

DISTRIBUTION OF THE COMBINED TOTAL ASSETS OF  
THE BANKING SYSTEM

Table 16

	%		
	1988	1989	1990
Large banks	54	51	48
Medium-sized banks	6	10	15
Specialized financial institutes	3	2	2
National Savings Bank	37	37	35
Total	100	100	100

## THE EXPANSION OF THE BANKS' ACTIVITIES

Beside the establishment of new financial institutes, the range of activities of the already functioning banks also expanded significantly in 1991.

There was a major increase in the number of mainly short-term securities traded to households. Two banks introduced automatic teller services. The credit card system and factoring are also expanding and so is the business of keeping accounts for new ventures.

In the course of the year, the number of business organizations nearly doubled. Partly due to this, the number of (non-household) accounts kept by the financial institutes rose by 36,000, i.e. by 46 per cent. The majority of these accounts were opened with the banks that administer anyway the bulk of the account business. At the same time, the majority of the banks neither collect deposits from, nor lend to households, in spite of being licensed to do so. This is primarily due to the lack of an adequate network of branches.

## THE LIABILITIES OF THE BANKS

In 1990 the banks' equity made up 7.5 per cent of the total liabilities of the banking system, while external leverage accounted for 92.5 per cent.

COMPOSITION OF THE LIABILITIES OF THE BANKING SYSTEM  
AT THE END OF THE YEAR

Table 17

	%	
	1989	1990
Equity	8.0	7.5
Deposits and securities	51.9	48.8
Loans	22.8	25.7
Other	17.3	18.0
Total liabilities	100.0	100.0

Within the total liabilities, the distribution of the banks' equity was the following.

## EQUITY COMPOSITION AT THE END OF THE YEAR

Table 18

	%	
	1989	1990
Share capital	81.3	74.4
Accumulated capital	9.6	9.8
Reserve capital	0	10.1
Risk fund	9.1	5.7
Total equity	100.0	100.0

According to the data of the end of last year, the large banks keep 44 per cent of the total deposits of the banking system, and a further 44 per cent is kept by the National Savings Bank. Since the increase in deposit collection is the most dynamic in the group of medium-sized banks (here their amount doubled within a year), these ratios are expected to change within a few years.

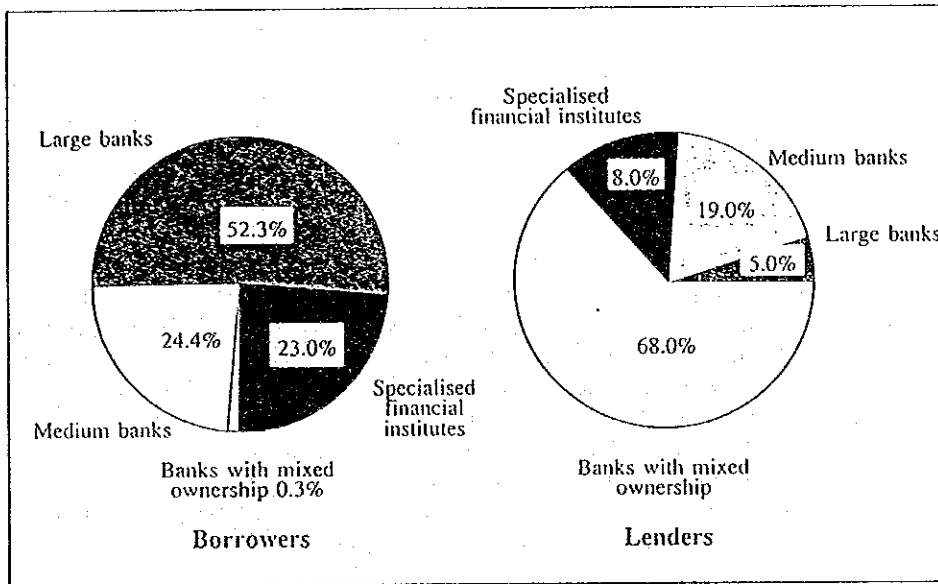
Owing to inflationary expectations, long-term deposits (fixed for more than a year) decreased in all groups of deposit holders, while there was an increase in sight and short term deposits (fixed for less than a year). Simultaneously with the reduction in long term deposits, the stock of debt (not equity) securities increased significantly, as their yield was better than the interest on deposits.

Securities (bonds, teller notes, deposit notes, etc.) as liabilities representing credit rights entailed a share of a mere 6-7 per cent within the total external leverage. Yet the past year saw a marked growth in this area - at the end of 1989 the securities stock amounted to HUF 33 billion, but a year later it exceeded HUF 48 billion.

As far as external leverage is concerned, refinancing loans extended to the banking system have the greatest significance.

In line with the intentions of the National Bank of Hungary the stock of refinancing loans, as compared to the combined total assets of the banks has dropped by the end of 1990 to 15 per cent from 20 per cent at the end of the previous year.

Within the liabilities of the banking system, the role of inter-bank financial movements is growing in importance. In 1990, primarily the large banks appeared as borrowers in the inter-bank money markets. In one kind of inter-bank money market the banks carry out their transactions directly, without involvement of the NBH, at their own risk. In another kind of inter-bank money market mediated by the NBH, the National Bank of Hungary takes on the administration of the transactions, acts in its own name and at its own risk, but charges an interest margin of 0.5 per cent for this. In this latter market, the distribution of borrowings and lendings according to groups of banks was the following.



DISTRIBUTION OF BORROWERS AND LENDERS ON THE INTER-BANK MARKET MEDIATED BY THE NBH, IN 1990 Figure 5

## ASSETS OF THE BANKS

The following table illustrates the ratios of the active lines of business of the banking system to one another.

COMPOSITION OF THE ASSETS OF THE BANKING SYSTEM  
AT THE END OF THE YEAR

Table 19

	%	
	1989	1990
All financial institutes		
Lending	60.2	57.1
Foreign	3.1	4.4
Non-lending type investment	15.6	20.0
Other assets + cash stock	18.5	14.9
Reserve requirement	2.6	3.6
Total assets	100.0	100.0

Loan stocks make up 57,1 per cent of the assets of the banking system. Their share shows a decreasing tendency. The volume of loans extended to entrepreneurs rose by 33 per cent in 1990, its share within total lending also increased somewhat. The business sector continues to be financed mainly by the large banks.

Some 41 per cent of the loans granted to the business sector are long-term and 82 per cent of these loans were extended by the large banks. The medium-sized banks represent only 5 per cent of the total loans maturing over a year. The share of the specialized financial institutes was a mere 1.7 per cent, even though they had originally been set up to finance investment and technical development projects, and new undertakings. Since they do not have "cheap" sources (refinancing loan facilities, licence to keep accounts), they tend to opt for the more profitable short term lending.

SHARE OF THE VARIOUS GROUPS OF BANKS IN FINANCING THE BUSINESS  
SECTOR AND SMALL-SCALE BUSINESSES AT THE END OF 1990

Table 20

Creditors	Loans	
	to business sectors	to small businesses
Large banks	71	26
Medium-sized banks	19	8
Specialized financial institute	2	1
National Savings Bank	8	65
Total	100	100

The financing of small-scale ventures is concentrated partly on the large banks but in the main on the National Savings Bank. The reason behind this is that they have the necessary network of branches and offices at their disposal and hence are able to serve their customers with relative ease. Households are primarily financed by the National Savings Bank.

In line with the government's economic policy, the banking system has also contributed significantly to the privatization process, indicated by the 131 per cent growth in lending to small-scale entrepreneurs. Privatization is also assisted by special credit facilities discussed under Chapter 9 of Part I.

## MARKET INTEREST RATES

The interest income of the banking system amounted to HUF 70.6 billion in 1990. In the course of the year, market rates increased continuously, owing partly to rising inflationary tendencies and partly to the high interest margins. Another

contributing factor was that a significant part of the sources of the banks come from households, the deposits of which are subject to a withholding tax. Therefore household deposits are among the most expensive sources of the banking system today. (The interrelations between interest rates and inflation are discussed under Part III, Chapter 3.)

DEVELOPMENT OF MARKET LENDING, DEPOSIT AND REAL INTEREST RATES IN 1990

Table 21

	January	December
	Weighted average	
Lending rates		
Maturity within one year	24.8	32.1
Maturity over a year	18.2	27.5
Rediscounting of bills	23.5	32.4
Deposit rates		
Fixed for less than a month	19.3	21.0
Fixed for less than a year	20.5	26.1
Fixed for more than a year	22.1	28.7
	Mathematical average	
Development of real interest rates*		
Lending within a year	6.3	0.0
Lending over a year	0.7	-3.5
Deposits maturing within a month	1.6	-8.4
Deposits maturing within one year	2.6	-4.5
Deposits maturing over a year	4.0	-2.6

\* Deflator: average monthly price index of industrial sales relative to the same period of the previous year.

#### CAPITAL ADEQUACY OF THE BANKS

The capital adequacy of the banks – that is the ratio of the sum total of the prime capital, accumulated capital and capital reserve to the total assets – developed in the following way.

DEVELOPMENT OF CAPITAL ADEQUACY IN A BREAKDOWN BY GROUPS OF BANKS (end of the year data)

Table 22

	HUF billion					
	Large banks		Medium-sized banks		Specialized financial institutes	
	1989	1990	1989	1990	1989	1990
1. Share capital	39.6	41.3	20.4	25.0	6.1	15.3
2. Accumulated capital	8.6	8.1	1.1	2.8	0.2	0.7
3. Reserve capital	–	5.2	–	0.3	–	0.3
4. Total equity	48.2	54.6	21.5	28.1	6.3	16.3
5. Total assets	640.3	781.2	136.3	238.1	22.3	43.0
Capital adequacy (4:5), in percentage	7.5	7.0	15.8	11.8	28.3	37.9

Hungarian regulations presently in force are not yet fully in line with all the regulations generally accepted in international practice aimed at facilitating safe lending practices and capital adequacy. In addition, the capital adequacy index does not include those liabilities of the banks that are not presented in their balance sheets (such as guarantees). The regulations pertaining to equity and capital adequacy to be included in the new Bill on Financial Institutes will,

following BIS recommendations, be in line with internationally accepted regulatory practice. It will prescribe the setting aside of weighted risk funds in accordance with the type of the assets and require an asset-to-equity ratio adequate to this state in order to ensure safe operation of the banking system.

The total net assets of the banking system can be qualified as satisfactory on the whole, but the accumulated risk funds are at a relatively low level, particularly in the case of the large banks.

#### PROFITABILITY OF THE BANKS

In 1990, the profits generated by the banking system increased by HUF 12.9 billion, i.e. 26 per cent. The profits of the large banks show a nominal increase of 18.8 per cent over the previous year. The growth in the case of medium-sized banks was 66.6 per cent, while the profits of the specialized financial institutes reached twice the profits of 1989. The increase in the number of banks and the initial, rapid boom in the operation of recently founded banks played a decisive role in the development of the total profits of the latter two groups. The changes in nominal and real terms in their profits are shown in the following table.

DEVELOPMENT OF PROFITS IN A BREAKDOWN BY BANKS

Table 23

	1989	1990	Index
	HUF million		$\frac{1990}{1989}$
Large banks	25,893	30,748	118.8
Medium-sized banks	7,019	11,694	166.6
Specialized financial institutes	1,124	2,298	204.4

The profits of the banking system corresponded to 3.96 per cent of the total assets at the end of 1989, and to 3.90 per cent at the end of 1990.

The development of the profits-to-equity ratio in the various groups of banks is shown in the following Table.

PROFITS TO EQUITY RATIO OF THE BANKING SYSTEM

Table 24

Profits as per cent of equity	%	
	1989	1990
Large banks	53.7	56.2
Medium-sized banks	32.6	41.6
Specialized financial institutes	17.8	14.1

In 1990, the structure of expenditures and revenues of the large banks developed as follows.

THE STRUCTURE OF EXPENDITURES AND PROCEEDS OF THE LARGE BANKS IN 1990

Table 25

Expenditures	Distribution %	Proceeds	Distribution %
Interest paid (of this, to NBH: 23.2)	49.3	Interest received (of this, from NBH: 1.3)	71.4
Commission paid	9.6	Commission received	9.0
Wage costs	2.3	Cost compensation	7.5
Other costs	19.9	Other revenues	12.1
Profits	18.9		
Total	100.0	Total	100.0

The proportion of costs increased in all groups of banks by 4–5 per cent, in which high inflation played a substantial part. In the case of the large banks, the expenditure item that showed the greatest increase (HUF 29 billion, 57 per cent) was the interest paid. (The interests paid to the NBH increased by HUF 9 billion, 30 per cent). Another significantly growing item is that of commissions paid, where the difference in comparison to the previous year was HUF 7 billion, 73 per cent. Operating and wage costs increased by more than 90 per cent.

The development of profits was primarily determined by the interest income.

#### COMPONENTS OF THE 1990 PROFITS OF THE BANKING SYSTEM

Table 26

	HUF billion
Interest income	70.6
Income from commissions	5.9
Income total	76.5
Operating costs	-13.3
<b>Profit</b>	<b>63.2</b>

The net interest income corresponds to an interest margin of 6–7 per cent relative to the average lending of the banks.

In 1990, the Hungarian banking system made significant progress towards properly functioning as the banking system of a market economy, if we examine its structure, banking operations, services or technical equipment.

## 2. The 1990 Securities Market Processes

### THE MARKET OF REGULARLY ISSUED BANK SECURITIES

Primary  
Market

Although household deposits increased by 18.5 per cent in nominal terms in 1990, the real value of these deposits decreased owing to the rate of inflation exceeding this growth rate. Hence other ways of obtaining funds increased in importance for the banks.

With respect to the securities regularly issued by the banks, it was the *deposit note* maturing over a year that enjoyed particular popularity with households due to the fact that, in 1990, these papers ensured a 2–3 per cent higher yield than the interest on deposits fixed for a year. They became all the more attractive through the fact that interest rates on them were raised not only upon new issues but also with a retroactive effect and the banks re-purchased these papers at relatively favourable conditions before maturity. In 1990, the stock of deposit notes with a maturity of one year increased from an opening stock of HUF 15 billion to double that figure, HUF 30 billion. (Owing to the abolition of the interest ceiling, a further increase of these stocks is expected for 1991.)

In addition to various interest bearing securities maturing within a year, *discount notes*, also enhancing the banks' short term liabilities, appeared.

### THE MARKET FOR TREASURY PAPERS

In 1990, the state budget regularly issued two types of securities. One was the interest bearing *treasury note* sold basically to households. Even though this paper offered one of the highest interest rates, its opening stock of HUF 1.7 billion increased only to HUF 2.3 billion. The structure of issuance also developed

in an unfavourable manner. Nearly three times as many treasury notes were sold of the type fixed for three months as of those fixed for six months and four times as many as of the ones fixed for 9 months. The time horizon of money supply shortened greatly due to inflationary expectations.

The other paper financing the budget is the *discount treasury note* sold to enterprises, financial institutes and budgetary institutions (detailed under Part I, Chapter 7, Financing the Budget and Part III, Chapter 3, Open-Market Operations of the National Bank of Hungary; here only the main data are summarized). The sales of treasury notes with a maturity of one year increased by 90 per cent relative to the previous year; discount treasury notes maturing in 30 days accounted for 51 per cent of the sales; those maturing in 90 days for 49 per cent of the sales. In the last quarter of the year the maturity structure improved, with issues shifting in the direction of longer term papers. This could be achieved since the 90-days paper ensured an approximately 2 per cent higher average yield and since the National Bank of Hungary announced that lots would be drawn among the holders of this paper. Another advantage of the 90-days paper is that the NBH ensures the possibility of discounting before maturity. Although this paper plays only a marginal part in financing the budget for the time being, its current yield has an indicative role in the money market.

