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Bond markets in advanced transition: A synopsis of the Visegrád bond markets

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Bond Markets in Advanced Transition: A Synopsis of the Visegrád Bond Markets

by

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May 1997

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Summary

Bond markets have to fulfil several important functions in the transition process: Through these markets capital can be channelled from domestic and foreign sources to the government and to private enterprises. Thus, an efficient bond market can help to create competition for the intermediation through the banking sector. In addition, government bonds can help to improve the macroeconomic framework through the provision of a non-inflationary instrument to finance government deficits. Behind this background, this analysis gives a synopsis of the stage of bond market development in the Visegrád countries. Apart from looking at the situation of different bond market sections, the primary and secondary markets, interest is also paid to the institutional and legal framework. Furthermore, the integration of these emerging bond markets into the international capital market is assessed. This synopsis indicates that although Visegrád bond markets have already proceeded far some shortcomings still remain. These concern among others low liquidity, an incomplete term structure of interest rates and the absence of markets for interest rate derivatives.

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Acronyms

AKK	Hungarian Government Debt Management Agency
BIS	Bank of International Settlement
BOB	Bratislava Options Exchange
BSE	Budapest Stock Exchange
BSSE	Bratislava Stock Exchange
CERA	Centrum Ratingu i Analiz SA
CeTO	Centralna Tabela Ofert
CEZ	Czech Public Electricity Supplier
CNB	Czech National Bank
COB	French Securities Commission
CP	Commercial Paper
CZK	Czech koruna
DWIX	Index for short-term government securities traded at the BSE
EBRD	European Bank for Reconstruction and Development
EMTN	Euro-medium term note
FIBV	International Federation of Stock Exchanges
FT	Financial Times
GEEC	General Electric Capital Corporation
HUF	Hungarian forint
IMF	International Monetary Fund
IOSCO	International Organization of Securities Commissions and Similar Organizations
ISSA	International Society of Securities Administrators
KELER	Central Depository and Clearing House Budapest
MoF	Ministry of Finance
NBH	National Bank of Hungary
NBP	National Bank of Poland
NBS	National Bank of Slovakia
NDS	National Depository of Securities of the Republic of Poland
OECD	Organization for Economic Co-Operation and Development
OTC	Over-the-counter

ÖTOB	Österreichische Termin- und Optionsbörse
PLN	Polish (new) zloty
PSC	Polish Securities Commission
PSE	Prague Stock Exchange
RM-S	Computerised retail stock exchange in the Czech and Slovak Republics
RTP	Right Time Price
SC	Securities Centre, Central registry and clearing house in the Czech Republic
SCP	Securities Centre of the Slovak Republic (Stredisko cennych papierov)
SDX	Slovak Bond Index
SDX	Slovak Bond Index
SEC	Securities and Exchange Commission
SECOM	Czech Securities Commission
SSEC	State Securities and Exchange Commission; Hungary
SSK	Slovak koruna
UNIVYC	Universal Settlement Centre of the Prague Stock Exchange
VUB	Všeobecná úverová banka s.a.
WSE	Warsaw Stock Exchange

1 Introduction

Bond markets are a relatively recent phenomenon in central and eastern European countries. Neither fixed income investment instruments nor the institutional and legal structure for their issuance and exchange existed in centrally planned economies. The monolithic financial sector was designed and used to monitor and enforce planned industrial production and to maintain macroeconomic stability. It was the central plan rather than market forces which determined the allocation and distribution of financial resources. There was therefore no need for bond markets. Neither the treasury nor local government organs, let alone enterprises, issued bonds for households to invest in (Montias, 1994: 12)¹. While somewhat neglected during the early stages of transition, there is now universal consensus that the rapid development of efficient financial systems is a prerequisite for restructuring and economic development in central and eastern European economies (see, e.g., Bonin/Szekely, 1994; Griffith-Jones/Drábek, 1995). Bond markets form an integral part of more developed financial systems and they can be expected to play an increasingly important role in the reform countries of central and eastern Europe.

This paper will therefore analyse the potential role of bond markets in the process of economic development and the transition to a market economy. After discussing the case for efficient bond markets in section two, the actual progress already achieved in different bond market segments in the central and eastern European countries is examined in section three. The next section will concentrate on the legal and institutional framework for issuing and trading fixed income securities. Even well organised primary markets will not lead to the development of efficient bond markets in the absence of liquid secondary markets in which bond issues of several issuers and with different maturities can be traded freely. Section five will therefore lay out the institutional preconditions for efficient secondary markets for fixed income securities and measure the actual developments in the Visegrád countries against this yardstick. Increasing financial openness and the need to satisfy the demands of foreign investors have accelerated institutional reforms in secondary markets for securities. Section six will further explore the advantages and drawbacks of the process integrating the bond markets of the Visegrád countries into the international financial system. In the conclusion we will attempt to identify the most important impediments to the development of efficient bond markets in these countries. We will also offer some tentative advice as to how this process might be accelerated whilst avoiding distortions in the domestic financial markets.

The impressive speed of change in central and eastern European financial markets made it near to impossible to keep track of all current developments and reform efforts in the region. We therefore restricted ourselves to outlining the most important developments in these markets and their implications for the transition process more generally. More detailed accounts are provided for the regulatory and institutional frameworks of primary and secondary bond markets. However, even these seemingly stable frameworks are undergoing rapid change. The Visegrád countries are adjusting and readjusting the financial infrastructure in response to market imperatives while bringing their regulatory systems more in line with internationally accepted standards. The deadline for assimilating material for this paper was November 1996. Some information received at a later point time up to January 1997 was used where appropriate. Subject to availability, we also included forecasts and information about upcoming reforms in 1997.

¹ Obligatory bonds sales took place in the Soviet Union during the Stalin period (Montias, 1994). Corporate and Municipal bonds were issued in Hungary in the 1980s, see below.

Some other aspects of the financial systems in the east-central Europe, notable the banking sector and equity markets, have been extensively researched. Bond markets, on the other hand, have so far received scant attention. Most of this paper is therefore based on original research. Our sources of information included ZEW-questionnaires sent out to the resident ACE-co-operation partners² as well as information provided directly by officials and market participants in the Visegrád countries. Moreover, we relied on statistics and analysis from local financial institutions and international banks active in the region. Obviously, most of this material is not conducive for providing a conventional system of quotations. We have nonetheless attempted give indication of the sources of information as far as possible.

2 The Case for Efficient Bond Markets in Transition Economies

The development of bond markets in the transition economies cannot be studied in isolation from the broader topic of financial market reforms in these countries. The establishment of markets for debt instruments is not an end in itself but should help to make the emerging financial systems in eastern Europe more efficient and responsive to market forces. Bond markets will only accelerate the transition to a market-type economy and make a contribution to economic development and growth if a number of preconditions are fulfilled (see Bröker, 1993; Feldman and Kumar, 1995; Pardy, 1992).

- *A macro-economic and fiscal environment* conducive to the supply of good quality securities and sufficient demand for them. In particular: inflation needs to be brought down to manageable levels, interest rates have to be liberalised, and a minimum of fiscal responsibility is necessary to free up financial resources in the economy.
- *A legal, regulatory and institutional infrastructure* capable of supporting the efficient, fair, and stable operation of securities markets. These institutional requirements include certainty of property rights and contracts, transparency of trading, public disclosure by non-state borrowers, investor protection against unfair practices by intermediaries and insiders, and protection against financial failure of intermediaries and market institutions. Moreover, a properly functioning banking system and liquid interbank payment system are an important precondition for the development of securities markets (Blommstein/Spencer, 1993).

Considerable reform and development efforts are required for bond markets in the Visegrád countries to reach the desired goals of efficiency, transparency and stability. Mature securities markets in OECD countries can serve as a model for the central European reform process. However, there are limits on the extent to, and speed with, which Western institutions and practices can be introduced in the transition economies. Financial sector reform involves a time-consuming process of adaptation and learning and the gradual building up of market infrastructure. Although bond markets were non-existent in the central European economies prior to the start of reform, the idea of an institutional tabula rasa, on which some kind of "designer" securities markets can be build is misconceived. Institutional and behavioural legacies of the communist planning system limit the range of current possibilities and options in institutional innovation and the adoption of market-conforming practices (see Hausner/Jessop/Nielsen, 1995). Moreover, any across-the-board advice applicable to a large number of transition economies is likely to be unrealistic. Country-specific

² In particular, we acknowledge helpful support from Victória Múcková and Marián Nemec (National Bank of Slovakia), Josef Mervart (Czech National Bank), Jarek Neneman (University of Lodz) and Rita Bozzai (Financial Research Ltd., Budapest).

factors, in particular the historical, institutional, regulatory and political circumstances which have worked together in shaping a country's financial system, need to be taken into account. If these preconditions are fulfilled, bond markets can serve a number of important functions in the transition process.

The most important function of capital markets in a market economy is to provide a mechanism to link deficit units with surplus units and thus help to achieve an efficient allocation of capital. Mature bond markets allow borrowers and investors to diversify sources of investment capital and spread investment risk. They facilitate financial deepening and, in the long term, lower the cost of capital and contribute to economic growth. Bond markets are suitable to serve medium- and long-term credit needs in the economy by channelling ultimate savings directly or indirectly, via financial intermediaries, into marketable debt instruments.

In the presence of public deficits government bonds are a noninflationary source of budget finance. Many economies in transition are burdened with a high stock of debt and relatively high deficits. An efficient bond market allows governments to minimise borrowing costs and to restructure maturities to guarantee the sustainability of debt-servicing. If adequate instruments for financing the budget are lacking, for example because of problems with tax-collection, the central bank may be forced to finance the deficit through direct lending to the government. The inflationary consequences of budget financing through central bank credit are well documented. Efficient bond markets allow the government to resort to domestic savings to finance the deficit and thus facilitate the fight against inflation.

Mature bond markets are a precondition for a market-oriented conduct of monetary policy. With an active bond market monetary policy can be carried out through the issue and repurchase of government securities. In the absence of efficient securities and money markets, monetary policy has to rely on direct means such as credit ceilings and interest rate controls. These are likely to distort the allocation of capital in the economy (BIS, 1993). Moreover, issuance of central bank or treasury bills are important for the development of money markets as they facilitate interbank transactions and increase liquidity.

Bonds may be an important source of finance for the enterprise sector. Newly privatised enterprises in the region are in great need for long-term capital for restructuring and expansion. Supply of capital has so far come primarily from banks which are notoriously risk-averse. The issuance of debt securities is also attractive for firms because the costs for the financial intermediaries are saved. In recent years the degree of securitization has progressed far in the industrialised countries (OECD, 1995). Securitization may offer particular advantages for the transition economies where traditional intermediaries, such as banks and insurance companies, need further time to function properly.

Bonds offer a yielding investment opportunity for the household sector. Fairly priced bonds are an attractive investment for risk-averse private savers. Availability of bonds can thus stimulate private savings which are the most reliable source of capital. This is of particular importance in the transition economies where there is a large demand for capital for enterprise restructuring and infrastructure reform in combination with traditionally low private savings rates (EBRD, 1996: 78-86).

Domestic bond markets may also attract foreign investors. It is generally in the interest of reform countries to diversify the sources of foreign capital. Besides seeking credit from supranational organisations or foreign direct investment it is desirable to attract portfolio investment. Portfolio investment includes the purchase of securities such as company stocks or bonds. Among these, foreign borrowed capital is politically less controversial than ownership of domestic equity. Possibly foreign investment in fixed income securities is also more reliable than equity investment.

A domestic bond market which is open to the world represents a link to world capital market and thus facilitates the efficient international allocation of capital.

Domestically, mature bond markets intensify competition in the financial markets: Bonds can be a substitute for financial intermediation and the provision of debt financing through the banking sector. Thus, a competitive bond market can impose pressure on the banking system to improve efficiency and the level of services, for example through a reduction of interest rate margins between borrowing and lending rates. This is of particular importance in the transition economies where reforms of the banking system are still lagging those in the production sector and where banking is highly concentrated on a regional and sectoral basis (EBRD, 1995: 153-170; Kern, 1996). Furthermore, bond markets may help central and eastern European banks to manage their balance sheets. Bank bonds are a suitable means for recapitalising financial institutions suffering from excessive bad loans. Well functioning securities markets allow banks to securitize their debt and better manage the maturity match and risk profile of their balance sheets (Pardy, 1992: 9).

Last but not least, the bond market is the market which decides the equilibrium interest rate. It is crucial for the intertemporal allocation of savings and investment that this market is efficient. In the reform countries where interest rates have been distorted first, by direct government and central bank controls, and second, by the monopolistic structure of the banking sector, this market process is of particular importance.

3 Primary Markets: The Development of the Different Market Sections

The previous section highlighted several important functions that bond markets can fulfil in the transition process. However, these general considerations cannot easily be applied across the board to the central European economies. The Visegrád countries started the reform process with differing degrees of financial development as well as different legacies of the past. It is therefore necessary to look more closely at the financial and fiscal system in each country and to analyse the actual and potential role of bond markets in this specific environment. Moreover, different bond market sectors play different roles in the financial systems of market economies. In OECD countries, the markets for government bonds are generally more developed than the markets for debt instruments issued by regional bodies and corporate entities. Usually, government bonds act as benchmark for the pricing in all bond market sections. As the next section will show, this does not necessarily hold true for all the central and eastern European countries.

A closer analysis of the developments in different bond market sections provides important clues about the overall reform process in each country, and the degree of enterprise and fiscal reform in particular. We have therefore divided our empirical and analytical framework not only with regard to countries but also with regard to different bond market sections.

3.1 Government Securities

In the transition economies, as in more developed market economies, the government bond sector is crucial for the development of other segments of the bond market. For reasons examined below, an early development of the non-state bond market was impeded by the structural legacies of the communist past. Government bonds had a special significance in the early stages of capital markets development because securities issued by the state were suitable to attract investors' confidence

from the start and thus helped in the development of capital markets more general. The evolution of a market for government bonds also provided the infrastructure and regulatory framework for the private securities market (BIS, 1993). Deepening of securities markets requires a regular supply of standardised securities from prime issuers. In more developed capital markets government bonds usually act as a benchmark for risk-assessment and for pricing of non-state issues. This is crucial for the establishment of a well-defined yield curve, which cannot be done with lesser-rated credits.

However, the emergence of a large government bond market is not necessarily beneficial for the capital market development in transition economies. On the one hand, a high volume of new issues in each period is crucial for providing market liquidity and facilitating the price finding process. If primary issues are lacking, government securities cannot provide a benchmark for the corporate and bank bond sector. On the other hand, if the market is swamped with low-risk, high yielding government paper for budgetary reasons, crowding out may prevent the development of non-government bond markets.

Supply side developments in the state bond sector reflect public borrowing requirements and the need to stabilise liquidity in the banking sector. High funding needs for infrastructure development and impending reforms of social securities systems as well as the need to roll over existing debt are apt to guarantee a continuous and sufficient supply of government debt instruments. On the other hand, central European countries are trying to decrease public spending for stabilisation purposes and, more generally, to reduce state involvement in the economy. If public borrowing needs are modest, governments might decide to issue bonds to simply retain a presence in the market and help liquidity through consistent and regular issuance. This could be justified if the proceeds were used to finance long-term investment or infrastructure development programmes, for which fixed interest bonds with longer maturities are ideally suited.

During the early stages of reform, the issuance of government fixed income securities was hampered by relatively high inflation, in particular in Poland and Hungary. There was therefore a natural tendency to develop the short end of the market first and to issue floating rate or index-linked bonds rather than fixed coupon paper³. Up to 1993/4 bond markets basically consisted of short-term treasury securities supplemented by a few issues of medium-term bonds (Dresdner, 1994). Strengthened confidence in the reform process and successes in the fight against inflation were a precondition for the emergence of medium- to long-term securities. Maturities of state bonds in east-central Europe are gradually getting longer. However, as long as inflation and interest rates can be expected to continue to come down relatively rapidly governments will remain cautious in issuing long-term debt instruments with fixed coupon payments.

On the demand side, low private savings rates and the traditional pattern of investing savings in bank accounts rather than securities were the main impediments for the development of the government bond market. In most transition economies, local commercial banks still account for the bulk of investment in government securities. The intermediation performed by banks in channelling private savings into budget financing has not necessarily been beneficial for the transition process. By giving preference to low-risk government securities, banks often did not meet the high credit demand for enterprise restructuring and private investment. On the other hand, due to a general lack of alternative low-risk investment opportunities commercial banks as well as non-bank entities had little alternatives to holding government paper. Once the privatisation process gathered momentum, demand for equity began to outpace demand for government bonds in most countries. Given the

³ Index-linked bonds, which are common in some central and eastern European countries, might carry the risk of leading to institutionalised inflation. It would therefore be advisable for governments faced with high inflation rates to rely on short maturities. These, however, entail the requirement of continuous refinancing and the associated risks (BIS, 1993).

scarcity of capital in central European countries, demand for government bonds remained closely linked to stock market developments. This became particularly obvious in the second half of 1994 when the rapid fall in share prices translated into increased demand for alternative investment opportunities, in particular bonds, and thus provided a boost for the fixed income market.

Table 1: Government Bonds (Excluding T-Bills) Outstanding at the End of Period

	1993	1994	1995	End June 1996
Poland PLN bn	1.41 ^o	4.37 ^o	11.10 ^o	16.10 ^o
Hungary HUF bn*	319.51*	465.21*	574.12*	615.41*
	778.23**	1,034.52**	1,221.02**	1,676.77
Czech Republic CZK bn	19.50	28.27	41.67	46.80
Slovak Republic SSK bn	7.95	15.9	54.1	51.78

Sources: For Poland: MoF Poland, 1995, 1996c; for Hungary: AKK, 1996c; for the Czech Republic: CNB, 1996b; for Slovakia: ZEW Questionnaire, Statistics of the NBS.

* Bonds issued by the central government.

** Figures including Social Security Fund, Consolidation Bonds, and other special purpose issues

^o Excluding non-negotiable Treasury securities

Czech Republic

In the Czechoslovak Republic the first bonds were issued in 1989, before the division of the country. These were traded in the so-called interim secondary market, an informal market organised by the Czech National Bank and domestic commercial banks. The legislative framework, which established the bond market in its present form, was in place by the end of 1992 (BV, 1995; Hein, 1994: 173-4). At the beginning of 1993, the Czech government began to finance the previous two years' budget deficits through issuing fixed coupon bonds with medium-term maturities. Financial and monetary stability provided a suitable framework for the establishment of a well-functioning securities market. However, the strong fiscal position of the central government made the development of a liquid market for state bonds extraordinarily difficult. Since 1993 the government has achieved budget surpluses.

As long as the budget remains balanced or even in surplus, new government bond issues are only replacing old debt and the market will remain thin and illiquid. The government continues to issue a modest amount of medium-term bonds four times a year in order to retain a presence in the market and to dampen rapid growth in the money supply⁴. Rapid growth of the market capitalisation of the Czech bond market -- in excess of 150% on a year to year basis since 1993 -- was mainly due to the increases in issuance volumes of corporate and bank bonds (Aspekt Financial Information).

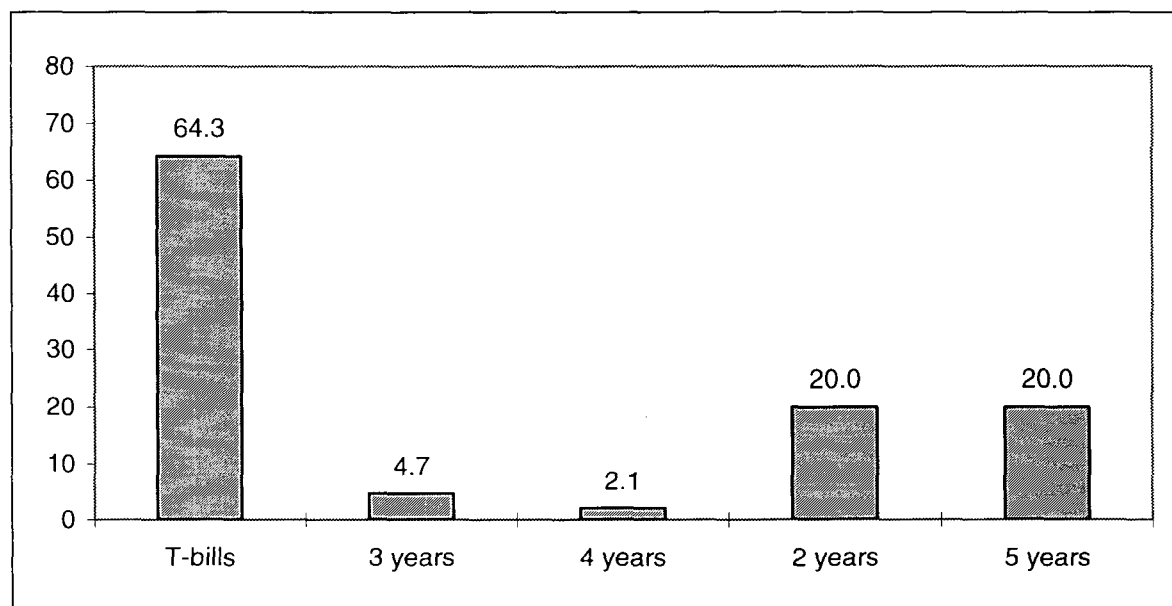
Not only in terms of volume but also with regard to maturity structure is the Czech corporate bond market more advanced than the state bond sector. While the longest available maturity of state bonds is still five years, enterprises and banks started issuing bonds with maturities of up to ten years. On the whole, however, the bond market is dominated by two to five year maturities and there is a lack of low-risk long-term paper in the Czech Republic. Some hopes are vested in the medium-term development of a more liquid market for mortgage securities (see below).

The Czech National Bank (CNB) issues its own bills to stabilise the liquidity of the banking system. In 1995, these were the main instruments used to sterilise large foreign capital inflows with an

⁴ The issuing volume is fixed at CZK 20 a year until the year 2000.

issuing volume that exceeded that of T-bills by a factor of ten. The National Property Fund also offers short-term bills on a regular basis. As these do not fall under tax preferences for government securities they usually yield about 6-7% more than comparable T-bills.

Figure 1. Bonds Outstanding, End of June 1996, CZK bn, Nominal Value



Source: CNB

Hungary

The establishment of the domestic state debt market dates back to 1988 when the government started issuing non-tradable three, six, and nine-months treasury notes. T-bill auctions were introduced in 1989 to facilitate monetary management. The issuance of fixed rate bonds with maturities longer than twelve months was originally impeded by high inflation and a lack of investor confidence due to previous problems with fixed rate instruments⁵ (BIS, 1993). The domestic market for short-term government securities, on the other hand, developed very rapidly. Since 1991, the domestic bond market has been flooded with large volumes of government paper as a result of high and fluctuating demand for credit by the central government. The consequences for the reform process in Hungary were twofold. First, crowding out has impeded the development of the capital market. The budget deficit has resulted in a shortage of capital for enterprise restructuring and expansion. Investors and analysts criticise that the flood of government bonds has choked the fledgling markets for commercial bonds. Equity market development was hampered by the fact that, up to the end of 1995, the average return on shares were below the yields of less risky government paper. Banks held an increasing share of their assets in the form of low-risk, high-yielding government bonds which considerably decreased their propensity to lend to the private sector.

⁵ Attempts to create a domestic capital market started in the early 1980s with the issuance of corporate and municipal bonds. Most of these instruments carried fixed rate coupons. Rising inflation towards the end of the decade caused a collapse of bond prices. The aversion of Hungarian retail investors against long-term fixed rate instruments can be related to the damage done to investors' confidence during this period (BIS, 1993).

Second, under Hungarian Central Bank Law the National Bank of Hungary (NBH) was obliged to purchase a pre-specified amount of treasury bonds and bills each year to help finance the budget deficit. Although this indirect way of budgetary finance is preferable to earlier ways of direct central bank credit, it nonetheless has negative consequences for monetary stability and the development of efficient monetary management (Kemme, 1994: 45-6). The absorption of a large share of primary issues by the NBH also had negative implications for liquidity and pricing efficiency in the domestic bond market. First, the purchasing obligations of the central bank left the Ministry of Finance with the possibility to exert control over the issuing price. Second, large holdings of government securities by the central bank proved to be an obstacle to the development of a liquid secondary market.

Fiscal consolidation and impending reforms of the central bank law can be expected to help both monetary stability and the development of the bond market. The austerity package introduced in March 1995 established a ceiling for the budget deficit of six percent of GDP. This target figure has more or less been achieved due to solid revenues and tight control of expenditure, although the collection of social security contribution arrears still represents a considerable problem. Despite the fact that the social security deficit again exceeded the original target in 1996, the total fiscal deficit could be brought down further. On the monetary side, recent structural reforms seek to strengthen the central bank, and make public finance more transparent. This mainly concerns the transfer of responsibility for the central bank's 'devaluation debt' to the central state budget at the beginning of 1997 (European Commission, 1996; CS first Boston, 1997).

Considerable progress has already been achieved in reducing the role of the NBH in the government bond market. While in December 1994 it held 32.9% of all deficit financing government securities, its share was down to 8.03% in August 1996 (AKK, 1996c).

