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Labor Markets in Hard-Peg Accession Countries: The Baltics and Bulgaria

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Labor Markets in Hard-Peg Accession Countries: The Baltics and Bulgaria

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LABOR MARKETS IN HARD-PEG ACCESSION COUNTRIES: THE BALTICS AND BULGARIA

I. INTRODUCTION

1. **This paper examines labor market developments and policies in four countries—Estonia, Latvia, Lithuania, and Bulgaria—which have pursued transition to a market economy in the context of a pegged exchange rate.**[2] All four countries have achieved considerable success in this transition, and are on the road to accession to the European Union (EU).

2. **While labor markets are a key determinant of economic performance in all economies, they are arguably more so in the context of transition, where major restructuring and reallocation of resources must take place.** For each of the countries examined here, the extent to which ongoing reforms continue to generate growth, as well as the degree to which the economic gains are broadly shared among the population, depends to a significant degree on the functioning of the labor market.

3. **Further, as each of these countries has chosen a pegged exchange rate, it is particularly important that the domestic labor markets be flexible.** Such flexibility is key to helping ensure that these economies can adjust to exogenous shocks and maintain their competitiveness on world markets. In fact, as described below, the four countries in question do have labor market institutions that are quite flexible compared with EU members, and even by the standards of most other transition economies.

4. **According to official statistics, these economies experienced a sharp economic contraction during the initial years of transition, as did virtually all other transition countries.**[3] Not until 1995 did the Baltics experience positive growth, which was again interrupted in 1999 by the Russian crisis (see Table 1). In Bulgaria, following positive growth in 1994-95, output declined sharply for several years, with growth restored only in 1998. Further, all four economies have experienced dramatic changes in the composition of real output, with a shift, in particular, from manufacturing to services. The flexibility of labor markets has been a major factor in determining the speed and strength of economic recovery, and the responsiveness of these economies to the Russia crisis and other external shocks.

5. **The differences in pace and distance along the reform path attained by each of these countries have contributed to differences in labor market outcomes.** The Baltic countries have established fully functioning market economies while Bulgaria, which got a later start on its program of reforms, has been making strong progress in recent years

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[2] Estonia and Bulgaria operate currency boards pegged to the euro, while Lithuania operates a currency board pegged to the dollar. Latvia's exchange rate is pegged to the SDR.

[3] There is, however, some evidence that the severity of the output collapse may be seriously overstated (Åslund, 2001).

(See Figure 1 on EBRD transition indicators, and Box 1). A comparison of the experience of these four countries provides evidence regarding the impact of the pace of structural reform on labor market performance. In particular, Bulgaria, the slowest reformer, has experienced relatively high unemployment throughout the period, while Estonia, the quickest reformer, has experienced more moderate unemployment. Moreover, delays in establishing hard budget constraints on enterprises in Bulgaria and, to a lesser extent Lithuania, served to delay bouts of sharp rises in unemployment, which have recently been experienced in both countries.

Box 1. Privatization and Related Reforms in the Baltics and Bulgaria: An Overview

Privatization has proceeded at different paces and by different methods in the Baltic countries and Bulgaria. In particular, the predominance of insider privatization in Lithuania and Bulgaria and, in the case of Bulgaria, an initially slower pace of privatization, has implied softer budget constraints than in Latvia and, in particular Estonia. This, in turn, has generated a more gradual restructuring of the economy.

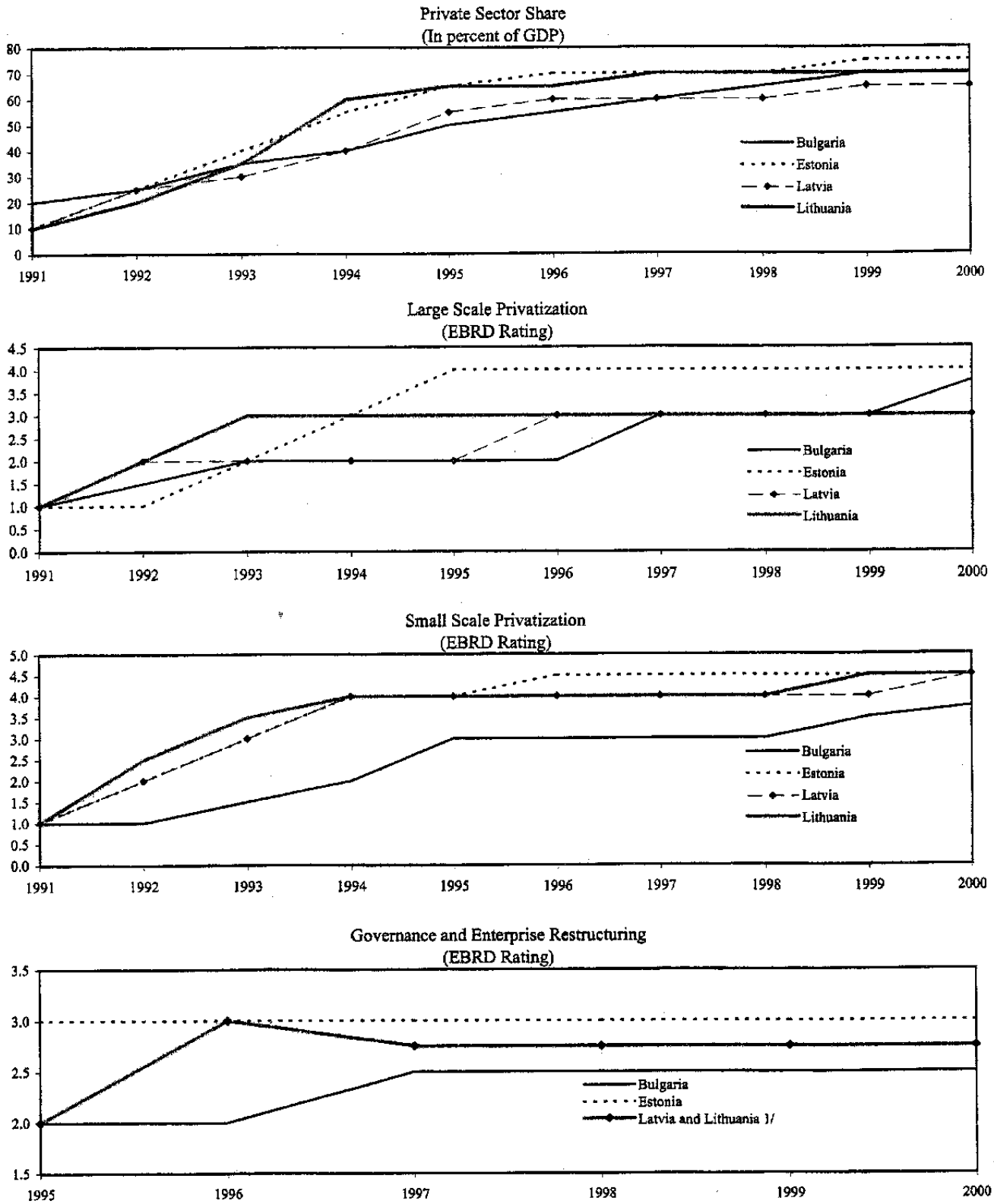
Small enterprise privatization in the Baltics was completed fairly early in transition, utilizing a mix of insider and voucher privatization. With large scale privatization, Estonia and Latvia have emphasized seeking strategic partners and selling controlling interests in enterprises; Estonia has largely completed this process while Latvia still has several large state-owned enterprises. Lithuania has relied more heavily on vouchers in its large-scale privatization. While momentum picked up in 1998 especially with the sale of majority holdings in Lietuvos Telekom, progress has been slower in the energy and banking sectors. Bulgaria adopted an accelerated privatization and restructuring strategy in 1997, including assigning a number of the most valuable assets to a privatization agent through a tender process funded by the EU and the relaunching of the voucher privatization scheme initiated in 1994. By end-2000, four fifths of bank assets and more than three fourths of non-infrastructure assets had been divested, but the privatization of energy assets still has to take off.

The role of vouchers has differed significantly across the countries. While in Estonia and Latvia vouchers were exchanged in public offerings for minority shares only after strategic investors had acquired a majority stake, in Lithuania they were often used to make a majority share purchase. Although this was intended to promote a more diversified ownership in Lithuania, a core of insiders often became owners. Bulgaria has also had a high share of insider deals where management-employee buyouts have been a common method of privatization.

The countries have differed considerably with respect to the role played by foreign direct investment (FDI). Estonia led in the promotion of FDI as, by 1993, foreigners had already taken over some large enterprises. The tender process used provided advantages to foreign companies since they had greater access to funds and expertise. While Latvia followed with significant FDI starting in 1994, foreign capital did not play an important role in Lithuania till 1998, as Lithuanian policies toward FDI were initially very restrictive. A number of studies have indicated that foreign-owned firms restructure more quickly, have been more profitable and export more successfully than domestic enterprises.

While privatization has been important for enhancing enterprise performance and restructuring, well-developed bankruptcy procedures, a good legal and regulatory framework, and a well developed financial system play an important part in increasing such dynamism. Estonia leads in these, and Latvia and Lithuania are moving in the right direction, although proper enforcement and implementation of some newly passed laws such as bankruptcy will take more time. In Bulgaria, weak corporate governance is still a key problem, though amendments to the Commercial Code to simplify and accelerate bankruptcy procedures passed in October 2000 should help accelerate restructuring.

Figure 1. Progress in Transition in Central and Eastern Europe, the Baltic States and Bulgaria, 1991-2000



Source: EBRD Transition Report 1995-2000.
1/ Same rating for Latvia and Lithuania.

6. **Despite flexible labor market policies, official unemployment in each of these countries has failed to come down from levels well above those of most industrial countries.** The Baltics and Bulgaria liberalized labor markets early on in transition, quickly moving away from many of the Soviet-style policies of the past (see Box 2). There is relatively little in the way of constraints on the ability of enterprises to hire and dismiss employees, unions have relatively minor roles, minimum wages are fairly low, and unemployment insurance is not overly generous. Further, the transition period has been characterized by a large reallocation of labor from contracting to expanding sectors. Against this background, the paper seeks to explain this apparent contradiction between seemingly flexible labor markets and significant labor movement on one hand, and persistently high unemployment on the other.

7. **At least part of the explanation for continued high unemployment lies in the mismatch between the skills of the unemployed and the needs of new enterprises, which has also contributed to relatively high long-term unemployment.** In addition to the obvious impact on the well-being of the population, such long-term unemployment could threaten political support for economic reforms more generally, and lead to an erosion of work skills, resulting in a higher natural rate of unemployment. Further, despite the fact that unemployment tends to be geographically concentrated, with a number of rural regions experiencing official unemployment as high as 30 percent, labor mobility between regions is limited, and seemingly unrelated to labor market considerations.

Box 2. Labor Market Characteristics and Policies Under the Soviet System

The pre-transition labor markets in the Baltics and Bulgaria shared a number of fundamental characteristics, as did many countries of the former Soviet Union and Central and Eastern European (CEE) countries (Haltiwanger and Vodopivec, 1999). Among these are:

- **Job security and large hidden unemployment.** Owing to soft budget constraints firms rarely laid off workers, and open unemployment was virtually zero. However, overstaffing—hidden unemployment—has been estimated to have been as high as 30 percent.

- **Predominance of state sector employment.** In Estonia, for example, in 1989, 80 percent of employment was generated by the state sector and virtually all of the rest by cooperatives.

- **Little wage variation.** Wages were centrally determined, and the ratio between highest and lowest-paid workers was close to 1. For example, in 1986, in Estonia, it was 4:3. However, non-cash benefits were important, and probably less equally distributed.

- **Well-educated work forces.**

- **High female labor participation rates.**

8. **Looking ahead, each of the four countries is seeking EU accession, with potentially important implications for labor markets.** While accession will provide large economic benefits, it will also require costly and wide-ranging reforms and institutional strengthening. In the area of labor policy, candidates will need to take a number of steps,

including the recognition of a set of rights for workers and standardization of working conditions with those in the EU. However, a cautious sequencing of such harmonization seems advisable. Moving too quickly might result in excessive labor costs, harming the development of the small and medium-sized enterprises, and inflating the informal economy. This takes on particular importance given that the completion of privatization and further restructuring on both the macroeconomic and enterprise levels over the medium term suggest that, without substantial job creation, unemployment will remain high for some time.

9. The organization of the paper is as follows. Chapter II provides a brief literature review of labor market issues in transition economies, and presents a broad analytical framework. Chapter III reviews and analyzes developments over the course of transition in key labor market indicators, including employment, unemployment and wages. Chapter IV describes key legal and institutional factors in the four countries—such as the system of unemployment insurance, minimum wage, role of unions and active labor market policies—and examines the extent to which they help to explain similarities and differences in developments across the countries. Chapter V presents a discussion of the implications and challenges for labor market policies of these countries in the process of EU accession. Finally, Chapter VI summarizes the findings of the paper and discusses potential policy implications.

II. Literature Review and Analytical Framework

10. **A number of theories have been proposed to explain and predict the behavior of labor markets and unemployment in transition economies**. This section briefly describes the most important ideas in the literature and points to the most immediate empirical implications.

A. Job Shedding and Job Creation

11. **The underlying idea of most models of the labor markets in transition is that the transition process is characterized by job shedding in the public sector and, with some delay, job creation in the private sector, with increased unemployment as a temporary outcome.** The public sector sheds labor during transition both because public enterprises are privatized and because rationalization and associated layoffs are taking place within the state sector. At the same time, job creation in the private sector reflects privatization as well as the creation of new private sector firms and employment. However, such private sector job creation takes time, because the private sector does not develop instantaneously, and because matching individuals and jobs can be costly; as a result, there must be unemployment. (For a more detailed exposition of several models for explaining unemployment, see Box 3.) In fact, some frictional unemployment may well be optimal, as individuals search for the jobs for which they are best matched, and employers search for the right workers. However, higher and longer-term unemployment can be brought about by wage rigidities, lack of labor mobility, or a mismatch between newly desired skills (such as computer literacy or knowledge of foreign language) and skills possessed by the unemployed.

Box 3. Theoretical Models of Labor Markets and Unemployment

Economic analyses of labor markets have taken a number of approaches to explaining unemployment, some of which may have particular relevance to transition economies. One important direction taken in the literature is to model labor markets as a decentralized process in which workers search for jobs and employers actively recruit their personnel (e.g., Pissarides and Mortensen, 1999). These activities are costly so that the intensity with which workers search and employers recruit—and so the level of unemployment—is dependent in part on institutional factors such as minimum wages and the availability of information. Further, once workers and employers match, contracts can take various forms and may, for example, result in wages above full employment wage levels ("efficiency wages") as employers lack information about the productivity of the individual worker in a heterogeneous workforce (see Pissarides and Mortensen, 1999; Blanchard and Fischer, 1989, chapter 9.4). Burda (1993) argues that search models describe developments in transition economies very well; the shocks initiated by the transition led to a large matching problem between workers and employers as industries important in the past contracted and other sectors, including services, began to expand. The speed at which countries return to more normal levels of unemployment is then determined by institutional factors.

Institutional factors, such as social safety nets, labor laws, and the role of unions, have received attention recently, in particular as a key to understanding differences between unemployment rates in the EU and the U.S. (Blanchard, 2000). The approach has intuitive appeal and seems to be empirically relevant, but as argued in Section IV, the labor laws and policies do not appear to be major obstacles to reducing unemployment in the countries analyzed in this paper. Other institutional factors, such as the lack of effective active labor market policies (ALMPs), may be more plausible as explanations; e.g., Burda (1993) and Burda and Lubyova (1995) present evidence suggesting ALMPs have been successful and are essential in explaining the relatively low unemployment rate in the Czech Republic. Furthermore, these countries are still only ten years removed from centrally planned economies, so that social norms adopted during that long period may still be important and market agents may still need to learn how to behave efficiently. (See Lindbeck, Nyberg and Weibull (1999) for an analysis of social norms). It is very difficult to assess the importance of social norms and immature markets, but these factors may help explain the low regional labor mobility in the four countries.

It has also been suggested that the long-run equilibrium rate of unemployment is determined also by the rate of unemployment itself (Blanchard and Summers, 1986; Pissarides, 1992). A person who loses his or her job may, over time, lose some skills by not working or may be stigmatized by the mere fact that he or she is unemployed. Therefore short-run shocks to employment can have long-run effects, i.e. there are elements of hysteresis in labor markets. This may be of particular relevance in transition economies as the initial labor shedding cannot possibly be immediately compensated for by private sector employment creation.

12. **In this framework, unemployment during transition can be seen as depending on the speed at which public sector jobs are shed, the rate of private sector job creation, and the extent of exit from the labor force.** Individuals whose public sector jobs have been eliminated may meet one of a number of possible fates in the labor market. First, they may find employment in the private sector. Second, they may leave the labor force, for example, by opting for early retirement or emigrating; both of these have been important phenomena in the four countries. Third, they may move into the informal sector; while these individuals may continue to be measured as officially unemployed or out of the labor force they are, in fact, employed, although typically at relatively low wages. Finally, those losing their public sector jobs may become unemployed.

13. **Such models suggest that unemployment would follow an inverted-U shape during the course of transition.** In the initial stage the number of state employed is high and even if the growth rate of private sector employment is also high, unemployment is likely to increase. As the transition progresses the increasing private sector is able to absorb more of the unemployed and unemployment will begin to decrease; this in fact has often been the case in transition economies (Boeri, 2000). In the countries covered by the present study, however, the inverted U-shape has not been observed, as unemployment has generally leveled off but has been quite slow to decline. In addition, in contrast to the predictions of the models, we have observed many workers making the transition from public to private employment without any spell of intermediate unemployment (Coricelli,1998), but at the same time a stagnant pool of relatively long-term unemployed. In other words, workers shed from the public sector need not become unemployed, but once unemployed tend to stay so for long periods of time.

14. **Given the rate at which transition takes place—proxied by the speed at which public sector jobs are eliminated—labor market institutions and policies can influence the extent and duration of unemployment.** A high minimum wage relative to the average wage in the economy will imply wage rigidities for a large number of workers, tending to slow job creation in the private sector, in particular for low-skilled jobs, increase unemployment but cushion the fall in real wages. Insufficient unemployment insurance (UI) may retard the restructuring process by encouraging workers to remain underemployed rather than searching for new employment, or accepting jobs for which they are poor matches, while overly generous UI may encourage individuals to remain unemployed for a longer-than-optimal time, provide disincentives for acquiring human capital, and impose a fiscal burden on the government. The public sector may hire laid-off individuals, acting as an "employer of last resort" and slowing the restructuring process. Training or other active labor market policies may speed the movement of the unemployed back to the workforce or may simply represent an inefficient use of public resources. The empirical evidence regarding the impact of such policies on labor market developments is summarized in Box 4.

15. **An essential element of many models is a feedback mechanism through which labor market policies and developments can influence the speed of transition.** That is, while the speed of transition influences labor markets, it is itself endogenous. One avenue for such feedback is the fiscal burden caused by unemployment.[4] If the speed of transition—i.e., the degree of labor shedding—is high, unemployment will tend to rise sharply as will payments of unemployment benefits, implying an increased fiscal burden. Higher taxation to finance this spending might hamper growth, so that the positive effect of transition could be reduced. In several of the countries examined here—in particular Estonia—eligibility requirements are restrictive and benefits low, so that fiscal costs have remained moderate.

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[4] See, for example, Burda (1993), Aghion and Blanchard (1994), and Chadha and Coricelli (1995).

Box 4. Unemployment and Labor Market Policies and Institutions: Evidence

A large literature has developed on the empirical effects on (un)employment of labor market policies and institutions, especially since the influential 'Jobs Study' (OECD, 1994) appeared. Though these studies have mostly been done for OECD countries, they can still be instructive in the context of transition economies. This box focuses on macroeconomic studies, despite potential econometric problems (e.g., sensitivity, endogeneity), since for microeconomic studies the question remains how to aggregate results to assess the overall impact of labor market policies and institutions. These studies generally indicate that some, but not all, of the labor market policies and institutions that can be broadly classified as 'rigid' indeed drive unemployment upwards, although there are a number of important caveats.

The effect on unemployment of **minimum wages** is a much debated topic on which there is little consensus. A heavily-criticized study by Card and Krueger (1994), suggesting that a large increase in New Jersey's minimum wage actually increased employment, brought the debate to the forefront, but the issue remains unresolved. A recent reading of the evidence for industrial countries by Nickell and Layard (1999) concludes that minimum wages are typically set low enough not to have a significant impact on adult male unemployment. However, there is some evidence that the minimum wage has increased youth unemployment, in particular where the minimum is not adjusted for those under 25 (e.g., France, Spain). The evidence for an impact of minimum wages on unemployment of low-skilled workers more generally is not clear. Evidence of the impact of minimum wages in developing countries is similarly mixed. Several studies (for Mexico, India, Chile) see little impact, either because the minimum wage is set below market wage rates, or because the legal minimum wage is easily circumvented. Other studies, however, indicate that significant effects do exist. (For a summary, see Freeman, 1993.)

Macroeconomic studies of the relationship between various measures of tax and welfare policy and unemployment suggest two broad conclusions (Disney, 2000). First, **taxes on labor** play a role in raising unemployment, but only in those countries classified as intermediate between having competitive and coordinated labor bargaining. In other countries, labor taxes are borne by workers, with no impact on labor costs (e.g., Daveri and Tabellini, 2000). Second, more generous **unemployment benefits**, in terms of both replacement rates and duration, tend to increase unemployment, but the magnitude of the effect depends on complementary labor market policies. The fact that long-term unemployment is strikingly larger in the EU than in the U.S., for example, can be largely explained by the longer period for which benefits are available in the EU. However, the impact of more generous benefits can be offset by strict eligibility requirements combined with well-targeted **active labor market policies** (ALMPs). In contrast, however, the main OECD (1993) study on the effects of ALMPs could identify no direct effect on unemployment, although it suggests that in the majority of OECD countries, expenditure on active programs contributes to wage moderation, thereby reducing unemployment indirectly. Specific evidence regarding the labor market effects of **pension systems** is more unequivocal: higher replacement rates and effective tax rates are clearly correlated with lower labor participation (e.g., Gruber and Wise, 1999).

Finally, while stricter **employment protection legislation** seems to be unrelated to unemployment, it is significantly associated with lower job creation (Garibaldi and Mauro, 1999). Union strength only appears to increase unemployment if unions and firms do not coordinate (Nickell, 1997).

