroeconomic adjustment. Exchange rate and monetary policies are given up as policy instruments. The benefits follow if a country faces substantial costs of gaining credibility for policies aimed at a stable price level. Possible benefits and costs in terms of national pride will be neglected here, albeit they can be powerful bases for economic decision making.

The benefits and costs of outsourcing banking supervision are perhaps more complex and controversial. The main benefits of foreign direct investments in banking in emerging market economies is that expertise in information systems, risk-evaluation systems, and

[3] See, for example, Wihlborg and Willett (1992) for a review.

bank management can be made available to the domestic banking system very rapidly. In subsidiaries or in branches, this expertise can be combined with local market knowledge to transform a banking structure[4].

Outsourcing of the supervisory function similarly implies that expertise, credibility and impartiality of high quality supervision can be obtained quickly. It can possibly be argued that the foreign supervisor is insufficiently informed about local market conditions but one expects that such expertise will be hired, if the supervisor's incentives to understand host country conditions are present.

There are a number of factors that could make the host country worried about relying on a foreign banking supervisor for important parts of the banking system. First, in the case of a subsidiary organization, the foreign bank could simply abandon the host country if credit losses mount[5]. Worse, the bank foreseeing the abandonment of a country could shift bad loans from other countries to the bank, leaving host country depositors or tax payers even worse off. Making matters even worse, the home country supervisor of the foreign bank has the incentive to collude with the bank in the shifting of risky and bad loans to the host country subsidiary in order to reduce the risk of home country depositors and tax payers[6]. For these reasons, it can be risky for a country to outsource banking supervision completely as long as foreign banks are established as subsidiaries.

Turning to the situation when the foreign bank has established branches in the host country, it would seem that the above risk-shifting argument is weaker or non-existent, because all branches are buffered by the same capital base[7]. A weak bank would want to keep branches that contribute the most to profitability wherever they are located. This profitability may arise as a result of national subsidization of banks in distress in the host

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[4] See Lensink (2004) for a discussion of benefits. The subsidiary organization may have one initial advantage in that the host country subsidiary more easily can be identified as a local bank under local management (Kowalski et al., 2004).
[5] Westdeutsche Landesbank abandoned Croatia quite suddenly in 2002.
[6] See European Shadow Financial Regulatory Committee Statement No. 17, 2003.
[7] The discussion here is base don Goldberg, Sweeney and Wihlborg (2005).

country. In such a case the distressed bank as well as the home country supervisor have an incentive to tap into the subsidy scheme.

One form of subsidization occurs through deposit insurance systems. If the responsibility for deposit insurance belongs to the host country (as in the USA), the home country supervisor bears less responsibility for depositors and the home country tax payers than is the case when the home country is responsible for the deposit insurance system for all depositors in the bank. The home country supervisor may be more risk tolerant when deposit insurance is the responsibility of each host county. Whether these considerations need to be of concern for host countries would depend on the size of banking operations in different countries. The bank may be of systemic importance in the host country, but not in the home country, or vice versa. Clearly, it is the former case that should be of concern for the host country. The home country risk tolerance problem would not be present if the home country bears the total deposit insurance responsibility.

So far it would seem that branch banking in host countries with deposit insurance responsibility assigned to the home country provides the appropriate incentives for outsourcing of banking supervision. The appropriate incentives of the home country supervisor comprise only one aspect of the outsourcing, however.

Another aspect is crisis management. Is there a risk that the home country supervisor resolves a banking crisis without proper concern for the interests of host countries with branches? We argued above that the home country supervisor may collude with the bank in shifting bad loans to the subsidiary facing distress. In the case of branch banking, this problem does not arise since all bad loans must be buffered by the same capital base and deposit insurance systems. Nonetheless, in the process of resolving the banking crisis the supervisor in the home country may try to salvage as much as possible of home country operations at the expense of operations in foreign branches. For example, assets in the foreign branches may be transferred to the home country before closing down host country operations. The foreign depositors still have their claims on the bank but these claims may be harder to enforce if the host country branch has been closed down. Thus, the host country must be careful with its choice of outsourcing partner and make sure that its depositors have the same legal standing as the home country depositors in a banking crisis.

A second problem that may arise for the host country occurs if the branches constitute a large share of the banking system. The distress of the foreign-controlled bank could cause a systemic problem in the host country. Thus, the host country needs to be convinced that the home country has a non-discriminatory and effective resolution mechanism in place.

These considerations imply that trust in the ability of a foreign country's supervisor and legal system to resolve a banking crisis rapidly and in a non-discriminatory way is a precondition for successful outsourcing of banking supervision. If the host country operations are organized in subsidiaries, outsourcing requires even greater trust because there are, as noted, incentives for the home country bank and its supervisor to shift bad loans to the subsidiaries when the subsidiary is near or in distress. In the next section we will see how two countries retained supervisory capability for subsidiaries of foreign banks along with domestically controlled banks.

IV. Central Banking Reforms in Estonia: Establishing Credibility in a Transition Economy[8]

In this section we review the monetary and banking system experiences of Estonia during a CB period from the early 90s. Estonia is generally considered a highly successful transition country. In the next section we turn to Argentina. Both countries have had a substantial or growing presence of foreign banks during the period. We begin by reviewing the historical developments in Estonia during the transition before turning to an evaluation of policies in light of our discussion of costs and benefits of outsourcing of central bank functions.

IV.1 Currency board and banking reforms in Estonia during the 1990s

[8] This section is based on Sorg and Vensel (1999) and Sorg (2000)

In August 1991 the three Baltic States regained their independence from the USSR, and Estonia was the first to introduce its own currency - the Estonian kroon (EEK) - in June 1992. The idea that Estonia should have its own currency dates from September 1987, when four Estonian social scientists put forward a proposal for Estonian economic autonomy. The supporters of the idea of a national monetary system hoped to achieve three main objectives: (1) eliminate inflationary influences from the East, (2) establish approximate macroeconomic balance of supply and demand, and (3) eliminate persistent cash crises.

Hyperinflation had broken out due to the liberalisation of prices and the disruption of Estonia’s eastern trade at the beginning of 1992. The consumer price index rose by 87% in January 1992, 74% in February and 30% in March in comparison with the previous month. This caused severe cash crises and threatened to paralyse money circulation completely. The Bank of Estonia (BOE) and the Estonian Savings Bank issued cheque books (a major innovation) to alleviate the shortage of cash but the population used them rather reluctantly. The public sector was instructed to pay wages four times a month, instead of twice as they did previously, and a ceiling on cash payments was fixed at 1000 roubles. Permission was given to use foreign currency alongside the rouble in buying and selling goods and services. Confidence in the inflationary rouble, also called the “occupation rouble”, was lost completely. Various means of payment started to emerge spontaneously in enterprises, which were used for shopping. One manifestation was a higher dollarization ratio than elsewhere in the Baltic States. Before Estonia’s currency reform in the second quarter 1992 the dollarization ratio peaked around 60 percent in Estonia, 50 percent in Lithuania (first quarter 1993), and 35 percent in Latvia (first quarter 1993) (see Sahay and Végh, 1995, p. 37).

