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Capital Markets and Financial Intermediation in the Baltic States

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Capital Markets and Financial Intermediation in the Baltic States

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CAPITAL MARKETS AND FINANCIAL INTERMEDIATION IN THE BALTIC STATES[2]

I. OVERVIEW

1. **In only a decade after independence, the three Baltic States—Estonia, Latvia, and Lithuania—have transformed themselves into fully functioning, small open market economies that are on the verge of joining the European Union. In December 2002, the three Baltic states jointly with the other 7 accession countries of the first wave completed negotiations with the European Union and closed all of the 31 chapters of the *acquis communautaire*.** The Baltic states are expected to join the European Union in May 2004 and would shortly thereafter seek membership in the European Exchange Rate System (ERM2); the three countries are likely to adopt the Euro as legal tender at the earliest at the end of 2006. Over the past decade, economic policies and economic developments in the three countries have been similar in many respects. All three countries have used the exchange rate as a nominal anchor to stabilize the economy and to impose fiscal discipline. Estonia and Lithuania chose a hard peg in the form of a currency board, while Latvia pegged its currency to a basket of currencies through an SDR peg. Although considered to be temporary arrangements until the adoption of the Euro, the respective exchange rate systems have served the countries well and withstood a number of shocks, the most extreme of which was the 1998 financial crisis in Russia.[3]

2. **With the exception of a contraction in output at the very beginning of the transition period and a slowdown in economic activity—which led to a decline in output in Estonia and Lithuania, in the aftermath of the Russia crisis, the Baltic states have experienced strong economic growth since independence.** This strong performance has resulted from several factors: substantial increases in efficiency due to restructuring of the economy, including privatization; the attraction of foreign capital; and a stable macroeconomic environment. Economic growth, in turn, went hand-in-hand with the rapid expansion of the financial sector. The path of financial sector development, however, was not always smooth and was interrupted by a number of banking crises. In Estonia, the first banking crisis emerged shortly after independence, while Latvia and Lithuania were faced with their banking crises in 1995. Estonia was confronted with a second banking crisis in 1997/98. The banking crises were largely related to the authorities' strategy of developing the financial system by liberally granting licenses to new banks with relatively few prudential and regulatory safeguards. The objective of such a policy was to reduce lending rates and

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[2] For an earlier paper that dealt with financial system issues in the Baltics see Berengaut, et. al. (1998).

[3] In addition, Lithuania's currency board arrangement has been resilient despite the appreciation of the dollar vis-à-vis the Euro during the period of the dollar peg and the recent appreciation of the Euro vis-à-vis the dollar since the country re-pegged its currency to the Euro at the beginning of the year 2002.

foster competition. However, the banking crises caused policymakers to focus more on financial sector stability, which led to a consolidation and restructuring as well as the implementation of more stringent prudential requirements and better supervision.[4]

3. **The current structure of the financial system in the Baltic states is the outcome of past policies, the regulatory framework, and the level of development of the Baltic economies.** In many respects, all three countries are confronted with challenges and questions that are quite similar and apply not only to these economies, but to small open economies with nascent financial sectors more generally.[5] Economic growth in the Baltics over the past decade was primarily driven by a reallocation of existing factors of production, that is, increases in efficiency due to the restructuring of the economy. To a large degree, the reallocation of resources relied less on the financial system and more on privatization-related investments—often in the form of strategic investors—and on firm internally generated financing. However, now that the economies are closer to their respective production possibility frontiers and privatization is almost completed, future sustained productivity growth will depend on how new technologies are being adopted and on how scarce resources are being allocated. To accomplish this, the financial system will play a more important role than in the past. Several issues and questions arise in this context.

- Countries with less developed financial systems usually rely on the banking system for financial intermediation. Should such small open economies foster the development of their own domestic capital markets as a means of promoting growth and if so how?

- Should the government encourage—or be concerned about—a banking system that is owned primarily by foreigners? If so, how would economic shocks in the parent bank's home country affect the foreign-owned branches or subsidiaries in the small open economy?

- In countries that pursue conservative fiscal policies and tend to balance their budgets over the cycle, and thereby create little or no debt, is there a role for government in actively fostering the development of a domestic capital market?

- As in many other parts of the world, the Baltic countries are faced with adverse demographic developments and have decided to move from a pay-as-you go pension system to a three-pillar system that includes a fully-funded mandatory pension scheme. Although this reform is likely to have an impact on the development of capital markets, the exact nature of this impact will depend on the specific design of the pension system.

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[4] See Fleming, Lily, and Bakker (1997).

[5] In what follows, the term "financial system" covers both bank and non-bank, that is, market-based financing.

This raises the question of whether small open economies should impose investment restrictions to foster the development of local capital markets?

- Does the small size of a country's financial systems warrant regional alliances?

- Small open economies might reasonably contemplate the integration of their financial systems into the system of a large economy or a larger economic region. What are the implications of such a strategy, especially as they relate to EU and EMU membership?

4. **These questions are quite relevant for the Baltics states given that the Baltics are in many respects perfect examples of small open economies.** This paper will, therefore, analyze the financial system in the Baltics and address some of the relevant issues. Section II will provide a comprehensive overview of the structure and level of development of the financial system, discussing some of the unique characteristics of the Baltics, such as leasing; and comparing the structure of the Baltic financial systems to other EU accession countries and/or Eurozone averages, both of which serve as benchmarks.

5. **Section III addresses some of the broader analytical questions raised above concerning how the financial system might be developed in the Baltics.** In particular, current distortions of the financial system are analyzed in this section as is the issue of whether or not the Baltics should move from an almost exclusively bank-based system towards one that relies more on capital markets.

6. **The foundation for both improvements in financial intermediation as well as the broadening and deepening of capital markets depends to a large degree on corporate governance.** Issues of corporate governance are addressed in this section as are questions of regional integration. Estonia has begun to target balanced budgets over the business cycle and Latvia and Lithuania may well follow suit. This suggests that the Baltics might find themselves in a situation similar to that of Hong Kong or Chile. Both countries continue to issue government debt to foster the development of capital markets despite the fact that they run fiscal surpluses. This issue is discussed as are the current efforts of the Baltic states to partly "privatize" their pension systems and the impact of this on the financial system.

7. **A unique characteristic of the Baltics is the percentage of banks that are owned by foreign parent institutions.** Foreign ownership of financial institutions in turn is frequently credited with the improved stability of the financial system in the Baltics. Foreign ownership can, however, also involve risks. Such risks are addressed in section IV as are issues of EU accession. Section V concludes the paper.

II. The Structure and Size of the Financial System in the Baltic States

8. **In channeling savings to investment, the financial system contributes to economic performance through mobilizing savings and allocating them efficiently, mitigating market imperfections, and promoting good corporate governance control.** In this vein, the following section will focus on the state of development of the financial systems in the Baltics and the role of both bank based financial intermediation and capital

markets in allocating financial resources with a view to identifying potential obstacles that may hamper the sound functioning of the financial system and its future growth. This section provides the background for the discussion of issues that are related to small open economies more generally.

A. Financial Intermediation in the Baltics

The banking system

9. **The financial system in the Baltic States is heavily bank-based.** Despite its pivotal role, the banking sector is still small relative to the size of the economy. At end-2001, total banking assets as a share of GDP were about 72 percent in Estonia and Latvia, but only 32 percent in Lithuania. By comparison, the average size of the euro area banking systems was over 250 percent of GDP at end-2001. Banking in the Baltics closely resembles the Western European model of universal banks that offer a broad range of services. Foreign entry has contributed to an upgrading of banking operations, growing trust by clients, and overall stability.

10. **Compared to the beginning of the transition process a decade ago, the banking sectors in the Baltic States have undergone major changes.** After regaining independence, the mono-bank system of the Soviet era was broken up into a two-tier banking system, consisting of the central bank and commercial banks. The elimination of this mono-bank system was quickly followed by a rapid expansion of the banking sector through a large number of new entries. Initially, the strategy of the authorities was to increase competition and to bring down interest rates by granting licenses liberally with little regard to prudential requirements and supervision.[6] Like other transition countries, the Baltics experienced banking crises during the transition process. In addition to the large amounts of bad debts inherited from the old regime, a key factor contributing to these crises was a lack of familiarity of banks and enterprises with the functioning of a market economy. Bank ownership in the early days of transition was largely vested in the state; as was the ownership structure of their clients. As a result, lending practices often lacked financial or economic rationale. At the same time, banking supervision and regulation was still in its infancy, so bankers—inexperienced themselves—generally had little guidance from regulators. However, especially after the banking crises, lending practices became more conservative.[7]

11. **Over the last couple of years, the banking system in the Baltics has benefited from substantial restructuring and consolidation partly in conjunction with foreign entry.** In Estonia, the number of credit institutions dropped from 42 in 1992 to just 7 by the end of 2001. Although the consolidation began already prior to 1998, the Russian crisis that

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[6] See for example Berglof and Bolton (2001) and ECB (2002b).

[7] Initially, there were also problems with the legal system and the ability of banks to enforce collateral.

year accelerated the process.[8] About 82 percent of the banking capital is held by Swedish conglomerates, and foreign ownership in controlling banking assets rose from just above 2 percent to 90 percent. Ownership is also highly concentrated since the top five banks (C5) account for 99 percent of the assets, while the top three (C3) control 91 percent of banking assets.

12. **The Latvian banking system differs somewhat from the ones in Estonia and Lithuania.** Although the number of banks dropped significantly in the aftermath of the 1995 banking crisis, the number of operating banks at end-2001 was still 23—down from 56 in 1994. The Latvian banking crisis was quite sizable since one of the banks, Bank Baltija, which accounted for 30 percent of the deposit base had to be closed. The accumulated net loss of the bank amounted to about 8 percent of GDP. Successive improvements in banking legislation and regulation ensured that the Russian crisis of 1998 had but a limited impact on the Latvian banking system. While it seems remarkable that so many banks have been able to survive in a comparatively small country, past banking problems in Russia and other CIS states (Latvia has traditionally had closer ties to Russia than its Baltic neighbors) has facilitated the evolution of a segmented banking system: resident business; nonresident business; and a combination of the two. As a result, only a few banks—albeit large ones—focus exclusively on servicing the domestic market. However, more recently even the more "niche" oriented banks servicing non-residents have also started to turn to domestic clients. In general though, Latvia has emerged as somewhat of a financial center for the region. Foreign ownership, on the other hand, is less pronounced. At end-2001, about 68 percent of the banking capital—or 62 percent of banking assets—was owned by foreigners from Germany, Sweden, Estonia, the US, and elsewhere. The structure of foreign ownership is therefore substantially more diverse than in Estonia. State ownership still accounts for about 4 percent of capital.[9] The top five banks account for 66 percent of the assets, while the top three control 53 percent of banking assets.

13. **The Lithuanian banking system is somewhat less advanced than those of the other two Baltic countries.** After the banking crisis in the mid-90ies and the indirect exposure from the Russian crisis (a sharp drop in output of -3.9 percent in 1999), bankers were reluctant to engage in credit activity. However, the crisis contributed to the consolidation of Lithuania's banking sector including an aggressive restructuring both prior and after privatization. The last state-owned bank, accounting for 10 percent of banking capital, was sold to a German bank early in 2002. Like its Baltic neighbors, Lithuania began with a large number of banks, peaking in 1993 with 27 banks. In the aftermath of the banking

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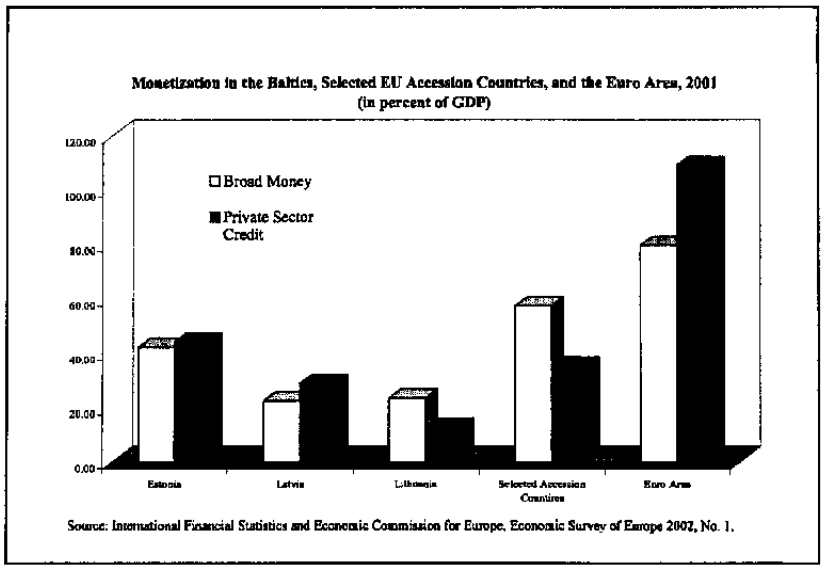
[8] A new banking license was issued by the Bank of Estonia in 1999, the first time since 1993.

[9] The Latvian State still owns 100 percent of the shares of the Mortgage and Land Bank (3 percent of banking system's total assets at end-2001) and there are no plans to divest the bank at this time. The 30 percent stake in Savings Bank, which accounted for some 4.5 percent of banking system assets at end-2001, is scheduled to be privatized in 2003.

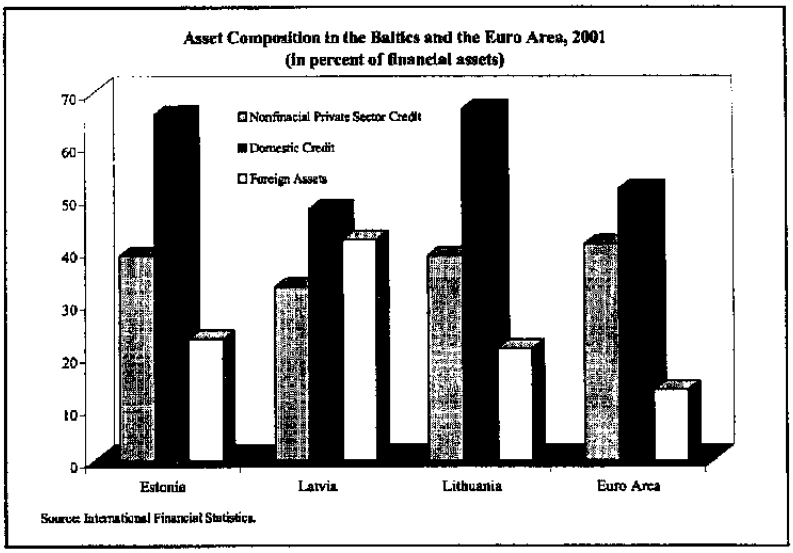
crisis in 1995, this number dropped sharply to 13, which was also the number of operating banks at end-2001. Despite the large number of bankruptcies in Lithuania, the impact on the banking system was limited given that the assets of these banks made up only 5 percent of total banking assets. Credit to the private sector has taken off in the last year and a half, albeit from low levels. End-2002 loan growth was 30.4 percent year-on-year. Regarding foreign ownership, only 13 percent of bank capital is domestically owned. Concentration is also significant. The top five banks control 90 percent of the assets, while the top three account for about 80 percent of banking assets.

