2 Comparative Analysis of the Financial System in Croatia and the Financial Systems in Advanced Transition Economies*

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Abstract

The Croatian financial system has entered a new phase of its development. As a result of the important and deep changes that have altered the image of the banking system, the conditions for more dynamic development of non-banking intermediaries and capital markets have been created. In order to assess the achieved level of financial development, the Croatian financial system is compared with the financial systems of advanced transition economies. The analysis is based on the standard indicators of size and activity of banking and non-banking intermediaries as well as of those of capital markets. The results of the analysis show that the size and activity of Croatian banking system is comparable to that of the banking systems of advanced transition economies. However, the achieved level of development of non-banking intermediaries and the capital market is still below that of other advanced transition economies. It is expected that Croatian financial system will fill this gap relatively quickly since activities of pension funds, investment funds and bond markets are growing quickly.

Keywords: financial development, bank-based financial systems, market-based financial systems, intermediaries, transition economies, Croatia
JEL classification: G00, G20

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1 Introduction

The changes that have taken place during the past few years indicate that the Croatian financial system is at a turning point and that it has entered a new phase of development. Primarily we have in mind factors such as privatization in the banking system, the reduction of interest rates, the inflow of deposits during the years 2000 and 2001, which reached its peak on the eve of the introduction of the euro, and in general, the rise of competitiveness in banking industry. At the same time second pillar of pension insurance, as well as the emergence of investment funds have encouraged the creation of quality institutional investors. A further step aimed at strengthening non-banking intermediaries is to be achieved through privatization of the largest state-owned insurance company that will, as in the banking industry, substantially contribute to the expansion of activities and an overall efficiency of the insurance sector. On the other hand, the activity of the capital market continues to be relatively low. However, the achieved degree of banking system development as well as rapid strengthening of non-banking intermediaries, in particular of investment and pension funds, indicate that demand on the capital market is no longer a limiting factor to its development. The focus in the future probably will be shifted to a large extent to the issue of the supply of quality trading instruments.

There is no doubt that financial development presents an important determinant of transition process, which to a large extent determines the speed and efficiency of transition. The importance of financial development in transition countries is of particular significance, as it also includes, in addition to restructuring existing banking intermediaries in line with the needs of the market economy, the creation of heretofore missing parts of the financial system, i.e. a capital market and some of the non-banking intermediaries. Hence, all transition countries are faced with an imbalance in the structure of their respective financial systems. Regardless of the various results achieved in capital market development, the financial systems in the more advanced transition countries are also dominated by banks; in other words the financial systems in all transition countries are bank-based. And, due to the mentioned changes, as the Croatian financial system enters a new stage of its development, questions arise frequently as to whether and to what extent a bank-based financial system is a factor limiting financial development and economic growth in general.

The objective of the paper is to compare the Croatian financial system to the financial systems in advanced transition countries using indicators relating to the size and activities of individual structural parts of the financial system. In addition to providing an answer as to the position of the Croatian financial system compared to those in advanced transition countries, such an analysis also indicates the possible direction of its further development. The paper is organized in two thematic sections. The first one presents the functions of the financial system in a market economy, giving arguments as to why the financial system in any economy plays such a vital role. The results of some empirical studies relating to the impact of financial development on economic growth are also briefly presented. The second part analyses the indicators of financial system development in a selected group of transition countries.

2 Bank-Based and Market-Based Financial Systems

A financial system may be defined as a group of institutions, markets and regulations enabling the allocation of resources within time and space. The financial system fulfils this fundamental goal through five main functions: savings mobilization, resource allocation, corporate control, risk management and facilitating the exchange of goods and services (Levine, 1997).

An essential reason for the emergence of a financial system, in other words financial institutions and a market, is an asymmetry in the distribution of information and the costs of information gathering and transaction handling. Various combinations of information and transaction costs result in various characteristics and organization structures of financial institutions and markets. Traditionally the link between a financial system and economic activity was explained by differences in the manner by which the bank-based systems (dominated by banks) and market-based systems (dominated by the capital market) fulfil the above specified functions.[1]

[1] *Supporters of a bank-based system usually argue that the market can hardly reduce informational asymmetry and corporate control in a quality manner. They consider that market domination favors the emergence of free riders, because information disseminates quickly, so that those who have not invested in its gathering can also profit thereof. As a result, not enough is invested at the economy level in information gathering thus increasing informational asymmetry and resulting in an inefficient savings allocation. On the other hand, privacy and exclusivity of banking information reduces the possibility of a free rider problem, and long-term links between banks and clients lower the costs of information gathering and improve their quality. At the same time a developed market encourages dispersion of ownership, such that owners are not motivated to monitor and control managers actively. It is believed that liquid markets may facilitate takeovers, and reduce incentives of shareholders, i.e.*

The views regarding the link between financial systems and growth through the dichotomy between bank-based and market-based systems arises from studies which attempted to explain the differences in economic achievements of the USA and the UK on the one hand and Germany and Japan on the other precisely by differences in the organization of their respective financial systems. Listing the advantages and disadvantages of bank-based and market-based systems implicitly suggests that there is a kind of trade-off between these two ways of financial system organization. However, lately some views have been advanced suggesting that contrasting bank-based and market-based systems is not of any use in clarifying the association between economic growth and financial system. Hence Levine (1997) suggests a functional approach to financial development. The functional approach assumes that banks and the market perform different but complementary services that positively affect growth. Therefore what matters is the overall development and availability of financial services and not the manner of financial system organization. Levine (2000) notes that it is possible that both banks and markets are capable of providing financial services at a certain stage of economic development, and that is why it is important to create the conditions for a better and more efficient functioning of both banks and markets.

