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Republic of Slovenia: Selected Issues

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REPUBLIC OF SLOVENIA

Selected Issues

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Executive Summary

Despite some of the most advantageous initial conditions of all transition economies, Slovenia has made only relatively fitful progress toward market based economic restructuring and liberalization since independence in late 1991. This collection of selected issues papers examines this progress by focusing on four interrelated topics that are critically important to the evolution of the transition process and provides insights into the work that lies ahead. The first paper,*"Privatization and Corporate Governance in Slovenia: The Shift from Comrade to Shareholder,"* concludes that the voucher based privatization process has failed to truly transform the ownership structure of socially owned enterprises. New owners have not been brought in from the outside, nor has the incentive structure for management changed much from the old social enterprise system. In general, privatization resulted in diffused ownership patterns with few strategic investors. With most of the enterprises dominated by insiders, corporate governance has not improved, as evidenced by concerns over excessive wage growth.

"Post-Stabilization Inflation Dynamics in Slovenia" investigates the inflation process in Slovenia through an empirical examination of some commonly used determinants of inflation in transition economies. Results of Granger causality tests and analysis of an unrestricted vector autoregression model suggest a strong linkage between both growth in broader monetary aggregates and changes in the tolar-deutsche mark exchange rate on retail price inflation. The study found that while growth in wages affects inflation, it appeared that changes in the exchange rate and growth in monetary aggregates provided the initial impulse. The wage formation process and pervasive use of indexation procedures were also found to be important factors in perpetuating inflation. The paper concludes that the multiple targets of the central bank, which have necessitated the use of sterilization and capital control measures, retard the disciplining effects of foreign capital flows on private sector governance and allow nonmarket price signals to continue.

In a similar vein, *"Measures and Assessment of External Competitiveness"* finds that while gains in competitiveness were made in the early years of transition, delays in implementing structural reforms have started to result in lagging growth and productivity. While present external competitiveness is judged to be adequate, the policy of fending off capital inflows through sterilization and capital restrictions—effectively blocking the flow of foreign investment and real appreciation—is judged to be an inefficient method of improving export performance. The paper concludes that competitiveness should be improved through an emphasis on structural measures—including ownership consolidation, participation of foreign investors, decentralized wage bargaining, elimination of wage indexation, and tax and pension reform. ·

The final paper, *"The Economic Impact of Accession to EU and Participation in EMU"* comes to the conclusion that full economic integration with the EU will be beneficial for Slovenia. Apart from financial convergence, there will be an acceleration of economic growth, permitting the more rapid reduction of the per capita income gap with respect to core EU members. The paper also finds a positive net impact of EU accession on the budget but warns that real exchange rate appreciation is likely to frustrate the simultaneous achievement of price and exchange rate stability as long as economic transformation remains incomplete.

I. Privatization and Corporate Governance in Slovenia:[1]
The Shift from Comrade to Shareholder

"To privatize," said an agency official, "is to drive a two-horse cart. The cart is the enterprise in question. One horse is called Political Goals and is flighty and fickle; the other is called Economics and is slow and steady. They have to pull the cart along the Road to Privatization, which is a rough, boulder-strewn track. The cart is full of cases of vintage wine, which is unfortunate because the horses, as often as not, are pulling in different directions. The bottles of wine, which can be enjoyed only when the cart reaches its goal, are labeled improved efficiency, high sales price, effective corporate governance, economic investment, and so on."

"Only the most skilled driver can negotiate this track: up the hill of Vested Interests (cases may have to be jettisoned here, and some horses aren't strong enough to make it), across the stream of Xenophobia (another case or two bumps off the back). Some carts are too weak and may fall apart before they get to Privatization. Sometimes it makes sense to give the flighty horse its head and fly the trail headlong, abandoning case after case on the way; sometimes it is possible to whip him into shape to follow his steadier partner. And many drivers simply give up, cut the horses loose, climb down and start back down the trail, hoping to find solace in the odd bottle that hasn't smashed."

Privatization: **Principles and Practice,**
Lessons of Experience Series, Vol. 1, IFC, 1995

A. Introduction

1.   The above analogy of privatization as a two-horse cart is quite fitting for Slovenia, where the privatization process has been a careful balancing act between economic and political goals. Political feasibility, with an emphasis on social consensus and gradualism, has resulted in the use of a hybrid approach to privatization which has not necessarily been optimal with respect to economic goals. This approach to privatization has implicitly preserved much of the previous corporate governance structure despite the transformation to private ownership, and has raised serious concerns about effective corporate governance and the ability to proceed apace with the needed restructuring and reorganization in the enterprise sector. Moreover, resistance to crossing the "stream of Xenophobia" (and attracting sufficient foreign strategic investment) is one of the biggest challenges facing Slovenia.

2.   The following section lays out the historical, institutional, and legislative background against which Slovenia's privatization program is taking place. In Section C, the current status

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[1]Prepared by Nancy Wagner.

of privatization in Slovenia is presented. Section D provides a brief assessment of the program's achievements to date. Section E examines the issue of corporate governance and makes some recommendations to improve governance in Slovenia. Section F is the conclusion.

B. Background

3.   Slovenia inherited its enterprise structure from the Socialist Federal Republic of Yugoslavia (SFRY), which has influenced the privatization process in Slovenia. Unlike other Central and Eastern European countries, the SFRY made a clear distinction between state ownership and social ownership of enterprises. The system of social ownership—unique to the SFRY—was one in which management and employees jointly determined how their enterprises would be run. This decentralized method of decision-making engendered a more market-oriented approach (or "market socialism")[2] than that which was found in the rest of central and eastern Europe, whose state-owned enterprises were centrally managed in accordance with the objectives of a national plan. The decentralized system of self-management is widely credited for the fact that the SFRY, and Slovenia, in particular, enjoyed a higher standard of living than the other socialist economies. Moreover, under this system, prices were for the most part decontrolled, and enterprises generally did not benefit from explicit subsidies from the government budget. Thus, the socially-owned enterprises were better positioned to compete in the global marketplace. Nevertheless, the absence of a fully market-oriented approach led to inefficiencies relative to the West European economies. The self-management system created an inherent tendency to safeguard employment and wages at the expense of declining productivity, erosion of social capital, and loss-making activity.

4.   As part of the SFRY's reforms to improve economic prospects, the privatization process actually began prior to the political disintegration of the SFRY. At the time, privatization took place according to the Federal Laws on Social Capital and on Companies, both of which came into force in 1989. This legislation allowed the workers' councils and managers to decide whether or not to privatize their enterprise. This constituted a passive, rather than an active, approach to privatization. By 1990, two government agencies had been established in Slovenia to oversee and assist in the privatization process: the Agency for Restructuring and Privatization, and the Development Fund (see Box I-1). The former was assigned monitoring and control functions, and, for this purpose, set guidelines for and approved the privatization programs of the socially-owned enterprises. The latter was made responsible for the financial restructuring (and subsequent privatization) of enterprises in its portfolio and was also the temporary depository of the shares of enterprises to be sold to investment funds.

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[2]C. Gray (1996).

Box I-1. The Development Fund

The role of the Development Fund was defined as promoting the development of enterprises in Slovenia. The Development Fund was to provide long-term financing for development projects for both privately-founded and privatizing enterprises and was designed to assist in financing of up to 30 percent of projects. In addition to its original role, the Development Fund has taken on some additional roles, including: (1) the transfer of 20 percent of the shares of privatizing enterprises to investment funds; and (2) the restructuring of companies in distress.

The restructuring of companies in distress stemmed from the government's reluctance to use bankruptcy procedures, out of both social and political concerns. Since banks refused to continue financing loss-making operations, the government decided to transfer the social capital in such enterprises to the Development Fund with the aims of short-term restructuring, financial stabilization, and subsequent privatization. (Of course, in some cases, bankruptcy was unavoidable.) The Development Fund began work in this area in 1992 when it became the main shareholder of 98 companies which employed 56,000 workers. These companies had lost a substantial share of their market following the breakup of the SFRY; in some cases, the loss of market share was as much as 90 percent. As part of the restructuring operation, the Development Fund laid off 14,000 workers in the first year, then began selling some of the companies in subsequent years. Those companies in which the Development Fund remains the major shareholder are those which it has been unable to sell, owing mainly to prices which have not been attractive to investors or to pending litigation with former owners insisting on denationalization.

New companies have come into the Development Fund's portfolio in connection with the Law on Ownership Transformation and the Law on Companies in the Ownership of the Development Fund. These companies were transferred to the Development Fund either because they violated the former law, or because they failed to actively prepare or implement an autonomous privatization program. The Development Fund's role in restructuring and privatizing these newly-transferred companies has been similar to its initial role, with one important exception—it must distribute the shares to the various groups in the percentages specified under the Law on Ownership Transformation. Moreover, if the Development Fund sells such an enterprise for cash, the proceeds must immediately be transferred to the budget. This change in operation could reduce the agency's motivation to expeditiously accomplish the restructuring of these firms.

5.   After the breakup of the SFRY and following two years of intense discussions and negotiations,[3] the present Law on Ownership Transformation (with a more active approach to privatization) was adopted in November 1992.[4] The Law on Ownership Transformation focused on those enterprises classified as socially-owned, and its primary goals were two-fold: (1) to replace social ownership of capital with private ownership, and (2) to achieve a normal corporate structure.[5] The ownership transformation process (the first goal), as described under the law, was initiated in 1993 and is now nearing completion. Indeed, it is estimated that over 90 percent of all socially-owned enterprises have completed their ownership transformation. The second goal, however, will only be accomplished after an extended and indeterminate period of ownership consolidation and improved corporate governance.

6.   This legislation provided for a decentralized or autonomous form of privatization in that enterprises adopted their own privatization plans within pre-determined parameters described below. These plans then had to be approved (first approval) by the Agency for Restructuring and Privatization. After an enterprise had implemented its privatization according to its plan, the Agency gave a second approval and registered it into the Court Register.

7.   The Law on Ownership Transformation represents a compromise on competing views of privatization and, therefore, provides for a hybrid approach, with the primary methods being management-employee buyouts, direct sales to outside buyers, and voucher-based mass privatization. The voucher program was implemented in 1993 by setting up a voucher (or ownership certificate) account for each citizen of Slovenia. Each account had a nominal value of SIT 250,000–SIT 400,000, with the face value indexed to the age of the citizen. The total nominal value of all voucher accounts was SIT 564 billion, representing 40 percent of the book value of social capital as of end-1992. Vouchers could be used only for the purchase of social equity and were not transferable.

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[3]*Central European* (1996a) describes the opposing views regarding the implementation of Slovenia's privatization program. The then-Minister of Economics, who preferred a gradual decentralized approach, reportedly resigned in protest over the advice to implement a mass privatization program, as advocated by Jeffrey Sachs. See also Murrell (1995).

[4]The Law was amended subsequently and made more mandatory to accelerate the privatization process.

[5]Government officials are correct to point out that privatization is a general process which embraces not only the socially- and state-owned enterprises through ownership transfer to private hands, but also promotes private entrepreneurship through the creation and establishment of new private enterprises. Indeed, as of end-1996, there were more than 35,000 commercial enterprises in Slovenia, of which more than 90 percent were privately-owned. Most of these privately-owned enterprises, however, are very small, employing less than a quarter of the employed and producing less than a third of total revenues.

8.   The Law on Ownership Transformation delineates the ownership transformation of enterprise shares according to the following basic formula:

• 10 percent to the Compensation Fund[6]
• 10 percent to the Pension Fund
• 20 percent to the Development Fund, which will subsequently sell its portfolio to the privatization investment funds (see Box I-2)
• 20 percent for internal distribution (distributed to employees, former employees, and relatives of employees in exchange for vouchers)
• 40 percent according to either of the following (or in combination):
• internal buyout (i.e., to insiders on preferential terms—employees receive a 50 percent discount on the value of shares, and the purchase can be financed for up to 5 years)
• commercial sales (public offerings, public tender, or public auction)[7]

9.   In addition, other approaches included the sale of all assets of a company in combination with its liquidation (in which case the Development Fund assumes the company's liabilities) or the raising of additional private equity provided that new shares are issued in excess of 10 percent of the existing equity.

10.   The privatization of most of the companies which are the core of Slovenia's economic activity is now almost completed. Most of the companies which remain to be transferred under to the Development Fund would be small enterprises in which there has been no interest in privatization, as well as a residual of large companies which have had problems with past "wild" (or spontaneous) privatizations, restitution claims, or land register issues. Nevertheless, it is anticipated that the privatization of these companies should be completed apace.

11.   There have been some problems associated with the placement with the investment funds of the 20 percent of socially-owned capital which, by law, had to be transferred to the Development Fund during the privatization process. In the past, the Development Fund used auctions to sell these shares to the investment funds. Five auctions had been conducted by mid-1996, but the results from these auctions were less than satisfactory. At four of the five auctions, there was apparently intensive collusion among the investment funds, which resulted in average prices below the enterprises' initial valuations. More importantly, shares in a significant number of enterprises had to be withdrawn because of insufficient interest in purchasing them. The investment funds were only interested in firms with good immediate prospects and avoided those in relatively bad shape. As a result, by the fifth auction, the shares

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[6]The Compensation Fund provides payment for restitution to previous owners and their heirs in cases where property cannot be returned in kind.

[7]More than 100 of the largest companies included public share issues as part of their privatization programs.

Box I-2. Privatization Investment Funds

In January 1994, the Law on Investment Funds and Management Companies was passed. This law provided the basis for the establishment of privatization investment funds which would collect vouchers (or ownership certificates) from the public in order to buy enterprise shares which had been transferred to the Development Fund. Thus, the role of the privatization investment funds was to intermediate between the population holding vouchers and the enterprises undergoing privatization. These funds were also intended as a counterbalance to insider ownership.

Before the investment funds could collect vouchers, they were required to publish a prospectus with full disclosure. The process of collecting the vouchers began in mid-1994, following an aggressive marketing campaign by the funds. By end-1995, there were 81 funds being managed by 14 management companies; the number of funds had declined to 72 by mid-1997. The start-up capital for the management companies has been provided primarily by banks and insurance companies (about 62 percent), which could create some conflicts of interest between the owners of the management companies and the investment fund managers.

About 88 percent of all vouchers have been transferred from the population's accounts to be used in the privatization process; of these, 53 percent (worth some SIT 300 billion) were collected by the investment funds, with three management companies each collecting more than 10 percent of all vouchers. These funds then participated in the Development Fund's auctions in order to use their accumulated vouchers to purchase enterprise shares. The investment funds have been unable to exchange most of the vouchers they hold (on average, only about 40 percent of the vouchers have been exchanged for equity), with the vouchers estimated to exceed the available capital by almost SIT 150 billion. In this context, the population which entrusted the funds with their vouchers have not actually received shares, and the vouchers are essentially treated as derivative instruments.

These funds have not yet developed typical mutual fund-like objectives (for example, investing in a particular category of industry or specifying risk-return objectives). There is already considerable trading among the funds, so it is expected that there will be a consolidation of portfolios over time and that the number of funds will continue to decline. The funds will eventually be listed on the over-the-counter market of the Ljubljana bourse, with analysts predicting that initial trading will be at sharp discounts to book value (on the grey market, the funds' shares have been trading at a price of only about 10 percent of their nominal value). The funds claimed that they could be listed during the latter part of 1997 if Parliament passes the law which would provide additional state-owned capital (in banks, insurance companies, petrol firms, and other state enterprises) in exchange for the privatization vouchers.

of 50 companies (out of approximately 200 on offer) had to be withdrawn.[8] Since the Development Fund could not continue to manage the 50 companies, it decided to stop using the auction method and try another approach to distributing the shares.

12.   Under the auction method, investment funds could decide for which companies they wished to bid. Thus, companies' shares could be purchased individually. Under the revised method adopted by the Development Fund, the shares of all companies, both profitable and nonprofitable, were bundled into a single package. Moreover, the investment funds were required to submit a single joint bid, acting as a cartel, and this bid could not be less than the initial valuation. Although the Development Fund referred to this method as a tender, it could also be described as a "take-it-or-leave-it" offer since it is highly unlikely that the cartel would submit a bid higher than the minimum required. This approach was first used in September 1996, at which time the Development Fund sold stakes in 162 companies. A second such tender was completed in December 1996, when the Development Fund sold stakes in 152 companies after accepting a joint offer from 23 investment funds.[9]

13.   The enterprises covered by the Law on Ownership Transformation are primarily in the field of trade and industry. While this first phase of privatization is now largely completed, state-owned assets (with a recently estimated value of about SIT 980 billion) have been excluded from the process.[10] Three banks—including the largest and third largest ones—are owned by the state.[11] The government also controls the majority of shares in many other enterprises, including utilities, banks, railways, airports, telecommunications, the Koper port, casinos, and even a horse farm.[12] Parliament must determine what percentage of each of these

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[8]The total estimated value of shares on offer at the fifth auction was SIT 20–22 billion (based on the firms' valuations as of January 1, 1993), while the estimated value of the shares withdrawn was SIT 7 billion.

[9]The offer (and the tender price) at the December tender was SIT 18.4 billion ($130.5 million).

[10]As a result of the delay in privatizing state-owned assets, the share of the private sector in GDP is less than 45 percent.

[11]The largest bank, Nova Ljubljanska Banka, has been undergoing rehabilitation since January 1993 in preparation for its privatization. Its rehabilitation is now completed, and the government must now decide on the specifics for its privatization, in particular, whether to allocate some of its equity to the investment funds and whether to allow foreign participation. See *Central European* (1997a) and *Slovenia Weekly* (1997c).

[12]The issue of whether to privatize the Lipica horse farm was brought before Parliament in early 1996. The Parliament, after determining that privatization of the farm would likely result in a sell-off of the horses, declared the Lipizzaner horses and the stables as Slovenian national

enterprises is to remain state-owned. For example, power plants are 100 percent state-owned, while the Koper port is 51 percent state-owned.[13] The non-state-owned share will be subject to a forthcoming privatization law.

14.   The Law on Privatization of State Property is currently under parliamentary consideration, with the aim of beginning the privatization of the state property. Under this law, privatization will not be done with vouchers (although there may be some exceptions) and will be implemented gradually with no predetermined time period. The legislation is intended to provide for a transparent process that is similar to that used in other European countries. However, the draft law, as it now stands, provides only a general framework and is lacking in specifics on methodology and institutional responsibility.[14]

C. Status of the Privatization Process

15.   As noted above, the privatization process is comprised of two stages. First approval is the more difficult stage, since this involves the issues of initial valuation and the selection of the method for privatization. In addition, in accordance with the 1992 Law on Ownership Transformation, restitution issues must be settled and public infrastructure and agricultural land associated with the enterprise must be determined and excluded from the process. Most of the privatization programs were submitted for first approval by the deadline of end-1994; those received after that date were primarily companies with unfinished audits. Second approval is granted and the company is registered in the Court Register only after the approved method of privatization has been implemented.

16.   The privatization process has been relatively slow owing, in part, to the decentralized, autonomous nature of the privatizations. This method was chosen so as to avoid "shock therapy" and ensure an organized, well-monitored approach. It appealed to the Slovenes' desire for social consensus and gradualism. Another factor which contributed to the slowness of the process was the need to harmonize Slovenian accounting standards with international ones.

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[12](...continued)
treasures, and, therefore, as a government official noted, "horses are on the state budget." The tourist hotels associated with the horse farm have, however, been privatized.

[13]Luka Koper port debuted on the Ljubljana Stock Exchange (LSE) in late November 1996. As noted above, the government still owns 51 percent; 33.3 percent of the port's equity was listed on the exchange. Although foreign interest in the shares is reportedly high, the government has not yet approved foreign purchases of the stock.

[14]In establishing the institutional framework for the next stage of privatization, the government recently created the Slovene Development Corporation and is expected to soon dissolve the Privatization Agency and the Banking Rehabilitation Agency.

17.   By October 1997, 1,418 privatization programs had been approved (out of a possible 1,599 enterprises with social capital), 53 programs were in the approval procedure, 69 enterprises had been transferred to the Development Fund, and 59 had undergone bankruptcy procedures. The 53 companies in the approval procedure were mostly smaller enterprises which were having problems sorting out the issue of restitution to previous owners or which had exhibited no interest in participating in the privatization process.

18.   Of those programs which had been approved, 1,108 had been registered in the Court Register and were operating as privately-owned companies, while the remaining enterprises had received first, but not yet second approval, and were in the process of implementing their programs. The Agency expected that most of these companies would soon receive second approval and that additional pressure could be brought to bear on these companies by insisting that failure to quickly complete the process would result in their shares being transferred to the Development Fund.

19.   The distribution of the shares of total capital, by method of ownership transformation, is given in the following table:[15]

Table 1. Slovenia: Distribution of Shares of Total Capital

(in percent)

Internal buyout	17.0
Private capital	31.0
Privatization investment funds	13.2
Internal distribution	12.7
Public sale of shares	9.1
Pension Fund	6.6
Restitution Fund	6.6
Transferred to the Development Fund	2.7
Capital increase	1.1

Source: Agency of the Republic of Slovenia for Restructuring and Privatization.

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[15]Tables I-1 and I-2 are based on data provided by APPNI during the September 1997 and 1996 Article IV Consultations, respectively. As of September 1996, 1,254 privatization programs had been approved.

20.   As seen from the figures in Table I-1, 29.7 percent of capital (distributed either by internal buyout or by internal distribution) is owned by insiders such as employees and management. The ownership structure is very dispersed, but the process of ownership concentration is expected to accelerate with the listing of shares on the Ljubljana Stock Exchange (see Box I-3). Some limitations are currently in effect regarding the transfer of shares (for example, shares bought with vouchers cannot be sold to outsiders for two years, and loan-financed shares are ineligible for trading until the loan is repaid). These limitations were imposed out of concern that a massive influx of shares onto the secondary market could trigger a stock market crash and undermine investor confidence.

21.   The ownership structure looks very different if viewed from the perspective of the number of enterprises under majority insider ownership. Table I-2 shows the percentage of insider ownership for those enterprises which had completed privatization plans as of September 1996 and which had included internal distribution or internal buyout as one of their ownership transformation methods. In almost 71 percent of enterprises under the program, insiders have a controlling share of capital. The figures are even more extreme when the data base is restricted to only those enterprises which have obtained second stage approval—in almost 85 percent of these enterprises, insiders own more than 50 percent of the shares. Therefore, although ostensibly a wide variety of methods were employed, the management-employee buyout has emerged as the dominant form of privatization in Slovenia.

Table 2. Slovenia: Percentage of Insider Ownership

Insider ownership (in percent)	Number of companies	Percent share	Cumulative percent share	Value of capital (in billions of SIT)	Percent share of value	Cumulative percent share of value
> 76	5	0.5	0.5	49.8	9.8	9.8
51-75	649	70.4	70.9	102.6	20.1	29.9
26-50	193	20.9	91.8	172.5	33.8	66.7
1-25	61	6.6	98.4	185.0	36.3	99.97
0	13	1.4	100.0	0.1	0.03	100.0
Total	921	100.0		510.0	100.0	

Source: Agency of the Republic of Slovenia for Restructuring and Privatization.

22.   After four extensions, the privatization vouchers expired at the end of June 1997.[16] This would be the final extension (this point would be emphasized to the population), and any

[16]As of mid-June 1997, some 12 percent of Slovenians had not yet used their vouchers (worth about SIT 67 billion).

Box I-3. The Ljubljana Stock Exchange

The Ljubljana Stock Exchange (LSE) was founded on December 12, 1989. The LSE's infrastructure is relatively advanced, even in comparison with stock exchanges in far more developed capital markets. The LSE is characterized by electronic trading, settlement clearing in 2 days (faster than on the New York Stock Exchange), remote trading, and central registry. All stocks have been dematerialized (i.e., physical share certificates are no longer issued) since January 1996, in contrast to the bills issued by the Bank of Slovenia, which have not yet been dematerialized.

Market capitalization, nevertheless, remains very low in Slovenia, not only in absolute terms (which is to be expected, in view of the country's relatively small size), but also relative to Slovenia's level of economic development. Market capitalization is only about 5 percent of GDP, with equity and debt instruments each comprising around one half of the capitalization. Capitalization, however, is rising rapidly, spurred in part by privatization. As of December 1996, the market capitalization of the LSE was SIT 91.5 billion (about US$655 million), up from SIR 38.6 billion at end-1995.

Only about a dozen companies were listed on the Ljubljana Stock Exchange at the beginning of September 1996.[1][2] Some companies have resisted being listed on the stock exchange out of fear of hostile takeovers. Slovenian companies also seem reluctant to list on the stock exchange due to disclosure requirements and the perception that such disclosure undermines managerial discretion, yet accountability and transparency are key to attracting foreign interest. Instead, much trading of shares on the secondary market occurs on the informal or "black" market rather than in the organized markets of the stock exchange or the over-the-counter (OTC) market. Moreover, share prices on the black market are usually significantly lower than on the organized exchanges. For this reason, some shareowners have been attempting to get their companies to list on the stock exchange. In the future, the Securities and Exchange Commission wants most sharetrading for ownership concentration to occur on the two organized markets to ensure transparency and promote capital market development.

The LSE is gradually getting new listings from the newly-privatized enterprises. By late November 1996, 22 newly-privatized companies had been listed on either the main exchange or the OTC segment of the Ljubljana bourse since the beginning of 1996. By October 1997, in terms of total listings, there were 15 companies listed on the main exchange and 40 trading on the OTC market. Experience has shown that if a company is first traded on the OTC and then moves its listing to the LSE, the price usually goes up by 10–20 percent. This increase in price may be partly attributable to the more extensive disclosure regulations for listing on the LSE. Although, as noted above, many companies have resisted listing as a result of these disclosure requirements, such a move is rewarded by allowing capital to be raised at less cost through the equity market.

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[1]Slovenia's blue chip index, the SBI index, was comprised of only 7 shares as of end-1996 and was, therefore, very sensitive to moves in any one of its component shares. In 1997, the LSE introduced a new blue chip index, weighted to reflect market capitalization, and is currently comprised of 28 shares.

[2]By comparison, the Czech Republic had over 1,700 companies listed as of end-September 1996, although many of the shares are relatively illiquid.

remaining unused vouchers would not be exchanged for any other financial instruments (government bonds, etc.). There is, however, no time limit on the use of vouchers by the privatization investment funds.

D. Assessment of the Privatization Process

23.   The above status report, on the surface, suggests that considerable progress has been made on privatization. A deeper examination, however, reveals some troubling aspects. The **lower-than-expected growth** in 1996 and early 1997, and in particular, the **slowdown in the industrial sector**, could be seen as warning signs of impending difficulties in the enterprise sector. Slovenia attracted only $186 million, or about 1 percent of GDP, in **foreign direct investment** in 1996, despite its highly favorable credit rating (the highest among all transition economies) and its relatively attractive economic prospects.[17] Moreover, Slovenia's share of the total stock in foreign direct investment in all transition economies has been steadily eroding from 1992 onward, declining from 7.3 percent in 1992 to 3.6 percent in 1995. This is in sharp contrast to most of the other transition economies in central and eastern Europe.[18] [19] The low levels of foreign direct investment are likely to be associated with a slow pace of introduction of new production methods and technologies, critical factors in raising productivity levels.

24.   Among the most troubling signs are the data from the financial statements gathered by the Agency for Payments, Supervision, and Information (APPNI). According to these data, the enterprise sector as a whole has been **operating in the red** for the past several years. Data through 1995, however, initially gave a glimmer of hope as they appeared to indicate an improving situation relative to previous years, in that the excess of the losses over the profits was declining.[20] Moreover, in 1995, expenses exceeded revenues by only SIT 567 million, a sharp drop from 1994, when expenses were more than SIT 15 billion in excess of revenues. However, figures for 1996 suggest that the problem of loss-making companies has, if

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[17]According to a Slovenian official, foreign investors have been favorably impressed with Slovenia, citing, as an example, a comment that "Slovenia produces with 90 percent of Germany's quality at 70 percent of Germany's costs." Despite this favorable assessment, International Financing Review (1996) reports that "Slovenia has the dubious distinction of having attracted the smallest amount of FDI funds in Eastern Europe during the first quarter .... In the league tables of cumulative FDI since the switch to a market economy, only Bulgaria has fared worse than Slovenia's US$614 million."

[18]Investmentbank Austria Research (1996).

[19]The low levels of foreign direct investment may also be partly attributed to the delays in privatizing state-owned assets.

[20]Slovenian Business Report (1996), in an article entitled "A Final Accounting—For Now," describes the situation as "an upward spiral within a downward trend."

anything, become more severe, with profitable enterprises accruing a net profit of only SIT 122 billion against loss-making enterprises' net loss of SIT 182 billion (see Table 3).[21] By area of activity, manufacturing firms accounted for almost 50 percent of the aggregate net loss. In some instances, enterprises underwent decapitalization—either through investing less than depreciation or through sales of assets—to pay current expenses. The discrepancy between expenses and revenues has also risen substantially, to more than SIT 42 billion. In terms of the number of enterprises, only about 60 percent of the companies were classified as profitable, with 21,729 enterprises operating profitably, and 11,205 operating at a loss.[22] Moreover, the distressing business results for 1996 do not even include data from those enterprises which were in bankruptcy procedure.[23]

Table I-3. Slovenia: Commercial Results [24]

(in millions of tolars)

	1994	1995	1996
Revenues	4,228,543	4,800,261	5,675,134
Expenses	4,243,876	4,800,828	5,717,270
Net Profits	85,376	110,771	121,764
Net Losses	112,206	125,976	182,181

Source: Based on financial statements submitted to APPNI.

25.   It is interesting to note the components of operating expenses which grew at the fastest rates between 1995 and 1996. While total expenses increased by 19 percent,

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[21]Although APPNI claims that Slovenian accounting standards are approaching EU levels, it is, nevertheless, difficult to assess how much of this apparently dire business situation is due to creative accounting, tax avoidance via generous depreciation allowances, investment tax credits, coverage, etc. As compared to a statutory tax rate of 25 percent, the corporate income tax yields only 7–8 percent. On the other hand, at 17 percent, capital depreciation does appear to constitute an unusually large percentage of GDP.

[22]Companies recording a net loss accounted for 34 percent of the workforce of those companies which submitted data.

[23]As of end-1996, 509 companies were in bankruptcy procedures, up from 402 at end-1995.

[24]Data for 1995 and 1996 were supplied by 33,609 companies and 35,786 companies, respectively. The jump in the number of companies reporting in 1996 is primarily attributed to better coverage of reporting, rather than to a sharp increase in the number of legal entities.

depreciation surged by 32 percent. Salaries and wages (which were subject to regulation and to collective agreements), on the other hand, grew by only 16 percent, but other labor costs (holiday allowance, distress assistance, lunch allowances, awards, presents, etc.) increased by 25 percent, suggesting that this category of payment may have been used, to some extent, to bypass the restrictions on wage increases.

