Financial System Development in Poland

2007

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Summary

In 2007, the importance of the financial system in the Polish economy continued to increase. The financial system assets to GDP ratio increased by 7.5 percentage points as compared to 2006 and amounted to 104%. All financial institutions recorded a rise in the value of assets (Table I). As in previous years, banks were the most important institutions in the Polish financial system. However, the share of the banking sector in financial system assets decreased, since the value of assets of non-banking financial institutions continued to increase at a fast pace. Investment funds were the fastest developing financial institutions. The growth rate of their assets, as the assets of open pension funds and insurance companies, was nevertheless lower than a year before, as a result of, *inter alia*, price decreases in the domestic stock and Treasury bond market in the second half of 2007.

Table I. Assets of financial institutions in Poland, 2004–2007

<table>
<thead>
<tr>
<th></th>
<th>Amount (PLN billion)</th>
<th>Growth y/y (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial and cooperative banks</td>
<td>538.5</td>
<td>586.4</td>
</tr>
<tr>
<td>Credit unions</td>
<td>4.2</td>
<td>5.3</td>
</tr>
<tr>
<td>Insurance companies</td>
<td>77.9</td>
<td>89.6</td>
</tr>
<tr>
<td>Investment funds</td>
<td>37.6</td>
<td>61.6</td>
</tr>
<tr>
<td>Open pension funds</td>
<td>62.6</td>
<td>86.1</td>
</tr>
<tr>
<td>Brokerage entities</td>
<td>5.5</td>
<td>6.9</td>
</tr>
<tr>
<td>Total</td>
<td>726.3</td>
<td>835.9</td>
</tr>
</tbody>
</table>

Source: NBP, Polish Financial Supervision Authority (KNF), Analizy Online, National Association of Credit Unions (KSKD).

An analysis of the financial institutions and financial markets of various countries against their economic development shows that the financial system in Poland, including the banking sector, is relatively poorly developed. The changes taking place in our financial system in recent years are not significantly different than the evolution of financial system in other countries (Figure I). Our country was characterised by a relatively low level of the stock market capitalisation and the low value of outstanding non-public sector debt securities. In Poland, as in the countries with a similar level of economic development, stock market capitalisation exceeded the value of banking sector assets. In 2007, the Polish stock market remained the region’s largest market, in terms of both capitalisation and the number of listed companies. In 2007, 81 new companies debuted on the Warsaw Stock Exchange. The capitalisation of domestic companies listed on the WSE increased significantly and as at the end of the year its relation to GDP amounted to more than 43%.

The increasing employment and the growth of wages influenced the improvement of the financial standing of households. This contributed to maintaining a high growth rate of housing loans. In the situation of intensive use of production capacities, enterprises much more frequently turned to external sources of financing, including bank loans. A significant structural change took place in the banking sector, where the value of loans for non-financial sector for the first time exceeded the value of deposits. In view of disturbances in the international financial markets and increased costs of financing in the interbank deposits market and debt securities market, the banks began to acknowledge that the development of their operations will largely be determined by the structure of their liabilities. Some banks changed their business strategies which have previously been targeted at the growth of assets and attached more importance to acquiring a stable deposit base by offering higher interest on deposits and structured certificates of deposit to the customers.
Bank deposits still accounted for the major share of households’ financial assets. Due to the increased interest in market instruments, the share of bank deposits in assets of households declined to the benefit of other forms of saving, i.e. units of investment funds and unit-linked products, structured products in the form of life and endowment insurance and stocks listed on the WSE. Throughout 2007, the inflow of resources to investment funds registered in Poland was the largest since the creation of those institutions. The growth of risk aversion and the decreases in prices on the WSE, recorded since July 2007 and resulting from disturbances in the global financial markets due to the crisis in the American mortgage market, influenced the behaviour of Polish individual investors. The interest of households in units of investment funds and unit-linked products declined markedly in the second half of 2007. This was accompanied by a rise in the interest on bank deposits and intensive promotional actions and advertising carried out by the banks which contributed to the growth of deposits.

In 2007, enterprises obtained over PLN 95 billion from external sources. The value of resources from bank loans, issue of stocks and bonds in the domestic market and the value of leased assets was the highest in the decade. Despite the slump on the Warsaw Stock Exchange in the second half of the year, in the entire 2007 Polish enterprises obtained over PLN 15.0 billion from the stock market. The placement of stock issues was facilitated by a large inflow of resources to investment funds and pension funds. Due to the large value of resources obtained by means of stock and bond issues, the advantage of the bank financing over market financing decreased, as compared to 2006.

The most important developments in the Polish financial system in 2007 and the most significant factors which may have substantial impact on the development of financial institutions and markets in the future are discussed below.
REGULATIONS

Regulations in Poland. In 2007, the provisions of the Capital Requirements Directive with regard to banks were implemented to the Polish law. Amendments of the provisions of the Civil Code supplemented the reform of the economic insurance law carried out in 2003. The so-called flat rate fee was introduced to the Act on health protection benefits financed from public funds. The fee was imposed on insurance companies offering obligatory third party liability insurance for the holders of motor vehicles.

Regulations in the European Union. In 2007, the European Commission focused to a greater extent on the correct transposition of Community acts adopted so far into Member States’ national legislation and the enforcement of their proper application, rather than on new regulations. The adoption of the Directive on payment services in the internal market was of the greatest importance for the integration of the European financial market. The European Commission also issued implementing regulations to the UCITS Directive and to the Directive on transparency and information requirements. In December 2007, the Commission published the White Paper on the Integration of EU Mortgage Credit Markets.

INFRASTRUCTURE

In 2007, the zloty payment systems (SORBNET and ELIXIR) and the euro payment systems (SORBNET-EURO and EuroELIXIR) operated effectively in the Polish market. The increase in the number and value of orders carried out in those systems was recorded. In 2007, the preparations were underway for the NBP and the banking community to join the TARGET2 system on 19 May 2008.

In August 2007, the Warsaw Stock Exchange (WSE) launched an unregulated NewConnect stock market which is an alternative trading system (ATS). The National Depository for Securities (KDPW) began to clear and settle transactions carried out in that market and to manage the guarantee fund securing the clearing of transactions concluded on that market.

The TARGET2 system was launched in the European market in November. Moreover, other projects were implemented which influenced or will influence the Polish financial market infrastructure. They pertained to the payment system (SEPA) and to the securities settlement system (European Code of Conduct for Clearing and Settlement, TARGET2-Securities and CCBM2).

FINANCIAL INSTITUTIONS

Banks. The growth rate of assets of the banking sector in 2007 was again significantly higher than the economic growth rate. The banking sector assets to GDP ratio increased to 68.1%. The growth of loans for households, in particular residential loans, was the major source of the growth of assets. The demand for business borrowing increased as well. The banking sector underwent a major structural change, with the value of loans for the non-financial sector exceeding the value of deposits for the first time.

Due to the disturbances in the international financial markets and increased cost of financing in the interbank deposits market and debt securities market, banks began to perceive that their development would to a great extent depend on the structure of their liabilities. Some banks changed their business strategies which have previously been targeted at the growth of assets and attached more importance to acquiring a stable deposit base by offering higher interest on deposits and structured certificates of deposit to their customers.

The efficiency of the banking sector remained high. The net profit amounted to PLN 12.3 billion. The quality of liabilities improved again. An important development was the division of Bank BPH SA and the inclusion of a part of its assets to Bank Pekao SA. As a result, the level of concentration of the banking sector slightly increased. The reason for further consolidation of cooperative banks was the wish to meet the capital requirements indicated in the accession treaty.
Banks continued their preparations to meet the obligations stemming from the Capital Requirements Directive and the resolution of the Committee for Banking Supervision on liquidity norms, and also adjusted procedures pertaining to the sale of financial instruments to the requirements of the MiFID Directive. In addition, banks continued works on implementation of new reporting packages (FINREP and COREP).

**Credit Unions.** In 2007, the assets of credit unions continued to grow further and their growth rate was higher than in cooperative banks. The number of credit union branches and their customers increased, while the efficiency indicators slightly deteriorated.

**Non-banking institutions providing financial services.** The leasing industry remained one of the fastest-developing segments of the financial market. In 2007, the value of leased assets increased significantly. The leasing of means of transport continued to dominate the composition of leased assets. Despite a fast development of factoring in recent years, the relation of invoices purchased to GDP was still insignificant (2.6%). Enterprises mostly used domestic recourse factoring.

The sale of loans granted by banks was the main area of activity of financial intermediaries. Intermediaries, which increasingly often cooperated with several financial institutions, also provided advisory services in the case of sale of insurance policies and units of investment funds. A factor conducive to the development of the financial intermediation market in 2007 was the high demand for residential loans.

**Private equity/venture capital sector (PE/VC).** In 2007, the value of investments initiated by private equity funds with their registered office in Poland grew markedly. Domestic investments dominated, but the value of accumulated resources and finished projects decreased.

**Investment funds.** In 2007, a significant increase in the households’ interest in investments in units of Polish investment funds was demonstrated by the highest balance of payments and redemptions since the beginning of the investment funds’ existence. The number of entities operating in the investment fund sector increased, as did the diversity of the products offered. Closed-end funds issuing non-public certificates dominated among the newly created entities. The unit purchasers preferred the funds investing in the stock market, both domestic and foreign.

**Open pension funds.** Open pension funds recorded a decline in the growth rate of assets, mainly as a result of a decrease in the prices of stocks and bonds in the domestic financial market in the second half of 2007. The value of assets managed by pension companies amounted to PLN 140 billion at the end of 2007, while the financial result of open pension funds dropped by over a half and amounted to PLN 7 billion.

**Insurance companies.** In 2007, the gross written premium continued to increase. For the second consecutive year, the life insurance gross written premium was higher than in the segment of non-life insurance, which was mainly due to the high interest in life insurance savings products. Assets of the insurance sector increased to PLN 126.9 billion.

**Brokerage entities.** The brokerage entities sector continued to develop, as a result of a favourable situation on the WSE in the previous years and in the first half of 2007. The number of domestic brokerage entities increased to 53. Another 3 foreign entities commenced operational activity on the WSE. As a result of the increase in turnover in the secondary stock market and a large number of primary offerings, the very good financial standing of brokerage offices and houses continued.

**FINANCIAL MARKETS**

**Money market**

**Short-term debt securities market.** At the end of 2007 the largest segment of the short-term debt securities market was the Treasury bills market (Table II). Due to a further decrease in the value of outstanding Treasury bills, liquidity of the secondary market of these instruments decreased
considerably. As in previous years, the majority of transactions on the secondary market of Treasury bills were conditional transactions. Compared to the end of 2006, the value of NBP bills decreased. The secondary market in NBP bills was characterised by low liquidity.

In 2007, the outstanding value of short-term corporate bonds increased significantly, which resulted, *inter alia*, from numerous new emission programmes being launched. Non-financial corporations and banks were the most significant investors in the short-term corporate bond market. The decrease in the value of bank debt securities was largely influenced by the redemption of the issue of short-term BGK bonds, which occurred at the end of 2006. Banks operating in Poland still used this form of financing relatively rarely.

Table II. Outstanding value of individual money market instruments, 2004–2007 (PLN billion)

<table>
<thead>
<tr>
<th>Instrument</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treasury bills</td>
<td>46.9</td>
<td>24.4</td>
<td>25.8</td>
<td>22.6</td>
</tr>
<tr>
<td>NBP bills</td>
<td>5.7</td>
<td>23.0</td>
<td>18.4</td>
<td>7.8</td>
</tr>
<tr>
<td>Short-term commercial bank debt securities</td>
<td>2.9</td>
<td>2.8</td>
<td>4.5</td>
<td>2.9</td>
</tr>
<tr>
<td>Short-term corporate bonds</td>
<td>6.6</td>
<td>5.6</td>
<td>6.3</td>
<td>10.6</td>
</tr>
<tr>
<td>Unsecured deposits (interbank deposits)</td>
<td>23.6</td>
<td>30.3</td>
<td>34.9</td>
<td>36.6</td>
</tr>
<tr>
<td>Secured deposits (FX swaps and conditional transactions)</td>
<td>n/d</td>
<td>n/d</td>
<td>n/d</td>
<td>n/d</td>
</tr>
</tbody>
</table>

1 It is not possible to determine the values of banks’ positions in respect of FX swaps and conditional transactions on the basis of data from the bank reporting system.
Source: NBP.

Deposit transaction market. FX swaps remained the most liquid domestic money market instrument. The turnover in the FX swap market was dominated by short-term transactions with foreign banks (almost a 90% share in turnover), which used the instruments most commonly to finance investments in Treasury bonds and speculate on the zloty exchange rate. The activity on the offshore market of zloty FX swap transactions was considerably higher.

Domestic banks managed their current liquidity mainly with the use of unsecured deposits. The upward trend in the average daily turnover in the unsecured interbank deposits market was continued. A significant increase was recorded in the O/N deposits segment, which dominated that market.

In 2007, there was a further increase in turnover in the domestic market of conditional transactions, which was mainly due to the increase in the value of secured deposits of non-banking financial institutions placed in banks in the form of BSB and, to a lesser extent, repo transactions. The market was dominated by buy-sell-back transactions, collateralised by Treasury bonds. The liquidity of the interbank repo market remained low.

Capital market

Long-term debt securities market. The Treasury bond market remained the largest and the most liquid segment of the debt securities market in Poland. Fixed-rate bonds remained the main debt instrument issued by the Treasury. The upward trend in the secondary market turnover was continued. Pension funds became the most important group of investors in the domestic Treasury bonds market for the first time.

The non-Treasury debt securities market was still underdeveloped (Table III). The value of municipal bonds did not change significantly. Low-value issues dominated. They were carried out as non-public offerings. Banks were the main group of purchasers of municipal bonds.

The outstanding value of long-term corporate bonds increased considerably, however their share in the financing of gross fixed capital formation remained relatively low (approximately 3.1%). The corporate bond market was dominated by issues carried out as non-public offerings, targeted at the non-regulated market.
In 2007, there was also a significant increase in the outstanding value of long-term debt securities issued by commercial banks. It mainly resulted from large issues of bank bonds carried out by two entities. Given the low interest rates, some banks, competing with investment funds for the savings of households, offered bank securities with embedded derivatives. The outstanding value of mortgage bonds issued by banks increased by over 40%. In 2007, the public mortgage bonds were issued for the first time in the domestic market. There were still NBP bonds to the value of PLN 7.8 billion on the market.

### Table III. Size of individual capital market segments, 2004–2007 (PLN billion)

<table>
<thead>
<tr>
<th>Segment</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Debt securities</td>
<td>248.5</td>
<td>302.9</td>
<td>345.4</td>
<td>388.6</td>
</tr>
<tr>
<td>Marketable Treasury bonds</td>
<td>226.6</td>
<td>278.4</td>
<td>317.0</td>
<td>350.9</td>
</tr>
<tr>
<td>Long-term corporate bonds</td>
<td>7.3</td>
<td>8.9</td>
<td>9.8</td>
<td>15.8</td>
</tr>
<tr>
<td>Municipal bonds</td>
<td>3.1</td>
<td>3.3</td>
<td>3.8</td>
<td>4.1</td>
</tr>
<tr>
<td>Long-term commercial bank debt securities</td>
<td>2.7</td>
<td>2.7</td>
<td>5.3</td>
<td>8.3</td>
</tr>
<tr>
<td>Mortgage bonds</td>
<td>1.0</td>
<td>1.8</td>
<td>1.7</td>
<td>2.4</td>
</tr>
<tr>
<td>NBP bonds</td>
<td>7.8</td>
<td>7.8</td>
<td>7.8</td>
<td>7.8</td>
</tr>
<tr>
<td>Equities – stocks</td>
<td>291.7</td>
<td>424.9</td>
<td>635.9</td>
<td>1 080.3</td>
</tr>
</tbody>
</table>

Note: Size of individual capital market segments for debt securities was measured by the outstanding value of these instruments and for equities – by capitalisation of domestic and foreign companies listed on the WSE.

1 The data for 2004–2005 cover the liabilities of Polish commercial banks resulting from the issue of own securities denominated in zlotys. The data for 2006 and 2007 also cover the bonds denominated in foreign currencies issued by mortgage banks and the bonds of the European Investment Bank.

Source: NBP own study on the basis of MF; NBP, WSE and Fitch Polska data.

**Equities market.** WSE capitalisation increased by over PLN 440 billion in 2007. It was mainly due to the large market value of foreign companies which listed their stock on the WSE. The capitalisation of domestic companies listed on the WSE also increased and as at the end of the year the capitalisation/GDP ratio exceeded 43%. In 2007, domestic companies carried out 81 Initial Public Offerings totalling PLN 8.0 billion. In the middle of the year the WIG index reached the highest value ever. The good economic situation in the first half of the year facilitated an increase in turnover in stocks. As at the end of the year, the securities (stocks and rights to shares) of 24 companies were listed on the New Connect market, launched in 2007. The RPW CeTO stock market remained underdeveloped and its importance for the Polish financial system decreased.

**Spot FX market**

The average daily net turnover in the domestic zloty market fell to PLN 3.7 billion. However, the offshore market still recorded a rapid increase in the value of zloty exchange transactions. The average daily turnover in this market exceeded PLN 10 billion. Increased turnover in the London market was due to the high hedge fund activity and increasing popularity of the carry trade and algorithmic trading strategies. The dominant currency pair in the domestic zloty market was EUR/PLN. In 2007, the share of EUR/PLN transactions in the currency composition of turnover in the domestic interbank market oscillated around 90%.

**Derivatives market**

The Polish market of OTC derivatives remained much better developed than the exchange market. The dominance of the OTC market is a result of the Polish bank-oriented financial system and the large activity of foreign banks.

**OTC derivatives.** In 2007, the FRA market remained the most liquid segment in the OTC derivatives market. There was a significant increase in liquidity of the OIS (Overnight Index Swap) transactions. Turnover in this market was higher than in the IRS market. In the OTC FX derivatives market, the forward transactions market, dominated by transactions with non-banking entities, was the most developed one. Turnover in the domestic FX options market increased considerably, which
resulted from a larger scale of transactions concluded by enterprises in order to hedge against changes in exchange rates. The CIRS market was dominated by interbank transactions. The larger activity of domestic banks in this market resulted mainly from the need to reduce the mismatch in the balance sheet structure caused by a rapid growth in the value of mortgage loans indexed to foreign currencies.

**Exchange-traded derivatives.** The value of turnover in the futures market organised by the WSE increased by nearly 80%. WIG20 futures contracts remained the most liquid instrument. Their share in turnover in the futures market amounted to around 95%. Individual investors were the most active group of market participants, although their share in the number of futures contracts concluded decreased significantly in comparison with 2006 and was the lowest ever. Only FX instruments were traded on the WCE, yet this market was still underdeveloped.
Introduction

The Financial System development in Poland 2007 is a new edition of the annual report which describes changes that occurred in the financial system in a given year. The publication presents trends and barriers for the development of all financial institutions and financial markets operating in Poland. Also analysed are changes in the infrastructure and regulations relating to the financial system, as well as initiatives aimed at the integration of the European financial market. According to the assumed methodology, developments which occurred in the financial system in 2008 have not been included in this report, even if they were known to the authors at the moment of writing.

Chapter 1 presents the evolution of the size and structure of the Polish financial system, indicating a significant, persistent dominance of banks’ assets over other financial institutions’ assets. In addition, it analyses the relations between the changes in the domestic financial system and the structure of the financial assets of households and the external sources of financing for enterprises. Chapter 2 describes amendments to legal regulations relating to the financial system, both at the national and at the European Union level. It also presents the state of work of EU authorities on the selected legal acts, as well as the extent of their implementation by individual Member States. Chapter 3 describes the most important changes in the financial system infrastructure, including the participation of Polish payment systems in the European system.

Chapter 4 presents a comprehensive analysis of the changes that occurred with regard to the individual financial institution groups in 2007. To the extent possible, the changes have been presented against the trends observed in other countries of the region and in the selected European Union Member States. Banks continue to dominate in the Polish financial system and, therefore, the banking sector is analysed first. Changes in commercial bank claims and liabilities as well as concentration and competition indicators for this sector have been analysed in detail. Subsequent sections analyse quasi-bank institutions and those which serve as intermediaries in the distribution of the financial products. The next group of financial institutions analysed are investment and pension funds. That chapter also presents the changes that occurred in the insurance sector as well as in the brokerage entities sector.

Chapter 5 analyses financial market developments. First, the evolution of the money market and its individual segments (Treasury bill, NBP bill, short-term corporate and bank debt securities as well as deposit transaction markets) has been presented. In the subsequent part of the chapter, the changes which occurred on the Polish capital market have been described. The development of the Treasury bond, municipal bond, NBP bond as well as long-term commercial bank debt securities and corporate bond markets have been analysed. A separate section has been dedicated to the stock market and the market of other equities. Chapter 5 also describes changes occurring on the FX market and describes the evolution of the derivatives market in Poland, which has been divided into the stock exchange and OTC segments.
1.1. Evolution of the size and structure of the financial system in Poland

The macroeconomic situation in Poland in 2007 created favourable conditions for the development of the financial system. GDP growth in that period amounted to 6.6% (as compared to 6.2% in the previous year). An increase in employment and salaries had an impact on the improvement of the financial standing of households. This contributed to a high growth rate of mortgage loans and growing demand of households for services provided by non-banking financial institutions. The situation of enterprises in 2007 was also very good. Due to a high capacity utilisation, enterprises used external financing sources much more often.

In 2007, there was an upward tendency in the importance of the Polish financial system for the economy. As at the end of 2007, assets of domestic financial institutions amounted to PLN 1.215 billion. The financial system assets to GDP ratio increased by 7.5 p.p. as compared to 2006 and amounted to 104%. Despite that, the Polish economy – similar to the economies of other Central and Eastern European countries – was characterised in 2007 by a relatively low level of financial intermediation1 (Table 1.1).

In the analysed period, the number of commercial banks operating in Poland increased by one entity. As at the end of 2007, there were 49 banks incorporated as public limited companies, one state-owned bank and 14 branches of credit institutions (there are two new branches of credit institutions as compared to 2006). Both the number of cooperative banks and credit unions (Spółdzielcze Kasy Oszczędnościowo-Kredytowe – SKOK) decreased by 3 entities, whereas the number of insurance companies, investment funds and brokerage entities increased (Table 1.2). In addition, in 2007 Polish financial supervision authorities received further notifications about the intention of foreign entities to conduct business activities in the territory of Poland.

In the analysed period, the value of assets of all financial institutions increased (by 18.8% as compared to 22.4% in the previous year). The increase in assets of the banking sector, which still plays a major role in the Polish financial system, accounted for 59% of the increase in assets of financial institutions. Assets of the banking sector and credit unions grew faster than in 2006. The most rapidly developing financial institutions were investment funds. The growth rate of their assets, as in the case of assets of open pension funds and credit unions was, however, lower than in the

Table 1.1. Assets of the financial system as percentage of GDP in selected Central and Eastern European countries and the euro area, 2004–2007 (%)

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poland</td>
<td>78.6</td>
<td>85.0</td>
<td>96.5</td>
<td>104.0</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>119.3</td>
<td>126.7</td>
<td>125.6</td>
<td>134.2</td>
</tr>
<tr>
<td>Hungary</td>
<td>100.0</td>
<td>114.6</td>
<td>128.4</td>
<td>140.6</td>
</tr>
<tr>
<td>Slovakia</td>
<td>100.5</td>
<td>110.9</td>
<td>101.5</td>
<td>113.5</td>
</tr>
<tr>
<td>Euro area</td>
<td>365.7</td>
<td>398.4</td>
<td>416.4</td>
<td>435.8</td>
</tr>
</tbody>
</table>

Source: For the euro area: EU Banking Structures. Frankfurt, October 2008, European Central Bank (ECB); for other countries: data provided by national central banks and Central Statistical Office (GUS).

1 The level of financial intermediation is measured as a ratio of the financial system assets to GDP.
Table 1.2. Number of financial institutions in Poland, 2000–2007

<table>
<thead>
<tr>
<th>Year</th>
<th>Commercial banks</th>
<th>Cooperative banks</th>
<th>Credit unions</th>
<th>Insurance companies</th>
<th>Investment funds</th>
<th>Pension companies</th>
<th>Brokerage entities</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>73</td>
<td>680</td>
<td>146</td>
<td>67</td>
<td>85</td>
<td>21</td>
<td>49</td>
</tr>
<tr>
<td>2001</td>
<td>69</td>
<td>642</td>
<td>144</td>
<td>71</td>
<td>108</td>
<td>17</td>
<td>42</td>
</tr>
<tr>
<td>2002</td>
<td>59</td>
<td>605</td>
<td>120</td>
<td>72</td>
<td>124</td>
<td>17</td>
<td>38</td>
</tr>
<tr>
<td>2003</td>
<td>58</td>
<td>600</td>
<td>109</td>
<td>76</td>
<td>137</td>
<td>16</td>
<td>36</td>
</tr>
<tr>
<td>2004</td>
<td>57</td>
<td>596</td>
<td>83</td>
<td>69</td>
<td>154</td>
<td>15</td>
<td>40</td>
</tr>
<tr>
<td>2005</td>
<td>61</td>
<td>588</td>
<td>75</td>
<td>68</td>
<td>190</td>
<td>15</td>
<td>42</td>
</tr>
<tr>
<td>2006</td>
<td>63</td>
<td>584</td>
<td>70</td>
<td>65</td>
<td>241</td>
<td>15</td>
<td>47</td>
</tr>
<tr>
<td>2007</td>
<td>64</td>
<td>581</td>
<td>67</td>
<td>67</td>
<td>277</td>
<td>15</td>
<td>53</td>
</tr>
</tbody>
</table>

Table 1.3. Assets of financial institutions in Poland, 2000–2007 (PLN billion)

<table>
<thead>
<tr>
<th>Year</th>
<th>Commercial and cooperative banks</th>
<th>Credit unions</th>
<th>Insurance companies</th>
<th>Investment funds</th>
<th>Open pension funds</th>
<th>Brokerage entities</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>428.5</td>
<td>1.7</td>
<td>37.9</td>
<td>7.0</td>
<td>9.9</td>
<td>3.9</td>
<td>488.4</td>
</tr>
<tr>
<td>2001</td>
<td>469.7</td>
<td>1.8</td>
<td>47.1</td>
<td>12.1</td>
<td>19.4</td>
<td>2.9</td>
<td>553.0</td>
</tr>
<tr>
<td>2002</td>
<td>466.5</td>
<td>2.5</td>
<td>57.6</td>
<td>23.0</td>
<td>31.6</td>
<td>2.8</td>
<td>584.0</td>
</tr>
<tr>
<td>2003</td>
<td>489.0</td>
<td>3.3</td>
<td>65.7</td>
<td>33.8</td>
<td>44.8</td>
<td>3.7</td>
<td>640.3</td>
</tr>
<tr>
<td>2004</td>
<td>538.5</td>
<td>4.2</td>
<td>77.9</td>
<td>37.6</td>
<td>62.6</td>
<td>5.5</td>
<td>726.3</td>
</tr>
<tr>
<td>2005</td>
<td>586.4</td>
<td>5.3</td>
<td>89.6</td>
<td>61.6</td>
<td>86.1</td>
<td>6.9</td>
<td>835.9</td>
</tr>
<tr>
<td>2006</td>
<td>681.8</td>
<td>6.0</td>
<td>108.6</td>
<td>99.2</td>
<td>116.6</td>
<td>10.8</td>
<td>1 023.0</td>
</tr>
<tr>
<td>2007</td>
<td>795.0</td>
<td>7.3</td>
<td>126.9</td>
<td>133.8</td>
<td>140.0</td>
<td>11.8</td>
<td>1 214.8</td>
</tr>
</tbody>
</table>

Table 1.4. Growth in assets of financial institutions, 2004–2007 (y/y, %)

<table>
<thead>
<tr>
<th>Year</th>
<th>Commercial and cooperative banks</th>
<th>Credit unions</th>
<th>Insurance companies</th>
<th>Investment funds</th>
<th>Open pension funds</th>
<th>Brokerage entities</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>10.1</td>
<td>27.3</td>
<td>18.6</td>
<td>11.2</td>
<td>39.7</td>
<td>48.6</td>
<td>13.4</td>
</tr>
<tr>
<td>2005</td>
<td>8.9</td>
<td>26.4</td>
<td>15.0</td>
<td>37.5</td>
<td>37.5</td>
<td>25.5</td>
<td>15.1</td>
</tr>
<tr>
<td>2006</td>
<td>16.3</td>
<td>13.0</td>
<td>21.2</td>
<td>61.0</td>
<td>35.4</td>
<td>56.5</td>
<td>22.4</td>
</tr>
<tr>
<td>2007</td>
<td>16.6</td>
<td>22.0</td>
<td>16.9</td>
<td>34.9</td>
<td>20.1</td>
<td>9.3</td>
<td>18.8</td>
</tr>
</tbody>
</table>

previous year, which was influenced, inter alia, by decreasing prices on the domestic stock and Treasury bond market in the second half of 2007. A lower growth rate of assets was also observed in brokerage entities sector (Table 1.3 and 1.4).

The ratio of banking sector assets to total financial sector assets has been decreasing steadily in the recent years. As at the end of 2007, this ratio amounted to 65.4% (decrease by 1.2 p.p. as compared to the previous year). At the same time, the ratio of non-banking financial institutions assets to total financial sector assets went up to 34.6% (for comparison – in 2000, it amounted to 12.3% – Figure 1.1 and Figure 1.2).
Figure 1.1. Asset structure of the Polish financial system, 2000–2007

Source: NBP, Polish Financial Supervision Authority, Analizy Online, National Association of Credit Unions (KSKDK).

Figure 1.2. Share of individual financial institutions in the asset structure of the Polish financial system in 2006 and 2007

Source: NBP, Polish Financial Supervision Authority, Analizy Online, National Association of Credit Unions (KSKDK).

Figure 1.3. Assets of investment funds as percentage of bank deposits from the non-financial sector, 2000–2007

Source: NBP, Analizy Online.
In 2007, clients were increasingly interested in products offered by non-banking financial institutions. As a result, the interest in typical banking products gradually decreased and investment instruments, in particular those offered by investment funds, became more popular (Figure 1.3).

Poland is one of the EU countries, in which the share of assets of the credit institution sector in assets of the financial sector declined significantly in the recent years (Figure 1.4). This results mainly from the above mentioned large interest in products offered by investment funds as well as from the operation of the reformed pension system and a related constant inflow of money to open pension funds. A decline in the share of assets of the credit institution sector in assets of the financial sector is also observed in other countries in our region (Slovakia, Slovenia, Hungary). In other analysed countries, the share of assets of the credit institution sector in assets of the financial sector increased or remained generally unchanged. At the same time, Poland is a country, in which the indicator measuring the share of assets of the credit institution sector in assets of the financial sector is one of the lowest ones in the EU. A lower level of this ratio is observed, inter alia, in countries such as Netherlands, Sweden and Great Britain.

Despite the growing importance of non-banking financial institutions both in Poland and in the majority of other countries in the region, the banking sector still plays a major role in the finan-

Table 1.5. Banking sector (commercial and cooperative banks) development levels in selected Central and Eastern European countries and in the euro area, 2005–2007 (%)  

<table>
<thead>
<tr>
<th>Country</th>
<th>Assets/GDP</th>
<th>Loans¹/GDP</th>
<th>Deposits²/GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poland</td>
<td>59.6</td>
<td>64.3</td>
<td>68.1</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>98.9</td>
<td>97.5</td>
<td>105.4</td>
</tr>
<tr>
<td>Hungary</td>
<td>79.7</td>
<td>87.4</td>
<td>96.0</td>
</tr>
<tr>
<td>Slovakia</td>
<td>95.4</td>
<td>86.1</td>
<td>89.7</td>
</tr>
<tr>
<td>Euro area⁴</td>
<td>280.4</td>
<td>294.6</td>
<td>318.5</td>
</tr>
</tbody>
</table>

¹ Loans and advances from the banking sector to the commercial and cooperative banks in domestic and foreign currency
² Deposits to the banking sector from the non-financial sector in domestic and foreign currency
³ Data also includes loans for non-banking financial institutions and deposits of those entities.
⁴ Assets, loans and lending facilities of the credit institution sector.

Source: EU Banking Structures, Frankfurt, October 2008, ECB; for other countries, data provided by national central banks and Central Statistical Office.

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1 2007 was a record year in terms of the inflow of capital to investment funds despite the fact that in October and December, due to the crisis on the sub-prime market in the United States and due to the deterioration of sentiment on financial markets, a negative balance of payments and redemptions was observed.
2 The credit institution sector comprises institutions whose activities consist in receiving deposits or other rentable funds from population and in granting credits on its own as well as electronic money institutions.
Table 1.6. Selected figures related to the stock market and bank loans in selected European Union Member States in 2007

<table>
<thead>
<tr>
<th>Country</th>
<th>Stock market</th>
<th>Bank loans</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Capitalisation (EUR million)</td>
<td>Capitalisation (GDP %)</td>
<td>Loans (EUR million)</td>
<td>Loans (GDP %)</td>
</tr>
<tr>
<td>Austria</td>
<td>161 730.7</td>
<td>58.7</td>
<td>256 917.0</td>
<td>94.9</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>47 987.4</td>
<td>37.6</td>
<td>39 963.0</td>
<td>31.3</td>
</tr>
<tr>
<td>Spain</td>
<td>1 231 086.4</td>
<td>117.3</td>
<td>1 016 309.0</td>
<td>96.8</td>
</tr>
<tr>
<td>Germany</td>
<td>1 439 955.3</td>
<td>59.4</td>
<td>1 721 087.0</td>
<td>71.0</td>
</tr>
<tr>
<td>Poland</td>
<td>142 347.0</td>
<td>43.7</td>
<td>48 391.6</td>
<td>14.8</td>
</tr>
<tr>
<td>Slovakia</td>
<td>4 555.0</td>
<td>8.3</td>
<td>15 503.0</td>
<td>28.3</td>
</tr>
<tr>
<td>Slovenia</td>
<td>19 695.1</td>
<td>58.7</td>
<td>22 405.0</td>
<td>66.8</td>
</tr>
<tr>
<td>Hungary</td>
<td>31 527.9</td>
<td>31.2</td>
<td>42 128.0</td>
<td>41.7</td>
</tr>
<tr>
<td>Italy</td>
<td>733 613.7</td>
<td>47.8</td>
<td>1 259 464.0</td>
<td>82.0</td>
</tr>
</tbody>
</table>

Note:
1. Stock market capitalisation – domestic companies.
2. Loans and advances from the banking sector to the non-financial sector, except for loans to households.
Source: EU Banking Structures, Frankfurt, October 2008, ECB; Federation of European Securities Exchanges (FESE); for Poland – data provided by the NBP, the Warsaw Stock Exchange and the Central Statistical Office.

Table 1.7. Selected figures related to the stock market in selected Central and Eastern European countries and in the euro area, 2005–2007¹

<table>
<thead>
<tr>
<th>Country</th>
<th>Stock market capitalisation² (EUR billion)</th>
<th>Stock market capitalisation to GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poland</td>
<td>79.9</td>
<td>114.3</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>31.1</td>
<td>34.7</td>
</tr>
<tr>
<td>Hungary</td>
<td>27.6</td>
<td>31.7</td>
</tr>
<tr>
<td>Slovakia</td>
<td>3.7</td>
<td>4.2</td>
</tr>
<tr>
<td></td>
<td>2007</td>
<td>2007</td>
</tr>
<tr>
<td>Euro area³</td>
<td>7 120.1</td>
<td>80.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Country</th>
<th>Liquidity ratio⁴ (%)</th>
<th>Number of listed companies (including new companies)⁵</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poland</td>
<td>31.9</td>
<td>38.7</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>95.1</td>
<td>63.1</td>
</tr>
<tr>
<td>Hungary</td>
<td>70.3</td>
<td>77.7</td>
</tr>
<tr>
<td>Slovakia</td>
<td>1.5</td>
<td>1.7</td>
</tr>
<tr>
<td></td>
<td>2007</td>
<td></td>
</tr>
<tr>
<td>Euro area³</td>
<td>160.5</td>
<td></td>
</tr>
</tbody>
</table>

¹ All presented amounts also comprise alternative trading systems, if such platforms are run by the operator of a given stock exchange. In 2007, this was the case for the following markets: Poland (NewConnect), Germany (Entry Standard), Euronext (Alternet), Ireland (IEX).
² Capitalisation concerns domestic companies.
³ Indicators calculated for the euro area comprise the following stock exchanges: Athens Exchange, Borsa Italiana, Deutsche Börse, Euronext, Irish Stock Exchange, Ljubljana Stock Exchange, Luxembourg Stock Exchange, OMX Nordic Exchange Helsinki, Spanish Exchanges (BME), Wiener Börse.
⁴ The ratio of net turnover value to stock market capitalisation (domestic companies).
⁵ Comprises domestic and foreign companies.

Source: for Poland – data provided by the Warsaw Stock Exchange and the Central Statistical Office, for other countries – FESE and Eurostat data, the Prague Stock Exchange data (number of new companies on the Prague stock exchange in 2007).
cial systems of these countries. However, a relatively low development of this sector is visible as compared to other euro area countries (Table 1.5).

The capitalisation of stock markets in the analysed Central and Eastern European countries was much lower than the capitalisation of analogous markets in the euro area. In 2007, the Polish stock market remained the region’s largest market, both in terms of the capitalisation and of the number of listed companies. In 2007, a significant increase was observed in the number of companies quoted on the markets organised by the Warsaw Stock Exchange – WSE (Giełda Papierów Wartościowych w Warszawie). 81 new companies were listed on the regulated market (as compared to 38 a year ago), whereas on the non-regulated NewConnect market this number was 24.4 No shares of any new entity were listed in Slovakia, whereas the number of new companies on the Czech and Hungarian market amounted to two and three companies respectively. Basic indices describing the development level of stock markets in the countries in question are presented in Table 1.7.

1.2. Households and enterprises on the financial market in Poland

1.2.1. Financial assets of households

The amount of savings made by households and willingness to make savings is linked to the economic situation of the society. The decisions of households concerning financial investments are influenced, inter alia, by the following factors: level of interest rates, tendencies in the capital market, knowledge about the financial market and familiarity with products offered by financial institutions and financial intermediaries.

Social attitudes surveys carried out in Poland indicate that only approx. 30-40% of households had savings in 2007, and further 20% declared the possibility of gathering savings.5 Studies show that social attitudes to the generation of own financial resources and gathering savings are of periodical character. These expectations are influenced, inter alia, by changes in disposable income of households6 (Figure 1.5).

A good macroeconomic situation in Poland in 2007 favoured an improvement in ongoing financial standing of households. The value of savings made by households grows by PLN 112 billion up to PLN 752 billion, and their ratio to GDP increased from 60% to 64.4% (Figure 1.6). The observed increase in assets of households was lower than in 2006 as disposable income increased more slowly than in the previous year.

As compared to the previous year, the highest increase in assets of households was observed in deposits held at banks and credit unions (Table 1.8). This resulted from falling prices of stocks and bonds on the domestic financial market in the second half of 2007 which led to a decline in the value of assets held by investment funds and open pension funds, as well as from growing interest in bank deposits and intensive promotional and advertising activities carried by banks and credit

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4 NewConnect market started its operation on 30 August 2007.
5 The example of Slovakia shows that the importance of the stock market as a place for investments and raising capital is insignificant. This is confirmed by low capitalisation of domestic companies to GDP ratio and liquidity ratio, as well as the process of removing quoted companies from trading and, at the same time, a lack of new entities on this market.
6 Conclusions from the study carried out as ordered by Open Finance, financial intermediary, by SMG/KRC between 18 and 24 May 2007 on the countrywide Polish sample, representative for Poles aged 20–70. E. Szweda, We know how Poles save, www.open.pl, 6 September 2007.
8 For the purpose of the present analysis, household savings comprise, as in the previous edition of the report, the following items: deposits at banks and credit unions, units of investment funds (equal amounts of net assets of investment funds), unit-linked assets, life insurance saving premiums, funds on accounts at open pension funds, Treasury securities, stocks quoted on the Warsaw Stock Exchange, cash in circulation excluding bank vault cash, other financial instruments (e.g. non-treasury debt instruments). See Financial system development in Poland in 2006, Warsaw 2008, NBP, p. 9.
Figure 1.5. Social attitudes surveys on savings and dynamics of disposable income, 2000–2007

<table>
<thead>
<tr>
<th>% of confirmative responses</th>
<th>dynamics</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  2  3  4  5  6  7  8  9  10</td>
<td>110 115</td>
</tr>
<tr>
<td>11 12 13 14 15 16 17 18 19 20</td>
<td>115 120</td>
</tr>
<tr>
<td>21 22 23 24 25 26 27 28 29 30</td>
<td>120 125</td>
</tr>
<tr>
<td>31 32 33 34 35</td>
<td>125 130</td>
</tr>
</tbody>
</table>

- Do you think that you will manage to save some money in the coming 12 months? – left-hand scale
- Do you have any savings now? – left-hand scale
- Growth rate of quarterly real disposable income (y/y) – right-hand scale

Note: quarterly figures are arithmetic means of monthly data. Quarterly amounts of disposable income were deflated using the quarterly CPI. Quarterly changes are calculated with reference to the same quarter of the previous year.
Source: own calculations on the basis of Ipsos and the Central Statistical Office (for disposable income) data.

Figure 1.6. Financial assets of households, 2000–2007

<table>
<thead>
<tr>
<th>PLN billion</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0  10  20  30  40  50  60  70  80</td>
<td>0  100  200  300  400  500  600  700  800</td>
</tr>
<tr>
<td>280.4  335.5  365.9  400.4  434.7</td>
<td>60.0  63.9  64.4</td>
</tr>
<tr>
<td>21.3  19.4  16.5  17.5  18.1</td>
<td>28.7  35.3  37.7</td>
</tr>
<tr>
<td>Financial assets of households – left-hand scale</td>
<td>Ratio of financial assets of households to GDP – right-hand scale</td>
</tr>
<tr>
<td>Including: funds on accounts at open pension funds – left-hand scale</td>
<td></td>
</tr>
</tbody>
</table>

Source: NBP, Central Statistical Office.

unions. Despite that, assets of households grew most considerably in the value of investment funds units and stocks quoted on the Warsaw Stock Exchange.

Events which took place on financial markets in the second half of 2007 had also a significant impact on structural changes in assets of households. The bull stock market in the period from April 2003 to June 2007 resulted in the increasing interest in investments in stocks, units of investment funds and unit-linked assets. Increasing aversion to risk and falling stock prices, resulting from turmoil on world financial markets caused by the crisis on the US mortgage credit market, were observed since July 2007. This influenced the behaviour of Polish individual investors. The interest of households in units of investment funds and unit-linked assets declined considerably in the second half of 2007 (Figure 1.7).

The main item of financial assets of households remained bank deposits (Figure 1.8). In the balance sheet perspective, they increased in 2007 by PLN 24.5 billion to over PLN 267 billion at the end of December and constituted almost 35% of total household savings. Despite a stable growth of this category from 2004, bank term deposits lost its share for the benefit of other forms of savings – units of investment funds and stocks listed on the Warsaw Stock Exchange.
Financial system in Poland

Table 1.8. Structure and changes (y/y) in selected items of financial assets of households, 2004–2007, as at period-ends

<table>
<thead>
<tr>
<th>Share in total assets of households (%)</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bank deposits</td>
<td>47.7</td>
<td>42.9</td>
<td>37.4</td>
<td>34.6</td>
</tr>
<tr>
<td>Funds on accounts at open pension funds</td>
<td>14.4</td>
<td>16.9</td>
<td>18.4</td>
<td>18.6</td>
</tr>
<tr>
<td>Units of investment funds</td>
<td>7.9</td>
<td>11.4</td>
<td>14.8</td>
<td>17.0</td>
</tr>
<tr>
<td>Unit-linked assets and life insurance saving premiums</td>
<td>8.1</td>
<td>8.2</td>
<td>8.4</td>
<td>8.5</td>
</tr>
<tr>
<td>Stock listed on the WSE</td>
<td>4.3</td>
<td>5.1</td>
<td>7.2</td>
<td>8.1</td>
</tr>
<tr>
<td>Treasury securities</td>
<td>4.7</td>
<td>3.3</td>
<td>2.1</td>
<td>1.4</td>
</tr>
<tr>
<td>Deposits at credit unions</td>
<td>0.9</td>
<td>1.0</td>
<td>0.9</td>
<td>0.9</td>
</tr>
<tr>
<td>Cash in circulation (excluding bank vault cash)</td>
<td>11.7</td>
<td>11.2</td>
<td>10.9</td>
<td>10.3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Growth rate (y/y, %)</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total financial assets</td>
<td>8.6</td>
<td>17.1</td>
<td>25.0</td>
<td>18.1</td>
</tr>
<tr>
<td>Bank deposits</td>
<td>-1.3</td>
<td>5.4</td>
<td>8.6</td>
<td>9.9</td>
</tr>
<tr>
<td>Funds on accounts at open pension funds</td>
<td>39.7</td>
<td>37.4</td>
<td>35.4</td>
<td>20.1</td>
</tr>
<tr>
<td>Units of investment funds</td>
<td>13.9</td>
<td>67.5</td>
<td>62.7</td>
<td>36.0</td>
</tr>
<tr>
<td>Unit-linked assets and life insurance saving premiums</td>
<td>16.9</td>
<td>18.7</td>
<td>26.9</td>
<td>20.4</td>
</tr>
<tr>
<td>Stock listed on the WSE</td>
<td>65.3</td>
<td>36.8</td>
<td>77.0</td>
<td>34.2</td>
</tr>
<tr>
<td>Treasury securities</td>
<td>7.0</td>
<td>-17.2</td>
<td>-23.7</td>
<td>-16.8</td>
</tr>
<tr>
<td>Deposits at credit unions</td>
<td>27.9</td>
<td>25.6</td>
<td>12.0</td>
<td>19.7</td>
</tr>
<tr>
<td>Cash in circulation (excluding bank vault cash)</td>
<td>2.8</td>
<td>12.6</td>
<td>20.3</td>
<td>12.3</td>
</tr>
</tbody>
</table>

Source: NBP calculations based on the data of the following institutions: NBP, Polish Financial Supervision Authority, Central Statistical Office, Analyzy Online.

The analysis of monthly inflows of funds to investment funds and changes in the value of term deposits of individuals indicates, however, that investments via investment funds in the first half of 2007 were much more popular than bank deposits whose value declined considerably (Figure 1.9). It was only when prices of stocks and Treasury bonds fell on the domestic market, as mentioned above, and the interest in term deposits offered by banks became more attractive that some individuals decided to redeem units of investment funds and to move their savings to banks. Furthermore, a big increase in term deposits in December was related to a typical December increase in the value of funds at bank deposits of individuals due to additional payments made by their employers (premiums, annual bonuses).

As at the end of 2007, the value of units of investment funds held by households amounted to PLN 128 billion, i.e. increased by PLN 34 billion as compared to the end of the previous year. The inflow of funds to investment funds observed in the whole 2007 was the largest one in history of these institutions. This resulted from very good investment performance achieved by funds in previous years, offering higher return on invested amounts than bank deposits.

The highest inflow of funds to investment funds was observed in June and July 2007, whereas the last two months of the year were marked by their outflow. Falling stock exchange indices in the last months of the year caused a decline in the interest of households in units of investment funds.

In 2007, the interest of households in unit-linked assets remained high. Provisions of life insurance companies (including unit-linked assets) grew by nearly PLN 11 billion, and reached PLN 64 billion as at the end of 2007, though their growth rate was by 6.5 p.p. lower than in 2006. Households were deeply interested in structured products in the form of life and endowment insurance, in which a part of the premium is invested on the financial market (inter alia, on the derivatives market), and the other part covers the costs of insurance protection, though owing to an investment
Financial system in Poland

Figure 1.7. Monthly changes in selected assets of households, 2004–2007

Figure 1.8. Structure of financial assets of households, 2000–2007, as at period-ends

Figure 1.9. Net inflow of funds to investment funds and the change in the value of term deposits of individuals, 2006–2007
character of the product, insurance sums are not much higher than the premium paid in. The advantage of such products is an exemption from tax on capital gains.

Households also invested directly on the stock market. Despite the bear market at the end of the year, the exposure of individual investors on the stock market increased by PLN 15.6 billion to over PLN 61 billion. However, the growth rate was two times lower than in the previous year.

The only category of financial assets of households whose value decreased constantly in the last few years were Treasury securities. A falling interest of individual investors in Treasury bonds resulted, inter alia, from a limited access to these instruments as bonds, since 2005, have been distributed and their issues have been arranged by only one bank. Furthermore, a lack of detailed information about bonds along with intensive advertising campaigns of commercial banks resulted in the situation that funds withdrew from the capital market were located at banks despite a higher interest on saving bonds than on bank deposits with similar maturity. At the end of 2007, the value of Treasury bonds held by households amounted to PLN 10.7 billion and was by over 2 billion lower than in the previous year. Thus, their share in the portfolio declined from 2.1% to 1.4%.

An important item of financial assets of households remained funds deposited with open pension funds (Otwarłe Fundusze Emerytalne – OFE), however, savings invested in this way are different from other forms of investments. They are mandatory and it is not possible to pay out capital gathered in open pension funds before retirement. As at the end of 2007, the pension funds’ assets value increased by PLN 23.4 billion and reached PLN 140 billion. Falling prices on the Warsaw Stock Exchange led, however, to a lower growth rate (decline from 35% to 20%) and a slight increase in the share of open pension funds’ assets in the whole portfolio of households (by 0.2 p.p.). The value and share of this item in financial assets of households will increase systematically due to a mandatory character of premiums and a permanent inflow of new participants to the system.

The structure of Polish households’ assets was similar to the structure in place in Central and Eastern European countries, but different from the saving structure of the euro area inhabitants (Figure 1.10). A high share of pension funds in Poland (18%) and in Hungary (16%) resulted from the operation of the capital part of the social insurances system, in which the participation is mandatory for a group of the population as specified by domestic regulations.

### 1.2.2. External sources of financing of Polish enterprises

In 2007, enterprises were still in a very good financial condition observed also in the previous year. A positive evaluation of future economic situation in Poland as well as a high utilisation of produc-
tion capacity by enterprises caused the growth rate of investments to remain on a high level.\(^9\) Investments grew by 20.4%, i.e. most significantly in the current decade (Figure 1.11). The scale of investments was so big that despite an increase in enterprises’ profitability and liquidity they significantly increased the use of external financing sources.\(^10\) In 2007, companies obtained PLN 95.1 billion\(^11\) from these sources, which means an increase by almost 40% as compared to the previous year. The value of funds obtained from bank loans, issues of shares and bonds on the domestic market and the value of leased assets were at the highest level in the current decade. Enterprises also increased debt with dominant entities and debt arising from issues of long-term bonds on foreign markets.

In 2007, debt of enterprises due to bank loans grew by 23.4% and amounted to PLN 167.9 billion as at the end of December (Figure 1.12). An increase in financing with bank loans may result

**Figure 1.11. Funds obtained by Polish enterprises from external sources vs. business cycle, 2000–2007**

![Graph showing funds obtained by enterprises from external sources vs. business cycle, 2000–2007](image)

- **Source:** NBP study on the basis of data provided by the Central Statistical Office, the National Depository for Securities (KDPW) and the NBP.

**Figure 1.12. External sources of financing of Polish enterprises, 2000–2007**

![Graph showing external sources of financing of Polish enterprises, 2000–2007](image)

- **Source:** NBP study on the basis of data provided by the National Depository for Securities (KDPW), Fitch Polska and the NBP.

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11. The figure includes the change in the value of bank loans for enterprises, stock issues on the WSE except for stocks sold by existing shareholders, long-term corporate bond issues on the domestic market, long-term corporate bond issues on foreign markets, leasing and the change in the value of loans from dominant entities (except for trade loans).
from the increasing demand of companies for funds related to both existing and new investments, as well as from a slight easing of credit criteria by banks. At the same time, an increase in the demand for loans by enterprises was limited due to the use of alternative capital sources, including own funds, issues of securities and leasing. A high value of funds obtained due to issues of shares and bonds resulted in the fact that, as compared to 2006, predominance of the financing by banks over the financing by market instruments declined (Figure 1.13).

The most important non-banking source of financing in 2007 was leasing. In 2007, the value of leased assets amounted to PLN 32.7 billion and was the highest in the recent years. As at the end of the analysed year, the size of the leasing market in Poland, measured by outstanding leasing instalments, was estimated at approximately PLN 48.6 billion. Services of leasing companies were still mainly used by small and medium-sized enterprises. The increased interest in leasing in the recent years resulted from a favourable economic situation in Poland and a higher demand of enterprises for external financing.

Issues of shares on the Warsaw Stock Exchange remained the most important market source of financing. Despite an unfavourable situation on the WSE in the second half of 2007, Polish enterprises raised over PLN 15 billion in the stock market, which is a record figure in the current decade. One hundred and five enterprises carried out IPOs on the main WSE market and on the NewConnect market, established at the end of August 2007. An alternative trading system – NewConnect – makes it possible to gather funds even by small entities and companies with short history of business. This is possible due to relatively low issue costs on this market and lower information requirements and fees charged on the issuer for quotations of its shares as compared to the main WSE market.

In 2007, the value of funds obtained by Polish enterprises from long-term bond issues on the domestic market amounted to almost PLN 8 billion and was over three times higher than in the previous year. Such considerable increase in the value of bonds issues resulted from high activity of enterprises from the following industries: energy, chemical as well as construction. Placing issues on the market was easier due to a high demand for such securities by banks and enterprises investing financial surpluses in these instruments and a considerable inflow of funds to collective investment institutions, in particular to investment funds. Banks, enterprises and investment funds were the main buyers of long-term corporate bonds. At the end of 2007, their share in the structure of long-term corporate bond holders amounted to approx. 75%.

Available data shows that only one Polish company issued long-term bonds on the foreign market in the analysed period. This company sold 7-year bonds with the value of EUR 170 million on the Luxembourg market via its subsidiary registered in France. Little interest of Polish enterprises

Figure 1.13. Market financing vs. bank financing of Polish enterprises, 2000–2007

Note: predominance means a difference between financing from market sources and bank financing in a given year. Market sources include: stock issues on the WSE, bond issues on the domestic market and bond issues on foreign markets.

Source: NBP study on the basis of data provided by the National Depository for Securities, Fitch Polska and the NBP.

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12 Senior loan officer opinion survey on bank lending practices and credit conditions (II, III, IV quarter of 2007 and I quarter of 2008), Warsaw 2007 and 2008, NBP.

13 More about the NewConnect market in chapter 3.3 and 5.2.
in this form of financing could stem from a low disparity in interest rates in Poland and in the euro area as well as availability of capital on the domestic market. Furthermore, the sale of bonds on foreign market in the second half of the year could have been more difficult due to liquidity problems caused by the crisis on the US mortgage loan market.

As compared to 2006, the importance of long-term loans from direct foreign investors as a source of financing of enterprises declined considerably. As at the end of 2007, the value of loans from dominant entities amounted to PLN 80.1 billion and was by 6.9 billion higher than in the previous year. Similar to previous years, this form of external financing was used by a relatively small group of enterprises.
2

Regulations of the financial system

The development of the financial system depends not only on economic conditions, but also on regulations concerning the sector of financial institutions. Along with the most important amendments to Polish law, this chapter also presents changes in European Community law. Measures taken in the European Union, aimed at creating a single European financial market, set the course for future changes in regulations regarding the financial system in Poland. The EU member states are obliged to ensure compatibility of national regulations with the requirements of EU law. Therefore, many amendments introduced to Polish law arise from the requirements of Community law.

2.1. Changes of the regulations of the financial system in Poland

In 2007, the most important amendments to legal regulations that affected the operation of the financial sector include:

- amendment to the Foreign Exchange Law Act,\(^1\)
- implementing regulations of the CRD directive\(^2\) relating to banks by amending the Banking Law Act\(^3\) and by issuing implementing regulations in the form of resolutions of the Commission for Banking Supervision (KNB),
- amendment to the regulations on the principles for creating provisions for risk related to banking activities,\(^4\)
- adoption of the resolution of the Commission for Banking Supervision on establishing mandatory standards of bank liquidity,\(^5\)
- amendment to the resolution adopted by the Management Board of the National Bank of Poland on the principles and mode of calculating and maintaining a reserve requirement by banks,\(^6\)
- amendment to the Civil Code in respect of insurance agreements,\(^7\)

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\(^3\) Act of 26 January 2007 amending the banking law act (Dz.U. of 2007, No. 42, Item 272). The provisions of this act came into force on 1 April 2006.

\(^4\) Regulation of the Minister of Finance of 29 June 2007 amending the regulation on the creation of provisions for risk related to banking activities (Dz.U. of 2007, No. 128, Item 887). The provisions of this regulation came into force on 1 January 2008.


– amendment to the act on compulsory insurances, the Insurance Guarantee Fund and the Polish Motor Insurers’ Bureau,
– amendment to the act on health protection benefits financed by public funds,
– amendment to the act amending the act on organisation and operation of pension funds,
– adoption of a new regulation specifying the basic conditions to be met by the information memorandum.

In 2007, provisions of the CRD directive were not implemented to Polish law in respect of institutions performing brokerage activities (investment companies). The lack of these solutions in Polish law makes it more difficult for brokerage offices to set capital requirements for credit and operational risk by means of advanced models approved by supervisors and consideration of quality criteria, as well as effective allocation of own funds.

It will be very important for the operation of investment companies, investment fund organisations and banks (providing investment services) that Polish legal regulations are adapted to the requirements imposed by the MiFID directive. The provisions of this directive specify the requirements for these entities as regards investment advisory, dealing with customer orders as well as preparing and submitting reports on services provided to customers. The provisions of the MiFID directive were to be fully implemented to Polish law by January 2007. Due to the fact that this deadline was not met, it is not clear to what extent clients of investment companies, investment fund management companies and banks using investment services, will be able to execute claims arising from the violation of their rights under these regulations in domestic courts. As of the date of implementation of the MiFID directive, implementing regulations to this directive, having the form of a regulation, also came into force within the territory of the European Union and should be applied directly in each Member State.

The provisions of the CRD directive relating to investment companies as well as the provisions of the MiFID directive will be implemented to Polish law by changes to the acts governing the operation of the capital market. In 2007 drafts amending these acts were submitted to the Polish Parliament (Sejm RP), and at the same time the Government carried out work on automatic amendments to these acts. These legislative actions are likely to be completed in 2008.

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8 Act of 24 May 2007 amending the act on mandatory insurance, the Insurance Guarantee Fund and the Polish Motor Insurers’ Bureau, as well as on the act on insurance activities (Dz.U. of 2007, No. 102, Item 691). The provisions of the act came into force on 11 June 2007.
11 Regulation of the Minister of Finance of 6 July 2007 on the detailed conditions which should be fulfilled by the information memorandum referred to in Art. 39 Par. 1 and Art. 42 Par. 1 of the act on public offering, conditions governing the introduction of financial instruments to organized trading and public companies (Dz.U. of 2007, No. 132, Item 916). The provisions of the regulation came into force on 7 August 2008.
12 There are three different types of institutions which carry out brokerage activities: brokerage offices, banks conducting brokerage activities (brokerage offices and banking organisational units of banks) and foreign entities offering brokerage services (foreign investment companies and credit institutions).
15 Draft act amending the act on trading with financial securities and some other acts (Parliament form No. 64, VI term of office), draft act amending the act on public offering, conditions governing the introduction of financial instruments to organized trading and public companies and amending some other acts (Parliament form No. 63, VI term of office) and draft act amending the act on investment funds (Parliament form No. 61, VI term of office).
2.1.1. Regulations regarding the entire financial services sector

Amendment to the Foreign Exchange Law Act

Amendments to the Foreign Exchange Law Act resulted from the obligation to ensure full compliance of Polish legal regulations with Community law as regards free movement of capital as specified in Art. 56 of the EC Treaty. The most important solutions applied to improve free movement of capital involve the lifting of restrictions on:

- disposal of securities and participation units of joint investment funds by non-residents from third countries,
- acquisition of securities and participation units of joint investment funds as well as claims and other rights in Poland by non-residents from third countries,
- disposal of securities with a maturity exceeding one year by non-residents in third countries,
- granting and taking loans and lending facilities in trading between residents and non-residents from third countries.

The amendments implemented to the Foreign Exchange Law Act did not have a significant impact on the development of the financial market in Poland because, in accordance with the existing foreign exchange permit granted by the Minister of Finance in 2002, foreign investors were able to invest in almost all instruments available on the domestic financial market.

The amendment to the Foreign Exchange Law Act did not remove restrictions on foreign exchange trading – settlements in foreign currency between residents. Furthermore, restrictions were imposed on agreements and on performing other legal activities which result or may result in domestic settlements in foreign currency.

2.1.2. Regulations regarding the banking services sector

Amendments to the Banking Law Act and new regulations implementing the CRD directive with respect to banks

In 2007, significant regulatory changes, whose full consequences have not yet surfaced, took place in the banking sector. These changes are related to the implementation of the New Capital Accord (NCA), prepared by the Basel Committee, replacing the First Capital Accord in force for over 15 years. Its purpose is to determine banks’ capital requirements in greater detail and make it possible to use their capital in a more efficient manner. This Accord consists of three parts referred to as pillars:

- the first pillar sets minimum capital requirements described in quantitative terms; these regulations relate to credit, market and operational risk,
- the second pillar imposes on banks the obligation to take into account all additional risk factors, which were not covered by the first pillar, by banks themselves, and to specify actual capital requirements based on this; the assessment made by the bank is then verified by supervisory authorities,
- the third pillar introduces the obligation to publish material information by banks as regards their operations and financial standing to increase transparency and market discipline.


17 Pursuant to Art. 2 Par. 1 Item 5 of the act of 27 July 2002 – foreign exchange law (Dz.U. of 2002, No. 141, Item 1178 as amended), third countries shall mean countries other than the European Union Member States, their independent and associated territories as well as dependent, autonomous and associated territories of the European Union Member States.

18 Regulation of the Minister of Finance of 3 September 2002 on general foreign exchange permits (Dz.U. of 2002, No. 154, Item 1273 as amended).
According to the intention of the Basel Committee, despite the fact that the New Capital Accord is addressed to large banks active on the international market, all banks may voluntarily apply its provisions.

The NCA provisions on capital adequacy of credit institutions and investment companies in the European Union are implemented by the CRD directive. In contrast to the provisions of the Basel document, the provisions of the directive apply to all banks and investment companies, irrespective of the scale of their activities. The NCA, and consequently the CRD directive, introduce new regulations, the most important of which are as follows:

- the capital adequacy level is based not only on quantitative (pillar 1), but also qualitative criteria (pillar 2); along with the obligation to maintain capital at a level not lower than total capital requirements for individual types of risk, banks have been obliged to regularly estimate and maintain internal capital (economic capital);¹⁹

- the possibility of using, in the standardised approach, credit risk weights based on the evaluation of creditworthiness by external entities (rating agencies recognised by supervisory authorities);

- capital charges in the first pillar to cover operational risk;

- enabling the use of advanced methods of credit and operational risk evaluation based on internal models prepared by banks, provided that they have been approved by supervisory authorities; banks which will not decide to use the approach based on internal ratings, or which will not obtain the approval of supervisory authorities for the use of this method, will apply to the standardised approach;

- to commit banks to carry out periodical evaluation of the capital adequacy level; this evaluation is then verified by supervisory authorities.

The CRD directive has been formally in force in the European Union since 2007, but in practice it has been applied since 1 January 2008 due to its derogation. According to its provisions, banks were allowed to follow old regulations relating to credit risk until the end of 2007. In Poland, almost all banks exercised this option, gaining additional time to prepare themselves for the implementation of new regulations.

The implementation of the CRD directive to the domestic law was a complex process due to high complexity of its provisions, which may give rise to many contradictory interpretations. Therefore, at the stage of designing draft acts, the consideration was given not only to the provisions included in the directive itself (including national options), but also to technical interpretations of the directive’s provisions prepared by the European Commission’s CRDTG²⁰ and to recommendations issued by the Committee of European Banking Supervisors (CEBS).

In contrast to previous prudential regulations applied by banks, the CRD directive was implemented based on the maximum harmonisation principle. According to this principle, Member States must transpose the directive to their legal systems in a strict manner, unless the directive offers the option to choose one of the proposed solutions or assures full implementing discretion for a given provision. The objective of the European Commission was to obtain significant compliance of domestic regulations in the EU Member States. At the same time, 97 areas of so-called national options were identified. These are areas where Member State authorities are free to choose individual solutions. As a result, some implementing differences between individual European Union Member States may appear in these areas.

¹⁹ “Internal capital” was defined as the amount evaluated by the bank, necessary to cover any possible losses which may be incurred due to all identified, significant types of risk present in bank activities or arising from changes in business environment.

The Commission for Banking Supervision had to decide – with respect to each option – which solution should be applied, taking into account prudential measures, existing practice and willingness to ensure competitiveness of domestic banks on the European market. The impact of individual national options on the level of bank capital requirements is very differentiated, and in many cases also neglected. The three most important specific solutions chosen in Poland under national options related to:

- risk weights for exposures to financial institutions (banks, credit institutions, investment companies and foreign banks). Out of two possibilities specified by the CRD directive: a system of risk weights applied to claims of the sovereign of incorporation assigned by external rating agencies or based on the risk weight assigned directly to the financial institution; the latter was selected as more favourable for banks and supervisory authorities.

- credit exposure to local government units. The Commission for Banking Supervision selected this possibility, specified in the directive, to assign credit risk weights to local government units at the level corresponding to risk weights assigned to the government and to the central bank.

- credit exposure secured by real estate. The directive makes it possible to use a risk weight reduced to 35% for exposures effectively secured by residential property. The Commission for Banking Supervision decided to apply this risk weight, provided that a residential loan secured by real estate is taken in the currency in which the debtor receives his income.

To ensure the transposition of the directive provisions to Polish law as soon as possible, the Polish legislator selected an analogical approach to the one proposed in the Lamfalussy report. The Banking Law Act specifies only those provisions of the CRD directive which require statutory regulations. Other provisions were regulated in resolutions of the Commission for Banking Supervision. The most important changes implemented in the form of an act are as follows:

- to commit banks to have in place a formalised risk management and internal control system. New solutions implement the division of responsibilities related to the risk management system in a bank between the management board and the supervisory board. The management board of the bank shall be responsible for designing, implementing and assuring effective operation of the risk management system. The supervisory board shall supervise the implementation of the bank’s risk management system and evaluate its adequacy and efficiency.

- to impose on banks the obligation to provide a written explanation of the creditworthiness evaluation process for a given entrepreneur. According to new regulations, an entrepreneur applying for a loan will be able to request the bank to provide it with a written explanation of its creditworthiness evaluation made by the bank.

- to enable banks to purchase back claims subject to securitisation and securities issued by the issuing entity, i.e. Special Purpose Vehicle (SPV) or Special Purpose Entity (SPE). The possibility of implementing synthetic securitisation is introduced, in which credit derivatives or guarantees are used for the purpose of risk transfer and the underlying assets are not be removed from the bank’s balance sheet. The solutions adopted in this respect by the Banking Law Act should facilitate the development of securitisation in Poland.

- to implement changes to bank secrecy regulation. Banks are exempted from the obligation to maintain bank secrecy if providing information is necessary for the conclusion of agreements, under which the bank transfers, in part or in full, the risk related to its own claims and agreements on credit transactions involving derivatives as well as transfers of claims to the issuing entity. This exemption also includes actions which are often needed to carry out securitised transactions such as: insuring against the risk of insolvency of debtors of securitised claims, providing ratings to securitised claims, servicing securitised claims, organising and carrying out issuance of securities.
• to enable banks and institutions established under the Banking Law Act\textsuperscript{21} to process – for the purpose of making use of statistical methods – data subject to bank secrecy concerning natural persons, after the expiry of the obligation arising from the agreement concluded with the bank, without the consent of the person to whom this information relates. This data may be processed for no longer than 12 years from the date of expiry of the obligation. The data storage period comprises one full economic cycle, i.e. it complies with the CRD directive requirements. As a result, PD and LGD\textsuperscript{22} ratios used by banks in advanced approaches will provide a more reliable assessment of credit risk.

• to eliminate the category of deductions made from the capital base. According to new regulations, capital comprises core capital and supplementary capital not exceeding a bank’s core capital. The principles concerning deductions from capital were also changed.

The majority of new regulations were reflected in prudential regulations – six resolutions of the Commission for Banking Supervision which came into force on 1 April 2007. These resolutions are:

- Resolution No. 1/2007 of the Commission for Banking Supervision of 13 March 2007\textsuperscript{23} implementing new principles for the calculation of a bank’s capital adequacy for the purpose of the first pillar of the NCA, i.e. the minimum capital requirement;
- Resolution No. 2/2007 of the Commission for Banking Supervision of 13 March 2007\textsuperscript{24} specifying the principles of the calculation of capital forming the basis for the analysis of capital adequacy for the purposes of the NCA (relates both to the first and second pillar);
- Resolution No. 3/2007 of the Commission for Banking Supervision of 13 March 2007\textsuperscript{25} specifying the principles of monitoring the concentration of exposures and large

\textsuperscript{21} Art. 105 Par. 4 of the Banking Law Act of 29 August 1997 (consolidated text: Dz.U. of 2002, No. 72, Item 665 as amended) is a legal basis for establishing the institution providing information on bank customers’ liabilities.

\textsuperscript{22} PD (Probability of Default) – probability of the debtor’s default in repaying its liabilities to banks, indicating the probability that the bank will incur a loss within one year. LGD (Loss Given Default) – a loss due to the debtor’s default in repaying its liabilities to banks expressed as percentage gross exposure of the debtor at the moment of its insolvency. The LGD amount depends, \textit{inter alia}, on the type, quality and amount of security, interest expense related e.g. to the security exercise period, refinancing and debt collection costs. The amount of the LGD quotient is a difference between 1 and the expected recovery rate on the mentioned exposure.

\textsuperscript{23} Resolution No. 1/2007 of the Commission for Banking Supervision of 13 March 2007 on the scope of the capital requirements against particular risks and the detailed principles to be applied in determining those requirements, including but not limited to, the scope and conditions of applying statistical methods and the scope of information attached to an application for authorization to apply them, principles and conditions of taking account of contracts on debt assignment, subparticipation, credit derivative and contracts other than those on debt assignment, subparticipation, in calculating the capital requirements, terms and conditions, scope and manner of making use of the ratings assigned by external credit assessment institutions and the export credit agencies, manner and specific principles of calculating the solvency ratio of a bank, the scope and manner of taking account of banks conducting their activities in groups in calculating their capital requirements as well as establishing additional items of bank balance sheets included in bank regulatory own funds in the capital adequacy account, the amount thereof and the conditions to be used in calculating them (Dz.Urz. NBP of 2007, No. 2, Item 3).

\textsuperscript{24} Resolution No. 2/2007 of the Commission for Banking Supervision of 13 March 2007 on other deductions from the bank’s core capital, the amount thereof, scope and conditions of such deductions from the bank’s core capital; other balance sheet items included in the supplementary capital, the amount and scope thereof, and conditions of including them in the bank’s supplementary capital; deductions from the bank’s supplementary capital, the amount and scope thereof, and conditions of performing such deductions from the banks’ supplementary capital, the scope and manner of taking account of the business of banks conducting their activities in groups in calculating their own funds (Dz.Urz. NBP of 2007, No. 3, Item 4).

\textsuperscript{25} Resolution No. 3/2007 of the Commission for Banking Supervision of 13 March 2007 on detailed principles and conditions for accounting of exposures in determining compliance with exposure concentration limit and large exposure limit; specifying exposures exempt from the provisions regarding exposure concentration limits and large exposure limits, and the conditions to be met by such exposures; specifying exposures that need authorisation of the Commission for Banking Supervision for exemption from the provisions related to exposure concentration limits and large exposure limits; and the scope and manner of accounting for the activities of banks operating in groups in calculating exposure concentration limits (Dz.Urz. NBP of 2007, No. 3, Item 5).
exposures\textsuperscript{26} for the purpose of the capital requirements under the first pillar of the NCA; new regulations are designed to better reflect the burden on bank capital and to reduce the exposure concentration measures by extending the catalogue of exceptions; according to previous regulations, banks were obliged to manage concentration risk at unit and consolidated level as well as to implement, monitor and update internal risk reduction limits;

- Resolution No. 4/2007 of the Commission for Banking Supervision of 13 March 2007\textsuperscript{27} specifying the requirements for risk management systems relating to bank activities as well as principles of reviewing the process of assessing and maintaining internal capital; internal capital should be maintained at the level required to cover capital requirements calculated under the first pillar and additional capital requirements arising from considering in the second pillar risk factors which were not covered by the capital requirements account under the first pillar of the NCA;

- Resolution No. 5/2007 of the Commission for Banking Supervision of 13 March 2007\textsuperscript{28} specifying the principles of the identification, monitoring and control of exposure concentration, including large exposures; according to the provisions of the second pillar of the NCA, banks were obliged to manage the concentration risk on the unit and consolidated level as well as to implement, monitor and update internal risk reduction limits;

- Resolution No. 6/2007 of the Commission for Banking Supervision of 13 March 2007\textsuperscript{29} implementing the principles of the third pillar of the NCA to Polish law; it specified the principles relating to the obligation to publish significant quantitative and qualitative information by banks which enable market participants to evaluate bank activities.

Furthermore, on 6 June 2007, the Commission for Banking Supervision adopted Resolution No. 10/2007 as requested by rating agencies.\textsuperscript{30} It enables the use of ratings assigned by rating agencies to calculate capital requirements related to credit risk by banks applying the standardised approach and as regards securitisation (quantitative regulations of the first pillar of the NCA).

Implementing the provisions of the CRD directive is a considerable challenge for banks. In determining their capital adequacy, banks are required to take into account new risk areas. Regulations of the second pillar require a quantitative analysis resulting in additional elements forming total bank credit requirements. This task may be difficult for some small banks as they do not have sufficient personnel and know how. These difficulties are somewhat reduced by the proportionality principles included in the CRD directive, according to which many requirements of the directive are applied to individual banks in the scope justified by the scale and character of conducted business. For some small banks which do not intend to use advanced credit risk measurement methods, this means that the existing regulation requirements in force under the first pillar are only slightly different from previous regulations.

\textsuperscript{26} The large exposure limit is the total bank’s credit exposure to its all counterparties. Pursuant to Art. 71 Par. 2 of the Banking Law Act of 29 August 1997 (consolidated text: Dz.U. of 2002, No. 72, Item 665 as amended), total bank’s credit exposure exceeding 10% of its equity to all its counterparties may not exceed the large exposure limit amounting to 800% of these funds.

\textsuperscript{27} Resolution No. 4/2007 of the Commission for Banking Supervision of 13 March 2007 on detailed principles of functioning of risk management and internal control systems and detailed conditions for banks’ assessment of their internal capital and review of the process of assessing and maintaining internal capital (Dz.Urz. NBP of 2007, No. 3, Item 6).

\textsuperscript{28} Resolution No. 5/2007 of the Commission for Banking Supervision of 13 March 2007 on requirements for the identification, monitoring and control of exposure concentration, including large exposures (Dz.Urz. NBP of 2007, No. 3, Item 7).

\textsuperscript{29} Resolution No. 6/2007 of the Commission for Banking Supervision of 13 March 2007 on detailed principles and the manner of publishing disclosures by banks with regard to qualitative and quantitative information regarding capital adequacy and the scope of information subject to disclosure by banks (Dz.Urz. NBP of 2007, No. 3, Item 8).

\textsuperscript{30} Resolution No. 10/2007 of the Commission for Banking Supervision defining the credit ratings assigned by external rating agencies that may be used by a bank to determine capital requirements, the scope of use of such ratings and their relation to the credit quality ratings (Dz.Urz. NBP of 2007, No. 6, Item 16).
A new solution offered by the NCA (CRD directive) is the possibility to use advanced credit and operational risk measurement methods to enable banks to use their capital in a more efficient manner. However, these methods require databases with data for long periods of time and equipped with appropriate IT solutions. In 2007, seven banks in Poland applied advanced methods – these were only banks whose major shareholders were foreign entities. This is due to the fact that decisions in this respect are taken by parent entities of bank groups, to which they belong. It may be assumed that the number of banks operating in Poland which apply advanced methods for determining capital requirements for market and operational risk will increase.