#### BOND MARKET

In the early and mid-eighties, a significant interest was expressed in bonds of fixed and compound interest issued by enterprises and local authorities. The issue of these bonds ceased by the end of the decade owing to the acceleration of inflation and the lack of medium and long term capital supply. At the same time, bond types better adjusted to creeping inflation, and offering variable interest rates or compound interest also appeared.

The stock of bonds held by individuals decreased further in the course of 1990, as the fall in the price of fixed interest bonds continued with the rise in inflation, coming down to 60-70 per cent. Anticipating further losses, bond holders tried to sell their papers at the earliest opportunity. With their forward bond sales, the banks, however, managed to draw investors back into the financing of the bond market. In this way, individuals, managed to convert their long term papers into short term ones and the banks were also relieved of an excessive stock of bonds.

#### STOCK MARKET

In 1990, the stock market was the most dynamically growing part of the securities market (even though its magnitude is still meagre in comparison to the stock markets of market economies). In the course of the year, eight companies (3 in commerce, 1 tourism, 1 in computer techniques, 1 in photo services and film sales, 1 brewery and 1 investment company) went public, issuing shares of a total nominal value of HUF 4.3 billion valued by the market at HUF 12.3 billion (corresponding to approx. USD 200 million at the exchange rate at the end of the year).

There was significant foreign demand for the shares issued, which had a positive impact on the confidence of domestic investors in the shares. Almost all issues were multiply oversubscribed.

The decisive event of the securities market and of secondary trade was the re-opening of the Budapest Stock Exchange on June 21, 1990. (The Stock Exchange was closed at the end of the 1940s.) The approximately 400 bonds and 50 shares traded at the time of its opening were automatically taken to the Stock Exchange. Naturally, the turnover of the Stock Exchange – in spite of the considerable growth experienced – is still very modest compared to the level of the market economies, its functioning has nevertheless an importance the “learning process” for a market economy, including the development of public thinking in this direction.

During the first six months of its operation, shares of a total nominal value of 8.4 billion were introduced to the Stock Exchange which, when calculated at the price at issue, amounted to HUF 23.6 billion (USD 384 million). On December 31, this amount was HUF 22.7 billion at current prices of that time, indicating the declining price trend that had evolved at the Stock Exchange by the end of the year.

The total turnover of the Stock Exchange was HUF 3 billion last year. The development of turnover was characterized by extreme fluctuations owing to uneven supply and keen demand following issues. The value of the daily average trade moved between HUF 5 and 15 million; the number of transactions per day was between 30 and 100.

The fluctuating turnover and the decline in prices can be attributed to certain unfavourable domestic processes. With respect to a wide range of shares, the long term price-increasing impact of inflation can be demonstrated only in economies exhibiting economic growth. The shrinkage of the economy due to the reasons discussed under Part I, Chapter 3 of the present Report could not have a favourable impact on trade in the securities market. This is also expressed in the decline of stock exchange prices. In retrospect it can also be seen that prices at issue were set too high in the case of some of the newly introduced shares (and this tendency continued throughout trading).

### 3. Hungary's Relations with International Financial Institutions

Hungary joined the International Monetary Fund on May 6, 1982. Her quota was then determined as SDR 375 million, raised to SDR 530.7 million in the course of the quota review of 1983. Based on the quota, Hungary had 5,557 votes until the end of 1990.

International  
Monetary  
Fund

At the beginning of 1990, Hungary conducted intensive negotiations with the IMF in preparation for a new, one-year stand-by agreement. This loan, amounting to SDR 159.21 million (USD 206 million), was approved on March 14, 1990. The loan matures in five years, repayment is due within five years, following a grace period of three years. The interest on the loan determined yearly in view of the IMF liabilities is presently 9.2 per cent. The installments of the loan scheduled for 1990 were drawn in order.

The new government formed after the first multi-party elections confirmed the provisions of the agreement and expressed its intention of concluding a three-year extended agreement with the Fund. The negotiations to this end began in November-December 1990, linked with the Hungarian application for financing the surplus costs arising from the change in oil prices. The application for compensatory financing was approved on January 16, 1991 at a value of SDR



348 million (USD 480 million), of which SDR 226.2 million (USD 310 million) was called.

The agreement on three-year extended fund facilities was approved on February 20, 1991. The amount of this loan is SDR 1,114 million (USD 1.5 billion). Its purpose is to enhance implementation of the country's economic stabilization and restructuring.

Entrusted by the Government, the National Bank of Hungary duly met its interest and principal payment obligations outstanding against the International Monetary Fund. On December 31, 1990, Hungary's total debt against the Fund was SDR 231.7 million.

**International  
Bank for  
Reconstruction  
and  
Development**

Hungary joined the World Bank in 1982. From mid-1983 till December 31, 1990 altogether 24 loan agreements were concluded with a total value of USD 2,357.4 million.

**LOAN AGREEMENTS CONCLUDED WITH THE WORLD BANK IN 1990**

Table 27

Name of programme	Borrower	USD million
Financial System Modernization	National Bank of Hungary	66
Structural Adjustment Loan (SAL)	National Bank of Hungary	200
Integrated Agricultural Export Programme	National Bank of Hungary	100
Telecommunications Development Programme II.	Hungarian Telecommunication Co.	150
<b>Total</b>		<b>516</b>

Of the four projects, the Structural Adjustment Loan is of the greatest importance: it can be used to finance current imports and to assist in the implementation of the medium-term economic policy programme upon which the loan is conditional. The primary objective of the programme is to establish a competitive market economy or rather to build up a suitable economic environment. The first part of the loan (USD 100 million) is already drawn. The EXIMBANK of Japan extended a co-financing loan of JPY 31 billion (approx. USD 200 million) to SAL, of which USD 100 million was immediately called. Since Hungary met the requirements, the second tranche (USD 100 million) of the loan was also extended.

Under the new co-financing programme of the World Bank (ECO), there was a USD 200 million bond issue in the fixed-interest-bearing Euro-bonds market. This USD 200 million was drawn in 1990.

Hungary has drawn loans of USD 268.1 million from the World Bank. With this sum Hungary's total debt to the World Bank rose to USD 1,401.9 million.

In 1990, USD 92.7 million of the World Bank loans were repaid. The total amount of repayment so far was USD 251.3 million.

Hungarian companies were awarded contracts worth USD 1 million in the course of international bidding competitions financed by the World Bank. The total value of contracts won abroad under World Bank financed tenders is USD 151.1 million.

**European  
Economic  
Community**

To support the economic restructuring process and to ease transition to a market economy, Hungary and the European Economic Community reached an agreement on the extension of a credit line of ECU 870 million (USD 1 billion) in March 1990. The credit line will be disbursed in three installments, each over five years.

Drawing of the first installment of ECU 350 million was made possible in April, after signing the agreement. The disbursement of the second tranche of the loan (ECU 260 million) was approved in January 1991.

The European Investment Bank was officially authorized by the European Community to extend loans up to a value of ECU 1 billion to Hungary and Poland to finance projects enhancing the development and the restructuring efforts of these countries.

European  
Investment  
Bank

The European Investment Bank and the National Bank of Hungary signed a framework agreement that lays down the general conditions of cooperation.

In 1990, three loan agreements were signed. The Hungarian Electricity Works signed an agreement on ECU 15 million for an energy rationalization project, the Hungarian Telecommunications Company concluded an ECU 80 million loan for the implementation of the telecommunication programme and Inter-Europa Bank Ltd. received a credit line of ECU 25 million to finance various investment projects. As yet, no drawings have been made in 1990 from the credit lines.

Francois Mitterrand, President of the Republic of France, proposed the establishing of a European Bank for Reconstruction and Development (EBRD). His motion was approved by the Council of Ministers of the European Community in November 1989 and endorsed by the Council of Europe at its December session.

European  
Bank for  
Reconstruction  
and  
Development

The European Community's initiative is aimed at supporting the political and economic changes taking place in the countries of Central and Eastern Europe, which is indicated by the fact that representatives of the beneficiary countries were involved in the preparatory negotiations on the establishment of the EBRD. Membership of the Republic of Hungary was approved by Parliament in November, 1990. The EBRD commenced its operation in April, 1990.

The purpose of the EBRD is to support the process of transition to an open, market-oriented economy, to promote the development of the private sector and entrepreneurial initiative in East-Central European countries which have committed themselves to a multi-party democracy, pluralism and the fundamental principles of the market economy. The EBRD intends to facilitate the implementation of structural and sectoral reforms taking place in these countries partly through infrastructural investments and partly by directly financing the private sector.

The international agreement determines the equity shares of the individual founding members. The combined share of the beneficiary countries is 11.9 per cent, that of Hungary within this is 0.79 per cent.

The EBRD as a multilateral financial institute will finance its operations mostly out of loans obtained on the money markets and to a minor extent from its own capital. It is expected that the EBRD as a borrower financial institute will acquire the best debtor rating (in view, partly, of the range of member states and partly of the high capital share paid up); hence it will be able to lend on favourable but not concessional (aid-type) terms.

Hungary joined the IFC in 1985. Her prime capital share paid so far amounts to USD 5,216,000. Hungary, together with the other member states, obtained a respite until August 1991 for the payment of the last installment of USD 963,000.

International  
Finance  
Corporation

Several joint ventures have been established with the participation of the IFC in Hungary. Namely: Unicbank Ltd., Tetrapak Hungaria Ltd., Agroferm Ltd.,

Dexter Instruments Ltd., Salgótarján Glass Wool Ltd., First Hungary Fund Ltd., Dunamont Ltd., First Hungarian Investment Consulting Ltd.

In addition to the above, the IFC, through its experts, provided considerable assistance in drafting Act VI of 1990 on the public offering and trade of certain securities and on the securities exchange. Upon the invitation of the Hungarian government, the Foreign Investment Advisory Service (FIAS), run jointly by the IFC and the Multilateral Investment Guarantee Agency (MIGA), has prepared a study entitled "Policy on Direct Foreign Investment in Hungary" by July 1990.

In 1991, the IFC intends to set up an independent representation office in Hungary which will open new prospects for cooperation.

**International  
Development  
Association**

In 1985 Hungary joined, as a donor country, the IDA, which gives aid-type loans to the poorest developing countries. IDA funds are replenished by the donor countries from time to time. Hungary took part in the 7th and 8th replenishments with a share of 0.11 per cent and also participated in the preparatory talks for the 9th replenishment. IDA's Board of Governors approved the principles and procedures elaborated during the series of talks held in 1990. The Hungarian Government gave its approval to the country's participation in the 9th replenishment of the IDA funds in September 1990. Hungary's payment obligation in relation to the 9th replenishment amounts to HUF 838 million. This amount corresponds in forint terms to the 1989 real value of the country's payment obligation undertaken for the 8th replenishment. The amount will have to be paid in forints in three equal installments between 1990 and 1992 and will have to be converted into convertible currency in accordance with the lending operations of IDA in 8 to 10 years.

IV. National Bank of Hungary

- Monthly Report -

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The December 1992 Report  
of the National Bank of Hungary



## Summary

The report is based on data and facts of the first eleven months of 1992, but available data and information from December 1992 and January 1993 are also included.

\*

*The total output of the Hungarian economy in 1992 was smaller than in the preceding year, but the drop was more moderate than in the year 1991. It is estimated that the GDP in real terms decreased by about 5% over 1992. This decline was more moderate than in 1991 (11.9%).*

*The decrease in industrial production, experienced for several years, stopped in 1992. Seasonally adjusted monthly production indices fluctuated around the December 1991 level. However, production over the first eleven months of the year fell 11% below that of a year earlier. At the same time, industrial sales decreased by 7.4%, less extensively than production, with domestic sales falling by 8.6%, while deliveries for export purposes were down 3.2% only. This means that it was no longer the limits of external but rather those of domestic demand that hindered industrial production.*

*Agricultural production and sales fell substantially. Within the decrease of total production, that of the cereal crop, amounting to 63% of the harvest in the preceding year, was particularly great. Besides market losses in the east, which took place in the preceding year, the slackening of domestic demand, the drought and temporary uncertainties due to changes in the ownership structure also played a role in this. Agricultural incomes fell very substantially.*

*The results of various services increased concurrently with the drop in industrial and agricultural output just indicated. These business activities are taking an increasing share in the generation of gross domestic product.*

*Unemployment grew by 63.3% in 1992 to 663 thousand people by the end of the year. The unemployment rate increased to 12.3% from 7.5% a year earlier.*

*Inflation slowed in 1992. Domestic industrial sales prices – following the 31.9% increase of 1991 – went up by 9.7% in 1992. In 1992 the consumer price level rose by 23%, much slower than the 35% in 1991, i.e. it remained in the 20–25% range that had been forecast. Just like in previous years, there was a single, major price increase in January 1993 diminishing over the following months, brought about by central measures taken at the beginning of the year. Following the 1.1% increase in December 1992, consumer prices were up 6.8% in the first month of 1993. This surge was more pronounced than the 3.2% in January 1992. The price increase was caused by the introduction of the dual-rate value-added tax – representing a tax hike –, by excise increases, by the rise of certain administered utility prices and by market price increases.*

*In foreign trade, according to preliminary data, the value of exports was Ft 10.7 billion in 1992, while imports amounted to Ft 11.1 billion. The value of exports exceeded that of the preceding year by 7.4%, while imports were roughly unchanged. The import surplus (US\$ 356 million) was much less than in the*



preceding year (US\$ 1.1 billion). Excluding items not involving payments, there was a US\$ 91 million export surplus. The growth of exports substantially lessened in the last period of the year.

Over eleven months there was a US\$ 520 million surplus in the current account. The main factors contributing to this result were the surpluses of trade-related payments, tourism, unrequited transfers, services and other current payments on the one hand, and the deficits of the transport of goods and interest payments, on the other hand. There were US\$ 1.2 billion of direct foreign investments by the end of November, 7.9% more than a year earlier. Gross debt, as of November 30 (US\$ 22.1 billion) was about half a billion less than at the end of 1991. Net debt, at the same time, decreased by US\$ 1.4 billion to US\$ 13.2 billion at the end of November. Foreign exchange reserves increased by US\$ 0.8 billion, 20.7% to US\$ 4.8 billion at the end of November. These reserves are sufficient to cover imports for six months.

The budget deficit in 1992 amounted to Ft 197.1 billion, the balance of Ft 793.3 billion of revenues and Ft 990.4 billion of expenditures. This is 2.8 times the originally projected Ft 69.8 billion budget deficit, but 0.7% less than the (Ft 198.4 billion) limit set by the supplementary budget approved on November 10. The deficit was basically determined by a shortfall in revenues, caused by the economy performing worse than expected. This, together with the great number of bankruptcies and liquidations filed, reduced payments of profit taxes and other public debts substantially. Additionally, the proliferation of private enterprise is not yet being accompanied by an appropriate development of tax payment morals. The central budget had a deficit of Ft 17.3 billion in January 1993, which was Ft 1.9 billion less than the January 1992 amount.

Gross savings of households, including accrued interest, expanded by Ft 284.1 billion (32%), their debt, including the end-of-year interest debits, were up Ft 9.1 billion (3.7%), their net savings increased by Ft 275 billion (42.7%). The background of increased savings includes forming provisions due to fears from the uncertainties of livelihood, saving for specific purposes and already extends also to accumulating capital not yet turned into business investments partly because of an undecidedness about profitable business opportunities and partly because of the still inadequate amounts of capital and the relatively high yield of certain securities.

In 1992 the amount of bank lending to the entrepreneurial sector increased in nominal value, but in real terms, the credit stock at the end of 1992 was smaller than a year earlier. Banks were discouraged from extending credit by the poor financial situation of a number of companies, while businesses were reluctant to raise credits due to the still high real rates of interest. The increasing amount of borrowing by enterprises directly abroad also exerts a moderating effect on lending by domestic banks.