26.   Data on company accounts frozen for more than 5 consecutive days provides another disturbing view of a worsening economic performance. The monthly average number of frozen company accounts grew to 6,230 in 1996,[25] 27 percent higher than the monthly average in the previous year. Moreover, almost 61 percent of the companies had their accounts frozen for more than a year.

27.   Future competitiveness could be jeopardized in view of the apparently **negligible progress in restructuring** many of the larger enterprises.[26] Although data show strong growth in investment, most of this investment has been concentrated in infrastructure, particularly in transport and telecommunications.[27] Investment in industry and manufacturing has, on the other hand, been relatively sluggish. Moreover, most of the investment in the enterprise sector has been targeted toward reconstruction, renovation, and replacement of obsolete equipment rather than to the introduction of new technologies and new production facilities for expansion and innovation.

28.   A primary aim of privatization is to transform the incentive structure underlying the enterprise sector to one which rewards efficiency, imposes financial discipline, creates a profit-oriented culture, and allows for the proper management of risk, all of which are critical for firms to compete effectively in a globalized market. Consider the four major methods of privatization used in transition economies—management-employee buyouts, equal-access voucher privatization, sale to outside investors, and spontaneous privatization.[28] (Note that

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[25]These companies employ about 22 percent to the workforce.

[26]The European Commission (EC), in issuing its opinion in July 1997 on Slovenia's fitness to start EU membership talks, echoed these sentiments. After praising Slovenia's significant achievements in the macroeconomic arena, the EC added, "... enterprise restructuring has been slow due to the consensual character of economic decision-making, and the incentives of workers and managers to preserve the status quo. Improvements in competitiveness have been hampered by rapid wage growth combined with low productivity growth. The low level of foreign direct investment reflects these structural problems, which need to be tackled."

[27]According to *Central European* (1996b), foreign investment represents only 2.5 percent of investment in the Slovene economy.

[28]Spontaneous privatization is a process in which state-owned or socially-owned assets or income flows are seized or otherwise (often illegally) transferred to the incumbent

(continued...)

Slovenia's program has included elements of all four of the above methods, but with the heaviest emphasis on management-employee buyouts). How does each of these methods fare with respect to the ultimate goals of a privatization program?

29.   Each of the major approaches to privatization involves tradeoffs between political acceptability and economic efficiency. The following table clearly illustrates these tradeoffs:

Table I-4. Slovenia: Tradeoffs Among Privatization Routes for Large Firms

Method\Objective	Corporate governance	Speed and feasibility	Access to capital/skills	Government revenue	Greater fairness
Sale to outside investors	+	-	+	+	-
Management-employee buyout	-	+	-	-	-
Equal-access voucher privatization	?	+	?	-	+
Spontaneous privatization	?	?	-	-	-

Source: From The World Bank's **World Development Report 1996**, "From Plan to Market".

30.   As seen from the above matrix, Slovenia's predominant privatization method—the management-employee buyout—excels only with respect to speed and feasibility. On all other counts, this method is expected to be less effective than most of the others (with, of course, the probable exception of spontaneous privatizations). In particular, the management-employee buyout is the only one of the four methods which is unambiguously classified as negative for corporate governance.[29]

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[28](...continued)
management or other insiders, in response to ambiguously-defined property rights or to excessive delays in implementing privatization programs.

[29]For a proper assessment of the effectiveness of the privatization approaches, it would be helpful to have data disaggregated by size of firm, since the management-employee buyout is not necessarily negative in the case of small companies. In such cases, merely forcing firms to face hard budget constraints and strengthening the mechanisms to allow enterprises to exit (i.e., bankruptcy or liquidation) could be sufficient to ensure a move toward good corporate governance.

31.   Indeed, a recent study in Slovenia provides a first step toward confirming some of these hypotheses, although the conclusions are very preliminary since the data—the 1995 financial statements of more than 2,000 Slovene enterprises—are from a single year early on in the privatization process.[30] In the study, firms are classified into one of six categories: (1) private enterprises which had not been privatized via the Law on Ownership Transformation; (2) enterprises which had majority foreign ownership; (3) enterprises which had been privatized primarily through management/employee buyout; (4) enterprises which had been privatized primarily via sales to outsiders; (5) state-owned enterprises performing public services or with a monopoly position; and (6) other nonprivatized enterprises. The analysis shows that net profits were generated on the whole by foreign-owned, privately-owned (category (1)), and state-owned firms, while externally-owned firms (category (4)) recorded a negligible net loss, and internally-owned (category (3)) and nonprivatized firms registered significant net losses. Moreover, the returns on equity indicate similar outcomes for the various categories, with privately-owned and foreign-owned firms achieving returns of 5.7 percent and 4.6 percent, respectively, in contrast to nonprivatized and internally-owned firms generating losses of -8.8 percent and -1.3 percent, respectively; state-owned and externally-owned firms had negligible returns on their equity.

32.   Thus, in determining the course of privatization, Slovenia largely chose to diffuse the tension between promoting economic efficiency and rewarding the existing stakeholders (i.e., giving employees and managers a substantial share in ownership) by focusing on the latter. In fact, much of what passes for privatization to date in Slovenia is perhaps more correctly termed ownership transformation. This initial transfer of ownership is only a first step toward an "effective" privatization. The current dispersed ownership structure in most of Slovenia's enterprises inhibits the accumulation of resources and know-how necessary so that the needed restructuring which should accompany privatization has largely failed to materialize. Although it is natural that the initial ownership patterns may be sub-optimal, a critical test of any privatization program is whether the capacity exists for these ownership patterns to evolve into more efficient forms. Thus, emphasis in Slovenia must now shift toward ensuring a rapid transition to an effective secondary trading process to **allow for ownership concentration**.

33.   Pohl, Anderson, Claessens, and Djankov (1997) examine the evidence from seven transition economies—Bulgaria, the Czech Republic, Hungary, Poland, Romania, the Slovak Republic, and Slovenia—during the period 1992 to 1995 to determine which economic policies were most conducive to enterprise restructuring.[31] They found that the following policies were positively correlated with restructuring: rapid privatization (independent of the approach to privatization); concentrated rather than dispersed ownership; forcing firms to face

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[30]Institute of Macroeconomic Analysis and Development, *"Ownership Structure and Performance of Slovenian Nonfinancial Corporate Sector,"* Ljubljana, Slovenia, May 1997.

[31]They employ several measures of restructuring, including: profitability, operating cash flow, labor productivity growth, total factor productivity growth, and export growth.

hard budget constraints; and restraining wage increases.[32] Among the seven countries, however, Slovenia fared relatively poorly on some measures of restructuring. For example, while most of the countries saw increases in the percentage of profitable industrial firms, Slovenia's percentage of profitable firms actually declined over the 4-year period, as shown in Table I-5. (On the other hand, the percentage of profitable firms in Slovenia is higher than that in the other comparator countries except for the Czech Republic and Hungary, but this largely reflects Slovenia's strong starting point relative to the other countries.)

Table 5. Slovenia: Industrial Firms Categorized by Profit or Loss

(percentage of firms weighted by employment)

	A	B	C	D	E	Total
1995	64	17	9	8	2	100
1994	67	14	13	6	0	100
1993	67	13	15	5	0	100
1992	65	13	17	5	0	100

Source: Pohl, et al (1997), "Privatization and Restructuring in Central and Eastern Europe."
A = profitable; B = cannot cover depreciation; C = cannot service all debt; D = cannot pay all wages;
E = cannot pay all suppliers.

34.   On some of the other measures of restructuring examined by Pohl, et al., only Bulgaria and Romania had lower annual growth rates in both labor and total factor productivity than Slovenia, and only Romania had a lower export growth rate and level of investment per worker in privatized firms than Slovenia. With respect to wage restraint in privatized firms, real wage growth in Slovenian firms nearly absorbed all of the labor productivity gains, while in the other six countries, labor productivity growth outpaced real wage growth. This differential between labor productivity and real wage growth will likely play an important role in the ability of firms to restructure, since firms will may have to rely to a large extent on financing investment from retained earnings.

35.   On an issue closely related to ownership concentration, Slovene officials frequently lament the **lack of strategic investors**, i.e., those investors with specialized knowledge of an

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[32]In addition, the data also suggested that enterprises with ownership and lending ties to banks had restructured more than other firms, indicating that banks may be effective monitors of management performance, and that this monitoring role outweighs the potential conflicts of interest inherent in such arrangements. Such banks—in their dual roles as both lender and owner—would have strong incentives to ensure that the firm would become profitable.

industry who are willing and able to commit their own, often significant, financial resources to enterprise restructuring. Domestic investors are unlikely to have sufficient financial resources to undertake the necessary degree of enterprise restructuring and are also unlikely to choose to commit resources when ownership is highly dispersed. Nor are there likely to be many local investors with the requisite state-of-the-art, cutting-edge knowledge required to succeed in the global marketplace. Therefore, to overcome this scarcity of strategic investors, reform programs should focus on spurring the development of market institutions and the legal framework which can facilitate and accelerate this process, both through concentration of ownership and encouraging foreign investment.

36.   Although there are reportedly no legal restrictions on foreign investment in most enterprises (some strategic areas like defense production still maintain some restrictions), the relatively low degree of foreign participation in the privatized enterprises reflects more an unwillingness on the part of domestic shareholders (particularly the insiders) to sell to foreign investors.[33] [34] Moreover, some Slovenian officials have expressed concerns about allowing greater foreign involvement in the enterprise sector, an attitude which was clearly demonstrated in the adverse reaction to a recent sale of a paper mill to a Czech company.[35] Although it is acknowledged that foreign investors could be an important source of recapitalization, expertise, and new technology, it is also feared that foreigners would snap up the best Slovenian enterprises and ignore those most in need of restructuring. This **atmosphere of xenophobia** and widespread hostility to foreign investment has, therefore, been the key obstacle to foreign participation in the privatization process.[36]

37.   Foreign investors remain cautious about investing in Slovenia, not only because of perceptions of a xenophobic attitude, but also because of **gaps in legislation** and a reluctance to disclose information. In addition, Slovenia has been suffering from occasional labor unrest over wages and benefits, which has frightened foreign investors, particularly in view of the large degree of insider ownership.

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[33]Outside observers apparently also interpret this unwillingness to sell to foreign investors from a broader perspective. For example, in the September 1996 issue of *Euromoney*, Gray writes, "Unlike the rest of eastern Europe, Slovenia rejected the notion that multinational investment was a prerequisite for restructuring."

[34]It is hoped that this situation may change in the future as insider owners retire or leave the enterprises.

[35]The sale, which apparently did not violate any laws on foreign investment, was nevertheless contested in a series of battles in the Slovene court system. See *Central European* (1996b).

[36]In fact, according to some observers, foreign investment is almost perceived as foreign invasion. On a positive note, however, the government has introduced a new bill which will liberalize foreign direct investment and eliminate the need for government approval.

38. The importance of foreign direct investment is illustrated by a simple empirical exercise by the Institute for Macroeconomic Analysis and Development (IMAD).[37] In the analysis, IMAD compared a variety of indicators in enterprises with foreign direct investment of more than 10 percent of capital and in all other enterprises. Using data from financial statements for 1995, IMAD found that, among other indicators, profits per employee were almost 3 times as high, exports per employee nearly 4 times as high, and profit per unit of capital more than 2 times as high in enterprises with foreign direct investment compared with all other enterprises. The differences are even more marked if the comparison is made with only those enterprises having a majority foreign interest.[38] Of course, these differences may be at least partly attributable to the initial quality and/or the sectoral distribution of the enterprises in which foreigners have invested (i.e., cherry picking) rather than just to any beneficial impact of foreign investment. Moreover, no attempt was made to test for statistical significance of the results.

39. The presence of foreign investors often provides a demonstration effect for local investors, creating a virtuous circle of **capital market development**.[39] Foreign investors also demand better disclosure, more information, and regulatory enforcement, leading to improved accounting standards, more competition among dealers and brokers, and better price discovery, all of which attracts domestic investors as the general climate for investment improves. Moreover, a growing theoretical literature suggests that stock market development boosts economic growth through the creation of liquidity.[40] [41] Since restructuring usually requires a long-term commitment of capital, many smaller investors may be hesitant to

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[37]Institute of Macroeconomic Analysis and Development "Foreign Direct Investment in Slovenia: Trends, Experiences, and Policy", Ljubljana, Slovenia, May 1997. See also *Slovenia Weekly*, September 14, 1996; *Slovenian Economic Mirror*, 1996 for a similar analysis using data from 1994 financial statements.

[38]The ratios would obviously be higher if enterprises with majority foreign investment were compared only with those without such investment.

[39]As one broker on the Ljubljana bourse explained, "A lot depends on international investors as domestic buyers are much more active when they know foreign demand is high."

[40]Demirgüç-Kunt and Levine (1996) review the theoretical literature on stock market development and economic growth. Levine and Zervos (1996) also provide empirical evidence that stock market development is positively (and robustly) associated with long-run economic growth.

[41]Ellerman (1996b) notes that nearly all of the shares in the Pension, Compensation, and Investment Funds in Slovenia are relatively illiquid. Moreover, there appears to be a basic misconception in Slovenia about the reasons for this problem. In particular, rather than focusing on the fundamental reasons for share illiquidity, there seems to be the mistaken belief that throwing more cash into the stock market will necessarily increase its liquidity.

surrender control of their savings for extended periods. However, liquid equity markets allow investors to have quick and easy access to their savings and thereby make such investment projects less risky. In this manner, liquid and deep equity markets may encourage savings, improve the allocation of capital, and enhance the efficiency of production. In view of Slovenia's slowdown in growth, sluggish efforts at restructuring, and relatively low levels of investment in the industrial sector, a key policy focus should be the removal of the impediments (described below) to deepening of the stock market. At the same time, however, it is also important to avoid the problems encountered in the Czech Republic (with more than 1,700 firms listed on the stock exchange, most of which are illiquid) by placing excessive emphasis on the stock market for solving the problems in the newly-privatized enterprise sector; the organized exchange is likely to be relevant primarily for the larger companies, while smaller companies' shares might be better traded through the investment funds or over-the-counter.

40.   A major obstacle to capital market development is the legislative or regulatory framework. Legislation on securities trading remains weak, with significant gaps remaining. In particular, legislation to regulate portfolio investment is inadequate (or even nonexistent). While the Foreign Investment Law (passed in 1988 prior to the breakup of the SFRY) provides rules for foreign direct investment, it fails to mention portfolio investment.[42] Although there are no restrictions on foreign direct investment, it is portfolio investment that is more important for securities market development and deepening.

41.   Both foreign and domestic investors are likely to remain reluctant to invest until the rules on portfolio investment are clear and transparent (for example, it is not clear whether foreign portfolio investors can repatriate their earnings).[43] There is a new law being prepared to regulate this type of investment, but this law has been in preparation for more than 2 years. A quicker approach could be to add some by-laws on this area to the existing laws, which could be done by decree by either the Bank of Slovenia (BOS) or the Ministry of Finance. It is also critical to phase out the current restrictions on short-term capital inflows, but the government is likely to resist moving quickly on this issue given its perception that a small economy like Slovenia's is vulnerable to speculative capital flows. An increase in capital inflows might, therefore, be viewed as an additional sterilization problem, a destabilizing

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[42]For the time being, investment in equities is treated by analogy under the law. By contrast, investment in debt instruments is governed by the provisions of the Foreign Exchange Law. Foreign investors must currently register every domestic transaction in debt instruments with the BOS, while share transactions involving nonresidents must be registered with commercial courts. This can be a time-consuming process which is likely to discourage portfolio investors.

[43]As of end-September 1996, the International Finance Corporation (IFC) included the Slovenian stock exchange as one of the "frontier" markets to be covered on a weekly basis. This should eventually lead to inclusion in the IFC's global equity index, which is monitored on a daily basis. Past experience has shown that the IFC's inclusion of an emerging stock market in its global equity index helps to boost foreign portfolio demand.

force, or even a threat to corporate sovereignty, as opposed to recognizing their function in providing liquidity and smoothing fluctuations in the supply and demand for capital.

42.   In this connection, in February 1997, the Bank of Slovenia ordered foreign investors to open custody accounts in one of 14 registered banks, effectively blocking foreign investment.[44] This move was in reaction to concerns about the potentially destabilizing effects of large capital inflows, in the wake of a substantial increase in capital inflows from foreign portfolio investors in January 1997 (inflows in January alone were around DM 50 million, compared with DM 120 million for the whole of 1996). In the months following the imposition of the new restriction, the SBI index slumped by more than 20 percent and turnover on the bourse plunged to only a tenth of its previous level, with international investors absent from the market.

43.   In late June 1997, however, the central bank decided to relax the requirement for foreign portfolio investors who hold their shares for at least seven years or who trade only among themselves. The SBI index was immediately driven higher as foreign investors returned en masse. With market sentiment buoyed by the change in rules, the SBI index continued to surge upward, regaining most of its losses by mid-August. In July, trading volume on the bourse rose to a record high, with securities worth almost $100 million sold, up 13.7 percent from February, the month in which the previous record turnover had been registered. Brokers estimated that foreign investors accounted for about 60 percent of the trading volume on the LSE. This illustrates the importance of an international presence for enhancing capital market liquidity.

44.   Some Slovenian enterprises have decided to augment their listings on the LSE with issues of global depository receipts (GDRs), in part to look beyond the limited domestic market and bypass restrictions that might be imposed on foreign investment. SKB Banka was the first Slovene company to launch a GDR issue and be listed abroad on the London Stock Exchange.[45] Other companies have been closely monitoring developments with the SKB listing, and it is expected that a number of them will follow suit with their own GDR issues.

45.   Delays in completing the privatization process have also contributed to the slow pace of capital market development. However, another factor which has hindered the development of the capital market has been the BOS' sterilization operations. The BOS has been issuing large amounts of relatively risk-free investment instruments with high rates of return which have been more attractive to investors than riskier equities or corporate bonds. The BOS places its instruments initially with the banking sector via auctions, but the banks are often purchasing on the orders of their customers. In addition, secondary trading of these bills

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[44]The banks estimated the cost of the accounts at about 12 percent of the amounts handled, a significant deterrent to investors from abroad.

[45]See *Central European*, 1997b.

occurs in the short-term trading section on the LSE. Savings have not been sufficient to support both the supply of the BOS bills as well as other securities.

46.   Another inhibitor to deepening of the securities market is the asymmetric tax treatment accorded to dividends and interest payments. While interest on **bank** deposits is tax-free, dividends are effectively taxed twice—first, when corporate profits are taxed, and, second, when dividends are specifically taxed—discouraging the population from placing its savings in shares of capital. Moreover, although there will be no tax on capital gains from investments held for at least 3 years, there is a capital gains tax on shorter-term investments.[46][47]

47.   Discussions on the issue of a potential stock overhang started even before privatization began. Fears about a possible stock market collapse were triggered by analytical papers which assumed—rather arbitrarily—that the entire available supply of shares would go onto the market at the same time, but that demand would be only about one third of this supply, with the consequent negative impact on share prices. Indeed, it is likely that people who receive shares (via vouchers) at no cost will behave quite differently than those who paid cash. Nevertheless, a survey conducted for the Agency for Privatization and Restructuring indicated that only a small proportion of shareholders would sell immediately, and, therefore, has allayed concerns since it suggests that the likelihood of a market collapse has been exaggerated.[48] Furthermore, within the current framework, shares will be coming onto the exchanges at staggered times since internally-held shares cannot trade for 2 years after privatization, while stocks bought on credit (with a maximum financing period of 5 years) cannot be traded until the loan is repaid. To expedite the process of ownership consolidation and accelerate development of the equity market, the time restrictions on the trading of insider shares could be removed sooner than the current limits. In addition, those shares purchased with credit could be allowed to trade before the loan is conventionally repaid by allowing for simultaneous selling and use of the proceeds for the early repayment of the debt.

48.   The initial stages of ownership consolidation are likely to be characterized by lumpy demand, but fragmented supply, with strategic investors interested only if they can acquire

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[46]The taxation of capital gains, at 25 percent, took effect for individual shareholders on January 1, 1997 and may constitute a further disincentive to the development of Slovenia's fledgling capital markets. Corporate shareholders had already been subject to the capital gains tax. Note, however, that the sale of privatization shares is exempt from this tax.

[47]There is currently a 0.1 percent transactions tax on sales of securities, but this tax was seen as so marginal as to have a negligible impact on investment decisions. Thus, it is also unlikely that this tax would negatively affect capital market development, although it could be a problem for very short-term money market instruments or very high-frequency trading.

[48]According to the survey, 5 percent have already sold their shares, a little over 5 percent intend to sell their shares in the near future, while about 35 percent claim to have no intention to sell.

large blocks of shares, while the present dispersed ownership provides for small lots of shares on the supply side.[49] In such circumstances, it may be ineffective to use transparent continuous auction trading, as some informational asymmetry may be needed to induce dealers to trade.[50] If a continuous auction system is to be used, the time period for trading could be reduced to better aggregate thin orders, or a periodic batch system could be employed where the frequency of batch trading is as high as possible to enhance informational efficiency. Alternatively, a segmented market could be created—one for relatively liquid shares, organized as a continuous auction, and another for relatively illiquid shares which operates as a batch system.

49.   Slovenia's **privatization investment funds** were one of the most controversial issues in the privatization program and have so far proved to be a disappointment, with few such funds interested in taking an active approach to investment. These investment funds exist in a sort of netherworld—they are neither mutual funds nor venture capital funds, and their role in the privatization process remains unclear. The funds have thus been passive investors endowed with vouchers, but lacking the cash to pay their costs and earn their management fees. The Development Fund's recent move to bundle shares for bidding by investment funds also dissipates incentives for active management. This only further dilutes the holdings of shares in a manner which encourages a passive approach to investing. Moreover, not only have the funds failed to provide the anticipated stimulus for restructuring, but, according to G. Gray (1996), the funds are often perceived today as hindering the restructuring process by blocking attempts, in some instances, to increase capital. In fact, according to Ellerman (1996a), the funds' emphasis on dividend payouts from firms to the detriment of restructuring has earned them the reputation of being "disinvestment funds."[51]

50.   Another problem associated with the investment funds is that they have collected more vouchers than there is capital available to cover them, a development referred to as the "privatization hole." The funds are expected to list on the OTC market of the LSE with the aim of increasing transparency in trading and allowing for greater regulatory control, but they are reportedly reluctant to list and have been using the issue of insufficient equity as an excuse to avoid taking the next step.[52] Although the investment funds now trade on the grey market,

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[49]Ellerman (1996b) briefly discusses the need for the appropriate sequencing of attracting strategic investors versus portfolio investors, noting that experience has indicated that strategic investment should precede portfolio investment, where possible.

[50]Evidence from Russia (where the privatization program produced similar dispersed ownership structures with substantial insider domination) supports this conclusion.

[51]Ellerman notes that some Slovene funds have even taken firms to court in an effort to force the firms to pay out more in dividends.

[52]The government recently adopted a law in which it pledged to cover the privatization hole

(continued...)

the funds' management companies have been the primary participants in such trading, as they attempt to consolidate control. International investors and small domestic investors, on the other hand, have difficulty accessing the grey market and have been largely absent.

51.   On the positive side, Privatization Agency representatives claimed that corporate governance was beginning to improve in some enterprises, with supervisory boards, comprised of both inside and outside owners, starting to become strict with management and controlling cash flows. Moreover, in some cases, up to 60–70 percent of profits were being retained, and the percentage of retained profits is expected to increase as the ownership structure consolidates. Nevertheless, many new shareholders are uninformed regarding their new roles. In response, the government has initiated a campaign to teach shareholders about their rights and responsibilities.

52.   Another positive development is that the newly privatized enterprises are, in general, no longer benefiting from soft budget constraints from either the state or the banks, and that, as in other market economies, most banks are willing to extend credit only to well-managed enterprises with good prospects.[53] Thus, the problem of excessive wages, where it exists, is not likely to stem from soft budget constraints, but rather from the wrong type of "restructuring" via decapitalization, *inter alia* through excessive depreciation.

E. Improving Corporate Governance

53.   Despite some exceptions among the privatized enterprises, a recurring theme among Slovenian officials and analysts was the general need to improve corporate governance (see Box I-4). This was seen as particularly critical for improving the competitiveness of Slovenia's enterprise sector in the runup to membership in the European Union, particularly since privatization has failed to curb wage growth or to produce the expected efficiency gains.

54.   What do the lessons of experience from other countries mean for Slovenia? As discussed above, the primary mechanism for ownership transformation in Slovenia has been the management-employee buyout. This mechanism for privatization was perhaps the most expedient and politically viable for Slovenia, in view of its social ownership inheritance, but it also implies that Slovenia has, in large part, not broken with the legacy of its past corporate

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[52](...continued)
with its own assets.

[53]This was not necessarily the case in the recent past, when the socially-owned enterprises were often the major owners of the banks. Such arrangements limited the capacity of the banks to exert financial discipline in the allocation of credit and could give rise to "insider" lending, which contributed to serious weaknesses in the banking system. See Pleskovic and Sachs (199?). The draft banking law, which is currently under consideration, also places ceilings on enterprise ownership of banks to ensure that any remaining risks of moral hazard are limited.

Box I-4. The Principal-Agent Problem of Corporate Governance

The fundamental issue in corporate governance is the principal-agent problem, namely, the separation of ownership and control, or alternatively, the separation of risk-bearing and decision-making. According to this view, management (the agent) may not have the same interests as the owners (i.e., the principals or the shareholders) of a corporation. If, for example, managers decide to sharply increase their own compensation, this may depress share prices and is therefore not in the firm's best interest, but the benefits of such an action accrue directly and immediately to management in the form of higher pay. Even if managers are also shareholders, they receive only a fraction of the benefits of actions which increase firm value, while the costs of irresponsible management (such as excessive pay increases) are not fully borne by management. Therefore, there need to be control mechanisms to induce management to act in the best interests of the owners.

There are various approaches to effective corporate governance. Effective governance can arise through either **internal or external control mechanisms**, or preferably through a combination of control mechanisms. Internal mechanisms might include monitoring by a board of directors or competition among managers within an enterprise, while external mechanisms could entail the use of proxy contests, the threat of takeover, or direct action by shareholders themselves. Control mechanisms for a given enterprise depend on a variety of factors, including, among others,:

- the ownership structure of the enterprise,
- the composition of the board of directors,
- the existence of a liquid equity market, and
- the presence of outside bidders.

structure. Employees, under the system of social ownership, had extensive powers to influence the management and decision-making process. This is unlikely to change in those privatized enterprises with majority insider ownership.[54]

55.   With Slovenia's large share of insider ownership, the agency problem could easily manifest itself in excessive wage and salary increases to labor and management as well as reluctance to shed labor in pursuit of productivity gains.[55] Not only do inside owners fully benefit from wage increases while only receiving a fraction of the benefits from share price increases, but it is also likely that there would be differential discount rates between different types of owners. Insider owners (and, in general, those who received shares without any cash outlay) may have shorter horizons, which would imply wage pressures, while outside investors, who have bought the firm's shares, may have longer horizons, implying a desire for reinvested profits to reinforce the firm's future prospects.[56]

56.   Outside investors may, therefore, fear that fresh financing could be expropriated by insiders in the form of excessive compensation and perks which provide personal utility to the insiders, but do not enhance the firm's value. A collective wage agreement is only one means of addressing this problem, but past experience in Slovenia has shown that this may not always be an effective solution.[57] There may also be a tendency to shift from explicitly paying higher wages to increasing other remuneration,[58] since other remuneration is not so strictly

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[54]Mrčela (1996), in discussing Slovenia's new ownership structure, clearly presents the perceived conflict of interests between insider and outsider shareholders: "outsiders are afraid that insiders will try to extract profits through higher salaries, and insiders, on the other hand, are scared that outsiders will try to draw profits out through dividends."

[55]If there were 100 percent management-employee buyout of shares, then the agency problem between insider and outsider owners does not exist since there is a complete aligning of ownership and control interests. Minority insider ownership, on the other hand, can provide significant benefits to the enterprise by inducing employees to focus more on maximizing the firm's value, while largely eliminating their ability to directly control their compensation at the expense of firm value.

[56]Transition to a market-oriented economy also seems to result in initial push for consumerism at the expense of long-term goals.

[57]The data through October 1996 showed that gross hourly wages had increased by an annualized 17.9 percent, yielding a real wage increase of more than 7 percent, which significantly exceeds productivity gains.

[58]The category of payments to workers referred to as "other remuneration" is comprised of a wide range of payments, including some intermediate consumption like business and travel expenses which should not be classified as personal income. Many of the types of payments

regulated by the collective agreements. Other remuneration comprised 36.7 percent of net wages in 1994, rose to 39 percent in 1995, and increased further to 43.6 percent for the first five months of 1996.

57.   The jury is still out as to which of the generalized models of corporate governance is more effective and, indeed, the effectiveness of a particular approach is heavily dependent on the specific attributes of the country (see Box I-5).[59] For example, the role of takeovers in enforcing good corporate governance can have adverse effects if management acts in a myopic manner to increase the short-run share price at the expense of longer-run goals to reduce the probability of takeover. If investors are well-informed and rational and capital markets are efficient, there is no distinction between trying to raise an enterprise's share price and boosting the enterprise's long-term value. But in fledgling markets like Slovenia's, such a distinction could have significant consequences. Similarly, the effectiveness of bankruptcy procedures for disciplining management has been undermined in certain cases in Slovenia, as some companies undergoing bankruptcy have established new companies which maintain much of the workforce (including management) and similar activities of the collapsing company. In addition, the enforcement role of domestic banks may have been undermined to some extent by the opening up of overseas sources of capital.

58.   Until Slovenia's stock market becomes deeper and more liquid and unless enterprises develop a change in attitude toward equity financing, most enterprises are likely to continue to rely on debt financing for the near future. Even more importantly, Slovenia seems to have a strong aversion to the concept of hostile takeovers,[60] and the government is poised to enact legislative impediments to the takeover market, thereby closing the door on one channel to enhancing good corporate governance. A law on takeovers had been promised since 1994, but passage had been continually delayed despite pressure from enterprises to pass such

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[58](...continued)
included in this category, however, should be properly classified as income, such as payments for contractual work, temporary work, research, internships, commuter expenses, food allowances, vacation allowances, retirement bonuses, remote location supplements, and solidarity help (for distressed workers).

[59]An important distinction between the Anglo-American and German/Japanese management models (as described in Box 5) is the emphasis on shareholders (and hence maximization of firm value) versus stakeholders (which includes not only shareholders, but also employees, creditors, suppliers, and customers), respectively. The concept of social ownership, which is Slovenia's cultural and historical legacy, is implicitly a version of the stakeholder philosophy.

[60]See *Slovenian Business Report* (Summer 1996).