16. **Another way of modeling a feedback mechanism is to introduce political factors.**[5] If the speed of transition is high, many will become unemployed, and even more will feel at risk of becoming unemployed tending to erode support for reform governments. The growing share of the long-term unemployed in many transition economies is important in this context as this group may well become a permanent and forceful opponent of reform. At the same time, policies aimed at preventing unemployment may prove counterproductive in limiting the extent and pace of economic restructuring and, therefore, the benefits of transition.

17. **Authorities, therefore, may face a trade-off between the speed of transition and the transitional costs imposed on unemployed workers.**[6] An adequate social safety net can play an important role in protecting those laid off from extreme poverty while also making transition more politically acceptable. It is interesting to note, however, that the Baltics, and more recently, Bulgaria, have managed to maintain broad political support for transition despite the substantial costs to the unemployed and others, and in some cases rather limited social safety nets. It is at least plausible that this continued support has resulted from, on the one hand, the strong opposition to the political and economic regime that preceded transition and, on the other, to the pull of European Union membership.

III. Developments in Employment and Wages

18. **The impact of transition on labor markets can be usefully viewed as the outcome of a rapidly shrinking public sector and a more gradually emerging private sector.** In this context, it would be expected that, at least initially, labor market participation and employment would fall, unemployment would rise and real wages would decline. Over time, these processes could be expected to reverse themselves as job creation in the new private sector picks up steam.

19. **The labor market experience of the four countries has been broadly similar, and generally in line with these expectations, although the unwinding of the initial negative consequences has taken considerably longer than expected.** In part as a result of these developments, poverty has remained high,[7] and income distribution has grown more unequal during transition, although it is still comparable to EU countries (OECD, 2000). Responses by governments to these developments have been generally market-oriented, and there have been few direct interventions by the government aiming to limit lay-offs.

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[5] See, for example, Przeworski (1993), Rodrik (1995), Dewatripont and Roland (1992).

[6] For a discussion of the optimal pace of transition, see, e.g., Boeri (2000).

[7] If a food share exceeding 50 percent of consumption is taken as an indicator of poverty, more than half of Lithuanian households, and almost half of Latvian households are poor. By this measure, only about 20 percent of Estonian households are in poverty (OECD, 2000).

A. Population and Labor Force Participation

20. **Reflecting emigration, a decline in the birth rate and an initial fall in life expectancy, populations declined during the decade of the 1990s by between 6 and 9 percent in Latvia, Bulgaria, and Estonia** (See Tables 2-5). Latvia and Bulgaria experienced particularly large net emigration of about 5 percent of the population, primarily in the first years of transition. While some of this may have been a response to worsening economic conditions, a majority of Latvians and Estonians emigrated to their countries of origin in the CIS, while more than half of the Bulgarian emigrants were ethnic Turks who emigrated to Turkey. In Lithuania, by contrast, emigration was small, and the overall population declined only marginally.

21. **In all four countries, labor force participation and participation rates have declined substantially, helping to at least contain increases in unemployment.** [8] In this, the experience has been broadly similar to other transition economies. Labor force participation has declined by 11 percent in Bulgaria,[9] about 15 percent in Latvia and Estonia, and 3 percent in Lithuania, where the population decline was far less dramatic. As a result, participation rates in all four countries have declined as well and, at between 41 and 49 percent, are low relative to Western industrial countries.

22. **The decline in participation rates has had several causes.** First, pension systems—in particular loose rules for disability and early retirement—have increased the number of pensioners, serving as a de facto safety net for many older workers who may have lacked the skills required by the new private sector (see Chapter IV).[10] Second, some workers became discouraged in their attempts to find a job, and dropped out of the labor force altogether. According to labor force survey data, this reduced participation in 1997 by 4 percentage points in Latvia and by 6.5 percentage points in Bulgaria. Third, some of the decline may reflect an attempt to acquire new skills needed in a market economy, e.g., via increased participation in higher education. In Estonia, for instance, the number of people who are out of the work force because they are studying or receiving training has increased by 30 percent since 1995.[11] Fourth, the decline in measured participation may reflect the fact that

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[8] An individual is participating in the labor market if he or she is either employed or out of work and actively seeking a job.

[9] Based on Labor Force Survey data for 1993-99.

[10] For example, from 1991 to 1993, the number of Latvian pensioners rose by 50,000, or nearly 10 percent, with half of this increase attributed to a rise in disability.

[11] The labor forces of these countries are well-educated, with 80 to 90 percent of the Baltic labor forces, and 75 percent of the Bulgarian labor force having received at least an upper-secondary education (OECD, 2000).

unreported economic activity is important.[12] The emergence of such informal sector employment has been particularly important in Bulgaria, especially among young workers and in the agricultural sector. Finally, the decrease may reflect a response to the lifting of requirements to work typical of the Soviet system.

B. Trends in Aggregate Employment

23. **Employment has declined sharply during the last decade in the four countries, with much of this fall in the initial years of transition, broadly similar to the experience in transition economies in general.**[13] The scale of the employment loss was, however, much larger in Latvia, Estonia, and Bulgaria, than in most other CEE countries (with the exception of Hungary) and the recovery in employment more delayed.[14] In Latvia, Estonia and Bulgaria, the number of officially employed individuals declined by about one quarter during 1990–99, largely in the initial years of transition.[15] In contrast to Latvia, employment in Estonia and Bulgaria has continued to decline, albeit more slowly, in the period since 1995[16]. Lithuania has seen a slower reduction in employment in line with its more gradual fall in participation, with employment falling by 11 percent over the 1990s, virtually all of which took place in the first half of the decade.

24. **The larger and more persistent decline of employment in the Baltics and Bulgaria than in many other CEE economies may reflect in part a larger initial output loss.**[17] Prior to the onset of the real transformation of the economies, the first few years of the

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[12] In this regard, it has been estimated that about 15 percent of workers in Estonia and Latvia, and 8 percent in Lithuania, have second jobs (OECD, 2000).

[13] Job losses in Poland and the Czech Republic were concentrated during 1990-93, whereas they continued through 1996 in Hungary and Slovenia.

[14] Employment fell by some 9 percent in Poland and the Czech Republic during 1990-93, and by 14 percent in Slovenia during 1990-96, whereas employment in Hungary dropped by a quarter over the same period (Garibaldi *et al.*, 2000).

[15] Employment data for Estonia in Table 3 have a break at 1995, reflecting a shift in data collection procedures from enterprise reports to labor surveys. According to an alternative data source (United Nations Economic Commission for Europe) the employment decline in Estonia during 1990-95 was 22 percent.

[16] This is in contrast to much of CEE, where employment started to recover or level-off as early as 1994 (Poland, Czech Republic) or since 1997 (Hungary, Slovenia).

[17] Measures of GDP both prior to transition and in the initial years of transition suffer from a number of important methodological problems. Valuation of output produced under non-market conditions is difficult, and the initial years of transition were characterized by an expansion of informal sector activities, imperfectly captured in official statistics. Thus, it is likely that the fall in real output during the first years of transition is overstated, though it remains large by any measure (see Åslund, 2001).

1990s were characterized by declines in output and employment related, in part, to the dissolution of the CMEA and problems of disorganization (Blanchard and Kremer, 1997). In addition, these countries—as with other transition economies—were characterized by large hidden unemployment prior to transition, which was then converted into open, measured, unemployment. Later, the contraction of the public sector and the slower generation of private sector jobs contributed further to declines in unemployment. The response of employment to the initial output decline was particularly sharp in Bulgaria, owing to a less restrictive Labor Code than most CEE countries, a weak enforcement of regulations, and the heavy use of "civil contracts" which could be terminated at the discretion of the employer (OECD, 1998).[18] In addition, Bulgaria failed to stabilize its inflation in the first three years of transition and experienced a severe financial and banking crisis in 1997, which led to a further decline of output by 14 percent during 1996-98.

25. **Employment in the public sector has declined quite rapidly, falling by more than half.** In Latvia, some 400 thousand public sector jobs were lost between 1992 and 1997, either through privatization or actual labor shedding (just over 400 thousand such jobs remain) and about 200 thousand private sector jobs created, either through privatization or the formation of new private firms (Figure 2). The share of employment in the private sector has increased from 40 percent in 1992 to 70 percent in 1999. The other Baltic countries have seen similar developments, and the proportion of private sector employment is similar to other CEE countries. In Bulgaria, by contrast, only 22 percent of the workforce was employed in the private sector in 1993, although by 1999, this figure had risen to almost 50 percent.

26. **While labor shedding and privatization have led to a fall in total public sector employment, central and local government employment appears to have risen.** The share of employment in the categories of public administration and defense, education, and health and social work—which correspond broadly to non-commercial public sector—increased sharply in all three Baltic countries and Bulgaria (Tables 6-9). Even given the fall in total employment, the number of workers in these sectors in Latvia and Lithuania increased over the decade, while declining slightly in Estonia and Bulgaria. These data suggest that, at least in some cases, the public sector (including local governments) may have been operating as an "employer of last resort," cushioning the fall in employment elsewhere—including in public enterprises—and perhaps slowing the restructuring of the economy.[19] This points to the importance of a broad civil service reform, at all levels of the public sector.

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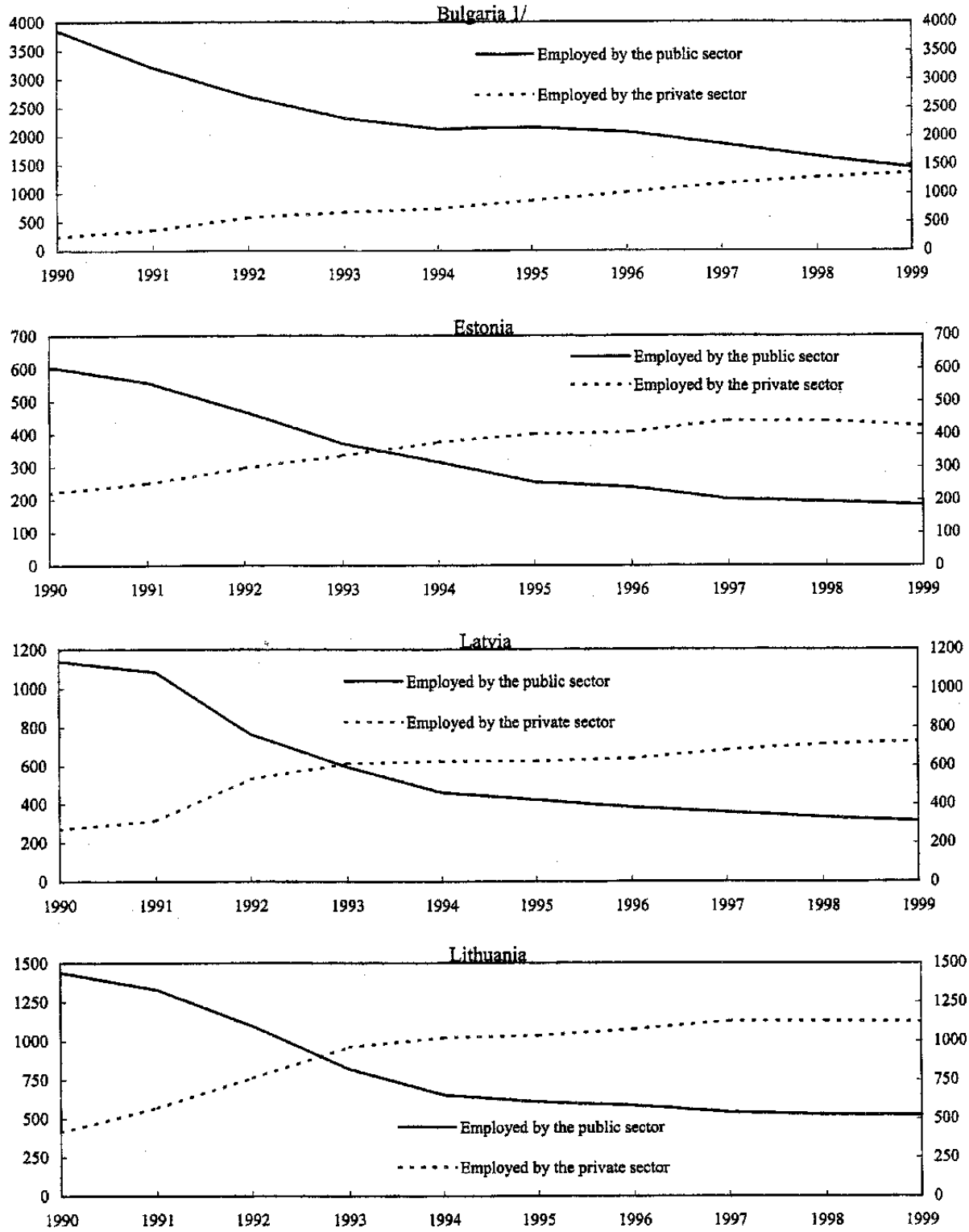
[18] Civil contracts accounted for 10 percent of employment in some years. Until March 1995, payment of social security contributions was waived for this type of contract.

[19] This may also reflect the shedding of certain social services, such as schools and hospitals, by public enterprises and their takeover by local governments.

Figure 2. Bulgaria and the Baltic Countries: Public and Private Employment, 1990-99
(In thousands)



Source: country authorities.
1/ Data from 1993 onward not comparable with previous years; see table 2.

27. **It appears that much of the switch from public to private sector employment reflects real labor-shedding in the public sector and private job creation, rather than simply privatization of state-owned enterprises.**[20] While it is difficult to make a precise estimate, in all four countries, more than half of the public sector job loss (on a net basis) took place during 1992–94, well before the privatization process took off. Similarly, nearly half of the new private sector jobs were created during this period.

28. **While there has been an acceleration of private job creation, it has not yet been sufficient to bring unemployment rates down significantly.** For example, in Latvia, in each year 1993–97, the reduction in public sector employment (including state enterprises) was far greater than the increase in official unemployment (Table 10). In 1993, about half of the labor force that lost state employment found jobs in the private sector, and about 20 percent became officially unemployed.[21] The remainder of the affected workers left the labor force, became employed in the informal sector, or were otherwise ineligible for official unemployment status. However, by the third quarter of 1997, the number of new private sector jobs exceeded the number of jobs lost in the public sector.

29. **Survey data for Estonia support the view that labor markets are becoming more dynamic, in that the pace of worker transition has increased dramatically**. In particular, hiring and separation rates rose from about 10 percent per year during 1989-90 to approximately 25 percent per year during 1990-95.[22] Further, much of this increase in worker flows resulted from job reallocation, which rose dramatically over the same period. In the early 1990s, job destruction rose much more rapidly than job creation—about 15 percent per year compared with 6 percent during 1992-93—but by 1994-95 the two rates had converged, at around 10 percent. Job creation was highly concentrated in small firms and the private sector, which likely were largely de novo. It is interesting to note, in this context, that Estonia, which privatized most rapidly of the four countries, has experienced lower unemployment than the others during most of transition.

30. **In Bulgaria, by contrast, labor force survey data indicate slower growth in job creation and worker transition.**[23] During 1995-99, job separation rates at 34 percent were even higher than in Estonia, but the hiring rates at 5 percent were much lower. While job destruction rates were comparable to those in other CEE countries, job creation rates were much lower, suggesting that the adverse labor market experience of Bulgaria primarily

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[20] This tentative finding is consistent with empirical results for transition economies. See, e.g., Bilsen and Konings (1998) for Bulgaria, Hungary and Romania.

[21] These data more precisely tell us about jobs gained or lost, but not whether the same individuals that lost jobs in a given year found new ones.

[22] Haltiwanger and Vodopivec (1999).

[23] World Bank (2000).

reflects a less dynamic private sector. Job creation rates remained lower than job destruction rates throughout the period, implying a net employment decline. Excess job reallocation (the difference between job reallocation and the absolute value of net employment changes), a proxy for the size of restructuring, was also much lower than in other candidate countries, again reflecting a less dynamic labor market.

31. **Data by age tend to support the view that skill mismatches have been an important determinant of levels of employment.** People at both the younger and older ends of the age distribution have had particular difficulties finding jobs. In Estonia, for example, particularly large declines in employment over the decade are observed in the age categories 15-24 and 50-69 years, where employment rates declined by about one third between 1990 and 1999 (Table 13b). The decline in employment for these two groups is mirrored in the high unemployment rate for the young, and the sharp rise in the number of retired persons. These trends, which can also be seen in the other countries, likely reflect skill problems—the young lack work experience and the vocational training systems are insufficiently responsive to market demands, while the old acquired skills under communism which tend to be outdated.

C. Developments in Unemployment[24]

32. **Despite the emergence of a vibrant private sector in the Baltics and more recently Bulgaria, the unemployment rate has been slow to complete the expected inverted-U shaped path.** Unemployment in the Baltics increased until 1995-96, when it reached almost 20 percent in Latvia, 17 percent in Lithuania and 10 percent in Estonia. In Bulgaria, unemployment peaked in 1993 at 21 percent (Figure 3).[25] The initial rise in unemployment was as expected, due to the first round of privatization and restructuring which led to state sector enterprise closings and the hardening of budget constraints in

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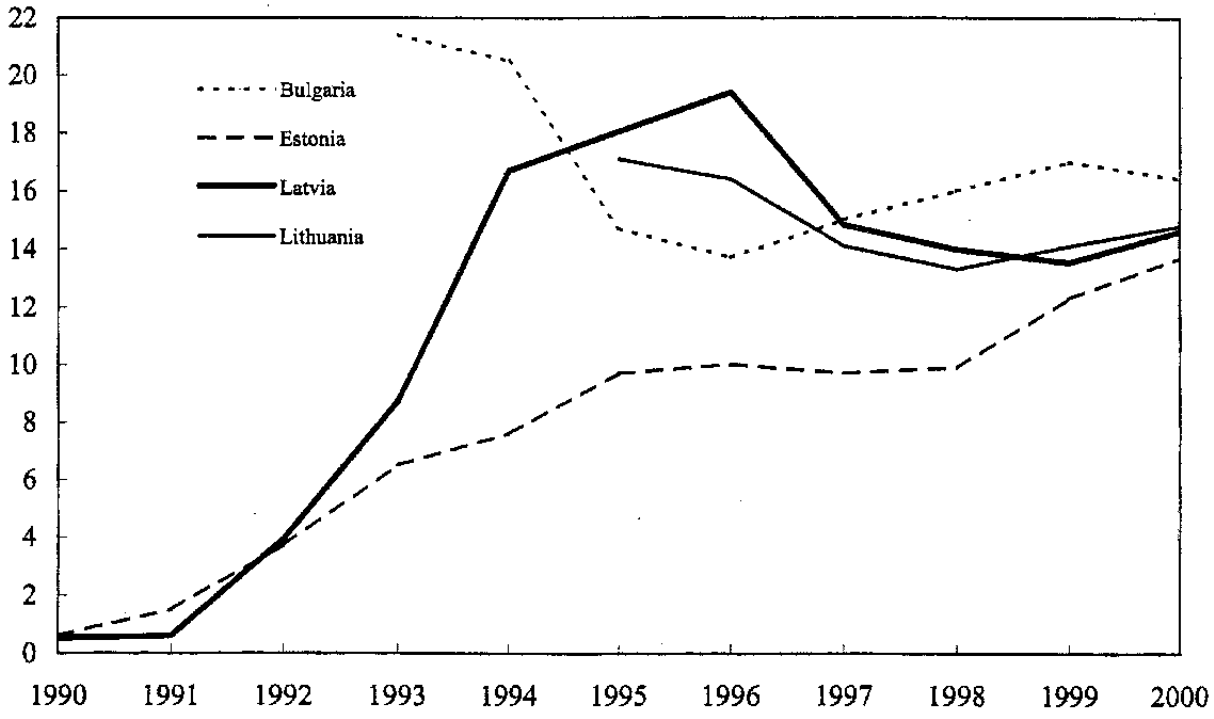
[24] Unemployment data come from several sources, corresponding to more or less broad definitions of unemployment. For all four countries, the national employment office compiles and publishes data on those individuals who register as unemployed ("official unemployment"). This understates true unemployment for several reasons, including that many unemployed fail to register, either because they are ineligible for benefits (e.g., long-term unemployed whose eligibility has lapsed, or new entrants to the labor market) or because benefits are too low to provide adequate incentive to register. Alternative estimates of unemployment based on labor force surveys seek to measure the unemployed as all individuals not currently employed and seeking employment, consistent with the definition utilized by the International Labor Organization (ILO). While such data are conceptually preferable, they are available on a less frequent basis, and for a shorter time series, than official unemployment data. Thus the paper makes use of both sets of data.

[25] These data are compiled by national authorities according to ILO definitions. However, the similar definitions do not necessarily ensure full comparability across countries.

Figure 3. Bulgaria and the Baltic Countries, Unemployment, 1990-2000
(in percent)



Source: Authorities labor force survey.

remaining state enterprises. As in other transition countries, the private sector was not able to absorb these workers immediately, despite the sharp decline in participation.

33. **Unemployment has remained at a fairly high plateau in the Baltic countries, significantly higher than both other CEE countries and most industrial countries** (Table 11). In Estonia, the unemployment rate was virtually constant over 1996-98 before rising in response to the Russia crisis. Latvia's experience has followed the expected path more closely, although the unemployment rate has not declined below 14 percent. Lithuania's unemployment fell to just over 13 percent in 1998, but has risen since. Bulgaria's experience has been quite different, with unemployment falling steadily from 21 percent to 14 percent during 1993-96, before rising in reaction to the economic crisis of 1996-97 and subsequent external shocks and economic restructuring.

34. **The failure of unemployment to decline to average industrial country levels is difficult to explain by reference to labor market policies, as these appear to be quite flexible (see Chapter IV).** At least part of the explanation lies in the lack of relevant skills—including language skills—for a significant portion of the workforce, as well as a lack of geographic mobility. In particular:

- A large share of unemployed—from 45 to 52 percent of the unemployed in these countries, excluding Lithuania—have been so for more than one year. This high level of **long-term unemployment** suggests that the ranks of the unemployed are to a great extent filled by individuals who are unable to function successfully in the post-transition labor market. In Lithuania, by contrast, the percentage of long-term unemployment is only 13 percent, in part reflecting the sharp increase in the number of unemployed following the Russia crisis, some of whom may only now be entering the category of long-term unemployed. While these long-term unemployment rates are similar to that of other CEE countries[26] and only slightly higher than those of EU countries, they are of a different order of magnitude than, for example, the United States and Korea, where less than 10 percent of unemployed are long-term unemployed (Table 12). A large share of long-term unemployed are without unemployment benefits, which contributes to increased poverty.