Broad money (M2) expanded by some 28% in 1992, based on preliminary estimates, faster than the expected nominal growth of the GDP. Some 60% of the growth of the money supply took place in the money stock of households, which, as explained above, increased their savings. The increase of enterprise and small business deposits made up about a quarter of the growth of the money supply. The expansion of their money stock was brought about, among others, by the extra demand for money generated by the intensive increase in the number of economic organizations and, as a reaction to bankruptcy proceedings, the strengthening effort for sustaining liquidity.

On February 12, 1993, the National Bank of Hungary devalued the forint against the basket of foreign currencies by 1.9%.

9

On its February 18 meeting, the government – in order to promote privatization – amended regulations making the conditions for Existence loans more favorable.

## A Review of Major Economic Processes

**Production** *Industrial output\** was 11% less, at constant prices, between January 1 and November 30, 1992 than a year earlier. The seasonally adjusted monthly industrial output index was 3.8% lower in November than in October, and it roughly equalled that for December 1991.

*Industrial sales* in these eleven months decreased by 7.4%, compared to a year earlier, i.e., less extensively than production. Within this decrease, domestic industrial sales were down 8.6% while sales for export purposes were 3.2% lower than a year earlier, meaning that – unlike in 1991 – the decrease of production was a result of shrinking domestic, rather than external demand.

### INDUSTRIAL PRODUCTION AND SALES AT CONSTANT PRICES (same period of preceding year = 100.0)

Period	Production	Sales for		Total sales
		domestic	export	
The year 1990	90.4	93.2	83.5	90.5
The year 1991	80.9	81.6	77.1	80.5
First half of 1992	83.4	85.4	94.6	87.4
First three quarters	86.9	89.4	96.0	90.9
January–November	89.0	91.4	96.8	92.6
November	95.5	98.8	93.5	97.5

A detailed analysis indicates that the eleven-month output indices of the 62 industrial subsectors varied between 47% and 150%. There were increases of production in six subsectors (crude oil and natural gas production, oil refining, the sawn plywood industry, the vegetable oil industry, the beer industry and the soft drink industry). At the same time, the output of precision engineering and the silk industry was not even half the level of a year earlier. There were 30–40% decreases of production in ferrous metallurgy, the manufacture of vehicles, fertilizers, pesticides, timber for construction, wool, cottage and handicraft industries.

### PRODUCTION IN THE MAJOR INDUSTRIAL SECTORS IN 1992, AT CONSTANT PRICES (same period of preceding year = 100.0)

Sector	First half	First three quarters	11 months
Mining	73.7	76.5	80.3
Electricity	87.4	88.9	88.0
Metallurgy	65.3	69.1	72.9
Engineering	63.8	67.7	71.0
Construction materials industry	76.6	80.8	84.8
Chemical industry	77.5	82.6	85.4
Light industry	76.4	80.0	82.5
Food industry	88.4	88.3	87.3

\* The data are based on the full-scope monitoring of a part of economic entities and on sampling of others. Sampling provides a reliable source of information on summary data but is unreliable for detailed data. Therefore, data showing sectoral details are based only on information from entities under full-scope monitoring.

The decline of *domestic industrial sales* lessened in the majority of subsectors, relative to the first half of the year. Domestic demand for construction materials, pharmaceutical products, rubber products, sugar, wine and soft drinks increased in October and November. The greatest reduction in the 11-month period has occurred in the domestic sales of metallurgy.

**DOMESTIC INDUSTRIAL SALES IN 1992, AT CONSTANT PRICES**  
(same period of preceding year = 100.0)

Sector	First half	First three quarters	11 months	%
Mining	73.7	76.1	81.9	
Electricity	91.9	92.0	91.3	
Metallurgy	48.5	55.2	59.0	
Engineering	58.0	64.6	66.9	
Construction materials industry	75.0	77.1	81.9	
Chemical industry	80.8	85.4	87.6	
Light industry	68.3	72.4	75.6	
Food industry	96.5	96.3	95.2	

Industrial deliveries for export purposes increased in three important sectors, while there were decreases in three others. The fall in deliveries for export purposes by the engineering sector was determined by the 25% and 50% reductions in sales by the vehicle industry and precision engineering, respectively. Export-oriented subsectors of the chemical industry delivered only about two thirds to three quarters of the amount of a year earlier for sale abroad. Exports by the meat industry, which are the determining factor in food industry sales abroad, fell by 38.5%, while the poultry and canning industries delivered about a third less than a year earlier for export purposes.

**DELIVERIES FOR EXPORT PURPOSES IN SOME MAJOR INDUSTRIAL SECTORS IN 1992, AT CONSTANT PRICES**  
(same period of preceding year = 100.0)

Sector	First half	First three quarters	11 months	%
Metallurgy	108.8	109.8	116.2	
Light industry	113.3	113.4	112.8	
Construction materials industry	150.1	146.6	140.8	
Chemical industry	86.8	89.3	89.7	
Engineering	85.5	83.4	86.8	
Food industry	76.3	81.4	78.7	

Sales of *agricultural products* – to wholesale purchasers, covered by statistics – amounted to only about two thirds of the volume of a year earlier. This rate of decline is equally characteristic of crops and products of animal husbandry. Among crops and horticultural products, sales fell especially with respect to vegetables (67.5%) and fruits (45.4%). Wholesale purchases of pigs and sheep for slaughter plunged to about a half of those of the previous year.

(The above data do not include products sold directly on marketplaces by producers. Thus, agricultural sales are likely to be higher than what is shown here, but the decline is still very significant.)

Cereal production shrank considerably, largely as an impact of unfavorable weather.

CEREAL PRODUCTION OVER THE YEAR

Denomination	(in millions of tons)		
	1990	1991	1992*
Wheat	6.2	6.0	3.4
Corn	4.3	7.5	4.3
Total	12.3	13.4	9.7

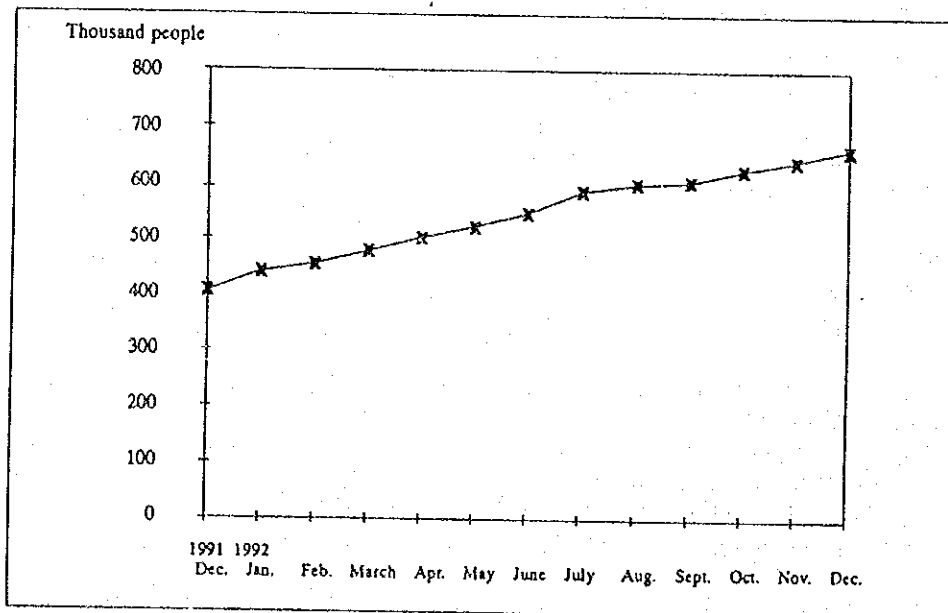
\* Preliminary data.

In addition to the 42-43% fall of production in the two major cereal types, 1992 crop results of rye and winter barley were also lower than a year earlier. At the same time, among field crops harvested in the fall, potato production was up 28%.

Statistically covered *transport* of goods, measured in ton-kilometers, between January 1 and November 30, 1992 declined by 16% in comparison to a year earlier. Domestic transport fell by 28.7% within this amount, the reduction was 16.7% over a year in import-related transport, while transport for export purposes was up 6.4%. Transits and transport fully outside the country decreased by 10.4% over a year. Long distance and local transport of people (measured in passenger kilometers) decreased by 6% and 7.6%, respectively, relative to a year earlier. The performance of private transport businesses most probably increased in comparison to the level of a year earlier, but the overall performance still falls short of it.

Unemployment

The number of registered unemployed increased from the 406 thousand of December 1991 by 257 thousand (63.3%) during 1992 to 663 thousand at the end of the year. The unemployment rate rose from 7.5% a year earlier to 12.3%.



THE NUMBER OF REGISTERED UNEMPLOYED IN 1992

The intensity of unemployment varies considerably from region to region. Within the 12.3% December national rate, the most unfavorable rate (22.4%) occurred in Szabolcs-Szatmár-Bereg County, and it was also very high in Nógrád County (19%) and in Borsod-Abaúj-Zemplén County (18.6%). Below-average rates were measured in Pest County (10.1%) Zala County (9.3%), Vas County (8.4%) and Győr-Moson-Sopron County (8%). The lowest unemployment rate (5.7%) occurred in Budapest, where one fifth of the economically active population lives.

The gravity of the situation is especially well indicated by a comparison of the supply and demand for labor force, which, based on the latest known data, tells us that there were less than four vacant positions for every 100 unemployed persons:

#### SUPPLY AND DEMAND FOR WORKERS IN DECEMBER 1992

Denomination	Number of registered vacant positions	Number of registered unemployed persons	Vacant positions per 100 unemployed
Blue-collar employees	20,037	554,163	3.6
White-collar employees	4,060	108,864	3.7
Total	24,097	663,027	3.6

In 1992, inflation, was much more moderate than in the preceding year and its course corresponded to prognoses.

Prices

The price level of *domestic industrial sales* increased by 9.7% in 1992, following a growth of 31.9% in 1991. The monthly rate of increase averaged around 1%.

#### DOMESTIC INDUSTRIAL SALES PRICE INDICES AS PERCENTAGES OF THE PREVIOUS MONTH

Month	1990	1991	1992
January	110.0	108.4	101.3
February	102.0	103.6	100.8
March	101.7	101.7	101.4
April	102.3	100.6	100.9
May	101.2	100.6	101.1
June	100.4	100.5	100.7
July	100.9	100.9	100.7
August	101.9	101.1	101.4
September	100.7	100.0	101.1
October	101.8	99.9	101.9
November	109.2	100.6	101.0
December	102.5	100.5	100.3

While price levels of primary materials and manufactured products increased mainly in the first half of the year, energy prices began to go up in August. The growth of food prices was substantial throughout the year.

*Agricultural sales* (procurement) prices were up an average 8.9% in the first eleven months of the year, relative to a year earlier. Within this increase, crops and horticultural products became an average 4% more expensive while the prices of livestock and animal products rose by 11.5%.

The level of *consumer prices* in 1992 exceeded that of 1991 by 23% on average, which was within the projected 20–25% range. This was much less than the 35% increase in 1991. The December 1992 level of prices exceeded that of a year earlier by 21.6%.

Within the 23% average consumer price index in 1992 it was the price of household energy that grew the most rapidly (by 43.2%). The smallest price increase (14.3%) occurred among durable consumer goods.

#### THE CONSUMER PRICE LEVEL IN 1992 AND IN DECEMBER 1992

Major groups of goods	Index (%)	Index (%)	Index (%)
	1992 1991	Dec. 1992 Dec. 1991	Dec. 1992 Nov. 1992
Food	119.4	127.6	101.7
Alcoholic beverages, tobacco products	119.6	123.3	100.4
Clothing	123.0	117.4	101.3
Durable consumer goods	114.3	111.7	100.9
Household energy	143.2	117.4	100.5
Other items, fuel	127.2	122.8	101.2
Services	126.0	119.0	100.7
Total	123.0	121.6	101.1

In 1992 the monthly growth rate of consumer prices was lower in each month until July than a year earlier, it became higher from August to November, then it was lower again in December and substantially higher in January 1993 than a year before.

#### CONSUMER PRICE INDICES AS PERCENTAGES OF THE PRECEDING MONTH

Month	1990	1991	1992	1993
January	107.7	107.5	103.2	106.8
February	105.3	104.9	102.7	
March	102.7	103.7	101.9	
April	102.5	102.4	101.3	
May	100.8	102.2	101.5	
June	100.4	102.1	100.6	
July	102.6	100.9	100.3	
August	102.9	100.2	100.8	
September	101.5	101.5	102.4	
October	101.5	101.3	102.5	
November	102.1	101.4	101.6	
December	101.7	101.6	101.1	

Due to central measures, for years there has been a regular, one-time, major consumer price increase at the beginning of the year, to be followed – as shown in the table above – by a moderation of the growth rate. The price hike at the beginning of the year took place this time, as well: in January 1993 consumer prices rose by 6.8% following the 1.1% increase in the preceding month. (This is more than the 3.2% increment a year earlier.) Of the January 1993 price increase 2.6% was due to the introduction of the dual rate value-added tax – representing a tax hike – as of January 1, 1993, 1.5% was attributable to raising

certain excises (such as liquor, beer, tobacco, gasoline), and the prices of some public services (postal service, TV subscription, water and sewage, transport), while market price increases were made up 2.6%.

Price increases in one month in certain major groups of goods varied as follows:

#### CONSUMER PRICE LEVEL IN JANUARY 1993

Major groups of goods	Index (%)
	<u>January 1993</u> December 1992
Food	109.8
Alcoholic beverages, tobacco products	106.9
Clothing	100.9
Durable consumer goods	101.5
Household energy	104.4
Other items, fuel	106.3
Services	<u>108.5</u>
Total	106.8

According to preliminary data, the value of 1992 exports was US\$ 10.7 billion, 7.4% more than in 1991. Imports, at the same time, amounted to US\$ 11.1 billion, equalling those of the preceding year. The increase of exports experienced in the last year slowed down considerably in the final period of the year. (While in the first half of the year exports exceeded those of a year earlier by about 16%, this excess was 7% in the fourth quarter.)

External  
Trade

The US\$ 356 million import surplus in the trade turnover is much more favorable than the US\$ 1,110 million trade deficit of 1991.

The balance above includes items not involving payments (such as leasing, in-kind contributions, the value of materials for commissioned labor, etc.) amounting to US\$ 447 million. Without them there was a foreign trade surplus of US\$ 91 million (at border parity). (This balance is also more favorable than that of a year earlier when there was a trade deficit of US\$ 369 million without the items not involving payment.)

Consumer goods had a major role in the expansion of exports; their sales abroad increased by some 25%. Engineering exports grew by 7%, while the exports of agricultural products were up about 2%. In the latter category, exports amounted to about the fourfold of imports. Within imports, there was a decrease in purchases of materials and parts as well as sources of energy.

Preliminary data indicate that the most dynamic growth in exports (14.5%) was experienced in trade with the member states of the European Community. The share of this region in Hungarian exports is 50%. Hungarian exports to EFTA countries were up about 3%. Some 14% more goods were sold to East European countries.

(Trade-related payments data are discussed in Chapter II about the balance of payments.)



## Tourism

There were 30.9 million entries from abroad between January 1 and November 30, 1992, 0.3% fewer than a year earlier. This figure includes the great number of refugees, mainly from the successor states of the former Yugoslavia, as well. There were 18.9 million people arriving as tourists, 7.6% fewer than a year earlier. The number of foreign guests at commercial accommodations fell 8.3% short of the figure from a year earlier.

Most guests utilizing commercial accommodations came from Germany. The number of Austrian, Italian and Dutch guests was lower but still significant.