Such views of financial systems are also supported by some theoreticians of corporate finance, who argue that different characteristics of financial system are required for the emergence of small and new companies, other than the characteristics of the financial system appropriate for existent companies. Stulz (2000) argues that the market is important because it constraints the power of banks and enables emergence of financial intermediaries (such as venture capitalists), who invest in the equity enabling small enterprises access, though indirectly, to the capital market. The market also allows entrepreneurs, the so-called exit option, namely the ability to sell their equity share fully or in part, when necessary. On the other hand banks are important as they ensure stage-by-stage financing to small emerging companies, where the possibility for new

owners, to undertake careful corporate governance of their companies' quality. The result of this, according to supporters of bank-based system, is distorted resource allocation, inefficient investments and lower economic growth (Gorton, 2001; Levine, 1997).

The arguments of those advocating the market-based system reflect in fact critiques directed at market-based systems. Supporters of a market-based system argue that the primary aim of banks is a safe return, thus they encourage investors to invest in more conservative projects while new and high-risk projects with higher expected returns frequently lack investors. On the other hand, developed liquid capital markets enable ownership transformation during the project's life encouraging investors to invest in long-term projects and a higher return. It is also considered that banks form long-run relationships with firms and have a huge influence over firms, which may sometimes be abused so that bank management may become de facto owner. Finally, supporters of market-based systems point out that the market creates a richer and more flexible set of financial instruments enabling higher quality and more efficient risk management (Gorton, 2001; Levine, 1997).

financing depends on the performance of the previous stage whereby the problem of collateral, as a characteristic of new companies, is in part eliminated.

Finally, La Porta et al. (1998) believe that bank- versus market-centeredness is not an analytically useful way to distinguish financial systems and suggest a fourth approach to financial development, the so-called legal-based approach. La Porta et al. (1998) argue that finances are nothing but a set of agreements, the efficacy of which depends on the efficacy of the overall legal system. An effective legal system ensures a high rate of investor protection (of both creditors and shareholders), thus increasing their readiness to finance investment projects. La Porta et al. (2000) also conclude that the legal origin of national legislation explains the differences in financial system organization.[2]

3 Empirical Research on the Relationship Between Financial Development and Growth

Most of the studies completed before the 90s of the 20th century were oriented towards detailed descriptive analyses of individual countries. Empirical research was scarce and covered only a limited number of countries, not taking systematically into consideration all the determinants of economic growth (Levine, 1997). An important impetus to empirical research was given by the Demirgūc-Kunt and Levine database (1996), and by Beck, Demirgūc-Kunt and Levine (2000) which enabled empirical identification of the mechanisms whereby financial development affects growth and testing to what extent different financial system structures (bank-based versus market-based systems) affect growth.

Much of the research relating to the links between the financial system and economic growth suggest that financial structure per se, in other words the comparison between bank-based and market-based systems, is not particularly useful for differentiating between financial systems. Indeed, studies have proved that an overall financial

[2] *They find that the countries the legal systems of which protect better the rights of shareholders, creditors and in general external investors have better developed capital markets and, in general, market-based financial systems. On the other hand, the countries having a lower rate of protection develop bank-based financial systems. All legal systems arise from four sources: English Common Law, French Law, German Law and Scandinavian Law. The research shows that the countries practicing Common Law system protect the rights of external investors in the best possible manner while such protection is the poorest in the countries practicing French Law, German and Scandinavian Law are between these two extremes, though the creditor protection is slightly better pronounced.*

development, as measured by using bank activities involving the private sector and market capital liquidity, is a key determinant of long-run growth. King and Levine (1993) were among the first to include financial development measures when studying economic growth and to establish their role in influencing growth. Levine and Zervos (1998) were the first to assert that banks and the market may act as interacting components of the financial system. Indeed, Levine (2000) has demonstrated that countries with unbalanced financial systems are countries characterized by a huge difference between bank and market development. However, according to Levine the differences in economic activities of these countries are not the result of the observed structural imbalance, but are related to differences in overall financial development, which has once again proved to be a crucial factor. The view stressing the importance of overall financial development is also supported by the results obtained from studies carried out for some transition countries (Šonje, 1999; Dalić, 2002). By using a panel analysis on a sample of 12 transition countries Dalić (2002) has also found evidence that banks and capital market have complementary functions.

Beck, Levine and Loayza (2000) and Levine (2000) have studied the mechanisms by which financial development affects long-run growth. Both studies strongly support the thesis that the effects of financial development on growth act through productivity growth, whereas the effects of financial development on capital accumulation and the savings rate are not significant. These authors also argue that the legal system is the primary determinant of the dynamics of financial intermediary development and consequently of the provision of financial services.

Firm-level and industry-level studies also show the importance of overall financial development for the economic growth. By using a time-series dataset at the industry-level, Rajan and Zingales (1998) show that industries relying heavily on external financing grow at a higher rate in the countries with developed financial systems. They argue that the effects of financial development are evident primarily through the increase in the number of companies in the economy, and less through the average size of existing companies. Such results are in conformity with the results obtained by Beck et al. (2000), who also show that companies are more likely to grow at rates requiring external financing in economies where the legal system favors development of an active capital market and developed banks. According to evidence at the firm-level Demirgūc-Kunt and Maksimović (2002) assume that the capital market and the banking system affect differently the ability of a company to ensure external

financing. Development of both banks and the market in general improves financing opportunities. Capital market development is closely linked to the long-run financing opportunities, whereas the banking system development is linked to the availability of short-term financing.

