World Bank EU-8 Quarterly Economic Report January 2005[1] Part III

EU-8

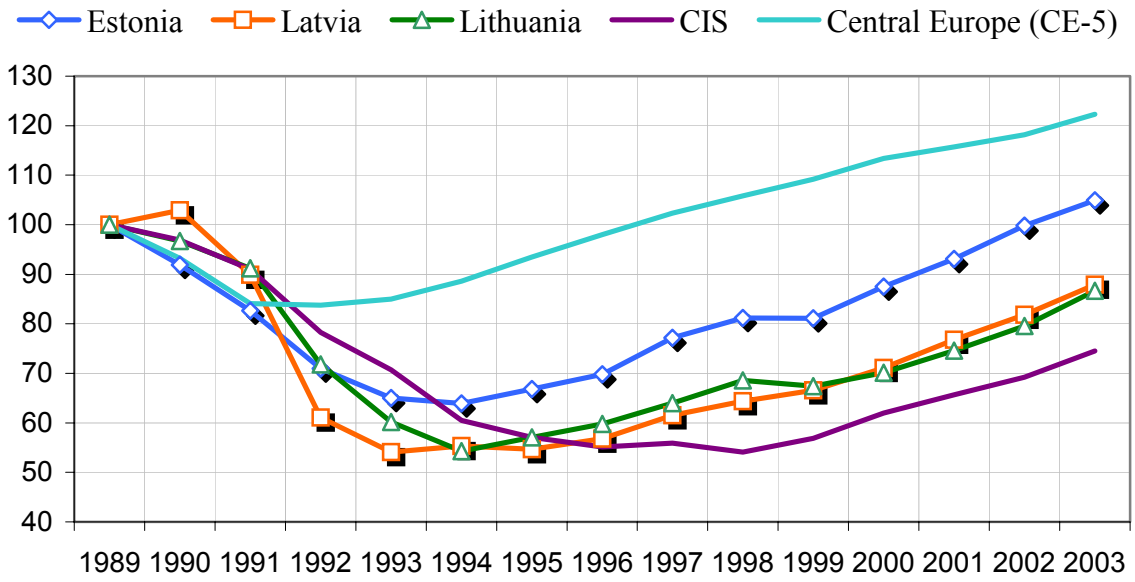
SPECIAL TOPIC: THE BALTIC GROWTH ACCELERATION—IS IT SUSTAINABLE?[2]

1. Introduction

The Baltic countries have experienced ups and downs on their way to becoming part of the European Union (Chart III.1). Small and open economies, the Baltic countries emerged from their transition recession around 1995 and since then have grown at a quite remarkable pace. Real GDP growth in the three countries surpassed that of most of the other transition economies, and over the period 1996-2003 the Baltic economies grew by roughly half of their initial level (cumulative growth was 51% for Estonia, 59% for Latvia and 52% for Lithuania). Moreover, the most recent results for 2004 show no signs of a slowdown, and Baltic countries are still experiencing the highest growth rates in Europe and are among the most rapidly growing economies in the world. Indeed, if it were not for the slowdown in 1999 following the Russian crisis, all three countries would already have become textbook examples of sustainable growth acceleration as defined by Hausman, Prichett and Rodrik (2004) with 8 or more years of growth in excess of 3.5%.

This golden period of growth should be seen on the background of both the rapid pace of economic reforms, liberalization of markets, intensive inflows of foreign direct investment and institutional changes, and the effect of a low base with the income levels at the beginning of transition well below and the initial output collapse much larger than those of the Central European countries. The Baltic countries are only now back to income levels prevailing before transition (at least according to official statistics).

Chart III.1. Real GDP dynamics in the Baltic countries, CIS and Central Europe[3] (1989=100)



Source: Economic Commission for Europe (2003, 2004)

The overarching question is whether this recent impressive growth performance can be sustained over the medium-long term. Income levels remain at less than one-half of those prevailing in the EU as a whole (Chart III.2), and there will be a lengthy period of catching up spanning several decades even if this were the case. If growth rates slow, obviously this period will be longer.

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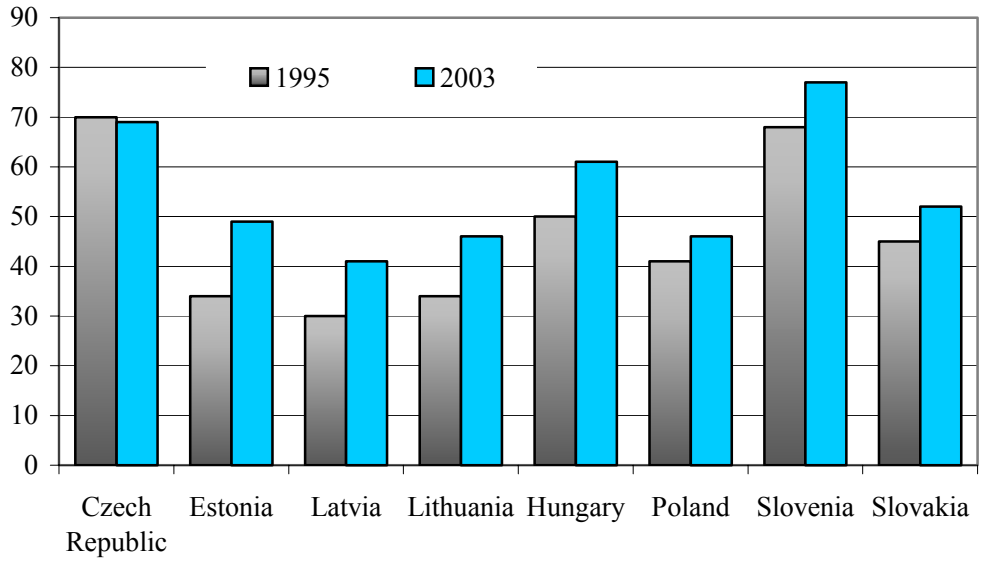
[1] This report is based on information available through end-December, 2004.
[2] This section is based on work in progress on a broader study of growth in the Baltic countries.
[3] CE-5 includes the Visegrad Countries (Poland, the Czech Republic, Slovakia, and Hungary) and Slovenia.