- Unemployment rates show substantial **regional** variation (see Section F below).

- Highest levels of unemployment are experienced by **young workers**; despite low participation rates, those between 15-24 years of age experienced unemployment rates of 26 percent in Latvia, 28 percent in Bulgaria, 22 percent in Lithuania and 16 percent in Estonia, in 1998.

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[26] In Hungary for instance, the share of long-term unemployed exceeded 50 percent of total unemployed by 1997, and in the Slovak Republic it nears 50 percent (EBRD, 2000).

- **Foreign ethnic groups** have experienced relatively high levels of unemployment. In 1998, non-nationals official unemployment rates ranged from 14-20 percent in the Baltics, compared with a range of 3-9 percent for nationals. In part, this reflects language differences, in particular for Russian speakers in the Baltics.

- **Semi-skilled and unskilled workers** are over-represented among the unemployed. They suffered the brunt of the labor shedding, and often found themselves without the appropriate skills for the newly available jobs.

35. **Hidden unemployment and underemployment, which was important prior to transition, remained so in the early years of transition.** In Latvia, for example, the number of underemployed—measured by full-time work equivalent of involuntary reduced work hours and unpaid leave—was significantly higher than the level of unemployment in 1992-93, and remained at nearly half of unemployment in 1999 (Table 13). Further, over the years 1995-99, the number of discouraged workers—those who have left the labor force after failed attempts to find work and so are not counted as unemployed—increased from an estimated 16 percent to 28 percent of the number of unemployed. In Estonia, similarly, the number of underemployed is about ⅓ of the unemployed, while the number of discouraged workers is about ¼ as large as the pool of unemployed.

36. **Following the Russia crisis in August 1998, unemployment rates rose in all four countries, but have more recently shown a tendency to decline again.** (See Box 5).

D. Economic Restructuring and Labor Market Developments

37. **At the same time that labor participation was declining and unemployment rising, the early years of transition saw dramatic shifts in labor from contracting to expanding sectors of the economy.** To a large extent, labor market flexibility has facilitated economic restructuring, but there is evidence that labor left behind in declining sectors—in particular agriculture—has become significantly less productive, and that significant further restructuring may be needed in several countries to ensure competitiveness.

38. **The data suggest that early and strong structural reform went hand-in-hand with a better labor market performance.** For example, Estonia which privatized its state enterprises, opened up to foreign investment, and imposed hard budget constraints on enterprises quickly and decisively, has experienced relatively large reallocation of labor and significant improvements in labor productivity. On the other hand, in Lithuania and, especially, Bulgaria, which were slower in pursuing structural reforms, labor remained employed in declining industries for longer periods, and productivity gains were limited.

Box 5. The Russia Crisis and Labor Market Developments in the Baltics and Bulgaria

In the aftermath of the August 1998 Russia crisis, the Baltics and Bulgaria all experienced a decline in exports and real GDP, which fed through their respective labor markets. In Lithuania, and to a lesser extent Latvia, the impact of developments in Russia was compounded by a real appreciation of the currency, forcing companies to reduce cost to stay competitive. The crisis also appears to have stimulated further restructuring.

Estonian real GDP declined by 1.1 percent in 1999. Although growth resumed in the second half of 1999, the official unemployment rate rose from 3.3 percent right before the crisis to a peak of 5.7 percent in March 2000. (This box consistently uses registered unemployment figures, because these are available on a monthly basis, whereas the ILO-compatible labor force survey figures have a lower frequency.) Wages bore part of the brunt, as private wages actually declined in nominal terms in the sectors that were adversely affected by the contraction of the CIS markets. The Russia crisis further stimulated the reorientation of Estonian trade. At the end of 1999, CIS markets accounted for only about 8 percent of total external trade, about half the pre-crisis level. Estonia's exports continue to gain market shares in the EU area.

Although in Latvia 1999 real GDP growth was still positive (1.1 percent), following the Russia crisis real GDP declined for three consecutive quarters. The unemployment rate rose from about 7 percent before the crisis, to a peak of about 10 percent in mid-1999. Since then it has decreased to about 8 percent, and the number of unemployed in the fourth quarter of 2000 had returned to the level of the third quarter of 1998. Real wage growth decelerated following the crisis. Latvia also partially compensated the effect of depressed foreign demand from the CIS markets by an export expansion to the EU area.

In Lithuania, real GDP contracted by 4 percent in 1999. The unemployment rate, which had hovered between 4 and 6 percent in the years 1993-98, rose into double digits. Despite resumed growth in 2000, the unemployment rate reached 12.1 percent in November of that year. Four important consequences emerged from the Russia crisis in Lithuania. First, the previously important black labor market, where construction and other such services were traded, collapsed. Second, agricultural restructuring, which was partly stimulated by the crisis, got underway especially in Marijampole and Lazdijai where unemployment was above the national average. Third, Russian demand for goods, such as clothing, produced by small enterprises declined. Fourth, receipts from transportation services including the use of Klaipeda seaport, fell. Real wage growth slowed somewhat following the crisis, though more so in the private than in the public sector. The Lithuanian public works program expanded considerably in 1999, providing (short-term) employment to almost 16 percent of the unemployed. In the other countries no such strong effects on public employment are noticeable, an indication that the policy response to protect employment was more active in Lithuania.

Bulgaria in the immediate aftermath of the Russia crisis also saw a large increase in the unemployment rate, which soared to 16 percent in November 1998 from 12 percent in June. Wages took part of the brunt, declining in real terms by more than 4 percent between September 1998 and January 1999. Private employment declined by almost 10 percent over the same period, after an increase of 2.4 percent during the previous 5 months. In 1999, Bulgaria also had to cope with the effects of the Kosovo conflict. These negative shocks constrained GDP growth and contributed to a sharp decline in exports. With the shocks tapering off, a recovery got underway in the second half of 1999. After a decline in mid-1999 to about 14 percent, partly reflecting seasonal factors, the unemployment rate started rising again and peaked at 18.5 percent in March 2000, leading to another real wage decline in the second half of 2000. The recent rise in unemployment reflects mainly the accelerated restructuring and privatization of state enterprises, which contributed to the loss of almost 400,000 public sector jobs, or 10 percent of the labor force, from September 1998 through November 2000.

Aggregate Changes in Productivity

39. **While employment fell sharply in the early stages of transition, it did not—with the exception of Bulgaria—fall as rapidly as real output, at least as officially measured** (Figure 4). In Latvia, for example, while employment fell by 15 percent during 1990–93, measured output fell by more than half. Many state-owned enterprises maintained their workforces, although a significant number of workers were sent home for a time without pay and without being registered as unemployed. In addition, employment in the agricultural sector remained fairly flat in Latvia and Lithuania, even increasing slightly in the latter, even while output contracted sharply. This partly reflects the fact that the agriculture sector was not initially subject to hard budget constraints and continued to receive sizeable subsidies, and that older and unskilled people preferred to farm small plots of land that they received at the time of independence. In Bulgaria, employment fell more sharply than output in the initial stages of transition. During 1996-99, however, as transition picked up speed, Bulgaria followed a similar pattern as the Baltics, with GDP declining by 12 percent and employment by just 9 percent, likely reflecting similar factors as noted for the Baltics.

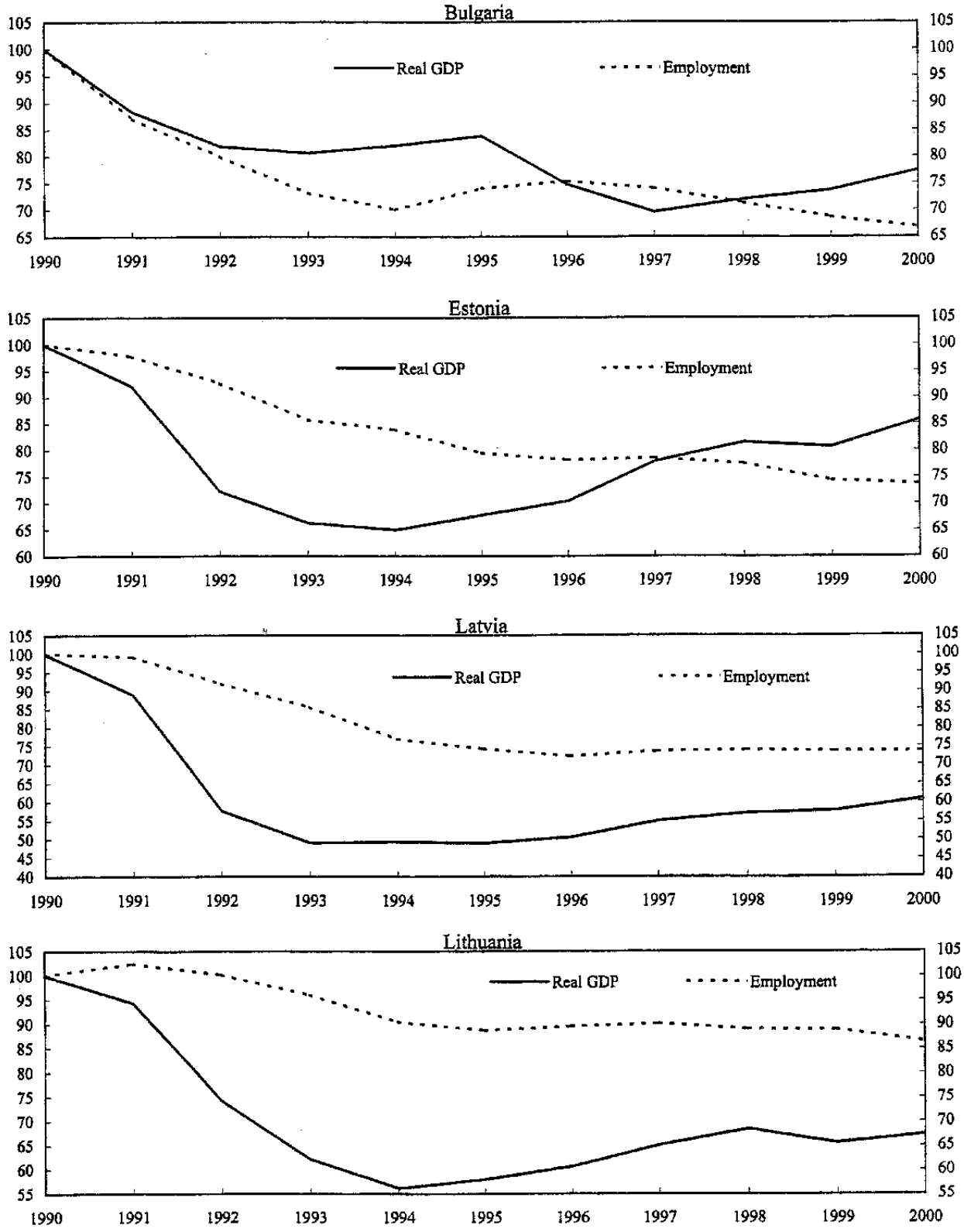
40. **As a result, labor productivity, measured by output per official worker, initially declined sharply in the Baltics, while rising moderately in Bulgaria.** However, from 1992 in Estonia, and 1993 in Latvia, aggregate labor productivity has increased steadily. By 1999, productivity exceeded 1992 levels by 45 percent and 17 percent in Estonia and Latvia, respectively, albeit at significantly lower levels of employment. In Lithuania, where employment declined more slowly, productivity appears to have remained below 1992 levels. In Bulgaria, after an initial 4 percent rise over 1991-95, labor productivity declined sharply by 14 percent during the 1996-97 crisis. Productivity has since begun to increase again, but remains below its 1992 level. These data suggest that the transition process may have some way to go before completion in at least several of the countries, and that further substantial restructuring on both the macroeconomic and enterprise levels, and significant layoffs, may be in the offing.

Productivity and Industrial Restructuring

41. **In the Baltic countries, the sectoral composition of output has changed dramatically, with the share in GDP of manufacturing and agriculture declining sharply and the share of services increasing.** In Bulgaria, in contrast, the decline in the share of industry in GDP has been much less marked, and the share of services declined until 1998 while the share of agriculture has increased slightly since 1994.

42. **Economic restructuring has been made possible by a sizable reallocation of labor.** In all four cases, the share of employment in manufacturing declined and that of services rose, but the magnitude of these changes varied substantially (Tables 6-9).

Figure 4. Bulgaria and the Baltic Countries: Real Gross Domestic Product and Employment, 1990-2000
(Indices 1990 = 100)



Source: country authorities; and Fund staff estimates.

Further, the role of agriculture has been quite different, reflecting in part the pace of economic restructuring. In particular, Estonia has been unique among the four countries in its ability to reduce agricultural employment and maintain employment in manufacturing. Conversely, Bulgaria experienced a sharp decline in the share of manufacturing and a steady rise in the share of employment in agriculture, suggesting that agricultural employment acted to some extent as a buffer for industrial labor shedding.[27]

43. **Sectoral employment changes have generally been proportionally smaller than those for output, implying a decline in productivity, in particular in declining industries:**

- In **Latvia**, output per worker in agriculture and manufacturing declined to less than half their 1990 levels in the mid-1990s. Even by 1999, productivity remained below official 1990 levels in these sectors, although manufacturing has recently seen rapid gains and now exceeds 1992 levels. In the service sector, labor productivity now significantly exceeds 1992 levels.

- For **Estonia**, productivity in manufacturing also fell in the first half of the decade, but output per agricultural worker declined by only one-fourth, as Estonia was more successful in shifting resources out of agriculture quite early in transition. By the end of the 1990s, agricultural productivity had returned to pre-transition levels, albeit a much lower employment level. Manufacturing productivity remains at about ⅔ of official 1990 levels, but is nearly ¼ higher than in 1992.

- In **Lithuania**, data are available only from 1992, so that the initial sharp decline in output is not observed. What is striking, however, is the very sharp decline in productivity in agriculture during 1993-95 of nearly 70 percent, which led to an economy-wide reduction of about 20 percent, compared with either a small increase (Estonia) or little change (Latvia) over the same period. Again, it appears that the ability to deal with surplus labor in agriculture was crucial in determining the success of restructuring during the initial period of transition.

- **Bulgaria** again presents a significantly different picture. Productivity in trade and other services declined over the period 1990-97, in contrast to the Baltics, and only picked-up in 1998-99. Output per worker in agriculture was largely unchanged over the period, with an initial sharp decline reversed during 1994-98. Also in contrast to the Baltics, output per industrial worker initially increased, but subsequently declined significantly. This very different pattern of productivity likely reflects the slower progress in reforms, which only began to pick up significantly in 1997.

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[27] For further discussion of trends in employment and productivity in Bulgaria, see "Bulgaria's Growth Experience and Prospects," in Bulgaria: Selected Issues and Statistical Appendix, SM/01/89.

E. Developments in Wages

44. **The four countries in question, and transition economies more generally, initially experienced substantial declines in real wages brought about by the sharp contraction in output and high inflation.** Real wages are estimated to have declined during 1990-92 by between 30 and 60 percent in these countries. While real wages have grown steadily since in Estonia and Latvia, they have been stagnant in Lithuania and declined further in Bulgaria.

45. **The relationship between wages and productivity has varied over time and across countries, with potential implications for competitiveness.** Overall, output per worker has increased significantly faster than wages in Estonia, while the two have grown at similar rates in Latvia and Lithuania. In Bulgaria, the average real wage took the brunt of the adjustment throughout the transition, dropping significantly faster than productivity.[28] This decline in real wages up to 1997 of more than 50 percent, is one of the steepest among EU applicants. The turn-around in wages and productivity started only in 1998 with wages rising by about a third during 1997-99, four times as fast as productivity (See Figures 5-8 and Tables 18-21). Perhaps more relevant for competitiveness, in both Estonia and Latvia, output per worker in manufacturing has grown significantly more rapidly than wages for the period as a whole, whereas for Bulgaria and Lithuania wages have grown roughly in line with productivity.

46. **Declines in real wages are a potential alternative to lower employment and evidence of labor market flexibility.** Of the Baltic states, Latvia has had the largest employment adjustment and the smallest real wage decline for the period as a whole (Figure 9). (See also OECD, 2000.) In Bulgaria, by contrast, the initial sharp drop in real wages in 1992-97 was accompanied by only a limited employment decline over the same period. Within the CEEs more generally, there was also some evidence of a wage-employment trade-off during transition, with a larger adjustment of employment than wages in most countries.[29] There is little evidence of an impact of the Russia crisis on aggregate real wages although, as noted in Box 5, there were significant adjustments in some affected industries.

47. **The transition process in most countries has resulted in a gradual but significant increase in wage dispersion and higher returns to education.** In this regard, enrollment in higher education has increased significantly over the last several years. For instance, in Bulgaria, tertiary school enrollment rose from 31 percent to 41 percent over 1990-96.

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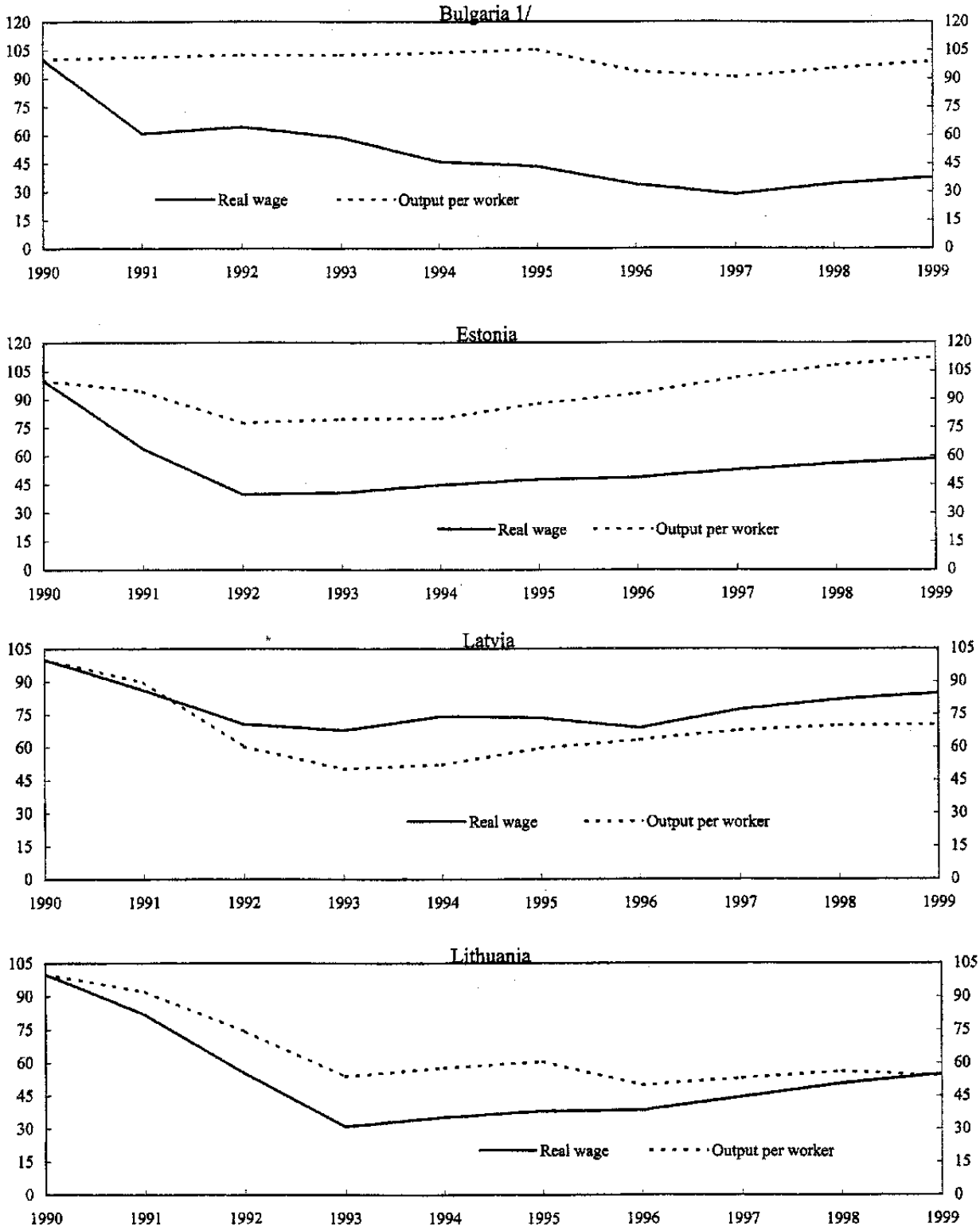
[28] The assessment of developments in private sector wages in Bulgaria as well as in most transition economies is hampered by the lack of comprehensive labor statistics. In particular, wages tend to be underreported in the private sector.

