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SLOVAK REPUBLIC

Selected Issues and Statistical Appendix

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Approved by the European I Department

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I. Issues on Bank Soundness and Supervision[1]

1. This chapter discusses the state of Slovakia's banking sector, with particular emphasis on the need to improve banking supervision. The paper first summarizes the nature and roots of the problems that plagued Slovakia's banking system before 1999 as well as the main steps that have been taken to deal with those problems (Section A). With this as background, Section B presents the current state of play in the banking system, and Section C discusses the remaining agenda. Section D provides the concluding remarks.

A. Background

Weaknesses of the banking sector prior to 1999

2. One of the main problems faced by the Slovak banking sector prior to 1999 was the low quality of its loan portfolio. The problem was exacerbated by inadequate provisions for most of the loan portfolio and/or overvalued collateral in those cases where loans were covered by real guarantees. This situation—which affected mostly the largest state-owned banks, but was also a feature of the rest of the system—had given rise to a significant amount of accrued losses.

3. The large amount of impaired assets can be explained by a number of factors. First, the largest state-owned banks inherited problem loans from the central planning days, and accumulated more of these loans during the 1994–98 period, in part because of political interference in bank lending practices. Second, Slovak enterprises have tended to run their businesses with high leverage ratios and unhedged foreign exchange or interest rate positions. The reliance on the sometimes implicit state guarantee of state-owned enterprises' liabilities has encouraged managers to fund projects with debt. Third, the volatile financial environment, characterized at times by significant swings in interest and exchange rates, especially during 1997–98, manifested itself in deteriorating financial performance. Finally, the implementation of banking supervision had been weak, owing to various reasons such as insufficient legal enforcement power, and shortage of qualified supervision resources.

4. These factors contributed to the poor banking sector performance in 1998–99.[2] The three largest state-owned banks became dangerously undercapitalized, suffering from poor credit portfolios and substantial losses. The smaller commercial banks also had difficulties, even though in most cases they did not have the heavy burden of the problem loans inherited from the past. Some private banks had foreign shareholders that helped them fare better.

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[1] Prepared by Costas Christou, Louis Kuijs, and Inwon Song.

[2] See SM/99/60 and SM/00/149 for a more detailed analysis of the financial situation of the banking system.

Progress since 1999

5. **The government began implementing an ambitious program of banking sector and enterprise reform in 1999,** in the context of discussions on Enterprise and Financial Sector Adjustment Loan (EFSAL)—to be considered by the World Bank Board on August 2, 2001.[3] The banking sector reforms include: (i) the restructuring and privatization of the three large state-owned banks; (ii) a program to resolve troubled small- and medium-sized banks; (iii) substantial strengthening of the regulation and supervision framework of the banking sector; (iv) better implementation of banking supervision; and (v) a workout of the bad assets carved out of the banks. In addition, the program aims at substantial improvements in the legal environment for enterprises, including insolvency reform, collateral reform, and corporate governance architecture.[4]

6. **A key aspect of this program was the restructuring and privatization of three large state-owned banks.** In 1999 and 2000 the balance sheets of Všeobecná úverová banka (VUB), Investičná a rozvojová banka (IRB), and Slovenská sporiteľňa (SLSP) were restructured through two basic operations: (i) a Sk 18 billion direct equity injection at end-1999; and (ii) a Sk 105 billion (12 percent of 2000 GDP) carve-out of bad assets in December 1999 and June 2000. The bad assets were transferred to the Slovak Consolidation Agency (SKA) and Konsolidačna Banka (KOB), and were replaced by state bonds (with maturities of 5, 7, and 10 years, and a combination of fixed and floating rates) in January and March 2001.[5] These operations have restored the capital adequacy ratios of these banks to levels above 12 percent, according to International Accounting Standards. The recapitalization took place in the context of a privatization program, and was accompanied by the imposition of conditions and controls during the pre-privatization period. At the same time, new management teams of the banks proceeded with self-restructuring, incorporating cost reductions, layoffs, and technological improvements. The privatization process is nearing a close with the completion of the sale of the state's stakes in SLSP and VUB to strategic foreign investors, while the privatization of IRB is to be completed by end-2001.

7. **As a by-product of the bank restructuring, the bad assets carved out from the banks will be worked out, together with tax and social security arrears.** The government's workout strategy for SKA and KOB combines sales of pools of loans to private investors, auctioning of individual loans to smaller investors, and the outsourcing of collection through asset/legal management contracts. The legal framework is also being strengthened, in order to facilitate the restructuring of distressed enterprises by investors, and

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[3] See the World Bank President's report on the EFSAL, April 2001, for more details.

[4] See Chapter II of this paper for issues related to the performance of the enterprise sector.

[5] Initially the loans were replaced by loans to the two consolidation agencies guaranteed by the government.

to improve the price received by SKA. With extensive technical assistance by donors, the Government established the ambitious target of completing the transfer of SKA's claims to private sector ownership or management by end-2002, and two tenders were completed in the first part of 2001.

8. **Consolidation of small and medium-sized banks.** In 2000 the authorities made progress in resolving problems with the banks which had become insolvent as a result of poor governance and political interference in credit decisions. Three banks have been placed in liquidation, two have been sold to a foreign strategic investor, and one has been merged with SLSP. By the spring of 2001, cases of two troubled medium-sized banks with assets amounting to 4 percent of total bank assets remained to be restructured or liquidated, and the authorities intend to complete the process during the year.

9. **Regulatory and supervisory regime of the banking sector**. In 1999 the regulatory framework for the banking sector was improved significantly, through amendments to the Banking Act and the Act on the Tax Treatment of Reserves and Provision. The amendments to the Banking Act aimed at strengthening the National Bank of Slovakia's (NBS) supervisory powers. Recently, a new Banking Act has been drafted incorporating further improvements, and moving the legal framework closer to EU standards and to implementing regulations based on the Basel Core Principles. The revised Act—which should come into force in September 2001—includes improvements in areas such as further reinforcing supervisory powers, enhancing board governance, expanding the definition of special relationships (connected parties), expanding a consolidated supervision, providing legal protection of supervisors, and adding risk management provisions. Recent changes to the NBS Act, effective since May 1, 2001, reinforce the supervisory role of the NBS substantially by reducing the involvement of the Ministry of Finance, especially in the areas of licensing and on-site examinations. The new NBS Act also makes it possible for the NBS to issue secondary regulations which have the power of generally binding legal norms for effective banking supervision. These legislative changes will be complemented by amendments to the Accounting Act and the Auditing Act, aiming at harmonizing accounting standards with International Accounting Standards by 2002, strengthening disclosure rules, and greater independence and legal responsibilities for auditors.

10. **Implementation of banking supervision.** In order to identify areas requiring improvement, a comprehensive evaluation of bank supervision (based on the Basel 25 Core Principles for Effective Bank Supervision) was jointly carried out by World Bank and NBS staff in mid-2000 (Box 1 summarizes the main findings and needed improvements, and compares current regulations with Basel standards). Using the results of this evaluation, the NBS elaborated a comprehensive supervisory development concept (SDC). The SDC defines the mission and focus of supervision, adopts an improved and more proactive approach to bank oversight through further developing of on-site and off-site functions, and the design of supervisory strategies for each institution. The Slovak authorities have a commitment to fully implement the SDC in 2001 and future years, and will provide the necessary

Box 1. Banking Supervision and Basel Core Principles

This box presents the main weaknesses identified by the diagnostic review conducted by the National Bank of Slovakia (in cooperation with the World Bank), as well as needed improvements to align supervision with the Basel Core Principles. [1]

- ***Legal protection of supervisors:*** The level of protection afforded to the supervisor by the legal structure is unclear. **Needed Action:** This legal protection should be explicitly defined by law.

- ***Sharing information between supervisors:*** Supervisory information is not shared with outside supervisors in practice. Some information restrictions exist between on- and off-site supervisory staff. **Needed Action:** The overall information access for each supervision department within the NBS and with outside supervisors should be evaluated and addressed.

- ***Setting minimum capital adequacy requirements and defining components of capital:*** The capital measure is generally consistent with the Basel Accord. However, the Supervisor's follow-up authority to ensure that adequate capital is maintained is weak. **Needed Action:** Provide the Supervisor with the explicit authority to act with regard to capital adequacy; application of capital adequacy requirements on a consolidated basis; and charges for market risk, and directions for increased capital charge should be adopted.

- ***Establishing and adhering to satisfactory policies for asset quality:*** Results of on-site reviews indicate that banks examined are not accurately reporting the level of classified assets in their portfolios. **Needed Action:** The Supervisor should rigorously enforce the requirement and regulations should be expanded further to ensure this.

- ***Connected lending:*** The Banking Act addresses many aspects of "special relationships" with the bank. However, the ability of the Supervisor to apply the law is questionable. **Needed Action:** Provide the Supervisor with explicit discretion by law to make informed judgments about the existence of connected lending; expand the definition of "special relationships" in the Banking Act.

- ***Banks' risk management process:*** No regulation on overall risk management and market risk has been established. As a result, the Supervisor does not have the capacity to enforce standards of prudential risk management on a comprehensive basis. **Needed Action:** Sound risk management legislation should ensure that banks' systems address financial risks; the risk management process should be periodically reviewed and adjusted.

- ***On-site and off-site inspection:*** The mix or emphasis of on-site and off-site supervision functions does not reflect the existing conditions. **Needed Action:** Formalize supervisory cycles and ensure adequate financial and personnel resources are available to support effective on-site and off-site supervision.

- ***Supervision on a consolidated basis:*** The lack of power to conduct consolidated supervision significantly restricts the Supervisor's ability to assess the complete risk profile of a bank. **Needed Action:** Legal provisions should be reinforced to conduct a consolidated supervision; the Supervisor should have access to information that will be adequate to fully understand the overall structure of the banking group.

- ***Corrective action:*** Supervisory focus on underlying causes of individual violation and the need for a strong response is inadequate. **Needed Action:** The supervisory responsibilities for timely corrective actions have not been properly fulfilled. Additional remedial measures such as prompt corrective actions should be reinforced.

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[1] Material for this box is based on "Core Principles Issues Summary" prepared by the Slovak authorities and the World Bank.

operational independence and the allocation of additional financial and human resources to the supervision function.

B. The Banking System Today

11. The restructuring of the large state-owned banks, along with the liquidation of three other small banks and the entry of foreign investors, have all contributed to the **stabilization of the Slovak banking sector**. The return on assets of Slovak banks improved from -4.0 percent in 1999 to 0.6 percent in 2000, mainly because of the removal of nonperforming loans (NPLs) from their books (Table). The ratio of NPLs to total loans was reduced from almost 40 percent in September 1999 to 15.3 percent in December 2000 based on the NBS criteria. The capital adequacy ratio was 12.5 percent at end-2000.

Table. Slovak Republic: Banking sector indicators, 1997–2000

(In percent, end-year)

	1997	1998	1999	2000
Return on assets	-0.2	0.0	-4.0	0.6
Return on equity	-5.0	-0.1	-61.2	9.2
Ratio of non-performing loans	27.2	31.7	23.7	15.3
Ratio of classified loans	31.2	35.7	29.5	21.9
Ratio of classified loans covered by reserves and provisions	54.4	47.7	68.0	85.0
Capital adequacy ratio	8.1	6.7	12.6	12.5
Acid ratio 1/	47.5	38.4	56.1	86.7
Clients' loans to clients' deposits	72.6	73.0	65.2	55.9

Source: National Bank of Slovakia.
1/ Or liquidity ratio: (current assets-inventory)/current liabilities.

12. **However, these indicators might give too rosy a picture**. Banks' financial fundamentals, albeit slightly improved, remain modest, as manifested by still high ratios of NPLs and low profitability. Although 67 percent of NPLs are covered by provisions, the amount of NPLs could well be higher if loans were classified in accordance with international standards, thus requiring further provisions.[6] Future NPL ratios could increase

[6] Loan classification rules define five categories for classification based on the period of overdue payment and also on the repayment capabilities of borrowers: "standard," "special-mentioned," "substandard," "doubtful and litigious," and "loss." NBS regulations stipulate that loans overdue for a period of 180–360 days are to be classified as "doubtful and litigious," while loans overdue for over 360 days are to be classified as "loss." However, in accordance with international best practices, loans are to be classified as "doubtful" if loans

(continued)

somewhat more because of "ring-fencing" arrangements with regard to the classification of loans of the large state-owned banks with foreign investors.

13. Although the recent amendments to the Banking Act and the NBS Act have strengthened banking supervision legislation, **the regulatory framework still contains weaknesses in some areas**. The weak areas include the enforcement powers, rules of bank governance, consolidated banking supervision, the quality of bank accounting and auditing, and related lending. Legislative issues also remain in other areas. Despite some progress in the tax system, loan loss provisions are tax deductible only up to the amount required by the NBS's required loan loss provisioning.[7] While this is an improvement over the previous situation, there is still a tax disincentive for banks to make provisions, should banks want to set up more provisions than those required by the NBS. In addition, banks are still required to accrue interest income for NPLs, unless they have been classified as in default. This distorts the level of performing assets and of reported revenue, and unnecessarily penalizes banks, which must pay taxes on income not realized.

14. The implementation of banking supervision has traditionally been weak, owing to various reasons such as **insufficient legal enforcement power, and shortage of qualified supervision resources**. While important steps have been taken toward restructuring the large state-owned banks and strengthening the regulatory and supervisory process in the banking sector, many challenges remain. Banking supervision has relied heavily on off-site monitoring based on the quantitative analysis of bank report figures. However, the accuracy of some bank-reported figures may be distorted, owing to insufficient confirmation by on-site examiners of the NBS and weak external audits. In many instances, final figures have not reflected serious problems that may very well have existed for some time prior to reporting.

15. Nevertheless, the current staff resources (13 on-site examiners) have not performed **on-site examination** with sufficient frequency. In 1999, only one comprehensive on-site examination was conducted, while in 2000 four comprehensive on-site examinations were completed. As of April 2001, four banks had never received on-site examinations from the NBS. One problem with on-site examinations is that they have tended to focus on compliance with various regulations rather than risk assessment of individual aspects of the banks' activities, or managerial capacity. This problem, coupled with a lack of vigorous use of enforcement actions, has resulted in a more costly and disruptive resolution process.

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are overdue for over 90 days. Furthermore, if payments are delayed over 90 days and if loans can not be classified as "substandard" or "doubtful," such loans should be classified as "loss."

[7] In 1999, the amendments to the Act on the Tax Treatment of Reserves and Provisions have allowed full deductibility of required loan loss provisions for banks. Previously, banks were not allowed to deduct loan loss provisions from their taxable income. This measure reduced a distortion in the tax system that had led to the taxation of bank profits and inappropriate levels of provisions for loan losses.

C. The Remaining Agenda

16. In spite of the substantial improvements to the **prudential and supervisory framework**, its further enhancement is required through a variety of measures.

- ***Prudential regulations*** should be strengthened further to enhance the effectiveness of bank supervision and make it consistent with Basel recommendations. The regulations related to the accrual of interest on NPLs should be revised. Banks should not accrue interest income for NPLs. In addition, prudential regulations on capital adequacy ratios should be reinforced by incorporating market risks.

- ***Loan classification criteria and accounting standards*** need to be further developed. The NBS needs to reinforce loan classification criteria to include the repayment capabilities of borrowers.

- The ***proposed expansion of a bank's investment limits*** on nonbanking institutions raises concerns. These limits are proposed to be increased from 10 percent to 15 percent of a bank's capital in the new Banking Act. The total investment limits to all nonbanking institutions will also be increased from 25 percent to 60 percent of a bank's capital. Expansion to nonbanking operations by banks without proper risk management or monitoring mechanisms could result in banks incurring unexpected risks, which might spill over to themselves.

17. On the **effectiveness of implementation**, the following issues are key:

- *On-site examination should certainly complement off-site monitoring of banks in order to ensure the accuracy of reported figures*. In this regard, the authorities are making welcome plans to increase the number of on-site examiners up to 48 from 13, to make possible a yearly on-site examination on each bank.

- *The accuracy of capital adequacy ratio (CAR) calculations will become more important*. According to the new Banking Act, the supervision authorities will be obliged to take prompt corrective action based on the predetermined threshold of the CAR. For the effective mobilization of such action, the accuracy of the CAR becomes more important. If loan classifications and loan loss provisions are not maintained properly by banks, the CAR is likely to be meaningless. Under such circumstances, the NBS can not activate the prompt corrective action system effectively. Therefore, it is important for the NBS to reinforce on-site examinations to ascertain the proper asset classifications and to assess the appropriateness of provisioning. The reinforced on-site examinations focused on risks such as credit risk could contribute to early detection of problem banks and could prevent the banking sector from experiencing any recurring incidence of recapitalization.

- *Efforts to strengthen banking regulation and the enforcement powers will not achieve their objective if they are not supported by improvements in skills, techniques, and*

resources of bank supervisors. Therefore, the authorities should be fully committed to implementing the Supervisory Development Concept. To this end, the staff-monitored program agreed with the Fund also provides a number of important benchmarks (Box 2). It is equally important to provide the necessary operational independence and the allocation of additional financial and human resources to the supervision function.

Box 2. Banking Supervision: Commitments Under the Staff-Monitored Program

The implementation of the government's new proactive approach to banking supervision will be monitored through benchmarks under the Enterprise and Financial Sector Adjustment Loan from the World Bank and the IMF staff-monitored program. The benchmarks under the Fund's program are:

- The government will decide on the institutional location of bank supervision (May 2001). (This benchmark has been observed.)
- The bank supervision authority will adopt a proactive approach to bank supervision, through the introduction of a new supervisory policy and procedures in line with the supervisory development plan agreed with the World Bank under the Enterprise and Financial Sector Adjustment Loan (September 2001).
- The bank supervision authority will develop an overall staffing plan to implement the proactive bank supervisory approach and make satisfactory progress in implementing the hiring under this plan (20–25 percent). At least four banks will be re-evaluated according to the new procedures, starting with the largest banks that are classified as high risk according to the CAMEL ratings (January 2002). [1/]
- The bank supervision authority will approve a new remedial action policy and corrective action plans in conjunction with supervisory strategies prepared by the four banks identified above with inputs from international supervisory experts (January 2002).

[1/] The CAMELS framework encompasses information on Capital adequacy, Asset quality, Management soundness, Earning/profitablity, Liquidity, and Sensitivity to market risk.

18. **Location of banking supervision.** The government decided in May 2001 that the banking supervision function would remain the responsibility of the NBS until late-2002, but it may be transferred to the newly established Financial Market Authority (FMA)—which is currently under the Ministry of Finance—from 2003. The location of banking supervision is less important than meeting the conditions for effective supervision: legal, administrative, operational, financial, and political independence. The supervisory authority must have sufficient autonomy, authority, and capacity to be effective, whether the supervision function is conducted by the NBS or the FMA (see Box 3 for the main requirements that the new Authority should satisfy to be effective). Should banking supervision be moved out of the NBS, it will be essential to have an effective transfer of the supervision function, without interruption of activities and bank oversight. To this end, the authorities need to prepare and

Box 3. Key Conditions of Organizational Structure for Effective Banking Supervision

- ***Independence and accountability:*** A supervisory agency must be able to make decisions that belong to its sphere of competence without undue outside interference. This agency should have the ability to issue or amend regulations in a timely manner. The need for regulatory independence should be balanced by a corresponding need to ensure that the agency is accountable for its policies and actions. All issues referred to the supervisor's independence should be established by law.

- ***Operational and administrative independence***: The executive management of the supervisory agency must be empowered to structure its organization and activities so that it can achieve its objectives. It must have the authority to require financial institution reporting, to conduct outside examinations and special reviews as needed. The agency should be independent in defining its personnel policy, salaries, organizational design, and information and inspection activities.

- ***Budgetary autonomy:*** The existence of an earmarked source of funding for the agency and its ability to allocate resources to its own internal priorities are important. Otherwise, efforts to develop an aggressive and effective regulatory body can be stopped by cutting the agency's budget.

- ***Adequate resources:*** The supervisory agency needs to have adequate resources to discharge its task effectively. Otherwise, the autonomy, integrity, and independence of the supervising agency could be undermined.

- ***Effective enforcement power:*** A regulatory agency must possess effective enforcement powers over the full range of entities that it is responsible for regulating. In order to protect depositors and creditors, and prevent the contagion of banking problems, supervisors must have at their disposal adequate enforcement power.

- ***Comprehensiveness of regulations:*** The regulatory system should be comprehensive and free of regulatory gaps. A central component of comprehensiveness is the practice of effective consolidated supervision. Fragmented supervision may create room for regulatory arbitrage and prevent an overall risk assessment of the institution.

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[1] For more details see: *Issues in the Unification of Financial Sector Supervision*, Working Paper No. 00/213, International Monetary Fund, 2000.

have approved a transition plan that identifies and assigns specific tasks, responsibilities, accountabilities, and time frames.

19. **Reform of deposit insurance system.** The authorities are aware of the need to reform the rules of deposit insurance and bank conservatorship, to avoid abuse, enhance market discipline, and improve the long-run viability of the Deposit Insurance Fund (DIF). These measures are particularly important, given that Slovakia will have to almost triple the

level of deposit insurance coverage in the future, in order to comply with the EU directive in this area. The government will elaborate a plan to restore the long-run viability of the DIF, allowing the DIF to repay its current obligations to the NBS and fund its future insurance obligations. To this end, the Government will also amend the Banking Act and the Deposit Insurance Act.

D. Conclusions

20. The Slovak authorities have embarked on an ambitious task to deal with inherited weaknesses of the banking system. With the restructuring and privatization of the main state-owned banks nearing completion, the challenge now is to focus on the institutional improvement in banking supervision and to ensure achievement of better asset quality of the banking system. An upgrading of the quality of banking supervision staff and, in particular, an enhancement of on-site supervision should not be delayed any longer. Any delay in the much-needed improvement of banking supervision could weaken the financial system and necessitate another round of recapitalization. It is thus essential to reinforce all the areas of banking regulation in order to discontinue the culture of regulatory forbearance that has prevailed in the banking system and to build a robust banking sector.

21. Although the tightened legal framework and the arrival of strong strategic foreign shareholders could slowly result in better asset quality for Slovak banks, the improvement of the banking sector will depend on the restructuring of the enterprise sector and the strong enforcement of the recently improved legal framework. Unless enterprise restructuring accompanies bank restructuring, the benefits of bank reform will not be fully realized. The persistent asset quality problem could endanger bank soundness in addition to having future fiscal implications.

22. The authorities need to consider carefully the location of banking supervision. The benefits of changing the current setup should be clear and unambiguous before embarking in it. Should they decide to move it outside the NBS, the change in process needs to be well-managed so as to ensure that there is no serious reduction in existing regulatory capacity. This will be key because of the importance of banking supervision in Slovakia given the centrality of banks in its financial system. The question of regulatory structure should be seen not as an end in itself—regulatory structure by itself is not the primary issue—but as a possible means, together with other measures, to achieving the primary objective: the provision of effective supervision, by a well-staffed, well-resourced, and independent regulatory agency.

II. Enterprise Performance and Restructuring[1]

1. This chapter documents major developments in enterprise performance and restructuring in Slovakia during the last decade, with an emphasis on the last five years. As background to the discussion, the next section describes the domestic and external environments within which enterprises have operated since the Slovak Republic separated from the Czechoslovak Federation. Section B provides an overview of changes in the enterprise sector in Slovakia, and Section C presents a more detailed analysis of enterprise performance, with special attention given to developments in profitability, productivity, and employment. The chapter concludes by summarizing the main findings and drawing implications for future enterprise performance.

A. The Environment

The Domestic Environment: Privatization and the Legal Framework

2. By the end of the 1990s the private sector accounted for more than 80 percent of the country's GDP. The dynamics of the enterprise sector improved significantly with private sector ownership, although the uneven performance of private enterprises during the last ten years reflected to some extent their method of privatization. Until the dissolution of the Czechoslovak Federation in January 1993, the privatization process in the Slovak Republic was driven by federal legislation and was very similar to the process in the Czech Republic. Small-scale privatization proceeded through auctions of shops and service facilities,[2] and was completed in March 1994.[3] For large enterprises, privatization through vouchers was initially the principal mechanism. However, after the breakup of the Czechoslovak Federation, the planned second wave of voucher privatization was cancelled, and was replaced with mostly nontransparent sales to insiders. Both approaches failed to bring new financial resources or external expertise to the privatized enterprises, and did not promote the development of entrepreneurship, which in turn had an adverse effect on the pace of enterprise restructuring.

3. Prior to 1999, the restructuring of enterprises, and private sector activity more generally, were hampered by several deficiencies in the legal system (Box 1), problems with enforcement of the law, and unwarranted government interference in the functioning of the market. Laws did not protect the rights of minority shareholders, failed to ensure transparency in corporate governance, and contributed to slowing down the restructuring of enterprises by protecting certain "strategic" enterprises. The government that

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[1] Prepared by Vladimir Klyuev.

[2] The extent of restitution, which was the first privatization mechanism adopted by the Czechoslovak parliament, was quite small.

[3] Seventy-seven percent of operating units slated for small privatization were auctioned off in 1992.

Box 1. The Legal Framework

This box presents the main elements of the legal framework under which Slovak enterprises have been operating, focusing on past weaknesses, and on the ways they have been addressed by the current government.

The framework prior to 1999—key weaknesses

- ***Company Law:*** provided no protection of the rights of minority shareholders; was unable to ensure transparency in corporate governance.
- ***Bankruptcy Law:*** contained no clear definition of insolvency; was biased in favor of the debtor.
- ***Competition Law:*** the law itself was in line with the requirements of European law and competition policy, but enforcement was regularly undercut by the efforts of the legislative and executive branches to shield substantial portions of the enterprise sector from its purview.
- ***Act on Strategic Enterprises (1995)***: postponed indefinitely the privatization of many companies, and provided them with various advantages, notably exclusion from the application of the Competition Law.
- ***Price Law (1995):*** endowed the Ministry of Finance with discretionary powers to intervene in any product and service markets, including import and export markets.
- ***Revitalization Act (1997):*** established that firms playing an important role in regional employment, regional or sectoral development could be granted deferrals and exemptions on their arrears, or be shielded from bankruptcy claims in exchange for the submission of a restructuring plan.
- ***Enforcement:*** Very poor, owing to the lack of means and qualification of the judges, corruption, and a bias of the judges in favor of keeping indebted firms afloat.

Changes initiated since 1999

- Abolition of the ***Revitalization Act***, the ***Act on Strategic Enterprises,*** and the ***Price Law***.
- Agreement on the ***privatization*** of substantial stakes in public utilities.
- Setting up of new ***regulatory bodies*** for the telecommunications and the energy sectors, and for capital markets and insurance companies.
- Amendment of the ***Commercial Code***.
- Progress in completing the ***negotiations with the EU*** (chapters on small and medium-sized enterprises and on industrial policy, and on company law).
- Amendments to the ***Bankruptcy Law*** facilitating the initiation of bankruptcy proceedings and shortening the resolution process, protecting the right of the creditors, and giving more prominence to restructuring (as opposed to liquidation).
- Amendments to the ***Accounting Act*** and to the ***Auditing Act***, submitted to parliament in April 2001.
- Harmonization of Slovak ***Accounting Standards*** with the International Accounting Standards to be completed by the end of 2002.
- New ***Securities Law*** to come into effect in January 2002.
- On the ***judiciary framework*** and the ***enforcement of laws***, technical assistance to train commercial and bankruptcy court judges.

assumed office in October 1998 made improving the business environment a key priority, and significantly strengthened the legal framework. The enforcement of this new framework will, inter alia, require strengthening of the judiciary system, and poses the next challenge for the authorities. In particular, in the case of bankruptcy claims, judges will need to upgrade their skills and eliminate the demonstrated bias in favor of keeping indebted firms afloat. With this in mind, Slovakia has been drawing upon international assistance to train commercial and bankruptcy court judges, although realistically, only gradual improvement can be expected.

The External Environment: Foreign Direct Investment

4. Foreign direct investment, particularly in the past two years, has played an important role in the success of direct sales and large-scale privatization. Over the period 1990–2000, the cumulative flow of foreign direct investment to Slovakia was just over US$ 4.5 billion, compared with a GDP of about US$ 20 billion in 2000. Reflecting in part a response to improvements in the legal framework, roughly half of this amount came into the country in 2000 (see Table 1), placing Slovakia in terms of FDI per capita in second place among the transition economies of Central and Eastern Europe.

Table 1. Inward Foreign Direct Investment in the Slovak Republic

(In millions of U.S. dollars)

Year	Stock as of January 1	Net Flow	Valuation Change	Stock as of December 31
1994	462.09	272.92	42.96	777.97
1995	777.97	258.38	81.39	1,117.74
1996	1,161.53	357.49	-84.05	1,434.97
1997	1,592.14	204.28	-146.82	1,649.80
1998	1,649.60	504.59	-67.17	2,087.02
1999	2,087.02	365.26	-253.18	2,199.10
2000	2,199.10	1,986.91	-689.7	3,496.31

Source: National Bank of Slovakia.

5. FDI not related to privatization, amounting to nearly to 4 percent of GDP in 2000, has also contributed to improvements in enterprise performance. The example of Volkswagen shows how a project initially viewed as quite isolated from the rest of the Slovak economy—employing relatively few people, engaging in a low value-added activity, and with minimal links to local suppliers or consumers—turned out to have positive agglomeration and spillover effects on the local economy (Box 2).

Box 2: Volkswagen Slovakia: A Success Story

A case showing the positive effects of FDI is Volkswagen Slovakia, a foreign-owned firm, which built a plant in Bratislava in the early 1990s to assemble its Golf model from imported components. Soon it added another model, and then expanded the plant to allow the manufacturing of gearboxes. In 2000, Volkswagen produced 181,000 cars, 364,000 gearboxes, and almost eight million gearbox components, collecting Sk 85 billion in sales revenue. Almost all output is exported. Volkswagen currently employs over 7,000 people in Slovakia. Since its founding, the company has invested over DM 1 billion in the Slovak Republic. Major future investments are envisaged, particularly those related to the plan to produce the new Colorado model in Slovakia. Volkswagen has encouraged the development of local suppliers of parts for its cars. In 2000, Slovak companies manufactured automobile components worth Sk 36 billion. While more than half of this output is produced for the Volkswagen plant in Bratislava, the rest is sold abroad.

B. Overview of Enterprise Restructuring

6. Central planning industrialized the Slovak economy to an excessive degree—industrial enterprises were large and oriented toward the Comecon market.[4] In 1989, industry accounted for half of Slovak value added, while services accounted for only one third. By contrast, for an average middle income country these shares are 33 and 50 percent, respectively. By 2000, the structure of the Slovak GDP resembled more closely the Organization for Economic Cooperation and Development (OECD) average; the industry and service sectors accounting for 29 percent and 60 percent, respectively (Figure 1).

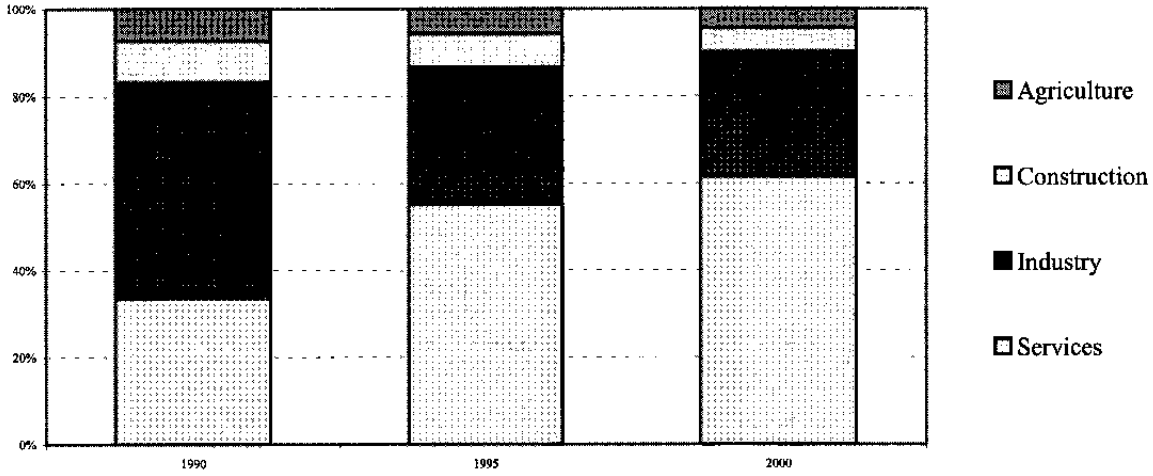
7. The change in the composition of output went hand in hand with far-reaching enterprise restructuring, as some old-system enterprises exited, and new, more outward-oriented enterprises, started business. The general shift in economic activity away from large industrial enterprises over 1993–97 has been amplified over the past two years through enterprise restructuring, which in part reflected improvements in the legal environment. It is clear from Table 2 that over 1997–99 there has been a gradual decrease in the share of large and medium enterprises in the total value added of the economy, while the share of small enterprises has increased.