14. **Foreign participation in the Baltic banking systems, albeit to different degrees, has played a crucial role in the restructuring process and contributed significantly to the health of Baltic banks today**. Foreign investors not only brought in urgently needed capital but also know-how and sound corporate governance practices and facilitated financial market integration with the west. However, the high degree of foreign ownership also implies some risk. Nonetheless, the degree of monetization, particularly credit to the private sector—with the exception of Estonia—somewhat lags when compared to other EU accession countries. Lending to the non-financial private sector accounted for less than half of banking assets in the Baltics. In terms of sectoral distribution of credit, real estate lending has been gaining in importance, particularly in Estonia where about 41 percent of loans outstanding at end-2001 were real estate loans,[10] followed by loans to industry (16.2 percent). Latvian banks, on the other hand, primarily fund the trade sector (23 percent), followed by manufacturing (18 percent). Lithuanian banks provide significant funding to manufacturing and trade (26 percent and 24 percent, respectively).



[10] Including household mortgage loans (21 percent of loans outstanding).

15. **Foreign assets play an important role in the Baltic banking system.** Particularly in Latvia, about half of banks' aggregate balance sheets comprise foreign assets reflecting to a large extent business with non-residents. However, foreign currency denominated lending to residents is also very high, amounting to 80 percent of total loans in Estonia, 56 percent in Latvia, and 61 percent in Lithuania at end 2001. At the same time, resident foreign currency deposits, as a share of total resident deposits, accounted for 30 percent, 45 percent, and 49 percent, respectively. Lithuania constitutes an interesting case in this regard because of the re-pegging of the Litas from the dollar to the Euro in February, 2002. Many Lithuanian households and businesses continue to hold their deposits in dollars while the Euro has appreciated substantially during 2002.



16. **In view of the strong presence of foreign owners, banks can close the funding gap through credit lines from their parent banks.** But foreign currency lending has other drawbacks in that banks basically substitute foreign exchange risk for credit risk, if foreign currency (mostly euro-denominated) loans are extended to unhedged borrowers. The highest risk is therefore in Estonia due to the large amount of foreign currency-denominated lending to households. One might argue that given the Baltic's successful implementation of their currency boards (Estonia and Lithuania) and Latvia's fixed rate system, the potential of adverse exchange rate movements may be small, but the experience in other countries, particularly in Latin America, has shown that balance sheet effects (both to banks and corporations) of adverse exchange rate movements can be quite large. Although the Baltic states have a credible exit strategy by intending to join EMU in 2006, a mutual agreement between the EU and the Baltic states about the central parity still would have to be reached before the countries could join ERM2. In general, while loan and deposit "dollarization" may not cause a crisis, it does have the potential to exacerbate one.

17. **Banking performance in the Baltics has improved over the past few years as evidenced by key banking indicators, although Lithuania still faces some difficulties.** However, in view of Lithuania's recent efforts to complete the privatization of the remaining state-held banking capital, it is likely that the banking sector will become more efficient and profitability will improve. Nonperforming loans have come down significantly, profitability continues to be high by international standards, and banks appear to be well capitalized and

liquid.[11] However, a large share of bank revenue is generated as a result of investments in securities rather than through traditional lending to the real sector. Why is this? On the one hand, foreign ownership contributed to more prudent lending behavior. On the other hand, the asset composition might also reflect a higher risk aversion in the aftermath of the Russia crisis and there may also be a shortage of sufficiently viable projects. While net interest margins have come down in recent years, they are still quite high by international standards. Both the high interest margins and overall relatively high profitability indicate that the high degree of concentration observed in the Baltic banking systems may, in fact, be hampering competition, something that EU accession might increase. When this occurs, profitability ratios would be expected to fall and be closer to those in Europe.

Profitability in Selected European Countries, 2001 1/

	Finland	Netherlands	Luxemburg	Germany
ROE	15.47	13.20	11.44	10.43
ROA	0.85	0.67	0.51	0.59
NIM	1.61	1.14	0.79	1.68

Source: BankScope.
1/ The reliability of BankScope data is limited.

Leasing

18. **In addition to bank financing, the Baltic states (in particular Estonia) have experienced a surge in lease financing, with leasing in some cases directly substituting bank loans.** As discussed below, certain features of the Baltic economies make leasing an attractive alternative to traditional bank financing for both lessor and lessee. Since these features are likely to be shared by other transition economies and CIS countries, the trend toward lease financing might ultimately spread to other transition economies as well. The most common type of leases are financial leases, which are the closest substitute for bank loans, given that the ownership of the asset that is being financed is transferred to the lease holder at the end of the leasing period. So-called operational leases, which are structured more like rental contracts, have been less important.

19. **In Estonia, leasing activities amounted to 12.7 percent of GDP in 2001 representing about one-third of total credit to the private sector.**[12] About 20 percent of

[11] The banking system in Lithuania, however, incurred losses in 2001 because 2001 marked significant consolidation in the Lithuanian banking system, including the write-off of a large share of bad debts.

[12] This compares, for example, to1.4 percent of GDP in Poland.

Banking Indicators in the Baltics, 1999-2001
(in percent, unless otherwise indicated)

	Estonia			Latvia			Lithuania		
	1999	2000	2001	1999	2000	2001	1999	2000	2001
Capital Adequacy									
Capital adequacy—risk-weighted average	16.1	13.2	14.4	16.4	14.3	14.2	17.4	16.3	15.7
Liquidity									
Liquidity ratio	58.3	64.4	72.5	64.1	66.4	65.5	45.4	49.7	48.0
Total reserves/total deposits	28.1	25.4	14.5	9.1	7.4	7.0	14.9	11.3	8.6
Excess reserves/total reserves	43.3	19.0	16.7	19.8	7.4	4.5	30.2	28.4	16.8
Asset quality									
Nonperforming loans (in millions of domestic currency)	792.0	716.0	590.0	52.8	49.4	46.0	709.3	650.8	509.9
Nonperforming loans/total loans	4.0	3.2	2.3	6.2	4.6	2.8	12.0	11.0	7.0
Loan-loss provisioning/gross loans	4.4	2.6	2.1	4.2	2.9	1.7	4.5	3.7	2.6
Loan-loss provisioning/nonperforming loans	118.3	81.4	91.7	87.9	81.9	81.9	38.0	35.0	34.0
Profitability									
Return on equity	9.2	8.4	20.9	11.2	18.6	19.0	1.1	4.0	-1.1
Return on assets	1.5	1.2	2.7	1.0	1.6	1.5	0.1	0.4	-0.1
Net interest margin	4.6	4.7	4.1	4.3	3.6	3.1	5.3	5.3	3.9
Loans and deposits									
Loans/deposits	100.9	98.5	95.3	65.9	58.3	70.3	79.3	64.5	62.5
Loans/total assets	56.6	59.2	59.5	43.4	40.3	47.3	53.0	46.6	49.9
Nonresident deposits as a share of total deposits	16.9	16.0	14.3	47.8	51.9	51.9	8.9	8.2	12.6
Nominal interest rate spread	4.5	3.9	5.4	8.3	7.5	4.2	8.2	8.3	6.6
Foreign currency deposits as a share of total deposits	31.1	34.0	30.1	48.2	46.8	45.0	48.8	49.5	49.1
Foreign currency loans as a share of total loans	76.1	77.9	78.7	52.3	51.3	56.3	61.6	66.8	60.6
Concentration									
C3	92.0	91.0	91.0	49.8	51.0	52.8	74.1	83.5	81.9
C5	99.0	99.0	99.0	61.3	62.3	66.2	92.4	91.2	92.4
Memorandum Items				(in percent of GDP)					
Total assets	28.7	33.5	48.0	50.4	62.0	71.8	26.0	29.0	32.0
Deposits (resident)	22.5	26.1	30.1	17.3	20.6	23.3	15.9	18.7	21.2

Source: Country authorities and Fund staff estimates.

lease claims were used to purchase real estate on installment plans. The remaining eighty percent of leases were used to purchase "movables", with about half of these leases being used to purchase personal and commercial vehicles.[13]

[13] In addition to its large leasing sector, Estonia also has a substantial factoring market. Factoring involves the secondary sale, at a discount, of a company's accounts receivable, allowing the company to exchange book debt for cash while shifting the risk associated with carrying the debt to the factor. This market was equal to 1.7 percent of GDP in 2001.

Leasing Sector in Baltic Countries, 1999-2001

	Estonia			Latvia			Lithuania		
	1999	2000	2001	1999	2000	2001	1999	2000	2001
Leasing and Factoring	6781.7	10078.4	13971	75.2	140.5	213.5	...	849	1343
(as a percent of GDP)	8.9	11.6	14.5	1.9	3.2	4.4	...	1.9	2.8
Leasing	6299.8	9219.5	12283.9	70.0	119.2	179.4	572	680	1121
(as a percent of GDP)	8.2	10.6	12.7	1.8	2.7	3.7	1.3	1.5	2.3
Leasing assets 1/	6289.8	9219.5	12283.9	70.0	119.2	179.4	572	680	1121
financial, in percent of total assets	62.5	52.3	46.3	...	95.7	82.9	98.3	95.3	95.4
operational, in percent of total assets	23.7	21.7	32.6	...	4.3	5.2	2.1	4.7	4.6
Leasing assets by industry									
cars (passenger, commercial and other), in percent of total assets	49.0	44.1	40.2	52.1	50.1	48.3	57.6	49.3	44.8
real estate, in percent of total assets	20.5	20.1	19.5	5.3	14.8	16.2	6.8	20.1	18.7
other, in percent of total assets 2/	30.6	35.8	40.3	42.6	35.1	35.4	35.6	30.6	36.4
Leasing portofolio by maturity									
up to 1 year, in percent of total assets	4.1	4.0	2.9	31.3	22.1	21.6	...	...	...
1-3 years, in percent of total assets	27.1	25.7	22.1	44.9	37.3	32.6	...	...	...
3-5 years, in percent of total assets	45.5	49.6	51.2	16.8	30.2	31.9	...	...	...
over 5 years, in percent of total assets	23.2	20.7	23.8	6.9	10.3	13.9	...	...	...
Factoring	491.9	858.9	1687.1	5.2	21.3	34.0	...	169	222
(as a percent of GDP)	0.6	1.0	1.7	0.1	0.5	0.7	...	0.4	0.5
Memorandum Items:									
GDP, in millions of national currency	76327	87236	96571	3889	4348	4812	42655	45148	47958
Leasing assets from bank affiliated companies									

Source: Country authorities.

1/ For Estonia, total leasing assets include hire purchase contracts.
2/ Other includes machinery and equipment; ships, aircrafts and railway; data processing and communications, etc.

20. **While the leasing market in Latvia is smaller, it too is expanding rapidly, more than doubling in size between 1999 and 2001.** By the end of 2001, the stock of leased assets had reached almost 4 percent of GDP. More than 94 percent of these leases were financial leases, a much higher proportion than in Estonia. Almost 50 percent of lease assets were used to purchase vehicles, while real estate leasing made up about 16 percent. The remaining lease contracts included leasing of machinery and equipment, airplanes and railway equipment, and data processing and communications equipment. Factoring is relatively insignificant, amounting to 0.7 percent of GDP.

21. **Although the leasing market in Lithuania grew by more than 60 percent in 2001, it is still the smallest among the Baltic States, with total leasing assets accounting forless than 3 percent of GDP.** The structure of leasing assets mirrors the structure of the economy, with manufacturing and trade comprising the largest share.

22. **Several factors contribute to the importance of leasing in all of the Baltic States.** The most important of these factors is related to how the collateral is handled as well as the cost of repossessing assets in the case of non-payment of loans. Although a lease contract operates in most respects like a debt contract, under a lease contract, the title to the underlying property remains with the bank or the leasing company. This important legal difference in ownership makes leasing an attractive alternative to debt financing in economies in which the actual cost of seizing collateral is higher despite the fact that leasing companies have the legal right to do so. In this respect, leasing, especially financial leases, are an efficient market response. The importance of leasing in the Baltics may presage the growth of this sector in other countries.

23. **Another reason for the rapid development of the leasing market, especially with respect to operational leases, is that people are often faced with borrowing/liquidity constraints reflecting the relatively low levels of income and wealth in these countries.** As lease contracts have been executed in the Baltic countries, they entail a different structure of payments than would a standard debt contract on a given underlying asset. These contracts, although classified as purchases by the lessee, have a lease term that is greater than 75 percent of the properties' estimated economic life, with an option to buy for less than the market value. For example, leasing a car requires a lower payment up-front, with a balloon payment coming due at the end of the term if the lessee decides to buy the car.

24. **In the future, it is likely that leasing will continue to grow unless collateral laws will be changed.** However, as the leasing sector expands, regulation of these activities may become an increasingly crucial issue. Until now, leasing companies have been primarily bank subsidiaries, and hence are monitored through the supervision and regulation of the parent banks. However, a larger lease sector that is not affiliated with banks would require explicit supervision and regulation of leasing to prevent regulatory arbitrage.

Insurance

25. **While leasing is well developed, the insurance sector continues to be small in the Baltics.** However, it has been increasing steadily since 1993 and is likely to expand further in the future. Insurance company assets amounted to 2.5 percent of GDP in Estonia, about the same in Latvia and slightly less in Lithuania. The number of insurance companies has fallen as higher capital requirements contributed to the consolidation of the sector.[14]

26. **Within the insurance industry, the life insurance sector is the least developed, accounting for only 20 percent of the total premium volume in Estonia, and less in Latvia and Lithuania.** However, recent legal changes have helped stimulate the growth of the life insurance sector in two of the Baltic states. In 1998, the Latvian government excluded payments made for employees' life insurance premiums from social security taxes, while in 1997 Lithuania introduced tax allowances for long-term life insurance premiums. Similarly, non-life insurance, primarily automobile insurance, is likely to see rapid growth in the immediate future as a result of compulsory motor insurance laws (third party liability) that have been passed in all three countries. Over the last couple of years, foreign investment has also played a significant role in helping the insurance sector to develop, reflecting the openness of the Baltic countries.

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[14] In Latvia, the number of companies decreased from 42 in 1994 to 25 in 2000 (17 non-life and 8 life insurance companies). In Estonia, partly due to bankruptcies, the number of companies fell from 22 in 1998 to 14 (8 non-life and 6 life) in 1999. Lithuania in turn, had 31 insurance companies at the end of 2001, of which 22 were non-life and 9 life insurance companies.