**FOREIGN GUESTS UTILIZING COMMERCIAL ACCOMMODATIONS  
BETWEEN JANUARY 1 AND NOVEMBER 30, 1992**

Country	At commercial accommodations		Of which: in hotels	
	Guests (1,000)	As a percentage of the figure from a year earlier	Guests (1,000)	As a percentage of the figure from a year earlier
Total	2,634	91.7	1,848	94.4
Of which:				
Germany	852	94.0	533	101.7
Austria	273	97.9	220	96.4
Italy	210	95.0	193	96.2
The Netherlands	129	88.3	61	99.0
Poland	119	63.7	31	46.1

The list covers 60% of all guests utilizing commercial accommodations.

Hungarian citizens travelled abroad 11.8 million times over eleven months, 11.1% less than in the same period of the preceding year.

(Tourism revenues and expenditures are discussed in Chapter II in connection with the balance of payments.)

**General  
Government**

The *central budget* deficit in 1992 was Ft 197.1 billion, the balance of Ft 793.3 billion in revenues and Ft 990.4 billion in expenditures, 2.8 times what was originally approved and 0.7% less than the ceiling set by the supplementary budget:

**MAIN AGGREGATES OF THE CENTRAL BUDGET IN 1992**

Denomination	Original target	Modified	Preliminary actual figure	Preliminary actual figure as a percentage of the	
				original	modified
	(in billions of forints)			target	
Revenues	883.6	778.8	793.3	89.8	101.9
Expenditures	953.4	977.2	990.4	103.9	101.4
Balance	-69.8	-198.4	-197.1	282.4	99.3

The deficit was determined by revenues falling short of expectations throughout the year. The situation of the central budget – in addition to unfavorable financial-economic effects lagging from the preceding year – was influenced by

trends of macroeconomic processes being more unfavorable than expected. As an overall result, there were significant shortfalls in payments of corporate taxes, bank profit taxes and dividends, in addition to tax and customs duty arrears in excess of Ft 10 billion. Revenues were also diminished by the bankruptcy and liquidation proceedings which began in 1992 and subsequently increased in number. Unfavorable macroeconomic processes necessarily caused excessive spending in certain items in addition to the revenue shortfalls. Higher-than-assumed unemployment increased the direct bearing of burdens by the state. Expenditures were also increased by the extra burdens stemming from the modifications of the institutional network, made necessary by the societal changes.

All these processes made it clear in the course of the year that the targets of Act XCI of 1991 on the 1992 budget will be impossible to meet. Therefore, on November 10, Parliament passed Act LXX on the 1992 supplementary budget. The supplementary budget targeted a budget deficit of Ft 198.4 billion. To attain this limit, measures had to be decided upon and taken. Collecting amounts due from economic entities had to be stepped up. To this end, the government imposed more rigorous rules for the payment of customs duties and import levies, and introduced a stricter set of customs procedures. The law on tax administration was also amended in the course of the year. Additionally, the government took serious austerity measures reducing allocations for central budgetary institutions and certain extrabudgetary funds.

It was due to these events that a Ft 197.1 billion deficit – 2.8 times the original target –, close to the ceiling set in the supplementary budget, could be attained.

*In the first month of 1993* the central government budget had a deficit of Ft 17.3 billion, Ft 1.9 billion less than in January 1992.

The original targets of the budget for 1992 and those approved in the supplementary budget as well as the actual figures are shown in detail in Table I/23 (The 1992 preliminary data on revenues and expenditures of the central government budget).

In order to *finance* the deficit *originally* limited to Ft 69.8 billion, the Budget Act authorized the minister of finance to

- a) issue special, long-term securities (with a maturity of at least ten years), to be purchased by the National Bank of Hungary in the amount of (at most) Ft 30 billion;
- b) issue new state bonds maturing in more than a year, in the amount of Ft 30 billion;
- c) increase the stock of treasury bills and other state securities maturing within a year by (at least) Ft 9.8 billion.

The extra funding needed to *finance the deficit far exceeding* the originally approved target was appropriated by the Act on the Supplementary Budget. This law authorized the minister of finance, in addition to maintaining the special securities mentioned in point a), and over the amounts set in points b) and c), to

- d) issue new state bonds maturing in more than a year, in the amount of (at most) Ft 130 billion;

e) increase the stock of treasury bills maturing within a year and other short-term state securities by (at least) Ft 3 billion,

Further, Act LXII. of 1992 on the 1991 Annual Report and Accounts on the Budget made it possible to convert Ft 35.4 billion of the liabilities arising from the 1991 growth of the treasury bill stock into state bonds. Based on the above, there were enough funds to cover the increased budget deficit. The actual securities issues made it possible to finance the deficit.

The deficit of *Social Security* amounted to some Ft 17.5 billion in 1992.

The financing of the massive budget deficit and other factors caused *domestic state debt* to grow substantially: according to preliminary data, it amounted to Ft 2,169 billion at the end of 1992, Ft 414.8 billion (23.6%) more than a year earlier.

Of the Ft 2,169 billion state debt, slightly more than Ft 1,600 billion is due to the NBH, about half of which was generated by financing the deficit of the central government budget prior to the end of 1990, by raising credit for assuming debts of enterprises and for equity contributions to financial institutions and by assuming the refinancing credits of the State Development Institute. The other half of the state debt to the NBH was accumulated in connection with the devaluation of the forint with respect to foreign currencies.

The portion of the state debt over the claims of the NBH mentioned above is the debt acknowledged in state securities. A part of it finances the budget deficit, another part was generated when bonds were issued in connection with the financing of housing, while yet another part was brought about by Act LXXX of 1992 on the 1993 budget which mandated that the rouble assets of the National Bank of Hungary be assumed by the treasury by way of issuing bonds.

**The  
Number of  
Economic  
Entities.  
Bank-  
ruptcies,  
Liqui-  
dations**

The number of economic entities continued to grow in 1992, but the pace was more moderate than in 1991. The number of incorporated economic organizations was 69,386 at the end of the year, 16,630 (31.5%) more than at the beginning of the year.

23% of the companies established between the beginning of the year and the end of October had – like in 1991 – foreign participation. The share of foreign capital was 45% at companies submitting financial statements in 1991 and 54% at companies founded in the first three quarters of 1992. At the same time, the share of fully foreign-owned firms grew from 13% to 36%. The initial capital per company and within that, foreign capital shows a declining trend.

According to the Registration Gazette „Cégközlöny”, 2,294 incorporated economic entities had been placed under bankruptcy protection until 1992, and at the same time 2,078 organizations were being wound up. 10% of the companies under bankruptcy protection and 4.7% of those being liquidated had more than 300 employees.

**Privatiza-  
tion**

The State Property Agency approved 55 transformations of state-owned enterprises into economic associations in November, and an additional 33 in December. The total number of transformations since the March 1, 1990 foundation of the State

Property Agency has thus reached 602 by the end of December. The aggregate property of the transformed enterprises corresponded to a value in excess of Ft 645 billion according to their books, while they were valued at a total of more than Ft 1,364 billion in the course of the transformations.

The process of transforming state-owned enterprises into economic associations has intensified in 1992: 27 enterprise transformations were completed in 1990 with 191 in 1991 and a further 384 in 1992. The June 30, 1993 deadline set in Act LIV of 1992 as the latest date for initiating the enterprise transformations is expected to further intensify the process.

Comparing the number of transformations with the book value of property per company, it becomes apparent that while it was mostly large enterprises that were transformed in 1991, small and medium-sized companies were characteristic of 1992. While the book value of the 191 companies transformed in 1991 amounted to some Ft 319 billion (making the average value per company Ft 1.67 billion), the 384 transformations in 1992 represented a property value of slightly more than Ft 300 billion (corresponding to an average of Ft 780 million per company).

According to the valuations carried out in the course of the transformations, the combined book values have appreciated significantly: the aggregate approved property value was more than 1.5 times as much as the aggregate book value in 1990, with the same ratio being 1.3 and nearly 3 in 1991 and 1992, respectively.

Leasing or ownership rights of 7,637 units were privatized in the privatization scheme of retail and catering businesses until December 31, 1992, out of the 10,529 registered shops falling under the scope of the law. Gross total amount of selling prices exceeded Ft 11 billion (which was 144.6% of the put-up price).

Total 1992 revenues of the State Property Agency exceeded Ft 72 billion, of which nearly Ft 68 billion came from selling state property. About Ft 41 billion was collected in foreign exchange, slightly more than Ft 17 billion in cash and Ft 9 billion originated from sales involving privatization loans.

On its February 18 meeting, the government amended its earlier decree on Existence loans and the preferential instalment plan. The new, more favorable conditions make it possible to utilize this facility not only when the state property management organization sells the stocks or business shares of a company with majority state ownership, but also when such companies are sold. The maturity of the loans will be 15 years uniformly, regardless of the amount being borrowed, instead of the former 6, 8 and 10 years. The grace period will increase to 3 years from the former 1 or 2 years. The required minimum of own resources has been reduced.

(Tables I/1 through I/23 relate to Chapter I.)

## II. Foreign Exchange Position

The Current Account During 1992 the surplus of the *current account* increased continuously until September – due to the positive balance of each month –, then – as a result of the monthly deficits – it decreased. Throughout the year, the balance was better than in the preceding year.

The surplus over the first eleven months of 1992 was US\$ 520 million. This was caused

– on the one hand, by the surpluses of trade-related payments, tourism, unrequited transfers, government payments, services and other current transactions,

– on the other hand, by the deficits of interest payments and dividends from financial assets, transportation of goods and revenues from direct foreign investment.

The eleven-month, US\$ 272 million surplus of *trade-related payments* was the balance of US\$ 9,214 million of exports and US\$ 8,942 million of imports. Compared to a year earlier, exports increased by 10.6%, imports by 10.1%.

(Foreign trade turnover is discussed in Chapter I.)

In the first eleven months of 1992, *tourism* had US\$ 550 million of expenditures and US\$ 1,140 million of revenues, thus achieving a surplus of US\$ 590 million. Expenditures, revenues and the surplus exceed the figures of the preceding year by 33%, 21% and 11.7%, respectively.

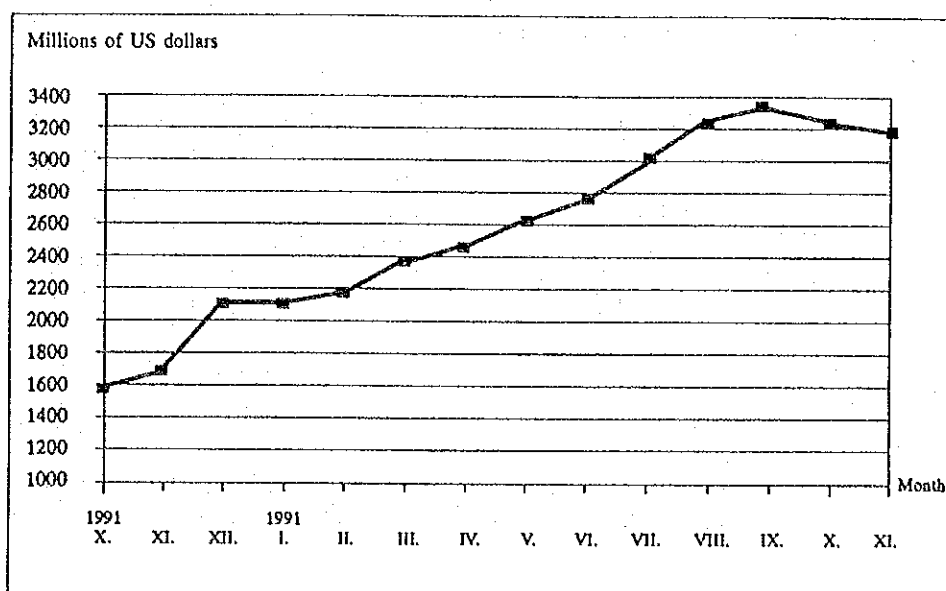
(Data on in- and outbound travel are shown in Chapter I.)

*Unrequited transfers* had a surplus of US\$ 764 million over the first eleven months of the year, 4.9% less than a year earlier.\*

In the first eleven months of 1992 revenues from *interest payments and dividends from earnings of financial assets* amounted to US\$ 384 million, there were US\$ 1,504 million of expenditures, leading to a passive balance of US\$ 1,120 million. The latter was 7.3% less than the US\$ 1,208 million a year ago. Most of the transfers and the balance within this item arose from interest payments, thus the outcome reflects the net interest burden.

Inflow of Direct Foreign Investment Over eleven months, *direct foreign investment in cash* (the balance of direct capital investment by non-residents) amounted to US\$ 1,216 million, 7.9% more than the US\$ 1,127 million a year earlier. The stock of direct foreign investments expressed in dollars was US\$ 3,192 million at the end of November. This was US\$ 16 million less than a month earlier – despite the US\$ 77 million net inflow of direct foreign investment in November – due to variations in cross exchange rates.

\* Experience of the past two years indicates that this item may include substantial revenues from the sales of goods and services (accruing to household foreign currency accounts).



#### STOCK OF DIRECT FOREIGN INVESTMENT IN CASH AT THE END OF THE MONTH

Over 11 months of 1992, US\$ 2,160 million of medium- and long-term *loans* were *raised*, while repayments amounted to US\$ 2,542 million. Thus, in this maturity category, amortization exceeded borrowing by US\$ 382 million. There was US\$ 165 million of net borrowing in the category of short-term loans, leading to an overall *amortization surplus* of US\$ 217 million over 11 months.

External  
Debt and  
Reserves

At the end of November *gross debt* expressed in cross dollars was US\$ 22,116 million, US\$ 542 million less than on December 31, 1991. Due to variations in cross exchange rates, this decrease is greater than the amortization surplus shown above.

It was also a result of fluctuations in cross exchange rates that gross debt expressed in the currency of the European Community (ECU 18,093 million) exceeded that at the end of 1991 by ECU 1,166 million.

On November 30, 1992, *net debt* amounted to US\$ 13,174 million, US\$ 1,380 million less than on December 31, 1991, because, in addition to the US\$ 542 million decrease of gross debt, foreign assets increased by US\$ 838 million.

Expressed in the currency of the European Community, net debt at the end of November, amounted to ECU 10,778 million, ECU 95 million less than at the end of 1991.

CHANGES IN CONVERTIBLE DEBT OF HUNGARY  
(in dollars)

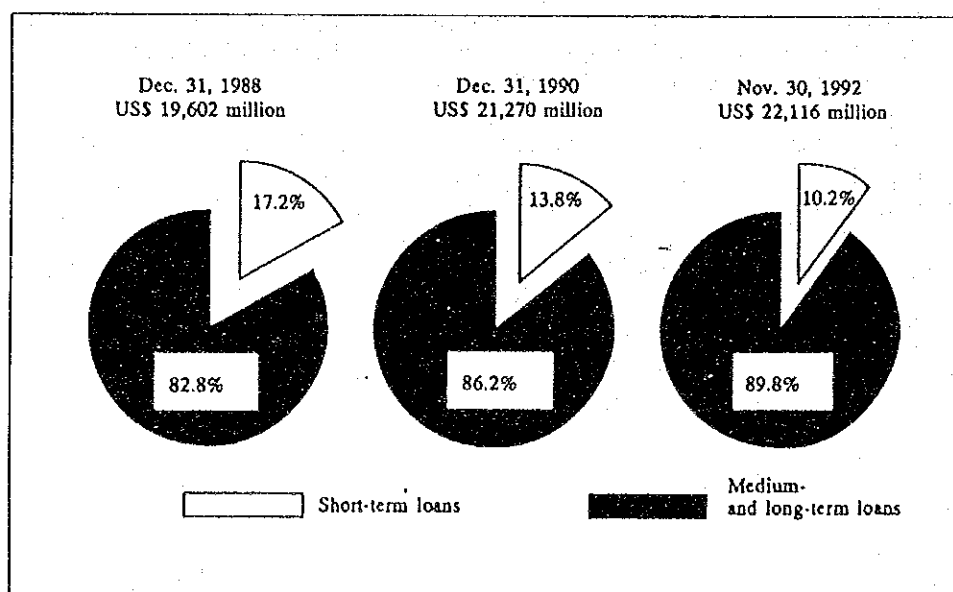
Denomination	Dec. 31, 1991	Nov. 30, 1992	Change	Index (%)
	(in millions of US dollars)			Nov. 30, 1992 Dec. 31, 1991
Gross foreign debt*	22,658	22,116	-542	97.6
Gross foreign assets	8,104	8,942	+838	110.3
Net foreign debt	14,554	13,174	-1,380	90.5
<i>*Of which</i>				
Debt of the NBH	17,921	16,890	-1,031	94.2
Debt of the NBH as a percentage of the entire debt	79.1	76.4	X	X

Expressed in forints, gross debt increased by 7.7% in the first eleven months of the year, gross assets were up 21.8%, while net debt was basically unchanged.