8. The shares of small enterprises (fewer than 20 employees) and of individual entrepreneurs in total employment went up between 1997 and 2000. The total number of enterprises with 20 or more employees in the economy was on the rise between 1997 and 1999, but then fell in 2000 to slightly below the 1999 figure (Table 3). The same is true

[4] Council for Mutual Economic Assistance. Established in 1949 by the U.S.S.R. and Bulgaria, Czechoslovakia, Hungary, Poland, and Romania. Other countries of the socialist block were affiliated with this intergovernmental organization until its dissolution in 1991.

of industry as a whole and of manufacturing. While the rise is indicative of a reduction in the average size of enterprises, the decline probably reflects closures of nonviable enterprises as a result of more aggressive application of the bankruptcy law.[5]

Figure 1. Composition of GDP



Source: Statistical Office of the Slovak Republic.

Table 2. Share of Value Added for the Economy by Size Structure of Enterprises

(In percent)

Year	1997	1998	1999
Small enterprises	**25.2**	**27.9**	**29.2**
0 – 9	13.9	15.5	17.2
10 – 19	4.3	4.3	3.2
20 – 49	7.0	8.1	8.7
Medium-size enterprises	**19.1**	**18.7**	**18.2**
50 – 249	19.1	18.7	18.2
Large enterprises	**55.7**	**53.4**	**52.6**
250 – 499	10.1	10.8	9.9
500 – 999	6.6	6.3	7.5
1 000 and more	39.0	36.3	35.2
Total	**100.0**	**100.0**	**100.0**

Source: Statistical Office of the Slovak Republic.

[5] In addition there was a considerable shift of employment toward enterprises with fewer than 20 employees. Indeed, the total number of enterprises increased in 2000.

Table 3. Number of Enterprises with 20 or More Employees

Year	1997	1998	1999	2000
Total Economy	6,381	7,417	8,729	7,010
Industry	2,027	2,409	2,663	2,340
Manufacturing	1,941	2,308	2,542	2,234

Source: Statistical Office of the Slovak Republic.

9. The evolution of the financial performance of enterprises also provides evidence of progress in their restructuring. Following several years of decline, including a major drop in 1998, profits rebounded in 1999. As illustrated by Figure 2, enterprise profits and GDP have followed fairly different patterns over the last several years. Prior to 1998, the slow pace of restructuring and inconsistent macroeconomic policies allowed high economic growth to coexist with a corporate sector that sheltered many loss-making firms. This situation changed after 1998, as new government policies were accompanied by a deepening of the restructuring process, which ostensibly resulted in an increase in aggregate profits in 1999 and 2000. The substantial koruna depreciation at end-1998 also helped improve the financial situation of large export oriented firms, particularly those that were not indebted abroad. On the other hand, during this same period, GDP growth was subdued, in part reflecting the effects of a rather restrictive fiscal policy and lower employment.

10. Although the pickup in enterprise performance over the past few years has been fairly broad-based, it has not been uniform (see Figure 3). While Slovakia has developed a core of highly efficient, internationally competitive enterprises that set the standard for the rest of the economy, some firms have lagged, and others have survived exclusively because of the protection provided by a forgiving legal framework. Major studies on enterprise restructuring in Slovakia[6] conclude that the major transfer from public to private ownership and reduction of excess labor has gone hand in hand with good export performance, output growth, and financial success in a number of cases, but they also underscore some weaknesses in the process. In particular, OECD (1999) and Marcinčin (2000) detail concerns about the outcome of insider privatization, which in tandem with the feeble legal framework, is determined to have weakened the incentives for the new owners to undertake major restructuring.

11. The change in economic policy under the new government has produced a new economic environment. Budget constraints are being hardened inter alia through strengthening of the bankruptcy law and elimination of political interference in bank lending; competition has been promoted, notably through the entry of foreign firms; and large-scale

[6] Djankov and Pohl (1998); OECD (1999); and Marcinčin (2000).

Figure 2. Growth Rates of Profits, and Real GDP (In percent)

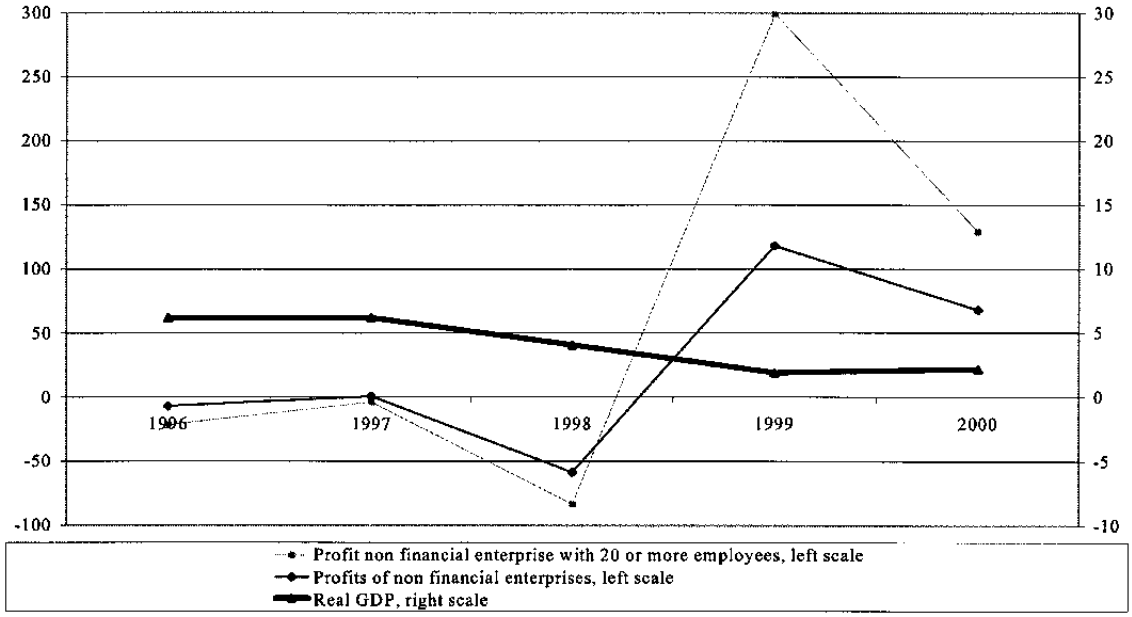
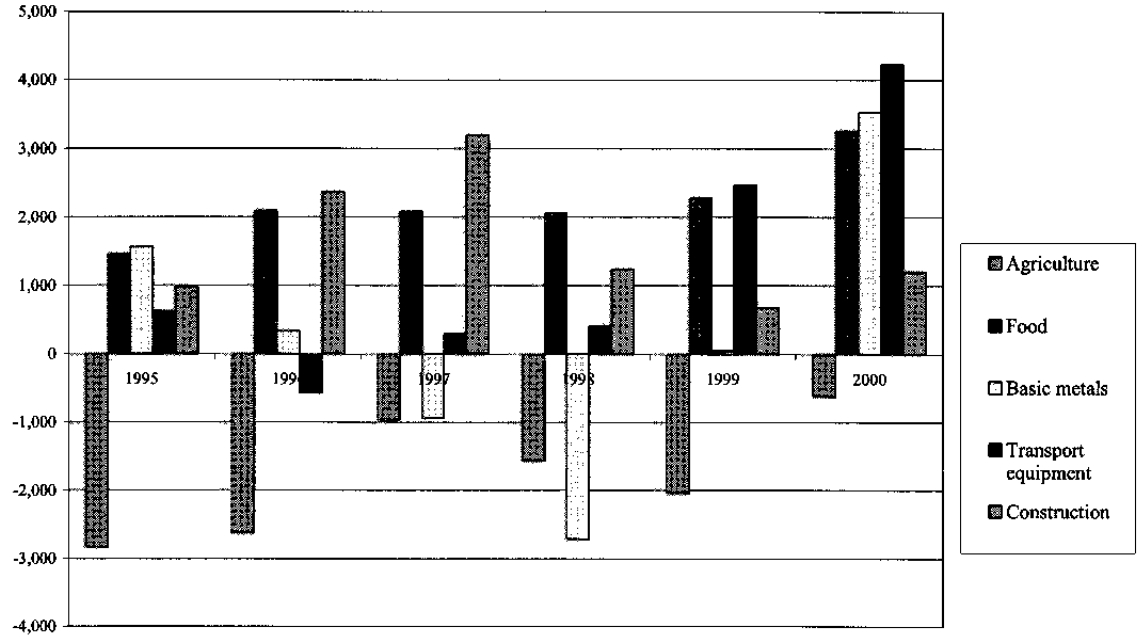


Figure 3. Profits in Selected Sectors
(In millions of Slovak koruny)



privatization has been furthered. The remarkable growth in exports and the rapid rise in FDI reflect, at least in part, the maturing of viable firms that seek new export markets and foreign partners.

C. The Facts About Enterprise Performance[7]

12. The ongoing restructuring of the Slovak corporate sector has resulted in a differentiated trend between sectors and types of enterprises. Although it is difficult to identify profitable sectors in Slovakia, it is fair to say that the transformation of the economy has favored light industry, services, and trade at the expense of the heavy industry, which dominated production until 1990. Productivity has been in line with profitability and has reflected strong cyclical effects. Nevertheless, recent increases in productivity are also associated with substantial enterprise restructuring. This restructuring has been characterized by a massive reallocation of labor, from the state to the new private sector, and from the old industrial sectors to new activities in services and trade (World Bank, 2001 and EBRD, 2000). While this process is typical of the transition to a market economy, the lag between job destruction and new job creation in Slovakia seems to have been longer than in the neighboring countries by the reluctance to undertake widespread structural reforms, and by macroeconomic imbalances that prevailed in 1996–98.

Profitability

13. The financial performance of enterprises shows a clear bounce-back after 1999. Infostat data indicate a mild decline in the profitability of nonfinancial enterprises between 1995 and 1997, a sharp drop in 1998, a recovery in 1999, and further substantial improvement in 2000 (Annex Table 1). This movement was not uniform across the economy. From 1995 to 1997 the aggregate profits of profit-making enterprises were growing, and so were the aggregate losses of loss-making enterprises. The losses increased further in 1998. The improvement in average profitability in 1999 was driven primarily by higher profits of profit-makers; in 2000, though, the reduced losses of loss-makers—which in part reflected the closure of some nonviable enterprises—contributed more to the improvement in the overall financial performance.

14. The deterioration in profitability in 1998 and subsequent recovery in 1999 was largely driven by a profit decline followed by a rebound among the largest enterprises—those that employ more than 1,000 employees (Table 4). The 2000 growth was much more broad based, with profit numbers improving, in some cases substantially, in all the categories except the smallest and the largest enterprises.

15. Among the major sectors of the economy, agriculture was unprofitable throughout the period (Annex Table 1). Mining was profitable, although the slump in the late 1990s

[7] See Box 3 for a discussion of data issues.

Box 3: Data Issues

The analysis of financial performance of Slovak enterprises was made difficult by the lack of comprehensive and reliable information, especially prior to 1993. To assess corporate sector performance, we used three different and complementary databanks.

Infostat

Infostat is an affiliate of the Statistical Office of the Slovak Republic. The data come from *Summary Economic Outcome and Acquisition of Investments in the Slovak Republic,* published quarterly by the Statistical Office of the Slovak Republic. The publication contains various financial indicators (such as revenue, cost, profit) and gross investment for various groupings of Slovak enterprises (by branch; by size; by type of ownership; profitable or loss-making enterprises). The series run from 1996 (or 1995 where possible to calculate from indices) until 2000. Yearly indicators are collections of quarterly data, which in turn are compiled based on enterprise responses to questionnaires. This data bank was used intensively in this chapter, since it has extensive coverage, and is the only one to have data for the year 2000. However, the quality of the data might be compromised because the data are compiled on a quarterly basis, while the law requires firms to prepare only annual financial statements.

Datacentrum

This data bank is produced by the Ministry of Finance on the basis of tax returns of enterprises. The data also include information on assets and liabilities. The series cover the years 1994–1999. Profits of profit-makers, losses of loss-makers, and net profits are broken down by branch, by ownership, and by region, which represent a valuable source of information. However, the profits are biased downward because firms have an incentive to underreport their profits to tax authorities. A comparison with Infostat at the aggregate level confirmed this bias in profits but also showed that the movements in profitability go in the same direction in the two series, except in 1999.

Albertina Company Monitor

This data bank offers details at the firm level based on financial statements that can be found in public sources – mostly in the *Commercial Register*. As a result, the enterprises represented are mostly those that are required to publish their financial statements, such as publicly traded companies. The information on individual companies is quite detailed, but aggregate results may be questionable. The financial statements date from the years 1993–1999.

Data on productivity (based on value added) had to be constructed. This task was made difficult by the frequent changes in statistical methodology, the lack or unreliability of price deflators, and the difference in approach to classification of economic activity between data banks. For instance, the sectoral breakdown of employment is available only for enterprises with 20 or more employees. To construct consistent data on productivity, price deflators were calculated for the sectors using national accounts (which is the only source for production in real prices) and then used to convert into real terms the value added created by enterprises with 20 or more employees. The results were divided by the number of employees in the sector.

Table 4. Net Profits of Nonfinancial Enterprises by Size

	1995 1/	1996 1/	1997 2/	1998	1999	2000
	(In millions of Slovak Koruny)					
0 - 9	12,399	18,227	16,196	14,567	20,689	19,686
10 - 19			3,684	1,674	2,755	7,919
20 - 49	2,832	8,701	5,983	3,526	2,291	8,693
50 - 249	5,578	4,758	8,841	3,500	6,316	7,995
250 - 499				-901	748	9,348
500 - 999	-1,608	-2,796	17,479	-3,909	-1,100	6,764
1,000 and more	35,932	22,889		3,182	42,092	27,611
Total	55,134	51,779	52,183	21,639	73,791	88,016

Source: Infostat data.
1/ Size groups for 1995–96 are: Enterprises with up to 24 employees; 25–99; 100–499; 500–999; 1,000 and more.

2/ In 1997, the number in the cell above the total refers to enterprises with 250 or more employees.

decreased profitability but did not drive the sector into losses in the aggregate, while 2000 witnessed a vigorous recovery. Construction experienced a boom in 1996–97, then went into a slump, but now seems to be on a recovery path. Trade was on a similar trajectory, except that the fall and the rebound were much more pronounced.

16. After a highly profitable 1995, manufacturing as a whole started to incur losses, culminating in a substantial loss in 1998. In the following year, the sector returned to profitability, and posted a very solid performance in 2000. The improved financial results of profit-making enterprises and the decrease in the losses of loss-makers contributed almost equally to the large improvement in the profitability of manufacturing in 2000.

17. The restructuring process exhibits different patterns in the different subsectors of manufacturing, as illustrated by differences in profitability (Annex Table 1). Three groups—*manufacture of food products, beverages, and tobacco*; *manufacture of pulp, and paper and paper products,* combined with *publishing and printing*; and *manufacture of rubber and plastic products* featured stable—exhibited a profitable performance throughout the period. All the other sectors had at least one loss-making year.

18. Interestingly, in addition to the magnitude, the timing of the cycle also varied across sectors. The worst year was 1996 for *manufacture of nonmetallic mineral products* and for *manufacture of transport equipment*; 1997 for *manufacture of wood and wood products* and *manufacture of textiles and textile products*;1998 for *manufacture of leather and leather*

products and *manufacture of basic metals and metal products*; and 1999 for *manufacture of chemicals*.

19. All subsectors were on the upswing in 2000. The gains in the chemical sector and manufacture of transport equipment were particularly noticeable and helped propel the profitability of manufacturing as a whole in 2000. The only manufacturing sector that continued to make losses in 2000 was *manufacture of machinery and equipment*, a former pillar of the Slovak industrial complex.

20. The movements in aggregate, sector-wide profits or losses may have been dominated by the fortunes of a few major enterprises in these sectors. To gain insights into what was happening to a "typical" firm, it is useful to look at measures of profit scaled by the size of the firm—such as return on sales.

21. Table 5 shows median returns on sales calculated on the basis of firm-level data in the Albertina Company Monitor database (see Box 2). This complementary analysis draws a picture close to the one presented above on the basis of aggregate data: positive median returns in the food sector throughout the period for which data are available (1993–99), and negative median returns in textiles from 1995 through 1999, with 1998 being the worst year and some recovery in 1999. Firm-level data in publishing and printing also confirm the aggregate picture of this sector being stable and profitable.

Table 5. Median Return on Sales in Selected Industries 1/
(In percent)

	1993	1994	1995	1996	1997	1998	1999
Manufacture of food products and beverages	0.57	0.8	0.63	0.74	0.58	0.38	0.28
Manufacture of textiles	1.91	0.37	-1.38	-3.64	-1.04	-3.73	-1.99
Publishing and printing	3.35	1.51	2.45	0.32	0.82	1.08	0.79
Manufacture of chemicals and chemical products	6.62	5.43	2.6	2.29	2.27	0.22	0.38
Manufacture of fabricated metal products (except machinery and equipment)	-0.07	0.68	0.31	0.28	0.38	0.01	0.06

Source: Albertina Company Monitor Database.
1/ Return on sales is the ratio of profits to sales.

22. Slicing performance by the type of ownership tends to favor the private sector. The profitability of public sector nonfinancial enterprises exceeded initially that of their private counterparts by a wide margin, came down steeply between 1995 and 1998, and then staged

a modest recovery (Annex Table 2). The profitability of the private nonfinancial sector was flat in 1995–97, dipped in 1998, and recovered in 1999–2000. The comparison between the public and the private sector turns dramatically in favor of the latter if the operations of the enterprises in the energy sector and the gas pipeline operator TRANSGAS are purged from the data.[8] The private sector is barely affected by this adjustment, while the public sector is pushed into losses for all years except 1995 and 2000 (Table 6).

23. Within the private sector, foreign-owned enterprises were the most profitable and were also the only segment to increase employment in 2000. The "other" sector, which mainly includes fully or partially foreign-owned enterprises, featured the most robust performance, with high profitability in all the years. The importance of this sector in the economy has increased, as indicated by the growth of its share in total revenue and private sector revenue. The cooperative sector—which accounted for less than 4 percent of total revenue in 2000—never had a profitable year. The profitability of the domestically owned private enterprises was on a declining trend from 1995 until 1998, when it became negative. The losses were slightly lower in 1999, while 2000 ushered in an impressive return to profitability.

24. The superior profitability of the "other" sector lends support to the casual observation that the best firms in Slovakia are foreign owned. At the same time, the fairly successful year 2000 for domestically owned firms demonstrates that foreign ownership is not a necessary condition for good performance, and that Slovak entrepreneurs are quite capable of earning profits in the new environment.

25. A look at the regional variation in enterprise profits shows the Bratislava region as the most thriving area (Table 7). The total profit earned in the region declined from 1995 to 1998, but the region never had losses in the aggregate. The nearby Trnava region featured similar performance, although on a smaller scale. The Kosice region had a few good years, but then showed sustained aggregate losses, as did all the other regions. All in all, these numbers draw a fairly bleak picture, with no turnaround apparent in the regions associated with the "old industry," such as metallurgy or armaments production. Given the general improvement in economic activity in 2000, one can expect more favorable numbers for all the regions for that year once the data become available, but there is little anecdotal evidence to suggest that the rest of the country has started to catch up with the dynamic Bratislava region, which benefits from the proximity to Austria, high educational level of its population, agglomeration effects, and other advantages.

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[8] The energy sector is dominated by state-owned monopolies, whose profitability is largely determined by government regulation of its input and output prices. TRANSGAS is a highly profitable enterprise transporting Russian gas to Central and Western Europe. This enterprise, whose profits derive from the strategic geographic location of Slovakia, is not representative of the public sector.

Table 6. Profits of Non-Financial Enterprises with 20 or More Employees by Ownership

	1995 1/	1996 1/	1997	1998	1999	2000
	(In Millions of Slovak koruna)					
All	42,741	33,552	32,303	5,398	21,550	49,377
Public	31,381	18,515	14,228	-258	7,029	11,354
Private	11,392	15,037	18,075	5,656	14,521	38,023
Domestically owned	7,452	8,249	7,865	-1,670	-1,022	18,532
Cooperatives	-1,676	-1,309	-718	-1,041	-872	-509
Other	5,615	8,097	10,928	8,367	16,415	20,000
	(Profit/Cost Ratio – percent)					
All	4.2	2.8	2.5	0.4	1.4	2.7
Public	7.3	4.5	3.7	0.4	1.9	2.7
Private	1.9	1.9	2.0	0.5	1.2	2.7
Domestically owned	2.3	1.7	1.3	-0.3	-0.1	2.3
Cooperatives	-2.6	-1.8	-1.0	-1.5	-1.3	-0.7
Other	2.9	3.5	4.2	2.5	4.2	4.0

Source: Statistical Office of the Slovak Republic.
1/ Enterprises with 25 or more employees.

Table 7. Enterprise Profits by Region

(In millions of Slovak koruna)

	1994	1995	1996	1997	1998	1999
Bratislava	22,638	32,675	30,407	19,064	171	172
Trnava	2,412	3,123	1,514	1,493	657	-1,526
Trenčin	-1,040	-1,492	-3,063	-5,912	-3,493	-7,648
Nitra	-1,105	-3,017	-2,564	-3,521	-1,145	-5,298
Žilina	-1,050	-1,891	-2,140	-4,068	-4,599	-4,859
Banská Bystryca	-2,561	-3,600	-3,697	-4,201	-3,835	-3,801
Prešov	-2,244	-2,082	-3,414	-4,514	-3,908	-3,616
Košice	-214	4,065	1,215	-818	-15,175	-8,559
Total	16,836	27,781	18,258	-2,477	-31,327	-35,135

Source: Datacentrum.

26. This aggregate picture does not mean that there are no profitable enterprises outside Bratislava. For example, a highly successful pharmaceutical firm Slovakofarma is registered in the Trnava region. Volkswagen produces several car components outside the Bratislava region. There is also hope for the enterprises of the heavy industry to continue in their old line of activity and become profitable. As demonstrated by the acquisition of the core assets of the Eastern Slovak steel producer VSŽ by US Steel (see Box 4), even foreign investors see good prospects for some parts of Slovakia's heavy industry. However, as the U.S. steel acquisition also makes apparent, a solution to tax, credit, and inter-enterprise arrears, and a separation of non-core activities in enterprises, are required to make some large enterprises viable.

Productivity

27. Low productivity of labor was one of the leading causes of enterprise losses at the beginning of the transition. Table 8 reports the rates of labor productivity growth based on value added calculated for industry and its main subsets (manufacturing, mining, and electricity, gas, and water supply). The decline of productivity growth in manufacturing between 1997 and 1998 and its subsequent pickup are in line with the dynamics of enterprise profitability indicators, although the rate of productivity growth in 2000 is probably overstated.

Table 8. Growth Rates of Labor Productivity
(In percent)

	1996	1997	1998	1999	2000
Industry	-3.5	4.8	3.8	17.8	11.8
Manufacturing	-4.5	9.2	6.1	11.6	21.0
Mining	15.2	6.5	4.4	37.2	-4.1
Electricity, gas and water supply	-2.4	-13.3	-10.4	24.1	-15.8

Sources: Statistical Office of the Slovak Republic and Staff Calculations.

28. Labor productivity based on output in industry and in manufacturing can also be calculated from the monthly data published by the Statistical Office of the Slovak Republic. The year-on-year growth rates of output, employment, and productivity for industry are shown in Figure 4. This figure shows a shift from decline to increase in labor productivity in the second half of 1999, and a strong acceleration of growth in 2000. This acceleration is indicative of the substantial enterprise restructuring underway in 2000.

29. The strong growth of productivity was accompanied in 2000 by a reduction in employment in both manufacturing and industry as a whole. This reduction subsided toward the end of the year, and in 2001 employment in industry has been expanding, while

Box 4. Privatization of VSŽ (Východoslovenske Železiarné – Eastern Slovak Steelworks)

In the early 1990s, VSŽ, the largest steel producer in Slovakia, employed more than 25,000 workers—which made it the second largest employer in Slovakia. The plant used to generate 9 percent of the country's GDP and 12 percent of its exports. The skilled and cheap labor, and the fairly new equipment, made the plant internationally competitive.

In spite of this, the company was in a deep crisis from 1998 until mid-2000. The plant had been privatized in a series of nontransparent steps between 1992 and 1995, and ended up under the control of its managers and several politically connected individuals. In addition to its good potential, the plant enjoyed favorable treatment from the government. It generated profits in 1994–1997. However, the profits, as well as resources borrowed from domestic and foreign banks, were invested in numerous businesses unrelated to steel production, such as a soccer club, a bank, and newspapers. Without a clear sense of direction and suffering from poor management, the company recorded a loss in 1998 and defaulted on its foreign debt payments in 1999.

The government partially renationalized the firm by buying shares from the market and, with 51 percent of the shares, took control of VSŽ at the end of 1999. The strategy for the turnaround of the company was the spinning off of non-core businesses, separation of non-saleable non-core assets, such as a hospital, and the sale of the core metal concern to a foreign strategic investor.

The strategy culminated in 2000 with the sale of the company Steel Kosice, which contained the core assets of VSŽ, to an American concern, U.S. Steel, for US$60 million. In addition, U.S. Steel agreed to defray US$325 million of bank debts and US$15 million of overdue tax obligations. The company committed itself to investing at least US$700 million in the plant over the next 10 years and to not laying off any workers, limiting reduction in the workforce to natural attrition.

In the first few months of its operation, the new company, U.S. Steel Kosice, has achieved substantial cost savings. An increase in production from 3.3 million tons in 2000 to 4 million tons in 2001 is planned, despite global overcapacity. Inspired by the success of its acquisition, USX, the parent company of U.S. Steel, is negotiating with the Slovak government the purchase of some other assets of the remnants of VSŽ.

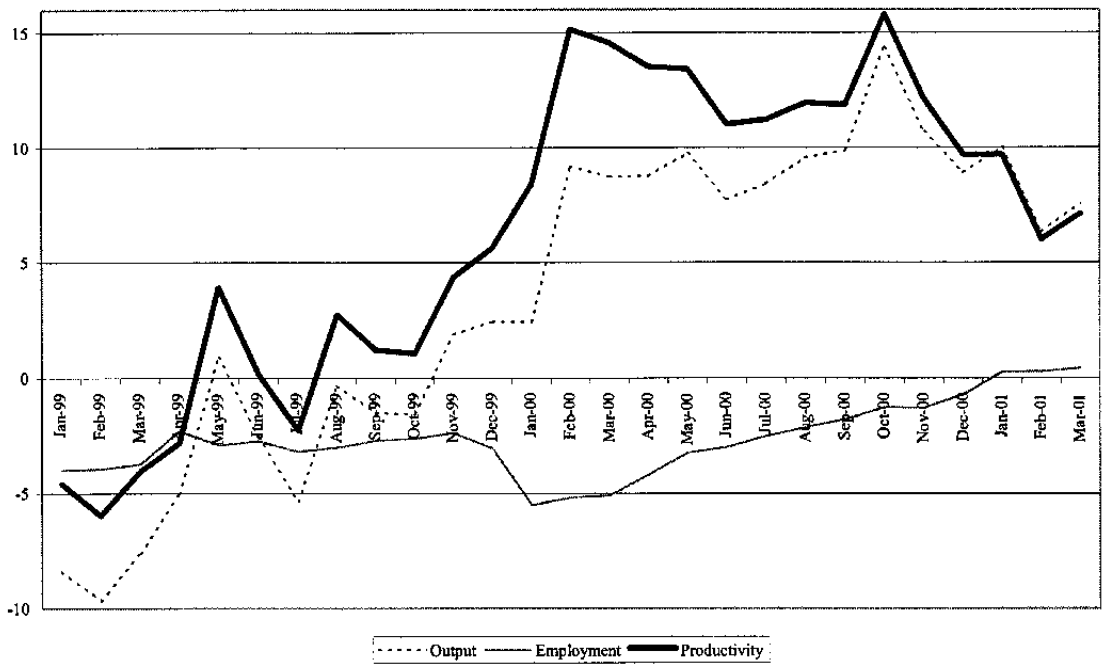
productivity continues to grow, although at a slower pace. This is a welcome development in Slovakia, given the high unemployment rate. It also may signal that the phase of reactive restructuring, characterized by output contraction and labor shedding in response to the new market environment, is largely over for the majority of Slovak enterprises, and that they are entering a new phase of strategic and deep restructuring combined with expansion.

Employment

30. Reduction in employment in Slovakia since its independence has gone far beyond what could be explained by cyclical factors. Unemployment in the country has a substantial structural component (IMF, 2000), which is related to changes in the economy in general and enterprise restructuring in particular. Labor-shedding by old enterprises was a noted feature of the early years of transition both in Slovakia and in other Central European economies. Unfortunately, a lag between the destruction of old jobs and the creation of the new ones (in the private sector, mostly in services and trade) seems to have been longer in Slovakia than elsewhere.

31. A recent study (World Bank (2001)) identifies a number of factors that have resulted in a low demand for labor in the Slovak Republic. The closure of nonviable enterprises and the elimination of redundancies was responsible for a major jump in unemployment in the early years of transition. This could have been offset over time by job creation in the new private sector, but its growth was rather sluggish. The low volume of foreign direct investment, lack of access to bank credit, a complicated tax regime and burdensome

Figure 4. Labor Productivity Growth in Industry
(In percent)



regulation for small and medium-size enterprises (the most dynamic sector in terms of job creation) and a deceleration of export growth in the mid-1990s, all stood in the way of building a strong demand for labor. In addition, high payroll taxes (the highest in the OECD)

create a wedge between labor costs and wages, and discourage the creation of new jobs, at least in the formal sector.

32. The unemployment problem was amplified by a mismatch in the skills required in the new economy and those offered by available workers, the solution for which require aggressive investment in human capital. The situation is aggravated by a geographic mismatch between emerging job opportunities and the residence of the majority of the unemployed. In addition, relatively generous social assistance benefits provide disincentives for job search by the people who cannot expect to get a job paying much more than the minimum wage.

33. The recent changes in the economy should prompt an increase in the demand for labor. These changes include an upsurge in foreign direct investment; a simplification of the tax regime for small and medium-size enterprises; a reduction in the corporate tax rate; the improved access of small and medium-size enterprises to bank credit following the resolution of the problems in the banking system and strengthening of accounting standards; and high rates of export growth. At the same time, still-high payroll taxes will continue to dampen labor demand, and under present fiscal conditions these taxes can be lowered only gradually. The recently announced measures to clamp down on informal employment will bring down the unemployment rate somewhat by forcing the employers to bring some of the workers on the formal payroll. However, these measures will also put some of the informally employed completely out of work.

D. Conclusions

34. The impressive turnaround in enterprise performance in 1999-2000, and the efforts of the government to improve further the legal framework, with a view to facilitating corporate governance and creating an incentive structure more suited to promote economic efficiency, suggest that the Slovak enterprise sector is being put on a more sound footing. Nevertheless, substantial enterprise restructuring is still ahead, and the improvement in aggregate enterprise performance masks important differences among enterprises.

35. Private firms have outperformed state-owned firms, once the operations of the energy and gas transportation sectors are excluded from the data. Foreign-owned firms have represented the most successful segment of the enterprise sector. Geographically, profitable enterprises have tended to concentrate in and around Bratislava, while enterprises in other regions have on average made losses. It is hard to find systematic differences in performance associated with enterprise size; the 2000 recovery appears to have been rather broad-based, encompassing enterprises of all sizes.