The Estonian authorities considered two conditions for a successful currency reform: (1) The currency reform must be carried out as quickly as possible before multiple wage and inflation shocks could cause a social explosion and economic collapse, and (2) the new currency had to inspire confidence large enough to dislodge the dollar. This had to be done under circumstances of deep economic crisis and lack of experience by the central bank in carrying out monetary policy. As a first step, inflation had to be controlled. Exchange rate stability was to be used as a conduit to price stability. The exchange rate between the kroon and DEM was set at 8 EEK = 1 DEM. The kroon was initially undervalued 75-80 percent relative to a purchasing power parity ratio. The undervaluation caused some inflationary pressure on consumer prices. However, the inflation rate in Estonia declined continuously (Exhibit 1) and in 1998 the CPI increase had reached a level lower than 10%. It was below 5% in 1999[9]. Thereafter, inflation has remained low and on level with the EMU.

The Estonian CB was clearly not orthodox, although very close. The Bank of Estonia (BOE) relied on a classical CB model where it is prohibited by law from devaluing the Kroon or financing any government debt. The Kroon was fully secured by gold and DM (now Euro) reserves. The BOE uses reserve requirements, prudential measures, loans to banks in distress under restricted conditions (without acting as a lender of last resort), and

Exhibit 1

Inflation against the Previous Year (%)

	1992	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**
Increase in consumer prices (CPI)	1076.5	89.8	47.7	29.0	23.1	11.2	8.2	3.3
open sector	991.6	84.9	33.8	17.4	18.6	7.8	6.0	0.3
Sheltered sector	1702.7	149.3	89.1	47.9	28.6	15.8	13.6	10.1
Increase in producer prices (PPI)	…	99.9	36.3	25.6	14.8	8.8	4.2	-1.2
Increase in export prices	…	…	…	15.2	11.4	7.5	2.1	-0.4
Increase in import prices	…	…	…	…	…	…	…	0.4
Increase in construction prices			…	36.0	18.7	10.1	7.7	2.0
Increase in real effective exchange rate (REER) index	…	…	10.9	18.0	9.7	3.3	10.4	7.3

(Source: Bank of Estonia)

[9] Dubauskas, Wihlborg and Willett (1999) review the path to credibility of the Estonian CB and the central banks of Latvia and Lithuania.

forbearance when banks get into some difficulties to manage the money supply and the banking system. Exhibit 2 shows the developments in reserve requirements. The reserve ratio was changed only once during the life of the Estonian CB. A 3% additional reserve requirement was added in late 1997 to the existing 10% ratio. The most significant development, however, was the decision to pay interest on reserve requirements in July 1999. This effectively eliminated the need of the BOE to issue interest bearing instruments that can be purchased by the commercial banks and have them count as reserves.

In order to allow the currency board to operate with credibility, it was deemed necessary to safeguard the independence of the BOE, while regulating its detailed functions as a CB. The credibility of the CB operations of the Bank of Estonia was and is guaranteed by the following stipulations: it is not allowed to extend credit to the government, its assets are kept separate from the state budget and its managerial staff is appointed by Estonia's president and parliament. The BOE was instructed that the exchange rate of the kroon could be fixed (or pegged) nominally to the Deutsche mark (1DEM = 8EEK). Only parliament can change this nominal anchor, though the BOE can permit fluctuations of the pegged rate within margins of 3 per cent.

The CB system has potentially important implications for the banking system for several reasons; One, the CB arrangement prevents the monetary authority from acting as a Lender of Last Resort (LOLR). Second, the CB imposes a degree of fiscal discipline because the government cannot borrow from the central bank. Third, by not being able to support banks in crisis by means of LOLR lending, the fiscal implications of aid to banks become relatively transparent. Fourth, since capital flows are occasionally massive, banks have to become international banks in order to respond to capital flows in the international environment. All these factors seem to have played a role in the development of the Estonian banking system during the transition process.

From the first days of the CB system the Estonian commercial banks had to grow fast, learn even faster, and allow for a high level of flexibility in their operations and in their portfolios. These are not the hallmarks of emerging banking institutions. The overwhelming number of Estonian banks were not in a position to perform, primarily because of lack of experience and expertise. Banks were often misled by their central

Exhibit 2
Reserve Requirements in Estonia 1995-1999

	1995	1996	1997	1998	1999
1) reserve requirement base	Liabilities to customers Since monetary reform	a) Liabilities to customers; b) debt securities issued by banks Since 1 July 1996	a) Liabilities to customers; b) debt securities issued by banks; c) net liabilities to foreign credit institutions Since 1 July 1997	a) Liabilities to customers; b) debt securities issued by banks; c) net liabilities to foreign credit institutions d) financial quarantees to institutions and non-resident credit institutions. Since 1 September 1998[3]	a) Liabilities to customers; b) debt securities issued by banks; c) net liabilities to foreign credit institutions d) financial quarantees to institutions and non-resident credit institutions. Since 1 September 1998[3]
2) monthly minimum reserve requirement	10% of the reserve requirement base. Since 1 January, 1993	10% of the reserve requirement base.	10% of the reserve requirement base.	10% of the reserve requirement base.	10% of the reserve requirement base.
3) cash component in monthly minimum reserve requirement	50% Since 7 July, 1994	40% Since 1 July 1996	30% Since 1 July 1997	20% Since 19 June, 1998	10% of the reserve requirement base
4) averaging	Non-averaged Since monetary reform	Averaged on monthly basis Since 1 July 1996	Averaged on monthly basis	Averaged on monthly basis	Averaged on monthly basis
5) daily minimum reserve requirement	Same as monthly minimum reserve requirement (see 2.2) Since 1 January, 1993	2% of the reserve requirement base Since 1 July 1996	4% of the reserve requirement base Since 1 November 1997	4% of the reserve requirement base	4% of the reserve requirement base
6) penalty interest rate for non-compliance with the reserve requirement (annual interest rate)	15%/25%[1] Since 30 December, 1993	15% Since 1 July 1996	20% Since 1 November 1997	20%	20%
7)remuneration of reserve requirement Since 1 July 1999	-	-	-	-	European Central Bank's deposit interest rate Since 1 July 1999
3.- Additional liquidity requirement Since 1 November 1997					
1) additional liquidity requirement	-	-	3% of the reserve requirement base[2.]	3% of the reserve requirement base	3% of the reserve requirement base
2) penalty for non-compliance with additional liquidity requirement	-	-	Higher reserve requirement or other sanctions	Higher reserve requirement or other sanctions	Higher reserve requirement or other sanctions
3) remuneration for compliance with liquidity requirement	-	-	Deutsche Bundesbank's discount rate Since 1 November 1997	Deutsche Bundesbank's discount rate Since 1 November 1997 European Central Bank's deposit interest rate Since 1 January 1999	Deutsche Bundesbank's discount rate Since 1 November 1997 European Central Bank's deposit interest rate Since 1 January 1999
4.- Interest paid on excess reserves Since 1 July 1996	0% Since monetary reform	Deutsche Bundesbank's discount rate minus 1% Since 1 July 1996	Deutsche Bundesbank's discount rate Since 1 November 1997	Deutsche Bundesbank's discount rate Since 1 November 1997 European Central Bank's deposit interest rate Since 1 January 1999	Deutsche Bundesbank's discount rate Since 1 November 1997 European Central Bank's deposit interest rate Since 1 January 1999

bank that authorized activities that were not traditional banking activities and that required more skills than was available. The result was massive failure of banks in Estonia. The industry shrank from 42 banks in 1992 to 11 by the end of 1997 and to 6 by the end of 1999. The share of the public sector in the capitalization of the banking sector fell to 4% in 1997 and to almost nothing in 1999.

