NATIONAL SECURITIES MARKET ASSOCIATION (RUSSIA)

(ANALYTICAL SUPPORT: "EUROFINANSY" Investment Banking)

# CORPORATE BOND MARKET IN RUSSIA: NEW FINANCIAL MACHINE

THE REPORT WAS DEVELOPED FOR
INTERNATIONAL CAPITAL MARKET ASSOCIATION (ICMA)
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Self-regulatory organization (Russia)

National Securities Market Association

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**About SRO NSMA**: SRO National Securities Market Association (SRO NSMA) was established in 1996 and is a trade association joining Russian securities market participants. At present NSMA comprises more then 240 financial organisations form 23 regions of all 7 Federal Districts of the Russian Federation.

Since 2003 NSMA has been a member of ICMA.

At present Russian Federation contributes 7 organisations to the overall ICMA's membership: SRO National Securities Market Association, 5 SRO NSMA member firms, namely, the Savings Bank of the Russian Federation (Sberbank of Russia), Vneshtorgbank, Vnesheconombank, TRAST Investment Bank and Sobinbank, as well as the Bank of Russia.

For further information about SRO NSMA, please, visit our website: www.nfa.ru.

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# Introduction and Summary

The Russian financial market of 1999 - 2006 is ***one of the most dynamic markets in the world.*** It produces high risks and is one of the most liquid of emerging markets, yet it offers investors the full package of traditional financial instruments and techniques on electronic basis. According to estimates, over 30% of investors in domestic market are ***non-residents*** (in 2003 - 2004 all restrictions for their entrance into the market were cancelled).

***The modern infrastructure*** of the Russian financial market was created in the 1990s. There was formed an ***eclectic market model***, combining advantages of universal banking and benefits of specialization of securities companies. Over 1300 commercial banks, about 700 brokerages, over 1200 insurance companies, several hundred investment and pension funds make its institutional basis. ***The system of  financial market regulation*** is formed in analogy with developed markets models. It is focused on protection of investors and maintenance of information transparency. In 1994 was created an independent securities commission; in 2004 appeared the megaregulator (Federal Financial Markets Service) (www.fcsm.ru).

***This report*** aims to reduce information barriers concerning entrance into the Russian corporate bond market, to make it more transparent for international investors by opening operation opportunities in the unique environment characterized by high return, excessive volatility and low level of corporate defaults.

To reach a desired goal of research the authors discussed the **fundamental factors** being responsible for debt dominant as a keystone of the capital market model in Russia, first of all such as an ownership structure and investors' preferences; showed the scope of development of the rouble bond market in 1999 – 2005, including it's "physical" growth (number of issuers and traded issues, value of initial offerings and outstanding debt, turnover indicators) and strengthening of it's qualitative characteristics (diversification of product lines, improvement of term structure, risk and yield profiles, sophistication of market's industrial structure).

# 1. Debt Model of Capital Market in Russia

It is generally recognized that depending on a number of fundamental factors the market-based ("Anglo-Saxon", "shareholder" and etc.) or debt-based ("German", "continental", "bank-based") models of domestic financial markets could be easily identified when we try to understand their nature and wish to predict their future developments. Above-mentioned fundamentals are an ownership structure and investor's preferences (bearing in mind that the later are influenced by an economic maturity of the society and the ability of national psyche and religious traditions to accept financial risk taking, individualism and freedom to win and to lose in the markets).

## 1.1. Ownership structure

The key factor forming the Russian model of capital market is an overconcentrated ownership. Overwhelming majority of companies have 2 - 4 stakeholders who control 70 - 80% of the equity capital and are not interested in its dilution. The evidence of capital concentration is high premium for vote (difference between prices of ordinary and preferred shares), reaching 45-50% (similar to Germany and France).[1] Russia's ownership structure is comparable to German and Japanese "stakeholder" economies and to the majority of other emerging markets.[2]

Controlling shareholders do not have enough interest in IPOs or in the growth of capitalization based on transparency of business and diversification of ownership. The true ownership structure is obscured by the holdings of offshore companies. The government as a shareholder is dominating in a number of industries. Stakeholders prefer to manage cash and asset flows directly. Therefore the company model based on capitalization growth appears to be attractive in Russia only when the major owners of the company aspire to raise foreign funds or expect to sell stakes to transfer a part of control - 10-15% of its shares to return the initial investments.