Hungary's relatively high inflation is also reflected by the fact that more than two thirds of outstanding treasury bonds are floating rate rather than fixed coupon. Moreover, the yield curve is underdeveloped as the government debt market is heavily concentrated in short maturities of less than twelve months and medium term notes. One of the main goals of Hungary's capital market policy has been to gradually shift supply to longer maturities. Up to the end of 1995, T-bills covered the largest share of the central government's borrowing needs. In 1996 only about one third of domestic net issues carried maturities of less than twelve months the remainder being medium-term bonds with maturities of one, two, and three years. There are a few issues of five-year bonds outstanding and only one long-term instrument with a maturity of ten years (NBH, 1996)⁶.

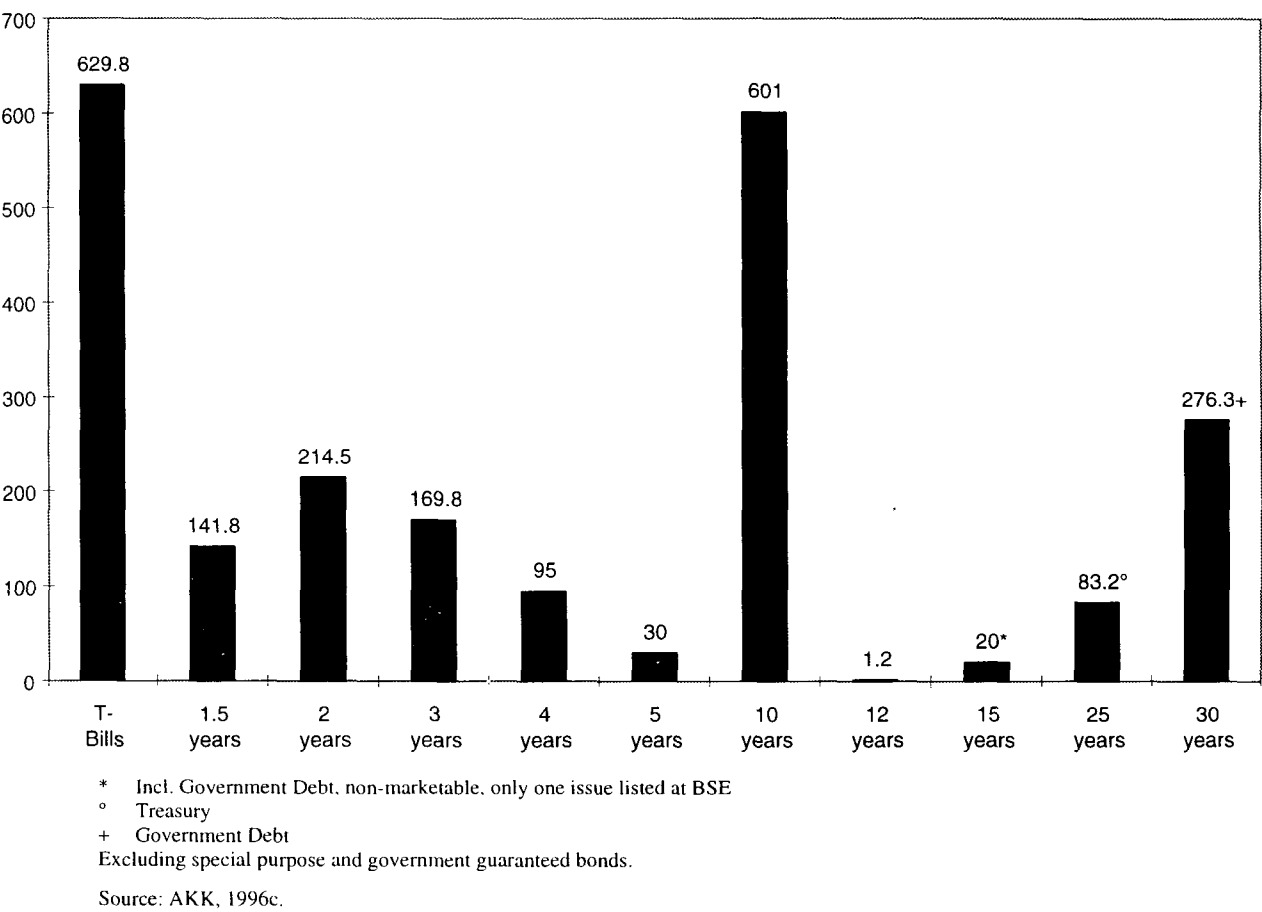
Some analysts believe that relatively high inflation and the expectation of considerable interest rate reductions will prevent the development of the long-term bond market in the near future (Euromoney, 1996c). On the other hand, investors seem to be more confident with the government's determination to fight inflation and demand for government debt by domestic institutions has risen sharply in 1996. This resulted in a large supply-demand imbalance in the primary market with auctions of government bonds being heavily oversubscribed. As inflation is expected to continue to fall in the course of 1997 demand for longer-dated paper should increase further.

For 1997, the government faces massive redemption of outstanding issues, which it plans to finance through further issues of bonds with maturities of two, three, seven, and perhaps five years. It is expected that net issuance volumes will approximately be the same as in 1996 but gross issuance

⁶ These figures concern bonds issued by the central government for budgetary reasons. Special-purpose issues to finance the Social Security Fund, the Higher Education and Housing Programmes usually have maturities of more than 10 years. These constitute a large part of all outstanding bonds but are not publicly traded (AKK, 1996c).

will certainly increase (Forecasts of the Government Debt Management Agency). The market for Hungarian government paper could get a further boost in 1997 if tax and social security reforms are realised, institutional investors strengthen, and Hungary further enhances its standing in international markets.

Figure 2: Hungarian Budget Financing Treasury Securities Outstanding at the End of August 1996, at Face Value, HUF bn



Slovak Republic

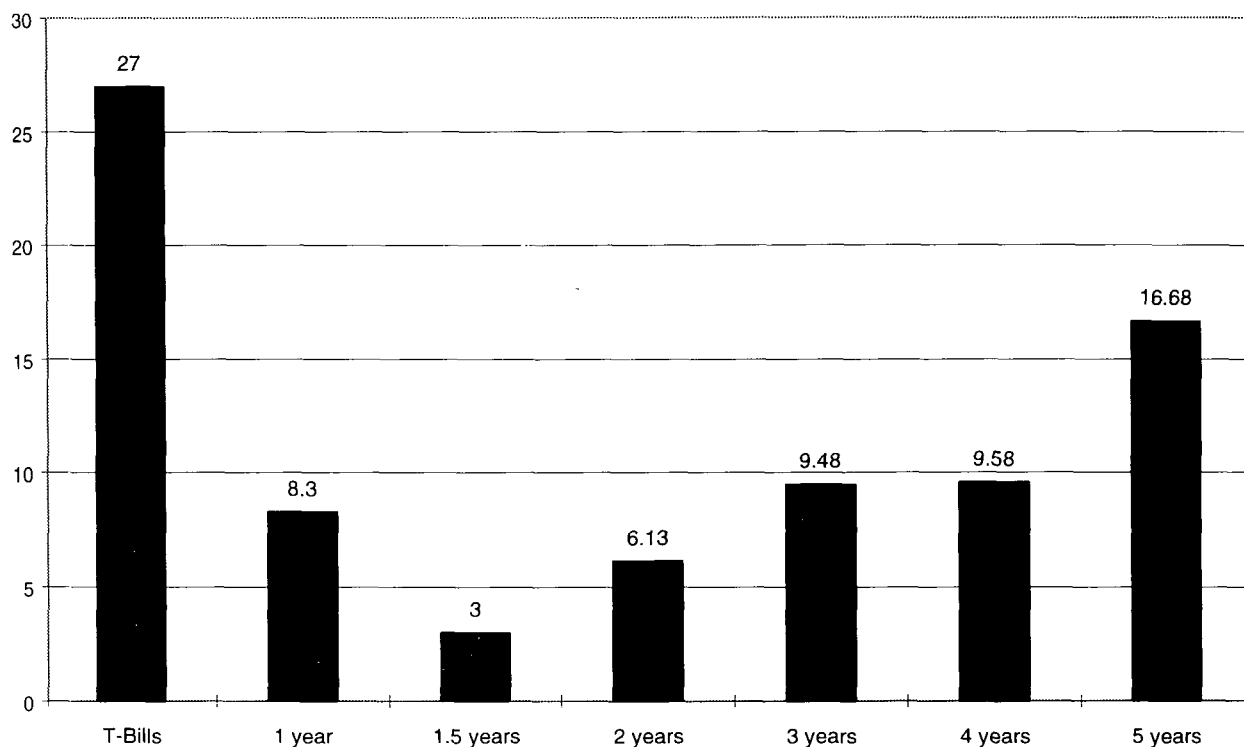
Similar to Hungary, the state used to be by far the most important issuer on the Slovak bond market. Government paper accounted for 90% of the outstanding volume at the beginning of 1995. The national government bond market had a relatively slow start. In mid-1994, the National Council, the Slovak parliament, approved of the issuance of treasury debt securities for financing previous and current budget deficits. Issuing volumes of government securities grew rapidly in 1995, which had several positive effects on the process of fiscal and financial reform. Through the funds raised in the capital markets the government was able to fully repay the direct credit it had received from the Central Bank for covering the previous two years' budget deficits. Another positive aspect of government issuance activity was the reduction of excess liquidity in the banking system. Moreover, changes in the term structure of the state-paper primary market provided a useful indicator for private-sector issuers of fixed income securities (NBS, 1995).

Due to fiscal consolidation, starting in 1995, issuing volumes decreased significantly. Total issuance of government paper in 1996 was less than a quarter of the volume issued in the previous year. Rapid growth of primary issues in the non-state sector compensated for the decrease in supply of government paper to a certain extent. On the whole, however, total volumes of primary issues fell considerably and the overall size of the Slovak bond market remains small, even if compared to other central European markets. Fiscal prudence, a lack of alternative low-risk investment, and discriminatory taxation of non-state securities resulted in a marked demand-supply imbalance in the state bond market (VUB, 1996a; 1997a).

Most of the outstanding government debt is medium-term bonds rather than T-bills, a situation which is rather untypical for central and eastern Europe. The Slovak T-bill market remains illiquid and the amount outstanding is low (SKK 17.7 bn or USD 578 mio at the end of August 1996; ING Barings, 1996). The National Bank of Slovakia (NBS) issues its own bills on a regular basis with the aim to reduce excess liquidity in the banking sector. Increasing monetary stability allowed the government to issue fixed-coupon bonds from 1994 onwards and to gradually extend maturity structures. However, like in the Czech Republic, the longest maturity for government bonds is still five years. Unlike in the neighbouring Republic, Slovak enterprises and banks have not stepped in to extend the yield curve which therefore remains underdeveloped.

On the demand side, the government bond market is entirely dominated by the banking sector. The share of government bonds held by commercial banks increased from 89% in 1994 to 95.9% in December 1996, mainly due to their purchasing activities in the primary market. Despite a reduction of the nominal value of government bonds to make the bond market more accessible for small investors, individual private investors still hold a mere 0.17% of outstanding treasury bonds in 1996. Foreign investors account for 0.02% of the market. The NBS does not hold government bonds but it occasionally purchases T-bills directly from the Ministry of Finance. According to Slovak Central Bank Law, the central government may resort to NBS credit for budget financing up to a limit of 5% of state revenue. In 1994, this limit was exceeded by a considerable amount. In 1996, the NBS purchased SKK 36.4 bn of a total of SKK 119.9 bn of T-bills directly from the Ministry of Finance. (NBS, 1995; supplementary information provided by NBS).

Figure 3: Slovak Treasury Securities at the End of December 1996, in SKK bn



Source: NBS

Table 2: Issuance of Domestic Bonds in the Slovak Republic, in USD mio

	1993	1994	1995	1996
Government	100.83	253.62	1 290.73	354.26
Corporate	9.10	27.01	216.78	396.61
Banking	4.55	11.12	138.66	279.67
Municipal	3.03	3.97	8.96	21.63
Total	1117.51	295.72	1 655.13	1 052.18

Source: VUB, 1997b.

Poland

In Poland the supply side of the bond market is equally dominated by the government. Although Poland owes almost two thirds of its public debt to foreigners, internal debt is now growing considerably faster (by 17.4% in 1995 compared to a 4.4% increase in external public debt). This is in line with the government's attempt to reduce its dependence on external sources of finance and to improve its standing in international markets. The national deficit is largely financed through the issuance of Treasury securities. Because of the need for budgetary consolidation primary issuance since 1993 has been modest.

The Polish monetary authorities started issuing bonds as early as 1989. In addition to helping to finance the budget deficit (through so-called 60%-State Borrowing Bonds) early types of state securities were issued to speed up privatisation (bonds convertible into shares in privatised companies), to recapitalise ailing commercial banks (Reconstruction Bonds), and to cover state indebtedness to the central bank (Conversion Bonds). All these instruments were directly placed

with the NBP and certain local commercial banks and are not tradable. A considerable share of these early issues was denominated in US dollars rather than zloty. These "passive" debt securities could therefore not form the basis for a liquid and efficient domestic bond market. Tradable government floating rate notes with a maturity of one and three years were first issued in 1992. Falling inflation and growing confidence in the reform process allowed the Ministry of Finance to introduce two- and five-year fixed coupon paper in 1994 and ten-year variable-rate bonds in 1995.

Floating rate notes, which used to dominate the primary and secondary bond markets in Poland, have now been overtaken by two- and five-year fixed rate bonds. Ten-year paper is particularly popular with domestic private investors, but its share in outstanding government bonds is relatively small. Growing confidence in economic stabilisation is also reflected by the fact that Poland has increasingly relied on bonds denominated in domestic currency. Whereas at the end of 1992 almost half of Poland's T-bonds were denominated in dollars, the share was down to 16.7% at the end of 1995 (MoF Poland, 1996a; 1996b; 1996c).

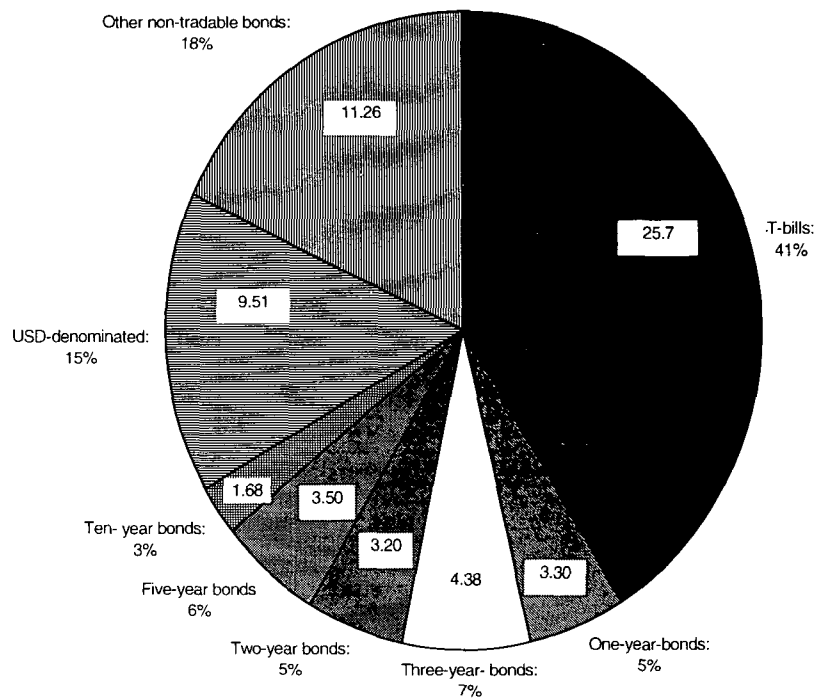
Similar to the Hungarian National Bank, the National Bank of Poland (NBP) used to play a dominant role in financing the government deficit through direct credits as well as purchases of government securities. The consequences for monetary stability and the development of the bond market were very similar to those observed in Hungary: an underdeveloped non-state bond market, problems with monetary management, and a distortion of market forces in the primary market. According to the NBP, the obligation of the Bank to purchase primary issues directly enabled the Ministry of Finance to manipulate the issuing price and interfere with the interest rate level on the market. During 1995, the Bank began to reduce its role in financing the public deficit. It diminished its holding of T-bills and non-negotiable bonds but remained nonetheless obliged to purchase government bonds directly to help finance the budget deficit⁷. The new Polish constitution, which is under preparation, will rule out any budget financing through the NBP and thus prepare the way to Poland's accession to the EU.

In the course of 1995 and 1996, the NBP already considerably reduced its holdings of domestic public debt (from 35.4% in 1994 to about 15% at the end of June 1996). This corresponded to a rapid increase of public indebtedness to the banking sector as the NBP sold on its holdings of T-bills to commercial banks through the interbank market.⁸ As in other central European economies, domestic banks are the most important investors in Treasury securities. In 1996 the banking sector holds about two thirds of all outstanding treasury securities. Private investors are more active in the bond market than is the case in other central and eastern European countries. The attractiveness of the state-bond market to retail investors is mainly due to tax incentives and the regular use of public offerings (MoF Poland, 1996c).

⁷ The Act on the National Bank of Poland obliges the central bank to buy government securities directly from the Ministry of Finance up to 2% of projected expenditures of the budget for a given year. In practice, the Parliament regularly suspends this obligation and lays down the limit for NBP purchases (in terms of purchasing price) in the budget law. In 1995, the Ministry of Finance sold only 50% of the stipulated amount of Treasury securities to the NBH. In 1996 the amount is expected to be even lower (Information from the Monetary Policy and Credit Department of the NBP).

⁸ These sales were mainly conducted in an attempt to sterilise the large capital inflows during 1995 and thus reduce inflationary pressures (see NBP Annual Report 1995). The NBP's holding of T-bills have been fluctuating in 1996 from zero at the beginning of the year to a high level over the summer when the NBP was once again obliged to purchase T-bills from the MoF to currently zero again (because the stock of T-bills in the NBP portfolio have matured).

Figure 4: Polish Treasury Securities Outstanding at the End of June 1996, in PLN bn and Relative Figures



Source: MoF Poland, 1996c

While T-bills are used by the NBP to ensure efficient money market operations, they are primarily issued to provide a non-inflationary source of financing for the Polish budget deficit. The Ministry of Finance has already reduced the share of T-bills in public debt from 50.5% at the end of 1992 to 43.0% at the end of 1995 and pursues the objective of further reducing this percentage (MoF Poland, 1996a).

Table 3: Available Maturities for Treasuries in the Visegrád Countries

Poland: T-Bills: 8, 13, 26, 39, 52 weeks T-Bonds: 1 year (inflation rate + 3%) 3 years (13-weeks-T-bill + 10 %, reduced to 5% in 97) 2 and 5 year with fixed rates. 10 years (52-weeks-T-bill + 10%, 5-year call option)	Slovak Republic: T-Bills: 1, 3, 6, 12 months T-Bonds: 1-5 years, fixed rate
Czech Republic: T-Bills: 13, 26, 39, 52 weeks T-Bonds: 2, 5 years*, fixed rate	Hungary: T-Bills: 1,3, 6, 12-months, discount and interest bearing T-Bonds: 2- 5 and 10 years*, fixed and floating rate

Source: ZEW questionnaire.
* 1,5 years series discontinued in 1996

3.2 Corporate and Bank Bonds

Corporate bonds have a potentially important role to play in the process industrial and financial sector reform in formerly planned economies. With the enforcement of hard budget constraints, newly privatised enterprises increasingly need to rely on their own funds to finance restructuring and new investment programmes. Banks need to raise fresh capital to clean up their balance sheets and comply with higher capital adequacy ratios. Fixed-income securities provide a suitable means of raising long-term funds for these projects. However, newly privatised or commercialised enterprises in central and eastern Europe have been largely unwilling or unable to supplement equity and loans with long-term debt funding for several reasons. First, in the early stages of reform alternative sources of funding were mostly cheaper and more easily accessible than debt financing through the capital markets. Lending rates in east-central Europe have decreased in recent years due to monetary stabilisation and increasing competition in the banking system. Short-term bank credit continues to be the main source of corporate funding in the region. Medium- to long-term credit is increasingly available to prime borrowers, not least in the international syndicated loan market. Equity markets have developed rapidly due to mass privatisation programmes and increasing sophistication of local exchanges.

Second, disinterest in the local bond market also reflected the structure of the economy after the start of reforms. In western industrialised countries it is mainly large, well-established companies that issue bonds, because the issuing costs have to remain small relative to bond yields. For small and medium-sized companies, debt financing through the capital market is in general too expensive. However, it is exactly this sector of small and medium-sized enterprises which is the most dynamic in the transition economies. Central and eastern European states continue to hold relatively large stakes in the biggest enterprises and financial institutions, which means that corporate funding is often directly or indirectly financed through the government budget. On the other hand, because of the uncertainty concerning profitability of former state-enterprises these cannot easily access capital markets in the absence of government guarantees. Development of the corporate bond market is therefore to a certain extent a function of the success of the privatisation programme (Dresdner, 1994).

High inflation constituted an additional obstacle to the issuance of corporate bonds. Equally important was that crowding out through large central budget deficit in Hungary and Poland. On the micro-level, debt funding was hindered by a lack of experience with issuing methods, the preparation of prospectuses, and the use of issuing syndicates. Due to the general lack of technical skills of employees in the finance area, corporates had to rely on outside sources for advice and financial management. However, while most banks established capital market departments early in the reform process there was no real experience in bond issues. In the early years of financial market development corporate bonds were therefore essentially disguised loans (Eichler, 1995).

For these reasons, corporate bond markets remained underdeveloped in the region, with the exception of the Czech Republic. Up to the end of 1994, only the most advanced companies relied on debt funding through the capital markets. The first corporate issuers were large domestic enterprises which were partly or wholly sold off to strategic foreign investors. The issue of CEZ, the Czech public electricity supplier, in June 1993 was widely considered as path-breaking for the development of corporate bond markets in the region (Eichler, 1995). In late 1994, when equity markets stagnated, many enterprises in central and eastern Europe sought alternative sources of corporate finance, in particular bonds and commercial paper. However, the renewed stock market boom in the Visegrád countries, the continued inflow of direct foreign investment, and the

increasing availability of longer-term corporate loans seem to diminish the need for a rapid expansion of the corporate bond market.

On the demand side, the main problem of the non-state bond markets in the region remains the high degree of uncertainty concerning credit risk. Only a small number of the largest utility companies and banks have obtained a credit rating by the internationally recognised rating agencies. There are no domestic rating agencies in central and eastern Europe to assess the creditworthiness of smaller and medium-sized companies.⁹ Moreover, stock markets and banks cannot necessarily be relied upon to monitor the solvency of local companies, and accounting and disclosure practices often fall short of western standards.

Table 4: Corporate Debt Securities in the Visegrád Countries

	Poland	Hungary	Czech Republic	Slovak Republic
Amount outstanding end 1995	PLN 737.4 mio	HUF 69 bn	N/A.	SKK 10.4 bn
Maturities	Predominantly short-term commercial paper up to three months.	Short-term CP and promissory notes, very few longer maturities.	CP up to twelve months, corporate and bank bonds from two to ten years, but mainly in the range of two to five years.	Commercial paper up to three months. Corporate and bank bonds from three to five years.
Number of corporate and bank bonds traded at the stock exchange in QIII 1996,	none	3	56	14 (+ 18 listed at the RM-S)

Sources: ZEW Questionnaire; Hypo-bank CZ, a.s.; BSSE. 1996b, September; RM-S.

Czech Republic

The Czech Republic has by far the most developed market for corporate bonds in the region. The market has expanded rapidly in volume terms since 1994, but it remains heavily concentrated in a few major issues mainly by the largest banks and public utility companies (CEZ, SPT Telecom, Skofin, Komerční Banka, and CHB). For industrial enterprises bank credit and equity remain the main sources of corporate finance. Some observers expect that the issuance of enterprise bonds will become a more important form of fund raising in line with the increasing sophistication of the Czech capital markets. CEZ, the energy utility company, remains the largest non-bank issuer in the Czech market and its long-term bonds (seven and twelve years) are widely regarded as benchmarks for the long end of the market.

The market for bank bonds proved to be more dynamic than the enterprise sector. In 1995, banks overtook the central government as the most important issuers in the domestic market. At the end of August 1996, bank bonds represented 41% of the Czech bond market, while government bonds accounted for 32%, and enterprise bonds for 25% (Aspekt Financial Information). Bonds are issued not only by the biggest banks in the capital but also some smaller regional banks and also foreign institutions, which are active in the Czech market. The issues are mainly used to refinance lending activities and might thus help to create a sounder basis for Czech banking¹⁰. As the largest banks

⁹ The first central European rating agency, CERA (Centrum Ratingu i Analiz SA) was established in Poland in December 1996. The firm will rate investment risk of bonds and other debt instruments in accordance with the standards established by internationally recognised rating agencies and provide general analysis of the securities markets. It will initially concentrate on non-state bonds in the Polish domestic market, but also plans to subsequently extend its activities to neighbouring central European countries (The Warsaw Voice, 2.2.1997; Handelsblatt, 30.1.1997).

¹⁰ The banking crisis in 1996 does not seem to have affected the market for bank bonds to any great extent. Bank failures were largely restricted to smaller private banks. The state continues to hold a significant stake in the five biggest financial institutions, which are also the main issuers in

often prefer private placements rather than seek listing at the stock exchange, exact figures for the size of the Czech bank bond market are hard to obtain.