The implementation of the CRD directive is accompanied with actions aimed at consolidating the regulatory and supervisory environment, which should support the process of establishing the single EU banking services market. These actions included the establishment of a consolidated Financial Reporting Framework (FINREP) and prudential Common Reporting Framework (COREP) by the Committee of European Banking Supervisors Implementing these reporting standards in Poland on a unit and consolidated basis was related to the adoption of a new reporting system using the XBRL IT technology. Banks have been submitting their reports to the NBP using the new principles specified by the resolution of the NBP Management Board since the end of October 2007.\(^ {31} \)

**Resolution of the Commission for Banking Supervision on establishing mandatory bank liquidity standards**

The resolution on establishing mandatory bank liquidity standards adopted by the Commission for Banking Supervision was aimed at implementing minimum quantitative and qualitative requirements for managing liquidity risk, which should increase security of bank operations. Banks were obliged to maintain and monitor their solvency at the level adapted to the size and type of their activities, taking into account real maturity and due dates as well as the concentration of deposits. According to the resolution, long-term liquidity management should comprise, *inter alia*, monitoring the mismatch of payment dates, forecasting the inflow and outflow of funds, determining the impact of affiliated entities on a bank’s liquidity and analysing the possibilities to obtain future financing from various sources, including analysing the costs of such financing and its impact on a bank’s profitability.

The resolution imposes on banks the obligation to measure liquidity risk by means of so-called supervisory measures of short-term and long-term liquidity. Implemented short-term liquidity measures make it possible to assess to what extent liquid assets cover unstable sources of funding (counter-balancing capacity). Long-term liquidity measures make it possible to evaluate the coverage of non-liquid assets and limited liquidity assets with stable sources of funding. Banks whose balance sheet total does not exceed PLN 100 million will be able to apply a simplified method of calculating supervisory liquidity measures. The resolution obliges banks to notify the Commission for Banking Supervision of any reduction in a supervisory liquidity measure below the specified level and to take immediate actions to return to the adequate level of funds securing liquidity.

**Amendment to the regulation on the rules for creating provisions for risk related to bank activities**

Changes to the regulation of the Minister of Finance on the rules for creating provisions for risk related to bank activities were implemented mainly to increase banks’ involvement in crediting EU programmes and export transactions. Therefore, the catalogue of securities of credit exposures was extended by guarantees and sureties from the funds managed by the European Union Surety Fund. Banks were offered the possibility to reduce their specific provisions by the security in the form of the assignment of rights arising from the export insurance agreement or from insurance guarantees. The new solution should reduce bank operating costs as banks will be required to build lower specific provisions.

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\(^ {31} \) Resolution No. 20/2007 of the NBP Management Board of 14 June 2007 amending the resolution on the mode and specific rules for providing the National Bank of Poland by banks with data necessary to determine the monetary policy, periodical evaluation of the state’s monetary situation as well as evaluation of banks’ financial standing and the risk of the bank sector (Dz.Urz. NBP of 2007, No. 7, Item 18). The provisions of the resolution came into force on 30 June 2007.
Other changes implemented by the regulation were only of organisational character. They defined precisely bank exposure when an evaluation of debtor’s economic and financial standing is replaced by a legal and financial evaluation of the project related to any kind of credit exposure (e.g. credit, loan, surety), and they also regulate in more detail the possibility to classify credit exposures to natural persons other than those related to their business activities or agricultural farms only according to the criterion of timely repayments.

**Amendment to the resolution of the Management Board of the National Bank of Poland on the principles and mode for calculating and maintaining mandatory reserves by banks**

Due to the changes implemented to the Banking Law Act\(^\text{32}\) in 2006, providing for the possibility to divide banks operating as public limited companies, the NBP Management Board amended the resolution on the principles and mode for calculating and maintaining mandatory reserves by banks.\(^\text{33}\) The new resolution includes provisions specifying the mode of dividing mandatory reserves between the bank to be divided and the bank taking over a part of the divided entity. The implemented changes enable proper calculation of mandatory reserves required from both banks in the transition period (i.e. until they provide data on the basis for calculating mandatory reserves for a full reporting period).

**2.1.3. Regulations regarding non-banking financial institutions**

**Insurance agreement**

Changes in the Civil Code regulations regarding insurance agreements supported the reform of business insurance law carried out in 2003 by adopting a package of 4 insurance acts.\(^\text{34}\) The regulations which came into force on 10 August 2007 were designed to ensure an equal position for all parties to the insurance agreement; previous regulations of the Civil Code did not treat the insuring party and the insurer in the same way. The most important solutions aimed at ensuring an equal status of the parties to the insurance agreement were:

- oblige the insurer to make a final settlement between itself and the insuring party, reimbursing the insuring party for the premium related to the period of unused insurance cover,
- provide the customer with the right to demand a reduction in the premium by the insurance company, if circumstances have been disclosed which reduce the probability of an accident,
- enable, if approved by the insurer, the seller of the insured object to transfer rights arising from the insurance agreement to the buyer of this object.

It may be important for the insured parties that the insurer is obliged to provide any insured party with a sample agreement before the actual agreement has been concluded. The existing regulations, imposing on the insurer the obligation to provide the insured party with the sample agreement at the time of its conclusion, were interpreted literally, and as a result the insured party was in fact deprived of the possibility to become familiar with the content of the agreement before the actual agreement has been concluded.


\(^{33}\) Resolution No. 15/2004 of the Management Board of the National Bank of Poland of 13 April 2004 on the principles for and mode of calculating and maintaining mandatory reserves by banks (Dz.U. NBP of 2004, No. 3, Item 4 as amended).

Furthermore, the term “insurance company” used in the insurance agreement was replaced with the term “insurer”. This change was only of organisational character and clarified the existing provisions. The term “company” is namely used in the Civil Code, but has a meaning which indicates an object. Giving a subject-related meaning to the term “company” only for the purpose of the insurance agreement would be inconsistent with the general code principle of interpreting terms.35

**Mandatory insurance**

The amendment to the act on mandatory insurance, the Insurance Guarantee Fund and the Polish Motor Insurers’ Bureau as well as of the act on insurance activity was related to the adjustment of Polish law to the Community legal regulations.36 The most significant changes consisted in:

- increasing protection of persons injured in events with the participation of moving motor vehicles (by increasing the amount of minimum guarantee sum),
- providing the possibility to obtain compensation for damages to property caused by moving motor vehicles driven by an unidentified person,
- entitling owners of motor vehicles to obtain information on the history of third party liability insurance (OC).

The implemented changes are designed to ensure proper insurance protection for the owner of a motor vehicle. The new regulations should not lead to an increase in the insurance premium as implementing higher minimum guarantee sums was assumed to take place within 5 years, and an increase in the insurance premium is much more dependent on the claims ratio and the amount of compensation paid, and not on the minimum guarantee sum.

**Amendment to the act on health care benefits financed by public funds**

The most significant amendment to the act on health care benefits financed by public funds was the implementation of the so-called lump sum fee imposed on insurance companies offering mandatory third party liability insurance to the owners of motor vehicles. This fee is the product of the amount of the assigned gross premium for a given month due to mandatory third party liability insurance and the ratio arising from the costs of health care benefits, specified in the form of a regulation issued by the minister competent for health.

The solutions which came into force on 1 October 2007 are aimed at compensating the costs of health protection of people injured in accidents involving motor vehicles. In 2007, these solutions did not cause an increase in premiums for mandatory third party liability insurance of the owners of motor vehicles because the entities with a dominant market position, and consequently also other insurance companies, did not decide to increase them. However, it may occur that premiums for mandatory third party liability insurance of the owners of motor vehicles will increase in subsequent years.

**Pension funds**

Amendments to the act on organisation and operation of pension funds were aimed at clarifying the provisions enabling the return of undue premiums obtained by the Social Insurance Office to open pension funds. To be able to fully govern financial and technical aspects of the return of undue provided premiums, work was also carried out in 2007 on the amendment to the regulation on the mode and dates of notifying the Social Insurance Institution by open pension funds of an agreement concluded with a member and of a transfer payment. It is planned that the amendment to this regulation will be implemented in 2008.

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35 More about this can be found in the justification to the draft act amending the act on Civil Code and some other acts (Parliament form No. 353, V term of office), www.sejm.gov.pl.

2.1.4. Regulations regarding the capital market

Adopting a new regulation by the Minister of Finance on detailed conditions to be fulfilled by the information memorandum is a result of the activities performed by the Working Group for the information memorandum, operating under the structure of the Financial Market Development Council – an opinion-making and advisory body established by the Minister of Finance. The most significant solutions implemented in this regulation, aimed at simplifying information requirements, were designed to:

- reduce the scope of information to be disclosed in the introduction to the information memorandum,
- replace the chapter “Summary and risk factors” by the chapter “Risk factors”, and to limit its scope to the indication of those factors which may influence the issuer’s ability to meet its requirements arising from the issue of securities,
- reduce the scope of information to be disclosed in the chapter “Persons responsible for information contained in the memorandum”,
- simplify data provided in the chapters: “Data on the issue”, “Data on the issuer” and “Data on the issuer’s activities”,
- remove the chapters: “Evaluations and perspectives for the issuer’s development” and “Additional information”,
- reduce the scope of information to be disclosed in appendices.

The implementation of new regulations should make it easier for enterprises to obtain capital by the issue of securities in those segments of the domestic capital market, in which limited information requirements are in place.

2.2. Measures of the European Union regarding the regulation of the financial services sector

Initiatives in respect of financial services undertaken in 2007 at Community level were carried out to further integrate the financial market in the European Union in line with the guidelines of the White Paper on the European Commission’s strategy for financial services in the years 2005–2010. As in the previous year, the Commission focused on the proper and timely adaptation of the national law in each Member State to the requirements imposed by the Community legal acts rather than on adopting new regulations. Adopted legal acts reflected mainly the implementation of actions started in previous years and responded to the development of financial markets.

2.2.1. Financial Services Action Plan

In 2007, the European Union continued its efforts to ensure the compliance of domestic regulations of the EU Member States with the requirements of the directives adopted under the implementation of the Financial Services Action Plan (Figure 2.2.1 and Figure 2.2.2). The deadline

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39 The deadline for the completion of the Financial Services Action Plan (FSAP) passed on 31 December 2005, but its implementation has not yet been finalised because the deadline for the adaptation of the national law to the requirements imposed by several directives was determined at the years 2006-2007, and furthermore, Member States do not always comply with the set deadlines.
for the transposition of three directives: on transparency and information requirements\(^{40}\) (20 January 2007), on markets in financial instruments\(^{41}\) (31 January 2007) and on money laundering\(^{42}\) (15 December 2007) to the national law of Member States passed in the analysed period. Until the end of 2007, the European Commission did not receive the notification of any of the above mentioned Community legal acts from Poland (Table 2.2.1).

Figure 2.2.1. Rate of transposition of selected FSAP directives to the legislation of Member States – view per directive (as of 8 January 2008)

Figure 2.2.2. Rate of transposition of selected FSAP directives to the legislation of Member States – view per Member State (as of 8 January 2008)

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### 2.2.2. Regulations regarding financial services

In 2007, the following legal acts regarding financial services were adopted in the European Union:

- Directive 2007/36/EC on the exercise of certain rights of shareholders in listed companies,\(^\text{43}\)
- Directive 2007/44/EC as regards procedural rules and evaluation criteria for the prudential assessment of acquisitions and increase of holdings in the financial sector,\(^\text{44}\)
- Directive 2007/63/EC as regards the requirement of an independent expert’s report on the occasion of merger or division of public limited liability companies,\(^\text{45}\)
- Directive 2007/64/EC on payment services in the internal market.\(^\text{46}\)

In addition, the European Commission adopted the following implementing acts:

- Directive 2007/14/EC laying down detailed rules for the implementation of certain provisions of Directive 2004/109/EC on the harmonisation of transparency requirements,\(^\text{47}\)
- Directive 2007/16/EC laying down implementing provisions to the UCITS\(^\text{48}\) directive (85/611/EEC).\(^\text{49}\)

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\(^\text{48}\) UCITS (Undertakings for Collective Investment in Transferable Securities) – investment funds whose participation units may be traded in the whole EU, if the management company or investment company which manages them is registered in one of the Member States and obtained the notification of host countries. In Poland, the requirements of the directive are fulfilled by open investment funds.


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**Table 2.2.1.** Most important Polish legal acts which are to implement regulations of EU directives, whose deadline for transposition into national legislation in the Member States passed in 2007

<table>
<thead>
<tr>
<th>EU Directive</th>
<th>Most important Polish legal acts which include regulations of the respective EU Directive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Directive on transparency and information requirements</td>
<td>Amendment to the act on public offering and conditions governing introduction of financial instruments to organized trading system and public companies</td>
</tr>
<tr>
<td>Directive on markets in financial instruments (MIFID)</td>
<td>Amendment to the act on trading with financial instruments. Amendment to the Banking Law Act</td>
</tr>
<tr>
<td>Directive on money laundering</td>
<td>Amendment to the act on countering the introduction to the financial circulation of financial assets originating from illegal or undisclosed sources and countering financing terrorism</td>
</tr>
</tbody>
</table>

Source: NBP studies.
2.2.2.1. Regulations affecting the whole sector of financial services

**Directive on approving mergers and acquisitions by supervisory authorities**

Directive 2007/44/EC is aimed at harmonising, within the whole European Union, procedural rules and evaluation criteria applied by supervisory authorities for approving acquisitions and increase in large shareholdings by entities operating in the banking, insurance or securities sector. The adopted legal act shall be applied for the purpose of prudential evaluation of acquisitions or an increase in large shareholdings both in respect of domestic and cross-border purchase transactions or increasing large shareholdings.

One of the most important changes implemented by the directive is to determine a final catalogue of criteria, based on which supervisory authorities will evaluate a potential buyer or a planned transaction. These criteria comprise: reliability and financial standing of the potential buyer, professional competences and experience of all persons appointed as managers of the institution or enterprise established as a result of the planned transaction, the ability of the institution or enterprise

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57 Interpretative Communication from the Commission Respective powers retained by the Home Member State and the Host Member State in the marketing of UCITS pursuant to Section VII of the UCITS Directive, Brussels 2007, Commission of the European Communities, COM(2007)1112.


established as a result of the planned transaction to meet prudential requirements as well as verification of a potential risk of money laundering or financing terrorism.

The new regulation reduced the maximum time granted to supervisory authorities for performing a prudential evaluation from three months to 60 working days from the date of a written confirmation of receipt in respect of the notification and all documents. However, this period may be suspended once for the period of 20 or 30 working days, if supervisory authorities need to obtain additional information. Supervisory authorities are also entitled to determine a maximum period of time in which the planned transaction should be completed, and to extend it in justified cases.

It is assumed that the directive will contribute to increasing the consolidation in the European Union financial sector. Implemented changes enable Member States to determine more restrictive principles for procedures and criteria of prudential evaluation applied by individual supervisory authorities, and hence they should ensure better transparency and uniformity of the process of approving mergers and acquisitions. Member States were given a deadline until 21 March 2009 for the transposition of the directive’s provisions to their national legal systems. This entails the need to introduce relevant changes to Polish regulations which implement or will implement directives amended by the adopted legal act.

**Directive on payment services**

Directive 2007/64/EC on payment services (Payments Services Directive – PSD) is one of the measures which should support the establishment of a single market for payment services. Establishing such a market would improve the conditions for the free movement of capital, goods and services in the European Union. At present, this movement is difficult as payment services markets in the EU are organised and regulated at the national level.

This directive implements a new category of entities providing payment services – “payment institutions”, which may perform business in the whole European Union on the basis of a single European passport. The activities related to payment services may be carried out by entities specified in the directive on payment services, which eliminates the possibility to provide such services by entities not subject to any supervision. Furthermore, the directive provisions increased responsibility of the provider of payment services for performing a payment transaction. Moreover, the period for performing payment transactions was reduced – according to the directive, it may not exceed one working day (until 1 January 2012, the payer and the provider may agree on the period not longer than three working days). Other important directive provisions relate, inter alia, to the regulation of payment services provided by telecommunication, outsourcing and payment services operators, as well as requirements concerning agents whose services are used by providers of payment services.

Along with other measures undertaken in respect of these services (inter alia an initiative to establish the Single European Payments Area (SEPA) the directive should ensure the comparability of cross-border payments in the European Union (credit transfer, payment by card, direct debit, cash transfer) in terms of speed, cost and convenience with domestic payments.

The directive should be implemented by Member States by 1 November 2009. In Poland, this will require an amendment to the act on electronic payment instruments which governs, inter alia, issuing electronic money, payment cards and providing e-banking services, as well as the Banking Law Act as regards providing payment services by banks.

**Green Paper on Retail Financial Services**

The Green Paper published in April 2007 specifies the main objectives of the European Commission’s policy in respect of retail financial services. This document also specifies actions undertaken to improve the operation of the European market of retail financial services. The objectives of the European Commission in this respect at the EU level are to:

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60 The Green Paper relates to a wide range of financial products addressed to individual consumers: current bank accounts, payments, pension savings, saving and investment products, insurance, consumer and mortgage credits, as well as consumer mortgage-backed credits (equity release).
– ensure lower prices for customers by increasing competitiveness and better offer of financial services,
– increase customers’ confidence by guaranteeing them proper protection irrespective of where the financial institution and the product distribution channel are located,
– improve the position of consumers by ensuring a high level of financial education, improving the quality of information presented by providers of financial services and guaranteeing the adjustment of financial advisory services to their knowledge on finance as well as on complexity of products and related risk.

To achieve the first objective, the European Commission intends to analyse the barriers limiting the change of the provider of financial services to the final customer. These barriers include fees collected for closing a bank account or for terminating an insurance agreement, providing insufficient or unclear information, product-tying, as well as the existence of significant administrative burden. Furthermore, the Commission will undertake actions aimed at ensuring equal access to payment systems and will improve competitiveness on the payment card market, in particular by limiting the practice of unjustified increases in payment card costs (interchange fee). There are also plans to design principles for using credit registers, which would also allow their use by foreign lenders.

As regards the extension of the offer of financial services to consumers, the European Commission plans the following actions: ensuring flexible and timely implementation of SEPA products, performing an analysis of domestic regulations on mortgage-backed consumer loans, examining the role of non-bank institutions on the mortgage credit market and determining the reasons for the lack of interest on the part of consumers in cross-border financial services. The Commission will also review the procedures for recommendations relating to the market of retail long-term saving instruments and pension products, as well as will start actions to examine demand for and possibilities of implementing simplified and standardised products to the market such as a basic bank account. In respect of the insurance sector, the Commission announced its intention to analyse domestic general good principles61 and to take actions to eliminate protectionism and unnecessary regulatory costs, *inter alia*, by removing excessive reporting requirements.

To increase consumer trust, the European Commission plans to strengthen the protection of consumer interests, to determine principles relating to the law on liabilities arising from agreements concluded by consumers, to ensure appropriate redress mechanisms for consumers and to promote safe financial institutions providing services to retail consumers. Initiatives in this respect include the adoption of the draft directive on consumer loans by the EU Council,62 evaluation of the effects produced by the directive on the remote sale of financial services63 and analysing CEIOPS work64 aimed at examining the cooperation between supervisory authorities in respect of dealing with cross-border claims. Furthermore, the European Commission will start gathering information on domestic systems which do not belong to the FIN-NET network,65 and will also monitor existing recommendations specifying minimum guarantees for alternative systems of consumer dispute settlement in the area of financial services.

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61 The “general good” principle is applied in the rulings of the European Court of Justice, although the ECJ has not defined the term. It is an exception to the freedom of establishment guaranteed in the EC Treaty and signifies that a member state may limit this freedom in its legal system, if it adopts a legal provision in order to achieve a significant objective for the general good. The ECJ specifies several conditions which must be met to enable the possibility of referring to the “general good” principle. *Inter alia*, it must be related to the sphere which was not harmonised by the EU law and may not be discriminatory. For more cf. Commission Interpretative Communication. Freedom to provide services and the general good in the insurance sector (OJ 2000 C43, p. 5).


64 European Insurance and Occupational Pensions Supervision Committee.

65 This is a cooperation network between national out-of-court authorities participating in settlement proceedings on financial services.
To strengthen the position of consumers, the Commission adopted measures aimed at improving the quality of information provided to consumers on consumer and mortgage loans, participation units of the UCITS funds and payment services. Furthermore, a consumer test is planned to assess the significance and usefulness of the information provided before a credit agreement has been concluded, and an inter-sector study will be carried out to examine whether information requirements contained in Community legislation in respect of long-term investments and savings are relevant and consistent. Furthermore, the Commission will evaluate the possibility of drafting legislation at EU level concerning credit agents and will review the directive on insurance intermediation.\(^6^6\) The document also indicates an important role which could be played by the European Commission in improving financial education by setting guidelines and promoting best practices.

According to the announcement made in the Green Paper, the results of consultations on the future European Commission policy in respect of retail financial services, including final proposals in this respect, were reflected in the communication published in autumn 2007, dedicated to innovations in retail financial services.

**Communication related to the initiatives in retail financial services**

In the Communication entitled *Initiatives In The Area Of Retail Financial Services*, as well as in the Green Paper, the Commission specified the main objectives of future measures the field of retail financial services, and indicated areas, in which it is necessary to carry out further work to improve competitiveness and effectiveness of the EU retail financial services market. As compared to the Green Paper, the communication comprises a broader scope of financial services and specifies a smaller number of initiatives.

The objectives of the European Commission’s policy on retail financial services presented in the referred communication are to:

- improve mobility of consumers and to increase the offer of financial products,
- increase operating efficiency of individual insurance markets,
- guarantee consistent principles for the distribution of retail investment products,
- promote financial education, access to basic financial services (*financial inclusion*) and mechanisms of out-of-court dispute settlements.

The main attention in the document was focused on the possibility to extend the offer of financial services and to increase consumer mobility. Actions announced by the European Commission, along with the initiatives specified in the Green Paper, relate to (*inter alia*): bank accounts, product-tying and extending the offer of products. The Commission will encourage the banking sector to take self-regulatory actions which should facilitate the process of transferring switching bank accounts and removing existing barriers to cross-border opening of accounts. It was also announced that EU legislation would be initiated if the banking sector failed to set up adequate arrangements. The European Commission will examine the effect of product-tying and other practices on selling financial services on consumer mobility, and will also analyse the factors encouraging financial services providers to use such practices. The possibility of applying legal regulations to combat unfair trade practices will also be assessed. Furthermore, the Commission plans to identify restrictions on the sale of certain products on the territory of a given country and to lift national regulations in this respect if they are not justified by Community law. A new initiative of the European Commission is the assessment of the possibility of effective implementation of the “28th regime”\(^6^7\) in respect of selected retail financial services and e-invoicing.

To make the retail insurance market more effective, along with the actions presented in the Green Paper relating to “general good” principles, the Commission will identify barriers to the

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\(^{6^7}\) “28th regime” is a proposal to create an additional legal regime effective in the whole EU, irrespective of 27 national regimes which may be compiled with voluntarily by enterprises performing cross-border activities.
development of cross-border motor insurance. Specifications of premium amounts will also be prepared for this type of insurance.

In order to ensure consistent rules for distributing retail investment products of similar properties (inter alia life insurance with an insurance capital fund, investment funds, structured deposits), the Commission initiated consultations to determine whether the varied scope of regulations on EU financial agents or on information disclosures may have a negative impact on the investor protection. The Commission announced it would issue a communication on this matter in summer of 2008.

The measures taken to carry out the last of the abovementioned policy objectives in respect of retail financial services are the same as the initiatives presented in the Green Paper. The Commission will consider taking actions aimed at ensuring access to a basic bank account for all citizens and will evaluate the possibility of increasing the efficiency of cross-border mechanisms for out-of-court settlement of consumer disputes, inter alia, in respect of the FIN-NET network.

As a part of the implementation of the abovementioned objectives, the Commission announced in its communication that it considers taking legislative measures relating, inter alia, to credit agents, switching bank accounts and access to credit data. However, new draft acts will be prepared only if their implementation is economically justified, and if their exercise may result in achieving set objectives in the retail financial services sector.

**Communication relating to the review of the Lamfalussy procedure**

In November 2007, the European Commission, fulfilling its obligation, published a communication on the review of the Lamfalussy procedure. The general evaluation of this procedure expressed in the communication is positive, in particular as regards acceleration of the legislative process. The communication points out that the Lamfalussy procedure made a significant contribution to the development of a more flexible system of regulations in Europe. Owing to the procedure, the EU authorities are able to respond more quickly to changing needs of financial institutions and to the increasing importance of cross-border financial groups on the European market by undertaking measures which strengthen the cooperation between domestic financial supervision authorities. Notwithstanding these achievements, the European Commission believes that changes need to be made in two areas: i.e. in establishing and enforcing legal regulations as well as in cooperation and convergence of supervision over financial market.

According to the Commission, it is necessary to improve the procedures on establishing and enforcing legal regulations. This may be achieved, inter alia, by a better coordination of timetables for the adoption and implementation of legislative and executive measures, as well as by assessing the impact of implementing regulations. The European Commission also indicates the need to increase transparency of the transposition of EU regulations to the legal systems of individual Member States, e.g. by publishing tables comparing the rate of transposition of the EU directives by individual Member States at the Commission’s website or by presenting supervisory disclosures at the website of the Committee of European Banking Supervisors (CEBS) and at the websites of domestic supervisory authorities.

In its communication, the European Commission focuses more on the need to foster cooperation between national financial supervisory authorities and to support convergence of their actions. The Commission proposes to reinforce the legal status of Level 3 committees, extend the possibility to take decisions by committees by qualified majority voting, develop a set of common standards for the operation of supervisory colleges and clarify the scope of responsibilities of supervisory authorities from the home and host country in the case of cross-border groups.

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69 Such decisions would not be binding. Committee members would be entitled to refuse to consent to apply a given measure following a formal justification (according to the principle: comply or explain).

70 These are teams supervising cross-border financial groups. They consist of supervisors from the group’s home country and host country where the group operates.
**Communication on financial education**

Despite the fact that the responsibility for economic and financial education lies with the EU Member States, the European Commission actively supports actions undertaken at national level. In its communication, the European Commission states that financial education is a vital supplement to legislative measures aimed at providing consumers with proper information and advice on financial services, as well as with appropriate protection.

By publishing the communication, the European Commission (based on Article 153 of the Treaty establishing the European Communities71) intends to support actions taken by Member States to increase knowledge of EU citizens on financial matters. For this purpose, the principles helpful in preparing and implementing financial education programmes were specified.72 According to the Commission, financial education should be available at all life stages, including education in schools as an obligatory subject. Furthermore, the Commission also indicated priority initiatives, i.e. establishing an expert group for financial education, financing a conference dedicated to these themes, making available an internet database on financial education programmes and placing an educational module for teachers on the “Dolceta” website.73

**2.2.2.2. Regulations regarding the banking services sector**

**White Paper on the integration of the EU mortgage credit markets**

The White Paper contains an assessment of the integration and operation of the mortgage credit markets in the EU and presents a proposal for actions aimed at improving efficiency and competitiveness of this market. According to the European Commission, the EU mortgage credit market is far from integrated. Due to limited cross-border activity of mortgage lenders, the competition on the market of these products remains low and the offer is not diversified enough. Furthermore, it was ascertained that consumers prefer to take mortgage loans on domestic markets mainly due to objective factors such as poor knowledge of foreign languages, distance as well as consumer habits and preferences.

The objective of the European Commission formulated in the White Paper is to establish a competitive and efficient mortgage credit market in the European Union. The White Paper specifies four types of actions which will make it possible to achieve this objective:

- removing legal and economic barriers which limit the development of cross-border mortgage loans. This may happen, *inter alia*, due to increasing possibilities of financing lending by entities which offer these products – e.g. by facilitating performance of cross-border issues of covered bonds and securitisation programmes.

- increasing the variety of products on offer. According to the European Commission, it is necessary to eliminate distribution barriers identified in some countries in order to widen the offer of mortgage lenders.

- increasing consumer trust. The European Commission underlines that mortgage loans should be granted in a responsible manner, following a reliable and precise verification of creditworthiness of borrowers. Therefore, it is crucial to ensure a high level of financial advisory standards adapted to the needs of individual borrowers.

- supporting consumer mobility. According to the European Commission, increasing consumer mobility is possible by ensuring full and transparent information, as well as by

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71 “The Community contributes to supporting the consumer right to information and education in order to protect their interests by means of measures which support, supplement and supervise the policy carried out by Member States in this area.”


73 This is an internet website established by the European Commission which contains educational modules for adult consumers (www.dolceta.eu).
limiting practices aimed at preventing excessive credit transfer costs, e.g. arising from the strategy of product-tying.

According to the European Commission, the implementation of the above tasks requires further work to regulate the problem of early loan repayment, improving information quality and comparability as well as to granting loans in a responsible manner. There are various solutions regarding early repayment in force in the EU Member States, and thus the Commission decided to examine whether it is possible to reach an agreement between Member States on this issue. The European Commission also plans to evaluate costs and benefits related to the selection of various solutions in this matter (e.g. retaining status quo, contractual option, guaranteeing the right to early repayment to the borrower).

As regards information quality and comparability, the European Commission points out that despite the fact that in many EU countries self-regulation existed in the form of a code of conduct, it is not complied with in practice. Furthermore, the Polish code did not contribute to increasing comparability of information provided prior to the conclusion of the credit agreement, which is particularly unfavourable for consumers due to the lack of single method of calculating an effective annual interest rate (APRC – annual percentage rate of charge). According to the code, before the credit agreement has been concluded consumers across the whole European Union should receive the so-called European Standardised Information Sheet (ESIS). However, research conducted in several EU countries indicates that this sheet may not contain all information necessary for the consumer. The European Union started work on improving the ESIS sheet and plans to complete it in 2008. The Commission will also analyse whether regulations on the APRC, included in the draft directive on consumer loans, may be extended to mortgage loans.

By indicating the need for responsible lending, the European Commission believes that banks should provide consumers with full information on loans taken, but should not be legally obliged to provide advisory services. Moreover, the European Commission is of the opinion that it is necessary to guarantee that mortgage lenders are not discriminated in access to loan registers of other Member States. In this respect it is considered, inter alia, to use the solutions contained in the draft directive on consumer loan.

Apart from the above mentioned initiatives, actions were also announced to improve the efficiency of the procedures for real estate valuation, entry to the land register and foreclosure. The analyses carried out by expert groups – expert group for mortgage financing and working group for securitisation – will be continued. Furthermore, it was announced that an expert group on credit histories would be set up in 2008.

The actions proposed in the White Paper should bring positive results to persons taking mortgage loans as they will strengthen their rights and widen the product offer and lead to price reductions. Mortgage lenders should obtain access to new markets and use new strategies to finance their activities.

**Communication on retail banking**

This document presents the final report of the European Commission on the study of the retail banking sector started in June 2005, in particular as regards the conditions for cross-border competition. In its communication, the European Commission recommends many actions aimed at strengthening competition in retail banking which should be undertaken both at Community level

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75 Appendix No. 3 to the White Paper on the integration of the mortgage credit market (Impact Assessment), p. 15.
76 The draft directive on consumer credit [COM(2005)483] implements a single method of calculating an effective annual interest rate (annual percentage rate of charge).
77 The proposal of the directive on consumer loan contains the following provision (article 8): “Each member state assures for creditors from other Member States access to databases used (…) to evaluate credit reliability of consumers. Access conditions shall not be discriminatory”.
and by domestic authorities dealing with protection of free competition in cooperation with supervisory and regulatory authorities. These actions relate to: structure and activities of payment systems (including card payment systems), loan registers, cooperation between banks as well as price determination and trade practices, *inter alia*, as regards combined products.

The Commission believes that it is necessary, first of all, to ensure an effective enforcement of the competition law, which will make it possible to eliminate unfair treatment of entities from various Member States. Furthermore, the European Commission indicates future benefits arising from already undertaken legal (preparing the draft directive on consumer credit) and self-regulatory (establishment of the Single European Payment Area) initiatives. The objective of the European Commission’s activities will also be to ensure non-discriminatory access to loan registers and to abolish barriers related to entering the market by new entities. Furthermore, Member States may decide to implement changes in domestic regulations on credit data exchange to increase its availability. As regards pricing and trade practices, it may become necessary for the European Commission to examine the impact of product-tying on competition in the retail banking services market. The document also announced the publication of the report of the expert group assessing the possibilities of switching bank accounts and presenting recommendations aimed at promoting consumer mobility.

### 2.2.2.3. Regulations regarding the capital market

**Directive on the exercise of certain rights of shareholders in listed companies**

Directive 2007/36/EC implements minimum standards to eliminate difficulties in cross-border exercise of voting rights by shareholders of companies listed on a regulated market registered within the European Union (registered office). Member states were, however, granted the right to impose additional requirements on companies with registered office on their territory or to extend the scope of the directive application e.g. to all public limited companies, whether or not their shares are listed on a regulated market.

The most important issues regulated by this legal act relate to: dates and principles for calling up the general meeting, scope of information to be made available prior to the general meeting, rights of shareholders to make changes in the agenda and the possibility of proxy voting. The new regulations ensure equal access to complete and reliable information for domestic and foreign shareholders. An important change consists in lifting the requirement to block shares as the condition for the participation in the general meeting with a voting right. According to the directive, the shareholder’s right to participate in the general meeting and to vote is specified based on the number of shares held by the shareholder at the date when its participation in the general meeting was recorded (record date). Furthermore, the participation and exercise of the voting rights will also be possible physical presence at the general meeting and without appointing the proxy. For this purpose, it is, however, necessary to identify shareholders and ensure security of electronic communications.

The solutions specified in the directive should contribute to increasing transparency and improving corporate governance in companies listed on regulated markets. The implemented changes strengthen the rights of minority shareholders, which enables them to participate more actively in the general meeting, irrespective of their domicile or seat. Eliminating difficulties in the exercise of the voting right may also positively influence investors’ willingness to acquire shares of companies listed on regulated markets in other Member States, and thus to contribute to an increase in liquidity of these markets and to enable better diversified investment portfolios.⁷⁹

The deadline for the adaptation of the national legislation in Member States to the adopted directive passes on 3 August 2009. New provisions will be implemented to Polish law by amending existing regulations, in particular the Code of Commercial Companies, the act on trading with finan-

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cial instruments, the act on public offering and conditions governing introduction of financial instruments to organized trading system and public companies.

**Directive as regards the requirement of an independent expert’s report on the occasion of merger or division of public limited liability companies**

The objective of Directive 2007/63/EC is to simplify national procedures for mergers and divisions of public limited companies. Similar to analogous cross-border transactions, the new rules provide an exemption from the obligation to audit the merger or division plan by an independent expert, if all shareholders agree to this solution. The directive relates mainly to companies which are not listed on a stock exchange and in the case of which – due to a small number of shareholders – the decision on the merger or division is usually taken unanimously.

Furthermore, the directive enables Member States to liberalise regulations on the merger of companies by lifting the obligation to prepare a report justifying the company’s division by the management board and by limiting information requirements, if agreed by all shareholders of the divided company. This will reduce unnecessary administrative burden imposed on companies operating in the EU and will increase their competitiveness.

The directive should be implemented to domestic legal systems by 31 December 2008. For this purpose, it will be necessary to implement relevant changes to articles 502 (merger of companies) and 537 (division of companies) of the Code of Commercial Companies.

**Implementing regulations to the UCITS directive**

The objective of Directive 2007/16/EC is to clarify definitions applied in the UCITS directive which relate to: disposable securities, money market instruments, financial derivatives and disposable securities and money market instruments with in-built derivatives. The document also clarifies methods and instruments used for the purpose of effective investment portfolio management as well as issues related to the composition of the index reflected in the UCITS fund portfolio.

The new regulations should eliminate doubts concerning the interpretation of the UCITS directive provisions, thus assuring their uniform application within the whole European Union. As a result, financial supervision authorities and market participants will know for sure in which financial instruments they are entitled to invest their UCITS funds. The implemented changes should also facilitate cross-border distribution of participation units in UCITS funds.

The deadline for the transposition of the implementing directive provisions to the national legislation of Member States passes on 23 March 2008, and the implemented regulations should be applied as of 23 July 2008. In Poland, this will require the amendment of acts governing the operation of the capital market.

**Interpretative Communication on the UCITS directive**

The purpose of the Communication is to eliminate diverging interpretations of section VIII of the UCITS directive on marketing UCITS participation units in Member States other than the country, in which the UCITS fund has its registered office. The document clarifies the scope of rights under the notification procedure granted to the home country and host country. However, it does not assign any new rights or obligations for these countries, nor for investment funds or companies managing investment funds.

According to the Communication, the scope of exclusive responsibility of the home country was described in sections II – VI of the Directives which relate to: issuing permits for conducting activities by UCITS funds, obligations of management companies, investment funds and depositaries, obligations regarding investment policy and information which should be provided to the owners of fund participation units (e.g. publication of the prospectus and periodical reports). This is the so-called field reserved to the responsibility of the home country, and the host country may not demand from the UCITS fund management company to provide additional information or to meet new requirements. The responsibility of the host country under the notification procedure comprises: the distribution network of participation units, promotion method, facilities enabling payments, disposing or repurchasing participation units and providing mandatory information to investors.
As regards the UCITS fund management company registered in another Member State, the scope of responsibilities of the host country depends on the method of distributing UCITS participation units on its territory. If the management company of the home country uses, for this purpose, services of third parties with a registered office in the host country, these persons will be in the first place obliged to meet the requirements imposed by the host country in the scope required for the functions or activities conducted by these persons. The document points out that the responsibility of the host country is limited as its regulations, extending beyond the field of responsibility of the home country on the grounds of the UCITS directive, are subject to increasing harmonisation within the European Union.

The communication should contribute to the uniform application of the UCITS directive as regards the notification procedure by all Member States. As a result, an improvement in the operation of the notification procedure in respect of the UCITS funds may be expected.

Implementing regulations to the directive on transparency and information requirements

Directive 2007/14/EC specifies the requirements on required content of the condensed set of half-yearly financial statements of issuers, if these statements are not prepared in accordance with the International Accounting Standards (IAS) and International Financial Reporting Standards (IFRS). This document specifies the most significant transactions with affiliated entities, subject to the disclosure obligation by issuers, as well as situations when shareholders are obliged to provide information on the ownership or disposal of large shareholdings. The directive indicates what conditions must be fulfilled by the dominant entity of the UCITS fund management company or of the investment company to be exempted from the obligation to consolidate shareholdings held. The document also specifies minimum standards on information disclosures by issuers as well as minimum requirements which must be met to recognise that regulations of third countries are compliant with the provisions of Directive 2004/109/EC.

Implementing the regulations on transparency and information requirements should increase investor protection and ensure uniform application of regulations in this respect. The deadline for the transposition of the directive provisions to the national legislation passes on 8 March 2008.

Regulation establishing a mechanism for the determination of equivalence of accounting standards applied by third country issuers of securities

The purpose of Regulation 1569/2007 is to determine criteria which must be fulfilled to recognise third country accounting standards as equivalent to the IFRS (according to the provisions of Directive 2003/71/EC on the prospectus and Directive 2004/109/EC on transparency and information requirements).

The adopted legal act extends to 31 December 2011 the transitional period for third country issuers of securities listed on regulated markets in Member States to obtain – following the fulfilment of the conditions specified in the document – permission for the use of financial statements prepared in accordance with accounting standards mandatory in their country.

The implemented changes should facilitate the harmonisation of third country accounting standards with the IFRS and contribute to the lifting of additional requirements for the preparation of financial statements by issuers from the EU operating on financial markets of the third country. The document supports consistent implementation of the International Financial Reporting Standards in the European Union. The regulation came into force on 25 December 2007.

Regulation amending implementing regulations to the directive on prospectus

Regulation No. 211/2007 introduces new requirements regarding financial information in prospectuses of companies with complex financial history or companies that have made a significant financial commitment. The term “complex financial history” refers to any cases when financial

statements of the issuer for the last three years do not fully present its situation, and a lack of reliable information influences the investor’s ability of making complex evaluation of the issuer’s financial standing and development prospects. At the same time, information required is presented as a part of financial information of another entity. In such case, it is necessary to include certain financial information relating to other entities than the issuer. The term “significant financial commitments” shall be understood as an agreement on purchasing or selling a significant entity or business which is not yet completed at the date of the prospectus approval. Should the agreed transaction result in a significant (over 25%) change in the issuer’s gross assets, liabilities or profit, such cases should be subject to the same information requirements as those that apply when the issuer has already completed an acquisition or disposal.

Regulation No. 211/2007, which came into force on 1 March 2007, is designed to increase compliance with the requirement of all information necessary for investors to carry out an informed evaluation of the issuer’s financial standing and prospects to be included in the prospectus.

2.2.2.4. Planned measures of the European Union regarding regulation of the financial services sector

Regulatory actions to be undertaken at the Community level in the coming years will relate mainly to the implementation of the directives announced in the White and Green Papers published in 2006 and 2007, i.e. in the White Paper on the improvement of legal framework for the operation of investment funds, in the White Paper on the integration of the mortgage credit market in the European Union as well as in the Green Paper on retail financial services.

The European Parliament and the EU Council are working on the adoption of the directive on consumer credit and on the directive on the taking-up and pursuit of the business of Insurance and Reinsurance (Solvency II). Furthermore, the European Commission will start work on amendments to Directive 2006/48/EC and 2006/49/EC on capital requirements to regulate any areas which were not regulated in these directives and to update some regulations by taking into account experiences resulting from turmoil on financial markets since the second half of 2007.

The report of the European Securities Markets Expert Group (ESME)81 relating to the directive on the prospectus82 points out that the European Parliament and the EU Council must amend the analysed directive. Furthermore, the report specifies the direction for future changes. The Group believes that the prospectus should help investors take an investment decision and evaluate investment risk instead of just meeting certain legal requirements. This should be reflected in its form and content. Proposals are being made for how to adjust the prospectus to new, flexible issue models which entered the market. Furthermore, experts are of the opinion that issuers should be released from the obligation to meet those requirements which do not bring in value added in the form of information helpful to investors.

The European Commission also started public consultations regarding Directive 2001/24/EC on the reorganisation and liquidation of credit institutions. The European Commission intends to examine whether the directive achieves its objectives and whether its scope may be extended to cross-border banking groups. The subject of the discussion also comprises solutions to the problems related to the transfer of assets within such groups.

The crisis on the subprime mortgage market in the United States caused turmoil on world financial markets in mid-2007 and resulted in large losses incurred by some financial institutions. In response to the worrying events in the European financial system, the EU authorities made efforts to identify factors which brought about or intensified the crisis. Doubts were expressed concerning,

81 This group was set up by the European Commission based on the decision of 30 March 2006 establishing the European Securities Markets Expert Group to provide legal and economic advisory services on the application of the EU directives relating to securities (2000/28/EC).


inter alia, the relevance of the methodology used to evaluate structured financial instruments\(^{83}\) by rating agencies and the transparency of such ratings. Rating agencies were also suspected of delaying decisions on downgrading the rating of these instruments. As late as in January 2007, the European Commission stated in its published communication\(^{84}\) that it sees no need to regulate activities of rating agencies at EU level. However, in September 2007, it requested the CESR to examine the role played by rating agencies on the market of structured financial instruments and to reassess the justification for regulating the activities of rating agencies at EU level.

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\(^{83}\) These are financial instruments such as CDO (Collateralized Debt Obligation) or ABS (Asset Backed Security). The party acquiring CDO runs credit risk of the base portfolio instruments. In the case of CDO, homogenous risk of the base portfolio is divided into tranches with a various repayment preference level; credit repayments in the base portfolio are covered in the first place from the tranche with the lowest credit quality (lowest preference level). ABS are debt securities secured by claims issues by a special purpose company which acquires these assets from the issue initiator. On the of the ABS types is MBS (Mortgage Backed Security), i.e. debt securities secured by mortgage claims.

\(^{84}\) Press communication IP/07/28 of 10 January 2008.
3
System infrastructure

The infrastructure of the financial system consists of institutions and systems which facilitate execution of payments by market participants, organise trade in financial instruments and facilitate settlement of transactions. Systems ensuring protection of market participants and institutions enhancing information transparency are important elements as well. An important role is also played by the entities which regulate and supervise the operation of the financial system.

This chapter presents the most important changes concerning the financial market infrastructure in 2007 and work directions related to its development. Projects related to the integration of the European financial market have been also presented.

3.1. Regulatory and supervisory institutions

In 2007, the operation of the financial system in Poland was regulated and supervised by the following institutions: the Ministry of Finance, the National Bank of Poland (NBP), the Commission for Banking Supervision (Komisja Nadzoru Bankowego – KNB) and the Polish Financial Supervision Authority (Komisja Nadzoru Finansowego – KNF).

The Polish Financial Supervision Authority started its activities on 19 September 2006, when the Act on Financial Market Supervision, aimed at establishing integrated supervision over the financial market in Poland, came into force.\(^1\) As soon as the above act came into force, the Polish Financial Supervision Authority took over the tasks of the Insurance and Pension Funds Supervisory Commission (Komisja Nadzoru Ubezpieczeń i Funduszy Emerytalnych – KNUFE) and of the Securities and Exchange Commission (Komisja Papierów Wartościowych i Giełd – KPWIG). Pursuant to statutory regulations, as of 1 January 2008 the Polish Financial Supervision Authority also took over the supervision over banks and electronic money institutions, which was exercised in 2007 by the Commission for Banking Supervision. This was related to the liquidation of the General Inspectorate for Banking Supervision (Generalny Inspektorat Nadzoru Bankowego – GINB), an executive body of the Commission for Banking Supervision. The tasks of the General Inspectorate of Banking Supervision were taken over by the Office of the Polish Financial Supervision Authority.

The Council for Financial Market Development (Rada Rozwoju Rynku Finansowego – RRRF), set up in 2006 by the Minister of Finance, continued its activities also in 2007. The Council gives opinions and advice on matters related to the development of the Polish financial market. The formula of its operation assumes that the Council’s working groups and teams prepare proposals of amendments to regulations aimed at improving conditions for the financial system development in Poland and for adapting it to the EU legislation.

Five working groups were established within the Council in 2007: a working group for reviewing banking law regulations, a working group for mortgage loans, a working group for reviewing business insurance law regulations, a working group for payment services and a working group for a new solvency regime for insurance companies (Solvency II), as well as five working teams: a working team for VAT in compensation under communication insurances, a working team for capital adequacy of investment firms, a working team for the mode and conditions for the conduct of investment firms and custodian banks, a working team for the transposition of the directive on reinsurance and a working team for reviewing implementing acts to the act on investment funds.

2007, two working groups set up in 2006 ended their activities: a working group for the information memorandum and a working group for securities lending and short selling. Based on the work conducted by these two groups a new regulation on detailed conditions to be met by the information memorandum\(^2\) was issued, and a legal solution was prepared to solve the problem of securities lending and short selling transactions, which were reflected in the governmental draft Act amending the Act on Trading in Financial Instruments.\(^3\) The activities of the third and last group set up in 2006 – a working group for omnibus accounts – were planned to be finalised in September 2007, but were suspended and not renewed until the end of 2007.

On 21 December 2007, an agreement was signed between the Minister of Finance, the President of the National Bank of Poland and the Chairman of the Polish Financial Supervision Authority on the cooperation to support the stability of the national financial system. This agreement resulted in setting up the Financial Stability Committee, and the principles of cooperation between the parties to the agreement were specified in order to establish mechanisms applicable in the situation of the financial crisis. Establishing the Financial Stability Committee reflects the recommendations on implementing the national solutions for crisis management, adopted at the European Union forum by the ECOFIN (Economic and Financial Affairs Council) and the EFC (Economic and Financial Committee).

### 3.2. Payment system

In 2007, both the Polish zloty payment systems functioning on the Polish market (SORBNET and ELIXIR) as well as euro payment systems (SORBNET-EURO and EuroELIXIR) operated effectively. An increase in the number and value of orders in these systems continued, in particular as regards euro payment systems. A gradual increase was also observed in the share of payments settled by SORBNET-EURO and EuroELIXIR in the total number of payments settled in euro by Polish banks.

On 19 November 2007, the TARGET2 (T2)\(^4\) system started its operation on the European market. The NBP is going to join this system on 19 May 2008. Therefore, in 2007 work on payment systems focused on preparing the NBP and the banking environment for the participation in the T2 system. The activities undertaken also consisted in preparing the Polish banking sector for the implementation – under the SEPA project – of a new pan-European payment instrument SEPA Credit Transfer.

### 3.2.1. Large value interbank settlements

As at the end of 2007, the following entities participated in the SORBNET system used for zloty payment settlement: 52 banks, the NBP, the National Depository for Securities (Krajowy Depozyt Papierów Wartościowych – KDPW), and the National Clearing House (Krajowa Izba Rozliczeniowa – KIR). In 2006, an increase was observed both in turnover within the system and in the number of orders (Figure 3.1). In the fourth quarter of 2007, the SORBNET system executed a total number of 390 783 orders for the total value of PLN 10.4 billion. The average daily number of orders amounted to 6 203 and the average order amount stood at approx. PLN 26.6 million. The structure of turnover by types of operations was dominated by settlements, which resulted from the execution of customer orders (Figure 3.2), mainly interbank orders. This resulted mainly from a systematic increase in turnover of those orders in the years 2003–2007 triggered, inter alia, by the increasing volume of transactions concluded by non-residents on the market of instruments denominated in

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\(^{2}\) Regulation of the Minister of Finance of 6 July 2007 on specific conditions to be met by the information memorandum referred to in art. 39 par. 1 and in art. 42 par. 1 of the Act on Public Offering, Conditions Governing the Introduction of Financial Instruments to Organized Trading, and Public Companies (Dz.U. of 2007, No. 132, Item 916).

\(^{3}\) Governmental draft Act amending the Act on Trading in Financial Instruments and some other Acts, Form No. 64, Warsaw, 7 November 2007.

\(^{4}\) Since 19 November 2007, the following countries have been participating in the TARGET2 system: Austria, Cyprus, Lithuania, Luxembourg, Latvia, Malta, Germany and Slovenia.
zloty, which are settled in the SORBNET system through correspondent banks. Average daily turnover arising from interbank customer orders increased from PLN 32 billion in 2003 to PLN 69 billion in 2007.

As at the end of 2007, the NBP, the National Depositary for Securities and the National Clearing House as well as 35 banks participated in the SORBNET-EURO system, which forms a part of the pan-European TARGET system and serves high value cross-border and domestic payments in euro. In 2007, the value of turnover in this system increased significantly (Figure 3.3). This was particularly visible in the fourth quarter of 2007 and was related mainly to received cross-border orders. A significant increase in turnover in this period was mainly due to the implementation of the T2 system, which enabled foreign banks to avoid payment settlements in euro with intermediation of correspondent banks. This change in the way of exercising payments may result, inter alia, from lower fees for processing orders in the T2 system than in the TARGET system, extended T2 system functions, in particular in respect of liquidity management, as well as from better availability of the T2 system reflected by various forms of participation.

In the fourth quarter of 2007, the SORBNET-EURO system executed 45,389 orders for the total value of EUR 16.2 billion. The average daily number of orders amounted to 709 and the average order amount stood at approx. EUR 357.4 thousand. Cross-border orders prevailed: they constituted 91% of total turnover and 94% of the total number of orders. In the fourth quarter of 2007, cross-border orders received from 84 countries and orders sent to 34 countries were executed via the SORBNET-EURO system. The largest number of orders received came from the United Kingdom and Germany (orders from France and Germany prevailed in terms of value). The largest number of orders placed – in terms of both number and value – were sent to Germany and Italy (orders to Germany and Belgium prevailed in terms of value).

In 2007, the share of payments settled by the SORBNET-EURO and EuroELIXIR system in the total number of payments settled in euro by Polish banks increased. This results from the resignation from further settlements of euro payments with the intermediation of correspondent banks and replacing them by the above mentioned systems. In January 2007, this share amounted to 21.5%, whereas in December 2007 it stood at 24.7%.

In 2007, preparations were underway for the NBP to join the T2 system, which has operated since 19 November 2007 (the date of the transition from the TARGET system to the T2 system for the Polish banking environment was set at 19 May 2008). The preparations focused on the cooperation with entities interested in participating in the T2 system as regards preparing and conducting tests, inter alia, of the central bank and of the user infrastructure. The NBP and banks operating in Poland, which declared their participation in the technical platform SSP (Single Shared Platform), took part in these preparations. Furthermore, legal documentation of the T2 system was also prepared, as well as the evaluation of the SORBNET-EURO system, which will be an element of the T2 system operating in a domestic environment (so-called PHA, Proprietary Home Account), in terms of meeting the requirements set for systemically important payments systems.7

Joining the TARGET2 system by the NBP on 19 May 2008 will be a starting date of a four-year transition period, which should end no later than in May 2012. In this period, the NBP will be able to intermediate in settlements in the T2 system (via the SORBNET-EURO system operating in a domestic environment as a part of the T2 system). According to the decision of the ECB, central banks are obliged to abstain from mediating in settlements carried out in the SSP platform after

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5 The system dedicated to domestic and cross-border retail settlements in euro. More information about the EuroELIXIR system can be found in chapter 3.2.2.
6 Common platform to which (under the T2 system) settlements from domestic RTGS systems (Real Time Gross Settlement, payment systems in which settlements are made on a gross basis in real time) were transferred.
7 These requirements were specified in the document entitled Core Principles for Systemically Important Payment Systems, prepared in 2001 by the Committee on Payment and Settlement Systems in the Bank for International Settlements. The European System of Central Banks adopted them as mandatory guidelines for the evaluation of payment systems in member states. The document Core Principles... contains 10 Core Principles specifying the requirements to be met by payment systems recognised by the national central bank as systemically important.
Figure 3.1. Quarterly gross turnover and the number of orders processed in the SORBNET system, 2004–2007

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Gross Turnover (PLN billion)</th>
<th>Orders (thousand)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I 2004</td>
<td>4,000</td>
<td>500</td>
</tr>
<tr>
<td>II 2004</td>
<td>5,000</td>
<td>600</td>
</tr>
<tr>
<td>III 2004</td>
<td>6,000</td>
<td>700</td>
</tr>
<tr>
<td>IV 2004</td>
<td>7,000</td>
<td>800</td>
</tr>
<tr>
<td>I 2005</td>
<td>8,000</td>
<td>900</td>
</tr>
<tr>
<td>II 2005</td>
<td>9,000</td>
<td>1,000</td>
</tr>
<tr>
<td>III 2005</td>
<td>10,000</td>
<td>1,100</td>
</tr>
<tr>
<td>IV 2005</td>
<td>11,000</td>
<td>1,200</td>
</tr>
<tr>
<td>I 2006</td>
<td>12,000</td>
<td>1,300</td>
</tr>
<tr>
<td>II 2006</td>
<td>13,000</td>
<td>1,400</td>
</tr>
<tr>
<td>III 2006</td>
<td>14,000</td>
<td>1,500</td>
</tr>
<tr>
<td>IV 2006</td>
<td>15,000</td>
<td>1,600</td>
</tr>
<tr>
<td>I 2007</td>
<td>16,000</td>
<td>1,700</td>
</tr>
<tr>
<td>II 2007</td>
<td>17,000</td>
<td>1,800</td>
</tr>
<tr>
<td>III 2007</td>
<td>18,000</td>
<td>1,900</td>
</tr>
<tr>
<td>IV 2007</td>
<td>19,000</td>
<td>2,000</td>
</tr>
</tbody>
</table>

Source: NBP.

Figure 3.2. Share of main types of operations in the gross turnover structure in the SORBNET system in Q4 of 2006 and 2007

<table>
<thead>
<tr>
<th>Type of Operation</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer orders</td>
<td>55.3%</td>
<td>53.9%</td>
</tr>
<tr>
<td>Operations on the interbank market</td>
<td>10.9%</td>
<td>9.6%</td>
</tr>
<tr>
<td>Use of credit extended by the NBP</td>
<td>6.7%</td>
<td>8.2%</td>
</tr>
<tr>
<td>Purchase/buy-out of securities from the NBP</td>
<td>3%</td>
<td>2.1%</td>
</tr>
<tr>
<td>Orders placed by KDPW SA</td>
<td>1.9%</td>
<td>1.5%</td>
</tr>
<tr>
<td>Orders placed by KIR SA</td>
<td>0.9%</td>
<td>1.9%</td>
</tr>
<tr>
<td>Other</td>
<td>21.3%</td>
<td>22.4%</td>
</tr>
</tbody>
</table>

Source: NBP.

Figure 3.3. Quarterly gross turnover in the SORBNET-EURO system, 2005–2007

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Domestic Transactions (EUR million)</th>
<th>Cross-border Transactions (EUR million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>II 2005</td>
<td>2,194</td>
<td>6,321</td>
</tr>
<tr>
<td>III 2005</td>
<td>2,516</td>
<td>6,992</td>
</tr>
<tr>
<td>IV 2005</td>
<td>7,492</td>
<td>11,212</td>
</tr>
<tr>
<td>I 2006</td>
<td>7,991</td>
<td>10,311</td>
</tr>
<tr>
<td>II 2006</td>
<td>9,771</td>
<td>8,952</td>
</tr>
<tr>
<td>III 2006</td>
<td>9,401</td>
<td>11,771</td>
</tr>
<tr>
<td>IV 2006</td>
<td>10,311</td>
<td>9,401</td>
</tr>
<tr>
<td>I 2007</td>
<td>11,212</td>
<td>10,311</td>
</tr>
<tr>
<td>II 2007</td>
<td>16,223</td>
<td>11,212</td>
</tr>
</tbody>
</table>

1 Excluding the value of intraday credit. The SORBNET-EURO system started its operation on 7 March 2005.

Source: NBP.
expiry of the transition period. This will be related to the closure of the SORBNET-EURO system. The majority of payment settlements performed in the SORBNET-EURO system will be taken over by the TARGET2-NBP system managed by the NBP on the SSP platform from 19 May 2008. Following the transition period, banks using the intermediation of the NBP will have to decide whether they want to make euro settlements directly on the common technical platform or with the intermediation of another bank being a direct participant of the T2 system.

3.2.2. Retail payment systems

Interbank settlements in zloty resulting from customer orders conducted through the National Clearing House are executed in the ELIXIR system. As at the end of 2007, 54 banks (including the NBP) participated directly in the exchange of payment orders in that system. In 2007, the total number of transactions settled through the National Clearing House increased by 13.3% as compared to 2006, and turnover – by 18.7% (Figure 3.4). In the fourth quarter of 2007, the ELIXIR executed 4.45 million orders per day on average and the average order value amounted to PLN 2745.

As at the end of 2007, 31 banks (including the NBP) participated in the exchange of payment orders in the EuroELIXIR system dedicated to domestic and cross-border retail euro settlements. In the analysed period, turnover achieved in this system increased by 32.8% as compared to 2006 (Figure 3.5). In the fourth quarter of 2007, the EuroELIXIR system executed 10.3 thousand orders per day on average and the average order value amounted to EUR 4389. The highest share both in terms of turnover and the number of orders was held by incoming cross-border orders (43.7% of turnover and 59.2% of the number of orders in the fourth quarter of 2007).

Following Poland joining the T2 system, the EuroELIXIR system will continue to settle domestic and cross-border payments in euro. In the first year of Poland’s participation in the T2 system, the settlement of orders placed in the EuroELIXIR system will be made via the SORBNET-EURO system. The National Clearing House set 19 May 2009 as the date for moving the settlement of orders coming from the EuroELIXIR system directly to the T2 system (on that date the EuroELIXIR system is going to be linked to the T2 system as an external system). Both before 19 May 2009 and after this date the EuroELIXIR system will be able to settle orders from banks which have become or will become direct participants of the T2 system, as well as from banks which will remain participants of the SORBNET-EURO system, and which will move to the common technical platform in future.

In 2007, the National Clearing House carried out work to make it possible to serve pan-European credit transfers (SEPA Credit Transfer, SCT) from January 2008. SCT is one of three new payment instruments – apart from the pan-European direct debits (SEPA Direct Debit) and card payments (SEPA Cards), implemented under the Single European Payment Area. As part of preparations to service new messages, relevant changes took place in the EuroELIXIR regulations. The National Clearing House also cooperated with EBA Clearing (STEP2 STC system operator, i.e. operator of the system, in which pan-European credit transfer will be settled), inter alia, to prepare the banking environment for testing of a new payment instrument. 7 commercial banks and the NBP took part in the operating tests of the SCT system under the EuroELIXIR system, carried out at the end of 2007.

In September 2007, the NBP took a decision to join the STEP2 SCT system as a direct participant, which provided Polish banks with the possibility to participate in this system via the NBP. The participation in the STEP2 SCT via the NBP will enable banks to offer pan-European credit transfer services without being obliged to make changes to their IT systems. The interest in joining the system via the NBP from the beginning (January 2008) was demonstrated by 7 banks.

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8 The SORBNET-EURO system will be transposed into an internal NBP application. This system will be used to carry out operations which do not need to be made on the SSP platform.
9 Banks which will not join the STEP2 STC system will also be able to offer a pan-European credit transfers to their customers e.g. using the mediation of other foreign banks.
**Figure 3.4.** Quarterly gross turnover and quarterly number of orders in the ELIXIR system, 2004–2007

Note: until 30 June 2004, apart from the ELIXIR system, there was one more system in place – SYBR (system of the traditional clearing house serving net interbank settlements using paper documents). In the first half of 2004, the share of this system in the National Clearing House amounted to 1.1%.

Source: NBP.

**Figure 3.5.** Quarterly gross turnover in the EuroELIXIR system, 2005–2007

In November 2007, the National Clearing House implemented a new form of Internet electronic payments – PayByNet. This is a system providing on-line information on the processing of a direct bank transfer between the customer of an Internet shop and the shop itself, even if parties to the transaction do not have their accounts in the same bank. Furthermore, the National Clearing House intends to implement the BILX (Electronic Bill Presentment and Payment, EBPP) service in the first quarter of 2008. This service will enable Internet banking customers to process mass payments (such as payments for electricity, gas, phone or house rent) via the Internet without being obliged to use paper invoices.

**Financial intermediation agencies**

The overwhelming majority of mass payments in Poland are made in cash. The Polish Post holds the largest share in the cash mass payment market. There are also banks with a well-developed network of cash desks and agencies as well as financial intermediation agencies accepting payments to bank accounts (both companies developing network of cash desks in the whole country and entities present only on the local market) which operate on this market.

In 2007, a further increase was observed in the value and number of transactions carried out by financial intermediation agencies (Table 3.1). As at the end of 2007, the number of entities...
accepting payments to bank accounts (including natural persons who conduct business activities) amounted to 129, and the number of service desks – to 10.4 thousand.

**Table 3.1. Value and number of transactions executed by financial intermediation agencies, 2005–2007**

<table>
<thead>
<tr>
<th></th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value of transactions (in PLN million)</td>
<td>3 694.6</td>
<td>4 172.6</td>
<td>5 541.4</td>
</tr>
<tr>
<td>Number of transactions (in million)</td>
<td>31.9</td>
<td>39.3</td>
<td>46.5</td>
</tr>
</tbody>
</table>

Source: NBP.

Activities of financial intermediation agencies are not supervised by any institution. Both in previous years and in 2007, some irregularities were observed in the operation of entities on this market. In October 2007, one of the largest companies on the market of entities accepting payments to bank accounts filed for bankruptcy. Furthermore, in October 2007, the Financial Entrepreneurs Economic Chamber – organisation which associates financial intermediation agencies – suspended its activities.

In 2007, a Directive on payment services on the internal market (Payment Services Directive, PSD)\(^{10}\) was adopted. It should be implemented by the EU member states until 1 November 2009. The PSD Directive specifies the catalogue of payment services and implements a new category of suppliers of these services – payment institutions which can be recognised on the Polish market, *inter alia*, as settlement agents, issuers of payment cards as well as financial intermediation agencies. According to the directive, member states are obliged to appoint authorities competent for granting permits and for supervising payment institutions. In 2007, working consultations were carried out between the Ministry of Finance, the Polish Financial Supervision Authority and the NBP on the appointment of supervisory authorities for these institutions on the Polish market. In September 2007, a working group for payment services was established under the Council for Financial Market Development. This working group will deal with the implementation of the PSD to the Polish legal system.

**Cash back service**

In 2007, it was possible to observe an increasing interest in cash back services, which enable customers to take out small amounts of money (up to PLN 200) when paying with a payment card. This service was offered on the Polish market by three settlement agents and one organisation of payment card issuers cooperating with five banks. As at the end of July 2007, this service was available in approx. 3 thousand service and trade points having over 4 thousand POS\(^{11}\) cash terminals. The cash back service supports the network of cash dispensers, enables access to cash for customers and should contribute to the popularisation of payment cards.

### 3.3. Financial instruments market infrastructure

The financial instruments market infrastructure consists of institutions that organise trading in financial instruments and of entities which settle transactions. The following mechanisms operate in Poland: markets organised by the Warsaw Stock Exchange (GPW), markets organised by the MTS-CeTOS, the Warsaw Commodity Exchange (WGT), the Securities Register (RPW, including the SKARBNET and SEBOP systems), which services Treasury bill and money market bill transactions, the National Depository for Securities (KDPW) system, which services the market of Treasury bonds and financial instruments available on the markets organised by the Warsaw Stock Exchange and by the

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\(^{11}\) [http://www.visa.pl](http://www.visa.pl).
MTS-CeTO, and the Clearing House of the Warsaw Commodity Exchange, which settles forward transactions concluded on this exchange.

**Warsaw Stock Exchange**

Since 30 August 2007, along with the regulated stock market, the Warsaw Stock Exchange has been also managing the equity market NewConnect – an alternative trading system (ATS). Pursuant to the Act on Trading in Financial Instruments of 2005,\(^\text{12}\) ATS – multilateral trading systems for securities or money market instruments – may be established by entities conducting brokerage activities as well as by companies operating regulated markets.\(^\text{13}\)

Furthermore, in 2007 the Warsaw Stock Exchange signed a cooperation agreement with: the Ukrainian stock exchange PFTS (Перша Фондова Торговельна Система), stock exchange in Baku and with the Vietnamese stock exchange HOSE. In October 2007, it became a shareholder of the Romanian derivatives stock exchange SIBEX (the Warsaw Stock Exchange holds 1.8% of share capital of this stock exchange).

As a part of the solutions implemented to facilitate investor access to information about companies listed on the stock exchange, in May 2007 the Warsaw Stock Exchange in cooperation with PAP, set up an information service GPWInfoStrefa, and in October – an Internet service dedicated to corporate governance subjects. In December 2007, an Internet portal dedicated to foreign companies listed on the Warsaw Stock Exchange was implemented.

In June 2007, a central computer and a part of the infrastructure of the quotation system WARSET were replaced. These changes were due to security reasons, the need to assure a proper level of technical infrastructure for the participants of the Warsaw Stock Exchange, and due to increasing activity of investors.

**Regulated market**

On 4 July 2007, the Supervisory Board of the Warsaw Stock Exchange adopted new principles of corporate governance – *Best Practices for WSE Listed Companies*.\(^\text{14}\) A new document has been in force since 1 January 2008 and replaced the principles specified in the document in force prior to this date – *Principles of Good Practice in Listed Companies 2005*. A new code of corporate governance consists of the Preamble and four parts containing principles of good practices applicable to companies listed on stock exchange markets, management boards, members of supervisory boards and shareholders. Companies are obliged to prepare a report on the use of corporate governance principles and to attach it to the annual report. Furthermore, if a given corporate governance principle presented in the second, third or fourth part of the code was not applied or was incidentally violated, the issuer is obliged to publish a report containing information on the principle which was not applied, the circumstances and reasons for not applying this principle and on the way, in which the issuer intends to remedy any results due to failure to apply this principle.

As compared to the previous code, certain matters were treated more generally in *Best Practices for WSE Listed Companies*. More stress was laid on the self-regulatory character of corporate governance codes, e.g. more freedom was provided for designing the rules of procedure of the general assembly or the rules of procedure of the supervisory board by companies. However, a new code lacks some key elements comprising, *inter alia*, precise information describing the circumstances, in which the general assembly of shareholders may be called off and the related procedure,

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clarification of the role of independent supervisory board members (e.g. by specifying decisions which require their approval), and a reference to the interests and roles of stakeholders.\textsuperscript{15}

In March 2007, new principles for calculating stock exchange indices and for qualifying companies to these indices became effective. The MIDWIG index was replaced by the mWIG40 index, and the WIW index by the sWIG80 index. As of 2 April 2007, a new division of the equity market was implemented.\textsuperscript{16} Shares and rights to shares of all companies listed on this market are qualified to four new segments: MINUS 5, 5 PLUS, 50 PLUS and 250 PLUS. The MINUS 5 segment comprises shares of companies whose capitalisation in PLN does not exceed the equivalent of EUR 5 million, and the 5 PLUS segment groups companies with capitalisation up to EUR 50 million. Companies with capitalisation between EUR 50 million and EUR 250 million compose the 50 PLUS segment, whereas those whose capitalisation exceeds EUR 250 million are qualified to the 250 PLUS segment. Following the implementation of these new segments, the Warsaw Stock Exchange stopped publishing the list of companies previously composing the PRIM and the PLUS segment.

\textit{NewConnect}

On 30 August 2007, a new equity market – NewConnect – started to operate. It was established and is managed by the Warsaw Stock Exchange (operating under the existing WARSET system technological infrastructure). The NewConnect is an alternative trading system for small and medium-sized companies with a high growth potential.

The rules of procedure of the NewConnect were prepared by the Warsaw Stock Exchange and approved by the Polish Financial Supervision Authority, according to the requirements specified in the Act on Trading in Financial Instruments (Article 33). Due to the launch of the NewConnect market, a new fund was set up to secure the settlement of transactions concluded under an alternative trading system, whose management was entrusted to the National Depository for Securities.\textsuperscript{17} Furthermore, the Advisory Committee for NewConnect was established in August 2007. The role of this committee is to express opinion on any significant problems related to the development of the NewConnect market and its operation.

Companies, which want their shares to be listed on the NewConnect, have to start the cooperation with an authorised advisor, market animator or market-maker. The role of the authorised advisor, which may be an investment firm or advisory company, is to prepare the issuer for the first listing on the NewConnect, support it in meeting information requirements and to provide advisory services related to the operation on the NewConnect. The task of the market animator or market-maker (this role is played by investment firms) is to support liquidity of trading with financial instruments of a given issuer. The agreement between the company and the authorised advisor must be concluded for a period of at least one year, and with the market animator – for at least two years from the date of the first listing of stocks of a given company on the NewConnect.

Trading with companies’ stocks on the NewConnect may be executed in two trading systems. Companies may choose the order driven system with the participation of the market animator or the price driven system with the participation of the market-maker. The market animator is obliged to maintain liquidity of trading with stocks of a given company; his role is to place purchase and sale orders, giving the price and number of stocks, which it intends to purchase or sell. It does not have to be a party to the transaction. The market-maker is obliged only to quote prices, at which it is willing to purchase or sell stocks of a given company during the session (so-called quotation). In contrast to the market animator, the market-maker is always a party to the transaction. Furthermore, companies whose stocks are traded in the order driven system may decide whether they want to be

\textsuperscript{15} Stakeholders shall be understood as entities which do not have a share in the ownership, but are related to a given company or involved in its activities – customers, contractors, creditors, company employees as well as society and national governments.

\textsuperscript{16} Resolution No. 159/2007 of the Management Board of the Warsaw Stock Exchange of 7 March 2007 on the separation of the regulated market segments, principles and procedures of qualification to these segments as well as principles for calculating the market value of stock issuers, and for determining the free float number of shares.

\textsuperscript{17} More about this in chapter 3.5.
### Table 3.2. Session timetable on the NewConnect market

<table>
<thead>
<tr>
<th>Time</th>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Order driven market – continuous trading</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>hour 8.30–9.30</td>
<td>Pre-opening phase (orders are accepted for the opening of trade):</td>
<td>– orders can be put, modified and withdrawn,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>– transactions are not concluded.</td>
</tr>
<tr>
<td>hour 9.30</td>
<td>Opening phase (the opening price is determined and transactions for the opening of trade are concluded):</td>
<td>– the possibility to put, modify and withdraw orders is suspended,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>– transactions are concluded at the price equal to the opening price.</td>
</tr>
<tr>
<td>hour 9.30–16.10</td>
<td>Continuous trading phase:</td>
<td>– orders can be put, modified and withdrawn,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>– transactions are concluded.</td>
</tr>
<tr>
<td>hour 16.10–16.20</td>
<td>Pre-closing phase (orders are accepted for the closure of trade):</td>
<td>– orders can be put, modified and withdrawn,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>– transactions are not concluded.</td>
</tr>
<tr>
<td>hour 16.20</td>
<td>Closing phase (the closing price is determined and transactions for the closing of trade are concluded):</td>
<td>– the possibility to put, modify and withdraw orders is suspended,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>– transactions are concluded at the price equal to the closing price.</td>
</tr>
<tr>
<td>hour 16.20–16.30</td>
<td>Trading-at-last</td>
<td></td>
</tr>
<tr>
<td>hour 16.30–16.35</td>
<td>Pre-opening phase (orders are accepted for the next opening of trade):</td>
<td>– orders can be put, modified and withdrawn,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>– transactions are not concluded.</td>
</tr>
<tr>
<td><strong>Order driven market – single price system</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>hour 8.30–11.00</td>
<td>Pre-opening phase (orders are accepted for the opening of trade):</td>
<td>– orders can be put, modified and withdrawn,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>– transactions are not concluded.</td>
</tr>
<tr>
<td>hour 11.00–11.15</td>
<td>Intervention phase</td>
<td></td>
</tr>
<tr>
<td>hour 11.15</td>
<td>Opening phase (the opening price is determined and transactions for the opening of trade are concluded):</td>
<td>– the possibility to put, modify and withdraw orders is suspended,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>– transactions are concluded at the price equal to the opening price.</td>
</tr>
<tr>
<td>hour 11.15–11.45</td>
<td>Trading-at-last</td>
<td></td>
</tr>
<tr>
<td>hour 11.45–14.45</td>
<td>Pre-opening phase (orders are accepted for the opening of trade):</td>
<td>– orders can be put, modified and withdrawn,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>– transactions are not concluded.</td>
</tr>
<tr>
<td>hour 14.45–15.00</td>
<td>Intervention phase</td>
<td></td>
</tr>
<tr>
<td>hour 15.00</td>
<td>Opening phase (the opening price is determined and transactions for the opening of trade are concluded):</td>
<td>– the possibility to put, modify and withdraw orders is suspended,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>– transactions are concluded at the price equal to the opening price.</td>
</tr>
<tr>
<td>hour 15.00–15.30</td>
<td>Trading-at-last</td>
<td></td>
</tr>
<tr>
<td>hour 15.30–16.35</td>
<td>Pre-opening phase (orders are accepted for the next opening of trade):</td>
<td>– orders can be put, modified and withdrawn,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>– transactions are not concluded.</td>
</tr>
<tr>
<td><strong>Price driven market – continuous trading</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>hour 9.30–16.10</td>
<td>Continuous trading phase:</td>
<td>– orders are placed by market-makers (quotations),</td>
</tr>
<tr>
<td></td>
<td></td>
<td>– orders are placed by other market participants,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>– transactions are concluded.</td>
</tr>
</tbody>
</table>

quoted under the continuous trading system or under the single price system (with two auctions). The session timetable for the order driven market is the same as for the main equity market of the Warsaw Stock Exchange. Orders may be placed between 8.30 and 16.35. In the case of the price driven market, orders may be placed between 9.30 and 16.10 (Table 3.2).

*Markets organised by the MTS-CeTO company*

The MTS-CeTO company is an organiser of the MTS Poland market and of the CeTO Securities Market (RPW CeTO). In 2007, the number of participants on the MTS Poland market amounted to 32 (as compared to 29 in 2006). This number includes 14 foreign entities (as compared to 12 in the previous year). On 19 December 2007, the Institutional Segment started to operate. This is a segment, in which transactions can be concluded by banks operating on the MTS Poland market as market-makers as well as by qualified investors allowed for trading (one qualified investor existed in 2007). As at the end of 2007, 12 institutions had a status of a member of the RPW CeTO market (as compared to 11 in 2006), and 2 institutions had a status of a participant able to trade with financial instruments only on its own account (as compared to 1 in 2006).

*Warsaw Commodity Exchange*

In 2007, there were no significant changes in the operation of the Warsaw Commodity Exchange, at which currency futures contracts and options for those contracts as well as interest rate and Treasury bond futures are traded. The legal basis for trading with financial instruments on the Warsaw Commodity Exchange was unclear as the Warsaw Commodity Exchange did not have a permit for operating as a commodity exchange.18

*Securities Register*

In 2007, there were no significant changes in the operation of the Securities Register. As at the end of 2007, Treasury bill deposit accounts were held by 54 banks, the Bank Guarantee Fund and the National Depository for Securities, while 46 banks and the Bank Guarantee Fund took part in money market bill trading. Table 3.3 presents the data concerning the number and value of Treasury bill and money market bill transactions processed by the Securities Register.