The largest domestic issuers which have listings inside Russia and in the West are characterized by very low "free float" and are very depended on debt financing. Only 5 - 6% of listed companies equities are traded on the largest Russian stock exchange, namely the Moscow Interbank Currency Stock Exchange (MICEX).

SMEs as a rule are fragmented, non-transparent and artificially non-profitable to avoid political risks, regulatory costs and tax burden (the last is too heavy for transition economies, as taxes and quasi-taxes accounted for about 33 – 35% of GDP). They are not ready for IPOs and

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[1] S. V. Losev. Corporate Securities Issues and Transaction Costs: International Experience and Russian Practice / Ph.D. Thesis - M.: Financial Academy under the Government of the RF, 2001. – p. 81-83, 134.

[2] Shleifer A., Vishny R.W. A Survey of Corporate Governance.- US: National Bureau of Economic Research.- NBER Working Papers Series.- 1996.- P.P. 27-28, 49-51. Frydman R., Gray C., Hessel M., Rapaczynski A. Private Ownership and Corporate Performance: Some Lessons from Transition Economies. - N.Y.: New York University.- NYU Working Paper 9827.- 1997.- 56 p. Djankov S. Ownership Structure and Enterprise Restructuring in Six Newly Independent States.- Wash.: World Bank.- Policy Research Working Paper 2047.- 1999. – 24 p.

enter the public market with debt instruments that require to lesser extent transparency of business and to greater extent the ability to pledge assets and to pay high premium for risk.

Therefore ***the debt model of capital market*** is developing in Russia like in many other emerging markets, where ***equity capital is subordinated to debt as a source of financing***.

## 1.2 Debt Preferences of Investors

***Structure of investors' demand*** also drives the capital market to debt model. The commercial banks (by nature they are focused on debt investments) generate over 95% of financial assets in Russia. ***Institutional investors*** are unable to create significant demand for shares. ***Households*** prefer either hard currency in cash holdings or simple debt products (bank deposits or debt securities) as means of savings. The reasons are:

- ***social and cultural*** - adherence of retail investors to lower risks, than in the countries with Anglo-Saxon culture (wide-spread risk aversion); extremely sizeable expectations of Russians concerning the proper depth of social protectionism ("social market" economy in its excessive manifestations); absence of any market experience for three generations;

- ***economic*** - massive losses of households as concerns their investments in stocks in the 1990s (financial pyramids of 1993-1996, negative influence of voucher privatization on welfare of households, crises in the securities markets of 1997 - 1998); ultrahigh volatility of the Russian stock market as one of the 6-8 most risky emerging markets in the world; low level of dividends in Russia due to absence of interest of controlling owners to pay dividends; wide-spread practice of underdeclaration of profits as a tax and dividend base; insignificance of shares as assets of minority shareholders, lack of influence on decisions are made by stakeholders and managers.

As a consequence both retail investors and financial institutions search for fixed-income instruments, considering securities and derivatives markets as significantly speculative and entering them only in anticipation of long-term growth trends. By and large investors' interests are aligned with the strengthening of the debt segment of the Russian capital market.