As a result of the active non-state primary market, the Czech Republic has the most developed yield curve in the region. Up to 1994, the standard maturity of corporate bonds was three. Subsequently the five-years-plus segment expanded, partly because of recurring benchmark issues of five year T-bonds. Few longer maturities of up to twelve years exist, but there is no liquid market for these long-term bonds. The market for short-term corporate debt instruments developed in the course of 1995. The number of floating rate bonds, issued mainly by the largest banks, has been growing rapidly in 1996. These are usually tied to the discount rate, although more recent issues tend to be tied to money market rates. Very few issues of convertible bonds have taken place since 1992, and the volume outstanding remains low.

Some problems remain in the Czech corporate bond market. A significant share of corporate bonds carry simple or often even multiple call options which has made them less attractive for foreign and domestic investors alike. Domestic demand for non-state bonds has been reduced by tax discrimination in favour of government bonds. The withholding tax on non-state bonds, in combination with relatively high inflation, resulted in negative real yields in many cases. Foreigner investors, on the other hand, prefer higher-yielding corporate and bank bonds, which also offer a greater degree of liquidity in the secondary market.

CEZ, the utility company, was the first (and at the end of 1996 still the only) Czech company to gain an international investment grade rating. It acted as a pioneer for central European non-state issuers in 1994 by raising money in international markets in order to avoid the constraints of the relatively narrow domestic capital market.

Slovak Republic

After a slow start in 1993 and 1994, the Slovak non-state bond market began to develop at a fairly rapid pace in the course of 1995. Comparing the amount of medium- and long-term credit to enterprises in 1995 with the issuing volumes in the corporate bond market during the same period, it becomes obvious that the Slovak capital market has emerged as an alternative source of business finance. Comparisons of the loan interest rates and the "all-in" cost of funds raised through bond issues show that the capital market offers cheaper fund raising opportunities. The ratio of corporate bonds to long-term loans reached about 1:10 in 1996 (VUB, 1996b; 1997a).

Low inflation allowed a lengthening of maturities in 1996 but unlike in the Czech Republic, maturities in the corporate bond markets are in the narrow range from three to five years and do not exceed those of government bonds¹¹. The lack of long-term government paper resulted in an undefined yield curve which makes the price finding process in the non-state primary market difficult. Whereas government, municipal, and bank bonds have been issued with fixed coupon rates since 1994, many corporates still carry variable interest rates¹². A large share has been structured with call options. Coupons on corporate bonds are usually 1.5-3% higher than those of bank bonds, reflecting higher risk and a lack of liquidity. There are a few issues of convertible bonds outstanding.

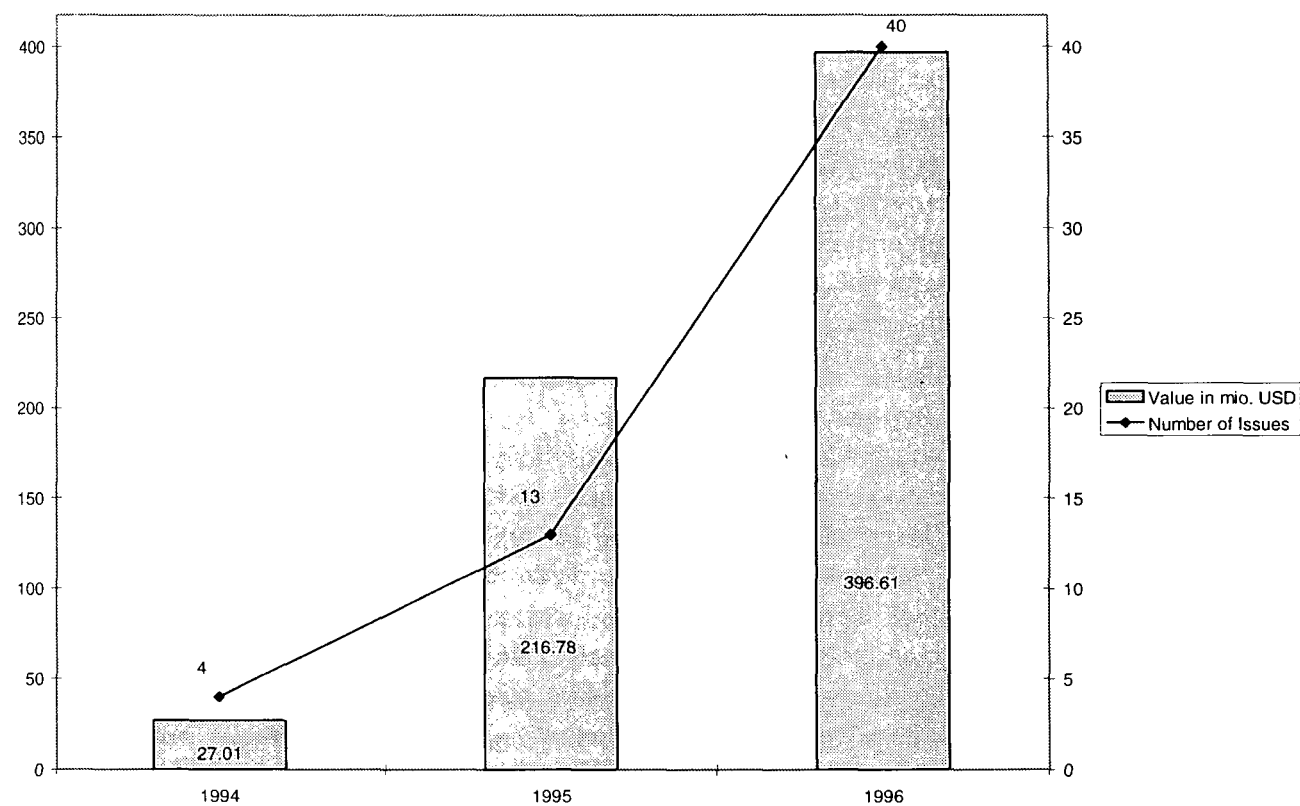
the bond market. This might imply an implicit state guarantee for outstanding bank bonds. Moreover, the Czech government proved its willingness to bail out bankrupt financial institutions to avoid a large-scale crisis of confidence in the Czech financial system.

¹¹ The only exception is a 7-year bond floated by Slovenské elektrárne, the Slovak electricity company, in December 1996. VUB, one of the country's largest banks, plans a 7-year issue for early 1997 (VUB, 1997b).

¹² The spread over the discount rate has fallen by two thirds between 1993 and 1995 and reached 3-5% in early 1996. In late 1995 the first corporate bond with fixed coupon was issued and by the end of 1996 the ratio of fixed to variable coupon enterprise bonds was about 4:5.

Commercial paper is mainly issued with maturities of less than three months in the form of promissory note programmes on the Slovak money market. CP is regarded as a quick and easy means of short-term financing and rates compare favourably with the costs of short-term credit. However, demand for these instruments is low because the tax rate of 40% makes them rather uninteresting for domestic investors. Despite the popularity of corporate bonds in Slovakia the domestic market remains relatively small. Slovak companies therefore face the need to seek international placements and to borrow directly in international capital markets. After a number of corporate issues had been partly subscribed by foreign investors, VUB-bank floated the first bond in December 1996 which was entirely placed with an international syndicate. Two of the largest Slovak enterprises entered the international markets successfully through issuing Euro-bonds. (Figures provided by BSSE; Euromoney, 1996c; ZEW Questionnaire; VUB, 1997b)

Figure 5: Development of the Slovak Corporate Bond Market



Source: VUB, 1997b.

Poland

In Poland high inflation and the availability of more attractive instruments for investment have prevented the development of a corporate bond market¹³. Up to the end of 1995, there had been three zloty-denominated bond issues, two by large multinational companies and one by a local brewery. It was hoped that the improvement of the legal framework through the Bonds Law of 1995 would create an environment more conducive to a rapid development of the non-state bond market. The law requires private issuers to disclose sufficient information and is thus designed to enhance

¹³ Polish Analysts point to another inhibiting factor: insufficient knowledge about this alternative means of funding in Polish industry and a lack of awareness on the part of domestic investors.

confidence in the fledgling corporate debt market¹⁴. It also allows corporate entities to issue different types of debt instrument, such as convertible or asset-backed bonds, to increase the flexibility and attractiveness of debt funding in the Polish capital market.

However, by the end of 1996, the corporate bond market is still in its infancy. The market for "KWIT" commercial papers (promissory notes), which were originally issued through ING Bank, emerged as an alternative means of corporate finance in 1995. The first issues were placed by multinational enterprises but Polish companies are also increasingly using this facility. In addition, Bank Handlowy provides issuing and trading services for its own commercial paper programme. "Bony Handlowe", registered debt instruments with maturities from one week to twelve months, are issued through open tender or private placement. The issues are guaranteed by the issuing agent and borrowing enterprises are required to fulfil certain disclosure requirement, thus reducing the risk of investment in these debentures. Through its Capital Market Centre, Bank Handlowy furthermore organises secondary market trading and provides clearing and settlement services for commercial papers (Bank Handlowy, 1995).

The market for commercial paper market has grown at a rapid pace during 1996, with foreign investors playing an increasingly important role (BV, Sept. 1996). It is estimated that corporate debt instruments amounted to some USD 550 mio in October 1996 (compared with USD 15 bn in government securities). However, the overwhelming majority of corporate issues still carry maturities of under three months. Poland's first medium-term corporate bonds with maturities of 12 and 18 months were issued in late 1995 by Elbrewery, the country's biggest brewery. There is one convertible bond outstanding which was issued by a start-up computer company in the fall of 1996 (FT Finance Eastern Europe, Dec. 1 1995; FT, 30.10.1996).

Although these issues may be interpreted as encouraging signs for the Polish non-state bond market, there are several reasons why Polish enterprises are unlikely to rely on longer term debt financing through the capital markets in the near future. First, relatively high inflation and interest rate uncertainty make the issuance of long-term debt instruments unattractive. Financing through medium-term bonds is too expensive compared to medium-term credit, which has continuously become cheaper due to a high degree of liquidity and increasing competition in the Polish banking system. Moreover, placing bonds in the illiquid market is too cumbersome and time-consuming compared to the issuance of commercial paper. The lack of demand for corporate debt instruments represents another major obstacle. Investors prefer low-risk government bonds or high-yielding commercial paper. As long as there is no secondary market for non-state bonds (see section 5) this situation is unlikely to change. Higher demand for first issues is expected to come from institutional investors in the future, in particular pension funds and insurance companies. Analysts furthermore expect that the amounts of investment needed by the larger Polish corporations will soon exceed the volume of credit that can be provided through syndicated loans so that bond issues will increase as the only viable alternative (Information provided by Creditanstalt Securities S.A. and Raiffeisen Capital Polska S.A.).

Polish financial institutions have attempted to avoid the underdeveloped Polish non-state debt market through issuing bonds directly in international markets. Two of Poland's largest banks successfully issued Euro-bonds and have thus opened cheaper and more flexible sources of funding for Polish private sector borrowers.

¹⁴ According to Creditanstalt Securities S.A., two corporate issuers defaulted on their issues of commercial paper up to 1996.

In Hungary, high demand for low-risk government bonds effectively crowded out demand for riskier investment in private-sector bonds. Corporate borrowers rely instead on commercial paper, the markets for which developed in 1992/3, at the time of the credit crunch when many companies did not have access to the loan market. According to the NBH, gross issuing volumes of corporate debt instruments in the first half of 1996 rose threefold compared with the first half of 1995 although the number of issues remained almost constant. The vast majority of these issues is short-term with maturities of up to three months (NBH, 1996). However, precise figures for the size of the Hungarian corporate bond market are not attainable and the size of the market may actually be underestimated. Corporate debt instruments are mainly issued through private placements and these do not have to be reported to the State Securities and Exchange Commission. The amendments to the Securities Law planned for 1997 will institute reporting requirements for private placements so that the situation in the Hungarian non-state bond market should become more transparent.

3.3 Municipal Bonds

Municipal bond markets in the Visegrád countries are lagging far behind the other bond market segments in terms of issuing volumes and liquidity. Nowhere do municipal bonds represent more than a small fraction of the domestic bond market. This can be expected to change in the medium-run. Bond markets offer a potentially important source of capital for urgently needed infrastructure investment and may help to bridge the gaps between tax revenue, investment expenditure, and proceeds of public investment. With the current trend towards decentralisation in central and eastern Europe, local authorities are required to assume growing responsibilities in a number of areas while at the same time disbursements through the central government are decreasing due to fiscal austerity. Municipalities will therefore increasingly face the need to raise own funds through credit and debt instruments. On the demand side, municipal bonds may be an attractive investment opportunity for foreign and domestic investors alike because they usually offer higher yields than comparable T-bonds with manageable credit risk. However, in a 1996 report Moody's, the rating agency, warns that sub-national bond issues in central and eastern Europe are not free of default risk. Although the risk of ultimate default in the sense of legal bankruptcy is very remote, there is a real danger of municipalities getting behind on their debt payments. Even the strictest laws on territorial borrowing in the domestic capital market do not usually address the issue of the timing of actual disbursement. The risk may be regarded as lower in countries such as Poland where mechanisms for horizontal equalisation exist at the territorial level (Moody's, 1996).

Poland's municipal bond market started to develop at a fairly rapid pace at the beginning of 1996 after the Bond Law of 1995 had created the legal framework for the issuance of municipal bonds. The first large sub-state issues were floated by the City of Gdynia in January and May 1996. A number of other cities, including Lodz, Krakow and Lublin, entered the bond markets with issues between PLN 20 and 90 mio in the course of 1996. Taken together, Polish municipal authorities raised approximately PLN 500 mio in the capital markets in 1996. In the main the funds raised are to be spent on refurbishing urban mass transport systems and improvements of local infrastructure (FT Finance East Europe 5.1.1996, 19.7.1996; Bank Handlowy, 1996a). In addition to financing needs, considerations of prestige were important for many larger cities and the large banks that placed the bonds. After this rapid start, the pace of new market entries is expected to be lower in 1997. The larger, more well known cities already have issues outstanding and there is a limited number of quality municipalities left that can issue bonds at affordable costs. Moreover, demand for municipal bonds remains relatively modest because of the tight spread over treasury securities

and the lack of liquidity in the secondary market (Euromoney, 1996c; Information provided by Raiffeisen Capital and Investment Poland).

Municipals issued in the *Czech Republic* amount to just 2% of the total bond market in 1996. The total amount outstanding at the end of June 1996 was CZK 9.74 bn, with maturities ranging from five to seven years (CNB, 1996b). The municipal bond sector is the least liquid because investors tend to hold the bonds to maturity rather than trade them. Many of the smaller issues are collateralised with mortgages and a few have been fully guaranteed by the Czech Savings Bank (Euromoney, 1996c). In *Slovakia* the municipal bond market is at a similar stage of development as in the neighbouring Czech Republic. Whereas the number of issues launched is comparable to that of corporate bonds, the total principal outstanding is considerably lower. In the third quarter of 1996, some 22 issues of municipal bonds were outstanding with a market value of SKK 570 million (Figures supplied by BSSE). No municipal bonds were outstanding in *Hungary* at the end of 1996. Some of the larger eastern European cities acquired international ratings and could thus benefit from falling borrowing costs in the international markets. The City of Prague was one of the first local authorities raise funds in the Euromarkets and a number of other large municipalities from the region quickly followed. It is expected that international issues by sub-state entities from central and eastern Europe will increase significantly in 1997.

3.4 Mortgage-Backed Bonds

In more developed countries, mortgage bonds (or mortgage-backed bonds) are important to provide an adequate supply of long-term finance for real estate at attractive interest rates. In the Visegrád countries they might develop into a source of capital for urgently needed housing construction and urban development. After the start of reforms, previously state-owned residential property was handed back to previous owners or sold off to current tenants at a large scale. Most of these buildings are in a poor state and in urgent need of refurbishment and modernisation. Moreover, an increase in the supply of new housing is regarded as an important precondition for enhancing the flexibility of property and labour markets. The pick up in economic activity and large inflows of foreign direct investment also resulted in growing demand for commercial real estate and office space. As most governments continue to regulate the housing market for social policy reasons, building up an efficient system for long-term real estate financing is of great economic and political importance.

Through the mortgage law of July 1995, the *Czech Republic* provided a comprehensive legal framework for the issuance of mortgage bonds. The new law defines these bonds as debt securities (hypotéční zástavní list) the value of which is fully backed by property or eligible supplementary collateral. Czech mortgage bonds are comparable to the German "Pfandbriefe" in most respects. However, unlike in Germany where mortgage bonds are issued exclusively by specialised financial institutions, the Czech bonds can be issued by any bank that acquired authorisation as part of its general banking license. The maximum loan-to-value ratio is 70%, which is 10% higher than the German equivalent. Interest-rate income from mortgage-backed bonds is tax-exempt for individual and corporate investors (Neubauer/Stöcker, 1995).

In July 1996, Vereinsbank CZ floated the first mortgage bond issue of CZK 100 mio with a maturity of five years. Demand for the issue by institutional investors was high but a lack of demand in the underlying Czech mortgage loan market is impeding the development of this new bond market segment. Mortgage costs tend to be higher than rents, which are still heavily subsidised. The government is planning to extend subsidies to the loan markets to reduce the prohibitive costs of borrowing. Demand for further mortgage-backed bond issues is assured by the absence of low-risk,

readily available, long-term paper in the Czech market. It is widely expected that the mortgage-backed sector will increase liquidity on the long end of the Czech bond market in the medium term (Business Central Europe, Nov. 1996). In *Poland*, the Bonds Law of 1995 envisages the introduction of mortgage-backed bonds but no issues took place in 1996. In *Hungary*, the mortgage-backed sector is equally underdeveloped. There is an urgent need for real-estate finance after local governments began with mass sales of poorly maintained state-owned apartments in 1990 and the government is determined to have the necessary legislation in place at the beginning of 1997. Additional legislation, which will allow institutions to raise funds for mortgage loans by selling mortgage-backed bonds, is expected to be passed in March 1997 (Bloomberg Columns). *Slovakia* also plans the introduction of mortgage-backed bonds for 1997 but no detailed information was available in 1996.

4 The Institutional and Legal Framework for an Efficient Bond Market

4.1 Feeding the Bond Market: Issuance and Placement Practices

The way in which new bond issues are brought to the market is of great importance for the development of a liquid and transparent bond market in emerging market economies. Issuing and placement practices do not only determine pricing efficiency and transparency in the primary markets, they also influence liquidity in the secondary markets and determine the types of investors attracted to the bond market. For the organisation of the primary market, four techniques for issuing and distributing newly offered bonds shall be considered:

- *Auctions.* Bonds are sold through either American-style auctions, at which each investor pays the price he bids, or Dutch-style/uniform price auctions, at which each bidder pays the price of the last accepted bids. Auctions for treasury securities are held periodically by the central bank or special institutions set up by the Ministry of Finance. Direct participation is often reserved for the special group of authorised primary government dealers, approved annually by the Central Bank and/or the Ministry of Finance.
- *Private placements.* Bonds are sold directly to a small number of selected financial institutions and/or other institutional investors. Private placements are often not explicitly defined in securities legislation. Bonds issued by way of this cost-effective method are often eligible for listing at the stock exchange at a later stage. Issuers usually opt for this step in the case of large volumes for reasons of prestige and to enhance liquidity in the secondary market.
- *Public offering.* Bonds are sold to a wider investor base at a fixed price. This is usually done through a banking consortium either on a commission basis or with a placement guarantee (underwriting). Investors can be registered as subscribers to the offered bonds during a fixed subscription period.
- *Tap issues.* Bonds of a given series are sold over a longer period either over the counters of designated financial institutions or through selling new issues directly into the secondary market.

In practice, these methods are often used in combination depending on a number of factors, including the general market environment, the size and reputation of the issuer, the planned volume and frequency of new issues, and the investor group to be targeted by the issue.

Particular problems exist in the eastern European countries in the pricing process of new issues. In established bond markets, the process of issuing new bonds can be based on the information

available on the secondary market of circulating paper. In a situation of illiquid or non-existent secondary markets, the task of pricing new issues on the primary market is more demanding. Market-oriented auction systems are the best way to use all available information for price determination. The public sector can act as a pioneer in establishing issuing procedures and providing regular information about market conditions. In OECD countries market-oriented approaches to the management and the issuance of public debt have become increasingly popular during the last decade (OECD, 1994b). These may serve as a model for the improvement of primary markets in east-central Europe. The experience shows that pricing efficiency of primary markets for government debt can be increased through

- regular and frequent auctions of government securities with a large volume per issue,
- a balanced mixture of maturities,
- advance notification of auction details,
- participation of all relevant potential purchasers in the auction, and
- ex-post assessment of the auction results.

Table 5: Issuance Calendars for Government Securities

Poland defined in the Budget Law. T-bills every Monday 1-, 3-, and 10-year quarterly 2- and 5-year fixed coupon bonds monthly	Hungary T-Bonds once a month 1- and 3- months T-Bills weekly 6- and 12-months T-Bills every two weeks 1 year Private Investors Bills once a month 1 year Saving Bills continuously
Czech Republic preannounced for every fiscal year, annual issuing volumes for T-bonds are fixed until 2000 T-bonds in the first week of the 2nd month each quarter T-bills weekly	Slovak Republic no issuing calendar

Sources: ZEW Questionnaire; AKK, 1996c.

In general, the issuing techniques for government bonds in the Visegrád countries are in line with the move to market oriented approaches in OECD countries. American-style auctions are used in all four countries and the auction details are widely publicised. However, the efficiency of the primary markets still needs to be improved. Pricing problems in the government bond market in Slovakia emerged in the course of 1996. The Ministry of Finance and the NBS refused to pass on higher interest rates to auction participants through increased yields on short-term treasury and NBS bills as well as medium-term notes. The bids offered by the small number of commercial banks present at the auctions were rejected as "inadequately high" by the NBS. A large number of auctions in the third quarter were unsuccessful as a result (NBS, 1996). In Poland, a significant share of the banks and brokerage houses accepted as primary dealers in the state paper market did not fulfil their functions to the satisfaction of the issuers. The NBP therefore tightened the regulations for participation in the primary T-bond market to filter out the most active participants and announced a considerable reduction in the number of licensed market-makers for T-bills for 1997 (The Warsaw Voice, 5.1.1997). Considerable scope for improvements seems to exist in the private-sector primary markets. The large share of private placements constitutes a problem not only for the transparency of the market situation but also for the development of a liquid secondary market.

Table 6: Issuing Methods for Government Bonds

	Poland	Hungary	Czech Republic	Slovak Republic
Auctions	American style. Minimum bid PLN 1 mio. The Polish Ministry of Finance reserves the right to increase/reduce the amount of T-bills auctioned off per session.	American Style. Minimum bid HUF 1 mio, maximum bid HUF 100 mio. Competitive and non-competitive bids. The quantity of bonds issued can be changed by up to 25% after the bids have been received.	American style	American style
Issuing Agent	National Bank of Poland	Government Debt Management Agency of the Hungarian State Treasury(AKK)	Czech National Bank	National Bank of Slovakia
Auction Participants	Only banks and brokerage houses which have a proven record of activity in the primary markets. In particular, they are required to have purchased T-bonds worth at least 0.2% of total bond sales during the preceding three months.	Selected brokerage companies which act as primary dealers.	Authorised primary government dealers, approved annually by the CNB (for banks) and the MoF (for security dealers).	Restricted to licensed dealers (investment funds, brokers, banks) which act for their customers.
Public Offerings. Subscription	Two-thirds of one-year floating rate bonds and also some three-year bonds series are sold through public offerings using Bank Pekao SA's service outlets throughout Poland. Subscription was introduced for one-year bonds in late 1996.	A significant share of T-bonds are issued through syndicates made up of brokerage houses. Since April 1996 subscriptions follow auctions for the same series and at a price 0.2% higher than the auction price.	---	----
Private placement	---	Dominant issuing method for Social Security Fund and Consolidation Bonds, but also used for Central Government bonds. According to the AKK only auctions will be used from QIII 1996 onwards.	----	A small amount of T-bonds were previously sold directly but the NBS is now entirely relying on auctions.
Form of issued securities	Bearer bonds in book-entry form only. ¹⁵	Registered and bearer, immobilised but not wholly dematerialised.	Overwhelming share in bearer form and dematerialised.	Bearer bonds in book-entry form.

Table 7: Issuing Methods for T-bills

	Poland	Hungary	Czech Republic	Slovak Republic
Issuing method	American-style auctions on a discount basis. Min. bid PLN 100,000. Competitive and non-competitive bids.	American-style auction, Bids between HUF 1 mio and 10 mio. Competitive and non-competitive bids.	American-style auction.	American-style auctions. Volumes may or may not be fixed in advance.
Auction Participants	Domestic and foreign legal entities and individuals which have been accepted by the NBP as primary dealers.	Licensed primary dealers for interest-bearing T-bills, Domestic banks, financial institutions, brokerage houses, KELER, BSE, foreigners with NBH authorisation for discount T-bills.	Banks and brokerage houses. No fixed primary dealer contracts.	Domestic and foreign brokerage houses which are registered with the NBS.
Issued form	Book-entry form only through the Central Treasury Bill Register.	Issued in book-entry form, transferable bearer instruments.*		

¹⁵ Under the Commercial Code investors are still entitled to obtain physical documents. The new securities legislation, to enter into force in 1997, will terminate this right, which is in practice already obsolete.