A common feature of all the studies available is that they were carried out by using a dataset from the beginning of the 60s or 70s up to 1997. Hence all the data presented refer to the time period when capital flows were relatively limited or, at best, include the beginning of the 90s when international capital flows were substantially intensified. However, globalization and the fast growing integration of the capital market raise the question of relevance of national financial systems relative to economic growth. While this issue will definitely continue to be debated in the literature, it is particularly important for transition countries that started an intensive development of their financial systems during the period of advanced globalization and financial system integration. A part of the question regarding relevance of the national financial system development has been offered by Guiso, Sapienza and Zingales (2002). They studied the relevance of the level of local (regional) financial development in Italy. A fundamental assumption of their study is that the integration level achieved by the Italian market (140 years following the foundation of Italian state) is integration limit achievable by the world financial market. Guiso, Sapienza and Zingales (2002) find evidence that the level of local financial development is important even for a completely integrated market. However, local financial system development is relevant only to small and medium-sized enterprises while it is not relevant to large enterprises which have access to the international capital market and international banks.[3]

The specified empirical evidence shows that a bank-based financial structure need not, per se, be an obstacle to economic growth and development. What is important is the availability of financial services. However, it is obvious that an active and liquid capital market (not necessarily large one) is an essential component of the financial system, the importance of which persists even in a perfectly integrated market. The conclusion is that the role of individual parts of the financial system changes depending on the degree of development of individual economies. We consider that for transition countries the empirical evidence on the importance of local capital markets for the

[3] *Results of their studies show that the probability of starting a new company in financially most developed countries is by 33 percent higher than in the least financially developed regions. In financially developed regions the presence of new companies as well as the density of the existing ones per capita is much higher. Finally, GDP per capita grows by 1 percent faster than in financially less developed regions.*

development of small and medium-sized enterprises are particularly instructive - not forgetting the differences relating to the attributed meanings to "small" and "medium-sized" in various economies.

4 Financial Systems in Advanced Transition Countries: Comparative Analysis

The Croatian financial system is compared with the financial systems of advanced transition countries which, for the purposes of this analysis, include Slovenia, the Czech Republic, Hungary, Slovakia and Poland. The objective of the analysis is to compare financial systems according to the size and activity indicators of the overall financial system and to the size and activity indicators of the most important parts of the financial system: banks, non-bank intermediaries and the capital market.

Table 1 presents size indicators of financial system leveled out to the average for the 1998-2001 period. For the comparison, the indicators for some EU member states and for the USA have also been presented. The size of the banking system is measured by the ratio of the total consolidated assets of banking system to GDP. The size of capital market is measured by the ratio of total market capitalization to GDP. Total market capitalization is defined as the sum of the market capitalization of the stocks and the market value of bonds at the end of the year. Non-bank intermediaries include the insurance sector, pension and investment funds and other institutional investors. The size of non-bank intermediaries is measured by the ratio of the assets of the specified non-bank intermediaries to GDP.

Data in Table 1 shows that the financial systems of transition countries are bank dominated. The structural imbalance in favor of banks is not surprising, as all the transition countries entered the transition process without capital markets and with insurance providers as the only part of non-banking sector. In all these countries the transition process includes, in addition to restructuring the banking system in conformity with the needs of market economy, the building up of heretofore missing parts of the financial system - capital markets and some of non-bank intermediaries. The financial systems of all the observed countries and the structural parts thereof (including banks) are still in their developmental stage and adjusting to the needs of the market economy. Hence it is not surprising that the size of the financial sector,

Table 1

SIZE OF THE FINANCIAL SYSTEM

	Banking system assets/GDP, in %, 1998-2001 average	Non-bank intermediaries assets/GDP, in %, 1998-2001 average	Market capitalization/GDP, in %, 1998-2001 average****
Czech Republic	101.9	18.6*	34.9
Croatia	71.9	8.4***	14.0
Hungary	60.2	11.8***	55.5
Poland	52.3	4.3*	27.5
Slovakia	88.5	-	23.6
Slovenia	75.1	17.2***	26.5
The average of the selected transition countries	**75.0**	**12.1**	**30.3**
Italy	105.7*	88.3**	58.2
Greece	110.0*	35.0**	80.3
Austria	187.1*	61.5*	15.6
Germany	178.8*	74.2*	61.6
USA	85.2*	198.0*	155.1

** average 1998–2000; ** average 1998-1999; *** average 1998-2001; **** market capitalization for the transition countries includes stock market capitalization and market value of bonds, while for developed countries it includes only stock market capitalization.*

Sources: International Financial Statistics, World Federation of Stock Exchanges, OECD; national sources and author's calculations.