36. There are profitable firms in every sector of the economy, but certain patterns have emerged. The food sector, the pulp, paper, printing and publishing sector, and the rubber and plastics sector have been strong performers throughout the transition. Several other sectors have pulled themselves up nicely in the past couple of years, most notably the transport equipment sector, propelled by its flagship—the German-owned firm Volkswagen Slovakia.

On the other hand, the machinery and equipment sector, associated with the old Slovak industry, has remained unresponsive.

37. The extent of enterprise restructuring achieved so far, and its ongoing strength, suggest that the productive base of the Slovak economy is being renewed and lead to optimistic expectations about future GDP and employment growth. Fast productivity growth since mid-2000, combined with wage moderation and a broadly stable exchange rate, has improved the competitiveness of Slovak industry. The large flow of foreign direct investment to Slovakia in 2000, and the high likelihood that the flow will be even greater in 2001 and over the medium term, also bode well for output and employment growth, given the superior average performance of foreign-owned firms in the recent past.

38. The amended bankruptcy law and other legislation being developed, if forcefully implemented, will lead to the closure of non-viable enterprises, while forcing the rest to pick up the pace of restructuring and adopt a high standard of corporate governance. This high standard should facilitate access to foreign partners, and translate into strong output growth. More transparent accounting standards and effective dispute resolution procedures should make it easier for banks to find companies with good prospects, and less risky to lend to them. This should alleviate the credit rationing affecting the small and medium-size enterprises. Moreover, the recapitalization, restructuring, and privatization of the largest state banks will put them in a position to become a source of funds for a wider group of enterprises. The recent significant reduction in the corporate income tax should also promote business activity.

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Table 1. Net Profits of Non-Financial Enterprises

(In millions of Slovak koruny)

Year	1995	1996	1997	1998	1999	2000
Whole Economy	55,736	51,779	52,183	21,639	47,129	79,222
Enterprises with 20 or more employees, *of which*	42,741	33,552	32,303	5,398	21,550	49,377
Agriculture and hunting	-2,837	-2,622	-954	-1,567	-2,040	-615
Forestry and fishing	214	73	-57	131	-9	123
Mining and quarrying	1,105	760	370	646	473	1,363
Manufacturing	8,020	-326	-500	-8,435	5,020	22,230
Manufacture of food products, beverages and tobacco	1,462	2,092	2,087	2,062	2,281	3,259
Manufacture of textiles and textiles products	-354	-368	-541	-126	-123	203
Manufacture of leather and leather products	-609	-760	-1,105	-2,120	-32	171
Manufacture of wood and wood products	-575	-403	-1,093	-530	-317	137
Manufacture of pulp, paper and paper products; Publishing and printing	3,188	867	1,813	1,559	1,495	1,884
Manufacture of coke, refined petroleum products and nuclear fuel; Manufacture of chemicals, chemical products and man-made fibers	6,016	3,938	4,888	1,823	-605	4,872
Manufacture of rubber and plastic products	1,127	924	757	584	942	1,097
Manufacture of other non-metallic mineral products	619	-1,026	376	974	1,351	2,201
Manufacture of basic metals and fabricated metal products	1,567	338	-940	-2,713	49	3,531
Manufacture of machinery and equipment	-4,412	-5,327	-7,586	-10,321	-4,112	-2,180
Manufacture of electrical and optical equipment	-425	-345	422	-210	1,553	2,275
Manufacture of transport equipment	628	-572	299	413	2,470	4,235
Other manufacturing	-202	316	123	170	68	545
Electricity, gas and water supply	23,903	19,639	15,696	10,247	17,707	11,070
Construction	980	2,369	3,197	1,241	674	1,203
Wholesale and retail trade; Repair of motor vehicles, motorcycles and personal and household goods	4,689	6,103	8,539	4,707	1,458	12,363
Hotels and restaurants	29	212	32	-35	170	261
Transport, storage, post and telecommunications	4,393	3,731	2,850	-3,568	-4,667	-1,808
Real estate, renting, research and development	3,631	4,007	3,039	1,165	2,303	2,581
Education	-215	-509	-408	-237	-231	-181
Health and social work	-1,294	275	423	336	369	341
Other community, social and personal service activities	157	-160	76	767	323	446

Source: Statistical Office of the Slovak Republic.

Table 2. Profits of Non-Financial Enterprises with 20 or More Employees by Ownership with Operations of Energy Sector and TRANSGAS Excluded

	1995 1/	1996 1/	1997	1998	1999	2000
	(In millions of Slovak koruny)					
All	19,081	13,967	16,595	-4,717	3,971	38,409
Public	7,437	-797	-1,091	-10,194	-10,385	445
Private	11,644	14,764	17,686	5,477	14,356	37,964
Domestically owned	9,017	7,980	7,501	-1,820	-1,165	18,514
Cooperatives	-2,999	-1,311	-718	-1,041	-872	-510
Other	5,625	8,095	10,903	8,338	16,393	19,960
	(Profit/Cost Ratio – In percent)					
All	2.0	1.3	1.4	-0.4	0.3	2.3
Public	2.3	-0.3	-0.4	-3.7	-3.9	0.2
Private	1.9	1.9	1.9	0.5	1.2	2.8
Domestically owned	2.2	1.7	1.3	-0.3	-0.2	2.3
Cooperatives	-2.6	-1.9	-1.0	-1.5	-1.3	-0.7
Other	2.9	3.5	4.2	2.5	4.2	4.0

Source: Statistical Office of the Slovak Republic.

1/ Enterprises with 25 or more employees.

III. Monetary Policy Transmission Mechanisms and Inflation Modeling in Slovakia [1/]

Abstract

This chapter presents the results of an empirical study on monetary policy transmission mechanisms and the determination of inflation in Slovakia. The empirical findings obtained from a structural vector autoregression (VAR) model suggest that fairly standard relationships for small, open economies can be found in the data.

The main motivation for this work is that since the National Bank of Slovakia (NBS) abandoned the currency peg in October 1998 and moved to a more flexible exchange rate regime, it conducts monetary policy predominantly with inflation considerations in mind. Although the NBS does not intend to move to a formal inflation targeting framework, the disinflation-oriented policy regime calls for a good qualitative understanding of the determinants of inflation, and the impact of monetary policy on prices, the exchange rate, and output. The empirical results suggest that expansionary monetary policy has significant (indirect) effects on inflation, through the exchange rate and wage costs, and modest effects on aggregate demand. Changes in monetary aggregates have a rapid impact on prices, which is much larger than the impact on output. Although both changes in interest rates and in M2 have a statistically significant effect on prices and output, the impact of interest rate changes is rather gradual and modest in size. After 12–15 months, the impact of changes in broad money on ***consumer prices*** is at its maximum—0.15 percent for an initial 1 percent increase in M2. At that time, the impact of an initial 1 percentage point real interest rate increase on ***consumer prices*** would still be only 0.05 percent.

The results are in line with the consensus that the interest rate channel—which central banks in more mature market economies rely on—is not yet very powerful in most transition countries. In Slovakia, bank restructuring has constrained banks' lending to the private sector, and monetary policy has become fully interest rate-based only recently. Interestingly, though, the empirical work also suggests that several effects contributing to the interest rate channel have become more important recently, indicating that the channel will become more significant as financial deepening and convergence with the EU continue.

[1/] Prepared by Louis Kuijs.

A. Introduction

1. Against the backdrop of a move to disinflation-oriented monetary policy in advanced transition countries as well as in other emerging markets,[1] several empirical studies have recently been conducted on monetary policy transmission mechanisms in transition countries. These studies concluded that for Poland (Wescott and Christofferson (1999), and Doyle (2001)) and the Czech Republic (Tzanninis (2000)), it is difficult to measure strong direct impact of monetary policy on inflation, although Tzanninis (2000) finds effects from lagged interest rates. The reasons cited are the abundance of structural changes (including regime changes), short time series, and insufficiently developed and deep financial systems. For Hungary, on the other hand, Golinelli and Rovelli (2000)—who estimated a structural VAR—find that "...the transmission of monetary policy impulses to macro variables is characterized in a fashion similar to that of advanced open industrial countries...the interest channel on aggregate demand and the exchange rate channel work together...". All the studies have found for the three countries that foreign prices, the exchange rate, and wages (unit labor costs (ULC)) have a strong impact on prices, and some have established an impact of aggregate demand.

2. Previous empirical studies for Slovakia suggest that there is a limited *direct* impact of monetary policy (monetary aggregates and/or interest rates) on prices, and a sizable impact on prices of foreign prices, the exchange rate, and wages (unit labor costs), while aggregate demand pressures were found to have a modest impact on prices (Griffiths and Woo (1997), Kuijs (2000)). In a recent study for Slovakia, Gavura (2001)—using Granger causality tests and bi-variate VARs—finds a very strong impact of the exchange rate on prices, some impact from monetary aggregates and wages, but "virtually no effect" from interest rates. Other work for Slovakia suggests that a relatively stable money demand function can be found for Slovakia (see Kuijs (2000) and, more comprehensively, Alquist (2001)). Previous studies have also found that Slovakia's financial system transmits the interest rate increases of the National Bank of Slovakia (NBS) to other interest rates, and that interest rates have some impact on credit creation (Chuda and Ševčovic (2000)).

3. Given the priors on the transmission mechanisms of monetary policy in small, open transition countries (see Box 1), it seems advisable to estimate those transmission mechanisms with a model that can capture the interaction among a set of *endogenous* variables. Specifically, it is necessary to assess the impact of monetary policy on the exchange rate, wages, and aggregate demand, in order to establish the *indirect* impact of monetary policy on prices. The vector autoregression approach is the obvious technique for the empirical analysis of the behavior of a set of endogenous variables. There are two types of VAR models: freely estimated and structural. Freely estimated VARs do not impose restrictions on the relationships between variables. However, in emerging markets, the short time series and abundance of structural changes reduce the likelihood of finding meaningful

[1] See IMF (2001).

relationships purely based on data. With a structural VAR, some structure can be extracted from the data based on priors that are in line with theory.

Box. Monetary Policy Transmission Mechanisms in Small, Open Economies

In mature market economies, the stance of monetary policy is typically represented by the policy interest rate. In a relatively closed economy, the main channels through which monetary policy affects inflation are aggregate demand and expectations. In a relatively open economy, additional channels are (in the order of speed) (i) a (very fast) direct exchange rate channel for the transmission of monetary policy to inflation via the price of imports; (ii) a real exchange rate effect on aggregate demand via the relative prices of foreign and domestic goods; and (iii) the impact of the exchange rate on the price of domestically produced goods, via the price of imported intermediate inputs and wages. In addition, a more open economy will be affected to a greater extent by (i) possible wealth effects through the exchange rate as an asset price, and (ii) foreign shocks (Svensson (1998)).

In emerging markets and transition countries, the pass-through from the exchange rate to inflation is generally higher (Calvo and Reinhart (2000)), partly because the exchange rate is typically seen as the key nominal anchor. At the same time, the policy channels relied on by central banks in mature market economies can be rendered less effective in emerging markets by corporate and bank balance sheet problems, and underdeveloped financial markets. In particular, in transition countries, the impact of interest rate changes on credit has been found to be weak, owing to highly interest inelastic lending policies of banks burdened by nonperforming loans, undeveloped financial markets, and strong capital inflows (see Shaechter, Stone, and Zelmer (2001)).

In Slovakia, the current fully interest-rate-based monetary policy is a relatively new phenomenon: the interbank money market was introduced in 1995; and prior to October 1998, monetary policy was to a large extent oriented to defending the exchange rate peg. Moreover, bank restructuring and bouts of financial turbulence have meant that banks' lending to the private sector has often been constrained by factors other than the monetary policy stance. Currently, the large restructured banks still pursue a conservative lending policy.

4. This paper specifies long-run equilibria on the markets for goods, labor, money, and foreign exchange, from which inflation is usually assumed to originate in an open economy. Then a model is set up containing a system of equilibrium correction mechanism (ECM)-based equations to analyze the dynamics and determinants of inflation in Slovakia. In estimating the model, we first test for cointegration relationships among the relevant variables in the markets for goods, labor, money, and foreign exchange using the Johansen procedure.[2] The four cointegration vectors are included as ECMs in a VAR that is tested to make sure that its stochastic properties are fulfilled. The period covered in this study is 1993-2000, and monthly data are used, to maximize the number of observations. Figure 1 depicts the basic scheme of empirical analysis.

[2] See Johansen, S. (1988).

5. Section B discusses the kind of long-run equilibrium relationships that one would expect to find in the markets for goods, labor, money, and foreign exchange. Section C discusses the estimation of the aforementioned long-run relationships (cointegration relationships). Section D presents the results of including the four cointegration relationships as error correction mechanisms (ECMs) in a dynamic VAR model for six endogenous variables. The endogenous variables are assumed to be affected by the ECMs and additional dynamic effects, including those from four exogenous variables. The implications of the model are illustrated by several simulations (using the 'impulse response functions') (Section E).

B. Long-run Relationships in Four Markets

6. The strategy pursued here is consistent with Svensson's model for small, open economies in that the exchange rate is considered key for conducting monetary policy (Svensson (1998)). Svensson's model, though, was meant to represent a small, open, mature market economy, and thus relies—appropriately—on the interest rate as the (only) instrument of monetary policy. This approach needs to be qualified for a transition economy (see Box 1). As suggested by previous empirical studies, in the case of Slovakia, the interest rate channel is still rather weak, and the impact of interest changes takes effect with long lags. In contrast, a sizable and faster impact is found for changes in broad money.[3] Thus, broad money plays an important role in the estimated model.

First we identify four long-term relationships describing equilibrium on the markets for goods, labor, money, and foreign exchange.

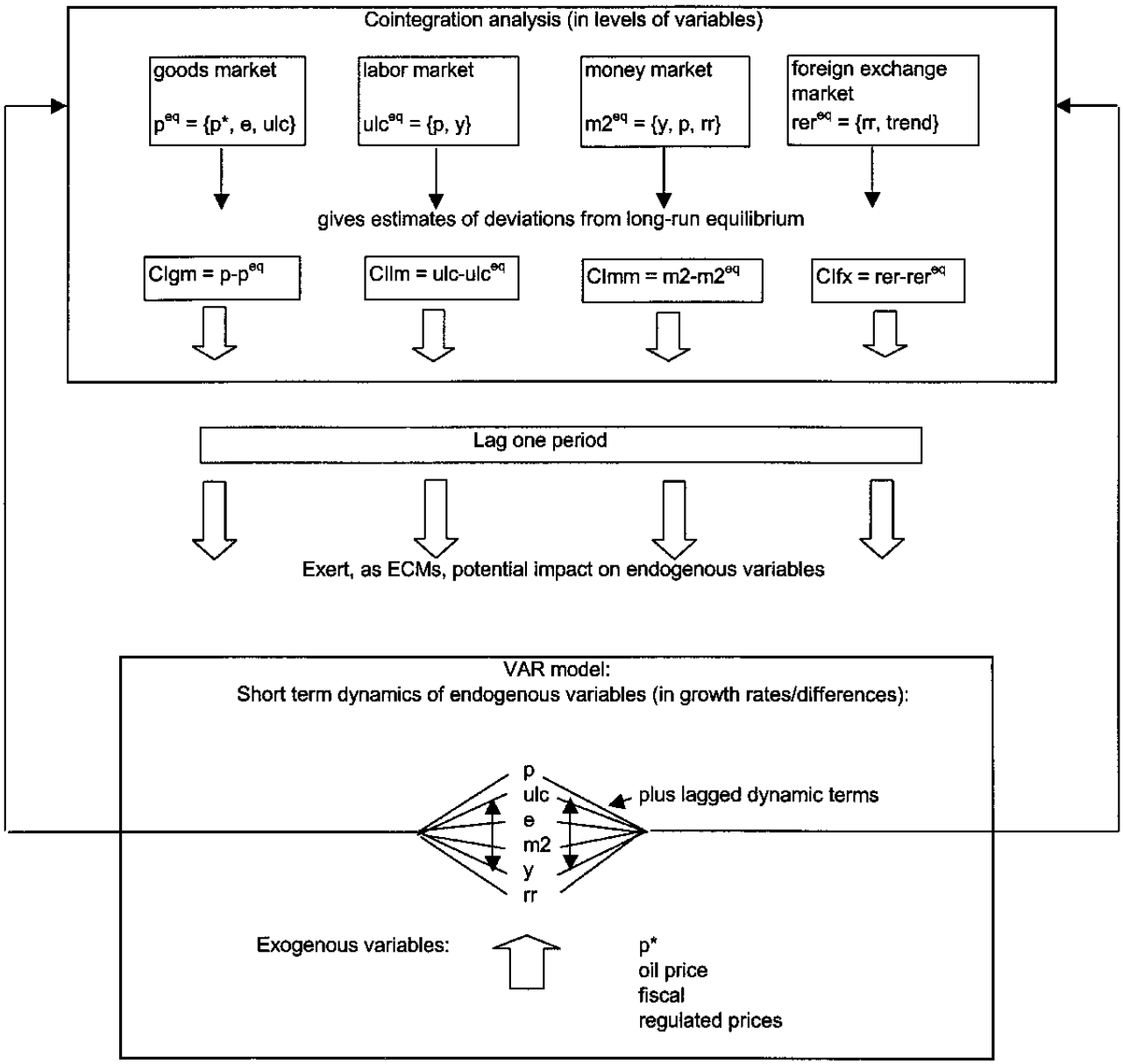
7. On the ***goods market***, in the long run, the consumer price is in principle expected to be determined by a weighted average of import prices (tradables) and domestic unit labor costs (nontradables).

consumer price = f(foreign price exchange rate, unit labor costs, other?)* (1)

The core CPI index (*P*) is used as the consumer price. For the import price, the German CPI index is converted into koruna, and adjusted for the impact of Slovak import tariffs (to obtain

[3] After 12–15 months, the impact of an initial 1 percentage point real interest increase on consumer prices would still be only some 0.05 percent. At that time, the impact of changes in broad money on consumer prices is at its maximum—0.15 percent for an initial 1 percent increase in broad money.

Figure 1. Slovak Republic: The Basic Scheme of Empirical Analysis.



P^**E). Unit labor costs (*ULC*) would ideally refer to the nontradable sector. However, in the absence of the relevant ULC data, they are constructed for the whole economy.[4]

8. On the **labor market**, along a long-run growth path, a Phillips curve type of labor market would imply:

real wage = wage/consumer price = f (productivity, output gap) →

unit labor costs = wage / productivity = f (consumer price, output gap). (2)

The core CPI is used here as well, instead of the headline CPI. This simplifies the model, and reduces the number of necessary variables in the estimation—which is a key consideration, and seems justified from an economic point of view. The movement of the headline CPI has started to diverge from that of the core CPI only recently, owing to large administered price increases, on which there was consensus that they had to be absorbed by households as a real wage decline.

9. On the **money market**, a standard money demand function is assumed, in line with previous work.

M2 = f (real GDP, consumer price, real interest rate) (3)

Here, again, the core CPI is used as the consumer price. The real interest rate used is the one-month interbank rate, deflated by the CPI index (*RR*).

On the foreign exchange market (the balance of payments), a relationship is postulated for the RER, or real exchange rate (in terms of consumer prices, vis-à-vis Germany, and adjusted for Slovak import tariffs: $RER = P / (P^*E)$). In a mature market economy without capital mobility, purchasing power parity would suggest that the *RER* should be stationary, or constant in the long run. In an emerging transition country, with rapid productivity growth in the tradables sector, the presence of Balassa-Samuelson effects would suggest a trend appreciation of the *RER*, with the coefficient of the trend bearing a relationship to the tradables productivity differential between the host country and its trading partners.[5] Moreover, portfolio (and other capital market) effects suggest the inclusion of the real interest rate.

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[4] In fact, monthly data for industry wages are used to approximate whole economy wages, justified by the strong correlation between the two on an annual basis. On the other hand, productivity movements are much less correlated, and monthly data for whole economy productivity are obtained by interpolation.

[5] For a discussion of Balassa-Samuelson effects, see Froot and Rogoff (1995).

Real Exchange Rate = f (real interest rate, trend) (4)

Table 1 lists all the variables, their definition and sources, and Figure 2 charts the endogenous variables of interest. Figure 3 shows year-on-year changes for the key variables.

C. Estimation of Cointegration Relationships

10. To test for the presence of long-run equilibrium relationships, the Johansen procedure was used. Time series properties of the data were tested using Dickey-Fuller (unit roots) tests. As Table 2 shows, these suggested that all variables (including the real interest rate (*RR*)) are nonstationary, but could be made stationary by taking first differences (i.e., they were I(1), rather than I(0) or (I(2)).The Johansen procedure suggested that there could be up to four long-run relationships among the set of six variables {*P, (P**E), ULC, M2, Y, RR*} (see Annex). It was possible to identify systems of three or four long-run relationships roughly in line with the priors discussed in Section B (see Annex). However, the high number of parameters required to identify the system, in relation to the number of observations, limited the accuracy of the estimation. Thus, the four relationships were estimated with a single equation method. The resulting equations 5–8 are listed below; more detailed estimation results are shown in the Annex. Figure 4 shows the parameter constancy of the equations, obtained after recursive estimation.

11. On the *goods market*:

$$LP = 0.20 * L(P^{*}*E) + 0.52 * LULC + 0.0025 * trend - 1.84 + seasonality \quad (5)$$

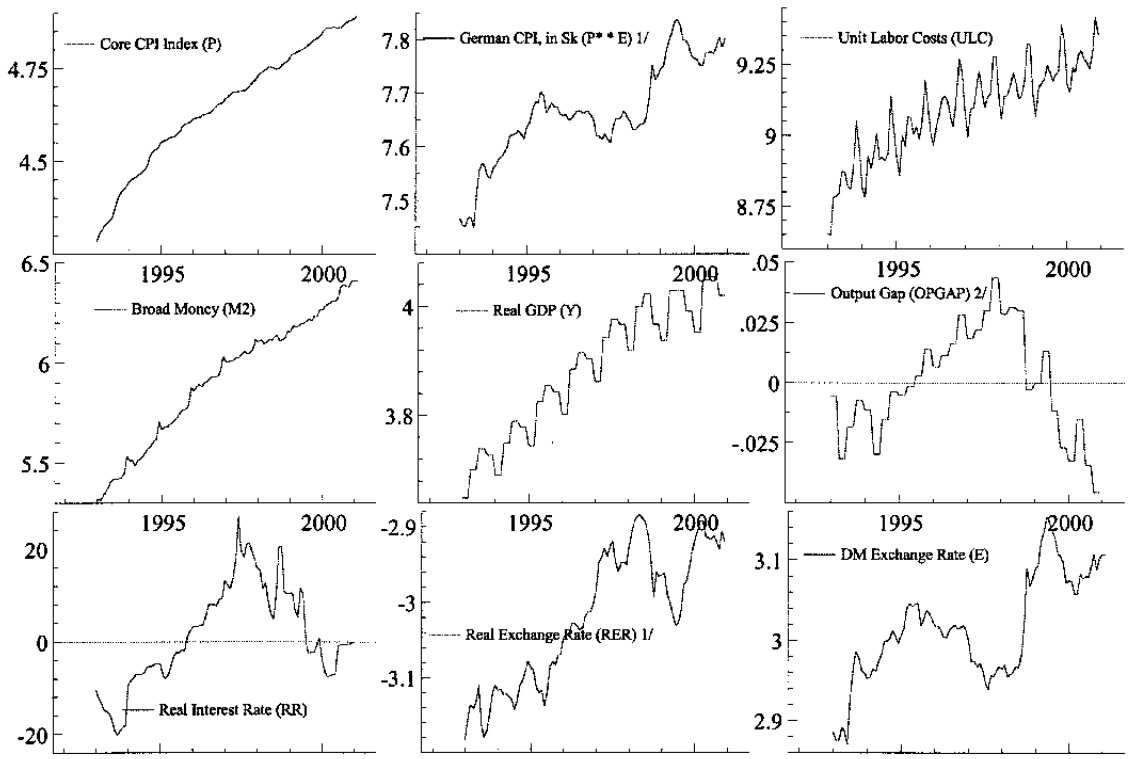
This equation suggests a strong impact on consumer prices of both import prices and wage costs. Figure 4 suggests that the coefficients in this equation have varied over time, and that the coefficient for foreign prices fell sharply after the move in October 1998 from an exchange rate peg to a floating exchange rate regime. This finding is consistent with results from other countries that the pass-through of foreign prices to domestic prices falls after the introduction of an inflation-based, rather than an exchange-rate-based, monetary policy regime.[6] The trend is included to pick up "other" influences.

12. On the *money market*:

$$LM2 = 1.26 * LY + 1.04 * LP - 3.80 + seasonality \quad (6)$$

[6] See for instance Schaechter, Stone, and Zelmer, (2000).

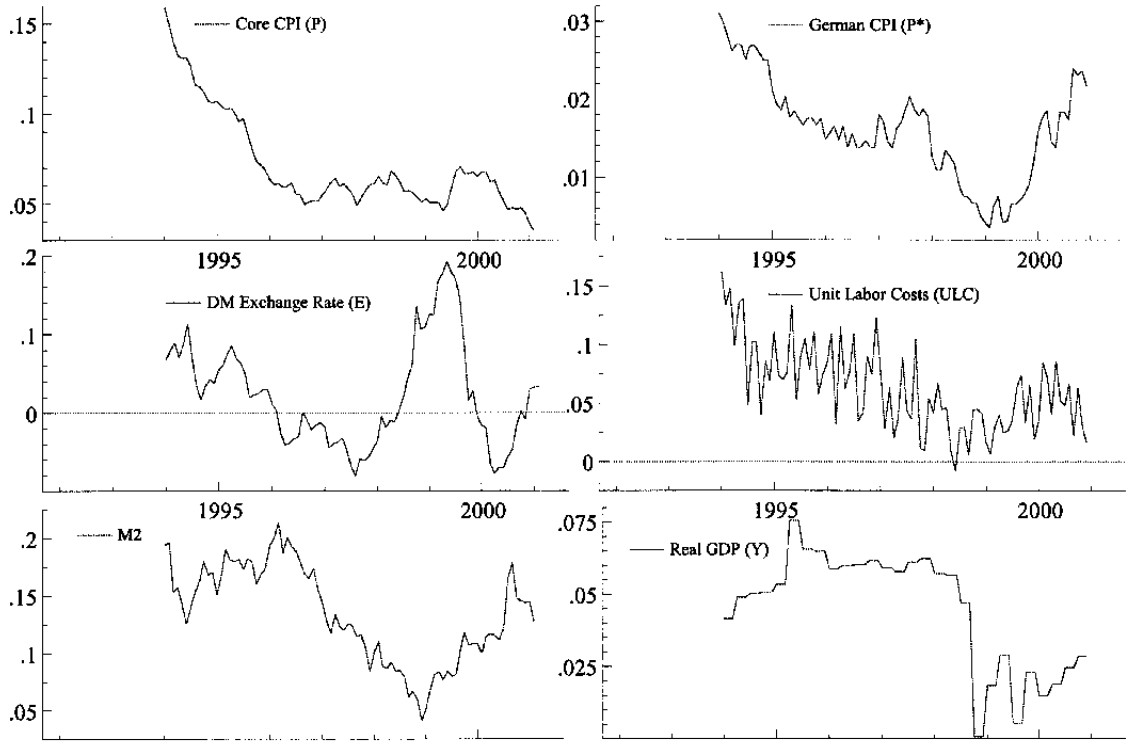
Figure 2. Slovak Republic: Endogenous Variables, 1993–2000



Sources: Slovak Statistical Office, National Bank of Slovakia, and staff estimates.

1/ Adjusted for Slovak import tariffs.
2/ See table 1 on calculation of output gap.

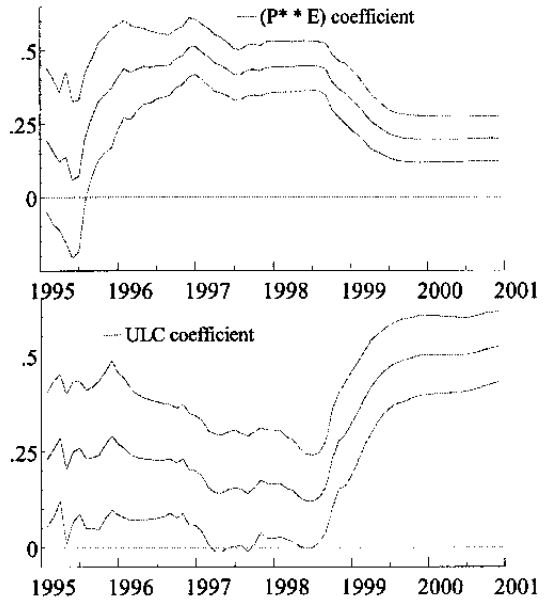
Figure 3. Slovak Republic: Key Variables, 1993–2000 (year-on-year growth)



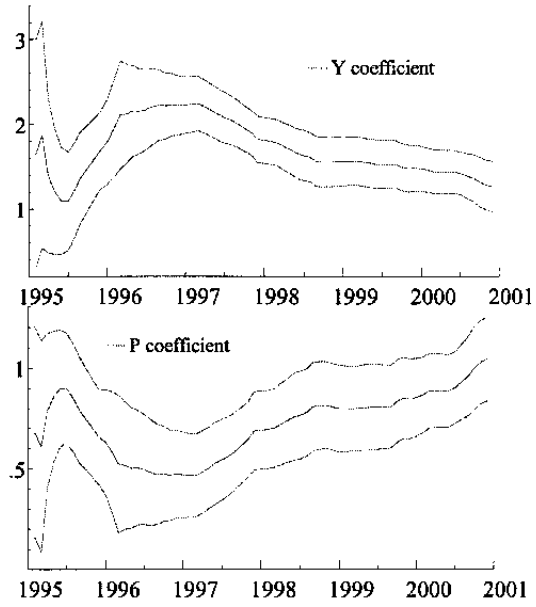
Sources: Slovak Statistical Office, National Bank of Slovakia, and staff estimates.

Figure 4. Slovak Republic: Long Run Equations; parameter constancy

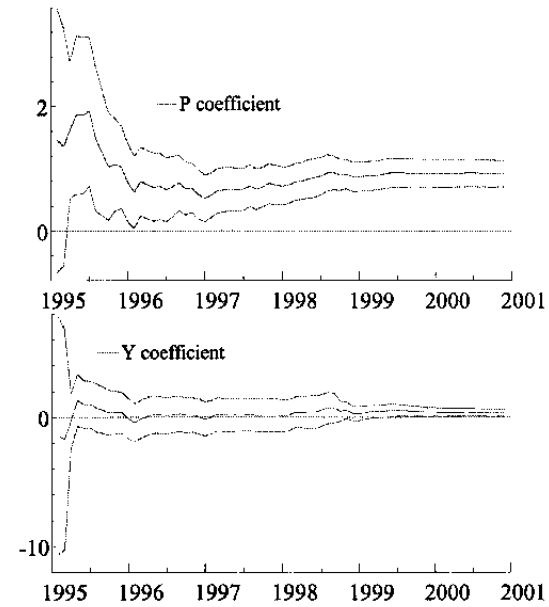
P equation



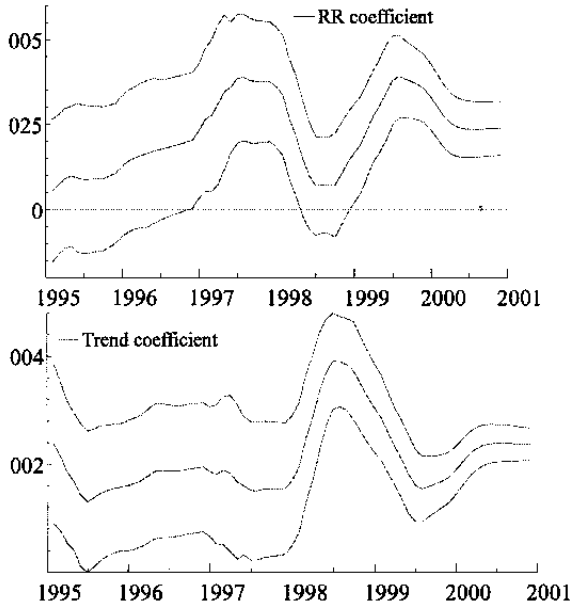
M2 equation



ULC equation



RER equation



This equation suggests, consistent with previous results,[7] that the coefficients for prices and real output are relatively close to 1 (although the coefficient of real output is statistically significantly higher than 1) and there is no significant impact from (real) interest rates. The residual of this long-run relationship can be interpreted as the difference between *M2* at any point in time and the (long-term) equilibrium demand for *M2*, i.e., the monetary policy stance.