## 1.3. Russian Capital Market in Mid-term Horizon: Debt / Foreing Investors Dominant

The fundamental analysis leads to the \\conclusion that the Russian financial market, in spite of the significant development of domestic share trading and derivatives markets, is formed ***similarly to German market model being focused on debt instruments.*** The high significance of the universal banking and bank credit will remain in place. Venture financing will be attracted more through junk borrowings than through investments in shares. The collective investment institutes and retail investors will be conservative in the choice of financial products; larger stake of household savings will be kept in pre-market traditional forms (deposits, cash, non-marketable debt securities). The market product lines will be simpler than that of stock-oriented markets and not so innovative. Corporate bonds and commercial paper will play an important role.

Thanks to low, although increasing financial depth of Russian economy, taking into account that financial behavior of retail investors are very conservative and regulatory / tax regime in Russia is more favorable to institutional investors, the window of challenging opportunities to enter the rouble corporate bond market is open for the foreign investors. Capital account and currency regime inside Russia are relatively liberalized. As we try to explain later, combination of acceptable risks of rouble corporate bonds, their growing liquidity and significant returns generates an unusual investment opportunity for foreigners.

# 2. Corporate Bonds: Current Situation and Development

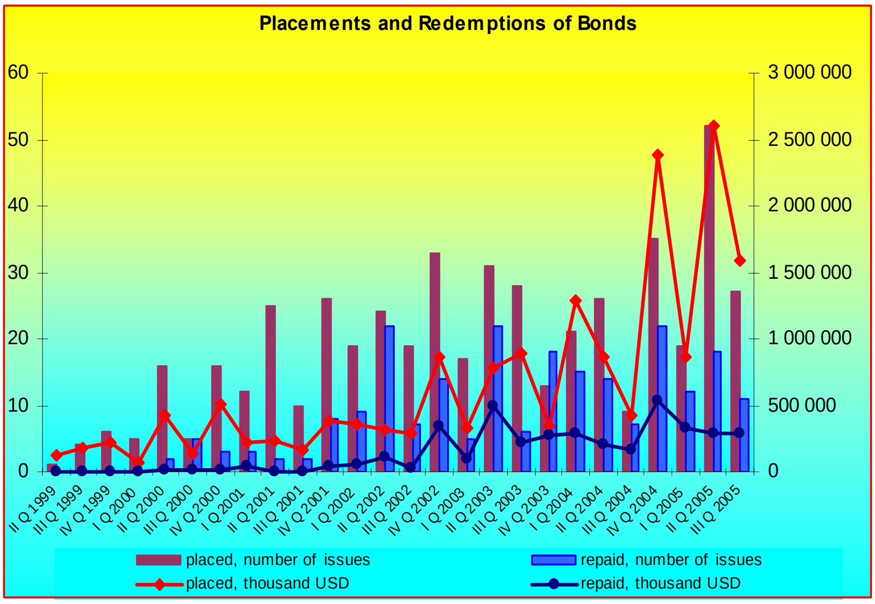
## 2.1 Volumes of Corporate Bond Market

### 2.1.1 Initial Offerings and Repayments of Corporate Bonds

From start of Russian corporate debt market in 1999, and up to the end of the 3rd quarter of 2005, 233 non-financial issuers of various industries placed 381 issues of corporate bonds, for total face value of about 15.7 billion USD.[3]

During this period financial institutes including banks, non-banking credit organizations and their subsidiaries, placed 122 issues for the face value of 3.83 billion USD.[4]

Data analysis shows that corporate bond market is dynamically growing. Thus it developed mostly in 2002-2004 when 95, 96 and 91 issues were placed (1.82, 2.33 and 4.96 billion USD respectively). Despite the drop in number of issues almost by 10% in 2004, the volume of raised funds grew twice, in comparison with 2003. The volume of funds raised as of the first 9 months of 2005 exceeded this indicator of the whole 2004 and amounted to 5.06 billion USD, the number of issues was also above the figure of 2004 making 98.