**Table 3.3. Number and value of Treasury bill and money market bill transactions registered in the Securities Register, 2004–2007**

<table>
<thead>
<tr>
<th></th>
<th>Number of transactions (thousand)</th>
<th>Value of transactions (PLN billion)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treasury bills</td>
<td>105.4</td>
<td>72.8</td>
</tr>
<tr>
<td>Money market bills</td>
<td>1.5</td>
<td>2.4</td>
</tr>
</tbody>
</table>

Note:
The number of transactions relates to the secondary market.
The value of transactions comprises the primary market and the secondary market.
Source: NBP.

*National Depository for Securities*

As at the end of 2007, there were 63 direct participants of the National Depository for Securities (as compared to 60 entities in 2006): 58 domestic institutions and 5 foreign institutions. In 2007, the number of issuers registered with the National Depository for Securities increased to 454 (as compared to 361 at the end of 2006): 425 domestic issuers and 29 foreign issuers. The number of transactions registered in the National Depository for Securities, relating to all kinds of financial instruments, increased to 19.4 million (from 14.5 million in 2006). As in the previous year, the value of operations recorded in the National Depository for Securities increased significantly (Figure 3.6).

18 Comments to Article 3 of the act of 26 October 2000 on commodity exchange markets (Dz.U. 2005, No. 121, Item 1019); in: M. Dul, R. Jastrebski, Commodity exchanges. Commentary, Warsaw 2006, Dom Wydawniczy ABC.
In 2007, the National Depository for Securities started an operational link to the Estonian deposit, increasing the number of operational links with foreign central securities depositories to six. The connection with Euroclear, previously non-active, was used for the first time due to the dual-listing of a foreign company shares.

In 2007, the modification of the clearing and settlement system, assuming the establishment of a new account structure, uniform for the derivatives and spot market, continued. On both markets new account structure will consist of nine elements including, inter alia, institution’s code, ownership type, participant type and status of assets. The customer classification number (numer klasifikacyjny klienta, NKK) will be also implemented and will replace the already existing customer identification number (numer identyfikacyjny klienta, NIK) on the derivatives market. A new system is also expected to process settlement orders in real time, assure automation in dealing with the tasks carried out by the National Depository for Securities and system participants, use uniform software as well as to simplify system development and modification. Furthermore, a new system will enable placing fixed orders, i.e. orders to perform instructions with certain frequency and in a specified time. The start-up of a new clearing and settlement system of the National Depository for Securities is planned for September 2008. However, the National Depository for Securities still does not serve the function of a central counterparty (CCP), an entity that, takes over legal liabilities of settlement participants, on the Polish market.

In 2007, the National Depository for Securities started to perform clearing and settlement functions for transactions executed on the new Warsaw Stock Exchange trading platform – NewConnect – as well as to manage the guarantee fund securing the clearing of transactions concluded on this market.

**Warsaw Commodity Exchange Clearing House**

In 2007, there were no significant changes in the operation of the Warsaw Commodity Exchange Clearing House, which fulfils functions related to the settlement of futures transactions concluded on the Warsaw Commodity Exchange. In 2007, there were six clearing members operating on the Warsaw Commodity Exchange (as compared to five in the previous year), but the membership of one of these entities was suspended.
3.4. European projects to enhance the financial market infrastructure

The European market witnesses the implementation of projects which will influence the operation of the Polish financial market infrastructure. They relate to the payment system (TARGET2 and SEPA) and to the securities settlement system (European Code of Conduct for Clearing and Settlement). Moreover, preparations are also made for the solutions which may, if the decision to implement them is taken, influence the operation of entities on the Polish financial market. These are: TARGET2-Securities project and the ECB proposal concerning Eurosystem collateral management handling procedures (Collateral Central Bank Management, CCBM2).

TARGET2

The TARGET2 (T2) system was implemented on 19 November 2007. The purpose of its implementation was to replace the TARGET system. The migration of individual EU member states to the T2 system was divided into three stages: first eight countries moved settlements to the single shared platform (SSP) on 19 November 2007, further seven countries will do it until 18 February 2008 and the last group of countries, including Poland, will complete it until 19 May 2008. As in the case of the TARGET system, the countries which remain outside the euro zone may also participate in the T2 system.20 They accounted for as much as the half of the first migration group (Cyprus, Lithuania, Latvia and Malta).

In the period between November 2007 and May 2008, the TARGET and T2 systems will operate simultaneously. On 19 May 2008, the T2 system will finally replace the TARGET system, which has been used since 1999. A 4-year transition period was specified for each migration group. During this period, central banks of individual countries will be able to intermediate in accessing the T2 system (through domestic RTGS systems operating as elements of the T2 system in the domestic environment). According to the ECB decision, central banks are obliged to abstain from mediating in settlements carried out on the SSP platform after the completion of the 4-year transition period. The entities, which will decide to use intermediation services of central banks, will then have to decide whether to carry out settlements directly on the single shared platform after the transition period, or to choose another agent being a direct participant of the T2 system (domestic or foreign bank). Table 3.4 presents the migration from the TARGET system to the T2 system.

Table 3.4. Migration from the TARGET system to the TARGET2 system

<table>
<thead>
<tr>
<th>Migration group</th>
<th>Countries</th>
<th>Date of migration to T2</th>
<th>Deadline for the completion of the migration period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1</td>
<td>Austria, Cyprus, Lithuania, Luxembourg, Latvia, Malta, Germany, Slovenia</td>
<td>19 November 2007</td>
<td>18 November 2011</td>
</tr>
<tr>
<td>Group 2</td>
<td>Belgium, Finland, France, Ireland, Netherlands, Portugal, Spain</td>
<td>18 February 2008</td>
<td>17 February 2012</td>
</tr>
<tr>
<td>Group 3</td>
<td>Denmark, Estonia, Greece, Italy, Poland</td>
<td>19 May 2008</td>
<td>18 May 2012</td>
</tr>
</tbody>
</table>

Source: NBP.

In contrast to the TARGET system, the T2 system is a centralised system. Settlements are made on the single shared technical platform created by three central banks: of France (Banque de France), Germany (Deutsche Bundesbank) and Italy (Banca d’Italia). In legal terms, the T2 system consists of domestic RTGS systems managed by national central banks and the ECB, and operates in accordance with legal regulations of individual countries. The T2 system assures the same scope of core services (offered within the system mandatory modules) to all participants irrespective of their location. It also enables, by offering a choice from several additional modules, the scope of services to be adapted to the needs of participants. The T2 system is characterised by: security of processing payments, advanced mechanisms assuring the continuity of its activities, single price structure (single level of fees for domestic and cross-border transactions as well as external system transactions) and advanced liquidity management mechanisms. The following issues are also important for direct T2 system participants: higher level of automation and shorter period of processing payments.

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20 The participation in the TARGET2 system is mandatory for countries which adopted a single currency.
than in the TARGET system, lower fees than for indirect participation, potential increase in the number of customers due to an easier access to the European market as well as the possibility to mediate in accessing the T2 system.

**SEPA project – Single Euro Payments Area**

The SEPA is a project which involves 31 European countries (27 European Union member states, Iceland, Liechtenstein, Norway and Switzerland) and consists in implementing three pan-European payment instruments (SEPA Credit Transfer, SEPA Direct Debit and SEPA Cards). The implementation of the SEPA project, whose main coordinator is the European Payments Council (EPC), was planned to take effect in three stages. The period from 2004 until June 2006 was dedicated to designing standards of payment instruments and settlements. The second stage was carried out until the end of 2007 and covered the preparation of the financial market participants for using new instruments and settlement standards. The purpose of the last stage, which should be completed until the end of 2010, is to implement new instruments and to gradually replace national payment instruments with SEPA instruments. The SEPA project is implemented mainly by banks. Banks must adapt their systems to new, joint high technical standards as well as they need to start pan-European payment instruments.

According to the SEPA implementation timetable, in 2008 the SEPA Credit Transfer should be implemented and the transition period for adapting payment cards to the SEPA principles should start to operate. The implementation of the SEPA Direct Debit at the beginning of 2008 will not be possible as it requires the implementation of the directive on payment services on the internal market (Payment Services Directive, PSD) to national legislations, which is expected to take place until 1 November 2009 at the latest.

**Diagram 3.1. SEPA implementation in Poland**

1 Europay MasterCard Visa – standard of chip cards

Each SEPA member country set up organisations dealing with the SEPA implementation to the national legislative environment. In Poland, the coordination centre for the SEPA programme (SEPA Polska) operates at the Polish Bank Association (Związek Banków Polskich, ZBP). The SEPA programme is managed by the SEPA Forum Polska. In 2007, actions consisting in preparing the Polish banking environment for the application of new SEPA instruments comprised, inter alia, meetings of working groups operating under SEPA Polska (working group for credit transfers, direct debits, cards, cash and infrastructure). Furthermore, individual SEPA components were also implemented (credit transfer, direct debit, card payments, cash payments, infrastructure), the document “National SEPA Implementation and Migration Plan” was elaborated, and work was also carried out on the documents forming a part of this plan. Diagram 3.1 presents an expected SEPA implementation timetable for Poland.

**European Code of Conduct for Clearing and Settlement**

The European Code of Conduct for Clearing and Settlement was signed in November 2006 by the members of three organisations associating entities from within the infrastructure of the European financial market (the Federation of European Securities Exchanges – FESE, the European Association of Central Counterparty Clearing Houses – EACH, and the European Central Securities Depositories Association – ESDA). The code comprises three sections dedicated to: transparency of prices and provision of services (part one), enabling operational cooperation between the code signatories (part two), and separating services rendered by those institutions along with adjusting accounting principles in that respect (part three). In 2007, the deadline for the adaptation of the Code signatories to the provisions specified in part three passed (the deadline for the adaptation to part one of the Code by the Code signatories was the end of 2006, and the deadline for part two expired in mid-2007). This means that both the National Depository for Securities (as an ESDA member) and the Warsaw Stock Exchange (as an FESE member) undertook to comply with all code principles as of 1 January 2008.

In 2007, work was continued on improving the use of the Code provisions. At the beginning of 2007, the ESDA set up a working group: Price Comparability Task Force whose main task was to elaborate standards enabling ESDA to carry out the provisions on transparency of prices and services among its member institutions. The activities of this group resulted in preparing the so-called “conversion table”, which should make it easier for customers to compare services offered by the Code signatories and related fees. In April 2007, the Joint Working Group on Access & Interoperability was appointed. The activities of this group resulted in designing guidelines for operational cooperation specified in the “Access and Interoperability Guideline” (infrastructural institutions signed this document in July 2007).

To follow a progress in the implementation of the code provisions, the European Commission set up a special Monitoring Group of the Code of Conduct on Clearing and Settlement (MOG). The analysis performed by the MOG demonstrates that the Code contributed significantly to improving price transparency. In the majority of cases, the obligation to publish information on all services rendered and their prices at a website was met. However, at the beginning, information on the principles for granting rebates and examples of calculating fees for various groups of customers turned out to be insufficient. The situation in this respect should be improved by a comprehensive application of the “conversion table” proposed by the ESDA. The MOG also stated that the Code signatories use the prepared guidelines for operational cooperation and prepare for the application of part three of the code.

**TARGET2-Securities**

The TARGET2-Securities (T2S) project was presented by the European Central Bank in July 2006. The purpose of this platform is to allow euro settlements of securities transactions in central

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22 European Code of Conduct for Clearing and Settlement, 7 November 2006, FESE, EACH, ESDA.
23 More about this in: European Commission, Fourth meeting of the Monitoring Group (MOG), Brussels, 10 October 2007.
bank money.\textsuperscript{24} Settlement would be made according to the same procedures, at the same technical platform and at the same time as cash settlements in the T2S system.

In March 2007, the ECB Governing Council decided that the implementation of the T2S project is justified. Market consultations on the shape and scope of the T2S platform started in April 2007 and ended two months afterwards. These consultations were attended mainly by individual banks, bank associations and central securities depositories. Out of 57 received responses, 65\% fully supported the project, and 26\% of institutions did not agree with its assumptions either fully or partially.\textsuperscript{25} Consultations made it possible to clarify projects details (\textit{inter alia} technical and organisational solutions, scope of tasks performed by the T2S system as well as some legal aspects of the operation of a new solution), as well as made it possible to identify the areas which require further analysis. In May 2007, a working group set up by the ECB (Advisory Group) held its first meeting. Its task is to formulate T2S User Requirements, summarise opinions received from the market on these requirements as well as to give advice and clues to six technical groups working on the detailed solutions for the T2S platform. In December 2007, further consultations were started with market participants on User Requirements and methodology for analysing costs and benefits of the T2S operation.

It is planned that the work on formulating T2S User Requirements, analysing costs and benefits related to the implementation of a new solution, analysing legal base for the T2S operation, management and its relations with the environment will be completed until mid-2008. The ECB estimates that the T2S start-up will provide the financial sector with annual benefits of over EUR 225 million.\textsuperscript{26} These benefits will result, \textit{inter alia}, from the consolidation of user technical interfaces (replacing several interfaces at central securities depositories with one interface at the T2S), the reduction in personal costs related to the account servicing due to the process simplification as well as from more efficient security management by market participants. One-time T2S platform start-up costs (estimated at EUR 200 million, resulting mainly from the need to adapt operating processes and user IT systems to uniform technical requirements imposed by a new solution) may, however, discourage central securities depositories from joining this system. The T2S start-up is planned to take place in 2013.

\textbf{CCBM2}

In March 2007, the EBC Governing Council took a decision to revise Eurosystem collateral management handling procedures. Entities participating in the Eurosystem credit operations may obtain financing only from the central bank of the country, in which they have their registered office. These operations may be secured on assets qualified for this purpose both of domestic and foreign origin. Specifying foreign qualified assets as collateral for the Eurosystem monetary policy operations or under liquidity support in the TARGET system is possible owing to the use of the CCBM system (Correspondent Central Banking Model) or links between securities settlement systems qualified for this purpose.

The CCBM system operates based on internal, bilateral agreements between central banks of individual countries, and as such is characterised by a various level of automation of operations. This system was originally designed as a temporary measure until a different mechanism has been elaborated by the market. Establishing links between the securities settlement systems qualified for the purpose of the Eurosystem credit operations is the only alternative solution to the CCBM system.\textsuperscript{27} However, such links are rarely used for this purpose.

The CCBM decentralised system, which has been in use for the time being to establish collateral on foreign assets, will be replaced by a shared CCBM2 (Collateral Central Bank Management)

\textsuperscript{24} Transfer of funds related to the transaction is based on changes in balances of the central bank accounts.

\textsuperscript{25} More about this in: T2S Progress Report, Frankfort, October 2007, European Central Bank.

\textsuperscript{26} T2S Progress Report, Frankfort, October 2007, European Central Bank.

\textsuperscript{27} In the process of establishing a collateral on a cross-border basis with the use of the links between central securities depositories, the cross-border connection is between depositories, and not between central banks which may be observed in the CCBM system. More about this on the ECB website: http://www.ecb.int/paym/coll/coll/html/index.en.html.
platform. It will enable central banks in the euro area to accept securities established on assets both issued in the country and abroad, under one technical platform. It should be also compatible with the T2 system and the T2S platform. Its start-up should facilitate the cooperation between central banks and entities delivering collateral, as well as help optimise the costs related to the security transfer and improve the quality of liquidity management by these entities. A shared technical platform will enable central banks to streamline their internal procedures for accepting collateral. Uniform communication tools will make it possible for all participants of credit operations (central banks and commercial banks) to monitor the instruction flow in real time.

In April 2007, market consultations were started on the main assumptions of the CCBM2 operation. The ECB received response from seven financial market environment organisations and from seven individual entities. In general, the consultation participants agreed with the project preliminary assumptions. The results of the consultations, published in October 2007, will be used when preparing detailed technical solutions of this project.

3.5. Market participant protection systems

In 2007, there were no changes to the principles of the operation of the Bank Guarantee Fund, capital market participant protection systems, the Pension Guarantee Fund and the Credit Unions’ Savings Protection Scheme. In 2007, the act on mandatory insurances, the Insurance Guarantee Fund and the Polish Office of Communication Insurers was amended, however, this did not significantly influence the operation of the Insurance Guarantee Fund. According to statutory regulations, as of 1 January 2007 the maximum limit of funds covered by the mandatory Investor Compensation Scheme of the National Depository for Securities was increased to the PLN equivalent of EUR 19 thousand. Furthermore, due to the start-up of the NewConnect market a special fund was set up in 2007 to secure the settlement of transactions concluded under an alternative trading system.

The guarantee fund securing the clearing of transactions executed in the alternative trading system

The guarantee fund securing the clearing of transactions executed in the alternative trading system organised by the Warsaw Stock Exchange (NewConnect) is managed by the National Depository for Securities. It is composed of contributions made by the National Depository for Securities clearing participants in respect of transactions concluded on the NewConnect market. The fund consists of the basic resource and of the reserve resource. Contributions to the basic resource are updated each day, on which the National Depository for Securities performs clearing of transactions secured by the fund. The reserve resource comprises, inter alia, revenues from investing the basic resource funds.

The Fund may be used:

1) for assuring a timely payment related to an obligation of the participant of the National Depository for Securities, if due to a lack of funds on the cash account, the participant fails to fulfil its obligations arising from the settlement of transactions concluded on the NewConnect market,

2) for covering differences between the prices of securities subject to the transaction concluded on the NewConnect market, whose settlement was suspended, and their sale or purchase

29 More about market participant protection systems in previous editions of the NBP study: Financial system development in Poland.
30 Act of 24 May 2007 amending the Act on Mandatory Insurance, the Insurance Guarantee Fund and the Polish Office of Communication Insurers as well as the Act on Insurance Activity (Dz.U. 2007, No. 102, Item 693). More about the amendment to this act in chapter 2.
price; the fund is used, if the settlement of such transaction requires securities to be disposed or purchased to carry out the transaction for the benefit of the participant who did not cause the transaction settlement to be suspended.\footnote{32}

3) for granting a loan to the clearing participant, if it has no funds available to settle transactions covered by the fund due to the fact that another participant did not provide securities necessary to obtain funds for the settlement.

The funds are used in the first place from the contribution to the basic resource and from the share in the reserve resource of the participant which does not fulfil any duties arising from the transaction settlement. In justified cases, the Management Board of the National Depository for Securities may decide to use the fund in the amount exceeding the contribution made by this participant.

3.6. Institutions that enhance information transparency

*Credit Information Bureau*

The main activities of the Credit Information Bureau (*Biuro Informacji Kredytowej, BIK*) include the collection, processing and distribution of data regarding credit history of individual customers of banks and credit unions in the form of credit reports. Information owned by the Credit Information Bureau relates to all credit accounts which are or were maintained by banks or credit unions – both those which were paid in a timely manner as well as to those which were not paid on time. The possibility to create a positive debt history by the Credit Information Bureau makes it easier for banks to take a decision on granting credit. For customers which pay their liabilities in a timely manner (approx. 95% of credit histories in the Credit Information Bureau’s database is positive) this may mean that they are granted a loan on more favourable terms. The data gathered by the Credit Information Bureau may also be useful to estimate risk parameters under the internal rating method applied by banks for calculating capital requirements due to credit risk.

In 2007, the number of entities participating in the information exchange system increased – the Credit Information Bureau cooperated with 49 commercial banks (43 in the previous year) and with the National Credit Union. The number of credit reports made available by the Credit Information Bureau increased in 2007 by 32% as compared to the previous year, and more scoring eval-

### Figure 3.7. Number of credit reports and scoring evaluations made available by the Credit Information Bureau, 2001–2007

<table>
<thead>
<tr>
<th>Year</th>
<th>Credit reports (million)</th>
<th>Scoring evaluations (million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>0.4</td>
<td>2.2</td>
</tr>
<tr>
<td>2002</td>
<td>4.2</td>
<td>9.1</td>
</tr>
<tr>
<td>2003</td>
<td>6.3</td>
<td>11.7</td>
</tr>
<tr>
<td>2004</td>
<td>0.5</td>
<td>2.2</td>
</tr>
<tr>
<td>2005</td>
<td>4.3</td>
<td>15.5</td>
</tr>
<tr>
<td>2006</td>
<td>4.3</td>
<td>11.7</td>
</tr>
<tr>
<td>2007</td>
<td>5.7</td>
<td>35.5</td>
</tr>
</tbody>
</table>

Source: BIK
Figure 3.8. Types of credit accounts in the information system of the Credit Information Bureau as at the end of 2007

Source: BIK.

Institutions evaluating investment risk of entities (rating agencies)

Only one rating agency was registered in Poland, namely Fitch Polska. In 2007, it assigned ratings to two banks, three Polish cities, two insurance companies and four bond issues (including one issue of revenue bonds). As at the end of 2007, 5 bond issues (including two issues of revenue bonds) as well as the following entities: 12 banks, 3 voivodeships, 17 cities, 5 companies (including one leasing company), 2 insurance companies and the Republic of Poland as a country had a rating assigned by Fitch Polska.
4.1. Banks

In 2007, the development of the banking sector in Poland was supported by favourable macroeconomic conditions and a related improvement of the financial standing of enterprises, as well as by the economic situation of households. The growth rate of assets of the banking sector\(^1\) was again much higher than the economic growth rate. As a result, the significance of banks for the economy, measured as a relation of banking sector assets to GDP, increased from 65.1% in 2006 to 68.1% in 2007. The average level of this ratio for other four countries classified as the CEC-5 group members (along with Poland) amounted in 2007 to 104.4% (Slovenia: 126.6%, Czech Republic: 105.4%, Hungary: 96.0%, Slovakia: 89.7%).

The most important reason for an increase in assets was an increase in household loans, and in particular in mortgage loans. A high growth rate of lending activity was also influenced by a fast growth rate of the enterprise sector debt to banks. A fast development observed in the credit market caused a significant change in the banking sector balance sheet. In the second half of the year, for the first time in history, the value of loans granted to non-financial entities exceeded the value of their deposits. For some banks, it meant a challenge for future financing of lending activity.

As a result of the fast credit growth banks received higher revenues from interest and commission, which along with a moderate increase in operating costs and remaining relatively low balance of provisions, enabled them to generate very good financial results. The need to finance rapidly developing credit activity was one of the key reasons for fierce competition in the banking sector as regards retail deposit products. A significant increase in bank deposits was observed in the first half of 2007. Due to the crisis on the US mortgage credit market and resulting turmoil on world financial markets bank deposits became perceived as a safer way of investing money than alternative forms such as participation units of investment funds. Due to the failing stock prices on the Warsaw Stock Exchange a part of investors withdrew their money from investment funds as well as from their direct investments on the stock exchange and deposited it in banks which competed more and more for funds and increased interest.

In 2007, a package of resolutions was adopted to enable the transposition of Directive 2006/48/EC and Directive 2006/49/EC, jointly referred to as the CRD Directive, to the Polish law. It meant for banks that the preparations for the application of the directive provisions, taking into account the specific character of the Polish banking sector, were completed as of 1 January 2008. Furthermore, on 13 March 2007, the Commission for Banking Supervision adopted the resolution on determining liquidity standards mandatory for banks.\(^3\) The resolution provisions came into force on 1 January 2008, but already in 2007 banks started to work on the fulfilment of its require-

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\(^1\) If not otherwise indicated, data on the banking sector for 2007 were taken from the reporting database on 2 September 2008. Data for previous years may differ from the data given in the previous report as it takes into account adjustments submitted by banks.

\(^2\) Banking sector assets do not comprise assets of banks which do not perform business activities or which are in liquidation.

ments,\textsuperscript{4} inter alia, as regards measuring liquidity risk by means of supervisory short-term and long-term liquidity measures, payment liquidity measures and by monitoring mismatch of payment terms.

Along with the preparations for the fulfilment of the obligations arising from the CRD directive and the resolution on liquidity standards, banks also had to adapt the procedures for selling financial instruments to the MiFID directive. Furthermore, they continued their work on the implementation of new reporting packages, i.e. the financial reporting package – FINREP – and the capital adequacy package – COREP.

### 4.1.1. Evolution of the banking sector: size and structure

In 2007, the growth rate of banking sector assets increased to 16.6\% (as compared to 16.1\% in 2006), and as at the end of December assets amounted to PLN 794.95 billion, including commercial banks’ assets amounting to PLN 746.0 billion and cooperative banks’ assets amounting to PLN 48.9 billion (Figure 4.1.1). As at the end of 2007, the share held by assets of commercial banks and of cooperative banks in total banking sector assets did not change as compared to 2006 and amounted to 93.8\% and 6.2\% respectively. Commercial banks developed slightly faster than cooperative banks, which means that the trend observed in the recent years changed. A high growth rate of assets was observed in the case of smaller commercial banks which have started their operation on the Polish market quite recently. Approximately half of the growth in the banking sector assets was due to a development in credit activity by ten largest commercial banks.

As at the end of December 2007, the number of commercial banks conducting operational activity in Poland increased to 64 entities, including 50 domestic banks and 14 branches of credit institutions. The number of commercial banks with major Polish shareholding decreased by one entity (to 6 entities) due to changes in the capital structure. In November 2007, the Commission for Banking Supervision gave its approval for the exercise of the right to over 75\% of votes at the General Assembly of Bank Współpracy Europejskiej SA to a foreign company Innova Financial Holding S.a.r.l.\textsuperscript{5} However, the number of entities composing the group of domestic banks with a major foreign shareholding did not change as a merger of BISE SA and DnB Nord Polska SA was completed, and as a result of this merger balance sheet items of BISE SA were included in balance sheet items of DnB Nord Polska SA. The number of branches of credit institutions changed as operating activities were started by three entities: Banco Mais SA (SA), Branch in Poland, Caja de Ahorros y Pensiones de Barcelona la Caixa, Branch in Poland and Elavon Financial Services Ltd.

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure4.1.1.png}
\caption{Banking sector assets, 2000–2007}
\end{figure}

\begin{itemize}
\item Assets of commercial banks – left-hand scale
\item Growth rate – commercial banks – right-hand scale
\item Assets of cooperative banks – left-hand scale
\item Growth rate – cooperative banks – right-hand scale
\end{itemize}

Source: NBP.

\textsuperscript{4} See more about the described resolutions in chapter 2.1.

\textsuperscript{5} In December 2007, due to the purchase of shares in Bank Współpracy Europejskiej SA, Innova Financial Holding S.a.r.l. became the owner of 90.2\% of its shares.
Table 4.1.1. Number of banks and ownership structure of the banking sector, 2000–2007

<table>
<thead>
<tr>
<th>Number of banks</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Commercial banks which conduct operating activities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Domestic banks</td>
<td>73</td>
<td>69</td>
<td>59</td>
<td>58</td>
<td>57</td>
<td>61</td>
<td>63</td>
<td>64</td>
</tr>
<tr>
<td>1.1. with major state shareholding</td>
<td>73</td>
<td>69</td>
<td>59</td>
<td>58</td>
<td>54</td>
<td>54</td>
<td>51</td>
<td>50</td>
</tr>
<tr>
<td>1.1.1. with major state shareholding:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polish equity</td>
<td>20</td>
<td>16</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Foreign equity</td>
<td>46</td>
<td>46</td>
<td>45</td>
<td>46</td>
<td>41</td>
<td>40</td>
<td>39</td>
<td>40</td>
</tr>
<tr>
<td>1.2. Branches of credit institutions</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>3</td>
<td>7</td>
<td>12</td>
<td>14</td>
</tr>
<tr>
<td>2. Commercial banks which do not conduct operating activities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Cooperative banks</td>
<td>754</td>
<td>713</td>
<td>667</td>
<td>660</td>
<td>596</td>
<td>588</td>
<td>584</td>
<td>581</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Share in total banking sector assets (%)</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Commercial banks which conduct operating activities (including branches of credit institutions)</td>
<td>95.8</td>
<td>95.4</td>
<td>95.0</td>
<td>94.8</td>
<td>94.7</td>
<td>94.2</td>
<td>93.8</td>
<td>93.8</td>
</tr>
<tr>
<td>1.1. with major state shareholding</td>
<td>22.9</td>
<td>23.5</td>
<td>25.1</td>
<td>24.4</td>
<td>20.5</td>
<td>20.3</td>
<td>19.8</td>
<td>18.3</td>
</tr>
<tr>
<td>1.2. with major private shareholding:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polish equity</td>
<td>3.4</td>
<td>3.2</td>
<td>2.5</td>
<td>2.6</td>
<td>6.6</td>
<td>4.0</td>
<td>4.3</td>
<td>4.6</td>
</tr>
<tr>
<td>Foreign equity (including branches of credit institutions)</td>
<td>69.5</td>
<td>68.7</td>
<td>67.4</td>
<td>67.8</td>
<td>67.6</td>
<td>70.0</td>
<td>69.6</td>
<td>70.9</td>
</tr>
<tr>
<td>2. Cooperative banks</td>
<td>4.2</td>
<td>4.6</td>
<td>5.0</td>
<td>5.2</td>
<td>5.3</td>
<td>5.8</td>
<td>6.2</td>
<td>6.2</td>
</tr>
</tbody>
</table>

Source: NBP.

(sp. z o.o.), Branch in Poland, whereas one branch ended its activities (Jyske Bank A/S (SA), Branch in Poland).

A significant event for the banking sector was the consent of the Commission for Banking Supervision for the division of Bank BPH SA. This transaction resulted from taking over the HVB Group (at that time a strategic investor of Bank BPH) by the UniCredit Group (strategic investor of Bank Pekao SA) in 2005 and from the agreement reached between UniCredit and the Ministry of State Treasury in April 2006. Bank Pekao SA took over a part of assets held by Bank BPH SA and its share capital was increased. At the end of November, the division was registered by court, and as a result, the major part of business activities of Bank BPH SA was taken over by Bank BPH SA. Assets of Bank BPH SA decreased from PLN 62.6 billion to PLN 12.9 billion, and assets of Bank Pekao increased from PLN 70.5 billion to PLN 123.3 billion. Thus, Bank Pekao SA became the largest bank in Poland in terms of its share in the banking sector assets, leaving behind PKO Bank Polski SA. UniCredit remains the main shareholder of Bank BPH SA (71.03% of share capital), but based on the agreement concluded with GE Money Bank SA, the latter will acquire a shareholding in Bank BPH SA (up to 66%) in 2008 and will become its strategic investor.

Changes in the structure of cooperative banks resulted from the obligation to achieve minimum equity requirements and consisted in the consolidation of cooperative banks owned by the same associating banks. As a result, the number of cooperative banks decreased by three entities.

6 Until the end of 2007, cooperative banks were obliged to increase their equity to at least EUR 1 million. More about capital requirements of cooperative banks in: Financial standing of banks in 2006 – Synthesis. Warsaw 2007, Commission for Banking Supervision, p. 22.
All cooperative banks were still associated in three associating banks, except for Krakowski Bank Spółdzielczy w Krakowie, which has been standing alone for several years.

Ownership structure

Ownership changes, which took place in the banking sector in 2007, were mainly related to banks with major foreign shareholding. However, they did not have a significant impact on the ownership structure of the whole banking sector. As at the end of December 2007, operating activities were performed by 50 domestic commercial banks (Table 4.1). The State Treasury remained in control of four banks: directly – PKO BP SA (51.55% of share capital) and BGK (100% of share capital), and indirectly – Bank Pocztowy SA and Bank Ochrony Środowiska SA. Total share of banks controlled by the State Treasury in the banking sector assets amounted to 18.3% and was slightly lower than in 2006.

The share of banks with major foreign shareholding (including branches of credit institutions) in the banking sector assets slightly increased (by 1.3 p.p.) and amounted to 70.9% as at the end of the year. The main reason behind this increase was growing assets of credit institutions, and in particular of one entity. The share of assets of credit institutions’ branches in total banking sector assets increased from 3.1% to 4.3%. Similar to previous years, banks with major foreign shareholding had the largest share in deposits of the non-financial sector entities (67.5%) and in loans granted to this sector (70.1%).

A large share of banks with major foreign shareholding in the banking sector assets is characteristic for almost all Central and Eastern European countries (Figure 4.1.2). This is a result of the transformation of banking sectors in these countries which started in mid-1990’s and caused an increase in the share of banks with major private shareholding (in particular of foreign origin) in the banking sector assets dominated by state equity. After the end of the transformation in Central and Eastern Europe, the ownership structure of banking sectors became more stable and the share of foreign investors in banks operating in this region has not changed significantly in the recent years. A development of cross-border banking activities in respect of branches of credit institutions is observed in the EU countries, as a result of which their share in the domestic banking sector assets has been increasing slowly.

Figure 4.1.2. The share of assets of banks with major foreign shareholding in the banking sector assets in CEC-5 countries, 2002–2007

![Figure 4.1.2](image_url)

Note: CEC-5 – Czech Republic, Poland, Slovakia, Slovenia and Hungary.
Source: NBP, central banks of Czech Republic, Slovakia, Slovenia and Hungary.

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7 I.e. in Bank Polskiej Spółdzielczości SA in Warsaw (350 cooperative banks), Gospodarczy Bank Wielkopolski SA in Poznań (152) and in Mazowiecki Bank Regionalny SA in Warsaw (79).

**Network of branches and employment**

In 2007, a further increase was observed in the number of banking branches and employment in the sector (Figure 4.1.3). Banks adjusted infrastructure and staff resources to the needs arising from the demand for financial products.

The number of commercial bank branches increased to 4,136 and the number of sub-branches and customer service offices increased to 5,262. Banks continued the modernisation of their distribution network to acquire new customer groups and to improve cost efficiency. Less cost-intensive branches were set up – they specialise in the sale of certain products – so-called credit centres offering only consumer credit. Internet banking is growing as well. Moreover, the number of banks which established separate trademarks for the sale of mortgage products under their operation increased. Franchise branches also developed fast.9

The increasing scale of immigration of Polish citizens in the recent years was the main reason for more interest demonstrated by some banks in offering their products abroad, in particular in Great Britain, Ireland and Germany. One bank opened its branches also in the Czech Republic and Slovakia.

In 2007, employment in the banking sector grew (by 5.8%) faster than in the previous year (3.3%) and took place mainly in smaller commercial banks (Figure 4.1.4). Employment in

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**Figure 4.1.3. Number of branches and other domestic field branches of commercial banks, 2000–2007**

![Diagram showing the number of branches and other domestic field branches of commercial banks, 2000–2007](image)

Source: NBP.

**Figure 4.1.4. Bank employees (excluding foreign branches), 2000–2007**

![Diagram showing bank employees (excluding foreign branches), 2000–2007](image)

Note: data on commercial banks including branches of credit institutions.

Source: NBP.

---

cooperative banks grew a bit more slowly (by 4.2%) than in commercial banks (by 6.2%). At the same time, employment grew faster in central offices than in branches which could be related to the preparations held in banks for the implementation of the New Capital Accord and well as of financial reporting standards. The number of employee per branch on average did not change significantly (10.1 in 2007, 10.5 in 2006). It may be expected that the growth rate of employment in the banking sector will remain at a similar level in 2008. This will be due to the planned start-up of new banks’ activities in Poland (Allianz Bank Polska SA and Alior Bank SA), favourable macroeconomic conditions and growing interest in financial products, in particular by households.

4.1.2. Changes in the structure of bank assets

Changes to the structure of assets of the banking sector, which took place in 2007, resulted mainly from a considerable increase in receivables from the non-financial sector. As at the end of the year, receivables from entities in this sector amounted to PLN 421.8 billion and accounted for over a half (53.0%) of bank assets (Figure 4.1.5). The growth rate of the non-financial sector debt was almost three times higher than the growth rate of deposits from this sector. As a result, for the first time in the history of the Polish banking sector, the value of loans taken by the Polish non-financial sector exceeded the value of deposits of this sector (Figure 4.1.6). A fast growth rate of receivables from the non-financial sector (34.0%) was due to rapidly growing household debt, in

Figure 4.1.5. Structure of commercial and cooperative bank assets, 2006–2007

<table>
<thead>
<tr>
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<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial banks</td>
<td>3.5</td>
<td>4.7</td>
<td>0.5</td>
<td>0.7</td>
<td>3.2</td>
<td>4.2</td>
</tr>
<tr>
<td>Cooperative banks</td>
<td>21.9</td>
<td>17.8</td>
<td>3.6</td>
<td>3.5</td>
<td>20.9</td>
<td>17.2</td>
</tr>
<tr>
<td>Banking sector</td>
<td>45.7</td>
<td>52.9</td>
<td>53.1</td>
<td>56.1</td>
<td>46.3</td>
<td>53.1</td>
</tr>
</tbody>
</table>

Source: NBP.

Figure 4.1.6. Loans and deposits of the non-financial sector, 2000–2007

<table>
<thead>
<tr>
<th></th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loans</td>
<td>150</td>
<td>165</td>
<td>180</td>
<td>200</td>
<td>230</td>
<td>250</td>
<td>280</td>
<td>310</td>
</tr>
<tr>
<td>Deposits</td>
<td>100</td>
<td>110</td>
<td>120</td>
<td>130</td>
<td>150</td>
<td>170</td>
<td>200</td>
<td>230</td>
</tr>
</tbody>
</table>

Note: data on domestic entities operating in the non-financial sector.
Source: NBP.
particular the growth rate of mortgage loans. Due to a higher growth rate of receivables from households than of receivables from enterprises observed in the recent years, the difference between them increased again as at the end of the year (Figure 4.1.7).

Receivables from other sectors declined, which was reflected by the banking sector assets structure. A decrease in receivables from the financial sector resulted mainly from a gradual decline in one-day deposits in foreign banks (usually in dominant entities). As at the end of December, they amounted to PLN 22.9 billion as compared to PLN 49.8 billion as at the end of December 2006. At the same time, a negative growth rate of receivables from governmental and self-governmental institutions arose was due to a decrease in receivables from social insurance funds.

Due to a small amount of money market bills held by banks as at the end of the year, the share of securities in the banking sector balance sheet decreased as compared to the end of 2006. The debt securities portfolio was still dominated by Polish Treasury bills, in particular by Treasury bonds whose share amounted to 69.3% as at the end of the year. In 2007, the value of Treasury bonds in the bank portfolio slightly increased (by PLN 2.5 billion) and amounted to PLN 92.9 billion as at the end of the year.

Commercial bank assets amounted to 93.8% of the banking sector assets. Due to this fact the structure of the banking sector assets was determined by the structure of commercial bank assets, and tendencies relating to individual balance sheet categories of the banking sector were reflected by tendencies observed in the balance sheet of commercial banks (Table 4.1.2).

Receivables from the non-financial sector increased both in the case of cooperative banks and of commercial banks (Table 4.1.3). The growth of loans to the entities operating in this sector was, however, lower for cooperative banks (receivables increased by 22.8%) than for commercial banks (34.9%). In contrast to commercial banks, receivables of cooperative banks from the non-financial sector and from the general government increased (by PLN 1.1 billion and by PLN 0.2 billion respectively). The value of securities held by cooperative banks decreased by PLN 0.2 billion and, as at the end of the year, amounted to PLN 2.6 billion. Similar to commercial banks, this was due to a decline in the value of money market bills in the bank portfolio.

As in previous years, the main reason for securitization transactions conducted by commercial banks in 2007 was the willingness to improve the capital adequacy. Under these transactions, banks sold irregular claims to securitised funds. Banks were still refused the possibility to recognise a loss on the sale of claims as tax-deductible costs in the case of the disposal of claims to a debt enforcement company. Therefore, instead of buying claims directly from banks, debt collection companies set up own investment fund organisations managing securitised funds to which banks sold claims. Securitisation in Poland continued to be used much less frequently than in other EU counties as an alternative method of obtaining funds („releasing” capital) by means
Financial institutions

Table 4.1.2. Selected assets of commercial banks, 2004–2007 (PLN billion)

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receivables form the non-financial sector</td>
<td>209.5</td>
<td>230.3</td>
<td>292.3</td>
<td>394.3</td>
</tr>
<tr>
<td>Receivables form the financial sector</td>
<td>99.0</td>
<td>111.8</td>
<td>121.8</td>
<td>111.4</td>
</tr>
<tr>
<td>Receivables form the general government sector</td>
<td>19.9</td>
<td>19.5</td>
<td>21.2</td>
<td>19.7</td>
</tr>
<tr>
<td>Securities, including:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>– Treasury bonds</td>
<td>114.3</td>
<td>132.2</td>
<td>139.7</td>
<td>133.0</td>
</tr>
<tr>
<td>– Treasury bills</td>
<td>65.4</td>
<td>79.0</td>
<td>89.5</td>
<td>92.5</td>
</tr>
<tr>
<td>– money market bills</td>
<td>22.2</td>
<td>12.7</td>
<td>11.0</td>
<td>10.2</td>
</tr>
<tr>
<td>Source: NBP.</td>
<td></td>
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</tbody>
</table>

Table 4.1.3. Selected assets of cooperative banks, 2004–2007 (PLN billion)

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receivables form the non-financial sector</td>
<td>16.6</td>
<td>18.3</td>
<td>22.4</td>
<td>27.5</td>
</tr>
<tr>
<td>Receivables form the financial sector</td>
<td>7.6</td>
<td>10.4</td>
<td>12.7</td>
<td>13.8</td>
</tr>
<tr>
<td>Receivables form the general government sector</td>
<td>0.8</td>
<td>0.9</td>
<td>1.5</td>
<td>1.7</td>
</tr>
<tr>
<td>Securities, including:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>– Treasury bonds</td>
<td>1.2</td>
<td>1.7</td>
<td>2.8</td>
<td>2.6</td>
</tr>
<tr>
<td>– Treasury bills</td>
<td>0.2</td>
<td>0.2</td>
<td>0.4</td>
<td>0.4</td>
</tr>
<tr>
<td>– money market bills</td>
<td>0.2</td>
<td>0.9</td>
<td>1.1</td>
<td>0.8</td>
</tr>
<tr>
<td>Source: NBP.</td>
<td></td>
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</tbody>
</table>

of issuing securities based on assets separated from the bank balance sheet and separated into tranches.10

Loans to the non-financial sector

Loans to the non-financial sector entities have the largest share in the structure of the banking sector assets in Poland and in the majority of the EU countries. Therefore, the main focus was laid on their analysis.

In 2007, the growth rate of loans was observed both in the household sector and in the enterprise sector (Table 4.1.4). Debt of households due to loans increased by 38.6%, and of enterprises by 24.1%. As at the end of the year, it amounted to PLN 254.2 billion and PLN 171.7 billion respectively.

The highest growth rate was still observed for mortgage-backed loans, whereas a significant acceleration in their growth as compared to 2006 took place in the enterprise sector. This resulted partly from the growing manufacturing capacity of enterprises as well as from an increase in loans to developers. The share of mortgage-backed loans in the loan portfolio of the non-financial sector entities increased and amounted to 41.4% as at the end of the year (Figure 4.1.8). Similar to 2006, debt on credit card accounts grew fast, in particular in the household sector. A high growth rate was also observed in the case of overdrafts, in particular in the enterprise sector.

Loans to households

A high growth rate of loans in the household sector was mainly due to a constantly high demand for residential loans. As at the end of 2007, household debt due to loans amounted to

Table 4.1.4. Changes in selected types of loans for the non-financial sector, 2005–2007 (%)

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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Authorized overdraft</td>
<td>18.9</td>
<td>16.8</td>
<td>31.1</td>
<td>4.3</td>
<td>4.6</td>
<td>16.5</td>
<td>13.2</td>
<td>12.4</td>
<td>26.2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Investment loans</td>
<td>3.8</td>
<td>10.4</td>
<td>9.5</td>
<td>11.6</td>
<td>18.8</td>
<td>21.0</td>
<td>5.7</td>
<td>12.5</td>
<td>12.7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Real property loans</td>
<td>16.8</td>
<td>28.4</td>
<td>61.4</td>
<td>40.6</td>
<td>54.8</td>
<td>50.8</td>
<td>34.3</td>
<td>48.6</td>
<td>53.2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>– including for residential purposes</td>
<td>6.1</td>
<td>16.4</td>
<td>45.2</td>
<td>40.9</td>
<td>54.3</td>
<td>50.6</td>
<td>34.7</td>
<td>49.1</td>
<td>50.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Credit card lending</td>
<td>96.0</td>
<td>15.6</td>
<td>-0.3</td>
<td>45.2</td>
<td>37.3</td>
<td>53.0</td>
<td>44.7</td>
<td>36.1</td>
<td>50.7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other loans and lending(^1)</td>
<td>-9.3</td>
<td>6.7</td>
<td>12.2</td>
<td>22.5</td>
<td>25.5</td>
<td>34.3</td>
<td>5.7</td>
<td>24.0</td>
<td>32.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>3.6</td>
<td>14.1</td>
<td>24.1</td>
<td>24.1</td>
<td>34.5</td>
<td>38.6</td>
<td>13.5</td>
<td>24.9</td>
<td>32.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mortgage-backed loans(^2)</td>
<td>5.7</td>
<td>17.3</td>
<td>25.0</td>
<td>32.2</td>
<td>52.6</td>
<td>46.6</td>
<td>13.4</td>
<td>37.5</td>
<td>38.6</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1 Mainly consumer loans, including loans within installment sales systems. The category does not include, inter alia, discount loans, export loans and securities purchase loans.
2 Included in total loans.

Source: NBP.

PLN 117.7 billion. The growth rate of residential loans was slightly lower than in 2006 (50.6% in 2007 as compared to 54.3%).\(^1\) However, despite this fact it was much higher than the average for the euro zone and for our region (Figure 4.1.9). The ratio of residential loans to GDP in Poland increased from 7.4% in 2006 to 10.1% in 2007, but it remained approx. five times lower than the average for the EU.

The number of serviced residential loans doubled in the years 2004–2007. As at the end of 2007, the number of these agreements amounted to 1.1 million.\(^2\) The average residential loan amount granted by banks also doubled (as at the end of 2007, it amounted to approx. PLN 180 thousand). In 2007 alone banks granted over 311 thousand of such loans. The share of refinancing loans, i.e. loans taken by households for the repayment of previously taken residential loans to reduce the cost of financing, grew fast in the bank portfolio. It is estimated that over half of residential loans granted in 2007 was dedicated to this purpose. A fast development resulted in

\(^1\) Due to appreciation of PLN to CHF; a nominal increase in residential credits was much higher than in 2006. More about this in: Report on the stability of the financial system, Warsaw 2008, NBP.
\(^2\) Polish Bank Association data.
Figure 4.1.9. The growth rate of residential and consumer loans in selected EU countries, 2006–2007

Source: NBP, ECB, central banks of Czech Republic, Hungary and Slovakia.

Figure 4.1.10. Loans to households by original maturity, 2005–2007

Note: Left half-open intervals.
Source: NBP.

Figure 4.1.11. Currency structure and quarterly growth rate of residential loans to households in Poland, 2004–2007

Note: data on domestic households.
Source: NBP.
the growing share of residential loans in the structure of household loans each year, and as at the end of 2007 amounted to 46.3%. This also resulted in an increase in the share of long-term receivables (with maturity over 10 years) in the household loan maturity structure (Figure 4.1.10).

A higher growth rate was still observed for loans denominated in PLN (Figure 4.1.11). This trend started in mid-2006, *inter alia*, due to the implementation of the Recommendation 5 and due to a decreasing difference between interest rates in Poland and Switzerland. As a result, the share of loans in PLN in the loan currency structure in 2007 increased (from 72% to 75.3%). More restrictive monetary policy measures observed in Poland since mid-2007, which meant a repeated increase in the interest rate disparity between Poland and Switzerland, as well as an increase in the number of banks providing residential loans in CHF, will probably stimulate further increase in demand for residential loans denominated in CHF. As at the end of 2007, these loans amounted to 95.3% of all currency loans granted to households for residential purposes (Figure 4.1.12).

In the coming years it will be difficult to retain the present growth rate of residential loans in Poland. The reason is that house prices are already very high, and despite the fact that they grew in 2007 more slowly than in the previous year, the purchasing power of borrowers remained at low level. Furthermore, more restrictive credit policy observed in the case of some banks in the second half of 2007 may contribute to lower interest in the purchase of real estates (in particular by foreign investors). Retaining a high growth rate of residential loans will not be supported by: an increasing cost of credit, arising, *inter alia*, from growing interest rates in Poland, a structural change in the banking sector, in particular an increase in the value of loans to the non-financial sector higher than an increase in deposits, as well as by an increase in cost of financing by banks due to the turmoil on the world financial markets in 2007.

The growth rate of consumer loans was slightly higher than in 2006, in particular in the segment of overdrafts (16.5% in 2007 as compared to 4.6% in 2006) and in the segment of credit card loans (53.0% in 2007 as compared to 37.3% in 2006). This is due to a strong marketing campaign focused on credit cards as well as on cross-selling. Banks often encouraged customers to conclude a credit card agreement when selling other financial products such as residential loan. As in previous years, debt of households due to consumer loans grew more slowly than debt due

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14 Senior Loan Officer Opinion Survey on Bank Lending Practices and Credit Conditions – IV quarter 2007, Warsaw 2007, NBP.

Financial institutions

Figure 4.1.13. Ratio of consumer loans to residential loans in Poland and in the euro zone, 2004–2007 (%)

![Graph showing ratio of consumer loans to residential loans in Poland and in the euro zone, 2004–2007.]

Source: NBP, ECB.

Loans to enterprises

In 2007, there was a rapid growth in loans to enterprises. As at the end of December, debt of enterprises due to bank loans amounted to PLN 171.7 billion and was by 24.1% higher than as at the end of 2006. This was accompanied by a lower growth rate of deposits held by enterprises. For the first time since 2000 the growth rate of loans granted to this sector exceeded that of deposits. This was accompanied by an increasing nominal interest on loans (Figure 4.1.14).

A high growth rate of loans to enterprises was supported by favourable conditions for economic growth. Due to a high utilisation of the production capacity, enterprises took loans to finance their activities. The highest increase in debt was observed for residential loans (61.4%) and for overdrafts (31.1%). Their value as at the end of the year amounted to PLN 34.3 billion and PLN 39.7 billion respectively. These two loan categories accounted, in total, for 67% of the increase in the value of loans to enterprises in 2007. A lower increase (i.e. by 9.5%) was observed for loans taken to finance investment activities. As at the end of the year, they amounted to PLN 46.7 billion.

Figure 4.1.14. Loans to enterprises and their average weighted nominal interest, 2004–2007

![Graph showing loans to enterprises and their average weighted nominal interest, 2004–2007.]

Source: NBP.

16 In the fourth quarter 2007, the production capacity utilisation ratio amounted to 84.1% and was by 1.5 p.p. higher than in the previous year. More about this in: Information on the condition of the enterprise sector, with particular consideration of economic prosperity in the first quarter of 2008, Warsaw 2008, NBP, p. 40.
A fast growth rate of residential loans, along with high expenditures on tangible fixed assets, meant that enterprises intended to extend their production capacity by acquiring new real estates to retain the present competitive position.\footnote{Report on inflation. February 2008, Warsaw 2008, NBP, p. 24.} Despite a fast increase in residential loans, the maturity structure of receivables from enterprises was still dominated by receivables with maturity under one year (Figure 4.1.15).

In the coming years, the growth rate of loans to enterprises will be determined mainly by: economic growth outlook, financial standing of enterprises as well as by possibilities and cost of financing of lending activities by banks. Due to the deterioration of the capital position, banks may intend to increase loan margins for enterprises (which was visible already in the third quarter of 2007\footnote{Senior Loan Officer Opinion Survey on Bank Lending Practices and Credit Conditions – IV quarter 2007, Warsaw 2007, NBP.}, which, in turn, may lead to a decline in demand for loans. Another factor influencing the growth rate of loans to enterprises will be the implementation of new principles of the capital adequacy account due to credit and operating risk (New Capital Accord), which provide for lower risk weights for entities from the SME sector.\footnote{More about this in: Financial system development in Poland in 2006, Warsaw 2008, NBP, chapter 4.1.} This may have a positive impact on the development of the banking offer and may contribute to the easing of the credit policy towards the segment customers.

### 4.1.3. Changes in the structure of bank liabilities

In 2007, liabilities to the non-financial sector and liabilities to the financial sector remained the most significant liabilities of the banking sector (Figure 4.1.16). As at the end of the year, liabilities of the banking sector to non-financial entities amounted to PLN 428.2 billion, which means an increase by 11.6% as compared to 2006. The growth rate of liabilities to enterprises (15.1%) was much lower than in the previous year (25.9%). A lower growth rate of liabilities to enterprises (in particular related to deposits) was crucial for the slowdown in the growth rate of liabilities to the whole non-financial sector. Despite this, liabilities of the banking sector to enterprises became an increasingly important source of the growth in the deposit base of banks (Figure 4.1.17) as the growth rate of liabilities to households remained at a lower level. A different tendency was observed in assets of the banking sector. Receivables from enterprises had a lower share in receivables of the banking sector (Figure 4.1.18).

Liabilities of the banking sector to financial entities were by 33.1% higher as compared to 2006 and amounted to PLN 158.4 billion as at the end of 2007 (Figure 4.1.19). The increasing importance of these liabilities as a source of financing for banks confirms that important changes
Figure 4.1.16. The structure of liabilities of commercial and cooperative banks, 2006–2007

![Diagram showing the structure of liabilities of commercial and cooperative banks, 2006–2007.](image)

Source: NBP.

Figure 4.1.17. Liabilities of the banking sector to the non-financial sector, 2004–2007

![Diagram showing liabilities of the banking sector to the non-financial sector, 2004–2007.](image)

Source: NBP.

Figure 4.1.18. The structure of receivables and liabilities of the banking sector to the non-financial sector, 2004–2007

![Diagram showing the structure of receivables and liabilities of the banking sector to the non-financial sector, 2004–2007.](image)

Source: NBP.
Figure 4.1.19. Liabilities of the banking sector to the financial and non-financial sector, 2004–2007

![Graph showing liabilities of the banking sector to the financial and non-financial sector from 2004 to 2007.]

Table 4.1.5. Selected items of liabilities of commercial banks, 2004–2007 (PLN billion)

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liabilities to the non-financial sector</td>
<td>288.8</td>
<td>311.9</td>
<td>351.5</td>
<td>391.3</td>
</tr>
<tr>
<td>Liabilities to the financial sector</td>
<td>78.2</td>
<td>92.0</td>
<td>118.5</td>
<td>157.5</td>
</tr>
<tr>
<td>Liabilities to the general government</td>
<td>22.5</td>
<td>26.2</td>
<td>28.8</td>
<td>39.9</td>
</tr>
<tr>
<td>Liabilities due to the issue of own securities</td>
<td>6.5</td>
<td>9.4</td>
<td>15.9</td>
<td>12.4</td>
</tr>
<tr>
<td>Equity and subordinated loans</td>
<td>49.7</td>
<td>51.7</td>
<td>55.4</td>
<td>63.9</td>
</tr>
</tbody>
</table>

Source: NBP.

are taking place in the Polish banking sector. Over half (52%) of liabilities of the banking sector to the financial sector were liabilities to foreign financial institutions. Some commercial banks, in particular those with a foreign strategic investor, obtained funds from an institution belonging to the same capital group, which enabled further increase in lending.20

Liabilities due to the issue of own securities and liabilities to the general government sector, despite their increase, remained an insignificant source of financing for bank activities. An increase in liabilities to the general government institutions was caused by the growing receipts obtained from social contributions to the Social Insurance Fund and to the National Health Fund. Within the banking sector, an increase was also observed in the balance sheet category “equity and subordinated loans”. This was mainly due to an increase in supplementary capital (commercial banks) and in spare capital (cooperative banks), as well as – to a lesser extent – due to an increase in subordinated liabilities. At the same time, a decrease in liabilities due to the issue of own securities resulted from the limitation of the long-term bond issues (original maturity over two years) by banks.

Commercial banks had the largest share in the balance sheet total of the banking sector. Therefore, the structure of liabilities of the banking sector was predetermined by the structure of liabilities of commercial banks, and tendencies in individual balance sheet categories of the banking sector reflected tendencies observed in the balance sheet of commercial banks (Table 4.1.5).

The financing of the activities of cooperative banks, to a much greater extent than of commercial banks, was based on funds obtained from the non-financial sector entities (Table 4.1.6, Figure 4.1.16). Liabilities to the general government increased mainly due to an increase in funds held on current accounts of these institutions. An increase in the category “equity and subordinated loans” resulted from a higher reserve fund in cooperative banks (by PLN 0.5 billion).

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A further part of the present sub-chapter is dedicated to the analysis of deposits of the non-financial sector as they had the largest share in liabilities of the banking sector (52.8%).

**Deposits of the non-financial sector**

As at the end of 2007, deposits of the non-financial sector amounted to PLN 419.3 billion, i.e. to 97.9% of liabilities of the banking sector to non-financial entities. The growth rate of deposits was lower than in 2006 (11.6% as compared to 14.1%). This had an impact on a significantly lower growth rate of enterprise deposits (Table 4.1.7), which amounted to PLN 144.8 billion as at the end of the year. Household deposits grew faster than in 2006. This was due to the largest ever observed monthly inflow of capital to banks in December (PLN 10.6 billion). This was related to households withdrawing their money from investment funds and depositing them in banks, as well as to the usual increase in capital deposited on bank accounts at that time of the year due to additional payments made by companies to their employees (premiums, annual bonuses). As at the end of 2007, household deposits amounted to PLN 262.4 billion.

In 2007, current deposits of the non-financial sector grew by PLN 42.6 billion, which is 97% of the whole increase in deposits of this sector. Fierce competition between banks for household funds and an increasing number of banks offering saving accounts had a significant influence on the increase in current deposits, along with the deterioration of the situation on the equity market and a related increase in interest on bank deposits in the second half of 2007. Current household deposits increased by PLN 28.3 billion.

A rapid increase in current deposits resulted in the fact that their share in the deposit maturity structure (both as regards households and the whole non-financial sector) exceeded 50% (Figure 4.1.20A). This is not a favourable situation as regards assuring stable financing for bank activities, in

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**Table 4.1.6. Selected items of liabilities of cooperative banks, 2004–2007 (PLN billion)**

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liabilities to the non-financial sector</td>
<td>21.4</td>
<td>25.5</td>
<td>32.4</td>
<td>37.0</td>
</tr>
<tr>
<td>Liabilities to the financial sector</td>
<td>0.4</td>
<td>0.4</td>
<td>0.5</td>
<td>0.9</td>
</tr>
<tr>
<td>Liabilities to the general government</td>
<td>2.6</td>
<td>3.3</td>
<td>3.6</td>
<td>4.8</td>
</tr>
<tr>
<td>Liabilities due to the issue of own securities</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Equity and subordinated loans</td>
<td>2.9</td>
<td>3.3</td>
<td>3.8</td>
<td>4.5</td>
</tr>
</tbody>
</table>

Source: NBP.

**Table 4.1.7. Changes in deposits of the non-financial sector, 2005–2007 (%)**

<table>
<thead>
<tr>
<th></th>
<th>Enterprises</th>
<th>Households</th>
<th>Non-financial sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current</td>
<td>23.7</td>
<td>21.5</td>
<td>19.9</td>
</tr>
<tr>
<td>Term</td>
<td>8.8</td>
<td>34.1</td>
<td>9.3</td>
</tr>
<tr>
<td>PLN</td>
<td>13.2</td>
<td>25.9</td>
<td>18.5</td>
</tr>
<tr>
<td>Currency</td>
<td>33.9</td>
<td>30.9</td>
<td>2.0</td>
</tr>
<tr>
<td>Total</td>
<td>16.8</td>
<td>26.9</td>
<td>15.0</td>
</tr>
</tbody>
</table>

Source: NBP.

---

21 In 2007, the classification of deposits for an undefined period of time was standardised in the NBP statistics. As a result of this change, a part of deposits which were previously recognised as the category “deposits with original maturity over two years” was disclosed in the category “current deposits”. The data presented in the present sub-chapter may be, therefore, different than in previous report editions (data was adjusted back in time). According to the current methodology in force, current deposits cover deposits: (1) for which no period was specified in the agreement, (2) in the case of which the customer is entitled to pay out a part or full amount of its funds on every request without losing due interest, and if it makes more than one payment per month, it requires to pay insignificant fee, (3) whose interest is comparable to interest on term deposits.
4.1.4. Banking sector performance and efficiency

In 2007, net profit of the banking sector increased by 14.6% and reached PLN 12.3 billion (Figure 4.1.21). As in previous years, interest income accounted for approx. 60% of total income on banking activities. In 2007, it increased by PLN 2.2 billion (i.e. by 10.8%) and reached PLN 22.9 billion. Such positive results were generated mainly due to a faster increase in loans to the non-financial sector entities than in 2006. An increase in bank net interest income due to the sale of products to the non-financial sector entities was influenced mainly by a much higher growth of interest income (PLN 5.3 billion) than of interest expense (PLN 1.2 billion).

Growing competition inside the banking sector and a lack of possibilities for a further decrease in margins (in particular as regards residential loans) resulted in the fact that banks more often searched for non-interest related sources of income. Such tendency was observed also in other EU countries (in particular in the EU-15).\(^2\) In Poland, the most important source of non-interest related income in the banking sector is commission income. In 2007, it amounted to PLN 13.1 billion, whereas 39.7% of this amount came from fees and commissions on loans granted and 31.8% from settlements such as credit card settlements and agency settlements. Credit products – the main source of bank income – were also an important source of non-interest related income, which along with income from settlements, amounted to nearly 75% of the banking sector commission income.

As in previous years, the largest part of the banking sector net income (94.4%) was generated by commercial banks (Figure 4.1.21). Out of 64 operating commercial banks, 50 ended the year with a (net) profit, and 14 with a loss: 9 branches of credit institutions (out of 14 operating in Poland) and 5 smaller banks. As in the previous year, the half of this loss was related to one branch of a credit institution, which started its activities in 2006 and incurred high costs related to an active sales policy. The costs of entering the Polish banking service market were also the main reason for losses generated by other branches of credit institutions. As regards the structure of

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\(^2\) **EU Banking Sector Stability**, Frankfurt, November 2007, ECB.
cooperative banks, three banks generated losses, with 70% of this loss attributed to one bank due to write-offs.

In 2007, bank profitability measured by net ROE and ROA did not change significantly (Table 4.1.8). However, banks noted an improvement in gross profitability indices (Figure 4.1.22 and 4.1.23), due to a faster growth rate of gross profit than of assets and core capital. An improvement in bank operating efficiency is confirmed by a systematic decrease in the ratio of their operating costs to assets. Bank costs related to business development (incurred e.g. due to the opening of new branches) grew namely more slowly than their assets. As in 2006, a fast growth in the bank credit portfolio had a significant impact on a lower ratio of irregular receivables.

Profitability of commercial banks has remained above that of cooperative banks since 2006. This is due to an increasing share of new residential loans in the credit portfolio of commercial banks. A different type structure of the credit portfolio of commercial banks and of cooperative banks also significantly influenced net interest margin, which has been higher for cooperative banks for several years now.

Table 4.1.8. Selected profitability and performance indices of the banking sector, 2004–2007 (%)

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Return on Assets (ROA)</td>
<td>1.4</td>
<td>1.6</td>
<td>1.7</td>
<td>1.7</td>
</tr>
<tr>
<td>Return on Equity (ROE)</td>
<td>17.2</td>
<td>20.6</td>
<td>22.3</td>
<td>22.5</td>
</tr>
<tr>
<td>Operating expense/assets</td>
<td>3.7</td>
<td>3.5</td>
<td>3.3</td>
<td>3.1</td>
</tr>
<tr>
<td>Net interest margin (NIM)</td>
<td>3.3</td>
<td>3.3</td>
<td>3.3</td>
<td>3.3</td>
</tr>
<tr>
<td>Non-interest related income/assets</td>
<td>2.4</td>
<td>2.2</td>
<td>2.1</td>
<td>2.1</td>
</tr>
<tr>
<td>Irregular receivables/gross receivables</td>
<td>14.9</td>
<td>11.0</td>
<td>7.4</td>
<td>5.2</td>
</tr>
</tbody>
</table>

1 ROA – Return on Assets, is the ratio of net financial result to average monthly assets less interest due on irregular receivables.
2 ROE – Return on Equity, is the ratio of net financial result to average core capital.
3 Bank general expense and depreciation.
4 NIM – Net Interest Margin, is the ratio of interest income less interest expense to assets less interest due on irregular receivables.
5 i.e. net commission income, financial result from equities, shares and other variable-income financial instruments, net gains/losses on financial operations, net foreign exchange gains/losses.
6 The value of receivables to the non-financial sector was used for calculations. In order to calculate this ratio, the definition of irregular receivables was applied which is used in the banks using Polish accounting standards. According to the definition, irregular receivables include subordinate, doubtful, and lost loans. Banks which apply the IFRS report as irregular receivables the receivables where it has been objectively proven that they had lost value and were acknowledged to have lost their value pursuant to the principles defined in IAS 39.

Source: NBP.
Figure 4.1.22. Return on Assets (gross ROA) in the banking sectors of the CEC-5 countries, 2000–2007

Source: NBP, central banks of Czech Republic, Hungary, Slovakia and Slovenia.

Figure 4.1.23. Return on Equity (gross ROE) in the banking sectors of the CEC-5 countries, 2000–2007

Source: NBP, central banks of Czech Republic, Hungary, Slovakia and Slovenia.

Figure 4.1.24. Net interest margin (NIM) in the banking sectors of the CEC-5 countries, 2000–2007

Source: NBP, central banks of Czech Republic, Hungary, Slovakia and Slovenia.
As compared to the CEC-5 countries, profitability of the Polish banking sector remained relatively high. ROA (gross) of the Polish banking sector was at the highest level of all CEC-5 countries, and as regards ROE (gross) the Polish banking sector placed second, just after Slovakia (Figure 4.1.22 and Figure 4.1.23). Further deterioration of profitability indices was observed in Hungary and Slovakia. In the case of Hungary, this was caused mainly by growing costs of financing, reduction in margins due to increasing competition within the sector, as well as by a considerable increase in operating expense. In Slovakia, a decline in the banking sector net income resulted mainly from worse financial standing of one bank. Despite worse profitability indices in Hungary and Slovakia, profitability observed in the CEC-5 countries remained higher than in the euro zone, which still encouraged foreign investors to develop banking activities in these countries.

In 2007, net interest margin in the Polish banking sector was at the highest of all CEC-5 countries (Figure 4.1.24). The largest decline in interest margin took place in Hungarian banks. The convergence of interest margin in the CEC-5 countries and the euro zone is a long-term process. In 2007, the NIM in the CEC-5 countries remained largely different from what was observed in the euro zone (2007: the NIM in the euro zone amounted to 0.89% and in the CEC-5 countries – to approx. 2.7%).

4.1.5. Consolidation and concentration of the banking sector

Consolidation processes

Consolidation processes, which took place in the Polish banking sector in 2007, were to a great extent the continuation of transactions started in the previous year. The most important events comprised: the division of Bank BPH SA and taking over a part of its assets by Bank Pekao SA, as well as the actions taken to carry out the merger (planned for 2008) of the remaining part of Bank BPH SA with GE Money Bank SA. Furthermore, the merger of two banks: BISE SA and DnB Nord Polska SA was finalised, and the Commission for Banking Supervision gave its approval for the exercise of over 75% voting rights at the general assembly of Dominet Bank SA by Fortis Brussels SA/NV and Bank Współpracy Europejskiej through Innova Financial Holding.

As in previous years, the reason behind the consolidation of cooperative banks was the intention to meet capital requirements specified by the Accession Treaty (EUR 1 million until the end of 2007). As a result, three cooperative banks merged with other banks with larger equity operating under the same associating banks.

Increasing competition in the banking sector and the intention to improve efficiency were the main reasons for carrying out the consolidation processes in the European Union. In the years 2003–2007, the number of credit institutions in the EU decreased by 707 entities, i.e. by approx. 9%. A decline in the number of credit institutions was accompanied by rapidly increasing assets of these institutions. The consolidation in the European Union was mainly of domestic character. However, as a result of shrinking development possibilities on domestic markets, banks more often opened their branches outside their country of origin. This was also the case in Poland where 14 branches of credit institutions with registered office in other EU countries operated as at the end of 2007.

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25 E.g. average ROA in so-called large banking groups in the euro zone (LCBG - Large and Complex Banking Groups) in 2007 amounted to 13.8%, and in the CEC-5 countries to 26.5%. Source: euro zone – Financial Stability Review, Frankfurt, June 2008 ECB, p. 30, CEC-5 – calculations based on data published by the NBP and central banks of Czech Republic, Hungary, Slovakia and Slovenia.
Concentration

In 2007, the concentration of the banking sector in Poland slightly increased. The share of five largest banks in total banking sector assets grew from 46.5% in 2006 to 46.6% in 2007 (Figure 4.1.25). An increase was also observed in the Herfindahl-Hirschman concentration index (HHI)\(^\text{27}\) for commercial banks, both in respect of net assets as well as of loans granted to the non-financial sector entities\(^\text{28}\) (Figure 4.1.26). These indices grew due to the division and transfer of a part of assets of Bank BPH SA to Bank Pekao SA. As a result of this transaction Bank Pekao SA became the largest bank in Poland and its share in assets of the banking sector increased from 10.3% in 2006 to 15.5% in 2007. The share of the former largest bank – PKO BP SA – amounted to 14.6% and 13.3% respectively (Figure 4.1.27).

Despite an increase in CR5 and HHI indices, CR10 and CR15 indices declined due to a rapid development of small banks, which actively develop their activities in Poland.

The concentration of the banking sector in Poland, measured by the share of five largest entities in the sector assets, remained slightly above the average for all EU member states, but lower

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27 Herfindahl-Hirschman Index (HHI) for net assets is defined as the sum of squares of the shares of individual entities in net assets of the sector. HHI indices for loans and deposits are calculated analogically. HHI can range from 0 to 1, and the higher its value, the higher the market concentration.

28 As regards deposits placed in commercial banks by the non-financial sector entities, the HHI index did not change significantly.
**Figure 4.1.27. Share of the largest entities in assets of the commercial banks sector, 2004–2007**

- **Other commercial banks**
- **PKO Bank Polski**
- **Bank Pekao**
- **Bank BPH**
- **ING Bank Śląski**
- **BRE Bank**

Source: NBP.

**Figure 4.1.28. Concentration of the banking sectors in the EU-25 countries measured by the CR5 index for assets in 2007**

Note: For individual groups of EU-25, EU-15, EU-10, euro area and CEC-5 countries, arithmetic means were calculated.

Source: ECB, central banks of the EU countries.

**Figure 4.1.29. Concentration of the banking sectors in the EU-15, EU-10 and CEC-5 countries measured by the HHI index, 2004–2007**

Source: ECB, central banks of the EU countries.
than the average for the euro zone and the CEC-5 countries (Figure 4.1.28). Similar to 2006, the concentration of the banking sector in Poland, measured by the CRS index, was lower than in Poland only in seven EU countries.

The average concentration of the banking sector in the CEC-5 countries decreased again (Figure 4.1.29). This was mainly due to a fast credit growth in smaller banks. The concentration of the banking sector in the European Union further increased, which was mainly caused by a decreasing number of banks and a dynamic development of large European banking groups. Consequently, a relatively small number of banks controlled a considerable part of assets of the European banking sector.29

4.1.6. Changes in banks’ product offer

Offer for individual customers

Due to the remaining high demand of households for residential and consumer loans, changes in the credit offer of banks covered mainly those two categories of loans. In the second half of 2007, the competition between banks for household deposits slightly increased. Some banks changed their business strategies, which had been previously focused on increasing their assets, and started to pay more attention to obtain a stable deposit base, offering their customers more attractive interest on deposits. This resulted from a structural change in the banking sector consisting in the fact that loans for the non-financial sector exceeded deposits of this sector. Turmoil on international financial markets and an increase in the cost of financing on the inter-bank loan and securities market made banks take it into account that their future growth will largely depend on the structure of their liabilities.

Changes to the loan offer

As a result of fierce competition between banks on the residential loan market in Poland observed in the recent years, bank margins on the sale of those products remained at a low level. Due to limited possibilities for their further reduction changes to the residential loan offer in 2007 were mainly related to other parameters than prices. To encourage customers to take residential loans some banks offered them the possibility to adjust repayments to the current financial standing of borrowers. Customers were offered, *inter alia*, the possibility to change the amount of a few instalments within the year, and even to fail to pay one instalment per year (so-called credit vacation which automatically extends the crediting period). Another measure offered to facilitate the repayment of residential loans was to provide customers with the possibility to pay only interest in the beginning period of the credit agreement, whereas a full instalment, comprising both capital and interest, has to be paid in further years. Furthermore, borrowers were also able to use a part of the loan granted for any purpose chosen by them.

Banks often made the LTV (loan to value) index for offered loans dependent on the profession exercised by the borrower. Loans financing 100% of a real estate value were more willingly granted to persons exercising so-called public trust professions (e.g. physician, prosecutor, judge, legal advisor). Banks extended the group of potential borrowers to include special borrowers. Some of them were willing to provide loans financing the purchase of a flat to individuals without Polish citizenship, while other banks prepared special offers for senior borrowers. Furthermore, banks were more and more interested in providing loans to Polish emigrants. To obtain a better access to the customers going abroad in search for a job, some banks promoted their products in foreign newspapers. Another two banks started the sale of loans using brands specially designed for this purpose. Banks became more and more innovative in implementing solutions, which could increase the number of their potential customers. For example, one bank offered the sale of its loans via an internet communicator.

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Box 4.1.1

REVERSE MORTGAGE

Based on a reverse mortgage loan agreement the bank grants a loan, secured on a real estate, to a person who has an ownership title to this real estate or cooperative ownership title to residential premises subject to the agreement. The ownership title to the real estate is transferred to the bank when the borrower passes away. Reverse mortgage loan enables the borrower to “release” capital from the real estate owned by him and to use it as an additional source of income (monthly income exempted from taxation).

Depending on the agreement conditions the loan amount may range from 30% to 50% of the real estate value, and the most common form of loan payment is term or life annuity (one-off payment or opening of a credit line with a determined limit is also possible)\(^1\). The borrower may be a person who achieved certain age (at least 60 years old).

For the first time reverse mortgage loan was offered by American banks at the beginning of 1960’s and has remained very popular in the US until now. In the recent years, this kind of loan has been also offered by banks in France, Belgium, Great Britain, New Zealand, Australia\(^2\), Japan, Russia and India. Taking into account expected demographic changes in Poland (ageing of the society), benefits offered by the Polish pension system as well as a high real estate ownership ratio seem to indicate that the growth potential of this innovative banking product is high. Due to the ownership structure of the Polish banking sector (high share of foreign investors), extending banks’ offer by reverse mortgage loan may be easier, if experience of mother companies is used. However, the scope of necessary changes in regulations in Poland is relatively large and would relate to several acts, \(\text{\textit{inter alia}}\), the banking law act, the act on land and mortgage registers, the code of civil proceedings, as well as the civil code\(^3\). Several banks carried out studies on the demand for this product, but due to the existing legal limitations, its implementation to banks’ offers will probably take place in a few years’ time.

2. In Anglo-Saxon countries reverse mortgage loan is also known as equity release.

Furthermore, some banks considered extending their offer by a so-called reversed mortgage loan, known also as reverse mortgage. However, due to its complex legal structure, this product may appear in the offer of banks operating in Poland no earlier than in a few years’ time (more about this in Box 4.1.1.).

Due to higher bank margins charged on sold consumer loans than on residential loans the competition in this market segment was mainly of price character. Banks encouraged customers, e.g. by offering attractive interest on loan agreements, benefiting from additional charges and commissions, which often exceeded interest paid. As demand for instalment loans declined, some banks offered their customers credit card loans with considerably lower interest charged on them than on traditional instalment loans. An increasing number of banks enabled their customers to transfer money from credit card accounts to repay liabilities.

Similar to residential loans, banks were very innovative as regards improving technical availability of loans (e.g. customers were able to send SMS messages to notify the bank of the intention to take a loan or lending). At the same time, the tendency to reduce time limit necessary
for taking credit decisions and to lower requirements regarding acceptable source of income and related documentation remained.

**Changes to the deposit offer**

In the second half of 2007, the development of the deposit base of banks was favoured by turmoil on world financial markets caused by the crisis on the US mortgage loan market and by the bear domestic equity market. A part of households withdrew capital held in investment funds and deposited it in banks. An additional factor, which encouraged them to entrust savings with banks, was an increase in domestic interest rates.

High interest bearing saving accounts, offering much freedom in using funds deposited on them without losing interest, became more popular. Increasing fierce competition on this market segment was reflected mainly in the increasing number of banks offering saving accounts. In previous years, they were offered only by smaller banks, but in the recent two years this offer was also provided by large banks. The fact that the competition becomes more and more fierce is confirmed also by bank advertisements pointing out high interest on capital deposited on accounts, providing free-of-charge insurance as a supplement to an account as well as enabling customers to open saving accounts via internet without the obligation to have a traditional account in a given bank.