Table 8: Issuing Methods for Non-State Bonds

Poland	Hungary	Czech Republic	Slovak Republic
In accordance with the 1995 Bonds Law, non-state legal entities may issue bonds by way of public offerings and private placement where the number of targeted investors may not exceed 300. Public offerings are regarded as too expensive and time-consuming for non-state entities. Commercial paper as well as municipal bonds are privately placed with commercial banks and enterprises through the Polish Development Bank or the more active local and foreign investment banks.	Non-state bonds are almost exclusively issued through private placement. Only three issuers sought listing at the exchange.	An estimated one-fifth of all outstanding bonds has been issued through private placements. The reason for the popularity of private placement seems to be the cost advantage as well as the fact that official listing at PSE is regarded as too cumbersome. However, the trend is towards more centralisation and an increasing number of listings.	Corporate bonds are mainly privately placed through large domestic banks. Subsequent listing at the Bratislava Stock Exchange or the RM-S is compulsory for all publicly traded securities.

Sources: ZEW Questionnaire

For Hungary: AKK, 1996a, 1996b; NBH, 1996;

For Poland: NBP Annual Report 1995; International Securities Regulation Report May 1995, Information provided by the Monetary Policy and Credit Department of the NBP.

For CR: BV, Feb., 1995;

For Slovakia: ZEW Questionnaire.

* Discount T-bills are printed in the form of one global note.

4.2 Statutory Frameworks: a Delicate Trade-off

Since capital markets were non-existent in the centrally planned economies, the regulatory and legal frameworks for these markets had to be build from scratch after the start of reforms¹⁶. The regulatory regime for efficient and stable bond markets comprises three main areas:

- the new issue market and related disclosure, accounting, and listing standards,
- secondary market trading activities, including market surveillance and enforcement, and
- supervision of market practitioners through registration and prudential standards (see Chuppe/Atkin, 1992).

In devising an adequate legal framework for emerging capital markets, governments faced a trade-off between two major goals of regulatory policy. On the one hand, financial policies should be designed to increase the efficiency of financial markets. The reform process in the Visegrád countries started off with an array of government policies which impeded efficiency in securities markets, whether fiscal (preferential tax treatment), monetary (reserve requirements, credit ceilings), or institutional (preferential market access for the federal government for budget financing) (BIS, 1993). Therefore, improving the functional efficiency of capital markets required, to a certain extent, the retreat of the state from the financial sector to give market forces greater scope in the allocation process. From this point of view, it could be argued that governments should limit regulations to the correction of market failures. On the other hand, building up confidence in fragile financial systems in the economies in transition requires prudent regulation and supervision. An extended role of the state in the financial sector can be justified by the fact that the costs of financial crisis are largely external to the decisions of direct market participants. These costs often extend

¹⁶ The debate about an adequate regulatory framework for financial markets in central and eastern Europe focused mainly on banking regulation. As the stock market crisis of 1987 demonstrated, confidence in the stability of the financial system may be undermined by shocks from any sector within the system. Therefore, prudential concerns should not be confined to banking but should cover all financial markets in the transition economies. It was only after the emergence of irregularities in some central European stock markets that more attention was given to the regulation of securities markets.

into the financial realm and include foregone growth and output and a general loss of confidence in the financial sector. The state should therefore protect investors and other market participants against losses due to fraud and other malpractices as well as install adequate safeguards for containing systemic risk.

After five years of economic reform, regulatory regimes for capital markets are in place in all the central European countries. The main problem in the regulation of security markets in the region does not seem to be legislation but law enforcement. The legal infrastructure in the formerly planned economies might be incapable of dealing with too complex regulatory systems. A clear and simple legal framework and an efficient enforcement mechanism should therefore be given priority in the regulatory process. In mature markets, areas not covered by laws are usually regulated by executive instructions, court decisions, customs, and self-regulatory rules of proper behaviour. This framework is only slowly emerging in central and eastern Europe. The number and capacity of commercial courts turned out to be inadequate and the procedures to solve conflicts related to capital market contracts is often too slow and costly. The regulatory agencies or administrations in these countries should therefore be granted the legal authority to act quickly and efficiently. They should also have the power to inflict punitive charges on market participants which violate rules of conduct or prudential regulations (Pohl et al., 1995: 25).

Moreover, regulatory authorities in transition economies with dynamically growing securities markets need to be alert to new regulatory issues generated by structural change, for example connected to advances in information technology or the increasing role of foreign financial institutions. It is therefore important that laws and regulations governing trading and the role of financial intermediaries allow for change rather than impede it. Supervisory authorities need to be given sufficient authority and discretion to interpret the law and promulgate new regulations in order to keep pace with developments (Pardy, 1992: 19).

Of particular importance for the development of emerging bond markets are the rules governing access to the primary market. Administrative supervision in this respect is all the more important as there are no domestic rating agencies operating in the Visegrád countries and the large international rating houses have so far only evaluated a small number of the largest enterprises and banks. In order to build up and maintain confidence in emerging bond markets it is important that only bonds of a minimum quality are admitted to the market in the initial stages. For reasons of systemic stability, a clear definition of access for non-state borrowers in the national bond markets should be laid down in securities laws. The admission of bonds of lesser quality might be envisaged at a later stage when investors have gained more experience.

In order to enable investor to make reasoned investment decision, effective disclosure standards need to be specified and enforced for all private sector borrowers issuing securities to the public. However, disclosure requirements may be insufficient to ensure investor protection in the early stages of bond market development. First, most of the potential corporate borrowers are newly privatised enterprises which cannot provide audited financial reports for more than a few years. Second, local investors often lack experience and sophistication and should not be expected to assess the creditworthiness of borrowers on the basis of scant information available. Disclosure requirements may be supplemented by quality controls and standardisation requirements. In defining the criteria for market access, the central and eastern European countries might consider international guidelines such as those laid down by the IOSCO for international borrowers or those used by internationally operating rating agencies. The task of monitoring and enforcing market access rules can be entrusted either to the Ministry of Finance or a specialised agency like the securities commission (see Bröker, 1993: 18-9).

In the initial stages of development regulations concerning the issuance and trading of bonds tended to differ substantially in the four Visegrád countries. Two forces might work into the direction of greater harmonisation: First, rapid improvement in the regulatory systems in central and eastern Europe and their adaptation to international standards is an important precondition for attracting foreign portfolio investment. Unclear legal frameworks or intransparent market practices may deter potential foreign investors or may have to be paid for by higher premia to cover additional risk. Second, in the view of the prospective accession to the European Union early in the next century, the Visegrád countries will be required to bring their regulatory systems more in line with relevant EU legislation. The four central European countries under consideration have embarked on this process of harmonisation with different degrees of success. The following short survey about securities laws and market supervision will show that the Visegrád countries have tested different solutions to trade-off between systemic stability and efficiency in securities market regulation.

Poland

The Polish securities market is widely regarded as the best regulated in the region. Some observers argued that the requirements related to the issuance and public trading of securities are too strenuous and there have been calls for simplification and more flexibility (The Warsaw Voice, 22-29.12.1996). The foundations of the regulatory regime were laid down in the Law on Public Trading in Securities and Trust Funds of 1991. It provided for the establishment of the Warsaw Stock Exchange as well as Polish Securities Commission (PSC) and it covers the issuance of bonds and bills through the central government. The Bonds Law of 1995 created a general framework for the issuance of corporate and municipal bonds. Only legal entities which have prepared financial statements for at least three years and meet stringent capital requirements may issue unsecured bonds. Strict disclosure and information requirements have to be fulfilled by corporate issuers if they use private placements or publicly offer bonds which are not to be publicly traded. In the case of public offerings, the issuer has to conclude a contract with a bank which subsequently represents the rights of the bond holders and keeps them informed about the financial standing of the issuer. There is no obligation to consult the issuance of bonds with the central bank nor are there restrictions with regard to minimum issuing volumes. Minimum requirements for the issuance of fixed income securities only apply to listings at the Warsaw Stock Exchange.

The Polish Securities Commission, which was modelled after the US Securities and Exchange Commission, is the main regulatory and supervisory body for the Polish capital markets. The Commission is an independent government agency which directly reports to the Prime Minister. Its role is to protect investors by ensuring that rules of fair trading and competition are observed in the public trading of securities, and that the securities markets operate in an orderly and efficient manner. Among other things, the Commission has authority over all public offerings of securities, reporting requirements, and operating practices. It is also responsible for providing licenses and supervision for brokerage houses, through which public trading in securities exclusively takes place. The Securities Commission's authority has been further enhanced by its ability to enforce punitive charges in the case of misconduct or misinformation. Regulatory policy is established by the Commission's President and a three-member board including the Minister of Finance, the Minister of Privatisation and the President of the Anti-Monopoly Office. (MoF Poland, 1996a; PSC, 1993).

The Law on Public Trading in Securities as well as the Stock Exchange Regulations are under review in late 1996. The amendments to the Securities Act aim to make Polish capital markets more responsive to market developments and to harmonise the Polish legal framework with OECD agreements and EU directives. The amended Law will also create the legal framework for the

operation of the Polish over-the-counter market and bring it under the supervision of the PSC. Market participants have been granted an important role in reforming the legal framework (Bank Handlowy, 1996a).

Hungary

The Securities Act of 1990 (Act VI) established the legal framework for the Hungarian capital market. It defines the rules governing the public offering of securities and the rights and obligations of market participants. The Securities Act also constituted the basis for the establishment of the Budapest Stock Exchange (BSE) and the State Securities and Exchange Commission (SSEC), the main regulatory and supervisory body for the Hungarian capital market. The SSEC itself operates under the supervision of the Ministry of Finance and its head is appointed by the Council of Ministers. Its main task is to monitor stock exchange trading and ensure investor protection. Furthermore, the SSEC is entrusted with the approval of prospectuses which are required for the public offering of securities. In the case of bonds, the issuer has to be in operation for at least a full calendar year, submit all required documentation including the issuing prospectus in accordance with relevant regulations, and has to entrust a broker with the public offering (except when the issuer is a financial institution). However, the Securities Act does not cover the private placement of bonds which has led to a significant degree of intransparency in the Hungarian non-state bond market.

Securities trading at the stock exchange is governed by the Charter of the BSE, which has been enacted by the General Assembly of the BSE in accordance with the minimum requirements contained in the Securities Act. The approval of the SSEC is required for any amendment to BSE regulations concerning listing, trading and settlement. Entities involved in securities trading need to obtain a license from the SSEC. Following the Anglo-American system of specialised financial institutions, the Hungarian Securities Act allows trading of securities only as an exclusive activity so that only brokerage houses can become BSE members. The BSE Membership Regulations of January 1995 establishes the framework for membership and admission rules as well as continuous requirements for BSE members. Special requirements have to be fulfilled by BSE members to become active in the government securities market (BSE, 1995b).

The amendments to the Securities Act, which will enter into force at the beginning of 1997, will bring Hungarian regulations more in line with OECD requirements as well as regulations and practices in the EU. The new Act envisages the admission of commercial banks to securities trading as well as the incorporation of investment banks. It will thus broaden access to the Hungarian bond market while at the same time raising equity requirements for capital market participants. Private placement of securities, which have so far taken place outside the legal framework of the Securities Act, will be brought under the supervision of the SSEC. The Securities Act will therefore, for the first time, contain reporting requirements for non-state bond issuers. It also institutes an "obligation" to publicly offer securities if the par value of the series exceeds a certain limit. (BSE, 1996c; Information supplied by the AKK).

Czech Republic

The Czech government has traditionally pursued a free-market oriented approach to financial market regulation. A minimum of regulation was regarded as desirable to safeguard systemic stability whilst allowing for a high degree of market efficiency. While other central and eastern European countries have entrusted securities market regulation and supervision to independent

agencies, in the Czech Republic these tasks are assumed by a department of Ministry of Finance. The Czech National Bank plays a subordinate role in the regulatory process. In Accordance with the 1990 Bonds Law, the Ministry's permission is required for all new non-state bond issues. Upon submission of the relevant documents the Ministry of Finance will assess the financial capacity of the issuer to meet the interest and principal obligations attaching to the debt over its full life. After consultation of the CNB, the Ministry will reject the application or grant an issuing permit, laying down volume, maturity, initial yield, etc., within 60 days. This authorisation process was introduced because it was felt that many issuers would lack the financial expertise necessary to evaluate their financial standing. There are no minimum requirements for new issues, except for securities listed at the Prague Stock Exchange (PSE). Private placements by non-state issuers are not covered by securities legislation and take place outside the supervision of the market authorities.

The Ministry of Finance is equally responsible for the regulation and supervision of secondary market trading in securities. Stock exchange dealers have to obtain a license from the Ministry of Finance, or the Czech National Bank in case the applicant is a commercial bank. Specific capital and other requirements for securities dealers and brokers are laid down in the Stock Exchange Membership Rules. Supervision of exchange trading is exercised by the Exchange Commissioner, who is appointed by the Minister of Finance (PSE, 1996a). Supervision only covers the official exchanges. Off-exchange transactions largely take place outside the regulatory and supervisory framework.

In 1996, the free-market approach of the Czech government increasingly attracted criticism from domestic as well as foreign observers and market participants. In particular, the absence of an independent supervision and enforcement agency for the capital market resulted in frequent complaints about irregularities and a lack of official oversight on the Prague Stock Exchange. The perceived inadequacy of securities market supervision in combination with intransparent practices of some Czech investment funds led to a retreat of foreign investors from the Czech capital market in 1996 (Business Central Europe, December 1996).

After prolonged political controversies, the government decided in late 1996 to establish an independent supervisory body, modelled after the US Securities and Exchange Commission (SEC) and the French Securities Commission (COB). The new Czech Securities Commission (SECOM) is expected to start operating in mid-1997. It will issue and enforce its own regulations, settle disputes and devolve parts of its authority to self-regulatory bodies. It will be responsible for licensing market participants in accordance to stricter rules, to authorise all public issues of securities, and to regulate and monitor securities trading, including OTC trading (PSE, 1996c).

Slovak Republic

As the regulatory and institutional foundations for the Slovak capital market were created before the division of the Czechoslovak Republic, the legal framework is similar to the one in the Czech Republic. In accordance with the 1992 Act on Securities, the Ministry of Finance acts as the supreme regulatory and supervisory body for the securities market. Its supervisory role includes the issuance of publicly traded securities, secondary market trading, and the activities of the Securities Centre of Slovakia. Applications for new bond issues together with the issuer prospectus have to be submitted to the Ministry of Finance which then has to make a decision about authorising the issue within 60 days. Members of the Bratislava Stock Exchange (BSSE) and individual brokers also need to obtain their license from the Ministry of Finance. Any publicly traded security issued in compliance with the relevant regulations can be registered at the BSSE Free Market. Higher listing requirements exist for the Secondary and Main Market (ZEW Questionnaire).

On the whole, the regulatory and supervisory framework in the Slovak Republic seems underdeveloped in comparison with other emerging markets, in particular neighbouring Hungary and Poland. There have been complaints that laws and regulations concerning capital markets and the stock exchange are often unclear and contradictory. A clear legal framework for the supervisory role of the state over the stock exchange is still missing. Rumours of insider trading and fraud at the BSSE have emerged occasionally (Handelsblatt, 12.11.1996). The prevailing insecurity with regard to capital market supervision was exacerbated in the fall of 1997 through the political controversies surrounding the seventh amendment to the Securities Law (see below section 5.1.).

4.3 Security: Sufficient Standard of the Settlement Systems

Efficient clearing and settlement systems are a precondition for well-functioning bond markets. The ultimate goal should be simultaneous, secure and irrevocable exchange of cash for title, preferably computerised, rather than paper based. Although clearing and settlement may appear to be merely administrative or accounting procedures, problems can arise if one party to the deal does not live up to the agreement. Because of the need to ensure the performance of the two parties, there is often a close relationship between the clearing and settlement organisation and the stock exchange. In Poland and the Czech Republic, the exchanges or its larger members own and operate the organisation while in Slovakia the settlement centre is owned and controlled by the Ministry of Finance. In Hungary, it is owned jointly by the BSE, the Budapest Commodity Exchange (BCE), and the National Bank of Hungary.

Trading is hindered without the assistance of the clearing and settlement organisation because each party must independently verify the creditworthiness of the other. The clearing and settlement organisation in co-operation with the exchange may reduce counter-party risk in the following ways:

- It might require that both parties provide securities and cash in advance of executing the trade. This is essentially what is done by the RM-S exchanges in the Czech and Slovak Republics because these deal with many small investors who do not trade through brokers.
- Participation may be restricted by, for example, requiring that brokers meet certain capital standards. This usually means that the clearing and settlement organisation limits membership to the most reputable and creditworthy brokers, dealers, and market participants. The members must then ensure the creditworthiness of the non-members.
- The third way is to organise a mutual guarantee system whereby all members of the clearing and settlement organisation agree to collectively stand behind the performance of members (Pohl et al., 1995: 14-15).

It is also important that clearing and settlement is closely integrated with a country's banking and payment system. Sufficient progress in banking reform and the establishment of liquid interbank markets were therefore preconditions for the development of securities markets in central and eastern Europe. In building up their clearing and settlement systems, the Visegrád countries have largely followed the unofficial standard of the Group of Thirty as well as recommendations from the International Society of Securities Administrators (ISSA) and the International Federation of Stock Exchanges (FIBV). These include:

- Establishment of a centralised depository system for securities operating on the book entry principle.
- Netting of transactions, which means that the clearing and settlement organisation should function as the counterparty in each deal so that bilateral credit and counterparty risks can be reduced.

- Final settlement should occur within three days of the trade (T+3).
- Settlement should be "delivery versus payment"; i.e. securities and payment are transferred simultaneously.

The high degree of computerisation and the move to book-entry securities instead of physical securities has facilitated the development of quick and secure clearing and settlement in the Visegrád countries. However, some problems in terms of access and reliability remain and there have been occasional complaints about delays and irregularities in the settlement process¹⁷, although outright default of one of the counterparties do not seem to have occurred.

Table 9: Settlement of Bond Transactions Conducted through the Stock Exchange

	WSE	BSE	PSE	BSSE
Clearing and Settlement Centre	The clearing, settlement, safekeeping and custody of securities traded on the WSE is handled by the National Depository of Securities (NDS). Only WSE members are members of the NDS.	Clearing and settlement of all publicly traded securities proceeds through the Central Clearing House and Depository (KELER). For trades conducted on the BSE a two-tier clearing system was introduced in Nov. 1996 to reduce the counterparty risk by limiting direct access of smaller and riskier investors to the clearing system. ¹⁸	All PSE transactions are settled through the Universal Settlement Centre (UNIVYC, previously the Stock Exchange Register of Securities), a joint stock company owned by PSE members.	Securities transactions are exclusively executed through the Slovak Securities Centre (SCP), which is fully owned and controlled by the Slovak Ministry of Finance.
Book-entry settlement	Since 1995, all government securities have been issued in book-entry form only. The entire clearing and settlement procedure is fully computerised.	About 95% of government securities are immobilised (but not dematerialised) and settled in book-entry form. ¹⁹	Settlement through the Securities Centre is dematerialised.	Since October 1995 all stocks and bonds have been issued and traded in book-entry form only.
Central registry	All securities admitted to public trading must be stored in the NDS.	A subdivision of KELER acts as the central registry of publicly traded securities.	The Securities Centre is the central registry for all dematerialised securities.	The Slovak Securities Centre is the central registry for all book-entry securities.
Cash settlement	The NDS prepares and supervises money settlement for the members of the Exchange through the Clearing Bank (Bank Slaski). The member brokers settle the deal with the individual investors.	In 1995 KELER took over the exchange cash accounts of BSE members from the central bank while establishing a direct cash connection with the NBH and joining the GIRO system.	Financial settlement takes place through the Clearing Centre of the Czech National Bank. Non-banks settle through their custodian bank.	The BSSE sends instructions to the Bank Clearing Centre of Slovakia to effect money transfers between the clearing accounts of the members and the BSSE account with ING Bank Bratislava.

¹⁷ For example, the settlement of trades through the Czech Central Registry of Securities has been criticized for involving long delays. According to Hypo-Bank CZ a.s., settlement of primary trading in T-bonds takes up to ten days. Reform measures are planned for 1997 to make the system more efficient.

¹⁸ The rights granted to exchange members to trade in government securities and to clear and settle the resulting transactions have been separated. The latter is now limited to so-called "general" and "individual" clearing members who have to comply with certain requirements, including capital requirements (BSE, 1996c).

¹⁹ The number of physical withdrawals - although decreasing - remains high. During 1995 KELER's depository effected delivery of about 2.7 million pieces of securities and some 1.7 million physical withdrawals (KELER, 1996). The new Securities Act provides for a dematerialised rather than a paper-based system.

Guarantee fund	The NDS manages the Fund which guarantees all transactions concluded on the WSE.	The Stock Exchange Settlement Fund is run jointly by the members of the Exchange.	UNIVYC operates the Stock Exchange Guarantee Fund for the members of the PSE. Only transactions concluded in the central market, but not direct trades, are ensured.	All members of the BSSE transfer collateral to the Guarantee Fund managed by ING Bank Bratislava. The Fund covers transactions in both listed and unlisted securities traded at the BSSE.
Settlement cycle	T+2 for continuous trading, T+3 for single price auctions.	T+2 for government securities*, T+5 for other BSE trades.	T+3 for anonymous PSE trades, T+2 - T+15 for direct trades registered at the PSE.	T+3 for BSSE transactions, T for OTC/RM-S trades.

*since September 1996

Table 10: Settlement of OTC Transactions

	Poland	Hungary	CR	Slovakia
Method	The NDS carries out all securities transfers between participants' accounts resulting from trading, corporate actions, off-market transactions, (including interbank bond trading) and free trades that lead to the movement of instruments from account to account.	Transactions conducted in the organised state paper OTC market are settled through KELER. No settlement rules exist for the unregulated OTC market but settlement also takes place through KELER for publicly listed securities.	UNIVYC provides clearing and settlement for both direct block trades registered at the Exchange and other kinds of OTC transactions which are subsequently entered into the PSE trading system. Most OTC trading in bonds is executed and settled directly through the Securities Centre. Transactions through the RM-S system are automatically cleared through the RM-S clearing system.	Securities transactions are carried out exclusively through the securities accounts of the SCP. Transfers cannot be executed directly through the SCP but have to be conducted through either the BSSE or the RM-S.
Insurance of OTC deals	In 1996 the NDS was planning to establish a guarantee system for the new OTC market.		Direct trades at the PSE are not covered by the guarantee fund, nor are off-market transactions.	Only BSSE direct trades but not OTC trades are ensured by the Guarantee Fund.
Settlement cycle	As agreed between the participants but mainly T+0 for interbank bond transactions.	T+0 for the state paper market. As agreed between the participants in the unregulated market.	T+0 for transactions conducted through the Securities Centre.	As agreed between the participants. T+0 for RM-S transactions.

Sources:

Poland: Euromoney, 1995; The WSE, Organisation and Operation, July 1995; Bank Handlowy, 1996.

Hungary: BSE Annual Report 1994; Five Years of the Budapest Stock Exchange, June 1995; Euromoney bonds guide; Supplementary information by the BSE, KELER, 1995; 1996.

CR: PSE, 1995a; 1996a; 1996d; Euromoney, 1996c.

Slovakia: ZEW Questionnaire; BSSE Annual Report 1995; Central European Securities House, May 1996.

4.4 Implications of Tax-policies for Capital Market Development

While it is conceivable that wide range of laws and regulations impinge on the development of a national bond market (including banking laws, social security legislation, real estate and mortgage legislation, and foreign exchange regulations) it is normally tax laws that have the greatest bearing on the bond primary and secondary markets. For instance, corporate bond issues might be impeded if enterprises are not allowed to deduct coupon payments from taxable corporate income. Issue taxes or stamp duties might make the offering of new bonds prohibitively costly. Stock exchange turnover tax can hinder the development of a liquid secondary market. Most importantly, withholding taxes on coupon payments as well as capital gains tax may be a particular obstacle to the development of a bond market, especially if competing investment outlets are not subject to such taxes. Where differential tax rates apply to income or capital gains from different financial instruments, borrowers and investors face incentives to structure capital raising and investment on the basis of tax considerations rather than on the fundamentals of value and risk (Bröker, 1994: 35).

Depending on the broader goals of financial policies, two different systems for taxing fixed income securities have evolved in the Visegrád countries. While in the Czech and Slovak Republics the tax rate depends on the issuer of the bonds, in Poland and Hungary it is related to the status of the investor. Both types of taxational discrimination are likely to have distorting effects on bond market development. Tax discrimination between government securities and private-sector issues has been used widely to facilitate the development of the state-bond sector. This has usually led to an adjustment of yields so that coupons of corporate and bank bonds are often considerably higher to compensate investors for the "tax penalty". Tax policy has also been designed to influence the attractiveness of the bond market for particular investor groups. In Poland financial policy was designed to encourage long-term private investment in securities markets rather than bank deposits. Due to special tax preferences for individual savers, the Polish government bond market attracted a much broader retail investor base than was the case in the other central European countries.