Box I-5. Contrasting Approaches to Corporate Governance

The general approach to corporate governance tends to differ across countries, reflecting their cultural and historical values and traditions. Two of the most studied broad models for governance are the Anglo-American approach and the German/Japanese approach. In the Anglo-American model, emphasis is placed on liquidity in the stock market, which allows shareholders to monitor management by "voting with their feet."[1] In such a system, share prices act as a sort of barometer of managers' performance. When a firm's managers persistently perform poorly, share prices may fall below the potential valuation and induce an outsider to attempt a hostile takeover. After a takeover occurs, management is usually replaced with a team or individual acceptable to the new controlling owners. Thus, the threat of takeovers performs a valuable role in enforcing good corporate governance by allowing outsiders to oust the incumbent management. Importantly, the Anglo-American system is underpinned by strict insider-trading laws and by full disclosure requirements for shareholders.

The Anglo-American model provides a competitive threat to management via the takeover. Although maximizing contestability can be an effective approach to improving corporate governance, in this model it requires deep and liquid capital markets, and, as noted earlier, Slovenia has a long way to go on this account. In contrast to the Anglo-American model, however, the German/Japanese approach de-emphasizes liquidity and substitutes "relationship-based" shareholding. Shareholders often own large stakes in these firms and develop long-term relationships with the management. Moreover, these large shareholders are likely to be banks or other firms with business links to the enterprise in question.[2] In view of the limited shareholder liquidity, these enterprises usually rely more on debt financing than on equity financing. In fact, those banks which own large shares of stock in such firms are often engaged in lending to them as well.

Thus, in contrast to the Anglo-American model in which liquid capital markets (and equity financing) lay a key role in corporate governance, banks (and debt financing) are at the core of the German/Japanese model. Different governance mechanisms are associated with debt and equity financing. Creditor rights are often easier to enforce than shareholder rights. Creditors may have the right to take assets if loans have been collateralized. Creditors can also throw an enterprise into bankruptcy procedures if it fails to pay its debts. Although bankruptcy may not directly help the creditor (since repossessing assets in bankruptcy can be very difficult), the threat of undergoing bankruptcy can be quite effective, especially since management usually gets fired.

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[1] The relatively high market capitalizations in the United States and the United Kingdom (where market capitalization actually exceeds GDP) are an indication that these countries use liquidity, in part, to enforce good corporate governance. Among transition economies, the Czech Republic has a high level of market capitalization, but this is somewhat illusory, since trading in many of the shares is illiquid or even nonexistent.

[2] Bishop (1994) provides an interesting example of shareholding patterns between the two systems of overnance: while the five largest shareholders in General Motors own 9 percent of the firm, the five largest in Daimler-Benz hold 68 percent of the firm's shares.

legislation.[61] Finally, after an extended period of controversy and debate, Slovenia passed its first takeover legislation in late July 1997.[62] The law provides for the Securities Market Agency to oversee corporate acquisitions involving (a) more than 25 percent of shares of listed companies, (b) companies with more than SIT 1 billion in equity capital, or (c) companies with over 500 shareholders. The effect of this legislation on corporate governance remains to be seen.

59.   Generally, calls for individual shareholders to exercise their power through voting ring hollow unless such owners have a sufficient shareholding to be dominant.[63] Enterprises with dispersed ownership also suffer from the free rider problem with respect to the monitoring of management. Any small shareholder who would spend his own resources on monitoring would incur all the costs of such action while providing a free benefit to all other shareholders. There is, therefore, little incentive to actively monitor in such circumstances. The presence of large institutional investors (such as pension funds or insurance funds), on the other hand, can sometimes reduce the free rider problem of inaction by shareholders. In practice, institutional investors do appear to have some influence on management and boards, particularly when they act in concert.[64] Slovenia currently lacks any large institutional investors of the type described above, but pension system reform could accelerate the development of such investors, particularly if emphasis is placed on enhancing the role of private pension funds.

60.   Even when all shares have identical voting rights, the share distribution can significantly alter effective voting rights. In Slovenia, this is a nontrivial issue, as G. Gray (1996) notes that "most companies have shareholder agreements whereby management and employees elect a proxy before the general meeting and vote their combined 60 percent stake as one block.[65] In practice, this makes management power near absolute." It is obvious that in

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[61]For example, pharmaceutical company Lek hesitated to begin trading on the LSE, declaring that passage of a takeover law was a critical condition for listing. Nevertheless, Lek listed on the LSE in September 1996 before the takeover law was passed, but only after it amended its statutes to place a cap on the maximum voting power of any given shareholder. Other companies have also followed suit.

[62]The State Council initially vetoed the legislation in early July, arguing that it put small shareholders at a disadvantage.

[63]It is also important to recognize that the initial impact of listing a company on the stock market may actually exacerbate the problem of diffuse ownership and passive investors.

[64]Of course, this assumes that the interests of institutional investors are reasonably homogeneous. However, interests, risk profiles, and horizons of pension funds could be quite different from those of mutual funds or insurance funds.

[65]Twenty percent from internal distribution plus 40 percent from internal buyout under

(continued...)

such situations, the votes of minority shareholders are essentially rendered meaningless, and few outside investors would, therefore, want to stake a claim in those enterprises.

61.   The problem of block voting by insiders in Slovenia is difficult to overcome. One suggestion has been to differentiate voting rights between shares purchased with one's own finances and those acquired through vouchers. According to this approach, there would be different classes of common stocks with differential voting rights attached to each class. For example, shares purchased on the stock exchange could be designated as having a greater number of votes attached than those received through the voucher program.[66] The distribution of voting versus cash flow rights on other than a one-to-one basis could prove very controversial to implement. Another strategy for diluting the near-absolute control of the majority insider-owners would be to introduce supermajority voting provisions. Supermajority voting usually requires that at least two thirds of shareholders approve certain measures. This approach could be more acceptable to implement.

62.   Another important channel to improving corporate governance is through the **supervisory board of directors**. The supervisory board can serve a monitoring function which provides appropriate restraints on managerial discretion, thereby protecting the shareholders against management's self-interest. In particular, the board should evaluate management's performance and design incentive contracts for management; i.e, pay managers in stock options, or otherwise ensure that management pay is linked to specific enterprise performance goals. It is important, however, that the linkage of management compensation to results does not induce myopic behavior.[67] To this effect, compensation should not be dependent upon short-term accounting performance, but rather should be tied to the market value of the firm. The board should also approve short-term operating plans as well as review long-range strategies.

63.   The board is particularly important when the market for corporate control (i.e., the existence of a takeover threat) is restricted, as in Slovenia.[68] During the ownership transformation process, workers councils, as firm control mechanisms, were presumably replaced with boards of directors. Although this would appear to be a move toward a market-oriented corporate structure, the supervisory boards in Slovenia often have 50 percent labor representation, and the other 50 percent is chosen by the owners, much of which is also labor.

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[65](...continued)
preferential terms.

[66]In general, shares with superior voting rights sell at a premium.

[67]Myopic management behavior can also ensue from improper assessments by a board of directors (i.e., if management is removed because a good long-term strategy translates into poor performance of short-run indicators.)

[68]Arthur and Taylor (1995).

Moreover, labor directors are frequently on management boards. Thus, in effect, the boards often act as pseudo-workers councils and are unlikely to perform the monitoring function so crucial to effective corporate governance. In addition, workers councils remain strong, and labor unions and the workers they represent are afforded strong constitutional protections.

64.   Slovenian enterprises must, therefore, take a number of steps to allow their supervisory boards of directors to perform the necessary governance role and reduce the potent influence of labor. For a board to be effective, it should be comprised, in large part, of outside directors who can act independently.[69] Insiders, if present on the board, should comprise a small minority, and insiders should not be present on the board's nominating, compensation, or auditing committees. In addition, interlocking directorships (managers who sit on each other's boards) should be banned. Outside directors should also not be receiving consulting or legal fees from the enterprise, as this could affect independent decision-making. Limits should also be placed on the number of boards on which directors may sit.

65.   Proxy contests, in which a dissident group of shareholders attempts to obtain representation on the board, should not be discouraged through excessive costs (often imposed through legislation) of mounting a proxy challenge. Empirical evidence suggests that the pressure placed by dissidents on incumbent board members (i.e., adversarial mutual monitoring) results in benefits that outweigh the costs. In this manner, proxy contests can perform a beneficial disciplinary role in improving corporate governance.[70]

66.   However, board composition matters little if the board is not actively involved in strategic decisions. The board must have both the power and the incentive to be able to discipline management and/or transfer corporate control. To improve accountability to shareholders, effective incentive contracts must be designed for the board. Payment to the board members should be in the form of company stock, and each of the directors should hold a substantial amount of stock to help ensure that the managing board's interests are aligned with those of other shareholders. Moreover, an independent governance committee should regularly assess the board's performance, and directors should be up for election every year. Again, however, external control devices, like hostile takeovers, may be necessary when monitoring by the board is ineffective.

67.   What should be the **role of the privatization investment funds** in the corporate governance of enterprises? Such funds were intended to function as intermediaries which

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[69]According to a study by Weisbach (1988), insider- and outsider-dominated boards behave significantly differently in terms of monitoring management, with outsider-domination much more likely to result in removal of top management in response to poor company performance (measured in terms of share returns or accounting earnings changes). Moreover, further analysis indicates that replacement of management by outsider-dominated boards increases the firms' values.

[70]See Weston, Chung, and Hoag (1990).

could mitigate the governance problem of dispersed ownership in the privatized firms. To this effect, their potential roles in governance could be classified as passive (a portfolio management approach via the trading of companies' shares in markets—like mutual funds in developed countries), active (through voting, involvement in boards, etc.), or restructuring (with participation in management decisions on types of restructuring measures to be taken—like venture capital funds or holding companies).[71]

68.   However, in the case of Slovenia, the investment funds have failed to specifically take on any of the above roles. Before they can effectively participate in the corporate governance of enterprises, the problem of corporate governance of the funds must first be addressed. Currently, neither external nor internal controls ensure that the funds behave in a manner to optimize shareholders' interests. External controls are largely lacking due to the absence of trading of the funds' shares on an organized market, while the funds' managers have apparently captured most of the voting rights, thereby eliminating shareholders' internal controls. Thus, as a first step, efforts must be made to develop a regulatory framework and provide incentives for funds to list (or conversely, enact penalties for not listing) on the OTC of the LSE. In addition, the regulatory framework could encourage funds to consolidate their holdings in particular firms or groups of firms and, thereby, foster their interest in becoming active participants in the restructuring process. Moreover, much of the above discussion on improving corporate governance for enterprises also applies to the investment funds if shareholders are to regain their ability to monitor fund performance through both internal and external controls and if managers' conflicts of interest are to be checked. Over time, with the appropriate regulatory environment and, in particular, tighter supervision, the investment funds should evolve into mutual funds, venture capital funds, or holding companies, each with clearly-defined and transparent objectives, and with the aim of providing a corporate governance solution for a diverse shareholder base.

F. Conclusions

69.   The privatization program in Slovenia has followed a consensus-based and gradualist approach, shifting over time from a voluntary to a more coercive procedure to bring socially-owned companies into the private sphere. Slovenia's impressive macroeconomic achievements to date could be jeopardized if this approach to privatization fails to improve efficiency and stave off a potential wave of bankruptcies and the consequent loss of employment opportunities. In addition, **privatization of state-owned enterprises has yet to begin**. While it is hoped that the accumulated experience form privatizing the socially-owned enterprises will be used to avoid the pitfalls that have plagued the first wave of privatization, it is also important to move forward quickly with this next stage of privatization.

70.   Privatization has largely transformed ownership of previously socially-owned enterprises in a purely administrative sense, but has failed to bring in new owners from the outside or to produce a substantial change in the incentive structure for management. Progress

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[71]C.E.E.P.N., 1996.

in enterprise restructuring is seriously lagging, owing largely to the very diffuse ownership patterns and to the lack of strategic investors in most of the enterprises. The focus should now shift toward accelerating restructuring through ownership consolidation. To facilitate concentration of voting and decision-making power, it is critical to **foster capital market development and to encourage foreign investment**.

71.   Although Slovenia's high investment grade rating testifies to international confidence in the domestic economy, foreign direct investment in Slovenia remains relatively low. In addition to an inadequate legislative and regulatory base, among the most important reasons underlying this disappointing development may be the perceived hostile atmosphere to foreign investment, which, in turn, seems to reflect the Slovenes' fear that foreign capital could overwhelm their small economy. Experience in Slovenia and in other countries, however, has shown that the benefits of attracting foreign investment go far beyond simply supplementing domestic savings. Foreign investment can trigger a virtuous circle which leads to a deepening of the capital market through encouraging domestic investment. Moreover, foreign interest may be critical to stimulating investment for expansion and innovation.

72.   Many of the enterprises continue to be insider-dominated and operate little changed from the old social enterprise system. This has led to concerns about excessive wage growth, labor hoarding, eroding competitiveness, and, in general, the effectiveness of corporate governance. The exchange rate should not be used as a primary instrument to improve competitiveness, as depreciation could have an adverse effect on corporate governance through a weakening of financial discipline at the enterprise level.[72] Instead, intensive effort must be placed on improving the external and internal control mechanisms to achieve good corporate governance, not only at the enterprise level, but also within the privatization investment funds, which have failed to live up to expectations. To this effect, capital market development again plays a key role, but **the legislative and regulatory framework under which the enterprises operate must also be substantially improved**. In addition, the excessive labor influence on the boards of directors must be significantly reduced.

73.   High real domestic interest rates continue to hamper industrial recovery. The excessively high bank lending rates have also discouraged new investment and restructuring and have induced enterprises to seek funds abroad. Thus, another important measure would be to **create a more competitive banking sector** by adopting the draft banking law and accelerating the process of bank privatization. This year has already seen several mergers in the banking sector, as banks have begun to prepare for tougher foreign competition in anticipation of the new banking law.

74.   The present period of reform presents not only a challenge, but also a unique opportunity to enact the measures necessary to facilitate the emergence of a structure of corporate governance which could place the country well in the top ranks of competitive economies. It is especially crucial to capitalize on the momentum of transition to realize the

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[72]See Bassett (1997).

country's outstanding potential and to avoid lapsing into the sluggish and languid pace of change that characterizes many of the more established market-oriented economies. The Slovenian parliament's ratification of the EU Association Agreement and the European Commission's recent decision to invite Slovenia to join the EU enlargement talks should spur the government to move forward with the remaining reforms needed to bring Slovenia's economy in line with EU standards.

75.   Thus, Slovenia now faces the critical test of whether its newly-privatized enterprise sector can effectively survive and prosper in a competitive global market, so that the "two-horse cart" can reach its destination with most of its bottles of wine intact.

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II. Post-Stabilization Inflation Dynamics in Slovenia[1]

A. Introduction

76.   Since independence in late 1991, Slovenia has made remarkable progress in reducing inflation and inflationary expectations through adherence to a tight money-based stabilization program. In addition, nominal exchange rate and core inflation targets have also been employed intermittently in a multiple anchor approach toward subduing inflation. However, as in many transition economies, inflation inertia has persisted in Slovenia—and it has become increasingly clear that the present multifaceted policy approach in the post-stabilization period requires an urgent re-evaluation before initiation of the next stage of necessary structural reforms.

77.   The purpose of this paper is to investigate the inflation process in Slovenia through an empirical examination of some commonly used determinants of inflation in transition economies. The paper follows the previous work of Ucer (1997), in that no prior structure is assumed and that Granger causality tests and an analysis of theoretical VAR models are undertaken. At the outset, the exploratory nature of this analysis should be stressed, given the numerous structural shifts in the economy during the stabilization period and well-known data deficiencies in transition economies in terms of coverage, time span, and statistical properties. Section B provides a brief review of the literature on inflation dynamics in transition economies, while Section C examines the behavior of inflation and related macroeconomic variables in Slovenia. Section D discusses the widespread use of indexation and wage formation, and Section E presents the data and methodology used in the study. Section F presents the empirical results, while a brief conclusion with policy recommendations is provided in Section G.

B. Inflation Dynamics in Transition Economies

78.   The literature on the determinants of inflation has traditionally identified various demand-pull and cost-push factors that have successfully explained the temporal behavior of inflationary processes. Classic demand-pull factors have included periodic episodes of money or credit growth expansion that have exceeded desired levels, as well as the familiar pattern of monetization of fiscal deficits, either of which creates a disequilibrium in money and goods markets that is eliminated over time through increases in the price level. On the other hand, cost-push factors of inflation have centered on wage growth in excess of productivity gains and on structural supply bottlenecks that tend to drive up price levels in the short run.

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79.   While inflation dynamics in transition economies can be described or modeled by the same basic factors that are used in market economies,[2] there are critical institutional and historical legacies from their previous centrally planned state which should be taken into consideration in any analysis of inflation. To varying degrees, an experience common to these economies has been rapid price increases at the onset of stabilization caused by accumulated monetary disequilibrium or **monetary overhang**—followed by moderate but persistent rates of inflation in the post-stabilization period.[3] Much of the focus in the literature on inflationary processes in transition economies has been on the second phase, evidence of persistent moderate inflation—usually defined as in the range of 10–40 percent a year—after the initial inflation shock has subsided. The source of this inertia has been linked to the traditional factors of excessive money and wage growth, but also to an underlying natural pressure for real exchange rate appreciation in the context of nominal exchange rate stability, and relative price adjustments coupled with downward price rigidities.

80.   Coorey, Mecagni, and Offerdal (1996) as well as many others have described how some of the more **common determinants** of inflation may explain the stickiness of inflation in transition economies. At the start of stabilization, most experienced a sharp decline in output, decreased fiscal revenues, and increased transfer payments, resulting in burgeoning fiscal deficits that provided an impulse for inflation. In addition, bank credit to public enterprises increased sharply, reflecting their unreformed corporate structures and an implicit fiscal deficit substantially higher than reported by the general government. Similarly, it has been noted that it is far easier for wage pressures stemming from a poorly governed enterprise sector to lead to an expansion of credit and inflationary pressures in transition economies.[4,5] In addition, the economies that experienced high degrees of inflation before stabilization began usually

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[2]Sahay and Végh (1995) found that despite significant differences in the economic structure and institutional framework, the inflationary experiences of market and transition economies were very similar. Monetary accommodation and the absence of fiscal discipline were viewed as critical in sustaining inflation, while wage policies were found to be more important in reducing inflation in transition economies than in market economies.

[3]Sahay and Végh (1995) discuss the creation of a monetary overhang and the repressed inflation evident in many formerly planned economies.

[4]Dayal-Gulati (1996) reports that inflationary pressures in the Czech Republic can be traced to rapid growth in wages, especially in the nontradable goods sector. He suggests that the underlying problem—weak corporate governance—should be addressed through an acceleration in the privatization and restructuring process of the enterprise sector.

[5]Bole (1997a) attributes persistent inflationary pressures in Slovenia to the growth in real wages, stemming from the inability of workers and management to agree to a "social contract" until 1995, and its related effects on nontradable prices. Šonje and Škreb (1997) point to a similar experience in Croatia.

contained deeply embedded, backward-looking wage indexation arrangements that further stymied attempts to reduce inflation inertia.

81.   In transition economies, **real exchange rate appreciation** has been a widely observed phenomenon.[6] Large capital inflows after stabilization set in caused countries with relatively stable nominal exchange rates to experience real appreciation, as these inflows influenced money growth and inflation. Countries with flexible nominal rates saw downward pressure on inflation concurrent with nominal and real appreciation. What factors are behind this observed tendency of real exchange rate appreciation? Richards and Tersman (1995) have suggested that the initial rate may have been undervalued, reflecting low domestic prices of tradable goods in relation to comparable goods in world markets. They also reported that differential productivity growth between tradable and nontradable sectors—the familiar **Balassa effect**—could lead to higher nontradable goods prices and therefore to a real appreciation. In a similar fashion, Bole (1997a) argued that rapid growth in nontradable prices was evident in Slovenia's post-stabilization experience due to increases in controlled prices, and through a "demonstration effect" of higher (productivity-induced) wages in the manufacturing sector filtering into service sector wages. In turn, each of these factors could be expected to affect inflation persistence through the real exchange rate. Šonje and Škreb (1997), in their study on Croatia's inflation experience, concluded that economies in transition should let the nominal and real exchange rates find their own levels (after nominal pegs have wrenched out the worst inflationary expectations), and that policymakers should not fear nominal appreciation.[7]

82.   Theory and evidence have also shown that **relative price adjustments** in the context of downward rigidities can contribute to inflation inertia. In transition economies, the variance of the relative prices falls after stabilization but tends to remain higher than in advanced market economies; likewise, the distributions (components of CPI relative to CPI average) tend to remain positively skewed—lending credence to the theory that inflation persistence may be driven by a few relative price adjustments.[8] In this regard, administered price increases may have supported higher inflation rates in the context of downward sticky prices. Another explanation for the persistence of relative price variability in transition economies after comprehensive price liberalization can be traced to the **cost recovery hypothesis**—in which

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[6]See Halpern and Wyplosz (1996).

[7]They point out that allowing nominal appreciation pressures to impact exchange rates enhances credibility by taking advantage of the indexation measures and other exchange rate–price transmission mechanisms developed during periods of high inflation.

[8]Coorey, Mecagni, and Offerdal (1996) found that broad money and wage growth were the most important determinants of inflation, with relative price variability having a smaller impact at moderate rates of inflation. In the case of Slovenia, the study revealed that relative price variability in the form of skewness measures tended to explain inflation.

the pricing of services during the post-stabilization period starts to include the recovery cost of capital, which had previously been inherited for free from the state (Zavoico 1995).[9]

83.   What inferences can be drawn from this brief review of the literature? First, the normal monetary and fiscal impulses that affect inflation in advanced economies are evident in transition economies. Second, it is clear that the previous economic structures of these economies have left a heritage of rigid price and wage determination mechanisms, which critically affect the inflation process. Administrative price adjustments, sectoral wage formation behavior, and the relationship between tradable and nontradable productivity are important ingredients in the inflation transmission process in transition economies. Third, in many respects these relationships can be directly linked to the level and efficiency of corporate governance and, therefore, to the degree of enterprise restructuring and privatization in the economy. Without an extensive restructuring of these enterprises, inflation persistence can be expected to continue. Finally, there is some evidence that it may be possible to harness the pressures for real exchange rate appreciation, so prevalent in transition economies, to reduce inflation and inflationary expectations through an allowance of nominal exchange rate appreciation.

C. The Behavior of Inflation and Related Macroeconomic Variables

84.   Table II-1 presents the performance of inflation and a few other important macroeconomic variables over the 1992.1–1997.3 time frame. The four different types of inflation indices exhibit much of the typical behavior found in transition economies, with sharp increases in **controlled and nontradable prices** affecting the outcome of overall inflation, (see Figure I-1). Although growth in the retail price index (RPI) has slowed dramatically in recent years—reaching single digits in 1995 from close to 90 percent in 1992—persistent inflationary inertia appears to have stubbornly kept rates in an approximate 8–10 percent range.[10] While controlled or administered price increases on petroleum products and electricity have declined through greater attainment of full cost recovery, they consistently provided the impetus for further growth in the retail price index. Likewise, growth in nontradable prices in

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[9]This hypothesis also has implications for the real exchange rate. It is assumed that price levels of services are below international PPP comparisons (suggesting an undervalued real exchange rate) and should tend to slowly rise as real incomes rise (suggesting that the real rate will appreciate more steeply, compared with advanced market economies). Zavoico concludes that the only way to reach a low inflation rate (below 10 percent) short of subsidizing capital-intensive nontradable industries is to allow a nominal appreciation to achieve the same appreciation of the real rate that would have take place via domestic inflation.

[10]Delays in administered price increases in the first quarter of 1997 allowed the year-on-year inflation rate to drop to 7.4 percent in March. However, when these controlled price increases took effect in May and June, annualized inflation increased to 9.6 percent by August.

Figure II-1. Slovenia: Inflation

Nontradable and Tradable Inflation
(1992.1-1997.3)

—— Nontradable price index

— — — Tradable price index

Retail Price Indices
(1992.1-1997.3)

——— Retail price index

— — — Controlled retail price index
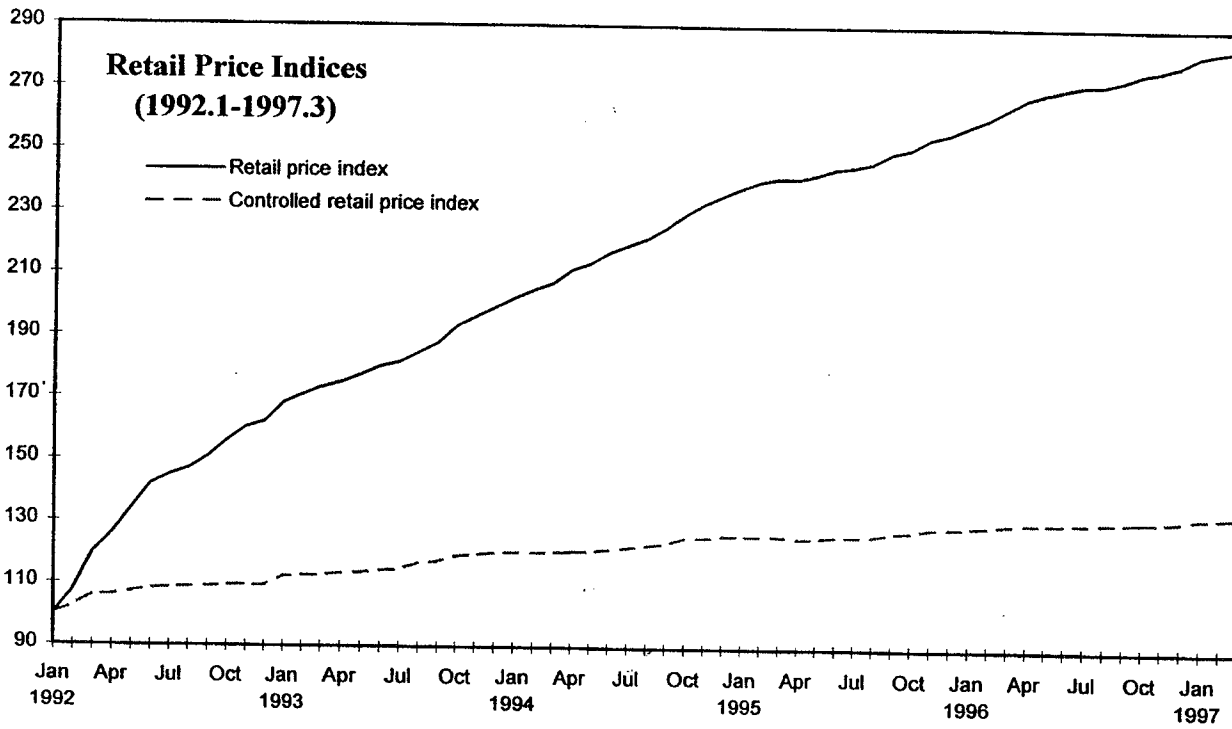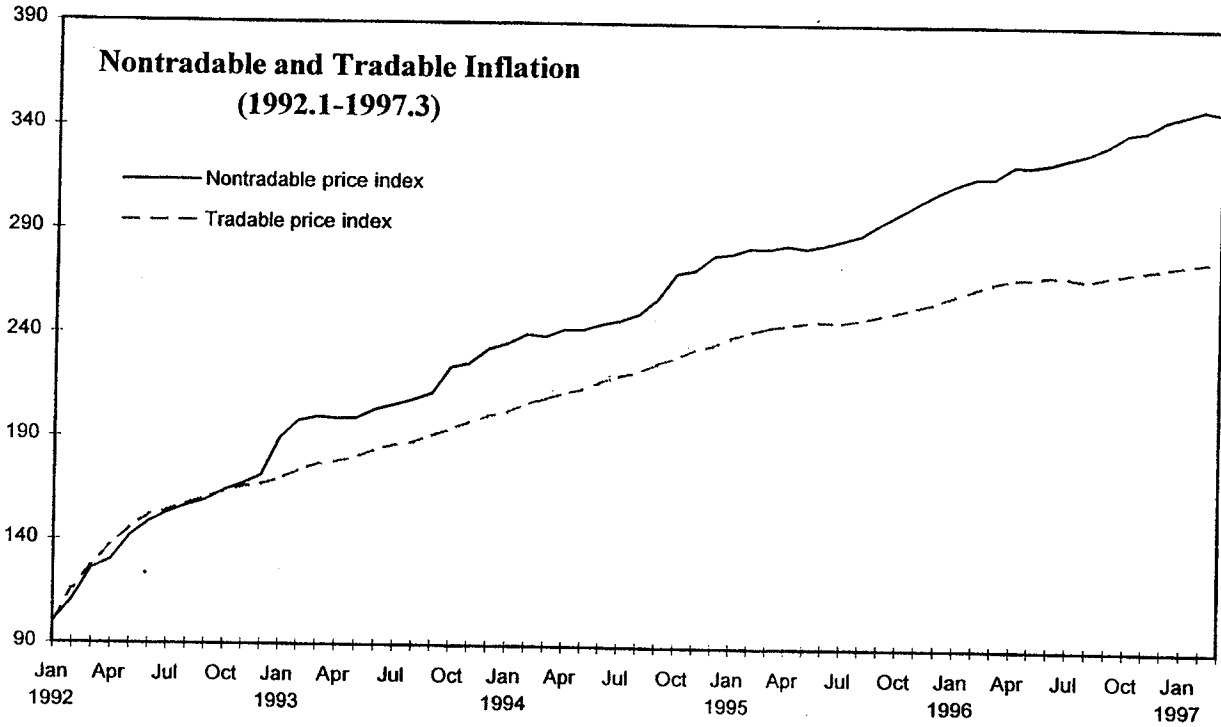
Source: Bank of Slovenia.

Table II-1. Slovenia: Macroeconomic Variables, 1992–1997

	1992	1993	1994	1995	1996	1997 1/
	(Annual percentage change)					
RGDP	-5.5	2.8	5.3	4.1	3.1	2.2
Industrial production	-13.2	-2.8	6.4	2.0	1.0	0.1
Retail price index	88.2	22.9	18.3	8.6	8.8	7.4
Retail price index controlled	9.6	9.8	5.0	2.3	2.4	2.5
Non-tradable price index	71.4	36.1	19.6	11.1	11.7	10.2
Tradable price index	67.1	20.3	17.5	9.2	6.8	4.7
Reserve money	128.6	38.5	57.6	25.2	15.6	16.9
M2	147.6	63.5	60.4	25.5	23.3	25.0
M2x	127.0	63.7	42.4	27.9	21.4	19.2
Real broad money	20.7	33.2	20.3	17.8	11.6	11.0
Real private sector credit	3.2	8.7	11.6	32.4	8.4	3.7
Nominal wages	130.9	31.5	23.9	11.5	16.7	12.5
Real wages	30.5	7.2	4.7	2.7	7.3	7.1
Productivity	5.3	12.8	6.2	3.1	5.4	3.7
Tolar per U.S. dollar (end-period)	98.7	131.8	126.5	126.0	141.5	158.0
Tolar per DM (end-period)	61.2	76.4	81.6	87.9	91.0	91.3
Nominal effective exchange rate (1993=100, average)	126.7	100.0	87.9	88.6	79.4	76.1
Real effective exchange rate (RPI based, 1993=100, average)	98.9	100.0	102.8	113.8	109.3	108.4
Real effective exchange rate (ULC based, 1993=100, average)	85.5	100.0	101.7	114.2	108.6	108.7
	(In percent of GDP)					
General government fiscal balance	0.2	0.3	-0.2	0.0	0.3	0.0
Trade balance	6.3	-1.2	-2.3	-5.1	-4.6	...
Current account	7.4	1.5	3.8	-0.2	0.3	...
Capital and financial account	-2.3	-0.6	0.6	1.4	2.9	...
Gross foreign exchange reserves 2/	1.2	1.3	2.1	2.0	2.6	2.9

Sources: Bank of Slovenia; and Fund staff estimates.