Insurance Sector in Baltic Countries, 1999–2001

	Estonia			Latvia			Lithuania		
	1999	2000	2001	1999	2000	2001	1999	2000	2001
Assets, in millions of US $	105.8	122.2	137.9	162.3	173.8	178.5	186.75	211.5	237.25
Assets, in percent of GDP	2.2	2.4	2.5	2.4	2.5	2.4	1.8	1.9	2.0
Assets, in millions of national currency	1646.0	2056.0	2439.0	94.6	106.6	113.9	747.0	846.0	949.0
Life, in percent of total assets	24.7	32.2	37.9	24.7	24.4	25.0	7.5	11.8	18.5
Non-life, in percent of total assets	75.3	67.8	62.1	74.1	77.3	74.9	92.5	88.2	81.5
Gross collected premiums, in millions of national currency	1417.0	1659.0	1822.0	94.6	95.6	96.9	428.0	422.0	478.0
Life, in percent of total premiums	15.3	18.3	19.5	7.1	3.9	3.6	7.7	10.7	14.4
Non-life, in percent of total premiums 1/	84.7	81.7	80.5	92.9	96.1	97.0	92.3	89.3	85.6
Foreign ownership, in percent of total assets	31.0	54.7	58.7	32.0	47.0	52	36.5	36.9	47.2
Memorandum Items:									
GDP, in millions of national currency	76327	87236	96571	3897	4336	4741	42655	45148	47968
Exchange rate, NC/US $, e. o. p.	15.6	16.8	17.7	0.58	0.61	0.64	4.0	4.0	4.0

Source: Country authorities.

1/ Includes reinsurance in Estonia.

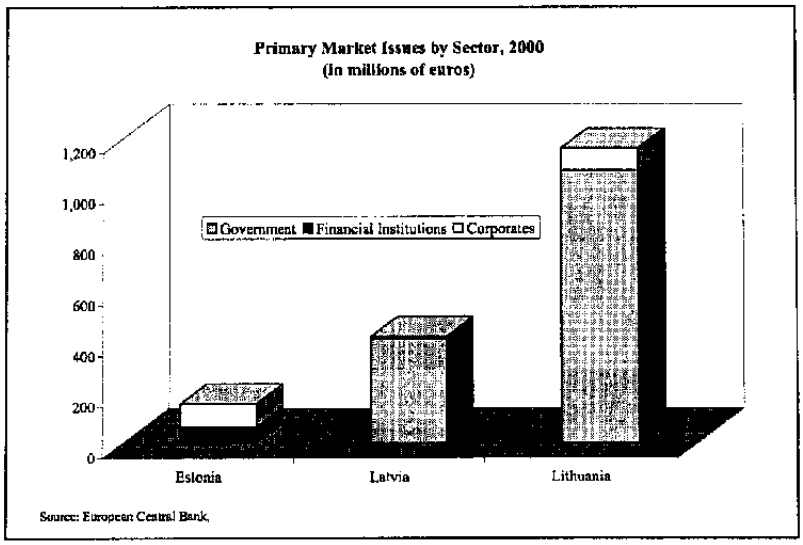
B. Market-based Finance in the Baltics

27. **All three Baltic countries inherited the infrastructure of a banking system but the capital markets have developed only over the past decade**. As a result, the role of domestic capital markets as part of the financial system and as a means to allocate savings and investment has been very limited. To some extent, the monetary policy framework has contributed, at least initially, to the present state of development of the bond markets in the Baltics. Specifically, the CBAs in Estonia and Lithuania and the peg in Latvia supported the deepening of foreign exchange markets and financing in international markets. This, however, implied slower development of domestic money markets. Developments would have been different had the Baltics opted to rely on domestic money as a nominal anchor instead of the exchange rate. In addition, foreign participation in the Baltic economies, which, to a large extent, reflects the past privatization process, has been significant and financing has often come from parent companies through credit lines.

Bond market

28. **In general, the development of markets for government debt is closely linked to the fiscal stance during the transition process.**. In addition, a growing nonbank financial sector, particularly through institutional investors such as insurance companies and pension and investment funds, typically leads to an increase in the demand for marketable securities (ECB, 2001). As will be discussed in greater detail below, bond markets can constitute an important supplement to bank lending. In addition, a well functioning market for government debt can serve as a platform for the development of private sector debt markets and provide key information about market expectations.

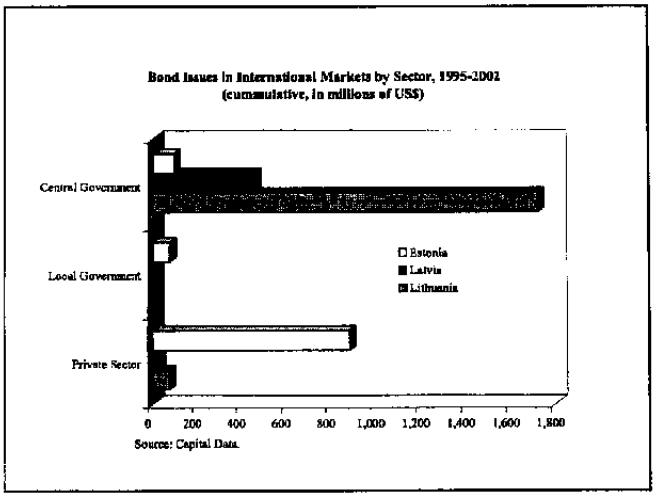
29. **After a decade of transition, domestic bond markets in the Baltics remain fairly underdeveloped and are dominated by government securities, with the exception of Estonia.** A sizable fraction of total bonds outstanding are in turn international rather than domestic issues, i.e. Eurobonds and again, except for Estonia, private issues in international markets are very small.



Bond Market Indicators, 1999-2001
(in percent of GDP, unless otherwise indicated)

	Estonia			Latvia			Lithuania		
	1999	2000	2001	1999	2000	2001	1999	2000	2001
Market capitalization 1/	4.0	4.0	4.0	3.4	5.9	5.7	3.0	3.0	4.0
Turnover (in percent of market capitalization)	227.0	82.0	38.0	3.3	150.6	169.7	90.7	61.9	50.8
Government securities	...	0.0	0.4	3.4	5.9	5.3	4.3	5.2	5.0
Eurobonds	...	...	...	3.5	3.1	5.2	6.8	8.7	9.1
Yield (in percent)	...	...	...	6.7	5.6	4.5	7.7	7.0	5.1
Yield spread (in basis points)	...	...	...	183.5	94.1	67.7	289.6	240.1	120.3
Corporate debt securities	...	...	0.7	0.0	0.7	0.4	0.9	0.3	0.4

Source: National Stock Exchanges, Datastream, and IMF staff estimates.
1/ For Latvia, only nominal values of market capitalization and turnover are available.



30. **During the period 1991–2001, cumulative international bond issues as a share of 1991–2001 GDP amounted to 1.9 percent in Estonia, 1.4 percent in Lithuania and 0.8 percent in Latvia.** Hungary, by way of comparison, issued 4.1 percent of GDP in bonds in international markets over the same period.[15] With private issues being minimal in Latvia and Lithuania, companies still rely to a large extent on internally generated funds or bank credits to finance ongoing and new investment projects.

31. **While overall international emerging market bond financing dropped substantially in 2002 compared to the previous year, the Baltics and other accession countries do not seem to have been affected by the increased risk aversion in global markets and the financial crisis in Argentina.** Bond spreads remain favorable and both Estonia and Lithuania have successfully launched Eurobonds in 2002.

32. **The total stock of debt outstanding as a share of GDP in EU countries was 109 percent, on average, at the end of 2000, while the comparable figure for accession countries was 22 percent.**[16] Notwithstanding the overall small size of the Baltic debt markets, the relative importance of the government debt market varies significantly across the Baltics.[17] As pointed out above, government securities dominate the debt markets in Lithuania and Latvia. At end-2000, government debt accounted for about 95 percent of the

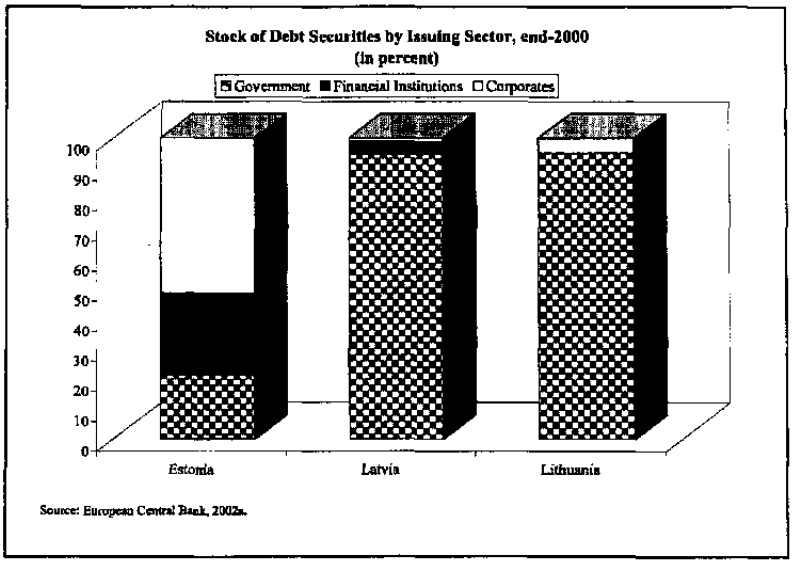
[15] In per capita terms, Estonia issued bonds worth US$ 531, Lithuania US$ 390, and Latvia US$ 208. Again, Hungary takes the lead among the accession countries, with bonds issued worth US$ 1,949 per capita.

[16] For a detailed comparison between the EU and EU accession countries, see ECB, 2002a.

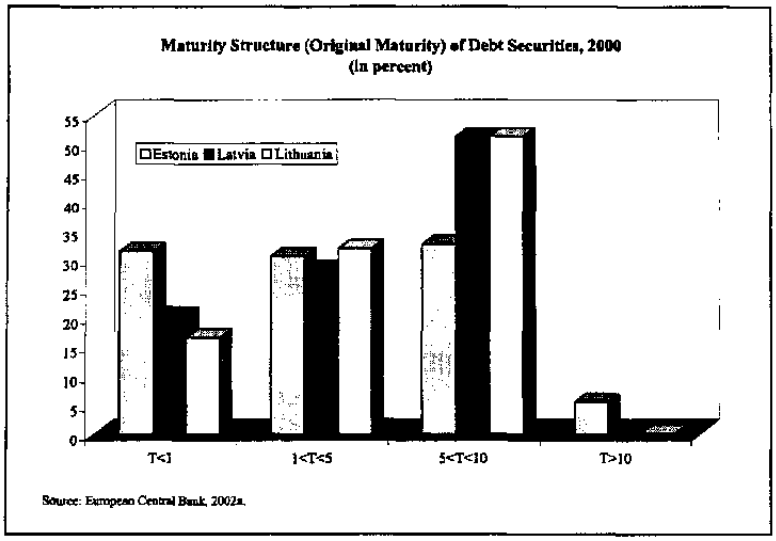
[17] The figures for Latvia and Lithuania include Eurobond issues by the government.

market in both countries. In Estonia, on the other hand, government securities only accounted for some 21 percent of the market.

33. **In Estonia, government debt securities have not been the driving force of corporate debt market development, or more broadly, capital market development.** This is partly due to prudent fiscal policies during most of the transition period which generated relatively small amounts of debt. Nonetheless, the fixed income market is gaining in importance as an alternative source of financing for marketable companies and local governments. About 90 percent of government securities were long-term bonds. The Estonian government issued its first Eurobond in June 2002 partly to refinance more costly World Bank loans, to test market sentiment towards Estonia, and to change the currency composition of the debt.[18] Both primary and secondary market activity has been declining in recent years.



34. **In Latvia, the general government is the major issuer of debt.** In contrast to Estonia, the Latvian government issued securities in excess of fiscal needs to help establish the domestic bond market and promote long term financing in domestic currency. Nonetheless, corporate issues are still dormant and issues by financial institutions continue to be insignificant as well. Both primary and



[18] The yield on that bond turned out to be fairly favorable at 5.2 percent.

secondary market activity was and remains dominated by government debt, although, the share of debt of financial institutions traded in the secondary market increased from zero in 1999 to 9 percent in 2000. About 95 percent of the trades in government securities were conducted via the over-the-counter (OTC) market while the remaining 5 percent were traded via the stock exchange. Nonetheless, with the listing of government securities at the Riga Stock Exchange (RSE) in 1999, stock exchange trading has gained in importance. In terms of maturity, about 19 percent of government securities outstanding at end-2000 were short-term, while the remaining stock had a maturity between 1 and 10 years. Since early 2003, the maximum maturity for domestic currency bonds is 10 years. Securities of corporations (only 1.1 percent of the total stock at end-2000) were exclusively short-term, while 39 percent of securities of financial institutions (4.3 percent of total) had a maturity of less than a year.

35. **In terms of size, the Lithuanian debt market exceeded that of both of its Baltic neighbors.** As in Latvia, government securities dominate the market, accounting for about 95 percent of the total at end-2000. Securities issued by corporations amounted to 5 percent of the total stock of securities at end-2000. Thus, primary marked activity was driven by the borrowing needs of the government. Secondary market activity increased slightly between 1998 and 2000 but was mainly trade in government securities. About 17 percent of the stock of securities at end-2000 had a maturity of less than a year, with the remainder being up to 10 years. Corporate debt securities, on the other hand, are concentrated in the 1 to 5 year maturity bracket (about 90 percent).

Equity markets

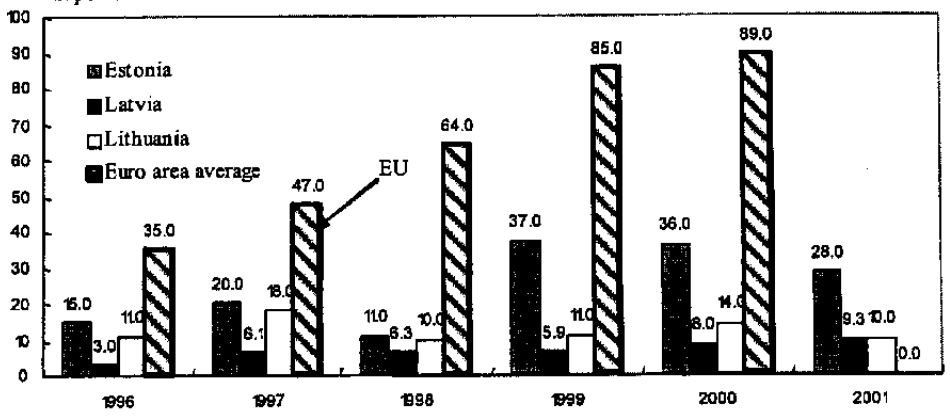
36. **Equity markets as a source of financing are still in their infancy in the Baltic states.** However, in the mid-1990s, all three countries attempted to foster the development of equity markets. The initial push for the development of these markets coincided with the 1995 banking crises in Latvia and Lithuania. The authorities' objective was to diversify the sources of financing in order to allow enterprises access to funds even when bank lending dried up. It was also thought that well-developed equity markets were needed to allow companies to raise non-debt-creating financing. Finally, it was believed that the creation of incorporated companies would improve corporate governance and therefore encourage companies to operate more efficiently.