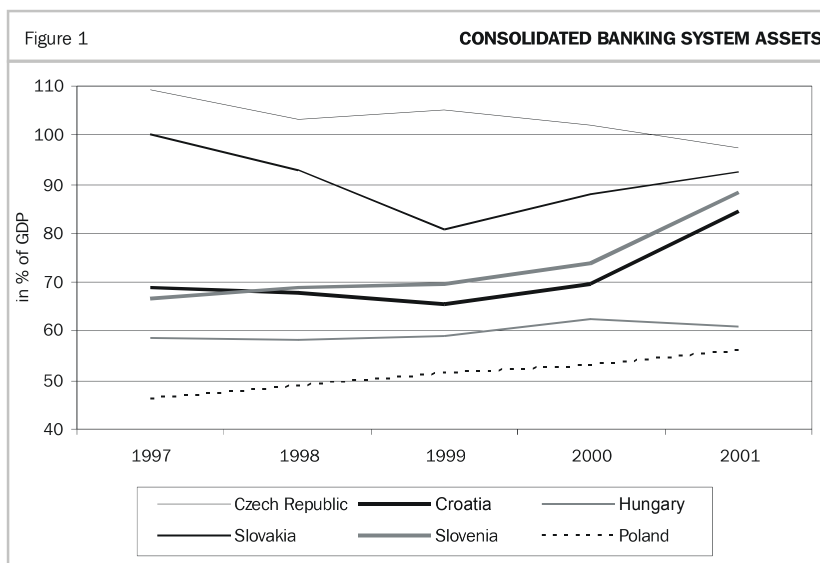
even in advanced transition countries, is still lagging behind the financial systems in developed countries.

The lag is present in all the parts of the financial systems, although the lag in the banking system is smaller. According to the data presented, the Croatian banking system is comparable by size to the banking systems in advanced transition countries. However, the structural imbalance between development of the banks and the non-bank sector and capital markets is much more pronounced in Croatia than in other observed transition countries.

4.1 Banking System Activity

Figure 1 presents variations in size of the observed banking systems by year. The figure shows that an increase of bank assets in 2001 is the main reason that the size of the Croatian banking system today is comparable to that of advanced transition countries.

Figure 1 **CONSOLIDATED BANKING SYSTEM ASSETS**

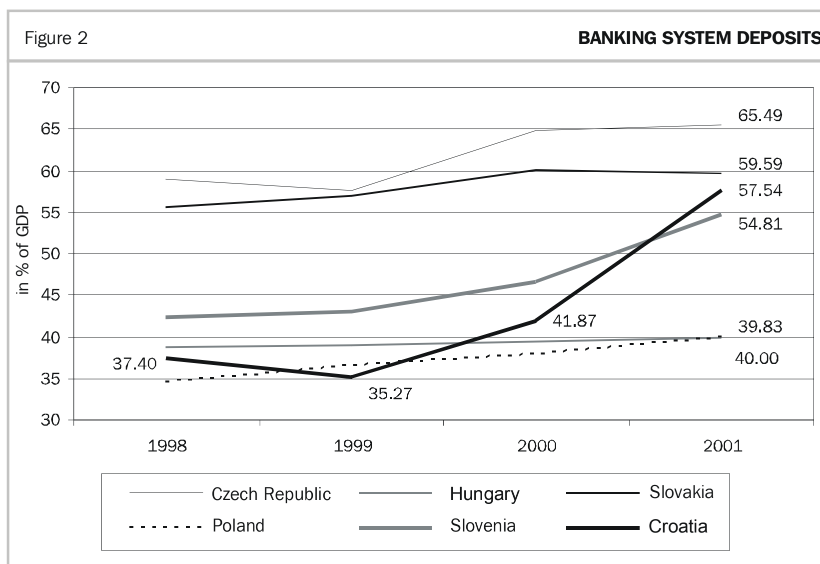


Source: International Financial Statistics.

The consolidated assets of the Croatian banking system increased from 69.8 percent of GDP at the end of 2000 to 84.4 percent of GDP at the end of 2001. Figure 1 shows that by the size of its assets, the Croatian banking system is far ahead of some advanced

transition countries, such as, for example, Hungary and Poland. The rapid growth of the assets of Croatian banks was particularly pronounced in 2001 as a consequence of extremely high inflow of deposits before introduction of the euro. The banking system liquidity measured as a share of total deposits in GDP is presented in Figure 2.

Figure 2 **BANKING SYSTEM DEPOSITS**



Source: International Financial Statistics.

During the years 2000 and 2001, from the country with the relatively lowest deposit value, Croatia advanced to a deposit level comparable to that of advanced transition countries. The deposit growth rate recorded in the Croatian economy in the past two years has not been achieved in any transition economy. Slovenia is the only country that can, to a certain extent, be compared to Croatia. The inflow of foreign currency into the Slovenian banking system before the euro was introduced was quite evident, although the total amount was substantially lower than in Croatia.

However, the size of the banking system or financial system in general is not necessarily a good indicator of its development or of its ability to handle the fundamental functions of financial intermediation in a high-quality manner. If, for example, the largest portion of bank assets is placed with the government sector, there will be none of the improvement of economic efficiency that should come about via functions relating to resource allocation, management control and monitoring, risk

management and the like. Therefore it is believed that the amount of bank claims on the private sector is much better indicator of the quality of bank activity than just a size measure. Taking account of the fact that it is not easy to measure with precision the manifold bank impact on an economy, this indicator is deemed to indicate the contribution of the banking system to improvement of total economy efficiency, if only indirectly.

Table 2 presents the relative size of the most important items in the total assets of the banking systems at the end of 2001, with the amount loaned to the private sector presented in column 4. Table 2 shows that in terms of the relative size of claims on the private sector the Croatian banking system follows closely the one in the Czech Republic and exceeds the average of the observed transition countries. This table also shows why it is sometimes stated that banking systems of advanced transition countries are very close to the ones in less developed EU members. Specifically, the structure of the assets of the Greek banking system shows that the claims of Greek banks on the private sector only slightly exceed 50 percent of GDP - compared to the eurozone average of 107 percent of GDP.