1/ 1997 figures are first quarter results.
2/ In months of imports of goods and services.

relation to the tradable sector furnishes evidence that the **Balassa and spillover demonstration effects** discussed by previous authors are impacting inflation dynamics.

85.   The growth in monetary aggregates exhibits a deliberately tight money base stabilization program undertaken by Slovenia at the onset of liberalization and impressively demonstrates discipline in implementing monetary policy. Moreover, unlike many other transition economies, the overall general government balance figures in Table II-1 convey the absence of inflationary pressures stemming from profligate fiscal spending. However, the **nominal and real effective exchange rates** shown in Figure II-2 reveal a tendency toward implicit nominal pegging of the tolar-deutsche mark exchange rate over the last three years, while the trend real exchange rate appreciation in Slovenia has been below that of its Visegrad neighbors. This would suggest that the Slovene authorities have followed a **dual objective, money and exchange rate based policy,**[11] in which monetary aggregates and the nominal exchange rate are targeted simultaneously through sterilized intervention of capital inflows.[12] It also highlights the fact that while the tight monetary program has probably limited price level increases, blocking the effect of capital inflows on the nominal exchange rate has forced the natural real appreciation of the exchange rate to take place through higher inflation.[13] Finally, while the pattern of growth in **real wages** and productivity displayed a parallel path during 1993–95, during the last 1½ years real wage growth spurted past gains in productivity, placing additional upward pressure on inflation.

D. Indexation, Wage Formation, and Inflation

86.   The prolonged bouts of hyperinflation that plagued the former Yugoslavia (SFYR) resulted in the widespread use of **indexation mechanisms** in financial and labor contracts throughout Slovenia. In fact, indexation of financial contracts has become so common in Slovenia that nominal contracting has all but disappeared. In the banking system, all tolar deposits are subject to indexation—either linked to the RPI ("R" clause) or the tolar/deutsche mark exchange rate ("D" clause). Most tolar deposits are linked to the R clause, while banks'

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[11]The authorities have also emphasized the importance of achieving certain inflation targets.

[12]The Slovenian authorities use a complicated array of monetary policy instruments to control liquidity in the economy. One of the main instruments is the BOS foreign exchange bills, which are denominated in deutsche marks, with a maturity ranging from two months to one year. While issuance of these foreign exchange bills reduces pressure on the tolar to appreciate, domestic operations are undertaken to offset the expansionary impact on base money. The authorities also directly intervene in the foreign exchange market if the bank-enterprise rate exceeds a 60-day moving average by 1.25 percent (Coats et. al., 1997).

[13]Bole (1997b) describes Slovenia's experience with sterilized intervention and the implementation of capital controls to limit the real appreciation of the tolar over the 1992–96 period.

Figure II-2. Slovenia: Exchange Rates

Tolar-DM Exchange Rate and Implicit Bands
(1994.7-1997.7)

— Tolar/DM
← Upper 2.25% Band
+ Lower 2.25% Band

Visegrad Real Exchange Rates
(1992.6-1997.6)

— Hungary
-- Slovak Republic
···· Czech Republic
■■ Poland
■ Slovenia
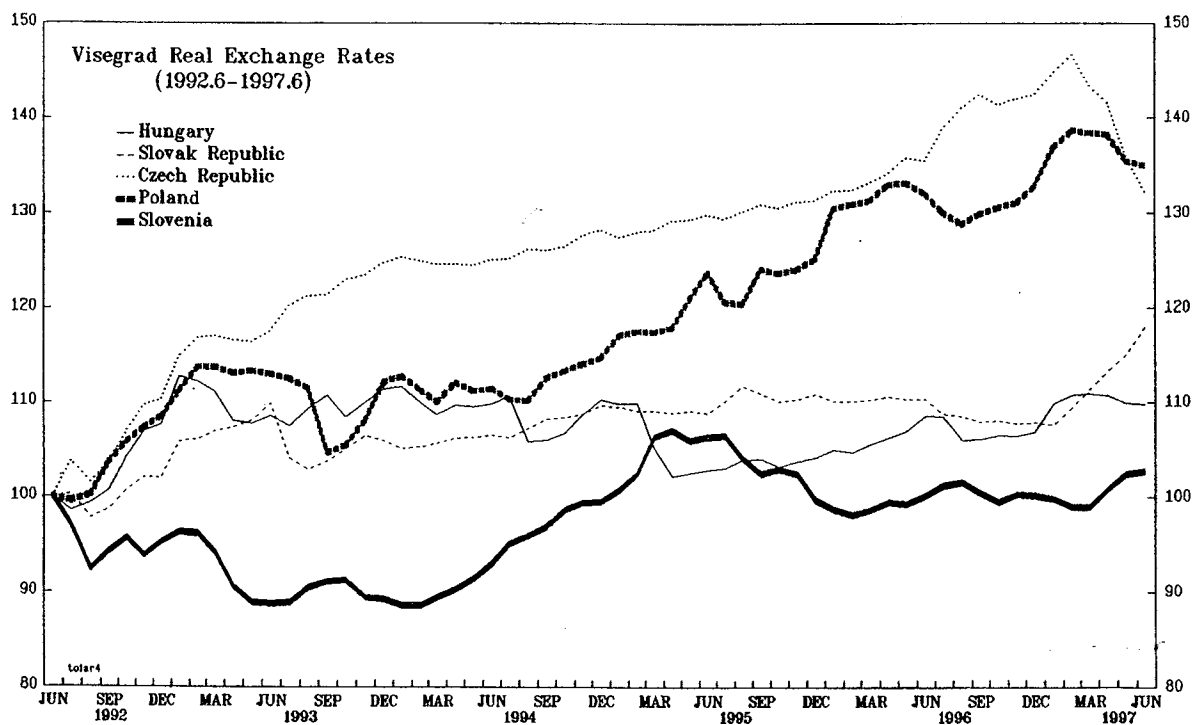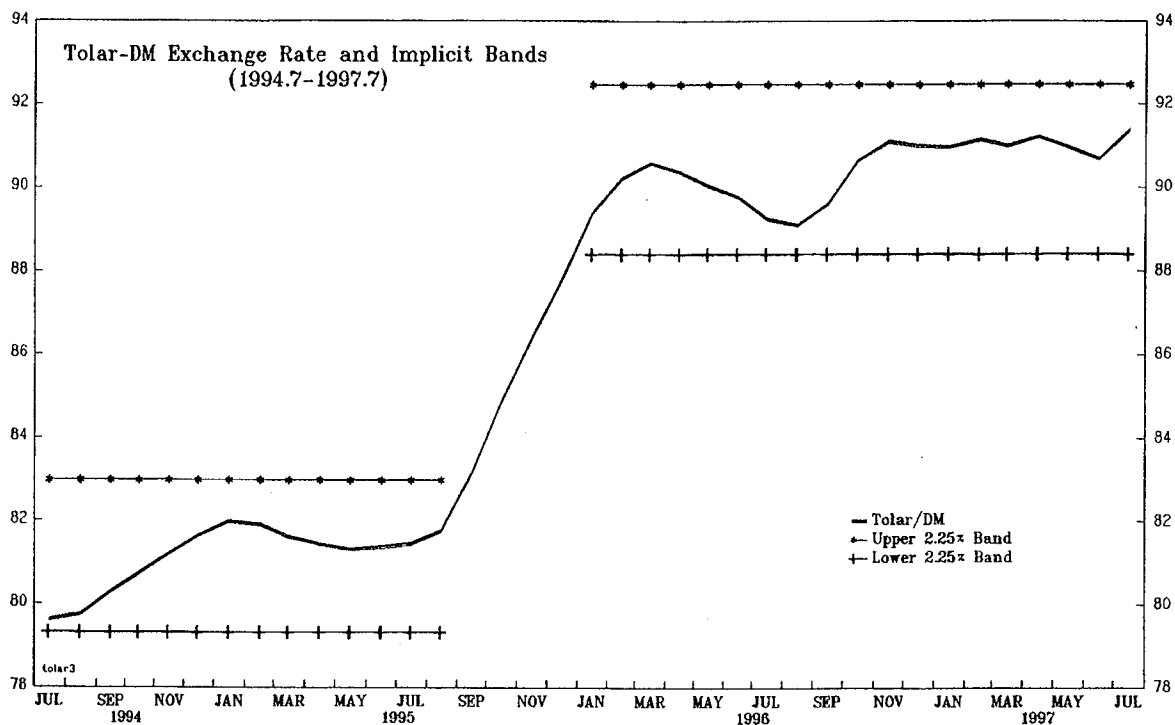
Sources: Bloomberg and INS, Information Notice System.

assets are generally linked to the D clause, or revaluation rate.[14] While the real component has shown little movement, administered price increases have created a substantial amount of variability in the RPI, which has been passed on to the R clause component, and therefore onto the nominal rate. Thus, movements in the retail price index and exchange rate have implications for the balance sheet of the banking system and should affect nominal monetary aggregates as economic agents attempt to hold targeted amounts of real money balances. In addition, given the relative stability of the exchange rate over various periods, these different indexation mechanisms may also help to explain the wide interest rate spreads found between lending and deposit rates.[15]

87.   In a similar fashion, labor contracts in Slovenia are indexed to the retail price index, in line with the R revaluation clause used in financial contracts. Prior to June 1995, the R clause was set to the previous month's rate of inflation. Since then the indexation period has been lengthened several times, so that by May 1997 it was set to the previous 12 months' rate of inflation.[16] Within this type of system any growth in the retail price index would naturally affect the growth of wages with a short lag and feed back into inflationary pressures almost immediately. With these indexation measures deeply embedded in the Slovene economy, one would expect to find that movements in inflation, wages, and monetary aggregates are closely related.

88.   **Wage formation behavior**, with roots in the unique market socialism of the SFRY, has been guided by the annual tripartite Social Agreement between government, labor unions, and employers. While the Agreement has compulsory coverage and sets the overall tone of labor market conditions, General Collective Agreements for both the market and nonmarket sectors spell out specific monthly pay scales. Unfortunately, these centralized pay scales have not been effective in reining in wage increases, nor have the Agreements been successful in slowing the growth in nonwage allowances. It has been noted that this relatively centralized system does not force enterprises to take full responsibility for their labor costs, nor does it allow differential sectoral or enterprise-specific productivity gains to be reflected in greater

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[14]Given the continuous observation of the exchange rate, the D adjustment clause does not involve an indexation lag; however, the R adjustment has an indexation lag that could have a substantial effect on the outcome of contracts. Feldman (1995) fully describes indexation mechanisms in Slovenia.

[15]With a majority of deposits and liabilities indexed to two different arrangements, differing degrees of stability in the revaluation rates could lead to widening spreads as financial intermediaries pass on the increased relative volatility to deposit and lending rates.

[16]The revaluation clause was adjusted to the previous three months' inflation rate in June 1995, lengthened to the previous four months' inflation rate in February 1996, and set to the previous six months' inflation rate by December 1996, before the final change in May 1997.

wage dispersion.[17] In essence, these mechanisms exacerbate the **Balassa effect** and positively affect inflation, as "any" productivity gain can propagate wage increases that must be passed on to the rest of the work force in an effort not to allow any segment of the population to fall behind.

E. Data and Methodology

89.   The empirical methodology used in this study is that of an unrestricted vector autoregressive (VAR) model, which includes the following monthly variables over the 1992.10–1997.3 time frame. All variables have been logged and are from the BOS's *Monthly Bulletin*.

Monetary aggregates:	RM_t (Reserve Money), $M2_t$ and $M2x_t$
Retail price index:	RPI_t
Total wages and other remunerations:	TOT_t .
Nominal SIT/DM exchange rate:	DM_t .

The three different monetary aggregates are examined in model specification to see which provides a better explanation for the transmission of inflation.[18] The theoretical framework for the choice of these four variables stems from Bruno (1993). In general, each VAR model can be expressed as

$$x_t = c + \sum \Phi x_{t-1} + \varepsilon_t, \tag{1}$$

where c is a vector of constants; x_{t-1} is a vector of variables specified for each model; Φ is a time invariant matrix of autoregressive coefficients; and ε_t is a vector of white noise residuals. The Akaike Information Criteria (AIC) was used to determine the lag structure in specifying the VAR model.[19] The appealing aspect of VAR systems is that no a priori assumptions

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[17]OECD Economic Surveys, 1997.

[18]Given that currency substitution has been in the range of 30–40 percent of total deposits, exchange rate changes will directly affect M2x, effectively biasing our results. However, it is important to examine the relationship between the broadest monetary aggregate and inflation, while keeping this limitation in mind.

[19]The application of the AIC resulted in a model with four lags. Given the short time span and without loss of generality, we report results using two lags. Typically, VAR models specified in levels are tested for cointegration among the variables and, if found, the VAR system is respecified to include an error correction term. However, the results of our stationarity tests reported below suggested the exclusion of key variables in any vector error correction model

(continued...)

concerning the exogeneity of policy variables are placed on the model and they provide a convenient means to summarize the empirical channels with respect to economic relationships. The estimated systems can be utilized to evaluate the strength of these relationships based upon variance decompositions and impulse response functions.

90.   **Variance decompositions** originate from the moving average representation of the VAR model. Often called innovation accounting, variance decompositions show the portion of the forecast error variance for each variable that is attributable to its own innovations and to shocks with respect to the other system variables.[20] **Impulse response functions**, which also originate from the moving average representation of the VAR model, show the estimated response of each variable to a one standard deviation impulse in one of the innovations. These dynamic multipliers tell us how new information in one of the variables causes revisions in the forecast of another variable. The impulse response functions are graphed with a two standard deviation confidence interval band estimated through Monte Carlo integration.

91.   Before implementation of the VAR models, the respective time series are analyzed to determine the existence of stationarity and examined through some basic descriptive statistics. We utilize the well-known augmented Dickey-Fuller (ADF) and Phillips and Perron (PP) unit root tests.[21] From a simple AR process $A(L) u_t = \varepsilon_t$, where $A(L)$ denotes a polynomial in the lag operator, the stationarity of the process depends upon the roots of the polynomial equation $A(L)=0$. If all roots are outside the unit circle, the process is stationary. If any root is equal to 1 in absolute value the process is not stationary and is said to be integrated of order one or I(1) and must be differenced in order to ensure stationarity. Finally, a set of common bivariate Granger causality tests is estimated.

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[19](...continued)
(VECM) and our attempts at specifying a VECM proved problematic, as slight changes in lag structure provided substantially different results. Therefore, we do not include a cointegrating vector.

[20]Since no contemporaneous terms enter the VAR system, any contemporaneous correlations are reflected in the cross-equation residual correlation. The Choleski factorization of the variance-covariance matrix of estimated variables is used to eliminate the cross-equation residual correlations among any given innovation series and those series that appear prior in the ordering. Thus the choice of variable ordering does affect the estimation of the VAR variance-covariance matrices—therefore various orderings are examined.

[21]When the underlying data generating process is more complicated than a simple AR(1) process, the ADF test augments the basic Dickey-Fuller test by including additional higher order lagged terms to capture autocorrelation in the error term. The PP test applies a non-parametric correction in the estimation of the variance of the error term.

F. Empirical Results

92.   As a prelude to examining the Granger causal relations and the VAR analysis, some basic descriptive statistics, correlations, and unit root tests are performed. The results of the unit root tests are presented in Table II-2. The null hypothesis of one unit root cannot be rejected for the inflation rate and M2x series at the 5 percent level under either the ADF or PP test. While the null hypothesis of one unit root cannot be rejected for the exchange rate under the PP test, the ADF test cannot reject the hypothesis of two unit roots. As mentioned above, this probably represents a more complicated and persistent error process in the calculation of the variance, which is more easily handled by the nonparametric adjustment of the PP test. Therefore, we can assume that the exchange rate is an I(1) process, that is rendered stationary in first differences. The unit root tests on the reserve money and total wage series, however, suggest that both are stationary in levels. This finding was consistent over various lags and visual checks of the residuals. Given the exploratory nature of this study and the need to ensure uniformity among variables, we will work with the first differenced data.

93.   The descriptive statistics of all variables in log first differences are displayed in Table II-3. The most striking item in this table is that the Ljung-Box Q-tests reject the null hypothesis of zero autocorrelation—conclusive proof that these series contain a large degree of persistence and indicative of (near) unit root processes. Additionally, the Jarque-Bera normality tests show that inflation and the exchange rate contain sizable non-normal distributions. Interestingly, among the monetary aggregates, the reserve money series contains a relatively dispersed distribution, while the M2x series shows signs of excess kurtosis. Similarly, the **inflation series exhibits excessive skewness and kurtosis**, as would be expected in view of the discussion on relative price increases and inflation inertia. The correlation matrices in Table II-4 demonstrate a strong contemporaneous correlation of inflation with the exchange rate and the broader monetary aggregates, M2 and M2x. Although there is a surprising negative correlation of inflation with total wages, the correlation between lagged total wages and inflation is quite strong, reflecting the backward indexation process in Slovenia. Besides the correlation between broader monetary aggregates and inflation, the correlation between M2x and total wages also stands out.

94.   The results of the **Granger causality tests** are reported in Table II-5. The monetary block reveals that of the three monetary aggregates examined, there is strong evidence that M2x growth Granger causes retail price inflation and that M2 growth Granger causes total wage growth. These results hold up across most lags and the various F-tests are significant at least at the 5 percent level. Regarding the wage growth block, there is some evidence that lagged total wage growth impacts inflation, particularly in the first period, and that total wage growth affects various monetary aggregates at different lags. The strongest results emanate from the depreciation block of F-tests, as there is persuasive evidence that depreciation in the tolar-mark exchange rate causes inflation and wage growth. However, as mentioned above, these results are to be expected, given the existing pervasive indexation in Slovenia, which would quickly pass through changes in the exchange rate to inflation and on to wages.

Table II-2. Slovenia: Unit Root Tests

	Levels		Differences	
	ADF 1/	PP 2/	ADF 1/	PP 2/
lrm	-2.41	-4.91 **	-5.20 ***	-16.90 **
lm2	-1.38	-3.16	-2.63	-5.94 **
lm2x	-2.83	-2.63	-3.80 **	-5.92 **
lrpi	-0.60	-2.30	-3.95 ***	-4.05 **
ldm	-2.28	-2.35	-2.13	-4.45 **
ltot	-2.85	-4.62 **	-6.08 ***	-10.62 **

1/ All ADF regressions in levels contain a constant, a linear trend, and four lags of the dependent variab sample period covers 1992:10-1997:3; all series are in logs; (*), (**), (***) indicate rejection of the null hypothesis at significance levels of 10, 5, and 1 percent, respectively.

2/ Levels include a trend and an intercept, while first differences include an intercept only.

Table II-3. Slovenia: Descriptive Statistics 1/

	lrm	lm2	lm2x	lrpi	ltot	ldm
Mean	0.027	0.040	0.028	0.012	0.018	0.009
Standard deviation	0.108	0.030	0.018	0.007	0.065	0.010
Skewness	0.018	0.591	0.409	1.278	-0.438	0.868
Kurtosis	3.037	2.997	3.466	5.075	3.109	2.952
Jarque-Bera 2/	0.006	3.086	1.992	24.387	1.750	6.784
(p-value)	0.997	0.214	0.369	0.000	0.417	0.034
Ljung-Box Q-statistic 3/	21.502	28.721	29.995	38.719	12.394	59.061
(p-value)	0.001	0.000	0.000	0.000	0.056	0.000

1/ All series are log first differences. Skewness and kurtosis of a normal distribution are 0 and 3, respectively.

2/ Under the null hypothesis of normality, the Jarque-Bera statistic is distributed as a chi-square with 2 degrees of freedom.

3/ The Ljung-Box *Q-statistic* tests for autocorrelation and is distributed as chi-square, with degrees of freedom equal to the number of autocorrelations, six lags.

Table II-4. Slovenia: Correlation Matrices 1/

	lrm-lm2-lm2x 2/	lrpi	ltot	ldm
lrm	1.000			
lrpi	0.121	1.000		
ltot	0.399	-0.021	1.000	
ldm	0.155	0.446	0.241	1.000
lm2	1.000			
lrpi	0.493	1.000		
ltot	0.113	-0.021	1.000	
ldm	0.401	0.401	0.241	1.000
lm2x	1.000			
lrpi	0.323	1.000		
ltot	0.620	-0.021	1.000	
ldm	0.498	0.446	0.241	1.000

1/ All series are log first differences.

2/ Related monetary aggregates are stated in corresponding matrix row.

Table II-5. Slovenia: Granger Causality Tests

	Lag length in number of months					
	1	2	3	4	5	6

Money Growth

	1	2	3	4	5	6
RM growth--> RPI inflation	0.1	0.3	0.3	0.2	0.2	0.3
M2 growth--> RPI inflation	3.6 **	2.2	0.6	0.9	0.9	1.0
M2X growth--> RPI inflation	10.3 **	5.3 ***	3.9 **	1.9	2.9 **	3.3 **
RM growth--> Totwage growth	1.2	1.0	0.8	0.8	1.3	2.0
M2 growth--> Totwage growth	1.6	0.7	7.5 **	10.9 **	9.0 **	6.6 **
M2X growth--> Totwage growth	6.0 **	3.1 **	1.7	2.1	1.2	1.8
RM growth--> Depreciation	0.5	0.6	1.2	1.0	0.9	2.1 *
M2 growth--> Depreciation	1.6	4.4 **	2.6 *	1.4	1.2	0.4
M2X growth--> Depreciation	0.0	0.9	0.2	2.3 *	0.8	1.2

Wage Growth

	1	2	3	4	5	6
Totwage growth-->RPI inflation	6.4 **	1.2	1.6	0.7	2.4 *	2.1 *
Totwage growth-->RM growth	2.9 **	2.9 **	2.0	1.5	1.4	1.1
Totwage growth-->M2 growth	0.0	0.0	0.2	1.1	0.7	0.5
Totwage growth-->M2X growth	0.5	4.3 **	2.9 **	1.9	1.5	1.2
Totwage growth-->Depreciation	0.6	0.5	2.9 **	1.8	1.9	1.8

Depreciation

	1	2	3	4	5	6
Depreciation-->RPI inflation	9.4 **	3.9 **	3.2 **	4.0 **	3.1 **	3.2 **
Depreciation-->Totwage growth	4.0 **	5.5 ***	3.9 **	3.3 **	3.7 **	3.0 **
Depreciation-->RM growth	5.3 **	4.2 ***	2.8 **	1.9	1.5	1.0
Depreciation-->M2 growth	4.9 **	0.9	0.1	0.1	0.2	0.4
Depreciation-->M2X growth	2.3 *	0.9	0.3	0.4	0.7	0.7

Inflation

	1	2	3	4	5	6
RPI inflation-->RM growth	2.5	2.8 *	2.0	2.4 *	2.2 *	4.0 **
RPI inflation-->M2 growth	1.4	1.8	1.4	0.7	0.9	0.5
RPI inflation-->M2X growth	7.1 **	2.6 *	1.1	0.5	0.6	0.7
RPI inflation-->Totwage growth	6.3 **	4.1 **	3.3 **	3.3 **	3.6 **	3.1 **
RPI inflation-->Depreciation	1.4	4.6 **	1.9	1.6	0.5	0.8

1/ Standard *F-tests*; (*), (**), (***) indicate rejection of the null hypothesis at significance levels of 10, 5, and 1 percent, respectively. The null hypothesis is "no Granger causality"; "-->" indicates direction of causality.

Finally, the inflation block of Granger causality tests repeats the strong evidence of bi-directional causality between inflation and wages, and suggests that inflation growth may be accommodated through higher growth in reserve money.[22]

95.   The **variance decompositions** are presented in Tables II-6–II-8, using the causal ordering of monetary aggregate growth, RPI inflation, growth in total wages, and changes in the exchange rate.[23] The rationale for this ordering is simply that changes in monetary aggregates affect inflation through the normal channels, which feeds into wage growth through indexation. Changes in the exchange rate are assumed to be affected by inflation through a PPP effect. The results shown in Table II-6 demonstrate that most of the forecast error variance in reserve money and inflation can be attributed to their own innovations at various horizons. The forecast error variance of wage growth and changes in the exchange rate can be attributed, to some extent, to innovations in reserve money growth and inflation. In contrast, using M2 growth in place of reserve money growth (Table II-7), demonstrate that a substantial percentage of the forecast error variance in inflation and depreciation can be attributed to M2 innovations. Variance decompositions using M2x growth (Table II-8) exhibit an even greater importance of M2x innovations in explaining the forecast error variance in inflation, wage growth and changes in the exchange rate. Also, it is quite surprising that innovations in wage growth and M2x dominate the exchange rate's own innovations in determining forecast error variance.

96.   The **impulse response functions** shown in Figures II-3–II-5 employ the same causal orderings as the variance decompositions and apply the same three monetary aggregates. The first column of each figure shows the responses of each variable to a one standard deviation shock or innovation in the respective monetary aggregate. While innovations in reserve money and M2x growth sharply impact wage growth within one period and quickly subside, innovations in M2 growth tend to affect the exchange rate with a lag of three to five months and the inflation rate within two months. From the second column, across all three VAR formulations, there is evidence that a one standard deviation shock to inflation positively impacts wage growth and the exchange rate within two to four months. Finally, from the last column, the innovations in the exchange rate appear to affect the inflation rate, using a VAR model with the reserve money aggregate, and wage growth and inflation under a VAR model with the M2x aggregate. In addition, the response of inflation to a one standard deviation shock in the exchange rate exhibits a slow decay or persistence.

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[22]These results closely mimic the findings of Ucer (1997), who used reserve money growth in examining the determinants of inflation in Slovenia.

[23]The results that follow were surprisingly robust across various orderings in the VAR models. However, as expected, moving the inflation rate and monetary aggregates further apart in the VAR orderings tended to weaken the statistical relationships. The following other orderings were examined: (1) growth in money aggregate, depreciation, inflation, and wage growth; and (2) inflation, wage growth, depreciation, and growth in money aggregate.

Figure II-3. Slovenia: Response to One S.D. Innovations ± 2 S.E.
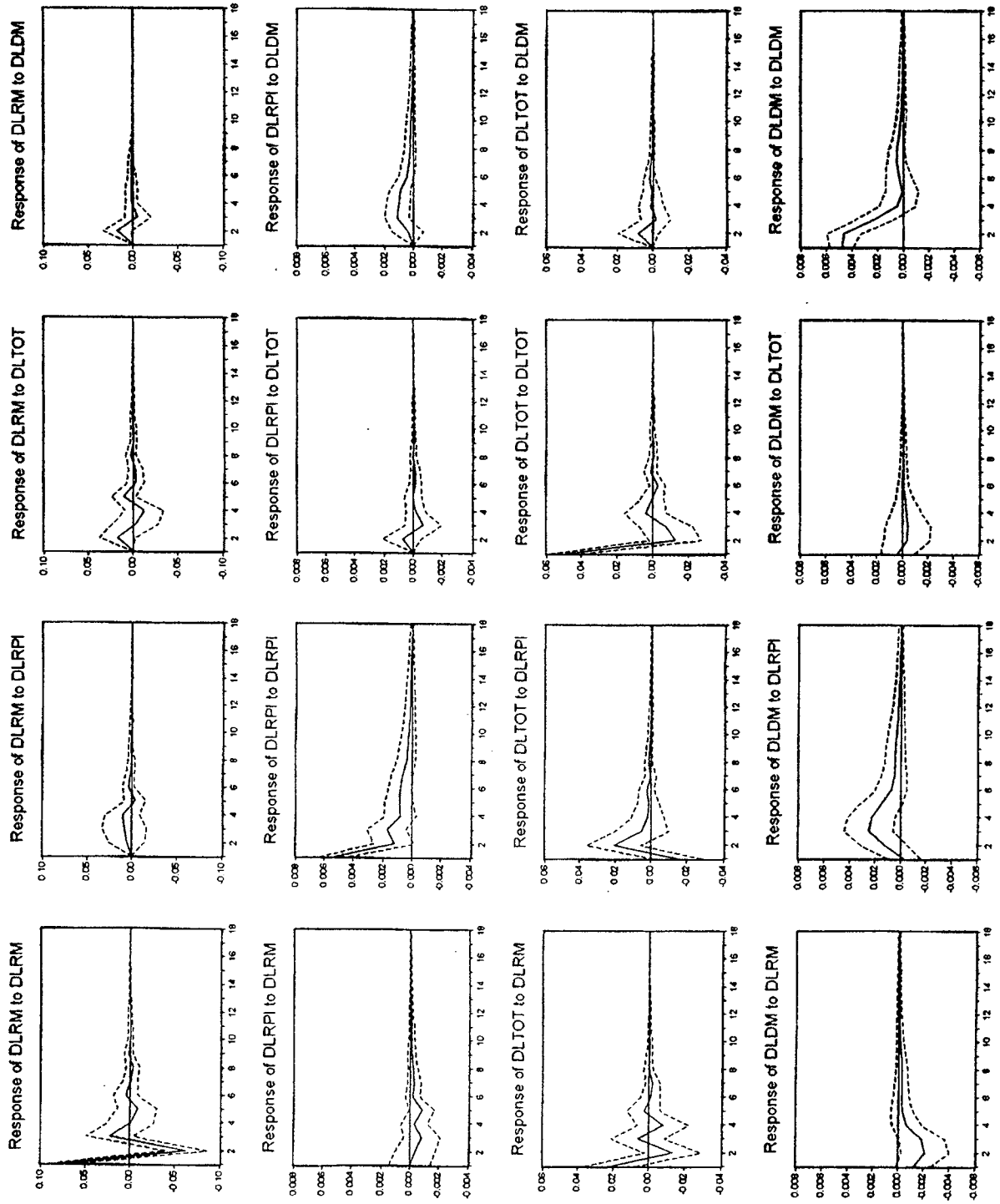
Figure II-4. Slovenia: Response to One S.D. Innovations ± 2 S.E.
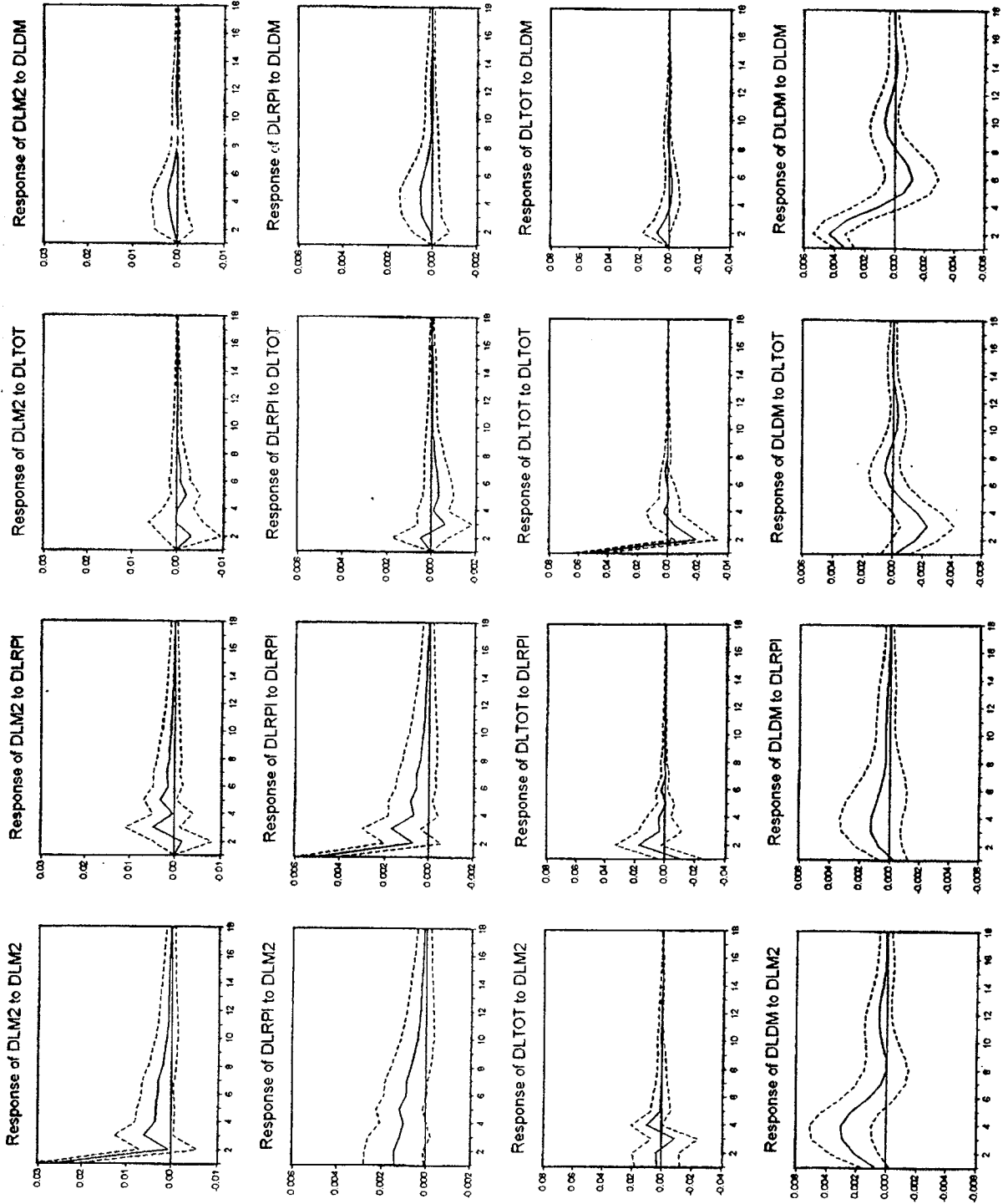
Figure II-5. Slovenia: Response to One S.D. Innovations ± 2 S.E.