Trading patterns at the stock exchanges were also heavily influenced by taxation. In Poland, for example, the sums invested in T-bonds in the primary market used to be deductible from income tax for retail investors. The result was that T-bonds were traded at the exchange at a considerable discount (WSE, 1996a, No. 1). In the Czech Republic, tax policy prevents corporate investors from dealing in the secondary market for bonds. Trading in fixed income securities is regarded as "financial turnover" for tax reasons. As enterprises which generate high financial turnover risk losing their right to claim a refund on input taxes corporate investors are often unwilling to restructure their portfolios (Aspekt Financial Information).

Although foreign portfolio investment is mostly covered by double-taxation agreements and non-residents are therefore exempt from domestic withholding taxes, the tax regimes in the specific countries heavily influence the attractiveness of different securities market segments for international investors. The adjusted yields of Czech and Slovak non-state bonds have made the corporate bond market relatively attractive for foreign investors in comparison with the state bond sector. According to Czech analysts, the share of foreign investors in the secondary market for non-state bonds is further increased through widespread practices of "bond washing"²⁰. In most central and eastern European countries taxation of investment income from securities was under review in 1996 and significant changes are expected for 1997. The abolition of tax discrimination is desirable from an efficiency point of view. External forces may have played an important role in shaping tax

²⁰ Bond washing is the practice of transforming taxable interest income and dividends into tax-free capital gains through selling the security before the payments of interest to (foreign) investors exempt from capital gains tax.

reforms in the Visegrád countries. Financial liberalisation has put central European securities markets in closer competition with funding opportunities in international and off-shore bond markets (see section five). Investment in the latter is mostly exempt from national withholding taxes and may therefore induce a degree of tax competition.

Table 11: Taxation According to Issuer

Taxation of	Czech Republic	Slovak Republic
Government securities	Government securities issued after 1993 are tax-exempt ²¹ .	T-bonds and T-bills are tax-exempt, NBS-bills are taxed at 15%.
Non-state bonds	Interest income from non-state bonds is subject to a 25% withholding tax. Capital gains are taxed at the investor's income tax rate, which ranges from 15% to 40% for natural persons and is 39% for legal entities in 1996. Capital gains are tax free for natural persons if the security was held for more than three months.	Corporate bonds are taxed at 15%, municipal bonds at 10%, and commercial paper at 40%.

Sources: For Slovakia: ZEW Questionnaire; Raiffeisen Zentralbank, 1995b; for the Czech Republic: PSE, 1996a.

Table 12: Taxation According to Investor

Taxation of	Poland	Hungary
Individual private investors	For Polish natural persons income from the sale of Treasury bonds as well as interest rate income are exempt from income tax, provided that the bonds are not part of business assets. The discount on T-bills is also tax-exempt while capital gains are subject to the investor's income tax rate. ²² Discount on CP is taxed at 20% while capital gains from the sale of CP is subject to the investor's income tax rate.	Interest income as well as capital gains from publicly traded government securities is tax free for private investors. Individuals pay a capital gains tax of 10% if the gains were achieved in public trading.
Domestic legal entities	Polish legal persons pay the income tax rate of 40% on interest and capital gains from all kinds of securities (incl. T-bonds and bills, and CP). Interest income from government securities re-spent on the purchase of T-bonds is tax exempt and taxed at 20% if re-invested in T-bills.	For domestic banks/enterprises interest income and capital gains are taxed at the corporate tax rate of 18%.
Foreign legal persons	Capital gains are subject to a 40% income tax assessment; interest rate income is subject to a 20% withholding tax.	Foreign subsidiaries are taxed at 18%, just like domestic legal entities, but pay an additional 23% supplementary tax on 65% of the tax base.

Sources: For Poland: MoF Poland, 1996a; Bank Handlowy, 1996b; for Hungary: Information provided by the AKK

5 Secondary Markets

Secondary markets for bonds should fulfil two essential functions: First, with continuous and high volumes of transactions in the secondary market bondholders are able to liquidate their holdings at any point in time prior to maturity. Bond markets thus mediate funds between different maturities

²¹ According to the CNB, the tax preferences for government securities will be abolished in 1997. The 25% withholding tax will than be levied on all fixed income securities irrespective of the issuer.

²² The tax-exempt status of capital gains from T-bills and T-bonds will be terminated on the 31 December 1996.

on the side of lenders and borrowers. Issuers receive long term credits which they do not have to reimburse prior to maturity of the bond while investors may hold short-term funds in the form of bonds which can be sold on in secondary markets. A liquid secondary markets will increase the demand for issues in the primary markets and therefore reduce the cost of borrowing for new issuers. Second, liquid secondary markets are needed to establish market-based prices and yields. These can serve as a reference for an adequate pricing of new issues. They will also provide valuable signal functions for the economy more generally as they serve as a barometer of domestic economic conditions and give indication of the impact of anticipated moves in interest rates. In order to fulfil these maturity-transformation and signal functions, secondary markets require a certain volume of marketable, standardised securities. In the initial stages of bond market development in transition economies these are most likely to be government bonds. In OECD countries, the government segment is usually the most liquid of the national bond markets.

In order to increase liquidity and transparency in the secondary markets, the Visegrád countries should therefore focus on improvement of the market infrastructure. In particular, a regular and transparent price discovery process, safe and reliable clearing and settlement systems and a good regulatory and supervisory framework must be installed. Development of efficient 'secondary markets is crucial not only because of the immediate needs of the market participants but also because the eastern European stock markets operate in an increasingly competitive environment. Financial opening and deregulation put each individual exchange into competition with foreign official exchanges as well as domestic and foreign over-the-counter markets for securities. This additional pressure has been one of the main driving forces for rapid improvements of stock market organisation in the central and eastern European countries. (see. e.g., Szabadföldi, 1996; BSE, 1995b; PSE, 1995c).

5.1 Where is the Market Place: Centralised Versus Decentralised Structure

Secondary trading of securities in transition economies is often heavily fragmented with a large number of transactions being conducted 'off-market' or 'over-the-counter' (OTC)²³. A minimum turnover at the official stock exchange, in relation to OTC trades is necessary for the transparency of the market situation. Government choices in this respect can be described in terms of a trade-off between consolidation and competition. On the one hand, it can be argued that the competitive effects of multiple exchanges will force exchanges to reduce transaction costs and improve the market infrastructure to enhance the efficiency of trading. On the other hand, multiple exchanges may have a detrimental effect on market quality, volumes of trade, and the stability of prices faced by individual traders.

What is more, informal markets have a number of weaknesses that might be particularly harmful in the fledgling capital markets of the Visegrád countries. First, informal markets often lack transparency because formal reporting mechanisms for prices and volumes of transactions are largely absent. The result is an inefficient market where the same securities trade at different prices, offering arbitrage opportunities and free riding on official price determination. Second, informal markets usually operate outside the regulatory and supervisory framework installed for the organised exchanges. The lack of official oversight may provide greater scope for cheating with the consequence that professional and more sophisticated market participants may gain at the expense

²³ Strictly speaking, there is a significant difference between off-market transaction, i.e. deals conducted in informal markets, and over-the-counter trades. The latter may take place in organised OTC markets as is often the case in more developed capital markets. In central and eastern Europe, however, the two terms can be used almost interchangeably as the degree of organisation of OTC markets is still very low.

of inexperienced retail investors. It can be assumed that, in general, trading is more efficient and costs are lower if all buyers and sellers of a security are brought together in a single market.

Remarkable differences exist between the trading systems used for bond transactions in the four countries of east-central Europe. On a continuum that ranges from free competition between exchanges for capital and turnover to complete consolidation of all trading into one exchange the Czech Republic would be placed towards the free-competition end of the spectrum. Secondary market organisation in the Slovak Republic would be assigned to the other extreme of almost complete consolidation. The secondary markets in both Hungary and Poland can be allocated to the middle ground.

Czech Republic

For the Czech Republic, it is estimated that only 20-25% of domestic bond trading goes through the Prague Stock Exchange. Bond trading mainly takes place through direct transactions at the counters of the Securities Centre (SC), the central registry of all dematerialised securities²⁴. Professional investors, who prefer an organised market, have increasingly used the Prague Stock Exchange (PSE) in recent years. Unlike in the Slovak Republic, the RM-S Exchange, a computerised bourse which has grown out of the mass privatisation programme, is not used for trading fixed income securities. The fragmentation of the Czech market and the large share of off-market transactions generated complaints from domestic and foreign investors about a lack of price transparency and inefficient pricing in the Czech market (FT Finance Eastern Europe, 19.7.1996). Official oversight does not extend to the OTC market and reporting requirements are minimal.

Similar to most central European regulatory authorities, the Czech Ministry of Finance was faced with the decision whether to suppress off-market dealing through amendments to the Securities Law. Several proposals were put forward in recent years to consolidate trading in order to improve the quality of pricing and prevent free-riding at the expense of market organisers. On the other hand, it was argued that penalising off-market dealing could be counter-productive because of the high share of institutional investors in the Czech secondary market and because trading activity could be driven cross-border rather than on-market (Miller, 1994). In accordance with its liberal approach to capital market regulation, the Ministry of Finance decided against using administrative means to encourage on-market trading. Competition rather than enforced centralisation will be relied upon to increase the transparency in the secondary market. In the first half of 1996, the Ministry granted a license to RTP group (Right Time Price) to set up a third Czech organised exchange with the aim of capturing a large share of OTC trading (FT, Finance East Europe, 5.4.1996). The new on-line trading system, which started operating at the end of 1996, will be used for trading shares as well as fixed income securities. The PSE also tries to attract a larger share of OTC transactions which are currently taking place at the Securities Centre. Reforms of the Universal Settlement Centre in 1996 were designed to facilitate OTC transactions using the PSE's information infrastructure and clearing and settlement facilities. In the new system, transactions conducted outside the PSE can subsequently be entered into the PSE electronic trading system and settled through the Universal Settlement Centre (PSE, 1996d).

²⁴ The trading facility was originally installed to facilitate direct trades between retail investors in the mass privatisation programme. Traders estimate that some 70% of all securities transactions (including stock trading) go directly through the Securities Centre (FT Finance East Europe, 5.4.1996) while the Official Figure is closer to 50% (CNB, 1996a).

Hungary

In Hungary, the share of OTC trading in fixed income securities is similar to that in the Czech Republic. Although all deficit-financing government bonds and T-bill are listed at the Budapest Stock Exchange (BSE) more than half of all T-bond transactions take place outside the official market. For T-bills the figure is even higher at 70-80% (BSE, 1996b; 1997). The main reason for the large share of trading outside the BSE is the existence of an organised OTC market for government securities. This has been managed by KELER, the Hungarian clearing and settlement organisation, since September 1994. KELER's state paper accounting system offers T-day settlement against the previous T+5 settlement cycle of the BSE, as well as lower transaction costs. In this organised OTC market, the NBH, local commercial banks as well as brokerage houses may conclude prompt, repo, and repo extension transactions. It is also important for the government paper turnover at the BSE that in late 1992 banks had to quit the exchange in accordance with the Securities Act of 1990. Direct trades between commercial banks, which are an important investor group in the local bond market, therefore take place outside the official exchange (BSE, 1995b, 1996a; KELER 1995).

Transparency of off-market dealing constitutes a significant problem as the Securities Act of 1990 does not cover OTC trading. Thus, broker companies operate in this market segment outside the supervision and regulations of the State Securities and Exchange Commission. The NBH (previously the most important investor in government bonds in the primary market and a net seller in the secondary market) has also been one of the most active traders in the OTC market with the justification of increasing liquidity in the secondary market (BIS, 1993).

Poland

The organisers of the Warsaw Stock Exchange (WSE) put much emphasis on the fact that securities trading is centralised in Poland, i.e. all transactions in publicly traded securities take place through the Exchange. The overall picture is not quite as clear, however. Treasury bonds are the only fixed income securities listed at the Warsaw Stock Exchange. There is no organised market for private sector issues, the liquidity of which is reportedly very low. Commercial paper and municipal bonds, if traded at all, are exchanged in direct transactions between financial institutions. In addition to the organised exchange, treasury bonds and notes are traded in the interbank market by brokerage houses which acquired a license from the Polish Securities Commission. According to the National Depository of Securities, off-market transactions in government bonds amounted to PLN 1.94 bn in the four months from July to end October 1996.

The absence of a secondary market for corporate bonds may be cited as one of the reasons for the underdevelopment of the non-state market segment. Considerable improvements may be expected in this respect in the course of 1997. A new decentralised exchange was established by the Polish Association of Brokerage Houses with the aim of providing an organised market for OTC trading. The new exchange, CeTO (Centralna Tabela Ofert), started operating in December 1996 and is primarily designed for shares of companies included in the new mass privatisation programme which do not fulfil the listing requirements of the WSE (Euromoney, 1995; The Warsaw Voice, 29.12.1996). According to the NDS, there are also plans to extend organised OTC trading to municipal and corporate bonds. Up to the end of 1996, only one sub-state issuer, Ostrów Wielkopolski, expressed interest in listing at the OTC exchange but it is expected that communal bonds will increasingly be traded there. It may in time also attract private-sector bonds as listing and trading at CeTO is cost-effective and information requirements are far less stringent than at the

WSE. The Amendment of the Act on Public Trading of Securities at the start of 1997 will bring the new organised OTC market under the auspices of the Polish Securities Commission.

Slovak Republic

Slovakia is the only of the Visegrád countries that has effectively suppressed off-market trading by government regulation. It is estimated that until the sixth amendment of the Securities Law in August 1995 less than 20% of securities trading took place in the organised markets. The new law required that all transactions in publicly traded securities take place through the organised markets. The Slovak Securities Centre (SCP) only takes instructions for securities transfers from the official exchanges, i.e. the Bratislava Stock Exchange (BSSE) and the computerised retail exchange RM-S. The legislation was intended to increase liquidity and transparency in the secondary market and it led to a large number of new listings at the BSSE (VUB, 1996). Conflicting signals were given by the government of Prime Minister Meciar through the proposed seventh amendment of the Securities Law in November 1996. The new regulation would have allowed issuers to choose whether to issue securities in dematerialised or paper form. Only the former would require authorisation by the Ministry of Finance for trading on the public market, while securities in paper form might again have been traded outside the public market where there are no reporting requirements (Trend, 13.11.1996). The amendment attracted considerable criticism from within the government as well as market participants and was finally vetoed by President Kovac and returned to Parliament for reconsideration. It was subsequently decided that transactions in bonds and certain other publicly traded securities shall only take place in the organised capital markets in book-entry form (VUB, 1997a).

Unlike in the Czech Republic, where the RM-S retail exchange plays a subordinate role, a real competition between the two organised exchanges has developed in the Slovak Republic. In 1995 the RM-S exchange captured one third of all organised securities trading. During 1996 turnover on the Bratislava Stock Exchange grew considerably quicker and by the end of the year the volume of transactions carried out there is five times higher than trading through the RM-S. The coexistence of the two exchanges resulted in inefficient pricing and arbitrage opportunities until they were required to establish a single closing price. All proposals to consolidate the two markets through government decree have been frustrated by the strong opposition of the market organisers. The trend is towards more competition rather than less. For 1997 it is planned to transform the RM-S into a membership exchange and to introduce derivatives trading more or less simultaneously at both exchanges.

Up to the end of 1996, competition was largely restricted to equity trading as organised bond trading almost exclusively took place at the BSSE. Although there are some 28 municipal and corporate bonds listed on the RM-S during 1996, only one corporate bond was actually traded. It is conceivable that in the near future the RM-S exchange will constitute more serious competition for the BSSE in fixed income market. According to the market organisers, certain technical difficulties, which have impeded bond trading at the RM-S so far, will be solved at the beginning of 1997. Competition between the two exchanges may be further invigorated by the government's decision that trading of the new National Property Fund Bonds should take place exclusively through the RM-S. Trading in these titles commenced in August 1996 but initially liquidity was poor as the massive sell orders were not met with any demand. Turnover increased considerably in the last months of 1996, with most transactions taking place in the segments for anonymous and direct transactions (Blick durch die Wirtschaft, 25.10.1996, RM-System Slovakia, 1996b).

Table 13: Share of Bonds Traded at the Stock Exchange

Poland: Only government bonds are traded at the WSE. Non-state bonds, if traded at all, are exchanged off-market. A considerable share of bonds is traded directly between authorised brokerage houses through the interbank market.	Czech Republic: Only some 20-25% of all securities transactions are conducted through the PSE. Direct transactions through the Securities Centre are the most popular form of bond trading.
Hungary: More than 50% of all bonds trades take place OTC, mainly through KELER's government securities accounting system. The figure for T-bills, which are also listed at the Exchange, is even higher, at 70-80%.	Slovakia: Since the sixth amendment of the Securities Law in August 1995, all transactions have to take place in the public market. Possibly, the RM-S retail exchange will be increasingly used for fixed income trading in the near future.

Sources: See plain text

The Further Perspective of OTC

In the absence of administrative intervention, secondary bond trading now taking place outside the official stock exchanges will only move to the organised markets if these offer advantages in terms of liquidity, transparency, lower transaction costs, and fair pricing. Issuers of eligible fixed income securities generally have lower incentives to seek a listing at the official stock exchange if unlisted securities are traded as vigorously as listed ones. Listings are then obtained not to reap additional benefits in terms of liquidity but for reasons of prestige, in particular to indicate to investors that the issue is larger or more marketable and the issuer subject to more extensive disclosure requirements.

Transaction costs figure prominently in investors' decisions about their preferred market place. The increasing use of modern telecommunication and information technology in securities trading has led to a continuous and across-the board decline in variable transaction costs. Even small cost differentials may be sufficient to induce investors to shift their activities from one market to the other, and from the official stock exchange to the OTC market in particular. Transaction costs crucially depend on the liquidity of a market. It can therefore be expected that the most liquid market will attract the largest share of secondary market trading in the emerging capital markets of the Visegrád countries. A number of other factors may also determine investors' preferences for one market or another, including market transparency, the types of market participants, and the regulatory framework for market activities.

It can safely be assumed that the large share of OTC trading in the Visegrád countries is closely related to the remaining short-comings in the organisation and infrastructure of the official stock exchanges. A lack of liquidity at the official exchange, investors' desire for a maximum degree of anonymity, and the enhanced trading opportunities through computerisation tend to increase the attractiveness of OTC markets. This does not only hold true for the secondary markets in east-central Europe, but is a universal trend observable in more mature markets in OECD countries. In Germany, for instance, the share of bond trading effected outside the official exchanges amounts to an estimated 80 percent. Official stock exchanges and regulators all over the world have responded to the increasing popularity of OTC trading through improving information and communication channels, through reducing trading costs, and through the abolition of excessive or inefficient regulation. For the progress of capital market development in central Europe it is therefore of great importance to anticipate these global trends at an early stage. Taking into account the experiences in other countries may enable these young stock exchanges to react more rapidly and flexibly to the changing needs of private and institutional investors, both domestic and international. The following section will provide an overview of the wide variety of choices organising an efficient market place.

5.2 Organising the Market: Options and Choices for Securities Trading at Central European Stock Exchanges

Rapid structural change has characterised capital market development in recent years. Increasing globalisation, deregulation, automation as well as the growing involvement of professional investors have resulted in fierce competition among the national stock exchanges for international capital flows. The fledgling capital markets of the Visegrád countries will have to adapt to these broader currents if they wish to attract additional funds for corporate investment and public deficit financing. This is all the more important as competition for capital flows does not only take place between the official stock exchanges in different countries but increasingly, as shown in the previous section, between the official exchanges and OTC markets or so-called proprietary trading systems, which are tailored to needs of institutional investors.

Given the relatively recent origins of the central European stock exchanges, considerable progress has already been achieved in adjusting trading systems to new market imperatives and in making them more efficient. Financial liberalisation and deregulation has inter alia resulted in increasing participation of foreign banks and brokerage houses in local trading activities. All four exchanges have rapidly followed the international trend towards computerisation of trading systems. The last market segment with open outcry was closed down at the Budapest Stock Exchange in the second half of 1996 so that trading is now fully electronic everywhere. Further improvements in the electronic trading systems will allow for remote access to the stock exchange enabling brokerage houses in foreign countries to directly take part in local trading. Computerisation has also facilitated the move towards real-time transmission of trading information through specialised information vendors such as Reuters and Telerate. As a result, current stock and bond market prices are now easily obtainable for investors all over the world. Increasing sophistication can also be observed in trading systems and market segmentation, as the following pages will show.

Table 14: Stock Exchanges in the Visegrád Countries

	WSE	BSE	PSE	BSSE
Start of Trading	1991	1990	1993	1993
Members in 1996	37 (June)	75 (Aug.)	109 (Oct.)	47 (Sept.)
Trading fully electronic?	Yes	yes	yes	yes
Trading five day a week?	Yes 11.00 - 14.30	yes 10.15 - 13.15	yes 11.00 - 14.00	yes 10.30-14.00

Source: PSE, 1996a; 1996d; Ticker, January 1997.

The development of bond trading at the official exchanges has varied considerably from country to country, depending on the regulatory framework, placement practices, types of investors involved as well as the parallel development of the equity market. In the Czech Republic, for example, the market capitalisation of the bond market is still small compared to the equity market, which is mainly due to the mass privatisation process. In sharp contrast, the Budapest Stock Exchange was, up to 1995, dominated by trading government securities. A significant share of Hungarian stocks was traded at foreign exchanges and the domestic equity market remained small and illiquid. In the medium- to long-term, the share of bond trading at the central European exchanges is likely to approach the levels found in more developed capital markets in the West.

Table 15: Bond Trading as % of Total Turnover at the Exchange (incl. Free Market) II/1996

WSE	BSE (bonds + T-bills)	PSE	BSSE (QI+II)
31.87	63*	26.55	23

Sources: BSE, 1995a; WSE, 1996a, No. 2; PSE, 1996b, No. 2; BSE, 1996a.

* figure for 1995

Table 16: Capitalisation of the Bond Market (at the Exchange)

	1993	1994	1995	1996
BSE* HUF bn	237.0	374.2	418.4	604.2 (Aug.)
PSE CZK bn	--	50.0	87.8	133.2 (Oct.)

Sources: BSE, 1996c; PSE, Online

*T-bonds only

5.2.1 Market Organisation: Auction Versus Market-maker System

Price determination in secondary markets can in principle be organised in two different ways. In a quote-driven or dealer market, trading is based on continuous quotation of bid/ask-prices by official market-makers or specialists who stand ready to deal specified amounts on both sides of the market. Alternatively, trading may be organised through an order matching system, where the price for one particular issue determined through an auction procedure and remains fixed over a certain period of time (Cohen et al., 1986: 15-47). Both types of trading systems involve advantages and drawbacks for the development of secondary trading in the Visegrád countries. Official market-makers or unofficial dealers can play a key role in the price discovery and stabilisation process. They actively buy and sell securities for their own account in response to expected short-term fluctuations in price or changes in supply and demand. In doing so, they increase the stability and efficiency of capital markets. It has therefore been argued that central and eastern European regulatory authorities should encourage brokers to act as dealers or specialists in local securities markets (Pohl et al., 1995: 11).

On the other hand, order-driven markets might be preferable in the early stages of stock market development. In thin and erratic markets, auction systems can provide a better price discovery mechanism and ensure that all orders interact. Efficient quote-driven systems can be difficult to achieve in emerging capital markets because the new brokers may not have adequate capital to act as dealers or market-makers, which would require them to hold inventories of securities (ibid.; OECD, 1991: 19, 50). Moreover, an efficient market-maker system requires a high degree of automation, both as regards trading and quotation procedures and the dissemination of market information, which may not be available in the early stages of secondary market development.

However, auction markets with low turnover may be faced with the problem that in situations of substantial order imbalances the excess order amount cannot be executed. In this case, it might be desirable to combine the two systems, in the sense that the central bank or designated financial institutions act as jobbers or market-makers to take "the other side" of the market (Bröker 1993, 32).

In OECD countries wholesale markets of all kinds, including foreign exchange markets, money markets and government securities markets, are usually organised through market-makers. Less liquid securities are commonly traded through auction markets²⁵. Price matching might be

²⁵ Market-maker systems are also often used in equity markets which include small companies stocks and equities with low turnover. This might suggest that certain features of market-maker systems could also usefully be applied in emerging bond markets with relatively low trading volume (Bröker, 1993: 32).

appropriate for smaller and immature markets whereas in more sophisticated markets, it may impede the development of the market towards higher turnover and transaction size.

Initially, most trading of securities at the stock exchanges in the Visegrád countries took place through single-price auctions, where orders were often accumulated over a number of days. In order to increase liquidity and smooth the price finding process, financial institutions such as banks and brokerage houses were assigned the role of specialists, in particular in government debt. However, in practice these systems did not necessarily work as ultimate demand and supply in secondary bond markets was simply too low to validate the system. With increasing trading activity, in particular in the government bond markets, market-makers started playing a more important role in the price finding process, in particular in Poland and Hungary.

The members of the Warsaw Stock Exchange are required to appoint "specialists-brokers" for all publicly traded securities. These are expected to set daily quotations, to intervene to balance the market, to support trading volume and market liquidity, and to issue contract notes. For the bond market PKO SA is the only authorised specialist-broker. Government securities dealing in the interbank market is based on a system of market-makers. In 1996, 29 brokerage houses and banks concluded special contracts with the NBP, which obliged them to collect buy and sell orders, balance the market, and issue contract notes (Euromoney, 1995; MoF Poland, 1996a;).