13. On the *labor market*:

$$LULC = 0.92 * LP + 0.33 * LY - 0.00156 * trend + 3.72 + seasonality \quad (7)$$

This equation can be thought of as including the output gap (*OPGAP*) instead of output (*LY*).[8] Theory would suggest a coefficient of 1 for *P*, but this is rejected statistically. The coefficient of *P* being lower than 1 implies that so far during transition, real wages have increased somewhat less than productivity. The equation also suggests that, in the longrun, *real* unit labor costs are predominantly a function of the output gap, with a relatively small residual impact (-0.3 percent per year) picked up by the trend. Figure 4 suggests that the coefficient on output in the equation for unit labor costs was very small up to 1997, but has recently increased. This suggests that wage costs have become increasingly sensitive to the business cycle—a characteristic associated with more mature market economies.

14. On the *foreign exchange market*:

$$LRER = 0.0024 * RR + 0.0024 * Trend - 3.17 \quad (8)$$

This equation suggests that, in long-run equilibrium, a 1 percent increase in the real interest rate is associated with a 0.24 percent more appreciated real exchange rate, while Balassa-Samuelson type factors would allow for a trend appreciation of the CPI based real exchange rate of (12*0.24=) 3.6 percent per year. Figure 4 suggests that there has been a tendency for an increase in the coefficient of real interest rates in the long-run real exchange rate equation, but that the relationship was disturbed during the exchange market turmoil of 1998–99.

15. So far, we have used cointegration to test for and find four long-run relationships between nonstationary variables. The residuals of the cointegration relationships—which

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[7] See, for instance, Alquist (2001).

[8] Equation 7 could be rewritten, using the results of a regression of *LY* on a trend (and seasonal dummies) to obtain the output gap. This regression suggested a coefficient for the trend of 0.00393. The equation would than be: *LULC=0.92*LP+0.33*OPGAP-0.00026*trend+seasonality*.

represent estimates of deviations from the long-run equilibria—are shown in Figure 5. Unit root tests suggest they are stationary (although those for the money and foreign exchange markets are significant only at the 5 percent level; see Table 2). These residuals are used as equilibrium correction mechanisms (ECMs) in the subsequent specification of dynamic equations for the endogenous variables, where they can potentially have an impact on any of the endogenous variables. Through estimation, we can test if and how rapid the endogenous variables are affected by the ECMs as estimates of deviations from the long-run equilibria.

D. Dynamic, Short-run Model

16. In order to capture the short-run dynamics, a dynamic model is set up, consisting of six equations for the endogenous variables {*P, E, ULC, M2, LY,* and *RR*}. The first difference of the endogenous variables is regressed on the four co-integration relationships as ECMs, lagged one period. In addition, the specification of the dynamic equations allows for the potential effect of lagged differences (one period) of all endogenous variables and of exogenous variables.[9] The exogenous variables are the oil price, denominated in koruna (*POIL*), German consumer prices (P^*), a fiscal variable (*FISC*), and regulated prices (*PREGUL*).

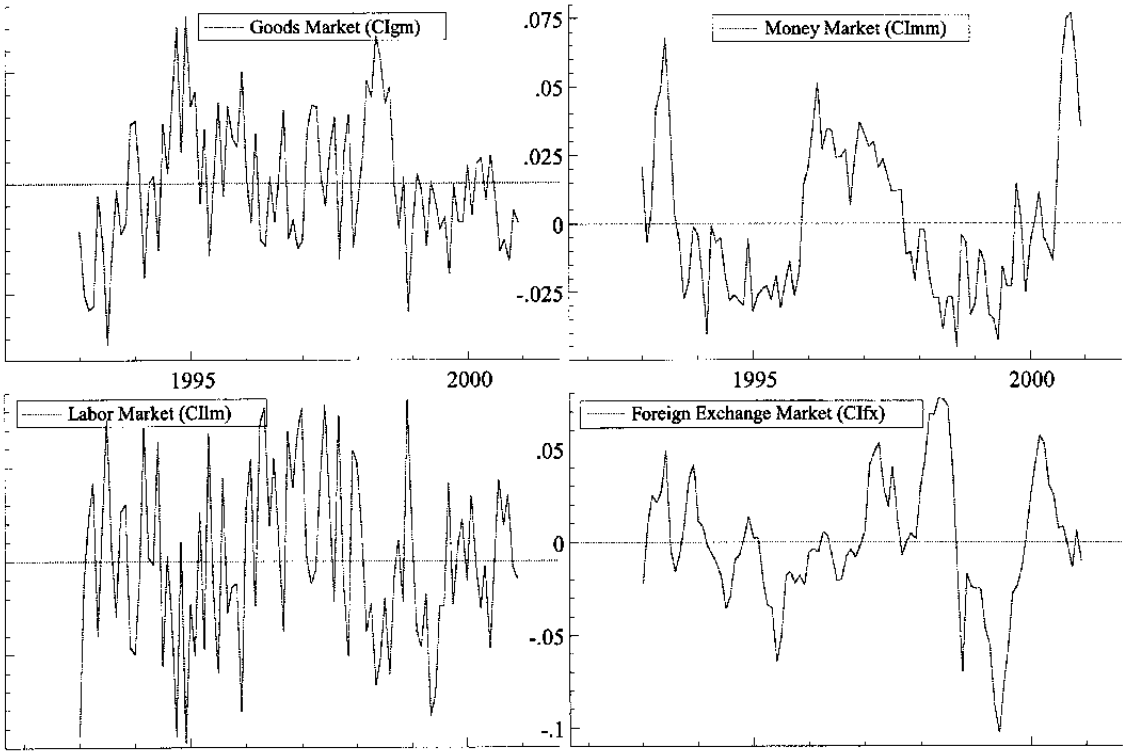
17. The dynamic model is estimated, simultaneously, as a VAR, over the period 1993.3-2000.12. After the removal of variables with insignificant coefficients, a more parsimonious specification results (see Annex).[10] The dynamic equations are interpreted as follows:

- **The price level (*P*).** The only significant ECM is that of the goods market. The sign of its coefficient implies that if the core CPI index is higher than its equilibrium value as defined by the long-run relationship, it tends to decrease. The size of the coefficient indicates a strong speed of adjustment: a disequilibrium shock would almost be fully undone within one year (12*0.078=94 percent). Additional dynamic effects are found only from the exchange rate and aggregate demand (*Y*). These results mean that in terms of *direct* effects, prices are determined by foreign prices, the exchange rate, unit labor costs, and aggregate demand. As no direct effect of monetary policy (the monetary ECM, or "excess money") was found, any effect of this will have to come via those channels.

[9] The results suggest that including only one lag implies virtually no loss of information, compared with including two lags (see also footnote 6).

[10] A few dynamic effects that appeared strongly at odds with theory were considered spurious and were therefore removed.

Figure 5. Slovak Republic: Cointegration Relations



Sources: Slovak Statistical Office, National Bank of Slovakia, and staff estimates.

- **The exchange rate (*E*).**[11] The foreign exchange ECM is the only significant ECM. The equation suggests that if the real exchange rate is higher than its equilibrium as defined by the long-run relationship, the koruna depreciates against the DM, reversing the disequilibrium in less than a year (12*0.9>100 percent). The dynamic effect from aggregate demand (*Y*) suggests that higher aggregate demand in itself (i.e., abstracting from the impact via policy responses) exerts depreciation pressure. A plausible explanation for this effect would be via higher imports and a weaker current account.

- **Unit labor costs (*ULC*).** As expected, the labor market ECM has a very strong effect. The surprisingly significant effect of the money market ECM suggests that a loosening of the monetary policy stance tends to increase unit labor costs. No additional dynamic effects are found to be significant.

- ***M2.*** The money market ECM is found to be significant, with the expected sign. Less obviously, the labor market ECM is also found to be significant. This seems to imply that wage (and income) increases tend to increase demand for and supply of money. In addition, dynamic effects are found from the core CPI and the oil price. The fiscal variable (*FISC*) is also found to have an impact on *M2*: a higher budget deficit tends to increase *M2*. Although this effect is in a sense mechanical, the finding suggests that, in the 1990s, monetary policy accommodated fiscal policy to some extent.

- **Aggregate demand (*Y*).** It was more difficult to find significant, non-spurious effects.[12] Therefore, two dummy variables were included to improve the fit.[13] Significant dynamic effects could be found from real interest rates (*RR*) and regulated prices. The real interest rate effect suggests a remarkably rapid impact on aggregate demand (in one month). However, the impact is very modest in size: a 1 percentage point increase in the real interest rate would result in a 0.04 percent fall in output. Indeed, this result indicates that the impact of interest rates on aggregate demand was rather modest in the 1990s, confirming previous findings and views.

- **The real interest rate (*RR*).** The coefficient of the foreign exchange market ECM suggests that, if the real exchange rate is 1 percent higher than its equilibrium value as

[11] Note that the nominal exchange rate is defined in terms of Sk/DM; a higher number means a depreciation, whereas, by convention, the real exchange rate is defined such that a higher number means an appreciation.

[12] The goods and labor market ECMs were found to be significant. However, these were difficult to justify conceptually. They were therefore considered spurious, and removed.

[13] For April 1993 and October 1999.

defined by the long-run relationship, the real interest rate will increase by 0.2 percentage point. The higher real interest rate is necessary to sustain a more overvalued real exchange rate. In addition, a dynamic effect from aggregate demand is found: a 1 percent higher (monthly) output growth would lead to a 0.7 percentage point increase in real interest rates. Both effects suggest that the real interest rate responds to macroeconomic imbalances, reducing them.

18. The Annex shows the test statistics for the six equations and Figure 6 shows actual and fitted values and residuals. The residuals of none of the equations—except for the unit labor cost equation—are distributed normally. This is due mainly to a few large outliers for all equations (see Figure 6). In general no attempt has been made to remove the outliers by including dummy variables. Experimentation with such removal suggested that, while this improved the fit, it had a negligible impact on the specification of the equations. Portmanteau and Arch tests did not suggest other problems.

19. The regression results can be summarized as follows. First, the main *direct* determinants of inflation are foreign prices, the exchange rate, and wage costs, with some additional impact from aggregate demand. Second, no *direct* impact of monetary policy on prices could be found (from either monetary aggregates or interest rates). Third, there is a statistically significant *indirect* impact of monetary policy on prices, via the impact of interest rates on the exchange rate and aggregate demand—which, in turn, is found to have a direct impact on prices, the exchange rate, and wage costs—and the impact of broad money on wage costs. Hence, the "standard" monetary policy transmission mechanisms on which central banks in more mature open market economies rely are present. Fourth, although the effects of broad money changes are also of significant magnitude, the impact of interest rate changes on prices and, especially, on output, seems to be small, particularly during the first part of the period under investigation (1993–2000).

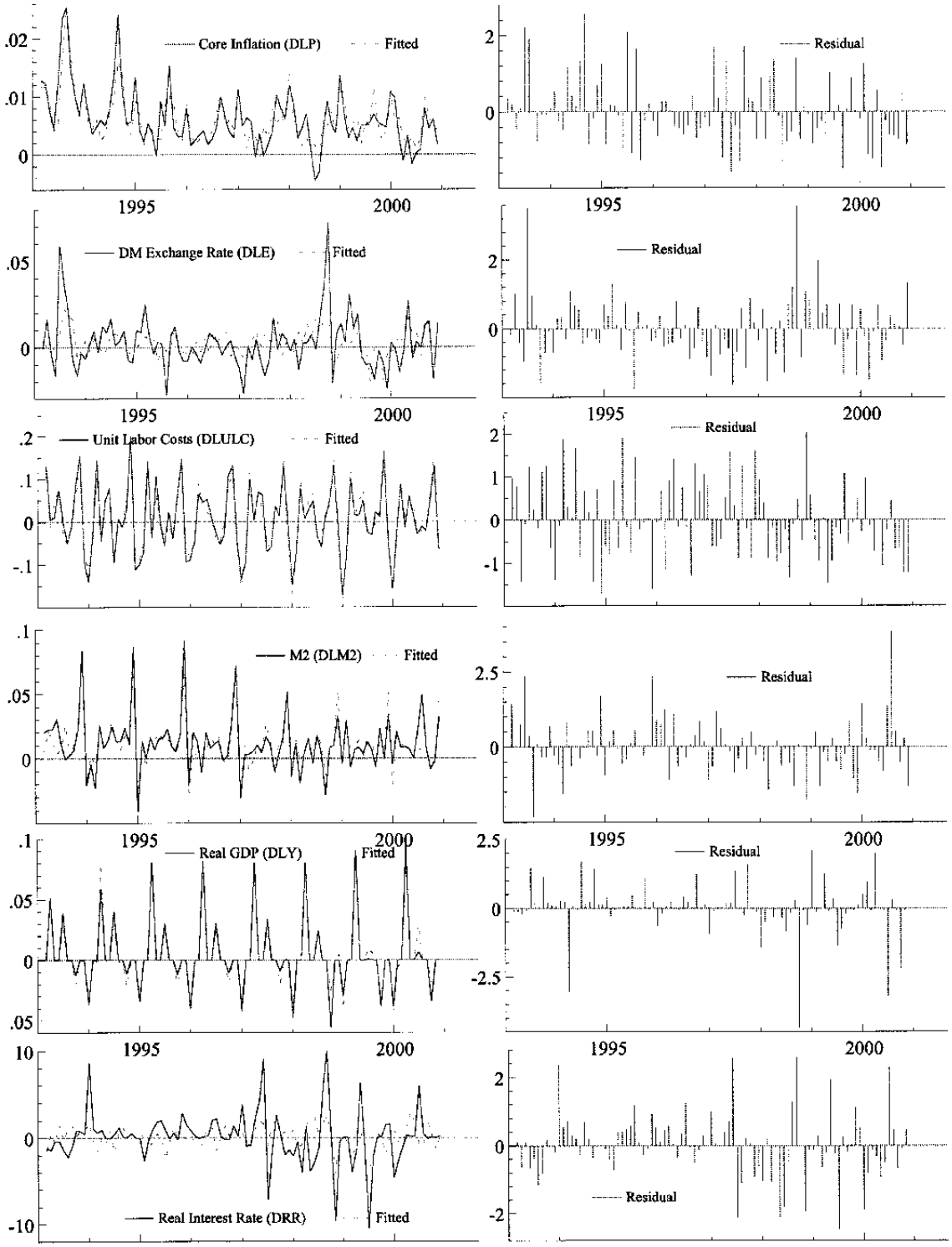
20. In Section E, several simulations are discussed to illustrate the behavior of the model formed by the six equations, and to check how the different channels discussed above work out when they operate simultaneously.

E. Simulations with Impulse Response Functions

21. The simulation properties of the VAR model were assessed by imposing shocks to the endogenous variables. Figures 7–12 show the impulse response functions.[14] As noted in Section D, the equation for the real interest rate—a key policy instrument that has an impact on prices—is driven by aggregate demand and the foreign exchange market ECM. In most of

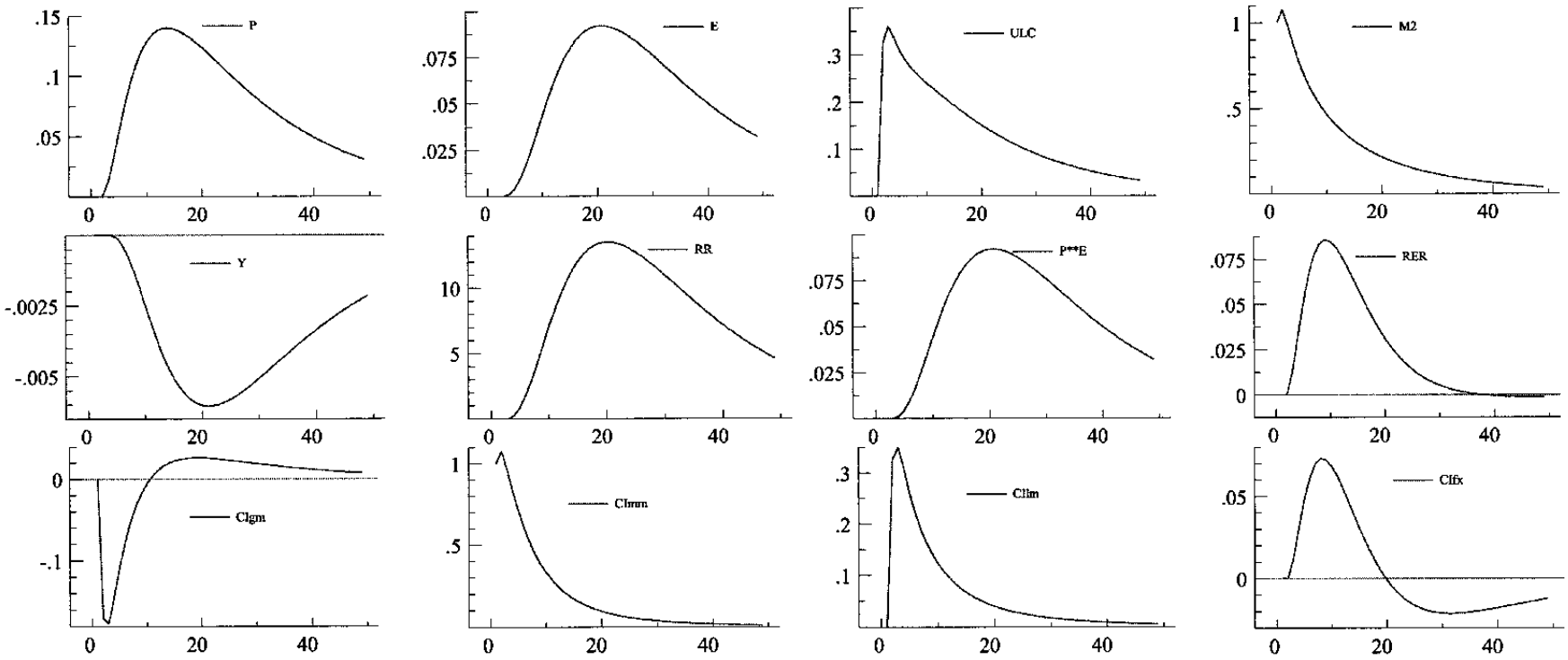
[14] In each of the simulations, one of the variables receives an impulse shock of 1 percent in the first period (for the real interest, the size of the shock is 1 percentage point).

Figure 6. Slovak Republic: Dynamic Model, Actual and Fitted Values, and Residuals



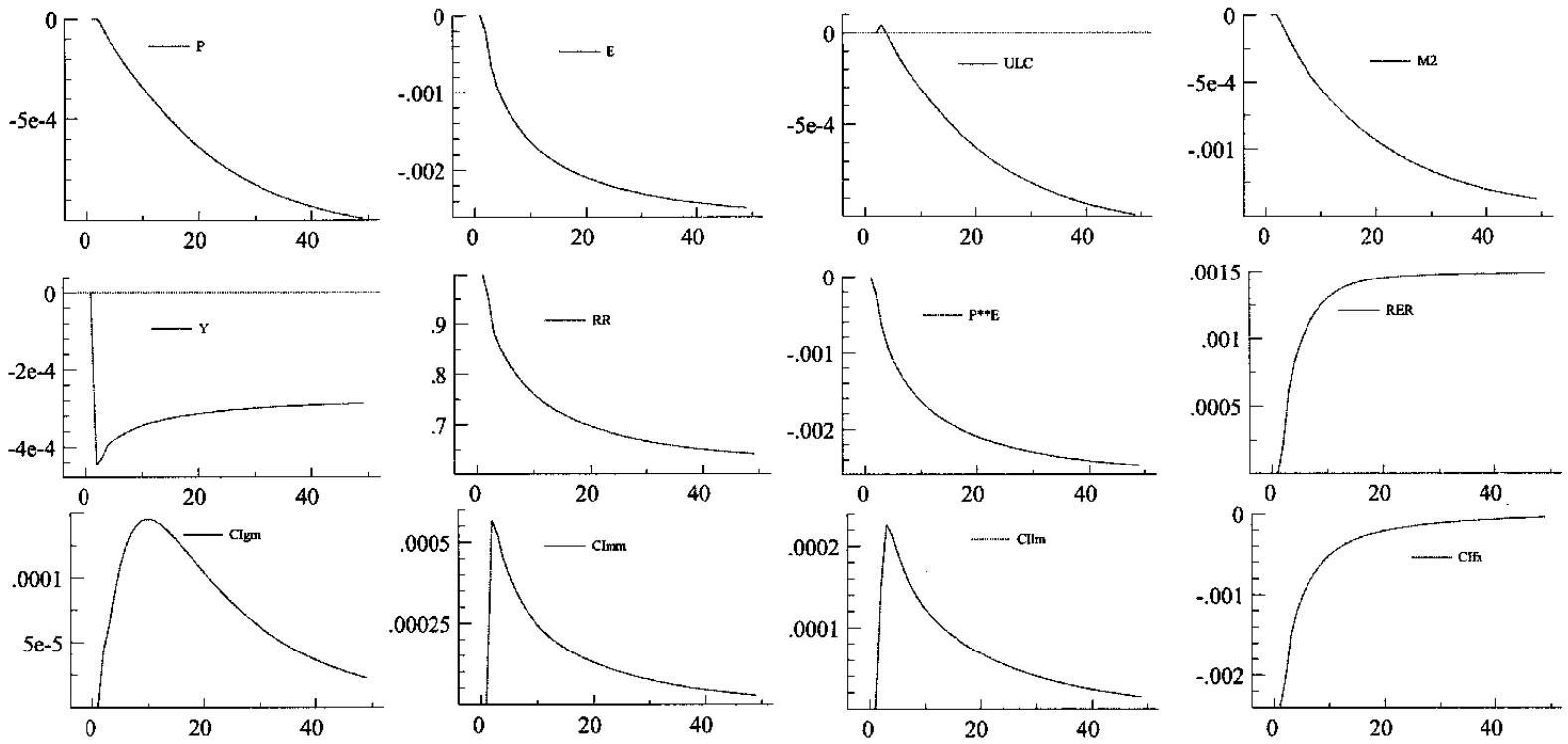
Sources: Slovak Statistical Office, National Bank of Slovakia, and staff estimates.

Figure 7. Slovak Republic: Impulse Response: Shock M2 by 1 percent



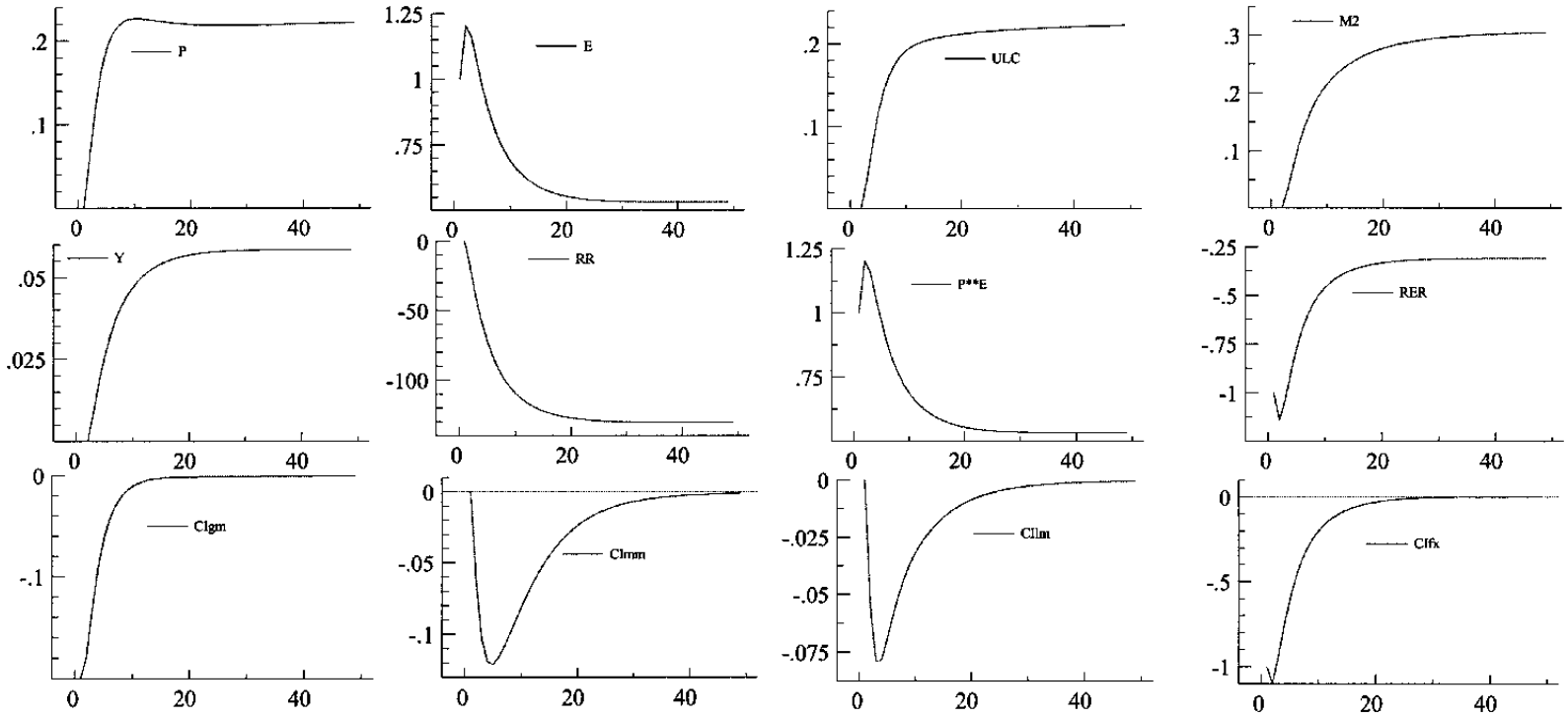
Source: Staff estimates.

Figure 8. Slovak Republic: Impulse Response: Shock real interest rate (RR) by 1 percentage point



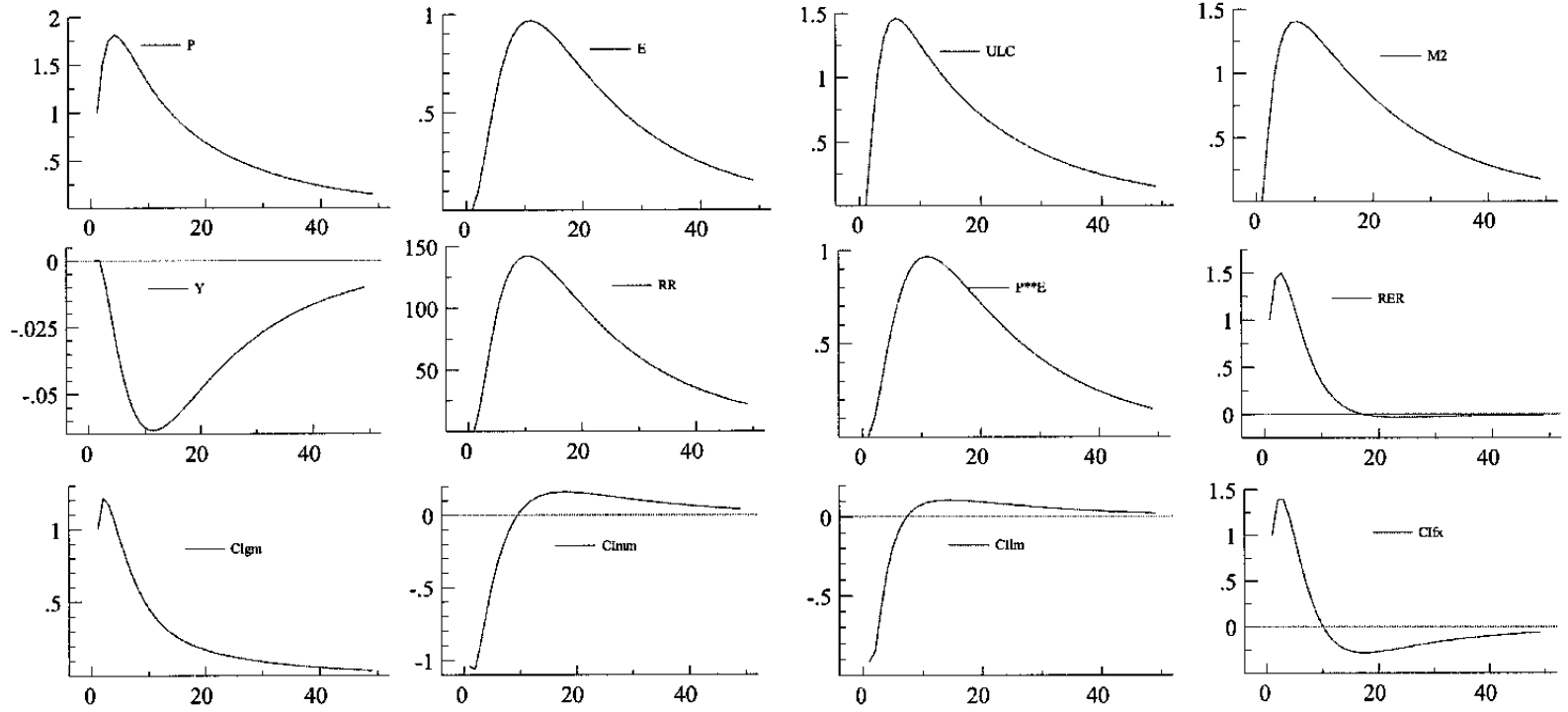
Source: Staff estimates.

Figure 9. Slovak Republic: Impulse Response: Shock DM Exchange Rate (E) by 1 percent



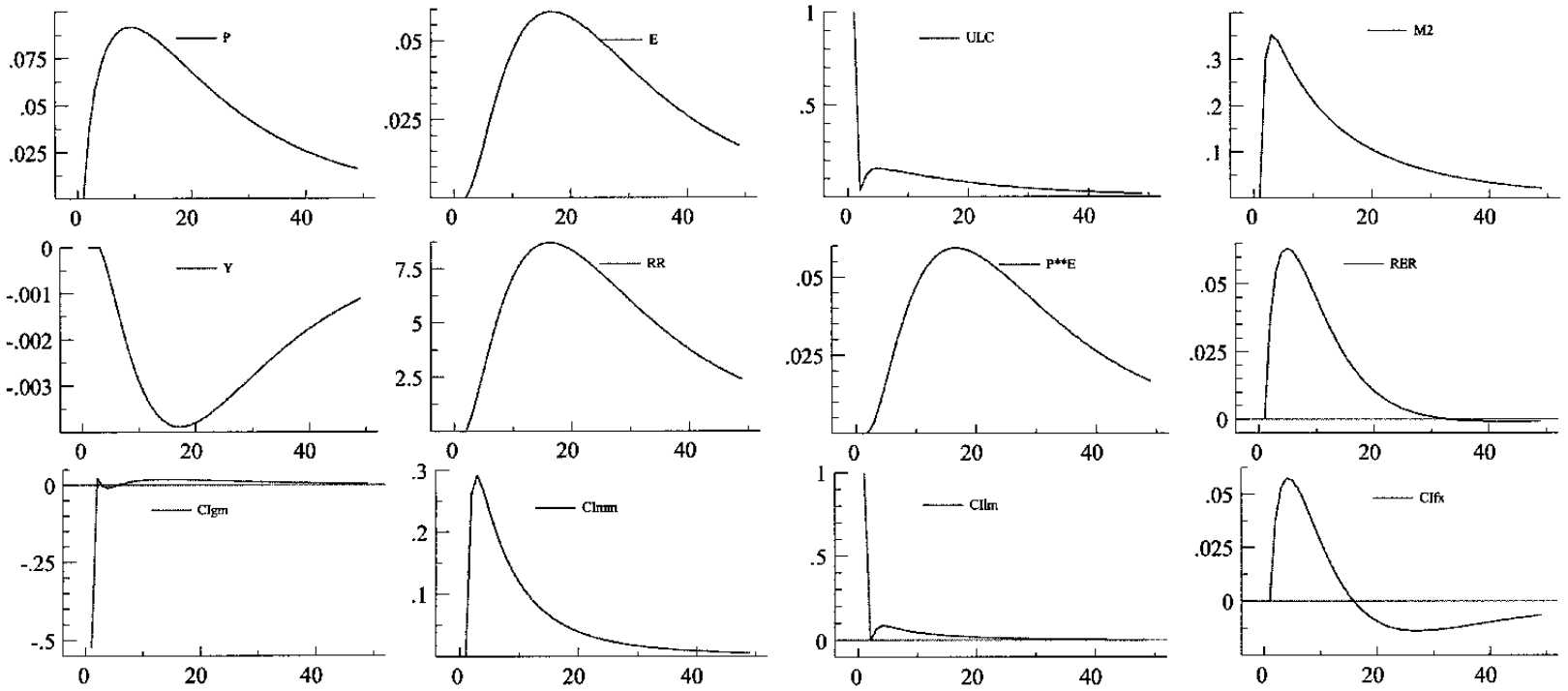
Source: Staff estimates.