**Changes in the bank offer to enterprises**

In 2007, banks extended their offer to enterprises, in particular to small and medium-sized enterprises. More and more popular are package services. By combining several products banks offered for the SME sector the possibility to adapt package elements to the current needs of enterprises in a flexible manner, offering at the same time more favourable prices for the package than for individual products offered separately. The standard was to offer internet banking, credit cards and insurance. Some banks additionally provided so-called payer identification systems, which enabled enterprises to control the repayment of debt by their counterparties. Some banks offered consolidation programmes for their customers – these programmes were able to consolidate loans taken in various banks and convert it into one loan with more favourable interest charged on it.

Banks were more interested in providing services to enterprises which start their business activities. New proposals for this segment of customers were, *inter alia*, loans granted to finance VAT on investments or for the sale of insurance. Furthermore, banks slightly decreased the requirements for loans granted to enterprises and some of them issued decisions on granting loans based on the evaluation of credit reliability of a natural person being an owner of a small enterprise. Enterprises provided by banks with credit limits were more often able to start further loans without the obligation to go through standard procedures of credit reliability verification and to present additional securities, which resulted in more efficient obtaining of capital by those enterprises.

The offer addressed to Polish entrepreneurs was also presented by foreign banks. One of them decided to provide services to entrepreneurs in London in Polish language. This offer was dedicated to entrepreneurs who wish to conduct business activities in Great Britain, offering them the possibility to make cheap transfers to Poland, customised financial advisory and loans with attractive interest for newly established companies.

**Payment cards**

In 2007, the number of payment cards issued in Poland increased by 2.7 million. As at the end of the year, 26.5 million cards were on the market (Figure 4.1.30). The highest upward trend was observed again in credit cards business which accounted for as much as 30% of all payment cards in Poland.

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Despite a fast growth in the number of issued credit cards, interest on credit cards did not change significantly, and the competition between banks on this market was mainly non-price related. Banks developed partner and loyalty programmes cooperating with the increasing number of institutions (e.g. air carriers, auction portals or mobile phone operators). The waiting time for cards was further reduced, and some banks decided to provide the customer with a credit card immediately.

Banks increased functionality of cards and improved security of transactions conducted with their use, implementing new technological solutions. For the first time in Poland, a bank implemented a card issued in the PayPass technology (so-called “contactless” card), enabling small payments without giving PIN and signature, which may be also used as a city ticket or parking card. Another innovation is the implementation of the 3D-Secure service which provides additional security for the payment made via internet irrespective of the payment card used for this purpose. The number of banks offering payment cards to enterprises increased as well.31

**Internet banking**32

In 2007, the number of internet banking customers in Poland slightly decreased and, as at the end of the year, amounted to 9.8 million (as compared to 9.9 million in 2006) (Figure 4.1.31). The reason for this decline was, however, a shrinking demand for internet banking as a result of ownership transformation in the banking sector and a related closure of accounts held by customers of the banks taken over. The number of banks providing internet banking services did not change significantly.

To encourage customers to use internet banking services more often, banks extended the scope of functions offered for the accounts with internet access. An essential element of price competition was a decline in charges on foreign transfers and free of charge keeping of internet accounts.

Due to a significant migration of Polish citizens, internet became a significant distribution channel of services for banks, enabling them to keep existing customers. Some Polish banks enabled persons going abroad for a temporary period to open a currency account via internet with interest calculated according to the local market interest rate.

![Figure 4.1.30. Number of payment cards in Poland and its growth rate, 2004-2007](image)

Source: NBP.

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31 According to the Pentor Research International studies carried out on the request of Visa International, approx. 34% of SME’s in Poland used company cards to carry out payments. The study was conducted in April 2007 and comprised 500 micro-, small and medium-sized enterprises in Poland. More about this at: [http://www.visa.pl/informacjebezace/pressreleases/news16.jsp](http://www.visa.pl/informacjebezace/pressreleases/news16.jsp), 22.10.2008.

32 Prepared based on the information provided by the Polish Bank Association.
Plans of banks as regards an improvement of the existing internet platforms indicate that internet will remain an important distribution channel of banking services in Poland in the coming years. This will take place despite an anticipated dynamic development of networks of traditional bank branches. Furthermore, expenses incurred to develop bank internet platforms are expected to provide benefits in a short time as it is believed that internet access in Poland will be improved and the number of active internet banking customers will increase.
4.2. Credit unions

Credit unions (SKOK) are non-banking financial institutions classified as monetary financial institutions. However, activities of credit unions are not regulated by the Polish Financial Supervision Authority. They are supervised by the National Association of Credit Unions (KSKOK).

**The size of the sector**

As at the end of 2007, assets of credit unions amounted to PLN 7.3 billion, which means that they increased by nearly 22% as compared to the end of 2006 (Figure 4.2.1). Due to legislative changes, the scope of services rendered by credit unions has been growing since the fourth quarter of 2006, and was extended to include loans and lending facilities granted for the period exceeding five years. The sale of these financial products had a significant impact on a high growth rate of assets of credit unions in 2007, influenced by a slower increase in the number of members than in previous years. Despite a dynamic growth of the credit unions sector, their assets remained below 1% of balance sheet total of the banking sector.

In 2007, the growth rate of assets of credit unions was higher than that of the banking sector (Figure 4.2.2). However, credit unions have to compete mainly with cooperative banks. These two types of credit institutions provide their offer to the same group of customers – inhab-

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**Figure 4.2.1. Assets of credit unions as compared to assets of cooperative banks, 2000–2007**

![Graph showing assets of credit unions compared to cooperative banks, 2000–2007](image)

Source: NBP, National Association of Credit Unions.

**Figure 4.2.2. Growth rate of assets of credit unions as compared to assets of cooperative banks and of the banking sector, 2000–2007**

![Graph showing growth rate of assets of credit unions compared to cooperative banks and banking sector, 2000–2007](image)

Source: NBP, National Association of Credit Unions.

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33 Act of 8 September 2006 on financial support for families in purchasing their own flat (Dz.U. 2006, No. 183, item 1354, Art. 15) dismissed regulations limiting the maximum repayment period of loans and lending facilities granted by credit unions to three years (for residential loans – to five years).
Financial institutions

National Bank of Poland

bitants of villages and small towns. Credit unions constantly reduce the distance to cooperative banks and the ratio of their balance sheet total to that of cooperative banks further increased in 2007 from 14.5% to 15.5%.

The credit union network was further developed and the number of customers increased, though not as fast as in the years 2000–2005. In the analysed period, the number of credit unions’ branches increased by 77 (Figure 4.2.3). As at the end of the year, the number of members associated under credit unions reached 1.67 million, i.e. was by 120 thousand higher than in the previous year. The downward trend in the number of credit unions has been observed since the beginning of the decade (as at the end of 2007, their number reached 67), which results from taking over weaker credit unions by larger ones.

The development of credit unions in Poland has a similar tendency to that observed in other countries (Figure 4.2.4). In 2007, assets of credit unions worldwide increased by over 8% and reached USD 1.18 billion. The number of members of credit unions increased to 177.4 million as at the end of the year (increase by 3.1% as compared to 9.5% in 2006).

**Structure of assets and liabilities**

Credit unions render their services mainly to households. As at the end of 2007, their share in loans and lending facilities granted by credit unions amounted to over 81%, and in deposits – to nearly 99%. The second largest group of borrowers were financial intermediation institutions (share of over 18%).

As at the end of 2007, loans and lending facilities granted by credit unions amounted to PLN 5.1 billion. An increase in the loan portfolio (by PLN 1.1 billion) was at the highest level since
Figure 4.2.5. Loans and lending facilities of credit unions, 2004–2007

Table 4.2.1. Share of loans, lending facilities and deposits for households in total loans, lending facilities and deposits of credit unions, 2004–2007 (%)

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loans and lending facilities to households, of which:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>– up to 1 year inclusive</td>
<td>28.8</td>
<td>18.2</td>
<td>14.9</td>
<td>9.4</td>
</tr>
<tr>
<td>– from 1 to 5 years inclusive</td>
<td>71.2</td>
<td>81.8</td>
<td>80.9</td>
<td>62.5</td>
</tr>
<tr>
<td>– over 5 years</td>
<td>–</td>
<td>–</td>
<td>4.2</td>
<td>28.1</td>
</tr>
<tr>
<td>Household deposits, of which:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>– current</td>
<td>4.1</td>
<td>4.4</td>
<td>6.4</td>
<td>10.4</td>
</tr>
<tr>
<td>– term</td>
<td>95.9</td>
<td>95.6</td>
<td>93.6</td>
<td>89.6</td>
</tr>
</tbody>
</table>

Source: NBP.

the system of credit unions was established, and resulted mainly from a large interest of customers in consumer loans and lending facilities granted for the period of more than five years. A significant increase in the value of loans granted for more than five years caused considerable changes in the time structure of loans and lending facilities provided to households (Table 4.2.1). Despite expectations the share of credit unions in the governmental programme “Family on its own” did not lead to more involvement of credit unions in the real estates credit market.

Deposits held with credit unions increased by nearly PLN 1.2 billion and reached PLN 6.7 billion as at the end of 2007. This increase was the highest one since the establishment of credit unions and two times higher than in 2006 (figure 4.2.5). Such high increase in the deposit base was mainly due to an attractive offer of credit unions for households. Interest on deposits offered by credit unions (in particular smaller credit unions) was namely still higher than in banks. Similar to previous years, the time structure of household deposits with credit unions was marked by an increased share of current deposits, though the main share was still held by term deposits. Deposits with maturity of 1 year inclusive accounted for 88% of term deposits.

The governmental programme “Family on its own” was implemented based on the act of 8 September 2006 on on financial support for families in purchasing their own flat (Dz. U. 2006, No. 183, Item 1354). Under this programme, BGK subsidises a part of interest on residential loans from state budget funds. A loan with subsidised interest may be granted for the purchase of a flat or for the purchase or construction of a single-family house whose usable area does not exceed 75 sqm and 140 sqm respectively.
Financial results, efficiency and solvency ratios

In 2007, net profit of credit unions amounted to PLN 36 million and was by 5.1% higher than in 2006. This increase was mainly the result of high net sales achieved by credit unions – profit on sales increased by nearly 60% as compared to 2006. Efficiency ratios slightly deteriorated, but were higher than in 2005. The ratio of overdue loans and lending facilities improved (decrease to 10.8%). It may be assumed that the reason behind this was dynamic lending activity. A high growth rate of assets led to the deterioration of general solvency ratio. According to the guidelines of the National Association of Credit Unions, this ratio should amount to 8% for credit unions with assets over PLN 500 million, and to 12.5% for credit unions with assets below this threshold. Credit unions, which did not meet this requirement, were obliged by the National Association of Credit Unions to submit the capital recovery plan. As at the end of 2007, the capital recovery plan was implemented by 11 credit unions.

Table 4.2.2. Selected efficiency and solvency ratios of credit unions, 2004–2007

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net profit (PLN thousand)</td>
<td>35 427</td>
<td>16 168</td>
<td>34 401</td>
<td>36 152</td>
</tr>
<tr>
<td>Gross financial result/assets (%)</td>
<td>0.9</td>
<td>0.3</td>
<td>0.6</td>
<td>0.6</td>
</tr>
<tr>
<td>Net financial result/assets (%)</td>
<td>0.8</td>
<td>0.3</td>
<td>0.6</td>
<td>0.5</td>
</tr>
<tr>
<td>General solvency ratio (%)¹</td>
<td>8.7</td>
<td>8.1</td>
<td>8.3</td>
<td>7.7</td>
</tr>
<tr>
<td>Ratio of overdue loans and lending facilities² (%)</td>
<td>14.1</td>
<td>12.3</td>
<td>12.5</td>
<td>10.8</td>
</tr>
</tbody>
</table>

¹ General solvency ratio is defined as a ratio of total capital to assets, and due to a different composition may not be compared with the banking solvency coefficient.
² Ratio of overdue loans and lending facilities is a share of overdue loans and lending facilities in total loans and lending facilities. This ratio for credit unions may not be compared with an analogical ratio for banks due to a different classification of overdue receivables.

Source: National Association of Credit Unions.

An increase in long-term receivables resulted from the fact that credit unions granted consumer loans and lending facilities with repayment period of more than five years and financed their activities mainly with member deposits with repayment period of maximum one year. Taking into account no possibility to incur liabilities on the financial market, this creates a risk of mismatched time structure of assets and of liabilities of credit unions. It seems that due to higher activity and the above mentioned changes in the structure of assets and liabilities, credit unions should be subject to supervision of a state authority in all aspects of their activities similar to the banking business.
4.3. Non-banking institutions providing financial services

4.3.1. Leasing companies

The size of the market

In 2007 the leasing market continued to grow fast. Assets leased in 2007 increased by 50% as compared to 2006 and amounted to PLN 32.6 billion, which accounted for 2.8% of GDP (Figure 4.3.1). The share of leased assets in gross expenditures on tangible fixed assets in 2007 amounted to 12.7% (as compared to 10.4% in 2006). It is estimated that the value of active lease agreements at the end of 2007 amounted to PLN 48.6 billion.\(^{(35)}\) Enterprises, in particular small and medium-sized, eagerly chose leasing as a source of financing for tangible fixed assets, thus increasing their production potential.\(^{(36)}\) Furthermore, for some companies which started business activities, with no bank account history and no own funds’ history, leasing was the only source of financing for their investments.

In 2007 leased assets in Europe increased by approximately 12% and amounted to EUR 338.9 billion.\(^{(37)}\) The share of leased assets in Poland in total leased assets in Europe reached 2.5%. In terms of value, approximately half of assets (both movables and real estates) were leased in only three countries: Great Britain, Germany and Italy.

According to the Central Statistical Office data, 56 entities carried out leasing activities in Poland in 2007.\(^{(38)}\) They were mainly companies controlled by foreign shareholders, in particular banks and other financial institutions. Main shareholders of domestic-owned leasing companies were usually non-financial companies. At the end of 2007, the Polish Association of Leasing Companies (ZPL) comprised 35 companies: 20 belonged to banking groups, 8 to producer groups\(^{(39)}\) and 7 to other groups. Out of all companies associated in the Polish Association of Leasing Companies, the share of 6 largest in the lease market amounted to 49%.

According to the Central Statistical Office data, at the end of 2007 the number of lessees amounted to 244.9 thousand entities and was by 22% higher than at the end of 2006.

Figure 4.3.1. Leased assets in Poland, 2000–2007

Source: Polish Association of Leasing Companies.

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\(^{(35)}\) Based on the Polish Association of Leasing Companies data.

\(^{(36)}\) For more information see: Informacja o kondycji sektora przedsiębiorstw ze szczególnym uwzględnieniem stanu koniunktury w IV kwartale 2007 r., Warszawa 2008, NBP, pp. 42-44 and Ocena kondycji ekonomicznej sektora przedsiębiorstw nefinansowych w 2007 roku w świetle danych F-01/F-01, Warszawa 2008, NBP, p. 36.


\(^{(38)}\) In 2008, the Central Statistical Office published for the first time data on leasing companies activities in Poland – Activities of leasing companies in 2007, Warszawa 2008, Central Statistical Office.

\(^{(39)}\) The term “producer companies” means manufacturers of tangible fixed assets offering them under a leasing service.
The majority (67.6%) of them used financial lease and the rest — operating lease or mixed lease. Leasing agreements were usually concluded for the period ranging from two to five years.

**Structure of leased goods**

Good economic situation and high demand for goods and services encouraged enterprises to increase their production capacities and to invest in tangible fixed assets. In 2007, as in previous years, the structure of leased assets was dominated by movable tangible fixed assets. At the end of 2007 they amounted to PLN 29.6 billion and were by 50% higher than at the end of 2006. An increase was also observed in leased real estates: from PLN 2 billion in 2006 to PLN 3.1 billion in 2007.

As regards the structure of leased assets in 2007, the highest share was still held by the means of road transport (Table 4.3.1) — approximately 60%. New vehicles were the main subject of leasing. Entrepreneurs increased their car fleet and replaced cars purchased in previous years. Passenger cars and specialist means of road transport (i.e. tractors, trailers and semi-trailers) were items most often leased. Their share in the value of the vehicle portfolio amounted to 37.6% and 37% respectively, whereas trucks accounted for 22% of the value of leased vehicles. Long waiting time (between a few and a few tens of months) for certain brands or models of vehicles was a barrier to the development of the truck leasing market. Six leasing companies (including 5 banking companies) specialised in leasing of vehicles: the value of vehicles leased by them accounted for approximately 52% of the total portfolio. Cars purchased under leasing agreements accounted for about 1/3 of all vehicles registered in 2007 by enterprises. Due to the demand of enterprises, leasing companies developed mainly full service leasing, combining financing with car fleet management (CFM). Furthermore, leasing companies offered various additional services to companies related to car fleet management, e.g. insurance packages and fuel cards.

A significant share of machinery and equipment in the structure of leased assets was due to continuous interest of enterprises in increasing their production capacities. A favourable situation on the construction market contributed to a high (33%) share of the construction equipment in the value of the leased machinery and equipment portfolio. Leasing also comprised, *inter alia*, polygraphic, metal processing and agricultural machines. The average value of machinery and equipment leased in 2007 amounted to PLN 168 thousand, and the average term of contracts was 47 months. Machinery and equipment leasing became more popular among local governmental units, city communication companies, health care centres and water-sewage companies.

### Table 4.3.1. Leased assets and their structure, 2004–2007

<table>
<thead>
<tr>
<th></th>
<th>Value (PLN billion)</th>
<th>Structure (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Movables, including:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>– machinery and equipment</td>
<td>2.85</td>
<td>4.26</td>
</tr>
<tr>
<td>– computers and office equipment</td>
<td>0.30</td>
<td>0.33</td>
</tr>
<tr>
<td>– means of rail, air and water transport</td>
<td>0.16</td>
<td>0.35</td>
</tr>
<tr>
<td>– means of road transport, including:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>passenger cars</td>
<td>1.45</td>
<td>2.76</td>
</tr>
<tr>
<td>– other</td>
<td>0.12</td>
<td>0.08</td>
</tr>
<tr>
<td><strong>Real estates</strong></td>
<td>1.93</td>
<td>2.46</td>
</tr>
<tr>
<td><strong>Total movables and real estates</strong></td>
<td>14.21</td>
<td>16.28</td>
</tr>
</tbody>
</table>

Note: Data on computers and office equipment do not include information from IT companies which lease IT equipment directly from manufacturers.

Source: Polish Association of Leasing Companies data.

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40 In 2007, the Polish Association of Leasing Companies specified the following categories in statistics on vehicles leased: tractors, trailers and semi-trailers, which in the recent years constituted part of the category of trucks over three tons.
The share of real estates in the structure of leased assets remained at a similar level as in 2006. There were only a few companies specialising in this kind of leasing. The most popular form of financing offered for real estates was sale and lease back. Most frequently leased objects were trade and service facilities, but their share in all leased real estates decreased to 44% (as compared to 71% in 2006). As compared to 2006, offices were leased more often (they accounted for 27% of leased real estates as compared to 9% in 2006). The share of industrial buildings, as well as hotels and recreational facilities did not change significantly and amounted to 17% and 2%, respectively. Trade and service, as well as office centres were subject to long-term leasing agreements (for approximately 12–14 years). The average value of a leasing agreement decreased to approximately PLN 17 million (from PLN 18.8 million in 2006), which resulted from, among others, addressing the offer to the companies from the SME sector and from decreasing minimum transaction values required by leasing companies.

The leasing of vessels, planes and rolling stock (big tickets) was still rather unpopular. The demand for the leasing of small water vehicles, such as scooters or yachts, was larger. Unypical means of transport were leased relatively rarely, but their value per unit was quite high. The development of the leasing of assets such as big tickets in Poland is limited mainly by the following factors: too small number of big carriers and vessels management companies, as well as tender procedures related to state-owned companies.

Available data indicates a weak development of the leasing of office equipment and computers (share of 1.5% in total leasing portfolio). The majority of transactions of this kind are made directly between IT equipment manufacturers and lessees, which makes a proper evaluation of the development of this market segment difficult.

**Barriers to development**

A significant barrier to the development of some leasing market segments are legal and tax regulations. For example, according to the regulations in place, two kinds of leasing should be applied for the leasing of land (operating leasing for the building and financial leasing for land). Entrepreneurs are discouraged to lease real estates also by: a long depreciation period of real estates (40 years), arising from a low annual depreciation rate (2.5% for this category of assets) and a long, at least 10-year period for which a leasing contract must be concluded. Furthermore, provisions of the valued added tax act oblige the lessee to pay this tax in advance as calculated on the total value of the financial leasing transaction which prevails on the domestic market. This is often a large one-time financial burden for the company which intends to use this form of financing. Unclear tax regulations on depreciation methods remain a barrier to the development of consumer leasing.

**4.3.2. Factoring**

**The size of the market**

In 2007, enterprises were more willing to use factoring. For many companies, in particular small and medium-sized, factoring enabled faster repayment of liabilities and extension of payment period for their customers. According to the Central Statistical Office data, the value of invoices purchased in 2007 by banks and factoring companies amounted to PLN 30.3 billion and

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41 According to the act of 15 February 1992 on corporate income tax (Dz.U. of 2000, No. 60, Item 700 as amended) land and perpetual leasehold of land are not subject to depreciation. Other provisions of this act specify that if any leasing agreement concluded for a defined period of time comprises land, and total value of leasing instalments specified in this agreement covers at least their costs of disposal, the solution to be applied should be the same as for financial leasing. A similar provision is included in the act of 26 July 1991 on personal income tax (Dz.U. of 2000, No. 104, Item 1104 as amended).

42 Appendix No. 1 to the act of 26 July 1991 on personal income tax (Dz.U. of 2000, No. 104, Item 1104 as amended) and Appendix No. 1 to the act of 15 February 1992 on corporate income tax (Dz.U. of 2000, No. 60, Item 700 as amended).


was by 36.4% higher than in 2006\textsuperscript{45} (Figure 4.3.2). Turnover of factoring companies rose significantly (by approximately 37.4% as compared to 2006) and reached almost PLN 18.9 billion. The value of receivables repurchased by banks increased by 35% and amounted to PLN 11.4 billion. In 2007, factoring services were used by 4.9 thousand enterprises (as compared to 3.7 thousand in 2006). These services were usually used by companies dealing with trade, car maintenance, manufacturing and construction.

The offer of services rendered by banks differs from the offer of specialised factoring companies. Banks usually finance invoices. Along with an increasing demand for their services and competition, factoring companies extended their offer by additional services to the repurchase of invoices. Most popular additional services, which contributed to an increase of interest of companies in factoring, comprised: registering claims and payments, sorting out settlements and collecting payments, preparing trade analyses and reports (e.g. on timely repayments or on the economic standing of counterparties), monitoring receivables and their management, as well as so-called soft debt collection.

Despite a fast development of factoring in Poland in the recent two years the ratio of repurchased invoices to GDP was still low (2.6%) in 2007. For Europe this ratio amounted to 7.1%. Factoring was used most considerably in Great Britain (14% of GDP) and Italy (8% of GDP). In the Czech Republic and Hungary the ratio of repurchased invoices to GDP was similar as in Poland and amounted to 3.7% and 3.1%, respectively\textsuperscript{46}.

At the end of 2007, 16 factoring companies operated in Poland (11 were members of the Polish Factors Association), and 21 commercial banks rendered factoring services. The membership in the Polish Factors Association in 2007 was given to two companies. The market of services rendered by factoring companies was largely concentrated. Four largest entities associated under the Polish Factors Association accounted for 80% of turnover carried out by the Polish Factors Association’s members. The biggest share was held by ING Commercial Finance Polska (24%). Among factoring companies 8 entities were companies with 100% share of Polish capital, 6 with 100% share of foreign capital and the capital structure of 2 entities was mixed\textsuperscript{47}.

\textsuperscript{46} Based on the Factors Chain International data.
\textsuperscript{47} Central Statistical Office data.
**Factoring structure**

In 2007, the turnover structure was dominated by domestic factoring. Its share decreased, however, as compared to 2006 and accounted for 88.8% of repurchased claims. This change resulted from a further increase in the use of export factoring. The share of import factoring in the value of repurchased claims amounted to mere 1.2%. An increasing demand for export factoring was the result of economic slowdown in the euro area and related extension of payment periods by foreign counterparties. It was also the result of the willingness of exporters to hedge currency risk. An earlier payment of the invoice makes it possible to reduce the impact of PLN appreciation on revenues of the factoring agent. Furthermore, more frequent participation of the factor from the country of import in the transaction facilitated the evaluation of credit worthiness of foreign partners, monitoring of payments and any possible execution of unpaid claims.

In 2007, more than half of the total number of factoring agents used recourse factoring, which is cheaper and more easily available than other types of factoring. It accounted for 67.6% of repurchased domestic claims (as compared to 70% in 2006). Similarly to 2006, the insolvency risk of the debtor was accepted more willingly by banks than by factoring companies (Figure 4.3.3). This resulted from lower capital capacities of factoring companies and a wider access of banks to information on credit worthiness of enterprises whose risk they take over. In 2007, the share of non-recourse factoring in the structure of repurchased domestic claims amounted to 27.6% and of mixed factoring\(^{48}\) – to 4.8%. Factoring with insurance is a new service on the Polish market. This kind of factoring is used, if taking over of the risk by a bank or a factor is too expensive for the company.

Advance factoring remains the most frequently used method of financing for repurchased claims (44.3% of the value of agreements). Accelerated factoring accounts for 41.1% of the value of agreements, and maturity factoring – for 14.6%.\(^ {49}\) The majority of the factoring transactions were disclosed (notified) factoring, and thus the majority of debtors (97.7% of entities) were notified of the concluded factoring agreements.\(^ {50}\)

![Figure 4.3.3. Structure of claims repurchased in domestic factoring in 2007](image)

**Source:** Central Statistical Office.

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\(^{48}\) Mixed factoring combined features characteristic for non-recourse and recourse factoring.

\(^{49}\) Advance factoring consists, inter alia, in obtaining by a factoring agent of the advance payment that is lower than the value of the claim. The advance, whose amount depends on the value of the claim and payment term, is paid immediately after the factor has received the invoices, and the rest is paid on the date of actual payment effected by the debtor. Accelerated factoring consists, inter alia, in paying by the factor of 100% of the value of the claim immediately after the customer has received the invoice. Maturity factoring consists in taking over the insolvency risk of the debtor without prior repayment of liabilities, because the claim against the factoring agent is settled on the date of payment by the debtor or e.g. within seven days from its expiry.

\(^{50}\) Central Statistical Office data.
In 2007, one of the factoring companies extended its offer by reverse factoring, where the factor – basing on the agreement concluded with the customer – provides financing for its suppliers. The customer sends invoices for delivered goods and services to the factor which then pays due amounts to suppliers. As the repayment of financing provided by the factor is the responsibility of one entity only – the customer, its financial standing must be verified and monitored meticulously.

**Barriers to development**

The development of the factoring market in Poland has been facing difficulties due to low financial transparency of companies in the SME sector, limited access of factoring companies to databases on credit worthiness of enterprises and less innovative financial management of companies. Some entrepreneurs still cannot distinguish factoring from other services (e.g. debt collection). The prohibition of assigning claims, required by some supermarket chains, made it impossible for a significant number of enterprises to use factoring services. Unclear regulations relating to taxation of factoring services with VAT were also a barrier to the development of factoring.\(^{51}\) Despite those barriers, as well as due to increasing knowledge of enterprises on this service, and more fierce competition among factors, factoring is likely to remain one of the fastest growing segments of the financial market.

### 4.3.3. Financial intermediaries

The main area of activity of domestic financial intermediaries was the sale of loans granted by banks. Financial advisory services also played a significant role in the offer of intermediaries. In the recent years, there has been a trend for combining credit intermediation and financial advisory services under one company. This is confirmed by the studies carried out by the Central Statistical Office,\(^{52}\) which demonstrate that out of 33 entities surveyed in 2007 as many as 8 entities were dealing only with credit intermediation, whereas the respective figure in 2006 was 11 entities. Financial intermediaries cooperated more often with several financial institutions. Along with credit intermediation, these companies also provided advice on the sale of insurance policies, participation units in investment funds (domestic and foreign), and were dealing with the distribution of various saving programmes. There were also several intermediaries operating on the Polish market which granted loans from own funds and offered own financial products designed specially for their customers along with banks, investment funds and insurance companies.

Loans and lending facilities remained the most popular products for customers using financial intermediation services (Table 4.3.2). In 2007, approximately 5 million loan agreements worth PLN 23 billion were concluded with the participation of financial intermediaries. This means an increase, as compared to the previous year, by 44% and 77%, respectively. The increasing scale of credit intermediation resulted from large demand of households for housing and consumer loans, as well as from a large variety of products, which made the choice of the best offer more difficult, and thereby encouraged the use of financial advisory services. The credit intermediation market was dominated by countrywide entities. Out of 33 entities covered by the Central Statistical Office study, 14 largest entities accounted for over 85% of the value of concluded loan agreements.

In terms of value, mortgage loans were the most significant group of products sold by financial intermediaries (Figure 4.3.4). In 2007, the value of loans granted with the participation of financial intermediaries exceeded PLN 11.3 billion and was nearly 90% higher than in 2006. According to the Office of the Polish Financial Supervision Authority data,\(^{53}\) in 2007 approximately 4% of mortgage loan agreements were concluded with the participation of financial intermediaries, and

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\(^{51}\) J. Czarecki, Factoring as an instrument of financing the activities of the SME sector, Warsaw 2007, PWN, pp. 142–143.

\(^{52}\) Data used in this chapter come from the Central Statistical Office publication: Activities of the credit intermediation enterprises in 2007, Warsaw 2008, Central Statistical Office.

Table 4.3.2. Activities of financial intermediaries, 2006–2007

<table>
<thead>
<tr>
<th>Financial products offered</th>
<th>Number of agreements signed (thousands)</th>
<th>Value of completed agreements (PLN million)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2006</td>
<td>2007</td>
</tr>
<tr>
<td>Total loans and lending facilities, including:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>– cash loans and lending facilities</td>
<td>1 399</td>
<td>2 200</td>
</tr>
<tr>
<td>– instalment loans</td>
<td>1 938</td>
<td>2 134</td>
</tr>
<tr>
<td>– mortgage loans</td>
<td>36</td>
<td>43</td>
</tr>
<tr>
<td>– car loans</td>
<td>16</td>
<td>17</td>
</tr>
<tr>
<td>Other financial products, including:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>– insurance products</td>
<td>1 649</td>
<td>920</td>
</tr>
<tr>
<td>– units of investment funds</td>
<td>11</td>
<td>34</td>
</tr>
</tbody>
</table>


Figure 4.3.4. Structure of loans and lending facilities granted through financial intermediaries, 2006–2007


their value amounted to 10% of new loans in the banks’ portfolios. The average value of a mortgage loan sold by financial intermediaries increased from PLN 170 thousand in 2006 to over PLN 260 thousand in 2007, which reflected mainly an increase in prices on the housing market.

Instalment loans as well as cash loans and lending facilities were most popular among the customers of financial intermediaries. In 2007, cash loans and lending facilities accounted for almost 30% of the value of all loans sold by intermediaries. Due to a low average value of instalment loans, their share in the value of agreements concluded by intermediaries amounted to nearly 17%.

In 2007, the sale of participation units of investment funds increased considerably, which was related to the highest inflow of funds to investment funds since the establishment of these institutions in Poland. Increasing stock prices on the Warsaw Stock Exchange observed until mid-2007 encouraged households to purchase participation units of investment funds, whereas some households carried out these investments via financial advisory companies.

In 2007, the activity of intermediaries related to the distribution of insurance products decreased. As compared to 2006, the number of agreements concluded with their participation declined nearly two times. Some insurance products were sold together with residential loans – insurance cover agreements aimed at minimising bank losses, if the debtor has become insolvent.
Along with traditional investment products (*inter alia*, securities, participation units of investment funds, life insurance with an insurance capital fund), financial advisors offered structured products combining features of a traditional deposit-like product with derivatives whose value depends on changes in prices on the capital, currency or commodity market. Payment profiles of such products depend on the risk taken by the investor. The rate of return on the instrument is not specified in advance, but is often guaranteed as a so-called minimum rate. In 2007, several companies which sell only this type of instruments and distribute them exclusively via the Internet, were set up. It will be possible to evaluate their impact on the development of the financial intermediation services market not earlier than after a few years.

Due to an extensive and diversified offer of loans and deposit and saving instruments on the Polish market, intermediaries more frequently provide advisory services to individual customers as regards selection of different financial products. Some of these products (e.g. mortgage loans) influence the financial standing of the customer during a significant part of his or her life. Therefore, it is the task of each advisor not only to help choose the best offer on the market, but also to make the customer aware of the risk, to which he or she will be exposed using a given financial product.

The importance of professional and reliable advisory services on the retail financial services market is confirmed by the European Commission. The Commission carried out work aimed at evaluating the necessity of taking legal actions on the EU level regarding, *inter alia*, credit intermediaries. The implementation of the directive on markets in financial instruments (MiFID) may be a step forward to regulate the relations between financial intermediaries and their customers in Poland. According to this directive, entities participating in the sale of participation units of investment funds may be obliged to obtain permission for conducting investment activities (broker license). However, the directive provides for the possibility to exempt from its scope those entities which meet certain conditions specified in art. 3, provided that their activities are regulated on the national level. The application of this exemption was entrusted to individual member states. At the end of 2007, no new solutions were known to be implemented in this matter in the future by the amendment of the act on investment funds. However, it may be assumed that, irrespective of the adopted legal solutions, some financial intermediaries – in particular companies dealing with advisory services and offering investment products – will make efforts to obtain a broker license. Obtaining such a license by the company dealing with financial advisory services makes it more reliable in the eyes of the potential customers and enables the extension of the offer – building own investment portfolios and implementing new deposit products.

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54 See chapter 2, pp. 42–46.
4.4. Private equity/venture capital sector

The size of the sector

In 2007, the value of investments started by private equity funds with registered office in Poland increased by nearly 90% and amounted to almost PLN 2.2 billion. The number of enterprises provided with the financing by these funds amounted to 50 and was by 13 entities higher than in the previous year. The value of capital gathered by venture capital funds with registered office in Poland was by over 40% higher as compared to the previous year and amounted to nearly PLN 2.2 billion (Table 4.4.1). Such considerable decline was partly due to a large base effect. A record value of capital obtained by the venture capital sector in 2006 resulted, \textit{inter alia}, from establishing a big fund by the largest company managing private equity funds in Poland. A characteristic feature of the venture capital sector in Poland is its high concentration, measured by the value of investments started. In 2007, approx. 23% of investments were carried out by one company managing private equity funds. Due to a relatively small size of this sector and its high concentration level, individual transactions may have a significant impact on its growth rate and direction of development.

According to the European Private Equity and Venture Capital Association (EVCA) data, the value of investments started in 2007 by private equity funds with registered office in Europe increased by 3.7% and amounted to EUR 73.8 billion.\textsuperscript{56} Despite an increase in the value of investments, their ratio to GDP slightly decreased as compared to 2006 and amounted to 0.584% (0.598% in 2006). As regards the ratio of investments to GDP (0.186%), the Polish venture capital sector remains less developed than in other European countries (Figure 4.4.1). In 2007, the value of capital raised by venture capital funds with registered office in Europe declined by 30% and amounted to EUR 79 billion.

The structure of the capital raised

In 2007, all capital raised by private equity funds with registered office in Poland came from abroad, including 60.3% of capital originating from other European countries and 39.7% from the

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\textsuperscript{56} The terms: “venture capital”, “venture capital sector” and “private equity” are used interchangeably in this section. Since the meaning of venture capital is narrower than that of private equity and constitutes its subcategory, private equity is used in the text, as it refers to the operations of both private equity and venture capital funds.

\textsuperscript{57} The study: \textit{Pan-European Private Equity & Venture Capital Activity Report, EVCA Yearbook 2008}, Brussels 2008, EVCA includes data on the following countries: Austria, Belgium, Czech Republic, Denmark, Finland, France, Greece, Spain, Netherlands, Ireland, Germany, Norway, Poland, Portugal, Romania, Sweden, Switzerland, Hungary, Great Britain and Italy.
Table 4.4.1. Investments and capital raised by private equity funds in Poland, 2004–2007 (PLN million)

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investments carried out by domestic private equity funds, including investments:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>– on the domestic market</td>
<td>590</td>
<td>620</td>
<td>1 144</td>
<td>2 162</td>
</tr>
<tr>
<td>– on foreign markets</td>
<td>370</td>
<td>434</td>
<td>1 093</td>
<td>1 742</td>
</tr>
<tr>
<td>Investments carried out by foreign private equity funds in Poland</td>
<td>220</td>
<td>186</td>
<td>51</td>
<td>420</td>
</tr>
<tr>
<td>Capital raised(^2)</td>
<td>1 378</td>
<td>238</td>
<td>3 649</td>
<td>2 158</td>
</tr>
<tr>
<td>Number of enterprises provided with the financing</td>
<td>34</td>
<td>25</td>
<td>37</td>
<td>50</td>
</tr>
<tr>
<td>Number of enterprises, in which funds completed their investment</td>
<td>41</td>
<td>29</td>
<td>25</td>
<td>23</td>
</tr>
<tr>
<td>Private equity investments as percentage of GDP (%)</td>
<td>0.063</td>
<td>0.064</td>
<td>0.114</td>
<td>0.186</td>
</tr>
</tbody>
</table>


\(^2\) I.e. the value of investments of private equity funds with registered office in Poland in a given year.

USA. The structure of capital raised depended, to a great extent, on the type of investments planned. Due to various risk preferences, not all investors are willing to be involved in leveraged buy-out transactions (LBO\(^58\)) and in some sectors, where potential portfolio companies operate. As compared to 2006, a significant change took place in the structure of investors providing capital to venture capital funds with registered office in Poland (Figure 4.4.2). The share of so-called funds of funds decreased significantly. In 2007, the majority of capital raised by private equity funds was provided by insurance companies. A significant share in the structure of capital sources is also held by other financial institutions — pension funds and banks. In contrast to previous years, in 2007 foreign private individuals did not provide financing for private equity funds with registered office in Poland. In 2005, a half of capital raised by these funds was provided by this category of investors, and in 2006 — this figure amounted to nearly 20%. Most significant entities providing

Figure 4.4.2. Private equity capital sources in Poland and Europe, 2006–2007

Note: Data for Europe refers to 20 countries listed in Figure 4.4.1.


\(^58\) Leverage Buy-Out (LBO) is a transaction which is to a great extent financed by debt — mainly by loans or issues of debt securities.
capital to venture capital funds in Europe were: pension funds, banks, funds of funds and insurance companies.

In the future, a significant source of financing for domestic private equity funds may be the National Capital Fund (KFK). It started to operate at the end of 2007. Its sole shareholder is Bank Gospodarstwa Krajowego. The objective of the KFK is to support the development of private equity funds investing in enterprises from the SME sector, in particular innovative enterprises conducting research and development activities with high growth potential. The development of the KFK should make it easier to obtain the financing (reducing the so-called capital gap) for small investments and projects at early development stages. The capital used for statutory activities of the KFK is provided by the state budget, European Union structural funds and other sources, e.g. foreign institutions. In December 2007, the KFK signed first agreements with two private equity funds on the financing of companies from high-tech industries at early development stages. Total capitalisation of these funds amounted to PLN 100 million.

The structure of investments

Private equity funds with registered office in Poland invested mainly on the domestic market – over 80% of the value of completed projects (Figure 4.4.3). As regards foreign investments, funds were interested in projects carried out on the Romanian and Bulgarian market. Among the projects started in the analysed period the largest investments were carried out in companies from the following sectors: industrial products (24.2%), transportation (23.7%) and financial sector (22.0%). The interest of funds in the telecommunication sector fell considerably. In 2007, this sector received only 2.4% of the total capital invested by the domestic venture capital funds, as compared to 56.2% in 2006.\(^{59}\)

At present, venture capital funds usually are not involved in projects with the value below EUR 3 million. This is due to the fact that the costs of the transaction preparation and its monitoring are too high in relation to the scale of the project. Furthermore, funds are not willing to participate in projects at early development stages (seed, start-up) due to a high investment risk. The activities of the KFK may contribute to increase the interest of private equity funds in small entities and in companies at early development stages.

In 2007, the value of divestments, measured according to the initial investment amount, reached PLN 360 million and was by 1/3 lower than in the previous year. In 2007, domestic funds completed finished investments in 23 companies, whereas in the previous year this number amounted to 25 entities. The main ways to complete projects were: sale of shares to another private equity fund (43.2% of total value of capital outflow from investments), repayment of principal loans by companies (23.5%) and sale of shares to another branch investor (14.8%).

As compared to previous years, a considerable decline was observed in the sale of shares on the stock market. In 2007, the sale of shares accounted for only 5.8% of divestment value (as compared to 53.4% in 2006). Funds sold shares of six companies on the stock market, of which shares of 5 companies were sold via Initial Public Offering (IPO) (as in 2006) and shares of one company were sold on the secondary market (as compared to 16 in 2006). A low value of divestments via the stock exchange was related to the deterioration of situation on the Warsaw Stock Exchange in the second half of the year. Lower valuation of companies and a poor demand for shares were the main reasons behind postponing decisions on divestments by funds or deciding to end investments in another way (e.g. through the sale of shares to another fund).

An attractive method of ending investments in small entities in the future may be the listing of the portfolio company on the NewConnect market. This market has been operating on the Warsaw Stock Exchange since the end of August 2007 and is an alternative trading system. Com-

\(^{59}\) In 2007, the structure of investments carried out in Poland by domestic and foreign private equity funds was similar. The largest investments were carried out in companies operating in the following sectors: consumer goods and retail trade (18.9%), industrial products (18.6%), financial services (17.8%) and transportation (14.5%). Telecommunication, which absorbed approximately a half of the investments in 2006, attracted only 3.5% of total capital invested.
Figure 4.4.3. Geographical structure of investments made by private equity funds with registered office in Poland

Source: NBP study based on the EVCA data.

Companies listed on the NewConnect market are small, have a short history of business, high growth potential and wish to finance their growth by raising capital through issues of shares.
4.5. Collective investment schemes

4.5.1. Investment funds

The Polish investment fund sector includes both domestic entities, which operate on the basis of the Act of 27 May 2004 on Investment Funds, and foreign entities, which operate in Poland in accordance with the UCITS directive on the basis of the single European passport principle. The participants of investment funds are mainly natural persons. As at the end of 2007, the share of units purchased by natural persons in net assets of investment funds amounted to 83% (excluding units acquired by insurance companies due to a concluded insurance agreement with an insurance capital fund by natural persons).

The size and growth of the sector

In 2007, net assets of domestic investment funds increased by 34.9% (PLN 34.6 billion) as compared to 2006, and amounted to PLN 133.8 billion (Figure 4.5.1) as at the end of December. This increase was in 89% attributed to net inflows to funds (approximately PLN 30.7 billion) and, to a lesser extent, to the change in the value of assets (Figure 4.5.2). Net assets of foreign funds, whose units were offered in Poland, amounted to PLN 2.5 billion as at the end of 2007. These assets grew by 68% (PLN 1.02 billion) as compared to 2006, mainly due to the inflow of new capital to these funds.\(^{61}\)

The inflow of new capital to investment funds in 2007 was the largest one since the establishment of these institutions in Poland. Owing to the bull market on the Warsaw Stock Exchange until mid-2007 investment funds achieved very good results and their historical rates of return were often higher than interest on bank deposits. Relatively high profitability of investments in units along with an increase in disposable income of households contributed to a large inflow of new capital to investment funds.

As compared to 2006, the balance of inflows and redemptions increased by 17.8% (PLN 4.6 billion). In July and August 2007, funds noted the highest inflow of capital. On the other hand, August was the month with the highest outflow of capital, but the balance remained positive. Such behaviour of investors resulted probably from uncertainty as for future changes in prices on financial markets. Negative net inflows to investment funds was observed in the last two months of 2007 after 33 months of a continuous positive net inflow to funds (Figure 4.5.3). Fund assets have been shrinking since August due to a deteriorating net inflows and negative management results.

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\(^{60}\) Act of 27 May 2004 on investment funds (Dz.U. of 2004, No. 146, Item 1546, as amended).

\(^{61}\) A further part of the study concentrates mainly on the description of domestic investment funds. If the analysis is related to foreign funds, this will be clearly stated in the text.
Financial institutions

Figure 4.5.2. Structure of the growth rate of net assets of investment funds in 2007 (on an accumulated basis)

Note: The structure of the growth rate of net assets is based on estimates. Net inflows to the funds were deducted by the distribution fee, and profits were reduced by the management fee.
Source: Analiz Online.

Figure 4.5.3. Monthly balance of inflows and redemptions of investment funds, 2004–2007

Source: Analiz Online.

As at the end of the year, net assets of investment funds were at a similar level to that observed at the turn of May and June 2007.

In 2007, the share of the net inflows in the growth rate of net assets of investment funds was exceptionally high, reaching its peak since 2001. This was both the result of a large inflow of funds and a relatively poor asset management result. The latter (in nominal terms) did not exceed PLN 4 billion and was worse than the results obtained in the years 2005–2006, when assets of investment funds were significantly lower.

In 2007, seven permits for the establishment of new investment fund management companies were granted. Shareholders of the majority of these investment fund management companies were companies and individuals operating on the financial market for many years, dealing, inter alia, with asset management in funds. As at the end of 2007, 33 investment fund management companies operated based on the permit of the Polish Financial Supervision Authority was (as compared to 26 in 2006) managing 277 funds (Table 4.5.1).

In 2007, the number of open-end investment funds decreased considerably. This decline was related to the transformation of open-end funds into umbrella funds. The transformation of open-end funds into umbrella funds and establishing new umbrella funds contributed to a significant increase in the number of sub-funds. As at the end of 2007, approx. 140 sub-funds operated on
The report on the activities of the Polish Financial Supervision Authority in 2007
detailed the market, whereas the respective number in 2006 amounted to 70 entities.\textsuperscript{62} A dynamic development of umbrella funds resulted from the possibility to postpone tax payments until the date of completion of investments in a given fund along with retaining the right to convert units/investment certificates between sub-funds. Furthermore, investment fund management companies were willing to set up umbrella funds or to convert existing funds into the umbrella funds as the establishment of a new sub-fund did not require the raising of a certain amount of capital specified in the statutes. In the case of the establishment of an investment fund (except for a closed-end investment fund issuing non-public certificates), total amount of inflows may not be lower than PLN 4 million.\textsuperscript{63}

In 2007, the Polish Financial Supervision Authority granted permits for the establishment of 74 new investment funds (as compared to 63 in 2006), including 13 open-end funds, 7 specialised open-end funds and 54 closed-end funds. A visible trend for establishing closed-end funds issuing non-public investment certificates was observed. Among newly established funds, 41 closed-end funds declared to issue non-public certificates. The popularity of these funds resulted mainly from a wide spectrum of financial instruments, in which they may invest, as well as the possibilities to create the product dedicated for certain investors. Furthermore, the advantage of closed-end funds is the fact that they may invest in securities or shares of limited liability companies.

A significant item of new closed-end investment funds are private equity funds (Table 4.5.2). Some investment fund management companies established real estate funds in this form. This practice was used due to the fact that a real estate fund operating as a private equity fund was obliged to adjust its investment portfolio to statutory requirements one year later than usually, i.e. to purchase at least four real estates. Furthermore, a significant category of assets forming the investment portfolio of some Polish real estate funds were shares held in limited liability companies. Funds established namely special purpose companies whose task is to acquire real estates and to lease them.

\textsuperscript{62} The report on the activities of the Polish Financial Supervision Authority in 2007, Warsaw 2008, Polish Financial Supervision Authority.

\textsuperscript{63} Art. 15, Par. 2 and 4 and Art. 159 Par. 2 of the act on 27 May 2004 on investment funds (Dz.U. of 2004, No. 146, Item 1546, as amended).

\begin{table}
\centering
\caption{Number of investment funds in Poland, 2004–2007\textsuperscript{1}}
\begin{tabular}{|l|c|c|c|c|}
\hline
\hline
Open-end investment funds & 107 & 134 & 144 & 130 \\
Specialised open-end investment funds & 24 & 20 & 28 & 33 \\
Closed-end investment funds\textsuperscript{2} & 23 & 36 & 69 & 114 \\
Total & 154 & 190 & 241 & 277 \\
\hline
\end{tabular}
\textsuperscript{1} Data refers to funds which obtained the license for operation. \textsuperscript{2} Data for 2004 for closed-end investment funds includes closed-end funds, specialised closed-end funds and mixed funds.
\end{table}

\begin{table}
\centering
\caption{Number of investment funds established based on the permit granted in 2006 and 2007 by individual types and structures}
\begin{tabular}{|l|c|c|l|c|c|}
\hline
\hline
Structures of investment funds & & & Types of investment funds & & \\
Funds with various unit categories & 4 & 0 & Money market funds & 0 & 0 \\
Umbrella funds & 9 & 12 & Exchange traded funds & 0 & 0 \\
Master funds & 2 & 0 & Securitisation funds & 7 & 5 \\
Feeder funds & 4 & 0 & Private equity funds & 10 & 39 \\
\hline
\end{tabular}
\end{table}
Box 4.5.1

LEGAL STRUCTURE OF POLISH INVESTMENT FUNDS AND A SINGLE PASSPORT PRINCIPLE

According to the UCITS directive, harmonised investment funds may have the following legal form: unit trust, investment company, contractual fund. Trusts originate from the Anglo-Saxon legal system. Contractual funds operate based on the agreement signed between investors and management company which undertakes to acquire financial instruments and to manage investment portfolio. An investment company is an independent corporate entity. Its example is French SICAV – public limited company with variable capital.

The act of 27 May 2004 on investment funds implementing the provisions of the UCITS directive in Poland introduced three types of investment funds: open-end, specialised open-end and closed-end funds. Among them only open-end funds are harmonised funds in the meaning of the mentioned directive. The legal structure of Polish investment funds does not correspond to any form specified in the UCITS directive. This solution is, namely, similar to the one in force in the domestic pension fund sector. Its main feature is the separation of two legal persons: investment fund and investment fund management company. This legal separation is aimed at improving security of capital raised by investment funds. Capital paid in by participants of investment funds is the fund’s property, and the liquidation of the investment fund management company, which manages a given investment fund, does not result in the liquidation of the fund. A similar structure is characteristic only for investment companies, but they differ by the role played by the managing company. Investment companies are often self-management institutions, whereas assets of trusts and contractual funds must be managed by an investment company.

It seems that a different legal structure of Polish harmonised investment funds, though improving security of investors, may result in the lack of the notification of Polish funds in the European Union countries. Limitations to foreign expansion may not be namely explained only by setting up funds in other countries than Poland by some foreign owners of investment fund management companies. It is namely possible to acquire units of domestic and foreign funds belonging to the same capital group in Poland.

As at the end of 2007, no Polish fund was notified in other EU member states despite the simplification of the form of a single passport (Box 4.5.1). As at the end of 2007, 47 foreign entities were notified in Poland, of which 18 funds sold units of more than one sub-fund. In December 2007, total number of sub-funds and funds offered by foreign entities amounted to 458, i.e. more than the offer of domestic investment fund management companies.

The growth rate of assets of the European sector of investment funds decreased from over 14% in 2006 to 4.9% in 2007. Over the year assets of investment funds grew by EUR 373 billion and reached EUR 7 925 billion as at the end of December (assets of harmonised funds increased by EUR 252 billion and reached EUR 6 203 billion as at the end of 2007). A decline in the growth rate of investment fund assets was caused mainly by a lower inflow of capital to funds (the net inflows decreased from EUR 452 billion in 2006 to EUR 170 billion in 2007). The tendency to withdraw capital from funds in the second half of 2007 was due to turmoil world financial markets, a decrease in stock prices and an increase in interest rates in the euro zone, which encouraged households to choose safer saving forms (flight-to-safety). The most significant outflow of capital was observed in bond funds and equity funds. Hybrid funds and money market funds remained an interesting form of investments.

In 2007, net assets of Polish investment funds (UCITS and non-UCITS) accounted for 0.47% of the investment fund sector assets of the countries associated under the EFAMA (European
Fund and Asset Management Association). The most important share in net assets were held by funds with registered office in Luxembourg and France. Owing to an intensive inflow of capital to domestic entities, Poland noted one of the highest increases in assets in the countries associated under the EFAMA, occupying position sixteen in terms of capital raised. Poland remained the leader in the region in terms of the value of harmonised asset funds and as percentage of GDP (Figure 4.5.4).

Concentration and competition

In 2007, along with the tendency observed in the recent years, the competition conditions improved and the concentration in the investment fund sector decreased, which is confirmed, inter alia, by the value of CR3 and HHI indices (Table 4.5.3). This was mainly due to a decrease in the market share of three largest entities whose growth rate of assets was below the average of the whole sector. The biggest decline in this share, by over 2 p.p., noted the biggest entity on the market. This investment fund management company has been systematically losing its market share in the recent years. Out of 24 investment fund management companies in the years 2006–2007, a half of them lost their market share, and the other half of entities increased their share. The highest increase in the market share was observed in the case of companies managing smaller assets, which offer mainly funds dedicated to a limited group of investors. The main reason for an increase was a relatively high, as compared to net assets, net inflow to these funds. This was influenced by both good investment results obtained in previous periods, as well as by an effective advertising campaign.

In 2007, 208 entities distributed units of investment funds (as compared to 125 in 2006). A significant increase in the number of permits granted resulted from a big interest of cooperative banks in the distribution of units (nearly 80% of permits). Another group were financial advisory companies; less interest was shown by commercial banks. Price decreases on the stock market as well as significant decline in the net inflow to equity funds in the second half of 2007 caused the

Table 4.5.3. Investment fund management companies concentration indices, 2004–2007

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of investment fund management companies</td>
<td>20</td>
<td>23</td>
<td>26</td>
<td>33</td>
</tr>
<tr>
<td>CR3 (w %)</td>
<td>55.09</td>
<td>54.92</td>
<td>53.78</td>
<td>50.08</td>
</tr>
<tr>
<td>HHI1</td>
<td>0.1603</td>
<td>0.1469</td>
<td>0.1232</td>
<td>0.1131</td>
</tr>
</tbody>
</table>

1 Herfindahl-Hirschman index.

Source: Polish Financial Supervision Authority, NBP calculations based on Analizy Online.
demand of distributors to increase their fees which could additionally encourage other entities to obtain the permit of the Polish Financial Supervision Authority for intermediation in disposal of units.

The development of the distribution network of units and increasing competition stimulated an increase in the number of investment fund participants. Despite the tendency to withdraw capital by the participants of funds in the second half of 2007, the number of participants grew systematically. As at the end of the year, it amounted to 3.4 million (as compared to approx. 2.35 million as at the end of 2006). In 2007, funds won over one million new investors, of which approx. 800 thousand invested in units of funds managed by investment fund management companies related to banking capital groups.

In 2007, in order to improve the protection of participants of investment funds, the Polish Financial Supervision Authority adopted a resolution on the forms of advertising used by investment funds. According to the resolution of the Polish Financial Supervision Authority, advertising message has to be reliable, include information on the investment risk related to the acquisition of units of investment funds and should not mislead potential investors. It seems that it will have a positive impact on the development of the investment fund sector as it will increase financial awareness of potential investors. The actions to be undertaken to implement the MiFID directive will have a significant importance for distributors of units of investment funds. Additional obligations imposed on distributors to protect investment fund clients may significantly change the structure of the market of intermediaries in disposal and repurchase of units of investment funds.

**Market structure**

Turmoil on world financial markets and related falling stock prices on the Warsaw Stock Exchange in the second half of 2007 caused changes to the structure of the investment fund sector. As at the end of 2007, the highest value of net assets was raised by balanced funds. They remained the leader despite a considerable decline in the positive net inflows compared to 2006. An increase in their market share was to a great extent related to the highest in all types of investment funds profit on investment activities, both in nominal figures and as percentage of the growth rate of net assets.

The second position in terms of net assets was occupied by domestic equity funds. Their high growth rate of net assets was almost exclusively due to an inflow of new capital (97% share). This group of funds noted the highest net inflows among all types of investment funds. This balance

**Table 4.5.4. Net assets of basic types of investment funds, 2004–2007 (PLN billion)**

<table>
<thead>
<tr>
<th>Fund types</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>Change 07/06 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic equity funds</td>
<td>4.8</td>
<td>6.5</td>
<td>19.3</td>
<td>33.1</td>
<td>71.5</td>
</tr>
<tr>
<td>Domestic bond funds</td>
<td>8.2</td>
<td>11.6</td>
<td>8.1</td>
<td>7.0</td>
<td>-13.6</td>
</tr>
<tr>
<td>Money market funds</td>
<td>5.1</td>
<td>7.1</td>
<td>7.6</td>
<td>8.3</td>
<td>9.2</td>
</tr>
<tr>
<td>Stable growth funds</td>
<td>7.1</td>
<td>13.9</td>
<td>22.5</td>
<td>25.9</td>
<td>15.1</td>
</tr>
<tr>
<td>Balanced funds</td>
<td>6.5</td>
<td>13.7</td>
<td>30.4</td>
<td>42.3</td>
<td>39.1</td>
</tr>
<tr>
<td>Foreign equity funds</td>
<td>0.3</td>
<td>0.8</td>
<td>1.8</td>
<td>8.9</td>
<td>394.4</td>
</tr>
<tr>
<td>Foreign bond funds</td>
<td>4.0</td>
<td>4.4</td>
<td>2.8</td>
<td>1.9</td>
<td>-32.1</td>
</tr>
<tr>
<td>Other</td>
<td>1.6</td>
<td>3.6</td>
<td>6.7</td>
<td>6.4</td>
<td>-4.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>37.6</strong></td>
<td><strong>61.6</strong></td>
<td><strong>99.2</strong></td>
<td><strong>133.8</strong></td>
<td><strong>34.9</strong></td>
</tr>
</tbody>
</table>

Source: Analiz Online.

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64 Resolution of the Polish Financial Supervision Authority of 3 July 2007 on the Communication of the Polish Financial Supervision Authority on the forms of advertising message related to investment funds.

65 Due to a change in the principles for investment fund classification to individual fund types, data for previous years also changed.
was by over 50% higher than in 2006. A high interest in equity funds was observed during the whole year, except for August and November, when capital was withdrawn from these funds.

The highest growth rate of net assets was achieved by equity funds investing outside the country. In 2007, this was the only fund type which was distinguished by positive net inflows in each month. Investors were not discouraged even by the fact that the funds of this type generated a negative result on investment activities. The need to diversify risk and the willingness to become independent from price changes on the Polish stock exchange contributed to high popularity of foreign investment funds. The highest capital among foreign investment funds was raised by investment funds investing on emerging markets. In terms of assets, foreign equity funds raised more capital than domestic bond funds as well as domestic money market and cash funds.

In 2007, the majority of capital withdrawn related to domestic bond funds. Positive net inflows were observed only in August and November, i.e. in months when capital was withdrawn from domestic equity funds. These funds were withdrawn also from foreign bond funds which achieved negative investment results.

The analysis of the investment fund sector in Poland in terms of net assets raised in various investment funds indicates that open-end investment funds prevail (Table 4.5.5), despite the fact that their number decreased as compared to the end of 2006. The share of open-end funds in net assets of the whole sector declined as well. The highest growth rate of assets was observed in specialised open-end investment funds. They were dominated by umbrella funds. Their umbrella-like structure made it possible to limit capital withdrawals and enabled conversion of units of one sub-fund into units of another sub-fund.

The group whose importance in the investment fund sector grew constantly were funds registered abroad and dealing with cross-border sale on the territory of Poland. As at the end of 2007, their net assets amounted to PLN 2.5 billion and were higher by 70% (in nominal terms – by approx. PLN 1 billion) than as at the end of 2006. The growth of assets was mainly due to

<table>
<thead>
<tr>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open-end investment funds</td>
<td>32.6</td>
<td>53.8</td>
<td>79.7</td>
</tr>
<tr>
<td>Specialised open-end investment funds</td>
<td>3.5</td>
<td>4.4</td>
<td>12.7</td>
</tr>
<tr>
<td>Close-end investment funds</td>
<td>1.6</td>
<td>3.1</td>
<td>6.8</td>
</tr>
<tr>
<td>Total</td>
<td>37.7</td>
<td>61.3</td>
<td>99.2</td>
</tr>
</tbody>
</table>

Source: Analyzy Online, Chamber of Fund and Asset Management.
an inflow of capital of PLN 900 million. An increasing interest in foreign funds was reflected by the growing number of individuals willing to acquire their units. As at the end of 2007, there were over 42 thousand clients of investment funds registered abroad, i.e. by almost 15 thousand more than in 2006.

In 2007, small changes took place in the asset structure of the European investment fund market. As compared to 2006, assets of major types of funds increased. The exception were bond funds whose assets declined by 3.5%. The highest (40%) market share was retained by equity funds, whereas the lowest share was held by hybrid funds (15%), though their growth rate of assets was the highest one among all types of funds (Figure 4.5.6).

The structure of the Polish market was different from the European average, as well as from the structure of the US market as the domestic market was characterised by the highest share of hybrid funds in the assets of the harmonised investment funds from among all countries associated under the EFAMA (Figure 4.5.6). As in 2006, the Swedish market had the highest share of equity funds (68% of assets of UCITS funds), and the Danish market – of bond funds (50% of assets of UCITS funds).

**The structure of the investment portfolio of investment funds and their impact on financial markets**

As regards domestic institutional investors, investment funds held the largest share in the structure of buyers of shares quoted on the Warsaw Stock Exchange. The value of shares in their investment portfolio as at the end of December 2007 amounted to over PLN 52 billion and was by nearly 17 billion (by 48%) higher than as at the end of 2006. Nearly 85% of the growth of the equity portfolio was due to the purchase of new shares, and only 15% resulted from increasing prices of acquired securities. The share of funds in free float on the Warsaw Stock Exchange

### Table 4.5.6. Exposure of investment funds on the Polish financial market, 2004–2007 (%)

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Share in Treasury bill market</td>
<td>13.3</td>
<td>8.1</td>
<td>9.6</td>
<td>10.4</td>
</tr>
<tr>
<td>Share in Treasury bond market</td>
<td>5.2</td>
<td>9.5</td>
<td>10.5</td>
<td>10.5</td>
</tr>
<tr>
<td>Share in free float on the Warsaw Stock Exchange</td>
<td>9.7</td>
<td>11.7</td>
<td>19.3</td>
<td>25.0</td>
</tr>
<tr>
<td>Share in the stock exchange capitalisation¹</td>
<td>4</td>
<td>5.1</td>
<td>8.1</td>
<td>10.3</td>
</tr>
</tbody>
</table>

¹ Capitalisation includes only domestic companies.

Source: Ministry of Finance, Warsaw Stock Exchange, Analyzy Online.
increased significantly because shares acquired by these entities are classified as free floating securities (Table 4.5.6).

The purchase of new shares by investment funds was caused by a significant net inflow to funds which declared investments in domestic equity securities, in particular in equity funds. Approx. 50% of capital, which flew in to investment funds, was invested on the domestic equity market. Thus, the share of stocks in net assets of investment funds increased from 35.5% as at the end of 2006 to 39% as at the end of 2007. In July 2007, exposure of investment funds on the equity market reached PLN 65 billion, which is 46% of their net assets. Since August 2007, due to turmoil on world financial markets and related price decreases on the Warsaw Stock Exchange, funds not only decreased purchases of new shares, but even started to sell securities (Figure 4.5.7).

In 2007, a considerable change took place in the structure of the equity portfolio of investment funds. Due to a significant inflow of capital to small and medium-sized funds in the first half of 2007, the share of stocks of large companies in this portfolio fell to 43.5%. Price falls on the Warsaw Stock Exchange and the tendency to withdraw capital from small and medium-sized companies in the second half of the year contributed to an increase in the share of companies composing the WIG20 index in the structure of the equity portfolio to 54% as at the end of 2007.

As regards the share in net assets, the second largest area of investments made by investment funds were domestic Treasury bonds. As compared to 2006, their value in the fund portfolio increased by nearly 10% and amounted to PLN 37.5 billion (in nominal terms). A small change in
exposure of investment funds to Treasury bonds was caused by the outflow of capital from bond funds, along with the inflow of capital to balanced funds and stable growth funds. In nominal terms, 5- and 10-year fixed interest rate bonds accounted for approx. 50% of the Treasury bond portfolio. In the second half of 2007, duration of the domestic wholesale bonds of investment funds was at the highest level among all portfolios of domestic institutional investors.

In 2007, a significant category of investments were units, in particular those issued by collective investing institutions with registered office abroad (Figure 4.5.8). By acquiring foreign units, domestic funds reflected the investment policy of a given institution. Benefits for the participants of the domestic funds, arising from the imitation policy, appear in particular when Polish investment fund management companies are not familiar with the markets on which foreign funds carry out their investments. Furthermore, in 2007 domestic investment funds increased significantly their exposure to deposits which resulted from turmoil on financial markets and a related tendency to withdraw capital by fund participants.

**Investment performance and risk level**

Falling stock prices and increasing Treasury bond yield observed in the second half of 2007, along with a significant share of these instruments in the structure of the investment portfolio of Polish funds, led to the deterioration of performance as compared to 2006. In 2007, investment funds generated a positive result on investments amounting to approx. PLN 4 billion, which accounts for only 11% of the growth of their net assets. This result is composed in 70% from gains on investments in shares of companies quoted on the Warsaw Stock Exchange. However, rates of return of all Warsaw Stock Exchange indexes in 2007 were lower than in 2006 which contributed to a decrease in rates of return of investment funds investing their assets in shares quoted on the domestic market. Furthermore, an increase in interest rates in Poland caused a lower valuation of units of investment funds investing in bonds.

In 2007, no type of investment funds generated better results than in 2006. The average weighted rate of return for the whole sector decreased by 11 p.p. which, taking into account higher inflation rate than in 2006, meant a considerable decline in real interest rates. The highest fall in profitability of investments (by over 30 p.p.) was observed in the case of equity funds. The average rate of return for this type of funds exceeded, however, the rate of return for the WIG index, mainly due to investments in shares of small companies whose rate of return was almost 2.5 times higher than that of the equity portfolio reflecting the widest index of the Warsaw Stock Exchange. In 2007, variances between rates of return generated by various types of funds decreased (Table 4.5.7).

Rates of return of money market and cash funds changed insignificantly. An increase in interest rates on the inter-bank market and a related increase in interest on bank deposits, which composed a significant part of the investment portfolio, had a positive impact on the performance of investment funds investing in cash.

**Table 4.5.7. Rates of return of investment funds, 2004–2007 (%)**

<table>
<thead>
<tr>
<th>Types of funds</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic equity funds</td>
<td>23.8</td>
<td>22.9</td>
<td>47.7</td>
<td>16.1</td>
</tr>
<tr>
<td>Domestic bond funds</td>
<td>6.0</td>
<td>6.5</td>
<td>3.9</td>
<td>2.1</td>
</tr>
<tr>
<td>Money market funds</td>
<td>5.0</td>
<td>4.7</td>
<td>3.6</td>
<td>3.6</td>
</tr>
<tr>
<td>Stable growth funds</td>
<td>10.7</td>
<td>11.6</td>
<td>12.8</td>
<td>7.0</td>
</tr>
<tr>
<td>Balanced funds</td>
<td>14.4</td>
<td>18.1</td>
<td>21.5</td>
<td>10.3</td>
</tr>
<tr>
<td>Foreign equity funds</td>
<td>-11.8</td>
<td>12.2</td>
<td>6.5</td>
<td>2.1</td>
</tr>
<tr>
<td>Foreign bond funds</td>
<td>-14.9</td>
<td>7.6</td>
<td>-4.6</td>
<td>-7.5</td>
</tr>
<tr>
<td>Weighted average for all investment funds</td>
<td>8.1</td>
<td>12.0</td>
<td>20.4</td>
<td>9.4</td>
</tr>
<tr>
<td>Average annual inflation rate (CPI)</td>
<td>3.5</td>
<td>2.1</td>
<td>1.0</td>
<td>2.5</td>
</tr>
</tbody>
</table>

Note: The rates of return for investment funds are stated as a product of arithmetic average monthly rates of return for a given fund category. The weighted average for investment funds does not include the unclassified fund group.

Source: Analyzy Online, Central Statistical Office.
Figure 4.5.9. Rate of return of investment funds vs. their net assets in 2007

Note: the hypothesis on no relation between the fund size and its rate of return was confirmed also by the analysis of the population of investment funds as divided into two groups. The first one comprised 86 funds and sub-funds whose net assets did not exceed PLN 100 million. The other group comprised 149 entries with assets over PLN 100 million. This division made it possible to obtain a similar structure of investment fund types in each sub-group. The division of domestic equity funds into two subgroups: one with assets up to PLN 500 million, and the other with assets over PLN 500 million, enabled the conclusion that there is no significant difference in the obtained rate of return depending on net assets.

Source: NBP calculations based on Analizy Online data.

Figure 4.5.10. Net inflows to investment funds and achieved rates of return in 2006 and 2007

Source: Analizy Online.

Figure 4.5.11. Distribution of annual rates of return of investment funds in 2006 and 2007

Note: density function estimated with the non-parametrical method using the Epanechnikov kernel. Axis of abscissae presents annual rates of return of investment funds.

Source: NBP calculations based on Analizy Online data.
of these funds. Largest losses were incurred by foreign bond funds whose negative rates of return resulted to a great extent from a strong appreciation of Polish zloty.

The analysis of variances in investment performance depending on net assets raised by investment funds suggests that no statistically significant relations existed between the fund size and its rate of return (Figure 4.5.9). At the same time, the analysis of the rationality of investment fund clients’ activities based on the examination of the relations between the performance of various types of investment funds and the inflow of capital to these funds shows that the net inflows in 2007 largely depended on the performance of investment funds both in the current and in the previous year (Figure 4.5.10).

The comparison of investment fund performance in the years 2006–2007 indicates that the distribution of annual rates of return in 2007 demonstrates leptokurtosis (smoothness) as opposed to the distribution in 2006 when leptokurtosis was similar to normal distribution (Figure 4.5.11). This means that a very large number of funds, irrespective of their investment policy, achieved similar rates of return in 2007. Both analysed distributions were characterised by right-hand skew (higher probability of rates of return exceeding average figures than in the normal distribution) and similar variability measured by standard deviation. Significant variances were, however,
observed in differences between rates of return achieved by investment funds in each of these two years. Whereas lowest rates of return in 2006 and 2007 were almost identical, best investment performance achieved in 2007 was almost 2.5 times higher than the rate of return of best funds in 2006.

Lower rates of return in the whole investment fund sector as compared to 2006 were accompanied by a similar level of undertaken risk weighted with standard deviation of monthly rates of return (Figure 4.5.12). Variability of investment performance of individual types of investment funds was related to the structure of their investment portfolio. In 2007, variance of rates of return of the SME index increased as compared to 2006, which was reflected by an increased level of risk undertaken by equity funds. In this group of funds, a significant number of entities invested in securities of small and medium-sized companies. The highest increase in risk along with a decrease in the rate of return was observed in the case of foreign equity funds. This was influenced by turmoil on world financial markets and appreciation of Polish zloty.

In 2007, the Sharpe index, reflecting efficiency of asset management for individual types of investment funds, declined considerably (Figure 4.5.13). Worse efficiency of asset management was largely influenced by lower rates of return of investment funds than in 2006. An increase in the Sharpe index, in particular for money market and cash funds, was also due to a higher level of the risk-free interest rate. In 2007, balanced funds were characterised by the highest management efficiency. They exceeded equity funds, which as compared to 2006 noted the lowest percentage decline of the Sharpe index. This may indicate efficient asset management by investment funds.

**New products offered**

In 2007, due to a high interest in units of investment funds, expressed by a considerable inflow of new capital to funds and the willingness to adjust the product offer to the expectations of investors, the number of newly established investment funds was the highest one since 1999. In the group of new entities, the dominant role was played by closed-end funds issuing non-public investment certificates, in particular private equity funds. In the analysed period, sector funds were established, including: funds from the financial sector, funds investing in shares of companies related to the energy industry and a fund investing in shares of Polish exporters. Furthermore, newly established funds comprise also those which focus on investing only in securities of companies involved in the organisation of the European Football Championships in 2012.

Investment fund management companies extended their offer by funds investing on foreign markets, mainly emerging markets marked by good economic prosperity. This was a response to the need to diversify the investment risk of fund participants. Investment fund management companies enabled direct investments in foreign instruments (purchase of securities of foreign companies by investment funds) or by investments in units of foreign investment funds investing their capital on selected foreign markets. The latter form of investments, though exposed to double management fee, seems justified as regards investments on well-known markets to Polish investment fund management companies.

Investment fund management companies continued to establish new securitisation funds. Entities set up in 2007 operated as non-standardised funds whose investment policy allows to invest in various types of claims.

**4.5.2. Open pension funds**

**The size of the sector**

In 2007, net assets of open pension funds (OFE) grew as compared to 2006 by PLN 23.5 billion and amounted to PLN 140 billion as at the end of December (Figure 4.5.14). The growth rate of capital managed by open pension funds was nearly two times lower than in the years 2003–2006, mainly due to worse investment performance arising from decreasing prices on the domestic financial market in the second half of the year. 70% of an increase in net assets resulted from the inflow of contributions handed over by the Social Insurance Office, and 30% – from investment activities of open pension funds.
Due to an increasing number of pension system participants (arising from new generations entering the labour market and a decline in unemployment) and an increase in salaries forming the basis on which contributions of open pension funds’ members are calculated, the value of funds handed over by the Social Insurance Office in 2007 increased to PLN 17.7 billion. Appro. PLN 1.5 billion out of this amount represented the repayment of the Social Insurance Office liabilities to open pension funds’ members in the form of Treasury bonds. In the analysed period, the open pension funds charged fees on contributions\textsuperscript{66} amounting to PLN 1.1 billion (6.2% of funds handed over by the Social Insurance Office). During the whole operating period of the reformed pension system these fees amounted to PLN 6.4 billion, i.e. 6.6% of contributions paid to the system. The financial result of open pension funds amounted to PLN 7.0 billion and was more than two times lower than in 2006 (Figure 4.5.15).

The number of participants of open pension funds increased by 6.3% and amounted to 13.13 million as at the end of December (as compared to 12.35 million in December 2006). In 2007, 785 thousand people joined funds, of which 243 thousand did not conclude an agreement with open pension funds within the period required by legal regulations. These persons became members of a given fund based on the ballot carried out by the Social Insurance Office. This is a no-cost form of acquisition of new members for funds taking part in the ballot – it does not require expenses on advertising and acquisition.

Polish pension funds belong to the most developed funds in the Central and Eastern European countries which have pension systems consisting of a capital part with a defined contribution (Figure 4.5.16). A much larger part of assets as well as of the participants of these funds as compared to, \textit{inter alia}, Hungary results from the statutory obligation to participate in open pension funds for all employees born after 1968. In Hungary, pension reforms were carried out one year

\textbf{Figure 4.5.14. Size and changes in assets of pension fund, 2000–2007}

![Chart showing size and changes in assets of pension fund, 2000–2007](chart.png)

Source: Polish Financial Supervision Authority.

\textbf{Figure 4.5.15. Breakdown of the growth of net assets of open pension funds, 2006–2007}

\begin{tabular}{|c|c|c|c|}
\hline
 & A. 2006 & B. 2007 \\
\hline
Assets (increase) & 30.5 & 23.5 \\
Premiums and interest (+) & 16.5 & 17.7 \\
Fees on premiums (-) & -1.0 & -1.1 \\
Other items (+) & +0.1 & -0.2 \\
Financial result & 15.2 & 7.0 \\
\hline
\end{tabular}

Note: Other items were determined with the use of the residual method; they comprise, \textit{inter alia}, contributions which were not converted to settlement units.

Source: Polish Financial Supervision Authority.

\textsuperscript{66} An open pension fund may collect a fee on the contribution, so-called distribution fee. This fee is expressed as percentage of the contribution handed over and may not exceed 7%.
earlier than in Poland (i.e. in 1998), but the obligation to participate in the capital part of the system covered only persons who just entered the labour market.

First pensions from the capital part of the system will be paid out in 2009. In the analysed period, work on solutions which would make it possible to finalise the reform of the pension system and which would determine the principles for the payment of these benefits were not completed. According to the governmental draft act submitted at the end of 2007, new financial institutions – pension companies – will manage funds handed over by the open pension funds to pay pension benefits and will make payments via the Social Insurance Office. The draft act proposes three forms of benefits which can be chosen by participants of a new pension system: individual annuity pension, pension with a guaranteed period of payments and marital pension.