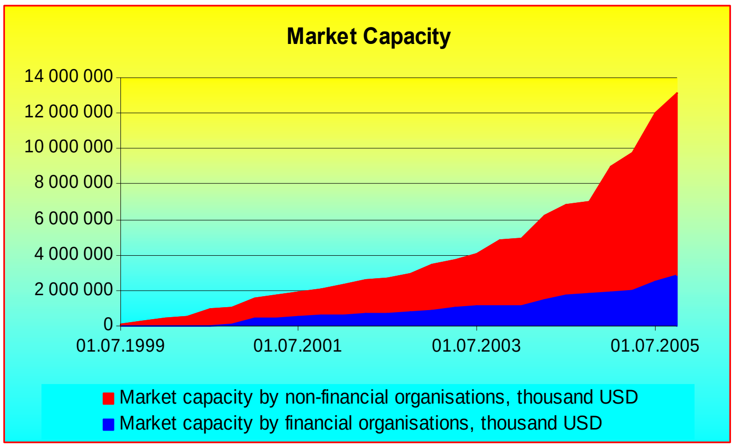



[3] Database of the authors conducted on official publications of the issuers, financial supervisors, trade organizers

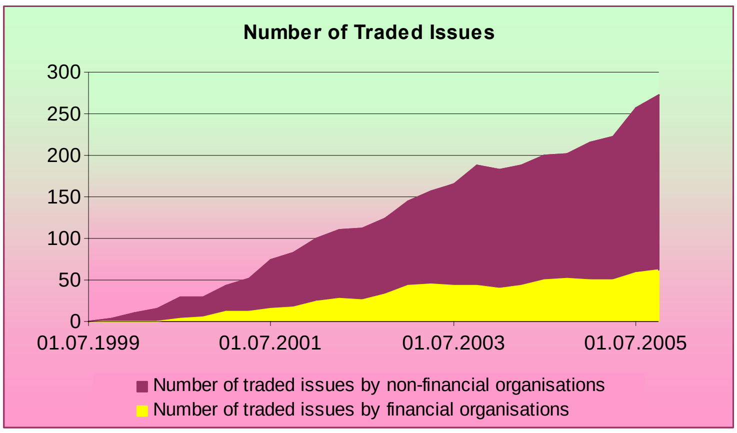
In 2004 expansion of the market in general was achieved due to essential increase in total volume of issues: the volume of the funds raised by non-financial organizations grew practically twice to 3.84 billion USD (in comparison with 2.04 billion USD in 2003) accompanied by fall in number of issues to 66 (in comparison with 73 in 2003) and by financial organizations - over 3 times - to 1.12 billion USD (in comparison with 0.29 billion USD in 2003) coupled by growth in number of issues by 1.5 times to 25 (in comparison with 16 in 2003). But growth in 2005 was caused by rise in all indicators followed by outstripping increase in number of issues by non-financial organizations (accompanied by partial decrease in average size of issue as volume of the funds raised in the 9 months of 2005 is practically similar to the level of the last year).

### 2.1.2 Market Capacity and Number of Traded Issues

Dynamical growth of number and volumes of issues with excess of number and volumes of placed issues over those of redeemed issues in most quarters of the period under analysis caused changes of such important indicators of corporate bond market as its **capacity** (**total face-value of traded bonds**) and **number of traded issues**.[5] Large increase in volumes of initial bond offerings by non-financial organizations determined the meaningful increase in market capacity in 2004 - 2005: the cumulative gain made 4.02 and 4.09 billion USD during 2004 and 9 months of 2005 accordingly, or 81% and 45% of the value of this indicator as of the end of the previous period. In the sector of non-financial issues these parameters made 3.25 and 3.12 billion USD or 85% and 44% accordingly.




Similar to the above mentioned trend the number of traded issues was characterized by essential increase achieved basically due to increase in number of issues placed by non-financial organizations, which made 77% of total traded issues by 10/01/2005.