37. **The factor that gave the development of equity markets the initial boost was privatization.** In line with other transition economies, the Baltic states used either voucher privatization or the sale of assets to strategic investors to transfer ownership to the private sector. Both approaches had a positive, albeit temporary, impact on the stock market. Although the stock markets saw a rapid increase in listings and active trading early on, the markets soon became illiquid and companies began delisting. Moreover, turnover fell as the number of shareholders decreased and the ownership structures became more concentrated.

Equity Markets in Baltics Countries, 1996–2001

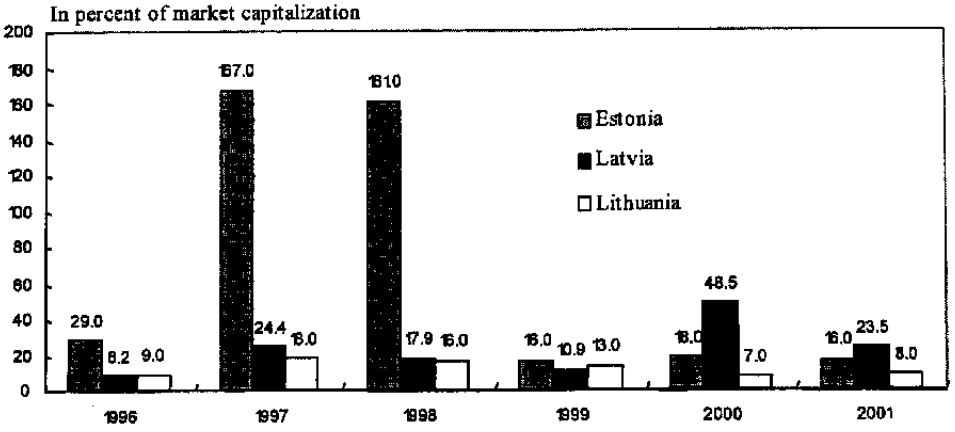
Market Capitalization

In percent of GDP

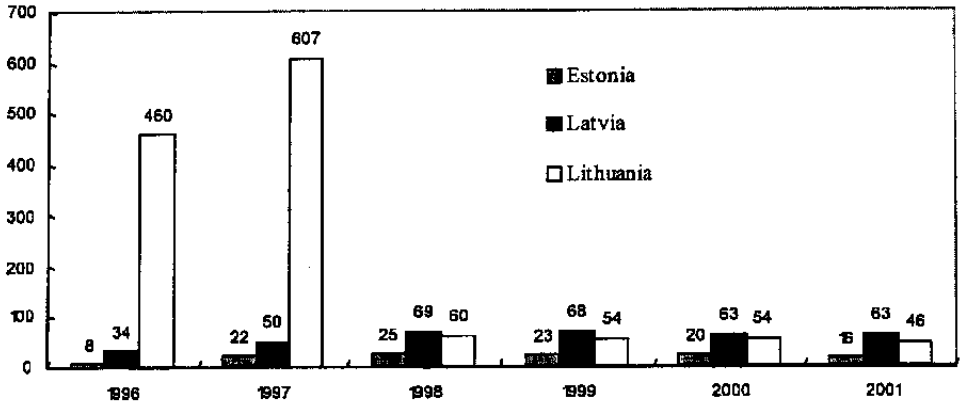


Market Turnover

In percent of market capitalization



Number of Stock Listed



Source: Stock exchange websites, country authorities and ECB.

Lithuania relied almost exclusively on voucher privatization, with the intention of ensuring ownership diversification.[19] This strategy, which continued until 1995, was also consistent with the government's goal of preventing the sale of assets to foreigners. Voucher privatization was used to sell off land, housing, and small and medium-size state-owned enterprises. The result, however, was that a relatively small group of insiders became owners, and often resisted extensive enterprise restructuring. While the initial impact of privatization was positive, in that it allowed the stock exchange to get off the ground, the subsequent impact has been limited. About 50 percent of the 1200 privatized companies that were initially listed and registered with the Lithuanian Securities Commission (LSC), only a few were actively traded on the National Stock Exchange of Lithuania (NSEL). More than 500 of the companies that were not traded or traded infrequently were ultimately delisted or reorganized into private, limited companies. Furthermore, a number of large companies were delisted after strategic investors bought out the remaining minority shareholders. Vilnius Bank, for example, which previously was the most actively traded company on the NSEL, was delisted when SEB (its Swedish majority owner) bought the remaining shares.[20] At the end of 2001, the number of listed companies had fallen to 46, of which only 6 were on the primary official list. The same development occurred with respect to the investment funds. Of the 200 investment funds that were created during voucher privatization, only 11 are still in existence. Given that the investment funds held shares in only a few companies each, they effectively became holding companies rather than investment funds. Today, of the 11 funds that still exist, only one (Invalda) is listed on the NSEL.

Box 1: Venture Capital

In advanced economies a substantial portion of small enterprises are financed by venture capital. Venture capital financing is, however, largely absent in the Baltic States. Those funds that exist have support from Western governments or multilateral institutions such as the European Bank for Reconstruction and Development (EBRD); Nordic Financial Institutions are another source of capital. Few of the venture funds that invest in the Baltics have a local presence and financing of start-ups are negligible; instead the funds invest in existing businesses. Exits from investments tend to take place through private equity sales rather than initial public offerings (IPOs). The lack of a developed venture capital market also implies that there is no secondary market for venture-capital commitments. Market participants indicate that the development of venture capital is hampered by the negative experiences of investors during the last financial crisis, which has kept investors largely out of equities. Since in advanced countries such as the U.S. the largest percent of funding comes from pension funds, the pension reform in the Baltic States is likely to boost the funds that will be available for venture capital. One of the main impediments is the small size of the countries. To partly address this issue, the EBRD has initiated the creation of a Baltic Venture Capital Association.

[19] In addition to Lithuania, countries such as Bulgaria and the Czech and Slovak Republics used voucher privatization as an active tool to develop secondary markets (see also Claessens, Djankov and Klingebiel (2000) and Berglof and Bolton (2001).

[20] The same may be likely for Hansa-LTB, LZUB and the national telecom company, Lietuvos Telekomas.

38. **At the end of 2001, the Lithuanian stock market capitalization amounted to 10 percent of GDP.** The exchange has been dominated by a few large companies such as the Lietuvos Telekomas, which itself represented more than 2 percent of GDP and 20 percent of the listed stock capitalization. The top five companies represent 60 percent of capitalization. With trading volumes at below 20 percent of capitalization, liquidity has been low.[21]

39. **Compared to Lithuania, both Estonia and Latvia have relied more on strategic investors in their privatization processes, using voucher privatization largely to sell off minority stakes after strategic investors had already acquired the majority of shares.**[22] Estonia (from early on in the transition process) and Latvia (from 1994) encouraged foreign participation, in particular sales of ownership stakes to Scandinavian enterprises and banks. Both countries did so by using fairly stringent tender processes that favored foreign companies over domestic ones, given that foreign entities had greater access to funds and expertise. Beginning in 1998, Lithuania also adopted the strategic investor approach, which was used to sell 60 percent of Lietuvos Telecom; later, a public offering was used to sell most of the remaining shares. Since then, companies including Mazeikiai Oil and GeoNafta; Vilnius, Savings and Agricultural Banks; and LISCO have been privatized to strategic foreign investors.

40. **The stock market in Latvia grew gradually, with market capitalization increasing from 3 percent of GDP in 1996 to 9.3 percent of GDP at the end of 2001.** Activity in the Riga Stock Exchange (RSE) began with the sale of a small number of stocks as a result of privatization-related IPOs. The subsequent listing of additional companies improved market capitalization and allowed the market to remain liquid. Recent activity has included mergers and acquisitions, such as the Swedish bank SEB buying the largest local bank, Unibanka; the Danish insurance company Codan buying the local Balta; and continuing privatization of the gas, telecom, oil, and shipping companies to foreigners. At the end of 2001, the RSE had 63 companies listed and capitalization of US$ 673 million (9.3 percent of GDP). Trading volume was about US$ 158 million (23 percent of stock market capitalization), exhibiting a dramatic fall from 2000 due to delistings of two major companies and large block trades of a few major companies.

41. **Estonia has the most developed stock market among the Baltic countries, and from the beginning has clearly benefited from a few—but high quality listings—created through the IPOs of state-owned companies.** Market capitalization of the Tallinn Stock Exchange reached 20 percent of GDP in 1997, before the Asian and Russian crises subsequently reduced it to 11 percent of GDP. By 1999, the exchange had rebounded, with 23 companies listed and capitalization reaching 37 percent of GDP. At year-end 2001, there

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[21] However, in Lithuania, housing and land were privatized through the use of vouchers.

[22] Other countries that sought to develop their stock market through initial public offerings were Hungary, Latvia, Poland, and Slovenia.

were 16 companies listed and capitalization was US$ 1433 million, or 28 percent of GDP. During 1997 and 1998, turnover reached frenzied peaks at about 160 percent of market capitalization, as investors tried to exit the market in response to the twin crises. However, since that time, turnover has returned to a relatively steady level of 16 percent of capitalization.

42. **The above section described the financial system in the Baltics and analyzed its strengths and weaknesses.** It revealed that financial intermediation remains somewhat underdeveloped, especially in Latvia and Lithuania, and that capital markets are still in their infancy in all three countries. Hence, the question arises whether further development of the financial system will be needed to ensure an efficient allocation of resources and high and sustainable growth rates. Recently, a number of studies have tried to address the relationship between financial system development and growth. The following summarizes their main findings.

III. Financial Sector Issues in Small Open Economies

43. **There is a growing consensus in the literature[23] that the development of a well-functioning financial system plays an important and positive role in the promotion of long-run economic growth and in economic stability in general.** This consensus emerged relatively recently from a growing body of literature based both on theoretical considerations as well as empirical evidence showing a positive correlation between various measures of financial development and economic growth. Indeed there is also some empirical evidence which suggests a causal relationship indicating that financial system development is conducive to economic growth. In addition another wave of research looked more closely at the channels through which the financial system enhances growth. This literature has identified a number of specific features that seem to have a potential for enhancing economic growth. The goal of this section is to ask whether and in what way the development of the financial system can promote increased long-run growth in the Baltic states.

44. **During the first 10 years of transition, the reallocation of existing resources and the attraction of new investments took place—to a large degree—in the context of privatizations, foreign direct investments, and through internally generated funds.** The role of capital markets and even the banking system was rather limited in the allocation of savings and investment. However, looking ahead, there is a considerable potential for the financial system to play an important role in the future. In the medium term, it is anticipated that all three states will have a high level of investment and that both the respective banking systems and potentially capital markets could play a key role in determining the efficiency of those investments and therefore contribute to maintaining high growth rates. While the empirical literature shows that financial system development and growth go hand-in-hand, it is less clear what—if anything—policymakers in small open economies can do to foster the

[23] See Appendix for an overview of the literature.

development of the financial system. The following section addresses a number of issues that are particularly relevant for the Baltic states and small open economies in general.

A. Distortions in the Financial System

45. **The least controversial way of fostering the development of the financial system is to reduce existing distortions.** As a result of the pursuit of sound macroeconomic policies, the elimination of direct controls, and an almost fully privatized banking system—and therefore the absence of government interference in the allocation of credit—the Baltic states do not exhibit financial repression of the sort commonly found in the CIS and developing countries. However, the lack of developed capital markets and the dominance of bank financing may reflect existing distortions that should be addressed. Distortions in turn can retard the development of the financial system or favor the development of a particular sector, such as banking, at the cost of other sectors. Furthermore, the financial system could have distortions that lead to allocative and/or productive inefficiencies.

46. **In the case of the Baltics, the most important distortions are related to the tax treatment of financial instruments.** In all three countries, taxation is uneven across instruments and tends to favor bank instruments. In Estonia, income earned from bank deposits is tax free, while income on other types of financial instruments is taxed as income at 26 percent. In Latvia, capital gains are taxed, while interest income from bank deposits held by households is not. Although new personal income tax legislation is being drafted in Lithuania which would tax all personal income at the same rate, bank deposits would continue not to be taxed. Moreover, in Lithuania, income from interest and fees related to leasing and factoring activities is subject to value-added tax, resulting in double taxation of this income and therefore placing these forms of financing at a disadvantage relative to bank lending.

47. **The high concentration ratios (C3 and C5) of banks (including leasing and insurance activities), especially in Estonia and Lithuania, as well as the size of the spreads between deposit and lending rates, suggest that these countries might be faced—among other things— with a lack of competition and/or an implicit form of taxation.**[24] The lack of competition as reflected in the concentration ratios is, of course, partly related to the small size of the countries and the presence of scale economies. Here, the future integration of the financial system with that of the European Union should, at least partly, increase competition. The size of the spreads between lending and deposit rates could also be a reflection of unremunerated reserve requirements in excess of those in the Eurozone representing an implicit from of taxation.[25] More recently though spreads between deposit

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[24] Higher spreads also reflect the more risky environment of making investments in transition economies.

[25] Unlike in the case of the tax distortions that favor bank financing, high reserve requirements should in principal favor financing via capital markets.

and lending rates have come down reflecting, among other things, a gradual reduction in cash reserve requirements[26] and a pick up in competition at the level of small-and medium size banks especially in Estonia. In Lithuania, the unremunerated required reserve ratio is now 6 percent (down from 10 percent in 2000).

48. **In order to create a level playing field, the Baltic states should eliminate the existing tax distortions and apply tax rates uniformly.** As the Baltic states prepare for EU accession, the reserve requirements will ultimately have to be lowered for banks operating in the Baltics in order to meet averages of 2 percent prior to joining EMU. The timing of the reduction should, however, take into account broader monetary developments.

B. Corporate Governance and Market Structure

49. **In addition to the elimination of market distortions, more and more emphasis is placed on measures that foster corporate governance and the infrastructure of the financial system.** The basic infrastructure needs for successful financial sector growth include legal protections for creditors and shareholders, sufficient disclosure standards, well-governed institutional investors, and supporting private and public institutions. Levine et al (2000)) and La Porta et. al. (1998) examined, for example, the relationship between the legal framework and measures of bond and equity market development and show that countries with greater support for creditors rights, contract enforcement and information disclosure, have higher levels of development of both capital markets and financial intermediaries. There is also a fundamental need for efficient trading and settlement systems.

50. **The market infrastructure and corporate governance frameworks in the Baltic countries are fairly modern (Box 2).** All three countries have seen significant improvements in their institutional and legal frameworks as new legislation has been introduced to comply with the terms of the *acquis communautaire* of the EU. La Porta, et. al. (1999) developed indicators of the quality of shareholder protection as written in laws; these indicators were extended by Pistor (2000) for transition economies. These indicators, which do not reflect enforcement standards, show that the three Baltic states have levels of shareholder protections that are equivalent or even higher than those, for example, in industrialized countries such as Germany.