Due to a mandatory character of the pension system in a long term, fund assets will grow systematically, though from 2009 a part of funds raised by open pension funds will be used to pay pension benefits. The value of funds used for the payment of pensions in the beginning period will have a small impact on the value of funds managed by the common pension companies (PTE). According to the estimates, the average annual contributions handed over to open pension funds in the years 2008–2020 will amount to between PLN 20–25 billion, and the average annual capital used for the payment of pension benefits will not exceed PLN 4 billion.

**Concentration and competition**

15 common pension companies managing open pension funds operated in 2007. In the analysed period, changes took place in the shareholders’ structure of two common pension companies. As AEGON Woningen Nova B.V. acquired all shares of PTE Ergo Hestia SA, the name of the organisation changed from PTE Ergo Hestia SA to AEGON PTE SA. On the other hand, a change of the strategic shareholder of Winterthur PTE SA resulted in the transformation of this organisation into AXA PTE SA.

In 2007, the number of transfers of members between pension funds remained at a high level which resulted, *inter alia*, from an active and expensive acquisition activities of some common pension companies, focused on strengthening the market position of the fund. Pension funds were changed by 382 thousand people, i.e. approx. 3% of members of open pension funds. The highest positive balance of transfers was observed in the case of AXA PTE SA (34 thousand) and

| Table 4.5.8. Concentration indices of open pension funds, 2004–2007 |
|-----------------|-----------------|-----------------|-----------------|-----------------|
|                | 2004            | 2005            | 2006            | 2007            |
| CR3 (%)        | 64.10           | 63.74           | 63.59           | 63.91           |
| HHI            | 0.1616          | 0.1602          | 0.1588          | 0.1601          |

Source: NBP calculations based on the Polish Financial Supervision Authority data.
Financial institutions

ING PTE SA (22 thousand). The largest number of participants resigned from the membership in Aegon PTE SA (almost 23 thousand) and in AIG PTE SA (19 thousand).

The downward trend for the concentration on the open pension fund market observed in the recent years came to a halt. A slight increase was observed in the Herfindahl-Hirschman (HHI) and CR3 index, describing the market share of three largest funds in terms of net assets (Table 4.5.8). An increase in the concentration indexes resulted from a slight increase in the market share held by the largest open pension funds, whose settlement units usually grew faster than the average for the market, and from a positive balance of transfers. At the same time, an increasing importance of largest entities was limited by the mandatory ballot system used for assigning persons who did not choose the fund themselves. Open pension funds entitled to take part in the ballot comprise those open pension funds whose market share measured by net assets does not exceed 10%, and which achieved higher rates of return than weighted average rates of return for the last two periods. In the coming years, market concentration may increase as new mergers and acquisitions are planned on the common pension companies market.

The structure of the investment portfolio of open pension funds and their influence on financial markets

In 2007, main categories of assets in the investment portfolio of open pension funds were Treasury bonds and shares quoted on the Warsaw Stock Exchange. The share of these financial instruments in the investment structure of open pension funds has been relatively stable in the recent years (Figure 4.5.17). This results from statutory investment limits mandatory for open pension funds as well as from the size and structure of the domestic financial market. Along with an increase in assets of pension funds, the latter factor is increasing important for determining the share of individual instruments in the investment portfolio.

In the analysed period, pension funds increased their involvement in the domestic Treasury bond market (Table 4.5.9) and became the largest investor on this market, ahead of foreign investors. Open pension funds purchased bonds for PLN 13.6 billion (in nominal terms), i.e. by PLN 3 billion less than in the previous year. Due to an increase in interest rates in Poland, the pricing of the bond portfolio of pension funds declined. As at the end of 2007, Treasury bonds in the investment portfolio of open pension funds amounted to PLN 81.2 billion, which means an increase by PLN 11.3 billion as compared to the end of 2006. Approx. 75% of Treasury bonds held by open pension funds were fixed interest securities, in particular 5- and 10-year securities. Such high interest in these bonds was due to their high value in circulation and to the liquidity of the secondary market. As regards the structure of the Treasury bond portfolio, the share of variable interest bonds increased considerably: from 10% as at the end of 2006 to 14.9% as at the end of 2007. This resulted mainly from the purchase of 10-year WZ0118 bonds by open pension funds in 2007, and to a lesser extent from handing over DZ1111 bonds to open pension funds due to the repay-

Figure 4.5.17. Structure of the investment portfolio of pension funds in Poland, 2004–2007

Source: Polish Financial Supervision Authority.
Table 4.5.9. Open pension funds on financial markets, 2004–2007 (%)

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Share of open pension funds in the State Treasury bond market</td>
<td>15.3</td>
<td>18.4</td>
<td>21.4</td>
<td>23.2</td>
</tr>
<tr>
<td>Share of open pension funds in the free float of domestic companies quoted on the Warsaw Stock Exchange</td>
<td>22.4</td>
<td>21.1</td>
<td>20.8</td>
<td>22.0</td>
</tr>
<tr>
<td>Share of open pension funds in the capitalisation of domestic companies quoted on the Warsaw Stock Exchange</td>
<td>9.3</td>
<td>8.6</td>
<td>8.7</td>
<td>9.0</td>
</tr>
</tbody>
</table>

Source: NBP calculations based on the Polish Financial Supervision Authority, Ministry of Finance and Warsaw Stock Exchange data.

The portfolio of shares quoted on the Warsaw Stock Exchange held by open pension funds amounted to PLN 47.8 billion as at the end of 2007, i.e. increased by 22.7% as compared to the end of 2006. However, at the same time, the share of pension funds in the stock exchange capitalisation and in free float slightly decreased (Table 4.5.9). Due to turmoil on world financial markets and a related decline in stock prices on the Warsaw Stock Exchange in the second half of 2007, the share of stocks in the investment portfolio of pension funds was subject to significant fluctuations. The involvement of open pension funds in shares quoted reached its peak (approx. 38.5% of the investment portfolio) at the turn of May and June, while as at the end of December the share of stocks decreased to below 35%. In 2007, funds acquired stocks on the Warsaw Stock Exchange for PLN 4 billion (net). In the first half of the year, when stock market indexes went up, the equity portfolio of pension funds increased, mainly as a result of an increase in stock prices and small net purchases of these instruments. However, due to an increase in the share of these instruments nearly to the maximum allowed investment limit of 40% of portfolio applicable to open pension funds, funds had to sell shares since April. The balance of equity investments in the first half of the year was therefore close to zero. In the second half of the year, in the light of falling prices of securities quoted on the Warsaw Stock Exchange, open pension funds intensified their purchases of stocks. In the fourth quarter, when investment funds reduced their exposure to stocks quoted on the Warsaw Stock Exchange, pension funds in fact acquired these securities (per saldo). As compared to the end of 2006, the structure of the equity portfolio did not change significantly. Stocks of the companies composing the WIG20 index accounted for nearly 55% of this portfolio.

In 2007, pension funds increased their exposure to non-Treasury debt securities issued by enterprises, banks and local government units. The value of the non-Treasury debt securities portfolio increased from PLN 335 million (0.3% of the investment portfolio) as at the end of 2006 to PLN 2 billion (1.5% of the investment portfolio) as at the end of 2007. Pension funds were mainly interested in purchasing securities issued by public companies on the non-regulated market. A significant category of these instruments were debt securities issued by the companies composing the WIG20 index (inter alia PKO BP SA, PKN Orlen SA, Globe Trade Centre SA).

Due to reallocation of investments, arising from, inter alia, price changes on financial markets, constant inflow of contributions of open pension funds’ members as well as periodical transfers of their funds, pension funds maintain a part of assets in very liquid instruments. As a part of liquidity management, open pension funds invested free capital in banks: they placed short-term unsecured deposits and deposits secured with Treasury securities in the form of buy-sell-back transactions. As compared to bank deposits, buy-sell-back transactions were characterised usually by higher interest and were concluded for longer periods of time.

Open pension funds still did not make significant investments on foreign markets. As at the end of 2007, the share of foreign investments in the investment portfolio of open pension funds amounted to 1% (as compared to 1.3% as at the end of 2006). Shares of companies listed on foreign stock markets (63%) prevailed in the foreign portfolio. A decline in the nominal value of the foreign portfolio resulted mainly from falling stock prices on foreign stock markets.
Investment performance of open pension funds vs. risk level

In 2007, the average rate of return on investments made by open pension funds was lower than in previous years and amounted to 6.2%. This means that having considered inflation, real rate of return decreased over four times as compared to 2006. During 9 years of history of the capital part of the pension system, lower rates of return were achieved by open pension funds only in 2001. Such considerable deterioration of investment performance was caused by falling stock prices on the Warsaw Stock Exchange in the second half of 2007. Between January and June 2007, the value of the settlement unit increased by 11.6%, and in the second half – fell by 4.8%. Variations in rates of return between the best and the worst open pension fund became smaller than in 2006. Differences in investment performance between individual funds reached approx. 5 p.p. and were similar to those observed in the years 2004–2005, when average annual rates of return of open pension funds were much higher (Table 4.5.10).

In 2007, all funds achieved a minimum 36-month required rate of return (MWSZ), which in March amounted to 26.829%, and in September – to 26.249%. Average 3-year rates of return for the whole market measured in the same months amounted to 53.657% and 52.497% respectively, i.e. rates of return on an annual basis reached 15.4% and 15.1% respectively. Such considerable difference between the 3-year rate of return on an annual basis and the average rate of return achieved by open pension funds in 2007 resulted from the fact that a 36-month period used for calculating the minimum 36-month required rate of return included mainly periods of high increases in stock prices on the Warsaw Stock Exchange (Figure 4.5.18).

Much lower rates of return, as compared to 2006, achieved by open pension funds were exposed to higher risk (Figure 4.5.19). Although the spread of rates of return decreased, the

<table>
<thead>
<tr>
<th>Table 4.5.10. Rates of return obtained by pension funds, 2004–2007 (%)</th>
</tr>
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<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Average annual rate of return of open pension funds</td>
</tr>
<tr>
<td>Best open pension fund in a given year</td>
</tr>
<tr>
<td>Worst open pension fund in a given year</td>
</tr>
<tr>
<td>Average annual inflation rate (CPI)</td>
</tr>
</tbody>
</table>

Source: Polish Financial Supervision Authority, Central Statistical Office.

Figure 4.5.18. Net assets and rates of return of pension funds in 2007

Source: Polish Financial Supervision Authority.
differentiation of risk levels increased significantly. This was due to various size of variability in individual stock indexes. The largest variability was observed in the case of the sWIG80 index, and the smallest in the case of the WIG20 index. An increasing spread of risk level contributed to a decline in the Sharpe index for all entities from the pension sector. The smallest decrease in the Sharpe index was observed in the funds whose portfolios most accurately reflected the WIG20 index. The largest decline of the index was observed in the fund characterised by the lowest exposure to shares composing the WIG20 index (Figure 4.5.20).

Despite worse investment performance of pension funds, financial performance of common pension companies (PTE) improved significantly. Net profit generated by common pension companies increased by 14%, while revenues due to the management fee of open pension funds – by 19.5%. Revenues due to the fee charged on the contribution were the main item in the profit and loss account of these organisations, but along with an increase in assets of open pension funds, the share of the management fee will grow. According to the accounting principles applicable to the pension fund sector, the fee charged on the contribution is collected by the fund prior to the conversion of the contribution to settlement units and is immediately transferred to the common pension companies, which means that it is not recognised in the financial statements of the fund. The management fee constitutes costs of the pension fund and, at the same time, revenues of the fund organisation.

A part of costs and revenues of common pension companies depends on the size of assets raised by the managed fund. Costs related to the open pension funds’ management increased in 2007 by nearly 12%, including an increase in mandatory changes by almost 5%, while other costs (inter alia related to promotion and acquisition) increased by approx. 18%. Mandatory costs accounted for 44% of the costs incurred by the common pension companies, and the share of acquisition (to acquire new members from other open pension funds) costs amounted to 33.2%.
Therefore, it seems that pension fund companies have the ability to cut down on certain kinds of expenses, and therefore it may be reasonable to consider the idea of reducing fees collected by funds and transferred to common pension companies.

4.5.3. Occupational Pension Programs and Individual Pension Accounts

The reformed pension system makes it possible to voluntarily raise funds for pension purposes in the form of Occupational Pension Programs (PPE) as well as on Individual Pension Accounts (IKE). In 2007, the number of persons who used these forms of saving money for pensions increased to 1 225 thousand (i.e. 7.8% of the employed\(^67\)). The value of savings gathered under the Occupational Pension Programs and Individual Pension Accounts amounted to PLN 5.7 billion, which is mere 4.1% of net assets of the open pension funds (Figure 4.5.21).

Figure 4.5.21. Number of participants and funds raised under the Occupational Pension Programs and Individual Pension Accounts, 2006–2007

![Graph showing number of participants and funds raised under the Occupational Pension Programs and Individual Pension Accounts, 2006–2007.](image)

Source: Polish Financial Supervision Authority.

Occupational Pension Programs (PPE)

In 2007, the interest in establishing Occupational Pension Programs increased which is confirmed by the increasing number of submitted requests for entering to the register. 82 new requests were submitted (as compared to 50 in 2006), and 62 new programmes were entered to the register. As at the end of 2007, these programmes comprised 312 thousand employees

Figure 4.5.22. Investment portfolio of employee pension funds, 2006–2007

![Graph showing investment portfolio of employee pension funds, 2006–2007.](image)

Source: Polish Financial Supervision Authority.

\(^{67}\) The number of the employed, professionally active people. *Economic activity of Poland’s population, Q4 of 2007*, Warsaw 2008, Central Statistical Office, p. 31.
Financial institutions

(as compared to 281.5 thousand in 2006). 1 019 Occupational Pension Programs operated on the market, i.e. by 45 more than as at the end of 2006. Programmes were set up both by large and small entities. Employers organising Occupational Pension Programs changed entities managing capital raised which may indicate the increasing competition between entities which provide asset management services. Furthermore, company schemes were transformed into inter-company schemes, which resulted from changes in the ownership structure of employers. One of the Occupational Pension Programs forms were Employee Pension Funds (PFE), maintained and managed by the employee pension fund organisations. As at the end of 2007, only five Employee Pension Funds were registered and their assets amounted to PLN 1.1 billion, which is nearly 30% of funds raised under the Occupational Pension Programs. Employee Pension Funds invested funds raised mainly in participation investment funds’ units and Treasury bonds (Figure 4.5.22).

**Individual Pension Accounts (IKE)**

As at the end of 2007, capital gathered on the Individual Pension Accounts (IKE) increased, as compared to the end of 2006, by approx. 45%, and reached PLN 1.9 billion. The majority of capital was invested in investment funds and insurance companies (Figure 4.5.23). These entities also managed the largest number of Individual Pension Accounts. The average annual payment to Individual Pension Accounts amounted to PLN 1,719 (as compared to PLN 2,199 in 2006). The largest inflows were made to the accounts maintained by brokerage offices. More than a half of the accounts belonged to persons aged 41–60.

The number of Individual Pension Accounts maintained by financial institutions and the value of funds collected on these accounts show that this form of gathering savings for pension purposes is currently less popular. The main barriers to its development were mandatory limitations in the payment of funds within the Individual Pension Accounts (so-called loss of the right to exemption from the tax on capital gains), too low limit of payments and a lack of the possibilities to deduct payments to the Individual Pension Accounts from taxable income. Payments to the Individual Pension Accounts could not exceed the amount equal to 1.5 time the forecast average monthly salary in the national economy (2007: PLN 3,697).68

Due to demographic changes taking place in the Polish society and the estimation of low substitution rates in a new pension system, it is recommended to start new actions aimed at promoting voluntary form of saving for pension purposes in the form of the Occupational Pension Programs and Individual Pension Accounts. These actions should, in particular, comprise the popularisation of knowledge on the pension system and the implementation of further tax incentives within the regulations relating to personal income tax.

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**Figure 4.5.23. Structure of Individual Pension Accounts by entities maintaining accounts, 2006–2007**

![Graph showing the structure of Individual Pension Accounts by entities maintaining accounts, 2006–2007](image)

Source: Polish Financial Supervision Authority.

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68 Ordinance of the Minister of Labour and Social Policy on the amount of payments to the individual pension account in 2007 (MP of 2006, No. 90, Item 952).
4.6. Insurance companies

In 2007, the development of the insurance market remained stable. The majority of technical and insurance indicators demonstrated further improvement of the financial standing of insurance companies. The gross written premium\(^{69}\) as well as assets of insurance companies grew significantly. Despite a decline in deposit revenues, financial performance was positive.

4.6.1. The size and structure of the insurance sector

**Gross written premium**

The gross written premium (hereinafter referred to as premium) for the whole insurance sector for the period from 1 January until 31 December 2007 amounted to PLN 43.7 billion and was by approx. 16.6% higher than in 2006. Despite an unfavourable economic situation on financial markets in the second half of 2007 and a related decline in the interest in insurance with insurance capital funds (UFK), the tendency observed consisted in a continuous increase in the importance of insurance in sector I (life insurance sector) against insurance in sector II (non-life insurance sector). For the second year in a row, the premium in the life insurance sector was higher than in the non-life insurance sector and amounted to PLN 25.5 billion (Figure 4.6.1). An increase

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69 Gross written premium is a premium due for the insurance period, and for life insurance contracts and contracts for an indefinite period, it is a premium due for the period of the insurance company liability. Gross written premium is correlated with revenues and reflects the scale of insured risk.
in the premium (20.9%) was, however, almost two times lower than in 2006. The premium in the non-life insurance sector increased to PLN 18.2 billion, and its growth rate was over two times higher than in the previous year. A significant influence on the premium increase in the non-life insurance sector (11.1%) was exerted by motor insurance, i.e., accident and theft insurance (AC) and third-party liability insurance (OC), which held the largest share in this market segment.

In 2007, the gross written premium as percentage of GDP (penetration ratio) and gross written premium per capita (insurance protection ratio) in Poland were much lower than in the majority of European countries. The penetration ratio in Poland increased to 3.7% (Figure 4.6.2), but remained much lower than the average for the EU countries (11.5%). Despite an increase in the insurance protection ratio in Poland to USD 411 the Polish insurance market belonged to the least developed EU markets in this respect. Higher insurance protection ratio was observed, inter alia, in “other CEC-5 countries” (Figure 4.6.3).

In Poland, as in other countries in the region, the role of the life insurance sector is growing, which is characteristic for developing insurance markets. The dominance of sector I insurance is typical for countries with a well-developed insurance sector. In Great Britain, the most developed insurance market in Europe, the insurance protection ratio amounted to USD 7.1 thousand, whereas USD 5.7 thousand (i.e., over 80%) was attributed to life insurance.

**Number of insurance companies and their ownership structure**

As at the end of 2007, there were 66 insurance companies conducting business activities, including 32 life insurance companies and 34 non-life insurance companies (Table 4.6.1). Two new insurance companies started their business activities – Link4 Życie and BRE Ubezpieczenia.

The majority of insurance companies operate as public limited companies (30 in the life insurance sector and 27 in the non-life insurance sector), while others took the form of mutual insurance organisations (TUW), of which two operated in the life insurance sector and seven in the non-life insurance sector. One main branch of a foreign insurance company offering non-life insurance operated on the Polish insurance market. Furthermore, insurance products were sold by

**Table 4.6.1. Insurance companies conducting insurance activities in the territory of Poland, 2004–2007**

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insurance companies</td>
<td>68</td>
<td>67</td>
<td>64</td>
<td>66</td>
</tr>
<tr>
<td>Sector I – life insurance</td>
<td>32</td>
<td>32</td>
<td>31</td>
<td>32</td>
</tr>
<tr>
<td>Sector II – non-life insurance</td>
<td>36</td>
<td>35</td>
<td>33</td>
<td>34</td>
</tr>
</tbody>
</table>

Source: Polish Financial Supervision Authority.
insurance companies from other EU countries.\footnote{After Poland’s accession to the European Union foreign insurance companies from the EU member states are entitled to sell their products on the territory of Poland under a single passport without the obligation to obtain a permit of the supervisory authority.} As they are not subject to the jurisdiction of the Polish financial supervision authority, it is difficult to evaluate the scale of their activities. It is estimated that the share of branches of insurance companies from other countries in the premium amounted to between one and a few percent.

As at the end of 2007, core capital of insurance companies slightly increased and reached PLN 5 billion. Despite the start-up of activities by two new entities, the sector ownership structure did not change considerably. Domestic entities controlled only a small number of insurance companies. The State Treasury retained its majority shareholding at Powszechny Zakład Ubezpieczeń SA (PZU) and Korporacja Ubezpieczeń Kredytów Eksportowych (KUKE). It also controlled, indirectly (via its shares at PZU) Powszechny Zakład Ubezpieczeń na Życie SA (PZU Życie) (Figure 4.6.4). Insurance companies controlled directly by the State Treasury collected in 2007 18.3% of premiums. Companies controlled by foreign entities (including mainly foreign insurance capital groups) remained the main item of the premium structure.

Concentration and competition in the insurance sector

In 2007, further decline was observed in the concentration indicators in both insurance sectors. In the life insurance sector, the Herfindahl-Hirschman Index (HHI) calculated for the gross written premium decreased to 0.1281. The share in the premium held by three and five largest entities decreased as well (Table 4.6.2). This was due to an increasing market share held by the companies with a large portfolio of life insurance with an insurance capital funds (UFK), e.g. Commercial

Table 4.6.2. Insurance sector concentration ratios, 2004–2007

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life insurance companies – sector I</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CR3</td>
<td>65.0</td>
<td>60.1</td>
<td>56.3</td>
<td>51.7</td>
</tr>
<tr>
<td>CRS</td>
<td>77.2</td>
<td>73.3</td>
<td>70.8</td>
<td>65.5</td>
</tr>
<tr>
<td>HHI</td>
<td>0.2299</td>
<td>0.1981</td>
<td>0.1689</td>
<td>0.1281</td>
</tr>
<tr>
<td>Non-life insurance companies – sector II</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CR3</td>
<td>68.3</td>
<td>67.0</td>
<td>64.4</td>
<td>62.1</td>
</tr>
<tr>
<td>CRS</td>
<td>77.8</td>
<td>76.9</td>
<td>76.2</td>
<td>74.3</td>
</tr>
<tr>
<td>HHI</td>
<td>0.2783</td>
<td>0.2654</td>
<td>0.2456</td>
<td>0.2210</td>
</tr>
</tbody>
</table>

Source: Polish Financial Supervision Authority.
Figure 4.6.5. Share of selected life insurance companies in the gross written premium, 2006–2007

Figure 4.6.6. Share of selected non-life insurance companies in the gross written premium, 2006–2007

Union, Aegon (Figure 4.6.5). Despite a significant decline in the market share PZU Życie remained the largest insurance company. Its market position resulted from a large portfolio of group (so-called employee) insurance, offered through companies employing staff.

In the non-life insurance sector, the Herfindahl-Hirschman Index (HHI) amounted to 0.2210 as at the end of 2007. The share of the five largest entities operating in sector II slightly decreased (Figure 4.6.6). PZU, which held a large portfolio of communication insurance, retained its leading market position, although its premium rose more slowly than the average for the sector. The market position of individual companies depended mainly on the sale of motor insurance: accident and theft insurance (AC) and third party liability insurance (OC). Only a few companies decided to specialise and concentrate their activities on other types of insurance, e.g. Towarzystwo Ubezpieczeń Europa, which specialised in financial insurance.

4.6.2. Premium structure

The life insurance sector comprises five statutory insurance groups, i.e.: life insurance (group 1), dowry insurance (group 2), unit-linked life insurance (group 3), annuity (pension) insurance (group 4) and accident and sickness insurance (group 5).

Unit-linked life insurance had a crucial influence on the rapid development of the life insurance sector and on the premium structure. Despite a considerable decline in the growth rate of total premium (in particular insurance with an insurance capital fund), it remained high. The gross written premium on insurance with an insurance capital fund amounted to PLN 12 billion and
accounted for almost a half (47%) of the gross written premium of life insurance (direct insurance without active reinsurance – i.e. without taking into account insurance assigned to insurance companies). Accident and sickness insurance was offered to insurance companies only as a supplement to the basic product offer (Figure 4.6.7).

A significant part of the market was still accounted for by group 1 insurance (so-called classic insurance), which comprise also group insurance (so-called employee insurance) and other life insurance, including so-called anti-tax insurance and structured products. Anti-tax insurance has a similar structure to term deposits. The client pays the premium (usually one-time payment), and after the expiry of the agreement (or in the case of the insured party’s death) the insurance company pays the benefit equal to the insurance sum. The insurance sum usually equals the premium paid in increased by an amount expressed as percentage. As regards structured products in the form of life and endowment insurance, the insurance company undertakes – for a period of one or a few years – to pay out the insurance sum at the expiry date of the agreement or at the date of the insured party’s death. Capital raised as insurance premium is invested in the financial instruments specified in the agreement (inter alia in derivatives), and the insurance sum depends on investment performance. A standard part of such agreements is the clause stating that the insurance sum (paid out at the expiry date of the agreement) may not be lower than the premium paid in. An advantage of anti-tax insurance and structured products in the form of life and endowment insurance is the fact that the benefits paid out (payable insurance sum) is not subject to tax on capital gains.

There are 18 statutory insurance groups in the non-life insurance sector. Due to the protection function they can be divided into: motor (car) insurance – AC and OC (groups 3 and 10), fire, natural forces and theft insurance (groups 8 and 9), financial insurance, including loan insurance (groups 14), accident and sickness insurance (groups 1 and 2) and general third party liability (groups 13).

In 2007, the premium structure of non-life insurance was dominated by motor insurance – AC and OC (Figure 4.6.8). The premium due to motor insurance increased by 9.4% and reached PLN 10.9 billion, though its share in the portfolio slightly decreased. A nominal growth in the premium resulted mainly from the fact that a percentage of new cars with higher market value, forming the basis for calculating the premium, increased.

As of 1 October 2007, new regulations were adopted as regards co-financing of the costs of medical treatment of accident’s victims. Insurance companies were obliged to provide the National Health Fund with 12% of the premium on concluded motor third party liability insurance (OC). In 2007, an increase in the premium due to this reason was insignificant because the largest company on the market (PZU) did not increase its premiums and some companies increased their
4.6.3 Balance sheet and investment portfolio of insurance companies

**Structure of assets and liabilities**

In 2007, assets of insurance companies increased by almost 17% and amounted to PLN 126.9 billion as at the end of December. As in previous years, assets of life insurance companies grew faster than assets of non-life insurance companies, though their growth rate slowed down. A decline in the growth rate of assets of sector I insurance companies resulted from a smaller inflow of funds to insurance capital funds and a decrease in deposit revenues in the second half of the year. Despite this fact, assets of the life insurance sector accounted for 63% of assets of the whole insurance sector (Figure 4.6.9).

As at the end of 2007, the main items of assets of life insurance companies were deposits of the insurance fund (group 1, 2, 4 and 5) as well as deposits covering own funds which, as in previous years, prevailed in assets of this sector (Figure 4.6.10A). Assets of insurance funds (for insurance under insurance capital funds – group 3) were the second largest balance sheet item, and the total share of combined insurance fund deposits (including deposits of insurance capital fund) and own funds accounted for approx. 96% of balance sheet total. Deposits dedicated to the payment of liabilities (to cover technical provisions), arising from concluded life insurance agreements, were higher than these liabilities. The ratio of covering provisions with these deposits amounted to 117% and has remained stable for several years.

The main items in the asset structure of non-life insurance companies were deposits of own funds and deposits held to cover current and future liabilities arising from insurance agreements.
A positive trend observed in the case of non-life insurance companies was a low share of receivables from insuring intermediaries, reinsurance companies and subordinated units in these assets.

Equity of non-life insurance companies exceeded technical provisions net of reinsurance. Such high equity in this sector was influenced by 2007 profits and accumulated profits from previous years. Liabilities cover net of reinsurance (i.e. technical provisions net of reinsurance) by deposits amounted to 190% and was at the highest level since 1990. It is expected that this ratio will continue to grow. This means that non-life insurance companies has very large own funds, and deposits were almost two times higher than expected liabilities net of reinsurance (Figure 4.6.10B).

The amount of equity of insurance companies is particularly important in the light of a proposal on a new insurance directive (Directive of the European Parliament and of the Council concerning life assurance on the taking-up and pursuit of the business of insurance and reinsurance – Solvency II). On 10 July 2007, the European Commission adopted the request for this directive, aimed at transforming 13 existing directives in the insurance and reinsurance sector into new regulations concerning insurance activities, and in December 2007, the Council and the European Parliament adopted the amended (in the second half of the year) directive. Another quantitative impact study (QIS3) was carried out between April and June 2007 to examine the methodology of calculations relating to new capital requirements. The results of the studies (both current and past) indicate that solvency parameters specified based on the proposed new methodology are not different (in terms of quality) from those currently in force, and Polish insurance companies have...
a large excess of equity in relation to the level required by existing regulations and new regulations specified in a new directive.

**Investment portfolio structure**

As at the end of 2007, the value of the investment portfolio of insurance companies from both sectors (taking into account insurance capital funds) amounted to PLN 117 billion. Treasury bonds issued, warranted or guaranteed by the State Treasury accounted for 50.4% of the investment portfolio in the life insurance sector. Investment funds units accounted for 24.8% and shares – for 11% of the investment portfolio (Figure 4.6.11).

The investment portfolio of life insurance companies was dominated by deposits of insurance capital funds (47%). The deposit structure was similar to that of other sector I insurance. This was due to the fact that they are not subject to investment limits applying to other deposits of insurance companies, and the decision on the selection of the investment strategy under insurance agreements with insurance capital funds is taken by the insuring party. Nearly a half of the portfolio of unit-linked funds constituted investment funds units. The share of stocks in deposits of insurance capital funds was much higher than in deposits dedicated to cover other life insurance items (other than those related to insurance capital funds) and own funds and amounted to 18.7%. Funds dedicated to cover liabilities arising from other insurance agreements and own funds of insurance companies are deposited jointly. Due to a statutory obligation to match maturity of liabilities and to maintain required liquidity of deposits, Treasury bonds and term deposits prevailed in the investment portfolio (in total 81%).

As at the end of 2007, the balance sheet value of the investment portfolio of non-life insurance companies amounted to PLN 40.7 billion. The highest share in the investment portfolio was held by Treasury bonds (59%) and deposits in affiliated companies (19.2%). Legal regulations oblige both life and non-life insurance companies to match their maturity structure of assets and liabilities, which is the reason why 10-year Treasury bonds prevailed in their investment portfolios. Duration of bonds held by sector II insurance companies amounted to 3.8 year as at the end of 2007. The share of term deposits remained at a stable, relatively low level, and these funds were used for the payment of compensations and benefits whose maturity falls in the following reporting period.

**Figure 4.6.11. Structure of the investment portfolio of life insurance companies as at the end of 2007**

<table>
<thead>
<tr>
<th></th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total life insurance</td>
<td>6.3</td>
</tr>
<tr>
<td>Unit-linked insurance</td>
<td>28.0</td>
</tr>
<tr>
<td>Including: unit-linked insurance</td>
<td>10.6</td>
</tr>
<tr>
<td>Non-life insurance</td>
<td>19.2</td>
</tr>
</tbody>
</table>

Source: Polish Financial Supervision Authority.

**4.6.4. Financial performance of the insurance sector**

In 2007, financial performance of insurance companies was good, though net profit of the whole insurance sector (PLN 5.3 billion) was lower than in the previous year. As compared to 2006, net profit of life insurance companies increased by 14.1%, while net profit of non-life insurance companies decreased by nearly 50%. This was due to a decline in revenues from deposit activities.
Figure 4.6.12. Financial performance of the insurance sector, 2004–2007

Figure 4.6.13. Revenues and costs of insurance companies in 2007 (PLN billion)

of both sectors and an increase in ratio of compensations to premiums in the non-life insurance sector (Figure 4.6.12).

Earned premium net of reinsurance71 was the main source of revenues generated by life and non-life insurance companies. In section I, these revenues were higher than revenues of non-life insurance companies, which was due to a large sale of unit-linked insurances as well as due to an insignificant share of reinsurers in the premium. Revenues from premiums and net investment activities in the life insurance sector were mainly to cover the costs related to the payment of benefits and the costs of provisions (including insurance provisions with insurance capital funds). In 2007, the ratio of net operating costs (including other items of the technical insurance account and the general profit and loss account) to revenues did not change significantly, and net financial result of life insurance companies amounted to PLN 3.3 billion (Figure 4.6.13A).

The most important cost item of non-life insurance companies were claims paid net (i.e. change in outstanding claims reserve and claims paid) and other net operating costs. As already mentioned, due to worse investment performance and worse claims history, net financial result in sector II decreased in 2007 by nearly 50% to PLN 2 billion (Figure 4.6.13B). In 2007, PZU Życie did not pay a dividend to PZU, which also had a significant impact on the financial performance of this sector.

71 Earned premium net of reinsurance is a written premium net of reinsurance within a reporting period, less the change in provision for premiums. Earned premium less the shares of reinsurers is earned premium net of reinsurance. Regulation of the Minister of Finance of 8 December 2003 on special accounting principles for insurance undertakings (Dz.U. of 2003, No. 218, Item 2144, as amended).
4.6.5. Reinsurance and selected technical indicators

The share of reinsurers in the risk assigned by insurance companies is measured by premium retention ratio\(^{72}\) and claims retention ratio.\(^{73}\) Higher retention ratios indicate lower reinsurers’ share in claims, and vice versa.

In 2007, the share of reinsurers in the life insurance sector remained continuously at a low level, and the premium retention ratio and the claims retention ratio exceeded 95%, which means that only 5% of the premium was transferred to reinsurers. This resulted mainly from risk dispersion in the portfolios of individual insurance companies and relatively small insurance sums for individual types of risk. Individual insurance agreements with relatively high insurance sums were, however, covered by reinsurance programmes.

As at the end of 2007, the premium retention ratio in the non-life insurance sector increased to 90% and has been almost equal to the claims retention ratio for the last two years (Figure 4.6.14). Hence, non-life insurance companies assigned only 10% of risk arising from concluded insurance agreements. A similar amount of these indicators means that the share of reinsurers in costs is relevant to revenues from the premium assigned by insurance companies. High equity of non-life insurance companies made it possible to reduce the scale of reinsurance as compared to previous periods. Reinsurance protection was provided to insurance companies operating in Poland mainly by foreign entities. Insurance companies used – to a lesser extent – active reinsurance services provided by insurance companies operating on the Polish insurance market (e.g. Towarzystwo Ubezpieczeń i Reasekuracji Warta SA) as well as the services provided by Polskie Towarzystwo Reasekuracji. In the latter case, this was related to a small scale of activities of this company and low ratio of its equity to the risk assigned by insurance companies.

Basic indicators which allow for monitoring insurance activity include the gross claims ratio and the corresponding claims ratio net of reinsurance.\(^{74}\) As claims ratios do not take into account, inter alia, the impact of changes in provisions and revenues from deposits of unit-linked funds, a factor which better reflects market efficiency and processes taking place on this market for life insurance is a modified claims ratio.\(^{75}\) In the life insurance sector, this ratio slightly decreased and amounted to 70.3% as at the end of 2007. The value of this ratio has been on a stable level of 70–74% for a couple of years which confirms that the development of this sector is stable (Figure 4.6.16).

Figure 4.6.14. Premium and claims retention ratios for non-life insurance companies, 2004–2007

![Figure 4.6.14. Premium and claims retention ratios for non-life insurance companies, 2004–2007](image)

Source: Polish Financial Supervision Authority.

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\(^{72}\) Premium retention ratio is a quotient of premiums, net of reinsurance, and gross premiums amount.

\(^{73}\) Claims retention ratio is a ratio of claims (net of reinsurance) to gross claims paid out.

\(^{74}\) Claims ratio (net of reinsurance) is a ratio of claims (net of reinsurance) having taken into account changes in provisions for outstanding claims (net of reinsurance) to earned premium (net of reinsurance).

\(^{75}\) Claims ratio in the life insurance sector, specified in accordance to the methodology used in non-life insurance, does not account for significant costs related to the creation of provisions for life insurance, and thus for the impact of insurance provisions related to insurance capital funds. A better performance measure for life insurance is a modified claims ratio. The only difference is that the earned premium is increased by revenues on deposits (net), and claims comprise changes in provisions for life insurance (including insurance from insurance capital funds).
In 2007, the downward trend in the gross claims ratio and the claims ratio net of reinsurance in the non-life insurance sector stopped. Both ratios increased by a few percent points due to higher claims than in previous years, caused by natural disasters and increasing claims due to third party liability of the owners of motor vehicles (Figure 4.6.15).

4.6.6. Product offer and distribution channels

Groups insurance (so-called employee insurance) and unit-linked insurances distributed by insurance intermediaries prevailed on the Polish insurance market (Figure 4.6.16). Group life insurance is a mass product. The largest group insurance portfolio was managed by PZU Życie. A common and easy access to this product (direct sale in companies), a wide scope of insurance cover and a relatively low price resulted in the fact that employee insurance still enjoyed large interest of insuring parties. The distribution method of these products (dominance of direct sale) arose from its specific character and well-founded, over a long period of time (by PZU Życie), principles of cooperation with employers.

Unit-linked insurances, which combines protective and saving function, required various selling strategies. Due to the complexity of this product as well as target customer group, insurance companies had to use services provided by intermediaries – specialised agency networks (individual agents and legal persons). On the Polish market, a considerable share in the sale of insurance in this group was held by large companies, i.e. Commercial Union, ING and Allianz.

The sale of insurance products via banks and in cooperation with them played an increasingly important role in the recent years. In 2007, the share of the banking sector in the distribution of both individual and group life insurance increased. The role of brokers in the acquisition process was insignificant, and life insurance was practically not offered by phone or via internet (Figure 4.6.17).

As in previous years, the dominant role on the Polish non-life insurance market was played by communication insurance (sold both in packages and separately – third party liability insurance (OC), accident and theft insurance (AC), accident insurance (NW, NNW), assistance) and fire insurance, dedicated to individual and institutional customers. This structure of the groups of purchasers of this insurance caused that the most important distribution channel for these kind of insurance were agents (individual insurance) and insurance brokers (insurance for large entities). A large part of insurance policies was sold directly by employees of insurance companies (so-called direct sale).

A specific character of non-life insurance, aimed exclusively at protecting against risk results and deprived of the investment part, is the reason why the banking sector did not play a significant role in their distribution. In 2007, non-life insurance companies started to use electronic distribution channels more frequently. Along with traditional forms of concluding insurance agreements,
Figure 4.6.16. Life insurance product structure, 2004–2007

![Life insurance product structure chart](chart)

Source: Polish Financial Supervision Authority.

Figure 4.6.17. Insurance distribution channels in 2007

![Insurance distribution channels chart](chart)

Source: Polish Financial Supervision Authority.

It was possible to conclude an insurance agreement by phone or via internet (direct distribution channel). These ways were used to sell mainly car accident, theft insurance and third party liability insurance. This kind of sale was introduced on the Polish market by the company Link4. Despite using this form of sale by other companies (e.g. Allianz, AXA, Commercial Union), the importance of this distribution channel was insignificant – only 1.6% of the gross assigned premium was obtained in this way.

An expected increase in the demand for paid medical services resulted in the extension of the offer of insurance companies by various medical insurance types. However, this did not cause a significant increase in their sale as higher popularity was still enjoyed by medical services offered under subscription by non-public health care centres. No fast development in these types of insurance should be expected until complex legal regulations on health protection are implemented.
4.7. Entities conducting brokerage activities

There are three types of institutions which conduct brokerage activities (investment firms) in the Polish market: brokerage houses, banks which conduct brokerage activities (brokerage offices and banks’ organisational units), and foreign entities which offer brokerage services (foreign investment firms and credit institutions). The latter ones operate on the Polish market on the basis of a permit granted by the supervisory authority of the country where they are seated, after it notifies the Polish Financial Supervisory Authority of the intention of a foreign entity to commence activity in Poland.

4.7.1. Evolution of the size and structure of the sector

The development of the brokerage services market depends mainly on the situation on the Polish market of equity and other financial instruments. In 2007, the brokerage entities sector continued to grow as a result of good economic prosperity on the Warsaw Stock Exchange in previous years and in the first half of 2007. The bull stock market, observed between April 2004 and June 2007, contributed to increasing activity of investors on this market and interest of enterprises in share issues (both domestic and foreign). In 2007, turnover on the main equity and rights to shares (PDA) market of the Warsaw Stock Exchange increased by 41.6% as compared to 2006 and was at the highest level in the WSE history; turnover on the futures market increased by 77%. A significant increase in the number of IPO was also observed (Table 4.7.1).

In 2007, 81 companies debuted on the WSE regulated market (as compared to 38 a year ago), including 12 foreign companies. The value of new issues of those companies amounted to PLN 5.1 billion (as compared to PLN 2.4 billion a year ago). 24 companies debuted on the NewConnect market existing since 30 August 2007. As at the end of 2007, assets of brokerage houses amounted to PLN 11.8 billion and were by 9.3% higher than in the previous year.

In 2007, the number of domestic brokerage institutions increased to 53. It included 41 brokerage houses and 12 banks conducting brokerage activities (6 brokerage offices and 6 banks’ organisational units). Three further foreign entities started activities on the stock market (there were 13 such entities operating in 2007). Significant changes took place in brokerage entities with the largest share in equity and rights to shares turnover on the Warsaw Stock Exchange (Figure 4.7.1). In this period it was also possible to notice a further decline in the share of five largest brokerage entities in turnover on the equity and rights to shares market. The CR5 ratio fell to 48.8% from 55.2% in 2006. In other segments of the equity market, leading positions were retained in 2007 by: DM PKO BP – on the bond market, DM BOŚ – on the futures market and DI BRE Bank – on the options market (Table 4.7.2). The largest number of new companies was introduced to the regulated market of the Warsaw Stock Exchange in 2007 by IDM (11 companies), DM BOŚ (8 companies) and DM Capital Partners (7 companies), UniCredit CA IB (7 companies) and Wroclawski

Table 4.7.1. Basic indicators related to the operation of the brokerage entities sector, 2004–2007

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turnover on the equity and rights to shares market (WSE main market, PLN billion)</td>
<td>54.89</td>
<td>90.57</td>
<td>169.35</td>
<td>239.74</td>
</tr>
<tr>
<td>Number of IPOs on markets organised by the WSE</td>
<td>36</td>
<td>35</td>
<td>38</td>
<td>105</td>
</tr>
<tr>
<td>WIG index (year end, points)</td>
<td>26 636.19</td>
<td>35 600.79</td>
<td>50 411.82</td>
<td>55 648.54</td>
</tr>
<tr>
<td>Number of brokerage entities</td>
<td>40</td>
<td>42</td>
<td>47</td>
<td>53</td>
</tr>
<tr>
<td>Assets of brokerage entities (PLN billion)</td>
<td>5.5</td>
<td>6.9</td>
<td>10.8</td>
<td>11.8</td>
</tr>
</tbody>
</table>

1 Session turnover and negotiated deals, net.
2 Including 24 companies which debuted on the non-regulated NewConnect market.
3 The WIG index grew continuously in the first half of 2007, it reached its peak on 6 July (67 568.51 points).
4 The number of brokerage entities does not include branches of foreign investment firms.

Figure 4.7.1. Share of the largest brokerage entities in the WSE equity and rights to shares turnover in 2006 and 2007 (session turnover and negotiated deals)

A. 2006

B. 2007

Table 4.7.2. Entities with the highest share in stock exchange gross turnover on the WSE in 2007

<table>
<thead>
<tr>
<th>Equity and rights to shares market</th>
<th>Bond market</th>
<th>Futures market</th>
<th>Options market</th>
</tr>
</thead>
<tbody>
<tr>
<td>DM BZ WBK 10.73%</td>
<td>DM PKO BP 44.07%</td>
<td>DM BOS 18.84%</td>
<td>DM BRE Banku 24.66%</td>
</tr>
<tr>
<td>PLN 51 428.65 million</td>
<td>PLN 1 539.97 million</td>
<td>PLN 254 012.94 million</td>
<td>PLN 14 061.5 million</td>
</tr>
<tr>
<td>ING Securities 10.72%</td>
<td>CDM Pekao 28.42%</td>
<td>DI BRE Bank 11.53%</td>
<td>DM PKO BP 17.48%</td>
</tr>
<tr>
<td>PLN 51 414.90 million</td>
<td>PLN 992.99 million</td>
<td>PLN 155 454.8 million</td>
<td>PLN 9 967.4 million</td>
</tr>
<tr>
<td>DM BH 9.60%</td>
<td>DM BZ WBK 6.68%</td>
<td>DM BZ WBK 10.66%</td>
<td>BPH 10.22%</td>
</tr>
<tr>
<td>PLN 46 050.14 million</td>
<td>PLN 233.57 million</td>
<td>PLN 143 724.9 million</td>
<td>PLN 5 827.6 million</td>
</tr>
</tbody>
</table>

Note: turnover calculated for each party to the transaction (purchase and sale). Consequently, the above figures are twice as the figures representing the value of transactions concluded on these markets.


Figure 4.7.2. Share of the largest brokerage entities in the NewConnect market stock turnover in 2007


Dom Maklerski (7 companies). The largest number of companies was introduced to the NewConnect market by Wrocławski Dom Maklerski76 (7 companies) and DM Capital Partners (4 companies).

20 entities operated on the NewConnect platform, including one foreign entity conducting activities in Poland as a branch (a participant of the NewConnect market may be an entity which

76 Through company CEE Capital Sp. z o.o., whose 100% shareholder is WDM.
has a status of the WSE participant). Net turnover of shares on the NewConnect market in 2007 amounted to PLN 151.3 million. The largest share in turnover, as on the WSE, was held by DM BZ WBK (Figure 4.7.2).

Foreign entities providing brokerage services were still very interested in the Polish capital market. In 2007, the intention to conduct brokerage activities on the territory of Poland without opening a branch was communicated by 336 foreign investment firms and 51 credit institutions, and 6 credit institutions notified about the intention to conduct business activities in the form of a branch.

In 2007, nine entities (including seven foreign entities) were allowed to operate as a member of the Warsaw Stock Exchange. During the year, operating activities on the Warsaw Stock Exchange were conducted by 13 foreign entities from: Austria, Belgium, Czech Republic, Estonia, France, Germany, Sweden, Hungary and Great Britain. 12 of them had a status of the remote stock exchange member (increase by three entities as compared to 2006), and one operated as a branch. Remote membership provides foreign brokerage entities with the possibility of direct access to the Warsaw Stock Exchange system without the obligation to be located in Poland or to use services of local intermediaries. In 2007, the share of remote members in turnover on the Warsaw Stock Exchange increased. On the equity and rights to shares market, this share amounted to 4.9%, on the futures market – to 3.5%, and on the options market to 1.9% (as compared to 2.0%, 0.04% and 0.06% a year ago).

In 2007, Polish entities conducting brokerage services were also present on foreign markets. Two brokerage houses (DB Securities and CDM Pekao) conducted their activities on the stock exchange in Budapest as remote members. Furthermore, since 2007 X-Trade Brokers DM may perform its activities in the form of a branch in Czech Republic and Spain.

4.7.2. Financial results

In 2007, the financial standing of brokerage offices and houses was very good. This was determined, inter alia, by an increasing turnover on the Warsaw Stock Exchange in the first half of the year as well as by a large number of IPOs. Despite the deterioration of sentiment on the financial market, gross financial result generated by brokerage entities in 2007 amounted to PLN 1 875.4 million and was by 57% higher than in 2006 (PLN 1 191.4 million). The favourable financial standing of brokerage entities is confirmed by the size of pre-tax return on revenue (Figure 4.7.3) and an increase in the number of institutions which generated profit from their activities. In 2007, 43 entities generated profit, while 2 entities incurred loss. In 2006, this number was 35 and 4 entities respectively.

In 2007, revenues from brokerage activities increased by 34% (as compared to 59% in 2006) and amounted to PLN 2 407 million. The most significant items of revenues from brokerage activities, i.e. commissions on transactions with securities on the secondary market and fees on asset management services, increased by 20% and 57% respectively as compared to 2006. A large number of share issues contributed to an increase in commission income due to the sale of securities on the primary market by 14%. An increase was also observed in revenues generated from intermediation in investment funds’ units (by 32%), however, they still form an insignificant part of revenues from brokerage activities (8.3%).

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77Remote membership in a foreign stock exchange (as in the case of foreign investment firms operating in Poland) gives brokerage entities the possibility to access the stock exchange transaction system without the need to establish a physical residence in Poland or to use local brokerage intermediaries, which would generate additional costs.

78The analysis of the financial standing of brokerage offices and houses in 2007 was performed based on the data on 47 entities conducting brokerage activities (41 brokerage houses and 6 brokerage offices). In the case of two entities conducting brokerage activities the business year is different from the calendar year. The analysis was based on the data presented in semi-annual financial statements of these entities.

79Data for 2007 does not include two entities whose business year is different from the calendar year.
Costs of brokerage activities increased in 2007 by 27% and amounted to PLN 1 224 million. The most important cost items, i.e. salaries and fees incurred for regulated markets and the National Depository for Securities, increased by 34% and 3% respectively.

4.7.3. Brokerage services market

In 2007, the number of securities accounts maintained by the participants of the National Depository for Securities for their customers increased (from 908.9 thousand in 2006 to 996.6 thousand in 2007). The importance of the distribution of brokerage services via Internet grew as well. The average share of Internet accounts in the total number of securities accounts maintained by brokerage offices and houses amounted to 30% in the second half of 2007, which means an increase by 9 p.p. as compared to the second half of the previous year. In 2007, the number of orders placed on the Warsaw Stock Exchange via Internet in the total number of orders remained high (Figure 4.7.4).

Asset management services offered both to individual and institutional customers become more and more popular on the Polish market. These services comprise standard investment strategies exposed to various risk levels (with defined assumptions), as well as individual strategies created for the purposes of individual customers. An increasing interest in these services is, inter alia, due to higher turnover on the stock market in the recent years, promotion of products offered by non-banking financial institutions, as well as growing society affluence. Asset management services are rendered on the Polish market by investment firms and Investment Fund Management Companies. In 2007, 30 brokerage offices and houses were entitled to perform asset management services in respect of portfolios composed of one or more financial instruments. A growing interest in these services is also confirmed by the share of fees on asset management services in total revenues of brokerage offices and houses (in 2007, these fees accounted for 15.4% of revenues).

In 2007, entities conducting brokerage services operated also on the newly established NewConnect equity market. Pursuant to the rules of procedure of the NewConnect, companies entering this market must start cooperation with two entities: an authorised advisor (investment firms, entities providing financial advisory, legal advisory or audit services) and with a market animator or market-maker (this function may be performed by investment firms). Brokerage offices and houses operate on the NewConnect market also as market participants, entities allowed to trade on its own account or on account of the customer with financial instruments quoted on this market. As at the end of 2007, the status of the market participant was held by 22 entities conducting brokerage activities (including two foreign entities). The list of authorised advisors for the

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Figure 4.7.3. Gross profit and pre-tax return on revenue of brokerage offices and houses, 2000–2007

![Figure 4.7.3. Gross profit and pre-tax return on revenue of brokerage offices and houses, 2000–2007](image)

Note: Pre-tax return on revenue is calculated as the ratio of pre-tax financial result to total revenue.

NewConnect market, which consisted of 94 entities as at the end of 2007, comprised 10 entities conducting brokerage activities, and the list of animators comprised 4 entities.

The deadline for assuring compliance with the provisions of the Directive on markets in financial instruments (MiFID) by entities conducting brokerage activities passed in 2007. The implementation of the MiFID to the national law should take place until the end of January 2007, and the deadline for adjusting to new regulations for financial market institutions expired on 1 November 2007. In 2007, provisions of the directive were not fully implemented to the Polish legal system, which raised uncertainty as for the legal provisions applicable to the performance of investment services on the Polish market. As at the date of implementation of the MiFID on the territory of the European Union, implementing regulation, which shall be applied directly in each member state, also came into force. Due to the failure to implement the regulations specified in the MiFID in the required time, it is still unclear to what extent customers of investment firms, investment fund management companies and banks will be entitled to exercise their claims in national courts due to the violation of their rights provided for in these regulations as regards the performance of investment services. Consequently, some entities conducting brokerage activities prepared themselves to apply provisions of the MiFID in 2007 according to their own interpretation of these provisions. This caused, inter alia, the use of customer segmentation principles by these entities as specified in the MiFID. Following the amendment of the Polish acts governing the operation of the financial market, as well as the issuance of implementing provisions to these acts, which is planned for 2008, it will be necessary to make final changes by brokerage entities to adjust their operation to the EU standards.

1 Options have been quoted on the Warsaw Stock Exchange since September 2003. 

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**Figure 4.7.4. Share of orders placed at the WSE via Internet in the total number of orders, 2002–2007**

![Chart showing the share of orders placed at the WSE via Internet](chart.png)

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5.1. Money market

5.1.1. Evolution of the money market: size and structure

As at the end of 2007, the largest segment of the short-term debt securities market was the Treasury bills market. A further decline in the value of Treasury bills issued and outstanding caused liquidity of the secondary market of these instruments to decrease significantly. In comparison with the end of 2006, the value of NBP bills was falling (Table 5.1.1). However, the annual average outstanding value of those instruments was lower by PLN 0.46 billion than the average level in 2006. In 2007, the outstanding value of short-term corporate bonds increased considerably, which resulted, *inter alia*, from numerous new emission programmes being launched. The decrease in the value of bank debt securities was caused to a great extent by the purchase of the issue of short-term bonds of the BGK which occurred at the end of 2006. However, banks operating in Poland still used this form of financing relatively rarely.

FX swaps remained the most liquid domestic money market instrument. The FX swap market in Poland was dominated by short-term transactions with foreign banks. The activity on the offshore market of zloty FX swap transactions was significantly higher. Domestic banks managed their current liquidity mainly with the use of unsecured deposits. The upward trend for the average daily turnover in the unsecured interbank deposits market and conditional transactions market was continued. The conditional transaction market was dominated by operations with non-banking financial entities (mainly buy-sell-back), collateralised by Treasury bonds. The liquidity of the interbank repo market remained low.

Table 5.1.1. Outstanding value of individual money market instruments as of year-end, 2004–2007 (PLN billion)

<table>
<thead>
<tr>
<th>Instrument</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treasury bills</td>
<td>46.9</td>
<td>24.4</td>
<td>25.8</td>
<td>22.6</td>
</tr>
<tr>
<td>NBP bills</td>
<td>5.7</td>
<td>23.0</td>
<td>18.4</td>
<td>7.8</td>
</tr>
<tr>
<td>Short-term bank debt securities</td>
<td>2.9</td>
<td>2.8</td>
<td>4.5</td>
<td>2.9</td>
</tr>
<tr>
<td>Short-term corporate bonds</td>
<td>6.6</td>
<td>5.6</td>
<td>6.3</td>
<td>10.6</td>
</tr>
<tr>
<td>Unsecured deposits (interbank deposits)</td>
<td>23.6</td>
<td>30.3</td>
<td>34.9</td>
<td>36.6</td>
</tr>
<tr>
<td>Secured deposits (FX swaps and conditional transactions)</td>
<td>n/d</td>
<td>n/d</td>
<td>n/d</td>
<td>n/d</td>
</tr>
</tbody>
</table>

1 It is not possible to determine the values of banks’ positions in respect of FX swaps and conditional transactions on the basis of data from the bank reporting system.

Source: NBP.

5.1.2. Short-term debt securities market

5.1.2.1. Treasury bills

Market size

As at the end of 2007, the value of Treasury bills issued and outstanding amounted to PLN 22.6 billion and was by PLN 3.2 billion lower than at the end of 2006 (Figure 5.1.1). The share of these instruments in the outstanding value of Treasury securities amounted to 5.9% (7.4% at the
end of 2006). In countries with developed financial markets, the share of short-term instruments in the outstanding value of Treasury debt securities is also modest. As at the end of 2007, in the euro area countries this share reached 7.9%. The development of the capital market results in a downward trend in the financing of the State Treasury borrowing needs with Treasury bills. The value of short-term instrument issues and their share in the outstanding value of Treasury securities are also affected by such factors as: the condition of the State Treasury, the seasonal nature of revenues and expenditures, expectations concerning changes in interest rates, and preferences of institutional investors.

The main factor which contributed to lowering the share of Treasury bills in the financing of the State Treasury borrowing needs was a better, than expected, implementation of the State budget. In 2007, the State budget income was higher by 3.2% than expected, whereas expenditures were lower by 2.6%. As a consequence, the State budget deficit was by 46.8% lower than planned and amounted to PLN 16.0 billion (PLN 25.7 billion in 2006). A decline in the outstanding value of Treasury bills resulted also from the implementation of the strategy of the Ministry of Finance aimed at extending the average debt maturity of Treasury securities issued in the domestic currency as well as reducing the refinancing risk. The average maturity period of Treasury securities prolonged from 3.94 at the end of 2006 to 4.33 at the end of 2007.

**Primary market**

In 2007, the Ministry of Finance issued Treasury bills in the amount of PLN 22.6 billion, i.e. by PLN 6.4 billion less than in 2006. As in previous years, mainly 52-week bills were sold, but their share in the financing of short-term borrowing needs of the State budget decreased. The issues of other kinds of Treasury bills were of supplementary character (Table 5.1.2). They were conducted in the situation of a huge imbalance between revenues and expenditures in a given month. For example, in December in order to finance the short-term liquidity shortage (the monthly deficit was planned at the level of PLN 1.9 billion, while actually it ran at PLN 9.9 billion), the Ministry of Finance issued, *inter alia*, 6-week Treasury bills totalling PLN 5.2 billion.

**Figure 5.1.1. Treasury bills (amounts outstanding) in 2004–2007 and the share of Treasury bills in the outstanding value of Treasury securities issued by the State Treasury (as at period-ends)**

![Graph showing Treasury bills and share of Treasury bills in the outstanding value of Treasury securities issued by the State Treasury from 2004 to 2007.](image)

Source: NBP, Ministry of Finance.

The values of each issue of Treasury bills changed throughout the year which was related to the seasonal variations in budget revenues and expenditures (Figure 5.1.2). As in 2006, the largest issues of Treasury bills were conducted in the first four months of the year and in December, when the negative monthly balance of revenues and expenditures is the highest, in comparison with other months. In 2007, the value of purchase bids exceeded the supply of Treasury bills at auctions. The demand to supply ratio amounted to 1.57. The excess of demand is permanent and results,

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inter alia, from the amount of supply and the investors’ interest in each issue as well as the applied form of selling on the primary market – the multi price auction system. The downward trend in the financing of the State Treasury debt with Treasury bills in recent years was accompanied by the worsening demand/supply ratio. In 2005 this ratio amounted to 3.07, whereas in 2006 – 2.80.

Since 1 January 2003 Treasury bills have been sold in the primary market within the Primary Dealers System. It is a primary wholesale market, which can be accessed by banks selected in a competition. In 2007, the rules governing the system operation were set forth in the regulations on performing the function of the Primary Dealer of 8 August 2006. Since 2006, 15 entities have been acting as Primary Dealers. In 2007, among the Primary Dealers, there were 11 domestic banks, one foreign branch of a credit institution operating in Poland, two credit institutions from the EU and one foreign investment company. Also BGK had the right to purchase Treasury securities in the primary wholesale market. Treasury bill auctions are organized by the NBP, which is the issue agent and manages the depository and settlement system for these instruments.

In 2007, the number of auctions was reduced for the subsequent time in recent years. In previous years, the Treasury bill auctions were held each week (usually each Monday). As from July 2006, the number of auctions was reduced to two per month and in 2007 only one auction was held per month for several months (in the first decade of a month). Reducing the frequency of

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**Table 5.1.2. Term structure of Treasury bills issued in 2004–2006 (% by value of bills sold in the primary market)**

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>13-week</td>
<td>3.3</td>
<td>6.0</td>
<td>0.7</td>
<td>5.9</td>
</tr>
<tr>
<td>26-week</td>
<td>1.2</td>
<td>0.0</td>
<td>3.4</td>
<td>0.0</td>
</tr>
<tr>
<td>39-week</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>2.6</td>
</tr>
<tr>
<td>52-week</td>
<td>95.5</td>
<td>89.2</td>
<td>81.4</td>
<td>68.7</td>
</tr>
<tr>
<td>Other</td>
<td>0.0</td>
<td>4.8</td>
<td>14.5</td>
<td>22.8</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Ministry of Finance.

**Figure 5.1.2. Monthly value of Treasury bills issued in 2006–2007 at Treasury bills auctions and the monthly balance of the State budget**

---

2 In this kind of auction, bids with the highest price are taken into account first, and then bids with lower prices follow until the supply is exhausted or the minimum price determined by the issuer is reached. Thus each purchaser pays the price indicated in his bid, provided that it is higher than or equal to the minimum price accepted by the Ministry of Finance.
auctions aimed at preventing the value of each issue from decreasing, which could cause a decline in the secondary market liquidity and increase in issue costs. The average value of 52-week Treasury bills sold in auctions in 2007 amounted to PLN 861.1 billion, while in 2006 it amounted to PLN 983.3 billion.

In 2007, the yield on 52-week Treasury bills in the primary market was lower than the 1Y WIBOR rate in the unsecured interbank deposit market. At the same time, it was significantly higher than the interest on household and corporate deposits (Figure 5.1.3).

**Secondary market**

The year 2007 saw a further substantial decline in the value of Treasury bills transactions. As compared to 2006, net turnover in these instruments decreased by 62.1%. The average daily value of transactions in 2007 amounted to PLN 0.4 billion and was almost ten times lower than in 2004 (Table 5.1.3). A significant drop in investors’ activity in the Treasury bills secondary market is also indicated by the decrease in the liquidity ratio from 0.99 in 2006 to 0.42 in 2007. The basic reason for the decrease in liquidity in recent years was the reduction of Treasury bills issues. A substantial part of Treasury bills purchased by the Primary Dealers in the primary market was resold to non-banking domestic investors, who usually kept them until the maturity date.

**Table 5.1.3. Average daily turnover in Treasury bills, 2004–2007 (PLN billion)**

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net turnover, including:</td>
<td>3.95</td>
<td>2.70</td>
<td>1.06</td>
<td>0.40</td>
</tr>
<tr>
<td>– outright transactions</td>
<td>0.72</td>
<td>0.49</td>
<td>0.22</td>
<td>0.17</td>
</tr>
<tr>
<td>– conditional transactions</td>
<td>3.23</td>
<td>2.21</td>
<td>0.83</td>
<td>0.23</td>
</tr>
</tbody>
</table>

Note: Average daily turnover was calculated on the basis of the following numbers of working days: 247 in 2004, 252 in 2005 and 2006, and 251 in 2007.

Source: NBP.

The decrease in turnover in the Treasury bills secondary market in 2007 was influenced by lower activity in the conditional transactions market (Figure 5.1.4), which was related to the change in the security structure of these transactions. Treasury bonds were much more often used in repo and sell-buy-back transactions (SBB). As a result, the share of conditional transactions in net

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3 The liquidity ratio is measured as a ratio of average monthly turnover to average monthly outstanding value of Treasury bills issued. Conditional transactions were calculated according to the initial value.
turnover in Treasury bills declined from 78% in 2006 to 58% in 2007. As in previous years, the majority of conditional transactions secured by Treasury bills were sell-buy-back transactions, which accounted for 87.6% of total conditional transactions. Sell-buy-back transactions with the use of bills were most frequently of a short-term nature – approximately 90% of them were settled within 7 days.

The majority of transactions in Treasury bills were transactions between banks and domestic non-banking investors (72.9% of net turnover in 2007) (Table 5.1.4). Transactions in the interbank market constituted 26.9% of net turnover. The higher share of banks’ transactions with domestic non-banking investors resulted, *inter alia*, from the functioning of the Primary Dealers System and the fact that non-banking financial institutions allocated financial surplus in the short-term sell-buy-back transactions secured by Treasury bills. Some of Treasury bills purchased by banks in the primary market were resold to domestic non-banking investors. Therefore, banks had the highest share in net turnover in Treasury bills, which significantly exceeded their share in the structure of buyers of these bills. The other investors usually treated Treasury bills as deposit instruments and kept them until the maturity date. The relatively high share of investment funds and open pension funds in net turnover resulted from the fact that they were used as instruments of current liquidity management (e.g. to allocate financial surplus in conditional transactions).

Treasury bills were traded in the non-regulated OTC market and in the MTS Poland electronic platform (organised non-regulated market). In previous years, transactions in the OTC market

![Figure 5.1.4. Monthly net turnover in Treasury bills by transaction type, 2004–2007](image)

**Table 5.1.4. The share of entities net turnover in Treasury bills, 2007**

<table>
<thead>
<tr>
<th>Entity</th>
<th>The share in the value of Treasury bills issued</th>
<th>The share in the value of transactions total</th>
<th>Outright</th>
<th>Conditional</th>
</tr>
</thead>
<tbody>
<tr>
<td>Banks</td>
<td>38.3</td>
<td>64.7</td>
<td>70.0</td>
<td>61.0</td>
</tr>
<tr>
<td>Insurance companies</td>
<td>6.6</td>
<td>2.6</td>
<td>2.9</td>
<td>2.5</td>
</tr>
<tr>
<td>Open pension funds</td>
<td>5.6</td>
<td>5.7</td>
<td>6.4</td>
<td>5.3</td>
</tr>
<tr>
<td>Investment funds</td>
<td>14.4</td>
<td>13.1</td>
<td>8.1</td>
<td>16.7</td>
</tr>
<tr>
<td>Individuals</td>
<td>2.5</td>
<td>0.5</td>
<td>1.0</td>
<td>0.2</td>
</tr>
<tr>
<td>Non-financial entities</td>
<td>5.5</td>
<td>2.4</td>
<td>1.8</td>
<td>2.9</td>
</tr>
<tr>
<td>Other entities</td>
<td>26.9</td>
<td>10.6</td>
<td>9.5</td>
<td>11.5</td>
</tr>
<tr>
<td>Non-residents</td>
<td>0.2</td>
<td>0.2</td>
<td>0.4</td>
<td>0.0</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

**Note:** Conditional transaction calculated individually, i.e. according to the value of the initial exchange.

**Source:** NBP.
dominated (99.8% of net turnover in 2006). Due to the decrease in the secondary market liquidity, banks’ interest in performing transactions via the MTS Poland platform was decreasing. In 2007, transactions in Treasury bills were concluded exclusively in the OTC market. One of the reasons behind such a high concentration of investors’ activity in the OTC market was the fact that the participants of the MTS Poland platform were exclusively banks, while transactions were mainly concluded with non-banking entities. On 19 December 2007, an Institutional Segment of the MTS Poland market was launched. Banks performing the function of a market-maker and admitted qualified investors will operate on this market. On the day of launching the Institutional Segment, the “Złota Jesień” PZU Open Pension Fund was admitted to participate in the market as a qualified investor.

**Investors**

The year 2007 brought no significant changes in the structure of buyers of Treasury bills. As in 2006, banks remained the major investor in the Treasury bills market (Figure 5.1.5). As at the end of 2007, the second largest group of investors in this market were open pension funds. However, the value of their portfolio was changing significantly during the year. At the end of December 2007, the value of bills possessed by open pension funds increased seven times in comparison with the end of November. Foreign entities in fact did not invest in Treasury bills (at the end of 2007 their share in the structure of buyers amounted to only 0.1%).

**Figure 5.1.5. Structure of Treasury bill buyers, 2006–2007 (by outstanding value as at period-ends)**

![Figure 5.1.5. Structure of Treasury bill buyers, 2006–2007 (by outstanding value as at period-ends)](image)

Source: NBP calculations.

**5.1.2.2. NBP bills**

The issue of NBP bills is the main open market operation performed by the NBP. The value of NBP bills offered in auctions depends on the forecasted scale of excess liquidity in the domestic banking system. The central bank uses this instrument to absorb excess liquidity and in this way determines short-term interbank deposits interest rates at the level close to the reference rate established by the Monetary Policy Council (Rada Polityki Pieniężnej – RPP).

**Market size**

In 2007, the excess liquidity of the banking system as measured by the balance of NBP bills issued and outstanding remained close to the level observed in 2006. In annual average terms, the value of NBP bills issued and outstanding reached PLN 19.3 billion and was by PLN 0.46 billion lower, i.e. by 2.3%, from the average level in 2006. The main reason for the increase in liquidity of the banking sector in 2007 was the net purchase of foreign currencies by the NBP, which was reflected by the increase in official reserve assets. The purchase of currencies by the NBP was associated mainly with converting the Community funds transferred by the European Commission. Other significant reasons for the increase in excess operating liquidity were: the payment of NBP
profit for 2006 to the central budget and further redistribution of these funds by the government, payment of discount of NBP bills, payment of interest on the Ministry of Finance term deposits placed with the central bank, reserve requirement and NBP bonds.

The most important factors restricting liquidity of the banking sector included: an increase in notes and coins in circulation (by PLN 11.5 billion per year on average), resulting mainly from the fast development of economy, and a higher level of reserve requirement of banks, caused by an increase in deposits constituting a basis for its calculation.4

The NBP bills issue depended also on the balance of term deposits of the State budget maintained in the NBP. Since 2005, there has been a limit on the Ministry of Finance term deposits bearing interest, which is reduced year by year. This resulted in shifting funds to the interbank market and consequently in the increase in the value of NBP bills issue. It also reduced the volatility of MF term deposits with the NBP, which made planning open market operations significantly easier and contributed to the stabilisation of interest rates in the interbank money market. Between 1 January and 30 September 2007, this limit, calculated according to the daily amounts, constituted PLN 5 billion, and between 1 October and 31 December – PLN 4.5 billion. In 2007, the average daily level of the Ministry of Finance term deposits held with the NBP amounted to PLN 4.4 billion. As in previous years, the remaining part of the State budget funds was placed on the interbank market through the Bank Gospodarstwa Krajowego (BGK). The Bank distributed the funds mainly in buy-sell-back operations with the domestic banks serving as Primary Dealers. These transactions were collateralised by Treasury bonds and bills. The Ministry of Finance also placed unsecured term deposits at banks, through the BGK.

Important changes in the above mentioned factors (in particular the net purchase of foreign currencies by the NBP, the level of the Ministry of Finance term deposits and an increase in notes and coins in circulation) resulted in varying levels of liquidity in the money market in subsequent months of 2007. The first half of the year saw an increase in the number of open market transactions, whereas in the second half the excess liquidity of the banking sector was reduced and the value of NBP bills issue decreased. The balance of NBP bills issued and outstanding amounted to PLN 7.77 billion at the end of December 2007 and was lower than in the previous year by PLN 10.63 billion (Figure 5.1.6).

**Primary market**

Since 2005, the NBP has performed main open market operations by issuing NBP bills with the maturity of 7 days.5 By the end of 2007, yield on NBP bills was determined at auctions, and the

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4 More information on the factors which influenced banking system liquidity in 2007 in: Monetary policy instruments of the National Bank of Poland, 2007; Banking sector liquidity, Warsaw 2008, NBP, pp. 7–16.

reference rate established by the RPP was its lower limit. In 2007, as in previous years, the auctions were held regularly once a week, each Friday. Since 1 January 2006, all banks operating in Poland which meet the technical requirements related to performing open market operations, as well as the Bank Guarantee Fund, can take part in NBP bills auctions. The technical requirements mentioned above included direct participation in the SORBNET payment system, having an account in the NBP Securities Register and having the ELBON application which facilitates electronic submission of orders to the NBP. However, only the Money Market Dealers were authorised to participate in fine-tuning operations. This function was performed by the banks selected every year in a competition, which were most active in the domestic money market and the OTC interest rate derivatives market.

The availability of information on the current liquidity situation in the banking system facilitated reducing volatility in short-term interest rates in the domestic money market. The NBP published, in the Reuters information service on the NBPM Website, daily information on the balance of banks’ current accounts, the value of deposits with the NBP as at day-end and Lombard loans taken. Furthermore, the central bank presented to the banks information on the level of reserve requirement in a given reserve requirement maintenance period, the average value of their current accounts in the period of required reserve maintenance, and the forecast of average daily balances from the day of NBP bills issue to the day preceding their maturity.

In 2007, as in 2005–2006, the NBP issued NBP bills, which influenced one-week interbank deposit interest rates (SW WIBOR). However, it was announced that from 2008 the central bank will conduct main open market operations to an extent enabling the POLONIA rate to become similar to the NBP reference rate. In 2007, the average deviation of the SW WIBOR rate from the reference rate amounted to approximately 9.4 basis points (after recalculating the reference rate on the basis of 365 days per year) and it was higher than the average deviation in the previous year by almost 4 basis points. A significant increase in this deviation was noted in November and December (Figure 5.1.7). The POLONIA rate was much more volatile, but rapid fluctuations in this rate were mainly observed in the days preceding the end of the reserve requirement maintenance period. In 2007, the average deviation of the POLONIA rate from the reference rate amounted to approximately 24 basis points (after recalculating the reference rate on the basis of 365 days per year), but in the first 11 months of 2007 it amounted to 17 points. In December 2007, due to large fluctuations in the POLONIA rate, the average deviation increased to 108 basis points.

In 2007, banks’ demand for NBP bills during auctions exceeded supply by 59.8% (in 2006 this ratio stood at 163%), however, the situation on the primary market was different each month. Only the first quarter saw a clear excess of demand over supply. During the last auction in 2006 only a few banks took into account the predicted extent of the reduction of offers and were allotted bills, according to their offers, with the value exceeding their funds. It made the market participants aware of the risk associated with and the negative consequences of underbidding. As a result, in the subsequent months of 2007 there was a marked reduction in the demand for bills declared by banks (Figure 5.1.8). In the second half of 2007, the demand for NBP bills was lower than the supply offered at 18 out of 26 auctions organised. Underbidding became more intense at the last five auctions. In December, considering the disturbance in liquidity in the international markets, banks declared low demand for bills as they preferred to leave funds on current accounts, even at the expense of income from open market operations. Therefore, a significant excess liquidity was still present in the banking sector. On the final days of the reserve requirement

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6 Since 1 January 2008, yield on main operations corresponds to the applicable reference rate determined by the Monetary Policy Council (RPP). Resolution No. 11/2007 of the Monetary Policy Council amending the resolution on the principles of conducting open market operations (Dz.Urz. NBP of 2007, No. 17, Item 31).

7 When Friday was an official holiday, the auction was held on Thursday.


9 The banks are selected on the basis of uniform criteria of the Dealer Activity Index prepared by the NBP.

Secondary market

NBP bills were traded in the non-regulated OTC interbank market. The secondary market of NBP bills is characterized by low liquidity, which results from the function of those instruments and their short original maturity. In 2007, the average daily net turnover amounted to PLN 0.43 billion and was slightly lower than in 2006 (PLN 0.44 billion) (Figure 5.1.9). Also the average daily number of transactions fell from 6.4 to 5.7. The reduction of liquidity in the secondary market of NBP bills in 2006–2007 resulted from admitting all banks operating in Poland which meet the abovementioned technical conditions to participation in auctions. Before 2006, a large part of the operations were transactions where Money Market Dealers (at that time only the banks which could participate in main open market operations) resold the purchased bills to other banks shortly after the auction. Due to the very short maturity period, NBP bills were seldom used as collateral.

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in repo transactions. In 2007, the share of conditional transactions in total net turnover in NBP bills amounted to approximately 1.7% (in 2006 – 3%).

5.1.2.3. Short-term bank debt securities

The domestic market of short-term bank debt securities (SBDS) includes bonds and bank securities (instruments issued pursuant to the Banking Law, also referred to as the certificates of deposit) with original maturity of up to 1 year, issued in Poland by commercial banks. As at the end of 2007, the share of SBDS in the total outstanding short-term bank debt securities resulted from the issues directed to the domestic market.

**Market size**

As at the end of 2007, the value of SBDS issued and outstanding was significantly lower than in 2006 and amounted to almost PLN 3 billion. However, in comparison with 2004–2005, the market size expressed as the outstanding value of SBDS issued by banks remained relatively unchanged (Figure 5.1.10). The issue of 9-month BGK bonds in December 2006 in the amount of PLN 1.1 billion had an enormous impact on changes in the value of the SBDS market. The share of short-term instruments in the outstanding bank debt securities issued on the domestic market decreased again.

The reduction in the outstanding value of SBDS resulted in a decrease in the share of these instruments in banks’ liabilities from 0.6% at the end of 2006 to 0.4% at the end of 2007. Thus, the scope of financing of banks in Poland by debt securities issues in the money market was clearly smaller than in the euro area (Figure 5.1.11).

In 2007, several banks which regularly issued SBDS on the domestic market became less active. As a result, the value of issues in 2007 decreased by a half and amounted to approximately PLN 14.2 billion. Short-term bank debt securities were still sold through non-public offering and were not traded on the regulated market. New issues were often performed within the framework of one programme and took place on the day of the maturity of instruments from the previous issue. Small issues with the original maturity of up to three months inclusive predominated. The average value of a single issue was about PLN 35 million. The share of bank securities in terms of their value amounted to 50% of all SBDS issues in 2007.