Chart III.2. GDP per capita (in PPS) in the Baltic countries and Central Europe (%; EU-25=100)



Source: Eurostat

The purpose of this study is to examine more carefully the factors behind the Baltic growth "miracle" with a view to assessing future growth prospects. We do this by looking at the recent history from a number of different angles and at the likely evolution of key growth variables in the future.

2. Demand and supply: the changing structure of output

Growth in the Baltic countries was driven first by rapidly expanding exports, followed more recently by booming domestic demand (Table III.1). The latter came mainly from the private sector, as public consumption stagnated due to the strong commitment of governments to maintain fiscal discipline. The surge in domestic demand also triggered a rapid expansion of imports, and while exports continued to do well, current account deficits widened to high levels.

Table III.1. Contributions to GDP growth and growth rates (in brackets) 1995-2003 (annual average %)

	Estonia	Latvia	Lithuania
Total GDP Growth	5.8	6.1	5.4
Consumption (private)	3.7 (6.7)	3.9 (6.2)	3.7 (5.9)
Consumption (public)	0.4 (1.8)	0.3 (1.4)	0.5 (2.2)
GDFI	3.2 (11.3)	3.7 (17.5)	2.1 (11.0)
Exports	6.4 (9.3)	2.9 (7.4)	4.5 (9.6)
Imports	8.0 (10.5)	4.7 (10.1)	5.5 (10.7)

Sources: National Statistical Offices; Bank staff calculations

At the same time, there was a significant shift in resources (especially labor but also capital, at least in relative terms) from the initially less productive tradable goods sectors (dominated by the old heavy industries) to the more productive non-tradable goods sectors. However, the reallocation of resources between sectors was not entirely uniform across the three countries. While agriculture declined markedly across the Baltics, the shift from industry to services was much larger in Estonia and Latvia than in Lithuania (Table III.2).

Table III.2. The structure of GDP in the Baltic countries and the EMU (%)

	Estonia			Latvia			Lithuania			EMU
	1990	1995	2003	1990	1995	2003	1990	1995	2003	2002
Agriculture	16	9	5	22	10	5	27	12	7	2
Industry	50	29	30	46	33	24	31	35	34	28
Services	34	62	65	32	57	71	42	53	59	70

Source: World Development Indicators

The key service sectors driving growth in Estonia were transport and storage and communication, while in Latvia they were wholesale and retail followed by real estate and related activities. In Lithuania, growth was driven by a combination of rapid expansion of the manufacturing industry and services, mainly trade, transport and real estate.

The Baltic countries, notably Estonia and Latvia, now resemble closely Western Europe in terms of economic structure. Thus, one would expect that growth going forward would come more from within-sector and within-firm productivity improvements rather than from reallocation of resources across main sectors. International evidence suggests that these are the main sources of growth over the longer term.

3. Labor, capital or productivity? A growth accounting exercise

The goal of growth accounting is to decompose growth into its main production function components: labor, capital and productivity. The exercise covers the period from 1994 to 2003 (except for Lithuania, where data is available only since 1995). The data and methodology is summarized in Box III.1.

Box III.1. Methodology for growth accounting

Assuming a standard neoclassical production function, where Y represents output, K capital, L labor and A productivity

$$Y_t = A_t F(K_t, L_t), \quad (1)$$

with (i) constant returns to scale and (ii) competitive factor markets, output growth can be decomposed into the following components

$$\ln\left(\frac{Y_{t+1}}{Y_t}\right) = \ln\left(\frac{A_{t+1}}{A_t}\right) + \theta_{t+1}\ln\left(\frac{K_{t+1}}{K_t}\right) + (1-\theta_{t+1})\ln\left(\frac{L_{t+1}}{L_t}\right), \quad (2)$$

where $Ø_{t+1}(0,1)$ is the capital income share. Defining $\ln X_t = x_t$ the decomposition can be rewritten as

$$y_{t+1} - y_t = (a_{t+1} - a_t) + \theta_{t+1}(k_{t+1} - k_t) + (1-\theta_{t+1})(l_{t+1} - l_t), \quad (3)$$

The term on the left hand side of (3) represents output growth, the first term on the right hand side denotes total factor productivity (TFP) growth, and the second and third terms stand for changes in capital and labor inputs weighted by their income shares, respectively.[4] Since TFP cannot be measured directly, the growth accounting exercise amounts to obtaining values for the remaining three terms in (3) from the data and measuring TFP growth as a residual. In line with equation (3), all growth rates reported in the remainder of this paper are logarithmic.