Figure 10. Slovak Republic: Impulse Response: Shock Core CPI (P) by 1 percent



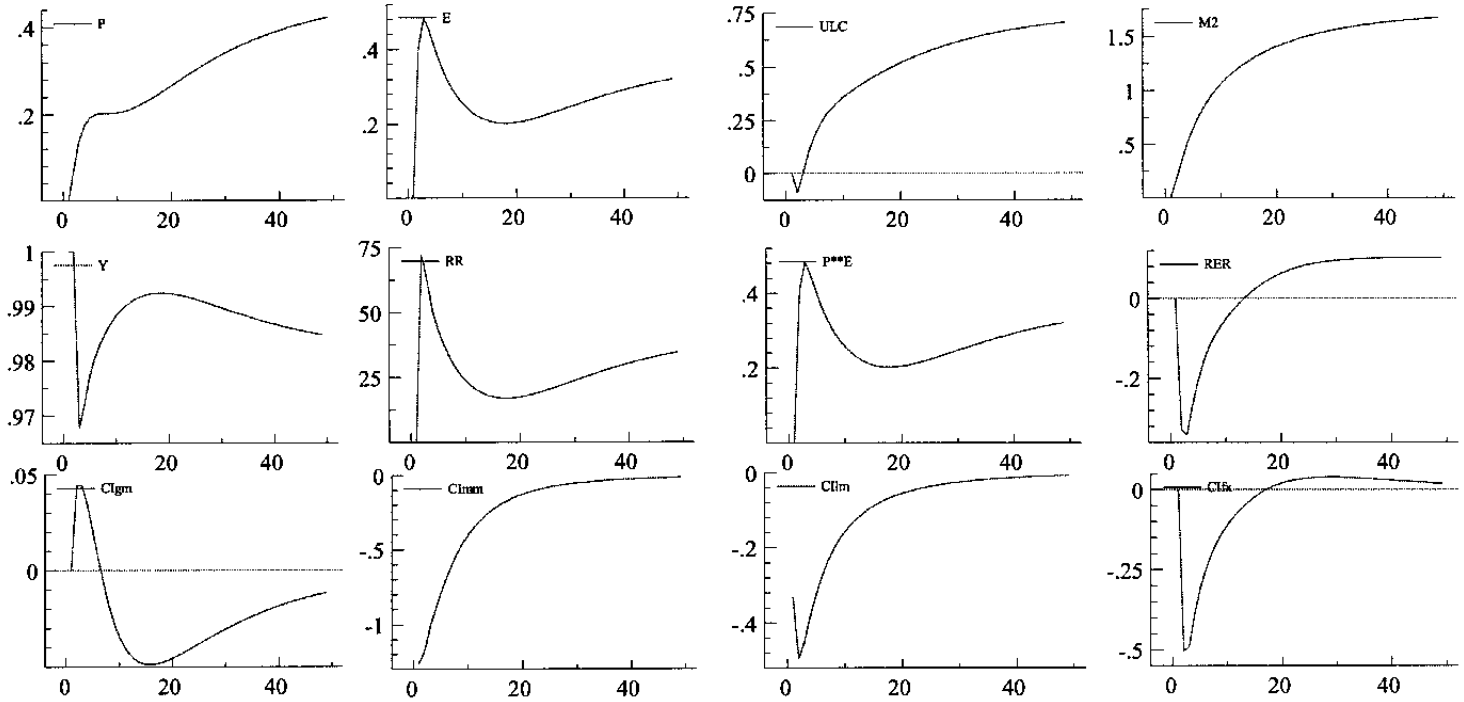
Source: Staff estimates.

Figure 11. Slovak Republic: Impulse Response: Shock Unit Labor Cost (ULC) by 1 percent



Source: Staff estimates.

Figure 12. Slovak Republic: Impulse Response: Shock Output (Y) by 1 percent



Source: Staff estimates.

the following simulations, the endogenous response of real interest rates dampens the initial effects, bringing the economy back to equilibrium eventually.

- **Shocking *M2* (Figure 7).** As discussed in Section V, a higher level of broad money tends to lead to higher unit labor costs, and therefore higher prices. The impact takes time to feed through, and the maximum effect on prices—0.15 percent for an initial 1 percent increase in *M2*—takes place after 12–15 months. The impact of higher broad money on output is very small, compared with its impact on prices (at its maximum, 5 percent of the latter). Remarkably, this effect on output is negative, owing to the response of real interest rates to the initial expansionary shock that brings the economy back to equilibrium. As the response of prices to the money shock is initially stronger than that of the exchange rate, the real exchange rate appreciates. This could be said to be consistent with the negative effect on output. Eventually, the depreciation catches up with price increases, and the real exchange rate response peaks after less than 10 months. The real interest rate response is responsible for the eventual return of all variables to their baselines. With output returning to steady state in the long-run, the model seems to exhibit the neutrality of money. In fact, with the impact on output very small (compared with its impact on prices), money could be said to be almost neutral in the short run. A (somewhat contrived) simulation of a fiscal expansion would proceed along the same lines, since the fiscal variable is only found to be significant in the M2 equation.

- **Shocking real interest rates (*RR*) (Figure 8).** A 1 percentage point increase in real interest rates leads to an appreciation of the exchange rate and a (small) reduction in output, thus exerting downward pressure on prices (and wage costs). The decline in prices is rather gradual, and it takes a long time before the price level stops falling.[15] After about a year, the impact on the exchange rate is around 0.2 percent, and the effect on the core CPI only 0.05 percent. This seems rather low; it suggests that large changes in interest rates are required to affect inflation. The insensitivity of prices and output to real interest rate changes is illustrated by the large swings in the real interest rate shown in Figure 2. Although the interest rate does not enter the money demand equation, M2 still decreases, given the impact of the interest rate on output and prices.

- **Shocking the exchange rate (*E*) (Figure 9).** A depreciation shock leads to higher prices, with the price level rapidly increasing by over 0.2 percent for a 1 percent depreciation. Slightly higher output also results. This seems to be consistent with a better net trade position due to a more depreciated real exchange rate (with the price rise substantially less than the nominal depreciation). The initial depreciation shock depreciates the real exchange rate below equilibrium, because of which the nominal

[15] One difference compared with the simulation of M2 is that in this simulation the variables—including the real interest rate—eventually settle down at a new equilibrium, instead of eventually returning to the baseline.

exchange rate moves back by appreciating. Higher nominal GDP leads to higher M2. The real interest rate can decrease, because a lower real exchange rate needs to be sustained (with the impact of higher output on the real interest rate offsetting slightly some of the impact).

- The results of price, wage cost, and output shocks are shown in Figures 10–12.

F. Conclusions

22. With monetary policy of the NBS increasingly conducted with inflation considerations in mind, it has become more important to understand the determinants of inflation and the impact of monetary policy on the economy. A structural VAR is estimated that uses, as ECMs, estimated long-run relationships in line with economic theory. The results seem consistent with mainstream economic thinking on the monetary policy transmission mechanisms, inflation determination, the behavior of the exchange rate and aggregate demand, and the policy reaction function of the central bank in a small, open economy such as Slovakia.

23. The analysis shows that the main *direct* determinants of inflation are foreign prices, the exchange rate, and wage costs, with some additional impact from aggregate demand, while no *direct* impact of either monetary aggregates or interest rates can be found. However, there is a statistically significant *indirect* impact of monetary policy on prices, via the impact of interest rates on the exchange rate and aggregate demand—which, in turn, is found to have a direct impact on prices, the exchange rate and wage costs—and the impact of broad money on wage costs.

24. While the impact of broad money changes seems to be fairly rapid and sizable, the impact of interest rates on prices and, especially, on output, are found to be modest and gradual. The maximum impact of an initial 1 percent change in broad money on consumer prices is 0.15 percent, and occurs after 12–15 months; at that time the impact of an initial 1 percentage point real interest increase would be only some 0.05 percent. This tallies with the view on other advanced transition countries, namely, that so far during transition, the interest rate channel has not been strong. In Slovakia, the fully interest-rate-based monetary policy is a relatively new phenomenon, whereas bank restructuring and bouts of financial turbulence have meant that banks' lending to the private sector has often been constrained by factors other than the monetary policy stance. The relative insensitivity of price and output to real interest rate changes means that, in current circumstances, it would be difficult for the NBS to commit itself to formal inflation targeting. Having said that, the finding that several effects contributing to the interest rate channel have recently become more significant suggests that the channel will become more influential as financial deepening and convergence with the EU continue.

Table 1. Slovak Republic: Variable Definitions and Transformations

	Mnemonic	Definition
Endogenous		
	P	CORE CPI Index [constructed prior to 1997]
	E	DM exchange rate
	ULC	Unit labor costs, whole economy Calculated as WAGE/PRODWH
	M2	Broad money
	Y	Real GDP (1995 prices), Interpolated from quarterly data
	RR	Real interbank rate, 1 month 2/ Deflated with CPI inflation
	OPGAP 1/	Output gap Calculated as residual of regression of Y on Trend and seasonal dummies
Identity		
	RER	Real exchange rate, against Germany, adjusted for Slovak tariff Calculated as P/(P**E)
Exogenous/Policy		
	P*	German CPI Index, adjusted for Slovak import tariff Calculated as CPIG * (1+TIMP/100)
	POIL	Oil Price (in koruny) [=Oil price, in dollars * Sk/$]
	PREGUL	Index of regulated prices
	FISC	Net credit to government Deflated with P, differenced, moving average
Auxiliary		
	CPIG	German CPI Index
	TIMP	Effective import tariff (calculated as revenue/import value)
	WAGE	Wage, whole economy Approximated by WAGEind
	WAGEind	Wage in industry
	PRODWH	Productivity, whole economy Interpolated from annual national accounts data, 6 months moving average
	CPI	Consumer Price Index (Jan. 1989=100)

Sources: Slovak Statistical Office, National Bank of Slovakia, IMF World Economic Outlook, and staff estimates.

Notes
1/ The output gap is not used in the modeling, but is included for illustrative purposes.
2/ For 1993–94 (when the interbank market did not exist), the (nominal) rate is set equal to 6.91, the level in January 1995.

Table 2. Slovak Republic: (Augmented Dickey-Fuller) Unit Root Tests

Variable	Mnemonic	Logged	Level			Difference		
			ADF 1/	Significance 2/	k 3/	ADF 1/	Significance 2/	k 3/
Core CPI Index	P	yes	-2.72		1	-6.10	**	0
Deutsch Mark Exchange Rate (Sk/DM)	E	yes	-1.36		0			
Unit Labor Costs, Whole Economy	ULC	yes	-1.59		5	-9.64	**	4
M2	M2	yes	-1.14		0	-12.08	**	0
Real GDP, in 1995 prices	Y	yes	-1.14		6	-8.83	**	5
Real Interest Rate	RR		-2.00		0	-8.36	**	1
Output Gap	OPGAP		0.34		6	-9.29	**	0
German Consumer Price Index, Denominated in Koruna, and Adjusted for Slovak Import Tariffs	P*E	yes	-1.46		0	-7.93	**	0
Oil Price, denominated in Koruna	POIL	yes	-0.30		0	-8.87	**	0
Regulated Price Index	PREGUL	yes	1.23		6	-2.82		5
Net Credit to the Government, Real, Differenced, Moving Average	FISC		-1.44		4	-5.11	**	3
Goods Market Cointegration Relationship	CIgm		-6.58	**	0			
Money Market Cointegration Relationship	CImm		-2.90	*	0			
Labor Market Cointegration Relationship	CIlm		-8.08	**	0			
Foreign Exchange Cointegration Relationship	CIfx		-3.31	*	1			

Notes:

1/ MacKinnon critical values for 1, 5, and 10 percent rejection of unit root hypothesis:
-3.62, -2.95, and -2.61 percent, for model with constant and without trend.

2/ * and ** indicate significane at 5 and 1 percent, respectively.

3/ Order of augmentation, or lag used to get t-value.

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Table 1. Slovak Republic: Co-integration analysis, 1993 (3) to 2000 (12) [1]

eigenvalue	loglik for rank	
	2100.41	0
0.47645	2130.83	1
0.34391	2150.64	2
0.179693	2159.94	3
0.133396	2166.67	4
0.0727401	2170.22	5

Ho:rank=p	-Tlog(1-\mu)	using T-nm	95%	-T\Sum log(.)	using T-nm	95%
p == 0	60.83**	53.06**	39.4	141.5**	123.4**	94.2
p <= 1	39.62**	34.56*	33.5	80.63**	70.33*	68.5
p <= 2	18.62	16.24	27.1	41.01	35.77	47.2
p <= 3	13.46	11.74	21.0	22.39	19.53	29.7

SYS(70) General cointegration test 1993 (3) to 2000 (12) [2] [3]

\beta'

LP	L(P*E)	LULC	LM2	LY	RR
1.0000	-0.16456	-1.2693	0.00000	0.00000	0.00000
-0.95547	0.00000	0.00000	1.0000	-1.3364	0.00017308
-0.82431	0.00000	1.0000	0.00000	0.00000	-0.0012794

[1] Two 2 lags were included. This implied virtually no loss of information, compared with including 3 lags. Imposing a rank of four is statistically reasonable: there are 3 to 4 high eigenvalues.

[2] After the imposition of a rank of 4, the resulting system gave acceptable results in terms of coefficients. However, the inclusion of the trend in the system caused some technical problems, apparently caused by instability of the foreign exchange relationship. Therefore, instead, a rank of 3 was imposed, allowing for separate estimation of the long-run relationship for the foreign exchange market.

[3] Although the parameter signs are all correct, and the size of the coefficients broadly in line with expectations, the standard errors are rather high. The relatively high inaccuracy with which the relations are estimated also affects the estimation of the impact coefficients. Some important impact coefficients do not have the right sign (for instance the one in the first row, first column, denoting the impact of the goods market ECM on P). An additional problem with this system is the seemingly spurious appearance of the real interest rate in the relationship for the labor market. The restriction of putting its coefficient to zero was not accepted.

Table 1. Slovak Republic: Co-integration analysis, 1993 (3) to 2000 (12)
(Concluded)

Standard errors of beta'

LP	(LP*E)	LULC	LM2	LY	RR
0.00000	0.10156	0.076670	0.00000	0.00000	0.00000
0.22875	0.00000	0.00000	0.00000	0.32713	0.0010375
0.028702	0.00000	0.00000	0.00000	0.00000	0.00032058

\alpha

LP	0.029320	0.00000	0.058497
L(P*E)	0.12475	0.00000	0.00000
LULC	0.21243	0.33907	-0.85473
LM2	0.00000	-0.16153	0.18124
LY	0.00000	0.00000	0.00000
RR	44.705	0.00000	71.912

Standard errors of alpha

LP	0.014025	0.00000	0.026830
L(P*E)	0.050093	0.00000	0.00000
LULC	0.091190	0.090645	0.18377
LM2	0.00000	0.047635	0.081823
LY	0.00000	0.00000	0.00000
RR	11.017	0.00000	21.579

loglik = 2151.3912 -log|\Omega| = 45.77428 unrestr. loglik = 2159.9447
LR-test, rank=3: Chi^2(10) = 17.107 [0.0720]

Table 2. Slovak Republic: Single Equation Estimation Long-Run Relationships

```
EQ( 1) Modelling LP by RLS
The present sample is:  1993 (1) to 2000 (12)

Variable      Coefficient     Std.Error  t-value  t-prob PartR^2
Constant          -1.8370       0.45119   -4.071  0.0001  0.1699
L(P*E)            0.19966      0.037828    5.278  0.0000  0.2559
LULC              0.52336      0.045546   11.491  0.0000  0.6198
Trend           0.0025300    0.00024049   10.520  0.0000  0.5774
Seasonality

R^2 = 0.991367  F(14,81) = 664.36 [0.0000]  \sigma = 0.0162089  DW = 1.10
RSS = 0.02128105939 for 15 variables and 96 observations

AR 1- 6 F( 6, 75) =     5.8865 [0.0000] **
ARCH 6  F( 6, 69) =    0.90939 [0.4935]
Normality Chi^2(2)=    0.85191 [0.6531]
Xi^2    F(17, 63) =      1.175 [0.3104]
RESET   F( 1, 80) =     169.79 [0.0000] **



EQ( 2) Modelling LULC by RLS  (using svkpcf5incalg.xls)
The present sample is:  1993 (1) to 2000 (12)

Variable      Coefficient     Std.Error  t-value  t-prob PartR^2
Constant           3.7148       0.46865    7.927  0.0000  0.4368
LP                0.91788       0.10565    8.688  0.0000  0.4824
LY                0.33175       0.12741    2.604  0.0110  0.0772
Trend          -0.0015604    0.00057644   -2.707  0.0083  0.0830
Seasonality

R^2 = 0.980874  F(14,81) = 296.72 [0.0000]  \sigma = 0.0245939  DW = 1.65
RSS = 0.04899379424 for 15 variables and 96 observations

AR 1- 6 F( 6, 75) =     1.2664 [0.2831]
ARCH 6  F( 6, 69) =    0.82306 [0.5560]
Normality Chi^2(2)=     1.2993 [0.5222]
Xi^2    F(17, 63) =     1.3351 [0.2014]
RESET   F( 1, 80) =     4.3134 [0.0410] *
```

EQ(3) Modelling LM2 by RLS (using svkpcf5incalg.xls)
The present sample is: 1993 (1) to 2000 (12)

Variable	Coefficient	Std.Error	t-value	t-prob	PartR^2
Constant	-3.8011	0.14007	-27.137	0.0000	0.8998
LY	1.2648	0.14786	8.554	0.0000	0.4716
LP	1.0433	0.10274	10.154	0.0000	0.5570
Seasonality					

Table 2. Slovak Republic: Single Equation Estimation Long-Run Relationships (Concluded)

```
R^2 = 0.991528  F(13,82) = 738.21 [0.0000]  \sigma = 0.0307013  DW = 0.347
RSS = 0.07729082798 for 14 variables and 96 observations

AR 1- 6 F( 6, 76) =     29.333 [0.0000] **
ARCH 6  F( 6, 70) =     10.718 [0.0000] **
Normality Chi^2(2)=     16.796 [0.0002] **
Xi^2    F(15, 66) =    0.89771 [0.5700]
RESET   F( 1, 81) =     2.9149 [0.0916]



EQ( 4) Modelling LRER by RLS
The present sample is:  1993 (1) to 2000 (12)

Variable     Coefficient     Std.Error  t-value  t-prob PartR^2
Constant         -3.1655     0.0096179 -329.123  0.0000  0.9991
RR             0.0023846    0.00038739    6.156  0.0000  0.2895
Trend          0.0023715    0.00015128   15.677  0.0000  0.7255

R^2 = 0.845871  F(2,93) = 255.2 [0.0000]  \sigma = 0.0354815  DW = 0.291
RSS = 0.1170810393 for 3 variables and 96 observations

AR 1- 6 F( 6, 87) =     44.444 [0.0000] **
ARCH 6  F( 6, 81) =     17.578 [0.0000] **
Normality Chi^2(2)=     2.4957 [0.2871]
Xi^2    F( 4, 88) =     2.3691 [0.0586]
Xi*Xj   F( 5, 87) =     6.1293 [0.0001] **
RESET   F( 1, 92) =    0.19485 [0.6599]
```

Table 3. Slovak Republic: Dynamic Equations 1/

```
MOD(10) Estimating the model by FIML
The present sample is:  1993 (3) to 2000 (12)

Equation 1 for DLP \sigma = 0.00313436

Variable      Coefficient     Std.Error  t-value  t-prob        HCSE
DLP_1             0.59450     0.071610    8.302  0.0000    0.071955
DLE_1            0.046744     0.023074    2.026  0.0462    0.027586
DLY_1            0.078605     0.043557    1.805  0.0749    0.041202
CIgm_1          -0.071409     0.021205   -3.368  0.0012    0.020907
Constant        0.0012689    0.0012073    1.051  0.2964         ---


Equation 2 for DLE \sigma = 0.0145936

Variable      Coefficient     Std.Error  t-value  t-prob        HCSE
DLE_1             0.29608      0.10643    2.782  0.0068     0.11493
DLY_1             0.40884      0.19953    2.049  0.0438     0.15287
CIfx_1           0.093396     0.043592    2.142  0.0352    0.044060
Constant     -0.00052068    0.0052318   -0.100  0.9210         ---


Equation 3 for DLULC \sigma = 0.0219705

Variable      Coefficient     Std.Error  t-value  t-prob        HCSE
CImm_1            0.32554     0.085358    3.814  0.0003    0.082102
CIlm_1           -0.96789      0.10879   -8.897  0.0000    0.088442
Constant       -0.058308    0.0077678   -7.506  0.0000         ---


Equation 4 for DLM2 \sigma = 0.011273

Variable      Coefficient     Std.Error  t-value  t-prob        HCSE
DLP_1             0.59003      0.27486    2.147  0.0349     0.27996
DLM2_1            0.27964      0.10781    2.594  0.0113    0.095873
CImm_1           -0.20415     0.048028   -4.251  0.0001    0.047921
CIlm_1            0.30060     0.059693    5.036  0.0000    0.052069
DLPOIL           0.033614     0.016698    2.013  0.0475    0.015768
DFISC             0.17405     0.074067    2.350  0.0213     0.10841
Constant         0.052473    0.0046984   11.168  0.0000         ---


Equation 5 for DLY \sigma = 0.00695467

Variable      Coefficient     Std.Error  t-value  t-prob        HCSE
DRR_1         -0.00044783   0.00025454   -1.759  0.0824  0.00040115
DLPREGUL        -0.10337     0.031596   -3.272  0.0016    0.052627
D934           -0.027669    0.0073097   -3.785  0.0003   0.0042384
D9910          -0.018517    0.0073231   -2.529  0.0134   0.0053343
Constant    -4.1563e-006    0.0024637   -0.002  0.9987         ---
```

Table 3. Slovak Republic: Dynamic Equations (Concluded)

Equation 6 for DRR \sigma = 2.91507

Variable	Coefficient	Std.Error	t-value	t-prob	HCSE
DLY_1	72.117	40.046	1.801	0.0755	46.577
CIfx_1	19.341	8.9883	2.152	0.0345	13.073
Constant	0.28245	1.0307	0.274	0.7848	---

Optimization result: Strong convergence (eps1=0.0001, eps2=0.005)

loglik = 2143.3728 log|\Omega| = -45.6037 |\Omega| = 1.56522e-020 T = 94
LR test of over-identifying restrictions: Chi^2(159) = 204.662 [0.0085] **

correlation of residuals

	DLP	DLE	DLULC	DLM2	DLY
DLP	1.0000				
DLE	0.30953	1.0000			
DLULC	0.065134	0.043051	1.0000		
DLM2	0.024214	-0.085569	-0.10628	1.0000	
DLY	0.044379	-0.13138	-0.016824	-0.062316	1.0000
DRR	0.0073982	0.071794	0.044034	0.016324	-0.077339

	DRR
DRR	1.0000

Test summary

```
DLP     :Portmanteau 10 lags=    17.82
DLE     :Portmanteau 10 lags=   5.4826
DLULC   :Portmanteau 10 lags=   17.924
DLM2    :Portmanteau 10 lags=   8.5181
DLY     :Portmanteau 10 lags=    16.61
DRR     :Portmanteau 10 lags=   10.906
DLP     :Normality Chi^2(2)=     6.0538 [0.0485] *
DLE     :Normality Chi^2(2)=     15.969 [0.0003] **
DLULC   :Normality Chi^2(2)=     4.7676 [0.0922]
DLM2    :Normality Chi^2(2)=     14.869 [0.0006] **
DLY     :Normality Chi^2(2)=     27.967 [0.0000] **
DRR     :Normality Chi^2(2)=     10.991 [0.0041] **
DLP     :ARCH 6  F( 6, 40) =    0.34292 [0.9098]
DLE     :ARCH 6  F( 6, 40) =    0.34237 [0.9101]
DLULC   :ARCH 6  F( 6, 40) =    0.96818 [0.4590]
DLM2    :ARCH 6  F( 6, 40) =    0.18946 [0.9781]
DLY     :ARCH 6  F( 6, 40) =    0.86386 [0.5296]
DRR     :ARCH 6  F( 6, 40) =    0.57921 [0.7446]
Vector portmanteau 10 lags=   424.32
Vector AR 1-6  F(216,233) =     1.3123 [0.0210] *
Vector normality Chi^2(12)=     77.32 [0.0000] **
Vector  Xi^2   F(1155,198) =    0.54488 [1.0000]
```

Notes
1/ All equations also included 11 seasonal dummies.

Table A1. Slovak Republic: Gross Domestic Product, Current Prices

	1993	1994	1995	1996	1997	1998	1999	2000
			(In billions of koruny)					
Domestic demand	411.0	443.8	536.3	667.5	753.5	833.1	858.9	909.3
Consumption	307.4	339.6	387.0	442.4	502.3	561.8	599.1	642.3
Private	214.0	244.4	277.3	315.8	353.7	395.4	436.3	469.0
Public, including NPISH 1/	93.4	95.2	109.7	126.6	148.6	166.4	162.8	173.3
Public	91.6	93.1	106.2	123.4	145.7	161.4	158.7	168.7
Non Profit Institutions Serving Households	1.8	2.1	3.5	3.2	2.9	5.0	4.1	4.6
Investment	103.6	104.2	149.3	225.1	251.2	271.3	259.8	267.0
Fixed investment	123.4	131.8	144.2	207.5	246.5	285.3	251.0	265.9
Change in stocks	-19.8	-27.6	5.1	17.6	4.7	-14.0	8.8	1.1
Non-government	...	84.3	124.1	190.2	205.3	227.3	229.0	230.6
Government	...	19.9	25.2	34.9	45.9	44.0	30.8	36.4
Net exports of goods and nfs	-20.4	22.4	9.7	-61.4	-67.4	-82.3	-43.6	-22.1
Exports of goods and nfs	228.3	287.3	326.4	334.7	397.8	459.5	501.7	652.4
Imports of goods and nfs	248.7	264.9	316.7	396.1	465.2	541.8	545.3	674.5
Gross domestic product at market prices	390.6	466.2	546.0	606.1	686.1	750.8	815.3	887.2
			(In percent of GDP)					
Domestic demand	105.2	95.2	98.2	110.1	109.8	111.0	105.3	102.5
Consumption	78.7	72.8	70.9	73.0	73.2	74.8	73.5	72.4
Private	54.8	52.4	50.8	52.1	51.6	52.7	53.5	52.9
Non Profit Institutions Serving Households	0.5	0.5	0.6	0.5	0.4	0.7	0.5	0.5
Public	23.5	20.0	19.5	20.4	21.2	21.5	19.5	19.0
Investment	26.5	22.4	27.3	37.1	36.6	36.1	31.9	30.1
Fixed investment	31.6	28.3	26.4	34.2	35.9	38.0	30.8	30.0
Change in stocks	-5.1	-5.9	0.9	2.9	0.7	-1.9	1.1	0.1
Private	...	18.1	22.7	31.4	29.9	30.3	28.1	26.0
Government	...	4.3	4.6	5.8	6.7	5.9	3.8	4.1
Net exports of goods and non factor services	-5.2	4.8	1.8	-10.1	-9.8	-11.0	-5.3	-2.5
Exports of goods and non factor services	58.4	61.6	59.8	55.2	58.0	61.2	61.5	73.5
Imports of goods and non factor services	63.7	56.8	58.0	65.4	67.8	72.2	66.9	76.0

Sources: Slovak Statistical Office; and staff estimates.

1/ Non Profit Institutions Serving Households.

Table A2. Slovak Republic: Gross Domestic Product - Constant Prices of 1995

	1993	1994	1995	1996	1997	1998	1999	2000
				(In billions of koruny)				
Domestic demand	510.3	484.8	536.3	613.3	649.3	711.1	678.1	669.3
Consumption	386.2	375.6	387.0	422.6	453.4	477.4	467.1	454.5
Private	266.6	269.2	277.3	300.1	317.0	333.8	334.2	322.7
Public, including NPISH 1/	119.6	106.4	109.7	122.5	136.4	143.6	132.9	131.8
Investment	124.1	109.2	149.3	190.7	195.9	233.7	211.0	214.8
Fixed investment	144.1	136.9	144.2	190.3	213.1	236.8	192.2	190.9
Change in stocks	-20.0	-27.7	5.1	0.4	-17.2	-3.1	18.8	23.9
Net exports of goods and non factor services	-22.7	26.8	9.7	-33.4	-33.4	-70.0	-24.8	-1.6
Exports of goods and non factor services	277.4	316.8	326.4	328.6	386.3	433.3	448.0	519.2
Imports of goods and non factor services	300.1	290.0	316.7	362.0	419.7	503.3	472.8	520.8
Gross domestic product at market prices	487.6	511.6	546.0	579.9	615.9	641.1	653.3	667.7
				(Annual percentage change)				
Domestic demand		-5.0	10.6	14.4	5.9	9.5	-4.6	-1.3
Consumption		-2.7	3.0	9.2	7.3	5.3	-2.2	-2.7
Private		1.0	3.0	8.2	5.6	5.3	0.1	-3.4
Public		-11.0	3.1	11.7	11.3	5.3	-7.5	-0.8
Investment		-12.0	36.7	27.7	2.7	19.3	-9.7	1.8
Fixed investment		-5.0	5.3	32.0	12.0	11.1	-18.8	-0.7
Change in stocks		...	...	...	...	...	...	...
Exports of goods and non factor services		14.2	3.0	0.7	17.6	12.2	3.4	15.9
Imports of goods and non factor services		-3.4	9.2	14.3	15.9	19.9	-6.1	10.2
GDP at market prices		4.9	6.7	6.2	6.2	4.1	1.9	2.2

Sources: Slovak Statistical Office; and staff estimates.