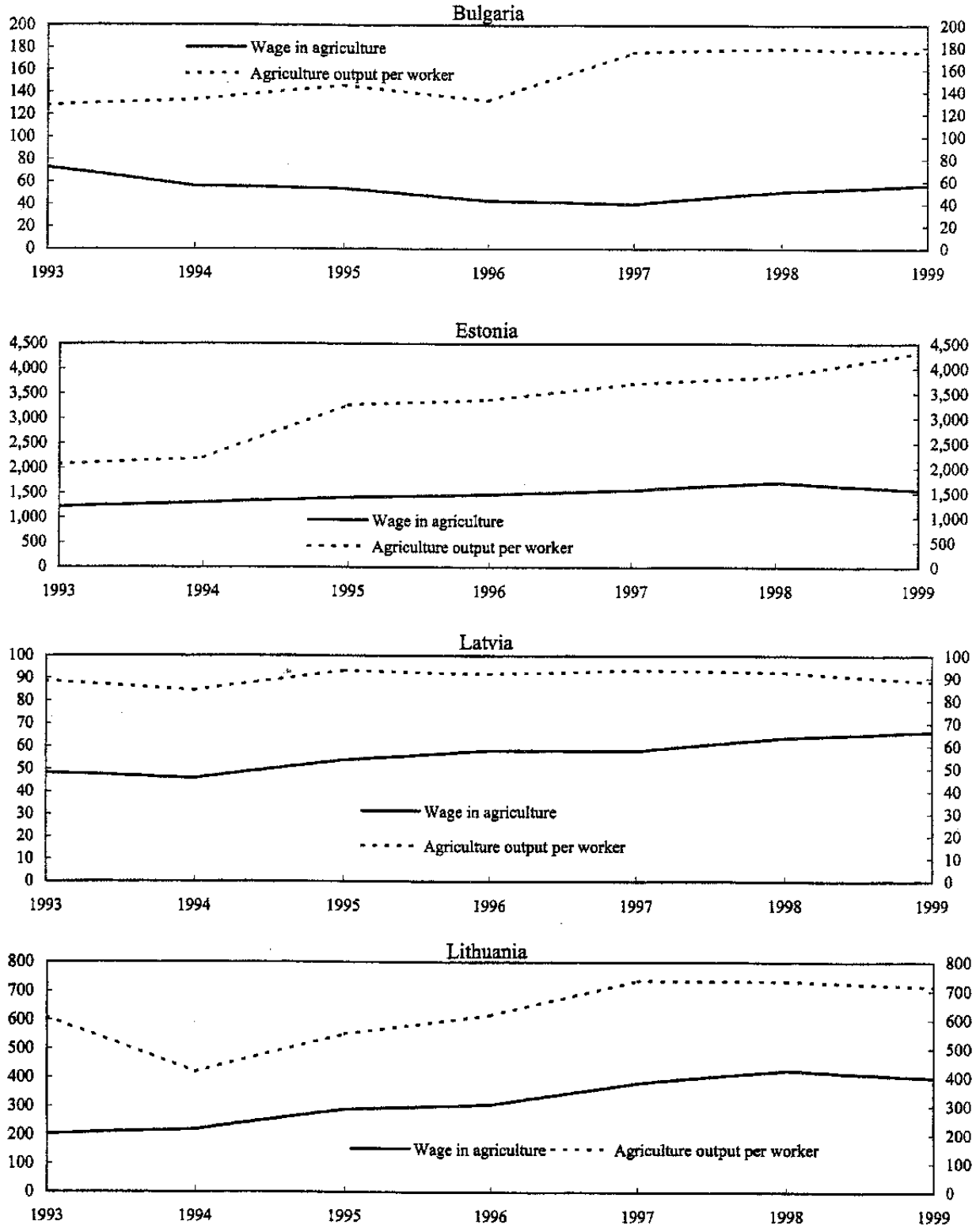
[29] In Hungary, for example, employment fell by 21 percent in 1990-92 and real wages decreased by 17 percent, while in the Czech Republic employment decreased by only 9 percent but real wages fell by 24 percent (EBRD, 2000).

Figure 5. Bulgaria and the Baltic Countries: Productivity and Real Wage, 1990-99
(Indices 1990 = 100)



Source: country authorities; and Fund staff estimates.
1/ Wage data are for public sector up to 1995, and are an average of the public and private sectors from 1996 onward.

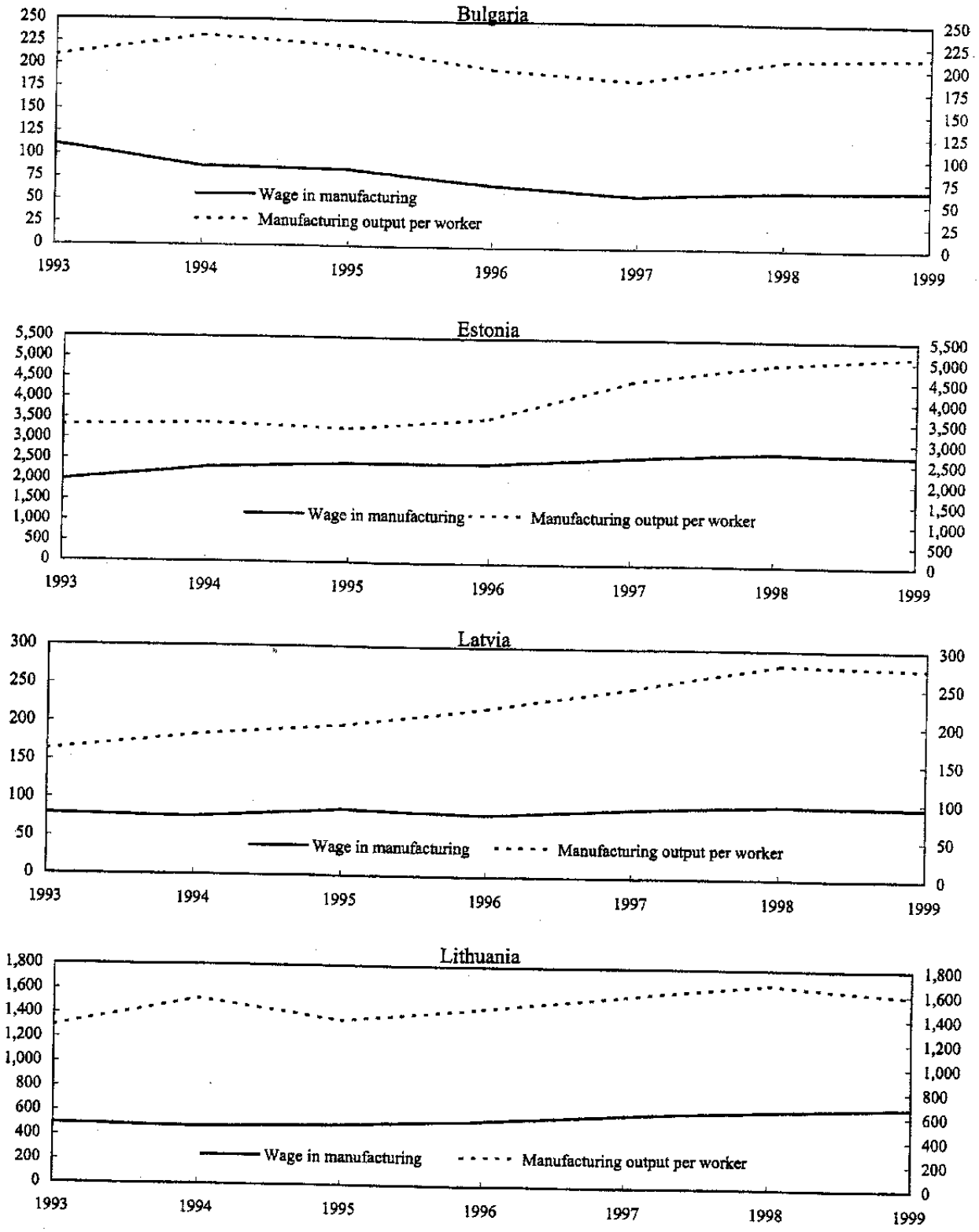
Figure 6. Bulgaria and the Baltic Countries: Productivity in the Agricultural Sector and Real Wage, 1993-99 1/



Source: country authorities; and Fund staff estimates.

1/ Real wages are in local currency at 1995 prices. Productivity is monthly output per worker in thousands of local currency, at 1995 prices.

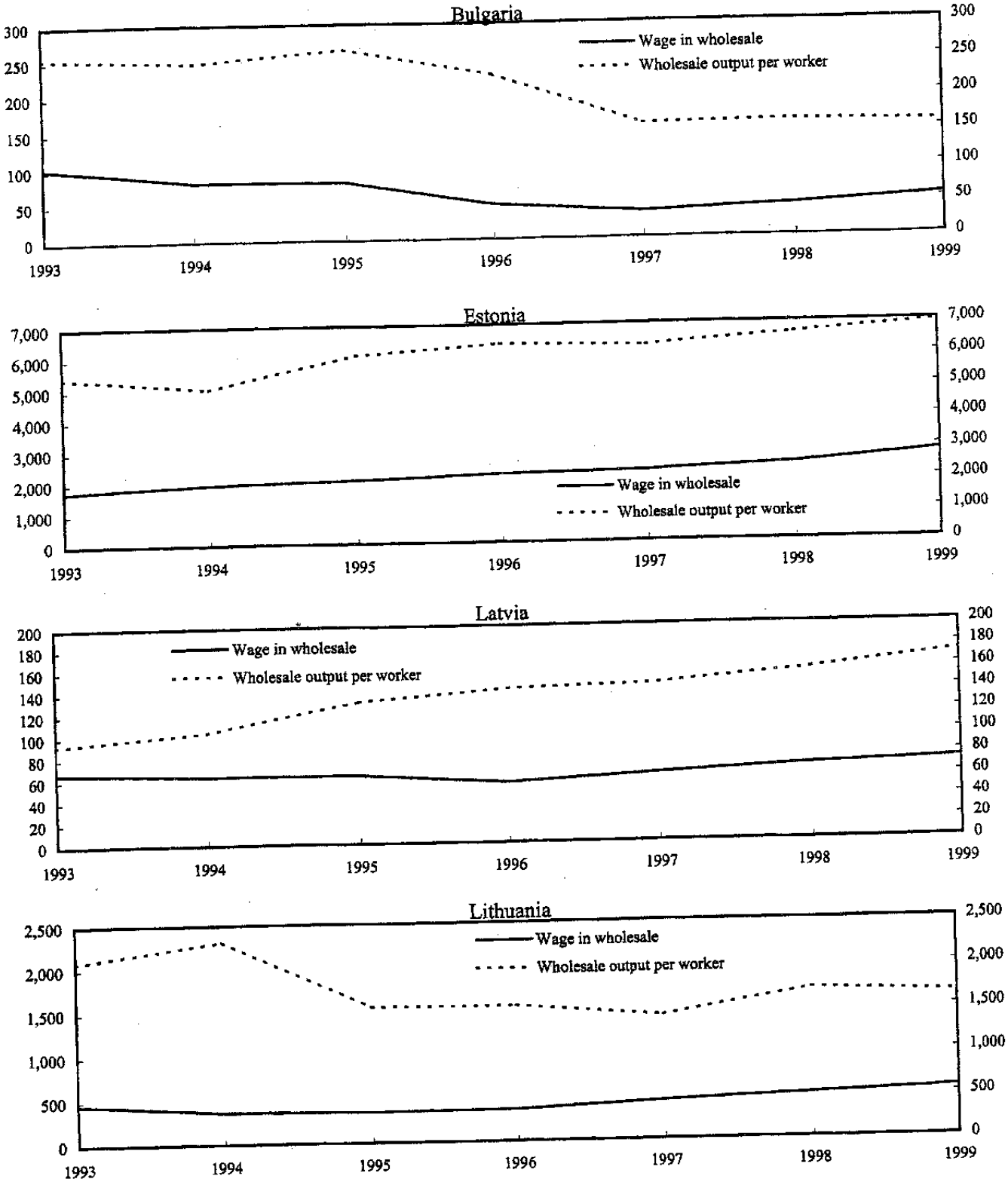
Figure 7. Bulgaria and the Baltic Countries: Productivity in the Manufacturing Sector and Real Wage, 1993-99 1/



Source: country authorities; and Fund staff estimates.

1/ Real wages are in local currency at 1995 prices. Productivity is monthly output per worker in thousands of local currency, at 1995 prices.

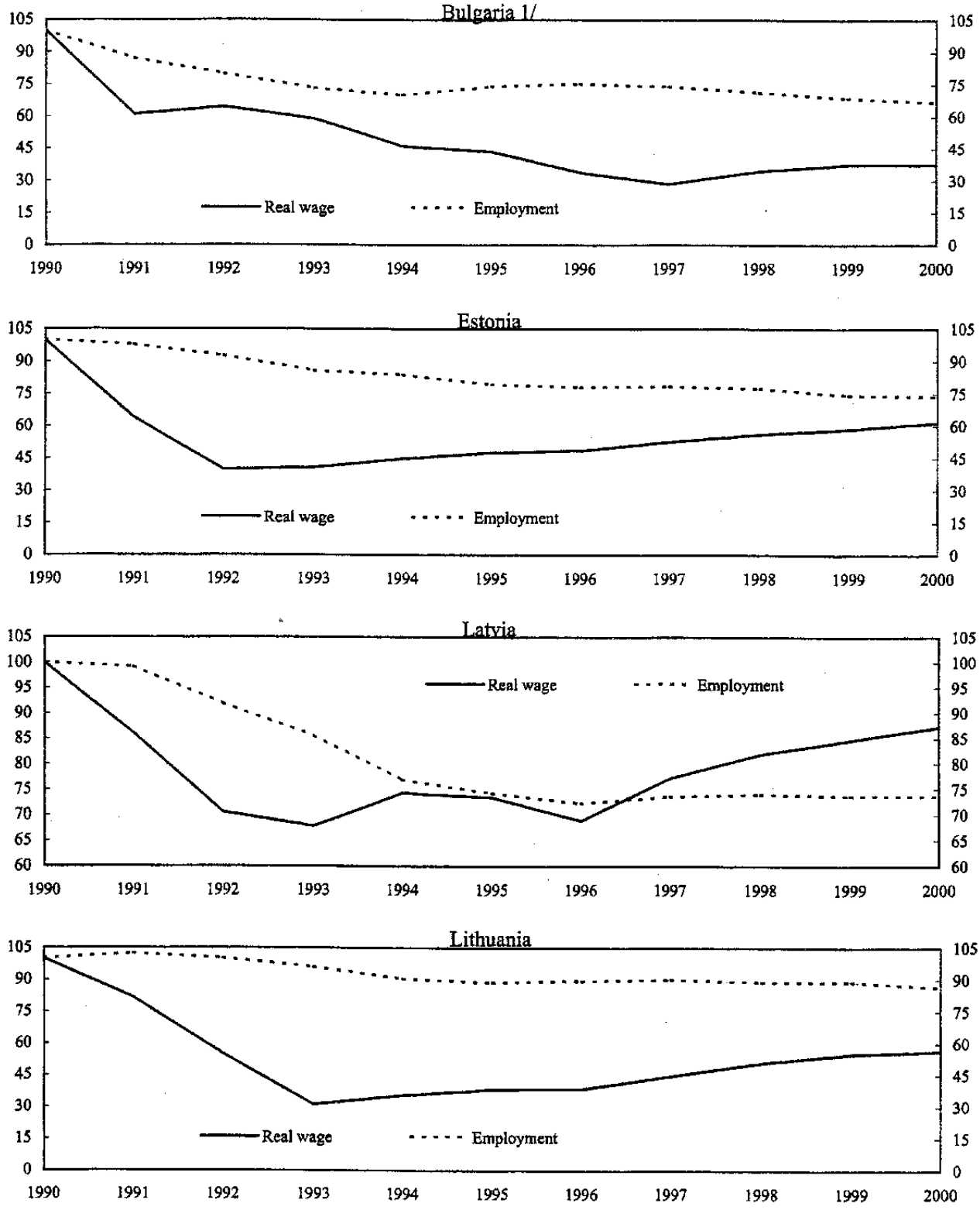
Figure 8. Bulgaria and the Baltic Countries: Productivity in the Wholesale and Retail Sectors and Real Wage, 1993-99 1/



Source: country authorities; and Fund staff estimates.

1/ Real wages are in local currency at 1995 prices. Productivity is monthly output per worker in thousands of local currency, at 1995 prices.

Figure 9. Bulgaria and the Baltic Countries: Real Wages and Employment, 1990-2000
(Indices 1990 = 100)



Source: country authorities; and Fund staff estimates.
1/ Wage data are for public sector up to 1995, and are an average of the public and private sectors from 1996 onward.

This is consistent with findings from a number of transition economies in Central and Eastern Europe (CEE), that returns to higher education have increased sharply.[30] In Bulgaria, sectoral real wage dispersion quadrupled between 1990 and 1993. It started declining in 1994, but has risen again since 1998.

48. **Continued attraction of foreign direct investment and removal of remaining barriers to entry by new firms would appear to be keys to increasing wages while maintaining competitiveness.** In this context, analyses indicate that, in the Baltics, foreign-owned enterprises pay higher wages than domestic ones, and new enterprises pay higher wages than those in operation since before the transition (OECD, 2000).[31]

F. Geographic Mobility and Regional Differences in Unemployment and Wages

49. **All four countries are characterized by substantial regional variation in unemployment and wages, although only a few regions with relatively small populations can be said to have extraordinary problems** (OECD, 2000). Living standards in rural areas are 20-30 percent lower than urban levels (more if only cash spending is counted), mainly reflecting differences in wages. But some rural regions are characterized by very low wages and high unemployment—southeastern Estonia, eastern Latvia (Latgale) and some parts of Lithuania (Alytus, in the South) and Bulgaria (Northwest and Northeast).

50. **The closing of a number of large enterprises in "one company towns" as well as the decline in agriculture have led to high unemployment rates in some areas.** The problem appears to be particularly important in Latvia, where unemployment by province ranges from near 30 percent, to less than 8 percent in Riga (Table 22).[32] In Bulgaria, regional unemployment rates also vary substantially, from about 4 percent in Sofia in 1999 to 26 percent in Targovishte. In two regions of Estonia, unemployment rates exceed 20 percent, double the rate in Tallinn. Only in Lithuania is there just modest variation across regions, although such variation appears to have increased since the Russia crisis.

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[30] In the Czech Republic, for example, the difference in wages according to schooling levels has increased dramatically (EBRD, 2000). Whereas in 1989, a university-educated man earned on average just 28 percent more than someone with only a junior high-school education, ceteris paribus, by 1996, he earned 72 percent more. In Hungary, the differential increased from 43 percent in 1986 to 78 percent by 1996. See Rutkowski (1996) for a review of studies in this area.

[31] Data for Latvia also suggest that women and non-ethnic Latvians tend to earn lower wages than men and those of Latvian background, and rural residents tend to have lower wages than their urban counterparts (Abolins and Bockarjova, 2000).

[32] Data are difficult to compare across countries, as the number of regions varies considerably. The greater the number of regions into which data are disaggregated the more variability, other things equal, we would expect to find.

51. **There has been surprisingly little movement of the population from high unemployment regions to those with low unemployment—in particular the capital cities—contributing to persistent high unemployment and significant long-term unemployment.** Overall levels of migration between regions within the four countries are low.[33] For example, about 1 percent of the Estonian population and 2 percent of the Bulgarian population per year move between regions (Table 23). More to the point, it does not appear that migration has been primarily motivated by labor market concerns. In Latvia, for example, fewer than 2,000 people migrated to Riga, on a net basis, during 1994-98, while net migration to Ventspils—a port city with robust growth—has been negative for each year in that period. By contrast, several of the regions with the highest rate of unemployment, such as Rezekne, have experienced net inflows over the period. Similarly, Tallinn has experienced net outmigration during 1997-99. In Bulgaria, net emigration from Targovishte was zero, despite high unemployment.

52. **The lack of labor mobility results, in part, from the high prices for new housing, and limited housing stock and turnover in urban areas.** While housing markets are liberalized in all four countries, it has been difficult to obtain housing loans, or to use houses as collateral. This points to the importance of completing apartment privatization and furthering development of capital markets, including mortgages. In addition, migration from rural to urban areas may be limited by the high cost of moving relative to rural incomes, as well as the ability of the rural poor to meet consumption needs from private plots of land. The lack of mobility also likely reflects social norms developed during years of central planning and mismatches between the skills of the rural unemployed and the requirements for jobs in urban areas. It is plausible that as transition continues and employment opportunities increase, a rise in geographic mobility might result. The small size of the countries would, in particular, make daily or weekly commuting possible for many.[34] Such activity could be encouraged by improved mass transit and transportation infrastructure (OECD, 2000).

IV. Labor Market Policies and Institutions

53. **For the most part, labor market policies and institutions in the Baltics and Bulgaria are quite flexible, as required for the successful operation of a fixed exchange rate regime.** In particular, labor markets appear to be generally less restrictive than those of the EU and in some dimensions—in particular scope granted to employers regarding work practices—most other CEE countries. Minimum wages, unemployment benefits, and pensions are unlikely to cause major incentive problems, because they are substantially lower than common wages. More generally, state interference with the labor market is limited.

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[33]The official data may underestimate real migration since some individuals may maintain their official residence while, e.g., living elsewhere with family.

[34] In fact, in Estonia, the percentage of the rural population working outside the municipality of residence already seems on the rise according to recent data.

Active labor market policies, and other policies to increase labor mobility, have played only a minor role to date.

A. Minimum Wages

54. **The four countries have set minimum wages at low enough levels that their potential adverse incentives have likely been moderate.** In Latvia, the current minimum wage is LVL 50 per month, and will increase to LVL 60 per month in mid-2001.[35] Over the course of transition the minimum wage in the Baltics has been maintained at 25 to 45 percent of the average gross wage (Table 24). In Bulgaria, the minimum wage began at a relative high level at the onset of transition—more than half of average gross wage in 1991—but is now around ⅓ of gross wage. The minimum wage in these countries is broadly in line with those of other CEE countries, but less generous, in relative terms, than the EU. CEE countries have minimum wages that cover roughly 40 percent of average gross wage. Not all EU countries have statutory minimum wages. However, in those that do (Belgium, France, Greece, Ireland, Luxembourg, Netherlands, Portugal, Spain, UK) they are generally set at about 50 percent of average gross wages.

55. **Despite their generally low level, it is plausible that minimum wages have had at least some impact among low-skilled workers in the four countries.** In Latvia, for example, some 12 percent of public employees and 35 percent of private employees have reported average gross wages below LVL 60 per month, the planned July 2001 minimum wage.[36] This suggests that at least some low-skilled workers may well be excluded from formal sector employment by the minimum wage, in particular once the proposed increase of the minimum wage to LVL 60 per month takes place, and that there may be some downward flexibility of wages for low-skilled workers. In Lithuania, similarly, 16 percent of all employees were working at the minimum wage in October 1999, and another 19 percent of all employees were working at a wage exceeding the minimum by 40 percent or less.

56. **The minimum wage may have some impact on labor market participants in high unemployment regions.** In all four countries, there is only one national minimum wage, which applies to all sectors and regions. Some regional differentiation could be desirable, in view of the wide regional disparities in wages, costs of living and unemployment (but it is prevented by the Constitution in some cases) and sectoral differentiation remains a possibility as well.

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[35] This compares with an estimated cost of a minimum complete consumer basket of LVL 83 per month in 1999 and LVL 85 per month during the first half of 2000.

[36] However, this likely reflects, in part, underreporting by private sector employers, including for the purpose of evasion of the payroll tax, so that the share of workers with wages at or near the minimum may be overstated.