The BOE as a central bank was re-established in January 1990. It developed its staff and barely created the normative basis for performance and supervision of banking system during the first years of operation. We must also remember that the CB reform took place in June 1992 and before the reform there was extremely low trust in the inflationary Soviet rouble. Banks earned profits from currency trading. They dealt with traditional banking business on a limited basis. After the currency reform such opportunities to earn profits were reduced significantly and some of the banks were not able to survive the shock caused by the changes in the earnings' structure.

Hyperinflation had reduced the real value of the required initial equity capital of banks several times. A boom in establishing new private commercial banks then occurred in Estonia in the first half-year of 1992 when 21 new banks were granted a banking license. By the end of 1992 the total number of banks was 42. These banks were relatively small with respect both to assets and number of shareholders. As a result of the Estonian banking crises in 1992-1994 the number of commercial banks was cut by more than one half due to bankruptcies and mergers.

The central bank acted quite quickly and actively to get over the banking crises. The BOE added stronger prudential measures to its operations in reflecting international standards. Beginning on January 1, 1993, these prudential requirements included: minimum equity requirement (5 million kroons), capital adequacy ratio (8%), liquidity ratio (10%), reserve requirements (10% from deposits), etc. These measures were probably inspired by the first Basel agreement. In April 1993, the Bank of Estonia announced a stabilisation period for the banking system. The issuance of new banking licences was frozen. Existing banks had to meet a schedule for a gradual rise in minimum equity capital up to

5 million ECU. After that, the Bank of Estonia did not renew licenses of 8 banks. Ten banks merged into one bigger bank (Union Bank of Estonia), to three banks declared a moratorium. As a result, 21 commercial banks were operating at the end of 1993.

The BOE managed to avert a disaster: “The characteristic feature of the first banking crises in Estonia was that it was caused by internal reasons and it was overcome with Estonia’s own resources and management skills” (Sorg, 2000, p. 403). The main causes of this banking crises were deep slump of the whole economy, poor bank management and lack of professional skills, as well as weak supervision both from the central bank and from the owners. The depositors’ losses in the banking crises were large, money supply decreased. Many loans had to be written down. As a result, the trustworthiness of the banking system dropped significantly, but the system was cleansing itself.

Confidence in the banking system began to increase when bankers started to pay more attention to the risk management and analysis, and pay more attention to the quality and the profitability of banking services. Foreign banks took great interest in Estonia. Finnish banks opened their representative offices in Estonia. At the same time, problems arose in connection with the operations of the largest commercial bank (Social Bank of Estonia) in 1994. This poorly run bank was liquidated in March, 1995.

By 1995, the Estonian banking sector achieved respectable standards. Competition tightened further in the banking market, banks introduced new banking services and products and they paid more attention to private clients’ needs. Svenska Handelsbanken, Landesbank Schleswig-Holstein, Finnish Yhdispankki etc, opened their representative offices in Estonia. The liquidation of Estonian Social Bank ended in March 1995. The disappearance of this unprofessionally managed bank from the banking market had a positive influence on the market. Due to rising equity requirements, banks started to look for strategic investors and the merging process started. As a result, there were 18 commercial banks operating by the end of 1995.

1996 was a year of expansion into new markets and developing more banking services. Estonian banks expanded their activities outside Estonia: some banks opened their representative offices in Russia and Hansabank opened a subsidiary in Latvia. The banking sector started to provide other financial services (leasing, insurance, brokerage services). The opening of the Tallinn Stock Exchange on 1 June 1996 was the most important event for development the financial sector. The listed stocks consisted mostly of bank shares. These remained the most actively traded securities until the beginning of 1999. Depositors also contributed to the changes in the banking sector. The share of cash transactions diminished and the number of bank cards and ATM transactions grew rapidly. Bigger banks started to provide telebanking and Internet banking services. At the end of 1996 Estonia had 15 commercial banks and two loan and savings co-operatives.

During 1997, the Estonian banking sector underwent further consolidation. The rapidly growing economy (growth of GDP 11.8%) boosted credit demand. Banking and non-banking financial intermediation accelerated. A new stage in the development of the Estonian banking market in the international context was reached. Standard & Poor assigned Estonia investment grade credit rating BBB+ and Moody's Investors Service rated Estonia, Baa1, the highest credit rating of the previous Soviet Union countries. The European rating agency IBCA assigned Estonia long-term credit rating of BBB and short-term credit rating A3. Credit ratings were assigned also to individual banks. For example, in 1997 Moody's long-term credit rating of Hansabank and the Union Bank of Estonia was Baa2. IBCA rated Union Bank of Estonia BBB.