However, in addition to the amount of total claims on the private sector the issue of the structure of such claims, that is the distribution of claims between corporate and retail clients, is equally interesting. The issue is particularly significant in the light of domestic debates on the (in)adequate proportion of funds placed with the corporate sector. Figure 3 presents the relative amount of gross claims of the banking system on the corporate and retail sectors (the corporate and retail sectors are the most significant components of total claims on the private sector).[4]

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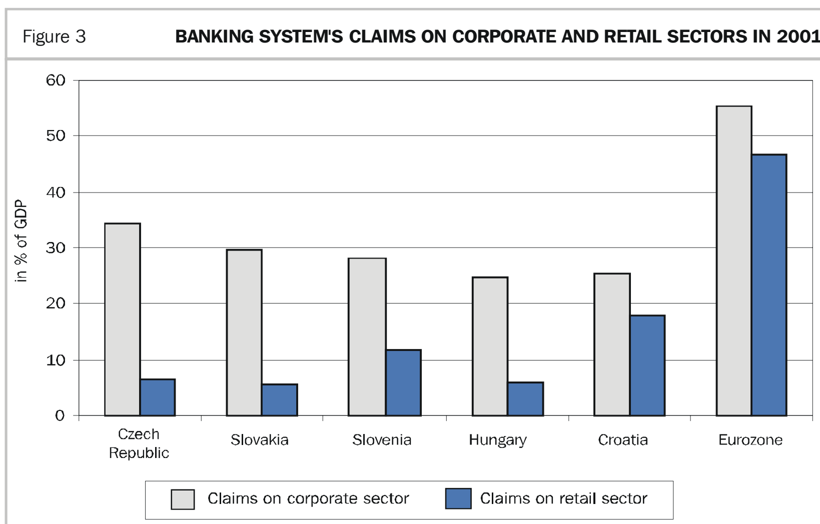
[4] Gross claims means that the value of the presented types of placement is not reduced by loan-loss reserves, as in the banks' balance sheets.

Table 2
BANKING SECTOR 'S ASSETS STRUCTURE IN 2001, IN %

	Total bank's consolidated assets/GDP	Consolidated bank's domestic assets/GDP	Claims on private sector/GDP	Claims on the central bank and the government/GDP	Foreign assets/GDP
1	2= 3+6	3=4+5	4	5	6=2-3
Czech Republic	97.3	72.1	43.1	29.0	25.2
Slovakia	92.4	80.4	38.6	41.8	12.0
Croatia	**84.4**	**65.0**	**44.1**	**20.9**	**19.4**
Slovenia	88.3	70.1	40.6	29.5	18.2
Hungary	61.1	52.6	33.8	18.9	8.5
Poland	56.0	48.0	31.4	16.6	8.0
TRANSITION COUNTRIES AVERAGE	**79.9**	**64.7**	**38.6**	**26.1**	**15.2**
Italy	112.1	97.6	77.5	20.0	14.6
Greece	115.8	104.6	52.7	51.9	11.1
Austria	192.3	128.8	111.4	17.4	63.5
Germany	205.1	153.2	120.3	32.9	51.9
Euro zone	235.8	135.1	107.1	28.0	100.7

Source: International Financial Statistics.

Figure 3 **BANKING SYSTEM'S CLAIMS ON CORPORATE AND RETAIL SECTORS IN 2001**



Sources: National central banks and ECB.

Figure 3 clearly shows why Croatia is so well positioned as regards the amount of claims on the private sector. Croatia has the highest relative rate of gross claims (credits) on retail clients, while the rate regarding claims on the corporate sector is at the rate of Hungary. Yet, it should be remembered that the non-banking sector and capital market is substantially less developed than in Hungary, suggesting that Croatian companies face higher limitations as regards the availability of resources than do Hungarian companies. Claims of Croatian banks on the retail sector at the end 2001 amounted to 17.8 percent of GDP, followed by Slovenia with 11.8 percent, while the average of the three remaining countries is 6 percent of GDP.

However, when assessing the extent of claims on the corporate sector and when relating the extent of claims to the bank contribution to economy-wide efficiency, some facts must be taken into account. In all the observed countries, in the total amount of claims on the corporate sector there is a component that reflects the specific problems of the transition and pre-transition periods. This means that the extent of claims on the corporate sector also includes bad placements; thus total claims on the corporate sector do not reflect with precision what the bank impact on economy-wide efficiency is. In addition, the total amount of claims on the corporate sector also includes claims on public companies. Certainly, in all the observed countries there is still room for a more

substantial contribution to efficiency. This assertion is supported by the relative size of claims on non-financial organizations (corporate sector) and on the retail sector in the eurozone, which in the case of the corporate sector at the end of 2001 amounted to 55 percent of GDP of the eurozone. Therefore the debate as to whether bank claims on the corporate sector are sufficient enough is not very productive since sufficiency is hard to define. The job to be done by banks, from the aspect of overall economy, is to efficiently allocate resources. There is still room for improvement in this respect in all transition countries. Finally, the fact that the claims on the corporate sector in Croatia are at the average of the observed countries should be considered in the light of development of the non-banking sector and capital market. In other observed countries, as will be seen below, capital market and non-banking intermediaries are better developed, enabling companies a more diversified access to resources.

4.2 Non-Banking Financial Intermediaries

Table 3 presents the structure of non-banking intermediaries sector in Slovenia, Croatia and Hungary in 2001. It is worth noting that the presented size of non-banking intermediaries does not include all institutions considered to be non-bank intermediaries, due to the unavailability of data about leasing companies, private equity funds and the like.