B. Unemployment Insurance and Social Safety Net

57. **An adequate system of unemployment insurance (UI) can be a significant element of the social safety net and, if properly designed, can help move forward the process of economic restructuring.** Without such a scheme in place, governments might be less willing to undertake reforms which might cause transitory unemployment and workers might be more willing to remain in less productive sectors, perhaps in part-time work. At the same time, overly generous benefit levels or duration, or eligibility requirements, may encourage unemployment beyond the optimal level and impose substantial fiscal costs.

58. **In the Baltics and Bulgaria, UI has not been generous, so that it has likely not played a major role in prolonging unemployment.** To the contrary, it could be argued that the narrow coverage and low level of benefits has left important holes in the safety net and perhaps slowed structural reforms in some cases. On the other hand, UI was typically more generous early on in transition, and pared down during later reforms, a policy path which could well be seen as quite rational.

59. **Unemployment benefits (UB) in the four countries are broadly similar to those of CEE countries.** In the European Union, by contrast, UB typically accounts for more than 60 percent of net average earnings, and the duration of benefits is generally quite long (Table 25). In addition, most EU countries provide so called unemployment assistance, which covers unemployed workers who have exhausted their entitlement to unemployment benefits and prevents them from falling directly into the less generous social assistance schemes.[37]

60. **One potentially important characteristic of UI in all four countries is the low coverage rate (the percent of registered unemployed receiving benefits), which has contributed to the incidence of poverty among the unemployed.** In Latvia, for example, there has been a steady decline in the share of officially unemployed who receive benefits, from 81 percent in 1992 to 41 percent by end-1999, while Bulgaria experienced a decline in coverage rate from 54 percent in 1990 to 29 percent in 1999, (World Bank, 2000; OECD, 2000). This reflects relatively stringent eligibility requirements, low benefit levels, which reduced incentives to register, and the high percentage of long-term unemployed, whose benefits have lapsed.

61. **UI in Latvia was reformed in 1996, with the aim of improving the incentive effects of such insurance**. The primary goals of the reform were to strengthen the link between contributions and benefits, and to introduce phased benefit reductions to increase the incentive for job search. An unemployed person who is actively searching for a job, reports to an employment office once per month, has been working for at least 12 months prior to

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[37] Note, however, that the benefit systems within the EU show quite some variation. In particular, Italy barely had an unemployment system at all for most of the postwar period, and still has the most parsimonious system of the EU countries.

their unemployment and who has paid the insurance premium in nine of those months is entitled to unemployment compensation. An individual may receive benefits for 9 months in any 12-month period, and 6 months for a training grant. Benefits depend both on length of work history and duration of unemployment.[38] This compares to a flat benefit equal to 90 percent of the minimum wage under the previous system, with no reduction in benefits over time. The average unemployment benefit in 2000 was LVL 45 per month, significantly below the minimum wage. If the benefit falls below LVL 21 per month the unemployed are eligible for social assistance, provided at the local level. This may be inadequate, especially in regions of high unemployment, which often cannot afford significant expenditures on such programs.

62. **In Lithuania, benefit levels are similar to those in Latvia.** A laid-off worker is eligible for unemployment benefits if he has paid social security contributions for a minimum of 24 months during the previous three years. Unemployment benefits are paid for a maximum of six months in any 12-months period (eight months for those within five years of retirement age). Individuals not eligible for unemployment benefits rely on social security benefits, specific transfers, family support, and subsistence farming. While there are generally few disincentives to seek gainful employment, some social security recipients receive benefits from various sources that exceed the minimum wage.

63. **An overhaul is planned for the unemployment insurance system in Lithuania, with unemployment insurance becoming an independent fund in the social security system (SoDra).** This would help ensure that unemployment insurance contributions and transfers from the budget are actually used for unemployment benefits and do not go to other uses within SoDra as is currently the practice. In addition, eligibility requirements are to become more stringent with the elimination of eligibility for labor market entrants. Further, benefits are to be linked more closely to contributions in order to strengthen the insurance principle and lower the incentives to move to the shadow economy, and unemployment benefits may also become means-tested.

64. **In Estonia, unemployment insurance is parsimonious, with benefits paid at a flat rate of about 10 per cent of the average gross wage.** To be eligible one must be actively seeking employment. This is defined as having voluntarily registered at the state employment office, wanting a full-time job immediately, be willing to undergo labor market training, and appearing at the employment office at least every 15 working days. In October 2000, the period of paying unemployment benefits was increased from 180 to 270 days. The Estonian

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[38] Unemployed individuals with 1–5 years of work service receive 50 percent of their average salary of the last six months, with the replacement rate rising stepwise to 65 percent for those with 25 or more years of service. Full benefits are paid for the first three months, 80 percent for 3–6 months, 60 percent for 6–9 months. A ceiling on benefits is applied as well, declining from LVL 250 per month on the first three months to 100 lats per month in months 6 through 9.

authorities note that, despite the still low level of unemployment benefits, some disincentives for job search may still arise owing to local housing and heating subsidies linked to such benefits, high transport and moving costs, and the informal economy.

65. **Unemployment benefits in Bulgaria are more generous than in the Baltic countries although, as noted above, the coverage rate is low.** The amount received in 1998 was about 60 percent of average gross earnings. Their maximum duration is 12 months for employees with more than 25 years of service (rising gradually from 4 months for workers with up to 3 years of service), and the minimum employment spell required for eligibility was 9 months. In 1997, the new Unemployment Security and Employment Incentives Act adopted by the government improved employment incentives by restricting benefits to workers who had paid social security contributions and reducing overly generous minimum benefit levels from 90 to 80 percent of the minimum wage. There is also a social assistance program for long-term unemployed (maximum duration 3 months, benefit amount 60 percent of the minimum wage). The shift from unemployment benefits toward social assistance in Bulgaria is to be welcomed, in particular, given the large unemployment rate among non-educated workers with low reemployment probabilities.

C. Pension Systems and Labor Markets

66. **There are several aspects of a country's pension system that can directly affect the functioning of the labor market.** First, if a system generously allows for early retirement and disability retirement it will tend to reduce the supply of labor during transition. Second, the payroll taxes that typically finance pay-as-you-go pension systems distort labor market decisions, increase labor cost to the employer, and reduce labor supply. Third, to the extent that working pensioners lose pension benefits when they have earned income, they are facing a sizable implicit tax on those earnings, further distorting work decisions.

67. **Upon regaining their independence, the Baltic states inherited the pension system of the Soviet Union characterized by high replacement rates, multiple benefit and retirement rules, and extensive early retirement.**[39] The Bulgarian pension system was similar. The pension systems became, over time, the most important *de facto* sources of welfare benefits to the growing number of unemployed and poor. In particular, the number of pensioners increased rapidly during the early years of transition, especially for those receiving disability pensions, as eligibility rules were explicitly or implicitly loosened.

68. **Pension reforms in the Baltics have generally moved toward limits on early retirement, increased retirement ages and closer links between contributions and benefits.** These changes have aimed at ensuring the long-term sustainability of the pension system in the face of worsening demographic trends, and at limiting the adverse incentive

[39] Schiff, *et al* (2000).

effects of pay-as-you-go pension schemes. Latvia in particular implemented in 1996 a system incorporating "notional individual accounts," based on actual social insurance contributions and indexed to the growth in the social tax wage base. While such accounts are simply devices for tracking individual contributions and calculating individual pensions, and the system remained pay-as-you-go, incentives for paying social taxes and labor market decisions have been improved.

69. **Looking ahead, the Baltic countries are moving toward a three-pillar system, incorporating a compulsory fully-funded system and voluntary private pensions alongside the pay-as-you-go-pillar.** Such a system is to begin operation in Latvia in July 2001 and in Estonia in 2002. These moves can be expected to further enhance labor market functioning to the extent that workers see their contributions to fully-funded pillars as individual investments as opposed to tax payments.

70. **Reform of the Bulgarian pension system, initiated in 1999, also aims to restore the long-term viability of the traditional pay-as-you-go scheme.**[40] Measures include gradually reducing benefits, raising the retirement age to 60 for women and 63 for men, and further reducing the scope of early retirement for special categories.[41] Compliance has been strengthened through establishing a link between contributions and benefits. Changes to the benefit formula also include partial indexing to preserve the real value of pensions. Preparations for the introduction of the fully funded second pillar at the beginning of 2002 are underway. This pillar will be mandatory for new entrants. Ten pension funds have already been licensed under this pillar, and most of the necessary regulations were issued in August 2000. Finally, the legislative basis for the third pillar was adopted in 1999, paving the way for the creation of voluntary private defined-contribution funds.

71. **In all four countries, taxes on labor income—including payroll taxes—are very high, with potentially important adverse consequences for the labor market.**[42] In Latvia, the payroll tax rate is 36 percent, down from 38 percent in 1994, and the personal income tax rate is 25 percent, implying a marginal labor tax wedge of nearly 60 percent. The payroll and personal income tax rates, respectively, are 33 percent and 26 percent in Estonia, and 34 percent and 33 percent in Lithuania. The standard social insurance contribution rate in Bulgaria was reduced from 45.7 percent to 42.3 percent of gross income in 2001. These rates are higher than a number of CEE countries or the EU average reflecting in part difficult demographics in several of the countries. All four countries plan gradual reductions in taxes

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[40] For further discussion of pension reform in Bulgaria, see Horváth (2000).

[41] The eligibility for early retirement was already sharply curtailed at the beginning of 1999.

[42] Although analyses of the interaction of taxation on wages and employment often focus on payroll and personal income taxes, other forms of taxation may also be borne largely by labor, in particular in a small open economy, such as the Baltics and Bulgaria.

on labor income, but this will be possible only as part of a broader medium-term strategy to reform the pension systems and reduce low-priority spending.[43]

D. Labor Laws and Institutions

72. **In general, the Baltic countries and Bulgaria have labor laws and practices that allow substantial scope for employers with regard to work practices.** All four countries deregulated the determination of wages early in transition, with the exception of the establishment of a minimum wage, which has typically been set at a modest levels.

73. **Labor unions in the Baltics are relatively weak.** Their membership covers only about 10 percent of the workforce in the private sector in all three countries, compared to about 20 percent in other CEE economies, although membership appears to be on the rise in Lithuania in response to recently increased unemployment. In Estonia, unions have a particularly weak position in the private sector, but play some role in wage negotiations with the government. Wage bargaining takes place at the enterprise level throughout the Baltics. Fewer than 1 percent of all enterprises in Lithuania were covered by a collective bargaining agreement in 1996-97, although employee coverage is most likely higher as collective bargaining is concentrated among larger enterprises.

74. **In contrast, union membership in Bulgaria is significantly stronger than in most other CEE countries.** Estimates of union membership range from about 30 percent[44] to more than 70 percent[45] of total employment. The role of unions tends to be strengthened by the greater reliance in Bulgaria, compared with other CEE countries, on centralized bargaining and direct government involvement in labor negotiations. While in Poland and Hungary, for example, local agreements cover nearly 90 percent of all establishments surveyed, they cover only 70 percent in Bulgaria (ILO, 1998). Further, local bargaining applies only to specific issues, such as premiums related to productivity, overtime, and holiday payments, and agreements on working time; the most important issues, such as wage setting, must be discussed at the national level. Finally, the recent amendments to the Labor Code allow the government to impose under certain conditions a collective agreement signed by companies in a particular sector to all companies of the sector. Improvements are needed toward more decentralized bargaining at the local level to address high and persistent regional unemployment differentials.[46] On the positive side, industrial relations are

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[43] Spending will also need to be rationalized to allow substantial spending related to EU accession.

[44] Figure cited by the Ministry of Labor.

[45] World Bank (2000).

[46] Currently, the minimum wage can be set at higher levels than the national one, but never lower.

characterized by a high degree of cooperation and there is little evidence of strong wage pressure.

75. **Employment legislation in the Baltics permits employers to easily dismiss redundant workers.** In Latvia, there is no mandatory severance pay and such pay is normally not included in the terms of employment. In Estonia, employers have the right to lay off a worker with a two-month notice, and even without notice in case of bankruptcy. Employers can generally select the workers they want to dismiss on the basis of productivity, although they must also take account of social factors such as family size, and they must pay severance benefits corresponding to 2-4 months of pay. Lithuanian municipalities have a formal possibility to stop dismissals, but this has rarely been used.

76. **In Lithuania, provisions to mitigate the effects of layoffs following the Russia crisis have introduced new requirements for employers.** Under this legislation, effective June 2000, employers are required to inform employees 60 days in advance of a planned mass lay-off. In addition, the local municipality and the local labor exchange are also to be notified. The idea was to allow local authorities time to initiate training schemes or seek to create jobs for those workers who will be laid off. The new government may rethink these requirements, and in contrast, has passed legislation aimed at reducing hiring and firing costs by easing notice time and severance pay requirements, liberalizing contracting between employers and employees, and eliminating work quotas and restrictions.

77. **The government of Bulgaria has taken steps to enhance labor market flexibility and promote employment.** Under amendments to the Labor Code approved in March 2001, contracts can now be terminated for economic reasons, and more flexibility in working hours is allowed. The new Labor Code also eliminates some of the more restrictive provisions of the old Code, including unduly onerous standards for lay-offs, and reduces the cost of overtime work. However, procedures for collective redundancies remain rigid and require difficult coordination with the trade unions, representing an obstacle to firm-level restructuring. Also, while employment termination for individual contracts is technically easy, there seems to be a practical difficulty in implementing dismissals; the grounds for terminating indefinite term contracts are limited, and often unclear. Finally, the new provisions for fixed-term contracts are more restrictive, allowing only two successive fixed-term contracts to be concluded for an employee in a given job.

78. **Privatization agreements have typically included employment guarantees.** In Latvia, for example, these guarantees have usually been for two to three years, but sometimes for as long as five years. The guarantees are unique for each privatized enterprise, but are typically structured such that if the privatized company reduces employment below some agreed upon level, they must make a contribution of some amount per employee, half of which goes for training programs, and the other half for payment of unemployment insurance. These agreements have tended to reduce the short-term impact on unemployment of privatization and perhaps to slow somewhat the transition process. However, the impact of

these agreements has probably not been great, since penalties for reducing the number of workers below agreed levels are fairly low.[47]

79. **Given delays in privatization and restructuring and persistent large financial losses by state-owned enterprises, the Bulgarian authorities have implemented a strict incomes policy for such enterprises.** The 2000 incomes policy which applied to some 1,500 state enterprises maintained strong links between financial performance and wages. In particular, the total wage bill of the 97 monitored enterprises subject to wage bill freezes (companies with the largest losses and arrears, state monopolies, and enterprises receiving subsidies) in 2000 was kept to 8 percent below the level in the third quarter of 1999. In 2001, similar policies will be maintained.

80. **The legal frameworks governing hiring and separations in the Baltics and Bulgaria are generally less restrictive than in EU countries.** Although there is considerable variation within the EU, [48] dismissals typically must be approved by work councils, which consider social aspects like marital status, number of children and health. Furthermore, severance pay is mandatory, and in some countries, like Germany, "social closing plan" have to be established in the case of major restructuring of firms. Legal norms have been further developed by labor courts. Further, in most EU countries, trade unions play a significant role in wage determination. Although the proportion of trade union members as a percentage of the labor force is not high in all cases, union wage negotiations often determine the wages of workers who are not explicitly part of the union. In France and Spain, for example, only about 10 percent of workers are union members, but the wages of over 70 percent of all workers are covered by union bargaining. Wages in EU countries are often determined not at the firm level but at the industry or economy-wide level.

E. Active Labor Market Policies

81. **Active labor market policies (ALMPs) can play a useful role in providing job information, training, and income support to the unemployed, but experience in transition countries has been mixed.** In Poland and the Czech Republic, for example, there is evidence that individuals taking part in active labor market programs subsequently have either higher employment rates or shorter unemployment spells than other unemployed workers. In other cases, however, training has not led to appreciable improvements in job prospects. Public works programs can be costly and, if not properly designed, provide

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[47] A figure cited as typical was US$200 per employee.

[48] The OECD employment protection index shows that the countries of southern Europe have the most restrictive regulations on paper and, roughly speaking, these regulations get less restrictive as one moves further north (see Table 25). Switzerland, Denmark and the UK have the least restrictive laws in Europe, comparable to those in the rest of the OECD, outside of Europe. The broader OECD labor standards index shows a similar picture.

disincentives for private sector employment. Such programs also tend to have little net impact on reemployment probabilities due to large substitution effects in the case of subsidized employment and possible "stigma" effects in the case of public works programs. Further, in transition economies, the ongoing restructuring process may make it more difficult to predict which skills will be required by private enterprises in the future. In any case, ALMPs are unlikely to have a major positive impact in the absence of an appropriate legal and institutional framework which allows labor market flexibility and mobility (see EBRD, 2000).

82. **In general, ALMPs play only a small role in the four countries.** For example, expenditure on such activities accounts for only about 0.2 percent of GDP in Bulgaria. There are public employment agencies in all regions of each country but, as noted, many unemployed are not registered and, in any case, the agencies have limited capacity to serve large numbers of unemployed. Public sector job training and subsidized work have a modest role in Bulgaria, Latvia and Lithuania, and an even smaller one in Estonia. ALMPs play a less important role in the Baltics and Bulgaria than in the EU. On average, EU countries spend about 35 percent of total labor market spending (or about 1.2 percent of GDP) on active measures although, again, the variation across the EU countries is quite large.

83. In **Latvia**, about 15 percent of all unemployed are involved in active labor market activities, including career guidance and psychological counseling; job training; public works, with workers paid the minimum wage with funds from the central government; and job-seekers clubs. Latvian training programs for the unemployed have met with limited success. A 1997 report indicated that only about one-fourth of the unemployed found jobs after having completed training courses.[49] More recently, the Ministry of Welfare reported that this figure has increased to just over one-half, but that only one-third of those who wished to receive training were able to do so.[50] The Latvian authorities are taking steps to improve performance by ensuring that training is better aimed at market requirements. However, this task may be particularly difficult in light of the fact that a rising share of the unemployed—more than a quarter in 2000—have only primary education or less, and so may be less able to benefit from vocational training. In addition, unemployed individuals in Latvia often do not know what training programs are available, and transportation to SES offices can be a problem in rural areas. The Latvian government has also improved the effectiveness of the SES through the creation of a computer system to provide accurate and up-to-date information on the unemployed as well as available vacancies.

84. In **Lithuania**, employment offices try as a rule to offer all registered unemployed a job or place in a program within 6-12 months, which has led to a higher reliance on public works than elsewhere in the Baltics; almost 16 percent of the unemployed found such jobs

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[49] Latvia Ministry of Welfare (May 1997).

[50] Latvia Ministry of Welfare (2000).

in 1999. One concern is that these programs may provide disincentives for job search in the private sector. Labor exchanges have been working actively with the unemployed to train and place them, as well as to help them start their own businesses. Recently the exchanges have been using electronic information systems, as well co-coordinating with potential employers to provide appropriate job training.

85. In **Estonia**, the most important ALMPs are a small training program and a cash allowance for enterprise start-ups. Regarding the former, an unemployed person who has attended labor market training for at least 80 hours is assigned a study stipend of EEK 600 per month, and travel costs for training can also be compensated. Private employment agencies seem to play a bigger role than public active labor-market programs. Only 16 percent of the registered unemployed—or 10 percent of actual unemployed—participated in the public training programs in 1999.

86. In **Bulgaria**, less than 2 percent of the labor force participated in ALMPs in 2000, with temporary employment by far the largest program. The authorities are working with the World Bank to strengthen ALMPs, improving targeting toward regions with high unemployment. ALMPs include a large-scale temporary employment program, TEP,[51] and several small-scale programs, including job search assistance, training with and without guaranteed jobs, subsidized employment, job associations for regions undergoing restructuring, and financial support and training for self-employment. The scope of these programs has been expanding throughout the transition, although they still represented less than a third of all labor-related expenditures in 1998. Evaluations suggest that the cost-effectiveness of some of these policies is low, especially the TEP and job associations (NEI, 2001). The TEP has no significant impact on reemployment probabilities of participants, contrary to small-scale programs like self-employment and subsidized employment. It is also inefficiently targeted, as the majority of participants are prime-age laid-off workers, who are least likely to benefit. In contrast, subsidized employment programs and training program appear more cost-effective. Both the TEP and training programs could also benefit from being better targeted at vulnerable groups for which they have the highest impact—new entrants, low-skilled, long-term unemployed, and older workers in high unemployment regions. However, the authorities have no immediate plans to scale back or change the targeting of the TEP as the program serves as a form of social assistance.

[51] The TEP accounted for 79 percent of total costs in 1999, and 71 percent of all participants in ALMPs.

V. EU Accession and Labor Market Policies

87. **All EU accession candidates will need to adapt the labor laws and accompanying institutional frameworks to ensure consistency with EU norms and regulations, with potential adverse impact on competitiveness.** Early compliance might generate benefits in some areas. For example, the implementation of stricter health and safety regulations at work will reduce accidents and illnesses, and also thereby reduce fiscal costs related to disability pensions and sickness benefits. At the same time, however, the increased regulation of labor markets implied by EU accession will lead to higher labor cost for the employer, in particular to the extent that no phase-in period is granted. As noted in Box 2, stricter employment protection legislation tends to be associated with lower job creation, which may be particularly problematic in the four economies in question, where unemployment is persistently high. Even where significant legislative changes are not required, accession will likely increase the pressure to strictly enforce these laws. Meeting EU requirements in these areas will also impose budgetary costs on the candidate countries, as additional resources for enforcement will be required. An analysis of previous EU accession experiences suggests that some countries experienced increases in structural unemployment following accession and that these increases persisted over time (Boeri, 1998).

88. **EU requirements with respect to labor markets are part of the much broader set of measures required for the establishment of a single internal market.** In particular "an uneven approach in national legislation concerning workers' rights or health and safety in the work place could result in unequal costs for economic operators and threaten to distort competition" (EU White Paper). Given the still-large wage differences between accession candidates and EU members, there are already strong incentives both for labor to migrate to current member countries and for capital to move to the candidate countries, and these pressures can be expected to rise as accession approaches.[52] Both developments may have adverse consequences for workers in current EU member countries, although these effects may be relatively small. Accession negotiations will need to consider the appropriate transition period for both free movement of labor and the implementation of EU standards in employment.