The exercise covers the period 1994-2003, with the central scenario based on 1996-2002, largely

[4] The income share weights could alternatively be taken as $(\theta_t + \theta_{t+1})/2$.

determined by data availability.

The employment data, taken as a proxy for labor input, was unadjusted for hours worked and labor quality (expressed in years of schooling) as the aggregate effect of these two components appeared to offset one another.

Measuring capital is fraught with difficulties as none of the three countries have official capital stock estimates. Three different approaches (based on estimates of fixed tangible and intangible assets of enterprises as well as residential housing stock, estimates from other literature, and estimates based on the steady-state formula for the capital-output ratio) were applied to deduce the initial capital output ratios, which were found to be similar for all three Baltic states (1.5). Gross investment rates and depreciation rates (0.08) were based on national accounts. Finally, factor income shares (capital share 0.33) were based on other studies using input-output tables or estimating production functions as well as Eurostat national accounts data.

In principle, one should adjust calculations for changes in capacity utilization or the business cycle, e.g. through measuring output at the beginning and end of the period under study at the same points in the cycle. While it is well known that such business cycles are not possible to measure with any degree of confidence in transition economies owing to the short time series and large shocks, it is conceivable that part of the strong growth from the mid-1990s (following the initial output collapse) in the Baltic countries is of a "cyclical" nature. In this case, TFP growth would be overestimated. Thus, the results should be interpreted with some caution.

The results show that the experience of the three Baltic countries was rather similar with investment and total factor productivity growth each accounting for roughly one-half of output growth over the period (Table III.3). By contrast, labor growth played a negligible role consistent with the ongoing process of labor shedding (at least until the most recent years).[5]

Table III.3. Growth accounting results for the Baltic countries, 1996-2003

Country	Annual growth of GDP	Contribution of capital	Contribution of labor	Contribution of TFP
Estonia	0.051	0.031	-0.005	0.025
% contribution		62	-10	49
Latvia	0.058	0.029	0.003	0.026
% contribution		50	5	45
Lithuania	0.052	0.027	-0.006	0.031
% contribution		52	-12	60

Note: data for 2003 are not final.

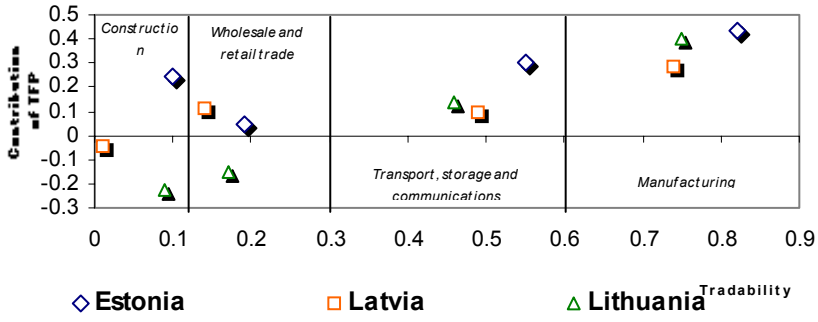
Source: World Bank calculations

TFP growth may have been rooted in: (i) improvements in technology and efficiency; (ii) positive effect of externalities; and (iii) changes in the composition of production between sectors or firms. In the Baltic states, all these sources of TFP growth—not least the latter—seem valid. FDI is often believe to play an important role in transferring knowledge and technology, but while this is undoubtedly also true for the Baltic countries, it is interesting to note that the contribution of TFP growth to output growth is no larger in Estonia than in Latvia and Lithuania despite the fact that Estonia's accumulated stock of FDI per capita is more than twice as large as that in the other two countries. Moreover, the leading country in terms of FDI per capita in Central and Eastern Europe—the Czech Republic—has experienced rather low TFP growth.

A disaggregated growth accounting exercise revealed a close linkage between tradability and productivity growth of individual sectors: the higher was the degree of openness, the larger was the contribution of TFP to sector output growth (Chart III.3). Thus, the efficiency gains of the traded goods sectors appear to be related to the pressures of competing in world markets.

[5] Sensitivity analysis of the main parameters of the growth accounting exercise do not alter the broad conclusions significantly.

Chart III.3. TFP growth and tradability of selected sectors in the Baltic countries, 1996-2002



Source: World Bank calculations

Employment has declined markedly in the traded goods sector over this period, while the non-traded goods sectors have seen rising employment and positive labor contribution to growth in all three countries. Meanwhile, investment remains a pivotal component of growth, especially in sectors which have experienced major structural changes (wholesale and retail trade) or were created from scratch (e.g. banking, insurance). Investment accounts for more than one-half of all key sector output growth rates.

The result of the Baltic growth accounting exercise is similar to that of the developed countries during their main expansion period (Bosworth and Collins 2003). However, recent growth in the Baltic countries looks much more like that of the major European countries during the Bretton Woods era than that of the East Asian "tigers" during their initial growth acceleration (Barro and Sala-i-Martin 1995; Young 1994). Within Central Europe, the result resembles mostly that of Poland during its transition period (Doyle et. al. 2001).

Perhaps the most important application of the growth accounting exercise lies in projecting future output growth rates based on projections of factor inputs and TFP growth. Before we turn to this, we examine the key factor inputs and conditions for productivity growth in more detail.