The SBDS issuers were banks operating on the retail loans and advances market with a poorly developed network of branches and small deposit base. Some of the universal banks were also active on the market. In order to increase the attractiveness of their deposit offers, they sold

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12 This is the ratio of the nominal value of repo transactions to the total net value of NBP bills transactions. Estimates based on reports submitted by banks performing the function of Money Market Dealers to the NBP.
structured certificates of deposit in the form of bank securities with incorporated option strategies, which specified the pattern of interest rates. These instruments were directed mainly to individual investors and their interest rate depended most often on the changes in the interbank money market rate (3M WIBOR or 6M WIBOR) in the period determined in the terms of issue. The value of structured certificates of deposit issued in 2007 declined in comparison with 2006 and amounted to approximately PLN 0.2 billion.

As at the end of 2007, the term structure of outstanding SBDS (according to original maturities) was dominated by instruments with original maturity from one to three months inclusive. The decrease in the share of debt securities with longer maturity periods resulted mainly from the redemption of 9-month BGK bonds (Table 5.1.5).

Table 5.1.5. The term structure of the domestic market of short-term bank debt securities, 2004–2007 (according to original maturities, as at year-ends; %)

<table>
<thead>
<tr>
<th>Maturity (months)</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 1 month</td>
<td>11.4</td>
<td>17.6</td>
<td>15.4</td>
<td>8.9</td>
</tr>
<tr>
<td>From 1 to 3 months</td>
<td>39.0</td>
<td>47.4</td>
<td>21.1</td>
<td>45.5</td>
</tr>
<tr>
<td>From 3 to 6 months</td>
<td>14.0</td>
<td>16.1</td>
<td>23.1</td>
<td>12.8</td>
</tr>
<tr>
<td>From 6 months to 1 year</td>
<td>35.6</td>
<td>18.9</td>
<td>40.4</td>
<td>32.7</td>
</tr>
</tbody>
</table>

Source: NBP.
**Secondary market and investors**

SBDS are traded on the non-regulated market. The NBP does not have any information about the value of transactions in these instruments. Information received from banks who arrange issues indicates that the transactions are performed very rarely. Due to very short maturity, investors keep the instruments until the maturity date.

The structure of investors in the SBDS market differs depending on the legal form of these instruments. As at the end of 2007, the main buyers of short-term bank debt securities were enterprises and banks (Figure 5.1.12). The decrease in the share of households in the structure of investors resulted mainly from the lower value of outstanding structured certificates of deposit issued by banks, which are mainly offered to this category of customers. As regards the structure of investors in the bond market, there was a significant decline in banks’ involvement. It was caused by a large issue which in 2006 was covered by one of commercial banks. The shares of enterprises and investment funds in this market increased.

![Figure 5.1.12. Investors in the short-term bank debt securities, 2006–2007, as at period-ends](image)

Source: NBP study based on information received from banks – Money Market Dealers serving as issue depositaries.

### 5.1.2.4. Short-term corporate bonds

The domestic market of short-term corporate bonds (SCB) includes debt instruments with the original maturity period of up to one year inclusive, issued in Poland by non-financial corporations, other financial intermediaries and financial auxiliaries.\(^\text{13}\)

**Market size**

In 2007, enterprises were more willing than in previous years to use external sources of short-term financing. In 2007, the value of new SCB issues increased as well as the number of issuers, despite the fact that companies still most often chose bank loans and factoring to finance their current needs (Table 5.1.6). As at the end of 2007, the value of short-term bonds issued and outstanding amounted to PLN 10.6 billion and was by 68% higher than at the end of 2006. The ratio of the outstanding value of SCB issue to GDP increased to around 1%, whereas in the euro area it stood at 1.5%.

The development of the SCB market in 2007 was significantly influenced by the fact that numerous issuers raised the limits of already functioning issue programmes and by the larger number of new programmes. In 2007, 39 new programmes for SCB issue were launched (in 2006

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\(^{13}\) The indicated issuer categories refer to the sectoral division of economy of the European System of Accounts 95. The term "enterprise" used throughout this section includes all three indicated categories.
Market structure

As in previous years, the structure of SCB issuers was dominated by non-financial corporations (an 80% share in the outstanding value of SCB at the end of 2007). The majority of issuers were non-public companies, while a few issues of high value were conducted by companies listed on the WSE. Companies from various industries expressed their interest in financing SCB issues, however, the highest activity was noted among companies from the following sectors: energy, telecommunication, food and construction. At the end of 2007, their joint share in the outstanding value of SCB amounted to 68%, almost a half of which constituted energy companies. Around 20% of the total outstanding value were corporate bonds of the other financial intermediaries, mainly leasing companies. The outstanding value of SCB issues of these institutions almost doubled in comparison with the end of 2006.

Short-term corporate bonds were issued exclusively in the form of non-public offering. The majority of debt instruments sold were bonds. The issues conducted were rarely based on the provisions of the Civil Code and the Act on Bills of Exchange. Issues of limited value were predominating, although large enterprises would meet their short-term financial demands by issuing bonds to the value of even several hundred million zlotys at one time. The average value of a single SCB issue was about PLN 25 million.

The function of issue arranger, depositary and paying agent was usually performed by banks with a stable position in the corporate banking segment. At the end of 2007, 14 banks were involved in the arrangement of issues (13 in 2006), whereas the 5 most active banks represented an approx. 78% share in SCB services, taking into account their value as at the end of 2007. As a result of incorporation of a selected part of Bank BPH SA, in December 2007 Bank Pekao SA took over the customers for whom Bank BPH SA arranged SCB issues. Thus, Bank Pekao SA became one of the leaders among the arrangers of short-term corporate bond issues in Poland (Figure 5.1.13).

In 2007, the term structure of SCB calculated according to the values of new issues was dominated by instruments with the original maturity period of up to one month (a 58.5% share). Several large companies used issues with very short maturity periods and of high values as instruments of current liquidity management. Bonds with the maturity period from one month to three months accounted for 33.9% of issues conducted, whereas those with the maturity period

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14 On the basis of information received from banks – Money Market Dealers serving as depositaries.


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Table 5.1.6. Outstanding value of SCB issued and number of issuers, 2004-2007

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of issuers</td>
<td>193</td>
<td>184</td>
<td>179</td>
<td>207</td>
</tr>
<tr>
<td>Outstanding value (PLN billion)</td>
<td>6.6</td>
<td>5.6</td>
<td>6.3</td>
<td>10.6</td>
</tr>
<tr>
<td>Value of new issues (PLN billion)</td>
<td>54.9</td>
<td>47.0</td>
<td>54.3</td>
<td>65.3</td>
</tr>
</tbody>
</table>

of over three months had a 7.6% share. Issues with longer maturity periods were often rolled and the funds obtained in this way could be used to finance investments.

**Secondary market and investors**

Due to the non-public nature of their issue, short-term corporate bonds were traded in the non-regulated OTC market. The SCB market was strongly segmented as a result of the absence of a centralized trading platform and settlement chamber. The banks which arranged issues organized trading markets for those instruments for whose trading they were agents in the primary market. Therefore, no information about the value of transactions concluded in the secondary market is available. In the opinion of issue arrangers, the liquidity of the SCB market was low as the majority of issues were characterized by a very short maturity period and investors tended to hold the bonds until maturity date.

**Figure 5.1.13. Share of individual banks in the arrangement of SCB issues, 2006–2007 (by outstanding value as at period-ends)**

<table>
<thead>
<tr>
<th>Bank</th>
<th>A. 2006</th>
<th>B. 2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bank BPH</td>
<td>25.4%</td>
<td>21.8%</td>
</tr>
<tr>
<td>Bank Handlowy</td>
<td>22.3%</td>
<td>24.2%</td>
</tr>
<tr>
<td>BRE Bank</td>
<td>8.7%</td>
<td>9.0%</td>
</tr>
<tr>
<td>Raiffeisen Bank</td>
<td>9.6%</td>
<td>16.9%</td>
</tr>
<tr>
<td>Pekao</td>
<td>12.7%</td>
<td>12.5%</td>
</tr>
</tbody>
</table>

Source: NBP study based on data received from banks – Primary Dealers serving as issue depositaries and on data from Fitch Polska SA.

**Figure 5.1.14. SCB buyers, 2006–2007 (by outstanding value as at period-ends)**

<table>
<thead>
<tr>
<th>Category</th>
<th>A. 2006</th>
<th>B. 2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enterprises</td>
<td>50.8%</td>
<td>51.1%</td>
</tr>
<tr>
<td>Investment funds</td>
<td>23.3%</td>
<td>32.8%</td>
</tr>
<tr>
<td>Banks</td>
<td>14.0%</td>
<td>1.4%</td>
</tr>
</tbody>
</table>

Source: NBP study based on information received from banks – Primary Dealers serving as issue depositaries.

The structure of investors was to a large extent affected by the non-public nature of issues and the fact that bonds were addressed to selected investors, e.g. entities from the issuer’s capital
group. Non-financial corporations and banks were the most important buyers of short-term corporate bonds. Being in good financial standing, some enterprises invested their ongoing financial surpluses in SCB and achieved a slightly higher return on investment than in the case of bank deposits. In comparison with the end of 2006, there was a sharp decrease in the share of investment funds in the structure of investors in the SCB market. The involvement of pension funds and insurance companies in the SCB market remained low (Figure 5.1.14).

The structure of SCB market, namely the domination of small issues conducted by non-public entities (with no rating assigned), does not correspond to the demands of institutional investors, such as open pension funds and investment funds. This may constitute an obstacle for the development of the SCB market. The range of financial demands of companies from the SME sector, which most often issue SCB, is relatively low, thus their issues are small, whereas the costs are relatively high. On the other hand, domestic institutional investors are interested mainly in high value issues by renowned (preferably public) companies. Moreover, institutional investors are also concerned with the risk premium included in the price of such instruments, which they consider to be too low.

5.1.3. Deposit transactions market

The deposit transactions market is used for current financial liquidity management by enabling market participants to invest temporary surpluses or to borrow funds when they are insufficient. Taking into account the credit risk, unsecured deposits as well as deposits collateralised by foreign currency (FX swaps) and by securities (conditional operations – repos and sell-buy-backs) can be distinguished among deposit transactions.

The most important participants of the deposit transaction market are domestic banks which lend available funds to one another on a daily basis. Large-value transactions with maturity periods ranging from one day to one year are concluded in the interbank market. In 2007, as in previous years, the structure of the interbank deposit transaction market in Poland was considerably different from the structure of this market in the euro area (Figure 5.1.15). The primary liquidity management instruments for banks operating in the money market of the euro area were conditional transactions, repos in particular. The popularity of this instrument resulted mainly from the necessity of limiting credit risk exposure and the associated costs of maintaining own capitals, as well as from the willingness to increase the profitability of portfolios of securities held. Those banks which were the most active in the bond market financed their positions by means of those instruments, mainly using conditional transactions. Secured loans with maturity periods ranging from T/N to 1 month dominated in this area. As regards the unsecured interbank deposit market, the highest level of activity was in the O/N transactions’ segment. In comparison with other deposit transactions, FX swaps were more often used to acquire liquid funds for a period longer than one week.\(^\text{16}\)

The primary liquidity management instruments for banks in Poland were unsecured deposits. Due to daily shifts in both liquidity in the banking system and the demand for liquid resources of particular banks, as well as due to high credit risk of those kinds of transactions, the most popular transactions concluded in the euro area as well as in Poland were O/N transactions.\(^\text{17}\) Secured deposit transactions were much more rarely used to finance short-term demands by banks operating in Poland than in the euro area. FX swaps were concluded mainly with foreign banks which accepted loans in PLN, usually in short-term T/N transactions, in order to finance their

\(^{17}\) A form of denoting the maturity periods of interbank deposits. Standard maturity dates: one-day – O/N, T/N, 5N, one week – 5W, two weeks – 2W, three weeks – 3W, one month – 1M, two months – 2M, three months – 3M, six months – 6M, nine months – 9M, and one year – 1Y. All deposits except for O/N and T/N begin on the second working day after the conclusion of the transaction. The O/N (overnight) deposit begins on the day of the conclusion of the transaction and matures on the following working day. T/N (tomorrow next) is a deposit which begins on the first working day following the day of the conclusion of the transaction and matures on the following working day.
positions in securities. Moreover, some domestic banks used FX swap transactions to hedge their currency position for granting residential loans indexed with foreign currencies.

The structure of the Polish interbank deposit market resulted, *inter alia*, from the fact that, for a certain group of banks, unsecured deposits were actually the only instrument for liquidity management. Some banks did not possess legal documentation of conditional transactions and sufficiently large portfolios of Treasury securities which could be used as collateral in these transactions. The domestic interbank market did not function fully effectively since only a few banks used conditional transactions. In 2007, as in previous years, the last days of required reserve maintenance period were characterised by instances of banks placing deposits at the NBP and, simultaneously, other banks drawing lombard loans as well as intense fluctuations of short-term interest rates. Credit limits imposed by banks on other market participants reduced the number of prospective contractors to unsecured deposits at the end of the month and the possibility to use third-party agency in switch transactions. In such a situation, it would be advisable to acquire funds via conditional transactions, which are burdened with a significantly lower risk and constitute a definitely lesser burden on credit limits. Therefore, the development of the interbank repo market would allow the domestic banks to manage their liquidity position in an optimum way.

### 5.1.3.1. Unsecured deposits

Unsecured interbank deposits are the simplest and most common liquidity management instrument used by banks operating in Poland. In the interbank deposit market, funds are continuously transferred from banks with temporary surpluses to banks with liquidity shortages. Liquidity needs of a bank which result from the necessity to maintain an average level of the reserve requirement as well as from its operations in different segments of financial market (*inter alia*, granting loans, activity in the securities market, foreign exchange transactions) are satisfied in the interbank deposit market on a daily basis. To this end, one-day O/N transactions are most commonly used – in 2007 they accounted for almost 80% of net turnover in the interbank unsecured deposit market.

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**Note:** Net turnover in the deposit transaction interbank market in Poland and in the euro area is equal to the nominal value of unsecured deposits, conditional transactions (repo and SBB) and FX swaps concluded exclusively between banks respectively – Polish and euro area residents.

**Source:** NBP calculations on the basis of data from the NBP, the National Depository for Securities and Euro Money Market Study 2007, Frankfurt 2007, ECB. Data for the euro area were verified by ECB.
**Market size**

The unsecured interbank deposit market belongs to the most developed segments of the domestic financial market. In 2007, the upward trend in liquidity of the interbank deposit market was sustained (Figure 5.1.16). In comparison with 2006, the average daily net turnover in this market increased by 18% and amounted to PLN 11.5 billion. It was caused by a significant increase in activity in the O/N deposits segment, which prevail in the market. This is supported by the 40% increase in the average value of O/N transactions, which amounted to PLN 5.6 billion in 2007. Those transactions provide the basis for the calculation of the POLONIA rate. The development of the market is also indicated by the data on the outstanding value of interbank deposits (Figure 5.1.17). The average outstanding value as at the end of quarters in 2007 was PLN 41.1 billion, whereas in 2005 it was PLN 33.1 billion.

The increase in activity in the interbank deposit market resulted, *inter alia*, from a larger volume of transactions in financial markets of instruments denominated in PLN. The average daily turnover on NBP current accounts in 2007 was higher by 12% (Figure 5.1.18), however, this increase resulted primarily from an increase in the value of interbank customer orders. The value of such orders increased as a result of higher activity of non-residents in the zloty offshore market (spot and forward transactions) and their large share in turnover on the domestic FX swaps, Treasury bonds and stocks markets. Payments made in the SORBNET system by correspondents for foreign banks significantly modified current account balances of domestic banks, which was one of the factors behind the increase in turnover on the interbank O/N deposit market.

The intraday credit facility, granted by the NBP to participants in the SORBNET system in return for the transfer of Treasury securities’ ownership, was also used by banks, in order to

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20 The POLONIA rate (Polish Overnight Index Average), an equivalent of the EONIA rate in the euro area, was introduced in the domestic money market on 24 January 2005. Its value is published on every business day at 5 p.m. in the Reuters news service on the NBPs website. The POLONIA rate is calculated by NBP.
manage liquidity in the course of an operating day. In 2007, the average daily value of intraday credit granted by the NBP to banks amounted to PLN 12.7 billion and was higher by 15% as compared to 2006. In summer 2007, the NBP conducted tests of the ELBON application with banks on servicing the intraday credit secured with additional securities – NBP bills and bonds. These tests were positive and probably in the first half of 2008 it will be possible to take out an intraday credit secured with these instruments.

**Market structure and money market rates**

In 2007, as in previous years, the term structure of turnover was dominated by O/N transactions (almost an 80% share). Those transactions allow banks to manage their liquidity in a flexible manner and to use the credit limits imposed on them by other participants of the market more effectively. Banks were also active in the segment of transactions with maturity periods from T/N to 1W. The share of deposits with maturity period of up to 7 days inclusive (excluding O/N) in net turnover amounted to approximately 15%. In other market segments liquidity was limited. From mid 2007, a decrease could be noted in number of interbank loans with maturity period exceeding one month taken in the domestic money market. It was caused by a decline in the number of banks having a large deposit base at their disposal (in 2007 the value of credits for the non-financial sector exceeded, for the first time, the value of deposits accepted from this sector) and the decreasing value of credit limits which banks impose on each other to reduce the counterparty credit risk exposure. The decrease in these limits was related to the disturbances in the global money market and limited trust between its participants, among which there are also the dominating entities of banks operating in Poland. In 2007, in the domestic money market there was no significant decrease in trust between banks and no increase in the risk premium in interbank deposits quotations (Box 5.1.1).

The focus of bank activity in the short-term transactions segment is confirmed by the structure of the banks’ debt as at the end of June 2007 arising from outstanding interbank loans by original maturity periods (Figure 5.1.19). Data as of the end of 2007 are not representative due to the unusual situation in the interbank market, which occurred in the last days of December 2007, when banks did not want to lend funds in O/N and T/N transactions.

In 2007, both the SW WIBOR rate and O/N WIBOR and POLONIA rates remained within the fluctuation range set by NBP deposit and Lombard rates (Figures 5.1.20 and 5.1.21). The most

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21 The POLONIA rate (Polish Overnight Index Average), an equivalent of the EONIA rate in the euro area, was introduced in the domestic money market on 24 January 2005. Its value is published on every business day at 5 p.m. in the Reuters news service on the NBPS website. The POLONIA rate is calculated by NBP.
variable interest rate was that of one-day deposits, which was related to the ongoing changes of liquidity conditions caused by autonomous factors. In 2007, the average deviation of the O/N WIBOR rate from the reference rate amounted to 19 basis points and was higher than in 2006 by 5 basis points (calculation of the reference rate on the basis of 365 days per year), however, this deviation increased rapidly (to 67 basis points) in December.

The actual interest of one-day deposits in the interbank market is better reflected by the POLONIA rate, which is the average of the interest on O/N transactions concluded by 4:30 p.m. by a representative group of banks, weighted with the value of those transactions.\(^\text{22}\) The POLONIA rate oscillated close to the centre of the range delimited by the fixing of the O/N WIBID and O/N WIBOR reference rates. However, large fluctuations were usually observed during the last days of required reserve maintenance period (Figure 5.1.21). At the end of the month banks manage the limits of credit exposures more carefully, thus decreasing the number of prospective contractors to unsecured deposits, which in situations of liquidity mismatches in the banking system or the absence of a liquid interbank repo market leads to sharp increases or decreases in overnight deposit rates. In 2007, the average deviation of the POLONIA rate from the NBP reference rate amounted to 24 basis points (after recalculating the reference rate on the basis of 365 days per year) and was higher than in 2006 (16 basis points). This deviation decreased considerably in December. In the

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\(^{22}\) Detailed rules for fixing the POLONIA rate are specified by the Regulamin fixingu stawki referencyjnej „POLONIA”, Warszawa 2005, Polskie Stowarzyszenie Dealerów Bankowych ACI Polska.
last month of the year there is usually a seasonal increase in cash in circulation and in payments related to annual settlements. Considering the disturbance in liquidity in the international markets, the domestic banks were very careful and maintained more funds, even at the expense of income from open market operations. Therefore, in December the banking sector saw a significant excess liquidity and the POLONIA rate was clearly below the NBP reference rate.

Box 5.1.1

RISK VALUATION (RISK PREMIUM) ON THE MONEY MARKET

Unsecured deposits on the interbank money market are exposed to the counterparty credit risk, which is reflected in the interest rates of these transactions, *inter alia*, in the WIBOR rates for the market in Poland and the LIBOR rates (quoted for EUR, USD, GDP) for the markets of the euro area, the USA and the United Kingdom, respectively. Overnight Index Swap (OIS) transactions do not incur such a risk as their settlement consists not in the exchange of the nominal amount but rather in the exchange of the difference between payments of interest on this amount, calculated according to the fixed and variable interest rate. The variable interest rate is usually determined on the basis of daily reference rates (e.g. POLONIA, EONIA, SONIA). Thus, quotations of OIS transactions reflect only the expectations of the market participants as to the future level of the reference rate during the transaction period.

The spread between the WIBOR/LIBOR rates and quotations of OIS transactions with the same maturity period may be perceived as a credit risk premium. However, this spread depends not only on the credit risk valuation, but also on the constantly changing liquidity conditions in the interbank unsecured deposits market as well as the expectations as to the future level of the interest rate which functions as a reference rate in OIS transactions. These factors interact with each other, making it difficult to isolate their impact on the spread.

Between August and December 2007, there was an increase in the spread between the LIBOR rates and quotations of OIS transactions on the markets in the euro area, the USA and the United Kingdom (Figure 5.1.22). The subprime mortgage crisis in the United States and the associated troubles of some large financial institutions increased the insecurity in these markets, which resulted in an increase in credit risk premiums and reduced liquidity in the EUR, USD and GBP markets. In Poland the spread increased significantly as late as in

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*Figure 5.1.21. POLONIA rate and its fluctuations in respect of O/N WIBID and O/N WIBOR rates and the reference rate, 2005–2007*

Source: NBP and Reuters.

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December 2007 for the 1M WIBOR rate. It was caused, however, by the unusual situation on the domestic interbank market in that period. Considering the disturbance in liquidity in the international markets and high volatility of factors shaping liquidity of the banking system, in December banks maintained more funds and did not want to lend them in transactions which would be settled in 2008. Moreover, the credit risk exposure on such a long-term deposit transaction would be included in the annual balance sheet and it would serve as a basis for the calculation of capital requirements, among other things.

Figure 5.1.22. Spread between interest on unsecured interbank deposits and quotations of OIS transactions in Poland, the euro area, the USA and the United Kingdom in 2007

A. Spread for one-month rates

B. Spread for three-month rate

**Infrastructure and market participants**

The most active participants of the unsecured interbank deposits market were still banks with a stable deposit basis and banks acting as correspondents for foreign banks and as agents in their payments for transactions concluded in markets of instruments denominated in PLN. The liquidity of the market was defined by transactions concluded by a few large banks.

Unsecured interbank deposit transactions were concluded mainly by the agency of voice brokers and the Reuters Direct electronic contractual system. The frequent, as compared to other financial instruments, agency of voice brokers resulted from the anonymity offered by such a manner of communication between market participants and the possibility of finding switch transaction partners. Transactions in PLN were rarely concluded via the electronic e-MID platform launched in 2005. The average daily value of operations concluded between domestic banks via this platform accounted for only a few per cent of average daily turnover in the interbank deposit market in Poland.

**5.1.3.2. Secured deposits**

The analysis of the secured deposit transactions market will be divided into two parts – FX swaps (deposits collateralised by foreign currency) and conditional transactions – repos and sell-buy-backs/buy-sell-backs (deposits collateralised by securities).

**5.1.3.2.1. FX swaps**

An FX swap is a combination of two opposite foreign exchange transactions which are settled on different dates. Thus, in economic terms, it consists of two secured deposit transactions in different currencies. The FX swap may be used as a liquidity management instrument. The sale of a foreign currency in the initial exchange and its obligatory repurchase in the final exchange make it possible to obtain zlotys for a period specified in the terms of the transaction.
**Market size and participants**

The zloty FX swap market was the largest market among the currencies of the region. In recent years, there was a highly dynamic increase in the value of FX swap transactions in the offshore market, which clearly distinguishes our market from the forint and the Czech koruna markets. In comparison with April 2004, the value of zloty FX swaps concluded between non-residents increased more than eightfold. In April 2007 the average daily net turnover in the zloty FX swap market (the domestic and offshore market in total) amounted to USD 16,736 million (PLN 46.7 billion),\(^{23}\) of which operations in the domestic market accounted for only 27% (Table 5.1.7).

<table>
<thead>
<tr>
<th>Table 5.1.7. Average daily turnover in the FX swaps market in zloty, Czech koruna and forint, April 2004 and 2007 (USD million)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Zloty</strong></td>
</tr>
<tr>
<td><strong>2004</strong></td>
</tr>
<tr>
<td>Total turnover, of which:</td>
</tr>
<tr>
<td>4,982</td>
</tr>
<tr>
<td>Transactions between residents</td>
</tr>
<tr>
<td>446</td>
</tr>
<tr>
<td>Resident – non-resident transactions</td>
</tr>
<tr>
<td>3,049</td>
</tr>
<tr>
<td>Transactions between non-residents (offshore)</td>
</tr>
<tr>
<td>1,487</td>
</tr>
</tbody>
</table>


The dynamic increase in the value of FX swap transactions concluded outside Poland resulted mainly from a high activity of non-banking financial institutions. Hedge funds used FX swaps to speculate on the zloty exchange rate and in carry trade strategies, which were most often financed with loans in yen or the Swiss franc. Some foreign institutional investors who invested their resources in zloty-denominated assets acquired zlotys in the FX swap market by concluding and then rolling transactions with longer maturities (of 1 and 3 months). An additional factor in the increased turnover in the offshore market was the greater activity of foreign banks in the market of interest-rate derivative instruments denominated in the zloty, as FX swaps make it possible to secure the exposure to interest rate risk which arises as a result of the FRA transaction.\(^{24}\)

The increase in turnover in the offshore market was accompanied by the decrease in liquidity in the domestic FX swap market, which started in 2006 (Figure 5.1.23). In 2007, the average daily net turnover in the interbank FX swap market in Poland decreased by 14% as compared to 2006 and amounted to PLN 10.9 billion (PLN 12.7 billion in 2006). Nevertheless, the FX swap was the most liquid domestic money market instrument. The domestic FX swap market was dominated by transactions with non-residents, which was characteristic also for other markets in the region. Due to the costs of conducting operations and monitoring the liquidity situation, foreign banks are not very active in local interbank deposit markets. In such a situation, FX swap transactions are a very effective method of financing operations in instruments denominated in various currencies.

In 2007, transactions with non-residents accounted for 88% of net turnover in the interbank market, i.e. 4 percentage points less than in 2006. Thus, the decrease in turnover in the domestic FX swap market resulted mainly from the lower value of transactions with foreign banks, which most often finance their positions in the domestic Treasury bonds market by renewing their loans in zlotys in T/N FX swap transactions on a daily basis. In 2007, foreign banks entered into such operations with domestic banks to a lesser extent, as they sold the Treasury bonds they possessed. Their exposure in the domestic Treasury bonds market decreased almost twice (from PLN 33.7

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\(^{23}\) This is the average daily nominal value of FX swaps adjusted for double-counting. Only the zloty leg of the initial or final exchange is taken into account.

\(^{24}\) Various applications of FX swaps were presented in the previous editions of this report.
billion at the end of 2007 to PLN 16.1 billion at the end of 2007). Moreover, foreign banks became more active in terms of speculative operations in the offshore market.

The turnover in the domestic interbank FX swap market was considerably concentrated. In comparison with April 2004, the share of the five most active domestic banks in net turnover slightly decreased and amounted to 66% (Figure 5.1.24). The most active among domestic banks were those belonging to international banking groups.

The activity of domestic non-banking entities in the domestic FX swap market remained limited, which was also characteristic for the Hungarian and Czech markets. The average daily value of transactions concluded by banks operating in Poland with domestic non-banking entities amounted to around PLN 250 million in 2007. The small involvement of non-banking entities in the FX swap market resulted from the fact that such institutions mainly used outright forward transactions to hedge against the currency risk, rather than – like banks – synthetic forward transactions generated by the combination of the FX swap and the spot transaction. The most active group of non-financial entities were the customers of private banking, who opened
speculative positions in the forward zloty market through the simultaneous conclusion of spot and FX swap transactions.

**Market structure**

In all countries of the region, the FX swap market was dominated by USD/PLN exchange operations (Table 5.1.8). Such a currency composition resulted from the standard of using the US dollar in international FX swap transactions, which has existed in the global FX market for years. In their investment strategies, London banks borrowed currencies with low interest rates (e.g. yens or Swiss francs), then exchanged them for US dollars and finally obtained zlotys in USD/PLN FX swap operations. In the Czech Republic the higher share of the EUR/CZK share was associated with relatively high turnover in the customer market.

The customer market in Poland was dominated by USD/PLN operations, which accounted for 63% of turnover registered in April 2007, whereas the share of the EUR/PLN pair amounted to around 30%. The higher share of the EUR/PLN currency pair in this segment of the market resulted from the fact that non-banking entities used the FX swap transactions to speculate on the zloty exchange rate and to hedge themselves against a decrease in the value of export payments, which are mainly denominated in EUR.

Operations without the involvement of zloty were also conducted in the domestic FX swap market. The average daily turnover in this market segment amounted in April 2007 to USD 1,368 million and they were mainly exchange transactions in the following currency pairs: EUR/USD, CHF/USD, GBP/USD, and CHF/EUR.

The term structure of turnover in the domestic FX swap market was still dominated by operations with maturity period of up to seven days inclusive (Figure 5.1.25). T/N and O/N one-day swaps predominated among the transactions (the share of these transactions in total turnover

**Table 5.1.8. Average daily turnover and structure of the FX swap market in Poland, the Czech Republic and Hungary, April 2004 and 2007 (USD million)**

<table>
<thead>
<tr>
<th></th>
<th>Poland</th>
<th>Czech Republic</th>
<th>Hungary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turnover – foreign currencies/national currency</td>
<td>3,495</td>
<td>4,514</td>
<td>865</td>
</tr>
<tr>
<td>– of which: EUR/domestic currency (%)</td>
<td>2</td>
<td>5</td>
<td>18</td>
</tr>
<tr>
<td>– of which: USD/domestic currency (%)</td>
<td>98</td>
<td>95</td>
<td>78</td>
</tr>
<tr>
<td>Interbank market</td>
<td>3,458</td>
<td>4,472</td>
<td>770</td>
</tr>
<tr>
<td>Customer market</td>
<td>37</td>
<td>42</td>
<td>95</td>
</tr>
<tr>
<td>Turnover – foreign currencies/foreign currencies</td>
<td>600</td>
<td>1,368</td>
<td>412</td>
</tr>
</tbody>
</table>

Source: NBP calculations on the basis of the results of the research Triennial Central Bank Survey of Foreign Exchange and Derivatives Market Activity in 2004 and 2007, made available by the NBP, the Czech National Bank and the National Bank of Hungary.

**Figure 5.1.25. Maturity structure of turnover on the FX swap market in Poland, 2004–2007**

Source: NBP data submitted by banks acting as Primary Dealers and candidates for this function.
amounted to around 80%). Such a term structure resulted mainly from the fact that foreign banks used T/N FX swap transactions to obtain zlotys for investments in the domestic capital market. By renewing FX swap transactions on a daily basis, investors are more flexible in financing their positions in securities and may hedge themselves against the currency risk. In 2007, the share of transactions with longer maturity periods in the term structure of turnover increased. Operations with maturities exceeding one month accounted for around 8% of turnover and were concluded by domestic banks to hedge against the currency risk related to mortgage loans denominated in foreign currencies and to mitigate the exposure resulting from forward transactions concluded with non-banking entities. Moreover, such operations could be used for speculations on interest rate and exchange rate movements.

**Market infrastructure**

The terms of transactions concluded in the domestic interbank market were mainly negotiated with the use of the Reuters Dealing Direct electronic conversional system and on the phone (54% of gross turnover registered in April 2007). Around 41% of the value of interbank FX swap transactions was executed via voice brokers. Banks operating in Poland became increasingly interested in using electronic platforms, which automatically match buy and sell orders. Transactions concluded via the Reuters Forward Matching platform accounted for 5% of gross turnover. The standard value of a single FX swap transaction with a maturity of up to 1 week was USD 100 million. For swaps with longer maturity, the ticket size amounted to USD 25, 30 or 50 million.

**5.1.3.2.2. Conditional transactions**

The merit of deposits in conditional transactions is the fact that owing to the use of collateral, they involve a much lower counterparty credit exposure than in the case of traditional interbank deposits, as risk results mainly from the volatility of the prices of securities which serve as collateral. The risk of a significant decrease in the collateral value on the domestic conditional transactions market is low since this market is dominated by the short-term operations collateralised with Treasury securities. Therefore, conditional transactions make it possible to obtain funds at a lower cost than in traditional interbank deposits. Moreover, conditional transactions facilitate managing liquidity in the case of turbulences in the money market, provided that its participants possess securities which may serve as collateral in these operations.

Two types of conditional transactions which include the temporary transfer of ownership of securities are concluded on the Polish money market: repos and sell-buy-back/buy-sell-back (SBB/BSB) transactions. The existence of two types of conditional transactions is the result of the significant differences between them before 2004, which pertained to, *inter alia*, the recording of those instruments in accounting books and the rules governing the reserve requirement. Those differences resulted in the SBB/BSB operations segment of the domestic money market being significantly more developed. At present, repos and SBB/BSB transactions are concluded on the basis of a standard framework agreement, have almost identical economic nature and should be recorded in accounting books in the same way. Since the party obtaining financial resources retains the risks and benefits related to the securities transferred by it as collateral for the duration of the transaction, then in accordance with IAS 39 the party should still record them in its assets. Moreover, for both types of operation with non-banking entities the zero rate of the reserve requirement applies. Different legal documentation in numerous institutions on the basis of which dealers conclude the transactions and the differences in the transfer of proceeds, the substitution

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25 Repo transactions also include legal risk. The failure to apply an appropriate framework agreement (documentation which describes in detail the legal relationship of the conditional transaction) entails the risk that the legal nature of that financial instrument may change, which in turn may result in the ineffectiveness of the collateral in case of the counterparty’s bankruptcy.

26 In the domestic money market, some banks conclude SBB/BSB transactions without a standard framework agreement based on the Global Master Repurchase Agreement. These operations are described as undocumented BSB and in fact consist of two separate transactions: the purchase and sale of securities.
of collateral and recording of collateral in securities depositories cause the two types of transactions to be treated as distinct.\textsuperscript{27}

**Market size**

An increase in net turnover\textsuperscript{28} in the repo segment of the conditional transaction market, which has been observed for several years, continued also in 2007 (Figure 5.1.26). The average daily value of conditional transactions concluded in the domestic money market increased from PLN 8.4 billion in 2006 to PLN 9.0 billion in 2007. SBB/BSB operations still predominated and accounted for around 85\% of net turnover, however, the repo market was developing more dynamically. The average daily value of SBB/BSB transactions increased by 3\% as compared to 2006 and amounted to PLN 7.7 billion, whereas the repo market saw a 45\% increase in the value of transactions. However, the domestic repo market, with its average daily net turnover in 2007 of PLN 1.3 billion was still underdeveloped. The increase in turnover on the repo market resulted from the growing activity of non-banking financial institutions, which began using standard framework agreements. In 2007, the average daily value of transaction in the interbank repo market increased only by 2\% and amounted to PLN 44 million.

**Market participants**

Similarly as in previous years, the Polish money market was dominated by conditional transactions with domestic non-banking institutions (Figure 5.1.27). The share of interbank operations in net turnover in the domestic conditional transaction market remained relatively unchanged and accounted for 25\%. Investment funds and insurance companies, as well as, to a lesser extent, pension funds, frequently deposited temporary financial surpluses in banks by concluding short-term conditional transactions. Non-banking financial institutions selected this form of depositing financial surpluses in banks, owing to, \textit{inter alia}, the collateral and a low credit risk as well as slightly higher interest rates than in the case of traditional deposits.

The average daily value of operations with non-banking entities amounted to PLN 6.8 billion (a 9\% increase in comparison with 2006). The development of the customer market resulted from the fast increase in the assets of non-banking financial institutions and the value of transactions concluded between these institutions in the domestic capital market. Owing to the changes in the composition of the investment portfolio and in the dates of settlement of transactions, these institutions had temporary financial surpluses at their disposal, which they invested willingly by concluding short-term conditional transactions. The average daily value of secured deposits placed by non-banking financial institutions operating in Poland amounted to

\begin{figure}
\centering
\includegraphics[width=\textwidth]{figure5.1.26.png}
\caption{Monthly net turnover in SBB/BSB and repo markets, 2004–2007}
\end{figure}

Source: NBP calculations based on NBP Securities Register and National Depository for Securities data as well as reports submitted by banks functioning as Primary Dealers.

\textsuperscript{27} The detailed comparison of repo and SBB/BSB transactions is presented in the report: \textit{Financial system development in Poland} 2005, Warsaw 2006, NBP, pp. 192–193.

\textsuperscript{28} Net turnover is the value of transferred funds in the initial or closing exchange of the conditional transaction.
around PLN 6 billion in 2007, of which over 45% were operations of investment funds. SBB accounted for the majority of turnover in the customer market (approximately 80%). This resulted from, among others, the legal doubts concerning the possibility for some non-banking financial institutions to use traditional repo transactions and from the rare application of standard framework transactions for repo transactions.

The majority of banks treated conditional transactions as an instrument to enrich their deposit offer rather than as an instrument for current liquidity management. This differentiates the domestic money market from the euro area market, where traditional repo transactions are used primarily to finance short-term financial demands. Banks from the euro area prefer repo transactions, since they are burdened with a significantly lower credit risk of the counterparty and make it possible to place deposits in other banks without burdening credit limits excessively and increasing the capital requirement. The interbank conditional transaction market remained underdeveloped, which resulted, inter alia, from the fact that some banks had excessively low portfolios of Treasury securities, which could be used in liquidity repo transactions. In 2007, the average daily net turnover in the interbank market slightly increased (to PLN 2.3 billion). SBB/BSB transactions dominated among the operations between banks (a 98% share).

The large share of BSB/SBB transactions in turnover on the domestic interbank market was caused by several factors. Banks did not apply uniform legal documentation for repo transactions, and some BSB/SBB operations were still concluded without a standard framework agreement. Transactions conducted by the BGK, through the intermediation of which the Ministry of Finance invests funds in the money market, with banks acting as Primary Dealers, were almost exclusively BSB. In addition, a part of operations between banks were securities driven deals, conducted, inter alia, in order to close the position which occurred as a result of concluding other transactions or speculation on yield curve movements. Banks preferred BBS/SBB transactions, where the gross price is used for securities which constitute collateral.

Banks offered conditional transactions as deposit products for enterprises. However, this form of investing financial surpluses was not very popular among this group of banks’ customers. In 2007, the share of enterprises in net turnover in the customer market amounted to around 5%. Very low activity in the domestic market was also recorded by non-residents. Operations with foreign banks were concluded very rarely and accounted for less than 1% of registered turnover. More often, foreign banks conducted repo transactions collateralised by zloty-denominated Treasury securities in the London-based market, where framework agreements which limit the legal risk of such transactions are commonly used.
**Market structure**

The domestic repo and BSB/SBB market was dominated by operations collateralised by Treasury bonds (Figure 5.1.28). In 2007, a tendency for decrease in the share of Treasury bonds in the structure of collaterals was continued, which resulted from the large increase in the value of conditional operations and a simultaneous decrease in the balance of Treasury bills held by banks, due to the limited issue of those bills by the Ministry of Finance. The Treasury bills portfolios held by domestic banks, whose value amounted to PLN 10.2 billion as at the end of 2007, was used mainly to collateralise the intraday credit and Lombard facilities with the NBP. With the increase in the demand of non-banking financial institutions for secured deposits, banks transferred the ownership or blocked the Treasury bonds held on accounts at the KDPW much more frequently. Banks still occasionally concluded transactions secured with NBP bills and non-Treasury debt securities.

**Figure 5.1.28. Conditional transaction collateral structure in Poland, 2004–2007**

The term structure of conditional transactions in the Polish money market was closely related to their application. Non-banking financial institutions invested for several days their available funds which they had at their disposal between the dates of settlement of transactions in the capital market. Therefore, transactions with maturities of less than 7 days predominated. In 2006, the share of those transactions in net turnover amounted to around 90%, 29 of which at least a half were one-day transactions (O/N, T/N, and S/N). Transactions with the maturity period of over 1 month, which are most often used in arbitrage strategies, were rarely concluded. In 2007, they accounted for less than 2% of net turnover in the domestic conditional transactions market.

Most repo and BSB/SBB transactions were concluded on the unregulated OTC market. Counterparties established the terms of transactions in the Reuters Direct conversation system, by phone or via voice brokers. Conditional transactions collateralised by Treasury securities could also be concluded using the MTS Poland electronic platform. In 2007, the average daily value of transactions collateralised with Treasury bonds which were concluded on this platform amounted to PLN 120 million, i.e. 5% of net turnover on the interbank conditional transactions market.

**Barriers to market development**

The development of the conditional transactions market, which is characterised by a significant share of securities driven deals with maturities longer than 7 days, and by the liquid segment of interbank repo operations, used to manage liquidity, is obstructed by numerous factors. The majority of them are of a regulatory character. There is no uniform and widely accepted specimen framework agreement for repo and BSB/SBB transactions on the Polish financial market.

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29 Estimates. In deposit systems SBB/BSB operations are treated as two separate transactions, and therefore it is difficult to obtain holistic, uniform data on the term structure of conditional transactions.
Some banks question the description of legal relationships included in the recommendation of the Polish Bank Association.¹⁰ Polish law does not have definitions of repo and SBB/BSB transactions which would be used by all financial market participants. Unfortunately, such a definition has also not been provided for in the government draft act, which will amend the Act on trading in financial instruments. The application of various legal documents and the lack of uniform terminology result in the lack of a uniform standard of repo transactions and strong segmentation of the market.

Repo transactions are less popular due to the applied method of taxing and the resulting tax and accounting dualism. In line with the applicable tax provisions, the financial result is realised during the sale of a security with a simultaneous buy-back guarantee. Thus, if the value of a security collateralising the conditional transaction is higher than its purchase price, it is necessary to pay the tax at the moment of the temporary transfer of ownership of securities. Since in accordance with the accounting principles, the gains/losses on the sale of assets are not realised, it forces the participants to keep two independent registers of operations – the accounting one and the fiscal one.

It appears that in order to create an effective market for conditional transactions in Poland it is necessary to change the tax regulations and to introduce for common use the framework agreement which would meet the standards of developed financial markets.

5.2. Capital market

5.2.1. Evolution of the capital market: size and structure

In 2007, the equity market and the Treasury bond market remained the most important segments of the Polish capital market. The other segments were much less significant. The equity market was developing the fastest. It resulted from the large capitalisation of foreign and domestic companies which introduced their equities to trading on the WSE and from a significant growth of equity prices. The outstanding value of marketable Treasury bonds increased likewise, but its growth rate was much lower than in previous years.

The non-Treasury debt securities market was still underdeveloped. The outstanding value of long-term corporate bonds increased considerably. There was also a significant increase in the outstanding value of long-term debt securities issued by commercial banks. It was mainly a result of large issues of bank bonds by two entities and the fact that some universal banks sold structured deposits in the form of the issue of bank securities with embedded derivative instruments. In 2007, the public mortgage bonds were issued for the first time in the domestic market. The value of municipal bonds did not change significantly. There were still NBP bonds to the value of PLN 7.8 billion on the market.

Table 5.2.1. Size of individual capital market segments, 2004–2007 (PLN billion)

<table>
<thead>
<tr>
<th>Segment</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Debt securities</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marketable Treasury bonds</td>
<td>226.6</td>
<td>278.4</td>
<td>317.0</td>
<td>359.9</td>
</tr>
<tr>
<td>Long-term corporate bonds</td>
<td>7.3</td>
<td>8.9</td>
<td>9.8</td>
<td>15.8</td>
</tr>
<tr>
<td>Municipal bonds</td>
<td>3.1</td>
<td>3.3</td>
<td>3.8</td>
<td>4.1</td>
</tr>
<tr>
<td>Long-term bank debt securities1</td>
<td>2.7</td>
<td>2.7</td>
<td>5.3</td>
<td>8.3</td>
</tr>
<tr>
<td>Mortgage bonds</td>
<td>1.0</td>
<td>1.8</td>
<td>1.7</td>
<td>2.4</td>
</tr>
<tr>
<td>NBP bonds</td>
<td>7.8</td>
<td>7.8</td>
<td>7.8</td>
<td>7.8</td>
</tr>
<tr>
<td>Equities – stocks</td>
<td>291.7</td>
<td>424.9</td>
<td>635.9</td>
<td>1 080.3</td>
</tr>
</tbody>
</table>

Note: Size of individual capital market segments for debt securities was measured by the outstanding value of those instruments and for equities, by capitalisation of domestic and foreign companies listed on the WSE.

1 The data for 2004–2005 cover the liabilities of Polish commercial banks resulting from the issue of own securities denominated in zloty. The data for 2006 and 2007 also cover the bonds denominated in foreign currencies issued by mortgage banks and the bonds of the European Investment Bank.

Source: NBP own study on the basis of Mf, NBP, WSE and Fitch Poliska data.

5.2.2. Long-term debt securities market

5.2.2.1. Treasury bonds

Market size

The issue of Treasury bonds was the major instrument for the financing of the State budget borrowing needs. In 2007, the outstanding value of Treasury bonds increased by 10.1% as compared with 2006 and amounted to PLN 357.6 billion at the end of December. The outstanding value of Treasury bonds issued by the State Treasury grew faster than total domestic debt (4.8%) and foreign debt (1.8%).

The Treasury bond market was the largest segment of the debt securities market. As at the end of 2007, the share of marketable Treasury bonds in the entire (short-term and long-term) debt securities market amounted to 90.3% (91.8% in 2006). The predominance of Polish Treasury bonds resulted both from the scale of the Treasury borrowing needs and the low level of development of the other segments of the domestic debt securities market. In the euro area, where the
non-Treasury debt securities market is much better developed, the share of Treasury bonds in the
debt securities market at the end of 2007 amounted to 42.3%.31

Market structure

The structure of Treasury bond market by types of issued instruments was similar to that of
the most developed capital markets of the countries with a stable inflation rate. Fixed-rate bonds
were the basic instrument for the financing of the State budget borrowing needs. As at the end of
2007, their value amounted to PLN 289.3 billion. They accounted for 80.9% of all outstanding
bonds (Figure 5.2.1) and for 82.4% of marketable bonds. In the euro area the share of fixed-rate
bonds in the outstanding long-term debt securities was slightly higher and amounted to 90.8% at
the end of 2007. The large share of fixed-rate bonds in the debt structure resulted from a decrease
in the interest rate risk and the lower premium for liquid risk paid by the issuer to investors. The
prices of fixed-rate bonds are more volatile and thus are more often subject to speculative
operations.

The most popular fixed-rate securities were 2-, 5- and 10-year bonds mainly for institutional
investors. In 2007, the scope of fixed-rate instruments issued was extended to cover 30-year bonds.
The issue strategy was aimed at increasing the outstanding value of TS with a long original maturity,
i.e. 10- and 20-year bonds, and limiting the share of instruments with a short maturity (2-year

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### Table 5.2.2. State Treasury debt, 2004–2007 (PLN billion, as at period-end)

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>State Treasury debt</td>
<td>402.9</td>
<td>440.2</td>
<td>478.5</td>
<td>501.5</td>
</tr>
<tr>
<td>I. Domestic debt</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Outstanding value of TS</td>
<td>286.9</td>
<td>312.0</td>
<td>350.5</td>
<td>380.2</td>
</tr>
<tr>
<td>1.1. Treasury bills</td>
<td>46.9</td>
<td>24.4</td>
<td>25.8</td>
<td>22.6</td>
</tr>
<tr>
<td>1.2. Treasury bonds</td>
<td>240.0</td>
<td>287.6</td>
<td>324.7</td>
<td>357.6</td>
</tr>
<tr>
<td>1.2.1. Marketable bonds</td>
<td>226.6</td>
<td>278.4</td>
<td>317.0</td>
<td>350.9</td>
</tr>
<tr>
<td>1.2.2. Saving bonds</td>
<td>9.1</td>
<td>8.6</td>
<td>7.2</td>
<td>6.3</td>
</tr>
<tr>
<td>1.2.3. Non-marketable bonds</td>
<td>4.3</td>
<td>0.6</td>
<td>0.5</td>
<td>0.4</td>
</tr>
</tbody>
</table>

Note: The category of "non-marketable bonds" includes restructuring bonds issued in 1993 and 1994 in order to increase the equity
and reserves of 10 banks and bonds from 1996 which were issued to increase the equity of BGŻ. As at the end of 2007, only the last of
the listed bonds were outstanding.

Source: MF.

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31 Eurostat data for debt securities denominated in EUR.
Table 5.2.3. Structure of the outstanding value of marketable fixed-rate bonds issued by the Treasury, 2005–2007 (as at period-end)

<table>
<thead>
<tr>
<th>Type of bonds by original maturity</th>
<th>Bond value (PLN billion)</th>
<th>Bond structure (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-year zero-coupon bonds</td>
<td>57.1</td>
<td>52.5</td>
</tr>
<tr>
<td>5-year bonds</td>
<td>86.7</td>
<td>88.1</td>
</tr>
<tr>
<td>10-year bonds</td>
<td>85.7</td>
<td>112.4</td>
</tr>
<tr>
<td>20-year bonds</td>
<td>6.4</td>
<td>13.4</td>
</tr>
<tr>
<td>30-year bonds</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Retail bonds</td>
<td>3.2</td>
<td>2.7</td>
</tr>
<tr>
<td>10-year converted bonds</td>
<td>2.6</td>
<td>2.6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>241.7</strong></td>
<td><strong>271.8</strong></td>
</tr>
</tbody>
</table>

Source: MF.

The outstanding marketable floating-rate bonds issued by the State Treasury increased by 37.5% in comparison with 2006 and amounted to PLN 53.3 billion at the end of December. The increase in inflation and interest rates facilitated the development of this segment of the market. Despite their dynamic growth (almost six times higher than in the case of fixed-rate bonds), these instruments were relatively rarely used by the State Treasury (Figure 5.2.1).

The year 2007 saw significant changes in the term structure of floating-rate bonds. The share of securities with the longest maturity, i.e. 10-year bonds, doubled. In 2007, an increase in the outstanding value of these bonds resulted mainly from the fact that they were sold at auctions rather than from the conversion of the State Treasury liabilities (taken over from ZUS) towards OFE. The 7-year wholesale bonds, due to the lack of new issues, ceased to be the major debt security in the floating-rate bond market (Table 5.2.4). In 2007, 3-year wholesale bonds, with the coupon calculated on the basis of WIBOR 3M rate, were fully repurchased.

In 2007, the segment of inflation-indexed bonds was also developing dynamically. Their value increased by 26.5% and amounted to PLN 8.2 billion at the end of December. It accounted for only 2.3% of the outstanding marketable bonds in the domestic market. The high growth rate of the outstanding value of marketable inflation-indexed bonds was the result of such factors as the low base and the implementation of the Ministry of Finance strategy based on the prolongation of the maturity of the issued Treasury securities (the original maturity of inflation-indexed bonds equals 12 years). In 2007, the demand for such securities on the part of foreign investors declined. Although the share of non-residents in the structure of buyers of inflation-indexed bonds decreased from 80.3% as at the end of 2006 to 45.6% at the end of 2007, they still remained the largest group of investors in this market.

The value of outstanding savings bonds totalled PLN 6.3 billion. Saving bonds are addressed mainly to individual investors, and since 2006 also to associations, other social and professional organisations and foundations entered into the court register (in the case of non-residents – entered into another official register). Savings bonds are not traded on the secondary market. Those instruments are registered in the Bond Purchaser Register maintained by the issuing agent (since 2003 – PKO BP). For the last three years the outstanding value of savings bonds has been decreasing. The fact that the list of entities entitled to purchase savings bonds was extended in 2006 to other investor groups than domestic natural persons did not contribute to an increase in interest in these securities. These securities were still purchased almost exclusively by domestic natural persons, who, as at the end of 2007, accumulated 99.6% of the value of savings bonds.

The demand for savings bonds was low since individual investors preferred to invest their financial surpluses on the capital market through collective investment institutions. In the first half
of the year, such investments offered higher rates of return than investments in bonds. In the second half of 2007, the funds of households withdrawn from the capital market were deposited in banks, despite the fact that the interest rates on savings bonds were higher than those on respective bank deposits. For example, in December 2007, the interest rate on deposits for households with the original maturity of one year was at the level of 4.0%, whereas the interest rate on two-year savings bonds amounted to 5.3%, on four-year indexed bonds – 6.0%, and on ten-year retirement bonds – 6.75%. The small interest in savings bonds was caused by an intensive advertising campaign by banks related to the interest rate on deposits and limited access to information about savings bonds. Another reason was the limited access to potential investors (bonds were sold only in one bank).

**Primary market**

Owing to an improvement in the State budget situation, the scale of Treasury bonds issues declined for the first time in this decade. In 2007, Treasury bonds to the value of PLN 84.7 billion were issued, i.e. by 18% less than in 2006. The decrease in the value of new issues was observed in the case of both savings bonds and wholesale bonds (Figure 5.2.2).

In 2007, there were no significant changes in the organisation of the primary market of Treasury bonds. The form of issue depended on the type of instrument. Marketable wholesale bonds were sold at auctions organised by the NBP for Primary Dealers. Retail marketable and savings bonds were sold through the network of PKO BP branches. In addition to the abovementioned standard forms of issue, in 2007 the Ministry of Finance organised special auctions of floating-rate

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32 Retirement bonds and four-year bonds are inflation-indexed bonds. The interest rate for a given interest period is calculated based on the 12-month Consumer Price Index growth rate, increased by a specific margin. The presented average interest rate on retirement bonds is the interest rate in the first year covered by interest rate. In the subsequent periods covered by the interest rate the margin was lowered.

33 Wholesale bonds are offered only to financial institutions. Retail bonds are sold mainly to individual investors. This category includes savings bonds and marketable retail bonds traded on the WSE or RPW CeTO.
Treasury bonds for open pension funds. In this way the State Treasury paid the liabilities of ZUS (taken over by the State Treasury) for contributions which were not transferred to pension funds. In 2007, during such auctions the Ministry of Finance transferred bonds to the value of PLN 1.4 billion to open pension funds.

The main form of sales of wholesale bonds on the primary market was auction sales. However, in recent years, a decrease has been noted in the importance of this form of introducing Treasury bonds to trading. In 2007, the Ministry of Finance sold at such auctions 64.3% of wholesale Treasury bonds issued (with the value of PLN 52.6 billion). In 2006 this ratio amounted to 71.3%, whereas in 2005 – 80.8%. The Ministry of Finance used switching auctions for public debt management. Such form of Treasury bonds issue reduces the refinancing risk since it allows for redemption of bonds without employing cash and facilitates the creation of large, potentially very liquid issues (the so-called benchmark issues). In 2007, despite a decrease in the value of bonds issued, there was an increase in their sale at switching auctions. Securities to the value of PLN 27.8 billion were sold in this form (in PLN 27.4 billion in 2006). Bonds with long original maturity dominated the offer. In 2007, the average maturity of Treasury bonds sold at switching auctions amounted to 7.9 year, and of marketable bonds sold at standard auctions to 7.2 year.

In 2007, nine wholesale bonds were introduced to trading (11 bonds in 2006). That year also saw the continuation of the policy consisting in increasing the value of individual issues so that the minimum value of outstanding medium- and long-term bonds amounted to EUR 5 billion when the issue is considered to be a benchmark issue. As at the end of 2007, 11 issues met this requirements (8 issues in 2006), including two floating-rate bond issues. An increase in the number of issues exceeding EUR 5 billion was in two cases statistical in nature (resulted from zloty strengthening).

**Figure 5.2.2. Value of Treasury bonds issued, gross, 2004–2007**

<table>
<thead>
<tr>
<th>Year</th>
<th>Wholesale bonds</th>
<th>Retail bonds</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>86.9 PLN billion</td>
<td>6.9 PLN billion</td>
</tr>
<tr>
<td>2005</td>
<td>89.6 PLN billion</td>
<td>6.0 PLN billion</td>
</tr>
<tr>
<td>2006</td>
<td>99.3 PLN billion</td>
<td>4.1 PLN billion</td>
</tr>
<tr>
<td>2007</td>
<td>81.8 PLN billion</td>
<td>2.9 PLN billion</td>
</tr>
</tbody>
</table>

Source: NBP and MF data.

**Figure 5.2.3. Largest issues of Treasury bonds, 2004–2007 (by outstanding value as at period-end)**

Source: National Depository for Securities.


35 Net turnover in Treasury bonds presented in this part of the report constitute a sum of the value of outright transactions and conditional transactions calculated according to the value of initial exchange.

36 In 2005 and 2006, the number of working days was 252 each, and in 2007 – 251.
operations accounted for 86% of conditional transactions collateralised with Treasury bonds. The activity in the conditional transactions segment was the result of huge demand among non-banking financial institutions for bank deposits collateralised with securities. The high value of conditional transactions was also influenced by changes in the collateral structure of these transactions (Treasury bills were increasingly rare) and their short maturity period. In 2007, for sell-buy-back transactions it accounted for six days on average (from the day of the conclusion of the transaction to the settlement of the final exchange).

The main participants of the secondary market of Treasury bonds were domestic banks, which accounted for more than a half of gross turnover (Figure 5.2.6). It results from the fact that these entities act as Primary Dealers and accept short-term deposits from non-banking financial institutions in the form of sell-buy-back transactions in Treasury bonds. The values of transactions concluded by banks and non-residents were similar in the outright transactions market (the share of each group of investors in gross turnover amounted to around 40%), whereas the conditional transactions market was dominated by transactions involving domestic banks. Their counterparties in sell-buy-back and repo transactions were most often investment funds.
Figure 5.2.6. Share of entities in gross turnover in the secondary market of Treasury bonds, 2007

![Chart showing the share of entities in gross turnover in the secondary market of Treasury bonds, 2007.]

Source: Calculated based on MF data.

Figure 5.2.7. Monthly value of transactions in Treasury bonds on the MTS Poland and OTC secondary market, 2005–2007

![Chart showing the monthly value of transactions in Treasury bonds on the MTS Poland and OTC secondary market, 2005–2007.]

Note: The value of conditional transactions included in the total transactions value was calculated according to the value of initial exchange.

Source: Calculated based on National Depository for Securities data.

Treasury bonds were traded on three markets: the unregulated OTC market, the MTS Poland (electronic platform) and on the Warsaw Stock Exchange. In Poland, as in the majority of the European Union countries, the trade concentrated on the non-regulated OTC market where the banks usually perform the transactions using Reuters Direct system terminals or voice brokers (Figure 5.2.7). Among the three functioning markets, only the non-regulated OTC market saw an increase in turnover. The value of outright transactions in this market increased by 9.0%, and the value of conditional transactions – by 18.3%. As a result, the share of transactions concluded on the OTC market in total turnover increased again (Table 5.2.7).

In 2007, for the first time since the MTS Poland electronic platform was established, the average daily net turnover in Treasury bonds on this market decreased and amounted to PLN 0.52 billion, despite an increase in the number of participants of this market from 29 at the end of 2006 to 32 at the end of 2007. Investors preferred the OTC market which was more liquid and allowed them to conclude transactions faster. Due to decreasing liquidity on the electronic platform in 2007, four foreign banks not acting as Primary Dealers lowered their participation status on the

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37 Treasury bond transactions may also be performed on the CeTO Securities Market (regulated OTC market) and the Warsaw Commodity Exchange. However, the trade in Treasury bonds on those markets in 2007, as in previous years, was insignificant.

38 Among them, there were 14 foreign participants at the end of 2007 (12 at the end of 2006).
MTS Poland from market-maker to market-taker. An important factor contributing to banks’ activity on the MTS Poland market was the inclusion of the value of transactions on that market as one of the criteria for the selection of Primary Dealers and the prolongation of the period covered by this competition. The competition for Primary Dealers lasted from 1 October 2006 to 30 September 2007. In previous years, the competition lasted 9 and then 10 months, which resulted in a significant decrease in the activity of the electronic platform participants in months not subject to assessment.

On 19 December 2007, an Institutional Segment of the MTS Poland market was launched. Banks performing the function of market-makers and qualified investors will operate on this market. Only one pension fund was admitted to participate in the market as a qualified investor. If qualified investors who are not active OTC market participants were admitted, the importance of the MTS platform in turnover on the domestic market of Treasury bonds could increase.

Investors

Significant changes took place in the structure of buyers of Treasury bonds in 2007. For the first time the major group of investors on the domestic market of Treasury bonds were pension funds, which increased their involvement by over PLN 13.6 billion (Figure 5.2.8). Their share in the structure of buyers of Treasury bonds increased to 23.2% and was higher than the share of non-residents. The systematic inflow of cash to pension funds and relatively limited choice of investment instruments forced the funds to invest in Treasury securities. There were also additional issues of bonds addressed to pension funds, which was related to repayment of ZUS liabilities towards OPE members, taken over by the State Treasury. The structure of the portfolio of pension funds’ bonds was dominated by fixed-rate instruments, however their share decreased to 83.0% at the end of 2007. The duration of the wholesale Treasury bond portfolio held by those institutions amounted to around 3.2 years and was the lowest among the portfolios of institutional investors involved in the domestic market of Treasury securities.

The second largest group of investors were domestic commercial banks which increased their bond portfolios mainly in the last two months of 2007. The structure of the commercial banks’ portfolios of Treasury bonds, as well as that of OPE’s portfolios, was dominated by fixed-rate bonds. As at the end of 2007, their share amounted to 74.6% and was by 3.4 percentage points lower than at the end of 2006.

In 2007, foreign investors ceased to be the most important group of buyers of Treasury bonds. Despite the fact that the value of foreign investors’ portfolios remained almost unchanged (PLN 74.5 billion at the end of 2007, PLN 74.4 billion in 2006), their share in the financing of the State Treasury debt resulting from the issue of bonds decreased by more than 1 percentage point (Figure 5.2.9). It was mainly caused by the significant reduction in foreign banks’ involvement.

### Table 5.2.7. Individual markets’ share in total turnover on the Treasury bond market, 2006–2007 (%)

<table>
<thead>
<tr>
<th></th>
<th>OTC market</th>
<th>MTS Poland</th>
<th>WSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total turnover in 2006</td>
<td>95.7</td>
<td>4.2</td>
<td>0.1</td>
</tr>
<tr>
<td>– outright transactions</td>
<td>48.5</td>
<td>2.9</td>
<td>0.1</td>
</tr>
<tr>
<td>– conditional transactions</td>
<td>47.2</td>
<td>1.3</td>
<td>–</td>
</tr>
<tr>
<td>Total turnover in 2007</td>
<td>97.0</td>
<td>3.0</td>
<td>0.0</td>
</tr>
<tr>
<td>– outright transactions</td>
<td>47.2</td>
<td>2.3</td>
<td>0.0</td>
</tr>
<tr>
<td>– conditional transactions</td>
<td>49.8</td>
<td>0.7</td>
<td>–</td>
</tr>
</tbody>
</table>

Source: Calculated based on National Depository for Securities data.

In accordance with the regulations of the MTS Poland market, its participants may act as: market-makers – providing their own Treasury securities purchase and sales offers with specified minimum quotation unit and spread not exceeding the maximum value set forth in the regulations of MTS Poland and a market-takers – solely accepting the whole or the part of the market-makers’ offer.
Foreign banks were selling Polish Treasury bonds mainly due to the increase in the profitability of Polish Treasury bonds (which may be attributed to the increase in the NBP reference rate, expectations of subsequent interest rate increases and a higher risk premium) and the growing aversion to risk on the international financial market (Figure 5.2.10). The value of bonds in foreign banks’ portfolios declined by more than a half (from PLN 33.7 billion at the end of 2006 to PLN 16.1 billion at the end of 2007). At the same time, foreign non-banking entities, which have a much longer investment horizon than banks, were increasing their investments in the domestic bond market. As at the end of 2007, they owned Polish bonds to the value of PLN 58.4 billion (PLN 40.7 billion at the end of 2006). The largest increase in the share of foreign non-banking entities was noted in the structure of buyers (by 3.8 percentage points to 16.3%).

In 2007, insurance companies and investment funds again increased their investments in the domestic market of Treasury bonds, however their share in the structure of buyers remained relatively unchanged. The higher involvement of those financial institutions may be attributed to a large interest on the part of households in investments in participation units of investments funds and the purchase of unit-linked life insurance products.
5.2.2. Municipal bonds

The municipal bond market is one of the smallest segments of the domestic capital market. In the euro area the share of the bonds belonging to other general government sector in the long-term debt securities market amounted to 3.1% as at the end of 2007, and in Poland – to 1.0%.

Market size

The value of outstanding municipal bonds increased by 7.5% in comparison with 2006. As at the end of 2007, the outstanding value of debt securities issued by local government units (LGUs) amounted to PLN 4.1 billion, the vast majority (87.8%) of which constituted long-term securities directed to the non-regulated market. A number of projects implemented by local government units and related to environmental protection and road infrastructure was the most important driving factor for the development of the municipal bond market. The issues of bonds allowed local government units to acquire funds for their own contribution to projects co-financed from the EU structural funds. In 2007, local governments issued bonds to the value of around PLN 900 million. Non-public issues with very low values (92.4% of the value of instruments sold in the primary market in 2007) were predominating. The value of a single issue ranged from PLN 100 thousand to PLN 125 million, while the average issue was of PLN 2 million. In 2007, there was only one issue carried out as a public offering. The city of Rybnik sold municipal bonds of PLN 40.5 million.

The decrease in the growth rate of the municipal bond market in comparison with 2006 was affected mainly by improvement in the financial situation of local governments. In 2007, LGUs noted a budget surplus of PLN 2.3 billion, whereas in 2006 there was a deficit of PLN 3.0 billion. Moreover, a large demand for construction and installation services and increase in the prices of materials hindered the implementation of infrastructure projects, which were supposed to be partially financed by the issue of bonds. In 2007, the schedule of expenditure on investment was implemented only in 84.9%.

Loans and credits continued to be the basic source of financing borrowing needs of local government units. Loans and credits’ share in LGU liabilities amounted to 83.6%. The share of outstanding securities in total liabilities of local government units increased from 15.1% at the end of 2006 to 15.7% at the end of 2007. The issues of municipal bonds are very often taken over by banks arranging them, thus in fact they are substitutes for loans. The main advantage of this form of financing for LGUs is the short and simple issue procedure as the election of debt securities issue

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40 Local government sector debt securities and social security funds. Eurostat data relate to outstanding bonds denominated in EUR as at the end of 2007.

41 The outstanding value of short-term debt securities as at the end of 2007 accounted for 1.1% of local government units’ outstanding value of securities issued.
Market structure

In Poland the main group of municipal bond issuers are cities with poviats status, however their share in the market is systematically decreasing (Table 5.2.8). The associations of local government units have not so far issued any debt securities. Joint issues by LGUs would contribute to the development of the municipal bond market in Poland. Due to the small borrowing needs of gminas and poviats and resulting small scale of single issues, the secondary market is segmented and not very liquid, which limits the demand for these instruments on the part of non-banking financial institutions.

As at the end of 2007, the average original maturity period of outstanding municipal bonds amounted to 7.3 years, whereas the issues of voivodeships had the longest investment horizon (10 years on average). As for the term structure, bonds with the original maturity period of 5 to 10 years were predominating. They accounted for 69.8% of the value of outstanding securities. The share of debt securities with the original maturity period of up to 5 years amounted to 10.6%, and those with the original maturity period exceeding 10 years – to 19.7%.

Local government units issued mainly bonds with floating interest rate depending on 52-week Treasury bills’ profitability. Issues based on this type of interest rates accounted for 65% of the value of municipal bonds sold in 2007 through non-public offering. The interbank money market rates, namely WIBOR 6M and WIBOR 3M, were less often used as a basis for the calculation of interest rates. In the future, due to the reduction in issues of Treasury bills, there should be more bonds on the market whose interest will depend on WIBOR rates. The margin exceeding the reference rate established in the terms of issue depended, inter alia, on the type of issuer, the form and scale of issue and the original maturity period. In 2007, the average margin for non-public bonds issued by gminas through non-public offering amounted to 0.23 percentage points and for bonds issued by poviats – to 0.35 percentage points. The highest average margin (0.52 percentage points) was offered by voivodeships. The margin on the only public issue for the city of Rybnik exceeded by 0.35 percentage points the 52-week Treasury bills’ profitability.

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42 The provisions of the Act of 29 January 2004 on Public Procurement Law do not apply to contracts where the object of the contract includes: financial services related to the issue, sale, purchase or transfer of securities or other financial instruments, in particular when related to transactions aimed at obtaining financial resources or capital for the awarding entity (Article 4 (3) (i)).
Table 5.2.8. Structure of municipal bonds’ issuers and the share of outstanding bond issues in local government units’ liabilities, 2005–2007 (%)

<table>
<thead>
<tr>
<th></th>
<th>Share in the municipal bond market</th>
<th>Share of outstanding bond issues in local government units’ liabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cities with powiat status</td>
<td>59.4</td>
<td>51.9</td>
</tr>
<tr>
<td>Gminas</td>
<td>26.4</td>
<td>30.2</td>
</tr>
<tr>
<td>Poviats</td>
<td>10.7</td>
<td>11.9</td>
</tr>
<tr>
<td>Voivodeships</td>
<td>3.5</td>
<td>6.0</td>
</tr>
</tbody>
</table>

Source: MF.

Figure 5.2.12. Municipal bond issue arrangers by the outstanding value of bonds, as at the end of 2006 and 2007

Considering the non-public nature of the majority of issues, banks were almost sole arrangers of the issues. Large banks with developed network of field branches were predominating in terms of the value of outstanding bonds (Figure 5.2.12). The scale of bank’s activity in servicing municipal bonds’ issues was determined by the bank strategy and its organisational capacity. In 2007, as in previous years, issues were arranged mainly by two banks: PKO BP and Pekao SA. Altogether, they had a 50% share in the market measured by the value of municipal bonds issued. The issues directed at the regulated market were organised mainly by brokerAge entities.

**Secondary market and investors**

Bonds issued through non-public offering could have been traded on the non-regulated OTC market. The secondary market was strongly segmented as banks acting as arrangers and depositaries of each issue dealt with the arrangement and settlement of transactions. The NBP has no information about the turnover on the OTC market. The banks acting as market-makers believed that transactions were concluded sporadically since the majority of investors kept their bonds until they reached maturity.

Secondary trade in public municipal bonds took place in the RPW CeTO regulated off-exchange market. In 2007, there was one issue placed on the MTS-CeTO market – bonds of PLN 40.5 million belonging to the city of Rybnik. As at the end of 2007, 9 bond issues were traded on that market. There were placed by 3 cities: Poznań, Ostrów Wielkopolski and Rybnik. The issues totalled PLN 497 million. In 2007, the value of transactions in municipal bonds on the RPW CeTO market amounted to PLN 43.1 million and was more than three times as high as in 2006. Yet, the liquidity of this market was still very low since turnover accounted for only 9% of the nominal value of bonds issued by the three cities mentioned above. The main reason for low liquidity of the
municipal bond market was the low value of single issues. The average value of issues traded on the regulated market amounted to PLN 55 million.

Banks were the main buyers of municipal bonds directed to the non-regulated market. As compared to 2006, their share in the structure of buyers significantly increased and at the end of 2007 they held 84% of the value of outstanding municipal bonds (Figure 5.2.13). Such a big share of banks in the structure buyers of non-public municipal bonds resulted from the fact that, while arranging the issues, banks acquire a substantial part of bonds (include them into their deposit portfolios) and usually keep them until maturity. Therefore, some banks treat the arrangement and acquisition of issues as an alternative to loans for LGUs. The second major group of buyers of municipal bonds were foreign investors, monetary financial institutions in particular (over 12% share in the market). The limited activity of non-banking financial institutions in the municipal bond market resulted from the low value of single issues, low profitability of these instruments as compared to alternative deposits and strong segmentation of the secondary market. Increased transparency of local government finances, popularisation of rating and formulation of clear rules related to receiving claims resulting from the bonds issued if LGUs cease paying their liabilities could also make the municipal bonds more attractive.

5.2.2.3. NBP bonds

Since 2002 10-year NBP bonds of PLN 7.82 billion have been traded in the domestic capital market. The interest on those bonds depends on the floating rate determined on the basis of

Figure 5.2.14. Net turnover in NBP bonds, 2004–2007, by type of transaction

Note: Data on net turnover include the value of outright and conditional transactions, calculated according to the value of initial exchange.

Source: National Depository for Securities.
52-week Treasury bills. They are going to be repurchased on 1 March 2012, however, the NBP has the right to early redemption of issues (in part or in whole). In 2007, the net turnover in NBP bonds amounted to PLN 7.5 billion (PLN 18.4 in 2006). Only self-buy-back transactions were concluded.

### 5.2.2.4. Long-term debt instruments issued by banks

Long-term debt instruments issued by banks are negotiable securities with the original maturity period of at least one year. In Poland these instruments might be issued in the form of bonds and bank securities pursuant to the Banking Law as well as in the form of mortgage bonds issued by mortgage banks. The further part of this chapter features an analysis of long-term debt instruments divided into two categories: long-term bank debt securities (bonds and bank securities) and mortgage bonds.

#### 5.2.2.4.1. Long-term bank debt securities (LBDS)

As at the end of 2007, more than 80% of the outstanding value of long-term bank debt securities resulted from issues in zlotys directed to the domestic market. The share of foreign currency issues directed to the foreign market in the total outstanding value of LBDS decreased considerably and amounted to 8.6% (57.8% at the end of 2006). The change in the currency structure of the outstanding value of LBDS resulted from the previous repurchase of bonds denominated in EUR by one of banks and from the lack of new issues directed to the foreign market. The development of the domestic LBDS market, which covers bank debt securities issued in Poland in compliance with the Polish law, is described further in this chapter.

**Market size**

In 2007, there was a strong growth in the outstanding value of long-term debt securities issued by domestic banks in Poland. At the end of the year, the outstanding value of these securities amounted to PLN 6.15 billion (Figure 5.2.15). It caused an increase in the LBDS share in banks’ liabilities resulting from their own issues to the domestic market from 41% to almost 67.6%. The share of outstanding banks’ own issues to the domestic market in banks’ liabilities also increased (from 0.5% at the end of 2006 to 0.8% at the end of 2007). In comparison with the euro area countries, the LBDS market remained underdeveloped. The share of the outstanding value of these securities in the balance sheet total of the banking sector indicates that commercial banks in Poland used this source of financing to a limited extent (Figure 5.2.16).

In 2007, the value of new LBDS issues exceeded PLN 5.5 billion, yet none of them was a public one. About 55% of the value of long-term debt securities issued was in the form of bank securities. Due to the fact that the increase in the number of loans still outpaced that of non-financial sector deposits, banks more and more often searched for other sources of financing than deposits. The increase in the outstanding value of LBDS was significantly affected by 5 large issues of bonds (totalling more than PLN 2.75 billion) by two domestic banks. Competing for household savings, some banks offered long-term bank securities with embedded derivatives (typically stock exchange index or precious metal price options) referred to as certificates of deposit. Contrary to structured deposits, long-term debt securities (called deposit certificates) are negotiable, which enables the establishment of secondary market for them. Investors can sell such securities to other investors via the issuer during sessions organised at regular intervals. In the absence of other investors, securities are redeemed earlier. It is estimated that in 2007 banks sold structured certificates of deposit of more than PLN 1.6 billion (of which PLN 0.3 billion were instruments denominated in foreign currencies). In 2007, LBDS were also issued in Poland by banks active in the consumer finance market and banks specializing in lending for car purchase. As at the end of 2007, the term structure of LBDS was dominated by debt securities with the original maturity period of up to three years (Table 5.2.9).

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43 Data on net turnover include the value of outright and conditional transactions, calculated according to the value of initial exchange.
Figure 5.2.15. Outstanding value of long-term debt securities issued by banks on the domestic market, 2004–2007 (as at period-end)

Source: NBP.

Figure 5.2.16. Share of outstanding value of LBDS in monetary financial institutions' balance sheet total in euro area countries and in Poland (as at the end of 2007)

Note: Data for Poland refer to the outstanding value of long-term debt securities issued by domestic banks directed to both the domestic and foreign market.
Source: ECB, NBP.