89. **EU guidelines with respect to labor law focus on four areas: equal opportunity for men and women; coordination of social security schemes; health and safety at work; and labor law and working conditions** (EBRD 2000). These are the areas in which accession countries will be required to make changes to labor laws and regulations:

- With regard to **equal opportunity**, the accession candidates will need to ensure equal access to employment, training and promotion; social security and occupational social security schemes; and self-employment activities. No specific infrastructure is

[52] Although actual migration to current member countries will be limited initially if there will be a transition period for the free movement of labor from accession countries.

required in this area, but changes in legislation and the legal structure needed for enforcement will be needed.

- On coordination of **social security schemes,** technical changes to national legislation will be required to avoid cross-border problems, and thereby stimulate labor mobility.

- The legislative framework for **health and safety** requires an effective enforcement mechanism, including worker training and effective labor inspectorates.

- Regarding **working conditions**, priority has been given by the EU to protecting employees of insolvent enterprises, placing conditions on collective redundancies, transfers of undertakings, and protection of young people.

90. **All four countries—and, in fact, all accession candidates—have some ways to go in meeting EU standards in the labor area, both in terms of legislation and implementation capacity.** The most recent EU regular reports on accession candidates notes the following regarding the chapter on social policy and employment.

91. **Estonia** has made progress in all areas within the chapter, in particular in the implementation of occupational and health protection legislation and social protection. Several regulations implementing the Occupational Health and Safety Act have been implemented; a Trade Unions Act has been adopted laying down basic rights and legal status of trade unions; and a Labor Market Services Act was adopted in June 2000 to provide the legal framework for the functioning of employment services. Also, the government adopted a National Employment Action Plan, following EU guidelines, and focusing on development of active labor market policies; reducing administrative burdens on enterprises; developing vocational education; and integrating disadvantaged groups into the labor market. The EU regular report points to the need to strengthen enforcement and bring the labor law into full compliance with the *acquis*, including on collective redundancies, establishment of European work councils and the posting of workers.

92. In **Lithuania**, a law establishing a wage guarantee fund was adopted in September 2000. The fund, financed by a payroll tax equal to 0.2 percent of employee's salaries, would provide support to unpaid workers of insolvent companies. In addition, steps have been taken to improve the enforcement of laws and standards regarding equality of treatment for men and women and health and safety. However, the EU report still notes that implementation and enforcement remain a cause for concern, and that "Lithuania's effective capacity to transpose and implement several health and safety directives will require substantial financial efforts." The adoption of a new labor code fully in line with the *acquis* remains a priority. The report also points to the low level of unionization (6 to 10 percent) and the general lack of collective bargaining at a sectoral level as problems.

93. In **Lithuania**, plans are to scrap existing affirmative action legislation, which appears to move in the opposite direction from EU directives. Quotas for women returning to the labor force from maternity leave (which can last until the child is 14 years old), for labor

market entrants, for ex-convicts, and for workers less than five years from retirement age—around one third of all employees—are to be removed. Special funds for training and retraining will be set up instead to help these social groups to compete on the labor market. Only the quota for disabled persons will remain in place.

94. In **Latvia,** the EU report points to progress aligning with the *acquis* in the area of health and safety, with an upgrade in administrative capacity. In February 2000, the cabinet of ministers approved a National Employment Plan for the year 2000. Latvia's labor code will need to be brought into full compliance with the acquis, and administrative capacity significantly improved, especially within the Labor Inspectorate. The Latvian parliament is currently in the process of accepting a new set of labor market regulations,[53] which will upgrade labor security and safety standards; increase the power of unions in the wage bargaining process; and strengthen the position of the employee, including by introducing the concept of permanent positions. In general, the Latvian authorities believe that problems in complying with EU standards will be limited, although there are clearly areas where work need to be done, in particular with regards to labor environment and safety. However, the authorities believe that enforcement of the laws will be problematic.

95. **Bulgaria** is making considerable efforts to align its regulatory framework in the field of labor markets with the EU accession requirements. In principle, most of workers' rights defined in EU regulations have long been part of Bulgaria legislation. The latest amendments to the Labor Code include several provisions ensuring its consistency with EU standards, notably regarding non-discrimination and the protection of women's jobs during pregnancy. The implementation of legislative changes will likely require however a further strengthening of administrative capacity.

96. **In addition to these requirements, there may be a presumption that the new accession countries will move toward EU norms in other aspects of labor policy, not covered by the *acquis*.** Among those areas in which accession candidates could find themselves under pressure to make changes are increasing minimum wages and UI replacement rates, easing requirements for early retirement and restricting employers' scope for hiring and firing. Such policies could adversely effect the competitiveness of the four countries in question, and the desirability and timing of any such policy changes should be carefully considered. As noted in Section IV, even among current EU members there is considerable variation in such policies, suggesting that harmonization may not be necessary in any case. In fact, a number of EU countries have been moving closer to the policies of the accession candidates in several of these areas.

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[53] The law is expected to pass in early 2001.

VI. Conclusions

97. **This paper has examined labor market developments in the four hard-peg EU accession candidates during transition, with a view toward understanding the persistent high unemployment experienced in each country**. This unemployment cannot be explained by labor market institutions or policies, which are quite flexible. Indeed, labor market flexibility has been a key ingredient of this restructuring, with large movements of workers from contracting to growing sectors of the economy. Further, the ability of each of the countries to successfully weather the Russia crisis rested, in part, on the flexibility of labor markets. Neither can the unemployment be fully explained by a failure to proceed with needed structural reforms, as these countries have generally been successful in restructuring and reorienting their economies. However, the timing of observed trends in unemployment are quite closely related to the individual histories of structural reform, with sharp increases in recent years in Bulgaria and, to a lesser extent, Lithuania, following on belated hardening of budget constraints.

98. **The high unemployment appears to reflect largely a mismatch between the skills of a significant pool of long-term unemployed, in particular in rural regions, and the needs of a growing private sector.** In particular, language differences may help explain the higher unemployment rates among ethnic minorities. In addition, there has been a surprising lack of geographic mobility. These problems are clearly reflected in the relatively high and growing share of long-term unemployment in total unemployment, the persistent large regional differences in unemployment rates, and the concentration of unemployment among the young and unskilled. Older workers also tend to suffer from inadequate skills for the market economy, resulting in the sharp drop in employment rates for this group, and a rise in pension (disability) rolls in the initial years of transition.

99. **Despite the significant levels of unemployment in all four countries, labor market developments suggest that the strongest and earliest reformers have had the best labor market performance as well**. Thus, in contrast to the literature on optimal pace of transition, there is no clear evidence of a trade-off between speed of reform and unemployment costs except, perhaps, in the very short run. In particular, Estonia, which completed its privatization and imposed hard budget constraints throughout the economy quite early in transition, has experienced unemployment that—while still substantial—has been consistently lower than its Baltic neighbors, while job creation and productivity gains have been relatively strong. The ability of the Estonian economy to quickly move labor out of less productive activities, especially agriculture, appears to have played a large role in the overall strong performance of its economy. Bulgaria, by contrast, was significantly slower than the other countries in moving forcefully on structural reforms, but has still experienced unemployment rates that are comparable, or higher, than Latvia and Lithuania. Labor force survey data suggest that Bulgaria's adverse labor market experience primarily reflects relatively weak job creation.

100. **While there has been a substantial restructuring of the Baltic economies and Bulgaria during the course of the transition, further restructuring, on both a macro level and within enterprises, may need to take place.** Reflecting this need, productivity levels in a number of industries and countries, appear to remain below pre-transition levels, in particular in declining sectors such as agriculture. As the privatization process is completed, new technologies are introduced, civil service reform proceeds, and job guarantees associated with privatized firms lapse, there will continue to be pressures which will make significant declines in unemployment difficult without robust new private sector job creation.

101. **It is crucial, therefore, that all four countries continue their policies aimed at encouraging investment and job creation.** In this regard, the flexibility of the countries' labor markets are likely to be an important asset. Active labor market polices can also play a role, but should be carefully designed and targeted, and focused and providing information and training rather than primarily public works and other public sector employment. In addition, reductions in payroll taxes and other taxes on labor income could increase job creation, although any such cuts would need to be made in the context of an overall medium-term fiscal framework. Further, as all four countries are characterized by low geographic labor mobility, policies should be developed to reduce rigidities in the housing market, including by completing apartment privatization and eliminating barriers to obtaining housing credits.

102. **Accession to the EU, while providing large economic benefits, will also present challenges to the labor markets of the Baltics and Bulgaria.** A number of changes will need to be implemented that can increase labor costs for enterprises, and adversely effect the competitiveness of the economies. Thus, it will be important for the accession candidates, as well as the EU, to carefully consider the optimal timing of such measures.

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Table 1. Bulgaria and the Baltic Countries: Selected Macroeconomic Indicators, 1990-2000
(In percent of GDP, unless otherwise indicated)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Bulgaria											
Population (in thousands)	8,718	9,632	8,540	8,472	8,427	8,385	8,341	8,283	8,230	8,191	8,149
Real GDP growth (year-on-year in percent)	-9.1	-11.7	-7.3	-1.5	1.8	2.9	-10.9	-7.0	3.5	2.5	5.0
CPI inflation (average, year-on-year in percent)	...	338.4	91.3	72.9	96.0	62.1	123.0	1,053.9	18.8	2.6	10.4
Nominal GDP per capita (in US dollars terms)	2,366	789	1,008	1,279	1,152	1,563	1,179	1,224	1,489	1,514	1,479
Fiscal balance	-8.5	-14.7	-5.2	-10.9	-5.8	-6.3	-12.7	-2.5	1.0	-0.9	-1.0
Current Account	...	-9.3	-9.3	-12.8	-1.6	-0.6	0.2	4.4	-0.5	-5.5	-5.8
Total external debt	...	...	...	128.2	117.5	77.4	96.8	96.0	81.8	79.7	86.0
Domestic saving	...	26.8	16.3	6.6	9.8	17.4	11.0	17.0	14.2	13.2	10.1
Private	...	27.6	17.1	14.5	12.8	19.2	19.5	15.5	6.1	6.4	4.2
Public	...	-0.8	-0.8	-7.9	-3.0	-1.9	-8.6	1.5	8.1	6.8	5.9
Investment	...	22.6	19.9	15.3	9.4	15.7	8.4	11.4	14.7	19.0	15.7
Private	...	20.6	17.1	13.4	7.9	14.5	7.7	10.4	10.9	14.3	12.0
Public	...	2.0	2.8	1.9	1.5	1.1	0.7	1.0	3.8	4.7	3.7
Estonia											
Population (in thousands)	1,571	1,566	1,544	1,517	1,499	1,484	1,469	1,458	1,450	1,442	1,439
Real GDP growth (year-on-year in percent)	-2.3	-7.9	-21.6	-8.2	-2.0	4.3	3.9	10.6	4.7	-1.1	6.4
CPI inflation (average, year-on-year in percent)	17.2	210.6	1,069.0	89.8	47.7	29.0	23.1	11.2	8.1	3.3	4.0
Nominal GDP per capita (in US dollars terms)	1,186	577	617	1,032	1,521	2,393	2,965	3,180	3,593	3,562	3,477
Fiscal balance	-6.1	5.3	-0.3	-0.7	2.8	-0.9	-1.5	2.2	-0.3	-4.7	-0.4
Current Account	-1.9	59.7	3.9	1.6	-7.2	-4.4	-9.2	-12.1	-9.2	-5.8	-6.7
Total external debt	0.0	0.0	2.8	5.2	4.9	4.5	24.5	36.9	35.2	40.5	46.9
Domestic saving	28.0	28.0	28.0	28.3	19.2	19.3	17.6	18.2	19.9	17.8	19.4
Private	...	...	...	24.8	13.6	15.9	14.2	12.1	16.0	18.2	16.7
Public	...	...	...	3.5	5.5	3.4	3.3	6.1	3.9	-0.4	2.7
Investment	22.2	22.1	22.6	24.6	27.0	26.0	26.7	27.9	29.7	25.1	25.7
Private	...	18.3	21.1	21.7	22.8	21.3	21.8	24.0	25.5	20.8	21.8
Public	...	3.8	1.4	2.9	4.2	4.7	4.9	3.9	4.2	4.3	3.9
Latvia											
Population (in thousands)	2,673	2,668	2,657	2,606	2,566	2,530	2,502	2,480	2,458	2,439	2,380
Real GDP growth (year-on-year in percent)	-2.3	-11.1	-35.2	-16.1	0.6	-0.8	3.3	8.6	3.9	1.1	6.6
CPI inflation (average, year-on-year in percent)	10.6	124.4	951.3	109.1	35.8	25.1	17.6	8.4	4.7	2.4	2.6
Nominal GDP in US dollars (billions)	20.03	14.48	1.38	2.19	3.63	4.41	5.36	5.95	6.18	6.21	6.71
Nominal GDP per capita (in US dollars terms)	7,493	5,427	519	841	1,415	1,743	2,144	2,398	2,514	2,574	2,934
Fiscal balance	7.5	9.4	-0.8	0.6	-4.4	-3.9	-1.8	0.3	-0.8	-3.9	-3.3
Current Account	-3.0	-1.7	1.8	14.3	-0.2	-0.4	-4.2	-5.1	-9.8	-9.7	-6.8
Total external debt	...	...	...	...	...	34.4	40.6	48.8	50.9	57.8	63.4
Domestic saving	22.4	22.4	22.4	19.7	20.7	17.3	14.6	17.7	17.8	17.1	20.0
Private	...	...	21.0	17.5	21.2	19.4	14.2	14.7	14.5	16.3	19.3
Public	...	...	1.4	2.2	-0.5	-2.1	0.4	3.0	3.4	0.8	0.7
Investment	...	...	13.6	12.8	15.1	17.6	18.8	22.8	27.6	26.7	27.2
Private	...	...	11.7	11.3	13.7	16.1	15.9	16.0	23.2	19.8	21.2
Public	...	...	1.9	1.4	1.3	1.6	2.3	2.7	4.1	4.7	4.0
Lithuania											
Population (in thousands)	3,708	3,737	3,747	3,737	3,724	3,718	3,712	3,707	3,704	3,701	3,699
Real GDP growth (year-on-year in percent)	5.5	-5.7	-21.3	-16.2	-9.8	3.3	4.7	7.3	5.1	-4.1	2.5
CPI inflation (average, year-on-year in percent)	7.8	224.7	1,021.0	410.4	72.1	39.5	24.7	8.8	5.1	0.8	1.6
Nominal GDP per capita (in US dollars terms)	6,165	6,270	514	727	1,142	1,621	2,126	2,586	2,902	2,878	3,029
Fiscal balance	6.8	4.2	0.5	-5.3	-4.9	-4.5	-4.5	-1.8	-5.8	-8.6	-3.3
Current Account	-0.4	0.3	11.3	-3.1	-2.1	-10.2	-9.2	-10.2	-12.1	-11.2	-7.4
Total external debt	0.0	0.2	5.2	10.3	10.5	12.6	30.2	35.1	34.8	42.5	43.9
Domestic saving	37.8	34.6	26.0	17.8	15.2	14.5	15.3	16.3	12.3	11.8	16.3
Private	...	...	...	14.1	14.3	12.6	15.2	14.6	14.5	15.6	17.6
Public	...	...	...	3.7	1.0	1.9	0.2	1.7	-2.2	-3.8	-1.3
Investment	27.6	22.4	23.0	23.1	23.1	23.0	23.0	24.4	24.3	22.5	22.5
Private	...	...	...	20.1	19.5	19.1	20.3	21.7	21.6	20.2	20.6
Public	...	...	...	3.0	3.6	3.9	2.7	2.7	2.7	2.2	1.9

Source: Country authorities; and Fund staff estimates and projections.

Table 2. Bulgaria: Summary of Labor Market Trends, 1990-99 1/
(In thousands, except where indicated)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Total population	8,718	9,632	8,540	8,472	8,427	8,385	8,341	8,283	8,230	8,191
Working age population 2/	4,822	4,793	4,757	4,736	4,741	4,745	4,749	4,750	4,750	4,753
Labor force participation	4,162	3,983	3,851	3,809	3,609	3,552	3,576	3,564	3,477	3,388
Participation, share of total population	47.7	41.4	45.1	45.0	42.8	42.4	42.9	43.0	42.2	41.4
Participation, share of working age population	86.3	83.1	80.9	80.4	76.1	74.9	75.3	75.0	73.2	71.3
Employment	4,097	3,564	3,274	2,995	2,869	3,032	3,085	3,030	2,921	2,811
Percent in private sector	5.9	10.1	17.7	22.4	25.5	28.8	32.7	38.2	43.6	48.2
Registered unemployed	65.1	419.1	576.9	626.1	488.4	423.8	478.8	523.5	465.2	610.6
Unemployment rate (registered)	1.7	11.1	15.3	16.4	12.8	11.1	12.5	13.7	12.2	16.0
Unemployment rate (ILO definition)	...	...	...	21.4	20.0	15.7	13.5	13.7	12.2	14.0
Unemployment rate (survey)	...	...	...	21.4	20.5	14.7	13.7	15.0	16.0	17.0
Long-term unemployed	...	...	...	220.9	214.9	221.9	246.9	245.2	225.8	303.2
As percent of total unemployed	...	...	...	35.3	44.0	52.4	51.6	46.8	48.5	49.7
Wages (leva per month):										
Gross monthly wage (public sector)	...	0.9	2.0	3.0	4.7	7.3	13.4	135.5	194.8	221.4
Net monthly wage (public sector)	...	...	...	...	...	...	7.5	75.9	108.3	120.2
Gross monthly wage (economy-wide)	0.4	1.0	2.0	3.2	5.0	7.6	13.2	127.9	183.3	205.1
Real wage index (1995 = 100)										
Public sector	...	135.8	148.5	131.7	104.3	100.0	82.1	72.0	87.1	96.5
National economy 3/	229.5	139.9	147.9	135.0	105.8	100.0	77.9	65.4	78.9	86.1

Source: Central Statistics Bureau of Bulgaria.

1/ Data on employment and labor force from 1993 onward reflects a change in the data source prompted from the labor survey.

2/ Working age population is defined as aged 15-59.

3/ Wage data are for public sector up to 1995, and are an average of the public and private sectors from 1996 onward.

Table 3. Estonia: Summary of Labor Market Trends, 1990-99
(In thousands, except where indicated)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Total population	1,571	1,566	1,544	1,517	1,499	1,484	1,469	1,458	1,450	1,442
Working age population 1/	953	948	933	917	909	903	897	892	889	888
Labor force participation	832	820	795	758	749	727	718	718	710	700
Participation, share of total population	52.9	52.3	51.5	50.0	50.0	49.0	48.8	49.2	49.0	48.6
Participation, share of working age population	87.3	86.5	85.2	82.6	82.4	80.5	80.0	80.5	79.9	78.9
Employment	875	905	937	951	993	656	646	644	636	610
Percent in private sector	25.3	27.7	31.7	35.3	37.9	61.2	63.1	68.6	69.3	69.7
Registered unemployed	5.3	12.0	29.1	49.6	56.7	70.9	71.9	69.4	70.2	86.2
Unemployment rate (official)	...	1.1	1.3	1.8	1.5	2.1	2.6	2.7	2.7	4.0
Unemployment rate (survey)	0.6	1.5	3.7	6.5	7.6	9.7	10.0	9.7	9.9	12.3
Long-term unemployed	...	...	5.8	13.9	22.5	22.5	39.8	31.8	33.0	39.5
As percent of total unemployed	...	...	19.9	28.0	39.7	31.7	55.4	45.8	47.0	45.8
Wages (kroons per month):										
Gross monthly wage (public sector)	...	...	461	899	1,498	2,149	2,754	3,256	3,848	4,418
Net monthly wage (public sector)	...	...	341	665	1,108	1,590	2,038	2,409	2,848	3,269
Gross monthly wage (economy-wide)	38	76	549	1,066	1,734	2,375	2,985	3,573	4,125	4,440
Real wage index (1995 = 100)										
Public sector	...	...	77.4	79.6	89.8	100.0	104.2	111.4	121.6	135.2
National economy	210.1	134.2	83.4	85.3	94.0	100.0	102.1	110.6	118.0	122.9

Source: Central Statistics Bureau of Estonia.
1/ Working age population is defined as aged 15-59.

Table 4. Latvia: Summary of Labor Market Trends, 1990-99
(In thousands, except where indicated)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Total population	2,673	2,668	2,657	2,606	2,566	2,530	2,502	2,480	2,458	2,439
Working age population 1/	1,503	1,499	1,487	1,484	1,457	1,436	1,441	1,432	1,424	1,439
Labor force participation	1,416	1,405	1,347	1,320	1,300	1,276	1,263	1,218	1,213	1,200
Participation, share of total population	53.0	52.7	50.7	50.7	50.7	50.4	50.5	49.1	49.3	49.2
Participation, share of working age population	94.2	93.8	90.6	89.0	89.2	88.8	87.6	85.0	85.1	83.4
Employment	1,409	1,397	1,294	1,205	1,083	1,046	1,018	1,037	1,043	1,038
Percent in private sector	19.2	22.5	41.0	50.8	57.5	59.6	62.5	65.6	68.3	70.0
Registered unemployed	7.6	8.6	31.3	76.7	83.9	83.2	90.8	84.9	111.4	109.5
Unemployment rate (official)	0.5	0.6	2.3	5.8	6.5	6.5	7.2	7.0	9.2	9.1
Unemployment rate (survey) 2/	0.5	0.6	3.9	8.7	16.7	18.1	19.4	14.8	14.0	13.5
Long-term unemployed 3/	...	...	...	2.7	14.8	137.4	156.7	113.8	94.0	83.9
As percent of total unemployed	...	...	...	3.5	17.7	59.7	63.9	63.0	55.5	51.7
Wages (lats per month):										
Gross monthly wage (public sector)	1.5	2.8	23.0	51.8	74.3	94.5	105.6	126.9	143.0	156.8
Net monthly wage (public sector)	1.2	2.3	19.2	43.2	62.0	77.2	83.7	93.1	104.1	113.6
Gross monthly wage (economy-wide)	1.4	2.6	21.5	47.2	71.9	89.5	98.7	120.0	133.3	141.0
Real wage index (1995 = 100)										
Public sector	129.1	111.1	91.1	93.5	102.8	100.0	93.8	105.6	113.7	121.8
National economy	136.2	117.2	96.1	92.3	101.1	100.0	93.8	105.1	111.6	115.3

Source: Central Statistics Bureau of Latvia.
1/ Working age population is defined as aged 15-59.