4. Trade and investment

The Baltic countries are highly open to international trade. During the early 1990s, trade relations with Western Europe were limited, but with trade barriers gradually easing in the context of free trade and pre-accession arrangements, foreign trade expanded rapidly at a rate of around 20 percent per year until 1999. The Russia crisis slowed trade dynamics temporarily as trade was diverted toward Western markets. In 2002, foreign trade turnover ranged from 101 percent of GDP in Latvia to almost 170 percent of GDP in Estonia (Table III.4).

Table III.4. Openness of the Baltics and selected CEEC countries, % of GDP

	2002	2000-2002 Average
Estonia	**169.0**	**180.8**
Latvia	**101.4**	**100.0**
Lithuania	**114.1**	**106.4**
Bulgaria	110.7	114.2
Croatia	105.4	103.1
Czech Rep.	133.4	140.2
Hungary	130.8	143.0
Poland	62.6	61.3
Romania	76.6	74.4
Slovak Rep.	148.5	149.0
Slovenia	115.0	115.9
Turkey	60.0	59.4
Russia	59.3	62.5

Source: World bank HFI database, National Statistical Offices

Investment has been another important source of growth for the Baltic countries. All three countries have achieved double-digit growth of GDFI since 1995. However, this dynamic growth of domestic investment to some extent reflects the low initial level of capital: in the early to mid-1990s the capital stock inherited from the Soviet system was mostly depreciated and became obsolete. Further, only very limited investments were made in the early 1990s. In 2003 investment rates in the Baltic countries were the highest in the EU8, although on average during the period 1995-2003 rates were more or less in line with other Central European countries (Table III.5).

Table III.5. Gross Capital Formation in the Baltics and selected CEEC countries, % of GDP

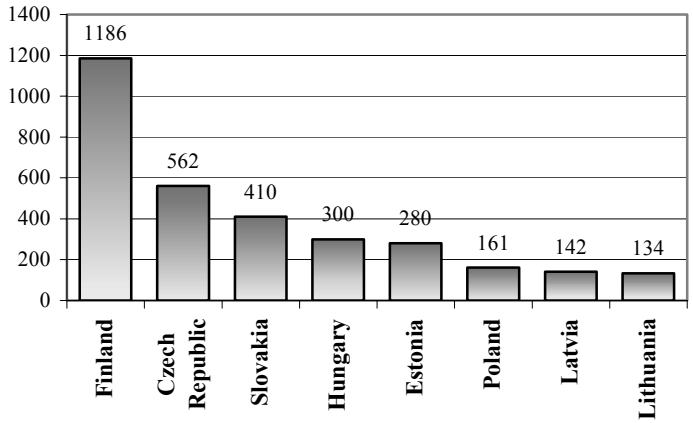
	2003	1995-2003 Average
Estonia	**31.1**	**28.8**
Latvia	**27.9**	**22.4**
Lithuania	**28.0**	**22.5**
Bulgaria	21.7	16.5
Croatia	30.4	25.4
Czech Rep.	27.3	29.4
Hungary	25.3	26.7
Poland	18.7	21.6
Romania	24.6	20.6
Slovak Rep.	25.4	29.6
Slovenia	24.8	24.5
Turkey	22.8	22.7
Russia	20.6	20.3

Note: Romania and Croatia 1997-2003
Sources: World Bank; National Statistical Offices

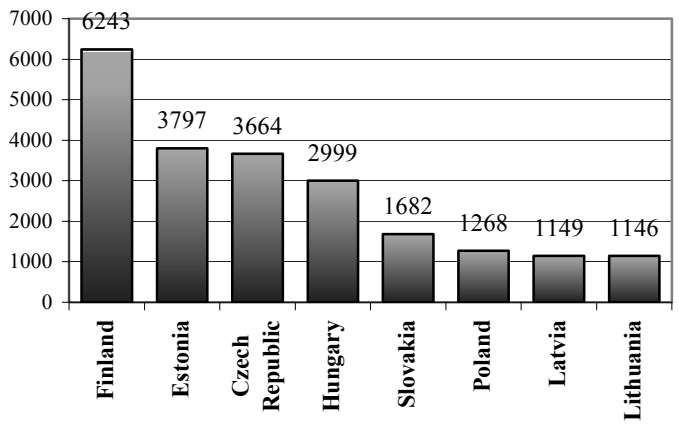
During the early years of transition the Baltic countries lagged behind in terms of FDI inflows. The sharp initial drop in economic activity and the small size of the economies led potential large-scale foreign investors to focus initially on the Central European countries. However, as output recovered and reforms—including privatization—accelerated, the countries started attracting more foreign investors. A well-educated labor force, a friendly investment climate (Box 3), and low labor and other production costs were all increasingly captivating conditions for FDI. Estonia has been the most attractive location in the Baltic region, followed by Latvia and Lithuania (Chart III.4).

Chart III.4. FDI in the EU8 and Finland, 2000-03

A. FDI flows per capita, 2000-2003 average, EUR



B. FDI stock per capita, 2003 eop, EUR



Source: UNCTAD online FDI database

FDI inflows in the Baltic countries have been directed mainly at the service sectors and manufacturing (Table III.6). Services (excluding non-market and construction) have attracted between 60% (Lithuania) and 75% (Estonia) of all FDI inflows. The main sub-sectors within services have been wholesale and retail trade (especially Lithuania), transport, storage and communication, financial intermediation (in particular Estonia), and real estate etc. (notably Latvia).