Table 5.2.9. Maturity structure of long-term debt securities issued by domestic banks in Poland according to original maturities, 2004–2007 (%), as at period-end

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 to 3 years (inclusive)</td>
<td>70.6</td>
<td>39.8</td>
<td>82.2</td>
<td>60.7</td>
</tr>
<tr>
<td>3 to 5 years (inclusive)</td>
<td>20.1</td>
<td>7.7</td>
<td>14.5</td>
<td>34.2</td>
</tr>
<tr>
<td>Over 5 years</td>
<td>9.3</td>
<td>52.5</td>
<td>3.2</td>
<td>5.1</td>
</tr>
</tbody>
</table>

Source: NBP.

Table 5.2.10. Market size of long-term debt securities issued by banks, 2004–2007 (PLN million, as at period-end)

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic banks' issues</td>
<td>776.5</td>
<td>903.8</td>
<td>3 101.7</td>
<td>6 135.2</td>
</tr>
<tr>
<td>EIB issues</td>
<td>1 875.0</td>
<td>1 765.0</td>
<td>1 982.0</td>
<td>1 982.0</td>
</tr>
<tr>
<td>EU credit institutions' issues</td>
<td>20.0</td>
<td>20.0</td>
<td>186.1</td>
<td>208.0</td>
</tr>
<tr>
<td>Total</td>
<td>2 671.5</td>
<td>2 688.8</td>
<td>5 269.8</td>
<td>8 325.2</td>
</tr>
</tbody>
</table>

Source: NBP study based on the data of NBP and National Depository for Securities.
As in previous years, long-term debt securities were also issued on the domestic market by foreign banks. In February 2007, structured certificates of Erste Bank Der Österreichischen Sparkassen AG were registered in the National Depository for Securities, while in August – another issue of Deutsche Bank AG 3-year bonds. Moreover, since September structured certificates of the Raiffeisen Centrobank AG have been dual listed on the WSE. The European Investment Bank bonds have been also traded on the Polish market. As at the end of 2007, their value amounted to nearly PLN 2 billion. In total, long-term debt securities of PLN 8.3 billion belonging to credit institutions were traded on the domestic capital market (Table 5.2.10).

**Secondary market and investors**

Secondary trading in LBDS took place on both the regulated market (WSE and RPW CeTo) and the non-regulated OTC market. In 2007, bonds of one domestic bank and one German bank as well as structured certificates of two Austrian banks were traded on the WSE. As at the end of the year, bonds of 3 commercial banks with the nominal value of PLN 112.6 million and EIB debt securities were traded on the RPW CeTo regulated OTC market. The value of transactions in bonds issued by domestic banks and bonds traded on the regulated market amounted to PLN 3.8 million (235 transactions), which accounted for only 22% of net turnover of the previous year. On the other hand, the value of net turnover in foreign banks’ securities exceeded PLN 12.5 million (840 transactions) and was more than twenty times higher than in 2006 (PLN 0.5 million), when only Deutsche Bank AG bonds were traded. The NBP has no information about the turnover on the non-regulated LBDS market.

The structure of investors on the LBDS market differed depending on the legal form of these instruments (Figure 5.2.17). The most important group of investors on the bank securities market in 2007 were households, which were the main addressees of structured certificates of deposit. The large share of domestic banks in the structure of buyers of bank bonds resulted, *inter alia*, from the fact that one of the banks acquired bonds of a mortgage bank from the same capital group.

**Figure 5.2.17. Investors in the LBDS market in 2006 and 2007 by type of instrument**

<table>
<thead>
<tr>
<th></th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pension funds</td>
<td>65.9</td>
<td>73.7</td>
</tr>
<tr>
<td>Insurance companies</td>
<td>0.3</td>
<td>3.3</td>
</tr>
<tr>
<td>Households</td>
<td>18.3</td>
<td>12.2</td>
</tr>
<tr>
<td>Investment funds</td>
<td>9.7</td>
<td>36.7</td>
</tr>
<tr>
<td>Banks</td>
<td>30.0</td>
<td>31.9</td>
</tr>
<tr>
<td>Non-residents</td>
<td>3.4</td>
<td>14.7</td>
</tr>
</tbody>
</table>

Source: NBP study based on data submitted by banks – Primary Dealers or money market dealers acting as depositaries.

5.2.2.4.2. **Mortgage bonds**

In Poland, mortgage bonds can be issued solely by mortgage banks. They constitute one of the financing sources of mortgage loans granted by those banks. There are two types of mortgage backed securities: mortgage bonds collateralised by mortgage on credited properties and public mortgage bonds issued on the basis of the receivables of a mortgage bank resulting from its loans to the public sector.44

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In 2007, the following mortgage banks were operating on the Polish market: BRE Bank Hipoteczny SA, BPH Bank Hipoteczny SA and Śląski Bank Hipoteczny SA. Nykredit Realkredit A/S SA Branch in Poland, which took over the liabilities of Nykredit Bank Hipoteczny operating until 2006, was also operating on the market.

**Market size**

In 2007, the mortgage bond market in Poland still constituted just a small part of the capital market and mortgage banks still played an insignificant role on the housing finance market which was dominated by universal banks. As at the end of 2007, the outstanding value of mortgage bonds issued by banks increased by PLN 700 million and reached PLN 2.4 billion (Figure 5.2.18). The outstanding value of mortgage bonds issued accounted for 20.9% of the total outstanding value of bank securities issued on the domestic market (18.6% in 2006). In mortgage banks this share amounted to 73.1% (64.2% in 2006).

The outstanding value of mortgage bonds remained the most important source of financing of mortgage banks’ lending activity. In 2007, the share of these liabilities in the mortgage banks’ financing structure increased from 41% to 46%. The unfavourable tendency to obtain funds from the issue of short-term unsecured bonds was curbed (Figure 5.2.19). Mortgage banks used the issue of public mortgage bonds and mortgage bonds to a greater extent than in 2006, and subsequent issues were planned for 2008.

In 2007, there were five issues of mortgage bonds by mortgage banks to the total value of PLN 740 million (Table 5.2.11). Public mortgage bonds accounted for more than a half (i.e. PLN 470 million) of the issues’ value. Up until then those instruments had been issued neither in Poland nor in other countries of Central and Eastern Europe. They were collateralised by receivables due from local government units (LGUs). Public mortgage bonds were issued by one of mortgage banks with the aim of financing its dynamically developing lending activity in the public sector, in particular in respect of loans for hospitals guaranteed by LGUs and loans granted directly to LGUs. Public mortgage bonds issued in 2007 always received a high investment rating from a rating agency. Around a half of these bonds were purchased by the European Investment Bank.

All mortgage bonds issued in Poland in 2007 were denominated in the domestic currency and the interest on them was based on a floating rate which depended on the reference rate (WIBOR 6M) and the margin established in the terms of issue. All issues were carried out as a public offering.

**Figure 5.2.18. Outstanding value of mortgage bonds issued by mortgage banks in Poland, 2004–2007, as at quarter-end**

- **PLN million**
- **%**
- **Mortgage bonds in foreign currencies – left-hand scale**
- **Mortgage bonds in PLN – left-hand scale**
- **Share of mortgage bonds in outstanding value of debt securities issued by banks on the domestic market – right-hand scale**

Source: NBP.
Figure 5.2.19. Sources of financing of mortgage banks, 2004–2007

Table 5.2.11. Mortgage bonds and public mortgage bonds issued in Poland, outstanding value as at the end of 2007

<table>
<thead>
<tr>
<th>Bank name</th>
<th>Issue date</th>
<th>Original maturity</th>
<th>Issue value (PLN million)</th>
<th>Issue currency</th>
</tr>
</thead>
<tbody>
<tr>
<td>BRE Bank Hipoteczy SA</td>
<td>20.05.2002</td>
<td>6-year</td>
<td>10</td>
<td>USD</td>
</tr>
<tr>
<td></td>
<td>20.05.2002</td>
<td>7-year</td>
<td>10</td>
<td>EUR</td>
</tr>
<tr>
<td></td>
<td>10.04.2003¹</td>
<td>5-year</td>
<td>200</td>
<td>PLN</td>
</tr>
<tr>
<td></td>
<td>20.05.2003</td>
<td>6-year</td>
<td>20</td>
<td>EUR</td>
</tr>
<tr>
<td></td>
<td>23.10.2003¹</td>
<td>5-year</td>
<td>200</td>
<td>PLN</td>
</tr>
<tr>
<td></td>
<td>20.05.2004</td>
<td>5-year</td>
<td>25</td>
<td>EUR</td>
</tr>
<tr>
<td></td>
<td>20.05.2004</td>
<td>5-year</td>
<td>25</td>
<td>USD</td>
</tr>
<tr>
<td></td>
<td>14.04.2005¹</td>
<td>5-year</td>
<td>100</td>
<td>PLN</td>
</tr>
<tr>
<td></td>
<td>21.11.2005</td>
<td>5-year</td>
<td>10</td>
<td>USD</td>
</tr>
<tr>
<td></td>
<td>27.07.2007¹²</td>
<td>5-year</td>
<td>100</td>
<td>PLN</td>
</tr>
<tr>
<td></td>
<td>28.09.2007¹²</td>
<td>5-year</td>
<td>200</td>
<td>PLN</td>
</tr>
<tr>
<td></td>
<td>28.11.2007¹²</td>
<td>3-year</td>
<td>170</td>
<td>PLN</td>
</tr>
<tr>
<td></td>
<td>28.11.2007¹²</td>
<td>3-year</td>
<td>170</td>
<td>PLN</td>
</tr>
<tr>
<td></td>
<td>29.04.2003</td>
<td>5-year</td>
<td>22</td>
<td>PLN</td>
</tr>
<tr>
<td></td>
<td>16.05.2003</td>
<td>5-year</td>
<td>8</td>
<td>PLN</td>
</tr>
<tr>
<td></td>
<td>16.05.2003</td>
<td>5-year</td>
<td>10</td>
<td>PLN</td>
</tr>
<tr>
<td></td>
<td>2.06.2005¹</td>
<td>7-year</td>
<td>200</td>
<td>PLN</td>
</tr>
<tr>
<td></td>
<td>18.08.2005</td>
<td>5-year</td>
<td>150</td>
<td>PLN</td>
</tr>
<tr>
<td></td>
<td>21.11.2005¹</td>
<td>5-year</td>
<td>400</td>
<td>PLN</td>
</tr>
<tr>
<td></td>
<td>28.03.2006¹</td>
<td>5-year</td>
<td>200</td>
<td>PLN</td>
</tr>
<tr>
<td></td>
<td>12.03.2007¹</td>
<td>5-year</td>
<td>100</td>
<td>PLN</td>
</tr>
<tr>
<td>Śląski Bank Hipoteczy SA</td>
<td>29.11.2004</td>
<td>4-year</td>
<td>30</td>
<td>PLN</td>
</tr>
</tbody>
</table>

¹ Public issues and issues in secondary trading on the regulated MTS-CeTD market.
² Public mortgage bond issues.
³ Issue value in EUR.

Source: NBP, banks’ annual reports.
**Secondary market and investors**

Secondary trading in mortgage bonds took place on both the non-regulated OTC market and the RPW CeTO regulated OTC market, whereas public mortgage bonds were traded on the RPW CeTO market. The trading on the non-regulated market was most frequently arranged by banks from the same capital group as issuers. They also performed the function of paying agents, market-makers and depositaries of mortgage bonds sold through non-public offering. In 2007, 71 transactions in mortgage bonds of PLN 657.3 million were recorded in the National Depository for Securities, including 7 transactions of PLN 1.98 million concluded on the RPW CeTO market.45

As at the end of 2007, the main buyers of mortgage bonds traded on the non-regulated market were banks (Figure 5.2.20).46 It results from the fact that non-public issues of mortgage bonds are usually acquired by their arrangers, i.e. banks from the issuer’s capital group. However, it should be noted that due to the small value of mortgage bonds traded on the domestic market, single transactions may cause significant changes in the structure of buyers.

**Figure 5.2.20. Structure of investors on the non-regulated market of mortgage bonds, 2004–2007**

![Diagram showing the structure of investors on the non-regulated market of mortgage bonds, 2004–2007]

Source: NBP study based on data submitted by banks – Primary Dealers or money market dealers acting as depositaries.

**5.2.2.5. Corporate bonds47**

**Market size**

In 2007, owing to the high level of utilisation of their production capacity, enterprises were interested in increasing the range of their activity and thus more willing to use non-banking source of investment financing, including issues of debt securities. As at the end of 2007, the outstanding value of LCB amounted to PLN 15.75 billion and in comparison with the end of 2006 it increased by around 62% (Table 5.2.12). The share of long-term corporate bonds in the whole market of non-Treasury bonds in Poland amounted to 37.6% and in the total bond market – to 3.9%. Private placements addressed to the unregulated market accounted for 99% of the market (according to the outstanding values as at the end of 2007). The outstanding value of corporate bonds sold through public offering and traded on the regulated market lowered again and amounted to PLN 164.8 million.

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45 The National Depository for Securities data show that 64 transactions to the value of PLN 655.3 million were concluded outside the regulated market. Source: www.kdpw.pl/statystyki/st_danes.jsp.

46 The presented data concern only the buyers of mortgage bonds sold through non-public offering. Information on the structure of buyers of mortgage bonds traded on the regulated market is not available.

47 The LCB market includes bonds issued in Poland by the following categories of entities (according to ESA 95 classification): corporations, other financial intermediaries (excluding investment funds) and financial auxiliaries. In this chapter the terms LCB and corporate bonds are used interchangeably.
Table 5.2.12. Outstanding value of LCBs issued and number of issuers, 2004–2007

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of issues</td>
<td>69</td>
<td>82</td>
<td>90</td>
<td>92</td>
</tr>
<tr>
<td>Outstanding value (PLN billion)</td>
<td>7.26</td>
<td>8.92</td>
<td>9.75</td>
<td>15.75</td>
</tr>
<tr>
<td>– value of public offers</td>
<td>0.67</td>
<td>0.45</td>
<td>0.26</td>
<td>0.16</td>
</tr>
<tr>
<td>– value of private placements</td>
<td>6.59</td>
<td>8.47</td>
<td>9.49</td>
<td>15.59</td>
</tr>
<tr>
<td>Value of new issues (PLN billion)</td>
<td>2.43</td>
<td>2.24</td>
<td>2.59</td>
<td>7.96</td>
</tr>
</tbody>
</table>

Source: NBP study based on data submitted by banks – Primary Dealers serving as depositaries, Fitch Polska.

Figure 5.2.21. Outstanding value of corporate bonds issued in the selected EU-25 countries, 2005–2007

Note: The term ‘corporation’ refers to non-financial corporations and non-monetary financial institutions, which, according to ESA 95, include: insurance companies, pension funds, financial auxiliaries, and other financial intermediaries.

Source: NBP study based on data provided by Statistical Data Warehouse, ECB.

Despite a significant increase in the value of LCB issues, their share in the financing of gross fixed capital formation remained relatively low and amounted to approximately 3.1% in 2007 (1.2% in 2006). The demand for external long-term financing was still mainly satisfied by bank loans.

The ratio of the outstanding value of LCBs issued to GDP was low and amounted to 1.35%. In other Central and Eastern European countries the corporate bond markets were also underdeveloped. In the euro area this ratio amounted to 20.3%, however the level of market development was different in separate countries (Figure 5.2.21).

In 2007, the value of new LCB issues exceeded the total value of issues in three previous years. The number of entities using LCBs as the source of financing their activity also slightly increased (Table 5.2.12). In 2007, long-term corporate bonds of PLN 7.96 billion were issued, of which only PLN 0.07 billion were sold through public offering. Bonds issued by companies from the energy sector accounted for around 29% of the value of new issues. Corporations from the property development and chemical sectors also had a significant share in new LCB issues (around one fifth of the value). The companies intended to allocate the funds from LCB issues for debt restructuring (Elektrownia Turów, Ciech, PBG Hydrobudowa), as well as for the implementation of environmental projects\(^\text{48}\) (Południowy Koncern Energetyczny), infrastructure modernization (MPK Łódź) and mining activity development (PKN Orlen).

\(^{48}\) The intense activity of energy enterprises in terms of corporate bond issues resulted, inter alia, from the necessity to acquire funds for investments necessary to comply with environmental requirements imposed by the EU directives on reducing the emissions of carbon dioxide and nitrous oxide.
The issues were most frequently carried out as private placements. In 2007, 45 new issuance programmes were launched (14 in 2006). More than a half of them did not exceed PLN 10 million and only six had a limit of PLN 500 million or more. In 2007, the largest issuance programme was launched for Elektrownia Turów with a limit of PLN 2.54 billion. The average value of a single issue in the form of private placement amounted to about PLN 50 million. There were only three public bond issues under the existing programmes.

Market structure

As in 2006, the structure of issuers selling LCBs in the form of private placement was dominated by non-financial entities. Corporations from five sectors (i.e. transport, energy, food, property development and chemical sectors) accounted for around 57% of the outstanding values as at the end of 2007. Other financial institutions, mainly leasing companies, prevailed among issuers selling LCBs through public offering (Figure 5.2.22). Their activity in the LCB market was related to the fast development of the leasing market in Poland.

In December 2007, there was the first issue of bonds collateralised by securitised receivables from the leasing contract portfolio (the Orchis company’s issuance programme worth PLN 850 million). As at the end of 2007, the outstanding value of bonds issued under this transaction amounted to PLN 750 million. Bonds of PLN 420 million from this issue were acquired by the European Investment Bank.

The LCB market was dominated by PLN-denominated instruments. As at the end of 2007, their share in the market exceeded 98% (96.6% at the end of 2006). The interest on the majority of LCBs traded on the non-regulated market (around 93% of the outstanding value) was based on a floating interest rate, most often the WIBOR rate. The floating-rate instruments accounted for around 42% and the fixed-rate instruments for around 54% of the outstanding value of bonds on the regulated market. For the new LCBs issues, the margin exceeding the WIBOR reference rates ranged from 0.15 to 2.9 percentage points.

As at the end of 2007, the original maturity of the majority of LCBs traded on the regulated market did not exceed three years (the original maturity of one issue exceeded 5 years). The instruments with original maturity of up to 3 years inclusive accounted for 33.2%, with the maturity of 3 to 5 years inclusive – for 24.8%, and with the maturity exceeding 5 years – for 42% of the value of the non-regulated market, as at the end of 2007. The 2007 issues were dominated by bonds with the original maturity of up to five years.

As regards the LCB debt structure by type of instruments, the share of standard bonds was the highest (around 97%). Revenue bonds of 6 issuers were also traded on the non-regulated market, whereas bonds with priority rights of one company and convertible bonds were traded on the regulated market. The majority of LCB (around 87%) was unsecured. Collateral was used mainly by entities from the property development sector. The most popular types of collateral were mortgage or other assets.

Figure 5.2.22. Structure of LCB issuers by outstanding value of bonds (as at the end of 2007)

A. Public offerings

- Enterprises: 14.2%
- Other financial intermediaries: 85.8%

B. Private placements

- Enterprises: 11.5%
- Other financial intermediaries: 88.5%

Source: NBP study based on data submitted by banks – Primary Dealers, serving as depositaries and National Depository for Securities.
In 2007, there were 27 entities organising LCB issues. Private placements were organised mainly by banks. In 2007, 21 banks were involved in this activity. Among them five entities, namely ING Bank Śląski, Bank Pekao, BRE Bank, PKO BP and Deutsche Bank Polska, had an over 80% share in the outstanding value of LCB issued. The high position of Bank Pekao resulted from the incorporation of a selected part of Bank BPH in December 2007 and taking over the customers for whom Bank BPH arranged LCB issues. Public issues were most often arranged by brokerage entities.

**Secondary market and investors**

In 2006, the LCBs were traded mainly on the unregulated market. The secondary market was organised and transactions were settled by banks arranging the issues. The data on the LCB turnover on the secondary unregulated market are not available. Bonds issued by three companies were traded on the regulated market, however on the WSE only bonds of one entity were listed. 21 issues of bonds of two companies were listed on the RPW CeTO regulated OTC market. In 2007, the annual value of net turnover in corporate bonds on the WSE exceeded PLN 27 million (PLN 10 million in 2006), whereas on the MTS-CeTO market it amounted to PLN 15.2 million (PLN 32.3 million in 2006).

In 2007, the main buyers of corporate bonds issued in the form of private placements were domestic banks, non-financial entities and investment funds. As at the end of the year, the share of these entities in the structure of LCB investors exceeded 76% (Figure 5.2.23). The interest (in nominal values) of investment and pension funds in debt corporate bonds increased significantly in 2007. The decline in share prices in the second half of the year probably encouraged these financial institutions to buy LCBs (mainly from the issues of large public and non-public companies) with the aim of diversifying their investment portfolios. The information about the buyers of LCBs traded on the regulated market is not available.

**Figure 5.2.23. Buyers of LCBs issued in the non-regulated market (as at year-end)**

![Chart showing the distribution of LCB buyers in 2006 and 2007]

Source: NBP study based on data submitted by banks – Primary Dealers serving as depositaries.

**Growth barriers**

Due to high fixed costs related to the arrangement of bond issues, they are often too expensive a source of financing for small and medium enterprises. Large entities with foreign capital have alternative sources of financing – they borrow funds from entities from their capital group, what decreases the supply of corporate bonds on the domestic market.

On the other hand, domestic institutional investors declare little interest in these instruments, which results, inter alia, from low values of individual issues and low liquidity of the secondary market. The domination of private placements often directed to a limited group of investors and the absence of a centralised trading platform and settlement chamber hinder the development of LCB secondary market. Furthermore, the majority of issues and issuers have no rating, which makes it difficult for potential buyers to carry out an investment risk assessment. The development of the...
5.2.3. Equity market

The Polish equity market includes shares, allotment certificates and subscription rights. In 2007, shares were traded on the Warsaw Stock Exchange (WSE), the NewConnect platform and the CeTO Securities Market (RPW CeTO). Allotment certificates were listed on the WSE Main Market and on the NewConnect market. Transactions in subscription rights were concluded exclusively on the WSE Main Market.

In 2007, as in previous years, in Poland shares were mainly traded on the WSE Main Market. The CeTO Securities Market continued to lose its significance. In 2007, nine companies, i.e. almost two thirds of issuers of shares listed on the RPW CeTO as at the end of 2006, transferred their shares from this market to the WSE Main Market. At the end of August 2007, the WSE launched an alternative trading system – NewConnect. This market was developing very dynamically. As at the end of December, the securities of 24 companies were listed on this market.

5.2.3.1. Equity market on the WSE Main Market

In 2007, the WSE equity market was still developing. Basic indicators of its development, including capitalisation, turnover and the number of listed companies, increased significantly. The total capitalisation of the equity market, including domestic and foreign companies (including those dual-listed), increased by almost 70% and amounted to PLN 1,080 billion as at the end of the year. However, such a substantial increase in capitalisation resulted from the introduction of

Table 5.2.13. Equity market on the WSE Main Market, 2004–2007

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market capitalisation, year-end (PLN billion)(^1)</td>
<td>291.7</td>
<td>424.9</td>
<td>635.9</td>
<td>1,080.3</td>
</tr>
<tr>
<td>– of which capitalisation of domestic companies</td>
<td>214.3</td>
<td>308.4</td>
<td>437.7</td>
<td>509.9</td>
</tr>
<tr>
<td>Capitalisation of domestic companies as a proportion of GDP (%)</td>
<td>23.2</td>
<td>31.4</td>
<td>41.3</td>
<td>43.9</td>
</tr>
<tr>
<td>Number of companies</td>
<td>230</td>
<td>255</td>
<td>284</td>
<td>351</td>
</tr>
<tr>
<td>– of which foreign companies</td>
<td>5</td>
<td>7</td>
<td>12</td>
<td>23</td>
</tr>
<tr>
<td>Number of IPOs</td>
<td>36</td>
<td>35</td>
<td>38</td>
<td>81</td>
</tr>
<tr>
<td>Value of IPOs (PLN billion)</td>
<td>13.2</td>
<td>7.0</td>
<td>4.2</td>
<td>8.0(^2)</td>
</tr>
<tr>
<td>Number of delisted companies</td>
<td>9</td>
<td>10</td>
<td>9</td>
<td>14</td>
</tr>
<tr>
<td>Free float to capitalisation of domestic companies (%)</td>
<td>41.4</td>
<td>43.1</td>
<td>41.7</td>
<td>41.1</td>
</tr>
<tr>
<td>WIG index (points)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>– year-end</td>
<td>26,636.2</td>
<td>35,600.8</td>
<td>50,411.9</td>
<td>55,648.5</td>
</tr>
<tr>
<td>– year minimum</td>
<td>21,299.4</td>
<td>25,206.5</td>
<td>36,020.7</td>
<td>49,264.4</td>
</tr>
<tr>
<td>– year maximum</td>
<td>26,636.2</td>
<td>36,068.6</td>
<td>52,370.8</td>
<td>67,568.5</td>
</tr>
<tr>
<td>Return on WIG index (%)</td>
<td>27.9</td>
<td>33.7</td>
<td>41.6</td>
<td>10.4</td>
</tr>
<tr>
<td>Investment accounts at year-end (thousands)</td>
<td>851</td>
<td>853</td>
<td>909</td>
<td>997</td>
</tr>
</tbody>
</table>

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\(^1\) Capitalisation calculated for all companies listed on the WSE (both domestic and foreign).

\(^2\) In the case of the global offer of the Austrian Immofest company, only the value of stocks sold through the WSE was taken into account (PLN 463 million). The total value of this offer was around PLN 10.7 billion.

Source: Bloomberg, GUS, WSE, National Depository for Securities.

The main WSE market includes the basic market and parallel market.
shares of the Italian UnitCredit bank to trading on the WSE. The capitalisation of domestic companies increased by 16.5% and amounted to PLN 509.9 billion at the end of December. In 2007, the total net turnover in shares increased by 41.1% and amounted to PLN 236.1 billion. As at the end of December, there were 351 companies listed on the WSE, i.e. by 67 entities more than at the end of 2006. The rising share prices in the first half of the year attracted new investors to the market. As at the end of 2007, the number of securities accounts amounted to 997 thousand and was almost by 10% higher than at the end of the previous year (Table 5.2.13).

Despite its dynamic growth in recent years, the WSE equity market is still relatively small in comparison with other European stock markets. The WSE capitalisation was lower than the capitalisation of stock exchanges in countries with GDP similar to the Polish GDP (e.g. in Austria and Greece). As at the end of 2007, the ratio of the capitalisation of WSE-listed domestic companies to the Polish GDP amounted to 47% and was almost twice as low as in the European Union (around 86%). The liquidity of the equity market measured by the turnover/capitalisation ratio was low not only in comparison with stock exchanges of a similar size (Vienna and Athens Stock Exchange), but also in comparison with smaller stock exchanges (Prague, Budapest and Dublin Stock Exchange).

Compared to European stock exchanges, the WSE came out well in terms of the number of companies listed (Table 5.2.14).

Table 5.2.14. Main indicators of selected European stock exchanges, 2004–2007

<table>
<thead>
<tr>
<th>Stock exchange</th>
<th>Number of listed companies</th>
<th>Turnover ratio (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Athens</td>
<td>321</td>
<td>38.2</td>
</tr>
<tr>
<td>Budapest</td>
<td>46</td>
<td>50.5</td>
</tr>
<tr>
<td>Dublin</td>
<td>65</td>
<td>43.3</td>
</tr>
<tr>
<td>Euronext</td>
<td>999</td>
<td>110.7</td>
</tr>
<tr>
<td>Frankfurt</td>
<td>819</td>
<td>140.8</td>
</tr>
<tr>
<td>London</td>
<td>2 837</td>
<td>200.3</td>
</tr>
<tr>
<td>Milan</td>
<td>278</td>
<td>133.1</td>
</tr>
<tr>
<td>Prague</td>
<td>55</td>
<td>69.6</td>
</tr>
<tr>
<td>Warsaw</td>
<td>230</td>
<td>25.2</td>
</tr>
<tr>
<td>Vienna</td>
<td>120</td>
<td>30.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Capitalisation of domestic companies (EUR billion)</th>
<th>Net turnover (EUR billion)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Athens</td>
<td>92.1</td>
</tr>
<tr>
<td>Budapest</td>
<td>21.0</td>
</tr>
<tr>
<td>Dublin</td>
<td>83.9</td>
</tr>
<tr>
<td>Euronext</td>
<td>1 796</td>
</tr>
<tr>
<td>Frankfurt</td>
<td>878.8</td>
</tr>
<tr>
<td>London</td>
<td>2 071.8</td>
</tr>
<tr>
<td>Milan</td>
<td>580.9</td>
</tr>
<tr>
<td>Prague</td>
<td>21.7</td>
</tr>
<tr>
<td>Warsaw</td>
<td>51.9</td>
</tr>
<tr>
<td>Vienna</td>
<td>64.6</td>
</tr>
</tbody>
</table>

1 The number of listed companies includes domestic and foreign companies, excluding ETF funds listed on the main market and on alternative markets. In the case of the Warsaw Stock Exchange, it includes the companies listed on the main market (except for the National Investment Fund’s shares) and on the NewConnect platform.

2 Liquidity ratio calculated as the ratio of turnover in a given year to year-end capitalisation.

Source: NBP calculations on the basis of FESE data.
**WSE capitalisation**

The market capitalisation is determined by the following factors: new listings of companies, delistings of companies, new issues of stocks of already listed companies, redemption of shares and changes in share prices. In 2007, the increase in the capitalisation of the Warsaw Stock Exchange resulted mainly from new listings of companies. Eighty one entities, including 12 foreign ones, carried out Initial Public Offerings (IPOs) on the WSE Main Market. The total capitalisation of these companies calculated according to the close prices from the IPO day amounted to PLN 346.2 billion, of which domestic entities accounted for only PLN 27.1 billion. The introduction of the shares of the Italian UniCredit bank to trading on the WSE (in the dual-listing system) was very significant for the increase in the WSE capitalisation in 2007. On the IPO day (22 December 2007), the capitalisation of this bank amounted to PLN 268.2 billion. As at the end of the year, the UniCredit capitalisation (PLN 273.2 billion) accounted for over 25% of the total capitalisation of the Warsaw Stock Exchange. According to the WSE data, companies entering the stock exchange through IPO sold shares to the value of PLN 8.0 billion.\(^{50}\) The data of the World Federation of Exchanges (WFE) show that in 2007 the Warsaw Stock Exchange ranked third in Europe, after the London Stock Exchange and the BME Spanish Exchanges, in terms of the number of IPOs and sixth in terms of their value (Figure 5.2.24).\(^{51}\) In 2007, the shares of small and medium-sized enterprises were mainly introduced to trading on the WSE, which is proved by the relatively low value of funds obtained through IPOs. According to the WFE data, this value amounted to USD 52 million on the WSE and to USD 164 million on average on other European markets.\(^{52}\)

The increase in capitalisation was also influenced by Secondary Public Offerings (SPO) of companies listed on the WSE. In 2007, the value of SPOs amounted to PLN 12.9 billion and was the highest in the present decade. The total value of funds obtained by companies through the Initial and Secondary Public Offerings on the WSE amounted to PLN 18.0 billion (Figure 5.2.25).

14 companies with the total capitalisation of PLN 9.5 billion were delisted, including 13 domestic companies worth PLN 6.0 billion. The main reasons for companies delisting were their takeovers or mergers with other entities.

**Figure 5.2.24. IPO in selected European markets, 2007**

\(^{50}\) This value includes the value of new stock issues and the value of previous stock issues sold through IPOs (PLN 5.1 billion and PLN 2.9 billion respectively).

\(^{51}\) World Federation of Exchanges presents the total number of IPOs on all markets of a given stock exchange. In the case of the WSE it takes into consideration the Initial Public Offerings of companies on the main market and on the NewConnect market.

\(^{52}\) The average value of funds obtained through IPOs on the European stock exchanges was calculated for the markets mentioned on Figure 5.2.1, excluding the WSE. The WFE data include IPOs carried out on all markets of a given stock exchange. Therefore, the average value of funds raised via IPOs for stock exchanges which operate alternative trading systems, specialising in trading stocks of small companies, is lower than in the case of other stock exchanges. In order to make data comparable, the value of IPOs on the WSE included the total value of the offer of the Austrian Immoreal (around PLN 10.7 billion) carried out on 4 markets. Through the WSE, this company sold stocks to the value of PLN 463 million.
In 2007, 12 companies (including 6 National Investment Funds) purchased some shares for redemption. The value of shares redeemed amounted to around PLN 900 million. Share redemption is a form of remuneration for shareholders by companies and is often treated as a substitute dividend.

In the year in question, the influence of changes of share prices on the capitalisation of the WSE Main Market was lower than in previous years. WIG broad market index increased by 10.4% in 2007, whereas in 2006 it increased by 41.6% and in 2005 by 33.7%. In the first half of 2007, the upward trend in share prices continued. It was interrupted only by a small and short-lasting correction at the end of February and the beginning of March. At the end of June and the beginning of July, the main WSE indices reached the highest levels ever. The upward trend in share prices which had continued for over four years (since Spring 2003) ended with substantial drops which lasted until mid August. The falls in share prices on the Warsaw Stock Exchange resulted from the turmoil on the global financial markets caused by the crisis in the US subprime market. In the second half of the year, the majority of world equity price indices dropped. The slides of prices on the WSE affected SMEs (with shares included in the WIRR/sWIG80 and

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MIDWIG/mWIG40 indices\(^{54}\) to a greater extent than the WIG20 companies (Figure 5.2.26). After these falls, however, only the WIG20 index managed to improve its historical record. The long-lasting fall in share prices of companies listed on the WSE Main Market began at the end of October when the problems of financial institutions resulting from investments in instruments related to mortgage loans in the USA were revealed. The problems of numerous global financial institutions contributed to an increase in risk aversion and triggered the sale of shares of companies listed on the emerging markets (so-called flight to quality), which caused a drop in their prices. The drop of share prices was magnified by the problems of foreign investors with obtaining funds for investments, the sales of shares by domestic individual investors and relatively high valuations of companies.

**Turnover**

In 2007, the value of the free float of companies listed on the WSE Main Market increased by 14.5% and at the end of the year it equalled PLN 209.5 billion, which could contribute to an increase in turnover in the WSE. In 2005–2007, the ratio of free float to capitalisation of domestic companies was stable and oscillated around 41.0%. Owing to a rise in the number of companies listed on the WSE and the increasing capitalisation of the market, the changes in the shareholders’ structure of individual companies have a lower and lower impact on the free float of the whole market.

In 2007, the total value of transactions in shares which were in trading on the WSE Main Market increased by 42% and amounted to PLN 237.6 billion. The average daily value of session transactions equalled PLN 913.7 million. The increase in turnover resulted from the growth in the number of transactions concluded as well as from the rise in share prices (this effect was especially visible in the first half of the year). In 2007, investors concluded over 15 million session transactions, which represents an increase by over 35% in comparison with the previous year (Table 5.2.15). The number of package transactions increased by 1 000 and amounted to 2 509 in the whole year. The value of package transactions increased by 18.7% to PLN 8.8 billion. High activity of investors on the equity market was mainly caused by the bull market which lasted until the end of June. The highest monthly net turnover in shares on the WSE ever was recorded in July and amounted to PLN 22.8 billion.

| Table 5.2.15. Turnover in shares on the main WSE market, 2004–2007 |
|---------------------------------|----------------|----------------|----------------|----------------|
| Annual net turnover in the equity market (PLN million) | 63 187 | 98 353 | 173 985 | 237 582 |
| – of which session turnover (PLN million) | 54 887 | 87 701 | 161 960 | 227 505 |
| – average per session (PLN million) | 215.2 | 349.4 | 645.3 | 913.7 |
| Number of transactions per session | 15 589 | 19 835 | 44 979 | 60 820 |
| Ratio of net value of turnover in shares to the capitalisation of domestic companies at year-end (%) | 29.5 | 31.9 | 39.7 | 46.6 |

\(^{54}\) Since 20 March 2007, the WSE has ceased calculating the MIDWIG and WIIR indices. They were replaced by mWIG40 and sWIG80, respectively. For three indices (WIG20, mWIG40 and sWIG80), one ranking of companies is established, which provides a basis for selecting companies to individual indices according to the criteria of capitalisation and liquidity. The method of selection of companies to indices and their calculation methodology are further described on www.gow.pl.

\(^1\) Net turnover in shares includes purchase and sale transactions of domestic and foreign companies’ shares. Due to the relatively low turnover in foreign companies’ shares, it might be assumed that the presented ration adequately reflects the liquidity of share of domestic companies listed on the WSE.

Source: WSE.
Participants

As at the end of 2007, the major group of investors on the equity market were foreign entities. Their share in the capitalisation of domestic companies listed on the WSE Main Market according to the WSE data increased by 7 percentage points in comparison with 2006 and amounted to 42% (Figure 5.2.28). According to the NBP data collected for the purpose of preparing the international investment position of Poland, the share of non-residents in the equity market was higher and at the end of December 2007 amounted to 47.6%.

Among non-residents prevailed direct investors whose share in the total value of foreign investors’ portfolios exceeded 65%.

Despite an increase in the value of Polish companies’ shares controlled by foreign investors, their share in the capitalisation of domestic companies listed on the WSE decreased again (Figure 5.2.29). One of the reasons for the drop in this share was the small number of large Initial Public Offerings. Foreign investors are mainly interested in investments in large companies on account of greater liquidity of their shares, which facilitates investment exit. In 2007, only the value of eight IPOs exceeded USD 100 million (PLN 277 million) and for only three of them it was higher than USD 200 million. In 2007, the majority of shares sold in IPOs were purchased by domestic investors and therefore the share of non-residents in the capitalisation of domestic companies listed on the main WSE market decreased. Moreover, this share was further lowered by equity sales. In 2007, foreign investors sold shares of Polish companies to the net value of PLN 1.1 billion (PLN 6.3 billion in 2006) (Figure 5.2.30).

Figure 5.2.27. Monthly net turnover in shares on the WSE Main Market, 2004–2007

Figure 5.2.28. Investors on the WSE main equity market, 2006–2007 (share in capitalisation of domestic companies)

55 The differences between the WSE and NBP data result from the different methodology of their calculation. The WSE data originate from annual reports of companies, which constitute around 90% of the market in respect of capitalization. In addition, these data include only those investors who control over 5% of a given company’s shares. The NBP takes into account in its statistics all foreign investors in all listed domestic companies.
In 2007, as in previous years, the equities of large companies included in the WIG20 index prevailed in foreign investors’ portfolios. In comparison with 2006 the share of equities of medium-sized companies from the mWIG40 index and of small companies in their portfolio increased (Figure 5.2.30). It was caused by net purchases of equities of these companies by non-residents and a higher increase in SME share prices than in prices of instruments from the WIG20 index.

The second most important group of investors in the equity market were domestic institutional investors, mainly investment funds and open pension funds. As a result of the high inflow of funds to investment funds (in January – July), in 2007 they purchased shares worth net around PLN 14 billion. The net value of shares bought by open pension funds was lower and amounted to around PLN 4 billion.

The State Treasury and individual investors had a significant share in the capitalisation of domestic companies listed on the WSE (14.7% and 12.0% respectively). In comparison with the end of 2006 the share of these two groups of investors decreased by 1.1 and 5.1 percentage points respectively. The drop in the share of the State Treasury resulted, inter alia, from the fact that in 2007 enterprises were not privatised through the WSE.56 The decrease in the share of individual

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56 The State Treasury is a passive investor, i.e. it does not participate in trading on the WSE. Its presence in the shareholders structure results from the way how state-owned companies are privatised through the WSE. As a rule, during such transactions the State Treasury keeps some shares and thus it becomes a shareholder of listed companies. If only companies of private origin carry out IPOs on the WSE and the share prices of listed companies do not change, the capitalisation of the entire market increases, while the value of the portfolio of shares controlled by the Treasury remains unchanged. It results in a decrease in the share of the State Treasury in the total capitalisation of domestic companies listed on the WSE.
5.2.3.2 Other equities traded on the main WSE market – allotment certificates and subscription rights

In 2007, on the WSE Main Market companies conducted 108 issues of allotment certificates and 42 issues of subscription rights (Figure 5.2.33). In comparison with 2006, the total value of these issues increased by 23.9% and amounted to PLN 21.4 billion, of which two thirds were allotment certificates. The value of issues of allotment certificates and subscription rights is strictly

---

57 As at the end of 2007, the value of individual investors’ portfolios of shares amounted to around PLN 61.2 billion and was by 18.2% lower than at the end of the previous year.
related to companies’ activity in obtaining capital through the WSE. During a favourable situation on the stock market, when companies actively obtain capital from this market, the number and value of issues of allotment certificates and subscription rights increase.

The higher value of issues positively influenced the value of transactions in these instruments in 2007. As compared to 2006, the net turnover value in allotment certificates and subscription rights increased by 54.4% and equalled PLN 4.0 billion (Figure 5.2.34). The increase in transaction value concerned both allotment certificates and subscription rights. Transactions in allotment certificates accounted for over 85% of turnover (80% in 2006).

### 5.2.3.3. Equity market on the NewConnect platform

On 30 September 2007, the WSE launched an alternative trading system – the NewConnect market. The platform is intended for start-up companies with a high growth potential which wish to finance their development with capital obtained through stock issues.

Trading is conducted outside the regulated market and therefore information requirements for issuers are lower than for companies listed on the WSE Main Market. Companies listed on the NewConnect platform are not obliged to submit quarterly reports. The information requirements include only annual reports and current reports, but with a narrower scope than the reports submitted by companies listed on the Main Market. For investors it means a higher risk involved while trading securities on NewConnect as compared to investments in the regulated WSE market.

There are two entry procedures for companies wishing to be listed on NewConnect. The first one is private placement addressed to up to 99 investors. In this case the admission to trading is

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**Figure 5.2.33. Issues of allotment certificates and subscription rights, 2004–2007**

<table>
<thead>
<tr>
<th>Year</th>
<th>PLN billion</th>
<th>pcs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>2.5</td>
<td>0.3</td>
</tr>
<tr>
<td>2005</td>
<td>6.2</td>
<td>0.2</td>
</tr>
<tr>
<td>2006</td>
<td>10.8</td>
<td>55</td>
</tr>
<tr>
<td>2007</td>
<td>14.2</td>
<td>3.2</td>
</tr>
</tbody>
</table>

**Figure 5.2.34. Net turnover in allotment certificates and subscription rights, 2004–2007**

<table>
<thead>
<tr>
<th>Year</th>
<th>Allotment certificates</th>
<th>Subscription rights</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>0.04</td>
<td>0.50</td>
</tr>
<tr>
<td>2005</td>
<td>2.97</td>
<td>0.54</td>
</tr>
<tr>
<td>2006</td>
<td>2.08</td>
<td>3.45</td>
</tr>
<tr>
<td>2007</td>
<td>0.58</td>
<td>108</td>
</tr>
</tbody>
</table>

Note: The value of issues is calculated according to the closing price on the first day.

Source: WSE.
based on an information document approved by an Authorised Advisor. It significantly reduces the
time necessary for the arrangement of trading. On the NewConnect platform, this preparatory phase
takes 2–3 months on average, whereas on the WSE main equity market it usually lasts 6–9 months.
A public offering is another procedure for the admission of shares to trading on NewConnect. In this
case the company has to comply with the same admission procedures as that binding in the main
WSE market with the obligatory issue prospectus approved by the Polish Financial Supervision
Authority (KNF). Only for offerings up to EUR 2.5 million, an information memorandum may serve as
an admission document. The period of time needed for the arrangement of public offering is
similar to issues on the regulated market and equals 6–9 months.

Capitalisation

On the first day of operation of the NewConnect market, the shares or allotment certificates
of five companies were introduced to trading. As at the end of 2007, securities of 24 entities were
quoted on this market. The total capitalisation of companies listed on NewConnect as at the end
of December 2007 amounted to PLN 1 185 million with the five largest entities accounting for
63.8% of this amount. The majority of companies which floated their securities on NewConnect
in 2007 took the advantage of conducting private placement. All companies which entered this
market in 2007 were listed in the order-driven system.

According to the WSE data, the total value of offerings on the NewConnect market in 2007
equalled PLN 150 million, of which PLN 145 million accounted for new share issues. In 2007, the
largest offer was that of the LUG company and amounted to PLN 20.5 million. The offers of five
other companies exceeded PLN 10 million. The lowest offer was submitted by the e-Muzyka
company and amounted to PLN 1.6 million.

In the first four months of the operation of the NewConnect market, its index (NCIndex) increased
by 44.2% and reached its highest value at the last session on 28 December 2007 (Figure 5.2.35). The
NCIndex comprises the shares of all companies listed on the NewConnect market. Weightings of all
index participants are determined based on the number of shares of a given company introduced into
stock exchange trading and rounded up to the nearest whole thousand. The NCIndex index is a total
return index, i.e. it accounts for both prices of underlying shares and dividend and pre-emptive rights’
income. Its base date is 30 August 2007 and its first value was 100 points.

Figure 5.2.35. NCIndex, 30 August – 28 December 2007

Source: www.bossa.pl.

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58 The Polish Financial Supervision Authority (KNF), within 20 days since the announcement of issue by a company, may
raise an objection to carrying out public offering if the content and form of an information memorandum does not com-
ply with the requirements set forth in the legal provisions or turnover in securities covered by the information memo-
randum enclosed to the announcement poses a significant threat to investors’ interests or the safety of trade.

59 Chapter 3 includes further information on the functioning of this market.
Turnover

In 2007, the total net turnover value in shares and allotment certificates of companies listed on NewConnect amounted to PLN 151.5 million (PLN 1.8 million per session). The average number of transactions per session and the average value of a single transaction amounted to 719 and PLN 2,535 respectively. The highest monthly net turnover was recorded in December – PLN 48.2 million.

Participants

In the first months of operation of the NewConnect market, individual investors prevailed among market participants. Their share in total turnover in shares and allotment certificates equalled 92%. The share of domestic institutional investors and foreign investors amounted to 5% and 3% respectively. Such a structure of participants of the NewConnect market was connected with the type of companies whose shares were listed on this market. The majority of them were entities with a low capitalisation and short track record. It often happened that at the time of introducing shares to trading on NewConnect, no annual financial reports were available, which made a thorough analysis of newly listed companies impossible. Therefore, some investors could have perceived investments in shares of companies listed on the NewConnect market as involving a higher risk than investments in shares of the majority of companies listed on the WSE. Domestic institutional investors and foreign investors are interested mainly in shares of companies with a large capitalisation, good financial situation and significant liquidity of shares which facilitates investment exit. For the above mentioned reasons, despite the possibility of generating large profits, the NewConnect market was not sufficiently attractive for the said investors.

5.2.3.4. Equity market on the CeTO Securities Market

Capitalisation

The companies listed on the CeTO Securities Market (RPW CeTO) were still SMEs. In 2007, the capitalisation of this market decreased by 25.7% and reached PLN 426.8 million at the end of the year. The decrease in the RPW CeTO capitalisation was influenced to a large extent by the withdrawal of several enterprises from trading. In 2007, nine companies transferred their shares to the WSE and one of them withdrew its shares from trading on the regulated market. As at the end of the year, only five entities were listed on the RPW CeTO. On the other hand, an increase in share prices exerted a positive influence on the RPW CeTO capitalisation. As at the end of 2007, the ITO index reached 41,197 points and was by one third higher than as at the end of the previous year.

Table 5.2.16. Main indicators of the CeTO Securities Market, 2000–2006

<table>
<thead>
<tr>
<th></th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of listed companies</td>
<td>21</td>
<td>21</td>
<td>21</td>
<td>22</td>
<td>18</td>
<td>18</td>
<td>15</td>
<td>5</td>
</tr>
<tr>
<td>Capitalisation (PLN million)</td>
<td>275.3</td>
<td>192.8</td>
<td>203.7</td>
<td>335.4</td>
<td>344.3</td>
<td>378.8</td>
<td>574.1</td>
<td>426.8</td>
</tr>
<tr>
<td>ITO index (points)</td>
<td>15,254</td>
<td>9,115</td>
<td>9,776</td>
<td>9,704</td>
<td>9,457</td>
<td>10,047</td>
<td>30,993</td>
<td>41,197</td>
</tr>
</tbody>
</table>

Source: MTS-CeTO.

Turnover

In 2007, the net turnover value in shares of companies on the RPW CeTO increased more than six times and reached PLN 171.5 million. There was an increase in the value of both session and package transactions. The increase in the value of turnover resulted from the increase in share prices and higher turnover volume (especially in the first half of the year). In 2007, the average daily number of transactions per session amounted to 159 and was the highest in the present decade. The significant increase in investors’ activity was affected by companies transferring their shares

60 The CeTO Securities Market achieved the highest monthly capitalisation at the end of March and amounted to PLN 1.26 billion.
from the RPW CeTO to the WSE. Due to low liquidity of their shares which limited the possibility of investment exit, companies listed on the RPW CeTO were valued lower than similar entities listed on the WSE main market. Owing to a considerably wider group of investors on the WSE, investors expected the liquidity of shares transferred from the RPW CeTO, and consequently the prices of these shares, to increase. The announcement of the transfer of shares of a given company to the WSE often led to a rapid increase in their prices and turnover on the RPW CeTO. In numerous cases, the prices of shares dropped after transferring to the WSE as investors began to sell the shares purchased on the RPW CeTO in large numbers, in order to yield profits.

The decreasing number of companies listed on the RPW CeTO over the last few years indicates that this market is loosing its significance. This results mainly from the competition of the WSE main equity market, where the trade in shares in Poland is concentrated. The further functioning of the CeTO Securities Market will be affected by the operation of the NewConnect platform. Owing to relatively low costs of arranging offerings and relatively low costs borne by issuers related to the listing of their shares, this platform will pose a serious threat to the RPW CeTO. A strong argument in favour of debuts on markets operated by the WSE (especially the main market) is a wider group of investors than on the CeTO Securities Market, which facilitates the placement of issues and ensures higher liquidity of shares in secondary trading. Therefore, the CeTO Securities Market will probably cease to exist in the coming years since companies will transfer their shares to the markets operated by the WSE or will withdraw them from the regulated market.

Table 5.2.17. Net turnover in shares on the CeTO Securities Market, 2000–2007

<table>
<thead>
<tr>
<th>RPW CeTO</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Total annual turnover (PLN million)</td>
<td>218.1</td>
<td>51.6</td>
<td>48.7</td>
<td>31.6</td>
<td>28.6</td>
<td>36.9</td>
<td>26.7</td>
<td>171.5</td>
</tr>
<tr>
<td>– net session turnover (excluding package transactions)</td>
<td>120.6</td>
<td>20.1</td>
<td>9.15</td>
<td>8.7</td>
<td>21.2</td>
<td>10.6</td>
<td>25.3</td>
<td>146.7</td>
</tr>
<tr>
<td>– average net turnover per session</td>
<td>0.48</td>
<td>0.08</td>
<td>0.04</td>
<td>0.04</td>
<td>0.09</td>
<td>0.05</td>
<td>0.10</td>
<td>0.59</td>
</tr>
<tr>
<td>2. Average number of transactions per session</td>
<td>93</td>
<td>17</td>
<td>9</td>
<td>8</td>
<td>15</td>
<td>9</td>
<td>44</td>
<td>159</td>
</tr>
</tbody>
</table>

Source: MTS-CeTO.
5.3. Spot FX market

The trends observed between 2004 and 2006 continued on the zloty spot market in 2007. The average net turnover in the domestic market (operations in which at least one of the parties is a bank operating in Poland) dropped to PLN 3.7 billion. The reduced activity in the zloty market in Poland was accompanied by a dynamic increase in turnover on the offshore market, which started in the second half of 2004. This increase resulted from a great interest of foreign financial institutions in investments in emerging markets. Increased activity of hedge funds that used carry trade and algorithmic trading strategies was supported by interest rate increases in Poland and a stable long-term trend for the zloty appreciation. The total average daily net turnover in the zloty market (domestic and offshore) is estimated at over PLN 14 billion, i.e. 50% more than in 2006. The dominant currency pair on the zloty market was EUR/PLN, and the share of EUR/PLN transactions in the domestic interbank market turnover was on average at the level of 90%.

This chapter describes the development of the zloty spot market, including the transactions in the offshore market. The market liquidity analysis was carried out using the results of the Triennial Central Bank Survey – Foreign Exchange and derivatives market activity in 2007, which was performed in April 2007 by the Bank for International Settlements, with the contribution from 54 central banks and monetary authorities from all over the world.

The size of the market

The zloty market in Poland was the largest and the most liquid among currency markets in our region. The value of transactions on the zloty spot market was almost three times as high as the turnover in the Czech koruna market and around 60% higher than the turnover in the forint market. The liquidity of markets of those currencies corresponded to the level of economic development of individual countries (Box 5.3.1). In April 2007 the average daily value of zloty spot transactions amounted to USD 4.851 billion and was over three times higher than in April 2004 (Table 5.3.1). Such a high rise of liquidity, resulting from a significant increase in exposure of non-residents, was also observed in the forint and the Czech koruna markets. As compared to April 2004, turnover in the offshore market (calculated using fix exchange rates) grew over six-fold and exceeded PLN 9.3 billion. The value of zloty transactions in the offshore markets was thus over twice as high as the turnover in the domestic market. All three FX markets of our region were dominated by the exchange transactions of local currencies into euro. In 2007, the zloty was the 18th currency in the world in terms of turnover value on the spot market (in 2004 it was at the 21st place).

Average daily net turnover in the domestic market fell to PLN 3.7 billion in 2007. This was due to a decrease in the value of operations between the banks, which dominate the turnover on the zloty market. The average daily value of transactions in the interbank market in Poland in 2007 amounted to PLN 2.8 billion and was as much as 14% lower than in 2006. Foreign banks were increasingly active in the domestic interbank market, with their share in this segment of the market rising to 80% (Figure 5.3.1). The reduced activity of domestic banks resulted from the centralisation of risk at the level of bank groups as well as the related transfer of speculative operations and

<table>
<thead>
<tr>
<th>Table 5.3.1 Average daily net turnover in the zloty, Czech koruna and forint spot FX markets in April 2004 and April 2007 (USD million)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Zloty</strong></td>
</tr>
<tr>
<td>Total turnover, of which:</td>
</tr>
<tr>
<td>Transactions between residents</td>
</tr>
<tr>
<td>Resident – non-resident transaction</td>
</tr>
<tr>
<td>Transactions between non-residents offshore</td>
</tr>
</tbody>
</table>

servicing of large customer orders that require the closure of FX position in interbank transactions outside of Poland.

The year 2007 saw a continued marked growth of turnover in the domestic customer market. The average daily value of transactions with non-bank customers increased by approximately 16% as compared to 2006 and amounted to PLN 0.87 billion. As a result, the share of operations with non-bank entities in net turnover in the domestic zloty market grew from 18% in 2006 to 23% in 2007. The main factor influencing the development of the customer market was a rise in turnover in foreign trade. The value of exports and imports of goods and services expressed in the euro increased by 17.5% and 19.4%, respectively as compared to 2006.

Since the turnover in the domestic zloty market in April was by 10% lower than the average for the year, the average daily value of zloty transactions (domestic and offshore market) is estimated at over USD 5 billion in 2007 (i.e. over PLN 14 billion). With such a high market liquidity, banks did not experience problems with closing FX positions which resulted from large customer orders. It seems that the zloty exchange rate was less sensitive to short-term capital flows resulting from speculative strategies which is evidenced by a stable and very low level of historical variability in the entire 2007 (Figure 5.3.5).

The dynamic increase in activity on the offshore zloty market that was observed in recent years resulted both from the situation in global markets and in the domestic financial market. The deterioration of the macroeconomic situation on the American market (slowdown in the real estate market, crisis on subprime mortgage market) and the weakening of confidence in the US dollar market encouraged foreign institutional investors to diversify their portfolios by means of investments in foreign exchange markets of the emerging economies.

Hedge funds were the group of investors which contributed to the increased turnover in the zloty market between 2005 and 2007 to the greatest extent. Those entities treated currencies as a separate class of assets which allowed them to improve their returns on investment. Hedge funds invested on developing markets using the carry trade strategy. The strategy consists in taking loans denominated in currencies with low interest rates (mainly the Japanese yen and the Swiss franc) and depositing the funds in currencies of developing countries bearing high interest rates, which induced the increased liquidity of spot markets in those currencies (Box 5.3.1).

Another investment strategy employed by hedge funds was taking very large positions on the on the FX options market. London-based banks, which most often issued such options, secured their FX positions by concluding relevant transactions on the FX foreign market (dynamic hedging). Moreover, hedge funds increasingly used electronic transaction platforms and prime brokerage services offered by large London-based banks acting as market-makers on the FX market. Those

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Figure 5.3.1. Monthly net turnover in the domestic interbank zloty market, 2004–2007

![Graph showing monthly net turnover in the domestic interbank zloty market, 2004–2007.](image)

Source: NBP data submitted by banks acting as Primary Dealers and/or money market dealers and candidates for these functions.

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61 A service which consists in large banks making available their credit limits imposed on them by other market participants, for a fee. Hedge funds which use this service may conclude transactions with multiple entities, submitting to credit rating and maintaining security in one bank whose credit limits they use.
DETERMINANTS OF THE FX SPOT MARKET LIQUIDITY

One of the factors affecting the FX spot market liquidity is the level of economic development of the country. There is a statistically significant linear relation between the level of the logarithm of net turnover in April 2007 in the spot market of individual currencies and the logarithm of GDP in terms of purchasing power. Differences in proportions between the analysed variables allow to distinguish two main groups of currencies, namely, the currencies of developed countries and the currencies of emerging markets (Figure 5.3.2). As regards the currencies of developed countries, a one-percentage growth of the GDP contributes to the average increase of 0.36% in the turnover on the foreign exchange market. In the case of currencies of the countries from the second group, the indicator is only slightly lower and amounts to 0.32%. The size of the zloty market corresponds to the theoretical value stemming from the model for a given GDP of emerging markets.

Figure 5.3.2. Relation between net turnover on the FX spot market and the GDP in April 2007

Note: currencies of developed countries: AUD (Australian dollar), CHF (Swiss franc), CAD (Canadian dollar), DKK (Danish krona), GBP (British pound), HKD (Hong Kong dollar), NZD (New Zealand dollar), NOK (Norwegian krona), SEK (Swedish krona), SGD (Singapore dollar). Currencies of countries described as emerging markets: BRL (Brazilian real), CZK (Czech koruna), CNY (Renminbi), IDR (Indonesian rupiah), INR (Indian rupee), KRW (South Korean won), MXN (Mexican peso), PHP (Philippine peso), PLN (Polish zloty), RUB (Russian ruble), TRY (Turkish lira), TWD (Taiwan dollar), ZAR (South African rand).


Figure 5.3.3. Relation between the increase in net turnover on the FX spot market and the average interest rate on interbank deposits between April 2004 and April 2007

Note: Currency codes as on Figure 5.3.2.

The value of transactions concluded on the spot FX market is also influenced by the level of money market interest rates. The currencies with high interest rates are used in carry trade strategies that are most often financed by loans in yens or Swiss francs. Between April 2004 and April 2007 a statistically significant linear relation between the percentage growth of net turnover in individual currencies’ markets and their average three-month interest rate in the interbank money market can be observed. The linear regression model for a group of currencies of the countries analysed in Figure 5.3.3 allows to state that the growth of turnover in the spot FX market between April 2004 and April 2007 depended on average interest rate on deposits in the interbank market in that period. A one percentage point increase in the interbank money interest rates market was related to a growth of turnover in the spot FX market (by 10 percentage points on average).

Changes in the transaction infrastructure allowed hedge funds to significantly increase their activity in the FX market.

Pension funds and trust funds increased their activity in developing countries’ markets. The portfolios they managed grew markedly in the last several years. As in the case of hedge funds, they treated the purchase of currencies as a separate class of assets, that was poorly correlated with other categories of their investments and allowed to achieve attractive rates of return. 62

Foreign institutional investors often used the zloty in the investment strategies on developing markets. Investments on the zloty market and purchases of zloty-denominated assets were supported by a very good economic situation, in particular the highest economic growth rate from among the countries of the region, an increase in indices on the Warsaw Stock Market in the first half of the year and a stable zloty appreciation trend. In 2007 the zloty exchange rate fluctuated within a narrow range between 3.57 and 3.95 and was only slightly determined by local factors. Short periods of the zloty weakening were mainly related to the increased uncertainty in global markets, stemming from the crisis on the American mortgage loan market (Figure 5.3.4). Under a strong appreciation trend, hedge funds took large positions in the zloty (on the spot market and the FX options market) speculating for its further strengthening.

The increased activity of foreign investors in the zloty market resulted from the disparity of interest rates between Poland and developed markets (in 2007 the Monetary Policy Council increased the NBP interest rates four times by 25 basis points) and strong expectations of their

Figure 5.3.4. Zloty exchange rate against the euro and the US dollar, 2005–2007

Source: Reuters.

Figure 5.3.5. USD/PLN, EUR/PLN and EUR/USD three-month historical volatilities, 2005–2007

Note: Three-month historical volatility is the standard deviation of the distribution of daily returns observed over 66 trading days.
Source: NBP, Reuters.

further growth in the domestic market. It encouraged frequent use of zloty in carry trade speculative transactions than in 2006. The attractiveness of carry trade strategies on the zloty market was increased by low volatility of the zloty exchange rate (Figure 5.3.5).

The growth of liquidity on the zloty market was also supported by an increased popularity of algorithmic trading strategies, targeted at short-term movements in foreign exchange rates. In such strategies the currency purchase and sale orders are generated automatically by means of an algorithm, i.e. studies of profitability of transactions performed on the basis of the analysis of financial time series gathered at a very high frequency as well as the inflow of information to the market. Such a way of speculating in the FX market allows to immediately assess the profitability of spot transactions and is characterised by high turnover with relatively low values of open FX positions. It is estimated that transactions made using algorithmic trading strategies accounted for around 20% of turnover in the world FX market in 2007.63

Market structure

In 2007, the dominant foreign exchange relationship in Poland, as in the Czech Republic and Hungary, was the EUR/domestic currency. In those countries, the EUR/domestic currency transactions clearly dominated both in the interbank and in the customer market. The high share of the EUR/domestic currency pair in operations with non-bank customers resulted from the structure of those countries’ payments in international trade. Between April 2004 and April 2007 those countries suffered a marked decrease in relation of net turnover in the interbank market to the value of transactions with non-bank customers, which was related to the transfer of activities of foreign banks from the domestic to the offshore market.

The share of EUR/PLN operations in the interbank market in Poland in the first three quarters of 2007 remained at around 90%, as in 2006 (Figure 5.3.6). In the fourth quarter, the increase in importance of zloty into USD exchange transactions in the turnover currency composition resulted from the fact that banks closed their open positions in USD stemming from transactions in the customer market.

The quoting of EUR/PLN exchange rate in the interbank market was the best indicator of the strength of our currency. This is confirmed by the share of the euro in the basket ensuring minimum variance of daily returns, which amounted to 100% for the majority of 2007. Periodical decreases of the share by several or between 10 and 20 percentage points were caused mainly by the changes in the trend on the EUR/USD market, i.e. short-term appreciation of the US dollar against the euro (Figure 5.3.7). Bank dealers treated the USD/PLN exchange rate as a resultant one which is

Table 5.3.2. Average daily net turnover and structure of the spot FX market in Poland, the Czech Republic and Hungary in April 2004 and April 2007 (USD million)

<table>
<thead>
<tr>
<th></th>
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<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Turnover – foreign currencies/domestic currency</td>
<td>1 052</td>
<td>1 540</td>
<td>455</td>
<td>783</td>
<td>407</td>
<td>691</td>
</tr>
<tr>
<td></td>
<td>767</td>
<td>1 083</td>
<td>362</td>
<td>566</td>
<td>346</td>
<td>540</td>
</tr>
<tr>
<td>Interbank market</td>
<td>– of which: EUR/domestic currency (%)</td>
<td>23</td>
<td>90</td>
<td>94</td>
<td>61</td>
<td>89</td>
</tr>
<tr>
<td></td>
<td>– of which: USD/domestic currency (%)</td>
<td>76</td>
<td>7</td>
<td>5</td>
<td>32</td>
<td>9</td>
</tr>
<tr>
<td>Customer market</td>
<td>– of which: EUR/domestic currency (%)</td>
<td>64</td>
<td>68</td>
<td>77</td>
<td>70</td>
<td>69</td>
</tr>
<tr>
<td></td>
<td>– of which: USD/domestic currency (%)</td>
<td>31</td>
<td>24</td>
<td>18</td>
<td>23</td>
<td>26</td>
</tr>
<tr>
<td>Turnover – foreign currencies/foreign currencies</td>
<td>879</td>
<td>870</td>
<td>413</td>
<td>845</td>
<td>279</td>
<td>1 944.3</td>
</tr>
</tbody>
</table>

Note: In the emerging markets, the “Other reporting institutions” category included mainly smaller banks, therefore the above table includes transactions concluded with “Other reporting institutions” and “Other financial entities” for the interbank market.

Source: NBP calculations on the basis of the results of the research Triennial Central Bank Survey – Foreign exchange and derivatives market activity in 2007, made available by the NBP, the Czech National Bank and the National Bank of Hungary.

Figure 5.3.6. Currency composition of zloty exchange transactions concluded in the domestic interbank market, 2004–2007

Source: NBP data submitted by banks acting as Primary Dealers and/or money market dealers and candidates for these functions.

dependent on the EUR/PLN and the EUR/USD exchange rates. This is confirmed by the high volatility of USD/PLN and EUR/USD exchange rates. In 2007 the correlation coefficient between those exchange rates remained within 0.55–0.9 range. In addition, the volatility of the zloty against the US dollar exchange rate was higher as compared to the volatility of exchange rate of the zloty against the euro. The fluctuations of the exchange rate of the zloty against the US dollar resulted from the changes in both EUR/PLN and EUR/USD exchange rates.

The customer market was clearly dominated by the EUR/PLN transactions, but their share in net turnover was lower than in the interbank market and amounted to 68% in April 2007. USD/PLN transactions accounted for 24% and GBP/PLN transactions for 4% of turnover in the customer market. The currency composition of turnover in the customer market was similar to the currency composition of payments arising from foreign trade of Poland. The composition of payments arising from exports and imports in 2007 was as follows: 71% and 58% for the euro, 18% and 29% for the US dollar and to 11% and 13% for other foreign currencies.64

In 2007, transactions in which foreign currencies were exchanged for other foreign currencies were also carried out in the domestic market. The average daily turnover in that market segment amounted to around PLN 2.5 billion, over 90% of which were transactions in the interbank market. In 2007, EUR/USD transactions accounted for around 75% of turnover in this segment of the domestic FX market. As the interbank FX swap market was traditionally dominated by USD/PLN

64 NBP data based on payments for goods, registered by the banking system.
trades, the banks operating in Poland found it the easiest to take positions in the zloty forward market (in order to, *inter alia*, neutralize the exposure arising from customer operations) by carrying out the following transactions: USD/PLN FX swap, EUR/USD spot and EUR/PLN spot. The GBP/USD exchange rate accounted for almost 20% share in the value of operations of foreign currencies exchange in the domestic market, with the vast majority of them being speculative transactions of banks concluded with foreign entities.

**Market participants**

The large share of foreign banks in the turnover with domestic banks as well as the dynamic increase in the value of offshore market transactions between 2004 and 2007 suggest that the zloty market was dominated by the speculative operations of London-based banks and foreign hedge funds. In April 2007, zloty exchange transactions between residents of Poland accounted for less than 15% of registered net turnover (over 36% in April 2004). Flows related to the real economy played an insignificant role. The share of transactions of non-financial customers in net turnover in the zloty market amounted to 29%.

The concentration of liquidity in the offshore market was related to the fact that hedge funds operated only with foreign banks that had a much wider offer of services related to handling FX transactions (prime brokerage, own trading platforms, fully automated confirmation of the transaction terms and conditions as well as their settlement) and were able to conclude large-value transactions. Foreign banks which were the most active in the zloty market as well as in the other Central and Eastern European currency markets were Deutsche Bank, Citigroup and UBS.\(^65\) Due to

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the low level of own funds (as compared to the London-based banks) and the conservative policy with respect to the open FX position, banks which operated in Poland very seldom acted as counterparties to foreign non-banking financial institutions and they carried out significantly fewer speculative operations (proprietary trading).

As compared to April 2004, the concentration of turnover in the domestic zloty market slightly decreased but remained high. In April 2007, the share of the five most active banks operating in the domestic zloty market amounted to 58% (Figure 5.3.8).

**Market infrastructure**

The transactions in the zloty interbank market in Poland in 2007 were mainly concluded via the systems automatically matching buy and sell orders. The zloty exchange transactions could be carried out in two such systems, namely, Reuters Spot Matching and EBS (Electronic Brokerage Services), but banks seldom concluded transactions using the latter system and preferred the very liquid market on the Reuters Spot Matching platform. In April 2007, the transactions concluded via the systems automatically matching orders accounted for around 58% of gross turnover in the domestic interbank zloty market. Around 26% of zloty exchange operations were carried out via the traditional conversation system, i.e. Reuters Dealing Direct and by phone, while 16% transactions were concluded via the voice broker. The terms of transactions concluded by domestic banks with non-financial entities were most often agreed by phone.

The standard value of transactions in the interbank zloty market in Poland amounted to 3 and 5 million euro for operations carried out in the conversational system. In the offshore market, the values of individual zloty exchange transactions were higher, which resulted from, *inter alia*, the composition of counterparties, i.e. the large share of operations with hedge funds. The value of transactions executed via the Reuters Spot Matching system amounted most often to 1 and 5 million euro, though the share of transactions with the value exceeding 1 million euro was markedly higher as compared to the previous years.

In the London market, transactions with non-banking entities (mainly hedging funds) were usually carried out via electronic trading platforms that allowed using algorithmic trading and carry trade strategies. The most popular trading platforms for zloty exchange transactions were Deutsche Bank’s Autobahn and FXall, organised by a consortium of banks.
5.4. Derivatives market

Financial derivatives are traded both in the stock exchange and over-the-counter (OTC). The advantages of the exchange market include the centralisation of trade and functioning of clearing houses, which contribute to a better market transparency, reduce counterparty credit risk and facilitate the participation of a greater number of investors. The OTC market, on the other hand, makes it possible to tailor the conditions of the contracts to the investor’s needs. The gross value of open positions of banks – the sum of nominal values of sold and purchased derivatives – suggests that the OTC market plays a greater role in the global financial system. The statistics of daily net turnover indicate, in turn, that the exchange market is much more liquid (Table 5.4.1).

A dynamic increase in the OTC derivatives market was recorded in 2004–2007. It was expressed in a substantial increase in turnover in this market and higher values of open off-balance sheet positions of banks as a result of transactions in derivatives. Between April 2004 and April 2007, net turnover on the OTC derivatives market increased by 67%, and on the exchange market – by 34%. As of the end of 2007, the value of open positions in OTC derivatives was 129% higher than at the end of 2004, whereas exposures in exchange-traded derivatives increased by 73%.66 The majority of transactions in interest rate and equity-linked derivatives were still concluded on stock exchanges. Transactions in FX derivatives were concluded mainly on the OTC market.

Table 5.4.1. Average daily net turnover in individual sectors of the world derivatives market (USD billion)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>OTC derivatives</td>
<td>490</td>
<td>686</td>
<td>1 374</td>
<td>2 292</td>
</tr>
<tr>
<td>– Interest rate derivatives</td>
<td>265</td>
<td>489</td>
<td>1 025</td>
<td>1 686</td>
</tr>
<tr>
<td>– FX derivatives</td>
<td>225</td>
<td>197</td>
<td>349</td>
<td>606</td>
</tr>
<tr>
<td>Exchange-traded derivatives</td>
<td>1 382</td>
<td>2 198</td>
<td>4 547</td>
<td>6 173</td>
</tr>
<tr>
<td>– Interest rate derivatives</td>
<td>1 371</td>
<td>2 188</td>
<td>4 524</td>
<td>6 101</td>
</tr>
<tr>
<td>– FX derivatives</td>
<td>11</td>
<td>10</td>
<td>22</td>
<td>72</td>
</tr>
</tbody>
</table>

1 FOW TRADE data; Futures Industry Association; derivatives exchange markets.


5.4.1. Evolution of the derivatives market: size and structure

In Poland, the OTC market is much more developed in terms of the turnover volume. The average daily turnover on the OTC market in 2004–2007 was significantly higher than that of derivatives listed on the WSE (Table 5.4.2). Banks, i.e. the institutions with the largest assets in the Polish financial system, acted as market makers on the OTC market. The considerable activity of foreign banks, which are still almost absent from the WSE, had a substantial impact on the volume of turnover. It was the speculative transactions on the interbank market that had a strong impact on the liquidity of this market. Additionally, Polish companies preferred to manage their financial risk using derivatives offered by banks rather than those traded on stock exchanges. Factors behind their preferences included: long-term relationships between banks and enterprises, larger offer and greater flexibility of OTC derivatives, as well as higher market liquidity, which affected the cost of the hedging instrument.

In 2004–2007, the OTC interest rate derivatives market was the fastest developing OTC derivatives market in Poland, which resulted mainly from the increase in banks’ activity in the OIS market. The most liquid segment of this market and of the entire OTC derivatives market was the FRA market. Among the FX derivatives, the forward market was the most developed, even though a significant increase in the value of CIRS transactions was recorded in 2007. Banks used these

66 The value of open positions includes the positions in derivatives related to the equity market, while the analysis of turnover does not include these instruments.
instruments to hedge the risk resulting from the dynamic increase in the value of mortgage loans indexed to foreign currencies.

In the last three years, the exchange market grew more dynamically than the OTC market, which was caused, *inter alia*, by the fast development of equity market on the WSE. As in previous years, WIG20 futures contracts were the most popular derivatives available on the WSE. Trade in those instruments accounted for over 95% of the total turnover in the exchange-traded derivatives market. Individual investors remained the main participants of this market, yet their share in turnover was constantly decreasing. As compared to 2006, the value of transactions in the WSE derivatives market increased by almost 80%. The bull market in the first half of 2007 contributed to an increase in the activity in the equity market.

### 5.4.2. OTC derivatives

The OTC derivatives market in Poland enables financial institutions and enterprises to hedge against the interest rate and FX rate risk. It also makes it possible to undertake a certain kind of risk in a desirable scope. Those features of the derivatives market determine the division of transactions in this market into speculative and hedging transactions. Furthermore, arbitrage between the derivatives market and the spot market is common. This is possible in the case of derivatives that generate cash flows similar in structure and value to payments related to the underlying financial instruments (e.g. IRS transactions vs. Treasury bonds).

Due to the decentralised nature of the OTC market, banks are the major market makers and participants. The analysis of domestic banks’ gross off-balance sheet positions resulting from transactions in OTC derivatives shows that in 2007, as in previous years, banks held the largest exposures in interest rate derivatives. Banks’ activities concentrated on instruments denominated in PLN. The FRA market remained the most developed segment of the OTC derivatives market. A very rapid increase in liquidity was observed in the OIS (Overnight Index Swap) transactions in 2007. Turnover in this market exceeded the turnover in the IRS market, although banks’ positions resulting from OIS transactions (a vast majority of the category “Other instruments of similar nature”), due to their short-term nature, were significantly lower. The interest rate options market and bond forward market were both still underdeveloped (Table 5.4.3).

The forward market, dominated by transactions with non-banking entities, was the most developed segment of the OTC FX derivatives market. The currency risk was the most important kind of financial risk identified and neutralised by Polish enterprises. In 2007, a significant increase in turnover was noted on the FX options market, especially with non-financial entities.

Table 5.4.2. Average daily net turnover in the domestic derivatives market, 2004–2007 (PLN million)

<table>
<thead>
<tr>
<th>Year</th>
<th>OTC derivatives</th>
<th>Exchange-traded derivatives</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2004</td>
<td>2005</td>
</tr>
<tr>
<td></td>
<td>5 490.3</td>
<td>7 759.4</td>
</tr>
<tr>
<td></td>
<td>– interest rate derivatives</td>
<td>4 178.3</td>
</tr>
<tr>
<td></td>
<td>– FX derivatives</td>
<td>1 312.0</td>
</tr>
<tr>
<td></td>
<td>251.5</td>
<td>498.9</td>
</tr>
<tr>
<td></td>
<td>– interest rate derivatives</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>– FX derivatives</td>
<td>0.5</td>
</tr>
<tr>
<td></td>
<td>251.0</td>
<td>483.1</td>
</tr>
<tr>
<td></td>
<td>– of which WIG20 futures</td>
<td>239.6</td>
</tr>
</tbody>
</table>

Note: OTC market turnover calculated according to nominal value; stock exchange market turnover calculated on the basis of settlement amounts. The exchange market only includes instruments traded on the WSE. For this market, session and package transactions are included. The “FX derivatives” category for the OTC market does not include FX swaps.