Table 5. Lithuania: Summary of Labor Market Trends, 1990-99

(In thousands, except where indicated)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Total population	3,708	3,737	3,747	3,737	3,724	3,718	3,712	3,707	3,704	3,701
Working age population 1/	2,269	2,264	2,254	2,243	2,238	2,237	2,235	2,234	2,237	2,244
Labor force participation	1,855	1,903	1,879	1,859	1,741	1,753	1,784	1,774	1,770	1,796
Participation, share of total population	50.0	50.9	50.2	49.8	46.7	47.1	48.0	47.8	47.8	48.5
Participation, share of working age population	81.8	84.1	83.4	82.9	77.8	78.3	79.8	79.4	79.1	80.1
Employment	1,853	1,898	1,855	1,778	1,675	1,644	1,659	1,669	1,649	1,648
Percent in private sector	22.3	30.0	41.0	54.0	61.0	63.0	64.7	67.5	68.4	68.2
Registered unemployed	2.3	5.3	24.1	81.1	65.7	109.0	124.5	104.5	113.7	148.7
Unemployment rate (official)	0.1	0.3	1.3	4.4	3.8	6.2	7.0	5.9	6.8	8.3
Unemployment rate (survey)	...	...	...	...	...	17.1	16.4	14.1	13.3	14.1
Long-term unemployed	...	...	...	...	...	...	...	15.2	15.2	19.3
As percent of total unemployed	...	...	...	...	...	...	...	14.5	13.4	13.0
Wages (litai per month):										
Gross monthly wage (public sector)	3	8	58	142	371	531	683	851	1,033	1,133
Net monthly wage (public sector)	...	...	...	110	286	393	516	631	760	827
Gross monthly wage (economy-wide)	3	8	58	166	325	491	618	778	930	1,013
Real wage index (1995 = 100)										
Public sector	241	197	133	64	98	100	103	118	136	148
National economy	261	213	144	81	93	100	101	117	133	144

Source: Central Statistics Bureau of Lithuania.

1/ Working age population is defined as aged 15-59.

Table 6. Bulgaria: Share of Employment by Industry, 1990-99
(In percent of total employment)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Agriculture and Forestry	18.5	19.5	21.2	22.1	23.2	23.9	24.4	25.3	25.7	26.6
Mining and manufacturing	36.6	34.5	32.6	30.4	29.1	28.1	27.5	27.6	26.4	25.0
Construction	8.2	7.1	6.2	6.5	5.9	5.7	5.1	4.4	4.4	4.0
Transport	5.9	6.2	5.9	6.1	5.8	6.3	6.3	5.8	5.7	6.1
Communications	1.1	1.2	1.3	1.4	1.4	1.4	1.4	1.4	1.5	1.5
Trade	9.1	9.6	10.0	10.3	11.4	10.9	9.8	9.8	10.5	11.0
Other services	20.6	21.8	22.7	23.2	23.2	23.8	25.6	25.6	25.8	25.7

Sources: Central Statistics Bureau of Bulgaria; and Fund staff estimates.

Table 7. Estonia: Share of Employment by Industry, 1990-99
(In percent of total employment)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Agriculture	21.0	20.4	19.0	16.6	14.6	10.5	10.0	9.4	9.1	8.3
Industry	28.8	28.3	27.6	25.6	25.1	28.6	27.8	26.1	25.9	25.5
Mining and quarrying	1.5	1.5	1.6	1.6	1.6	1.4	1.4	1.2	1.3	1.4
Manufacturing	25.1	24.6	23.6	21.4	20.7	24.8	23.9	22.2	21.8	21.2
Energy and water	2.2	2.3	2.3	2.6	2.8	2.4	2.5	2.7	2.8	2.8
Construction	8.0	8.1	7.9	7.4	7.2	5.4	5.7	7.3	7.3	6.8
Services	42.1	43.2	45.5	50.4	53.1	55.4	56.5	57.2	57.7	59.4
Wholesale and retail trade	7.6	8.1	9.4	11.4	12.7	12.6	13.3	14.0	14.2	14.1
Hotels and restaurants	2.1	2.3	2.3	2.4	2.7	2.7	2.7	2.2	2.2	2.3
Transport and communications	8.1	8.3	8.0	8.3	8.4	10.0	10.0	9.2	9.1	10.2
Financial intermediation	0.5	0.6	0.8	0.9	1.1	1.1	1.0	1.1	1.3	1.5
Real estate	4.0	3.8	3.7	3.9	4.3	4.9	5.0	5.4	6.1	6.4
Public administration and defense	3.8	3.9	4.2	4.9	5.3	5.4	5.4	5.3	5.7	6.0
Education	6.0	6.0	6.4	7.0	7.0	8.5	8.7	9.1	8.8	8.6
Health and social work	6.0	6.2	6.3	6.7	6.8	5.6	5.6	5.7	5.5	5.3
Other community services	4.0	4.1	4.3	4.8	4.8	4.6	4.7	5.2	4.7	5.1

Sources: Central Statistics Bureau of Estonia; and Fund staff estimates.

Table 8. Latvia: Share of Employment by Industry, 1990-99
(In percent of total employment)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Agriculture	16.5	16.9	19.5	18.9	18.6	18.0	17.8	18.0	17.1	16.5
Industry	27.8	26.6	25.3	23.1	21.0	20.5	19.8	20.2	18.4	17.8
Mining and quarrying	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2
Manufacturing	26.5	25.5	23.9	21.6	19.3	18.5	17.7	18.0	16.4	15.8
Energy and water	1.0	0.8	1.2	1.3	1.5	1.6	1.9	1.9	1.8	1.8
Construction	9.7	9.3	6.6	5.5	5.1	5.4	5.7	5.8	6.0	6.2
Services	45.2	46.4	48.1	52.1	54.3	55.7	56.2	55.4	57.9	59.1
Wholesale and retail trade	7.7	8.5	10.3	11.7	13.6	14.1	13.4	14.6	16.2	16.4
Hotels and restaurants	4.3	4.2	3.6	2.6	3.0	2.2	2.1	2.0	2.1	2.3
Transport and communications	7.5	7.7	7.8	8.7	8.8	8.8	8.8	8.6	8.6	8.5
Financial intermediation	0.5	0.5	0.7	0.8	1.0	1.3	1.5	1.5	1.4	1.5
Real estate	5.7	5.6	4.8	4.9	5.1	4.8	4.0	3.7	4.5	5.1
Public administration and defense	1.5	1.7	2.8	3.7	4.4	5.4	6.0	6.1	6.1	6.1
Education	7.2	6.7	7.5	7.7	8.4	8.7	8.8	8.8	8.6	8.6
Health and social work	4.8	4.7	5.2	6.4	6.1	6.2	6.1	5.9	5.9	5.9
Other community services	5.9	6.7	5.4	5.5	3.8	4.2	5.5	4.3	4.3	4.7

Sources: Central Statistics Bureau of Latvia; and Fund staff estimates.

Table 9. Lithuania: Share of Employment by Industry, 1990-99
(In percent of total employment)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Total	...	...	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Agriculture	...	...	19.6	22.5	23.4	23.8	24.2	21.9	21.5	20.2
Industry	...	...	28.9	25.7	22.5	21.2	20.1	20.0	20.0	19.8
Mining and quarrying	...	...	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Manufacturing	...	...	26.9	23.6	20.1	18.4	17.4	17.3	17.3	17.2
Energy and water	...	...	1.6	1.9	2.3	2.6	2.5	2.5	2.5	2.4
Construction	...	...	9.1	7.1	6.6	7.0	7.2	7.1	7.1	6.6
Services	...	...	42.4	44.6	47.5	48.0	48.4	51.0	51.4	53.4
Wholesale and retail trade	...	...	9.6	9.7	13.4	12.8	12.7	15.1	13.6	13.6
Hotels and restaurants	...	...	1.0	1.1	1.3	1.1	1.1	1.3	1.6	1.8
Transport and communications	...	...	6.7	5.6	5.5	5.8	5.6	5.5	6.3	6.1
Financial intermediation	...	...	0.8	1.2	1.5	1.3	1.0	1.0	1.2	1.0
Real estate	...	...	2.3	2.2	2.2	2.2	2.4	2.4	2.7	2.8
Public administration and defense	...	...	2.7	3.2	3.6	4.1	4.1	4.1	4.7	5.2
Education	...	...	7.4	7.7	8.4	8.7	8.9	8.9	9.1	9.9
Health and social work	...	...	5.6	5.4	5.9	6.2	6.2	6.4	6.4	6.8
Other community services	...	...	6.3	8.6	5.8	5.7	6.3	6.2	5.9	6.2

Sources: Central Statistics Bureau of Lithuania.

Table 10. Latvia: Employment and Unemployment Changes, 1992-97

(In percent of labor force, except where noted)

	1993	1994	1995	1996	Sept. 1997
Change in employment	-7.57	-3.10	-1.26	-1.67	0.72
Change in state employment	-16.87	-8.61	-3.22	-4.21	-0.48
Change in private employment	9.31	5.51	1.97	2.54	1.20
Change in unemployment	3.44	0.56	-0.06	0.60	-0.53
Change unemployment as percent of change employment	-0.45	-0.18	0.04	-0.36	-0.75
Change unemployment as percent of change public employment	-0.20	-0.06	0.02	-0.14	1.12

Sources: Central Statistics Bureau of Latvia; and Fund staff estimates.

Table 11: Unemployment in Selected OECD Countries, Baltic Countries, and Bulgaria, 1987-99
(Percentage of labor force)

	Average 1990-1997		1998	1999
Czech Republic	4.0		6.5	8.8
Hungary	10.6		8.0	7.1
Korea	2.9		6.8	6.3
Poland	13.4		10.0	12.0
United Kingdom	8.8		6.2	5.9
United States	6.1		4.5	4.2
EU	9.9		10.0	9.2
Total OECD	7.4		6.9	6.6
Bulgaria 1/	17.1	2/	16.0	17.0
Estonia 1/	6.2		9.9	12.3
Latvia 1/	10.3		14.0	13.5
Lithuania 1/	15.9	3/	13.3	14.1

Source: OECD Employment Outlook; ILO Yearbook of Labor Statistics.
1/ Authorities labor survey data.
2/ 1993-97 average for Bulgaria.
3/ 1995-97 average for Lithuania.

Table 12: Incidence of Long-term Unemployment in Selected OECD Countries, Baltic Countries, and Bulgaria, 1999
(Percentage of total unemployment)

	1999	
	6 months and over	12 months and over
Czech Republic	61.9	37.1
Hungary	70.4	49.5
Korea	18.6	3.8
Poland	63.8	41.2
United Kingdom	45.7	29.8
United States	12.3	6.8
EU	63.7	47.5
Total OECD	46.2	31.2
Bulgaria	...	49.7
Estonia	65.7	45.8
Latvia	71.5	51.7
Lithuania	31.4	13.0

Source: OECD Employment Outlook; ILO Yearbook of Labor Statistics.

Table 13a. Bulgaria: Labor Market Survey Results, 1993-2000

	1993	1994	1995	1996	1997	1998	1999	2000
Economically active population								
(in thousands)	3,809	3,609	3,552	3,576	3,564	3,477	3,388	3,272
As percent of population	45.0	42.8	42.4	42.9	43.0	42.2	41.4	40.2
Employed (in thousands)	2,995	2,869	3,032	3,085	3,030	2,921	2,811	2,736
As percent of population	35.3	34.0	36.2	37.0	36.6	35.5	34.3	33.6
Of which:								
Employees	2,655	2,592	2,695	2,717	2,606	2,531	2,437	2,364
Employers	50	47	55	61	59	69	70	68
Self-Employed	243	199	244	263	294	274	296	259
15-24	280	264	260	259	248	252	238	218
50-69	570	537	581	590	592	587	558	551
Urban	2,219	2,163	2,249	2,306	2,244	2,221	2,137	2,098
Rural	775	706	783	779	786	700	674	638
Male	1,599	1,532	1,610	1,637	1,616	1,554	1,500	1,453
Female	1,395	1,336	1,422	1,448	1,414	1,367	1,311	1,282
Unemployed (in thousands)	815	740	521	491	534	556	577	537
Of which:								
Urban	538	475	334	338	369	381	389	357
Rural	277	265	187	153	165	176	188	180
Male	421	393	270	258	279	298	313	288
Female	393	348	250	233	255	258	264	249
Share of Long-term unemployment								
Total	52.5	59.3	64.8	58.6	56.5	53.3	52.5	58.6
Youth	13.3	13.7	14.6	12.0	12.2	11.0	10.7	10.4
Other	39.2	45.6	50.2	46.6	44.3	42.3	41.8	48.2
Unemployment rate by education level								
Higher education	9.7	8.1	5.2	5.0	6.1	6.7	7.0	6.3
Semi-higher	8.6	8.8	5.1	6.1	7.2	7.0	6.0	8.0
Secondary vocational	16.5	15.8	11.2	11.6	12.6	13.3	14.0	15.5
Secondary general	22.2	20.7	14.2	13.8	15.3	15.7	19.0	14.7
Primary or lower	30.1	31.0	23.9	21.1	22.7	26.4	26.4	28.9
Unemployment rate by age								
15-24	47.0	44.9	37.7	33.5	36.0	36.0	36.7	34.2
25-49	17.7	17.3	12.2	12.1	13.0	14.0	14.9	14.5
50-64	15.8	14.9	9.3	8.5	10.3	11.6	13.7	14.0

Source: Bulgaria Labor Force Survey.

Table 13b. Estonia: Labor Market Survey Results, 1990-99 1/

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Economically active population (in thousands)	832	820	795	758	749	727	718	718	710	700
As percent of population	76	74	72	70	70	69	68	65	64	64
Employed (in thousands)	826	808	766	708	693	656	646	648	640	614
Of which:										
Full-time work	798	779	734	672	652	605	586	600	586	566
Part time work	28	29	32	36	41	51	60	49	54	48
Of which:										
Underemployed	13	15	17	19	21	31	35	31	29	28
Employees	799	772	717	648	629	610	597	596	585	561
Self-employed	27	36	49	60	64	46	49	52	56	53
Employment rate (in percent)										
City	75.8	74.1	70.2	66.4	65.8	63.9	63.4	61.5	60.2	57.7
Countryside	73.0	71.0	68.1	63.8	62.3	56.8	56.1	52.5	53.4	51.5
Estonians	73.8	72.0	69.0	65.6	65.4	62.3	61.6	59.8	59.1	56.6
Non-Estonians	77.2	75.5	70.6	65.4	63.5	60.9	60.5	56.6	56.0	54.0
Male	81.6	80.5	77.4	73.0	72.2	67.9	67.0	65.8	64.2	61.2
Female	69.0	66.6	62.5	58.9	58.0	56.3	56.1	52.6	52.7	50.8
15-24 years	48.0	47.9	46.7	44.4	46.1	41.0	38.6	38.9	37.4	32.4
50-69 years	64.8	61.3	55.1	49.5	47.8	44.7	45.2	45.7	46.5	46.0
Unemployed (in thousands)	5	12	29	50	57	71	72	69	70	86
Of which:										
Long-term unemployed	...	...	5.8	13.9	22.5	22.5	39.8	31.8	33.0	39.5
Unemployment rate (in percent)	0.6	1.5	3.7	6.5	7.6	9.7	10.0	9.7	9.9	12.3
City	...	1.6	4.0	6.5	7.4	9.4	9.6	9.0	9.6	12.1
Countryside	...	...	3.0	6.6	8.0	10.6	11.1	11.3	10.5	12.9
Estonians	...	1.3	3.0	5.2	6.0	7.7	7.8	7.8	7.9	9.9
Non-Estonians	...	...	5.0	9.1	10.6	13.5	14.0	13.3	13.7	16.7
Male	...	1.4	3.9	6.5	7.3	10.6	10.7	10.1	10.8	13.6
Female	...	1.5	3.4	6.6	7.9	8.8	9.2	9.2	8.9	11.0
15-24 years	...	...	7.4	11.0	11.6	14.1	16.0	14.4	15.7	19.8
50-69 years	...	...	...	4.2	5.1	6.9	7.2	6.1	6.1	8.4
Economically inactive population (in thousands)	271	284	306	322	320	335	337	386	392	403
Of which:										
Discouraged	...	4	7	11	13	15	18	16	19	21
Retired	96	107	125	135	133	144	136	182	183	182
Studying or receiving additional training	86	85	84	87	85	82	88	89	96	106
Taking care of children or other members of family	48	52	52	46	44	45	44	42	41	41
Ill or disabled	25	27	29	31	33	37	40	44	43	44
Other reasons	13	11	10	13	12	12	11	12	10	9

Source: Labor Force Survey Data, Statistical Office of Estonia

1/ 1989 – 1996: population aged 15–69; 1997 – 2000: population aged 15–74.

Table 13c. Latvia: Labor Market Survey Results, 1995-99

	1995	1996	1997	1998	1999
	Nov.	Nov.	Nov.	Nov.	Nov.
Economically active population (in thousands)	1,200	1,182	1,186	1,168	1,157
As percent of population 1/	67.6	59.8	59.7	58.8	58.2
Employed (in thousands)	973	966	1,015	1,007	990
Of which:					
On involuntary unpaid leave	4.3	3.6	3.0	2.0	1.4
Involuntary paid leave	0.4	0.4	0.4	0.2	0.2
Involuntary part time work	73.8	77.7	82.1	80.5	74.7
Jobseekers (in thousands)	227	217	171.2	161	167
As percent of economically active	18.9	18.3	14.4	13.8	14.5
Unemployment rate (in percent)	18.9	18.3	14.4	13.8	14.5
City	21.2	21.3	17.6	16.4	16.0
Countryside	12.9	10.8	6.9	7.4	10.7
Male	19.7	18.9	14.3	13.5	15.5
Female	18.0	17.7	14.6	14.1	13.3
15-24 years	30.1	29.0	24.9	25.5	24.6
50-69 years	19.8	16.4	12.3	10.7	10.9
Higher education	9.2	9.0	7.6	6.0	7.4
Primary/basic education	27.3	25.9	17.7	17.1	22.1
Without formal education	33.3	35.3	...	21.4	18.8
Economically inactive population (in thousands)	576	796	801	817	831
Of which:					
Discouraged	37	37	50	51	46
Memorandum items:					
Characteristics of jobseekers					
Percent under 24 years	23.6	21.9	22.0	22.3	20.9
Percent over 60 years	7.1	5.1	3.3	2.4	3.3
Percent male	55.7	54.4	51.4	51.6	56.4
Percent urban	81.3	83.7	85.9	84.1	78.7

Source: Central Statistics Bureau of Latvia, "Labor in Latvia: Labor Force Survey Data," various issues.

1/ In 1995, age 15 to 69. Since 1996, age 15 and older.

Table 13d. Lithuania: Labor Market Survey Results, 1995-2000

	1995	1996	1997	1998	1999	2000
Economically active population (in thousands)	1,979	1,938	1,828	1,843	1,862	1,794
As percent of population 15-69 yrs.	75.3	73.7	69.5	69.9	70.5	67.8
Employed (in thousands)	1,632	1,620	1,571	1,598	1,598	1,518
Of which:						
Employees	...	...	1,226	1,252	1,266	1,204
Employers and self-employed	...	...	287	275	259	253
Contributing family workers	...	...	57	67	68	55
Not stated	...	...	1	4	5	6
Jobseekers (in thousands)	347	317	257	245	263	276
As percent of economically active	17.5	16.4	14.1	13.3	14.1	15.4
Unemployment rate (in percent)	17.1	16.4	14.1	13.3	14.1	15.4
Urban	...	...	15.9	14.4	16.5	16.7
Rural	...	...	9.8	11.1	9.0	12.8
Male	...	...	14.2	14.3	15.6	17.3
Female	...	...	13.9	12.2	12.6	13.3
15-24 years	...	...	25.4	22.3	26.3	29
50-69 years	...	...	9.5	8.7	9.5	13.3
Economically inactive population (in thousands)	976	1,025	1,145	1,145	1,144	1,174
Memorandum items:						
Characteristics of jobseekers						
Percent under 24 years	...	...	25.5	21.7	23.3	20.8
Percent over 55 years	...	...	4.8	4.9	5.0	7.7
Percent male	...	...	53.3	56.0	57.1	57.7
Percent higher education	...	...	6.6	6.9	7.9	7.2
Percent college level education	...	...	22.2	20.1	20.6	21.7
Percent secondary education without vocational training	...	...	29.0	28.0	24.7	23.1
Percent secondary education with vocational training	...	...	15.4	20.1	22.7	22.2
Percent basic education without vocational training	...	...	16.3	13.6	13.3	14.9
Percent basic education with vocational training	...	...	6.6	8.2	8.7	8.7
Percent primary education	...	...	3.9	3.1	2.1	2.1

Source: Central Statistics Bureau of Lithuania, Labor Force Survey 1997-99.

Table 14. Bulgaria: Output Per Worker by Sector, 1990-99
(In 1996 leva)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Total	567	576	581	581	588	598	532	515	542	561
Agriculture and forestry	466	528	452	307	319	349	317	421	429	421
Industry	398	389	483	485	538	522	465	437	481	493
Mining and manufacturing	...	388	492	501	556	531	473	445	502	512
Construction	...	329	457	414	450	475	423	323	350	376
Services	1,131	898	754	751	710	719	635	538	539	566
Transport	221	249	298	317	342	443	436	494	458	423
Communications	468	485	522	558	561	734	658	703	779	935
Trade	1,133	686	615	612	593	635	546	377	383	377
Other services	2,111	1,273	952	936	867	829	717	601	606	659

Sources: Central Statistics Bureau of Bulgaria; and Fund staff estimates.