51. **However, to what degree the market infrastructure and corporate governance framework actually has an impact on the behavior of market participants depends crucially on enforcement and implementation.** There have been continual improvements in the enforcement of legislation in the Baltics. The EBRD's Business Environment and Enterprise Performance Survey (BEEPS) conducted in 1999 and 2002 asked firms to

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[26] In Estonia, banks are now allowed to hold 50 percent of required reserves in quality Euro assets. Since 2003, reserve requirements in Latvia are only one percentage point above those in the Eurozone.

Box 2: Market Infrastructure and Corporate Governance in the Baltics

Estonia:

Market infrastructure

HEX Tallinn operates the Estonian securities market infrastructure, thus provides a common trading environment for securities listed on the Tallinn and Helsinki exchanges. Companies can apply to be listed in the main, I-list, funds or bonds list. All securities must be dematerialized, freely negotiable and registered with the Estonian Central Depository (CSD), owned by the Tallinn Stock Exchange (TSE). At least 25 percent of the shares must be in public hands. There is also a "Free Market" which is a pre-list; firms which do not meet the criteria for listing may be permitted to trade in the "Free Market" for one year before applying for an official listing. Supervision is the responsibility of the newly created Financial Supervision Authority (FSA), which will lead to more effective supervision and enforcement. The State Liability Act 2001, which provided for legal protections for supervisory staff should bring about further improvements.

Corporate governance

Most financial sector laws in Estonia favor transparency. Estonia has seen significant improvements in the accounting framework – from 1995 all entities were required to comply with Estonia's Generally Accepted Accounting Principles. New accounting rules came into force in the beginning of 2003.

Latvia:

Market infrastructure

The capital market consists of the Riga Stock Exchange (RSE), which trades securities on three tiers, brokerages, investment companies, private pension funds, and the Central Depository. Settlement of securities trades takes place according to DVP (T+3) (simultaneous, irrevocable, and final), while cash transactions are settled through the central bank. Companies on the official list must make at least 25 percent of their shares freely tradable. Regulation and supervision of capital markets activities is vested in a newly established (July 2001) unified agency, the Financial and Capital Market Commission (FCMC). Latvia's legal framework is based on civil law. The primary legislation for listed companies is the new Commercial Code of January 2002.

Corporate governance

While the legislative and regulatory framework dealing with corporate governance practices has undergone significant change, compliance and enforcement remain areas that need improvement. Thus, to foster good corporate governance, a key priority is the strengthening of the judiciary. Disclosure, an important ingredient to sound corporate governance is of high standard. All companies on the official (top-tier) list of the RSE as well as commercial banks and insurance companies (but not brokers) must prepare their financial statements in accordance with International Accounting Standards (IAS) and have their audits prepared by an approved auditor (typically an international audit firm). Second tier firms and firms on the free list may prepare their financial statements in accordance with Latvian accounting and auditing legislation. However the financial statements of virtually all listed companies are reportedly prepared in accordance with IAS and are audited by sworn auditors following ISA.

Lithuania:

Market infrastructure

The market comprises the National Stock Exchange of Lithuania (NSEL), which trades securities on three tiers, the central depository, and brokers. The legal framework for establishing private pension funds has been put in place, but no pension fund is operative as yet. Clearing and settlement is based on the DVP (T+3) principle and linked to the Bank of Lithuania's payments system. Supervision and regulation is conducted by the Lithuanian Securities Commission (LSC). The civil code, effective as of July, 2001, provides the basis for private and commercial law.

Corporate governance

Lithuania's corporate governance structure primarily reflects several historical events, such as the mode of privatization and imminent EU accession. New accounting legislation, which came into force in 2002, should significantly improve the quality of company disclosure. Banks are required to have all annual financial statements audited by international audit companies in accordance with IAS requirements

evaluate their business environment using several criteria. According to this survey, the Baltics rate high in terms of providing a favorable business environment relative to many of the other transition economies, with Estonia receiving one of the highest rankings in both years. Lithuania and Latvia saw an improvement in their ratings between the surveys. At the

same time though, the EBRD transition report notes that even with the 'strong anchor' provided by the *acquis communautaire*, there remain institutional weakness in regulation, competition policy, the judicial system and in local government administration that should be addressed.

52. **Information and, therefore, financial disclosure, accounting and audit standards, play a central role in financial market development**. Disclosure is one of the key underpinnings of good corporate governance, accounting provides the financial information required for businesses to operate in a market environment, and audit serves to attest the reliability of a company's financial statement. For example, evidence suggests that countries with some basic accounting standards experience higher level of stock market development than others (Levine and Zervos, 1996). Box 2 provides background information on legislation covering these issues in the Baltics; all countries have enacted new legislation that complies with international standards in both accounting and auditing practice.

C. Market-based versus Bank-based Financing

53. **The above description has shown that equity and bond markets in the Baltics are underdeveloped**. This is not surprising, since in small economies with less developed financial systems, corporate bond and equity financing is typically not a viable alternative to the bank financing. Berglof and Bolton (2001), for example, suggest that weaknesses in regulatory and contractual enforcement mechanisms in emerging market economies render banks better placed to protect creditor rights. Typically, small investors refrain from stock market investments for fear of being exploited by insider trading and prefer to use bank deposits as a savings vehicle. In addition, the number of sufficiently large enough enterprises is inadequate to make corporate issues of debt or equity cost efficient.

54. **There is quite an extensive literature that assesses the merits of market-based versus bank-based financing models**. The debate about bank-based versus market-based finance is based on two competing theoretical view. One view is that bank-based systems are better placed to mobilize savings, identify sound investment projects, and exert corporate control, particularly at the early stages of development. The other, marked-based view, argues markets are better suited to allocate capital, provide risk management tools, and mitigate the problems of concentration in the banking system. Empirical research on the issue has centered on the U.K. and U.S. as classical cases of marked-based financial systems and Germany and Japan as bank-based systems. However, as pointed out by Levine (2002), this makes it difficult to draw conclusions for countries that are dissimilar in important ways to these industrial country models. In his paper, Levine constructs a dataset for a broad range of countries with different financial structures and growth rates. The results suggest that neither polar view is supported as being particularly conducive to growth. The analysis does support the so-called "financial services view"—which is a hybrid case between bank-based versus marked-based finance. In essence, the key to growth is the overall development of the financial system, a sound legal framework, including contract enforcement, and investor protection. As such, this research suggests that it does not matter whether financing of private

sector activity is dominated by banks or by capital markets, as long as they operate efficiently and reflecting a regulatory framework that is non-distortionary.[27]

55. **So what should governments do?** The authorities can play a pivotal role in providing the necessary infrastructure that supports the development of competitive markets. The basic infrastructure needed for successful financial sector growth include strong legal rights for creditors and shareholders, sufficient disclosure standards and high quality information, well-governed institutional investors, and supporting private and public institutions (see Claessens, Djankov and Klingebiel, (2000)), including efficient trading and settlement systems. Thus, in general, the quest to minimize debt servicing costs under the constraints of a level playing field requires the existence of competitive markets (Fry, 1997). Above all, macroeconomic stability, including fiscal discipline and price stability, are key determinants of sound financial sector development. By coordinating fiscal and monetary policies, the authorities can provide the basic framework for private sector activity. As a result, an economy that has a bank-based financial system should not suffer in terms of development. However, it is clear that over-reliance on bank credit as a means of finance exposes an economy to the risk of failure in the banking system (IOSCO, 2002). Thus, a banking crisis may have more pronounced effects on overall economic activity because firms would find themselves credit-constrained and unable to pursue investment projects and therefore exacerbate the adverse demand effects. A functioning corporate debt market could then serve as a substitute to bank financing, thus, ameliorating the potential adverse effects of a credit crunch. As pointed out, for example, by Greenspan 2000, the availability of alternative forms of finance helped mitigate the US credit crunch of the late 1980s.[28]

56. **Nevertheless, the Baltics should not actively pursue policies that would favor one form of finance over the other.** Economic growth has been impressive in recent years and empirical evidence presented by Levine, 2002, supports the view that either system can work as long as the infrastructure for sound financial sector development is in place. Thus, the authorities should continue to enhance the general financial architecture in their respective economies to ensure that financial intermediaries operate on a level playing field, including the removal of any remaining distortions. Given that the financial systems of the Baltics are primarily bank-based, it is crucial that supervisory frameworks are kept in line with international best practices. In addition, the significance of foreign participation in the Baltic banking systems requires ongoing cooperation and information sharing with foreign and domestic supervisors. The Baltic banking systems have benefited from foreign entry which

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[27] There may also be implicit obstacles—rather than legal or regulatory impediments—toward fostering capital market development. Most notably, monetary operations that are conducted to a large extent through open market operations such as repo operations tend to support capital market deepening, contrary to discount operations (Germany versus U.S.).

[28] One can turn the argument around, since banks may substitute for bond markets to provide funds if the latter dries up as evidenced after the Russian default in 1998.

has contributed to the financial strength of banking institutions, but it has also led to a degree of concentration that may leave some banks potentially in a position that is considered to be "too big to fail."

57. **While the risks associated with a strong reliance on bank financing and concentration cannot be eliminated, these measures can help to discover problems early on and, therefore, mitigate potential adverse effects.** Furthermore, as the transition process nears the end, and with EU accession within reach, market based finance can be expected to gain in importance, as equity and bonds can be issued more cost efficiently.

D. Developments of Regional Markets

58. **Given the relatively small size of capital markets in the Baltics, one might ask if the Baltics should actively attempt to foster the deepening of regional integration.** Markets in transition economies, including the Baltics, are relatively small by international standards, and are likely to remain so; most will not achieve minimum economies of scale. However, as also pointed out by Claessens, Djankov, and Klingebiel (2000), the fact that there is limited scope for domestic stock market development does not automatically imply that transition economies will lack access to the services offered by stock exchanges. First, cross border trade in financial services, harmonization of international practices for global capital raising and trading, and stronger technological links make it much easier for any large corporation to list its stock and raise capital in the market that offers the best conditions. Second, EU integration will drive the process of financial market development in Central and Eastern Europe and the Baltics.[29]

59. **In addition, some scale efficiencies could be reached through the integrating of capital markets at the regional level.** This is what the Baltic States have started to do. To some degree, financial laws have already been harmonized with those of the EU. A cross-Baltic cooperation between the stock exchanges exists, and in 2001 the HEX Group (Helsinki Stock Exchange) acquired its position as a majority shareholder in Tallinn and in 2002 also in Riga Stock Exchange, providing a common trading platform. Although the Lithuania stock exchange has not formed a regional alliance yet and the government continues to own the exchange and the central securities depository, it is currently negotiating both with the HEX group and the Warsaw Stock Exchange about a potential sale. Therefore, closer cooperation among the Baltic countries and further integration with other Western European stock

[29] In addition, Sutela (2001), for example, argues that the lack of portfolio investment opportunities, i.e., limited scope for short-term capital flows, may have helped the Baltics to sustain their exchange rate regimes without major disruptions, despite sizable current account deficits and a liberal capital account regime.

exchanges will help facilitate market broadening. As a result, Baltic companies may more easily attract portfolio investments.[30]

60. **It seems appropriate that the Baltic states pursue a dual strategy.** On the one hand, there is further integration among the Baltic stock exchanges and to some degree between the exchanges of the Baltics and the Nordic countries. On the other hand, the Baltics are fostering the integration with EU capital markets.

E. Active Government Policy to Develop a Bond Market

61. **The impetus for the development of underdeveloped debt markets in many transition economies came primarily from the public sector.** A typical side effect of the transition process was that governments faced increased expenditure needs. The resulting rise in financing requirements was therefore an obvious reason for developing a market for government debt, since deficits could be financed in a non-base money creating way. An interesting question in this regard is to what extent the development of a government debt market can help facilitate the development of a market for corporate debt. Potential positive spillover effects could simply be the provision of a market infrastructure which could be used for private sector debt or, more importantly, the creation of a benchmark for corporate debt. Under such circumstances, should governments issue debt above and beyond their financing needs to create this benchmark? What does the experience from other countries reveal in this regard?[31]

62. **The existence of a government debt market has some far-reaching implications. Central banks, for example, have multiple interests in the development of a government debt market.** First, government securities provide a financing vehicle that is non-inflationary and, therefore, facilitates the implementation of monetary policy more generally.[32] In addition, as the transition process is naturally accompanied by sizable capital inflows, the availability of domestic debt instruments facilitates the sterilization of such flows, thus enhancing the monetary authority's ability to effectively conduct monetary management.[33] A

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[30] On January 3, 2000, the Baltic List, which lists Baltic blue-chip securities, was launched by the Tallinn, Riga and Vilnius stock exchanges. The list consists of up to 15 largest firms listed on the official lists of the three exchanges, with no more than seven originating from one country. The composition of the list is reviewed quarterly by the exchanges.

[31] See, for example, BIS (2002) on some arguments for debt market development as well as country experiences.

[32] There is, however, a limit to this argument in that excessive government borrowing crowds out private sector activity. The costs associated with that policy may well outweigh the benefits a sound government debt market brings with it.

[33] The effectiveness of sterilization in a small open economy will, of course, be limited.

well-functioning money market is essential for smooth liquidity management, as monetary policy implementation increasingly relies on indirect instruments.[34] From a financial sector perspective, the development of a sound government debt markets has the potential to improve the functioning of financial markets more generally, i.e., the completeness of financial markets can be enhanced by creating market rates that reflect the opportunity cost of funds at each maturity (see BIS, 2002).

63. **Overall, the creation of a sound government debt market supports the formation of private sector debt markets.** Government securities yields can be used as reference rates for corporate bond issues, the pricing in the markets for commercial paper, etc. In addition, the infrastructure and the procedures established for the government debt market can be used as a model for private sector debt markets. Box 3 highlights some specific country experiences in which government debt markets served as a vehicle for developing corporate debt markets.

64. **So far, the discussion has focused on the potential positive spillover effects of government debt markets and not so much on potential benefits of having private sector debt markets.** As pointed out above, it may be unwise to rely solely on one form of financing, such as bank financing. If a crisis dries up that avenue of finance, other financing means, such as debt instruments, can mitigate the problem through an alternative financing channel. In addition, in the absence of debt markets, firms have to finance the acquisition of long-term assets through short-term funding. By doing so, they either incur sizable mismatches (with respect to either currency or maturity), or overall investment policies may simply be biased toward short-term projects, which may hamper growth prospects (BIS, 2002). Finally, another important factor in judging alternative means of financing relates to the cost of funds. Since banks charge administrative costs that range from loan origination fees to charges for information processing and monitoring, an efficient corporate bond market helps firms to lower their financing costs and provide competitive pressure for banks to lower their charges.