Table II-6. Slovenia: Variance Decompositions
(First ordering, using Reserve Money growth)

Variable	Lags	RM growth	RPI inflation	Wage growth	Depreciation
RM growth	1	100.0	0.0	0.0	0.0
	6	89.9	2.0	5.2	2.9
	12	89.7	2.1	5.3	3.0
	18	89.7	2.1	5.3	3.0
RPI inflation	1	0.0	100.0	0.0	0.0
	6	4.1	84.4	2.8	8.7
	12	4.4	83.8	2.8	9.1
	18	4.4	83.7	2.8	9.1
Wage growth	1	15.4	7.4	77.2	0.0
	6	18.5	16.9	62.7	1.9
	12	18.5	17.0	62.6	1.9
	18	18.5	17.0	62.6	1.9
Depreciation	1	5.8	0.3	0.6	93.3
	6	13.0	21.0	0.8	65.3
	12	13.0	21.5	0.8	64.7
	18	13.0	21.6	0.8	64.6

Note: ordering is RM, RPI inflation, total wages, and depreciation.

Table II-7. Slovenia: Variance Decompositions
(First ordering, using M2 growth)

Variable	Lags	M2 growth	RPI inflation	Wage growth	Depreciation
M2 growth	1	100.0	0.0	0.0	0.0
	6	91.1	5.1	2.0	1.8
	12	90.3	5.9	2.1	1.8
	18	90.2	5.9	2.1	1.8
RPI inflation	1	8.4	91.6	0.0	0.0
	6	23.2	71.8	2.3	2.6
	12	26.2	68.7	2.4	2.7
	18	26.5	68.4	2.4	2.7
Wage growth	1	0.3	3.5	96.2	0.0
	6	5.1	11.4	81.4	2.0
	12	5.2	11.4	81.3	2.1
	18	5.2	11.4	81.3	2.1
Depreciation	1	4.1	0.6	0.5	94.7
	6	33.6	5.5	12.2	48.7
	12	33.1	5.8	12.5	48.6
	18	33.2	5.9	12.4	48.4

Note: ordering is M2 , RPI inflation, total wages, and depreciation.

Table II-8. Slovenia: Variance Decompositions
(First ordering, using M2x growth)

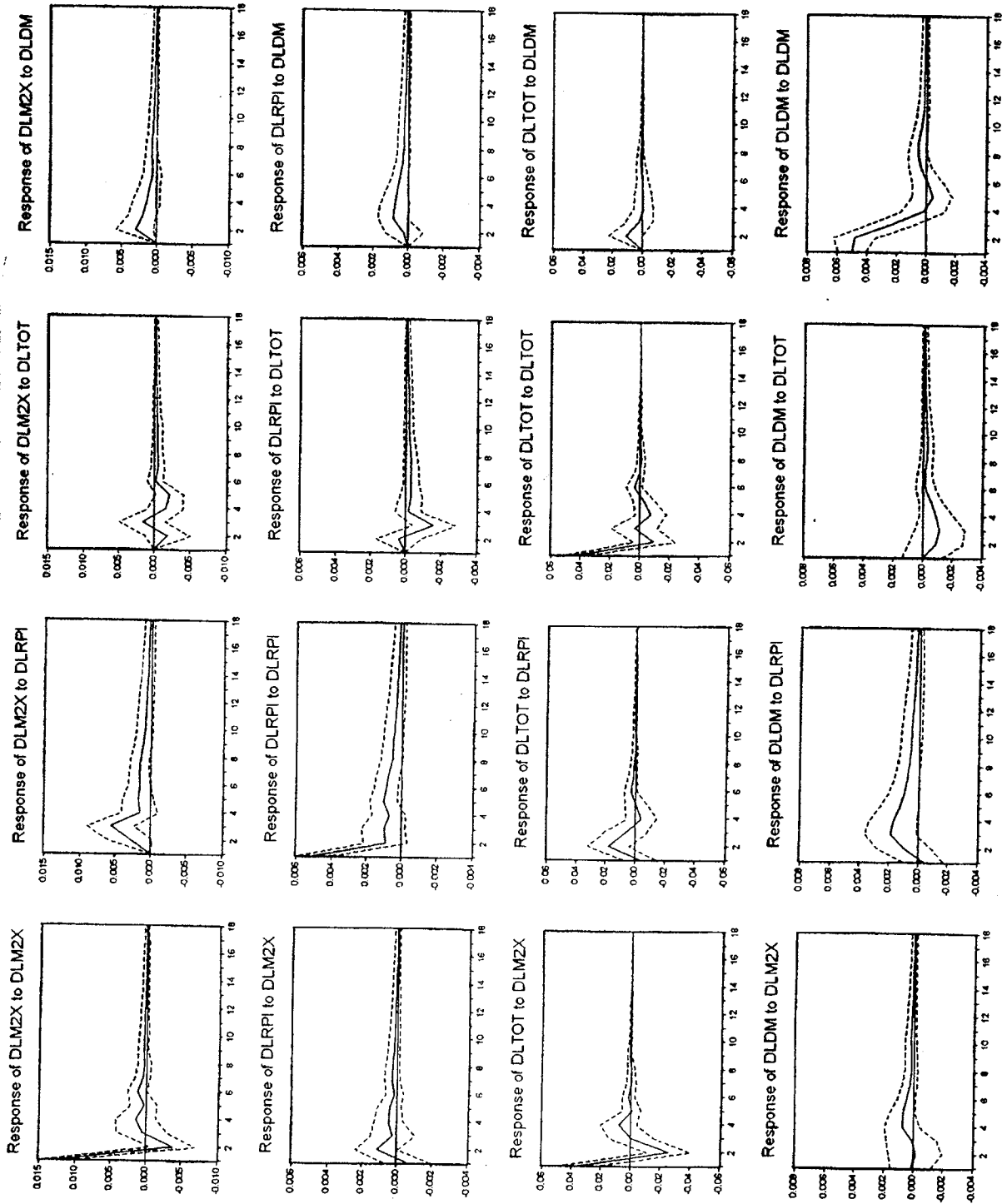| Variable	Lags	M2x growth	RPI inflation	Wage growth	Depreciation
M2x growth	1	100.0	0.0	0.0	0.0
	6	67.1	20.1	5.6	7.1
	12	64.1	22.5	5.7	7.6
	18	63.6	22.9	5.8	7.7
RPI inflation	1	58.2	29.5	5.3	7.0
	6	56.6	29.8	6.1	7.5
	12	56.2	30.2	6.1	7.5
	18	56.1	30.2	6.1	7.5
Wage growth	1	39.8	3.3	56.1	0.7
	6	43.6	10.9	42.3	3.2
	12	43.6	11.0	42.2	3.2
	18	43.6	11.0	42.2	3.2
Depreciation	1	43.3	10.9	42.0	3.8
	6	42.9	11.0	41.7	4.4
	12	42.9	11.1	41.6	4.4
	18	42.9	11.1	41.6	4.4

Note: ordering is M2x , RPI inflation, total wages, and depreciation.

G. Conclusions

97.   Understanding and disentangling the process of price formation and inflation in Slovenia is a complicated and empirically difficult task. Ubiquitous indexation procedures quickly pass on price and exchange rate changes on to wages and most financial assets, which directly filter back into inflation. Exogenous wage growth stemming from labor market rigidities or from the lack of decentralized bargaining arrangements can propagate price pressures, which again are fed almost immediately into price indices and demands for additional wage increases, in a vicious circle. In addition, administered price increases are layered on top of an underlying price impulse, which could stem from excessive growth in money aggregates or wage demands, increasing the variability of inflation. Peeling away these effects to acquire an understanding of basic inflationary pressures is not a trivial task.

98.   Our attempt at understanding this process through Granger causality tests and estimated unrestricted VAR models found a **strong linkage** between both growth in broader monetary aggregates and changes in the tolar-deutsche mark exchange rate on RPI inflation. As expected, the strength of the exchange rate pass-through effect was robust. While our results suggest that wage growth affects inflation, it appears that changes in both the exchange rate and growth in monetary aggregates place the initial pressure on wage movements to impact inflation. Excessive wage demands by labor alone do not appear to individually drive inflation; however, we would stress that the indexation measures and statistical properties of the data do not allow us to make a conclusive statement. We also found that our brief examination of the behavior of controlled and nontradable price growth suggested that many of the inflationary channels discussed in our review of the literature, and experienced in many other transition economies, are also in effect in Slovenia. Therefore, we would not underestimate the importance that structural rigidities have on inflation dynamics in Slovenia.

99.   Based upon what we have learned, what policy recommendations can be prescribed? First, any attempt to lower inflation to Western European levels through tight monetary policy alone will not succeed without severely contracting economic activity. This policy can reduce core inflation levels, but until the process of administrative price increases has played itself out and strict indexation mechanisms are eliminated, persistent overall inflation will remain. Thus, we would strongly caution against any attempt to fight inflation through monetary policy alone.

100.   Second, the dual money and nominal exchange rate targeting policies of the BOS—necessitating the pervasive use of sterilization and capital control measures—retard the disciplining effects of foreign capital inflows on overall private sector governance. As discussed by Wagner (1997), the privatization and restructuring process in Slovenia has not resulted in major structural changes in corporate ownership from that prevailing in the previous SFRY, nor has overall corporate performance substantially improved. Elimination of these capital controls and a policy of welcoming the positive effects of foreign capital inflows would go a long way in truly restructuring and modernizing Slovene corporate enterprises, as

well as expediting the development of financial markets. This policy would also play a catalytic role in the removal of indexation and accelerate the integration of labor and financial markets with those in Western Europe. All of these items are key ingredients in the formation of a common currency area and the desired entrance of Slovenia into the European Union and its Exchange Rate Mechanism (ERM)—*the* main medium-term economic objective of the country.

101. While pursuit of multiple macroeconomic objectives is not rare in transition economies,[24] it is becoming increasingly apparent that the authorities need to choose between conflicting targets. Besides the financial costs of sterilization, the real output costs suffered in achieving the inflation targets mentioned above, as well as the potential cost of lost central bank credibility, the multiple objective system and its requirement to shield the economy from the effects of foreign capital are a major deterrent to the implementation of fundamental market reforms. If Slovenia wants to go forward and enjoy the advantages of a market-based economy, it must shed its reliance on old-style "market socialism" and allow market mechanisms to produce correct price signals, in spite of the distributional effects. Only then will inflation dynamics in Slovenia truly reflect the underlying supply and demand conditions. With an overall **medium-term objective** of ERM attainment within four to five years, our results would suggest the use of a money-based anchor in the **near-term**, which permits capital inflows to lead to an appreciation the nominal exchange rate and increase the money supply. As there is substantial evidence that monetization levels are below those of other Visegrad countries, monetary targets would have to be adjusted accordingly and policy-makers would need to vigorously pursue de-indexation and other price liberalization policies prior to (or simultaneously with) this relaxation of policy. However, while they are in effect, these rigidities would help to dampen inflationary pressures emanating from the re-monetization process as the exchange rate appreciation is passed through to the whole economy.

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[24]See Begg (1996).

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III. MEASURES AND ASSESSMENT OF EXTERNAL COMPETITIVENESS[1]

A. Introduction

102.   An analysis of Slovenia's external competitive position is of particular interest because of the very open nature of its small economy, with foreign trade accounting for 133 percent of GDP in 1996. More importantly, as Slovenia moves toward full EU membership, competitiveness is of critical importance to its successful integration. The conventional measure of competitiveness is the **real effective exchange rate** (REER), for which there are a number of different indicators based on different price measures of tradable goods. While REER indicators may provide a guide, competitiveness is in fact a multidimensional concept which for macroeconomic analysis cannot be fully captured in one measure. A number of other factors affect competitiveness, including technology and education levels.[2]

103.   An appreciation of the REER may be perceived by policymakers as a loss of competitiveness. This can pose a policy dilemma between the desire to both maintain price stability and preserve competitiveness. In addition, the REER appreciation may be accompanied by a deterioration in the external accounts. Recent research by Halpern and Wyplosz (1996) suggests that the tendency of the REER to appreciate in transition economies is an **equilibrium** response to productivity and other efficiency gains made in the process of moving to a market economy and 'catching up' with the advanced economies. Furthermore, a deterioration in the external accounts may simply represent an equilibrium response to the increased capital requirements and domestic demand associated with the process of economic development.[3] It is therefore important to examine the factors underlying the developments in the REER as well as other external indicators, in order to assess whether competitiveness is threatened.

104.   This paper assesses Slovenia's competitiveness from a number of different angles.[4] The analysis concentrates on the events following stabilization (1993–97). Section B presents

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[1]Prepared by Sheila Bassett.

[2]As noted in Feldman (1994), indicators of international competitiveness should not be construed as measures of economic well-being. Furthermore, Krugman (1994) discusses the misuse of the term competitiveness as a reason for economic difficulties that are primarily domestic in origin.

[3]See, for instance, Williamson (1994).

[4]The paper does not estimate an equilibrium REER. Such estimations for transition economies are problematic for a number of reasons, including the short time span for estimation and lack of data. However, estimates by Halpern and Wyplosz for Slovenia serve as additional evidence for the analysis of competitiveness.

the Halpern and Wyplosz 'stylized fact' concerning developments in equilibrium exchange rates in transition economies, and then draws on this work to analyze developments in Slovenia's REER, the underlying factors influencing its movement, and the implications for competitiveness. Section C tries to shed further light on competitiveness by examining external developments including market share analysis and empirical estimates of import and export equations (for details see Annex I). These empirical findings are then used to try to assess the impact on the current account of an appreciation of the REER. Section D presents the conclusions, including prospects for competitiveness and policy implications.

B. Real Exchange Rate Developments

A "stylized fact" for the equilibrium exchange rate in transition economies

105.   Recent empirical work by Halpern and Wyplosz (1996), henceforth referred to as H-W, presents a 'stylized fact' for the REER for countries in transition: an early profound exchange rate depreciation followed by continuing real appreciation, where the process of real appreciation is a combination of a return to equilibrium, following the early overshooting, and a further gradual appreciation, reflecting relative productivity and other efficiency gains in the course of the transformation process. Apart from the correction of the initial overshooting, the steepness of the appreciation depends on the backwardness of the transforming economy and the speed with which it implements structural reforms and catches up with the advanced economies.

106.   H-W cite a number of factors that are likely to induce an appreciation of the real **equilibrium** exchange rate, including: (1) **rapid productivity gains** on account of the economic restructuring, as overstaffing is reduced and unprofitable activities are abandoned and new industries emerge; (2) **the Balassa-Samuelson effect**, which hypothesizes that, given competitive pressures within each country for workers with similar skills to receive similar wages, relatively rapid growth in productivity in the tradable goods sector would tend to push up the relative cost of production in the nontradable goods sector and hence the relative price of nontradables; (3) **increases in the prices of natural resources**, as well as public utility prices, which were traditionally set below world prices; as they are raised, the real exchange rate appreciates; (4) **changes in the demand for public spending**, including expenditure on infrastructure, and the overhaul of the tax structure, which is likely to result in shifts in relative prices; (5) **capital inflows**, such as those in the form of FDI for the purpose of modernizing and expanding the capital stock, tend to put upward pressure on the REER, while the gains in productivity may not be evident for some years; and (6) **improved quality of goods**, which would be reflected in terms of trade gains.

Trends in Slovenia's competitiveness indicators

107.   A comparison of trends in the various measures reveals a broadly similar pattern (Figure 1).[5] After a pronounced fluctuation during the stabilization period (1991–92),[6] external competitiveness indicators have been relatively stable, appreciating about 10 percent since 1993, in sharp contrast to other transition economies (Figure 1). This may reflect several factors: (1) **the comparative strength of the market economy** at the start of the transition process, as reflected in the very steep appreciation of the REER in 1992;[7] (2) **the gradualist approach to reform**, which means the economy was subject to less radical shocks; (3) an active policy to prevent an appreciation of the REER by **containing and neutralizing the effects of large capital inflows**—which are perceived to threaten competitiveness—via sterilization and capital inflow controls. This latter factor has complicated exchange rate and monetary policy,[8] repressed financial development, and limited economic growth, which in turn thwarts competitiveness.

108.   The most pronounced appreciation of the REER in the post-stabilization period occurred in the first half of 1995—some 14 percent (ULC-based REER, industry). This

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[5]Simple correlation tests among various indicators show that they are strongly related, with the correlation coefficients all exceeding 91 percent for the period 1993–96. Given significant differences in definition and coverage (see Box 1), the similarity in the movement after stabilization is somewhat surprising. It may be due to factors such as, the close relationship between wages and the RPI due to indexation and the very gradual freeing of controlled prices (mainly nontradables).

[6]Monetary independence became effective in October 1991 with the introduction of the tolar. Prior to this time, Slovenia operated within the dinar-based monetary system.

[7]Slovenia's exports—which accounted for close to 50 percent of GDP in 1990—were already largely oriented toward industrial countries before independence. It can therefore be said that they had already passed the test of market competition. As a consequence, Slovenia was able to re-orient its exports to EU markets from the former SFRY relatively quickly . In addition, most of the expansion of exports took place in technologically more demanding sectors such as electrical appliances, automobiles, and chemicals.

[8]There have been frequent reversals in monetary policy during the period. While the exchange rate was allowed to float initially, a real exchange rate rule was imposed from mid-1992 to mid-1994 and the Bank of Slovenia (BOS) resisted pressures for a nominal and real exchange rate appreciation through active sterilization of inflows. Subsequently, there was unannounced nominal stability until mid-1995, when on account of concerns about competitiveness, the BOS abandoned its 'hard tolar' policy and imposed restrictions on foreign borrowing in July 1995 to try to stave off short-term capital inflows. Since January 1996, there has been a return to unannounced nominal stability with heavy sterilization and further intensification of capital inflow restrictions.

Figure III-1. Slovenia: Various Indicators of Competitiveness
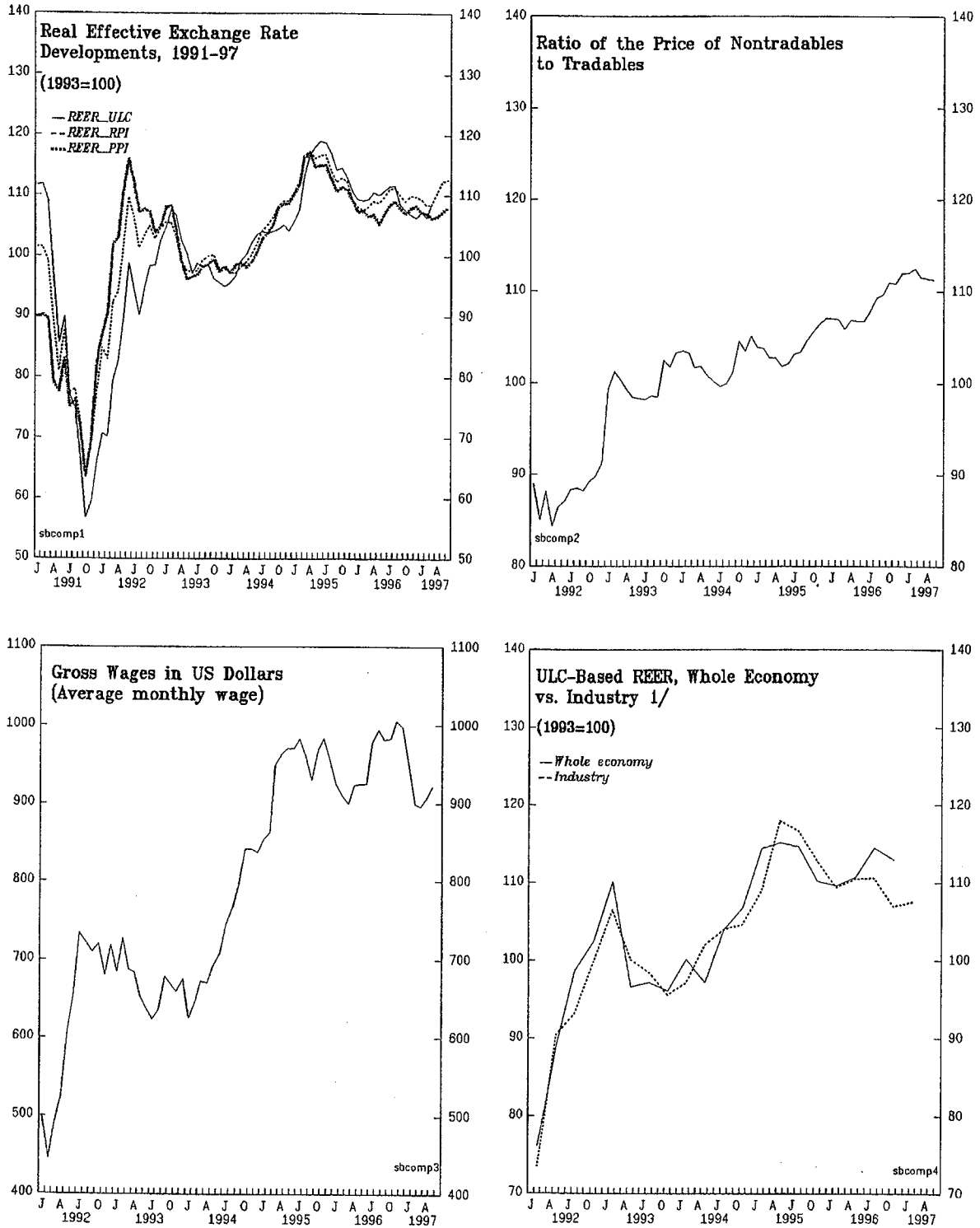
Sources: Bank of Slovenia, Institute of Macroeconomic Analysis and Development, IMF Research Department, OECD Analytical Database, and IMF staff estimates.

1/ Trade weights are not identical, ulc-based REER for the overall economy uses IMF's Research Department trade weights for Germany, France, and Italy; ulc-based REER industry uses BOS weights for seven major OECD trading partners.

Box III-1. Indicators of External Competitiveness

There are a number of indicators of competitiveness including the CPI-based, ULC-based, PPI-based REERs, and dollar wages. The choice among indicators is usually based on data availability and comprehensiveness of coverage of the tradable sector, as well as its ability to explain trade performance. The main indicators and their advantages/disadvantages are summarized below (for further details see Annexes I and II).

CPI-based REER—a broad-based indicator, which includes both goods and services, and the CPI is typically correlated with wage movements which are an important component of production costs. The main drawbacks are that it is vulnerable to distortions from price controls, it includes prices of nontradable goods, and it does not include intermediate goods.

PPI-based REER—it reflects the price of intermediate goods which are an important component of trade. However, it may not be good measure of profitability as exporters can "price to market" by squeezing profits in the short run.

ULC-based REER—this indicator is based on unit labor costs and serves as a measure of profitability, since unit labor costs are an important component of production costs. The main drawbacks are that it may overstate gain in competitiveness, as labor productivity gains are typically associated with increases in capital costs. Also, labor services acquired in production are typically excluded, and there may be differences in coverage among countries being compared. Also the coverage of the indicator may include nontradable sectors such as in the case of a ULC-based REER for the whole economy or for industry, which includes utilities.

*Relative price of nontradables to tradab*les—noted in a strain of the literature as an important relative price in terms of its relationship to a country's external position. However, it does not take into account productivity differences across sectors (the Balassa-Samuelson effect), and it is difficult to delineate traded from nontraded goods.

Dollar wage—a widely used indicator among transition economies, it provides an indication of the wage gap for comparison across countries. It also avoids the problem of selecting an appropriate base year for comparison. It has, however, problems of comparability in definition of wages costs and, in the case of transition economies, it may suffer from underreporting of direct labors costs.

development coincided with an appreciation of the nominal effective exchange rate (NEER), as the government pursued a "hard tolar" policy. However, policy was modified in the second half of the year in response to concerns about competitiveness and the nominal effective rate depreciated, inducing a depreciation of the REER. However, the decline in the REER (ULC-based, industry) did not fully match the decline in the NEER, as part of the nominal depreciation was offset by price and wage increases. This was reflected in the widening of relative price differentials and higher real wages, which were not offset by relative productivity gains (Figure 2).[9] Subsequently, in 1996, the REER depreciated relative to 1995, on account of favorable intercurrency effects, reflected in the decline in the NEER and remained relatively stable through the first quarter of 1997.[10]

109.   While the REER remains below its post-stabilization peak in mid-1995, which may signal improved competitiveness vis-à-vis this reference point, the appreciation of the REER since 1993 might be construed as a loss. However, since the equilibrium exchange rate is unknown and since it has probably changed over time, these indicators alone do not provide enough information to assess the level of competitiveness.[11] Thus, it is important to examine the underlying factors affecting the movements in the REER.[12] Several measures are selected for further analysis: (1) the ULC-based REER for industry, which is widely considered to be a good indicator of the competitiveness of exports from this important sector; (2) a ULC-based

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[9]Empirical research into the causal links between the exchange rate and inflation indicates that there is a strong and significant positive relationship between inflation and nominal depreciation with a very short lag. See the preceding chapter of this selected issues paper.

[10]The RPI-based REER increased in April-May, mainly on account of increases in fuel prices. This process of decontrolling fuel prices, while adversely affecting profitability of firms in the short-run, represents an elimination of a price distortion which would be expected to improve economic efficiency. Therefore, a rise in the REER on account of removing price distortions should not be construed as a decline in competitiveness.

[11]Empirical estimates of H-W suggest that Slovenia was in the neighborhood of its equilibrium REER by 1996. However, given the large errors often associated with these estimates, one cannot rely solely on these findings.

[12]Of course, this analysis still does not tell us whether the level of the exchange rate is appropriate. That is why other indicators, including the level of dollar wages in relation to other countries and indicators of external performance such as the trade balance and current account, also need to be looked at (see Section C).

Figure III-2. Slovenia: Comparison and Key Components of REERs

Comparison of REERs Among Transition Economies
(June 1992=100)

—Hungary   --Czech Republic
····Poland   ×·Slovak Republic
▬▬Slovenia

sbreer1

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J S D M J S D M J S D M J S D M J S D M J
 1992    1993    1994    1995    1996    1997
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Relative Labor Productivity in Industry 1/
(1993=100)

sbreer2

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III IV I II III IV I II III IV I II III IV I II III IV I II
 1992    1993    1994    1995    1996    1997
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Quarterly Price Differential 1/
(1993=100)

sbreer3

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III IV I II III IV I II III IV I II III IV I II III IV I II
 1992    1993    1994    1995    1996    1997
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Components of ULC-Based REER, Industry
(Jan. 1993=100)

▨ULC-based REER, industry
—Tax rates
--Productivity
▬NEER/RPI
—Net wages and other remun.

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J S D M J S D M J S D M J S D M J S D M J
 1992    1993    1994    1995    1996    1997
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Sources: Bank of Slovenia, Institute of Macroeconomic Analysis and Development, WEO Competitiveness Database, International Financial Statistics (IFS), IMF Information Notice System (INS), IMF Research Department, and IMF staff estimates.

1/ Compared to Austria, France, Germany, Italy, U.K., and U.S. IMF Research Department trade weights. Relative labor productivity is based on manufacturing productivity in trading partners.