CHANGES IN CONVERTIBLE DEBT OF HUNGARY  
(in forints)

Denomination	Dec. 31, 1991	Nov. 30, 1992	Change	Index (%)
	(in billions of forints)			Nov. 30, 1992 Dec. 31, 1991
Gross foreign debt	1,713.4	1,846.2	+132.8	107.7
Gross foreign assets	612.8	746.5	+133.7	121.8
Net foreign debt	1,100.6	1,099.7	-0.9	99.9

The *maturity structure* of gross debt improved substantially on the longer run, with short-term fluctuations. While at the end of 1988, short-term debt had represented as much as 17.2% of gross debt, this ratio was only 10.2% at the end of November, 1992.



MATURITY STRUCTURE OF GROSS CONVERTIBLE DEBT

Considering the following years, repayment obligations of medium- and long-term debt will continue to be favorable in 1993 and 1994 (amortization will be below US\$ 2.5 billion in these two years), but it will exceed US\$ 3 billion in 1995 and 1996.

The eleven-month, US\$ 838 million increase of gross assets was reflected almost entirely in the US\$ 831 million increase of *foreign exchange reserves*. The stock of other assets was basically unchanged:

**CONVERTIBLE FOREIGN EXCHANGE RESERVES AND OTHER ASSETS OF HUNGARY**  
(in dollars)

Denomination	Dec. 31, 1991	Nov. 30, 1992	Change	Index (%)
	(in millions of US dollars)			Nov. 30, 1992 Dec. 31, 1991
Convertible foreign exchange reserves	4,017	4,848	+831	120.7
Other assets	4,087	4,094	+7	100.2
Gross assets	8,104	8,942	+838	110.3

The US\$ 4,848 million amount of foreign exchange reserves at the end of November, 1992 was 43.5% more than a year earlier. The value of the reserves, expressed in dollars, was US\$ 294 million (6.1%) less than that of a month before, due to changes in cross exchange rates as well as an actual decrease of the reserves.

Expressed in forints, foreign exchange reserves were equivalent to Ft 404.7 billion on November 30, which is Ft 100.9 billion (33.2%) more than a year earlier.

At the end of November 1992, foreign exchange reserves were sufficient to cover six months of imports (based on trade-related payments data).

The summary data of the interbank foreign exchange market, operating since July 1, 1992, are as follows:

The  
Interbank  
Foreign  
Exchange  
Market

**MAIN DATA OF THE INTERBANK FOREIGN EXCHANGE MARKET IN 1992**

Month	(in billions of forints)			
	Turnover between the NBH and commercial banks		Net foreign exchange purchases by the NBH at fixing rates	Turnover among commercial banks*
	at fixing rates	at current market rates		
July	n.a.	3.6	32.9	15.1
August	32.1	6.6	14.0	14.7
September	30.9	4.0	9.4	20.6
October	30.8	2.1	8.2	31.4
November	25.6	2.1	2.9	32.2
December	32.0	5.5	8.7	34.5

\* Does not include the total turnover among commercial banks due to netting agreements.



At the National Bank of Hungary, banks may change forints to foreign exchange and vice versa at the official rate or at current market rates. The turnover at the official exchange rate decreased substantially during the past year, indicating that banks increasingly carry out their forint/foreign exchange transactions on the interbank money market.

The recorded market exchange rates fluctuated between the limits determined by the official and market exchange rates of the NBH, more precisely, most of the time in the neighborhood of the foreign exchange purchase price level, i.e.: the so-called lower intervention point, due to the net foreign exchange seller position.

In general, the market volume may be said to be increasing with minor fluctuations.

(Tables II/1 through II/9 relate to Chapter II.)

### III. Credits and Deposits of the National Bank of Hungary

*Annual balance sheet data about domestic lending by the NBH and deposits placed with it were not yet available at the time this report was prepared. Eleven-month processes were discussed in our preceding monthly report. Their detailed data can be found in tables III/1–III/4 of the present publication. Processes of the entire year will be shown in our next monthly report.*

*Changes in interest rates of the central bank – including those in force since January 1, 1993 – were also discussed in our preceding monthly report. Table III/5 of the present publication provides information about central bank interest rates.*

The NBH organizes auctions of 30-day and 90-day *discounted treasury bills* weekly.

Securities  
Transactions by  
the  
Central  
Bank

The treasury sold roughly equal amounts (about Ft 50-50 billion) of 30-day and 90-day discounted treasury bills. In the first five months of the year these yielded basically equally, both in terms of the maximum announced and the average formed at auctions. Between June and October, however, securities with longer maturities had 2-4 percentage point higher average yields. The average annual yields of both 30-day and 90-day treasury bills gradually decreased to a substantial extent during the year (the former from 31% in January to 14.4% in December, the latter from 31.6% to 14.7%). Yet, demand exceeded supply by several hundred percent at certain auctions. The average annual yields decreased in January 1993 as well: to 13.9% and 13.5%, respectively, at 30-day discounted treasury bill auctions, and to 14.6% and 14.4%, respectively at 90-day treasury bill auctions.

180-day discounted treasury bills are also auctioned by the National Bank of Hungary monthly since April 1992, while as of July the Bank also holds auctions quarterly for selling 360-day discounted treasury bills.

At the nine auctions of 180-day treasury bills last year, the state offered a total of Ft 63 billion worth of securities for sale. Of these 91.1% (valued at Ft 57.4 billion) were sold. The average annual yield of this type of security decreased, as well (from 26.8% in April to 17% in December). Yet, demand exceeded supply at each auction except one. At the January 1993 auction the entire Ft 10 billion stock of treasury bills offered was sold with an average annual yield (16.9%) roughly equalling that of December.

There were three auctions of 360-day discounted treasury bills in 1992. Practically 100% of the securities worth a total of Ft 25 billion offered by the treasury were sold. The average annual yield of this security type was also decreasing: 23.1%, 21% and 18% at the three auctions, respectively.

*State bonds* issued in 1992 were thoroughly discussed in our September Monthly Report, sent to print at the end of December 1992.

Following the intensification begun in last October, state bonds continued to be issued early 1993. On January 22, state bonds with a combined face value of Ft 20 billion and a maturity of three years were issued at auctions for brokerage

firms, banks and specialized financial institutions, to be followed by a second issue on February 1, with a combined face value of Ft 30 billion and a maturity of two years. In both cases, the interest rate was a fixed 17.5%.

Based on an auction on February 4 for brokerage firms and banks, three-year state bonds with a fixed (17.5%) rate of interest and an aggregate face value of Ft 15 billion were issued on February 10.

(Tables III/1 through III/7 relate to Chapter III.)

## IV. Credits and Deposits of the Banks

27

The *aggregate total assets* of commercial banks and specialized financial institutions at the end of November 1992 were Ft 2,304.6 billion, some 9% higher in nominal terms than at the end of the year 1991 (which means a decrease in real terms).

Main  
Indicators  
of the  
Banking  
System

The amount of *mandatory central bank reserves* grew by nearly 19% in eleven months. Within this increment, mandatory reserves against forint liabilities increased by some 41% while those against foreign exchange liabilities decreased by 50%, approximately. This tendency in the generation of mandatory central bank reserves can basically be observed since early 1992 and is more and more pronounced.

The *structure of the lending portfolios* of banks shown below indicates that the weight of budget financing continued to grow at the account of the market sectors. (In November, the weight of the entrepreneurial sector in financing decreased only very slightly while that of households increased.)

### COMPOSITION OF LENDING PORTFOLIOS OF COMMERCIAL BANKS AND SPECIALIZED FINANCIAL INSTITUTIONS IN 1992\*

	%			
Financed sector	January 1	September 30	October 31	November 30
<b>Lending to</b>				
- the entrepreneurial sector	3.2	66.2	62.4	62.3
- general government	7.4	17.7	22.2	22.8
- households	10.1	8.3	7.9	8.0
- non-residents	9.3	7.8	7.5	6.9
<b>Total lending</b>	100.0	100.0	100.0	100.0

\* Excluding lending on the interbank money market.

The *capital and specific provisions* of the banks amounted to Ft 262.5 billion on November 30, some Ft 54.5 billion more than at the beginning of the year; their share within total liabilities increased from 9.8% to some 11.4% over this period. Basically, increases in the equity of banks were due to the more than Ft 42 billion increase in their specific provisions. The obligation of banks to form specific provisions at the expense of their profits was substantially increased by a number of bankruptcy and liquidation procedures in the wake of the law on bankruptcy put in force at the beginning of 1992.

At the end of November the portfolio of *credit extended by financial institutions to enterprises under bankruptcy protection* amounted to some Ft 40 billion. At the same time the *debt of companies under liquidation* to financial institutions amounted to about Ft 58 billion.

Decree 3/1992 of the State Banking Supervision governs the classification of the claims of the banking system into risk categories. The following major criteria are put forth in this decree:

The Classi-  
fication of  
the Claims  
of the  
Banking  
Sector

Claims are classified into four categories. Thus, there are so-called problem-free, substandard doubtful and bad claims.

A claim is *problem-free* if there is no known reason barring collection.

A past due claim is being classified as *substandard* if the conditions for collection are present and the delay in amortization or payment is expected not to exceed 60 days, or if revenues from selling the collateral cover the asset, and the sale can take place within 180 days following the due date of the claims.

A past due claim is *doubtful* if it may be expressly stated to cause a loss to the financial institution, but the extent of the loss is, as yet, not known exactly. Assets are also doubtful if the delay in collection is expected to exceed 60 days but not to exceed 360 days and if revenues from selling the collateral cover the asset and the sale is expected to take place within 360 days following the due date.

A past due claim is classified as *bad* if the expected delay in repayment exceeds 360 days, or if the expected delay does not exceed 360 days but the likely amount of loss exceeds 50% of the asset. A past due asset is also classified as bad if the debtor is under a liquidation procedure.

**CLASSIFICATION OF THE CLAIMS OF THE BANKING SECTOR\*  
BY RISK AS OF SEPTEMBER 30, 1992**

Classification of claims	Stock (in billions of forints)	As a percentage of all claims
Problem-free	1,367.1	83.9
Substandard	41.3	2.5
Doubtful	96.7	5.9
Bad	125.7	7.7
All Claims	1,630.8	100.0

\* Claims were regarded according to the classification criteria of the State Banking Supervision.

Based on these criteria, aggregate data as of September 30, 1992 are available:

Thus, at the time indicated above, Ft 222.4 billion of claims were classified as doubtful or bad, 13.6% of the total.

The credit consolidation program of classified claims is being worked out. Its details will be discussed in a later report.

**Debt and  
Deposits of  
the Entre-  
preneurial  
Sector**

The stock of credits by banks\* to the entrepreneurial sector\*\* and deposits of entrepreneurs with banks, further, their net position are shown in the following table:

\* Commercial banks and specialized financial institutions without savings cooperatives. Includes bills of exchange rediscounted by the central bank.

\*\* State-owned enterprises, joint-stock companies, limited liability companies, cooperatives, small and private entrepreneurs.

## TOTAL BANK CREDIT AND DEPOSIT DATA OF THE ENTREPRENEURIAL SECTOR IN 1992\*

29

(in billions of forints)

Denomination	September 30	October 31	November 30
1. Bank credits	750.1	755.2	762.2
2. Bills of exchange rediscounted by the NBH	1.9	1.7	1.5
3. Gross debt of entrepreneurs to banks (1 + 2)	752.0	756.9	763.7
4. Deposits of entrepreneurs	425.4	424.4	446.1
5. Net debt of entrepreneurs to banks (3 - 4)	326.6	332.5	317.6

\* The data in the table were computed from basic data of greater accuracy which fact may lead to differences.

The details of the summary data\* shown above are the following:

Out of credits to the entrepreneurial sector, valued at Ft 762,2 billion, those maturing within a year amounted to Ft 503.7 billion on November 30. The amount of credits maturing over a year was Ft 258.5 billion on November 30.

Foreign exchange credits grew continuously during the year. The November increment was Ft 3.8 billion with a Ft 64.4 billion end-of-month stock.

The stock of Start loans was Ft 7 billion at the end of November, 245% more than eleven months earlier. The stock of privatization and Existence loans grew by 360% to Ft 7.8 billion.

In the first eleven months of the year the stock of redeemed bank guarantees grew substantially, by some Ft 10 billion (65%) to Ft 27.6 billion. At the end of November the stock of discounted bills of exchange amounted to Ft 42 billion, some Ft 43 billion (51%) less than on January 1.

The amount of credits to enterprises had increased modestly in nominal terms since May, but in real terms, considering inflation, it had decreased. The reasons behind the excess liquidity at greater part of – related to this change in the credit stock – were explained in detail in our recent monthly reports. The causes described there are still valid.

Deposits by the enterprise sector with banks amounted to Ft 446.1 billion on November 30. Foreign exchange and forint deposits maturing over a year had decreased since the beginning of the year and relative to a year earlier, as well. This tendency began in April; there was a slight increase in October to be followed by another decrease in November.

Monthly average interest rates on credits extended by banks to the enterprise sector and on deposits of enterprises kept with them decreased in 1992 as follows:

Changes  
in Market  
Interest  
Rates

\* Further on: without bills of exchange rediscounted by the NBH.

**MARKET INTEREST RATES FOR THE ENTREPRENEURIAL SECTOR IN 1992\***  
(annual interest rate, percent)

Denomination	January	June	October	November	December
<b>Lending rates</b>					
Maturity of up to one year	36.0	34.3	29.6	29.6	28.8
Maturity of over one year	31.5	33.5	28.3	26.2	25.4
Discount rate	36.1	34.1	28.1	29.1	27.4
<b>Deposit rates</b>					
Fixed for one month or less	25.0	21.5	14.4	14.5	12.9
Fixed for more than one month but less than one year	31.9	26.4	18.4	18.4	17.6
Fixed for more than a year	32.8	29.9	20.0	20.7	19.5

\* Weighted average rates of interest computed from credit and deposit contracts signed in the given months (without additional charges).

A significant difference has taken shape between the level of lending and deposit rates in the enterprise sphere over 1992:

**DIFFERENCES BETWEEN INTEREST RATES IN 1992\***  
(in percentage points)

Month	Within a year	Over a year
January	6.6	-1.3
February	8.6	2.3
March	8.4	-3.0
April	9.0	3.3
May	9.5	3.0
June	10.0	3.6
July	12.6	6.1
August	13.1	8.0
September	12.2	10.6
October	12.2	8.3
November	12.7	5.5
December	12.7	5.9

\* The table indicates the differences between the levels of lending and deposit rates set in credit and deposit contracts signed in each month. A negative value means that the deposit rate was higher than the lending rate. Data on discounted bills of exchange are not included in the table.