Table 3 **SIZE OF NON-BANKING INTERMEDIARIES SECTOR**

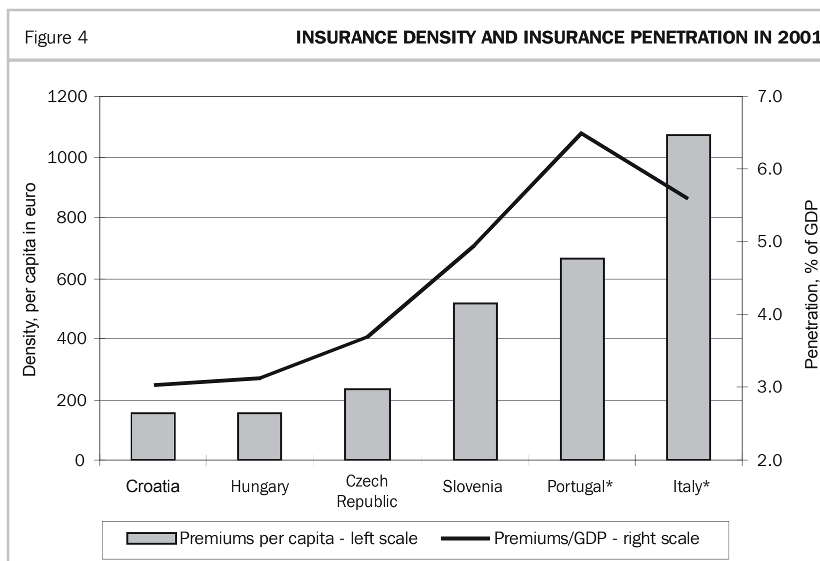
	Assets in 2001, in % of GDP		
	Croatia	**Hungary**	**Slovenia**
Insurance companies	6.1	5.6	8.7
Investment funds	0.8	4.8	0.3
Privatization (closed) funds	2.2	-	12.2*
Brokers	0.3	1.0	0.5
Compulsory pension funds - second pillar	-	1.6	-
Voluntary pension funds	-	1.8	0.1
TOTAL	**9.4**	**14.8**	**21.8**

**Unused privatization certificates excluded.*
Sources: Hungarian Central Bank, Slovenian National Bank, Croatian Securities Commission and Croatian Insurance Office.

In all three countries the insurance industry constitutes the largest segment of non-banking intermediaries. Nonetheless, in spite of differences in the development of

the insurance industry, they are not a crucial determinant in the overall development of the non-banking intermediaries. As an illustration, in 2001 Hungary had the most diversified sector of non-banking intermediaries. This occurred because of the more rapid development of investment funds connected to the more developed capital market and the earlier beginning of pension system reform, which instigated the growth of compulsory and voluntary pension funds. In contrast, in Slovenia the size of non-banking intermediaries is determined by the size of privatization funds, which is closely related to the way in which the privatization process was carried out in Slovenia. The structure of the non-banking intermediaries in these two countries indicates two prime determinants of the development of this sector in transition countries: the relationship with the social insurance system and the manner of privatization. Education and acceptance by the general public, that pensions are not a government problem, but the problem of every individual, enhances the motivation for investment into long-term savings instruments, such as insurance, investment and pension funds.

Figure 4 **INSURANCE DENSITY AND INSURANCE PENETRATION IN 2001**

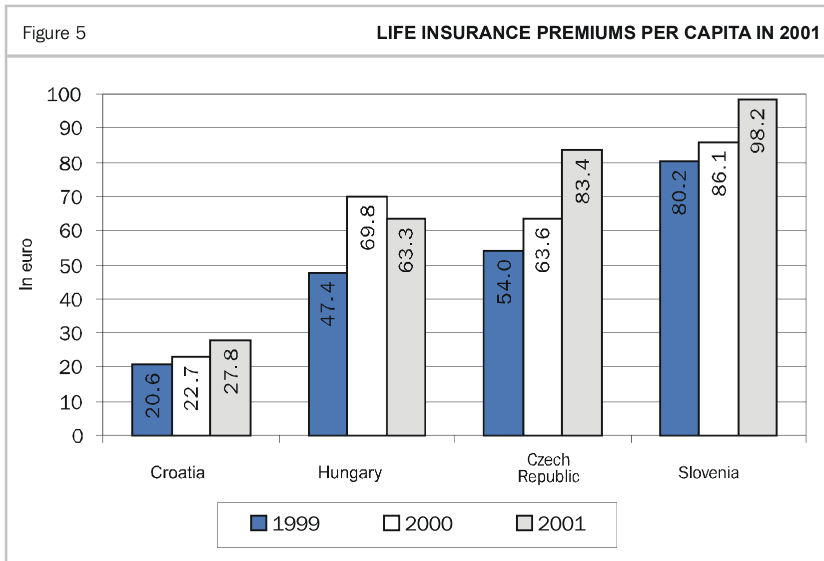


** 2000*
Sources: Croatian Insurance Office, Hungarian National Bank, Czech Insurance Association, Slovenian National Bank and OECD.

The importance for financial sector development of awareness of the inefficiency of pension scheme based on pay-as-you-go pension system is shown by the example of

insurance companies in Slovenia. Among the three observed countries Slovenia has the largest insurance sector and by some of indicators Slovenian insurance companies are close to those of the less developed EU member states. This is illustrated in Figure 4 that presents indicators of insurance density (gross premiums per capita) and insurance penetration (the share of gross premiums in GDP). According to the Slovenian Insurance Association, insurance development was boosted by tax relief as well as by the awareness of citizens that they are the ones to save for their old age. In Slovenia life insurance has obviously been a substitute for undeveloped pension and investment funds.