1/ Non Profit Institutions Serving Households

Table A3. Slovak Republic: Gross Domestic Product by Sectors, Constant Prices

	1995	1996	1997	1998	1999	2000
			(In billions of 1995 koruny)			
Gross domestic product	546.0	579.9	615.9	641.1	653.3	667.7
Agriculture	28.8	27.9	29.4	29.3	31.9	32.9
Industry	158.9	170.8	170.2	171.9	184.4	188.9
Mining and quarrying	5.1	5.9	6.4	6.8	8.0	6.5
Manufacturing, *of which:*	132.0	138.3	142.3	149.6	154.0	162.5
Food	17.6	19.2	17.6	19.7	20.8	19.5
Chemicals and plastics	25.9	24.6	22.6	24.7	21.3	21.8
Metal products	20.8	24.0	24.6	23.6	24.8	27.3
Machinery and vehicles	29.8	32.5	35.0	40.1	43.3	45.5
Electricity, water and gas	21.8	26.6	21.5	15.4	22.4	19.9
Construction	38.1	37.6	37.7	35.5	24.7	21.0
Services	277.7	294.8	328.6	343.3	349.4	364.2
Market services	214.3	219.3	240.5	258.7	265.2	278.8
Transportation	37.3	48.3	46.7	49.3	51.5	50.6
Communications	12.7	13.6	16.4	18.5	18.7	17.5
Wholesale and retail trade	70.1	71.8	75.6	85.9	89.3	99.7
Other market services	94.2	85.7	101.9	104.9	105.7	110.9
Non-market services	63.4	75.5	88.1	84.7	84.1	85.4
Other 1/	42.5	48.8	50.1	61.1	63.0	60.8
			(In percent of GDP)			
Agriculture	5.3	4.8	4.8	4.6	4.9	4.9
Industry	29.1	29.5	27.6	26.8	28.2	28.3
Mining and quarrying	0.9	1.0	1.0	1.1	1.2	1.0
Manufacturing	24.2	23.9	23.1	23.3	23.6	24.3
Food	3.2	3.3	2.9	3.1	3.2	2.9
Chemicals and plastics	4.7	4.2	3.7	3.9	3.3	3.3
Metal products	3.8	4.1	4.0	3.7	3.8	4.1
Machinery and vehicles	5.5	5.6	5.7	6.3	6.6	6.8
Electricity, water and gas	4.0	4.6	3.5	2.4	3.4	3.0
Construction	7.0	6.5	6.1	5.5	3.8	3.1
Services	50.9	50.8	53.4	53.6	53.5	54.5
Market services	39.2	37.8	39.1	40.3	40.6	41.8
Transportation	6.8	8.3	7.6	7.7	7.9	7.6
Communications	2.3	2.3	2.7	2.9	2.9	2.6
Wholesale and retail trade	12.8	12.4	12.3	13.4	13.7	14.9
Other market services	17.2	14.8	16.5	16.4	16.2	16.6
Non-market services	11.6	13.0	14.3	13.2	12.9	12.8
Other 1/	7.8	8.4	8.1	9.5	9.6	9.1

Sources: Slovak Statistical Office; and staff estimates.

1/ Imputed banking services charges, indirect taxes, and own supplies.

Table A4. Slovak Republic: Gross Domestic Product by Sectors, Current Prices

	1993	1994	1995	1996	1997	1998	1999	2000
				(In billions of koruny)				
Gross domestic product	369.9	441.3	546.0	606.1	686.1	750.8	815.3	887.2
Agriculture	17.3	29.3	28.8	29.1	31.6	31.6	33.2	36.0
Industry	113.1	125.8	158.9	178.9	184.1	191.3	215.6	233.1
Mining and quarrying	4.6	3.8	5.1	5.6	6.1	6.3	7.5	7.0
Manufacturing, *of which:*	72.7	106.4	132.0	146.9	154.6	166.7	178.1	193.2
Food	8.4	12.6	17.6	20.3	20.1	24.9	27.4	26.6
Chemicals and plastics	14.2	18.6	25.9	28.8	27.9	30.5	29.1	31.5
Metal products	12.4	14.7	20.8	25.4	26.5	26.7	27.6	31.1
Machinery and vehicles	15.7	19.2	29.8	33.5	36.6	40.5	47.8	52.5
Other manufacturing	22.0	41.3	37.9	39.0	43.4	44.1	46.2	51.4
Electricity, water and gas	35.8	15.6	21.8	26.3	23.5	18.3	30.0	32.9
Construction	17.5	20.1	38.1	43.3	47.7	48.2	42.4	42.3
Services	205.6	244.3	277.7	304.5	369.5	409.3	445.0	494.3
Market services	156.6	191.2	214.3	230.3	275.5	308.1	343.3	388.2
Transportation	22.5	29.9	37.3	46.7	48.5	53.6	57.8	66.5
Communications	7.2	8.3	12.7	13.9	17.2	20.5	23.6	23.6
Wholesale and retail trade	96.1	115.7	70.1	76.5	85.5	102.8	114.1	134.2
Other market services	30.8	37.3	94.2	93.2	124.2	131.3	147.7	163.9
Non-market services	49.0	53.1	63.4	74.2	94.0	101.2	101.7	106.1
Other 1/	16.4	21.8	42.5	50.4	53.2	70.4	79.1	81.5
				(In percent of GDP)				
Agriculture	4.7	6.6	5.3	4.8	4.6	4.2	4.1	4.1
Industry	30.6	28.5	29.1	29.5	26.8	25.5	26.4	26.3
Mining and quarrying	1.2	0.9	0.9	0.9	0.9	0.8	0.9	0.8
Manufacturing	19.7	24.1	24.2	24.2	22.5	22.2	21.8	21.8
Food	2.3	2.9	3.2	3.4	2.9	3.3	3.4	3.0
Chemicals and plastics	3.8	4.2	4.7	4.7	4.1	4.1	3.6	3.6
Metal products	3.4	3.3	3.8	4.2	3.9	3.6	3.4	3.5
Machinery and vehicles	4.2	4.4	5.5	5.5	5.3	5.4	5.9	5.9
Electricity, water and gas	9.7	3.5	4.0	4.3	3.4	2.4	3.7	3.7
Construction	4.7	4.6	7.0	7.1	6.9	6.4	5.2	4.8
Services	55.6	55.4	50.9	50.2	53.8	54.5	54.6	55.7
Market services	42.3	43.3	39.2	38.0	40.2	41.0	42.1	43.8
Transportation	6.1	6.8	6.8	7.7	7.1	7.1	7.1	7.5
Communications	1.9	1.9	2.3	2.3	2.5	2.7	2.9	2.7
Wholesale and retail trade	26.0	26.2	12.8	12.6	12.5	13.7	14.0	15.1
Other market services	8.3	8.5	17.2	15.4	18.1	17.5	18.1	18.5
Non-market services	13.2	12.0	11.6	12.2	13.7	13.5	12.5	12.0
Other 1/	4.4	4.9	7.8	8.3	7.8	9.4	9.7	9.2

Sources: Slovak Statistical Office; and staff estimates.

1/ Imputed banking services charges, indirect taxes, and own supplies.

Table A5. Slovak Republic: Investment by Sector

	1993	1994	1995	1996	1997 1/	1998 1/	1999 1/	2000 1/
				(In billions of koruny)				
Total investment, national accounts	103.6	104.2	149.3	225.1	251.2	271.3	259.8	267.0
Total	126.1	135.7	163.0	242.3	280.3	308.4	271.3	303.2
Agriculture	4.9	6.1	6.4	8.4	9.9	9.2	7.3	8.2
Industry	57.0	57.1	65.7	85.5	94.8	121.1	100.6	117.2
Mining and quarrying	37.8	28.0	34.8	48.9	55.5	67.2	68.1	77.3
Manufacturing	2.1	2.4	4.2	6.8	6.9	3.4	1.6	2.7
Electricity, water and gas	17.1	26.7	26.7	29.8	32.4	50.6	30.9	37.2
Construction	4.1	5.0	5.1	7.1	8.0	7.1	4.7	4.7
Services								
Market Services	41.5	49.8	61.0	95.2	115.0	117.6	117.5	128.3
Financial intermediation	10.0	13.4	17.1	25.0	25.8	25.9	25.7	31.5
Real estate	14.1	13.5	14.5	20.3	25.4	28.1	30.6	31.9
Trade and repairs	4.5	6.3	7.7	14.9	22.8	26.2	32.1	34.6
Hotels and restaurants	1.1	1.0	1.5	2.9	3.2	2.6	3.0	4.1
Transport and communications	11.8	15.6	20.2	32.1	37.8	34.9	26.1	26.2
Non-Market Services	18.6	17.7	24.8	46.1	52.5	53.3	41.2	44.8
Public administration and defense	5.6	6.4	9.7	25.5	29.2	29.6	22.2	24
Education	2.2	2.3	4.1	6.0	6.5	6.5	5.2	5.7
Health and social work	3.4	3.5	5.0	7.5	8.6	8.3	5.7	6.7
Other social services	7.4	5.5	6.0	7.4	8.2	8.9	8.1	8.4
				(In percent of total)				
Buildings	47.5	43.0	45.5	40.6	41.7	40.0	41.7	36.2
Machinery	48.3	45.6	47.8	47.9	49.4	52.0	50.4	56.3
Other	2.2	9.0	4.5	8.2	5.9	5.4	5.1	4.9
Intangible investment	1.9	2.4	2.2	3.3	3.0	2.6	2.8	2.6
Memorandum items (in billion Sk, unless otherwise indicated):								
Public	78.4	69.5	79.9	120.0	127.7	129.9	98.4	105.4
(in percent of total investment)	62.2	51.2	49.0	49.5	45.6	42.1	36.3	34.8
Private	47.7	66.2	83.1	122.3	152.6	178.5	172.9	197.8
(in percent of total investment)	37.8	48.8	51.0	50.5	54.4	57.9	63.7	65.2

Source: Statistical Office of the Slovak Republic.

1/ Preliminary data.

Table A6. Slovak Republic: Employment by Sector

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
					(In thousands)					
Total economy 1/	2,008.2	2,013.4	2,012.3	1,976.9	2,019.8	2,036.4	2041.0	2,032.0	1,988.0	1,977.0
Enterprises with 20 and more employees 2/	1,818.2	1,646.8	1,606.0	1,515.2	1,503.1	1,487.6	1,448.0	1,436.0	1,388.0	1,344.4
Agriculture	296.8	245.4	208.9	183.3	170.8	156.7	139.8	126.0	111.0	97.2
Industry	655.9	576.4	547.4	517.4	521.7	514.0	497.3	484.0	460.0	445.4
Mining and quarrying	34.1	29.8	24.1	21.4	20.4	21.2	21.3	20.0	17.0	15.2
Manufacturing	582.7	508.2	478.5	451.4	457.6	448.5	430.8	417.0	395.0	384.3
Electricity, water and gas	39.0	38.5	44.8	44.6	43.7	44.3	45.2	47.0	48.0	45.9
Construction	150.5	128.3	106.1	92.6	88.1	85.9	84.5	83.0	70.0	59.0
Services	329.1	290.8	330.6	311.8	299.6	306.4	305.0	314.0	319.0	302.8
Financial services and insurance	11.9	15.3	19.8	24.5	27.3	30.6	32.8	34.0	35.0	35.0
Real estate	84.4	76.6	69.5	62.1	60.3	63.0	60.9	63.0	65.0	60.0
Trade and repairs	131.3	100.6	88.1	77.5	68.6	71.7	73.7	79.0	83.0	76.8
Hotels and restaurants	15.5	13.7	12.2	11.4	10.5	10.6	11.0	12.0	12.0	12.0
Transport and communications	86.0	84.6	141.0	136.3	132.9	130.5	126.6	126.0	124.0	119.0
State administration	385.9	405.6	413.0	410.3	422.7	424.7	421.8	429.0	428.0	440.2
Administration	47.2	59.4	76.9	70.8	78.3	81.1	84.5	84.0	81.0	79.3
Education	184.4	183.8	168.7	172.3	173.6	174.9	174.4	179.0	180.0	176.6
Health	116.6	126.2	128.5	127.3	122.3	114.5	110.4	114.0	117.0	118.6
Other social services	37.7	36.2	38.9	39.9	48.5	54.2	52.5	52.0	50.0	65.7
Enterprises with up to 19 employees 3/	6.0	46.6	82.9	106.7	156.7	167.4	155.0	154.0	155.0	180.1
Private entrepreneurs 4/	184.0	320.0	323.5	355.0	360.0	381.5	437.5	442.0	445.0	452.5
					(In percent of total employment)					
Total economy	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Enterprises with 20 and more employees 2/	90.5	81.8	79.8	76.6	74.4	73.1	70.9	70.7	69.8	68.0
Agriculture	14.8	12.2	10.4	9.3	8.5	7.7	6.8	6.2	5.6	4.9
Industry	32.7	28.6	27.2	26.2	25.8	25.2	24.4	23.8	23.1	22.5
Mining and quarrying	1.7	1.5	1.2	1.1	1.0	1.0	1.0	1.0	0.9	0.8
Manufacturing	29.0	25.2	23.8	22.8	22.7	22.0	21.1	20.5	19.9	19.4
Electricity, water and gas	1.9	1.9	2.2	2.3	2.2	2.2	2.2	2.3	2.4	2.3
Construction	7.5	6.4	5.3	4.7	4.4	4.2	4.1	4.1	3.5	3.0
Services	16.4	14.4	16.4	15.8	14.8	15.0	14.9	15.5	16.0	15.3
Financial services and insurance	0.6	0.8	1.0	1.2	1.4	1.5	1.6	1.7	1.8	1.8
Real estate	4.2	3.8	3.5	3.1	3.0	3.1	3.0	3.1	3.3	3.0
Trade and repairs	6.5	5.0	4.4	3.9	3.4	3.5	3.6	3.9	4.2	3.9
Hotels and restaurants	0.8	0.7	0.6	0.6	0.5	0.5	0.5	0.6	0.6	0.6
Transport and communications	4.3	4.2	7.0	6.9	6.6	6.4	6.2	6.2	6.2	6.0
State administration	19.2	20.1	20.5	20.8	20.9	20.9	20.7	21.1	21.5	22.3
Administration	2.4	3.0	3.8	3.6	3.9	4.0	4.1	4.1	4.1	4.0
Education	9.2	9.1	8.4	8.7	8.6	8.6	8.5	8.8	9.1	8.9
Health	5.8	6.3	6.4	6.4	6.1	5.6	5.4	5.6	5.9	6.0
Other social services	1.9	1.8	1.9	2.0	2.4	2.7	2.6	2.6	2.5	3.3
Enterprises with up to 19 employees 3/	0.3	2.3	4.1	5.4	7.8	8.2	7.6	7.6	7.8	9.1
Private entrepreneurs 4/	9.2	15.9	16.1	18.0	17.8	18.7	21.4	21.8	22.4	22.9

Sources: Statistical Office of the Slovak Republic; and staff estimates.

1/ Average number of employed, including persons employed by entrepreneurs and entrepreneurs themselves, excluding women on maternity leave, apprentices and armed forces.
2/ Untill 1996, the data is for enterprises with 25 and more employees.
3/ Until 1996, the data is for enterprises with up to 24 employees.
4/ Estimate.

Table A7. Slovak Republic: Average Monthly Wages

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
					(In koruny)					
Total economy 1/	3,770	4,543	5,379	6,294	7,195	8,154	9,226	10,003	10,728	11,430
Enterprises with more than 20 employees 2/	3,776	4,483	5,275	6,160	7,144	8,221	9,356	10,212	10,945	11,864
Agriculture	3,771	4,149	4,556	5,191	5,835	6,579	7,363	7,930	8,541	9,354
Industry	3,836	4,535	5,496	6,464	7,477	8,508	9,527	10,371	11,349	12,718
Mining and quarrying	4,445	5,458	6,482	7,383	8,621	9,382	10,485	11,053	12,008	13,438
Manufacturing	3,757	4,370	5,234	6,193	7,194	8,230	9,197	10,001	10,940	12,291
Electricity, water and gas	4,480	6,006	7,767	8,766	9,905	10,902	12,212	13,371	14,515	16,055
Construction	3,845	4,617	5,533	6,502	7,489	8,722	9,970	10,619	10,854	12,037
Services	3,651	4,463	5,579	6,766	8,023	9,520	10,968	12,109	13,087	14,358
Financial services and insurance	5,260	7,667	10,386	11,770	13,529	15,328	17,886	19,487	20,169	22,565
Real estate	3,733	4,516	5,559	6,642	7,883	9,648	10,710	11,970	12,933	13,897
Trade and repairs	3,386	4,049	4,848	5,748	6,848	8,600	10,094	11,122	12,150	13,439
Hotels and restaurants	3,169	3,843	4,474	5,192	5,746	6,958	7,743	8,363	9,087	9,928
Transport and communications	3,840	4,427	5,467	6,634	7,742	8,810	10,089	11,163	12,184	13,216
State administration	3,758	4,584	5,035	5,670	6,576	7,441	8,574	9,241	9,546	9,816
Administration	4,189	5,110	6,179	7,350	8,350	9,818	11,240	12,362	13,005	13,727
Education	3,547	4,448	4,706	5,157	6,205	7,005	7,771	8,247	8,459	9,048
Health	3,942	4,605	4,813	5,443	6,274	6,947	8,373	8,674	8,693	8,902
Other social services	3,683	4,342	4,933	5,626	5,805	6,337	7,372	8,866	9,853	8,812
Enterprises up to 19 employees 3/	2,844	5,118	6,675	9,039	9,074	9,722	11,528	11,422	12,070	11,580
Private entrepreneurs 4/	4,000	4,950	5,850	5,900	6,300	6,773	7,454	8,262	8,970	9,328
Memorandum item:										
Minimum wage	2,000	2,200	2,450	2,450	2,450	2,700	2,700	3,000	3,600	4,400

Sources: Statistical Office of the Slovak Republic, and staff estimates.

1/ Since 1997, the payout associated with profit sharing is not included in the average monthly wage, and, as of January 1998, rewards for standby services are excluded too.
2/ In 1997, for enterprises with 20 or more employees
3/ Until 1996, for enterprises up to 24 employees
4/ Estimate.

Table A8. Slovak Republic: Unemployment and Vacancies

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
						(In thousands, end of period)					
Population 1/	5,309	5,289	5,308	5,336	5,356	5,368	5,379	5,388	5,393	5,399	5,403
Labor force	2,533	2,559	2,503	2,556	2,510	2,544	2,576	2,601	2,607	2,662	2,695
Employment	2,495	2,257	2,064	1,950	1,976	2,022	2,049	2,057	2,048	1,952	1,980
Unemployment 2/ 3/	38	302	260	368	371	333	330	325	407	511	482
Receiving benefits 2/	25	246	87	123	85	90	94	93	120	145	92
Receiving social allowances 2/	...	...	121	140	172	147	135	...	...	...	...
Vacancies 2/	14.6	8.2	16.0	8.0	13.0	15.0	14.0	19.0	11.0	5.7	6.0
						(In percent)					
Participation rate 2/	47.7	48.4	47.2	47.9	46.9	47.3	47.9	48.3	48.3	49.3	49.9
Unemployment rate 2/ 4/	1.5	11.8	10.4	14.4	14.8	13.1	12.8	12.5	15.6	19.2	17.9
Vacancy rate 2/	0.6	0.3	0.6	0.3	0.5	0.6	0.5	0.7	0.4	0.2	0.2

Sources: Statistical Office of the Slovak Republic; and National Labour Office.

1/ Preliminary data for 1999 and 2000.
2/ Data from the National Labor Office.
3/ From 1997 onwards, the data refers to the number of unemployed available for work.
4/ From 1997 onwards, the data is calculated based on the number of unemployed available for work.

Table A9. Slovak Republic: Profits and Losses of Enterprises 1/

	Profits					Loss					Net				
	1996	1997	1998	1999	2000	1996	1997	1998	1999	2000	1996	1997	1998	1999	2000
	(In billions of koruny)														
Total economy	92.5	89.3	80.3	128.3	103.7	-46.6	-48.5	-66.5	-79.1	-45.5	45.9	40.8	13.8	49.2	58.2
Total economy, without financial services	67.0	71.6	58.2	75.2	81.3	-33.0	-39.3	-52.8	-52.7	-31.9	34.0	32.3	5.4	22.5	49.4
Agriculture	1.6	2.5	1.7	1.8	1.8	-4.2	-3.5	-3.1	-3.8	-2.3	-2.6	-1.0	-1.4	-2.0	-0.5
Industry	39.7	39.4	32.7	44.6	48.5	-19.6	-23.8	-30.3	-23.9	-13.9	20.1	15.6	2.4	20.7	34.6
Mining and quarrying	1.1	1.1	0.9	0.9	1.6	-0.3	-0.7	-0.3	-0.4	-0.3	0.8	0.4	0.6	0.5	1.3
Manufacturing	18.9	22.2	20.7	26.2	35.5	-19.2	-22.7	-29.1	-21.2	-13.3	-0.3	-0.5	-8.4	5.0	22.2
Electricity, water and gas	19.7	16.1	11.1	17.5	11.4	-0.1	-0.4	-0.9	-2.3	-0.3	19.6	15.7	10.2	15.2	11.1
Construction	3.5	4.1	3.2	3.1	2.8	-1.1	-0.9	-2.0	-2.4	-1.6	2.4	3.2	1.2	0.7	1.2
Services	47.7	43.3	42.7	78.8	50.6	-21.7	-20.3	-31.1	-49.0	-27.7	26.0	23.0	11.6	29.8	22.9
Services, without financial services	22.2	25.6	20.6	25.7	28.2	-8.1	-11.1	-17.4	-22.6	-14.1	14.1	14.5	3.2	3.1	14.1
Trade and repairs	8.7	11.1	10.1	12.4	15.9	-2.7	-2.6	-5.4	-11.0	-3.5	6.0	8.5	4.7	1.4	12.4
Hotels and restaurants	0.5	0.3	0.4	0.6	0.5	-0.3	-0.3	-0.4	-0.4	-0.2	0.2	0.0	0.0	0.2	0.3
Transport and communications	7.0	8.7	4.6	6.2	5.7	-2.7	-5.8	-8.2	-7.4	-7.5	4.3	2.9	-3.6	-1.2	-1.8
Financial services 2/	25.5	17.7	22.1	53.1	22.4	-13.6	-9.3	-13.7	-26.4	-13.6	11.9	8.5	8.4	26.7	8.8
Real estate	5.1	4.2	3.8	5.0	4.8	-1.1	-1.2	-2.6	-2.7	-2.2	4.0	3.0	1.2	2.3	2.6
Other services	0.9	1.3	1.7	1.5	1.3	-1.3	-1.2	-0.8	-1.1	-0.7	-0.4	0.1	0.9	0.4	0.6

Source: Statistical Office of the Slovak Republic.

1/ Enterprises with 20 or more employees including subsidized public organizations.

2/ Data for financial intermediaries refer to all enterpirses, rather than only to enterprises with 25 or more employees

Table A10. Slovak Republic: Number of Enterprises 1/

	1995	1996	1997	1998	1999	2000 2/
Total economy	43,635	47,866	53,819	60,334	58,333	60,920
Agriculture	1,931	3,603	3,682	3,642	3,419	3,461
Industry	7,476	7,718	8,463	9,196	8,876	9,249
Mining and quarrying	80	88	99	105	99	96
Manufacturing	7,318	7,541	8,264	8,948	8,639	9,005
Electricity, water and gas	78	89	100	143	138	148
Services	34,228	36,545	41,674	47,496	46,038	48,210
Financial services and insurance	674	601	563	529	546	563
Real estate	6,060	6,916	8,205	9,803	10,206	10,943
Trade and repairs	20,266	21,232	24,114	27,254	25,392	26,322
Hotels and restaurants	1,101	1,157	1,307	1,487	1,462	1,564
Transport and communications	1,613	1,437	1,679	1,926	1,864	2,044
Other	4,514	5,202	5,806	6,497	6,658	6,774
Private enterprises	42,054	46,185	52,362	58,970	57,137	59,786
Public enterprises	1,581	1,681	1,457	1,364	1,196	1,134
			(In percent of total)			
Private enterprises	96.4	96.5	97.3	97.7	97.9	98.1
Public enterprises	3.6	3.5	2.7	2.3	2.1	1.9

Source: Statistical Office of the Slovak Republic.

1/ Profit-oriented organization, included subsidized ones, for which revenues exceed 50 percent of costs reported.
2/ Estimate.

Table A11. Slovak Republic: Electricity Production and Consumption

	1995	1996	1997	1998	1999	2000 1/
	(In millions of kilowatt hours)					
Production	26,306	25,278	24,822	25,465	27,743	30,685
Thermal	9,561	9,396	9,537	9,221	9,804	9,163
Hydro	5,226	4,533	4,358	4,567	4,776	4,975
Nuclear	11,437	11,261	10,797	11,394	13,117	16,494
Other	82	88	130	283	46	53
Exports	2,065	698	374	157	926	3,647
Imports	3,448	4,220	4,429	1,447	1,484	951
Losses	1,715	1,627	2,082	2,039	1,828	1,827
Domestic consumption	21,730	23,479	22,840	21,020	22,747	22,957
Agriculture	904	854	1,136	844	689	520
Industry 2/	8,940	10,334	9,870	9,265	9,389	10,018
Households	4,998	5,451	5,507	5,619	5,672	5,419
Other	6,888	6,840	6,327	5,292	6,997	7,000
	(In percent of production)					
Production	100.0	100.0	100.0	100.0	100.0	100.0
Thermal	36.3	37.2	38.4	36.2	35.3	29.9
Hydro	19.9	17.9	17.6	17.9	17.2	16.2
Nuclear	43.5	44.5	43.5	44.7	47.3	53.8
Other	0.3	0.3	0.5	1.1	0.2	0.2
Exports	7.8	2.8	1.5	0.6	3.3	11.9
Imports	13.1	16.7	17.8	5.7	5.3	3.1
Losses	6.5	6.4	8.4	8.0	6.6	6.0
Domestic consumption	82.6	92.9	92.0	82.5	82.0	74.8
Agriculture	3.4	3.4	4.6	3.3	2.5	1.7
Industry 2/	34.0	40.9	39.8	36.4	33.8	32.6
Households	19.0	21.6	22.2	22.1	20.4	17.7
Other	26.2	27.1	25.5	20.8	25.2	22.8

Source: Statistical Office of the Slovak Republic.

1/ Estimate
2/ Excluding construction.

Table A12. Slovak Republic: Agricultural Production

	1994	1995	1996	1997	1998	1999	2000
Vegetable products (in thousands of tons)							
Grain, *of which:*	3,700	3,490	3,322	3,741	3,488	2,829	2,201
Wheat	2,145	1,938	1,713	1,886	1,789	1,187	1,254
Rye	96	89	71	84	96	70	64
Barley	874	794	718	687	875	724	397
Corn	521	597	750	819	637	779	440
Sugar beets	1,112	1,176	1,713	1,688	1,331	1,405	962
Potatoes	399	441	777	504	412	385	419
Animal production							
Meat (in thousands of tons)	417	398	410	412	375	352	328
Beef	122	108	111	116	104	90	80
Veal	5	3	4	5	4	3	2
Pork	290	287	295	291	267	259	246
Milk (in millions of liters)	1,155	1,151	1,125	1,116	1,142	1,073	1,067
Eggs (in millions)	1,606	1,608	1,618	1,579	1,544	1,166	1,095

Source: Statistical Office of the Slovak Republic.

Table A13. Slovak Republic: GDP Deflator

	1993	1994	1995	1996	1997	1998	1999	2000
				(1995 = 100)				
Domestic demand	80.5	91.5	100.0	108.8	116.0	117.2	126.7	135.9
Consumption	79.6	90.4	100.0	104.7	110.8	117.7	128.3	141.3
Private	80.3	90.8	100.0	105.2	111.6	118.5	130.6	145.3
Public	78.1	89.5	100.0	103.3	108.9	115.9	122.5	131.5
Investment	83.5	95.4	100.0	118.0	128.2	116.1	123.1	124.3
Fixed investment	85.6	96.3	100.0	109.0	115.7	120.5	130.6	139.3
Change in stocks	...	...	...	...	...	...	...	...
Net exports of goods and non factor services	89.9	83.6	100.0	183.6	201.8	117.6	175.8	1381.3
Exports of goods and non factor services	82.3	90.7	100.0	101.9	103.0	106.0	112.0	125.7
Imports of goods and non factor services	82.9	91.3	100.0	109.4	110.8	107.6	115.3	129.5
Gross domestic product at market prices	80.1	91.1	100.0	104.5	111.4	117.1	124.8	132.9
				(Annual percentage change)				
Domestic demand	...	13.7	9.2	8.8	6.6	1.0	8.1	7.3
Consumption	...	13.6	10.6	4.7	5.8	6.2	9.0	10.2
Private	...	13.1	10.1	5.2	6.0	6.2	10.2	11.3
Public	...	14.6	11.8	3.3	5.5	6.4	5.7	7.3
Investment	...	14.3	4.8	18.0	8.6	-9.5	6.1	1.0
Fixed investment	...	12.4	3.9	9.0	6.1	4.2	8.4	6.7
Change in stocks	...	...	...	...	...	...	...	...
	...							
Net exports of goods and non factor services	...	...	...	...	...	...	...	...
Exports of goods and non factor services	...	10.2	10.3	1.9	1.1	3.0	5.6	12.2
Imports of goods and non factor services	...	10.2	9.5	9.4	1.3	-2.9	7.1	12.3
	...							
Gross domestic product at market prices	...	13.8	9.7	4.5	6.6	5.1	6.6	6.5

Source: Staff estimates.

Table A14. Slovak Republic: Consumer Price Index

	1993	1994	1995	1996	1997	1998	1999	2000
				(December 1995 = 100)				
Total	77.9	88.4	97.1	102.7	109.0	116.3	128.6	144.1
Food and non-alcoholic beverages	74.0	86.6	97.4	101.4	107.2	113.5	116.5	122.7
Alcoholic beverages and tobacco	82.9	93.9	98.9	102.2	106.3	118.8	123.9	135.8
Clothing and footwear	76.6	88.5	96.6	103.5	111.4	120.0	129.0	133.0
Housing and utilities	84.9	91.7	98.1	102.7	110.1	117.0	151.7	201.0
Furniture and household equipment	79.3	88.6	96.3	102.1	106.9	114.4	123.4	128.4
Health	62.0	73.1	89.5	104.5	117.7	125.4	138.6	152.7
Transport	81.4	89.2	96.6	102.7	108.9	111.6	125.6	145.2
Recreation	76.2	89.0	97.5	107.7	114.5	123.9	135.4	144.7
Education	65.5	78.8	90.2	100.2	104.4	101.7	111.0	119.7
Hotels and Restaurants	74.6	84.8	96.5	102.1	108.6	115.8	125.3	134.9
Other	81.0	90.3	96.5	101.7	106.7	119.6	130.8	141.8
				Inflation rate, percent				
Total	23.0	13.5	9.8	5.8	6.1	6.7	10.6	12.0
Food and non-alcoholic beverages	...	17.0	12.5	4.1	5.7	5.9	2.6	5.3
Alcoholic beverages and tobacco	...	13.3	5.3	3.3	4.0	11.8	4.3	9.6
Clothing and footwear	...	15.6	9.2	7.1	7.6	7.7	7.5	3.1
Housing and utilities	...	8.0	7.0	4.7	7.2	6.3	29.7	32.5
Furniture and household equipment	...	11.7	8.7	6.0	4.7	7.0	7.9	4.1
Health	...	17.9	22.4	16.8	12.6	6.5	10.5	10.2
Transport	...	9.6	8.3	6.3	6.0	2.5	12.5	15.6
Recreation	...	16.8	9.6	10.5	6.3	8.2	9.3	6.9
Education	...	20.3	14.5	11.1	4.2	-2.6	9.1	7.8
Hotels and Restaurants	...	13.7	13.8	5.8	6.4	6.6	8.2	7.7
Other	...	11.5	6.9	5.4	4.9	12.1	9.4	8.4

Source: Statistical Office of the Slovak Republic.

Table A15. Slovak Republic: Producer Prices and Energy Prices

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
						(1995 = 100)					
Agriculture	68.6	71.6	76.3	87.4	96.8	100.0	105.4	111.3	111.0	109.0	116.9
Plant products	70.4	74.0	77.8	93.3	98.1	100.0	109.9	116.8	109.6	106.0	113.6
Animal products	67.2	69.8	75.1	83.1	95.9	100.0	102.1	108.1	111.7	110.4	118.2
						(December 1995 = 100)					
Industry	39.4	66.5	70.0	81.9	90.0	98.1	102.2	106.8	110.3	114.5	125.7
Mining and quarrying	...	76.3	80.2	91.5	96.5	106.1	103.2	105.7	106.2	108.2	121.0
Manufacturing	...	65.6	68.6	80.7	89.8	98.2	102.6	106.8	110.1	113.8	124.1
Electricity, gas and water	...	81.0	93.5	102.3	95.8	99.6	99.3	106.9	111.8	118.5	134.1
						(Average of 1995 = 100)					
Construction											
Works	41.5	57.7	62.7	77.8	86.3	96.7	111.2	122.0	132.7	147.3	160.5
Materials	39.5	64.7	69.3	78.7	85.9	96.4	103.5	111.4	119.4	121.6	128.9
						(Annual percentage change)					
Agriculture	...	4.4	6.6	14.5	10.8	3.3	5.4	5.6	-0.3	-1.8	7.2
Industry	...	68.8	5.3	17.0	9.9	9.0	4.2	4.5	3.3	3.8	9.8
Construction works	...	39.0	8.7	24.1	10.9	12.1	15.0	9.7	8.8	11.0	9.0
						(In koruny per unit)					
Petroleum products											
Gasoline, 91 octane (liter)	10.47	16.00	16.22	18.68	18.77	18.18	19.76	21.27	21.22	25.41	33.05
Gasoline, 95 octane (liter)	11.78	18.00	18.22	19.55	19.69	19.27	20.86	22.33	22.05	26.08	33.48
Diesel (liter)	9.49	15.00	14.68	15.91	16.25	17.11	18.52	21.02	20.60	24.40	31.95
Electricity (MWh)											
Households	497.0	845.0	845.0	1,018.0	1,018.0	...	...	...	...	...	
Enterprises	840.0	1,433.0	1,433.0	1,455.0	1,455.0	...	...	...	...	...	
Natural gas (1000 m3)											
Households	900.0	2,075.0	2,075.0	2,190.0	2,190.0	...	...	...	...	...	
Enterprises	2,530.0	3,350.0	3,350.0	3,550.0	3,550.0	...	...	...	...	...	
Central Heating											
Households	21.0	89.0	89.0	120.0	140.0	140.0	140.0	140.0 1/	165.0 2/	200.0 3/	350.0
Enterprises	140.0	180.0	197.0	200.0	200.0	...	...	...	...	...	