Lending rates decreased much slower than deposit rates. As it was pointed out in our preceding monthly reports, the background for this fact includes extremely increased lending risks of financial institutions, the deteriorating financial situation of many of their customers, the growing stock of past due credits, and the resulting obligation to generate increasing amounts of specific provisions. Without widening the gap between nominal lending and deposit rates – as indicated above – banks would be unable to cover the costs of forming specific provisions and of expectable constraints of writing off bad debts. Note that in the most recent two months, the difference between lending and deposit rates did not increase further; but had basically stagnated at 12–13% since July. (Since the weight of over-the-year credits and deposits is minuscule, as shown below, it is basically the interest gap for transactions maturing within a year that carries relevant information.)

In line with the recent period credits maturing within a year are still dominant within credits extended to the entrepreneurs. In November\* about 82% of all granted credit matured within a year, 10% were discounted bills of exchange and 8% were credits maturing over a year. These ratios were basically unchanged in December.

Among deposits, those with a maturity of a year or less are the most decisive. 38% of all deposits placed in November\* were fixed for not more than a month and 61% were fixed for a year or less, while 1% was fixed for more than a year. 31% of the deposits placed in December\* were fixed for less than a month, about 65% were fixed for less than a year, and nearly 4% were fixed for more than a year. The maturity composition of credits and deposits had remained relatively stable and constant until the end of November, but in December, the shares of deposits fixed for both less than a year and more than a year increased at the expense of those maturing within a month.

The market interest rates characteristic for various groups of banks varied as follows:

**AVERAGE MARKET LENDING AND DEPOSIT RATES FOR THE ENTREPRENEURIAL SECTOR IN NOVEMBER AND DECEMBER 1992 IN A BREAKDOWN BY GROUPS OF BANKS**  
(annual interest rate, percent)

Denomination	Four large banks*		Other banks		Total	
	November	December	November	December	November	December
<b>Credit rates</b>						
Credits maturing within a year	30.9	30.9	28.1	26.5	29.6	28.8
Credits maturing over a year	25.9	24.6	26.5	26.1	26.2	25.4
Discount rate	28.5	26.6	29.2	27.8	29.1	27.4
<b>Deposit rates</b>						
Fixed for one month or less	16.0	15.9	13.7	11.5	14.5	12.9
Fixed for more than one month but less than a year	18.1	18.0	18.8	17.2	18.4	17.6
Fixed for more than a year	19.2	19.7	20.9	19.4	20.7	19.5

\* Budapest Bank Ltd.; Hungarian Credit Bank Ltd.; Hungarian Foreign Trade Bank, Ltd.; Commercial and Credit Bank, Ltd.

The National Savings Bank (OTP), the largest Hungarian commercial bank, decided for an interest rate cut as of February 1, 1993. The decision was followed by two other commercial banks.

The most significant data concerning the transactions in the *interbank money market mediated by the NBH* were the following:

**The  
Interbank  
Money  
Market**

\* Contracts concluded during the month.



MAIN CHARACTERISTICS OF THE INTERBANK MONEY MARKET MEDIATED  
BY THE NBH, 1992

Month	Number of transactions	Amount (in billions of forints)	Average term (days)	Average rate of interest (%)
January 1992	3	1.20	7.0	31.5
February	7	1.95	23.4	31.5
March	8	1.35	17.2	28.7
April	6	0.36	6.5	24.6
May	12	2.42	43.7	26.6
June	9	1.73	33.0	23.9
July	10	2.06	16.3	17.0
August	9	1.93	17.1	16.5
September	15	2.92	21.8	17.6
October	22	11.67	10.9	16.3
November	40	20.46	7.3	15.5
December	47	23.42	5.6	15.6
January 1993	20	11.20	9.2	12.8

Money flows of the *entire interbank money market* fluctuated between Ft 90–160 billion per decile with a monthly turnover in excess of Ft 380 billion in October. Turnover surged in November, reaching Ft 440 billion, fluctuating between Ft 140–150 billion per decile. There was a decrease in December, especially in the third decile. Monthly turnover was Ft 420–430 billion, and – while there was a record Ft 163 billion turnover in the first decile – the volume fell back to Ft 110 billion in the last decile.

The interest rates of interbank money flows decreased gradually until late June, then the process intensified in July, especially in the first decile. Since then there had been a minor decrease.

(Tables IV/1 through IV/10 relate to Chapter IV.)

## V. Financial Processes of Households\*

In 1992 households received *revenues* of Ft 1,745 billion from enterprises and organizations subject to the requirement to provide data on their cash flows.\*\*\* It was Ft 288.9 billion, in nominal terms 19.8%, more than in 1991, which is a 2.6% decrease in real terms, considering the 23% average increase of consumer prices in 1992.

Household  
Revenues  
and Expen-  
ditures\*\*

Out of wages received from the organizations providing data, the net amount of taxable personal income in 1992 (Ft 641 billion) exceeded the figure of a year before by Ft 45.5 billion, 7.6%. Throughout the year, this was a much lower growth rate than that of total monitored household income. At the same time, revenues of small and private businesses originating from the organizations providing data increased much more dynamically than the average, by 37.5%. Social security payments (pension, family allowance, child care benefit) increased by 19% in nominal terms. Welfare payments in cash, amounting to nearly Ft 43.7 billion, increased about 2.5-fold in nominal terms relative to a year earlier.

In 1992, households *spent* Ft 1,711.6 billion within the sectors providing data on cash flows, which is Ft 345.5 billion, in nominal terms 25.3%, in real terms 1.9% more than in the previous year.

In 1992 households spent Ft 722.2 billion on *commodity purchases* at the organizations providing data, which was Ft 18.4 billion, in nominal terms 2.5%, less than a year earlier. This is a 20.7% decrease in real terms. The actual decrease is smaller, considering household purchases from organizations not subject to the requirement to provide cash flow data, and from illegal traders. Experience shows that these purchases have an increasing share of the total.

In 1992 households spent Ft 41.39 of every Ft 100 of income covered by statistics on commodity purchases at organizations reporting cash flow data, Ft 9.47 (18.6%) less than a year earlier. Out of every Ft 100 of income, Ft 14.76 were spent on services (Ft 1.50, 11.3% more than a year earlier), while Ft 41.94 were spent on other purposes<sup>+</sup> (Ft 12.24, 41.2% more than a year earlier, mainly because of increased savings).

The gross *savings* of households increased by Ft 284.1 billion (32%) in 1992 to Ft 1,172.1 billion at the end of the year. The individual forms of savings varied as follows:

Savings  
and Out-  
standing  
Debt of  
Households

On December 31, 1992 households possessed *banknotes and coins* valued at Ft 270.3 billion. This was Ft 65.4 billion (31.9%) more than a year earlier.

In 1992 *savings deposits* of households\* increased by Ft 152.3 billion (35.3%) and amounted to Ft 584.3 billion (including accrued interest) as of December 31.

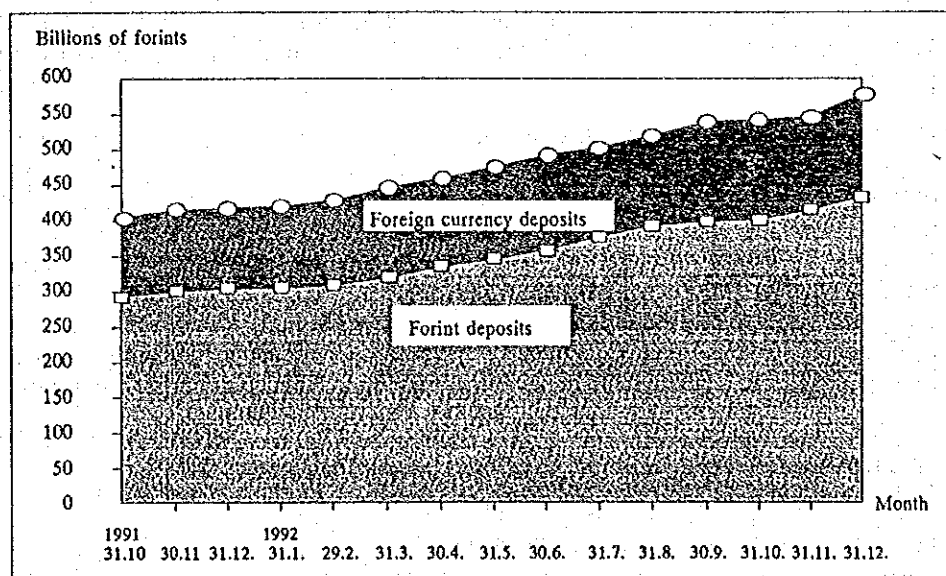
\* This chapter of our report was based on preliminary December data.

\*\* We draw attention to the fact that the data shown here – with the exception of social security and welfare benefits – reflect revenues and expenditures of households less and less comprehensively. With the proliferation of small businesses, the category of entities not obliged to supply cash flow data (i.e.: legal entities with annual cash flows of less than Ft 25 million) keeps expanding, and so does the number of new businesses who are unaware of the relevant regulations.

\*\*\* State-owned enterprises and cooperatives, incorporated economic entities, publicly financed institutions, budgetary and local government institutions.

<sup>+</sup> This includes a portion of foreign currency purchases, some types of savings (non-cash types: savings deposits, securities), as well as taxes, levies and duties paid in cash.

Within this amount, deposits placed in forints grew by Ft 129.9 billion (42.9%) while *foreign currency deposits* went up by Ft 22.4 billion (17.3%). The December 31 stock of foreign currency deposits (Ft 151.9 billion) corresponded to US\$ 1,809 million at the prevailing central rate of exchange.



#### CHANGES IN THE STOCK OF SAVINGS DEPOSITS

In 1992 the stock of *securities held by households*\*\* increased by Ft 63.3 billion (29.6%) to Ft 277.1. This stock, however, was less than the approximately Ft 280 maximum in the middle of the year. The decrease, which took place in the second half of the year but stopped in December, is related to the fact that the supply of securities shrank, and so the value of redeemed securities appeared in savings deposits and cash after maturity.

At the end of December (just like at the end of November), *insurance premium provisions*\*\*\* were Ft 40.4 billion, (Ft 3.1 billion, 8.3% more than at the beginning of the year).

*Outstanding debt* of households<sup>†</sup> amounted to Ft 253.8 billion on December 31, 1992. This was Ft 9.1 billion (3.7%) more than a year earlier. The outstanding debt increased substantially (by Ft 38.3 billion) in December because the interest on the loans is debited to debtors at the end of the year. According to preliminary calculations, without the Ft 42 billion amount of interest, the outstanding debt of households would have been Ft 211.8 billion at the end of the year, indicating that the diminishing trend continued.

\* Exclusive of deposit notes, listed among securities. This item is likely to include not only household savings, as it is a common phenomenon for small (and sometimes larger) businesses to place their funds in forms of household deposits because of the state guarantee on savings deposits.

\*\* This figure is largely based on estimates. It includes the stock of property notes and share notes but excludes stocks held by households.

\*\*\* Provisions formed after the amount accumulated from life insurance and pension coverage premiums.

† Including Ft 41.1 billion of credit extended by employers.

Taking all of the above into account, *households* were in a *net savings position* with Ft 918.3 billion on December 31, 1992, less than the (Ft 933.5 billion) amount at the end of the preceding month, due to the effect of the interest being debited, as explained above. The net savings position of households increased by Ft 275 billion, 42.7%, in a year.

The next table shows that household savings effected in forints\* grew by Ft 15.4 billion (2.1%) in December, resulting from the growth of savings deposits. The increase of deposits suggests that the drop in interest rates has had, as yet, no significant decelerating effect. The securities stock increased minimally relative to the end of November.

The exceptionally great Ft 5.7 billion August increase in the stock of foreign currency deposits was followed by a more moderate increase in September, while the amount of foreign currency deposits decreased in October, due to developments in cross exchange rates. There was a slight increase in November, to be followed by a somewhat more substantial one in December.

**MONTHLY CHANGES IN HOUSEHOLD SAVINGS IN 1992, INCLUDING ACCRUED INTEREST**  
(excluding cash)

Month	Monthly changes of savings (in billions of forints)			End-of-month stock of savings in percentage of the previous month's stock		
	Forint*	Foreign currency	Total deposits	Forint*	Foreign currency	Total deposits
January	17.1	4.6	21.7	103.1	103.6	103.2
February	18.3	--	18.3	103.2	100.0	102.6
March	22.3	1.8	24.1	103.8	101.3	103.3
April	25.5	-1.2	24.3	104.2	99.1	103.3
May	16.7	1.0	17.7	102.6	100.7	102.3
June	16.4	4.7	21.1	102.5	103.5	102.7
July	19.9	3.1	23.0	103.0	102.2	102.8
August	16.1	5.7	21.8	102.3	104.0	102.6
September	10.5	3.6	14.1	101.5	102.4	101.6
October	8.2	-4.3	3.9	101.1	97.2	100.4
November	9.9	0.9	10.8	101.4	100.6	101.2
December**	15.4	2.5	17.9	102.1	101.7	102.0
Entire 1992**	196.3	22.4	218.7	135.5	117.3	132.0

\* Deposits in forints, securities, insurance premium provisions.

\*\* Preliminary data.

One of the main motives for the 1992 savings of households was the uncertainty of livelihood and fears of unemployment which enticed those who were able to do so to form reserves out of their income. Generating provisions for specific purposes also plays a role in the increase of savins. At the same time, these savings include more and more capital accumulated for enterprise, too. These amounts are, for the time being, very slow to turn into investments because of the uncertainty about profitable projects and the present insufficiency of accumulated funds.

Tables V/1 through V/4 relate to Chapter V.)

\* Exclusive of cash; deposits placed in forints, securities and insurance premium provisions.

## VI. Development of the Money Supply

### Banknotes and Coins

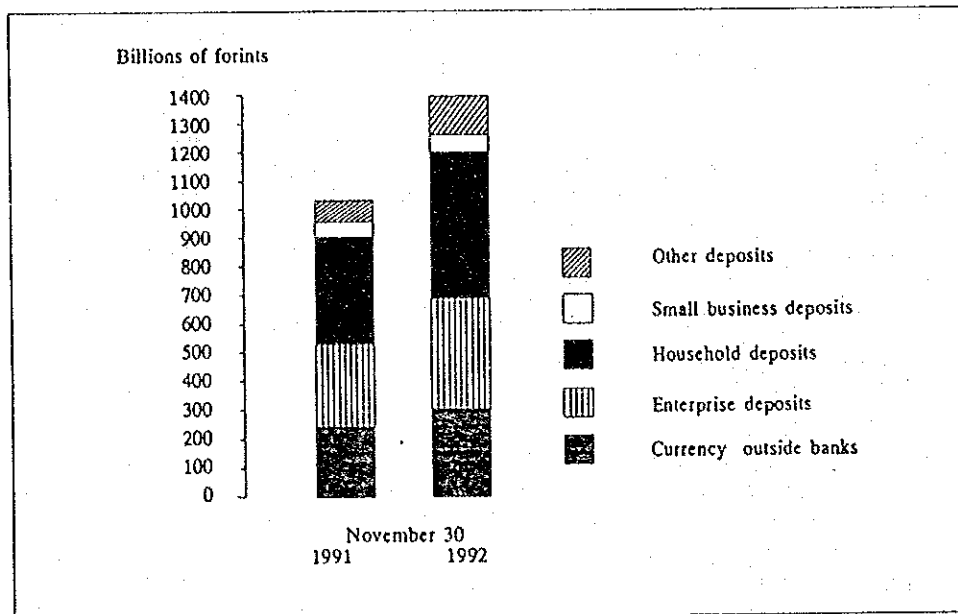
Between January 1 and November 30, 1992 Ft 2,773.5 billion of coins and banknotes flowed out, and at the same time Ft 2730.9 billion of cash flowed out through the cash desks of the NBH. As their balance, the *total currency stock\** increased from Ft 286.7 billion on January 1, 1992 by Ft 42.6 billion (14.9%) over eleven months to Ft 329.3 billion on November 30. This amount exceeded that of a year earlier by Ft 62.9 billion, 23.6%.