Table III.6. FDI stock by main sectors, 2003

	Estonia		Latvia		Lithuania	
	EEK mio	%	LAT mio	%	LTL mio	%
Manufacturing	14690	18.2	277	15.6	4260	31.1
Wholesale and retail trade	12878	15.9	318	17.9	2454	17.9
Transport, storage and communication	14290	17.7	223	12.5	2344	17.1
Financial intermediation	22738	28.1	268	15.1	2156	15.7
Real estate, renting, business activities	9180	11.4	422	23.8	1004	7.3
Other	7017	8.7	268	15.1	1481	10.8

Source: National Statistical Offices

While often regarded as an important source of innovative activities, the role of FDI in terms of promoting high-tech sectors has been fairly limited in the Baltic countries. Estonia has been more successful in this context benefiting from high-tech investments from Finland and Sweden, while the other two countries have seen a fairly small share of FDI going into high-tech sectors (with telecommunications the main exception). As a result, their high-tech exports still make up a negligible share of total exports suggesting that Latvia and Lithuania have a long way to go in terms of creating knowledge-based economies (Table III.7). The Baltic countries also lag behind the EU in terms of most other higher technology indicators, incl. internet access.

Table III.7. High-tech trade in the Baltic countries and the EU in 2001 (% of total)

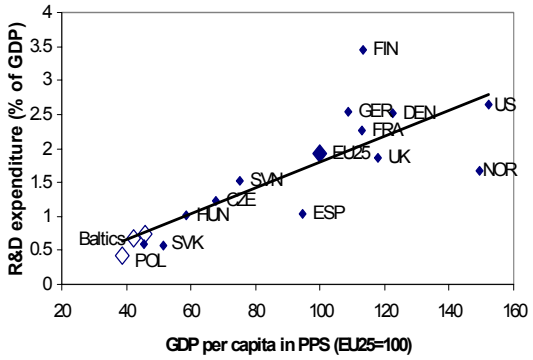
	Exports	Imports	High-tech trade balance (bn. EUR)
Estonia	14.6	11.0	0.1
Latvia	2.2	8.5	-0.2
Lithuania	2.9	7.8	-0.5
EU-15	19.8	21.3	-23.1
EU-10	9.7	13.8	-11.3

Source: Eurostat

Spending on research and development (R&D) in the Baltic countries is much lower than in the more advanced EU member countries, but largely in line with its income levels (Chart III.5). In

particular, spending by the private sector is relatively low (Table III.8). While it is not entirely clear which way the causality runs, it is likely that further resources devoted to R&D in the Baltic countries, not least from the private sector, could be an important engine of growth.

Chart III.5. R&D expenditure and GDP in the Baltic and selected other countries (2002)



Source: Eurostat

Table III.8. R&D spending in the Baltics and EU (% of GDP)

	1998	2003
Estonia		
government	0.14	0.13
non-government	0.44	0.64
Total	0.58	0.77
Latvia		
government	0.13	0.08*
non-government	0.28	0.34*
Total	0.41	0.42*
Lithuania		
government	0.32	0.18
non-government	0.23	0.50
Total	0.55	0.68
EU-15		
government	0.28	0.25*
non-government	1.58	1.74*
Total	1.86	1.99*

Note: *2002 data
Source: Eurostat

Relatively high investment rates and buoyant FDI inflows reflects a generally favorable investment climate in the Baltic countries (Box III.2). The business and investment climate has improved dramatically in the Baltic countries since the beginning of the 1990's. One could hardly tell that less than 20 years ago the private sector and foreign investment were virtually non existent in these countries. The acceleration and catching up on the reform side have resulted in conditions for doing business that are now at least as good as in the more advanced transition economies of Central Europe.

The recent "Doing Business in 2005" study by the World Bank ranks Lithuania among the top ten (number 6) global reformers in 2003 and top 20 (number 17) economies in the world for doing business. The Baltic countries generally compare well to other countries in the region on starting and closing a business, registering property, and enforcing contracts, while on the other hand they have more rigid labor markets. According to EBRD Transition Indicators, the Baltic countries on the whole compare favorably to other EU8 countries, although in some areas they are behind (e.g.

Also, the Baltic countries stand out in the region in their prudent conduct of macroeconomic policies, not least fiscal policy. Further, relatively low labor costs and corporate income tax rates are attractive for investors. Labor taxes, meanwhile, remain high as in the other countries in the region.

While the Baltic countries have been successful in redirecting trade from Russia and other CIS countries toward Western Europe, and equally successful in attracting Western capital, economic relations with the East may remain more important than a quick glance at the statistics suggests (Box III.3).