65. **The decision to develop a bond market, however, needs also to take into account the effects on the banking system.** A common worry is that bond markets could take business away from banks. While this may be a concern for bank supervisors, corporations would be less vulnerable to weaknesses in the banking system. While the evidence suggests that the growth of bond markets does lead to slower growth in the banking system, there is no evidence that bond markets actually take away business from banks. In fact, banks play a key role in and derive profits from the development of bond markets, as they usually act as issuers, holders, dealers, and so forth. In fact, once banks have reached prudential lending limits to single customers they can serve as underwriters. A bond market therefore may

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[34] Latvia, for example, had to rely mostly on foreign exchange operations to manage bank liquidity, since sufficient high-quality collateral only became available after the government began to issue larger amounts of securities.

Box 3: Developing Markets for Debt—Some Country Experiences

A number of countries have actively developed government securities markets to create benchmarks and to develop market infrastructure and thereby facilitate the formation of corporate debt markets (see for example Fry, 1997 and BIS, 2002). For example, the Asian countries had to rethink market strategies in the aftermath of the Asian crisis. Many believe that the crisis was caused in part by companies' over reliance on the banking system. Companies often resorted to highly volatile short-term funding, often in foreign currency, which left them vulnerable. However, domestic savings would have been sufficient to finance company operations, had debt markets existed that could have channeled some of these savings into domestic investment.

- The Hong Kong Monetary Authority, which operates in an environment similar to that of the Baltics (CBA, small open economy, etc.), has actively developed a government debt market, including the provision of an efficient clearing and settlement system, despite the fact that that the government does not need the funds raised to finance itself. This, however, requires strong fiscal discipline to avoid moral hazard in the sense that the extra funds could be used for extra spending.
- Establishing a reference rate more generally can be used for pricing in the markets for commercial paper, certificates of deposit, interbank claims and other repo markets. This was one of the benefits of the creation of a government debt market in Jamaica.
- In Malaysia, the infrastructure and procedures established for the government debt market served as models for private sector debt markets.
- In Mexico, brokerage houses started operations in government securities and then expanded their activities using the same techniques and facilities to develop markets for private debt.
- Chile and Israel have used indexation as a means of sustaining financial markets in the face of ongoing inflation. Mexico also developed markets for indexed bonds under inflationary conditions. It is important to note, though, that indexation can only be a short-term fix, assisting other stabilization measures, most notably fiscal adjustment. In the long-run, indexation erodes the government's revenue from inflation. In addition, indexation may spill over to labor markets, thus having adverse effects. In essence, price stability is a prerequisite for developing markets for longer-term fixed financial claims.
- Chile also switched from a pay-as-you-go pension system to a fully-funded system in 1980. In addition, the legal and regulatory framework related to the nonbank sector and capital markets was beefed up. Due to the long history of fiscal surpluses, the Chilean government has seldom issued debt. They did, however, issue foreign debt instruments to facilitate a sovereign rating (sovereign risk benchmark). For that purpose, US$ 500 million were issued in 2000 and US$ 650 million were issued in 2001. The central bank is primarily issuing domestic government bonds in the local market for monetary management and to establish a benchmark yield curve.
- The Monetary Authority of Singapore (MAS) actively pursued the development of a liquid bond market. Like Greenspan (2000), the MAS took the view that an overdependence on the banking system has the potential to exacerbate problems for borrowers in a crisis situation, with the Asian crisis being a good example. To make available to investors a broader range of financial assets of varying credit risk and maturities, the following steps were taken to develop the Singapore dollar bond market: building and extending a benchmark yield curve through issuing government securities—of 10-year maturity in 1998 and 15-year maturity in 2001; increasing the size of the issues per tranche; and establishing a repo facility to support primary dealers (repo markets are important to support secondary market activity).

improve the health of banks by improving both market discipline and revenues. However, banks may face a deterioration in the quality of their loan portfolios. Since there are differences in bond ratings (and therefore differences in costs), depending on the company that issues the bonds, higher rated companies may find it more attractive to issue bonds,

particularly in view of the potentially lower costs. This however, may leave banks with lower quality loans on their books as they lose high-rated clients. Finally, it is not necessarily the case that the bond market can serve as a substitute for bank lending in a crisis. True, concentration of intermediation functions solely in banks that are typically highly leveraged gives rise to potential vulnerabilities. However, to the extent that bank lending and bond issues are correlated, i.e., a deterioration in general confidence in the wake of a banking crisis, a decline in lending may be accompanied by a decline in bond issues. Empirical evidence from both OECD countries and emerging markets suggests that bank lending and bond issues are indeed correlated.[35]

66. **Should the Baltics promote the development of government debt markets more actively, given the positive spillover effects on private debt markets?** As pointed out above, Latvia has issued longer term government debt beyond its financing needs to foster long-term financing in domestic currency instruments. While this has contributed to the establishment of a benchmark yield curve through extending maturity profiles of government securities and the provision of a sound infrastructure, the policy seems to have extended bank loan maturities rather than boost private bond issues. Therefore, given that it is not certain whether such government actions are sufficient to foster the development of corporate debt markets, the Baltic states should first-and-foremost focus on the elimination of existing distortions, for example, those that favor bank over capital market developments and consider measures that would improve corporate governance even further.[36]

67. **All three Baltic States decided to reform their pension systems in the mid-1990s.** Although the primary objective of the reforms is to address the long-term sustainability of the pension system in the context of adverse demographic developments, experiences from other countries show that the "privatization" of social security systems has potentially large impacts on the development of capital markets. All three countries decided to move from a purely pay-as-you go system (PAYG) to a three-pillar pension system. The first pillar of the new system is a scaled-down and slightly modified version of the current PAYG system. The second pillar is a mandatory[37] but fully funded system of privately managed pension accounts. Finally, the third pillar provides tax-incentives for those who make additional voluntary contributions to a pension fund.

68. **From the point of view of capital market developments, the most important component of the Baltic pension reform is the creation of the second pillar, that is, the**

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[35] See Hongkong Monetary Authority (2001) and BIS (2002).

[36] On pension reform in the Baltics see also Schiff, et.al. (2000).

[37] Switching to the 2nd pillar though is optional in Lithuania and mostly optional in Estonia. In Estonia, the second pillar is mandatory for people who enter the labor market and were born after 1983.

creation of a mandatory (once opted into), but fully funded system. The relatively low level of income implies that despite tax deductibility, households are unlikely to substantially increase their voluntary savings under the third pillar. The creation of the second pillar, however, will increase the need for appropriate investment vehicles. If the need is fulfilled domestically, the pension reform should lead to the creation of more diverse financial market instruments, more liquidity, and an overall deepening of financial markets. This in turn should improve competitiveness and, therefore, contribute to better allocation of scarce savings as well as improved risk diversification. The empirical evidence suggests that most pension funds in other countries have traditionally preferred domestic assets. For example, in 1991, only 7 percent of the assets of the world's 300 largest pension funds were invested abroad.[38] Despite the fact that during the 1990s the degree of international diversification increased, regulators and pension fund managers continue to prefer domestic assets. If the objective is to foster the development of a domestic capital market, policymakers can, of course, limit the ability of fund managers to invest abroad. In addition to the argument that such a regulatory restriction is necessary to foster the development of a domestic capital market, regulatory restrictions on foreign investments are potentially also useful for reducing capital flight in the initial stages of capital market development and decreasing the volatility of capital flows.

69. **Most empirical studies analyze the case of Chile to determine the impact of pension reforms on the development of financial markets, given that Chile spearheaded pension reform by beginning to reform its pension system in the early 1980s.** Initially, Chile's pension funds were highly regulated and limited to government securities. Holzman (1997) constructs a number of indicators in order to capture the implications of the pension reform for the development of the financial system and shows that the "privatization" of the social security system was associated with a substantial improvement in these indicators.[39] By the end of the 1990s, Chile's pension funds had become the most important institutional investors in the country, amounting to about 45 percent of GDP.

70. **Although arguments can be made in favor of limiting pension funds from investing abroad, there are also a number of arguments that can be made to limit investments in domestic instruments instead.** These arguments are particularly applicable to small open economies such as the Baltic States. If the pension reform takes place at a time when the domestic capital market is still almost non-existent or substantially underdeveloped and therefore unable to absorb the additional savings, the pension reform could put

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[38] See French and Poterba (1991).

[39] Once the equity restriction was relaxed, the Chilean stock markets experienced a continuous boost both in terms of total market capitalization and in terms of turnover ratios. Investments in foreign assets were allowed only from the early 1990s onward.

substantial pressure on asset prices and lead to financial instability.[40] Furthermore, limiting investments abroad could lead to too much risk-taking due to moral hazard If funds can only be invested domestically, there could be an implicit assumption that the government will be willing to bail out the sector, and thereby encourage excessive risk taking.[41]

71. **Despite the fact that the three Baltic states share many similarities, especially in terms of size, openness, and proximity to established European capital markets, they have implemented pension reform at different paces**. Estonia's and Latvia's second pillar became operational in 2002. Lithuania's second pillar system, however, will not become operational before 2004. The three countries also differ substantially in terms of pension fund regulation.

72. **Until 2003, Latvia placed the toughest restrictions on foreign investments** given that during the first 1 ½ years of operation investments were limited to domestic assets, either in the form of government securities, time deposits in domestic banks, mortgages, and deposit certificates. While from the beginning of 2003 onward there are formally no limits on investments in foreign assets, a 70 percent currency matching rule

Baltic States: Pension Reform

	Estonia	Latvia	Lithuania 1/
Establishment of			
2nd pillar	April, 2001	July, 2001	Jan, 2004
3rd pillar	Jan, 2000	July, 1998	Jan, 2000
Contributions to 2nd pillar	6 percent 2/	2 percent 3/	5.5 percent 4/
Mandatory domestic investments	None 5/	None 6/	70 percent

Source: Estonian, Latvian, and Lithuanian authorities.

1/ Based on legislation passed by Parliament in December 2002.
2/ 4 percent from social security contributions; 2 percent additional contribution from payroll.
3/ Scaled increase from 2 percent during the period 2001-2006 to 10 percent in 2010.
4/ Scaled increase from 2.5 percent in 2004 to 5.5 percent from 2007 onward.
5/ No investment restrictions with respect to Eurozone.
6/ Until 2003, investments had to be in domestic instruments, i.e., government securities and banks' time deposits. With respect to the 3rd pillar, 15 percent of pension funds can be invested abroad.

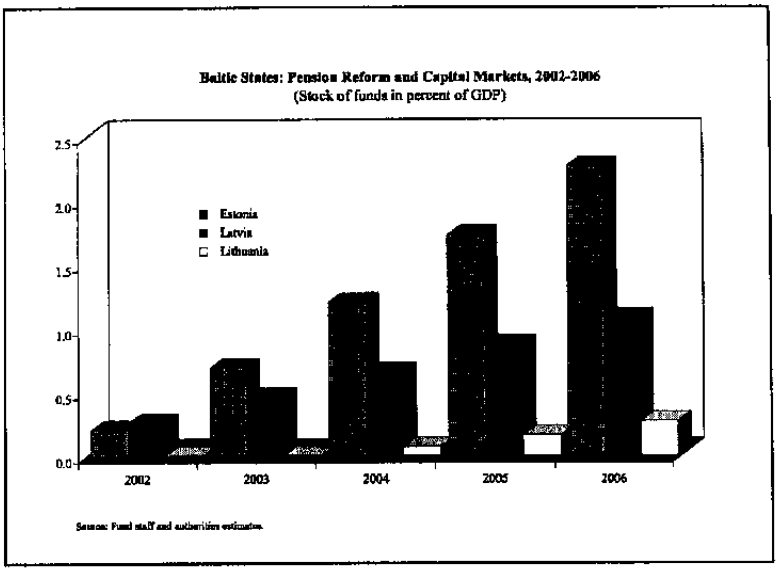
[40] Of course, at a first approximation national savings remain unchanged. It would imply that the loss in social security taxes would lead to a higher fiscal deficit. Since even under a fully funded pension system, pension contribution are mandatory, employs would be forced to acquire domestic assets. Under such a scenario, asset prices would not be affected. However, without a pension regulation that would force employees to acquire government securities, some of the available funds could shift into other domestic assets. Furthermore, assuming that Ricardian equivalence does not hold, a reduction in social security taxes could be associated with the perception of a wealth increase and therefore lead to an increase in consumption. This, in turn, would lower national savings.

[41] In addition, if at the time of the reform the financial institutions of the country lack adequate models of risk assessment, pension fund mangers might also be inclined to assume excessive risk

effectively continues to restrict foreign investments.[42]

73. **On the other side of the spectrum lies Estonia, which imposes no restrictions on whether the funds are invested domestically or abroad,** as long as the investments take place in the Euro area.[43] According Lithuania's legislation passed in December 2002, its second pillar system would fall somewhere in between. The different approaches reflect the differing strategies of the Baltic countries. The strategy of the Estonian authorities has been to foster integration with European capital markets. Since its fiscal position generally has been stronger than in the other two Baltic states—with very low levels of government debt and a budget position that is close to balance—government financing has been less of a concern than in the other two countries.

74. **Because of some restrictions on investing abroad, pension reform is likely to provide the greatest boost to Latvia's domestic capital market, followed by Lithuania's.** But because contribution rates will only be increased gradually in Lithuania and Latvia, the overall second-pillar contributions, and hence the accumulation of assets, will be substantially below those in Estonia during the first couple of years. Preliminary estimates suggest that in 2006, the stock of assets in Latvia will amount to about 50 percent of the stock of assets in Estonia. Given that Lithuania's second pillar pension reform will not start before 2004, the stock of assets will be even less, amounting to 50 percent of those in Latvia. Since Estonia's investment regulation is the most liberal among the Baltic states, the runs close to balance budgets and corporations have tended to borrow abroad, pension reform is likely to have a limited impact on the development of a domestic bond market in Estonia.



[42] Instead of imposing restrictions on investments in foreign assets, the focus should be on prudential requirements such as open foreign exchange positions.

[43] Depending on where the securities are being issued and traded, the foreign investments are limited to 20–30 percent of pension fund assets.

IV. Foreign Ownership of Banks and EU Integration

A. Foreign Ownership of Banks

75. **As previously mentioned, one of the characteristics of the current structure of the financial system in the Baltic states is that it is dominated by bank financing.** This is especially true of Estonia and Lithuania, while somewhat less so in Latvia. In addition, over the course of the last several years, the percentage of foreign ownership has increased dramatically. Although the degree of foreign bank ownership is relatively high, other small open economies (such as New Zealand and Malta) are also notable for the dominance of foreign bank ownership. The increase in foreign ownership in the Baltics reflects, to some degree, a conscious decision by the authorities to attract strategic foreign investors in the aftermath of the banking crises in the 1990s.