At the beginning of 1996 a market-maker system for government securities was established in Hungary. Primary dealers are required to quote bid and ask prices for up to 25 securities they have been assigned. They are divided into two groups: those selling to institutional or wholesale investors and those trading in small lots via a network of branches. Their main functions include subscription of government bonds, accepting orders for purchasing discount T-bills at auctions, acting as a site of disbursement, a back office and a custodian, and accepting orders at the stock exchange (NBH, 1995).

5.2.2 Market Frequency: Periodic Versus Continuous Trading

Auction markets can be organised in two different ways. In a call market buy and sell orders are accumulated over a specific period and executed simultaneously when a market clearing price is established. In a continuous market orders can be executed whenever bid prices and asking prices cross. The main advantage of call markets is their simplicity of price discovery and the ease of dissemination of information. The timing of an order in a call market is not important because all orders brought to the market before call time are treated equally (Lucas/Schwartz, 1989: 23-4). This was important for markets in central and eastern Europe while communication systems were still being build up.

Continuous markets allow traders to learn and adjust to current market conditions from observation of incoming orders, bid and ask quotations, and volume of transactions. As a result, decisions better reflect current market conditions. Continuous markets also guarantee execution of orders at the market price and trading without delay (Schwartz, 1991: 185-6). Continuous markets enable market participants to execute transactions at any point in time during a trading session. However, higher frequency of trading might result in decreasing market liquidity and thus more volatile prices. The accumulation of buy and sell orders over a period in call markets will generally lead to more price stability (Lucas/Schwartz, 1989: 24).

In order to preserve price stability with higher auction frequency, stock exchanges may use so-called "circuit-breakers", i.e. they set specific percentage limits on the fluctuation of prices from session to session (Greenwald/Stein, 1988). Central European stock markets have extensively relied on such

price limits, which range from 5% to 20%. Although these limits are suitable to prevent erratic price fluctuations in low-turnover market segments, they should not be used to hamper fundamental changes in the market clearing price, as long as these are not related to panic selling or computer-based trading programmes.

Because of thin trading and the associated price instability, most central and eastern European countries initially utilised call auctions rather than continuous trading in most market segments. Continuous trading is increasingly being used for the most liquid securities at the exchanges. A stable system of continuous trading is also an important precondition for exchange trading of standardised derivatives, which has already been introduced in Hungary and is being envisaged by the other exchanges.

Table 17: Trading Systems for Bonds at the Stock Exchanges

Poland	Hungary	Czech Republic	Slovak Republic
T-bonds are traded in a single price auction for retail investors and in continuous auctions for institutional investors and banks in which bonds in round lots of PLN 10 000 face value are traded. Continuous trading was computerised in 1995.	Continuous trading was organised by the BSE since its inception in the system of automatic order matching. This system now comprises all securities traded at the Exchange.	Continuous trading, in the so-called KOBOS system, has been established in March 1996 for a small number of liquid securities. The majority of PSE trading takes place through fixed-price auctions but the PSE plans to include more and more securities in KOBOS.	The BSSE organises anonymous trading through both continuous and single price auctions.

5.2.3 Intermediation: Direct versus Anonymous Trading (OTC Trading at the Exchange)

The organisers of secondary markets for bonds will have to take into account the types of investors which are likely to be active in these markets. Retail investors, which usually place small orders, have different requirements in terms of market organisation than institutional investors or banks, which tend to trade in large blocks of securities. Anonymous auction trading is suitable to match a large number of small orders, either through passing them directly through the price-determination process or through pooling small orders at a specified reference price. Institutional investors, on the other hand, often prefer to deal directly with each other to avoid the execution and price risk related to auction trading. In the less developed capital markets of the Visegrád countries, where retail investors are often underrepresented, institutional investors risk distorting market prices through their block orders when there is a lack of sufficient counter-orders. Most of the central European exchanges established special trading sections to separate small transactions from large block trades and direct trading. The latter seem to be vastly more popular, which is a sign for the predominant role of banks and investment funds at central European bond markets.

Table 18: Bond Turnover According to Trading Methods as % of Total Bond Turnover in the Main Market, for 1995

	WSE	BSE	PSE	BSSE
Anonym. auctions	2	100	0.2	0.6
Direct Trades	79	*	97.2	99.4
Block Trades	19		2.6	**

Sources: BSE, 1995a; BSSE, 1995; PSE, 1995a; WSE, 1995a

* Direct trades in Hungary are conducted off-market and not recorded at the BSE.

** Block trading was introduced on the BSSE at the end of 1995.

Czech Republic

The division of trading into distinct trading groups and methods has gone furthest at the PSE. Securities are traded in three different groups and through five different trading systems: Daily fixing, which is the most widely used method for equity trading, is hardly used for fixed income securities. Equally, after-trade sessions at fixed prices are mainly used for stocks. Bond trading almost exclusively takes place through direct transactions outside the central market. For blocks of securities larger than CZK 200,000, the members of the exchange may agree bilaterally about prices and volumes of trades, which are subsequently registered at the Exchange. The prices agreed are not quoted as the official price of the bond, and there are no limit on price fluctuations. Moreover, blocks worth more than CZK 500,000 can also be exchanged in the system of automated block trades. Here anonymous auctions are used to match buy and sell orders. Again, the prices used are not related to the official price. The most recent trading method is continuous trading at variable prices (KOBOS) which is currently used for only a small number of securities. (PSE, 1995b; 1996a; 1996d). Fixed-price auctions, direct trades and block trades are used in the listed as well as the free market segments.

Table 19: Bond Trading at the PSE 1996 in CZK mio According to Trading Method

	Q I	Q II	Q III
Central Market	22.7	31.2	23.6
Direct Trades	19,655.5	23,166.8	35,123.6
Block Trades	699.7	1,027.8	251.8

Main, Secondary and Free Market
Source: PSE, 1996b.

Poland

At the WSE the segmentation into direct and anonymous trading is equally important. T-bonds are traded in three different markets. Firstly, on the main market of the WSE in the single-price auction system used for equities. Secondly, on the so-called bond block market where lots of PLN 10,000 are traded continuously at variable prices. And thirdly, block trading in off-session transactions by authorised brokers dealing directly with each other. From the introduction of bond trading at the WSE the continuous block market was vastly more popular than the single price segment. From 1995 onwards, off-session transactions became the most widely used trading method for government bonds, which was partly due to lower commission. In 1995 and 1996 the WSE made additional changes to facilitate off-session block trades, including a reduction in the size of blocks and an extension of the limits on price changes (WSE, 1994, 1995; 1995b; Bank Handlowy, 1996b).

Table 20: Bond Trading at the WSE 1996 According to Trading Method in PLN million (*Double Counted)

	QI	QII	QIII
Single price auction	339	456	430
Continuous block	732*	667*	2,190
Off-session block	1,961*	2,589*	4,552

Source: WSE, 1996a, 1996b.

Trading at the BSSE takes place in three subsystems: Apart from single-price auctions and continuous trading at variable prices, members can execute direct block trades using the BSSE electronic trading system. The offers received for block trades are not matched automatically but by means of address orders and the prices may vary during the course of the trading session. These systems are used in both the listed and the unlisted markets (BSSE, 1995). Again, the large share of direct trades reflects the predominant role of financial institutions in the Sloval secondary bond market.

Table 21: Trading Methods at the BSSE 1996, Listed and Unlisted Bonds, in mio SKK

	Q I	Q II	Q III
Anonymous trades	1,619.2	128.0	3,575.8
Direct trades	3,016.0	551.5	5,411.3

Sources: BSSE 1996a; 1996b.

5.2.4 Market Segments: Main Versus Parallel Market

Different markets are not only used to satisfy the needs of particular investor groups but also to facilitate the classification of securities into separate groups. In accordance with certain pre-specified quality criteria the same type of security may be traded in different market segments, for example main market, parallel market and free market.

Different listing requirements, for example with regard to disclosure requirements, capital, and auditing of company accounts, for the respective market segments can reduce uncertainty about the quality of the issue and mitigate distortions related to information asymmetries. Through differentiated listing requirements the stock exchange can thus fulfil an important function of quality certification in order to signal a certain minimum quality of the investment (Gerke, 1991: 2). The admission of securities to the higher market segments will usually depend on:

- a minimum threshold for the prospective market value of the issue,
- the ability of the issuer to provide audited yearly accounts for a certain number of years,
- a minimum percentage of the nominal value of the issue has to be floated through public offering,
- publication of all relevant information in the issuance prospectus, including company status, financial information etc.,
- additional continuous disclosure requirements are to be satisfied through quarterly or semi-annually reports business activities and ad-hoc publication of any new information which may be relevant for the evaluation of the issue.

The specific listing requirements for the top markets are usually included in the securities law, while the rules for admission to the free or unlisted market segment are left to self-regulatory bodies, such as the listing committees of the stock exchange or brokerage associations. The obligations of the issuer are normally less stringent for the lower market segments in order to attract smaller issues and issues of lesser quality to the stock exchange.

The Visegrád countries have largely followed the conventional segmentation found at Western European bourses into main, parallel and free market. At the *BSE*, the listed market is also called category A while the free or "traded" segment was named category B. This distinction is only relevant for equity trading as all bonds listed at the BSE are included in the listed market. For 1997 the BSE plans the introduction of a horizontal segmentation for equities, government securities, and

derivatives, each with a different trading technique and settlement system. At the *PSE*, segmentation underwent a fundamental reform in 1995. The previous "listed" market was subdivided into a „main“ and a „secondary“ market. While listing requirements for the main market were raised and a relatively high liquidity threshold was introduced, admission to the secondary market was facilitated. Applications are accepted through a quasi-automatic procedure as long as all required documentation is attached and no member of the PSE Listing Committee raises any objections. The preconditions for registration in the free market are limited to the submission of basic information about the issuer and the permission of the Ministry of Finance to publicly trade the securities (PSE, 1996a). In May 1996 the members of the *WSE* decided upon the introduction of a free market segment in combination with a tightening of the listing criteria for the top markets. There are, however, concerns that the unlisted market segment might not be an attractive place for securities trading due to the absence of issuers' profitability requirements and short accountancy period (The Warsaw Voice, 16.6.1996). Strong competition can be expected from the new organised OTC market. The *BSSE* has operated with three market segments from its inception. In the second tier of the listed category bonds are underrepresented while the unlisted market is the main venue for trading in non-state bonds (BSE, 1995).

Government securities are traded everywhere in the highest market segment and the listing requirements do not usually apply. Special conditions also often exist for municipal bonds. The number of listings of non-state bonds in the higher market segments remains low or zero, apart from the Czech Republic, where the largest issuers applied for listing for prestige reasons.

Table 22: Market Segmentation at the Visegrád Exchanges

	Poland	Hungary	Czech Republic	Slovak Republic
Market segmentation	Main, Parallel and Free Market. Government securities are exclusively traded in the Main Market. No other bonds had been admitted to WSE at the end of 1996. The new Free Market may attract non-state bonds in due course.	All fixed income securities are listed in one segment in the spot market. Stocks are divided into the categories A and B, depending on share distribution, capitalisation, and reporting requirements.	Main, Secondary and Free Market. Bonds are mainly traded in the first and third tiers.	Senior and Junior Markets for listed securities. Registered Market for unlisted ones. All newly listed securities are first traded in the Junior market. Transfer is possible after six months.
Min. issue size	For securities other than shares: PLN 12, 6, 2 million for the Main, Parallel and Free Market, respectively.			The minimum volume for both listed segments is SKK 100 mio.
Min. share in public offer	For securities other than shares: 20% for the Main and 10% for the Parallel Market or a minimum of PLN 6.2 (2.2) million.		For issues included in the Main Market a min. of CZK 200 mio. or 20% subject to public offer. CZK 100 mio. or 15% for the Secondary Market. 10% for the Free Market.	
Liquidity threshold	Adequate liquidity and proper course of stock market trading must be ensured.		For the main market: CZK 3,000,000 average trading per session in the last five months.	
Continuous disclosure requirements			Quarterly reports on business operations for the Main Market, semi-annually for the Secondary Market. No disclosure requirements for the Free Market.	
Financial statements	Issuers applying for listing on the Main Market must disclose audited financial reports for the last three years. For the Parallel and Free Market, the requirement is reduced to two and one year, respectively.			Audited financial statements for the last three years for listing on the Senior Market, or at least one year in the case of the Junior Market.

Sources:

Czech Republic: PSE 1995b, 1996a;

Hungary: FT Finance East Europe, 22 Sept, 1995

Poland: Bank Handlowe, 1996b.

Slovakia: ZEW Questionnaire.

Table 23: Number of Issues Traded at the Exchange (Listed and Free Market) End 1995

	BSE	PSE		WSE		BSSE	
	listed	listed	free	listed	free	listed	free
T-bonds	34 (+50 T-bills)	8		39		15	
Municipal bonds						15	
Corporate bonds	3	12	28			10	15
Shares	42	68	1,648	53	13	19	790
Inv. funds etc.	37					2	

BSE, 1995a; BSSE, 1995; PSE, 1995b; WSE, 1995a.

Table 24: Number of Issues Traded at the Different Segments in 1996

	BSE	PSE			WSE		BSSE		
	listed	Main	Sec.	Free	Main	Paral.	Listed		Unlisted
T-bonds	37 (+ 47 T-bills)	11			35		8		
Municipal bonds		1		11					
Corporate bonds	2	5	1	40			4		15
Shares	44	42	51	1,554	62	13	11	7	921
Inv. funds, Units etc.	31 + 1	2	1	39					2

Sources:

PSE, October 1996 : PSE 1996c; Information provided by Hypo-Bank CZ a.s.

BSE: 31 August 1996, BSE, 1996c.

BSSE: 31 Sept, 1996.

WSE: 31 June 1996, WSE, 1996a, No. 2.

Table 25: Turnover of Bond Trading in the Different Market Sections in 1995 and September 1996 (added in brackets are the number of transactions over the stated period)

	For the whole of 1995	Monthly turnover Sept. 1996
WSE in mio. PLN		
continuous trading	3,734.57 (1 115)	1,622.68 (168)
block trades	15,121.74 (1 170)	2,571.51 (64)
single price auction	417.21	215.23 (19 49 7)
PSE in mio. CZK		
Main Market	57,957	18.54**
Secondary Market:	0	0.23
Free Market	11,789	5.10
BSSE in mio. SKK		
Listed Bonds	12,067. 60 (401)	2,101.12 (47)
Unlisted Bonds	270.70 (293)	772.23 (56)
BSE spot market in mio. HUF		
Bonds	77,210* (450)	34,579* (67)
T-bills	81,110* (1,412)	9,436* (49)

Sources: WSE, 1995a; 1996b; BSE 1995a, 1996b; PSE, 1999b; 1996c; BSSE, 1995; 1996b, Sept.

* double counted

** October 1996

5.3 Availability of Interest Rate Derivatives

Derivatives on fixed income underlyings are indispensable instruments for bond portfolio managers in the fixed income markets of OECD countries. In these sophisticated markets interest rate derivatives are used

- as a cost-efficient hedge of bond portfolios against interest rate changes,
- to speculate on the future interest rate, and
- to create synthetic bonds and thus fill gaps in the term structure of circulating bonds.

It is important to differentiate between OTC non-standardised derivative products and highly liquid and standardised derivative contracts traded at an exchange, such as LIFFE in London or DTB in Frankfurt. OTC interest rate swaps are already used in a number of central and eastern European. Nevertheless, the absence of standardised interest rate derivatives remains one of the major differences between the emerging bond markets in east-central Europe and more mature fixed income markets. At the end of 1996, there is an organised market for interest rate futures only at the Budapest Stock Exchange.

Derivatives on Eastern European stocks are more developed than interest rate derivatives. Standardised products on central European share indices are now traded at ÖTOB in Vienna and will be introduced at the local exchanges in central and eastern Europe in the course of 1997. The increasing use of continuous trading methods was an important precondition for derivatives trading as it allows for real-time input of prices. However, as the turnover figures provided above indicate, underlying bond markets are not sufficiently liquid to allow for the development of the kind of highly efficient derivatives markets found in Western countries.

Table 26: Derivatives Trading in the Visegrád Countries

Poland	Hungary	Czech Republic	Slovakia
The amendment to the Polish Securities law of July 1996 opens the way to trading in derivatives. For 1997 the WSE plans to start trading in futures on WIG 20 index and dollar and D-mark exchange rates. No plans exist for the introduction of interest rate derivatives in the near future.	Standardised derivatives have been traded at the BSE since 1995 including futures for three months T-bills. In Sept. 1996 the BSE added future contracts on the 12-months T-bill. Options trading is planned for the 1st quarter of 1997.	OTC interest rates swaps as well as currency swaps and forwards are available on the Czech market but no standardised derivatives. The PSE plans to introduce trading in options on share titles and the index as well as in interest futures in the first half of 1997.	The Bratislava Options Exchange was closed down by the MoF in 1995. As the only instruments traded there were one-day forward contracts, the BOB developed into a direct competitor of the spot market. It is now planned to introduce derivatives trading at the BSSE as well as the RM-S in 1997.

Sources:

For Poland: FT Finance Eastern Europe, WSE Information.

For Hungary: BSE Handbook of Futures Trading 1995, Information from BSE, Handelsblatt 27.06.1996.

For CR: PSE Information.

For Slovakia: ZEW sources, Handelsblatt 12.11.1996.

5.4 Evaluation: Transparency and Liquidity

The choices concerning the system of market organisation in the Visegrád countries have to be evaluated with regard to transparency and liquidity, the two most important attributes of an efficient secondary market for securities. Transparency of secondary trading is crucial for efficient price setting and for confidence in the fairness of the market. The term refers to both pre-trade transparency, i.e. the disclosure of all bids, offers, and orders before transactions take place, and post-trade information about the volumes and prices of recent trades. In both respects, considerable progress has been achieved at central European stock exchanges. Price and volume information on bond trading at the exchanges in the Visegrád countries is available through Exchange bulletins, newspapers, television, and partly in real-time through specialised communication systems such as Reuters. In general, the high degree of computerisation of securities trading has facilitated the emanation of trading information and enhanced transparency of the organised market. The problem with transparency is not so much trading in the official market but

the large share of deals conducted in informal markets with limited reporting requirements. In these markets individual transactions may entail significant search costs and may be out of line with prevailing prices. Intransparency in OTC markets in the Visegrád countries has often led to inefficiencies in the price finding process and a lack of reliable information about supply and demand conditions as well as transactions completed. This raises the risk for investors and it may create opportunities for "insiders", i.e. sophisticated traders and dealers who have better access to information, to manipulate trading and earn substantial profits at the expense of less sophisticated and less-informed investors. As secondary markets are essentially markets in information, regulation can improve them by increasing the amount of information they receive, process and disseminate among actual and potential investors (Sylla, 1995). This can be done improving the infrastructure for reporting details on transactions and through instituting reporting requirements for off-market trading.

Concerning the evaluation in terms of liquidity the results are less positive. The existence of at least one liquid bond market sector is crucial for providing reliable pricing information over the whole term structure. In the central and eastern European countries only a small number of bonds are sufficiently liquid to fulfil this function. A large share of outstanding issues are hardly traded. Low liquidity might result from the small volume of bonds outstanding, a small population of investors, or widespread buy-and-hold strategies, i.e. the desire of investors to keep bonds to maturity rather than trade them. Regulators and market organisers may consider supporting liquidity through such measures as improving the dissemination of price information and encouraging market-makers or dealers. Some kind of 'forced' consolidation might also be justified in fragmented markets in the Czech Republic of Hungary. This can be done by integrating sub-markets, requiring notification of the official exchange about off-exchange transitions (put-throughs), and by establishing a centralised depository of securities (Pohl et al., 1995: 2, 8-10).

Slovak Republic

Transparency in the Slovak bond market is ensured through requirement that all trading takes place in the public market. Post-trade information covering the whole market is provided in official stock exchange publications and equivalent material issued by the RM-S. The high degree of computerisation of both markets ensures sufficient pre-trade transparency. Market developments are thus easier to monitor than in Hungary and the Czech Republic where a large proportion of trade takes place off-market. The introduction of the Slovak Bond Index²⁶ (SDX) in October 1996 should further increase transparency and enable investors to better follow developments in the market.

The main impediment to the development of the fixed income market in Slovakia is the lack of liquidity. Activity in the Slovak secondary market started picking up in 1995 when an increased demand in both primary and secondary market was met by higher number of new issues. On the whole, however, the Slovak market remains the smallest and least liquid of all the central European bond markets. This is due in part to a lack of primary offerings (see above) and the lack of choice between different investment instruments. Thus, bond-holders (mainly commercial banks), who might otherwise be inclined to restructure their assets, prefer to hold their portfolio to maturity rather than trade it (VUB, 1996b).

²⁶ The index comprises all government and other bonds traded on the listed market and a selected number of bonds from the registered market. The values for government and non-state bonds are calculated separately. SDX is compounded of current prices plus accrued interest and the cumulative interest payments starting from a certain reference date (VUB, 1996b).

Turnover in the secondary bond markets almost doubled in 1996, which was partly due to the increasing involvement of foreign investors in the Slovak market. However, yearly or quarterly turnover figures often conceal a high degree of volatility in secondary trading volumes. During 1995, secondary trading in government bonds was characterised by large fluctuations in response to issuance activity in the primary market, the level of liquidity in the banking sector, interest rates on the interbank market, as well as legal changes (in particular the new law requiring centralisation of trading). Four transactions conducted in December 1995 in one government bond issue accounted for almost half of the yearly turnover (NBS, 1995).

Bond trading at the BSSE used to be heavily dominated by government bonds, the share of which in total bond trading reached 92.4% in 1995. Trading in corporates, and in particular the issues of VUB-bank and the steel conglomerate CSZ, has increased significantly during 1996, but turnover in other non-state bonds remains modest. Since the beginning of 1996 the rise in bond trading at the BSSE has surpassed growth in equity trading which was initially due to growth in transactions involving unlisted bonds. Subsequently, the listed segment reported higher turnover caused by more active trading in a small number of government bonds.

Table 27: Trading in Government Bonds on the BSSE in 1995 in mio. SKK

Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
3	0.5	1,556	2,200	67	22	21	360	649	1,001	249	4,916

Source: NBS, 1995

Table 28: Bond Trading at the BSSE in 1996, Anonymous Trades (mio. SKK)

	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.
listed	189.2	839.1	210.2	183.6	388.4	542.7	625.9	633.9	1,343.8
<i>No. of tr.</i>	9	11	20	14	24	22	21	22	25
unlisted	68.9	226.6	32.5	121.5	58.4	196.9	57.9	272.8	181.8
<i>No. of tr.</i>	10	6	14	18	20	10	19	18	15

Sources: BSSE, 1996a; 1996b.

Table 29: Bond Turnover at the BSSE in 1996, Listed and Unlisted Bonds, mio. SKK

	July	August	September
government bonds	826.7	1,407.2	1,713.8
non-state bonds	2,272.6	1,607.0	1,728.9

BSSE, 1996b.

Table 30: Volume of Bond Trades in the Secondary Market, in USD mio.

	1995	1996
Government	377.00	322.64
Corporate	111.11	389.95
Banking	26.33	252.43
Municipal	4.27	6.49
Total	518.72	971.51

Source: VUB, 1997b.

Czech Republic

The PSE is slowly developing into a more actively used market for bond trading. Until the end of the year 1995, daily prices were quoted at the PSE only for some of the T-bonds and one corporate bonds. Illiquidity in most segments resulted in relatively large price movements in response to small orders. During 1996 liquidity - especially in corporate and bank bond trading - has been increasing rapidly and daily direct trades²⁷ registered at the stock exchange exceed \$ 10 million at the end of the year. The value of bonds traded rose from about CZK 70 bn in 1995 to CZK 114 bn in the first eleven months of 1996. The government bond sector remains illiquid in comparison with the non-state sector. The discriminatory tax treatment of corporate and bank bonds makes these titles relatively more attractive to foreign investors. The latter are increasingly active participants in the secondary markets. Domestic financial institutions, which are the main investors in government bonds, prefer buy-and-hold strategies (Euromoney, 1996c). As a result, PSE turnover remains heavily concentrated in a few corporate and bank bonds. In the third quarter of 1996, the titles of CEZ, Komerční Banka, and CSOB accounted for over half of total turnover in bonds trading in the Main and Secondary Markets.

The main problem of the Czech market does not seem to be liquidity but a lack of transparency due to the fragmentation of the market and the widely-criticised deficiencies in official oversight. The fact that bonds are almost exclusively traded directly between investors means that pre-trade transparency is low. The large share of trading outside the PSE without reporting requirements has often led to inefficient pricing with multiple prices for the same instruments. The Securities Centre, where most trading takes place, does not continuously report information on prices, buyers and sellers but only publishes weekly average prices of OTC deals.