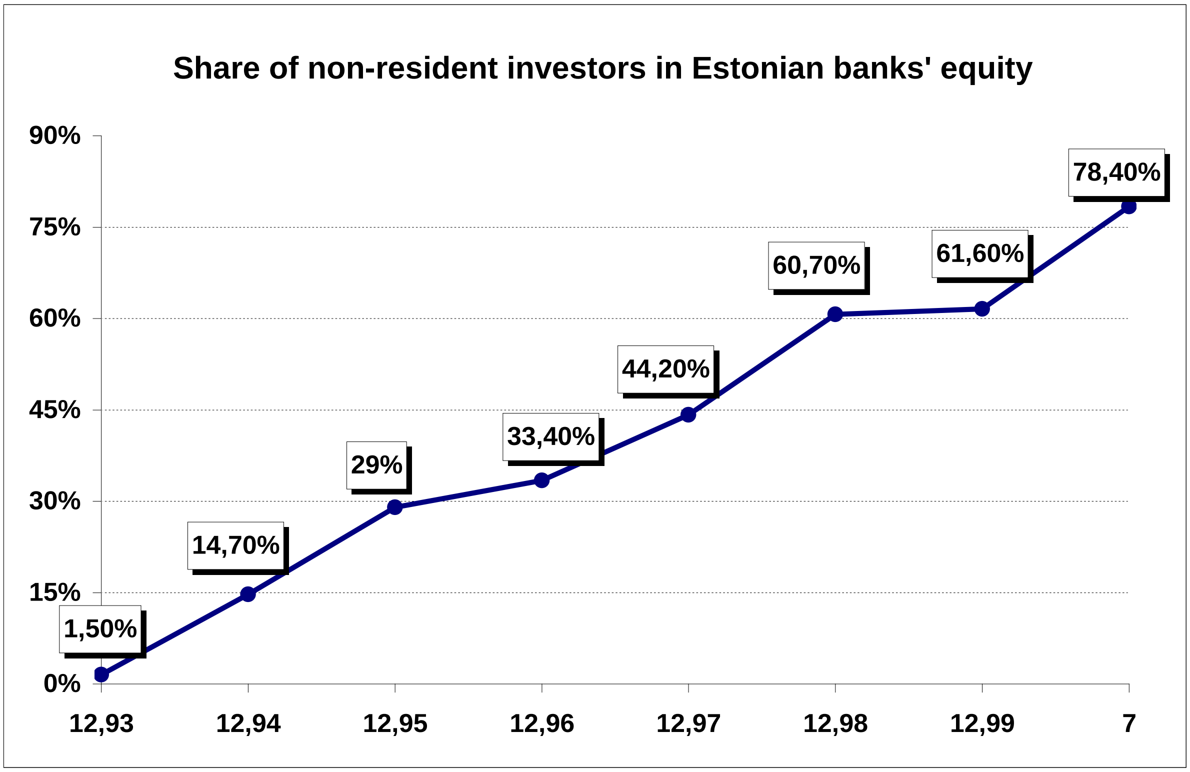
Substantial changes took place in the Estonian banking sector in 1998 and 1999. The Bank of Estonia adopted several radical measures to prevent possible instability in the Estonian banking sector. Some banks were merged, and some bank bankruptcy procedures were initiated. As a result of such consolidation process, the number of commercial banks in the Estonian banking market fell to six.

The problems in the banking sector were first and foremost due to flawed financial and management decisions made in an ever more competitive environment. The changed economic environment had a significant effect on the Estonian banking sector. Add to this, the Russian crisis which had especially significant effects on smaller banks. The largest Estonian banks merged: Estonian Savings Bank (market share 21%) merged with Hansapank (market share 24%), and Bank of Tallinn (market share 7%) merged with the Union Bank of Estonia (market share 26%). As a result, the interest of Scandinavian banks in Estonian banks rose: Swedish *Swedbank* acquired 59% of the Hansapank, and *Skandinaviska Enskilda Banken* acquired 32% of the Union Bank of Estonia.

Since the year 2000 the commercial banks of Estonia are on their own more than ever.. The BOE will no longer, as it may have in the past, act as a lender of last resort regardless of the size of the troubled banking institution. This stance may be irrelevant, however, given the massive foreign ownership of the Estonian banking system. The foreign banks are fully subject to the regulations of the home country and are consequently beneficiaries of whatever the home country central bank allows. The BOE treats foreign banks on a nondiscriminatory basis.

The share of foreign banks in the banking sector has increased dramatically as is shown in Exhibit 3. Foreign banks invested massively encouraged by a very liberal FDI policy in Estonia, and by extremely advantageous stock prices for target banks especially in the wake of the Russian crisis in 1998. The net result is a banking industry in Estonia that is primarily Estonian in location only. No one in Estonia we discussed this matter with seems to be concerned with the ownership of the banking sector. Foreign ownership was deemed necessary for a stable and profitable banking sector that enjoys public confidence and support.

Exhibit 3



<u>IV.2 Assessing the performance of the BOE and outsourcing in Estonia</u>

To assess the performance of the BOE further we look at assessments by the OECD and the IMF.

A study by the OECD on foreign direct investment in Estonia published in November 1999 concluded that FDI was long term in nature, driven by the stability of the Kroon, the various guarantees offered by the Estonian government, attractive asset prices and the low tax rate (flat 26% personal and corporate income tax rate). FDI had a very strong positive impact on the Estonian economy. Skills increased markedly, production methods were upgraded, R&D expenditures increased, and management attitudes and structures changed considerably. In the banking sector, the changes were dramatic:

'In general…, foreign entry has been considered positive, as it has raised corporate governance standards and quality control, as foreign banks were controlled by their home country regulations, while local banks typically exhibit more reckless lending practices. Foreign control can lower capital costs, facilitate compliance with capital requirements, and reduce the collusion with local authorities. Furthermore, corporate finance and banking services are now well established for the benefit of especially Nordic foreign investors.'

This conclusion drawn by the OECD researchers that foreign direct investment has had very stabilizing and confidence generating effects on the Estonian banking sector is fully confirmed by an independent case study submitted to the Ministry of Finance and to the Bank of Estonia in December, 1998 on the Eesti Maapank bankruptcy.[10] This bankruptcy when coupled with falling values of bank shares dramatically illustrates why foreign ownership became inevitable. The dirty linen of Estonia banking could not be washed in private. Once in the open, the Swedes and Finns were watching. The report states the following:

'The reasons for the failure of Maapank are mainly due to (i) a high proportion of non-performing loans, and (ii) a decline in the value of its securities portfolio in the wake of the stock market decline in late 1997 and early 1998. Furthermore, it appears that the actual size of non-performing loans is far greater than the reported figures, and that, with respect to the securities portfolio, Maapank continued incorrectly to report the higher face value of the securities instead of marking them to market – as required by the BOE – thus inflating both its assets and profits. Although the banking Supervision Department (the BSD) of the BOE noted this in early 1998, no action was taken until June……….We found incompetent management to be the main reason for the bankruptcy…..Activities of some people involved in managing the bank were with criminal intent…..the management board of the bank lacked adequate overview of the activities….the bank abused the possibility given by the Bank of Estonia to enter into sophisticated and dangerous, somehow illegal transactions applying forward contracts, the so-called Hansabank bonds, and let the managers make deals with themselves.'

It is clear that neither internal, nor external supervision of the bank was exercised adequately. The net results were fully predictable. One must point out, however, based on many discussions and interviews at the BOE, that the likelihood of another Maapank has been dramatically reduced and that the current BOE staff has developed a considerable level of sophistication in a rather brief period of time.

[10]The BOE declared the Eesti Maapank bankrupt on June 28, 1998

The BOE has a de minimus deposit insurance (covering only $3,000 currently). It has been rather aggressive in the past in closing unprofitable banks with occasionally substantial losses to depositors, and is preempted by the CB structure from ever acting as lender of last resort, no matter the size of the bank under consideration. The emphasis is, therefore, on prudential measures. The challenge is to be able to meet the core principles of banking supervision as enunciated primarily by the Bank of International Settlement (BIS). These principles have been accepted by all EU countries and the United States. They constitute the standards that the BOE must aspire to meet as a new member of the EU, as long as supervision is not outsourced completely.

A recent assessment by the IMF of the extent of Estonian compliance with the Basic core principles completed in March 2000 is shown in Exhibit 4. Clearly, non-trivial hurdles remain.