Figure 5 **LIFE INSURANCE PREMIUMS PER CAPITA IN 2001**



Source: Croatian Insurance Office, Hungarian National Bank, Czech Insurance Association, Slovenian National Bank and OECD.

Figure 5 presents the differences in gross life insurance premiums per capita by countries. Relative to Slovenia and Hungary, the Croatian insurance industry lags to a great extent as regards life insurance density. One needs to remember that life insurance products and pension funds are to a certain extent substitutes. However, the disproportion relationship of life insurance premiums per capita relative to other countries (in particular in Hungary where private pension funds already exist) indicates that there is room in Croatia for further growth of this industry. The expected privatization of the largest state-owned insurance company will contribute to the quality of competition and provide an impetus to further development in insurance

and the overall non-banking sector. Also, intensive development of life insurance should enable further strengthening of institutional investors, particularly those interested in issues with long-term maturity date.

4.3 Capital Market

Table 4 presents the size of capital market in selected countries. Total size of a capital market is measured by the ratio of the total capitalization of stocks and bonds to GDP.[5] This indicator of capital market rests upon the assumption that the size of the market is positively correlated with the market's ability to mobilize capital and diversify risk. According to Table 4 all transition countries have a small capital market in comparison with developed economies, including those which are considered financially less developed (such as Italy or Greece). Also, in most of the countries the bond market is a crucial determinant of their size.

Table 4 **SIZE OF CAPITAL MARKET, 1998-2001 AVERAGE**

	Total market capitalization, in % of GDP	Stock market capitalization, in % of GDP	Bond market capitalization, in % of GDP
Hungary	55.53	27.95	19.43
Czech Republic	34.85	22.39	13.13
Poland	27.52	16.53	11.00
Slovenia	26.47	16.68	6.21
Slovakia	23.57	6.72	18.51
Croatia	14.03	14.03	NA
Italy	110.42	58.20	52.23
Greece	NA	80.23	NA
Austria	73.70	15.61	58.08

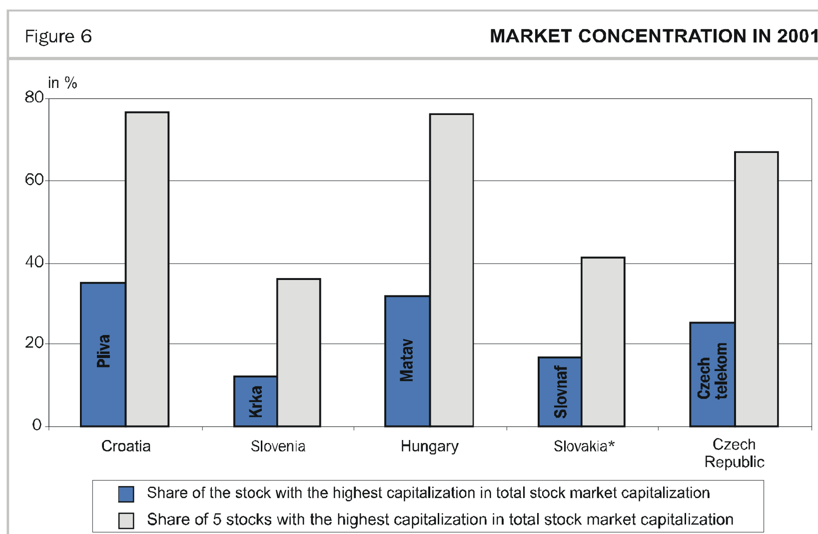
Source: National stock exchanges and World Federation of Stock Exchanges.

Such a structure of market size indicates that even advanced transition markets have a long way to go as they build and develop their capital markets. This is not surprising having in mind the concentration in the capital markets which indicates that all such markets are dominated to a great extent by a small number of stocks.

[5] *Stock market capitalization equals the market value of issued stocks, while bond market capitalization equals market value of bonds at the end of the year.*

The extent of market concentration is presented in Figure 6, which shows what part of total stock market capitalization comes from the stock with the highest capitalization or from the five stocks with the highest capitalization, respectively.

Figure 6 **MARKET CONCENTRATION IN 2001**



** 2000*

Source: National stock exchanges.

Capitalization of Matav shares constitutes 31 percent of total Hungarian capitalization, while a share of Czech Telecom is slightly over 25 percent of the Czech market capitalization. In this context the very concentrated Croatian stock market (35 percent share of Pliva stocks in total capitalization) is not an exception. For the sake of comparison, on Deutsche Bòrse 10 companies, with the highest capitalization, amounted to 42.7 percent of total capitalization in 2001.

A capital market lagging behind those of developed countries and also of advanced transition countries additionally highlights underdevelopment of a Croatian capital market. Table 4 reveals some of the reasons for such a situation. As well as the rather small stock market, the bond market hardly existed during the observed period. However, when pointing to the non-existence of a domestic bond market up to the year 2001 the data displayed in Figure 2 come useful. Only in 2001 did the Croatian banking system reach relatively "normal", for transition countries, deposit and liquidity levels. If we assume that the deposit growth in the Croatian banking system is a sign

of trust by the public in the financial system, it follows that some of the essential prerequisites required for bond market development and capital market in general were only satisfied in the years 2000 and 2001. In view of the liquidity level present in the economy up to 2000, the intensive state activity in the domestic market (since in all transition countries the state is the sole and most important issuer of trading instruments) would substantially deprive the private sector, the access of which to financial resources was already very limited. Such developments in the Croatian financial system are in line with both theoretical and empirical evidence regarding the complementarity of financial services provided by banks and the market. A certain level of economic development must be reached before demand for financial services provided by capital market arise.