Improvements in terms of transparency and stability in the Czech capital are to be expected in the course of 1997 following the reforms of the institutional and regulatory framework of the securities market. Polish regulations and practices are partly used as a model in the reform process. An independent Securities Commission will take over from the Ministry of Finance as the main regulatory and supervisory body for the Czech capital market in mid-1997. The new agency will inter alia be responsible for regulating and monitoring the OTC market. In the interim period a Securities Office will be operating to monitor capital market development and to gradually decrease the role of the Ministry of finance in the Czech securities market. Moreover, transparency of OTC trading will be increased when from February 1997 onwards the prices of all transactions conducted off-exchange through the Securities Centre will be reported (PSE, 1996c; PSE on-line; Neue Zürcher Zeitung 17.12.1996).

Table 31: Bond Trading at the PSE 1996 in CZK mio (rounded figures), Main, Secondary and Free Market

Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
6,758	6,047	7,131	7,130	9,341	7,755	9,486	13,309	12,604	23,864	17,522

Source: Figures supplied by PSE.

²⁷ As indicated above, the share of transactions carried out in automated trading is negligible.

Hungary

In Hungary, secondary trading takes place almost exclusively in government bonds as there are no markets for private sector debt instruments²⁸. Although Hungary's primary state paper market is liquid with a large amount of government paper issued on a regular basis, secondary trading is concentrated in short maturities and remains thin at the longer end of the market. Liquidity in the government bond market has increased considerably during 1996 which was partly due to the new system of primary dealers. Average daily turnover in government bonds at the BSE increased from HUF 310 million in 1995 to HUF 1.69 billion in 1996. According to the statistics of the government debt primary dealers, financial institutions, brokers and institutional investors account for the large majority of transactions. In the third quarter of 1996, private and foreign investors made up 3% and 1% of government securities turnover, respectively (AKK, 1996c).

Trading in the secondary market for government securities more or less follows tendencies in the primary markets as the amounts of bids rejected at the auctions translate into demand on the secondary market. Turnover is also dependent on the performance of the stock market. The spectacular rise of the Hungarian stock market during 1996, combined with a significant decrease in the yields on government securities, drove both small and large investors from the bond to the equity market (NBH, 1995; Euromoney, 1996c).

Up-to-date information about BSE trading is easily available through the BSE Information Systems, Teletext as well as real time information vendors and weekly and monthly publications. The publication of the T-bill index, DWIX, allows investors to monitor the development of the short-end of the market. DWIX usually moves in response to the liquidity position and the lending opportunities of commercial banks and shows strong correlation with the movements in the foreign exchange markets (NBH, 1995).

The large share of transactions conducted outside the BSE represents a problem for transparency as there are no official reporting requirements. The situation is likely to change in the short to medium for two reasons. First, improvements in the BSE trading environment, in particular the shortening of the settlement period and the introduction of a special segment for bond trading, might attract a significant share of bond transactions back to the official stock exchange. Second, the amended Securities Law, which will enter into force the 1st January 1997, envisages the re-admission of banks to securities trading at the BSE, which should result in greater use of the public market for transactions among this important investor group. The amendment will also require all issuers of public bonds offered after the 31st December 1997 to apply for listing at the BSE.

Table 32: Bond Trading at the BSE in 1996, Turnover on Market Value in HUF million (Double Counted)

	Apr.	May	Jun.	Jul.	Aug.	Sept.
T-bonds	16,236	10,762	27,976	27,976	7,688	34,579
Corporates	41	0	531	531	0	0
T-bills	1,307	3,840	5,131	5,131	6,208	9,436

Source: BSE, 1996b.

²⁸ Only three transactions took place in the non-state bond section of the BSE in the course of 1996 (BSE, 1997).

Table 33: Cash Turnover at Market Value, HUF billion (Double Counted)

	1991	1992	1993	1994	1995	1996, Jan-Aug,
T-bonds	0.30	12.36	73.38	53.89	77.16	178.91
Corporates	0	0	0	0.01	0.05	0.57
T-bills		15.06	85.00	81.22	81.11	36.39

Source: BSE, 1996c.

Poland

In Poland, the development of a liquid secondary market for treasury bonds was originally hindered by the fact that a large proportion of T-bonds issued in the early years of reform were non-marketable. The share of these non-negotiable instruments in total outstanding treasury securities has slowly diminished from 45.6% at the end of 1992 to 35.6% at the end of 1995. Treasury bills are still dominant in the marketable section and they are not listed at the WSE but are traded through the interbank market. Only some 20% of all treasury securities were therefore tradable at the WSE in 1995. As these bonds are concentrated mainly in the portfolio of large banks, the infrequent transactions are usually concluded for large blocks. Erratic changes in turnover have therefore characterised the Polish secondary market.

In 1996, only the short-term maturities are fairly liquid, whereas medium- and long-term titles are hardly traded. Apparently, the jobber system for government bonds does not work in practice and only the market-makers in the short-term T-bill market are active. (Euromoney, 1996c). The large share of bonds traded in off-session and interbank transactions reduces the transparency of the market situation. A shortage of alternative instruments induces Polish banks, the most important local investor group, to hold bonds to maturity rather than trade them.

Liquidity in the market for non-state paper remains close to zero due to the absence of a organised secondary market, a lack of choice of tradable instruments, and the predominance of private placements. CP is regarded as an attractive short-term investment opportunity and is usually held to maturity. Municipal bonds are privately placed and prices are only quoted by the issuing agent, if at all.

Significant changes can be expected in the course of 1997 which are suitable to increase transparency and liquidity in the Polish bond market. It is expected that the organisation of the OTC market will create the possibility to trade non-state debt instruments which are not listed on the WSE. The WSE itself plans to improve its information infrastructure by introducing real-time price information through Reuters and Telerate before the end of 1998.

Table 34: Bond Turnover Value WSE 1996, PLN million

Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.
661	636	233	1,112	640	481	838	1,928	4,409

Sources: WSE 1996a; 1996b.

6 Integration of Central European Bond Markets Into the International Capital Market

The general trend toward the internationalisation and integration of capital markets started to extend to non-OECD countries in the late 1980s. The Visegrád countries are following this international trend through facilitating access for foreign investors to their domestic capital markets as well as issuing securities in international bond markets. The relatively rapid integration into international capital markets entails clear advantages for financial market reform and the transition process more generally.

- International investors provide an additional source of budget and corporate financing, which is desirable as long as domestic debt markets are thin.
- The integration of the domestic bond markets into international capital markets links domestic interest rates to international interest rates and it increases the efficiency of the international allocation of resources.
- Foreign investors can bring liquidity and expertise to domestic bond markets in central and eastern Europe. It can also be argued that the views of foreign investors are the best test of the performance of an emerging market because of their wide experience and high standards.
- Moreover, external capital inflows can initiate a virtuous circle when the involvement of foreign financial institutions enhances the efficiency and sophistication of the domestic market. The improved market environment as well as increasing familiarity with these markets can, in turn, attract additional investment flows (Feldmann/Kumar, 1995: 189).
- International and Euro-bond issues may serve as a yardstick to measure the judgement of international markets and investors, not only with regard to the functioning of domestic securities markets but about the transition process more general. International bond markets are more liquid and transparent than the fledgling markets of the Visegrád countries and may thus react more quickly to changes in the creditworthiness of central European borrowers.

On the other hand, foreign portfolio investment in the transition economies of central and eastern Europe entails certain risks that need to be balanced against actual and potential benefits. The problems associated with excessive reliance on external debt financing have become painfully obvious in the aftermath of the Mexican debt crisis. Portfolio capital is, by its nature, more liquid than foreign direct investment. Portfolio capital flows may thus put considerable stress on foreign exchange reserves because investors are able to sell securities rapidly in large volumes and repatriate capital. Securities markets may also rapidly transmit external shocks which simply reflect the mood in international capital markets and are not related to the domestic economy of the receiving country. Shifts in the portfolios of industrialised countries, even if small from the perspective of the investing country, may result in inflows and outflows that are large in relation to the size of the recipients capital market. Abrupt changes in market sentiment can induce a large-scale reversal of capital inflows and lead to sharp corrections in market prices. These may have serious implications for systemic stability of the financial system and the real economy. As experience in several industrialised countries has shown, a sharp downturn in asset prices can have significant adverse effects on the banking sector and, through negative effects on wealth and confidence, can lead to a retrenchment in consumption and investment spending (Feldmann/Kumar, 1995; Pardy, 1992).

6.1 Foreign Participation in Domestic Bond Markets

The attractiveness of central and eastern European bond markets for international investors depends on a variety of factors, which do not only include financial returns but encompass the whole spectrum of political, economic and financial reforms and related matters of market efficiency as well as legal and political stability. The specific factors that determine the relative attractiveness of central European securities markets for international investors can be divided into three groups:

- *Institutional efficiency.* The organisation and functioning of the market infrastructure should meet the standards required by international investors. This includes the reliability of order handling and execution, custodian services, as well as the clearing and settlement process. (Pohl et al., 1995: 18; Bröker, 1993: 26).
- *Financial benefits.* Yields on domestic bonds should be sufficiently attractive as compared with those attainable in other internationally accessible bond markets. Potential gains from portfolio diversification will also be taken into account.
- *Market environment.* This relates to the broader environment in which the investment takes place and includes all aspects of sovereign risk, including the political and legal framework of the receiving country. Likewise, the macroeconomic environment, including inflation, GDP growth, and exchange rate stability weighs heavily in investors' decisions to commit funds to emerging market economies. Of particular importance are issues of taxation as well as foreign exchange rules and restrictions on capital and profit repatriation.

The problems of creating an *efficient market infrastructure* have been extensively discussed in the preceding sections. As far as *financial benefits* are concerned, the attractiveness of central European bonds does not only depend on the macroeconomic environment in the respective countries and the risk premia which have to be paid by individual issuers but also on economic conditions in world markets and developments in other industrialised countries as well as emerging markets. Changes in international interest rates have been found to be an important factor determining capital inflows to emerging markets (Dooley et al., 1996). In this respect central and eastern European markets have benefited from the slow-growth, low-inflation environment in the OECD countries during 1995 as institutional investors were looking for high yielding securities elsewhere. This dependence on the external environment implies the danger of a sudden drying up of capital should interest rates in the major industrialised countries start rising again with a new business cycle upturn. However, recent research suggests that the inverse correlation between the level of interest rates in major industrialised countries and the demand for emerging market debt is no longer a close one (BIS, 1996: 23).

Furthermore, portfolio investment in central and eastern Europe crucially depends on strategies of diversification of large institutional investors. Diversification away from Latin American assets after the Mexican debt crisis has re-directed significant capital flows towards eastern Europe. Fixed income securities from the region are suitable instruments for the diversification of global portfolios, in particular for US investors because central and eastern European fixed income markets are not highly correlated with American bond markets (ING Barings, 1996).

To discuss all the factors subsumed under the heading of *market environment* would be beyond the framework of the present paper. A few issues shall be highlighted which seem of particular importance for foreign investors. Traditionally, administrative restrictions and capital controls have been the most important obstacle to foreign portfolio investment in many emerging market economies. The dangers of premature capital account liberalisation in the face of structural impediments to market efficiency have been widely discussed. The lessons to be learnt from the

financial crises experienced by other emerging market economies in Latin America and South East Asia include that financial liberalisation can have destabilising consequences if structural problems in the financial sector remain unresolved (Fanelli/McMahon, 1996; Verbeek, 1996; Vos, 1995). Central and eastern European countries have originally adopted a cautious approach with regard to capital account liberalisation and international portfolio investment.

Foreign access to national bond markets was restricted for three reasons: First, monetary authorities in the Visegrád countries are wary of short-term "speculative" capital inflows and their consequences for internal price stability and exchange rates. Second, those countries already burdened with a high stock of external debt were reluctant to allow further increases in external borrowing. The move away from external debtors is seen as crucial in order to enhance the standing in international markets and reduce debt servicing and borrowing costs. Third, despite liberal rhetoric, aversion against foreign capital inflows and surrendering market control and profits to foreign banks is still widespread in central and eastern Europe. On the other hand, convertibility of the domestic currency and, more generally, a liberalised financial environment is a precondition for attracting foreign capital, and foreign portfolio investment in particular. All four Visegrád countries have therefore already introduced full currency convertibility in accordance with Article VIII of the IMF statutes and have gradually liberalised access to their domestic capital markets²⁹. The move towards capital account liberalisation should also be seen in the context of accession to the OECD. The new members pledged to remove all remaining restrictions on capital account transactions before the end of the century in compliance with the OECD Codes of Liberalisation.

In 1996, foreign investment in bond markets is almost completely liberalised in all four countries. Some restrictions remain for foreign investment in Hungarian short-term securities for the above-mentioned reasons. Apart from administrative restrictions, a lack of reliable custodian services seems to have been a major obstacle to foreign portfolio investment in the earlier stages of reform (Pohl et al, 1995: 18). Consequently, the accessibility of domestic bond markets was closely related to reforms of the banking system and the rules governing foreign banking activities in the countries of the region. Through sufficient progress in banking reform and especially the increasing role of foreign financial institutions in the financial systems of the Visegrád countries foreign investors can now rely on a system of efficient custodian services in these financial markets. The free repatriation of profits, another precondition for foreign portfolio investment, is guaranteed in all four Visegrád countries.

Taxation of investment income hardly affects potential foreign investors directly since the Visegrád countries have concluded double taxation agreements with a large number of industrialised countries. Domestic tax systems do, however, indirectly affect the attractiveness of different bond market sections for non-residents. The most striking examples are the underrepresentation of foreign investors in the Czech and Slovak markets for tax-free government bonds and widespread practices of "bond washing" involving foreign investors in the taxable section (see section 4.4).

²⁹ Compared to other emerging markets, particularly in South East Asia, the Visegrád countries were amazingly quick in opening their domestic bond markets to foreign investors (Compare Euromoney, February 1995, and OECD, 1993 for the strategies of the Asian NICs).

Table 35: Convertibility of Central and Eastern European Currencies

	Poland	Hungary	Czech Republic	Slovak Republic
Convertibility in accordance with Art. VII of the IMF Statutes and capital account liberalisation.	Since 10 Dec. 1995**. Some capital account restrictions remain, Full convertibility until 2000.	Since January 1996,* investment, Capital account restrictions remain for residents.	Since 1 October 1995**; complete liberalisation of capital account planned until 2000.	Since 1 October 1995. Restrictions remain for capital transactions with foreign countries.
Remaining restrictions on foreign portfolio investment in domestic bond markets.	Foreign investors can purchase all debt securities without restrictions. ³⁰	Foreign investors can purchase Treasury securities with an initial maturity of more than one year through participation in primary or secondary markets. The market for non-state debt instruments (currently basically commercial paper) is not yet open to foreign investors. ³¹	There are no restrictions on the quantity or value of securities that can be held by foreigners.	There are no restrictions on foreign investment and trading in the Slovak bond market.

Sources: Euromoney, 1996b.

Information provided by the NBP; NBH; NBS.

* Full convertibility of CA transactions before that date for non-residents and portfolio investment.

** High degree of de-facto liberalisation prior to that date.

The unstable macro-economic environment was a major obstacle to foreign portfolio investment in the early stages of reform. Initially, high inflation rates did not allow issuance of long-term fixed coupon bonds. The risk of depreciation of the local currency had to be balanced against nominal high interest rates of domestic assets. Moreover, for investors of hard currency countries, effective yields were too volatile to render investment in central European bonds viable (Dresdner, 1994). Exchange rate regimes and internal stability in the Visegrád countries have become more suitable to attract foreign portfolio investment. All the Visegrád countries utilise the exchange rate as an external anchor to speed up disinflation and strengthen confidence in the stabilisation process. The high share of D-mark and US dollar in the currency baskets guarantees a certain degree of stability for Western European and US investors. On the other hand, exchange rate fluctuations between dollar and D-mark can entail currency risk for these investor groups. Due to continuous domestic price increases (partly exacerbated through large capital inflows since 1994/5) all countries have experienced real appreciation of their currencies. Given the fact that the central European countries all face growing trade deficits, the costs of the exchange rate regime are sometimes regarded as too high. The central banks of the Czech Republic, Slovakia, and Poland have attempted to discourage short-term capital inflows by widening the fluctuation bands of their respective currencies in 1996. These measures also had more or less temporary effects on the attractiveness of domestic bond markets.³²

³⁰ One-year bonds issued through NBP auctions were only made available to foreign investors in May 1996.

³¹ In 1997 foreigners will be allowed to purchase bonds issued by investment grade non-state entities (Euromoney, 1996c).

³² In the Czech Republic, for instance, the widening of the fluctuation bands of the crown in February 1996 had considerable impact on the domestic bond market while the market for equity was largely unaffected. The interbank market recorded a decline, especially for bonds with shorter maturities as investors tried to shed these assets from their portfolios. Spreads of quoted bonds widened temporarily which expressed widespread uncertainty about future prices and a diminishing interest in fixed coupon securities. State bonds were affected relatively little by the price decline because they are in general not held by foreign investors (CNB, 1996a).

Table 36: Exchange Rate Regimes in the Visegrád Countries

	Poland	Hungary	Czech Republic	Slovakia
Exchange Rate Regime	Crawling peg with a monthly devaluation rate of 1% which is likely to be reduced to 0.7 - 0.8% in 1997.	Crawling peg with a monthly devaluation of 1.2% (to be reduced to 1% around mid-1997).	Pegged	Pegged
Basket	35%D-Mark, 45% US-dollar, 20% French franc, Swiss franc, pound sterling.	30% US-dollar and 70 % ECU, to be replaced by D-mark 1 January 1997.	65% D-Mark and 35% US-dollar.	60% D-Mark and 40% US-dollar.
Fluctuation Band	+/- 7%	+/- 2.25 %	+/- 7.5%	+/- 5%, widened to +/- 7% 1.1.1997

Sources: Euromoney, 1996b; VUB, 1997a.

A certain pattern can be distinguished in the way emerging markets attract overseas capital. The first step is often privatisation of large enterprises. Depending on the rules governing foreign direct investment, this is a suitable way to attract both international equity investment and project finance from foreign banks. The development of a domestic stock market is the next step, accompanied by the sale of equity or equity-linked financial instruments abroad. Finally, the opening up of domestic capital markets and wider access to the international debt markets mark the full integration into international capital markets (FT, 13.11.1991). Similarly, a country that wants to attract foreign capital typically has to progress through several tiers of investors (OECD, 1994a). Diversification of the sources of foreign capital is closely related to the country's standing in international markets as measured by country ratings. The first international investors to show an interest in reform countries are normally specialised emerging market funds or high yield bond funds. These specialised institutions are apt to accept a considerable share of high-yield, high-risk paper for speculative purposes. Conventional institutional investors are usually restricted in the amount of non-investment grade paper they can hold in their portfolios. Since it is in the interest of the Visegrád countries to move fast to the attraction of more traditional investors with a longer time horizon, obtaining an investment grade rating from one of the internationally recognised rating agencies was an important step. Such an award equally important as a precondition for issuing bonds in the Euro-markets.

Table 37: Country Ratings in November 1996

Ratings	S&P	Moody's	IBCA
Czech R.	A	Baa1	A-
Poland	BBB-	Baa3	BBB
Slovakia	BBB-	Baa3	BBB-
Hungary	BB+	Baa3	BBB-

Source: Business Central Europe, November 1996.

Table 38: Ratings of Long-term Foreign Currency Debt, December 1996

	S&P	Moody's	IBCA
Czech R.	A (stable)	Baa1	A-
Poland	BBB- (stable)	Baa3	BBB
Slovakia	BBB-	Baa3	
Hungary	BBB- (stable)	Baa3	BBB

Source: Raiffeisen Zentralbank, 1996c.

Rapid success in monetary stabilisation and the establishment of a capital market infrastructure in conformity with western standards have increased the attractiveness of the Visegrád bond markets. As explained above, the international environment was also conducive at the time when these countries began opening their capital markets to foreigners. On the whole, however, foreign portfolio investment in central and eastern European bond markets has remained modest. Booming stock markets in the regions have attracted the bulk of foreign portfolio investment as they offer higher returns, liquidity and transparency through widely published stock market indices. For fixed income investors, Brady bonds and the international bond issues of Latin American borrowers were more attractive for similar reasons.

Czech Republic

Discriminatory tax policy has made the government bond market rather unattractive to foreigners. Access to the potentially more interesting market for short-term T-bills used to be restricted for monetary policy reasons. Foreign investors are active participants in the markets for private issues. In particular bank bonds proved attractive to foreigners because of high yields and sufficient liquidity in the secondary market. The Czech banking crisis of 1996 has to a certain extent undermined confidence in this market sector. The issues of the five largest banks are still in high demand by foreigners but caution prevails with regard to bonds issued by smaller financial institutions³³. Corporate bonds issued by the largest Czech enterprises are also popular with foreign investors, in particular because they partly offer higher returns than bank bonds to compensate investors for a lack of liquidity. The bills issued by the National Property Fund are an attractive alternative to T-bills at the liquid short end of the market as they traditionally offer higher returns than the short-term securities offered by the Ministry of Finance or the CNB. At the close of September 1996, foreigners held CZK 23.9 bn worth of Czech securities, of which 65% were shares, 19% enterprise bonds, and 16% state bonds.

The Czech Republic encountered problems with large scale foreign capital inflows in 1995. Of USD 8.4 bn which flowed in during 1995, USD 1.5 bn were accounted for by portfolio investment and speculative inflows (Euromoney, 1996b). The inflows were welcome from the point of view of financing the current account deficit and they are regarded as politically uncontroversial due to the low level of external indebtedness. However, rapidly increasing foreign exchange reserves increased pressure on the internal money supply and thus forced the central bank and the Ministry of Finance to issue some expensive short-term debt instruments to reduce liquidity in the banking system. Revaluation pressure on the Czech crown is considered problematic given the growing current account deficit of the Czech Republic. Existing restrictions on short-term foreign investment were partly undermined by capital inflows shifting from short to medium and long-term investments. The attractiveness of short-term investment in the Czech koruna was diminished through the central bank's decision to widen the fluctuation band of the currency from +/- 0.5% to +/- 7.5%. It can be expected that the Czech domestic bond market will remain attractive for foreign investors in 1997 because Czech bonds have proved the least volatile in the region, while offering good returns with low sovereign risk.

³³ Due to the high share the government still holds in the largest financial institutions it is widely assumed that these enjoy an implicit state guarantee. The Czech financial market remains heavily concentrated with the largest banks accounting for the majority of financial assets. Fierce competition for market shares among smaller banks induced them to take undue credit risk.

Hungary

Under the Hungarian Act on the Investment of Foreigners portfolio investment has been gradually liberalised but some restrictions on foreign access remain in 1996. Foreign investors only have access to the market for Treasury security, they are not allowed to purchase non-state debt instruments. Given Hungary's relatively high stock of external indebtedness the NBH is unwilling to see private sector borrowers raise additional funds abroad. Moreover, as the monetary authorities seek to limit the amount of speculative capital entering the country, there are restrictions on foreign purchases of T-bills with an initial maturity of less than one year. The government is trying to channel both domestic and foreign demand into longer maturities and to make the domestic bond market generally more attractive to foreign investors. Special bond issues were reserved for foreign investors while others were only accessible for Hungarian residents. The latter would normally carry more favourable interest rates. Although Hungary is the main recipient of foreign direct investment in the region and has an impeccable debt servicing record, foreign investors are still largely uninterested in the domestic bond market. This lack of demand was partly due to the fact that until the end of 1996 Hungary lacked an investment grade rating by one of the major international rating agencies. However, low yields and the exchange rate policy of continuous depreciation also played a part in rendering the Hungarian market relatively unattractive. At the end of 1995, foreign investors held 3.13% of all outstanding deficit financing government securities; by August 1996, their share had fallen to 2.47% (AKK, 1996c).

In connection with Hungary's admission to the OECD the government has liberalised long-term capital transactions with OECD countries. The Securities Law will be amended again in 1997 to bring it in line with EU legislation. Foreign investors' participation in the domestic bonds markets will then be facilitated while foreign participation in Hungarian enterprises through share-holdings would be restricted. Corporate bonds with investment grade ratings will be accessible for foreigners in 1997 (Euromoney, 1996b, 1996c).

Poland

Polish short-term government securities have attracted considerable attention from international investors since 1994 due to high returns and the relative external stability of the zloty. Foreigners bought 7.9% of all T-bills on the primary market in 1995 (NBP, 1995). The increased demand for zloty paper highlighted growing confidence in the stability of the Polish financial system, the Polish currency as well as the political development of this emerging market. However, the surge in capital inflows added to the NBP's foreign exchange reserves, which had already reached record levels, and increased the zloty money supply and thus inflationary pressure. (Handelsblatt 4.6.1996, FAZ 20.2.1996). There were concerns in 1996 that access to the zloty T-bill market might be restricted to safeguard monetary stability. The NBP regards administrative controls on foreign portfolio investment as a last-resort device but would not rule out their use altogether. In general, it is in line with the process of financial deregulation that central banks in eastern Europe have relied on market-oriented measures, such as the widening of fluctuation band rather than capital account restrictions.

Like other central banks in the region the NBP faces a dilemma with regard to its monetary policy stance. Although high internal inflation make a raising of interest rates seem desirable this is ruled out by the danger of attracting significant short-term capital flows. The resulting strengthening of the currency would entail competitive disadvantages for the export sector. Similar to the monetary authorities in the neighbouring countries the NBP uses reserve requirements as a tool for tightening monetary policy in addition to interest rate policy.