REER for the whole economy,[13] to provide a broader view of competitiveness vis-à-vis trading partners; and (3) the dollar wage, which provides a level basis for comparison and a sense of the size of the wage gap.

ULC-based REER for industry[14] and the whole economy

110.   An examination of developments in the main components of the ULC-based, industry REER—i.e., real average net wages and other income for industry (deflated by RPI), productivity in industry, and taxes on wages (including employers' contributions to social security) in industry—suggests that, over the four-year period 1993–96, gains in real wages in industry were in line with gains in productivity[15] while taxes were reduced (Table III-1, Figure 2). During the period 1993–96 there were substantial gains in productivity relative to trading partners, most notably in 1993–94 and some additional gains in 1996 (some of which may be cyclical, as these are not normalized ULC), reflecting economic restructuring, mainly in the form of labor shedding. In addition, the terms of trade improved by about 6 percent by 1996 relative to its 1993 value, part of which may reflect improved product quality (Figure 2). Relative productivity gains and improvements in product quality would tend to point to an equilibrium appreciation of the REER in the way described by H-W. However, two caveats should be noted. One, the gains in productivity from labor shedding in manufacturing are not indicative of long-term trends in productivity. Two, wage data may be underestimated to the extent that some forms of compensation may not be properly accounted for.

111.   To provide a broader view of the trends in the competitive position, a ULC-based REER for the whole economy was constructed. The indicator follows closely that of the ULC-based, industry REER during the period 1993–95 (Figure 1). As in the case of industry, relative productivity gains for the whole economy were made vis-à-vis trading partners, especially during 1993–94. Also, real wages did not exceed gains in productivity (Figure 3) during this period. However, by the end of 1996, the broad-based REER is more appreciated

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[13]The index is constructed from data on economy-wide gross wages in dollars divided by real GDP. The trading partner data is based on ULC data for the whole economy from the OECD Analytical Database for three major advanced EU trading partners (Germany, Italy, and France). The trade weights are obtained from the IMF's Research Department.

[14]Industry includes mining and quarrying (4 percent of industry), manufacturing (88 percent of industry), and electricity, gas and water supply (8 percent of industry).

[15]The results are, however, disappointing with respect to the aims of the national/tripartite wage agreement, which sought to contain wage growth below that of productivity. This reflects in part a centralized wage bargaining process which does not encourage wage differentiation across sectors, although performance varies considerably (see OECD (1997)).

Figure III-3. Slovenia: Factors Influencing Developments in Dollar Wages

(1993=100)

Relative Productivity
Overall Economy 1/

Developments in Real Gross Wage
and Productivity

— Real gross wage, overall economy
... Productivity

Real Gross Wages by Sector

—Industry and construction
--Business services
—Public services

Terms of Trade

▨Terms of trade
--Import price
—Export price
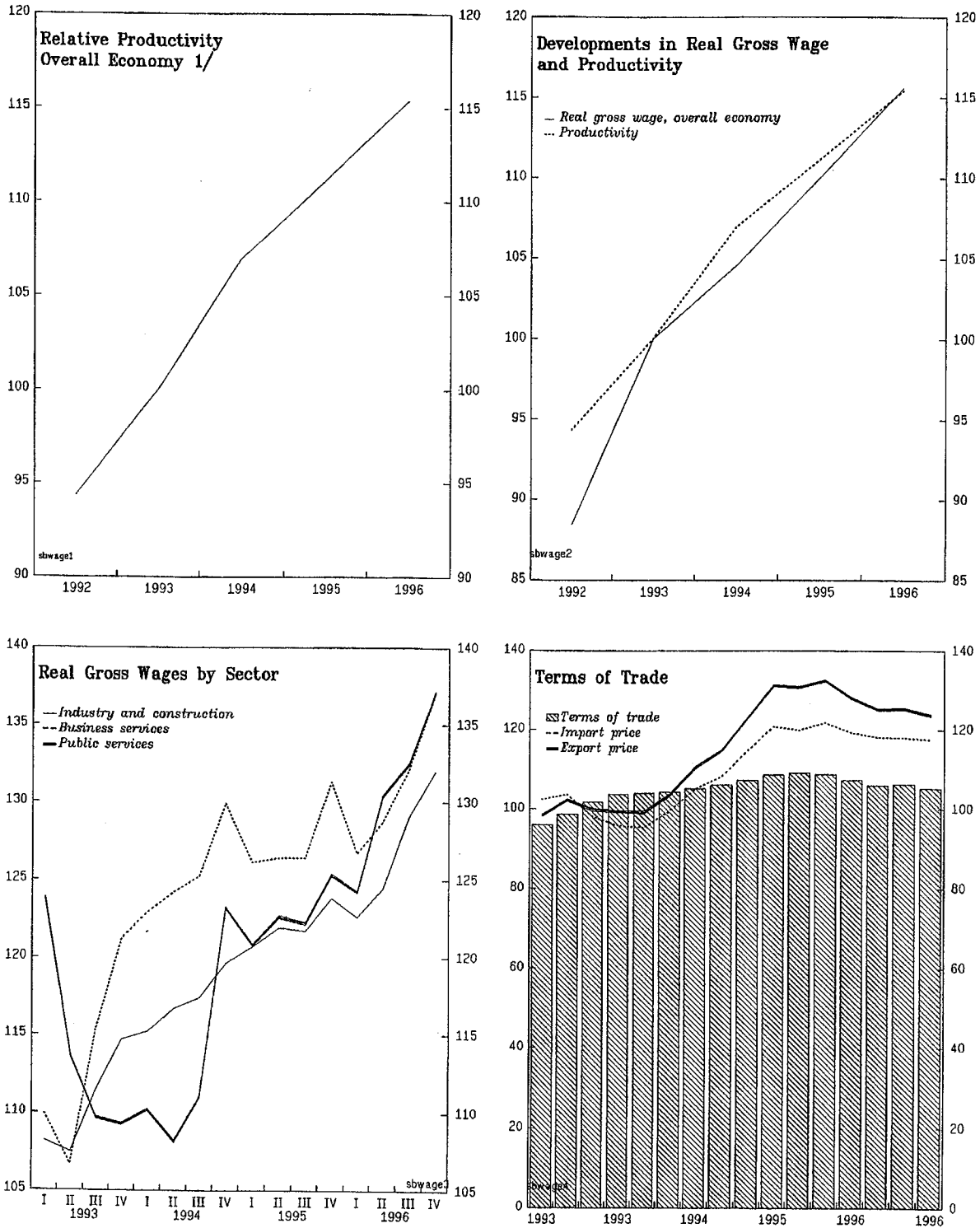
Sources: Bank of Slovenia, Institute of Macroeconomic Analysis and Development, OECD Analytical
Database, IMF Research Department, and IMF staff estimates.
1/ Compared to Austria, France, Germany, Italy, U.K., and U.S. IMF Research Department
trade weights. Relative labor productivity is based on manufacturing productivity in
trading partners.

Table III-1. Slovenia: Analysis of Competitiveness, Industry
(Annual percentage change)

	1993	1994	1995	1996	Proj. (IMAD target scenario) 1997 [1/]
REER(ULC-based, industry)	9.8	- 0.2	11.8	-7.3	-1.2 (-1.7)
NEER	-26.5	-13.3	0.1	-11.2	-4.7 (-4.0)
For industry:					
Unit labor costs (US$)	-0.3	0.7	19.7	-11.1	
Unit labor costs (nominal)	38.9	13.0	11.7	3.1	3.3
RPI inflation	32.3	19.8	12.6	9.7	9.0 (8.4)
Employee compensation(real)	11.0	6.8	5.4	2.7	2.7
Real net wages	16.4	12.2	7.1	6.1	4.3 (4.9)
Tax burden on wages [2/]	-3.5	-4.1	-0.6	-2.7	-0.9
Productivity growth	5.8	13.2	6.3	9.2	8.2 (6.2)
Trading partners[3/]					
Manufacturing					
Productivity growth	0.8	7.9	4.2	1.8	
Unit labor costs (US$)	-3.0	0.3	11.7	-2.6	
Relative ULC, manufacturing [4/]					
(CEFTA countries=100) [5/]	-5.5	-0.3	13.1	-9.7	--
Relative wages - real	7.3	1.0	0.4	-0.9	--
Relative US$ exch. Rate/prices	-10.7	-0.2	4.7	-8.5	--
Relative labor productivity	-0.1	0.4	-6.9	0.6	--

Sources: Institute of Macroeconomic Analysis and Development (IMAD), Bank of Slovenia, Statistical Office, and Fund staff estimates.

1/ Data in parentheses are latest observations (first five months of the year, except ULC REER which is for the first 3 months of the year, relative to a year ago).

2/ Ratio of gross wages and employers' contributions to net wages.

3/ Relative to manufacturing data for Austria, Germany, France, Italy, UK, US; IMF's Research Department trade weights.

4/ Unit wage costs in US$ based on IMAD estimate for Slovenian manufacturing.

5/ Weighted average.

than that for industry, mainly due to substantial increases in service and public sector wages which pushed up aggregate wages and were not offset by productivity gains.[16] Competitiveness was nonetheless preserved in 1996, mainly due to the temporary effects of favorable intercurrency movements and reductions in social security taxes (mentioned above). This suggests that corrective measures will need to be taken soon to **link wage growth more closely to performance** to avoid a loss of competitiveness. Some progress in this area was indeed made in 1997.

Dollar wage

112.   Over the period 1993-96, Slovenia's dollar wage for the overall economy increased by 37 percent.[17] Much of the rapid rise in the dollar wage is due to a rebound of real wages after a substantial decline in 1991–92;[18] and productivity gains resulting from industrial restructuring and deepening of the capital stock (as noted above, Figures 2–3). Furthermore, while dollar wages have increased substantially, they are still well below those of the advanced EU countries, and the market exchange rate appears to be below PPP estimates, suggesting that there is further room for catching up (Slovenia's PPP-based wage was US$1,066 as opposed to US$2,314 in Austria, and the ratio of the PPP-based to market exchange rate was 1.13 in 1995).[19] Of concern, however, is that dollar wages are well above those in the CEFTA countries (Slovenia's wages are 2 to 3 times higher on a PPP basis). Yet, it is important to consider that the counterpart to high wages is higher productivity, as well as other factors, such as better access to markets and product quality.[20] Likewise, in evaluating competitiveness vis-à-vis the EU, lower wages reflect in large part lower productivity, so that the catch up

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[16]To some extent this overstates the impact on tradables to the extent that nontradables are included (e.g., public sector wages are not in the tradable sector). However, developments in these wages have a significant demonstration effect for the other sectors. This is especially true given the centralized bargaining process.

[17]It subsequently fell in the first part of 1997, mainly on account of the strength of the U.S. dollar.

[18]Real average monthly net wages fell nearly 20 percent in the two-year period.

[19]PPP-based wage data are from the Statistical Office of the Republic of Slovenia and OECD. For estimates of PPP exchange rates in selected transition economies see Havlik (1996).

[20]In a recent survey of business managers by Slovenia's Chamber of Commerce, executives were the most negative with regard to competitiveness vis-à-vis EU, citing productivity, industrial policy, access to and the cost of capital, and access to selling markets as the main disadvantages. Factors viewed as advantages in relation to EU were gross wages and availably of work force. Relative to Central European competitors, the managers rated labor productivity, worker qualifications, and quality of infrastructure as positive factors, while disadvantages included taxation, gross wages, and the exchange rate.

process involves making substantial productivity gains, as well as improving product quality and marketing of exports.[21] As long as the upward movement in dollar wages is matched by productivity and other efficiency gains, it does not imply a loss of competitiveness.

C. External Performance

113.   While the above analysis provides some indication of the underlying factors influencing developments in competitiveness, additional indicators such as export market share developments and the trends in the balance of payments can shed further light on this issue. A substantial loss of export market share over a period of time and/or a large and unsustainable external balance could point to an overvalued exchange rate and the need for policy measures to strengthen competitiveness.

Market share analysis

114.   In recent years, about two-thirds of Slovenia's exports went to the EU. As shown in Table III-2, Slovenia's export growth exceeded growth of foreign market demand up until 1995, when there was a loss of market share, coinciding with the slowdown in the EU and the appreciation of the REER.[22] Since then, exports have recovered, growing in line with export market growth in 1996 and further recovery is expected in 1997 with continued expansion in the EU.[23] However, for the four year period, there was a cumulative loss of export market share of about 1½ percentage points, due to the poor performance in 1995. Estimates of export/import functions using various indicators suggest that the elasticity with respect to the REER is relatively small, particularly in relation to that of foreign demand, which is high (greater than one). This suggests that while most of the explanation of export performance is due to the sensitivity of exports to fluctuations in foreign demand, structural factors, such as

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[21]See Havlik (1996).

[22]The elasticity of exports with respect to changes in foreign demand may be greater than one (for instance, recently, the BOS estimated an elasticity greater than 1 for Slovenian exports in relation to a measure of foreign demand based on a weighted average of trading partners imports). Also, the measure of foreign demand used in Table III-1 is based on merchandise import volume, excluding oil. Therefore it includes imports other than manufactured goods and may overstate market growth for Slovenia's exports which are concentrated in manufacturing. For example, Germany's real imports of goods rose 6.3 percent in 1995, while the volume of imports of manufactures rose only 3.9 percent (based on data from the OECD Analytical Database).

[23]So far, indicators are favorable, merchandise export volumes were up 5.8 percent in the first four months of the year relative to last year. Also, tourism indicators at the beginning of this year have been very buoyant; in the first four months of this year, the number of foreign tourists rose 14 percent and the number of overnight stays was up 18 percent over a year ago.

Table III-2. Slovenia: Analysis of Market Shares

(Average annual percentage change)

	1993	1994	1995	Est. 1996	Cummulative 1993-96	Prel. 1997
1. Market growth (goods and services) 1/	**-2.2**	**8.1**	**7.7**	**2.4**	**16.0**	**5.9**
Slovenia's exports of goods and services	0.6	10.5	1.0	2.5	14.6	--
Change in market share	2.8	2.4	-6.7	0.1	-1.4	--
2. Market growth (goods) 1/	**-3.4**	**9.3**	**8.4**	**3.4**	**17.7**	**6.6**
Slovenia's exports of goods	-8.9	4.9	1.1	3.4	0.5	5.8 2/
Change in market share	-5.5	-4.4	-7.3	0.0	-17.2	--
Memorandum items:						
Volume of trade:						
World trade growth, goods and services	4.1	9.2	9.2	5.6	28.1	
World trade growth, merchandise trade	4.1	9.9	9.7	5.4	29.1	
Industrial country imports, goods and services	1.8	9.7	8.7	5.3	25.5	
Industrial country imports, merchandise trade	2.1	10.8	9.1	4.8	26.8	

Source: *World Economic Outlook*, September 1997, preliminary.

1/ Weighted average of real import growth of goods and services and goods(excluding oil) of trading partners; the weights for the trading partners are from the IMF's Research Department, World Economic Outlook, Winter 1997.
2/ Preliminary estimates from IMAD for the first four months of 1997.

reductions in overstaffing and regional/bilateral trade agreements, have probably also played a role (see Annex I). However, delays in carrying the reform process forward may have contributed to the lackluster performance of exports in recent years.

115.   The table also reveals that export performance has benefited from a change in composition, as the rapid growth of service exports has offset a substantial decline in merchandise exports relative to the average growth of their respective markets. Bole (1997) notes that machinery and transport equipment have increased their market share,[24] while chemicals and manufacturing goods have lost market share. This suggests considerable restructuring within the manufacturing export sector, which would be expected in the transition to a market-based economy.[25] Relative to 1993, the rise in exports of services has been driven principally by increases in travel-related services (which grew by about 26 percent, mainly in 1994) and construction services (mainly in 1994).

116.   Although, for the most part, Slovenia's exports appear to be keeping pace with the comparatively slow growth in its traditional export markets, relative to world export growth, export performance is weak. This suggests that further gains could be reaped by regional diversification. Direction of trade data suggest that while the share of merchandise exports to industrial countries in total exports rose by several percent in 1993–95, data for 1996 show rapidly expanding markets in CEFTA, the countries of the former SFRY, and BRO countries. Another important question is how Slovenia has fared in relation to other central and eastern European economies. The table below reveals that while Slovenia has been able to maintain its market share in industrial countries since 1992, the other CEFTA countries have been able to make gains. As Slovenia's share remains comparatively high, part of this may reflect its strong competitive position at the start of the transition process which enabled it to quickly reorient its export markets to advanced European markets. This is reflected in the increase in Slovenia's market share in industrial countries between 1991 and 1992.[26] In addition, the market share developments in industrial countries in the above table only include merchandise trade, so that any gains in market share by service exporters would not be accounted for.

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[24]This is the sector where the foreign investment enterprises are the most "overrepresented." (IMAD, "Foreign Direct Investment in Slovenia," 1997).

[25]Merchandise exports are mainly concentrated in the highly competitive manufacturing sector. Over 80 percent of merchandise trade is concentrated in three of the nine one-digit SITCs (transport and machinery, manufactured goods classified by material and miscellaneous manufactured articles). There is, however, diversity within these classifications.

[26]Total merchandise imports of advanced countries amounted to US$2.7 trillion in 1992. A 0.05 percentage point increase in market share of advanced countries would amount to about US$1.3 billion.

Table III-3. Slovenia: Market Shares of Central and Eastern European Countries
in Advanced Economies 1/
(In percent)

	1991	1992	1993	1994	1995	1996
Czech Republic	--	--	0.27	0.31	0.34	0.39
Hungary	0.25	0.26	0.26	0.28	0.33	0.35
Poland	0.37	0.39	0.43	0.46	0.51	0.49
Slovak Republic	--	--	0.07	0.10	0.13	0.13
Slovenia	**0.11**	**0.16**	**0.16**	**0.17**	**0.18**	**0.17**

Sources: *Direction of Trade Statistics*. Data for Slovenia for 1991–92 from Bank of Slovenia and
Statistical Office.

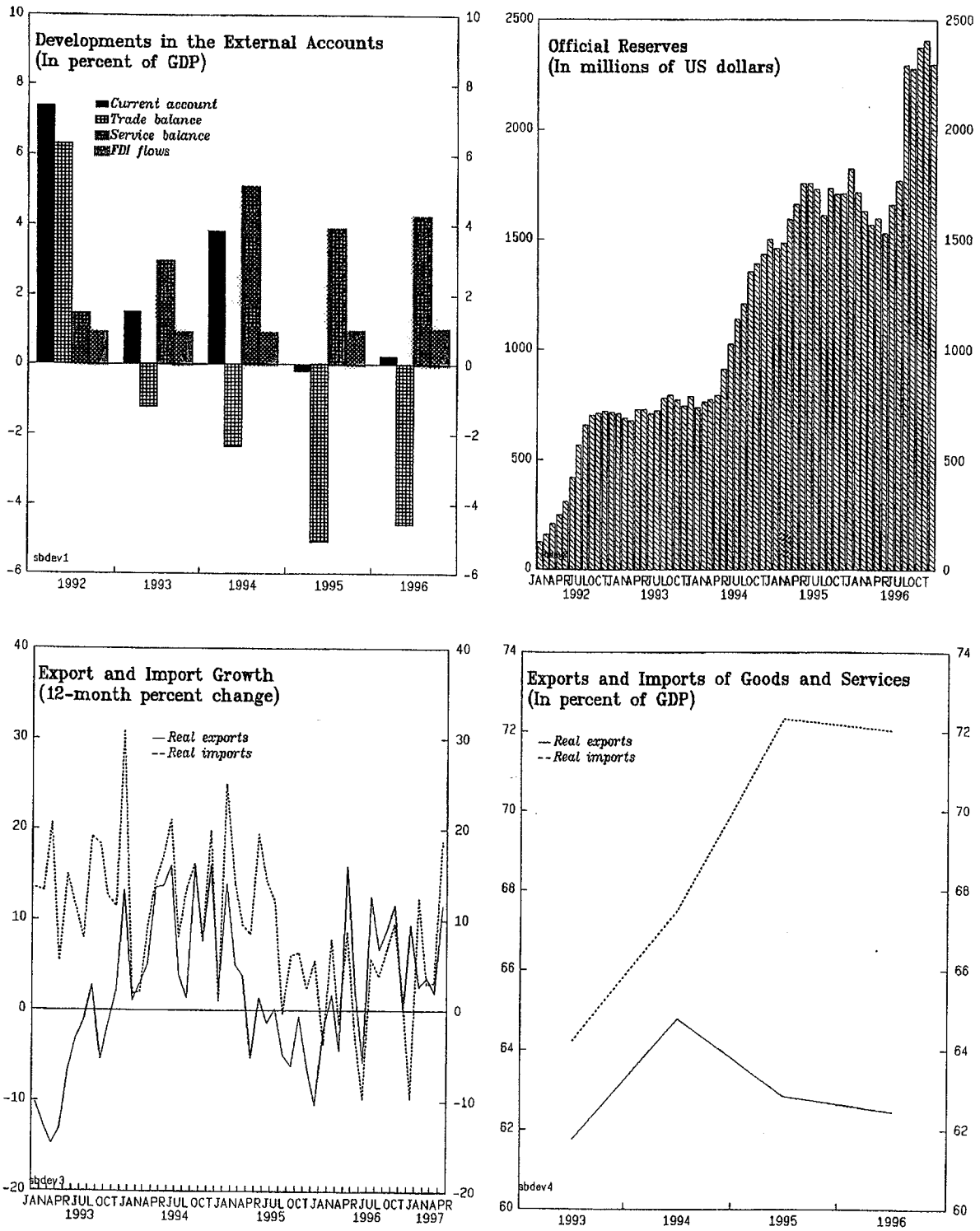1/Defined as the country's share of total advanced country merchandise imports.

Balance of payments developments

117.   During the period following stabilization (1993 onward), balance of payments
developments were characterized by several factors: (1) the **disappearance of the large
current account surplus** by 1995; (2) **a widening trade deficit**, caused mainly by rising
imports of capital goods; (3) **a rising surplus on services**, mainly driven by higher travel
receipts; and (4) **a steady accumulation of reserves**, reflecting capital and current account
surpluses (Figure 4). The underlying factors are examined below to see if they signal an
erosion in competitive position.

118.   The elimination of the current account surplus reflects mainly the recovery of domestic
demand, particularly investment, after stabilization and hence does not point to a decline in
competitiveness. The savings-investment balance helps to explain the decline in the current
account balance. In 1992, the investment/GDP ratio was low owing to uncertainty concerning
economic policies, particularly those relating to the privatization process. Subsequently, there
was a substantial rise in the investment/GDP ratio, by about 6½ percentage points over the
period 1992–96, a significant part of which reflects investment in infrastructure. Meanwhile
the domestic savings ratio declined by about 2½ percentage points in the same period,
reflecting mainly a lower private saving ratio relative to 1992, which was in part due to a
resurgence in expenditures on consumer durables, especially in 1993.[27] By 1996, the current

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[27]A decrease in the private saving ratio may also reflect a drop in enterprise profitability in the
initial years of transition, following the steep decline in output and price liberalization, as has
been the case in most transition economies; subsequently, this is expected to strengthen with
progress in transition (EBRD, Transition Report 1996).

Figure III-4. Slovenia: External Developments

Developments in the External Accounts
(In percent of GDP)

- Current account
- Trade balance
- Service balance
- FDI flows

sbdev1

1992 1993 1994 1995 1996

Official Reserves
(In millions of US dollars)

JANAPRJULOCTJANAPRJULOCTJANAPRJULOCTJANAPRJULOCTJANAPRJULOCT
1992 1993 1994 1995 1996

Export and Import Growth
(12-month percent change)

— Real exports
-- Real imports

sbdev3

JANAPRJUL OCT JANAPRJUL OCT JANAPRJUL OCT JANAPRJUL OCT JANAPR
1993 1994 1995 1996 1997

Exports and Imports of Goods and Services
(In percent of GDP)

— Real exports
-- Real imports

sbdev4

1993 1994 1995 1996

Sources: Bank of Slovenia, Statistical Office, and IMF staff estimates.

account was close to balance; subsequently the current account deteriorated in the first five months part of 1997.[28]

119.   The widening of the trade deficit reflects mainly a rapid increase in imports, principally capital goods (see Table below). This reflects higher investment in state enterprises, new private businesses, and infrastructure, which would be expected to raise the productive capacity of the economy. In addition, export performance remained relatively stable in relation to GDP. Although it deteriorated somewhat during the latter part of 1995, continued expansion in the EU should bring about an improvement this year (as noted above).

Table III-4. Slovenia: Merchandise Trade by End Use
in Percent of Total Merchandise Trade

	Exports					Imports			
	1992	1993	1994	1995		1992	1993	1994	1995
Capital goods	9.9	10.6	11.2	11.3		13.9	15.4	16.0	16.9
Intermediate goods	45.5	45.9	44.7	47.2		66.6	64.1	61.4	60.5
Consumption goods	44.6	43.4	44.1	41.4		19.5	26.3	22.5	22.5

Source: Statistical Office of the RS. data for 1996 not yet available.

120.   The service balance has improved steadily since 1993, mainly on account of increased receipts from tourism. A recent paper by Bole (1997) suggests that the rise in tourism reflects mainly shuttle trade (daily tourism along the border) driven principally by lower prices in Slovenia, particularly lower oil prices. Since these prices will eventually have to be raised to world prices, Bole concludes that this trade is not sustainable. However, it seems that a recovery of services to pre-independence levels would be expected following stabilization,[29] as well as further expansion given the potential for growth in this sector. Also, the share of service exports in total exports is substantially lower (about 20 percent) than in other tourism-intensive countries such as Greece (40 percent) and Austria (30 percent). It could be argued then that an improvement in the service balance stemming from the expansion of more standard inward tourism could be sustainable.

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[28]This is in part due to imports which had been deferred from the previous year in anticipation of a customs duty reduction on January 1, 1997.

[29]In 1990, there was a service surplus of 6.6 percent of GDP.

121.   The current and capital account surpluses during the period allowed a steady buildup of reserves. Increased capital inflows reflected: (1) FDI inflows, which had remained relatively stable in relation to GDP since 1992, at about 1 percent of GDP—which is low compared with other transition economies; (2) substantial inflows of foreign currency holdings of households, most of which occurred in 1993–94 in response to the return to political and monetary stability after independence; and (3) commercial credits and loans by enterprises, which took place mainly in 1993–94 until capital inflow restrictions in July 1995 stopped this flow; (4) increased foreign portfolio investment in the form of bonds after normalization of relations with international creditors and the awarding of an investment grade A rating in mid-1996.[30] A gain in creditworthiness would likely improve the prospects for sustainability of current account deficits and, in turn, imply a higher real equilibrium exchange rate.[31] Meantime, foreign portfolio equity investment is negligible, reflecting in part the slow progress in privatization, as well as recent measures to restrict these inflows.

Is there scope for nominal and real appreciation?

122.   · The table below compares developments in GDP growth and the current account of Slovenia with those of other CEFTA countries. The table reveals that while Slovenia's current account remained near balance over the last two years and those of most of the other CEFTA countries deteriorated, Slovenia's growth performance has been significantly weaker (see Table below). In addition, investment relative to GDP was several percentage points lower than in most of the other CEFTA countries in 1996. Part of this can be explained by the authorities' active policy of sterilizing and restricting capital inflows, which as noted above, has contributed to the substantially smaller REER appreciation in Slovenia compared to other transition economies.

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[30]Subsequently, Slovenia floated its first Eurobond of US$325 million in July 1996.

[31]See Williamson (1994).

Table III-5. Growth, Investment and Current Account in Slovenia
and Other CEFTA Countries

	Real GDP Growth				Investment/GDP				Current Account (% of GDP)		
	1994	1995	1996		1994	1995	1996		1994	1995	1996
Czech Rep.	2.7	4.8	4.1		29.7	28.0	34.5		-0.1	-2.7	-8.1
Hungary	2.9	1.5	1.0		21.4	23.5	24.6		-9.5	-5.6	-3.8
Poland	6.0	6.5	5.5		15.7	16.8	19.1		2.3	3.3	-1.0
Slovakia	4.6	6.8	6.9		20.5	22.4	26.0		4.8	2.3	-10.2
Simple average of above 4 countries	4.1	4.9	4.4		21.8	22.7	26.1		1.2	-0.7	-5.8
Slovenia	**5.3**	**4.1**	**3.1**		**20.5**	**23.2**	**23.0**		**3.8**	**-0.2**	**0.3**

Sources: World Economic Outlook, Bank of Slovenia, Institute of Macroeconomic Analysis and Developments.

123.   If policymakers were to relax capital inflow restrictions, these inflows would provide additional financing for investment. At the same time, higher inflows would induce a nominal and real appreciation, which would tend to cause a deterioration in the external accounts. Based on the estimated elasticities for exports and imports with respect to the REER and income,[32] it is possible to make a rough approximation of the impact on the trade balance of an appreciation of the exchange rate. For example, a sustained 10 percent REER appreciation of the tolar could result in a deterioration of the external balance by some two percent of GDP.[33] Even so, a deficit of two percent of GDP would still be well below that of the other CEFTA countries. It should be noted, however, that this analysis is only a partial assessment, as no account is taken of the possible consequences of higher capital inflows and the REER appreciation on growth and inflation. It would be expected that higher growth would widen the trade deficit on account of increased imports (mainly investment goods), but this effect would likely diminish over time as export growth would benefit from increased capacity and higher total factor productivity. Furthermore, in the context of the intertemporal saving-investment model, it may be optimal to run current account imbalances for some time, in the

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[32]Based on average values of parameter estimates for the various REER indicators for the elasticity of exports/imports of goods and services with respect to income and the REER presented in the annex.

[33]This assumes that there is full pass through of the tolar appreciation into export prices which takes place over a two year period. Export volumes, while still growing contract by several percentage points as a consequence of the real appreciation, while import volume growth is significantly higher. The impact on the current account of the contraction in the real foreign balance is partly mitigated by higher export prices.

sense of the current account as a venue for resource allocation between countries. This would be particularly relevant for Slovenia, which is in the process of narrowing the relative income gap with the advanced countries.[34]

D. Conclusions

124.   Slovenia began the transition process in a relatively strong competitive position vis-à-vis other transition economies, evidenced by its ability to quickly reorient its exports—mainly in the more technologically demanding areas—to the markets of the advanced European economies. Gains in competitiveness were made in the early years, revealed by increases in export market shares and relative productivity. However, the outcome of delays in implementing necessary structural reforms are beginning to show up in lagging growth and productivity increases that are being surpassed by real wage gains, and lackluster export performance. Meanwhile, policymakers have actively tried to safeguard competitiveness by fending off capital inflows—which they see as a threat to competitiveness—via sterilization and capital inflow restrictions. As a consequence, Slovenia has avoided the steady upward appreciation of the REER predicted by the H-W stylized fact and the substantial current account deficits experienced in other transition economies. However, there appears to have been a cost in denying the economy needed investment funds for development through restrictions on capital inflows.