Without the banknotes and coins in the vaults of financial institutions – not functioning as currency –, the *currency in circulation* amounted to Ft 304.6 billion on November 30, Ft 44.4 billion (17.1%) more than on January 1. (The increment between November 30, 1991 and 1992 was Ft 61.7 billion, 25.4%.)

According to estimates, the currency handled by the Post as an activity supplementing the issuing function of the central bank and, as such, not in circulation, amounted to Ft 29.4 billion on November 30, 1992. Thus, the (estimated) value of the stock of *banknotes and coins actually in circulation* was Ft 275.2 billion on November 30, 1992. Considering this, the Ft 265.1 billion of cash at households accounted for 96.3% of the stock of currency, while 3.7%, Ft 10.1 billion was the amount of the end-of-the-month cash stock at economic entities.

### Broad Money (M2)\*\*

The *unadjusted money supply* (including banknotes and coins held at the Post for purposes explained above) was Ft 1,401 billion on November 30, 1992, Ft 337.9 billion (31.8%) more than a year earlier. The following graph shows its composition.



**MONEY SUPPLY AND ITS COMPOSITION**  
(without adjustment)

\* In addition to currency in circulation, this figure also includes currency in bank vaults outside the NBH.

\*\* Bank money + currency.

Subtracting the (estimated) amount of currency held at the Post, the *adjusted money supply* at the end of November, 1992, was Ft 1,371.6 billion, 33% more than a year earlier.

Within the 12-month, Ft 337.9 billion, 31.8% increase of the (unadjusted) money supply, the money stock of *households* was up Ft 133.6 billion in deposits and Ft 68.8 billion in currency, which was an aggregate increase of Ft 202.4 billion (35.4%).

*Deposits of enterprises* grew by Ft 72 billion (22.7%) over the 12-month period ending in November, 1992.

The growth rate of deposits under the blanket name of "other"\* was well above average (80.1%, corresponding to an increase of Ft 60.8 billion) in November as well as in each month of the year.

Deposits of *small businesses* grew by Ft 9.8 billion, 18.9%.

The growth rate of the money supply is above the expected nominal growth rate of GDP. Data from the end of November, which are, in essence, characteristic of the entire year, indicate that households were the driving force behind the growth of the money supply: the growth of their money stock made up 60% of the total 12-month increase of the money supply. (The background for the savings of households is presented in Chapter V.)

Enterprise deposits had a 21.3% share in the increase of the money supply, while the growth of small business deposits amounted to 2.9% of the total. The growth of the money stock in the enterprise sector was brought about in part by the substantially increased number of economic entities, which inevitably generates additional demand for money. This demand is also increased by the pressure for greater liquidity, in which the effects of bankruptcies have also had a role.

(Tables VI/1 through VI/3 relate to Chapter VI.)

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\* Deposits of local governments and other public institutions as well as items in transit.

V. Bulletin on Collection, Transportation,  
Incineration and Disposal of the Municipal Solid  
Waste Generated by the Capital City

Municipality of Budapest  
Public Services Division

BULLETIN

on

collection, transportation, incineration and disposal  
of the municipal solid waste generated by the  
capital city

Budapest, November 1989.





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been taken

Summary

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Summary of the Bulletin

There is an annually revised contract between the Public Service Division of the Municipality and FKFV on the sanitation tasks to be done in Budapest.

FKFV collected and transported as a total of 3,88 million m<sup>3</sup> municipal solid waste in 1988 from which 2.3 million m<sup>3</sup> residential waste was ordered by the Municipality and 1.58 million m<sup>3</sup> m.s.w. was ordered by other companies.

As far as the incineration and disposal of municipal solid waste carried out by FKFV concerns the total figure is 4.597 million m<sup>3</sup>. This number includes the waste transported by other enterprises from companies, institutions and from horticultural company.

I. Generation of waste

1.1 Characteristics of waste, changes in its quality and quantity

The quantity is doubled since 1970. The ratio of paper, plastic, glass and metal content have increased, the unorganic ratio has decreased.

The volume mass has decreased, the thermal value has increased. The waste quantity in 1970 was 2.2 million m<sup>3</sup>.

The waste quantity in 1970 was 2.2 million m<sup>3</sup>  
in 1988 was 4.6 million m<sup>3</sup>

Paper: 18%

Textile, plastic, metals: 4-6% /See Annex 1 and 2./

1.2. Projection of its changes in quantity and quality upto the year 2000

There had been a dynamic growth in the quantity of waste from 1970 to 1980. The growth has slowed down, for the last 8 years the growth have been less than 1% annually.

We estimated 2% annual growth for the period between 1990 and 2000. For 11 years this totals 57.7 million m<sup>3</sup> waste, which has to be deposited or incinerated. /See Annex 3/.

Change in quality: ratio is increasing for paper  
plastics  
packing materials  
glasses  
metals  
ratio in decreasing for organic parts

Volume mass will lessen, thermal value will grow.

II. Collection, haulage of waste

2.1 Containers

Collection only in containers of standard models.

The containers of 110l and 240 l are exclusively made of plastic.

The containers of 1.1 m<sup>3</sup> are partly made of plastic but mostly of metal.

The containers 5 m<sup>3</sup> and 6 m<sup>3</sup> are of metal.

Container types in 1989:

<u>Volume</u>	<u>Number</u>
110 l	228.218
240 l	64.347
1.1 m <sup>3</sup> /metal/	10.371
1.1 m <sup>3</sup> /plastic/	1.206
5 m <sup>3</sup> and 6 m <sup>2</sup>	<u>621</u>
Total:	304.763

The number of containers located on an area depends on waste norms /3 litre or 0.6 kg per day per capita/ and on the frequency of transport. The containers belong to FKFV.

The user has to pay charge for them.

Charge for usage: 20-40 and 200 Ft/month  
for containers of 110-240 and 1100 l, respectively.

2.2 Storage within the real estate

The containers are - in the staircases  
- or on separate storage location

2.3 System and frequency of haulage, information on vehicles

99.7% of the inhabitants of Budapest are concerned with municipal solid waste collection, haulage, etc.

The collector vehicles collect the waste of an area according to a schedule, /frequency, place, route/.

From the areas of high importance the waste is collected each day between 5.00 and 7.00 a.m.

The frequency of collection in terms of the area:

5 times per week	22%
3 times per week	44%
twice per week	29%
once per week	5%

For the residents this service is free of charge.

For companies, institutions this is for compensation.

Companies, institutions may use their own vehicles for haulage into the incineration plant and onto the final disposal sites. They have to apply for permission from FKFV and have to pay for the service.

In the contracts there are some regulations concerning the handling of hazardous, poisonous, inflammable, explosive materials thus achieving that only household-like wastes are deposited and incinerated.

Hospital wastes are hazardous therefore its collection, haulage etc is not FKFV's task.

The not hazardous waste from hospitals are collected etc. by FKFV.

There are some important places from which FKFV transports more frequently /on week-ends also/.

The bulky waste is collected from residents each year. This is for free of charge. Volume collected is 150.000-200.000 m<sup>2</sup> of furnitures, household equipments, machines etc.

These have been some actions on separate collection with bad results due to negligency and indiscipline of residents.

The cost of one action: 150,000 - 500,000 Ft

The net income: 1000-2000 Ft

Vehicles: SKODA-BOBR and MUT compactors are the backbone of the vehicles.

Technical data:

<u>Type</u>	<u>Number of vehicles</u>	<u>Capacity</u>	<u>Waste volume</u>
SKODA	120	11.0 m <sup>3</sup>	16-22 m <sup>3</sup>
MUT	92	15-20 m <sup>3</sup>	45-73 m <sup>3</sup>
		/drum/	incompacted
		24 m <sup>3</sup>	45-73 m <sup>3</sup> in-
		/container/	compacted
PKFV's own develop- ment	62		

Because of financial constrains the vehicles are old-fashioned, PKFV can not afford to replace the old ones.

III. Incineration and disposal

Total m.s.w. generated in 1988: 4,597 million m<sup>3</sup>  
of which 72.5% was deposited  
27.5% was incinerated

Number of disposal sites: 8 — 5 in Budapest  
3 outside Budapest

The capacity of boilers in HHH was low due to the reconstruction works in 1988.

### 3.1 Present situation of incineration and disposal of waste

1981: HHM was built

Problems with capacity of the plant

Reconstruction 1988-1990.

- Estimated cost: 1150 million Ft
- New capacity: 2.0 million m<sup>3</sup>

2.7-3.7 million m<sup>3</sup> waste should be deposited per annum up to year 2000.

↳ Search for new sites /max. 50 km from Budapest/

↳ Csomád, Kerepestarcsa, Dunakeszi  
/Total capacity 2.0 million m<sup>3</sup>/

The final disposal sites will be full by the end of 1992.  
The potential f.d. sites will be full by the end of 1996.  
Present and potential disposal sites see on Annex 4 and 5,  
respectively.

#### 3.1.1. Technology of depositing

- Trapezoidal stripes
- Covering layer
- 0.5 - 1 m soil, when they are filled up  
on the top.

#### 3.1.2. Incineration

HHM - Capacity was 1.5 million m<sup>3</sup> at the beginning.

- 4 boilers, 15 t/h capacity each



3.2. Tasks at present and in the future regarding waste incineration

- New disposal sites
- New incineration plant

3.2.1 Missing capacity upto the year 2000

Capacity of disposal sites at present:	2,479,000 m <sup>3</sup>
Capacity of potencial disposal sites start to operate from 1990 to 1995:	<u>9,450,000 m<sup>3</sup></u>
Total:	11,929,000 m <sup>3</sup>

Projected amount of municipal solid waste generated between 1990 and 2000: 57,712,000 m<sup>3</sup>

To be incinerated: 20,500,000 m<sup>3</sup>  
To be deposited: 37,212,000 m<sup>3</sup>

The volume of the waste to be deposited is as much as half of the original volume.

M.s.w. to be deposited /37,212,000 m <sup>3</sup> :2/	18,606,000 m <sup>3</sup>
Slag from the incineration plant:	<u>2,050,000 m<sup>3</sup></u>
Total:	20,656,000 m <sup>3</sup>

Capacity is needed for waste and slag:	20,656,000 m <sup>3</sup>
Total capacity of present and potential disposal sites:	<u>-11,929,000 m<sup>3</sup></u>
Missing capacity:	8,727,000 m <sup>3</sup>

See details on Annex 6 and 7.

3.2.2 a/ Depositing

10 potencial disposal sites, 0.5 - 2.0 million m<sup>3</sup> capacity each /See Annex 5/

This can provide just a temporary solution. Estimated cost for buying them totals 230-250 million Ft /1989/ versus 18.9 million m<sup>3</sup> capacity. For some sites the unit price would be 60-70 Ft/m<sup>3</sup>. FKFV alone can't afford it.

Another problem is: residents make objections.

If these sites will not be available for FKFV due to financial constrains or protests, there will be no possibility to deposit after 1995-96.

b/ Treatments other than depositing

Concept elaborated in 1985 for a new plant with a capacity of 2.0 million m<sup>3</sup>/year.

- Resource recovery and recycling has been thrown out as methods for waste treatment

∟ technology is not developed enough; required materials can't be sold cost effectively; too much residue (50-80% of the original quantity) ∩

- Incineration is accepted /general heat, electricity; max. 10% residue; ecological etc./

Proposal: To build a new incineration plant with a capacity of 300.000 t/year or 2.0 million m<sup>3</sup>/year.

3.2.3 Measures have been taken so far

a/ Disposal sites

Disposal sites bought by FKPV since 1980 see on Annex 8.  
Disposal sites of which purchase was failed to be  
successful see on Annex 9.

Problems caused by - dwellers' objections  
- high prices

b/ Incineration

Municipality's resolution on 2nd Incineration Plant  
on December 19, 1988.

- Preparatory works should be carried on.
- Feasibility Study should be prepared.
- Capacity will be 300.000 t/year /2.0 million m<sup>3</sup>/year/

Municipal solid waste generated by  
the capital city for the period of  
1970-1988

Year	Hauled by PKFV /m3/	Hauled by other co. /m3/	Total m.s.w /m3/
1970	1,601,646	594,612	2,196,258
1975	2,327,350	671,197	2,998,547
1980	3,246,365	1,086,551	4,332,916
1981	3,363,314	1,015,379	4,378,693
1982	3,359,939	1,151,516	4,511,455
1983	3,597,315	861,777	4,459,092
1984	3,613,611	873,403	4,487,014
1985	3,707,104	796,006	4,503,110
1986	3,752,678	882,755	4,635,433
1987	3,818,520	831,103	4,649,623
1988	3,881,620	715,427	4,597,247
1989			4,650,000 <sup>+</sup>

+ This is the projected volume for 1989

Annex 2.

Composition, volume mass and thermal value of  
municipal solid waste generated by the capital  
city for the period of 1970-1988

Composition of waste %	1970	1975	1980	1985	1986	1987	1988
Paper	18.1	25.2	23.2	16.25	19.98	18.27	18.26
Textile	2.5	2.4	3.9	4.08	5.31	4.62	4.58
Plastic	2.7	4.2	4.5	3.08	5.7	4.36	4.76
Glass	2.9	3.9	4.0	5.61	6.09	5.03	5.28
Metals	1.5	2.6	3.5	4.24	4.43	5.2	4.46
Organic waste	27.3	29.2	33.9	39.0	34.73	38.56	35.36
Unorganic waste	45.0	32.5	27.0	27.74	23.76	23.96	27.28
Volume mass /t/m <sup>3</sup>	0.3- 0.35	0.23- 0.3	0.17- 0.25	0.15- 0.21	0.16- 0.21	0.16- 0.2	0.16- 0.2
Thermal value /kJ/kg/	5020- 6280	6700- 7750	7570- 7960	6890- 8860	6990- 7560	6890	6230

Annex 3.

Projection of the quantity of municipal solid waste will be generated by the capital city  
/Estimated growth is 2% per annum/

Year	Total waste /in terms of 1000 m <sup>3</sup> /
1989	4,560 /To be expected for this year/
1990	4,743
1991	4.837
1992	4.934
1993	5.033
1994	5.134
1995	5.236
1996	5.341
1997	5.448
1998	5.557
1999	5.668
2000	5.781
Total:	57.712.000 m <sup>3</sup>

The waste amount for 1989 has been projected from data of quarters 1-3.

Annex 4.

PKFV's final disposal sites in operation

No.	Description Site	Capacity /1000m <sup>3</sup> /	Filled-up date
<u>In Budapest</u>			
1.	X. Akna str.	1.200	1993
2.	X. Harmat str.	120	-
3.	XVII. Micsurin rd.	400	1992
4.	XX. Péteri major	20	1989
5.	XXII. Tétény	130	1990 1st quarter
<u>In Pest county</u>			
6.	Csomád	40	1990 1st quarter
7.	Kerepestarcsa	150	1992
8.	Dunakeszi I.	1.000	1994

Total: 3.060 000 m<sup>3</sup>  
=====

- Notes: - The operation of final disposal site in Harmat str, has been stopped since September 1, 1989
- The contract for the operation of Micsurin disposal site was abrogated by its owner /Rákosvölgye Cooperative/ on December 31, 1989.