Excess demand for zloty-bills resulted in a sharp increase in T-bill prices and a drop in yields, which has reduced the attractiveness of this investment. The widening of the fluctuation band also contributed to making investment in short-term debt securities less attractive. According to the Ministry of Finance, the share of foreign investors in the domestic market for Treasury securities fell back to less than one per cent towards the end of 1996. The planned reduction in devaluation rates from 12.7% in 1996 to about 9% in 1997 would again increase the attractiveness of the Polish bond market with the possible result of a resurgence of speculative capital flows.

Slovak Republic

Foreigners are allowed to purchase and sell securities denominated in Slovak crowns under the provisions of the country's Foreign Exchange Act. On the primary market for government paper foreigners need to be represented by one of the licensed institutions. In the case of non-state issues the lead-managing bank can acquire bonds for foreigners. In the secondary market, buy and sell orders have to be executed by a member of the BSSE. Each foreign investor needs to open an account with the Slovak Securities Centre to effect transfer of securities and cash settlement.

Despite the openness of the Slovak bond market, foreign involvement in the market has remained modest in 1996, partly because of widespread concerns about intransparency in the market and partly because of political risk. Most importantly, the Slovak bond market is regarded as too small and insufficiently liquid compared to other emerging bond markets in the region, to attract much attention from foreign investors. As in the Czech Republic, the discriminatory tax treatment has made the government debt market unattractive to foreign investors. According to the NBS, foreigners held a mere 0.02 % of government bonds outstanding in December 1996. Foreign portfolio investment in the bank and enterprise sector is more active but privatisation insecurity turned out to be an impeding factor.

6.2 International Bond Markets: Greater Choice and Enhanced Competition

As long as foreign demand for domestic bond issues remains modest, access to international capital markets is an important source of refinancing for east-central European borrowers. In addition to syndicated loans, Euro-bonds and EMTNs (Euro-medium-term notes) can offer access to international funding. Euro-bonds are typically debt instruments denominated in a major international currency which are issued outside the borrowers home country through an international syndicate of financial institutions. Although Euro-bonds are, for technical reasons, listed at the stock exchanges in Luxembourg or London, they are mainly traded over the counter with settlement taking place through one of the large specialised clearing houses (CEDEL, Euroclear).

For capital raisers in the Visegrád countries, the international bond markets may bring a number of advantages as supplements to or even substitutes for domestic capital markets:

- As long as governments and corporate entities in central and eastern Europe do not have access to broad and liquid bond markets, the Euro-bond markets offer a real alternative for raising funds for investment and restructuring.
- Governments may benefit from cheaper funding through the Euro-markets if they are faced with high interest rates in domestic capital markets due to a lack of credibility.
- Falling borrowing costs in international markets allow government to restructure existing external debt and thus reduce debt servicing costs.

- The Euromarkets offer a high degree of liquidity and flexibility. Euro-bonds allow issuing agents to easily vary the terms of the issue, such as currency of denomination and structure. Rigidities in domestic markets as well as administrative restrictions on financial contracts and taxation, including withholding taxes, stamp duties etc., are most easily avoided by launching an issue in a different market (Benzi, 1992: 19-20).

It could thus be said that the opportunity for central European borrowers to raise funds in off-shore markets is beneficial not only because these provide additional sources of capital but also because they introduce an important element of competition for domestic bond markets. On the other hand, the threats to financial and monetary stability which emanate from large foreign investment in domestic securities markets may be exacerbated through large-scale use of the more volatile international bond markets. In more advanced capital markets there is an increasing degree of substitutability between domestic, international and Euro-bond markets due to financial liberalisation and enhanced swap facilities. It may therefore become more difficult for national monetary authorities to regulate and manage domestic securities markets.

The Visegrád countries (apart from Hungary which has been present since the 70s, see below) entered the Euromarkets at a time of record demand for emerging market debt when international investors had regained confidence after the 1995 Mexican peso crisis. The underlying reasons for this resurgence of demand were a mixture of improving economic fundamentals and international liquidity. Against the background of low interest rates, low growth and stable inflation rates in OECD countries, international investors' interest in higher yields offered by emerging market assets revived. Demand for central and eastern European bonds increased rapidly as international investors were trying to diversify their portfolio away from Latin American debt securities. The more fundamental reasons for the popularity of eastern European bonds were the reform successes during 1996, rapidly improving credit ratings, and the prospect of eventual entry into the European Union. Developments in western Europe also benefited demand for central and eastern European debt. The prospects of accession to the European Monetary Union resulted in the decline of interest rates of many traditional higher-yield currencies such as the Italian lira. The convergence of European currency yields induced investors to shift funds to the next level of possibly converging economies in central Europe (FT, 31.1.1997).

Despite high demand for emerging market debt, the Visegrád countries have adopted a cautious approach to borrowing in international markets. Large national foreign exchange reserves and cheaper alternative sources of debt funding, in particular in the international syndicated loan market, made resort to international bond markets largely obsolete. Euro-bond issues by sovereign borrowers were often based on considerations of prestige rather than funding requirements. Sovereign issues are a preferred way to test the judgement of international investors about progress in economic reforms and the standing of the capital raiser in international markets. Sovereign issues are also important to establish a benchmark for subsequent non-state issues. Although Euro-bond issues from central and eastern Europe have become more frequent in 1996³⁴, it is unlikely that the transition economies will rely on international bond markets to any great extent in the near future. Government borrowing in most countries in the region is limited by fiscal consolidation and central European central banks have been wary to see external indebtedness increase. Due to the demand-supply imbalance and rapid economic successes in 1996, yields on outstanding Euro-bonds from central Europe have fallen drastically. Lower borrowing costs allow sovereign issuers to partly

³⁴ According to Capital Data Bondware, central and eastern European issuers borrowed a total of USD 4.4 bn in Euro- and international markets (FT, 31.1.1997).

avoid higher funding costs in domestic market and it enables those countries that already have a relatively high level of external debt to reduce debt servicing costs through debt restructuring.

A growing number of non-state borrowers from the region are also taking advantage of decreased borrowing costs in international markets. Flexible and streamlined issuing procedures in the Euro-markets allow central European entities to access funds more quickly, avoiding the often cumbersome issuing requirements in domestic bond markets. As in the case of sovereign borrowers, considerations of prestige have been an important factor for banks, enterprises and municipalities in accessing the Euro-markets. High yields and low credit risk through explicit or implicit guarantees made the first corporate Euro-bond issues from the region a series of success stories. Most of the issues were heavily oversubscribed and spreads were often tighter than predicted even by the most optimistic analysts. In the course of 1996 spreads on outstanding bonds have tightened further and many of the initial issuers are planning to return to the market in 1997 to take advantage of improved funding opportunities.

The successes of the first Euro-bond issues from private sector issuers should not detract from the fact that risks remain on both sides of the market. Up to the end of 1996, foreign borrowing by private-sector entities has either been covered by a government guarantee and/or has been limited to blue-chip companies. As the number of corporate borrowers increases, central European governments are increasingly unwilling to extend such guarantees. Smaller entities mostly lack credit ratings, which implies higher, if not unacceptable, credit risk. Large banks and utilities, which are still predominantly state-owned, may benefit from an implicit government guarantee. However, the uncertainty connected to the future consolidation and/or privatisation of such state-owned entities may also prove an obstacle to borrowing abroad. The case of Polish Bank Handlowy's Euro-bond debut shows that privatisation uncertainty can be an important factor in raising capital in international markets (Euromoney Magazine, June 1996).

For the issuing company, the Euro-market debut also contains risks. The increased currency risk which results from foreign borrowing may be problematic for relatively inexperienced financial managers in central and eastern Europe. There are no good hedging instruments available to cover long-term currency risk. It is widely expected that corporate bond issues in the Euro-markets will increase further in the course of 1997. However, the number of large issuers with acceptable credit risk is limited and funding needs of smaller private enterprises are mostly too modest to warrant accessing international capital markets.

Hungary

Hungary, which has been an active participant in international capital markets since 1971, is the only of the Visegrád countries which consistently relied on borrowing in the international markets. According to BIS statistics, Hungary accounted for 81% of a total of USD 18.4 bn of outstanding issues of international debt securities from the whole of eastern Europe in the first quarter of 1996 (BIS, 1996). By October 1996, the Hungarian National Bank³⁵ had floated almost 100 issues in 14 different currencies. According to the NBH, the amount of external debt outstanding is about USD 13 bn, the largest share of which is medium and long-term and carries fixed interest rates. Hungary is also an exception in that it has repeatedly issued bonds in international markets without having obtained an investment grade rating. Although Hungary has never defaulted on its external debt it

³⁵ As the state budget is financed from internal sources only, there are no Euro-bonds outstanding in the name of the Republic of Hungary.

faced higher borrowing costs than Poland or the Czech Republic because of its sub-investment grade rating.

Hungary is expected to reduce its activities in the international markets in 1997 because gains through privatisation and high foreign direct investment allowed the Hungarian government to build up considerable foreign exchange reserves. The NBH will nonetheless continue to issue Euro-bonds because first, Hungary is still restructuring its external debt to reduce debt servicing costs; and second, the NBH seeks to remain present in the market and to test the general judgement of Hungary as a debtor (Handelsblatt, 16.4.1996). Only two Hungarian banks have launched international bonds but the NBH expects a larger number of private sector issues and some issuing activity by municipalities for 1997.

Table 39: International Bond Issues Hungary 1993-1996

Issuer	Date	Amount	Maturity	Coupon
NBH	January 1993	JPY 30 billion	5 years	6.80%
	January 1993	DEM 600 million	7 years	10.00%
	February 1993	JPY 40 billion	5 years	6.50 %
	March 1993	JPY 50 billion	7 years	6.45%
	June 1993	CHF 100 million	7 years	7.25%
	June 1993	USD 150 million	5 years	8.00%
	July 1993	JPY 50 billion	6 years	6.45%
	August 1993	GBP 100 million	10 years	10.00%
	Sept. 1993	DEM 1 billion	10 years	8.75%
	Oct. 1993	ATS 1 billion	7 years	8.50%
	Oct. 1993	USD 50 million	5 years	8.00%
	Nov. 1993	USD 200 million	10 years	7.95%
	Nov. 1993	FRF 1 billion	6 years	8.00%
	Nov. 1993	USD 200 million	20 years	8.875%
	Dec. 1993	CHF 200 million	6 years	6.75%
	January 1994	DEM 1 billion	10 years	8.00%
	January 1994	EPS 10 billion	5 years	10.30%
	January 1994	JPY 50 billion	10 years	5.45 %
	April 1994	LFR 2,5 billion	7 years	8.875%
	June 1994	ATS 1,25 billion	7 years	9.00%
	July 1994	NLG 150 million	5 years	8.75%
	August 1994	JPY 15 billion	3 years	5.00%
	August 1994	JPY 15 billion	6 years	6.15%
	August 1994	USD 250 million	5 years	LIBOR + 1.5%
	Oct. 1994	CHF 150 million	5 years	8.25%
	Nov. 1994	DEM 500 million	7 years	9.75%
	Nov. 1994	JPY 30 billion	8 years	6.65%
	January 1995	ATS 750 million	7 years	9.625%
	February 1995	JPY 25 billion	10 years	6.75%
	April 1995	JPY 15 billion	3 years	3.70%
	April 1995	JPY 15 billion	15 years	6.90%
	June 1995	JPY 30 billion	12 years	6.00%
	June 1995	DEM 500 million	6 years	9.00%
	June 1995	DEM 250 million	6 years	9.00%
	July 1995	JPY 25 billion	10 years	5.20%
	Sept. 1995	JPY 30 billion	10 years	5.00%
	Oct. 1995	CHF 200 million	5 years	6.75%
	Oct. 1995	JPY 10 billion	20 years	6.00%
	Oct. 1995	JPY 30 billion	12 years	5.00%
	Nov. 1995	JPY 25 billion	13 years	5.00%
	January 1996	JPY 40 billion	15 years	5.20%
	May 1996	DEM 500 mio	6 years	LIBOR + 0.9

Source: NBH, 1996.

Poland

The relatively high level of existing external indebtedness and fiscal prudence has made Poland cautious to use the new borrowing facilities in the Euro-bond markets. Poland issued its first dollar-denominated Euro-bond in 1995 despite the trend away from reliance on external creditors. The issue came as a surprise insofar as Poland had only one year earlier rescheduled its external debt through a London Club agreement. The main rationale of the bond issue was, according to the Ministry of Finance, to establish a presence in the market, to move away from the emerging market image connected to Poland's outstanding Brady bonds, and to establish a benchmark for potential private sector issues. The second Polish Euro-bond issue followed in July 1996, this time in the D-mark sector. Given Poland's strong foreign exchange reserves at the time of the issue, the purpose was again to accustom foreign lenders to the country's presence in international capital markets. The remaining restrictions of the capital account represent an obstacle for Euro-bond issues by private sector and sub-state entities. Up to the end of 1996, only two non-state entities, two of the country's largest banks, had entered the Euro-bond markets.

Poland issued about USD 8 bn in Brady Bonds in 1994 as part of its debt rescheduling agreement. These were mainly held by the banks that made the original loans and a narrow range of specialised funds. In January 1996, Moody's decided to award an investment grade rating to Polish Brady bond issues. This was the first time the credit rating agency has rated the credit of any Brady bond issue at this level. The upgrade allowed a broader range of investors to hold the debt instruments and resulted in a gradual decrease of yields of Polish Brady bonds towards levels of Polish Euro-bonds.

Table 40: Polish Euro-Bond Issues

Issuer	Date	Amount	Maturity	Coupon/spread at issue
Republic of Poland	July 1996	DEM 250 million	5 years	6.125%, 65 bp over Bobl
Republic of Poland	June 1995	USD 250 million	5 years	7.75%, 185 bp over 5% US 1999 Treasuries
BRE	April 1996	USD 100 million	3 years	6.625 %, 1.0% over 6-months dollar LIBOR
Bank Handlowy Warszawie	April 1996	USD 100 million	3 years	7.0 %, 88 bp over US treasuries

Source: Ministry of Finance, Foreign Department

Czech Republic

Czechoslovakia entered the Euromarkets soon after the start of reforms with a USD 200 mio issue in 1991. This first issue was followed by a prolonged break in international issuing activity during the break-up of the country. The newly created Czech National Bank returned to the international market in 1993, this time to the yen sector. Due to the sound fiscal position of the Czech central government, no further Euro-bond issues have taken place in the name of the Czech Republic. Czech corporates and banks, on the other hand, acted as pioneers in the international bond markets. CEZ, the Czech Republic's largest electricity supplier, was the first central European corporate to receive an international rating (investment grade). It subsequently entered the Euromarkets with USD 150 mio issue at the end of 1994. The success of this early issue was not only its relatively tight spread (110 bp over US treasuries) but also the wide distribution, both geographically and by type of investors. An interesting problem in placing the issue was that the company already positioned itself beyond the emerging market investors, which require very high returns, and investors in frequent issues who had not heard of CEZ and did not expect to find an investment grade utility in Eastern Europe (Eichler, 1995). Komerční Banka was the first Czech bank which issued Euro-bonds in April 1996.

Table 41: Selected Euro-Bond Issues out of the Czech(oslovak) Republic

Issuer	Date	Amount	Maturity	Spread/coupon
National Bank of Czechoslovakia	November 1991	USD 200 million	3 years	300 bp over US Treasuries
Czech National Bank	July 1993	JPY 35 bn	7 years	6.60%
City of Prague	April 1994	USD 250 mio	5 years	7.75%
CEZ	November 1994	USD 150 mio	5 years	8.88%, 110 bp over US treasuries
Komerční Banka	April 1996	USD 250 mio	5 years	7.13%, 78 bp over US Treasuries
Pivovar Radegast	July 1996	DM 70 mio	5 years	6.50%

Source: Euromoney Magazine; BV.

Slovakia

The National Bank of Slovakia entered the international bond market in 1993 at a time when the domestic bond market was still in its infancy. The Republic of Slovakia has not itself issued in the international market. It has, however, provided unconditional guarantees for all three corporate Euro-bond issues outstanding at the end of 1996 and thus facilitated access to international markets for Slovak companies. A novelty was introduced by VUB, the largest Slovak bank, in December 1996. The bank placed SKK 1.5 bn worth of domestic bonds entirely with foreign banks. The issue was in accordance with domestic law as well as international standards. Further issuance activity by Slovak entities will depend on whether private sector borrowers and local government can obtain international ratings. At the end of 1996, only three non-state entities had been subject to ratings from international rating agencies (the City of Bratislava, JCRA: BBB; Amylum Group, S&P: aa; Vodohospodárska výstavba, S&P: BBB-) (Information provided by NBS; VUB, 1996b).

Table 42: Slovak Euro-Bond Issues

Issuer	Date	Amount	Maturity	Coupon/Spread at issue
NBS	Sept. 1993	JPY 25 billion	5/7 years	7.75/8.00%
Calex, a.s.	Dec. 1993	USD 21 million	3 years	7.88%
Calex, a.s.	July 1994	JPY 700 million	3 years	5.60%
City of Bratislava	Nov. 1995	JPY 6.5 billion	5 years	4.10%
Vodohospodárska výstavba, s.p.	Dec. 1996	USD 200 million	10 years	7.25%, 115 bp over US Treasuries

Sources: ZEW Questionnaire; NBS, Debt Management Department.

Czech and Slovak Crown Established as New Euro-Currencies

Central and eastern European borrowers have been expanding their investor base through accessing a widening array of currencies. According to the BIS (1996: 25), this diversification of issuance is the most important recent trend in emerging market finance. As the tables above indicate, deutschmark and yen denominated issues are increasingly popular with central European borrowers. More remarkable still is that central European currencies themselves are used to establish new benchmark sections in the Euromarkets. Originally, Euro-medium term notes or bonds denominated in Czech or Slovak korunas provided a profitable swap opportunity for large international borrowers with good credit standing. The involvement of foreign issuers, mainly international financial institutions such as the EBRD, the IFC or the World Bank, brought credibility to the local market and, to a certain extent, may have introduced new investors to the fledgling local currency markets in Eastern Europe. These local currency bonds usually have a triple-A rating and safe settlement

through Cedel or Euroclear. Hence they allow more traditional institutional investors, which could not take the credit and settlement risk of domestic central European bonds, to enter these markets.

The *Czech koruna* market is the most sophisticated of the central European Euro-markets. It has grown very rapidly since the end of 1995 and by September 1996 more than 25 koruna-denominated issues in the form of Euro-bonds as well as EMTNs had taken place. The typical issue has a volume of CZK 1 bn to CZK 2.5 bn and maturities range from one to five years. The bank, which acts as lead-manager, will typically try to involve an international institution with first class rating in the issuance. In most of the cases the korunas raised through the issue are then swapped into dollar or D-marks. Foreign banks and multinationals tend to hold on to the korunas to fund their local activities or lend them on in the domestic market. Whereas the early Euro-bond issues in CZK were mainly bought by private-banking departments of large international banks, more recent issues also appealed to foreign institutional investors such as pension and emerging market funds, mainly because of their higher coupon, but also because of the increased confidence in the Czech reform process. On the domestic side, demand for Euro-bonds denominated in the local currency seems to be thin, however. In the Czech Republic this is mainly due to unfavourable tax treatment: Whereas income from domestic bonds is subject to a withholding tax of 25%, the interest from international bonds is taxed at the normal corporate tax rate of 39%. Recently, Czech institutional investors have shown increased interest in the koruna sector of the Euromarkets, mainly because the tight monetary policy of the CNB has resulted in more appealing coupon yields. The Euro-bond market is connected to the Czech money market through the frequent swaps related to Euro-bond issues (Handelsblatt, 9.10.1996).

Remaining restrictions on the Polish capital account have prevented Euro-bond issues in *Polish zloty*. In order to satisfy international investors' desire for greater exposure to Poland's economic success, international investors created synthetic zloty-linked bonds. The EBRD was the first issuer to offer USD denominated global bonds linked to the PLN-USD exchange rate. The IFC and a number of large multinational corporations have also borrowed through these instrument. Zloty-linked bonds offer investors the high yields available on domestic Polish securities while carrying a much lower credit risk than Polish Government debt. According to the Ministry of Finance, Poland is currently discussing the issuance of zloty-denominated and settled bonds in the domestic Polish market as well as the Euromarket with a number of international financial institutions. The Ministry regards the tax immunity and the limit of ECU 300 mio. for foreign public issues in the Polish domestic market as the biggest obstacles for further issues in 1997.

The first Euro-*Slovak koruna* public bond was issued by the EBRD in August 1996, followed by an issue of three-year bonds through the IFC. In October, the General Electric Capital Corporation (GECC) issued SKK 2 bn. worth of one-year Euro-bonds with a 11.625% coupon, i.e. 87.5 bp. lower than the initial one-year offering of the EBRD. The new instruments allow foreign investors to gain exposure to the Slovak koruna with a higher level of liquidity than can be expected in the local market. According to the NBS, Euro-SKK issuance has attracted additional attention to the Slovak corporate bond market. However, the investor base for Euro-crown issues does not normally overlap with those international investors interested in the Slovak domestic market. The gap between the two markets stems from the fact that the Euro-bonds are only issued by AAA-rated institutions which are absent from the Slovak domestic market. The *Hungarian forint* is not used as a Euro-currency and according to the EBRD it is unlikely that Euro-HUF issues will take place before the end of 1997.

7 Conclusion

The Visegrád countries have progressed very fast in establishing the regulatory and institutional framework for efficient bond markets. However, evaluating the situation on the basis of the end of 1996, some deficiencies still have to be overcome. Before summarising these points it has to be emphasised that the speed of the ongoing capital market reforms is fast both on the side of government legislation and on the side of private market participants. Therefore, some of the mentioned problems might already be clearly realised in the process and might already be moving close to a solution, or at least a major improvement.

It was shown that while the transparency at the computerised exchanges is high, market *liquidity on secondary bond markets is often not yet satisfactory*. The two reasons are: First, relatively small market segments do not provide the secondary market with sufficient tradable material. Second, high shares of OTC trading aggravate this problem further. Therefore, it can be expected that liquidity will grow with the ongoing growth of the bond market. Further attempts to improve the efficiency of the exchange relative to the OTC trade should be designed to increase the share of bonds trade at the official exchange.

The *incomplete term structure* remains a serious drawback of the Visegrád bond markets. Even where long-run maturities exist (above 5 years) these bond segments suffer even more from illiquidity than shorter maturities. Not only do straight fixed interest rate bonds rarely exist in the long-run segments, but most of the long-run papers have a floating interest rate or are callable prior to maturity. Therefore, information on long-run market interest rates is not available. This means that an important point of orientation for long-run intertemporal activities such as saving and investment is missing.

The problem of the incomplete term structure goes beyond what can be done through further improvements in the market infrastructure. To enable sovereign and private issuers to borrow long-term at fixed rates, progress in the macroeconomic environment seems essential. Inflation and inflationary expectations have to be reduced to single-digit figures to make the real interest rate more predictable. Only then can a liquid market for long-run fixed interest rate bonds develop.

The *absence (with the exception of Hungary) of highly liquid and standardised derivative contracts on interest rate underlyings* at the official exchanges is a further shortcoming in comparison to mature bond markets in the Western capital markets. Of course, the problems of low liquidity and a missing derivative market are interrelated. The existence of a liquid underlying market is an indispensable precondition for a viable derivative market. Therefore, within the reform sequence attempts to further improve the markets for straight bonds should precede initiatives to create derivative markets.

The synopsis of the relative importance of issuers in the Visegrád bond markets clearly indicates that a high level of government issues leads to a *crowding out of private activity in the bond market*. In Hungary and Poland, where the markets have been flooded with treasuries, there has not been much room for a corporate bond market to develop. In sharp contrast, the favourable budgetary position in the Czech Republic resulted in low levels of treasury issues, and thus facilitated the development of the most advanced corporate bond market in the region. Crowding out of private bond issuance activities has often been supported by other policy measures. First, discriminatory taxational measures favouring government bonds relatively to other issuer groups has generally reduced domestic demand for the latter and raised borrowing costs for private sector issuers. Second, central bank obligations to buy certain shares of government bonds has promoted the sale of government bonds in excess of market demand. It is obvious that this kind of crowding out is

detrimental for the economic development, and in particular for the development of the private sector. For the private sector, bond market finance can be a cost saving alternative to bank credits. Positive tax discrimination of government bonds is not compatible with the aim of developing an efficient capital market. Central bank activities in financing the public debt run contrary to the goals of both reducing inflation rate and bringing the economic systems in these countries in line with the requirements of EU accession.

A twofold strategy is required to deal with the crowding out problem. On the macroeconomic side, fiscal prudence, which is necessary in many respects, will support the development of a mixed issuer structure in the bond market. On the institutional side, legislative reform should aim at removing taxational discrimination and other regulatory privileges for government bonds. Credible institutional safeguards have to be constructed in order to prevent future central bank activities in government debt finance.

The increasing integration into international capital markets, both through the activities of foreigners on domestic bond markets and the presence of Visegrád issuers on Euro-bond markets, are a very positive development in at least two respects. First, it shows that capital market development in these countries has reached an advanced level. Second, the international integration puts the domestic bond markets under growing competitive pressure to overcome the remaining deficiencies.

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