125.   These developments suggest that, while competitiveness appears to be adequate, corrective measures of the types recently taken will need to be maintained and reinforced to keep wages in line with productivity and increase efficiency. A policy of depreciating the nominal exchange rate—a blunt instrument that affects all sectors of the economy equally—only leads to higher inflation with a short lag.[35] Therefore, from a policy perspective, competitiveness is most effectively addressed via structural measures—including, implementation of the ownership consolidation phase of the privatization process and increased participation by foreign investors;[36] decentralized wage bargaining; early elimination of wage and financial instrument indexation; and implementation of tax and pension reform measures to reduce the burden of wage taxes—to ensure that competitiveness is maintained over the medium term.

126.   If further structural reform efforts are made and impediments to capital inflows are removed, there may be scope for further appreciation of the REER. Slovenia's wages still remain low in comparison to the EU average. The wage gap can be narrowed through gains in productivity *relative* to abroad and by other improvements in efficiency, such as product quality and innovation, that would produce terms of trade gains, suggesting that there is

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[34]See Krueger (1996) for an assessment of the experience of Hungary.

[35]See Ucer (1997) and Ross (1997).

[36]See Wagner (1997).

latitude for an appreciation of the REER without threatening competitiveness. While an appreciation of the REER, due to nominal exchange rate appreciation, may worsen the external current account, it may be optimal for Slovenia to run a measured deficit as a venue for resource absorption in the process of 'catching up' with the EU countries.

EMPIRICAL ANALYSIS OF COMPETITIVENESS INDICATORS IN EXPLAINING TRADE FLOWS

127.   This annex presents the model and estimation results of an empirical analysis of the relationship of various measures of the REER[37] to trade performance.[38] One measure of the usefulness of an indicator for assessing competitiveness is its ability to explain movements in trade flows. The estimation model is based on Marsh and Tokarick (1994), who employ the following basic error-correction model:

$$\Delta T = \alpha + \beta_1 \Delta Y + \beta_2 \Delta REER + \beta_3 T_{-1} + \beta_4 Y_{-1} + \beta_5 REER_{-1} \qquad (1)$$

where T is the log of trade flows as noted below, Y is an income term, which is the log of real GDP for Slovenia when looking at imports and the log of foreign demand in the case of exports,[39] REER is the log of the measure of the real effective exchange rate. By including the lagged variables, the regression allows for both short-run and long-run dynamics. The short- and long-run elasticities can be easily computed: the coefficients β_1 and β_2 are the short-run elasticities with respect to income and the REER, respectively. The long-run elasticities are then derived from the above-estimated coefficients: the long-run elasticity with respect to income is equal to $-\beta_4/\beta_3$, and the long-run elasticity with respect to REER is $-\beta_5/\beta$.[40] The absolute value of the coefficient of the lagged value of exports, β_3, is the speed of adjustment to the long-run equilibrium. The expected signs of coefficients of the income term are positive; in the case of the coefficients of the REERs, the expected sign of the coefficient is negative for exports and positive for imports.

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[37]The measures are those based on the RPI; PPI; ULC, industry; and ULC, whole economy.

[38]While in theory such an analysis would be conducted on the trade balance, for purposes of this paper trade flows are disaggregated into imports and exports of goods and services, and goods, all measured in volume terms. This is done because estimating an equation for the difference of two large numbers can lead to imprecise estimates. Also, it may be desirable to see whether the composition of trade between services and goods has a bearing on which indicator is preferable, for example, the ULC-based indicator, may perform better in relation to merchandise trade rather than goods and services.

[39]As noted in Marsh and Tokarick, while arguably a domestic and foreign income term should be included in both the import and export equation (especially if exports are seen as an excess supply phenomenon), including two income terms would cause problems of collinearity, which would make the interpretation of income elasticities difficult, so only one income term is used in the equations.

[40]Formal tests (unit root tests) would not be expected to produce conclusive results because of the short time span, only four years, even though there are 16 observations using quarterly data (see Campbell and Perron (1991)). A simple plot of the series suggests the series have a persistent tendency to move upward over time, suggesting that they are nonstationary.

128.   The estimation results using the four different measures of the REER are given in Tables III-A1–III-A4 and are broadly similar (based on the expected sign and significance of the *t-statistic* of the coefficients)[41] suggests that the indicators perform fairly similarly in relation to imports and exports.[42] This is not surprising given the similar behavior of these indicators during the estimation period.

129.   For exports of goods and services, the short-run estimates suggest that both foreign demand and the REER (lagged one period) play a role with the expected signs.[43] The estimated long-run elasticities of exports (both goods and goods and services) with respect to foreign demand, proxied by real GDP of Slovenia's major advanced trading partners,[44] [45] are estimated to be between 1.9 and 3.7 and are significant in most cases. The long-run elasticities of exports with respect to REER are estimated at between -0.3 and -1.1, although they are statistically insignificant in most cases.[46] The speed of adjustment is fairly fast, ranging from 0.3 to 0.6, or between two to three quarters. Furthermore, the finding that there is a high elasticity of exports with respect to foreign demand supports the notion that the sluggishness of exports in 1995–96 was mainly due to the slowdown in the EU.

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[41]This is a simplistic approach and probably insufficient to distinguish between alternative indicators. Marsh and Tokarick carry out non-nested hypothesis tests using pair-wise comparisons. They were unable to find a clear indication of dominance of one indicator over another.

[42]Given the few observations, such statistical tests may not be robust. In addition, the analysis of the long and short run must also take into account that only a few years are being used to assess these dynamics.

[43]It was found that in the case of exports, REER lagged one period performed better than the contemporaneous value.

[44]Austria, Germany, France, Italy, UK, and the U.S.; trade weights are based on those of the IMF Research Department.

[45]This finding is similar to findings in other empirical work. For instance, estimates of elasticities of export volumes with respect to the REER for countries in the APEC region (Ito, et. al. (1996)) tend to be relatively small (panel estimates resulted in a short-run elasticity of -0.18 and long-run elasticity of -0.80) and statistically insignificant for individual countries in a number of cases; some explanation for this may stem from factors such as changes in trade policy or shifts in the type of tradable goods.

[46]Recent BOS estimates also indicate a strong elasticity of exports with respect to foreign demand, greater than 1, (although the BOS's elasticity is lower than the one presented here, as the foreign demand variable in the BOS estimates is based on foreign imports, as opposed to GDP). The BOS estimates for the elasticity with respect to the REER are substantially smaller than the ones presented here.

Table III-A1. Slovenia: Estimation Results for Real Export Equation[1]
Merchandise Exports

	Competitiveness Indicator			
	ULC, industry	RPI-based	PPI-based	ULC, whole economy[3]
Estimated parameters[2]				
ΔY (B1)	1.12	1.34	1.85	1.49
	(1.7)	(2.2) *	(2.7) **	(1.8) *
$\Delta REER-1$ (B2)[4]	-0.32	-0.53	-0.59	-0.21
	(1.9) *	(2.1) *	(2.3) *	(0.9)
long-run coefficients				
Y (-B4/B3)	2.00	3.49	3.21	1.80
	(3.5) **	(2.2)*	(2.2) *	(1.8) **
REER(-B5/B3)	-0.38	-0.99	-0.75	-0.23
	(1.4)	(1.4)	(1.3)	(0.5)
Speed of Adjustment (-B3)	0.78	0.51	0.41	0.60
	(2.7)**	(1.8)	(1.3)	(1.6)*
Equation statistics: Log likelihood ratio	43.3	45.3	47.5	40.3

Sources: Bank of Slovenia, World Economic Outlook Competitiveness data base; and Fund staff estimates, OECD.

[1] NLS estimation on quarterly data for the period January 1993 through December 1996. * indicates significance at the 10 percent confidence level, ** at 5 percent, *** at 1 percent.

[2] T-ratios are in parentheses below the parameter estimates.

[3] Defined as average gross wages/gdp in dollars relative to ULC for whole economy of 3 major trading partners (Germany, France, Italy); trade weights from IMF's Research Department.

[4] It was found that the lagged value of the REER performed better in the short-run.

Table III-A2. Slovenia: Estimation Results for Real Export Equation[1]
Exports of Goods and Services

Estimated parameters[2]	Competitiveness Indicator			
	ULC, industry	RPI-based	PPI-based	ULC, whole economy[3]
ΔY (B1)	1.42	1.53	1.94	1.60
	(1.9)*	(2.6) *	(3.9)**	(1.8)**
$\Delta REER_{-1}$ (B2)[4]	-0.37	-0.58	-0.63	-0.26
	(2.2)*	(2.8) **	(3.4) **	(1.2)**
Long-run coefficients				
Y (-B4/B3)	2.04	3.65	3.30	1.88
	(-3.0)**	(1.4)	(2.9)**	(1.6)**
REER(-B5/B3)	-0.42	-1.12	-0.88	-0.32
	(1.3)	(1.6)	(1.6)	(0.6)
Speed of Adjustment (-B3)	0.61	0.44	0.34	0.45
	(2.2)*	(1.9)	(1.6)	(1.4)
Equation statistics: Log Likelihood	43.9	47.5	51.6	41.1

Sources: Bank of Slovenia, Statistical Office of the Republic of Slovenia, World Economic Outlook Competitiveness Database, and OECD Analytical Database.

[1]NLS estimation on quarterly data for the period January 1993 through December 1996. * indicates significance at the 10 percent confidence level, ** at 5 percent, *** at 1 percent.

[2] T-ratios are in parentheses below the parameter estimates.

[3]Defined as average gross wages/gdp in dollars relative to ULC for whole economy of 3 major trading partners (Germany, France, Italy); trade weights from IMF's Research Department.

[4] It was found the the lagged value of the REER performed better in the short run.

Table III-A3. Slovenia: Estimation Results for Real Import Equation[1]
Imports of Merchandise Goods

Estimated parameters[2]	Competitiveness Indicator			
	ULC, industry	RPI-based	PPI-based	ULC, whole economy[3]
ΔY_{-1}(B1)	0.05	-0.50	-0.37	-0.54
	(0.1)	(0.8)	(0.6)	(0.7)
ΔREER (B2)	0.99	1.11	1.04	0.75
	(3.5)***	(4.1)***	(4.3)***	(2.5)**
Long-run coefficients				
Y(-B4/B3)	1.59	1.34	1.43	1.38
	(7.1)***	(4.7)***	(6.0)***	(3.0)***
REER(-B5/B3)	0.25	0.44	0.42	0.19
	(1.3)	(2.1)**	(2.2)**	(0.6)
Speed of Adjustment (-B3)	1.06	0.93	0.96	0.76
	(3.4)***	(3.1)***	(3.3)***	(2.9)**
Equation statistics: Log Likelihood	42.0	42.6	41.3	37.8

Sources: Bank of Slovenia, Statistical Office of the Republic of Slovenia, and World Economic Outlook Competitiveness Database, OECD Analytical Database.

[1]NLS estimation on quarterly data for the period January 1993 through December 1996, * indicates significance at the 10 percent confidence level, ** at 5 percent, *** at 1 percent.
[2] T-ratios are in parentheses below the parameter estimates.
[3]Defined as average gross wages/gdp in dollars relative to ULC for whole economy of 3 major trading partners (Germany, France, Italy); trade weights from IMF's Research Department.

Table III-A4. Slovenia: Estimation Results for Real Import Equation[1]
Imports of Goods and Services

Estimated parameters[2]	Competitiveness Indicator			
	ULC, industry	RPI-based	PPI-based	ULC, whole economy[3]
ΔY (B1)	-0.22	-0.70	-0.62	-0.75
	(0.4)	(1.5)	(1.4)	(1.2)
ΔREER (B2)	0.82	0.90	0.85	0.61
	(3.9)***	(4.4)***	(4.7)***	(2.5)**
Long-run coefficients				
Y(-B4/B3)	1.52	1.36	1.42	1.40
	(10.5)***	(7.7)***	(9.5)***	(4.8)***
REER(-B5/B3)	0.20	0.32	0.31	0.15
	(1.5)	(2.4)**	(2.5)***	(0.7)
Speed of Adjustment (-B3)	1.20	1.07	1.11	0.92
	(4.1)***	(3.7)***	(3.9)***	(2.4)***
Equation statistics:				
Log Likelihood	45.3	46.5	46.6	41.2

Sources: Bank of Slovenia, Statistical Office of the Republic of Slovenia, World Economic Outlook Competitiveness Database, OECD Analytical Data Base.

[1]Nonlinear least squares estimation on quarterly data for the period January 1993 through December 1996, * indicates significance at the 10 percent confidence level, ** at 5 percent, *** at 1 percent.

[2]T-ratios are in parentheses below the parameter estimates.

[3]Defined as average gross wages/gdp in dollars relative to ULC for whole economy of 3 major trading partners (Germany, France, Italy); trade weights from IMF's Research Department.

130.   Short-run dynamics of income do not appear to be play a role in determining imports.[47] However, the short run effect of the REER on imports is strong, between 0.7 and 1.1 (for goods and goods and services). The long-run elasticity of real imports with respect to income was estimated between 1.3 and 1.6 for imports (goods and goods and services),[48] while long-run estimates for imports with respect to the REER are between 0.2 and 0.4; and the speed of adjustment is very rapid.

131.   These results should be viewed with caution, however, owing to the short span of the data (that is, the number of years, not the number of observations). A longer time period for estimation is needed to assess the long-run relationship of the REER with respect to trade. The lack of significance of the REER as a long-run determinant for exports also suggests that structural factors may have been more important than the REER during the period. Also, these measures of the REER do not capture other important nonquantifiable factors affecting competitiveness. Therefore, it is important to look at other indicators of competitiveness such as export market shares.[49]

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[47]Income is lagged to avoid simultaneity with imports, as imports are a determinant of income.

[48]These estimates compare with long-run elasticities of imports with respect to the REER of 0.28 and with respect to income of 1.46 for panel estimates of APEC countries (Ito, et. al., (1996)). The panel estimate was insignificant in the long run and about half the value of the average for the countries. And as noted above, for exports, changes in trade policy or shifts in the type of goods being traded were possible factors in the imprecise estimates of the REER. Other authors, such as Kumar, et. al., (1993), estimate an elasticity of import volumes with respect to relative prices of 0.37 for net-debtor countries.

[49]Marsh and Tokarick (1994) conclude that none of the indicators which they tested fully captures all of the theoretical aspects of competitiveness and none of the indicators works uniformly well across the G-7 countries.

EXTERNAL INDICATORS OF COMPETITIVENESS

132.   Slovenia publishes a number of commonly used indicators of external trade competitiveness, including the REER based on retail prices (RPI-based),[50] unit labor costs for industry (ULC-based, industry), and producer prices (PPI-based).[51] In addition, some other broad-based measures can also be constructed from available data: the price of tradables to nontradables (the internal terms of trade), the dollar wage, and the ULC-based REER for the whole economy.[52] The **RPI or CPI-based REER** is one of the broader measures, as it includes manufactured goods and services and is usually fairly comparable across countries. It also has the advantage that retail/consumer prices are typically correlated with wages, which are an important factor in production costs. However, there are a number of drawbacks: (1) it is vulnerable to distortions stemming from price controls, which account for about one fourth of items included in Slovenia's RPI; (2) it includes nontradable goods and services;[53] and (3) it does not include prices of intermediate goods, which account for a large amount of trade. Alternatively, the **PPI-based index** is derived from the prices of tradable goods and hence is likely to reflect the degree of substitutability of these goods with those of Slovenia's trading partners. However, it also suffers from distortions. For instance, if the tradable goods are close substitutes for foreign goods, exporters can "price to market" when the exchange rate appreciates by squeezing profits in the short term.[54] As a result, it may not present a very good measure of relative profitability and incentives to shift production from domestic to tradable sectors. Also, the PPI-based indicator is often not very comparable across countries because of differences in commodity composition. The **ULC-based REER for industry** has the advantage that it provides an indication of the profitability, which is particularly important for Slovenia where manufactured goods accounted for about three-fourths of total exports of

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[50]The RPI is used as the measure for inflation in Slovenia as opposed to the CPI which is used in most countries. The measures differ mainly due to the weights. In 1998, the Statistical Office plans to stop producing the RPI.

[51]A limitation of other REERs is that comparing unit values of exports in a specific import market implicitly adopts a view of competitiveness based on competition among exporters in a given import market, and is not a view based on the relative incentives to produce tradable and nontradable goods (McGuirk, 1986).

[52]See Marsh and Tokarick (1994) for an assessment of competitiveness indicators.

[53]Consequently, it is likely to appreciate on account of the Ballassa-Samuelson effect, which predicts increases in nontradable prices relative to tradable prices on account of productivity differences across these two sectors.

[54]As noted in Feldman (1994), such a policy is not sustainable in the long run and therefore these indicators of competitiveness are better viewed in a medium-term perspective.

goods and services in 1995.[55] However, it also includes utilities which are typically not tradable. While it avoids a number of the problems associated with the CPI- and PPI-based indices, there are drawbacks: (1) labor productivity gains due to substitution of capital for labor are frequently associated with an increase in unit capital costs, so that a decrease in this indicator may overstate underlying gains in competitiveness. Likewise, additional nonlabor costs in production, such as intermediate goods costs, may distort the return to capital;[56] (2) labor services acquired from other sectors in the process of production are typically excluded and there may be cross-country or intertemporal differences in the use of labor services from other sectors; (3) problems with international comparability may result in differences in the definition of the sector.

133.   In addition, to these widely available measures, alternative broad-based measures of competitiveness include the **price of tradables to nontradables** (the internal terms of trade, Pn/Pt) and the **dollar wage**. Pn/Pt is faulted because it fails to account for the differences in productivity across sectors. There also is the difficulty of defining tradable/nontradable goods (the Institute of Macroeconomic Policy and Development defines tradable sectors as those which export or import an above average proportion of their output). Also, the impact of an increase in Pn/Pt on the trade balance may be mitigated if similar trends occur in competitor countries, as seems to be the case.[57] The dollar wage is widely used among transition economies as it is a level, as opposed to index, measure. As such, it has the advantage that it avoids the problem of selecting an appropriate base year and, more importantly, it gives a sense of the size of the gap in wages when comparing across countries. Since it is wages for the overall economy, it also reflects gains in productivity of the economy relative to abroad, as opposed to other indices such as the RPI-based REER (which moves on account of productivity differences across sectors) and the ULC-based industry REER (which only reflects relative productivity gains in the industrial sector). It, however, has the problem of comparability across countries in definition of labor costs and, in the case of transforming economies, of underreporting of wages as direct labor costs used to be only a portion of total costs given the "social function" of firms.

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[55]Data for 1996 are not yet available.

[56]A correction to this is possible by using the value-added deflator in manufacturing (Lipschitz and McDonald (1991)); this, however, poses data availability problems in most countries.

[57]De Gregorio et. al., (1994) provide evidence of an increase in the relative price of nontradables for 14 OECD countries.

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IV. THE ECONOMIC IMPACT OF ACCESSION TO EU AND PARTICIPATION IN EMU[1]

A. Introduction and Summary

134. With EMU in the offing, several countries are aspiring to membership in the EU, and eventually EMU. Among them is Slovenia, a small open economy: small in that its output is 0.3 percent of that of the EU; and open in that exports are two-thirds of its GDP. Slovenia has managed to stabilize its economy since reaching independence in 1991, with early structural reforms and tight macroeconomic policies. Inflation has declined to single digits, and economic growth has resumed. These developments have positioned the country well for EU membership. In fact, in July 1997, the European Commission announced that it would propose to the European Council that Slovenia be among the first group of countries with which membership negotiations should be initiated. Acting on this proposal, the Luxembourg European Council in December invited Slovenia and five other countries to begin these negotiations in March 1998.

135. What will be the impact of joining the EU and EMU for Slovenia? This chapter points out that interest rates and the inflation rate will converge to EU levels, most likely involving a substantial drop in rates. Monetary policy will lose its autonomy; therefore, it can no longer be used to counter idiosyncratic shocks. To compensate, fiscal policy will be required to be more flexible, but prudent, given the limits to fiscal deficits under the Stability and Growth Pact. The net impact of accession on the budget is expected to be positive. The composition of output and exports is not expected to change significantly, given the existing similarities in economic structure between Slovenia and the EU. The most important impact will be on economic activity: the growth rate will increase because liberalization of markets and stability-oriented macroeconomic policies will foster efficient use of resources and knowledge spillovers, which in turn will increase productivity and capital accumulation. These will help Slovenia catch up with the EU in terms of its per capita income (Figure 1).

136. These results are conditional on three main factors. First, it is necessary to liberalize Slovenia's economy by not only lowering its barriers to trade, but also by carrying through many structural reforms, including capital account liberalization, removal of remaining price controls, and de-indexation. A partial opening up without the necessary reforms will jeopardize the EU membership possibility. In addition, it will limit efficient use of factors of production and knowledge diffusion from abroad, therefore inhibiting increases in productivity and growth. Second, it is important to conduct an active and prudent fiscal policy. Too rigid fiscal policies may lead to excessive volatility in output, and too loose policies will entail penalties under the terms of the Stability and Growth Pact. Third, the inevitable real appreciation needs to take place early in the process. A continuing real appreciation that comes about through a nominal appreciation or inflation is inconsistent with the Maastricht criteria of a stable exchange rate and low inflation.

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[1]Prepared by Tarhan Feyzioğlu.

Figure IV-1. European Union: Gross Domestic Product per Capita, 1996
(In US dollars)
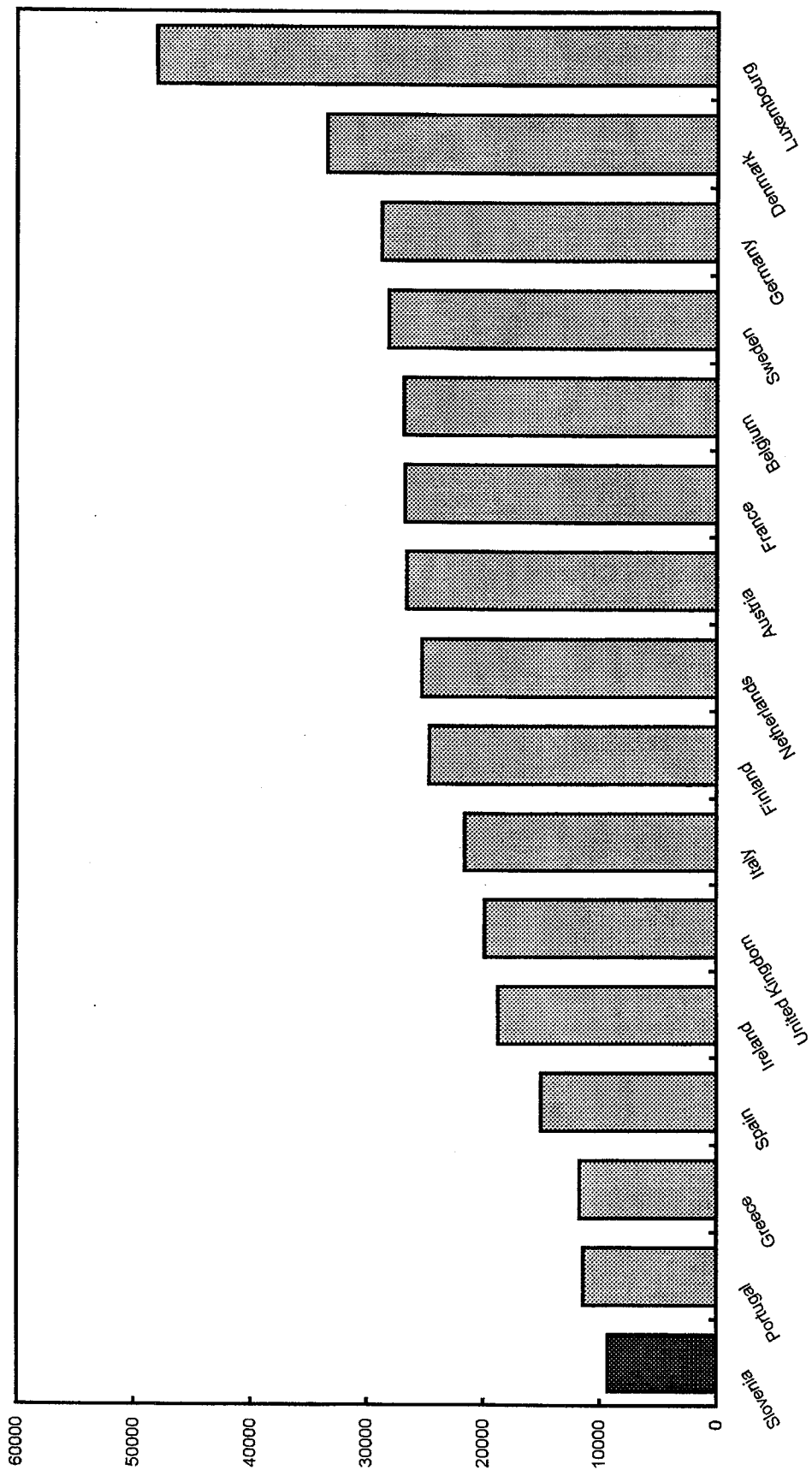
Source: World Economic Outlook, September 1997.

137. In deriving these conclusions, it is assumed that the strategy detailed in the EU Accession Strategy of the Republic of Slovenia will be implemented, and that the current policies and the structure of the EU, which includes the Maastricht convergence criteria, the Stability and Growth Pact, and several financial support funds that are mentioned below, will continue to exist.

138. The rest of this chapter describes how these conclusions are reached. After the brief background section, there are four sections that cover issues in the monetary, fiscal, production and trade, and growth areas.

B. Background

139. Slovenia established formal ties with the EU in early 1992, soon after its independence, and formally applied for membership in mid-1996. A Europe Agreement that provides the basis for integration to the EU was signed, and an Interim Agreement entered into force in January 1997, until the ratification of the Europe Agreement by all the EU members. The EU accepted Slovenia as one of the candidates for full membership in December 1997, with negotiations to be started in March 1998. The government envisages 2002 as the year of accession to EU membership and 2005 as the year for EMU participation.[2] However, government officials—most recently Prime Minister Drnovšek at the Luxembourg Summit in December 1997—have at times insisted on bringing EMU participation forward to the date of EU membership.

140. The accession requirements were spelled out in the declarations by the European Council in Copenhagen in 1993 and in Madrid in 1995, in a 1995 White Paper by the European Commission, and in the Commissions's Agenda 2000, published in 1997. According to these documents, for accession the EU requires the implementation of the "four freedoms": free movement of goods, services, people, and capital. To fulfill these requirements, the Slovenian government agreed on a set of measures and submitted them to parliament in October 1997. Some of these measures are discussed in the following sections.[3]

141. Regarding EMU, the Slovenian government has never left any doubt that it considers EU membership without participation in EMU as inconceivable. Although prerequisites have not officially been specified by the EU, the Slovenian government has agreed on a sequence of measures to qualify for participation.

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[2]See "EU Accession Strategy of the Republic of Slovenia" by IMAD.

[3]For a complete list, see Annex I and "EU Accession Strategy of the Republic of Slovenia."

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C. Monetary Sector

142.   There is very little uncertainty about the changes the EU accession and EMU participation will bring to the monetary sector, because most of them are spelled out either as requirements for EU membership or as convergence criteria for EMU participation: full capital account convertibility should be established, inflation and interest rates must come down to EU levels, and the tolar has to remain stable in terms of the euro for two years before EMU qualification. Subsequently, the tolar will be irrevocably fixed vis-à-vis the euro, and eventually will be replaced by it. Even before the euro replaces the tolar, the requirement of exchange rate stability implies that the Bank of Slovenia will lose monetary policy independence.
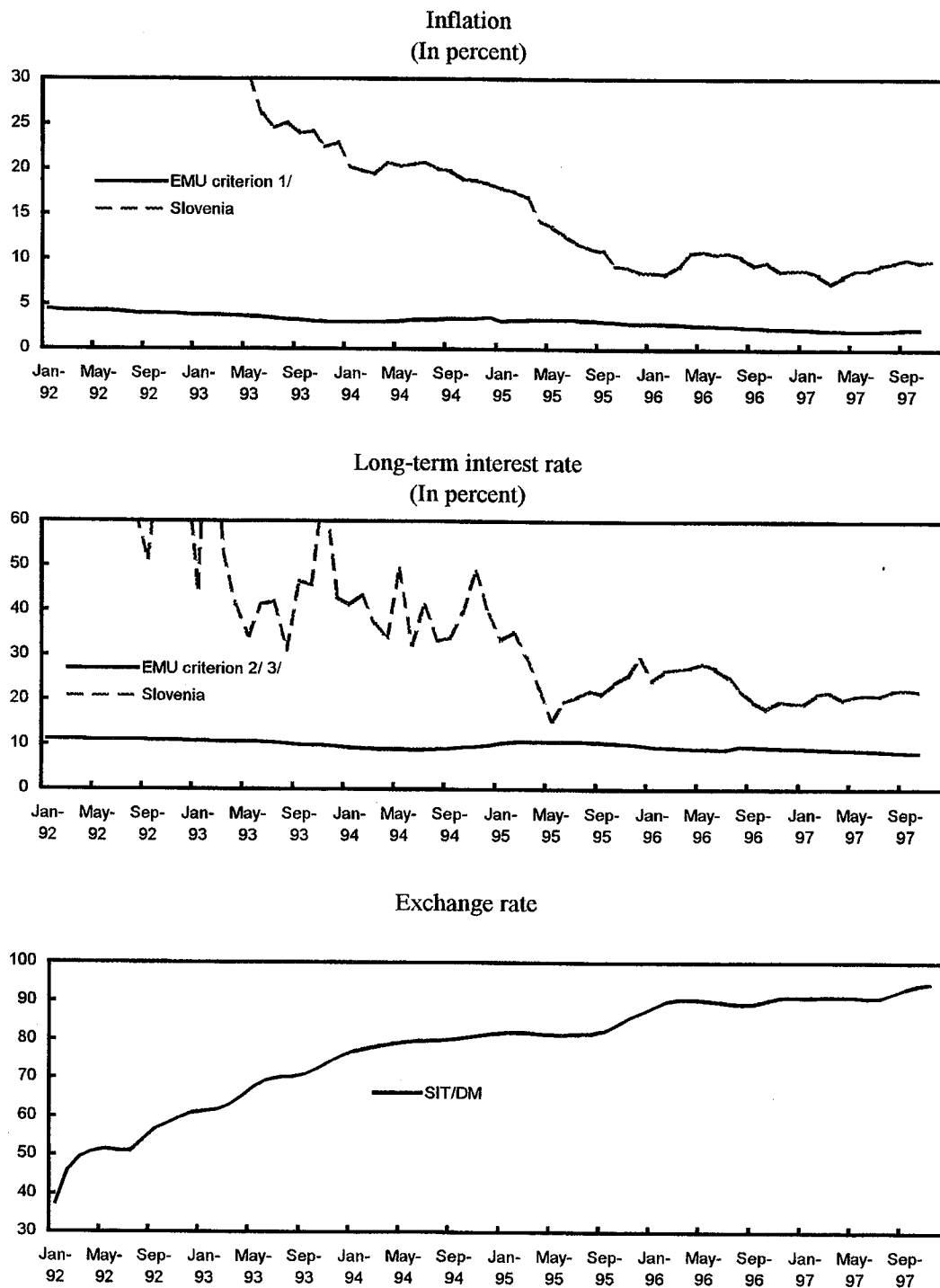
143.   Free capital flows will be allowed, in line with one of the "four freedoms." Currently there are significant restrictions on capital inflows and outflows, in particular short-term capital.[4] A new foreign exchange law envisages an immediate liberalization of foreign direct investment and long-term credit operations; liberalization of portfolio inflows will be extended over four years.