76. **Foreign bank ownership in the Baltics has contributed to a number of positive developments.** Among them is a higher degree of diversification, lower cost of financing due to high credit rating of the parent bank, improved efficiency as a result of economies of scale, improved risk management through better technical and management expertise, more rapid integration with international capital markets, and access to capital for recapitalization of existing banks. Foreign bank ownership has also increased the overall level of confidence in the quality of the banking system, reduced the probability of a bank panic and the danger of capital flight. In addition, especially in Estonia and Lithuania, where the banking system is highly concentrated, foreign ownership is likely to reduce the risk of a government bailout in case of a crisis. For all of these reasons, foreign ownership is usually associated with an improvement in the stability of the banking system.

77. **However, foreign ownership may come at a price.** One potential disadvantage of a banking system that is owned by a few large foreign banks is that it effectively creates barriers to entry due to the perception that the parent company can provide almost an unlimited amount of funds.[44] The argument becomes especially relevant in countries such as the Baltics states where the potential profits of new entrants are limited by the small size of the domestic markets. Notably, the high cost of establishing a retail banking system, combined with relatively limited profit opportunities and the "deep pockets" of incumbent foreign banks, would deter even other large players from entering the market. The potential adverse implications of barriers to entry are even more pronounced in countries such as the Baltic States that lack an alternative to bank financing in form of developed capital markets.

78. **An even more important potential downside to foreign ownership is related to the transmission of external shocks.** In all three Baltic states, foreign bank ownership is likely to be beneficial if a recession is limited to the Baltic region or any one of the Baltic

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[44] Here ownership matters. A large domestic player might never reach the scope to deter entry by a large foreign institution due to the size of the country.

countries. Under these circumstances, foreign bank ownership would foster stability by providing a lending buffer and allowing for both consumption and investment smoothing. However, foreign ownership may prove to be a liability in the case of a recession outside the Baltic region. In particular, how does the banking sector react if a shock were to occur in the country or region in which the parent banks are registered and do the majority of their business? A number of studies show (see for example Goldberg, Dages, and Kinney, 2000) as well as Garcia-Herrero (1997) that in less developed countries that are faced with a crisis, foreign ownership contributes to stability. However, Peek and Rosengrenn (1997) demonstrate how an adverse shock in Japan—reflected in falling share prices—led to a decline in bank lending by Japanese financial institutions in the U.S. Given that equity investments in companies qualify as tier-two capital in banks' capital adequacy ratios according to the Basel Accord, a fall in share prices in Japan forced Japanese parent banks to reduce lending. This reduction was accomplished, however, by having branches and subsidiaries of Japanese parent banks reduce lending in the U.S., while maintaining lending levels in Japan. Such behavior by foreign-owned banks in the Baltics would cause a severe crisis due to their dependence on foreign banks. Whether the risks of such behavior exist in the case of the Baltics also depends on how committed banks are to the region and the size of lending in the Baltics relative to the total lending volume of the parent bank.

79. **Foreign bank ownership could transmit a shock from the parent bank to the subsidiary even in the absence of trade links to the parent bank's home country.**[45] Most of the foreign banks in the Baltics are owned by two Swedish groups (SEB and Swedbank). The likelihood of a recession-induced crisis on the parent bank—and therefore potentially on the subsidiary—will depend on the level of diversification of its assets, in particular with respect to its lending operations. The table Diversification of Parent Banks and Subsidiaries shows that one of the two largest parent banks (Swedbank) tends to be highly exposed to Sweden, while the other Swedish parent bank (SEB) is diversified outside of the region.[46] Therefore, for example, a business-cycle induced downturn in Sweden could reasonably be expected to

Diversification of Swedish Parent and Baltic Subsidiaries (in percent of total assets)

Parent banks		Baltic Subsidiaries					
Swedish		Estonia		Lithuania		Latvia	
Swedbank		*Hansabank*		*Hansabank*		*Hansabanka*	
Sweden	90	Estonia	54	Lithuania 1/	100	Latvia 1/	100
Estonia	4	Lithuania	28				
Other (Norway, Denmark)	6	Other (Latvia)	18				
SEB (Swedish parent)		*Eesti Uhispank*		*Vilniaus Bankas*		*Latvijas Unibanka*	
Sweden	42	Estonia 1/	100	Lithuania 1/	100	Latvia 1/	100
Germany	37						
Baltics	3						
Other	18						

Source: Based on information from respective banks.

1/ No major assets held abroad.

[45] Such a transmission could, for example, have occurred as a result of the banking crises in Sweden in 1992.

[46] The assets of the subsidiaries are highly concentrated in their respective home country or at least for the Baltic region overall.

more negatively affect the income position and balance sheet of Swedbank. Given their relative exposure to the bank, Estonia and Lithuania would be especially vulnerable to this turn of events.[47]

80. **Furthermore, the Baltic states are vulnerable to exogenous real shocks due to their relative openness as reflected in their share of exports to GDP**. To what degree the Baltics would ultimately be affected by such an exogenous shock depends also on the regional diversification of their exports. None of the Baltics depend exclusively on the export market of any single country. However, a sharp economic downturn in Sweden or Finland is likely to have substantial implications for Estonia, while a recession in Germany or the UK is likely to have adverse implications for Latvia and Lithuania, respectively. Under such a scenario, foreign bank ownership could compound the transmission of the recession if the country of the parent bank is in recession.

The Baltic States: Export Dependence and Diversification, 2001

Estonia	73.1
Total exports in percent of GDP	
In percent of total exports	
Finland	24.5
Sweden (2)	**17.0**
United Kingdom	9.4
Latvia	
Total exports in percent of GDP	25.8
In percent of total exports	
Germany	16.7
United Kingdom	15.7
Sweden (3)	**9.6**
Lithuania	
Total exports in percent of GDP	38.2
In percent of total exports	
United Kingdom	13.8
Latvia	12.6
Sweden (9)	**3.7**

Source: IMF. Direction of Trade Statistics; World Economic Outlook

81. **Because it relies heavily on Sweden in both the banking and export sectors, Estonia would be the most vulnerable of the Baltic states to adverse developments in Sweden, since a real shock could be compounded by a financial shock originating in that country**. Although two of the three largest banks in Lithuania are owned by the same Swedish group, Lithuania's export dependence on Sweden is marginal. Therefore, the possibility of a dual shock is less likely. The same applies to Latvia, which depends less on foreign bank ownership in the first place.

[47] The transmission of shocks from the parent bank to the subsidiary should be reflected in a correlation of the respective share prices. Using daily share prices for both Swedbank (Sweden) and Hansabank (Estonia), the correlation turned out to be extremely weak. This is true for both an unadjusted series and a series that took into consideration the market performance in the two countries.

82. **The Baltic states have profited in a number of respects from foreign bank ownership**. The greatest risk that remains as a result of the ownership structure is that an adverse shock in the country of the parent bank could be transmitted to the Baltics. However, what matters most is not so much ownership but rather the level of diversification of the parent bank. The more diversified the lending portfolio of the parent bank, the less likely it is that an economic downturn would affect the performance of the parent and therefore that of the subsidiary. Of the two largest parent banks that have subsidiaries in the Baltic States, Swedbank's lending is more highly concentrated in Sweden. Given that Estonia's export market is also strongly dependent on Sweden, Estonia would be the most vulnerable country among the Baltic states.

83. **The analysis suggests that overall, foreign ownership has contributed to the stability of the Baltic banking system.** Some of the risks that remain, especially as they are related to the possibility of the transmission of shocks from parent banks to subsidiaries, are likely to diminish in the process of further EU integration. As result, the loan portfolios of the parent banks are likely to become more diversified and therefore less dependent on the performance of the parents' home countries.

B. Looking Forward: The Implication of EU Accession

84. **Joining the EU implies that accession countries will profit from the free movement of services**. Theoretically, this should reduce barriers to entry into the banking sector in the Baltics even further and ensure that national regulators do not discriminate against foreign banks. Free movement of services implies that a bank that is licensed to operate in one country of the EU does not need additional approval to set up branches and subsidiaries in another EU country. Since this should lead to more competition, smaller countries such as the Baltics are likely to profit because foreign banks could set up branches or subsidiaries, or even simply threaten entry, without incurring high regulatory costs. This in turn should reduce financing costs, especially for small- and medium-size enterprises.[48]

The creation of an EU "passport" for capital markets and the implications for the Baltics

85. **The principle of the European financial market has been one of regulatory competition with minimal harmonization and mutual recognition of rules**. Especially with respect to capital markets, EU regulation is still developing, which is one of the reasons why capital markets remain segmented. Raising capital across borders is still subject to

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[48] Despite this principle, though, numerous provisions in the European Union allow host country intervention in the interest of the "general good". For example, Article 11 of the Investment Services Directive (ISD) allows the host country to impose local rules of conduct in addition to those enforced in the home country of the parent company. This in effect has allowed national regulators to discriminate against foreign institutions, thereby limiting competition somewhat.

regulatory barriers. The lack of a common legal framework and enforcement rules has particular implications for accession countries such as the Baltic states. Within the EU, there are some 40 public entities that deal with securities market regulation and supervision. The number will increase substantially once the next wave of accession countries has joined the EU. The largest benefit for accession countries, especially those with underdeveloped domestic capital markets, would come from being able to simply adopt a common European framework. Given the small size of the Baltics, the costs for investors of obtaining information about the regulatory framework and enforcement rules of these countries are relatively high. Under these circumstances, the adoption of a unified framework would be associated with scale efficiencies and therefore lower information costs. This would contribute to the creation of markets based on ratings and default risk and eliminate the premium for institutional differences.

86. **The latest proposal by the EU commission is designed to create a single European market for securities.** While no final decision has been made concerning the specifics and the exact timing, there seems to be general agreement about the principle. A single European market for securities would have significant implications for the Baltics. According to the current proposal, small- and medium-size enterprises would be able to use a simplified prospectus which could be updated by attaching financial statements. This would reduce otherwise prohibitively high standards and costs, allowing SMEs to access capital markets. The same simplification would apply to the prospectus for bond issues worth more than Euros 50,000 and sold via private placements. Another feature of the proposal could also benefit the Baltic states. For bond issues in excess of Euros 50,000, the issuer can choose the country in which the prospectus will be approved; this prospectus can then be used in all EU countries. Given the small size of the Baltics and therefore the scarcity of knowledge that is available about financial market instruments, this aspect of the proposal should be beneficial.

Settlement and payments system

87. **The greatest benefits for the Baltics, both in terms of efficiency gains and risk reduction, would occur if the countries could simply adopt a common European platform for payments and settlements.** However, analogous to the segmentation of capital markets, such a common platform does not exist, given that the backbone of the EU settlement and payment system comprises the individual systems of the EU countries.[49] Consequently, the Baltic states have had to first adopt and improve their own national systems order to participate in the trans-European-gross-settlement system (TARGET). In this vein, all three countries have embarked on the development of a new interbank transfer system, which will entail a real-time gross settlement (RTGS) for large and urgent transactions and a designated-time net settlement (DNS) for retail transactions.

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[49] See ECB (2000).

Changes in operating procedures in the Baltic States in preparation for EMU membership

88. **Policy decisions by central banks in the run-up to EMU membership can, like pension reforms and government debt management strategies, potentially foster capital market integration.** Most accession countries, including the Baltic States, have still mandatory reserve requirements for the banks that are in excess of those in the EU. Reserve requirements continue to play a particularly important role in Estonia and Lithuania, the two Baltic States that chose a currency board arrangement as their exchange rate regime.[50] One of the requirements for EMU membership is the reduction of reserve requirements to 2 percent of deposit liabilities. Reserve requirements in excess of the EU average would put the banking system at a competitive disadvantage. However, a reduction of cash reserves is potentially associated with an increase in liquidity. The increase in liquidity could, of course, be sterilized through open market operations. The Bank of Estonia opted instead to allow banks to hold 50 percent of required reserve in the form of high-quality euro-denominated foreign assets. In addition to minimizing adverse liquidity implications, this action has accelerated the integration of capital markets since banks are encouraged to invest a percentage of their assets in Europe.[51]

V. Summary and Conclusion

89. **The Baltic states are on the verge of joining the European Union.** This event represents a milestone in the completion of the transition process in the three countries. During the past ten years of economic transformation, the allocation of savings and investment took place largely in the form of internally generated funds and through the employment of strategic investors in the privatization process. Associated with this were substantial improvements in efficiency, which contributed to the countries' strong growth performance. However, now that the transition has almost been completed and the Baltic states have moved closer to the production possibility frontier, a continued efficient allocation of savings and investment will have to rely more prominently on the financial system. This will also be one factor to ensure continued high rates of productivity growth. A positive relationship between the development of a financial system of a country and economic growth has also been reflected in a growing body of literature.

90. **Currently, the financial systems in all three countries are still exclusively bank based.** Bond and equity markets play a negligible role in each of the financial systems. The capacity for intermediation, as measured by standard indicators such as monetization and credit to the private sector, is still lower compared both to the Eurozone average and most other transition economies. Furthermore, especially in Estonia and Lithuania, the banking

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[50] The same applies to Bulgaria, another accession country with a currency board.

[51] Another reported side-effect of the policy is that banks are gaining experiences in both monitoring and as an active participant in European capital markets.

systems are highly concentrated and dominated by foreign ownership. While Latvia continues to have less foreign ownership and a larger number of banks relative to the size of the country, the banking system is somewhat more fragmented. While the larger banks focus on the domestic market, a number of smaller institutions are specialized and cater to non-residents. This also reflects the country's strategy of serving as a financial center for CIS countries with weaker banking systems and as an intermediary between the East and the West. Most indicators suggest that the banking systems are relatively strong and with the exception of Lithuania—which completed the privatization of its banking system only in 2002 —quite profitable. However, there are some structural issues that could lead to problems. A large percentage of lending in Estonia takes place in foreign currency to unhedged borrowers. In Lithuania, the re-pegging of the currency from the U.S. dollar to the Euro has not been followed by a corresponding change in the composition of foreign currency deposits.

91. **Small open economies with underdeveloped financial systems can benefit substantially from foreign ownership.** In the case of the Baltics, foreign ownership has improved the stability of the financial system and resulted in efficiency increases. However, the dominance of foreign ownership could pose some challenges in the future. Both Lithuania's and to a greater degree Estonia's banking systems are owned primarily by two Swedish parent banks. Therefore, one of the key risks is the transmission of a shock via the banking system to the Baltics. The likelihood of a credit crunch in the Baltics caused by the parent banks depends in turn on the lending exposure of those banks to the Swedish economy. It is the degree of diversification of the parent bank, rather than the presence of foreign ownership per se, that could create risks for the Baltics. Analysis reveals that one of the two Swedish banks is highly exposed to the performance of the Swedish economy, since a sizable share of its lending is to domestic borrowers. A sharp and prolonged downturn in Sweden could therefore, via the Swedish banking system, lead to a credit crunch in Estonia and Lithuania. An analysis of stock prices of the Swedish parent bank and the share prices of the subsidiary, however, did not reveal any correlation. In the case of Estonia, the risks associated with a downturn in Sweden are compounded by the fact that Sweden is also Estonia's second largest export market. A real shock originating in Sweden could be followed by a credit crunch, thereby hampering the ability of the financial system to smooth out real shocks. Overall though, the policy of the Baltic states to allow—and in some cases to encourage foreign bank ownership—has played a critical role in the establishment of a sound and stable banking system. Potential vulnerabilities of the Baltic banking systems to shocks from abroad are likely to be reduced through a further integration of Swedish banks with institutions in the rest of Europe. Future EU-driven mergers and acquisitions, for example, will lower such risks through a diversification of the lending portfolio of the parent banks.