Exhibit 4

Estonia: Compliance with the Basel Core Principles

(Assessment of February/March 2000)

Core principle	C[1]	LC[2]	MNC[3]	NC[4]	Corrective Actions
1(1) Objectives	X				
1(2) Independence		X			Supervisors need training.
1(3) Legal framework	X				
1(4) Enforcement powers	X				
1(5) Legal protection				X	Legal protection is lacking.
1(6) Information sharing		X			No Memorandum of Understanding with Securities Inspectorate.
2. Permissible activities	X				
3. Scope of licensing	X				
4. Ownership	X				
5. Investment criteria	X				
6. Capital adequacy	X				
7. Loan & Investment policy	X				
8. Asset quality	X		X		Decree on loan classification and loan loss provisioning to be issued by end of March 2000.
9. Large exposures	X				

10. Connected lending	X				Definition of connected parties should be extended to managers of shareholds and to companies in which managers hold a qualifying interest.
11. Country risk			X		Capital adequacy regulations to cover these risks to be issued by end of 2000.
12. Market risk	X				BOE should seek external support when assessing risk models.
13. Other risks		X			Need explanations on operational risk. Banks should establish information-sharing system on fraud.
14. Internal controls	X				
15. Money laundering		X			No provision for a Money Laundering Prevention Act for information sharing with other agencies.
16. On-site/off-site supervision	X				
17. Bank management	X				Managers of credit institutions should inform BSD of any material changes in their organization.
18. Off-site supervision		X			Reporting rules for loan classification await decree by BOE on the subject.
19. Validation of information	X				On-site supervisors should have unlimited access to the management and staff of the supervised banks.
20. Consolidated supervision		X			BOE should have the authority to review activities of parent companies and their affiliates.
21. Accounting	X				
22. Corrective action	X				
23. Global consolidation		X			BOE should have the power to order closing of the overseas branches of Estonian banks.
24. Host country supervision		X			MOUs with other country regulators are in the final stages of execution.
25. Supervision of foreign establishments	X				

Source: Mission's assessment

1/C: Compliant
2/LC: Largely compliant
3/MNC: Materially noncompliant
4/NC: Noncompliant

The report by the IMF concluded the following:

> 'The BOE was found to have a competent, professional, but somewhat inexperienced supervisory staff…..Questions have arisen regarding the quality of some audits…Even though the preconditions for effective banking supervision are met, several weaknesses were identified. These include: a lack of adequate training arrangements for supervisory staff for upgrading of skills to meet the demand for emerging products….A greater concern is that the BSD has not issued a decree on minimum rules for loan classification and loan loss provisioning…The BOE has not issued guidance on the management of country and transfer risk.'

The same report found that the BOE was largely compliant with the transparency requirements in monetary and financial policies.

In all cases the IMF report starts with the assumption that the existence of a domestic Bank Supervision Department (BSD) is required, and that no other alternatives exist. This may be the IMF model or one of the bureaucratic requirements of the EU. However, the EU model states, as noted above, that the home country supervisor takes responsibility for supervision as well as deposit insurance. In the case of branch banking, this principle implies complete outsourcing of supervision. In the case of Estonia, foreign banks have so far chosen to operate subsidiaries with the consequence that outsourcing has not been complete.

Although the BIS-principles favor consolidated supervision, Estonia, as well as other Eastern European countries, have retained substantial influence in the supervision in cooperation with the home country supervisors. In fact, in Estonia, the local supervisor is perceived by local managers of foreign banks to be more strict than the home country supervisor.

The last observation is due to Kowalski et al. (2004), who present the results of an interview study with local managers of foreign banks in Croatia, Estonia, and Poland, referring to the strictness and quality of supervisors. One striking result is that Estonia scores very high on the supervisor's professionalism and lack of arbitrariness relative to the scores for Croatia and Poland. When the question also refers to how knowledgeable the supervisors are, the scores for all the three countries[11] are less impressive. Most striking is that the Estonian supervisor clearly is perceived as imposing more binding requirements than the home country supervisor. This result may stem from the relatively high capital requirements in Estonia. While most Western European countries impose an 8 percent requirement, Estonia requires banks to hold 10 percent.

Summarizing our study of Estonia it is clear that monetary policy has been almost completely outsourced while banking supervision has only been partially outsourced although the banking system is controlled almost completely by foreign banks. The CB arrangement for monetary policy has been very successful and contributed to a relatively rapid quality enhancement of the banking sector. The lack of LOLR activity by the BOE increased the need for quality in banking and this need could be satisfied most efficiently through FDI in banking.

The BOE has imposed relatively strict capital requirements on the foreign controlled banks and retained substantial supervisory authority in cooperation with home country supervisors. This policy is consistent with the organization of foreign owned banks as subsidiaries as discussed in Section II. The strictness may reflect a rational fear that foreign supervisors may allow a distressed foreign parent bank to shift losses to the Estonian subsidiary. A lack of confidence in its own supervisory capability may contribute to the strictness as well.

Allowing the foreign banks to operate as branches would have enabled Estonia to outsource supervision more completely. The costs of imposing stricter requirements than home country supervisors would then have been unnecessary.

[11] On a scale of 1-5 where 5 represents lack of knowledge and professionalism. Estonia scores 2.3, while Poland and Croatia score 2.5.

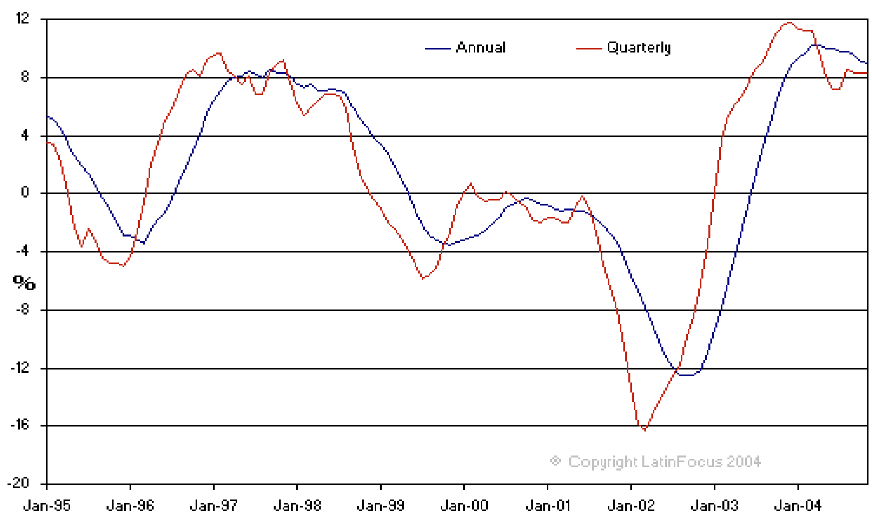
V Currency Board and Banking Supervision in Argentina

The Argentinean CB dates back to 1991 when Carlos Menem introduced the convertibility plan after being elected President in 1989. The exchange rate relative to the USD was set at 1=1. The CB was abandoned in January 2002. The Argentinean Peso sank rapidly to 3 to USD 1. A number of banks were in distress at this time.