Table 15. Estonia: Output Per Worker by Sector, 1990-99
(In thousands of 1995 kroons)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Total	63,437	59,710	49,134	50,435	50,669	55,622	58,913	64,358	68,554	71,094
Agriculture	53,952	51,256	33,018	24,905	26,352	39,149	40,442	44,279	46,022	51,832
Industry	94,284	88,843	52,761	45,145	45,715	44,873	48,330	58,612	61,800	63,236
Mining and quarrying	...	77,485	77,232	61,158	57,826	66,063	72,859	96,331	82,720	73,626
Manufacturing	...	92,856	47,198	39,671	40,577	39,191	42,491	53,755	59,109	61,641
Energy and water	...	52,684	92,234	80,723	76,522	91,284	90,123	82,120	72,971	69,990
Construction	...	52,281	30,386	38,207	37,925	60,756	64,466	57,953	71,110	67,278
Services	59,083	42,700	56,091	62,898	60,992	63,322	66,293	70,388	74,121	76,962
Wholesale and retail trade	...	62,605	75,692	65,080	60,395	72,787	76,615	75,455	79,522	83,344
Hotels and restaurants	...	23,377	36,273	27,054	24,623	23,246	26,209	34,878	39,904	42,676
Transport and communications	...	51,945	85,765	67,483	68,592	58,196	63,584	82,465	92,384	90,330
Financial intermediation	...	89,504	153,329	186,736	164,750	185,911	216,411	206,980	152,548	157,630
Real estate	...	30,045	86,025	134,793	118,707	107,862	108,196	113,655	118,041	123,245
Public administration and defense	...	29,338	26,670	49,767	48,152	49,743	50,761	54,653	51,357	51,373
Education	...	27,857	29,812	42,663	44,452	39,650	39,862	38,383	40,621	43,381
Health and social work	...	17,304	12,472	31,385	31,725	40,671	40,646	40,994	44,712	48,988
Other community services	...	73,325	57,813	71,924	72,498	83,493	86,477	79,822	84,472	82,160

Sources: Central Statistics Bureau of Estonia; and Fund staff estimates.

Table 16. Latvia: Output Per Worker by Sector, 1990-99
(In thousands of 1995 lats)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Total	3,259	2,922	1,965	1,636	1,702	1,944	2,064	2,208	2,282	2,294
Agriculture	2,521	2,439	1,668	1,027	917	1,168	1,149	1,153	1,148	1,108
Industry	7,206	7,033	4,317	2,139	2,240	2,671	2,912	3,201	3,612	3,430
Mining and quarrying	3,186	2,803	1,912	2,119	2,015	1,056	1,081	1,762	1,906	2,095
Manufacturing	4,020	4,230	2,406	1,885	1,977	2,353	2,640	2,975	3,384	3,182
Energy and water	22,184	27,435	13,360	6,423	5,662	6,590	5,784	5,456	5,844	5,845
Construction	5,754	3,576	2,135	1,482	1,833	1,837	1,868	1,954	2,177	2,317
Services	2,369	2,054	1,748	1,670	1,770	1,955	2,093	2,239	2,226	2,300
Wholesale and retail trade	...	...	1,168	1,015	1,133	1,567	1,707	1,740	1,876	2,058
Hotels and restaurants	...	...	757	801	967	963	1,112	1,122	1,138	1,058
Transport and communications	...	...	4,650	3,085	3,615	3,529	4,099	4,451	4,279	4,386
Financial intermediation	...	...	9,367	10,046	8,940	8,201	7,040	7,321	7,263	7,156
Real estate	...	...	1,242	1,943	1,715	1,743	2,270	2,677	2,338	2,442
Public administration and defense	...	...	1,579	2,175	2,085	1,824	1,821	1,867	1,853	1,878
Education	...	...	1,047	1,071	1,125	1,182	1,220	1,218	1,264	1,281
Health and social work	...	...	831	1,089	1,102	1,238	1,235	1,280	1,228	1,237
Other community services	...	...	733	1,000	952	1,557	1,366	1,889	2,005	1,987

Sources: Central Statistics Bureau of Latvia; and Fund staff estimates.

Table 17. Lithuania: Output Per Worker by Sector, 1990-99
(In thousands of 1995 litai)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Total	27,834	25,627	20,631	14,992	16,070	16,861	13,906	14,807	15,675	15,104
Agriculture	...	...	12,203	7,316	5,019	6,604	7,403	8,833	8,810	8,572
Industry	...	...	28,159	17,716	18,387	16,571	17,842	19,001	20,549	19,232
Mining and quarrying	...	...	63,786	26,656	20,188	23,547	32,266	42,707	68,750	60,185
Manufacturing	...	...	26,460	15,486	18,266	16,204	17,451	18,818	20,125	19,025
Energy and water	...	...	54,066	44,692	19,278	18,530	19,484	18,554	19,985	17,189
Construction	...	...	21,011	16,397	21,117	13,661	13,615	14,511	17,084	16,516
Services	...	...	19,316	16,425	19,940	15,414	15,608	15,781	16,459	15,871
Wholesale and retail trade	...	...	9,632	24,980	27,747	18,580	18,558	16,937	20,387	19,714
Hotels and restaurants	...	...	18,518	9,769	9,924	18,653	24,172	22,768	19,295	17,083
Transport and communications	...	...	25,309	28,550	27,473	21,785	23,937	26,232	23,289	25,697
Financial intermediation	...	...	53,155	91,786	46,629	36,500	43,671	44,781	38,463	48,435
Real estate	...	...	31,518	28,271	49,875	42,784	41,245	40,976	39,896	40,590
Public administration and defense	...	...	39,882	13,657	22,582	18,414	17,853	18,829	17,507	15,080
Education	...	...	4,996	5,472	8,058	7,423	7,477	7,698	7,831	6,956
Health and social work	...	...	4,450	5,008	7,127	6,050	6,138	6,773	6,785	6,004
Other community services	...	...	7,830	4,176	7,215	6,041	5,600	6,404	7,075	6,887

Sources: Central Statistics Bureau of Lithuania; and Fund staff estimates.

Table 18. Bulgaria: Average Monthly Gross Wages by Economic Activity, 1993-99
(Monthly average, in 1995 Leva)

	1993	1994	1995	1996	1997	1998	1999
In national economy	10,261	8,040	7,600	5,919	4,970	5,995	6,540
Agriculture, hunting and forestry	7,287	5,607	5,339	4,283	3,986	5,077	...
Fishing	...	...	...	3,735	3,524	2,773	...
Mining and quarrying	...	...	...	9,404	8,137	9,278	9,939
Manufacturing	11,058	8,682	8,448	6,850	5,769	6,367	6,567
Electricity, gas and water supply	...	...	...	9,359	8,643	11,718	12,947
Construction	11,182	9,020	7,851	6,536	4,395	5,647	6,136
Wholesale and retail trade	10,305	8,199	8,065	4,745	3,484	4,303	5,456
Hotels and restaurants	...	...	...	4,811	3,689	4,113	4,837
Transport, and communications	12,072	9,607	8,840	7,290	6,352	7,280	7,962
Financial intermediation	16,903	13,231	12,542	10,845	7,943	10,080	11,811
Real estate	...	...	...	4,922	4,161	5,271	6,420
Public administration and defense	...	...	...	5,137	4,496	6,858	7,797
Education	...	...	...	4,076	3,563	4,873	5,444
Health and social work	12,072	9,607	8,840	3,996	3,403	4,675	4,907
Other community services	...	...	...	3,637	3,033	4,143	4,743

Sources: International Labor Office; and Fund staff estimates.

Table 19. Estonia: Average Monthly Gross Wages by Economic Activity, 1993-99
(Monthly average, in 1995 EEK)

	1993	1994	1995	1996	1997	1998	1999
In national economy	2,029	2,235	2,375	2,425	2,610	2,788	2,905
Agriculture and hunting	1,220	1,302	1,405	1,471	1,557	1,713	1,561
Forestry	1,728	2,063	2,419	2,104	2,672	2,743	2,704
Fishing	2,340	2,197	1,987	2,200	2,659	2,483	2,287
Mining and quarrying	2,831	3,044	2,968	3,204	3,223	3,307	3,370
Manufacturing	1,972	2,299	2,421	2,430	2,614	2,758	2,693
Electricity, gas and water supply	2,793	3,134	3,262	3,145	3,532	3,758	3,732
Construction	2,406	2,638	2,568	2,595	2,710	2,836	2,536
Wholesale and retail trade	1,746	1,946	2,051	2,210	2,273	2,451	2,815
Hotels and restaurants	1,496	1,541	1,570	1,729	1,709	1,773	1,528
Transport, and communications	3,314	3,120	3,101	3,045	3,233	3,461	3,620
Financial intermediation	4,751	4,602	4,951	4,963	5,613	6,024	6,402
Real estate	1,963	2,253	2,562	2,610	2,979	3,086	3,280
Public administration and defense	2,100	2,616	2,825	2,881	3,087	3,340	3,738
Education	1,618	1,622	1,900	1,890	2,041	2,277	2,593
Health and social work	1,557	1,807	1,975	2,184	2,257	2,494	2,718
Other community services	1,570	1,675	1,894	1,993	2,128	2,291	2,512

Sources: International Labor Office; and Fund staff estimates.

Table 20. Latvia: Average Monthly Gross Wages by Economic Activity, 1993-99
(Monthly average, in 1995 Lats)

	1993	1994	1995	1996	1997	1998	1999
In national economy	80	77	82	76	86	92	97
Agriculture, hunting and forestry	48	46	54	58	58	64	66
Fishing	97	88	87	102	125	79	73
Mining and quarrying	82	66	71	74	88	91	98
Manufacturing	79	76	86	81	90	96	94
Electricity, gas and water supply	113	106	106	107	123	125	136
Construction	84	73	80	60	0	87	89
Wholesale and retail trade	67	63	63	55	62	69	73
Hotels and restaurants	61	60	61	53	62	60	59
Transport, and communications	145	128	125	115	129	131	133
Financial intermediation	198	152	144	153	187	217	227
Real estate	72	72	75	73	82	97	111
Public administration and defense	93	92	100	87	101	109	122
Education	67	64	65	62	68	72	81
Health and social work	67	61	67	60	68	70	83
Other community services	67	63	68	63	73	78	87

Sources: International Labor Office; and Fund staff estimates.

Table 21. Lithuania: Average Monthly Gross Wages by Economic Activity, 1993-99
(Monthly average, in 1995 Litai)

	1993	1994	1995	1996	1997	1998	1999
In national economy	398	453	479	498	573	652	688
Agriculture, hunting and forestry	204	219	288	306	381	424	398
Fishing	454	379	374	325	356	384	380
Mining and quarrying	569	522	527	576	693	774	777
Manufacturing	494	473	496	536	596	639	674
Electricity, gas and water supply	849	925	865	857	898	930	934
Construction	631	664	649	601	674	731	687
Wholesale and retail trade	463	364	352	363	439	502	559
Hotels and restaurants	302	280	262	304	364	403	411
Transport, and communications	528	544	595	621	689	771	760
Financial intermediation	1,214	1,403	1,356	1,169	1,202	1,330	1,487
Real estate	408	526	525	540	626	742	816
Public administration and defense	542	774	752	765	879	1,081	1,072
Education	310	381	401	407	475	580	690
Health and social work	324	374	381	391	474	556	590
Other community services	334	390	384	412	476	585	629

Sources: International Labor Office; and Fund staff estimates.

Table 22. Bulgaria and the Baltic Countries, Highest and Lowest Regional Unemployment, 1990-99

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Bulgaria, total	1.7	11.1	15.3	16.4	12.8	11.1	12.5	13.7	12.2	16.0
Sofia	...	...	...	15.0	14.0	8.5	7.4	7.9	4.0	3.9
Haskovo	...	...	...	18.5	17.9	16.1	13.1	10.9	13.3	13.7
Rousse	...	...	...	25.8	24.7	18.8	18.4	17.4	14.1	16.3
Montana	...	...	...	27.3	29.9	24.1	22.1	24.1	19.9	22.6
Estonia, total	0.6	1.5	3.7	6.5	7.6	9.7	10.0	9.7	9.9	12.3
Hiiu	...	...	...	...	...	...	...	5.3	6.9	10.9
Parnu	...	...	...	...	...	...	...	5.5	7.5	10.2
Tallinn	...	...	...	...	...	...	...	8.5	9.3	10.6
Polva	...	...	...	...	...	...	...	12.6	12.4	21.7
Ida-Viru	...	...	...	...	...	...	...	13.3	14.7	20.0
Latvia, total	0.5	0.6	2.3	5.8	6.5	6.5	7.2	7.0	9.2	9.1
Saldus	...	...	...	...	3.5	2.0	3.2	4.7	5.5	6.3
Ogres	...	...	...	...	3.1	3.0	4.1	4.4	4.7	7.1
Riga region	...	...	...	...	4.6	4.0	5.1	5.0	5.2	7.9
Krāslavas	...	...	...	...	24.2	24.2	24.8	24.3	22.1	23.3
Rēzeknes	...	...	...	...	20.1	25.3	28.0	29.8	28.0	28.3
Lithuania, total	0.1	0.3	1.3	4.4	3.8	6.2	7.0	5.9	6.8	8.3
Kaunas	...	...	0.8	3.5	1.4	4.0	5.0	3.7	3.8	...
Klaipeda	...	...	0.9	4.5	2.4	3.9	5.2	4.1	4.1	...
Vilnius	...	...	1.4	3.4	3.2	5.3	6.5	6.0	4.8	...
Panevezys	...	...	1.4	5.6	4.7	6.0	7.3	7.3	8.5	...
Taurage	...	...	3.1	10.7	9.7	12.6	16.9	10.3	9.7	...
Memorandum items:										
EU regions with highest and lowest unemployment										
Luxembourg	...	...	...	...	...	...	...	2.5	...	...
Berkshire, Buckinghamshire, Oxfordshire	...	...	...	...	...	...	...	3.2	...	...
Sicilia	...	...	...	...	...	...	...	24.0	...	...
Andalusia	...	...	...	...	...	...	...	32.0	...	...

Sources: Country authorities; and Fund staff estimates.

Table 23. Bulgaria and the Baltic Countries, Highest and Lowest Regional Migration, 1992-99
(In percent of population)

	1992			1993			1994			1995			1996			1997			1998			1999		
	In	Out	Net	In	Out	Net	In	Out	Net	In	Out	Net	In	Out	Net	In	Out	Net	In	Out	Net	In	Out	Net
Bulgaria, total	1.9	1.9	0.0	2.1	2.1	0.0	2.3	2.3	0.0	2.3	2.3	0.0	2.0	2.0	0.0	2.3	2.3	0.0	2.3	2.3	0.0	2.2	2.2	0.0
Sofia, District	1.3	1.6	-0.3	1.3	1.1	0.2	1.9	1.3	0.6	1.8	1.3	0.5	1.7	1.3	0.4	2.0	1.3	0.7	2.4	1.2	1.2	2.5	1.1	1.4
Haskovo	2.5	2.3	0.2	2.2	2.3	-0.2	2.5	2.7	-0.2	3.1	2.7	0.5	2.2	2.1	0.1	2.1	2.2	-0.1	2.2	2.4	-0.2	2.2	2.6	-0.4
Sofia	0.8	1.6	-0.8	1.0	1.7	-0.8	1.5	1.9	-0.4	0.8	1.9	-1.0	1.3	1.9	-0.6	1.0	2.0	-1.0	1.0	2.1	-1.1	1.0	2.3	-1.2
Rousse	1.4	1.7	-0.3	2.2	2.3	-0.1	1.7	2.3	-0.5	2.8	2.6	0.2	2.6	2.5	0.2	2.8	2.7	0.1	2.4	2.4	0.0	2.3	2.2	0.2
Montana	3.5	2.7	0.8	3.3	2.8	0.5	3.1	3.0	0.1	2.7	2.9	-0.2	2.9	2.9	0.0	3.0	3.1	-0.1	2.5	3.0	-0.5	2.7	3.3	-0.5
Estonia, total	...	...	...	...	...	...	...	...	...	...	...	...	2.4	2.7	-0.4	2.3	2.5	-0.2	1.8	1.8	-0.1	1.8	1.8	0.0
Hiiumaa	...	...	...	...	...	...	...	...	...	...	...	...	2.3	2.4	-0.1	2.1	2.3	-0.2	1.4	1.7	-0.3	1.5	1.7	-0.1
Pärnumaa	...	...	...	...	...	...	...	...	...	...	...	...	3.9	3.0	0.9	3.7	3.0	0.7	1.9	1.9	0.0	1.5	1.6	-0.1
Tallinn	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0.4	0.5	-0.1	0.3	0.3	0.0	0.3	0.3	0.0
Põlvamaa	...	...	...	...	...	...	...	...	...	...	...	...	3.3	3.3	0.1	2.9	3.0	0.0	2.4	2.6	-0.2	2.7	3.0	-0.3
Ida-Virumaa	...	...	...	...	...	...	...	...	...	...	...	...	1.5	2.5	-1.0	1.6	2.0	-0.4	1.4	1.7	-0.3	1.3	1.6	-0.2
Latvia, total	...	...	...	...	...	...	1.1	1.3	-0.2	1.1	1.2	-0.1	1.1	1.1	-0.1	1.1	1.2	-0.1	1.1	1.1	0.0	1.1	1.0	0.1
Saldus	...	...	...	...	...	...	1.7	2.2	-0.5	1.9	2.3	-0.4	1.7	2.2	-0.5	2.0	2.4	-0.4	1.7	2.2	-0.5	1.4	2.0	-0.6
Ogres	...	...	...	...	...	...	2.3	2.9	-0.7	2.3	2.3	-0.1	3.5	3.1	0.4	2.8	2.6	0.2	2.9	2.4	0.5	2.8	2.0	0.8
Riga	...	...	...	...	...	...	2.5	3.2	-0.6	2.7	2.7	0.0	2.8	2.3	0.5	2.5	2.1	0.4	3.0	2.0	1.0	2.9	1.7	1.2
Krāslavas	...	...	...	...	...	...	2.2	2.5	-0.3	2.1	2.3	-0.2	2.5	2.5	0.0	2.5	2.7	-0.3	2.3	2.5	-0.1	2.5	2.3	0.2
Rēzeknes	...	...	...	...	...	...	3.0	2.4	0.6	3.3	2.6	0.7	3.3	2.8	0.6	3.1	2.5	0.5	2.6	2.6	0.0	2.7	2.3	0.4
Lithuania, total	...	...	...	...	...	...	...	...	...	2.3	2.4	0.0	2.3	2.3	0.0	2.2	2.2	0.0	1.8	1.8	0.0	1.6	1.5	0.0
Kaunas	...	...	...	...	...	...	...	...	...	2.4	2.6	-0.2	2.3	2.4	-0.1	2.2	2.3	-0.1	1.7	1.7	0.0	1.6	1.6	0.0
Klaipeda	...	...	...	...	...	...	...	...	...	2.3	2.3	-0.1	2.3	2.4	-0.1	2.2	2.2	0.0	1.9	1.9	0.0	1.5	1.5	0.0
Vilnius	...	...	...	...	...	...	...	...	...	1.6	1.8	-0.1	1.6	1.7	-0.1	1.7	1.6	0.1	1.3	1.2	0.1	1.2	1.0	0.1
Panevezys	...	...	...	...	...	...	...	...	...	2.7	2.6	0.1	2.7	2.7	0.1	2.5	2.6	-0.1	2.0	2.0	-0.1	1.9	2.0	-0.1
Taurage	...	...	...	...	...	...	...	...	...	2.8	2.6	0.2	2.6	2.5	0.1	2.6	2.6	0.0	1.8	1.9	-0.1	1.7	1.6	0.1

Sources: Country authorities; and Fund staff estimates.

Table 24. Bulgaria and the Baltic Countries, Minimum Wages, 1990-99

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Bulgaria										
Minimum wage, in local currency	0.2	0.5	0.9	1.2	1.8	2.5	4.4	34.3	52.1	64.0
As % of gross average national wage	43.7	53.3	41.5	37.5	37.1	33.5	33.4	26.8	28.4	31.2
As % of net average national wage	...	...	...	...	...	...	59.6	47.8	51.1	57.5
Estonia										
Minimum wage, in local currency	...	...	300.0	300.0	450.0	450.0	680.0	845.0	1,100.0	1,250.0
As % of gross average national wage	...	...	54.6	28.1	26.0	18.9	22.8	23.6	26.7	28.2
As % of net average national wage	...	...	73.8	38.0	35.1	25.6	30.8	32.0	36.0	38.0
Latvia										
Minimum wage, in local currency	...	1.0	8.0	15.0	22.0	28.0	36.0	38.0	42.0	50.0
As % of gross average national wage	...	38.2	37.2	31.8	30.6	31.3	36.5	31.7	31.5	35.5
As % of net average national wage	...	39.0	36.2	36.6	36.5	38.4	45.8	43.0	43.1	48.7
Lithuania										
Minimum wage, in local currency	0.7	5.0	17.0	48.0	65.0	180.0	300.0	400.0	430.0	430.0
As % of gross average national wage	24.3	65.5	29.5	28.9	20.0	36.7	48.5	51.4	46.2	42.5
As % of net average national wage	...	...	...	37.5	25.9	49.6	64.2	69.3	62.9	58.2

Sources: Country authorities; and Fund staff estimates.

Table 25. Labor Market Policies and Institutions

	UB gross replacement rate (%)	UB duration (years)	Payroll tax rate (%)	ALMP 1/	Employment protection index 2/	Labor standards index 3/	Union density (%)
Bulgaria	60	1	45.7	1.6	...	...	30.0
Estonia	10	0.7	33.0	1.0	...	...	12.0
Latvia	30	0.8	36.0	1.4	...	...	25.0
Lithuania	30	0.5	31.0	1.5	...	...	15.0
Austria	50	2	22.6	8.3	16	5	46.2
Belgium	60	Indefinite	21.5	14.6	17	4	51.2
Denmark	90	2.5	0.6	10.3	5	2	71.4
Finland	63	2	25.5	16.4	10	5	72.0
France	57	3	38.8	8.8	14	6	9.8
Germany	63	Indefinite	23.0	25.7	15	6	32.9
Ireland	37	Indefinite	7.1	9.1	12	4	49.7
Italy	20	0.5	40.2	10.3	20	7	38.8
Netherlands	70	2	27.5	6.9	9	5	25.5
Portugal	65	0.8	14.5	18.8	18	4	31.8
Spain	70	3.5	33.2	4.7	19	7	11.0
Sweden	80	1.2	37.8	59.3	13	7	82.5
UK	38	Indefinite	13.8	6.4	7	0	39.1
US	50	0.5	20.9	3.0	1	0	15.6

Source: Nickell (1997), national authorities and Fund staff estimates.

1/ Active labor market spending per unemployed person as a percentage of GDP per member of the labor force.

2/ Running from 1 to 20, with 20 being the most strictly regulated (OECD).

3/ Running from 0 (lax or no legislation) to 2 (strict legislation) on each of five dimensions, the total index being the sum of these (OECD).