92. **One rather unique characteristic of the financial system in the Baltics is lease financing.** In Estonia, lease financing amounts to about one third of lending to the private sector. More recently, lease financing has also grown in importance in Latvia and Lithuania, albeit from a lower level. In the case of financial leases, leasing is in effect a substitute for bank loans, since at the end of the lease the ownership of the asset is automatically transferred to the leaseholder. The substitution of leases for standard bank loans reflects high

transaction costs associated with collateral laws. However, it also demonstrates how markets overcome inefficiencies and, given similar shortcomings of collateralized lending in other transition economies, the trend in the Baltics might even be an example for those countries to follow. While lease financing per se does not represent a particular problem, the establishment of leasing companies outside of banks would warrant a tightening of supervision. For the time being, the largest share of leasing takes place, however, through bank-owned leasing companies.

93. **After the international financial crises in the second half of the 1990s, it has been argued that over-reliance on bank credit implies certain risks and that the existence of a more diverse financial system—including a developed domestic capital market—could limit the impact of a crisis since the private sector would be able to resort to alternative forms of financing.** Some governments have therefore begun to encourage the development of domestic bond and equity markets. There are two ways to foster this development. The first is less contentious and focuses merely on eliminating existing distortions that favor bank over other forms of financing. In the case of the Baltic States, one of the major distortions comes from the tax system, which discriminates against non-bank financing by granting advantageous tax treatment for bank instruments, in effect making income from bank deposits tax free. Therefore, the first step toward fostering the development of capital markets should be through the elimination of existing distortions.

94. **The other approach is more controversial and relates to active government policies to foster the development of a local capital market.** One method focuses on developing an active market for government securities and establishing a yield curve even in cases where the public sector generates surpluses. The assumption of such an approach is that the development of a government bond market has positive externalities, which would, for example, make it easier for the private sector to price and therefore issue financial instruments. Hong Kong and Singapore are among the countries that have pursued such a policy and are somewhat similar to the Baltics in terms of openness, exchange rate system and fiscal position. Latvia has also borrowed funds in excess of its financing needs to establish a benchmark yield curve. While such an approach might have potential positive externalities, it is unlike that the size of the respective local markets in the Baltic would ensure sufficient liquidity to establish a yield curve over the entire maturity spectrum.

95. **The other approach to fostering the development of local capital markets is through regulation, for example, in the context of pension reform.** The "privatization" of the Chilean pension system, for example, was associated with stringent investment restrictions, making investments in government securities mandatory. As a result, Chile's pension reform contributed substantially to the development of its capital market, which in turn has been credited with the country's relatively high growth performance. The three Baltic states have embarked on pension reforms that are likely to increase investments in marketable securities. Based on current regulation, it is estimated that in terms of the accumulation of pension fund assets, the largest impact—after a four-year period—would be in Estonia, where assets are expected to reach 2 percent of GDP. While the legislation in the three countries has converged, there are still differences with respect to investments abroad.

Estonia has the most liberal approach with no restrictions on foreign investments while both Latvia and Lithuania have—at least until EMU membership—some restrictions. Again, given the size of the Baltics, it appears that the development of local capital markets in the context of social security reform through restrictions on investments abroad seems to be sub-optimal. In this respect, Estonia's approach seems to be the most appropriate.

96. **The lack of broad and deep capital markets in the Baltic states is related to the level of economic development, the absence of any kind of capital market infrastructure prior to the beginning of the transition process a decade ago, and especially the small size of the countries.** However, it is also a reflection of the monetary policy framework in conjunction with the respective exchange rate systems. In particular, the currency board systems in Estonia and Lithuania favored transactions in foreign exchange markets over traditional repo markets that would have contributed to the liquidity of the bond markets. Although equity markets, especially in Lithuania, experienced temporary surges as a result of mass privatization, in the wake of the Russian crisis, stock markets in the Baltics are now limited to a few larger companies.

97. **Overall, the Baltic financial system has come a long way since the beginning of the transition process and is relatively well positioned to ensure that future economic growth is aided by an efficient allocation of savings and investment.** Further EU integration will increase competition and efficiency. To what degree this will take place, however, will not only depend on policies in the Baltics but also on how and how quickly the EU itself will eliminate still existing distortions and legal obstacles that have prevented capital markets and the EU banking systems from becoming fully integrated. The reform of EU capital markets is, however, still ongoing.

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FINANCIAL SYSTEM AND GROWTH

1. The following reviews the key channels through which the financial system is related to economic growth. Furthermore, this appendix reviews the questions of whether there is empirical evidence concerning the relationship between financial sector development and economic growth and if so whether there is any evidence for a causal relationship. In addition, this section looks at whether a particular structure of the financial system is superior in terms of growth prospects.

The role of financial intermediaries and capital markets

2. The primary roles of the financial system is to facilitate transactions and the allocation of resources across agents and over time. The need for financial intermediaries as opposed to capital markets arises in the presence of market imperfections, such as information asymmetries, which give rise to transaction costs and costs of obtaining information. By reducing these costs, more transactions can occur and the allocation of resources is improved. Levine (1997) discusses the basic functions of financial intermediaries as well as capital markets and the channels though which they enhance economic growth. Each function can influence growth through its impact on investment decision either through increasing the level of investment or by increasing the efficiency of those investments and thus the rate of technological improvement.

3. One basic function of capital markets is to facilitate the trading, hedging, diversifying, and pooling of risk. An important risk faced by agents considering an investment project is the risk that they will not be able to sell their assets to meet current consumption needs. By increasing the ease and speed with which assets can be converted into purchasing power, capital markets increase liquidity and reduce the risk for an individual investor of illiquidity. While the impact of increased liquidity on the overall level of savings, and therefore on investment, could be either positive or negative, the reduced risk of illiquidity is productivity enhancing. By encouraging investment in longer term projects with higher returns, which—in the absence of capital markets would not be undertaken—the average return on investment in the economy increases and with it productivity.

4. The financial system facilitates the acquisition of information and the allocation of resources. High information costs can hinder the flow of capital to its most productive use. The financial system can lower the costs for an individual of obtaining information in two ways. By grouping together, i.e., forming intermediaries, individuals can spread any fixed costs of obtaining information and, in well-developed secondary markets, published prices are an important source of information.

5. Capital markets provide a way for agents to monitor managers in the firms where they have invested; this can increase the level of investment and also the productivity of that investment. Individual investors need a way to ensure that the funds they have invested are being properly managed, however, such monitoring can be very costly for the individual investor. Well-developed collateral and financial contracts can lower monitoring and

enforcement costs. Additionally, financial intermediaries can spread the monitoring cost across groups of individuals. Bencivenga and Smith (1991) have shown that financial arrangements which improve corporate control lead to higher levels of investment and faster growth.

6. Another role of the financial system is to mobilize savings; by pooling the savings of individuals, firms can undertake large investment projects not possible without the resources of several investors. In the presence of economies of scale, the productive capacity of the economy is increased. Finally, financial intermediaries facilitate the exchange of goods and services by reducing transactions costs. The greater the ease with which goods and services can be traded the higher the degree of specialization which in turn implies higher productivity.

Empirical evidence on financial market development and growth

7. There is a wealth of empirical research investigating the relationship between economic growth and financial system development. Much of the research has taken placed during the 1990s and was spurred by the influential studies by King and Levine (1993a) and (1993b). Those studies examined the relationship between economic growth and measures of financial sector development using the familiar methodology of cross-country growth studies.[52]

8. Figure (Financial Development and Real Per Capital GDP) shows the variation across countries for various indicators of financial development in 1985 for 116 countries divided into quartiles by real GDP per capita. The first is a measure of the size of the financial intermediation sector, the second measures the extent to which commercial banks rather than central banks are allocating credit while the third and fourth indicators concern the allocation of credit measuring the portion of credit allocated to the private sector and the amount of credit extended relative to GDP. All these measures are strongly positively related to GDP and show that financial markets are larger and more market oriented in richer countries with a much smaller proportion of credit extended by central banks and a much greater proportion extended to the private sector in richer countries than in poorer countries. Regression analysis showed that these indicators have a strong positive and economically important relationship with average real GDP growth, the rate of capital accumulation, and total productivity growth.

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[52] The standard regression model with the growth of per capita real GDP as the dependent variable is estimated using panel data. The explanatory variables include conditioning variables such as the log of initial real per capita GDP and initial secondary school enrollment rate, among others, and a measure of financial sector development – the variable of interest.

9. Moreover, the studies show that the initial value of financial depth proves to be a significant predictor of future growth, capital accumulation and productivity growth. This final result is important since it addresses the issue of causality and suggests that the development of the financial system can increase economic growth rates. However, the evidence on causality is not conclusive as there are a number of econometric problems associated with the methodology, one of which is the issue of simultaneity bias. A number of studies have applied various approaches to deal with this issue and broadly speaking the conclusions are robust to the methodology employed. For countries with longer samples of adequate data, Vector Autoregression (VAR) techniques can be employed, as in Rousseau and Wachtel (1995) and (1998), and these studies also find evidence of a causal relationship. A causal relationship is also found using panel VAR techniques in cross-country studies, see for example, Beck et. al. (2000) and Levine, Loayza, and Beck (2000). The consensus which emerges from these studies is that there is a robust causal relationship between financial development and economic growth. However, as noted by Khan and Senhadji (2000) the size of the measured effect varies with different indicators of financial development, estimation method, data frequency and the functional form of the relationship.[53]

Characteristics of Financial Markets and Growth

10. Thus far the discussion has focused on evidence concerning the relationship between broad aggregates measuring various aspects of financial development and growth. However, results from such studies are quiet on specific actions which policymakers could undertake in order to promote the development of the financial system. Nevertheless, there are a number of studies which examine the relationship between specific characteristics of financial systems and economic growth and these are briefly reviewed here.

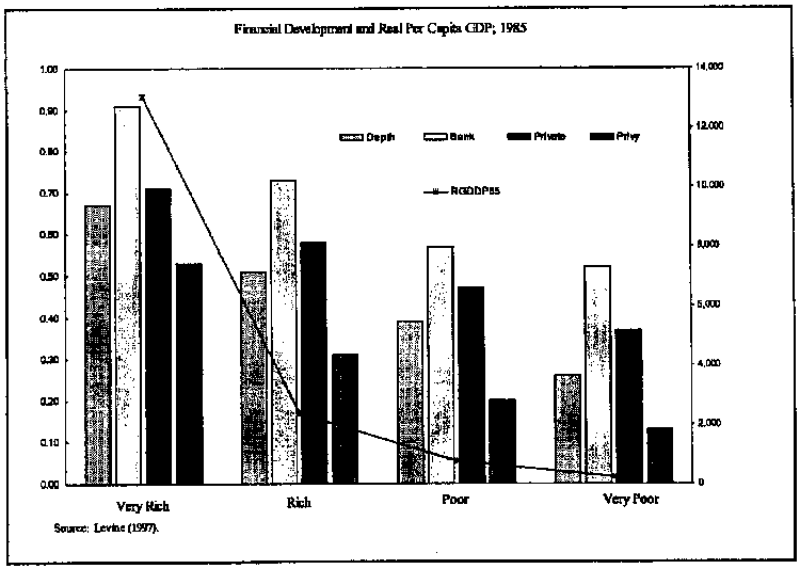
11. Liquidity: One of the functions of capital markets and financial intermediaries discussed above was a source of liquidity. Levine and Zervos (1996) examined the relationship between stock market liquidity and economic growth rates, capital accumulation and productivity employing two measures of liquidity in the study; the 'value traded ratio', which equals the value of shares traded on a country's stock exchange relative to GDP, and the 'turnover ratio' which equals the value of shares traded relative to stock market capitalization. Using a standard approach of other cross-country studies and including the level of banking sector development (bank credit to private sector relative to GDP) as a control variable, Levine and Zervos found evidence of a positive relationship between

[53] Much of the work on this topic assumes a linear relationship between financial market development and economic growth. One exception is Khan and Senhadji (2000) who allow for a simple form of non-linearity by specifying a quadratic relationship. A statistically significant negative coefficient is found on the quadratic term which could suggest that there exists an optimum level of financial development. Another possibility is that there may exist a "threshold" effect—that countries need to reach a certain level of financial development before there are effects on growth, as argued by Berthelemy and Varoudakis (1996).

liquidity and long-run economic growth. Hence one could argue that governments ought to implement policies that foster the deepening of capital markets.

12. The discussion on the functions of financial intermediaries emphasized the role of information: unfortunately, difficulties in devising measures of how easy it is to obtain information preclude the conduct of empirical studies examining the relationship with macroeconomic variables. However, a large number of studies at the micro level have established that when outsiders find it more difficult to evaluate an individual firm, say, in the absence of a bond rating, there is an increased reliance on internal sources of finance. This result would be consistent with government measures to increase transparency.

13. Finally, the question of whether the general structure of the financial system has implications for economic growth has received considerable attention as reflected in studies such as the one by Claessens, Djankov and Klingebiel (2000) as well as Demirguc-Kunt and Levine (1996). These studies showed that as countries become more wealthy, there is an increase in the size (measured by assets or liabilities relative to GDP) of the financial intermediation sector, the importance of the commercial banks in the allocation of credit grows, the non-bank sector increases in size and the size and liquidity of the stock markets increases. However, it is worth noting that Levine (1997) cautions against drawing conclusions regarding patterns of financial development and linking financial structure to economic growth. One aspect of financial structure that has commanded considerable attention is the question of the relative merits of bank-based versus market based systems. This is an important issue for the Baltics and section III.C. reviews this debate and discusses the merits of both bank-based and market based systems. Some recent studies have argued that the structure is not relevant: what is important is the efficiency of the legal system and other aspects of the institutional framework (Levine, Loayza and Beck (2000), Levine (2000), Beck and Levine (2002)). Studies such as these examine how differences in the legal and regulatory systems can impact the financial sector development and economic growth. Levine (1999, 2002) found that countries with better contract law, accounting a reporting infrastructure will have more developed financial systems and growth. Levine (2002) highlighted the importance of strengthening the rights of investors and improving the efficiency of contract enforcement.



This view—the 'financial services' view emphasizes the quality of the services produced by the financial system.[54]

[54] Goldsmith (1969), King and Levine (1993a) and (1993b), and Wachtel and Rousseau (1995) were among the first empirical studies of the relationship between financial sector development and growth. See Levine (1997) for an extensive review of the research which followed. Wachtel (2001) and Khan and Senhadji (2000) provide more recent reviews.