Exhibit 5

GDP growth in Argentina

1995 – 2004 GDP Growth Rate For Argentina



In hindsight there are a number of factors that contribute to the explanation of the failure of the CB. These factors illustrate the conditions for outsourcing of central banking and the important differences between Estonia and Argentina.

Unlike Estonia, Argentina is not a very open economy. International trade accounts for about 10 percent of GDP—less than in the USA. In spite of liberalization efforts and reforms during the 90s, the labor market and wage adjustments remained sluggish.[12] In general, liberalization efforts were de facto less impressive than on paper. The failure to rein in public sector spending may have contributed to the lack of liberalization and the

[12] See Willett (2003)

weakening of the CB. Argentina did not follow the rules that make the CB viable and credible. Openness and a general liberal economic environment are among these rules. Furthermore, the CB was seriously corrupted by the central Argentine government. The permission (explicit and implicit) granted the state governments to issue IOU´s which looked and felt like money were significant mechanisms for circumventing the CB´s basic requirement: no issuance of money. The central government that could not issue money or monetize debt, was allowing its states to do just that, which destroyed the letter and the spirit of the CB and, therefore, the confidence of international and domestic investors. The net results were a run on the banks in 2001, and a huge array of restrictions by the central government to stem the tide.

It can be argued that the dollar was not a natural choice of currency for building the CB around it. The USA is not the major trading partner of Argentina. When the dollar appreciated strongly in the late 90s, Argentina's peso was appreciating relative to currencies of major trading partners. The substantial depreciation of the currency of a major trading partner and competitor, Brazil, may be considered an element of bad luck and it contributed to the Argentinian economic calamity.

The Argentinian banking system was in shambles as well in 2001 when the debt crisis hit. Only a year or two years earlier, the reforms in 1995 of supervision, deposit insurance and bank failure resolution were considered highly successful.[13] The reforms were expected to reduce risk-taking incentives and reduce costs of banking crises if they occurred. The strains on the system in 2001 were overwhelming and systemic, however.

The banking system was not foreign controlled to the degree we have seen in Eastern Europe. Less than 25 percent of the banking sector was controlled by foreign bank subsidiaries and the largest domestic bank was state-owned.. Accordingly foreign supervision was not extensive. One reason for the modest foreign presence may have been the less friendly FDI climate as compared to Eastern Europe. The foreign banks also specialize on the corporate sector and mortgages, while consumer banking is left to

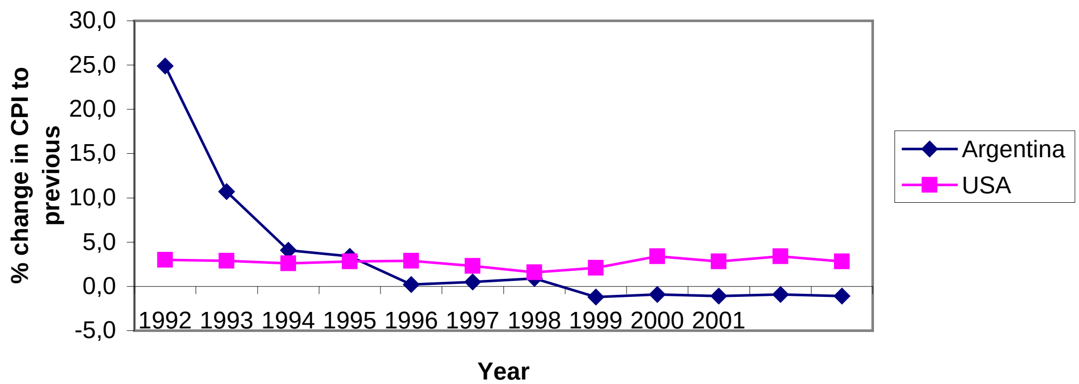
[13] See de la Torre (1999).

domestic banks. In Eastern Europe, the subsidiaries of foreign banks are like local banks with foreign ownership.

V.2. A brief review of the 1990s

In 1991 the Peso exchange rate relative to the USD was set at 1=1 when the CB arrangement was initiated. Exhibit 6 shows that the CB was very successful in terms of inflation control. The inflation rate fell rapidly during the first CB-years and it went below the US rate in 1996 and remained below. The decline in inflation was not sufficient to avert a real appreciation of the Peso. Although the inflation came down below the US rate, the difference was insufficient to compensate for the early real appreciation. According to many estimates the overvaluation of the Peso when the crisis hit was around 20 percent.

Exhibit 6. Inflation rates in USA and Argentina



The CB fixes the nominal exchange rates. It leaves real rates subject to trade patterns, to conditions in the forex markets and to inflation patterns. Clearly, as Exhibit 7 shows, the terms of trade were moving in favor of the US and Argentinian exports (predominantly not with the US) were becoming much less competitive as the dollar was a strong currency almost throughout the CB period. Argentina, which was heavily indebted, and its ability to generate foreign exchange reserves critically dependent on investor confidence and its capacity to export found itself in a non- competitive international position, which contributed to the spiral downward toward a major crisis in 2000-2001.

-We must add that Argentina´s fiscal management was reckless. All of its governments have borrowed themselves into a fiscal crisis. Some of the borrowing was used for political patronage and appeasement, in some cases simply to increase wages before elections. Exhibit 8 shows the uneven discipline in fiscal policy even when it was absolutely required (and expected by the market) during the CB period. The figures do not include regional and local governments.

- Aggravating the problems were the Tequila effects from Mexico in 1995 (partially mitigated by assistance from the IMF), and the devaluation of the Brazilian Real in 1998-1999, and the overvaluation of the Argentinian Peso became a source of the Argentinian economic tragedy. The Brazilian effects were also felt in the bond markets as the risk premium on Brazilian bonds widened putting further pressures on Argentinian debt service and new debt costs.