Source: Statistical Office of the Slovak Republic.

1/ From August 1, 1997, the price was Sk 150 per unit.
2/ From January 1, 1998.
3/ From July 1, 1999, the price was Sk 290 per unit.

Table A16. Slovak Republic: General Government Revenue, 1995-2000

	In billions of koruny						In percent of GDP						In percent of total					
	1995	1996	1997	1998	1999	2000 Estimate	1995	1996	1997	1998	1999	2000 Estimate	1995	1996	1997	1998	1999	2000 Estimate
Total revenue	251.7	274.5	293.4	304.1	339.5	347.6	46.1	47.7	42.8	40.5	41.6	39.1	100.0	100.0	100.0	100.0	100.0	100.0
Tax revenue	217.1	236.4	251.3	266.1	274.6	303.9	39.8	41.1	36.6	35.4	33.7	34.2	86.3	86.1	85.7	87.5	80.9	87.4
Indirect taxes	72.3	70.3	76.8	78.3	84.1	99.0	13.2	12.2	11.2	10.4	10.3	11.1	28.7	25.6	26.2	25.8	24.8	28.5
VAT	52.3	48.7	54.9	55.3	58.9	70.6	9.6	8.5	8.0	7.4	7.2	7.9	20.8	17.7	18.7	18.2	17.4	20.3
Excise taxes	20.0	21.6	21.9	23.1	25.2	28.5	3.7	3.8	3.2	3.1	3.1	3.2	7.9	7.9	7.5	7.6	7.4	8.2
Direct taxes	58.5	64.9	61.0	68.5	69.1	67.6	10.7	11.3	8.9	9.1	8.5	7.6	23.2	23.6	20.8	22.5	20.4	19.5
Corporate income tax	35.2	34.8	24.4	26.0	23.0	26.4	6.5	6.0	3.6	3.5	2.8	3.0	14.0	12.7	8.3	8.6	6.8	7.6
Personal income tax	23.2	30.1	36.6	42.5	46.1	41.3	4.3	5.2	5.3	5.7	5.7	4.6	9.2	11.0	12.5	14.0	13.6	11.9
Wage income	15.7	20.3	25.6	29.5	31.6	27.3	2.9	3.5	3.7	3.9	3.9	3.1	6.2	7.4	8.7	9.7	9.3	7.9
Entrepreneurial income	3.6	4.7	5.3	5.4	4.6	4.5	0.7	0.8	0.8	0.7	0.6	0.5	1.4	1.7	1.8	1.8	1.4	1.3
Capital income	3.9	5.1	5.7	7.6	9.8	9.5	0.7	0.9	0.8	1.0	1.2	1.1	1.6	1.8	1.9	2.5	2.9	2.7
Import duties and surcharge	8.8	9.9	12.8	11.7	12.5	13.2	1.6	1.7	1.9	1.6	1.5	1.5	3.5	3.6	4.4	3.8	3.7	3.8
Road tax	1.5	1.5	2.5	2.6	2.7	3.1	0.3	0.3	0.4	0.4	0.3	0.3	0.6	0.6	0.9	0.9	0.8	0.9
Other taxes	4.2	4.8	4.2	4.5	4.9	5.2	0.8	0.8	0.6	0.6	0.6	0.6	1.7	1.7	1.4	1.5	1.4	1.5
Social security contributions	71.9	85.0	94.0	100.5	101.3	115.7	13.2	14.8	13.7	13.4	12.4	13.0	28.6	31.0	32.0	33.0	29.8	33.3
Nontax revenue	34.6	38.1	42.1	38.0	64.9	43.7	6.3	6.6	6.1	5.1	8.0	4.9	13.7	13.9	14.3	12.5	19.1	12.6
Budgetary and subsidized organizations	11.9	1.8	2.2	5.3	4.2	10.6	2.2	0.3	0.3	0.7	0.5	1.2	4.7	0.6	0.8	1.7	1.3	3.0
Interest	0.9	1.2	0.7	1.2	1.4	2.8	0.2	0.2	0.1	0.2	0.2	0.3	0.3	0.4	0.2	0.4	0.4	0.8
Fees and fines	3.9	7.1	5.6	5.1	8.0	5.2	0.7	1.2	0.8	0.7	1.0	0.6	1.6	2.6	1.9	1.7	2.4	1.5
NBS profits	1.4	2.4	1.1	1.0	27.7	3.4	0.3	0.4	0.2	0.1	3.4	0.4	0.6	0.9	0.4	0.3	8.2	1.0
Other	16.4	25.7	32.5	25.4	23.4	21.6	3.0	4.5	4.7	3.4	2.9	2.4	6.5	9.4	11.1	8.4	6.9	6.2

Sources: Data provided by the Slovak Ministry of Finance; and staff estimates.

Table A17. Slovak Republic: General Government Expenditure, 1995-2000

	In billions of koruny						In percent of GDP						In percent of total					
	1995	1996	1997	1998	1999	2000 Estimate	1995	1996	1997	1998	1999	2000 Estimate	1995	1996	1997	1998	1999	2000 Estimate
Total expenditure and net lending	249.7	282.2	327.4	340.2	367.5	378.8	45.7	49.0	47.7	45.3	45.1	42.6	100.0	100.0	100.0	100.0	100.0	100.0
Current expenditures	225.2	248.0	276.7	292.9	311.1	338.6	41.2	43.1	40.3	39.0	38.2	38.1	90.2	87.9	84.5	86.1	84.7	89.4
Consumption	112.8	120.5	144.8	141.8	144.2	156.3	20.7	20.9	21.1	18.9	17.7	17.6	45.2	42.7	44.2	41.7	39.2	41.3
Gross wages	28.7	33.2	50.7	56.5	55.8	59.7	5.3	5.8	7.4	7.5	6.8	6.7	11.5	11.8	15.5	16.6	15.2	15.8
Health care	27.5	36.7	45.9	44.7	43.6	48.6	5.0	6.4	6.7	6.0	5.4	5.5	11.0	13.0	14.0	13.1	11.9	12.8
Education 1/	7.7	1.9	2.2	1.5	2.5	2.0	1.4	0.3	0.3	0.2	0.3	0.2	3.1	0.7	0.7	0.5	0.7	0.5
Other	49.0	48.6	46.1	39.0	42.2	46.0	9.0	8.4	6.7	5.2	5.2	5.2	19.6	17.2	14.1	11.5	11.5	12.2
Subsidies to enterprises	19.4	24.0	26.1	26.1	26.3	35.3	3.6	4.2	3.8	3.5	3.2	4.0	7.8	8.5	8.0	7.7	7.1	9.3
Agriculture	7.4	6.0	7.0	6.8	7.6	10.2	1.4	1.0	1.0	0.9	0.9	1.1	3.0	2.1	2.1	2.0	2.1	2.7
Industry	0.4	0.3	0.3	0.3	0.3	0.5	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Transportation	3.0	2.9	2.2	2.2	2.2	3.0	0.5	0.5	0.3	0.3	0.3	0.3	1.2	1.0	0.7	0.7	0.6	0.8
Heating	3.5	4.3	4.2	3.4	1.8	0.0	0.6	0.8	0.6	0.5	0.2	0.0	1.4	1.5	1.3	1.0	0.5	0.0
Other (including state funds)	5.2	10.5	12.3	13.3	14.3	21.5	1.0	1.8	1.8	1.8	1.8	2.4	2.1	3.7	3.8	3.9	3.9	5.7
Interest	12.2	12.7	12.3	17.5	23.5	23.7	2.2	2.2	1.8	2.3	2.9	2.7	4.9	4.5	3.8	5.1	6.4	6.3
Social expenditures	80.7	90.8	93.5	107.5	117.2	123.3	14.8	15.8	13.6	14.3	14.4	13.9	32.3	32.2	28.6	31.6	31.9	32.5
Pensions	43.3	46.1	51.0	56.9	61.9	68.3	7.9	8.0	7.4	7.6	7.6	7.7	17.3	16.3	15.6	16.7	16.8	18.0
Labor policies	5.5	7.4	7.1	7.8	7.8	7.8	1.0	1.3	1.0	1.0	1.0	0.9	2.2	2.6	2.2	2.3	2.1	2.0
Unemployment benefits	5.5	7.4	4.0	5.5	7.3	6.2	1.0	1.3	0.6	0.7	0.9	0.7	2.2	2.6	1.2	1.6	2.0	1.6
Active policies	0.0	0.0	3.1	2.3	0.5	1.6	0.0	0.0	0.5	0.3	0.1	0.2	0.0	0.0	0.9	0.7	0.1	0.4
Sickness benefits	5.7	7.4	8.1	9.0	9.5	9.1	1.0	1.3	1.2	1.2	1.2	1.0	2.3	2.6	2.5	2.6	2.6	2.4
Social assistance	11.3	13.7	11.0	16.4	20.5	20.9	2.1	2.4	1.6	2.2	2.5	2.3	4.5	4.8	3.3	4.8	5.6	5.5
Other state benefits	14.9	16.3	16.3	17.5	17.5	17.2	2.7	2.8	2.4	2.3	2.1	1.9	6.0	5.8	5.0	5.1	4.8	4.5
Investment expenditures	25.2	34.9	45.9	44.0	30.8	34.5	4.6	6.1	6.7	5.9	3.8	3.9	10.1	12.4	14.0	12.9	8.4	9.1
Net lending	-0.7	-0.6	4.8	3.4	25.6	5.8	-0.1	-0.1	0.7	0.4	3.1	0.7	-0.3	-0.2	1.5	1.0	7.0	1.5
Lending 2/	3.0	2.0	6.3	3.5	26.8	7.7	0.6	0.3	0.9	0.5	3.3	0.9	1.2	0.7	1.9	1.0	7.3	2.0
Repayments	3.7	2.6	1.4	0.2	1.2	1.9	0.7	0.4	0.2	0.0	0.1	0.2	1.5	0.9	0.4	0.0	0.3	0.5

Sources: Data provided by the Slovak Ministry of Finance; and staff estimates.

1/ Excludes wages.

2/ Beginning 1998, it excludes invoked guarantees.

Table A18. Slovak Republic: Government Financial Assets in 1994–2000

(In millions of koruny, end of period)

	1994	1995	1996	1997	1998	1999	2000
Assets							
Bank accounts of reserve character	473.6	473.6	473.6	0.0	0.0	0.0	0.0
Counterpart deposits on foreign loans	6,492.9	8,341.5	8,341.5	88.8	88.8	269.1 1/	583.4 2/
SAL from the IBRD	793.5	793.5	739.5	0.0	0.0	0.0	0.0
Borrowing from G-24	3,262.9	3,262.9	3,262.9	88.8	88.8	88.8	0.0
SAL from the IBRD	2,436.6	2,532.0	2,532.0	0.0	0.0	0.0	0.0
Borrowing from JEXIM BANK	0.0	1,753.1	1,753.1	0.0	0.0	0.0	0.0
Other bank accounts	556.6	534.3	534.8	6,971.5	2,934.5	1,239.1	4,524.7
Claims on foreign countries; other than CSOB	59,011.9	52,254.2	49,150.4	52,682.2	52,491.8	56,143.2 3/	62,513.4 4/
Civil; nonconvertible	24,683.0	23,320.9	18,994.8	19,233.1	16,575.2	15,945.6	17,667.0
Civil; convertible	9,307.2	8,771.8	9,341.1	10,065.3	10,940.3	7,313.4	8,042.4
Special; nonconvertible	118.7	117.9	120.9	124.2	100.7	103.3	105.9
Special; convertible	17,654.3	18,338.9	20,325.9	22,970.9	24,748.1	27,529.9	31,353.6
Clearing account: Czech Republic	5,867.3	1,224.7	367.7	288.6	127.5	0.0	0.0
Other claims, including on FSU	1,381.4	480.0	0.0	0.0	0.0	0.0	0.0
Claims on foreign countries; CSOB 5/	29,775.7	28,556.9	28,583.8	31,817.0	33,348.7	52,082.8 6/	43,458.4 7/
Nonconvertible	28,805.2	27,555.9	27,534.6	31,817.2	32,747.1	36,837.5	41,964.3
Convertible	970.5	1,001.0	1,049.2	699.8	601.5	173.4	317.9
Participations in international banks	2,892.4	2,171.7	2,308.1	2,435.6	2,720.5	2,966.5 8/	3,423.8 9/
IBEC	831.7	324.1	343.0	358.4	380.3	365.1	378.3
IIB	720.1	391.9	414.8	433.4	459.9	441.6	457.6
EBRD	335.2	467.8	511.0	533.8	614.9	741.6	866.3
World Bank institutions	1,005.3	987.9	1,039.4	1,110.0	1,265.4	1,409.3	1,635.8
Deposits with domestic companies	792.3	919.1	925.1	3,537.2	3,527.8	24,423.8	20,762.0
Receivables from returnable assistance	643.3	1,389.0	3,456.5	2,421.9	3,955.9	5,788.9	6,499.1
Receivables from state guarantees	1,683.5	2,742.1	3,466.6	6,550.5	9,578.6	17,520.1	30,155.4
Securities held by the state	0.1	0.1	0.1	0.0	0.0	0.0	0.7
Other receivables	240.0	240.0	240.0	263.0	11,757.5	9,795.4	9,246.8
Total assets	102,562.3	103,323.2 10/	99,705.9 11/	115,269.9 12/	129,655.9 13/	182,647.8 14/	199,419.0 15/
(as a percentage of GDP)	23.2	20.0	17.3	17.6	18.1	23.4	22.5

Source: Data provided by the Slovak Ministry of Finance.

1/ Includes counterpart deposits on foreign loans: "special" of Sk 108.1 million; and counterpart deposits of foreign loans: "civil" of Sk 72.2 million.
2/ Includes counterpart deposits on foreign loans: "special" of Sk 31.2 million; and government deposits of foreign loans: "civil" of Sk 552.2 million.
3/ Includes claims on foreign countries-loans performed and managed by the NBS of Sk 5,248.3 million; and claims on Vietnam Socialist Republic of Sk 2.7 million.
4/ Includes claims on foreign countries-loans performed and managed by the NBS of Sk 5,344.5 million.
5/ CSOB - Ceskoslovenska Obchodni Banka.
6/ Includes claims on foreign countries; CSOB managed by the NBS of Sk 942.3 million; other claims on CSOB of Sk 14,129.6 million.
7/ Includes claims on foreign countries; CSOB managed by the NBS of Sk 975.9 million; other claims on CSOB of Sk 200.3 million.
8/ Includes participation in social development fund of Sk 5.8 million; and in the social development reserve fund of Sk 3.1 million.
9/ Includes participation in social development fund of Sk 11.5 million and in the social development reserve fund of Sk 73.9 million.
10/ Includes issued treasury bills of Sk 5,700.9 million.
11/ Includes issued treasury bills of Sk 1,442.3 million and accounts receivable (Mochovce) of Sk 783.1 million.
12/ Includes issued treasury bills and bonds of Sk 6,053.9 million and accounts receivable (Mochovce) of Sk 2,448.4 million.
13/ Includes issued treasury bills and bonds of Sk 6,324.9 million and accounts receivable (Mochovce) of Sk 2,926.9 million.
14/ Includes issued treasury bills and bonds of Sk 7,338.7 million; accounts receivable (Mochovce) of Sk 2,239.6 million; accounts receivable (Electricity Industry). of Sk 2,840.6 million.
15/ Receivable (Mochovce) of Sk 1212.4 million; accounts receivable (electricity industry) of Sk 2717.7 million and CSOB--revolving credit of Sk 10000.0 million.

Table A19. Slovak Republic: Government Financial Liabilities in 1994–2000

(In millions of koruny, end of period)

	1994	1995	1996	1997	1998	1999	2000
Liabilities							
Credit from the NBS	21,903.2	6,871.1	5,495.0	5,495.4	0.0	0.0	0.0
Due to state lending abroad	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0
Due to exchange rate changes	0.0	0.0	0.0	n.a.	n.a.	0.0	0.0
Direct credit	21,903.2	6,871.1	5,495.0	5,495.4	0.0	n.a.	n.a
Slovak budget deficit of 1991	6,877.6	6,871.1	n.a.	n.a.	n.a.	n.a.	n.a
Federal budget deficit of 1992	0.0	0.0	n.a.	n.a.	n.a.	n.a.	n.a
Slovak budget deficit of 1992	0.0	0.0	n.a.	n.a.	n.a.	n.a.	n.a
T-bills issued in 1992	0.0	0.0	n.a.	n.a.	n.a.	n.a.	n.a
Direct credit in 1992	0.0	0.0	n.a.	n.a.	n.a.	n.a.	n.a
Budget deficit of 1993	15,025.6	0.0	n.a.	n.a.	n.a.	n.a.	n.a
Treasury bills issued in 1993	0.0	0.0	n.a.	n.a.	n.a.	n.a.	n.a
Direct credit in 1993	15,025.6	0.0	n.a.	n.a.	n.a.	n.a.	n.a
Budget deficit of 1994	0.0	0.0	n.a.	n.a.	n.a.	n.a.	n.a
Treasury bills issued in 1994	0.0	0.0	n.a.	n.a.	n.a.	n.a.	n.a
Direct credit in 1994	0.0	0.0	n.a.	n.a.	n.a.	n.a.	n.a
Credit from commercial banks	4,846.0	3,464.2	2,168.5	1,807.0	1,445.6	1,084.2	722.8
Related to CSOB	1,954.7	934.3	0.0	0.0	0.0	0.0	0.0
Investment Bank/KTUK Dolinska	2,891.3	2,529.9	2,168.5	1,807.0	1,445.6	1,084.2	722.8
Balance of payments support loans	15,663.6	16,485.3	17,472.6	14,962.5	11,730.7	12,180.0	11,553.3
SAL/IBRD	4,691.6	4,457.6	4,784.3	4,695.5	4,429.6	4,437.9	4,265.0
EU	4,703.6	4,757.6	4,945.7	2,366.3	0.0	0.0	0.0
G-24	3,834.3	3,423.6	3,674.5	1,572.6	522.8	0.0	0.0
ERL/IBRD	2,434.0	2,377.4	2,551.6	2,782.6	2,953.0	3,240.3	3,317.0
JEXIM BANK	0.0	1,469.2	1,516.5	3,545.4	3,825.3	4,501.8	3,971.3
Liabilities related to CSOB	22,874.1	14,339.2	11,531.6	10,206.0	7,770.1	5,714.3	5,637.0
Convertible currencies	18,387.0	9,921.3	7,113.0	4,460.3	2,112.6	35.1	30.0
Non-convertible currencies	4,487.1	4,417.9	4,418.6	5,745.7	5,657.5	5,679.2	5,607.6
Issued state bonds	17,692.2	54,325.7	53,894.9	61,683.7 1/	92,303.8 2/	89,515.6 3/	94,760.6 4/
KBV	5,205.6	4,200.0	4,200.0	1,500.0	1,500.0	0.0	0.0
Rehabilitation bonds	520.0	0.0	0.0	23.0	21.2	16.5	11.4
Budget deficit of 1991	600.3	600.0	0.0	0.0	0.0	0.0	0.0
Bills of exchange; IBRD participation	230.2	230.2	230.2	230.0	230.2	230.0	230.2
Gabcikovo, Turcek, Malinec	3,150.1	3,150.0	0.0	0.0	0.0	0.0	0.0
Bonds to refinance 1993 deficit	7,986.0	23,080.0	15,100.0	8,970.0	8,350.0	6,040.0	0.0
Bonds to refinance the 1994 deficit	0.0	23,065.5	23,065.5	23,065.5	14,205.5	6,640.0	0.0
Bonds to finance 1995 deficit	0.0	0.0	8,299.2	0.0	0.0	0.0	0.0
Bonds for roads	0.0	0.0	3,000.0	0.0	0.0	0.0	0.0
Treasury bills outside NBS	22,892.0	14,830.0	27,000.6	43,053.0	19,940.0	16,127.0	18,429.0
Foreign loans	...	...	801.7	2,615.5	2,926.9	2,239.6	1,212.4
Mochovce	...	...	801.7	2,615.5	2,926.9	2,239.6	1,212.4
Total liabilities	105,871.1	110,315.5	118,364.9	149,636.8 5/	177,664.9 6/	192,324.5 7/	224,246.3 8/
(As a percentage of GDP)	24.0	21.3	20.5	22.9	24.8	24.7	25.3
Net assets	-3,308.8	-6,992.3	-18,659.0	-34,366.9	-48,009.0	-9,676.7	-24,827.3
(As a percentage of GDP)	-0.8	-1.4	-3.2	-5.3	-6.7	-1.2	-2.8

Source: Data provided by the Slovak Ministry of Finance.

1/ Includes Sk 27,895 million bonds to refinance the 1996 deficit.

2/ Includes Sk 67,996.9 million bonds to refinance 1998 bonds principal payment.

3/ Includes Sk 15,360 million bonds to refinance 1998 bonds principal payment; Sk 61,229 million bonds to refinance 1999 principal payment.

4/ Includes Sk 25,049 million bonds to refinance 1999 principal payment; Sk 69,470 million bonds to refinance 2000 principal payments.

5/ Includes government loan from Nomura (Sk 6,608.5 million), Matra Communication loan (Sk 2,652.7 million) and foreign loan (Sk 552.3 million).

6/ Includes foreign issued bonds (Nomura) (Sk 37,958.2 million), Matra Communication loan (Sk 2,996.8 million), and foreign loan (Sk 592.6 million).

7/ Includes foreign liabilities abroad-loans of Sk 691.3 million; Matra Communication loan (Sk 2,861.4 million); other liabilities (bonification of the mortgage loans) of Sk 85 million; includes foreign issued bonds of Sk 61,826.1 million.

8/Includes foreign liabilities abroad loans of Sk 750.8 million; Matra Communication loan (Sk 2,618 million); other liabilities of Sk 1,644.6 million; includes foreign issued bonds of Sk 86,917.2 million.

Table A20. Slovak Republic: Fiscal Operations of the Central Government, 1994-2000

(In millions of koruny, unless otherwise indicated)

	1994	1995	1996	1997	1998	1999	2000 Estimate
Total revenue	135,938	154,684	155,908	159,545	166,008	202,971	193,698
Tax revenue	114,587	136,499	140,129	145,466	152,978	160,437	173,826
Personal income tax	14,195	19,722	25,455	31,293	36,999	40,233	34,854
Wage tax	11,241	15,808	20,404	25,642	29,372	30,389	25,399
Withholding tax on capital income	2,954	3,914	5,051	5,651	7,627	9,844	9,455
Corporate income tax	30,282	33,667	33,560	23,590	24,701	22,019	25,125
Indirect taxes	58,263	72,266	70,320	76,749	78,335	84,102	99,029
VAT	37,138	52,300	48,679	54,877	55,264	58,938	70,577
Excise taxes	21,125	19,966	21,641	21,872	23,071	25,164	28,453
Custom duties and import surcharge	7,164	8,754	9,894	12,815	11,664	12,534	13,181
Social security contributions	4,040	0	0	0	0	0	0
Other tax revenue	643	2,090	900	1,019	1,279	1,549	1,638
Nontax revenue	21,351	18,185	15,779	14,079	13,030	42,534	19,872
Total expenditure and net lending	135,533	157,063	166,980	176,687	182,413	217,059	208,472
Current expenditures	101,561	126,911	129,657	136,568	144,732	160,496	175,526
Wages	16,697	18,805	21,320	33,877	37,929	38,019	40,143
Social security contributions	0	7,224	8,190	12,670	14,195	13,440	14,297
Health, education	8,172	8,306	2,395	2,873	2,056	3,027	2,541
Social expenditure 1/	15,269	26,373	28,523	25,390	31,810	35,866	35,831
Subsidies to enterprises	13,909	14,301	15,198	16,535	14,430	15,672	25,022
State equalization allowance	2,535	0	0	0	0	0	0
Interest	16,683	12,000	12,101	11,614	16,626	22,434	22,586
Other current expenditures	28,296	39,902	41,931	33,609	27,686	32,039	35,105
Capital expenditure	10,368	14,395	20,705	16,290	11,713	8,394	7,026
Investment projects	8,093	11,952	17,557	12,814	8,841	6,981	4,255
Transfers to enterprises	2,275	2,443	3,148	3,476	2,872	1,413	2,772
Intragovernmental transfers	26,121	16,429	19,082	18,889	26,026	25,603	26,515
To local authorities	1,080	1,190	1,266	1,443	1,801	1,888	2,161
To social security sector	22,522	11,956	13,725	11,007	11,680	12,179	12,285
To state funds	2,519	3,282	4,091	6,440	12,545	11,535	12,070
Net Lending 2/	-2,517	-672	-2,464	4,941	-58	22,566	-595
State budget overall balance	405	-2,379	-11,072	-17,142	-16,405	-14,088	-14,775
In percent of GDP	0.1	-0.4	-1.9	-2.5	-2.2	-1.7	-1.7

Source: Data provided by the Slovak Ministry of Finance; and staff estimates.

1/ Includes social assistance and social benefits.
2/ Beginning 1998, it excludes invoked guarantees.

Table A21. Slovak Republic: Fiscal Operations of the Social Security Funds, 1995-2000 1/

	1995	1996	1997	1998	1999	2000 Estimate	1995	1996	1997	1998	1999	2000 Estimate
	(In millions of koruny)						(In percent of GDP)					
Health Fund												
Revenue	28,011	36,201	39,507	41,286	41,329	45,855	5.1	6.0	5.8	5.5	5.1	5.2
Contributions	26,002	34,449	37,581	39,737	40,959	43,483	4.8	5.7	5.5	5.3	5.0	4.9
Other	2,008	1,752	1,925	1,549	370	2,372	0.4	0.3	0.3	0.2	0.0	0.3
Expenditure	26,808	36,229	45,221	44,211	43,166	48,034	4.9	6.0	6.6	5.9	5.3	5.4
Balance	1,203	-28	-5,715	-2,925	-1,837	-2,179	0.2	0.0	-0.8	-0.4	-0.2	-0.2
Sickness Fund												
Revenue	7,943	7,946	10,181	10,722	10,640	10,672	1.5	1.3	1.5	1.4	1.3	1.2
Contributions	7,693	7,310	9,578	9,817	10,001	10,362	1.4	1.2	1.4	1.3	1.2	1.2
Other	249	636	604	905	638	310	0.0	0.1	0.1	0.1	0.1	0.0
Expenditure	6,148	8,166	9,257	10,130	10,567	10,148	1.1	1.3	1.3	1.3	1.3	1.1
Balance	1,794	-220	924	592	73	524	0.3	0.0	0.1	0.1	0.0	0.1
Pension Fund												
Revenue	44,852	51,568	52,106	57,204	57,184	67,578	8.2	8.5	7.6	7.6	7.0	7.6
Contributions	44,603	50,932	51,503	56,299	56,546	67,268	8.2	8.4	7.5	7.5	6.9	7.6
Other	249	636	604	905	638	310	0.0	0.1	0.1	0.1	0.1	0.0
Expenditure	44,738	46,866	52,142	58,037	62,940	69,317	8.2	7.7	7.6	7.7	7.7	7.8
Balance	115	4,702	-36	-833	-5,757	-1,739	0.0	0.8	0.0	-0.1	-0.7	-0.2
Employment Fund												
Revenue	7,225	8,219	8,547	9,026	8,846	10,969	1.3	1.4	1.2	1.2	1.1	1.2
Contributions	6,183	7,157	7,536	8,030	7,937	8,659	1.1	1.2	1.1	1.1	1.0	1.0
Other	1,042	1,062	1,011	996	909	2,310	0.2	0.2	0.1	0.1	0.1	0.3
Expenditure	6,203	7,695	8,818	8,977	9,116	9,202	1.1	1.3	1.3	1.2	1.1	1.0
of which: contributions 2/	580	1,125	1,187	1,736	1,953	1,750	0.1	0.2	0.2	0.2	0.2	0.2
Balance	1,022	524	-271	49	-270	1,767	0.2	0.1	0.0	0.0	0.0	0.2
Total												
Revenue	87,451	102,809	109,154	116,502	116,045	133,323	16.0	17.0	15.9	15.5	14.2	15.0
Contributions	83,902	98,722	105,011	112,146	113,490	128,022	15.4	16.3	15.3	14.9	13.9	14.4
Other	3,549	4,087	4,143	4,355	2,555	5,302	0.7	0.7	0.6	0.6	0.3	0.6
Expenditures	83,317	97,832	114,252	119,618	123,836	134,950	15.3	16.1	16.7	15.9	15.2	15.2
Balance	4,134	4,977	-5,098	-3,116	-7,791	-1,627	0.8	0.8	-0.7	-0.4	-1.0	-0.2

Source: Data provided by the Public Expenditure Department at the Slovak Ministry of Finance; and staff estimates.

1/ Social security funds includes health insurance companies, the sickness fund, pension funds and the employment fund.

2/ Contributions made by the Employment Fund to the Health, Sickness and Pension Funds on behalf of unemployed persons.