Box III.2. Investment climate in the Baltic countries

INDICATORS OF DOING BUSINESS AND INVESTMENT CLIMATE

	scale (high - low)	Estonia	(rank)	Latvia	(rank)	Lithuania	(rank)	Other EU8 countries average*
Index of Economic Freedom 2004 (the Heritage Foundation)	1-5	1.76	(6)	2.36	(29)	2.19	(22)	2.60
Growth Competitiveness Index 2004 (World Economic Forum)	7-1	5.08	(20)	4.43	(44)	4.57	(36)	4.45
The Business Competitiveness Index Ranking (World Economic Forum)	Ranking		27		49		36	
IMD - World Competitiveness Ranking 2004	U.S.=100	68.43	(28)	n.a.		n.a.		53.71
EBRD Transition Indicators 2004	4.3-1							
Large scale privatisation		*4.0*		*3.7*		*3.7*		*3.7*
Small scale privatisation		*4.3*		*4.3*		*4.3*		*4.3*
Governannce & Enterprise restructuring		*3.3*		*3.0*		*3.0*		*3.2*
Price liberalisation		*4.3*		*4.3*		*4.3*		*4.2*
Trade & Forex systems		*4.3*		*4.3*		*4.3*		*4.3*
Competition Policy		*2.7*		*2.7*		*3.0*		*2.9*
Banking reform & interest rate liberalisation		*4.0*		*3.7*		*3.0*		*3.6*
Securities markets and non-bank financial institutions		*3.3*		*3.0*		*3.0*		*3.2*
Overall infrastructure reform		*3.3*		*3.0*		*2.7*		*3.2*
Doing Business 2005 (IBRD/The World Bank)							17	
Starting a Business								
Number of procedures		*6*		*7*		*8*		*9*
Time (days)		*72*		*18*		*26*		*47*
Cost (% of income per capita)		*7.5*		*17.6*		*3.7*		*14.5*
Min. capital (% of income per capita)		*49.7*		*41.4*		*62.8*		*86.6*
Hiring and Firing Workers								
Dificulty of hiring Index	*0-100*	*11*		*78*		*33*		*19*
Rigidity of hours Index	*0-100*	*80*		*20*		*40*		*52*
Dificulty of firing Index	*0-100*	*40*		*50*		*40*		*28*
Rigidity of employment Index	*0-100*	*44*		*49*		*38*		*33*
Firing costs (weeks)		*33*		*42*		*38*		*29*
Registering Property								
Number of procedures		*4*		*10*		*3*		*5*
Time (days)		*65*		*62*		*3*		*164*
Cost (% of property value)		*0.5*		*2.1*		*0.9*		*3.3*
Getting Credit								
Cost to create collateral (% of income per capita)		*43.0*		*1.5*		*4.1*		*7.7*
Legal rights Index	*10-1*	*..*		*8*		*4*		*6*
Credit Information Index	*6-0*	*5*		*4*		*3*		*4*
*Public registry coverage (per 1,000 adults) **		*0*		*6*		*44*		*10*
*Private bureau coverage (per 1,000 adults) ****		*95*		*0*		*0*		*132*
Protecting Investors								
Disclosure Index	*0-7*	*4*		*5*		*6*		*5*
Enforcing Contracts								
Number of procedures		*25*		*23*		*17*		*27*
Time (days)		*150*		*189*		*154*		*647*
Cost (% of debt)		*10.6*		*11.0*		*14.1*		*11.5*
Closing a Business		*3.0*		*1.1*		*1.2*		*4.2*
Time (years)								
Cost (% of estate)		*8*		*4*		*8*		*19*
Recovery rate (cent on the dollar)		*40.0*		*85.0*		*52.4*		*35.8*

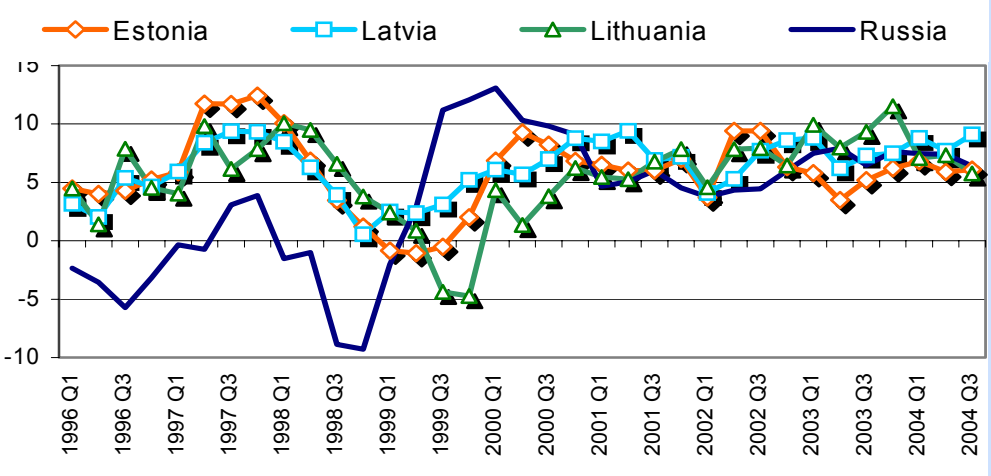
* Czech Republic, Hungary, Poland, Slovak Republic, Slovenia

** Number of individuals and firms listed in the public credit registry with current information on repayment history, unpaid debts or credit outstanding. The number is scaled to country's adult population (per 1,000 adult population). If a public registry does not operate, the coverage value is 0.

*** Number of individuals or firms listed in the private credit bureau with current information on repayment history, unpaid debts or credit outstanding. The number is scaled to the country's adult population (per 1,000 adult population). If a private bureau does not operate, the coverage value is 0.