Exhibit 7

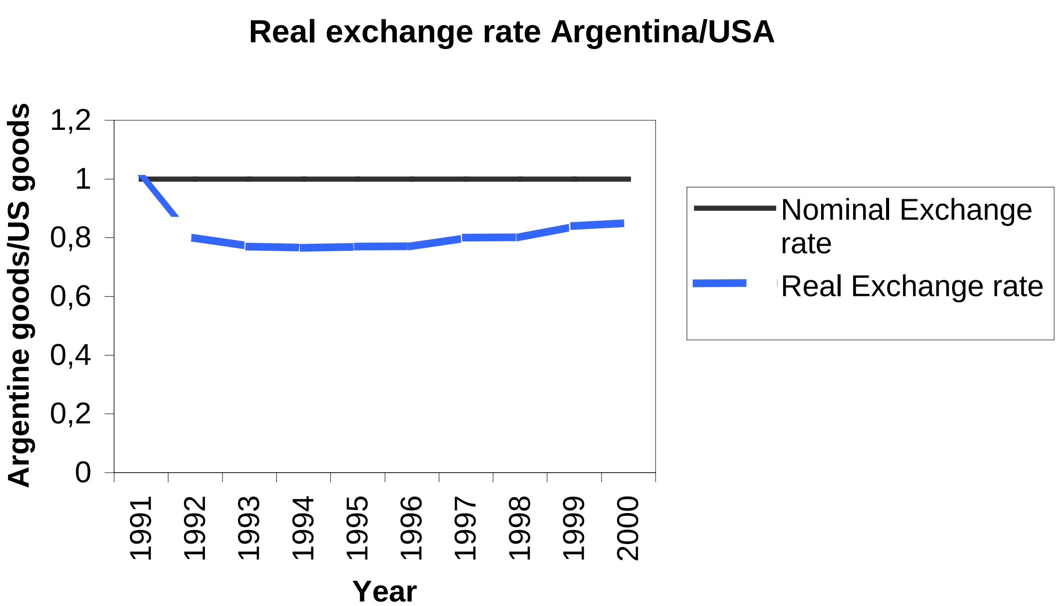


Exhibit 8

Argentina's Government spending, Deficit and GDP

Millions	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Government Consumption	-	-	31953	33948	34446	34023	35325	37353	38918	39298
Fiscal Balance	-963	-73	-1574	-1886	-1426	-5234	-4357	-4148	-8126	-6818
GDP	181000	227000	237000	257000	258000	272000	293000	299000	283000	284000

Deficit in % GDP	-0.5	-0.003	-0.7	-0.7	-0.6	-1.9	-1.5	-1.4	-2.9	-2.4

V3. Resolving banking Crises in the 1990´s- Argentine Style

The recent history of the resolutions of bank failures in Argentina were reviewed by de la Torre (1999) and Fanelli

The shocks of the 1990´s were fundamentally externally generated. There are two: the Tequila shock in 1995 and the South East Asia shock of 1997 followed by the Russian shock. The only system in place prior to the crises was embodied in judicial liquidation: bank failure making deposits illiquid and value impaired.

Bank failures had to be dealt swiftly (the immediacy `clause´-implicit in a CB arrangement) as the government was unable to delay resolution because it lacked liquidity provided by the Central Bank. Adding to the pressure for immediate resolution is the desire to limit, if not eliminate contagion effects.

The elements of the bank bailout plan for Argentina were:

1- Reforms of financial institutions- 1995. This consisted of carving out privileged liabilities (e.g. owed wages) from the liabilities side of a `bad bank´, and carving out good assets on the asset side and transferring the balance of the asset and the liabilities to a bank in good standing (the `good´ bank). The bad bank ends up with the bad liabilities and the impaired assets and will then have to be liquidated. Good assets and good liabilities are rank ordered to maximize the protection of depositors and the minimize the effects of failure on non-impaired bank assets. A broader objective is the minimization of moral hazard based on lessons learned from past rescue efforts.
2- Deposit insurance- SEDESA (sistema de Seguro de Garantia de los depositos bancarios) through mandatory contributions paid by the banking system. The size of the contribution was a function of the riskiness of the banking institution. The insurance plan did not need to wait until the institution was in jeopardy of real failure. Banks were allowed to enter rehabilitation plans, and assistance was made available to banks acquiring assets and liabilities of banks in rehabilitation, or acquiring institutions that are in rehabilitation.
3- The Bank Capitalization Trust Fund. The fund was capitalized by international agencies and special bond issues and was able to inject funds

directly (including making loans convertible into equity and buying illiquid assets of distressed financial entities) in the financial system in the event of a crisis. This is equivalent, except of how it is financed) to the Resolution Trust Corporation that resolved the S&L crisis in the US. All the options available were intended to stop banks from becoming bad banks.

Between 1995 and 1998, 18 bank failures were resolved. All the deposits were covered by the guarantee in 16 of the 18 bank failure cases. Recently a new mechanism (for Argentina), very familiar and effective in other countries, was added. It consisted of securitization of salvageable assets of failed banks. The introduction of this technique was enhanced by the presence of the CB.

The Argentinian experience was produced largely by the lack of discipline in fiscal and monetary matters. Bad politics were driving out good economics undermining any economic plan, including the CB set up. The lack of sufficient FDI in the banking sector, especially form countries that have distinguished themselves in the management of their economies and in the supervision of their banks, and the lack of economic liberalism at almost all levels preempted the complete outsourcing of the monetary policy function and most assuredly the supervisory function.

VI. Lessons for out-sourcing of central bank functions

Outsourcing the entire central banking within a CB framework is indeed an option because of the presumed full separation between monetary and fiscal policy. We can, therefore, argue that a CB framework combined with a an open economy with unrestricted ownership of domestic banking institutions by foreign entities (subject to their home country regulatory structure) necessitate a discussion of the viability of the remaining roles of a central bank in a host country like Estonia.

The outsourcing decision clearly has its advocates and is largely driven by timing and the political process. We now consider its advantages and its disadvantages in general cases:

Advantages	**Disadvantages**
Absence of political Considerations which can corrupt the supervisory function and the resolution method and size of the rescue package	Absence of political considerations because supervision and rescue packages have strong political consequences
The problem of supervision becomes More serious as failure has immediate fiscal consequences that are not easily fungible in a CB framework with monetary policy on auto pilot. Forbearance and other gimmicks will not Be useful, if indeed they are available.	
Immediacy, if not urgency of settling bank failures promptly	
Costs of bank failures can be shifted to the banks through an insurance scheme that protects depositors. The CB structure in no way hinders that	
The resolution of bank failures could Be achieved by setting up in Argentina a trust mirroring the Resolution Trust Fund in the US. The Central bank need not be directly Involved.	In the event of failure Central bankers need to have the basic skills and info. to make sure that the public Interest is protected, especially from a moral hazard resulting from foreign banks owning Estonian banking institutions in the form of subsidiaries that are supervised and potentially regulated by both the home (concerned about the health of their banking institutions on a consolidated worldwide basis) and host country central bank, while the mother institution is regulated only by the home country central bank. The incentive, should difficulties develop, is to shift the bad assets to

the subsidiary in Estonia so that the host country taxpayers pay for the bank failure. This is more likely to occur should the supervisory function be farmed out to any other central bank, especially that of the home country.

The problem in the case of Estonia is that the subsidiary could account for a large portion [if not the entire] of the banking system, while constituting a small portion of the home country banking institutions´ assets. This asymmetry will insure an equivalent asymmetry in the need to regulate foreign banking institutions operating in smaller countries, but this is so regardless of whether the CB is operating or not. The protection of the national interest through the preservation of the bank (financial system) in a country like Estonia will be more compelling than keeping the subsidiary operating either from its owner perspective or from the home country regulator´s perspective. This clearly argues against a strategy of out-sourcing of supervisory powers. The issue is further compounded by the fact that a foreign bank may experience multiple problems in many of its foreign subsidiaries. Fixing the problems in the Estonian subsidiary may well not be on the top of the agenda for the home bank, but definitely critical to the Estonian banking system.