Source: NBP own calculations based on NBP and WSE data.
Table 5.4.3. Gross positions of domestic banks on the OTC derivatives market at the end of 2006 and 2007 (by nominal value of instruments, PLN billion)

<table>
<thead>
<tr>
<th></th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PLN(^1)</td>
<td>Other currencies</td>
</tr>
<tr>
<td>Interest rate derivatives</td>
<td>1 525.30</td>
<td>126.00</td>
</tr>
<tr>
<td>– FRA</td>
<td>793.90</td>
<td>28.30</td>
</tr>
<tr>
<td>– IRS</td>
<td>616.80</td>
<td>83.50</td>
</tr>
<tr>
<td>– options</td>
<td>2.96</td>
<td>0.51</td>
</tr>
<tr>
<td>– bond forwards</td>
<td>1.05</td>
<td>0.08</td>
</tr>
<tr>
<td>– other instruments of similar nature (incl. OIS)</td>
<td>110.60</td>
<td>13.70</td>
</tr>
<tr>
<td>FX derivatives</td>
<td>115.50</td>
<td>n/d</td>
</tr>
<tr>
<td>– forwards</td>
<td>55.40</td>
<td>n/d</td>
</tr>
<tr>
<td>– CIRS</td>
<td>31.00</td>
<td>n/d</td>
</tr>
<tr>
<td>– options</td>
<td>29.20</td>
<td>n/d</td>
</tr>
<tr>
<td>Equity-linked derivatives</td>
<td>4.10</td>
<td></td>
</tr>
<tr>
<td>Credit derivatives</td>
<td>0.00</td>
<td></td>
</tr>
</tbody>
</table>

\(^1\) For FX derivatives, the nominal value of derivatives transactions regarding PLN exchange rate against foreign currencies has been presented in this column.

Source: NBP.

The value of banks’ gross positions in equity-linked derivatives remained at a low level. In 2007, banks were actively trading mainly in OTC options on stock exchange indices. Banks were still not very active in the credit derivatives market. Low exposures in credit instruments resulted from CDS (Credit Default Swap) transactions concluded with non-residents, but they were insignificant.

The further parts of this section describe the structure and growth factors of the domestic OTC derivatives market in detail, in the interest rate and the FX derivatives segments. Additionally, the liquidity of the offshore market for PLN exchange rate derivatives was estimated, based on the results of the Triennial Central Bank Survey of Foreign Exchange and Derivatives Market Activity in 2007, performed in April 2007 by the Bank for International Settlements.

5.4.2.1. Interest rate derivatives

Market size

In 2007, the domestic OTC interest rate derivatives market, with its average daily turnover of around USD 2.6 billion, was the largest one in our region. In Poland this market was characterised by relatively high liquidity in the FRA, as well as interest rate swap market sectors (IRS and OIS). As compared to 2004, the advantage of the Polish domestic market over the markets of countries from our region strengthened, especially with respect to the IRS and OIS market. It was caused by the dynamic growth of the domestic OIS market. The Polish market, similarly to the markets in the Czech Republic and Hungary, was dominated by domestic interest rate transactions. None of the countries in our region managed to develop a liquid interest rate options market (Table 5.4.4).

Interest rate derivatives of the Polish money market (mainly FRA and IRS) were also traded outside Poland, mainly in the London market. Based on the opinions of banks, the value of FRA and IRS transactions in the offshore market is estimated to have exceeded the turnover volume in the domestic market. Given the activity in the offshore market and the large share of non-residents in transactions with domestic banks, it needs to be stated that the liquidity of the OTC Polish interest rate derivatives market was influenced by London banks to a significant extent.

The market for FRA transactions denominated in PLN remained the most developed sector of the OTC interest rate derivatives market in Poland. In 2007, the average daily net turnover in this market amounted to PLN 6.1 billion and was 27% higher than in 2006 (PLN 4.8 billion).
(Figure 5.4.1). The increased turnover in the FRA market resulted mainly from an increase in the amount of speculative operations related to expectations of interest rates changes. The increase in gross off-balance sheet positions due to FRA transactions denominated in PLN also indicates the growth of this market. The intense activity of non-residents on the domestic FRA market is shown by both the data on turnover and on domestic banks’ exposures.

The second largest segment of the domestic OTC interest rate derivatives market in terms of turnover was the OIS market, established in 2004. The year 2007 saw a rapid increase of liquidity in this market. The average daily net turnover amounted to PLN 2.4 billion and was 180% higher than in 2006 (Figure 5.4.2). Gross positions of banks resulting from these transactions also increased significantly (by around 60%) (the majority of the “Other instruments of similar nature“ category presented in Table 5.4.3). The development of the OIS market in 2007 was influenced by an increase in the number of its active participants, as well as increased activity of its incumbent participants. More and more banks introduced risk management procedures and adjusted operating systems to daily monitoring of OIS transactions. The characteristic feature of the OIS market, in comparison with other OTC derivatives markets in Poland, was the low activity of foreign banks (a 20% share in net turnover).

Domestic banks used OIS transactions mainly to hedge against changes in financing costs on the money market and to speculate on interest rate and exchange rate movements. Moreover, the transactions allowed them to limit the basis risk resulting from the mismatch between positive and negative cash flows and arbitrage between OIS quotations and interest rates in the domestic money market.

Figure 5.4.1. Monthly net turnover in the domestic FRA market for transactions denominated in PLN, 2004–2007

Table 5.4.4. Average daily net turnover in the OTC interest rate derivatives market in Poland, the Czech Republic and Hungary, April 2004 and April 2007 (USD million)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>FRA</td>
<td>691</td>
<td>1 435</td>
<td>471</td>
<td>438</td>
<td>105</td>
<td>568</td>
</tr>
<tr>
<td>– of which FRA in the domestic currency</td>
<td>635</td>
<td>1 094</td>
<td>260</td>
<td>212</td>
<td>93</td>
<td>546</td>
</tr>
<tr>
<td>IRS and OIS</td>
<td>267</td>
<td>1 240</td>
<td>60</td>
<td>204</td>
<td>90</td>
<td>267</td>
</tr>
<tr>
<td>– of which IRS and OIS in the domestic currency</td>
<td>213</td>
<td>968</td>
<td>19</td>
<td>80</td>
<td>87</td>
<td>256</td>
</tr>
<tr>
<td>Interest rate options</td>
<td>0</td>
<td>6</td>
<td>2</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>– of which options in the domestic currency</td>
<td>0</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>958</td>
<td>2 681</td>
<td>533</td>
<td>645</td>
<td>195</td>
<td>833</td>
</tr>
</tbody>
</table>

Source: NBP calculations on the basis of the results of the Triennial Central Bank Survey of Foreign Exchange and Derivatives Market Activity in 2007, made available by the NBP, the Czech National Bank and the National Bank of Hungary.

Note: Data adjusted for double-counting with respect to transactions between resident banks.
Source: NBP data submitted by banks acting as Primary Dealers and candidates for this function.
Figure 5.4.2. Monthly net turnover in the domestic OIS market for transactions denominated in PLN, 2006–2007

Note: Data adjusted for double-counting with respect to transactions between resident banks.
Source: NBP data submitted by banks acting as Primary Dealers.

The IRS market was the third largest segment of the OTC interest rate derivatives market in terms of turnover. In 2007, the average daily net turnover in the IRS market increased by 64% as compared to 2006 and amounted to PLN 1.8 billion (Figure 5.4.3). It was related to the larger scale of speculative operations resulting from the increase in long-term interest rates on the Polish market and larger difference between IRS quotations and Treasury bonds’ yield. Similarly to the FRA market, foreign banks had a significant share in turnover (almost 70%). The year 2007 saw a substantial increase in the involvement of domestic banks in IRS transactions denominated in currencies other than PLN.

The options market remained the least developed segment of the domestic OTC interest rate derivatives market. In 2007, the average monthly turnover in this market almost doubled and reached PLN 171 million. Low market liquidity resulted from a small number of market participants. None of domestic banks had a portfolio of these instruments and, therefore, none could actively participate in the interbank market. In 2007, only six domestic banks offered interest rate options to non-banking customers. Exposures resulting from option transactions were hedged with foreign banks (usually dominant entities) in form of back-to-back transactions.

**Market structure**

The currency structure of interest rate derivatives transactions concluded by banks operating in Poland was dominated by PLN transactions (Figure 5.4.4). However, domestic banks became more and more active in the market for IRS and FRA transactions denominated in foreign currencies, especially with exposure to interest rates in Hungary. In April 2007, FRA transactions denominated...
Figure 5.4.4. Currency structure of turnover in the FRA, IRS and OIS transactions market in Poland, April 2004 and April 2007

Figure 5.4.5. Maturity structure of FRA transactions denominated in PLN, 2006–2007

Note: Maturity structure according to the original maturities, contract maturity intervals are left half-open.

Source: NBP data submitted by banks acting as Primary Dealers.

in HUF constituted over 20% of the turnover in the domestic FRA market and nearly 13% in the IRS market. Some banks also concluded OIS transactions settled using the EONIA rate.

As compared to 2006, the maturity structure of FRA transactions denominated in PLN remained relatively unchanged (Figure 5.4.5). The market liquidity was concentrated in the following segments: 9x12, 3x6, 1x4, and 6x9. Domestic banks more frequently concluded transactions with maturity exceeding one year. Standard reference rates on the market for FRA transactions denominated in PLN were mainly WIBOR 1M, 3M and 6M. The standard values of transactions in the interbank market amounted to PLN 250 million, but were usually larger (PLN 500 million) with respect to transactions with shorter maturity and WIBOR 1M as a reference rate.

The year 2007 saw significant changes in the maturity structure of OIS transactions (Figure 5.4.6). A significant increase in the share of OIS transactions with shorter maturities (up to two weeks) resulted from the fact that they were more often used to speculate on changes in short-term money market rates. On the other hand, they were used to a lesser extent to hedge against changes in financial costs of positions held in debt securities. The reference rate for the majority of OIS transactions (around 75%) was the POLONIA rate, although some banks concluded transactions (mainly with foreign banks) settled according to the O/N WIBOR rate. Standard nominal values of OIS transactions with maturity of up to one week amounted to PLN 500 million and in the case of transactions with maturity exceeding three months – PLN 100 million.

The maturity structure of IRS transactions was still dominated by transactions with maturity periods from one to two years (Figure 5.4.7). Domestic banks more frequently used OIS transactions...
to reduce the interest rate risk arising from mismatch between banks’ assets and liabilities. As a result, the activity in the segment of IRS transactions with maturity of up to one year was limited in 2006–2007. In the last three years, the turnover in the segment of transactions with maturity exceeding 5 years has increased significantly. The development of this market segment was possible owing to foreign banks’ activity. The reference rate used most frequently for IRS transactions nominated in PLN was WIBOR 6M (WIBOR 3M was used for 1Y IRS). Standard nominal values of 2Y and 5Y IRS transactions amounted to PLN 50 or 100 million. In the case of transactions with maturity periods exceeding five years, the amounts used for the calculation of interest payments were lower.

**Market participants**

The structure of entities participating in the OTC interest rate derivatives market in Poland, like in the Czech Republic and Hungary, was dominated by transactions with financial entities, mainly banks (Table 5.4.5). Transactions concluded with other banks (domestic and foreign) accounted for over 90% of turnover in the market in Poland. High activity of banks resulted from the fact that they used these instruments to hedge their positions in Treasury securities and to speculate on interest rate movements.

The common feature of interest rate derivatives markets in countries from our region was the high share of non-residents in the structure of entities participating in turnover, especially in the FRA and IRS transactions segment. In Poland the value of transactions with foreign entities’ exceeded the value of transactions concluded between residents. Between April 2004 and April 2007 the share of foreign entities in the turnover on the Polish OTC interest rate derivatives market decreased from around 70% to 53%, which was caused by a rapid development of the OIS market.
Table 5.4.5. Share of entities in the turnover on the OTC interest rate derivatives market in Poland, the Czech Republic and Hungary, April 2004 and April 2007 (average daily net turnover in USD million)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>FRA – with banks</td>
<td>678</td>
<td>471</td>
<td>470</td>
<td>418</td>
<td>105</td>
<td>566</td>
</tr>
<tr>
<td>FRA – with non-residents</td>
<td>486</td>
<td>389</td>
<td>334</td>
<td>343</td>
<td>94</td>
<td>446</td>
</tr>
<tr>
<td>IRS and OIS – with banks</td>
<td>267</td>
<td>60</td>
<td>204</td>
<td>90</td>
<td>267</td>
<td>267</td>
</tr>
<tr>
<td>IRS and OIS – with non-residents</td>
<td>178</td>
<td>52</td>
<td>181</td>
<td>89</td>
<td>246</td>
<td>246</td>
</tr>
<tr>
<td>Interest rate options – with banks</td>
<td>0</td>
<td>6</td>
<td>2</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Interest rate options – with non-residents</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Note: In the emerging markets, the “Other reporting institutions” category included mainly smaller banks; therefore the above table includes transactions concluded with “Other reporting institutions” and “Other financial entities” for the interbank market.

Source: NBP calculations on the basis of the results of the Triennial Central Bank Survey of Foreign Exchange and Derivatives Market Activity in 2007, made available by the NBP, the Czech National Bank and the National Bank of Hungary.

Figure 5.4.8. Concentration of turnover in the FRA market and interest rate swap market (IRS and OIS) in April 2004 and April 2007


in Poland, dominated by transactions between residents. Low activity of foreign banks in the OIS market resulted from the low share of these entities in the domestic interbank deposit market and the fact that investments in PLN securities were financed mainly through the FX swap market.

The share of non-banking financial institutions in turnover on the domestic interest rate derivatives market was insignificant. Due to high rates of return achieved in the equity market and constant inflow of new funds, investment funds operating in Poland were not interested in derivatives. However, this situation may change as a result of lower rates of return achieved in the second half of 2007 and the resulting redemption of participation units by fund participants. In order to encourage households to invest through investment funds, fund managers may be more willing to extend the offer of financial instruments used in their investment strategies. Pension funds, on the other hand, due to the absence of implementing rules, could not use derivatives to hedge against a drop in Treasury bonds’ prices.

Non-banking entities very rarely used OTC interest rate derivatives. Enterprises most frequently used IRS transactions and – to a smaller extent – options to manage the interest rate risk. These entities were almost absent from the FRA and OIS transactions market.
5.4.2.2. FX derivatives

Market size

The OTC market for PLN exchange rate derivatives was the largest among FX markets in our region. Between April 2004 and April 2007 the turnover in the OTC market for PLN exchange rate derivatives increased significantly, as did the Czech koruna and forint derivatives market. The growth of the Polish market entailed an increase in the share of transactions concluded outside the domestic market. In 2007, transactions between non-residents accounted for almost 70% of turnover in regional exchange rate derivatives.

The activity of non-residents in recent years has been transferred to the offshore market and the foreign banks, which shaped the liquidity of the domestic market for PLN exchange rate derivatives to a large extent, have been less willing to conclude transactions with domestic entities. The significant feature which distinguished the domestic OTC FX derivatives market from the interest rate derivatives market was the considerably higher share of transactions with non-banking entities. A substantial number of enterprises used FX derivatives, forward transactions in particular, to hedge their exposures to currency risk.

The PLN forward market was the largest segment of the OTC derivatives market among the regional currencies (Table 5.4.6). In comparison with April 2004, there was a 5.5 times increase in turnover on this market. Liquidity was mainly influenced by transactions concluded between non-residents. In April 2004 customer transactions prevailed in this market, whereas in 2007 transactions between financial entities obtained a larger share. The abovementioned changes resulted from an increase in the value of speculative transactions concluded by foreign banks and hedge funds on the offshore market.

Transactions in which at least one of the parties was a domestic bank accounted in April 2007 for only 17% of turnover in the PLN forward market. The forward market was the most developed segment of the domestic PLN derivatives market. However, in comparison with April 2004 Poland lost its leading position in the forward market in the region (Table 5.4.7). It was the result of a dynamic increase of activity in the forward market in the Czech Republic, where the value of transactions on the interbank market, especially USD/CZK transactions concluded with foreign banks, increased significantly.

The average daily net turnover in the domestic PLN forward market amounted to PLN 1.1 billion in 2006 and PLN 1.45 billion in 2007 (Figure 5.4.9). This increase in turnover of over 30% was mainly caused by the increase in transactions with non-banking entities, which affected the liquidity of this market to a large extent (a share of around 80% in net turnover). Together with the increased export and import, enterprises more and more frequently hedged the value of future payments denominated in foreign currencies against changes in the PLN exchange rate. Furthermore, a greater interest in speculative transactions was observed on the part of private banking customers. Domestic banks hedged their cash flows denominated in foreign currencies resulting from customer transactions in the interbank market, mainly by concluding transactions with foreign banks. This led to an increase in turnover on the interbank PLN forward market and in the share of transactions with foreign banks in this turnover from 88% in 2006 to 95% in 2007.

The option market was the second largest PLN derivatives market in terms of the value of transactions concluded in April 2007. As compared to April 2004, the average daily net turnover increased by 262% and amounted to USD 940 billion in April 2007. Similarly to the Czech koruna and forint option markets, the Polish market was dominated by transactions with financial entities (around 65% of turnover). The liquidity in all three FX markets was mainly shaped by the activity of non-residents. The share of offshore transactions in the PLN option market turnover increased
Table 5.4.6.  Average daily net turnover in the PLN, CZK and HUF forward markets in April 2004 and April 2007 (USD million)

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total turnover, of which:</td>
<td>483</td>
<td>2,644</td>
<td>253</td>
<td>1,432</td>
<td>308</td>
<td>1,357</td>
</tr>
<tr>
<td>– transactions between residents</td>
<td>161</td>
<td>392</td>
<td>39</td>
<td>205</td>
<td>54</td>
<td>82</td>
</tr>
<tr>
<td>– resident–non-resident transactions</td>
<td>27</td>
<td>64</td>
<td>3</td>
<td>565</td>
<td>28</td>
<td>34</td>
</tr>
<tr>
<td>– transactions between non-residents (offshore)</td>
<td>295</td>
<td>2,188</td>
<td>211</td>
<td>662</td>
<td>226</td>
<td>1,241</td>
</tr>
</tbody>
</table>


Table 5.4.7.  Average daily net turnover and the structure of forward markets in Poland, the Czech Republic and Hungary in April 2004 and April 2007 (USD million)

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Turnover – foreign currencies/domestic currency</td>
<td>188</td>
<td>456</td>
<td>42</td>
<td>770</td>
<td>82</td>
<td>116</td>
</tr>
<tr>
<td>– of which: EUR/domestic currency (%)</td>
<td>63</td>
<td>67</td>
<td>74</td>
<td>28</td>
<td>70</td>
<td>64</td>
</tr>
<tr>
<td>– of which: USD/domestic currency (%)</td>
<td>33</td>
<td>28</td>
<td>24</td>
<td>67</td>
<td>21</td>
<td>22</td>
</tr>
<tr>
<td>Customer-driven market</td>
<td>156</td>
<td>373</td>
<td>35</td>
<td>76</td>
<td>60</td>
<td>69</td>
</tr>
<tr>
<td>Turnover – foreign currencies/foreign currencies</td>
<td>141</td>
<td>71</td>
<td>28</td>
<td>105</td>
<td>43</td>
<td>58</td>
</tr>
</tbody>
</table>

Source: NBP calculations on the basis of the results of the Triennial Central Bank Survey of Foreign Exchange and Derivatives Market Activity in 2007, made available by the NBP, the Czech National Bank and the National Bank of Hungary.

from 45% in April 2004 to 67% in April 2007 (Table 5.4.8). This increase was caused by greater activity of hedge funds which held large positions in PLN options, including barrier options. The interbank PLN option market was highly segmented. It was more and more difficult for domestic banks to become counterparties to foreign banks in speculative transactions due to excessively high nominal values of option strategies. The activity of domestic banks in this market segment was constrained by their equity, which determines the amount of market risk taken and the value of credit limits that counterparties impose on themselves.

Despite its segmentation, the PLN option market in Poland was dynamically developing in 2007. The average daily net turnover in this market amounted to PLN 1.14 billion and was almost 140% higher than in 2006. An increase in liquidity was also recorded in other countries of the region (Table 5.4.9). The increased activity in the FX option market in Poland resulted mainly from the value of transactions with non-banking entities, which was around 200% higher than in 2006. The increase in trade contributed to a higher demand of enterprises for instruments hedging against the currency risk. Enterprises used option strategies adjusted to their structure of payments more frequently. The turnover in the interbank market increased as well and equalled PLN 0.62 billion (Figure 5.4.10). The majority of these transactions were concluded with non-residents, mainly foreign dominant entities (back-to-back hedge transactions).

A liquid CIRS market has not developed for any of the currencies from our region. The PLN CIRS market was characterised by the fastest pace of growth of the value of transactions among the PLN FX derivatives markets. It was the result of the increased activity of domestic banks and foreign financial institutions (Table 5.4.10). The average daily net turnover in the CIRS market for transactions including the Polish zloty increased in April 2007 by around USD 185 million and was definitely higher than in the CZK and HUF markets. Similarly to the forward and FX option markets, the CIRS market was dominated by transactions between non-residents (accounting for 67% of PLN CIRS transactions).

The CIRS market remained the least developed segment of the domestic OTC FX derivatives market in Poland, but it was considerably larger than the Czech or the Hungarian market.
(Table 5.4.11). In 2007, the average daily net turnover in the domestic PLN CIRS market increased in comparison with 2006 by 87% and reached PLN 74 million. Unlike the forward and option markets, the CIRS market was dominated by interbank transactions. Domestic banks became more active mainly due to the need to eliminate the mismatch between assets and liabilities. The dynamic increase in mortgage credits for flats indexed to foreign currencies (mainly to CHF) was a source of currency and interest rate risks. Banks used CIRS foreign currency/PLN transactions, CHF/PLN in particular, to reduce the abovementioned risks. Turnover in the domestic market was dominated by basis swaps concluded with foreign banks. The year 2007 saw a sharp 400% increase in turnover on the customer market (Figure 5.4.11). The increase in the demand of enterprises for CIRS transactions may have resulted from the growing value of loans taken in foreign currencies and the necessity to hedge against the risk connected with this kind of financing.

Table 5.4.8. Average daily net turnover in the PLN, CZK and HUF option markets in April 2004 and April 2007 (USD million)

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total turnover, of which:</td>
<td>260</td>
<td>940</td>
<td>98</td>
<td>226</td>
<td>73</td>
<td>269</td>
</tr>
<tr>
<td>– transactions between residents</td>
<td>53</td>
<td>207</td>
<td>15</td>
<td>26</td>
<td>6</td>
<td>26</td>
</tr>
<tr>
<td>– resident–non-resident transactions</td>
<td>90</td>
<td>99</td>
<td>32</td>
<td>27</td>
<td>7</td>
<td>39</td>
</tr>
<tr>
<td>– transactions between non-residents (offshore)</td>
<td>117</td>
<td>634</td>
<td>51</td>
<td>173</td>
<td>60</td>
<td>204</td>
</tr>
</tbody>
</table>


Table 5.4.9. Average daily net turnover and the structure of the FX option market in Poland, the Czech Republic and Hungary in April 2004 and April 2007 (USD million)

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Turnover – foreign currencies/domestic currency</td>
<td>143</td>
<td>306</td>
<td>47</td>
<td>53</td>
<td>13</td>
<td>65</td>
</tr>
<tr>
<td>– of which: EUR/domestic currency (%)</td>
<td>55</td>
<td>70</td>
<td>80</td>
<td>97</td>
<td>4</td>
<td>77</td>
</tr>
<tr>
<td>– of which: USD/domestic currency (%)</td>
<td>44</td>
<td>27</td>
<td>17</td>
<td>2</td>
<td>40</td>
<td>10</td>
</tr>
<tr>
<td>Customer-driven market</td>
<td>47</td>
<td>192</td>
<td>12</td>
<td>24</td>
<td>6</td>
<td>26</td>
</tr>
<tr>
<td>Turnover – foreign currencies/foreign currencies</td>
<td>38</td>
<td>38</td>
<td>14</td>
<td>20</td>
<td>33</td>
<td>77</td>
</tr>
</tbody>
</table>

Source: NBP calculations on the basis of the results of the Triennial Central Bank Survey of Foreign Exchange and Derivatives Market Activity in 2007, made available by the NBP, the Czech National Bank and the National Bank of Hungary.
CIRS transactions weigh on credit limits to a large extent due to the associated currency and interest rate risks. Therefore, the situation on global financial markets will exert an enormous influence on the further development of CIRS transactions. The financial market disturbance and the loss of confidence on the part of market participants may reduce the credit limits that banks impose on themselves, including banks operating in Poland. As a result, the number of active entities in the CIRS market may decline and credit margins included in the prices of these instruments may increase.

Table 5.4.10. Average daily net turnover in the PLN, CZK and HUF CIRS markets in April 2004 and April 2007 (USD million)

<table>
<thead>
<tr>
<th></th>
<th>PLN</th>
<th>CZK</th>
<th>HUF</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>185</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>2007</td>
<td>11</td>
<td>40</td>
<td>11</td>
</tr>
<tr>
<td>Total turnover, of which:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>– transactions between residents</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>– resident–non-resident transactions</td>
<td>0</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>– transactions between non-residents (offshore)</td>
<td>5</td>
<td>32</td>
<td>10</td>
</tr>
</tbody>
</table>


Table 5.4.11. Average daily net turnover and the structure of the CIRS market in Poland, the Czech Republic and Hungary in April 2004 and April 2007 (USD million)

<table>
<thead>
<tr>
<th></th>
<th>Poland</th>
<th>Czech Republic</th>
<th>Hungary</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>2007</td>
<td>61</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>Turnover – foreign currencies/domestic currency</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>– of which: EUR/domestic currency (%)</td>
<td>0</td>
<td>31</td>
<td>0</td>
</tr>
<tr>
<td>– of which: USD/domestic currency (%)</td>
<td>0</td>
<td>39</td>
<td>0</td>
</tr>
<tr>
<td>Customer-driven market</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Turnover – foreign currencies</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Source: NBP calculations on the basis of the results of the Triennial Central Bank Survey of Foreign Exchange and Derivatives Market Activity in 2007, made available by the NBP, the Czech National Bank and the National Bank of Hungary.
Market structure

The currency structure of the PLN forward and option markets was clearly related to the structure of trade payments of Polish enterprises. EUR/PLN transactions prevailed in turnover on these markets (Figure 5.4.12). The share of EUR/PLN transactions in the domestic PLN forward market amounted in April 2007 to 67% (an increase of 20 percentage points in comparison with April 2004). The share of EUR/PLN transactions in the FX option market amounted to almost 63% (43% in April 2004). The greater activity in this segment of PLN forward and option transactions, as well as a decrease of turnover in the EUR/USD market, resulted from the fact that after Poland’s accession to the EU the Polish zloty ceased to be a basket currency, and the EUR/PLN became the basic relation on the interbank PLN spot market. On the other hand, the domination of the EUR/PLN relation on the customer market resulted from a large share of EUR in export and import payments. The conditions for option and forward transactions were established mainly through the electronic conversational system and over the phone (over 95% of gross turnover in April 2007).

The currency structure of CIRS transactions was significantly influenced by banks’ transactions intended to hedge against the market risk resulting from mortgage loans denominated in foreign currencies. In April 2007, CHF/PLN transactions amounted to 38% of the value of transactions concluded with other banks. The CIRS transactions (EUR/PLN, EUR/CHF and USD/PLN) also had a large share in the market. It was caused by the fact that some banks used both EUR/PLN and EUR/CHF transactions to hedge the transactions concluded on the customer market and eliminate the mismatch between assets and liabilities.

The maturity structure of the turnover in the forward market was dominated by transactions with maturity exceeding 7 days, which were used by enterprises to limit their exposure to currency risk. Such operations accounted for 65.2% of turnover recorded in April 2007. The share of short-term transactions with maturity of up to 7 days used for speculations decreased to 34.8%. Non-deliverable forwards were also popular among private banking customers, who speculated on the PLN exchange rate.

Almost all options traded on the domestic interbank market were European options and option strategies based on them. The standard value of the ATM straddle option strategy quoted by banks amounted to EUR or USD 10 million. In order to hedge against unfavourable fluctuations in FX rates, enterprises usually used risk reversal strategy and plain vanilla options. Banks also offered exotic options to their clients, including barrier and binary options. The maturity of FX options was longer than previously (Figure 5.4.13). The share of transactions with maturity of up to 1 month decreased by 11 percentage points as compared to 2006. The increase in the share of operations with maturity exceeding 6 months represented a significant change. The fact that the
Figure 5.4.12. Currency structure of turnover in the forward, FX option and CIRS transactions markets in Poland in April 2004 and April 2007

![Currency structure chart]


Figure 5.4.13. Maturity structure of turnover in the PLN FX option market, 2006–2007

A. 2006

- <1M: 32%
- 1–3M: 27%
- 3–6M: 22%
- 6–9M: 8%
- 9M–1Y: 7%
- >1Y: 4%

B. 2007

- <1M: 21%
- 1–3M: 18%
- 3–6M: 21%
- 6–9M: 14%
- 9M–1Y: 14%
- >1Y: 12%

Note: Maturity structure according to the original maturities, contract maturity intervals are left half-open.
Source: NBP data submitted by banks acting as Primary Dealers.

Figure 5.4.14. Maturity structure of turnover in the CIRS market, 2006–2007

A. 2006

- >5Y: 42%
- 3–5Y: 31%
- 3–5Y: 18%
- 1–2Y: 6%
- 1–2Y: 3%

B. 2007

- >5Y: 17%
- 3–5Y: 18%
- 2–3Y: 38%
- 1–2Y: 14%
- 1–2Y: 13%

Note: Maturity structure according to the original maturities, contract maturity intervals are left half-open.
Source: NBP data submitted by banks acting as Primary Dealers.
average maturity of option transactions extended indicates that enterprises more frequently used these instruments to limit the impact of the change in the value of future cash flows denominated in foreign currencies on their financial results.

The maturity structure of CIRS transactions was dominated by transactions with maturity of 2 to 3 years and 3 to 5 years (Figure 5.4.14). They were used most often to hedge against risk resulting from the mismatch in the balance sheet structure, caused by a rapid growth in the value of long-term mortgage credits indexed to foreign currencies.

**Market participants**

The Polish OTC FX derivatives market was dominated by transactions with non-financial entities (70% share in net turnover). Enterprises and individual customers were the largest group of contractors in the forward and FX option segments, and their importance increased in the option market in comparison with 2004. The increased interest of enterprises in FX derivatives resulted from an increase in the awareness of currency risk and the need to hedge against the fall in the value of future cash flows related to foreign trade. In 2005–2007, there was a decrease not only in the value of transactions concluded by domestic banks with non-financial entities, but also in the number of companies participating in trade which declared the use of derivatives for the purpose of currency risk reduction (Figure 5.4.15). The second group of non-financial entities active especially in the forward market were private banking customers using short-term non-delivery forward transactions for speculations on the PLN exchange rate.

Foreign banks played an important role on the interbank FX derivatives market. As compared with April 2004, however, their share in turnover on the domestic OTC FX derivatives market decreased. It was due to the transferring of the activity to the dynamically developing offshore PLN derivatives market. Owing to the large share of foreign banks in trade with domestic banks and the dynamic increase in the value of transactions in the offshore market in 2004–2007, the liquidity of the OTC PLN derivatives market was influenced mainly by speculative operations of London banks and foreign hedge funds.

Transactions on the FX option market were seldom concluded between domestic banks. Only a few domestic banks were managing an FX options portfolio and regularly quoting implied volatilities of option strategies traded on the interbank market. Other banks, which offered options to their customers, acted only as agents in this market. Exposures resulting from transactions with non-banking entities were eliminated on the same day by the conclusion of back-to-back hedge transactions with foreign banks, usually parent companies. Banks were also not very active on the interbank PLN forward market, since they preferred synthetic forward transactions concluded in the most liquid segments of the domestic financial market – a combination of the spot and FX swap transactions.

Figure 5.4.15. Exporters and importers declaring the use of derivatives in currency risk management

![Figure 5.4.15](image-url)

**Note:** Instruments hedging against currency risk included both exchange-traded and OTC derivatives, but the latter prevailed in terms of the value of transactions.

**Source:** Informacja o końcu sektor przedsiębiorstw ze szczególnym uwzględnieniem stanu koniunktury w II kwartale 2008, Warsaw, NBP 2008, p. 54.
Non-banking financial institutions used instruments available on the OTC FX derivatives market to a small extent. Investment funds investing abroad did not show interest in these instruments, either. Pension funds had to comply with low limits for investing abroad and, according to legal provisions, they could not use derivatives to hedge against, *inter alia*, fluctuations of exchange rates.

### 5.4.3. Exchange-traded derivatives

Financial derivatives were traded on the WSE and the Warsaw Commodity Exchange (WCE). Trading on the WSE was carried out for Treasury bond futures, FX futures and derivatives related to the equity market (equity index futures, individual equity futures and options, index options and MiniWIG20 index participation units). The WCE offered WIBOR interest rate futures and Treasury bond futures, FX futures as well as options on FX futures.

In 2007, the volume of transactions in derivatives on the WSE increased by over 46% to reach 9.9 million contracts and the value of transactions increased by approx. 77% to PLN 351 billion. As in previous years, the activity of investors was concentrated in the segment of WIG20 index futures. The second largest share in this market was observed for index options. Other segments of the WSE derivatives market were still not very liquid and a substantial decrease in turnover was recorded for three of them (equity options, TechWIG futures and Treasury bond futures).

In 2007, the transaction volume in FX futures offered by the WCE decreased slightly. Investors were still most interested in futures for the following FX rates: EUR/PLN, USD/PLN and EUR/USD. There was a substantial increase in the activity of investors in the options on FX futures market. In the analysed period, no transactions were concluded on the interest rate (WIBOR 1M and WIBOR 3M) and Treasury bond futures markets on the WCE.

According to the Futures Industry Association (FIA), the total number of futures and option contracts sold worldwide increased in 2007 by almost 28% and amounted to 15.2 billion contracts. Thus, the share of the Polish market in global turnover reached 0.07%. In 2007, the WSE was classified 42nd among world stock exchanges as regards the number of futures and option contracts sold. In this classification for Europe the WSE ranked 8th and WIG20 futures contracts were classified 8th among futures contracts on equity indices traded on the European exchanges.

<table>
<thead>
<tr>
<th>Underlying instrument</th>
<th>Stock exchange</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>DJ EURO STOXX 50</td>
<td>Eurex</td>
<td>121.6</td>
<td>140.0</td>
<td>213.5</td>
<td>327.0</td>
</tr>
<tr>
<td>DAX30</td>
<td>Eurex</td>
<td>29.2</td>
<td>32.7</td>
<td>40.4</td>
<td>50.4</td>
</tr>
<tr>
<td>CAC40</td>
<td>Euronext Paris</td>
<td>24.1</td>
<td>25.0</td>
<td>33.4</td>
<td>44.7</td>
</tr>
<tr>
<td>FTSE100</td>
<td>Euronext LIFFE</td>
<td>20.8</td>
<td>21.8</td>
<td>25.1</td>
<td>33.5</td>
</tr>
<tr>
<td>OMX Stockholm 30</td>
<td>OM</td>
<td>16.5</td>
<td>19.7</td>
<td>23.6</td>
<td>30.8</td>
</tr>
<tr>
<td>SMI</td>
<td>Eurex</td>
<td>8.1</td>
<td>8.6</td>
<td>11.4</td>
<td>14.4</td>
</tr>
<tr>
<td>AEX</td>
<td>Euronext Amsterdam</td>
<td>5.7</td>
<td>7.4</td>
<td>11.2</td>
<td>12.9</td>
</tr>
<tr>
<td>WIG20</td>
<td>WSE</td>
<td>3.5</td>
<td>5.2</td>
<td>6.3</td>
<td>9.3</td>
</tr>
<tr>
<td>IBEX35</td>
<td>MEFF</td>
<td>4.4</td>
<td>4.9</td>
<td>6.4</td>
<td>8.4</td>
</tr>
<tr>
<td>MIB30</td>
<td>IDEM</td>
<td>3.3</td>
<td>3.6</td>
<td>4.0</td>
<td>4.7</td>
</tr>
</tbody>
</table>

Source: Eurex, Euronext, WSE, IDEM, MEFF, OM.

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One of the reasons for such a high position of WIG20 index futures contracts (according to the turnover) was the relatively low value of these contracts.68

5.4.3.1. Equity derivatives

Equity derivatives were offered by the WSE. In 2007, futures contracts for the following indices: WIG20, MIDWIG and TechWIG, as well as European options on the WIG20 index were traded on the WSE. Furthermore, the WSE offered futures contracts on equities of eight companies, European options on stocks of five companies and MiniWIG20 index participation units.

The equity derivatives market was developing very dynamically in 2007. The trading volume increased by over 46% and the value of transactions by almost 77%. WIG20 futures contracts remained the most liquid instrument. Their share in turnover in the futures market amounted to around 95%. The second best developed segment of this market was still the WIG20 options segment (a share in turnover of around 4%). In order to make it possible for investors (mainly the foreign ones) to hedge their positions in equities without the necessity to roll positions frequently in 2007, the WSE introduced WIG20 futures contracts with one-year maturity and WIG20 options with 9 and 12-month maturity. In comparison with 2006, the trading volume in mWIG40 futures contracts increased more than 10 times and the turnover value increased more than 16 times. However, this instrument was still insignificant.

The liquidity of the other segments of the derivatives market (individual equity futures and options, TechWIG futures and MiniWIG20 index participation units) was still very low (Tables 5.4.13 and 5.4.14).

Table 5.4.13. Size of the index derivatives market on the WSE, 2004–2007 – turnover

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>61 096</td>
<td>3 484 397</td>
<td>112 648</td>
<td>5 156 953</td>
</tr>
<tr>
<td>B</td>
<td></td>
<td></td>
<td>188 206</td>
<td>6 293 885</td>
</tr>
<tr>
<td>WIG20 futures</td>
<td></td>
<td></td>
<td>334 467</td>
<td>9 330 506</td>
</tr>
<tr>
<td>TechWIG futures</td>
<td>51</td>
<td>7 961</td>
<td>53</td>
<td>7 617</td>
</tr>
<tr>
<td>mWIG401 futures</td>
<td>421</td>
<td>5 424</td>
<td>45</td>
<td>2 541</td>
</tr>
<tr>
<td>WIG20 options</td>
<td>1 393</td>
<td>78 795</td>
<td>5 685</td>
<td>250 060</td>
</tr>
<tr>
<td>MiniWIG20 index participation units</td>
<td>8 45 645</td>
<td>4 18 574</td>
<td>5 18 323</td>
<td>8 22 258</td>
</tr>
</tbody>
</table>

Note: Turnover according to the close price of the underlying instrument.

A – annual value of turnover (session and package transactions) (PLN million)
B – annual volume of turnover (number of contracts)

1 The mWIG40 index is a continuation of the MIDWIG index in terms of value.

2 MiniWIG20 index participation units are American WIG20 options expiring in December 2025. A purchase of MiniWIG20 index participation unit is equal to taking over exposure to changes in prices of equities included in the WIG20 index.

Source: WSE.

Table 5.4.14. Size of the individual equity derivatives market on the WSE, 2004–2007

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1 042</td>
<td>87 975</td>
<td>2 734</td>
<td>172 939</td>
</tr>
<tr>
<td>B</td>
<td></td>
<td></td>
<td>2 412</td>
<td>112 699</td>
</tr>
<tr>
<td>Equity futures</td>
<td></td>
<td></td>
<td>1 370</td>
<td>114 021</td>
</tr>
<tr>
<td>Equity options</td>
<td></td>
<td></td>
<td>93</td>
<td>4 368</td>
</tr>
<tr>
<td></td>
<td>302</td>
<td>5 522</td>
<td>2</td>
<td>73</td>
</tr>
</tbody>
</table>

A – annual value of turnover (PLN million), B – annual number of contracts sold

1 Equity options were traded from 17 October 2005 to 3 July 2007. Turnover according to the close price of the underlying instrument.

Source: WSE.

68 For example, at the end of 2007, the value of a single WIG20 index futures contract amounted to PLN 34 560 (i.e. around EUR 9 589), whereas the value of a single futures contract on the DI EURO STOXX 50 index amounted to EUR 43 997, on the DAX30 index – to EUR 201 683, on the CAC40 index – to EUR 56 141, on the FTSE100 index – to GBP 64 569 (i.e. EUR 87 853), on the OMX Stockholm index – to SEK 30 108 144 (i.e. EUR 11 460), on the SMI index – CHF 84 845 (EUR 51 309), on the IBEX35 index – to EUR 151 823, and on the MIB30 index – to EUR 194 425.
and 5.4.14) Due to the fact the turnover in equity options on the WSE almost completely disappeared, the WSE decided to suspend the trading in these instruments as of 4 July 2007. A significant decrease in liquidity was recorded in the TechWIG futures contracts segment. Therefore, as of 24 December 2007 the WSE stopped the introduction of subsequent series of these instruments to trading for an indefinite period. The main reasons for low liquidity in the above mentioned segments of the derivatives market included the absence of market makers and the fact that investors preferred more liquid WIG20 instruments (mainly futures contracts). In 2007, the WSE took action intended to increase turnover in the equity futures market. To this end, contract sizes for all equity futures contracts were decreased (and standardised) to 100 shares per one contract, which contributed to lowering the nominal value of a single contract. Moreover, the WSE significantly lowered transaction fees for market participants. The first change was aimed at increasing the activity of individual investors in this segment of the futures market.

The further part of this section will describe in detail the development of the most liquid instruments – WIG20 futures contracts and WIG20 options.

**Market size**

In 2007, net turnover in WIG20 futures amounted to PLN 334.5 billion and was almost 80% higher as compared to the previous year. Investors concluded transactions for 9.3 million contracts, which means a 48% increase as compared to 2006 (Figure 5.4.16). The average number of open positions at month-end amounted to 60,892 contracts. As at the end of 2007, nine market makers operated on the WIG20 futures contracts market ensuring adequate market liquidity.

There were several reasons for the above mentioned increase in turnover in WIG20 futures contracts. First of all, the turmoil on global financial markets due to the crisis on the American subprime mortgage loans market increased the uncertainty concerning the future direction of changes in the share prices of companies comprising the WIG20 index (Figure 5.4.17). The increase in share prices volatility contributed to greater activity of speculators and entities wishing to hedge their equity portfolios against a fall in values. Secondly, the number of market participants has been increasing for several years. The number of individual derivatives accounts grew in 2007 by over 23% and amounted to 69,541 as at year-end. The number of active individual derivatives accounts also increased (to 14.3 thousand). Thirdly, foreign investors and domestic institutional investors became more active in the futures market.

The increased activity in the WIG20 futures market was noted in March and between July and December, when a drop in the share prices was observed. The first insignificant (two-week) correction of share prices on the WSE took place at the end of February and the beginning of March. The second stronger correction lasted almost from the beginning of July until mid August. At the end of October, a bear market began in the equity market. By the end of the year, the WIG20

Figure 5.4.16. WIG20 futures traded on the WSE, 2004–2007

![Figure 5.4.16. WIG20 futures traded on the WSE, 2004–2007](image)

Source: WSE.

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69 An active account is defined as one where at least one transaction has been concluded in a given half-year period. The WSE obtains data about active accounts every half year by a survey addressed to brokerage offices and houses.
index declined by almost 10%. In the period of price corrections and during the bear market, the volatility of the WIG20 index increased, as did the daily changes of this index expressed in points70 (Figure 5.4.18). The highest monthly turnover in these contracts was noted in August. For the first time ever in the quotations of this instrument the trading turnover has exceeded one million of contracts.

A significant increase in liquidity in the WIG20 futures market led to a situation where the ratio of turnover value in these contracts to the turnover value in equities included in the WIG20 increased in 2007 by 85.1 percentage points to 260.9%. It was the highest value of this ratio in the history of WIG20 futures contracts so far (Figure 5.4.19). The liquidity of the WIG20 futures contracts measured by the bid-ask spread71 was much higher than the liquidity of equities included in this index. In 2007, an average spread on WIG20 futures contracts was approximately 15 basis points, and for equities of companies included in this index – 28 basis points. The high liquidity of the WIG20 futures market, which allows investors to conclude transactions at any time at a price similar to the price described as fair value, is one of the main factors contributing to the development of this market segment.

In 2007, the trading volume in WIG20 options amounted to 399,113 contracts and was 26% higher than in the previous year. The value of transactions in index options increased by over 50% and amounted to PLN 14.3 billion.72 The turnover in WIG20 options has been continually increasing since the introduction of this instrument to trading on the WSE (September 2003). It is related to a higher number of participants of this segment of the futures market and their increased activity. Despite a significantly (23 times) lower trading volume in WIG20 options in comparison to futures contracts on this index, the average value of open positions at month-ends was only twice as low (PLN 1.0 billion and PLN 2.2 billion respectively). It might suggest

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70 For investors in the futures market, the change of the underlying index expressed in index points is more important than its percentage change. The reason for this is that investors receive PLN 10 from the other party to the transaction for each index point if they predicted the direction of the index change correctly or pay this other party if they predicted the index change incorrectly.

71 The ratio of turnover in WIG20 futures contracts to the value of turnover in equities of companies included in this index might not be appropriate for measuring the difference between the liquidity of these two segments of the market. Since October 2007, the maximum period of trading in futures contracts for a given series has been 12 months (before it used to be 9 months), but in practice investors roll their positions more frequently by investing in the most liquid series of contracts (with the closest maturity date). Equities have no specified maturity, thus rolling of contracts in order to maintain positions exerts a positive impact on the increase in the turnover ratio. Furthermore, due to the leverage effect, investors in the futures market may profit even from slight index changes and conclude transactions (e.g. day trading) much more frequently than investors in the equity market. In general, it is not profitable for equities due to the relatively higher transaction costs. Therefore, it seems that in order to assess the liquidity of both market segments, it is also necessary to compare the difference between bid-ask spread for WIG20 futures contracts and equities included in this index.

72 In addition to the turnover value in index options according to the closing price of the underlying instrument, the WSE presents also the value of premiums paid by investors. In 2007, the value of premiums amounted to PLN 468 million and was 66% higher than in the previous year.
that options were used by investors more often than futures contracts to hedge positions on the equity market than for short-term speculations. In March 2007, the WSE extended its offer of index options by increasing the number of strike prices from four to at least nine. Moreover, series of options with one-year maturity were introduced to trading in October 2007. However, it was relatively insignificant for the development of this segment of the futures market on the WSE (Box 5.4.1). Two market makers were operating on the index option market, which were obliged to ensure adequate market liquidity.

**Box 5.4.1**

EXTENDING THE OFFER OF INDEX OPTIONS AND LIQUIDITY OF THIS MARKET

As a result of the raising interest in index options, the WSE took a decision to extend the offer of these instruments by increasing the number of exercise prices and the possible expiration dates. Since March 2007, for each expiration date of options traded on the WSE, there have been series with at least nine exercise prices (it used to be four). Since 15 of October four expiration dates have been introduced (it used to be two). Options remain in trading for 12 months and expire at the four closest dates of the March settlement cycle. After these changes, at least 72 series of WIG20 options were
traded on the WSE. The introduced changes were supposed to enable investors to apply complex investment strategies.

Liquidity in the WIG20 option market was concentrated on series with the closest expiration date and, at the same time, negative intrinsic value (out-of-the-money options – OTM) or with the exercise price equal to the current market price (at-the-money options – ATM). High trading volume was also recorded in OTM index options expiring at the second closest date. The large interest of investors in OTM options resulted from their relatively low price, for example in comparison with options with positive intrinsic value (in-the-money – ITM) Liquidity of option series with more distant maturity dates (in 9 and 12 month’s time) and with strike prices significantly different from the current index level was considerably lower, mainly due to the lack of active market making in these instruments (Figure 5.4.20). Order books often did not contain bid and ask offers for such options, thus bid/ask spreads were wide, which prevented investors from closing positions. Wide spreads incurred significant costs of reversing positions. Investors having options with low liquidity in their portfolios had to take into account the risk of market liquidity. It is well illustrated with the situation which occurred in autumn 2007 and coincided with the introduction of a new option maturity dates. One of the market makers partially ceased performing its functions for some option series. Investors having options from these series in their portfolios practically could not close positions in convenient time at a price close to the fair value. Therefore, the increase in the number of exercise prices and introduction of options with a one-year expiration period to trading had little significance for the development of this segment of derivatives market on the WSE.

**Figure 5.4.20. Share of individual WIG20 option series in the total volume of turnover in these options in 2007 by expiration date and moneyness**

![Diagram showing share of individual WIG20 option series in the total volume of turnover in these options in 2007 by expiration date and moneyness](image)

Note: The low trading volume in options from series with the two most distant expiration dates partially resulted from the smaller number of trading sessions than in the case of series with the two closest expiration dates (51 and 249 sessions respectively).

Source: NBP calculations based on www.bossa.pl data.

**Market participants**

The main participants of the WIG20 futures market were individual investors (Figure 5.4.21). As compared with 2006, the share of this group of investors in the trading volume of futures contracts decreased markedly and was the lowest ever. In 2007, the share of domestic institutional investors in the WIG20 futures market increased significantly (by around 9 percentage points). Among domestic institutional investors, more than a half of turnover was generated by market makers. The second largest group of domestic institutional investors constituted investment funds, whose share in the trading volume of futures contracts of domestic institutional investors amounted to 34%. Foreign investors also became more active. Both the domestic institutional investors and foreign investors recorded the highest shares in turnover in the futures market in its 10-year history.
Figure 5.4.21. Structure of investors in the futures market on the WSE\textsuperscript{1}, 2004–2007, by number of contracts

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{futures_structure}
\caption{Structure of investors in the futures market on the WSE\textsuperscript{1}, 2004–2007, by number of contracts}
\end{figure}

\textsuperscript{1} The presented shares include all futures contracts traded on the WSE. Due to the dominance of WIG20 futures, it may be assumed that they reliably reflect the share of individual groups of investors in the WIG20 futures market.

Source: WSE.

Figure 5.4.22. Structure of investors in the option market on the WSE\textsuperscript{1}, 2004–2007, by number of contracts

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{option_structure}
\caption{Structure of investors in the option market on the WSE\textsuperscript{1}, 2004–2007, by number of contracts}
\end{figure}

\textsuperscript{1} The presented shares include all options traded on the WSE. Due to the dominance of WIG20 options, it may be assumed that they reliably reflect the share of individual groups of investors in the WIG20 option market.

Source: WSE.

Due to the lack of implementing provisions to the Act on organisation and operation of open pension funds,\textsuperscript{23} OFEs could not invest in derivatives, which seriously hindered hedging their equity portfolios against a drop in prices on the WSE.\textsuperscript{24}

Individual investors prevailed among the participants of the index option market. The share of this group of investors decreased as compared with 2006 by 18 percentage points and was the lowest in the history of this instrument’s listing so far (Figure 5.4.22). The shares of domestic institutional investors and foreign investors increased significantly. Market makers prevailed among domestic institutional investors with an 87% share in transactions of this group of investors. The other part was dominated by operations of investment funds. An increase in the activity of non-residents in the index option market could have resulted from an improvement in liquidity of this market segment and the willingness to hedge positions in equities. In the period of correction,

\textsuperscript{23} The Act of 28 August 1997 on organization and operation of pension funds (Dz.U. of 2004, No 159, item 1667).

\textsuperscript{24} As at the end of 2007, equities held by OFEs (PLN 47.8 billion) accounted for almost 23% of free float of domestic companies listed on the WSE. Given such a high value of the OFE portfolios in relation to the market size, in the event of a fall in share prices, it is practically impossible for fund managers to avoid losses. Selling large packages of stock by OFEs would only lead to further falls, which in turn would negatively affect the value of shares remaining in funds’ portfolios.
one the possible ways of hedging the value of portfolios (in addition to selling WIG20 futures contracts) was to purchase WIG20 put options.\textsuperscript{75}

5.4.3.2. Interest rate derivatives

Interest rate futures contracts were traded on both the WSE and the WCE. Treasury bond futures were traded on the WSE. The issue amount could not have been lower than PLN 5.0 billion and maturity could not have been shorter than two years and nine months and not longer than five years and six months, as of the contract delivery date. The contract was settled by a delivery of bonds on the terms specified by the National Depository for Securities (KDPW). The WCE offered contracts on interest rates (WIBOR 1M and WIBOR 3M) and 2-, 5- and 10-year Treasury bonds, however, since the second half of 2005 no transactions were concluded in these instruments.

Since its creation on the WSE, the liquidity of the Treasury bond futures market has been low (Table 5.4.15). There were 5 market makers on this market that were obliged to place bid and ask offers. In 2007, the liquidity of the Treasury bond futures market on the WSE significantly decreased. Due to the low liquidity, since 27 December 2007 turnover in these instruments on the WSE has been suspended for an indefinite period of time.

Table 5.4.15. Size of the Treasury bond futures market on the WSE, 2005–2007

<table>
<thead>
<tr>
<th></th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turnover (PLN million)</td>
<td>3 323</td>
<td>1 329</td>
<td>200</td>
</tr>
<tr>
<td>Average turnover per session (PLN million)</td>
<td>15.0</td>
<td>5.3</td>
<td>0.8</td>
</tr>
<tr>
<td>Average trading volume per session (contracts)</td>
<td>146</td>
<td>51</td>
<td>8</td>
</tr>
<tr>
<td>Number of open positions at year-end (contracts)</td>
<td>58</td>
<td>50</td>
<td>0</td>
</tr>
</tbody>
</table>

Note: Treasury bond futures contracts were concluded from 14 February 2005 to 27 December 2007.
Source: WSE.

The main reason for the weak development of exchange-traded interest rate derivatives market is the competition from the more liquid OTC market, in which domestic banks and foreign entities actively participate. Domestic enterprises rarely hedge against the risk of interest rate changes and if they do so, they usually use instruments offered by banks owing to their flexibility (for example longer maturity of instruments offered by banks than that of exchange contracts, different nominal values). The demand for exchange-traded interest rate derivatives on the part of domestic investment funds and insurance companies is very low. Bond futures were introduced to trading on the WSE mainly for the purpose of their use by OFE, as Treasury bonds are a significant part of their investment portfolios. However, OFE do not have legal possibilities to invest in derivatives, which prevents them from hedging bond portfolios against interest rate changes. In such a situation, the increase in yields of Polish Treasury bonds leads to a decrease in the value of bonds in OFE portfolios. Individual investors rarely speculate on the interest rate and bond futures market and their participation can be further hindered by the high value of a single contract, which amounts to PLN 100,000 or 200,000. Moreover, some investors may be discouraged from activity in this market by the settlement method of Treasury bond futures contracts. The instruments offered by both the WSE and the WCE are settled by a physical delivery of bonds. It incurs the risk of paying a higher price during their purchase if, at the moment of the contract settlement, the supply of relevant bonds on the market is limited. As a result, the potential loss (profit) of an investor having a short position will be higher (lower) than if contracts were settled in cash.

5.4.3.3. FX derivatives

FX futures contracts were traded on both the WCE and WSE. In addition to contracts already traded (on the following exchange rates: USD/PLN, EUR/PLN, EUR/USD, GBP/USD, GBP/PLN, CHF/PLN, EUR/HUF, EUR/CZK), in 2007 the WCE introduced to trading options on: SEK/PLN, NOK/PLN, SEK/USD, NOK/USD.

\textsuperscript{75} According to the NBP data as at the end of 2007, the equities of companies included in the WIG20 index accounted for almost two thirds of equity portfolios of non-residents.
EUR/SEK, EUR/NOK, USD/JPY, EUR/JPY, USD/CHF, EUR/CHF, AUD/USD, USD/CAD, and EUR/GBP. Furthermore, EURO (50%) and USD (50%) exchange rate contracts in relation to PLN were introduced to trading. In addition to futures contracts, options on futures contracts on: EUR/PLN, USD/PLN, EUR/USD, GBP/PLN, and CHF/PLN were traded on the WCE. On the WSE, on the other hand, only PLN futures contracts (USD/PLN and EUR/PLN) were traded. The development of the FX futures market was hindered by the competition from derivatives offered by banks, mainly forward and option transactions.

**Market size**

In 2007, as in previous years, the activity of investors focused on the WCE, where the trading volume in FX derivatives was over six times higher than on the WSE.\(^\text{76}\) The increase in the turnover in FX derivatives in the WCE resulted from a significantly higher activity of investors in the segment of options on FX futures. Despite the introduction of contracts on new currency pairs, the trading volume in these instruments slightly decreased: by 2.5% to 32,178 contracts (Figure 5.4.23). Two market makers were operating on the FX futures market on the WCE.

In comparison with 2006, the turnover in options on FX futures contracts on the WCE increased over four times and reached 7,586 contracts (Table 5.4.16). The large increase in liquidity of this market resulted mainly from the greater activity of enterprises which used options to hedge the value of receivables in foreign currencies. Enterprises frequently purchased out-of-the-money options to hedge against significant changes in exchange rates, usually the appreciation of PLN exchange rate. Furthermore, in addition to simple option strategies involving the purchase or sale

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**Figure 5.4.23. FX futures on the WCE, 2004–2007**

![Graph showing FX futures contracts on the WCE, 2004–2007](image)

*Source: WCE.*

**Table 5.4.16. Size of the FX futures option market on the WCE, 2005–2007**

<table>
<thead>
<tr>
<th></th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
<td>A</td>
</tr>
<tr>
<td>EUR/PLN</td>
<td>190</td>
<td>0</td>
<td>621</td>
</tr>
<tr>
<td>USD/PLN</td>
<td>355</td>
<td>0</td>
<td>543</td>
</tr>
<tr>
<td>EUR/USD</td>
<td>277</td>
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<td>254</td>
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<tr>
<td>Other</td>
<td>9</td>
<td>0</td>
<td>6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>2005</th>
<th>2006</th>
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<td>EUR/PLN</td>
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<td>USD/PLN</td>
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<tr>
<td>EUR/USD</td>
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<td>254</td>
</tr>
<tr>
<td>Other</td>
<td>9</td>
<td>0</td>
<td>6</td>
</tr>
</tbody>
</table>

**Source:** WCE.

\(^{76}\) The WCE did not publish any data on the value of turnover in FX derivatives.
Figure 5.4.24. FX futures on the WSE, 2004–2007

![Graph showing contracts sold and open positions as at month-end from 2004 to 2007]

Source: WSE.

of one type of options, enterprises used option strategies, mainly the collar strategy. The liquidity of the FX futures option market was maintained by one market maker.

On the FX derivatives market organised by the WSE, the trading volume almost doubled in 2007 and reached 6,101 contracts (Figure 5.4.24). The value of transactions increased by 60% and exceeded PLN 166 million. The last two months of the year saw a significant increase in the activity of investors. It was related to the fact that the market maker began its activity.

**Market structure**

The most popular FX futures contracts on the WCE were EUR/PLN contracts, whose share in the trading volume increased from 25% to 46%. The transactions in futures contracts on the USD/PLN exchange rate accounted for 31% of the trading volume (51% in 2006). Furthermore, EUR/USD contracts were popular with investors. The share of these transactions in the trading volume constituted 12% (14% in 2006). On the WSE, over 90% of trading volume in FX futures contracts was registered in the USD/PLN segment. In comparison with 2006, the trading volume in these contracts more than doubled.

In 2007, a significant increase was noted in the trading volume in futures contracts against the USD/PLN exchange rate. Transactions in these instruments accounted for 49% of the total trading volume in the FX futures option market (38% in 2006). The share of the USD/PLN currency pair decreased to 46%. Investors’ activity in relation to the other currency pairs (EUR/USD, GBP/PLN and CHF/PLN) was insignificant.

**Market participants**

The domestic entities from the SME sector were the largest group of investors in the FX derivatives market organised by the WCE. The second important category of market participants comprised foreign speculative financial investors. They were frequently counterparties for Polish enterprises. Individual investors, who used futures mainly for speculations, were slightly less active. The main participants of the market organised by the WSE were individual investors. The low interest of enterprises in FX futures contracts offered by the WSE could have resulted from the limited diversity of these instruments, low market liquidity and competition from the other markets (the OTC market and the WCE).

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77 The collar strategy involves a simultaneous purchase of put options and sale of call options against a given underlying instrument (e.g. exchange rate). Both options have the same expiration date and usually a negative intrinsic value at the moment of concluding transactions. This strategy allows investors to protect themselves, at low costs, from changes of prices of the underlying security (exchange rate in this case) exceeding the determined trading band. The costs incurred by the investor while purchasing the put option are covered by the premium obtained from the sale of the call option to a large extent.
Abbreviations used in the report

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1M</td>
<td>one month</td>
</tr>
<tr>
<td>1W</td>
<td>one week</td>
</tr>
<tr>
<td>1Y</td>
<td>one year</td>
</tr>
<tr>
<td>ABS</td>
<td>asset backed security</td>
</tr>
<tr>
<td>AC</td>
<td>accident and theft insurance</td>
</tr>
<tr>
<td>ASO</td>
<td>alternative trading system</td>
</tr>
<tr>
<td>ATM</td>
<td>at-the-money</td>
</tr>
<tr>
<td>BFG</td>
<td>Bank Guarantee Fund (Bankowy Fundusz Gwarancyjny)</td>
</tr>
<tr>
<td>BGK</td>
<td>Bank Gospodarstwa Krajowego</td>
</tr>
<tr>
<td>BGŻ</td>
<td>Bank Gospodarki Żywnościowej</td>
</tr>
<tr>
<td>BIK</td>
<td>Credit Information Bureau (Biuro Informacji Kredytowej)</td>
</tr>
<tr>
<td>BIS</td>
<td>Bank for International Settlements</td>
</tr>
<tr>
<td>BSB</td>
<td>buy-sell-back</td>
</tr>
<tr>
<td>CCBM</td>
<td>Correspondent Central Banking Model</td>
</tr>
<tr>
<td>CCBM2</td>
<td>Collateral Central Bank Management</td>
</tr>
<tr>
<td>CCP</td>
<td>central counterparty</td>
</tr>
<tr>
<td>CDO</td>
<td>Collateralised Debt Obligation</td>
</tr>
<tr>
<td>CDS</td>
<td>credit default swap</td>
</tr>
<tr>
<td>CEBS</td>
<td>Committee of European Banking Supervisors</td>
</tr>
<tr>
<td>CEC</td>
<td>Central European Countries</td>
</tr>
<tr>
<td>CEC-5</td>
<td>Czech Republic, Poland, Slovakia, Slovenia, Hungary,</td>
</tr>
<tr>
<td>CEIOPS</td>
<td>Committee of European Insurance and Occupational Pensions Supervisors</td>
</tr>
<tr>
<td>CESR</td>
<td>Committee of European Securities Regulators</td>
</tr>
<tr>
<td>CeTO</td>
<td>Central Table of Offers (Centralna Tabela Ofert)</td>
</tr>
<tr>
<td>CHF</td>
<td>Swiss franc</td>
</tr>
<tr>
<td>CIRS</td>
<td>currency interest rate swap</td>
</tr>
<tr>
<td>COREP</td>
<td>Common Reporting Framework</td>
</tr>
<tr>
<td>CPI</td>
<td>Consumer Price Index</td>
</tr>
<tr>
<td>CR (3, 5, 10)</td>
<td>concentration ratio (3, 5 or 10 largest entities)</td>
</tr>
<tr>
<td>CRD</td>
<td>Capital Requirements Directive</td>
</tr>
<tr>
<td>CRDTG</td>
<td>Capital Requirements Directive Transposition Group</td>
</tr>
<tr>
<td>CZK</td>
<td>Czech koruna</td>
</tr>
<tr>
<td>DBPD</td>
<td>long-tem debt securities</td>
</tr>
<tr>
<td>DPDP</td>
<td>long-tem enterprise debt securities</td>
</tr>
<tr>
<td>DRP</td>
<td>Money Market Dealers</td>
</tr>
<tr>
<td>DSPW</td>
<td>Treasury Securities Dealers</td>
</tr>
<tr>
<td>DvP</td>
<td>Delivery versus Payment</td>
</tr>
<tr>
<td>Dz.U.</td>
<td>Journal of Laws (Dziennik Ustaw)</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Full Form</td>
</tr>
<tr>
<td>--------------</td>
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</tr>
<tr>
<td>Dz.Urz. NBP</td>
<td>Official Journal of the National Bank of Poland (Dziennik Urzędowy Narodowego Banku Polskiego)</td>
</tr>
<tr>
<td>EACH</td>
<td>European Association of Central Counterparty Clearing Houses</td>
</tr>
<tr>
<td>EBC</td>
<td>European Central Bank</td>
</tr>
<tr>
<td>EBI</td>
<td>European Investment Bank</td>
</tr>
<tr>
<td>EBPP</td>
<td>Electronic Bill Presentment and Payment</td>
</tr>
<tr>
<td>ECB</td>
<td>European Central Bank</td>
</tr>
<tr>
<td>ECOFIN</td>
<td>Economic and Financial Affairs Council</td>
</tr>
<tr>
<td>ECSDA</td>
<td>European Central Securities Depositories Association</td>
</tr>
<tr>
<td>EEA</td>
<td>European Economic Area</td>
</tr>
<tr>
<td>EFAMA</td>
<td>European Fund and Asset Management Association</td>
</tr>
<tr>
<td>EFC</td>
<td>European Financial Consultant</td>
</tr>
<tr>
<td>EMTA</td>
<td>Trade Association for Emerging Markets</td>
</tr>
<tr>
<td>EMV</td>
<td>Europay MasterCard Visa</td>
</tr>
<tr>
<td>EONIA</td>
<td>Euro Overnight Index Average</td>
</tr>
<tr>
<td>EPC</td>
<td>European Payments Council</td>
</tr>
<tr>
<td>ESA 95</td>
<td>European System of Accounts 95</td>
</tr>
<tr>
<td>ESCB</td>
<td>European System of Central Banks</td>
</tr>
<tr>
<td>ESIS</td>
<td>European Standardised Information Sheet</td>
</tr>
<tr>
<td>ESME</td>
<td>European Securities Markets Expert Group</td>
</tr>
<tr>
<td>ETF</td>
<td>Exchange Traded Fund</td>
</tr>
<tr>
<td>EUR</td>
<td>euro</td>
</tr>
<tr>
<td>EVCA</td>
<td>European Private Equity and Venture Capital Association</td>
</tr>
<tr>
<td>EWG</td>
<td>European Economic Community</td>
</tr>
<tr>
<td>FESE</td>
<td>Federation of European Securities Exchanges</td>
</tr>
<tr>
<td>FIA</td>
<td>Futures Industry Association</td>
</tr>
<tr>
<td>FIAP</td>
<td>International Federation of Pension Funds Administrators</td>
</tr>
<tr>
<td>FIN-NET</td>
<td>Financial Dispute Resolution Network</td>
</tr>
<tr>
<td>FINREP</td>
<td>Financial Reporting Framework</td>
</tr>
<tr>
<td>FRA</td>
<td>forward rate agreement</td>
</tr>
<tr>
<td>FSAP</td>
<td>Financial Services Action Plan</td>
</tr>
<tr>
<td>FUS</td>
<td>Social Insurance Fund (Fundusz Ubezpieczeń Społecznych)</td>
</tr>
<tr>
<td>GBP</td>
<td>Pound sterling</td>
</tr>
<tr>
<td>GINB</td>
<td>General Inspectorate for Banking Supervision (Generalny Inspektorat Nadzoru Bankowego)</td>
</tr>
<tr>
<td>GPW</td>
<td>Warsaw Stock Exchange (Giełda Papierów Wartościowych w Warszawie)</td>
</tr>
<tr>
<td>GUS</td>
<td>Central Statistical Office (Główny Urząd Statystyczny)</td>
</tr>
<tr>
<td>HHI</td>
<td>Herfindahl-Hirschman index</td>
</tr>
<tr>
<td>HUF</td>
<td>Hungarian forint</td>
</tr>
<tr>
<td>IKE</td>
<td>Individual Pension Account (Indywidualne Konto Emerytalne)</td>
</tr>
<tr>
<td>IPO</td>
<td>Initial Public Offering</td>
</tr>
<tr>
<td>IRS</td>
<td>interest rate swap</td>
</tr>
<tr>
<td>ITM</td>
<td>in-the-money</td>
</tr>
<tr>
<td>ITO</td>
<td>RPW CeTO stock market index</td>
</tr>
</tbody>
</table>
IZFiA Chamber of Fund and Asset Management (Izba Zarządzających Funduszami i Aktywami)

JPY Japanese yen

JST local government units

KBPD short-term bank debt securities

KDPW National Depository for Securities (Krajowy Depozyt Papierów Wartościowych)

KE European Commission

KFK National Capital Fund (Krajowy Fundusz Kapitałowy)

KIR National Clearing House (Krajowa Izba Rozliczeniowa)

KNB Commission for Banking Supervision (Komisja Nadzoru Bankowego)

KNF Polish Financial Supervision Authority (Komisja Nadzoru Finansowego)

KNUiFE Insurance and Pension Funds Supervisory Commission (Komisja Nadzoru Ubezpieczeń i Funduszy Emerytalnych)

KPDP short-term enterprise debt securities

KPWiG Securities and Exchange Commission (Komisja Papierów Wartościowych i Giełd)

KSKOK National Association of Credit Unions (Krajowa Spółdzielcza Kasa Oszczędnościowo-Kredytowa)

KUKE Export Credit Insurance Corporation (Korporacja Ubezpieczeń Kredytów Eksportowych)

LBO leveraged buyout

LCBG Large and Complex Banking Groups

LGD Loss Given Default

LTV loan-to-value

MBS Mortgage Backed Security

MF Ministry of Finance

MIDWIG index of medium-sized companies listed on the WSE main market

MiFID Markets in Financial Instruments Directive

MOG Monitoring Group of the Code of Conduct on Clearing and Settlement

MSP Small and medium-sized enterprises

MSR International Accounting Standards

MSSF International Financial Reporting Standards

mWIG40 Warsaw Medium-Sized Enterprise Stock Index (Warszawski Indeks Giełdowy Średnich Spółek)

NBP National Bank of Poland

NFI National Investment Fund (Narodowy Fundusz Inwestycyjny)

NFZ National Health Fund (Narodowy Fundusz Zdrowia)

NIK customer identification number

NIM Net Interest Margin

NKK customer classification number

NNW casualty insurance

NUK New Capital Accord

NW unfortunate accident

O/N overnight

OC third party liability
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>OECD</td>
<td>Organisation for Economic Cooperation and Development</td>
</tr>
<tr>
<td>OFE</td>
<td>open pension fund (Otwarty Fundusz Emerytalny)</td>
</tr>
<tr>
<td>OIS</td>
<td>Overnight Index Swap</td>
</tr>
<tr>
<td>OTC</td>
<td>over-the-counter</td>
</tr>
<tr>
<td>OTM</td>
<td>out-of-the-money</td>
</tr>
<tr>
<td>PAP</td>
<td>Polska Agencja Prasowa</td>
</tr>
<tr>
<td>PD</td>
<td>Probability of Default</td>
</tr>
<tr>
<td>PDA</td>
<td>allotment certificate (prawo do akcji)</td>
</tr>
<tr>
<td>PE</td>
<td>European Parliament</td>
</tr>
<tr>
<td>PFE</td>
<td>employee pension fund (Pracowniczy Fundusz Emerytalny)</td>
</tr>
<tr>
<td>PFTS</td>
<td>Перша Фондова Торговельна Система</td>
</tr>
<tr>
<td>PHA</td>
<td>Proprietary Home Account</td>
</tr>
<tr>
<td>PIN</td>
<td>personal identification number</td>
</tr>
<tr>
<td>PKB</td>
<td>Gross Domestic Product</td>
</tr>
<tr>
<td>PKO BP</td>
<td>Powszechna Kasa Oszczędności Bank Polski</td>
</tr>
<tr>
<td>PLN</td>
<td>Polish zloty</td>
</tr>
<tr>
<td>POLONIA</td>
<td>Polish Overnight Index Average</td>
</tr>
<tr>
<td>PPE</td>
<td>occupational pension scheme (Pracowniczy Program Emerytalny)</td>
</tr>
<tr>
<td>PSD</td>
<td>Payment Services Directive</td>
</tr>
<tr>
<td>PSIK</td>
<td>Polish Private Equity Association (Polskie Stowarzyszenie Inwestorów Kapitałowych)</td>
</tr>
<tr>
<td>PTE</td>
<td>common pension company (Powszechne Towarzystwo Emerytalne)</td>
</tr>
<tr>
<td>PZF</td>
<td>Polish Factors Association (Polski Związek Faktorów)</td>
</tr>
<tr>
<td>PZU</td>
<td>Powszechny Zakład Ubezpieczeń</td>
</tr>
<tr>
<td>QIS3</td>
<td>Quantitive Impact Study 3</td>
</tr>
<tr>
<td>ROA</td>
<td>Return on Assets</td>
</tr>
<tr>
<td>ROE</td>
<td>Return on Equity</td>
</tr>
<tr>
<td>RP</td>
<td>The Republic of Poland</td>
</tr>
<tr>
<td>RPA</td>
<td>The Republic of South Africa</td>
</tr>
<tr>
<td>RPP</td>
<td>Monetary Policy Council (Rada Polityki Pieniężnej)</td>
</tr>
<tr>
<td>RRRF</td>
<td>Council for Financial Market Development (Rada Rozwoju Rynku Finansowego)</td>
</tr>
<tr>
<td>RPW</td>
<td>Securities Register (Rejestr Papierów Wartościowych)</td>
</tr>
<tr>
<td>RPW CeTO</td>
<td>CeTO Securities Market</td>
</tr>
<tr>
<td>RTGS</td>
<td>real time gross settlement</td>
</tr>
<tr>
<td>S/N</td>
<td>spot next</td>
</tr>
<tr>
<td>SBB</td>
<td>sell-buy-back</td>
</tr>
<tr>
<td>SCT</td>
<td>SEPA Credit Transfer</td>
</tr>
<tr>
<td>SEPA</td>
<td>Single Euro Payments Area</td>
</tr>
<tr>
<td>SKOK</td>
<td>Credit Union (Spółdzielcza Kasa Oszczędnościowo-Kredytowa)</td>
</tr>
<tr>
<td>SONIA</td>
<td>Sterling Overnight Index Average</td>
</tr>
<tr>
<td>SP</td>
<td>State Treasury</td>
</tr>
<tr>
<td>SPE</td>
<td>Special Purpose Entity</td>
</tr>
<tr>
<td>SPO</td>
<td>Secondary Public Offering</td>
</tr>
<tr>
<td>SPV</td>
<td>Special Purpose Vehicle</td>
</tr>
</tbody>
</table>
SPW treasury securities
SSP Single Shared Platform
SW spot week
sWIG80 Warsaw Medium-Sized Enterprise Stock Market Index (Warszawski Indeks Giełdowy Małych Spółek)
T2 TARGET2
T2S TARGET2-Securities
T/N tomorrow next
TARGET Trans-European Automated Real Time Gross Settlement Express Transfer system
TechWIG index of companies listed on the WSE which belong to the High-Tech Segment
TFI investment fund management company (Towarzystwo Funduszy Inwestycyjnych)
TUW mutual insurance company (Towarzystwo Ubezpieczeń Wzajemnych)
TWE Treaty establishing the European Community
UCITS Undertakings for Collective Investment in Transferable Securities
UE European Union
UE-10 10 member states which joined the European Union on 1 May 2004
UE-15 15 member states which belonged to the European Union before 1 May 2004
UE-25 25 member states which belong to the European Union since 1 May 2004
UFG Insurance Guarantee Fund (Ubezpieczeniowy Fundusz Gwarancyjny)
UFK Insurance Capital Fund (Ubezpieczeniowy Fundusz Kapitałowy)
UKNF Office of the Polish Financial Supervision Authority (Urząd Komisji Nadzoru Finansowego)
USD US dollar
VAT Value Added Tax
WE European Community
WFE World Federation of Exchanges
WGT Warsaw Commodity Exchange (Warszawska Giełda Towarowa)
WIBID Warsaw Inter-bank Bid Rate
WIBOR Warsaw Inter-bank Offered Rate
WIG Warsaw Stock Exchange Index (Warszawski Indeks Giełdowy)
WIG20 Warsaw Stock Exchange Index of 20 Large Enterprises (Warszawski Indeks Giełdowy Dużych Spółek)
WIRR Warsaw Index of the Parallel Market (Warszawski Indeks Rynku Równoległego)
WOCCU World Council of Credit Unions
WZA General Assembly
ZBP Polish Bank Association (Związek Banków Polskich)
ZPL Polish Association of Leasing Companies (Związek Przedsiębiorstw Leasingowych)
ZUS Social Insurance Office (Zakład Ubezpieczeń Społecznych)