Nonetheless, the size of capital market is not considered to be its vital characteristic. Market liquidity, i.e. the possibility to trade and change ownership, is much more important than the size itself from the economic efficiency aspect. For example, one can image a market with a very high capitalization (i.e. size) as a result of its being dominated by a small number of stocks not much traded. However, regardless of its size, the financial services offered to the economy by such a market are obviously very limited. To be a valid indicator of the ease and efficiency of trading, an overall market liquidity measure needs to include all costs relating to trading. As such a measure is difficult to design with precision, two measures are actually used in international comparisons; the ratio of the market turnover and GDP (total value traded as a share of GDP) and the turnover ratio (market turnover as a share of market capitalization). It is assumed that the market turnover in relative terms (value of transactions relative to GDP) positively correlates with the liquidity of overall economy.

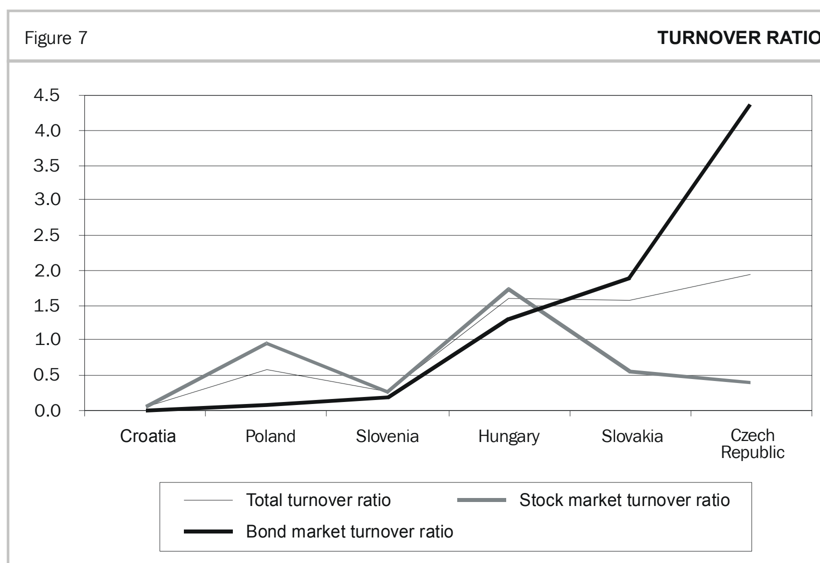
Table 5 **CAPITAL MARKET ACTIVITY, AVERAGE 1998-2001**

	Total value traded, in % of GDP	**Value of stocks traded, in % of GDP**	**Value of bonds traded, in % of GDP**
Hungary	91.43	50.19	29.74
Czech Republic	66.69	9.29	57.28
Slovakia	33.28	3.77	28.80
Poland	16.66	15.91	0.75
Slovenia	6.76	4.40	1.19
Croatia	0.83	0.59	0.24

Source: National stock exchanges and World Federation of Stock Exchanges.

Table 5 presents activity in the observed markets confirming that even when compared to transition countries, the Croatian capital market is not only small but also illiquid.

Figure 7 **TURNOVER RATIO**



Source: National capital markets and World Federation of Stock Exchanges.

Table 5 also confirms that bond market is of vital importance for the capital market activity in large transition economies (Hungary, the Czech Republic). This assumption is also supported by the turnover ratio. A high turnover ratio is commonly used as an indicator of low transaction costs. A small but active capital market will have low capitalization and high turnover, suggesting that there is a relatively efficient access to capital market. Figure 7 shows again that a significant contribution to total liquidity is achieved by bonds.

5 Conclusion

The presented comparative analysis indicates that during the past two years Croatia has decreased its gap in financial system development versus advanced transition countries. Excellent progress has been achieved in the growth of bank size and activity, enabling the Croatian banking system to be comparable on equal terms with banking systems of advanced transition countries. However, comparison with bank activities in

developed countries indicates that in all transition countries there is still much room for strengthening bank activities towards the private sector.

Pension reform and the fast growth of open investment funds will close the gap in Croatian non-banking intermediaries' development, in particular if the announced privatization of the largest state-owned insurance company promotes quality and competitiveness in insurance industry. Therefore the largest lag behind advanced transition countries relates to capital market development. However, today the perspectives relating to capital market development are much different than they were a year or two ago. Development of pension and investment funds created active institutional investors. In other words, a lot of the obstacles blocking capital market development and arising from the absence of quality demand have to a large extent been removed. We believe that a crucial issue relating to furthering capital market development and growth of the activity thereof concerns the provision of quality trading instruments. The emergence of state bonds in the domestic market will contribute to bond market business. However, the issue relating to the absence of quality ownership instruments remains unresolved. The quality of the corporate sector and its ability to adopt the rules of public listing is closely related to the quality and dynamics of the overall transition process through which the Croatian economy is passing. On its own, the financial system affects economic growth; however the system itself is influenced by economic activity. Therefore it has been shown once again that it is essential to continue with the reforms in order to strengthen the corporate sector and to further in a more rapid way financial system development. Two aspects of reforms in this context are particularly important. Firstly, in line with Porta et al. (1998, 2000), a faster reform of the legal system is of paramount importance because it is the institutional framework that determines much of the trust of investors. Secondly, the strategy relating to further privatization is extremely important. In addition to contributing to the efficiency of the overall economy, privatization through initial public offerings (IPOs) seems to be the only way to increase the number of higher-quality stocks in domestic market in the short run.

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