The issue of transaction costs attached to bank failure resolution is also an important consideration. Not having a structure and a well trained staff to deal with domestic banking failures or problems may well turn a problem crisis into a crisis and invite a systemic failure. Third parties managing the supervisory and rescue functions may well have neither the heart not the commitment to see that things are done in the long term interest of the country. Their suggestions may well be standard ones void of domestic considerations a la IMF in the standard package it suggests to solve macro economic problems in debtor countries. Furthermore, the home country regulators need someone to talk to and coordinate with in the host country.

This argues against the outsourcing option. However, a committee of financial coordination and enforcement could be set up to protect the interest of the host country, and banks operating in Estonia could be required to set up branches instead of subsidiaries that are supervised by the home country´s central bank and which deposits are guaranteed by the home country´s central bank or insurance program. All transactions in the branch will be supported by the full capital of the home bank. The problem is that the home bank may well refuse to participate in a market where they do not have a choice in the organizational form.

A home country supervisor working with he right incentives relative to foreign branches would presumably set up host country offices where local expertise is gathered. This expertise would then be available in a crisis and contribute to the protection of host country interests.

VII Conclusions and lessons for regional integration

The outsourcing of important policy functions by any government requires a degree of convergence of policy objectives and values.

The necessary conditions for the implementation of an outsourcing strategy are:

1- Trust in the capability and honesty of foreign supervisors and policy makers
2- Firmness of policies and plans of the host country
3- Stability and focus of the political process in host country

4- Degree of openness of the economy and the degree of foreign ownership of banks
5- The degree to which a country is engaged in international trade
6- The level of coordination between home and host country
7- The consistency and clarity of signals form the country seeking to outsource
8- The level of nationalism in the country. The extreme version of nationalism may preempt any outsourcing regardless of how promising it may be. National interest becomes skewed in directions that are not determined by economic rationality.
9- The degree of transparency in public policy and the credibility of the political leadership.

The comparison between Estonia and Argentina highlights the role of openness to trade, capital flows, and a generally liberal policy regime.

One form of outsourcing is to participate in integrated regions wherein authority is given to a super-national authority. This is an argument similar to an optimal currency area that is at the foundation of replacing 13 currencies with one called the euro. Just as these currencies were replaced so could the supervisory functions of their central banks by one agency with the resources necessary to do the job with nationals providing the necessary sensitivities in the local markets.
Outsourcing to such an authority may be politically more acceptable than outsourcing to another country's. The economic considerations and general requirements for successful outsourcing are the same, however.

Burden sharing in crises
Opennness
Flexibility

Appendix 1
LIST OR CORE PRINCIPLES FOR EFFECTIVE BANKING SUPERVISION (BIS)

Preconditions for Effective Banking Supervision 1. An effective system of banking supervision must have clear responsibilities and objectives for each agency involved. Each agency should possess operational independence and adequate resources. A suitable legal framework for banking supervision is also necessary.
Licensing and Structure 2. The permissible activities of institutions that are licensed and subject to supervision as banks must be clearly defined. 3. The licensing authority must have the right to set criteria and reject applications for establishments that do not meet the standard set (ownership structure, management structure, operating plan, internal controls and a projected financial condition including the capital base, **as a minimum**) 4. Banking supervisors must have the authority to review and reject any proposal to transfer significant ownership or controlling interests in existing banks to other parities. 5. Banking supervisors must have the authority to establish criteria for reviewing major acquisitions or investments by a bank, and ensuring that corporate affiliations or structures do not expose the bank to undue risks or hinder supervision.
Prudential Regulations and Requirements 6. Banking supervisors must set appropriate minimum capital adequacy requirements that should reflect the risks the bank undertakes and must define the components of capital, bearing in mind their ability to absorb losses. 7. The evaluation of a bank's policies, practices and procedures related to the granting of loans and the ongoing management of the loan and investment portfolios, is an essential part of any supervisory system. 8. Banking supervisors must be satisfied that banks establish and adhere to adequate policies, practices and procedures for evaluating the quality of assets and the adequacy of loan loss provisions and loan loss reserves. 9. Banking supervisors must be satisfied that banks have management information systems to identify concentrations within the portfolio. Supervisors must set prudential limits to restrict bank exposures to single borrowers or groups of related borrowers. 10. Banking supervisors must have the requirements that banks lend to related companies or individuals, on an arm's-length basis, in order to prevent abuses arising from connected lending. 11. Banking supervisors must be satisfied that banks have adequate policies and procedures for identifying, monitoring and controlling country risk and for maintaining appropriate reserves against such risks. 12. Banking supervisors must be satisfied that banks have systems that accurately measure, monitor and control market risks. Supervisors should have the authority to impose specific limits and/or specific capital charges on market risk exposures, if warranted. 13. Banking supervisors must be satisfied that banks have a comprehensive management process (including appropriate board and senior management oversight) to identify, measure, monitor and control all other material risks. 14. Banking supervisors determine that banks have internal controls adequate with the nature and scale of the business (these should include clear arrangements for delegating authority and responsibility, establishment of functions and appropriate independent internal or external audit to test adherence to controls as well as applicable laws and regulations). 15. Banking supervisors must determine that banks have established adequate policies, practices and procedures that promote high ethical and professional standards in the financial sector and prevent the bank from being used, intentionally or unintentionally, by criminal elements.
Methods of Ongoing Banking Supervision 16. An effective banking system should consist of some form of both on-site and off-site supervision. 17. Banking supervisors must have regular contact with bank management through understanding of the institution operations. 18. Banking supervisors must have a means of collecting, reviewing and analyzing prudential reports and statistical returns from banks on a solo and consolidated basis. 19. Banking supervisors must have a means of conducting independent validations of supervisory information either through on-site examinations or use of external auditors. 20. An essential element of banking supervision is the ability of the supervisors to monitor the banking groups on a consolidated basis.
Information requirements 21. Banking supervisors must be satisfied that each bank maintains adequate records drawn up in accordance with consistent accounting policies and practices that enable the supervisor to obtain a fair view of the financial condition of the bank and the profitability of its business.
Formal powers of supervisors 22. Banking supervisors must have adequate supervisory measures to bring out timely corrective actions when banks fail to meet prudential requirements when there are regulatory violations. In extreme circumstances, this should include

the ability to revoke the banking license or recommend its revocation.
Cross-border Banking 23. Banking supervisors must practice consolidated monitoring over their international active banking organizations and apply appropriate prudential norms to all aspects of the business conducted by these banking organizations. 24. A key component of consolidated supervision is establishing contact and information exchange with other supervisors involved, primarily with host authorities. 25. Banking supervisors must call for the local operations of foreign banks to be conducted to the same high standards as required of domestic institutions and must have the authority to share information needed by the home country of the supervisors of those banks, for the purpose of carrying out consolidated supervision.

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