144.   Inflation will come down to EU levels, as is mandated by the Maastricht criterion that dictates that inflation should not exceed by more than 1.5 percentage points, at most, the average inflation of the three best-performing EU member states in terms of price stability, currently lower than 2 percent (Figure 2). Inflation was successfully brought down from triple digits in 1991 to single digits by 1995; however, since then it has lingered close to 10 percent. Inflation will be lowered as the authorities conduct responsible monetary policy, abolish indexation, remove controls on certain prices and set the remaining ones close to market levels. One-time shifts can be expected when the relative prices adjust and the VAT is introduced.

145.   As long as interest rates in core EU1 countries remain close to present levels, the requirement on the long-term interest rate will bring down both the nominal and the real rates (Figure 3). Under the relevant Maastricht criterion, a member's long-term interest rate may not exceed by more than 2 percentage points, at most, that of the three best-performing member states in terms of price stability. Currently, interest rates are high in Slovenia. This can be explained by tight monetary policy, indexation, and the structure of the banking system. As indexation is abolished and competition is increased in the banking system, real rates will decline. Coupled with lower inflation, nominal rates will converge to EU levels.

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[4]See the accompanying report on Recent Economic Developments, Section IV and IMF, Exchange Arrangements and Exchange Restrictions, Annual Report 1997.
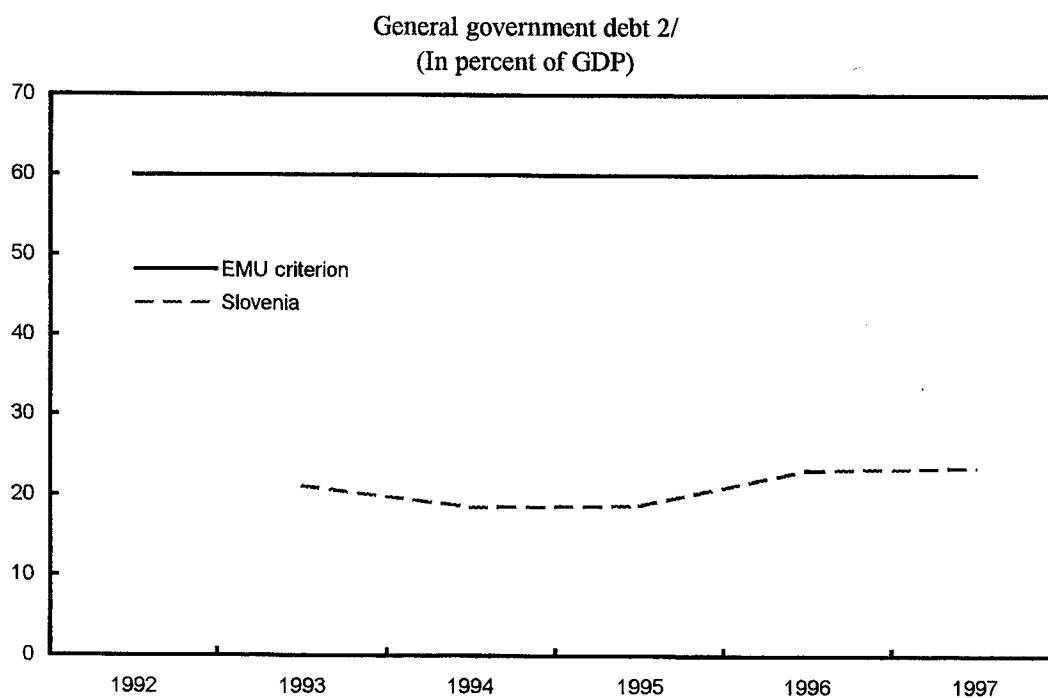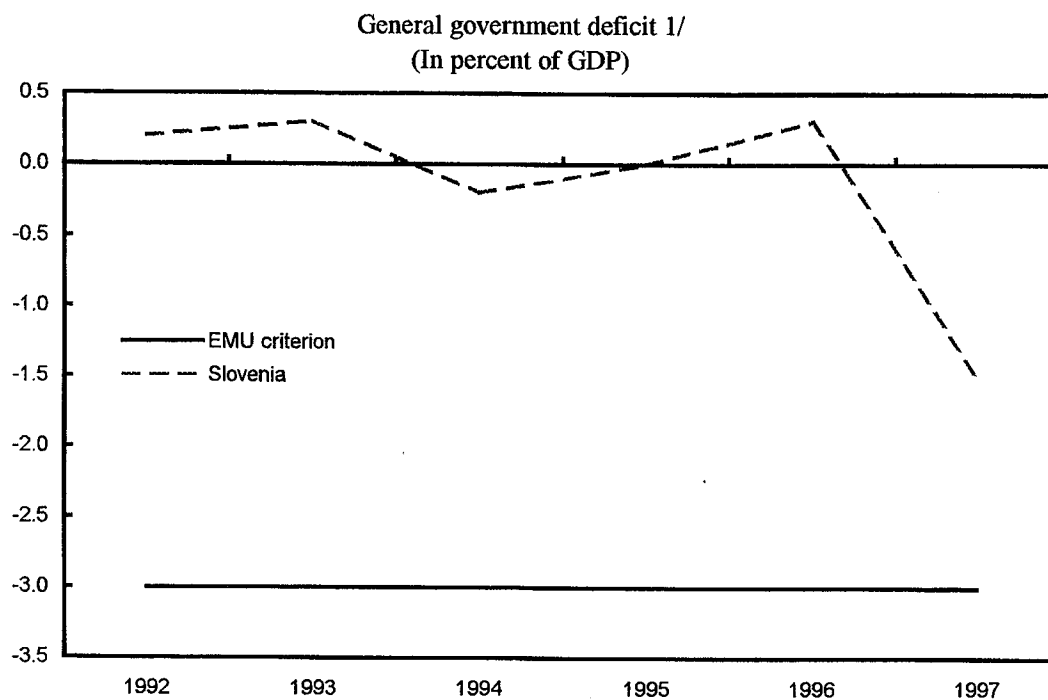
Figure IV-2. Slovenia: EMU Monetary Convergence Criteria, 1992-1997

Inflation
(In percent)

EMU criterion 1/
Slovenia

Long-term interest rate
(In percent)

EMU criterion 2/ 3/
Slovenia

Exchange rate

SIT/DM

Sources: Bank of Slovenia and staff calculations.

1/ Average of the three member countries with the lowest inflation rates + 1.5 percentage points.
2/ Average of the three member countries with the lowest inflation rates + 2.0 percentage points.
3/ Slovenia: long-term nominal lending rate.

Figure IV-3. Slovenia: EMU Fiscal Convergence Criteria, 1992-97

General government deficit 1/
(In percent of GDP)

General government debt 2/
(In percent of GDP)

Sources: Bank of Slovenia, and Ministry of Finance.

1/ The 1997 figure is official projection.
2/ The 1997 figure is staff projection.

146.   Prior to EMU participation, the exchange rate has to remain stable for two years.[5] However, Halpern and Wyplosz (1996) point out a stylized fact of the transition process that an early exchange rate depreciation is followed by continuing real appreciation. Their results suggest that appreciation stems from a combination of a return to equilibrium levels and equilibrium appreciation.[6] This is also expected for Slovenia. If the real appreciation is achieved through higher inflation, Slovenia will probably violate the Maastricht criterion on inflation; if there is a nominal appreciation, the requirement of a stable exchange rate will be violated. Although—as in the case of Ireland—an appreciation may be looked upon more leniently than a depreciation, these imbalances could jeopardize Slovenia's acceptance to EMU. A real appreciation that takes place in advance of convergence to Maastricht criteria will avoid the conflict.

147.   Once in EMU, Slovenia can no longer expect monetary policy to be geared to serve primarily the interest of Slovenia. In case of an external shock, the European Central Bank will react only to the extent that the shock is common to the union. Idiosyncratic shocks will not be compensated by monetary policy. This change will put particular demands on the adaptability of fiscal and incomes policies and on labor market flexibility.

D. Public Sector

Budget

148.   Accession to the EU is expected to have a positive net effect on Slovenia's government budget. Positive net transfers from the EU budget and larger taxes stemming from higher output (see section F) will improve government revenue. On the other side, customs duties will decline and administrative costs are bound to increase. The net effect, however, is expected to be positive if the net transfers do not fall to the lower end of the range of possible outcomes.

149.   Net transfers from the EU budget are likely to be substantial. Transfers from the EU budget will be within the framework of the Common Agricultural Policy (CAP), the European Structural Fund (ESF), and the Cohesion Fund (CF). The application of the CAP to Slovenia will allow Slovenia to receive transfers for farm income support from the EU budget. Similarly, Slovenia will qualify to receive transfers from the ESF and the CF. The CF was set up to help countries with low income to achieve the criteria set in Maastricht. The ESF was set up to distribute income to achieve more even development across the EU. The most

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[5]Most likely Slovenia will joint ERM II by pegging to the euro, with possible maximum fluctuation bands around the central rate of plus or minus 15 percent.

[6]Halpern and Wyplosz's stylized fact of an appreciating real equilibrium exchange rate in transition economies is briefly summarized in the preceding chapter of the present selected issues paper.

important criterion to qualify for the transfers is a low income relative to the EU average. Under current rates, Slovenia will satisfy all the criteria and obtain a considerable amount of transfers from the EU. The amounts of transfers to be received are not certain; calculations of inflows range between 4 and 5¼ percent of GDP. Transfers to the EU budget will be proportional to the share of Slovenia's GDP in the EU, which is 0.3 percent, and should translate into an outflow of around 1 percent of Slovenia's GDP. The net flow estimates thus range between 3 and 4 percent of GDP.[7] If a policy change occurs in favor of the new members once they enter the union, net transfers may even exceed the upper range of the estimates.

150.   These figures are consistent with previous EU accession experiences. In 1995, net flows to Greece, Portugal, and Spain were 4½ percent, 3¼ percent and 1½ percent of their respective GDPs, respectively.

151.   There are several uncertainties surrounding the amount of net transfers. First, the CAP is very complex and precise data on farms and agricultural production are lacking. Second, the CAP may be reformed before the accession. Third, the absorption capacity of the economy may be limited for such large transfers. Fourth, most of these transfers require matching national contributions, which may not be available given the Maastricht criterion on the fiscal deficit. This is reflected in the actual use of such funds by eligible recipients: actual expenditure for structural projects accounted for only 70 percent of the amount approved in 1995.

152.   In addition to transfers, higher output will boost government revenue as EU and EMU membership is expected to increase the growth rate of output. As a result, under the assumption of no change in tax rates, revenue from income taxes and VAT will rise.

153.   On the other side, revenue from customs duties, which has already declined by some 1 percent of GDP, will decline even more substantially to comply with the requirements of the single market and the common external tariff. In the long run, total revenue from customs duties is expected to be insignificant, because of, in addition to EU, certain bilateral agreements and CEFTA.

154.   Administrative costs will also rise. The new procedures, and the necessity of formulating and designing further reforms, have already put strains on the government administration. This pressure will intensify since Slovenia is now officially accepted as a candidate for admission.

155.   There will be other changes in the budget stemming from EU accession. Currently Slovenia has a sales tax, which must be replaced with a value added tax (VAT) to bring the revenue system more in line with that of the EU. Excise taxes will also be altered to comply

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[7]See Baldwin et al. (1997) and Strmšnik (1997).

with the EU provisions on the holding and movement of goods. Several other taxes will be harmonized with those of the EU. These changes are expected to lower the distortions inherent in the tax system, and increase transparency and comparability with other countries' systems. The impact of these changes on total revenue will be minimal, because the VAT and excise tax rates will be determined to ensure revenue levels no less than the current levels.

Other effects

156. Until now, the Maastricht criteria on the public sector deficit and debt have not been binding for Slovenia. The general government accounts have been close to balance, deviating from zero by no more than ¼ percent of GDP until 1997. Moreover, the general government debt has been low relative to levels observed in the EU, fluctuating around 20 percent of GDP. These values are far from the deficit and debt ceilings in the Maastricht criteria, which are 3 percent and 60 percent of GDP, respectively.

157. It is uncertain if this will continue. Based on the recently approved budget, the general government accounts show a deficit of 1½ percent of GDP in 1997. Once the accounts are standardized with the EU, the deficit may be even higher, depending on the treatment in the budget of the privatization revenue and the expenditure of extrabudgetary funds. Without measures, the deficit is projected to increase to more than 3 percent in 1998. More important, these fiscal slippages are occurring during a period when output is growing by 3–4 percent, well above the EU average. Even if Slovenia may satisfy the deficit criterion, once in EMU, it will be bound by the Growth and Stability Pact that penalizes a country for excessive deficits. This means that, to safeguard the path to EMU membership and to avoid penalties under the Growth and Stability Pact, a savings package is required.

158. Another pressure point is the pension fund, which is projected to have an increasing deficit for the coming 50 years. This will also put considerable stress on the budget, and will be yet another factor increasing the deficit. Reforming the pension system will help both the sustainability of the pension fund, and the fulfillment of the Maastricht criterion on the public deficit.

159. In addition to being prudent, fiscal policy has to be more responsive to idiosyncratic shocks to the economy. Up to 1997 the fiscal balance has changed minimally, in spite of strong fluctuations in the macroeconomic variables.[8] However, participation in EMU will eliminate Slovenia's autonomous monetary policy. The buffer role of the monetary policy needs to be taken over by fiscal policy. This way, negative idiosyncratic shocks will be countered by fiscal policy measures and their adverse effects on economic activity will be limited. To this end, it will be beneficial to increase the relative size of the discretionary part in the central government budget, which currently stands at only 30 percent. If such flexibility is

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[8]See the accompanying report on Recent Economic Developments, Section III.

not brought to fiscal policy, if wage determination continues to be rigid, and if the size and frequency of idiosyncratic shocks do not diminish, then the volatility of output has to increase.

E. Production and Trade

160.   Trade liberalization will reduce tariff protection, in line with one of the "four freedoms." The average nominal tariff rate was 5.7 percent in 1996. This figure would be somewhat higher if additional protection for intermediary goods is taken into account. The rate is expected to come down by a few percentage points by 2001, and become insignificant in the long run as more bilateral free-trade agreements are adopted. The common tariff structure for the EU will raise some tariffs, but the increases are not expected to be substantial.

161.   While the decline in tariff protection is in the right direction, the impetus to further freedom of markets and resources will come from many micro-level adjustments in different production sectors. These measures are detailed in the "EU Accession Strategy of the Republic of Slovenia," and a summary list is in Annex I. Their main objective is to increase efficiency through better governance, price liberalization, and stronger incentives for knowledge diffusion.

162.   Will liberalization lead to a change in the production structure? This depends on how different Slovenia's current production and trade patterns are from those of the EU, and whether integration will lead to more product concentration. The structures of output by type of activity and exports in Slovenia and in the EU are very similar (Figures 4 and 5). In both Slovenia and the EU, manufacturing, especially machinery, has the largest share in output, while agriculture and mining have the smallest. In exports, again the manufacturing sector has the largest share in both Slovenia and the EU. The strength of the linkage between the economies can also be seen from the fact that close to 70 percent of Slovene exports goes to the EU. However, there are still certain divergences. First, the share of Slovene financial institutions in total output is significantly lower than that in the EU. Second, the share of social services (most of "other" category), including education and health, is significantly higher. Third, the ratio of basic manufacturing goods to total exports is almost twice as large as that of the EU.
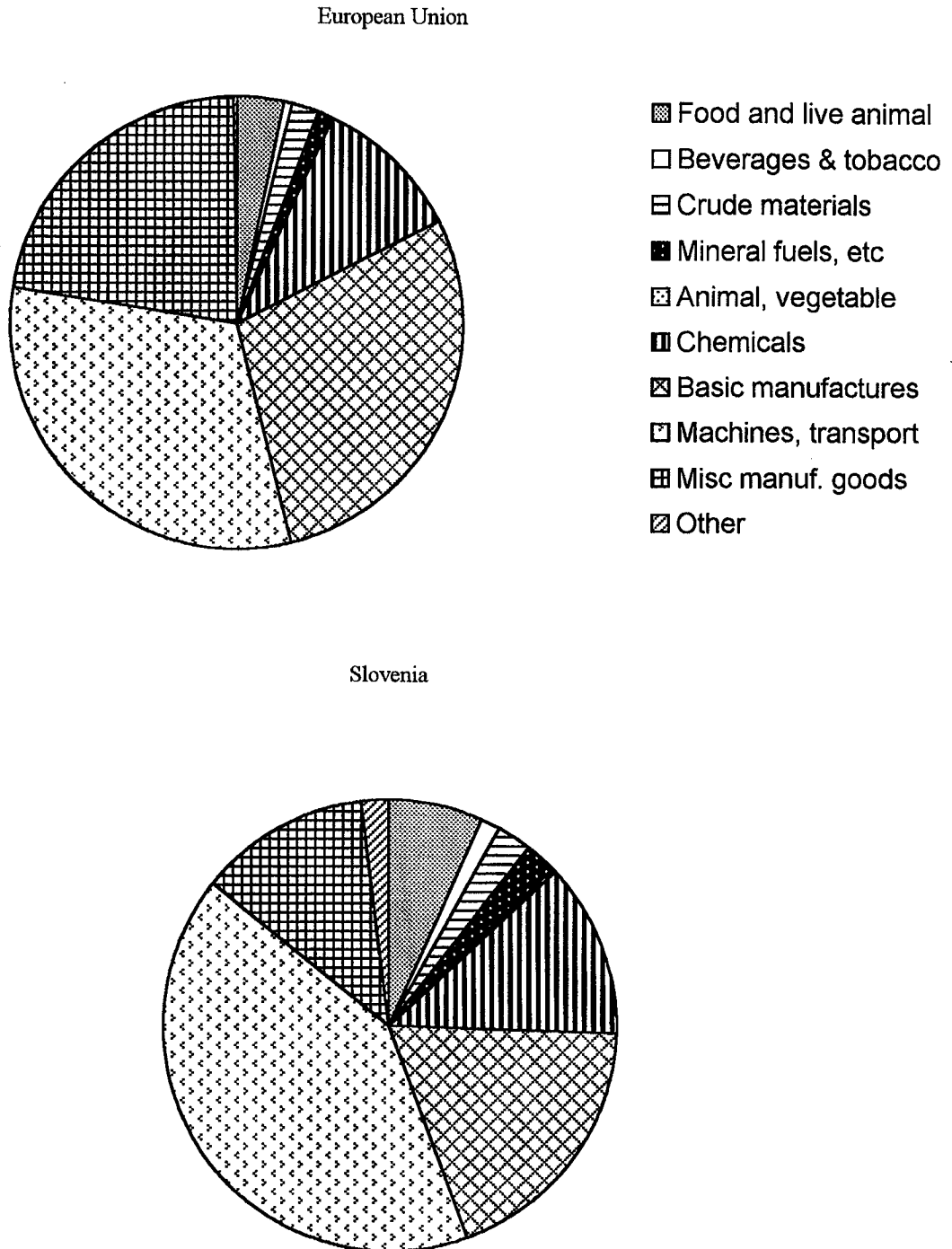
163.   Theoretically, opening up an economy to international trade can have two opposing effects on the production structure. On the one hand, it creates the opportunity to produce closer to the final market, thereby encouraging diversification. On the other hand, it allows further use of economies of scale, and leads to concentration of production in specific regions that are determined by comparative advantage. As Krugman (1991) points out, the automobile industry is an example of higher production concentration with further integration. This can be seen by comparing production in the United States and Europe. In the United States, where there are fewer barriers to trade relative to Europe, automobile production is much more concentrated in a few regions.

Figure IV-4. Slovenia: Composition of Output

European Union

- ▨ Agriculture
- ☐ Mining
- ⊟ Manufacturing
- ■ Electricity
- ⊡ Construction
- ⊞ Wholesale
- ⊠ Hotels
- ⊡ Transportation
- ⊞ Finance
- ▨ Real estate
- ⊟ Other

Slovenia

Sources: OECD, National Accounts and national authorities.

Figure IV-5.   Slovenia: Export by SITC

European Union

- ▨ Food and live animal
- ☐ Beverages & tobacco
- ⊟ Crude materials
- ■ Mineral fuels, etc
- ▣ Animal, vegetable
- Ⅲ Chemicals
- ⊠ Basic manufactures
- ⊡ Machines, transport
- ⊞ Misc manuf. goods
- ▨ Other

Slovenia

Sources: UNCTAD, Trade Analysis Reporting System and national authorities.

164.   Frankel and Rose (1996) claim that trade liberalization increases intra-industry trade. They use a panel of 30 years of data from 20 industrialized countries and investigate the link between trade intensity and business cycle activity. If liberalization leads to production concentration, then the business cycles should become less correlated. Finding that there is a strong positive relationship between trade intensity and business cycles, they conclude that greater integration leads to more diversification.

165.   The strong similarities between Slovenia and the EU in production and export structure, coupled with empirical results, indicate that EU accession will not lead to substantial changes in the Slovenian production structure. The remaining differences should diminish with liberalization. Liberalization will certainly introduce more competition to the banking sector in Slovenia, and improve the financial services, as barriers to capital movements and indexation are abolished. This is consistent also with the necessary development of the capital markets. Liberalization will also bring more know-how to the industrial sector, increasing the share of non-basic manufacturing. With the government's commitment to a smaller government sector and pension reform, the share of the social services within output is expected to shrink.

166.   It should be noted that the analysis at the aggregate level misses certain important dynamics at the micro level. For example, while the relative size of a sector in Slovenia and the EU may be the same, the quality of output can be very different. Through learning-by-doing, or other ways of knowledge diffusion (section F), these differences can be eliminated. Such changes may improve the prices in that sector and Slovenia's terms-of-trade.

167.   One way of predicting changes at the sectoral level is to simulate changes using a computational general equilibrium model (CGE), as done by Potočnik (1997). His simulations indicate that textiles, wood and paper products, minerals, basic metal and metal products, and machinery and equipment sectors stand to lose the most, whereas coke, refined petroleum products, and transport equipment will benefit from European integration. These results should be interpreted with caution because of the necessary abstraction for simulation.

F. Growth Rate

168.   Perhaps the most important potential impact of EU accession for Slovenia is on the growth rate of output. A one-time level shift in output, while welcome, may not be substantial. But an increase in the growth rate of output, no matter how small, will have an important impact in the long run. An improvement that will keep the output growth rate above that of the EU will be instrumental in Slovenia's quest to catch up with per capita output levels in core EU countries.

Theoretical considerations

169.   There is a growing consensus that opening up the economy to international markets, together with a set of policies directed toward a stable macroeconomic environment, does

lead to a higher growth rate of output. The emphasis on trade in promoting growth, which dates back to Adam Smith, has led to outward-oriented policies, away from the inward-oriented import substitution growth policies of 1960s and 1970s. In this context, trade liberalization is considered to be the flagship of a set of reforms that include price liberalization, privatization, deregulation, and the installation of a social safety net.

170.   The literature on international trade and growth finds a strong positive link between free trade and economic growth.[9] Two classical explanations are economies of scale and comparative advantage. Sectors with increasing economies of scale benefit from free trade because additional markets lead to more production with lower costs, promoting growth. Similarly, firms will be able to produce their goods where they have a comparative advantage, making more efficient use of the resources and enhancing growth.

171.   Recently, the importance of knowledge dissemination on growth has been emphasized. According to this strand of literature, growth depends on the accumulation of knowledge by a country, which depends on the stock of knowledge. The larger a free trade area is, the more knowledge spillover there is. Trade between countries acts as a "conduit" for the dissemination of knowledge. For example, Marin (1995) finds supporting evidence that Austria's growth was relatively fast during the postwar period because of the "knowledge spillovers from its trading partners," particularly Germany. A similar point is made for a number of countries by Ben-David and Loewy (1995).

172.   Recent empirical studies verify these theoretical conclusions. Edwards (1993) finds that higher trade barriers reduce factor productivity and growth. However, his study does not include non-tariff barriers. Bosworth, Collins and Chen (1995) look at 70 countries and obtain direct indicators of tariff and non-tariff barriers. They find that lower average tariff rates and non-tariff barriers are associated with faster growth. They find also that trade liberalization works through both channels: faster capital accumulation and larger productivity gains. The possible short-term negative impact of trade liberalization is downplayed by Papageorgeiou et al. (1991), based on the study of a number of liberalization episodes.

173.   A stable macroeconomic environment is also shown to be important for economic growth. Barro and Lee (1994) show that there is a strong correlation between a stable environment and economic growth. Bosworth, Collins, and Chen (1995) empirically find that higher real exchange rate volatility and higher average budget deficits lead to lower growth rates in their panel study with a 32-year sample. The budget balance is shown to affect capital accumulation, whereas the variance in the real exchange rate affects the productivity growth.

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[9]See, for example, Rivera-Batiz and Romer (1993) and Roubini and Sala-i-Martin (1991). For certain exceptions, see Grossman and Helpman (1991) and Young (1991).

174.   These results are reinforced by other results that show convergence of per capita income between certain countries. Sachs and Warner (1995) reach a strong conclusion that all economies that are open tend to converge to the same level of per capita income in the long run, and that closed economies do not.

Implications for Slovenia

175.   The theoretical and empirical literature advocates two broad conditions for stronger growth: open, freely functioning markets, which allow the efficient use of capital and labor, and a stable macroeconomic environment. But these are precisely the requirements to join the EU and EMU. Therefore, Slovenia's growth should pick up once it joins the EU and EMU.

176.   Specifically, Slovenia will take steps to lower barriers to the free movement of goods, services, and factors of production. These measures will help boost the accumulation of both physical and human capital, and increase knowledge spillovers from abroad. Further measures in research and development can be taken to benefit from such spillovers. In turn, productivity will grow.

177.   Steps will also be taken to ensure macroeconomic stability. In this regard, there are two opposing forces. On the one hand, EMU will constrain Slovenia's ability to use monetary policy to react to country-specific shocks.[10] For example, a negative demand shock to Slovenian exports could not be softened by a depreciation of the exchange rate. If wages do not adjust quickly, output will decline, until real wages decline in the long run. Even a temporary change in the terms of trade may lower output. This case can be aggravated if Slovenian industries become more concentrated, thereby becoming more vulnerable to idiosyncratic shocks. On the other hand, an active fiscal policy will compensate for the monetary rigidities; at the same time, the Stability and Growth Pact will ensure its prudence. Moreover, historical volatility that stems from inappropriate policies will diminish, if not vanish. The volatility of the exchange rate will decline and, eventually, the rate will be fixed vis-à-vis the euro. A fixed exchange rate will also lead to a less volatile real rate, as is shown in Flood and Rose (1995). Of course, a more flexible wage setting environment, if it materializes, will also ease the pressures. Finally, the similar production structure and the well diversified nature of the Slovenian economy (a remarkable feature, given its smallness) would seem to limit the likely incidence of idiosyncratic economic shocks. Idiosyncratic shocks should diminish further as the Slovenian economy gets integrated to the EU. The net effect should be more macroeconomic stability.

178.   The experience of Spain is germane in this context. Spain became a full member of the EU in 1986. The fundamental macroeconomic imbalances were eliminated and market mechanisms were put in place. The progressive opening up, coupled with structural reforms, had led to freer movement of goods and capital. In the following five years, Spain's GDP

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[10]See, for example, Corben (1994) and De Grauwe (1994).

grew at an average annual rate of 4.3 percent, 1.5 percentage points faster than GDP in its main trading partners and close to 3 percentage points faster than the previous five years, and reduced its per capita income gap with the core EU economies.

A PARTIAL LIST OF MEASURES TO BE TAKEN FOR THE EU ACCESSION

Monetary and foreign exchange
- Elimination of the inter-bank agreement on maximum deposit rates.
- Interest rate de-indexation.
- Abolishing the BOS restrictions on commercial and financial credits.
- Liberalization of all short- and long-term capital flows, and harmonization with the EU.

Fiscal
- Pension reform.
- Introduction of VAT.
- Reform of the tax administration.
- Adoption of the Public Servants Act.
- Revision of the excise tax in accordance with the EU standards.

Price and competition liberalization
- Implementing a programme of administered prices liberalization.
- Introduction of amendments to Protection of Competition Act.
- Restrict state aid to research and development, environmental issues, and regional cohesion.

Enterprise sector reform
- Variety of measures, including education and subsidies, to stimulate development of small and medium-sized companies, research, and foreign direct investment.
- Promotion of Environmental Approach to Business
- Harmonization of Technical Regulations
- Consolidation of ownership and establishing of corporate governance in newly privatized enterprises.
- Efficient implementation of the Takeover Act.

Financial sector reform
- Adoption of the new Banking Act.
- Adoption of the Bank Privatization Act.
- Privatization of NLB and NKBM
- Adoption of the Ownership Transformation of Insurance Companies Act.
- Improvements on the existing Insurance Companies Act.
- Adoption of the new Securities Market Act.
- Adoption of the new Investment Funds Act.

Labor market
- Removing discrimination against workers from the EU.
- Reducing barriers for employment of Slovenians in other countries.
- Adoption of the new Unemployment Act.
- Adoption of the Labor Relations Act.
- Adoption of a new Disabled Persons Employment Act.

Transport
- Investments on highways.
- Harmonization of existing legislation on transportation with the EU.
- Adoption of a new EU compatible legislation on maritime, upgrading existing one.
- Adoption of a new EU compatible legislation in air traffic.

Telecommunications
- Increased investment for modernization.
- Gradual deregulation, and liberalization.

Energy
- Increasing the energy prices to EU levels.
- Gradual elimination of tariff subsidies.
- Adoption of the Energy Act for more competition.

Agriculture
- Harmonization with the CAP and CEFTA protections.
- Adaptation of programs that will support investment, modernization, integration, etc..

Regional and spatial development
- Adoption of the new Regional Development Promotion Act and the Strategy of Regional Development.
- Adoption of the new Spatial Planning Act.

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