Box III.3. East or West—does Russia still matter for growth in the Baltic countries?

Anecdotal evidence suggests that Russia may still matter for growth in the Baltic countries. Certainly, the sharp downturn in the Baltic economies in 1998-99 was to a large degree related to the Russia crisis in 1998, but it may also be that the subsequent strong recovery in the three countries to some extent was boosted by the rapid recovery and following oil-led dynamic growth in Russia. The chart below suggests that any such dependence is with roughly a one year lag. This is confirmed by simple correlation analysis, which shows a correlation coefficient of around 0.4 using a three-quarter time lag. It also shows that the correlation is strongest for Latvia, consistent with the sharper downturn in growth there in the aftermath of the Russia crisis, and that it has been growing influence in Lithuania, consistent with the increase in Russian FDI in Lithuania in recent years.



Growth rate correlation between Russia and the Baltic states

	time lag	The Baltics	Lithuania	Latvia	Estonia
2001-2004Q3	no	0.29	0.54	0.36	-0.37
1996-2004Q3	t-1	0.31	0.03	0.54	0.33
1996-2004Q3	t-2	0.40	0.21	0.51	0.37
1996-2004Q3	t-3	0.41	0.35	0.45	0.30
1996-2004Q3	t-4	0.34	0.42	0.32	0.13

While trade relations with Russia and the other CIS countries largely collapsed after the Russia crisis (according to official statistics on bilateral goods trade, which shows that the CIS countries in recent years have accounted for only about 10% of exports from the Baltic countries), it is conceivable that growth may spill over from Russia to the Baltic countries through other channels, notably trade in services, FDI, and portfolio capital flows. All these channels may have played a role in the recycling of Russia's large oil surpluses in recent years.

Service exports are relatively large in the Baltic countries (ranging from one-third of total exports in Estonia and Latvia to one-fifth in Lithuania). However, only Estonia provides a breakdown of service exports by country. This shows that the CIS share is 10-11 percent, although it rises to almost 19 percent if services to offshore regions are added. Further, the CIS region is likely to be more important for Latvia and Lithuania, including because of their role as a significant energy transit corridor. Rough estimates suggest that 20-30% of GDP in the Baltic countries is transit-related. Latvia also exports a large share of its construction services to the countries further East.

Most of the FDI in the Baltic countries also comes from Western countries, but the importance of Russian capital has been increasing in recent years. Russia joined Lithuania's top ten foreign investors in 2001 (with 5% of the total stock of FDI), while in 2004 its share had increased to 8% (approximately EUR 680 million). If FDI from third countries likely to intermediate Russian FDI are included, the share rises to around EUR 900 million.

Top 10 foreign investor countries in the Baltics (end-June, 2004).

	Latvia	LVL thous	%	Lithuania	LTL million	%	Estonia	EEK thous	%
1	Germany	306.8	14.8	Denmark	2,312.7	15.8	Sweden	38,743	42.0

2	Sweden	247.8	11.9	Sweden	2,053.1	14.0	Finland	23,671	25.6
3	Denmark	198.1	9.5	Germany	1,362.8	9.3	United States	4,308	4.7
4	Netherlands	168.6	8.1	Estonia	1,301.2	8.9	Denmark	2,999	3.2
5	Finland	164.9	7.9	Finland	1,252.9	8.5	Netherlands	2,972	3.2
6	Estonia	159.5	7.7	USA	1,251.2	8.5	Norway	2,566	2.8
7	Russia	140.2	6.7	Russia	1,109.6	7.6	Germany	2,338	2.5
8	United States	137.7	6.6	Netherlands	524.9	3.6	United Kingdom	2,126	2.3
9	Norway	106.5	5.1	United Kingdom	508.6	3.5	Austria	1,644	1.8
10	United Kingdom	50.2	2.4	Norway	439.9	3.0	Russia	1,346	1.5
	Total	2,079	100	Total	14,658.1	100	Total	92,327	100

Not surprisingly, Russian FDI is mostly directed to the energy sector. Main investments include the acquisition of Mazeikiu oil refinery by Yukos, the privatization of Kaunas Hydroelectronic Power Station to Gazprom (who also holds about one-third of Lithuanian Gas company Lietuvos Dujos and Eesti Gaas. In Latvia, Russian capital also concentrates on gas supply (Latvija Gaze) and oil products infrastructure, mainly transit facilities (Latrostraans, Lukoil Baltija). Russian capital is also quite actively involved in the chemical industry and in the banking sector (the latter notably in Latvia).

Finally, portfolio capital inflows from Russia—including through deposits in Baltic banks—may have played a role in the recent rapid credit expansion from these countries, although data on these flows by country are not available.

5. Human capital

Education levels have traditionally been high in the Baltic countries. In comparison with Western European countries, the Baltic countries seem to do well in terms of basic indicators of education (as do other EU8 countries). For example, the share of the population having completed at least upper secondary education is significantly higher in the Baltic countries than in Western Europe (Table III.9).

Nevertheless, there are important concerns about the quality and relevance of education in the Baltic countries. Education spending per student is low, and the 1999 TIMS test revealed poor skills in eight grade math and science in the Baltic countries (even compared to other new EU member countries).