## Potencial disposal sites

No.	Description	Disposal site estimated capacity /1000m <sup>3</sup> /	Likely date of putting in operation	Purchase price /1000Ft/	Note
<u>In Budapest</u>					
1.	XVII., Ferihegyi airport /Orgovány u./ Betonútépítő V. mine	800	1990	56.000 + VAT	
2.	XVII., Rákosszezeje MGTSZ /Micsurin rd/	500	1991	30.000	
3.	XVIII., Cséry telep	1.000	1991	-	It is being negotiated /No bid is received yet/
4.	XX., Péteri major /Horticultural University	400	1991	30.000	



Annex 5. cont.

No.	Description	Disposal site estimated capacity /1000 m <sup>3</sup>	Likely date of putting in operation	Purchase price /1000 Ft/	Note
5.	XXII., Tétény /HM territory/	800	1990	10.000	It is being negotiated /estimated price/
<u>In Pest county</u>					
6.	Kerepestarcse	1.000	1994	-	Preparatory negotiations /No bid./
7.	Dunakeszi II.	1.100	1994	42.500	Contract is done 25 million Ft is paid.
8.	Érd	1.000	from 1990	25.000 /in 1987/	

Annex 5 cont.

No.	Description	Disposal site estimated capacity /1000 m <sup>3</sup> /	Likely data of putting into operation	Purchase price /1000 Ft/	Note
9.	Sóskút	850	from 1990 /in 1988/	15.000	
10.	Solymár	2.000	from 1996	-	No bid
Total:		9.450			

Missing capacity (the present and potential disposal sites have been taken into account)

Disposal sites in operation in Jan 1, 1990	2,479,000 m <sup>3</sup>
Potential disposal site with start-up date between 1990 and 1995	9,450,000 m <sup>3</sup>
<b>Total:</b>	<b>11,929,000 m<sup>3</sup></b>

1 unit is 1000 m<sup>3</sup>

Year	Waste generated	To be incinerated	To be deposited		Disposal site capacity at the end of the year
			Slag	Waste	
1990	4.743	500	50	4.243	9.758
1991	4.837	2.000	200	2.837	8.139
1992	4.934	2.000	200	2.934	6.472
1993	5.033	2.000	200	3.033	4.756
1994	5.134	2.000	200	3.134	2.989
1995	5.236	2.000	200	3.236	1.171
1996	5.341	2.000	200	3.341	- 700
1997	5.448	2.000	200	3.448	-
1998	5.557	2.000	200	3.557	-
1999	5.668	2.000	200	3.668	-
2000	5.781	2.000	200	3.781	-
<b>Total:</b>	<b>57.712</b>	<b>20.500</b>	<b>2050</b>	<b>37.212</b>	

Preliminary conditions for calculations:

- quantity grows by 2% annually
- volume of deposited waste will be as much as half of that of original waste
- 10% of incinerated waste is slag
- It was assumed that the potential disposal sites would be available for EKFV in time.

Annex 7.

Projection for depositing /The likely start-up dates of potential disposal sites have been taken into consideration

Year	Disposal capacity on-hand	Waste to be deposited /1000 m <sup>3</sup> /	Waste to be incinerated /1000 m <sup>3</sup> /	Remaining disposal capacity /1000 m <sup>3</sup> /	Note
1989-	2	3	5	7	
		municipal slag from inciner.			
1990	5.929	4.243	50	2.479	Incoming disposal sites:
			On December 31, 1989		- XVII., Ferihegyi airport
					- XVII., Tétény
					- Érd
					- Sósokút
					1st boiler of HEM is in operation

1	2	3	4	5	6	7
1991	5.683	2.837	200	2.000	4.065	Incoming disp. sites: - XVII., Rákosmezeje MGTSZ - XVIII., Cséry telep - XX., Péteri major 4 boilers are in operation
1992	4.065	2.934	200	2.000	2.498	No incoming capacities
1993	2.498	3.033	200	2.000	880	No incoming capacities
1994	2.980	3.134	200	2.000	1.313	Incoming disposal sites: - Kerepestarcsa - Dunakeszi II.
1995	1.313	3.236	200	2.000	- 403	No incoming capacities
1996	1.597	3.340	200	2.000	0	Incoming disposal site: Solymár

- waste quantity will grow by 2% annually

- Original waste is as much as twice of disposed waste

Disposal sites become available since 1980

Annex 8.

Year	Place	Capacity /1000 m <sup>3</sup> /	Charge for use /1000Ft/	Note
1980	-	-	-	
1981	-	-	-	
1982	Gyál	132	4500	
1983	Vecsés /expansion/ Csomád	190 700	1200 8500	
	Total:	890	9700	
<hr style="border-top: 1px dashed black;"/>				
1984	Kerepestarcsa X. Akna str. /ex- pansion/	320 600	3000 -	
	Total:	920	3000	
<hr style="border-top: 1px dashed black;"/>				
1985	XX. Péteri major Dunakeszi I.	450 1100	4500 42500	
	Total:	1550	47000	
<hr style="border-top: 1px dashed black;"/>				
1986		-	-	According to the
1987	Tétény /expansion/	600	17000	contract:
1988	X. Száraz str. /expansion X. Akna str. Dunakeszi II	350 580 1100	3000 8000 42500	25.000.000 Ft was paid until October 31, 1989. 17.500 Ft is to be paid
		2030	53500	
<hr style="border-top: 1px dashed black;"/>				
1989	X. Akna str. /expansion/	1200	9000	Taken over: 600,000 m <sup>3</sup>
<hr style="border-top: 1px dashed black;"/>				
1980-1989		7322	143700	Many paid in 1990: 4,500,000 Ft

Disposal sites for which  
purchase was failed

No.	Description	Estimated capacity /1000 m <sup>3</sup> /
1.	Diósdí mine	100
2.	Diósdí sand mine	110
3.	III. Péterhegy	100
4.	Budakalászi stone mine	180
5.	Budaörs - Törkugrató	130
6.	Békásmegyéri clay mine	1000
7.	Dunaharaszti sand mine	350
8.	Pilisborosjenő clay mine	1000
9.	Ötházi sand mine	350
10.	Bistorbágy	200

Total: 3.520.000 m<sup>3</sup>

=====

VI. Environmental Evaluation for Budapest to  
Determine Tasks Relating to Environment  
Protection I





Environmental Evaluation  
for Budapest

to determine tasks relating to environment  
protection

I.

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## Introduction

Budapest is the 8th biggest city in Europe in terms of the number of population. Having almost 0.5 million employees in its industrial sector Budapest is one of the most important industrial zone of the continent. Being 2 million residents in the city the capital's density of population is the highest in the country 24% of total number of employees working for industrial companies in the country is working in Budapest.

Budapest is the starting point of the most important roads and railroads. The secondary impacts of traffic and transport - noise and air pollution - put big burden on the city. Budapest however has plenty of unique natural values its mountains, caves, thermal and curative waters are unparalleled throughout Europe.

The urbanization in Budapest as well as in other metropolises of the world requires more and more developed industry, traffic system, energy supply resulting environmental problems. Many factors of civilization and business activities have impact on natural resources. Therefore the coexistence of environment protection interests and social values is very complex and difficult issue. The geographical-natural environment is manifoldly overburdened due to the growth of social welfare demands and social appreciation of relating activities. The dynamic growth, expansion of residential areas have impact on every element of natural environment. Generally speaking the living-space is getting narrow. As a result, proportionally to this process, the natural resources /i.e. green areas, parks, groves and forests, as well as fresh air, clean water and soil/ gain appreciation among people.

The primary tasks of environment protection are to reduce or limit negative impact on environment, contamination of surface and subsurface waters.

1. General and special conditions determined by location, environment, function and situation of Budapest

1.1 Natural and geographical description

The capital and its outskirts are divided by the Danube into two different areas along N-S line.

The Budai Mountains - belong to Transdanubian Mountains - which are split by valley, basins, are situated on the right side of the river. The Pesti Plain - had been formed on the northern border of Great Plain - is situated on the left side of the Danube. The NE and Eastern border of the area belong to Gödöllői-hills.

Budai mountains are of cross locality, upthrust formations with karst surface of 300-550 m above sea level. The higher upthrust trends are separated by basins of NW-SE directions as the major characteristic of Transdanubian Mountains.

The mountains are full of cross localities, valleys and have high relief energy. The mountains can be split into parts as we advance from north to south as follows:

The lowest part of Kevély-group - the area of Ezüst-hill, Róka-hill and Péter-hill - is situated between Budakalász and Solymári basin. Most of its territory consists of karst rocks. An abrupt slope forms the eastern boundary of this area toward Danube flood plain. Hármashatár hill is situated between Solymár valley and Ördögárok valley. Majority of its



material is karst rock. Csúcs hill, Kecske hill, Látó hill, Mátyás hill and the lowest formation called Rózsa hill together with Hármashatár hill form one unit. Huge cave-systems are situated in this area /Pálvölgyi, Ferenc hill, Szemlő hill, Mátyás hill and József hill caves/. An abrupt slope can be found near Danube flood plain.

Szabadság hill, János hill and the continuous Hárs hill, Sas hill, Csiki hills and Farkas hill group are situated in the middle of Budai Mountains southward Ördögárok valley. Farkas hill is a trend of upthrust blocks with naked karst rocks. The hill-foot upthrust trend of this central block consists of Budai Castle's hill, Gellért hill, Törökugrató. All of them are of karst rocks. Budai Castle's hill between Ördögárok and the Danube is a characteristic monadrock prevented from erosion by fresh water lime stone deposited on the top of it with a thickness of few metres. Major components of its material are limestone and dolomite but no major karst development processes were taking place therefore just smaller caves are situated in that hill.

The area of Tétényi highland with its height of 200-250 m is also part of Budai Mountains. The highland is situated between Budaörs basin and Érd. Its major rock is porous limestone from Miocene era.

This limestone had been extracted from several superficial and subsurface mines since it can be easily cut and has good heat insulating feature. These mines are sources of various environmental problems.

Among protruding parts of the mountains are situated the basins.

Two basic types can be distinguished. The first one is of through fault preformed tectonically which follows NW-SE cracks. /Solymári basin, Ördögárok basin/.

The second is a broader type of basin formed at the border of upthrusts. /Budakeszi basin, Budaörsi basin/.

The completely flat stripe of Danube's flood plain is stretching along the area between Budai Mountains and the Danube. This area is of various width i.e. 1 km on the northern part near Budakalász, Békásmegyer and on the south at Érd, meanwhile there is no flood area at all on the foot of Gellért hill.

The left bank of the Danube is more even. The so called Pesti Plain and Csepel Island both are flat areas which used to be the flood areas of the Danube, Rákos stream and Szilas stream.

The slightly rising plain-like flat area gradually turns into small hills at the border of the city. Such a hilly landscape can be seen in Cinkota, Csömör, Mátyásföld and Rákoscsaba. The slight slopes of stream valleys are stretching along NW-SE crack line in the same way as on Buda side. The landscape of the city and the outskirt is formed now by more than 2 million inhabitants living in this area.

## 1.2. Subsurface waters

### 1.2.1 Geological conditions

The geological formation of the area in question can be separated basically into two parts: the basement rock consists of karstic rocks from Triassic era of Mesozoic and quaternary cap rocks. The rocks of the basement consist of thick dolomite and limestone basis from Ladinic and Karnic stage of Triassic era. These rocks appear upto 500-550 m above sea level as lumps of Gellért hill, Szabadság hill, János hill, Hárs hill, Martinovics hill, Sas hill, Csiki hills, Hármashatár hill, Rózsa hill, Mátyás hill, Látó hill, Kecse hill, Csúcs hill, Róka hill, Ezüst hill on the right side of the Danube.

The rocks of the basement on the eastern and southern edges of the abovementioned lumps as well as on northern area in Solymár valley dip abruptly under the deposits of cap rock basin in a form of step faults. The borings for water supply of spas reached the top of basement at 1000 m below sea level in Csepel and at Paskal spa. The marl layers under karstic development and the quaternary Eocene limestones are considered as parts of basement rock. The major component of cap rocks in terms of its size and thickness is the Oligocene clay and from the same era - sandy clay, fine sand, loose sandstone and marl. They occupy different size of areas and are situated on different depth.

Various Miocene layers of maximum 200 m thickness are settled on the top the Oligocene layers especially on southern part of the area. The bottom layers are loamy, rough sandy, gravelly layers the middle part is of sandy clay the top part consists of calciferous clay, sandstone and porous sandstone layers.

The Miocene formations are situated on the surface mostly on Tétényi highland, and are sunk deeply and covered on the left side of the Danube and on Csepel Island. Above Miocene base mixed sandy, loamy, lenticular pannonian layers can be found east to the Danube getting thicker southward from couple of meter upto 150-200 m thickness.

The sand and gravel layers deposited from the Danube in Pleistocene can be found only in Pest and Csepel Island and along the Danube on Buda side. These layers are getting thicker southward.

Lenticular layer base of various grain sizes are extracted in large quantity in Csepel. The material is used for constructions.

The cap rock deposit layer are covered almost everywhere by a thin new deposit layer with good permeability.

### 1.2.2 Hydrogeological conditions, sensitivity of the area

The hydrogeological characteristics of the area are grouped in this chapter according to the age of impermeable formations.

#### a/ Karsting rocks of Triace and Eocene

The karsting rock base, which can be found everywhere in the area, has unique hydrogeological features.

The precipitation falling down the surface of Eocene limestones and marls which are deposited on Triace dolomites and limestones can get into the inner part of the rocks along structural cracks and small gaps.

The water on its way moving down forms gap systems along cracks and splits in the entire rock base due to its solvent effect. A big amount of water can be found in this systems. It can move more easily and quickly than the water stored in porouse rocks. This kind of water is called cavern water. The cavern waters of the neighbouring rocks have interconnections and form a unified system. Interfering any part of this system would have effect on the whole system. The level of cavern water is higher on the higher parts of the hills and is getting lower toward erosion basis at hill-foots. The major part of seeped-in waters comes through lower part of thick karstic rock base up to the surface as hot springs on Buda side, but the same hot cavern water can be found in deep borings on Pesti Plain and Csepel Island. The minor part of seepen-in waters comes directly to the springs and is mixing with upbreacking hot waters. In this mixing zone near the surface formed the caves of Budai Mountains

Unique characteristic of these kind of waters that due to quick seepage and to lack of filter layers the contaminants on the surface may get quickly in the depths resulting severe water contamination. According to the facts mentioned above the water balance conditions of cavern water draw-off are influenced by the water draw-off of other mountains belong to Transdanubian Mountains /Pilis, Gerecse, Vértes Mountains/. The water output and water level of springs and borings are significantly reduced by water draw-off activities of the mines in Tata and Dorog cities. Due to lower water level a great deal of cold ground water and even Danube water - through springs near Gellért hill - is mixed with hot cavern water causing disadvantageous changes in its chemical and temperature conditions.

The significant sensibility of the areas consist of karstic rock - just like Budai Mountains - means big danger on that areas. Any contaminations on superficial karsts would quickly get into cavern water causing its spoilage, but the quality of thermal waters are effected also by large quantity of cold water getting into the karsts. It is strictly forbidden to drain waste water generated on open karstic areas and to install any kind of contaminating source. Special care should be taken when laying public utilities i.e. sewerage ducts, water supply tubes, gas lines on that areas.

Being aware of abovementioned risks and in order to protect spas in Budapest the Water Management Directorate for Közép-Duna-völgy in accordance with concerned organizations declared the entire area within the boundaries of Budapest as hydrogeologically preserved.

This decree ordained complete prohibition on drainage activities on the areas of karstic surfaces.

/See Annex 1. Site map of thermal and warm water sources/