Table A22. Slovak Republic: Fiscal Operations of the State Funds in 1996-99

(In millions of koruny)

	Own revenue	Transfers from Budget	Total Revenue	Current Expenditure	Capital Expenditure 1/	Total Expenditure	Balance
1996							
Environment Fund	934.9	297.0	1,231.9	58.8	1,194.3	1,253.1	-21.2
Fund for Culture "Pro Slovakia"	15.4	116.7	132.1	153.9	0.0	153.9	-21.8
Fund for Physical Culture	462.8	18.3	481.1	311.6	0.0	311.6	169.5
Health Fund	499.1	0.6	499.7	62.9	441.2	504.1	-4.4
Fund for Market Regulation in Agriculture	1,762.2	653.5	2,415.7	4,242.7	0.0	4,242.7	-1,827.0
Road Fund	448.5	1,174.0	1,622.5	1,628.8	2,959.4	4,588.2	-2,965.7
Forestry Fund	139.9	571.1	711.0	647.9	0.2	648.1	62.9
Fund for Agricultural Land Protection	626.2	25.2	651.4	297.5	130.1	427.6	223.8
Fund for Water Management	63.3	200.2	263.5	139.2	87.5	226.7	36.8
Financial Support Fund for Agriculture	947.6	135.3	1,082.9	74.8	1,786.5	1,861.3	-778.4
Nuclear Waste Fund	1,518.6	139.3	1,657.9	0.7	656.1	656.8	1,001.1
Housing Fund	11.7	760.0	771.7	5.5	349.0	354.5	417.2
State funds, total	7,430.2	4,091.2	11,521.4	7,624.3	7,604.3	15,228.6	-3,707.2
1997							
Environment Fund	798.5	239.5	1,038.0	55.1	944.0	999.1	38.9
Fund for Culture "Pro Slovakia"	141.9	100.0	241.9	190.3	0.0	190.3	51.6
Fund for Physical Culture	489.5	16.5	506.1	594.5	90.8	685.3	-179.2
Health Fund	89.6	0.0	89.6	8.2	166.4	174.6	-85.0
Fund for Market Regulation in Agriculture	3,198.7	1,250.0	4,448.7	4,112.7	0.0	4,112.7	336.1
Road Fund	1,664.0	2,600.0	4,264.0	2,986.4	12,135.4	15,121.8	-10,857.8
Forestry Fund	45.4	450.0	495.4	594.1	0.0	594.1	-98.7
Fund for Agricultural Land Protection	925.8	135.0	1,060.8	1,271.8	0.0	1,271.8	-211.0
Fund for Water Management	439.2	380.0	819.2	309.9	369.4	679.3	139.9
Financial Support Fund for Agriculture	910.2	20.0	930.2	749.7	396.7	1,146.4	-216.2
Nuclear Waste Fund	896.7	89.2	985.9	3.5	1,191.6	1,195.0	-209.1
Housing Fund	1,781.6	1,160.0	2,941.6	21.5	3,246.8	3,268.3	-326.7
State funds, total	11,381.2	6,440.2	17,821.4	10,897.7	18,541.0	29,438.7	-11,617.3
1998							
Environment Fund	985.9	150.0	1,135.9	120.3	967.2	1,087.5	48.4
Fund for Culture "Pro Slovakia"	84.4	140.1	224.5	194.3	21.6	215.9	8.6
Fund for Physical Culture	291.0	17.5	308.5	305.5	0.1	305.6	2.9
Health Fund	23.8	30.0	53.8	21.1	31.7	52.8	1.0
Fund for Market Regulation in Agriculture	1,555.5	834.0	2,389.5	2,275.6	-322.0	1,953.6	435.8
Road Fund	1,794.1	5,800.5	7,594.6	3,791.3	12,641.0	16,432.3	-8,837.7
Forestry Fund	59.0	488.9	547.9	537.9	0.2	538.0	9.9
Fund for Agricultural Land Protection	1,022.7	0.0	1,022.7	130.8	795.5	926.3	96.5
Fund for Water Management	601.6	188.2	789.8	197.7	554.7	752.4	37.4
Financial Support Fund for Agriculture	1,026.8	0.0	1,026.8	750.8	90.0	840.8	186.0
Nuclear Waste Fund	2,972.3	150.0	3,122.3	701.6	1,003.1	1,704.7	1,417.6
Housing Fund	273.0	4,746.0	5,019.0	38.1	7,156.7	7,194.8	-2,175.8
State funds, total	10,690.1	12,545.1	23,235.3	9,064.9	22,939.7	32,004.6	-8,769.4
1999							
Environment Fund	717.7	140.0	857.7	64.6	793.1	857.7	0.0
Fund for Culture "Pro Slovakia"	8.8	80.0	88.8	88.8	0.0	88.8	0.0
Fund for Physical Culture	273.0	18.0	291.0	291.0	0.0	291.0	0.0
Health Fund	233.0	23.0	256.0	26.5	216.6	243.2	12.8
Fund for Market Regulation in Agriculture	1,249.7	940.0	2,189.7	1,497.2	3.5	1,500.7	689.0
Road Fund	2,007.5	6,080.0	8,087.5	4,353.4	10,733.4	15,086.8	-6,999.3
Forestry Fund	39.5	345.6	385.1	377.9	0.0	377.9	7.2
Fund for Agricultural Land Protection	941.5	0.0	941.5	317.9	404.3	722.2	219.3
Fund for Water Management	407.6	144.0	551.6	102.0	418.9	520.9	30.7
Financial Support Fund for Agriculture	1,107.2	0.0	1,107.2	667.1	146.8	813.9	293.3
Nuclear Waste Fund	3,116.1	64.5	3,180.6	497.0	645.3	1,142.3	2,038.3
Housing Fund	596.9	3,700.0	4,296.9	628.4	3,644.4	4,272.8	24.1
State funds, total	10,698.4	11,535.1	22,233.5	8,911.8	17,006.3	25,918.1	-3,684.6

Sources: Data provided by the Slovak Ministry of Finance; and staff estimates.

1/ Includes net lending.

Table 23: Slovak Republic: Monetary Survey 1995-2001 1/

	1995	1996	1997	1998				1999				2000				2001
				Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
								(in billions of koruna)								
Net foreign assets 2/	63.9	65.0	70.5	72.2	73.1	51.5	43.5	44.1	31.1	32.4	46.5	51.5	54.4	114.0	93.2	79.0
Net domestic assets	293.3	351.9	383.0	372.0	378.3	397.5	429.2	437.6	460.0	465.1	480.2	488.7	494.7	480.9	514.7	534.2
Domestic credit	370.6	430.6	468.7	468.1	483.3	506.5	530.1	557.6	576.6	583.1	575.5	581.2	590.4	584.9	610.2	631.4
Net credit to government	66.4	71.6	101.7	95.0	103.8	119.2	138.6	158.4	168.5	173.9	165.2	168.1	174.5	183.4	199.8	310.0
Net credit to Property Fund	-2.3	-3.2	-3.0	-0.2	0.5	0.4	0.2	0.8	1.1	1.5	1.2	1.9	1.8	-14.1	0.1	2.9
Credit to enterprises and households	306.5	362.2	370.0	373.3	379.0	386.9	391.3	398.4	407.0	407.7	409.1	411.2	414.1	415.6	410.3	318.5
In domestic currency	283.8	331.4	334.6	338.8	342.2	346.3	346.9	347.9	352.2	352.7	356.9	359.0	365.1	362.1	359.8	268.2
In foreign currency 1/	22.7	30.8	35.4	34.5	36.8	40.6	44.4	50.5	54.8	55.0	52.2	52.2	49.0	53.5	50.5	50.3
Other items, net	-77.3	-78.7	-85.7	-96.1	-105.0	-109.0	-100.9	-120.0	-116.6	-118.0	-95.3	-92.5	-95.7	-104.0	-95.5	-97.2
Broad Money	357.2	416.9	453.5	444.2	451.4	449.0	472.7	481.7	491.1	497.5	526.7	540.2	549.1	594.9	607.9	613.2
Koruna aggregate			406.5	395.1	398.0	387.4	404.2	409.8	414.6	421.9	450.6	463.6	470.7	488.5	513.6	518.6
Foreign currency deposits 1/			47.0	49.1	53.4	61.6	68.5	71.9	76.5	75.6	76.1	76.6	78.4	106.4	94.3	94.6
Memorandum items 3/																
Money aggregates																
								(percent change, 12-month)								
Broad money	18.9	16.7	8.8	9.2	8.8	6.4	4.2	8.4	8.8	10.8	11.4	12.1	11.8	19.6	15.4	13.5
Koruna money			8.4	8.0	7.5	2.9	-0.6	3.7	4.2	8.9	11.5	...	...	...	...	...
Net foreign assets	312.3	1.7	8.5	12.8	20.0	-23.7	-37.7	-38.9	-57.5	-37.1	6.9	16.8	74.9	251.9	100.4	53.4
Net domestic assets	3.0	20.0	8.8	8.5	6.8	12.2	11.9	17.6	21.6	17.0	11.9	11.7	7.5	3.4	7.2	9.3
Domestic credit	7.7	16.2	8.8	8.8	9.5	12.2	13.9	19.1	19.3	15.1	8.6	4.2	2.4	0.3	6.0	8.6
Credit to enterprises and households	14.9	18.2	2.2	3.9	4.5	6.2	6.7	6.7	7.4	5.4	4.5	3.2	1.7	1.9	0.3	-22.5
Credit to enterprises and households (adjusted for bank restructuring) 4/				...	...	...	...	...	...	...	...	...	...	...	...	4.1

Sources: National Bank of Slovakia; and Fund staff estimates and projections.

1/ As published monthly by the NBS.

2/ At actual exchange rates.

3/ Growth rates adjusted for reclassification of various items between December 31 and January 1.

4/ Adjusted for balance items of commercial banks bankrupted in 2000 and balance item transactions in restrukturalisation process of selected banks in 2000.

Table A24. Slovak Republic: Monetary Base, 1997–2001

(In billions of koruny; average of the month; unless otherwise indicated)

	1997	1998				1999				2000				2001
	Dec.	March	June	Sep.	Dec.	March	June	Sep.	Dec.	March	June	Sep.	Dec.	March
Net foreign assets	84.3	79.7	98.8	91.3	75.9	84.4	82.6	92.6	103.8	129.9	156.8	185.7	180.6	175.0
Foreign assets	114.9	111.9	128.3	118.5	105.9	116.1	116.2	117.3	129.8	154.7	182.9	208.4	196.5	189.5
Foreign liabilities	30.6	32.2	29.5	27.3	30.0	31.7	33.6	24.7	26.0	25.1	26.0	22.7	16.0	14.5
Net credit to government	-6.1	-5.1	-15.3	-3.2	-3.4	-4.4	-7.3	-9.9	-8.1	-22.1	-26.9	-18.6	-17.3	-14.6
Credit to banks and open market operations	6.4	4.3	-4.5	-2.2	14.4	10.2	11.8	3.0	-1.2	-23.6	-38.9	-55.3	-54.0	-67.4
Of which														
government securities	3.4	3.9	0.0	3.1	14.0	9.8	11.4	3.0	1.0	0.2	0.0	0.0	0.0	0.0
Other items net	9.8	18.5	18.7	15.2	13.4	9.2	10.7	12.1	12.1	19.1	17.2	-4.2	4.4	10.4
Reserve money	94.3	97.4	97.6	101.2	100.2	99.4	97.8	97.8	106.5	103.0	108.2	107.6	113.6	103.4
Currency in circulation	58.2	58.6	59.3	61.7	61.1	58.5	59.1	58.9	66.6	62.3	66.7	70.7	75.9	73.8
Reserves	36.1	38.8	38.3	39.4	39.1	40.9	38.7	38.9	39.9	40.7	41.5	36.9	37.7	29.6
Required	36.3	38.1	38.0	39.1	38.8	40.7	38.6	38.8	38.5	40.7	42.3	36.7	37.7	29.6
Excess	-0.2	0.7	0.3	0.3	0.3	0.3	0.2	0.1	1.4	-0.1	-0.8	0.2	0.0	0.1
Memorandum item:														
Official reserves in U.S.$ million, EOP	3284	3143	3790	3110	2923	2814	2953	2935	3425	3726	4070	4221	4077	3863

Source: National Bank of Slovakia.

Table A25. Slovak Republic: Selected Interest Rates, 1997–2001

(Average in each period, in percent per annum)

	1997				1998				1999				2000				2001
	March	June	Sep.	Dec.	March	June	Sep.	Dec.	March	June	Sep.	Dec.	March	June	Sep.	Dec.	March
Deposits																	
Total	7.5	7.8	8.7	8.7	10.0	9.9	10.3	10.4	10.5	10.9	10.3	9.9	8.6	7.4	6.0	5.6	5.4
Sight deposits	3.0	3.2	3.5	3.5	3.7	3.7	3.8	4.2	3.8	3.8	3.8	3.8	3.8	3.6	3.3	3.1	2.6
Term deposits	10.0	10.2	11.4	11.6	12.7	12.7	13.1	13.2	12.9	13.4	12.4	12.1	10.1	8.6	7.0	6.6	6.3
7 days	18.2	14.8	20.4	17.1	15.5	15.0	21.9	16.2	14.3	16.1	13.0	12.1	8.5	7.2	6.4	6.0	6.7
One month	10.7	12.3	15.5	16.3	18.0	16.4	17.3	17.5	14.9	16.1	13.9	13.8	9.6	7.7	3.4	6.2	5.8
One year	10.0	10.1	10.5	10.5	10.7	11.0	11.1	12.0	12.3	12.5	12.3	12.3	11.3	10.4	8.1	7.4	6.8
New credits																	
Total	16.2	19.3	19.9	20.9	20.3	16.4	24.9	18.6	17.2	19.1	16.5	12.6 1/	14.2	10.9 2/	11.2	10.8	9.9
Short-term	16.2	20.0	20.9	21.6	20.6	16.6	25.6	18.9	17.4	19.3	16.8	16.4	14.5	10.9 2/	11.2	10.7	9.8
Medium-term	15.4	15.6	16.8	16.3	15.3	15.2	13.6	14.2	12.5	17.6	13.3	10.4 1/	10.4	10.8	11.1	11.6	10.8
Long-term	17.7	15.5	15.5	15.4	15.9	14.5	14.5	14.8	11.9	12.6	13.6	14.1	11.0	9.3	10.1	9.6	8.8

Source: National Bank of Slovakia.

Notes

1/ Including loans reclassified as part of the restructuring process, in the amount of Sk 61.7 billion, at an interest rate of 10.3 percent (medium-term loans).

2/ Including loans reclassified as part of the (second stage of) the restructuring process, in the amount of Sk 30.9 billion, at an interest rate of 10.3 percent (short-term loans).

Table A26. Slovak Republic: Balance of Payments, 1995–2000

(In millions of U.S. dollars)

	1995	1996	1997	1998	1999	2000
Trade Balance	-228	-2,293	-2,081	-2,353	-1,093	-897
Exports, f.o.b.	8,579	8,831	9,639	10,720	10,229	11,914
Imports, f.o.b.	-8,807	-11,124	-11,720	-13,074	11,322	12,812
Services balance	540	36	74	20	218	440
Receipts	2,376	2,068	2,170	2,295	2,063	2,247
Payments	-1,836	-2,032	-2,096	-2,275	-1,845	-1,807
Income balance	-14	-45	-122	-157	-301	-353
Current transfers	92	203	175	367	196	118
Current account	391	-2,098	-1,953	-2,124	-979	-693
Capital transfers	46	30	0	71	160	91
Foreign investment, net	380	295	121	1,107	1,379	2,751
Direct investment	134	199	95	314	756	1,914
Portfolio investment	246	96	26	793	623	837
Medium and Long-term credits	394	986	1,146	796	301	-344
Credits extended, net	69	136	107	167	16	-84
Credits received, net	325	849	1,039	629	285	-261
Disbursements	1,052	2,033	2,226	1,843	1,511	1,543
Repayments	-726	-1,184	-1,187	-1,214	-1,226	-1,804
Short-term capital, net	91	882	581	27	84	-1099
Capital account	994	2,192	1,848	2,000	1,924	1,398
Errors and omissions	385	268	-31	-171	-390	74
Overall balance	1,771	362	-137	-295	555	779
Financing	-1,771	-362	137	295	-555	-779
Gross reserves (increase, -)	-1,579	-237	188	362	-502	-652
Use of Fund credit, net	-192	-125	-52	-67	-53	-127

Sources: National Bank of Slovakia; and staff estimates.

Table A27. Slovak Republic: Foreign Trade, 1993–2000

(In millions of U.S. dollars)

	1993	1994	1995	1996	1997	1998	1999	2000
Exports f.o.b	5,447	6,691	8,579	8,831	9,639	10,720	10,229	11,914
Developed countries	1,783	2,632	3,510	3,925	4,937	6,408	6,439	7,548
European Union 1/	1,609	2,340	3,208	3,644	4,538	5,955	6,082	7,011
Austria	271	351	426	534	692	790	824	993
France	87	113	171	187	231	369	490	550
Germany	828	1,144	1,613	1,871	2,284	3,084	2,830	3,176
Italy	148	288	413	431	576	760	903	1,090
United Kingdom	55	86	112	136	160	165	179	227
EFTA 2/	40	56	85	106	124	194	197	251
Other developed countries 3/	134	236	217	175	275	259	160	286
Of which:								
Japan	8	6	18	19	12	12	14	12
United States	60	108	107	119	156	150	145	170
Developing countries	288	338	371	387	213	183	495	243
Of which:								
China	66	23	17	39	11	4	194	9
India	15	61	67	65	43	17	0	53
Economies in Transition 4/	3,371	3,721	4,697	4,519	4,480	4,073	3,295	4,107
CEFTA countries 5/	2,716	3,059	3,799	3,658	3,582	3,416	3,060	3,651
Of which:								
Czech Republic	2,310	2,502	3,024	2,738	2,471	2,175	2,058	2,383
Hungary	247	366	391	403	433	470	460	577
Poland	159	189	378	427	507	586	542	691
BRO countries 6/	453	467	612	641	712	496	235	327
Of which:								
Russia	256	278	331	308	333	205	102	106
Ukraine	140	117	191	236	269	198	133	147
Other transition economies	202	195	286	220	186	161	0	129
Others and nonspecified	5	0	1	0	9	56	0	16

Table A27 (Concluded). Slovak Republic: Foreign Trade, 1993–2000

(In millions of U.S. dollars)

	1993	1994	1995	1996	1997	1998	1999	2000
Imports f.o.b.	6,334	6,611	8,771	11,123	11,720	13,074	11,321	12,812
Developed countries	2,109	2,646	3,674	5,023	5,962	7,440	6,491	7,093
European Union 1/	1,769	2,210	3,049	4,147	5,109	6,501	5,854	6,257
Austria	394	382	448	538	582	604	547	503
France	96	148	215	360	419	499	437	428
Germany	723	888	1,252	1,625	2,297	3,334	2,963	3,201
Italy	190	290	406	663	681	837	803	788
United Kingdom	80	106	148	210	279	267	251	309
EFTA 2/	96	104	166	183	181	206	168	182
Other developed countries 3/	244	332	459	693	672	733	470	654
Of which:								0
Canada	18	12	20	29	41	35	0	19
Japan	73	82	131	205	192	212	180	215
United States	112	188	215	300	362	378	290	264
Developing countries	195	221	348	468	584	687	659	238
Of which:								0
Brazil	9	16	16	19	21	20	0	18
China	30	38	58	82	114	150	657	177
India	9	18	31	27	20	18	0	23
Economies in Transition 4/	4,024	3,737	4,736	5,616	5,160	4,873	4,171	5,481
CEFTA countries 5/	2,533	2,297	2,973	3,315	3,204	3,267	2,668	3,061
Of which:								
Czech Republic	2,275	1,958	2,434	2,708	2,493	2,379	2,092	2,402
Hungary	85	111	193	222	242	317	260	268
Poland	123	158	243	271	298	323	317	391
BRO countries 6/	1,438	1,378	1,672	2,207	1,910	1,550	1,506	2,420
Of which:								0
Russia	1,237	1,191	1,456	1,934	1,573	1,281	1,359	2,177
Ukraine	152	119	123	173	284	239	147	189
Other transition economies	97	110	161	176	46	56	0	0
Others and nonspecified	7	6	13	16	14	74	0	0

Sources: Data provided by the Slovak authorities; and staff estimates.

1/ EU-15 for all years.

2/ The European Free Trade Association (EFTA) consists of Iceland, Liechtenstein, Norway and Switzerland.

3/ OECD members as of end-1993 (i.e., excludes CEFTA members).

4/ All formerly centrally planned economies.

5/ The Central European Free Trade Association (CEFTA) includes the Czech Republic, Slovak Republic, Hungary, Poland, Slovenia, Romania and Bulgaria. How trade with Romania is not included here.

6/ Former Soviet Union countries.

Table A28. Slovak Republic: Shares of Partners in Foreign Trade, 1993–2000

(In percent of total)

	1993	1994	1995	1996	1997	1998	1999	2000
Exports f.o.b.								
Developed countries	32.7	39.3	40.9	44.4	51.2	59.8	63.0	63.4
European Union 1/	29.5	35.0	37.4	41.3	47.1	55.5	59.5	58.8
Austria	5.0	5.3	5.0	6.0	7.2	7.4	8.1	8.3
France	1.6	1.7	2.0	2.1	2.4	3.4	4.8	4.6
Germany	15.2	17.1	18.8	21.2	23.7	28.8	27.7	26.7
Italy	2.7	4.3	4.8	4.9	6.0	7.1	8.8	9.1
United Kingdom	1.0	1.3	1.3	1.5	1.7	1.5	1.8	1.9
EFTA 2/	0.7	0.8	1.0	1.2	1.3	1.8	1.9	2.1
Other developed countries 3/	2.5	3.5	2.5	2.0	2.9	2.4	1.6	2.4
Of which:								
Japan	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1
United States	1.1	1.6	1.3	1.3	1.6	1.4	1.4	1.4
Developing countries	5.3	5.1	4.3	4.4	2.2	1.7	4.8	2.0
Of which:								
China	1.2	0.3	0.2	0.4	0.1	0.0	1.9	0.1
India	0.3	0.9	0.8	0.7	0.4	0.2	0.0	0.4
Economies in Transition 4/	61.9	55.6	54.8	51.2	46.5	38.0	32.2	34.5
CEFTA countries 5/	49.9	45.7	44.3	41.4	37.2	31.9	29.9	30.6
Of which:								
Czech Republic	42.4	37.4	35.3	31.0	25.6	20.3	20.1	20.0
Hungary	4.5	5.5	4.6	4.6	4.5	4.4	4.5	4.8
Poland	2.9	2.8	4.4	4.8	5.3	5.5	5.3	5.8
BRO countries 6/	8.3	7.0	7.1	7.3	7.4	4.6	2.3	2.7
Of which:								
Russia	4.7	4.1	3.9	3.5	3.5	1.9	1.0	0.9
Ukraine	2.6	1.7	2.2	2.7	2.8	1.8	1.3	1.2
Other transition economies	3.7	2.9	3.3	2.5	1.9	1.5	0.0	1.1
Others and nonspecified	0.1	0.0	0.0	0.0	0.1	0.5	0.0	0.1

Table A28 (Concluded). Slovak Republic: Shares of Partners in Foreign Trade, 1993–2000

(In percent of total)

	1993	1994	1995	1996	1997	1998	1999	2000
Imports, f.o.b.								
Developed countries	33.3	40.0	41.9	45.2	50.9	56.9	57.3	55.4
European Union 1/	27.9	33.4	34.8	37.3	43.6	49.7	51.7	48.8
Austria	6.2	5.8	5.1	4.8	5.0	4.6	4.8	3.9
France	1.5	2.2	2.4	3.2	3.6	3.8	3.9	3.3
Germany	11.4	13.4	14.3	14.6	19.6	25.5	26.2	25.0
Italy	3.0	4.4	4.6	6.0	5.8	6.4	7.1	6.2
United Kingdom	1.3	1.6	1.7	1.9	2.4	2.0	2.2	2.4
EFTA 2/	1.5	1.6	1.9	1.6	1.5	1.6	1.5	1.4
Other developed countries 3/	3.9	5.0	5.2	6.2	5.7	5.6	4.2	5.1
Of which:								
Canada	0.3	0.2	0.2	0.3	0.3	0.3	0.0	0.1
Japan	1.2	1.2	1.5	1.8	1.6	1.6	1.6	1.7
United States	1.8	2.8	2.5	2.7	3.1	2.9	2.6	2.1
Developing countries	3.1	3.3	4.0	4.2	5.0	5.3	5.8	1.9
Of which:								
Brazil	0.1	0.2	0.2	0.2	0.2	0.2	0.0	0.1
China	0.5	0.6	0.7	0.7	1.0	1.1	5.8	1.4
India	0.1	0.3	0.4	0.2	0.2	0.1	0.0	0.2
Economies in Transition 4/	63.5	56.5	54.0	50.5	44.0	37.3	36.8	42.8
CEFTA countries 5/	40.0	34.7	33.9	29.8	27.3	25.0	23.6	23.9
Of which:								
Czech Republic	35.9	29.6	27.8	24.3	21.3	18.2	18.5	18.8
Hungary	1.3	1.7	2.2	2.0	2.1	2.4	2.3	2.1
Poland	1.9	2.4	2.8	2.4	2.5	2.5	2.8	3.1
BRO countries 6/	22.7	20.8	19.1	19.8	16.3	11.9	13.3	18.9
Of which:								
Russia	19.5	18.0	16.6	17.4	13.4	9.8	12.0	17.0
Ukraine	2.4	1.8	1.4	1.6	2.4	1.8	1.3	1.5
Other transition economies	1.5	1.7	1.8	1.6	0.4	0.4	0.0	0.0
Others and nonspecified	0.1	0.1	0.1	0.1	0.1	0.6	0.0	0.0

Sources: Data provided by the Slovak authorities; and staff estimates.

1/ EU-15 for all years.

2/ The European Free Trade Association (EFTA) consists of Iceland, Liechtenstein, Norway and Switzerland.

3/ OECD members as of end-1993 (i.e., excludes CEFTA members).

4/ All formerly centrally planned economies.

5/ The Central European Free Trade Association (CEFTA) includes the Czech Republic, Slovak Republic, Hungary, Poland, Slovenia, Romania and Bulgaria. However, trade with Romania is not included here.

6/ Former Soviet Union countries.

Table A29. Slovak Republic: Merchandise Trade, 1995-2000 1/

(In millions of U.S. dollars, and changes in percent from a year earlier)

	1995					1996					1997					1998					1999					2000				
	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total
Exports, f.o.b.	1,966	2,231	2,128	2,269	8,595	2,065	2,154	2,265	2,340	8,824	2,337	2,554	2,286	2,464	9,641	2,473	2,710	2,735	2,802	10,720	2,300	2,417	2,679	2,833	10,229	2,631	2,959	2,955	3,369	11,914
(percent change)	37.8	33.6	27.3	16.5	28.0	5.0	-3.5	6.4	3.1	2.7	13.2	18.6	0.9	5.3	9.3	5.8	6.1	19.7	13.7	11.2	-7.0	-10.8	-2.0	1.1	-4.6	14.4	22.4	10.3	18.9	16.4
Imports, f.o.b.	1,967	2,257	2,086	2,475	8,786	2,612	2,568	2,675	3,254	11,109	2,879	3,127	2,740	2,931	11,677	2,988	3,312	3,238	3,536	13,074	2,683	2,801	2,647	3,190	11,321	2,790	3,032	3,103	3,887	12,812
(percent change)	29.3	46.4	26.1	29.4	32.5	32.8	13.8	28.2	31.5	26.4	10.2	21.8	2.4	-9.9	5.1	3.8	5.9	18.2	20.7	12.0	-10.2	-15.4	-18.3	-9.8	-13.4	4.0	8.2	17.2	21.8	13.2

Source: Data provided by the Slovak authorities.

1/ Quarterly data may not add to annual totals due to differing exchange rate conversion factors.

Table A30. Slovak Republic: Commodity Composition of Trade,
S.I.T.C. Classification, 1993–2000 1/

(In millions of U.S. dollars)

S.I.T.C. Category	Description	1993	1994	1995	1996	1997	1998	1999	2000
Exports, f.o.b.		5,447.5	6,691.0	8,578.9	8,831.1	9,638.9	10,720.0	10,229.0	11,914.0
0	Food and live animals	299.3	303.3	431.3	331.3	332.1	343.4	306.9	300.1
1	Beverages and tobacco	48.1	62.8	75.0	63.6	65.7	56.9	51.1	51.0
2	Crude Materials	268.0	342.5	437.2	393.4	409.4	382.6	388.7	385.3
3	Fuels and related products	268.1	310.4	362.5	434.3	444.6	375.4	491.0	830.6
4	Animal and vegetable oils and fats	5.6	6.8	9.2	12.1	14.8	19.8	15.3	14.4
5	Chemicals and related products	654.6	862.2	1,132.1	1,096.8	1,039.5	949.7	808.1	941.7
6	Intermediate manufactured products	2,111.0	2,633.8	3,469.1	3,379.5	3,272.6	3,201.4	2,792.5	3,172.7
7	Machinery and transport equipment	1,057.5	1,271.4	1,614.7	2,047.0	2,737.3	3,982.7	4,040.5	4,690.7
8	Miscellaneous manufactured articles	730.5	893.7	1,045.5	1,065.8	1,318.2	1,350.7	1,319.5	1,519.9
9	Other	4.8	4.1	2.3	7.3	4.7	4.1	15.3	7.6
Imports, f.o.b.		6,334.1	6,611.1	8,770.5	11,123.4	11,671.9	13,074.0	11,321.0	12,812.0
0	Food and live animals	464.2	458.7	604.7	670.9	659.2	686.3	583.0	572.8
1	Beverages and tobacco	92.2	85.3	96.1	120.3	122.4	116.3	130.2	106.1
2	Crude Materials	326.5	348.8	525.6	543.7	516.0	500.2	430.2	495.7
3	Fuels and related products	1,324.1	1,273.3	1,535.1	1,861.4	1,826.9	1,534.0	1,460.4	2,236.4
4	Animal and vegetable oils and fats	15.6	19.0	17.6	19.4	21.5	27.3	22.6	30.1
5	Chemicals and related products	720.0	871.7	1,189.2	1,282.1	1,354.0	1,382.1	1,279.3	1,399.1
6	Intermediate manufactured products	956.7	1,113.7	1,560.8	1,700.5	1,929.3	2,343.5	2,071.7	2,266.6
7	Machinery and transport equipment	1,852.8	1,829.3	2,534.9	3,917.6	4,190.6	5,184.2	4,268.0	4,556.3
8	Miscellaneous manufactured articles	571.1	599.8	698.0	995.6	1,046.5	1,294.4	1,075.5	1,148.9
9	Other	10.9	11.5	8.5	11.9	5.5	6.3	0.0	1.8

Table A30 (Concluded). Slovak Republic: Commodity Composition of Trade, S.I.T.C. Classification, 1993–2000 1/

(In percent of total)

S.I.T.C. Category	Description	1993	1994	1995	1996	1997	1998	1999	2000
Exports, f.o.b.									
0	Food and live animals	5.5	4.5	5.0	3.8	3.4	3.2	3.0	2.5
1	Beverages and tobacco	0.9	0.9	0.9	0.7	0.7	0.5	0.5	0.4
2	Crude Materials	4.9	5.1	5.1	4.5	4.2	3.6	3.8	3.2
3	Fuels and related products	4.9	4.6	4.2	4.9	4.6	3.5	4.8	7.0
4	Animal and vegetable oils and fats	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1
5	Chemicals and related products	12.0	12.9	13.2	12.4	10.8	8.9	7.9	7.9
6	Intermediate manufactured products	38.8	39.4	40.4	38.3	34.0	29.9	27.3	26.6
7	Machinery and transport equipment	19.4	19.0	18.8	23.2	28.4	37.2	39.5	39.4
8	Miscellaneous manufactured articles	13.4	13.4	12.2	12.1	13.7	12.6	12.9	12.8
9	Other	0.1	0.1	0.0	0.1	0.0	0.0	0.2	0.1
Imports, f.o.b.									
0	Food and live animals	7.3	6.9	6.9	6.0	5.6	5.2	5.2	4.5
1	Beverages and tobacco	1.5	1.3	1.1	1.1	1.0	0.9	1.2	0.8
2	Crude Materials	5.2	5.3	6.0	4.9	4.4	3.8	3.8	3.9
3	Fuels and related products	20.9	19.3	17.5	16.7	15.7	11.7	12.9	17.5
4	Animal and vegetable oils and fats	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2
5	Chemicals and related products	11.4	13.2	13.6	11.5	11.6	10.6	11.3	10.9
6	Intermediate manufactured products	15.1	16.8	17.8	15.3	16.5	17.9	18.3	17.7
7	Machinery and transport equipment	29.3	27.7	28.9	35.2	35.9	39.7	37.7	35.6
8	Miscellaneous manufactured articles	9.0	9.1	8.0	9.0	9.0	9.9	9.5	9.0
9	Other	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0

Source: Data provided by the Slovak authorities.

1/ Data are on customs basis and exclude 'private' imports.

Table A31. Slovak Republic: External Debt in Convertible Currencies, 1992–2000

(In millions of U.S. dollars; end of period)

	1992 1/	1993 1/	1994	1995	1996	1997	1998	1999	2000
Debt in convertible currencies	2,829	3,380	4,660	5,678	7,667	9,871	11,902	10,518	10,886
Medium- and long-term	2,262	2,665	3,424	3,964	4,721	5,581	7,297	7,812	8,476
By debtors:									
National Bank	554	917	1,181	1,025	876	900	812	588	324
Commercial banks	199	214	275	529	764	680	602	345	317
Government	1,071	1,059	1,083	1,011	844	764	1,698	2,225	3,061
Corporations	438	475	885	1,399	2,237	3,237	4,184	4,653	4,775
Short-term	567	715	1,236	1,714	2,946	4,290	4,605	2,706	2,410
Government	0	0	0	0	0	186	0	6	0
Other	567	715	1,236	1,714	2,946	4,104	4,605	2,700	2,410
Commercial Bank	...	...	...	...	1,424	2,225	2,063	335	367
Enterprise & Other	...	...	...	...	1,522	1,879	2,541	2,365	2,043

Sources: Data provided by the Slovak authorities; and staff estimates.

1/ Excludes debt towards the Czech Republic.