Table III.9. Population having completed at least upper secondary education (%)

	1998	2002
Estonia	83.9	87.5
Latvia	82.6	82.6
Lithuania	78.4	84.8
EU-15	57.3*	64.6

Note: * stands for 1997
Source: Eurostat

Youth unemployment remains high, in part because skills are inadequate and programs not tailored sufficiently to the present demands in the labor market. Among the older labor force, many of these of course acquired their education under the Soviet regime, and their human capital may not be fully relevant to a modern market economy.

6. Looking ahead

Looking ahead, growth in the Baltic countries is likely to slow down somewhat from recent very high rates. Over the short-medium term, the adjustment is likely to be mainly of a cyclical nature, with some slowdown in rapid credit growth, reduction in current account deficits, and prospects for slower growth in Russia as oil prices ease. Over the medium-long term, the main risk arises from demographic prospects and a likely reduction in labor supply, although it will also be difficult to fully sustain recent high investment and productivity increases. On balance, we believe that output growth rates are likely to settle around 5-6%, still somewhat higher than in Central Europe.

While unemployment remains sizeable, bottlenecks are already occurring in labor markets and shortages of skilled labor are emerging, including because of significant emigration. Further down the road, demographic changes will reduce working age populations (e.g. in Latvia by about 13% over the next 20 years), and prospects for raising labor force participation rates are uncertain. Also, strengthening the quality of human capital is a long-term process.

Investment shares in the Baltic countries are high and may come down somewhat as capacity is built in the services sector. Nevertheless, current investment ratios are below the 30% of GDP levels assumed under favorable conditions in many growth studies of transition economies.

Sustaining recent high growth rates hinges mainly on maintaining or even increasing further TFP growth. Historical evidence suggests that TFP growth at recent Baltic rates extending for 20-30 years is not common, but by no means unprecedented (Benhabib and Spiegel 2002). Germany, Italy, and Japan all exceeded these rates for a 25 year period from 1947, while France and the Netherlands achieved rates similar to the Baltic countries during that period. More recently, Ireland has been one of the main success stories with rapid productivity growth over more than a decade.

Looking at various growth determinants and indicators of investment and business climate, the Baltic countries compare favorably with their Central European peers, although much of this reflects a rapid catching up on the reform side and in general would not point to prospects for continued significantly higher growth rates in the Baltic countries relative to Central Europe. Also, international cross-country regressions based on key growth determinants suggest that the Baltic countries could be growing at around 5½%, although Estonia slightly higher (Fischer, Sahay, and Vegh 1998).

In any event, sustaining relatively high output growth rates in the Baltic countries in the face of increasing competition from not only other new EU member countries but also countries further East will require continued strong reform momentum. Enhancing further the flexibility of labor markets, privatizing remaining state-owned enterprises and enhancing competition (notably in the energy sector), developing further financial markets (including easier access to finance for SMEs), and enhancing the legal environment for businesses are key priorities in this regard. In the longer run, improving further the quality of education and innovation will be crucial to move toward knowledge economies and move up the technology ladder in production and exports.

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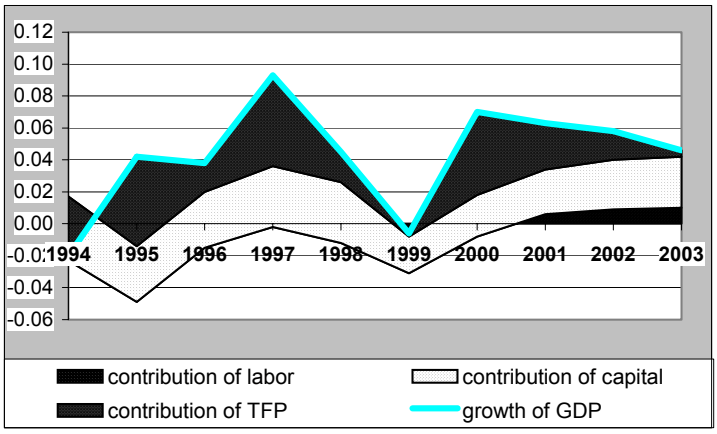
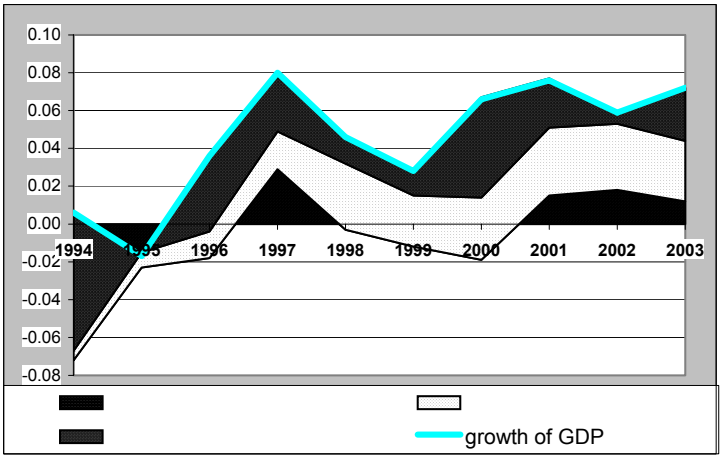
III.1.A. Estonia: contribution of capital, labor and TFP to output growth



III.1.B. Latvia: contribution of Capital, labor and TFP to output growth



III.1.C Lithuania: contribution of capital, labor and TFP to output growth