[4] Statistics of initial offerings and repayments of issues are given in Appendix A

## 2.2 Structure of Corporate Bond Market

### 2.2.1 Maturity Structure of Market

As issues of corporate bonds are traditionally considered as an instrument used for financing of long-term investment projects aimed at modernization of equipment, development of technologies, mergers and acquisitions and other capital-intensive growth strategies, the question of bond maturity is crucial.[6]

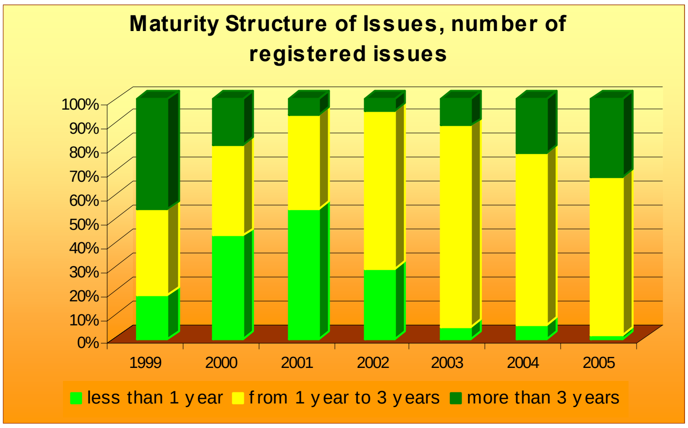
A large part of issues registered in 2000-2005 contained options for prescheduled early buy-back, structured as a contractually binding commitment of the issuer to make an offer to buy back the bond from the current holder at pre-set time points through the life of the bond at prearranged prices (Bermudan-style puttable bond). Accordingly, when analyzing risks involved in the purchase of such security an investor could consider it as a bond with maturity equal to the first date on which the attaching option can be executed.

From the issuers point of view, however, the actual maturity of these bonds was longer. The buy back did not signify the final redemption of the bond, but merely a temporary transfer from the market to the asset side of the issuers balance sheet, that would shortly be followed by the re-sale. These deals were supported by technical short-term bank lending, and did not require commitment of issuers’ own funds.

The standard practice is therefore to base all market bond calculations on bonds’ full maturity, disregarding buy-back clauses.

With few exceptions, trends of change in structure of registered corporate bond issues were the same for financial and non-financial issuers. In our analysis we will exclude data for 1999, because the composition of market participants has been distorted by the one-off post-crisis effects.

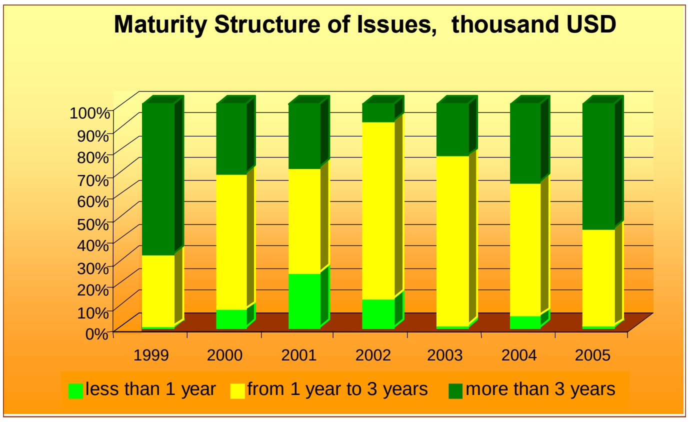
Aggregate maturity structure of bond issues was characterized by the significant increase in the share of issues with maturity of 1-3 years in 2000 – 2003. For financial institutions the share of mid-term bond issues rose from 30.77% in 2000 to 78.57% in 2003 (for non-financial institutions the share of the mid-term bonds increased from 41.38% to 85.29% over the same period). Across the market as a whole in 2003 bonds with maturities of 1-3 years




[5] Statistical data are available in Appendix B.
[6] Statistical data are available in Appendix C.

made up 84.15% of the total number of issues (or 69 issues) in comparison to 38.10%, or 16 issues in 2000. If we consider dynamics in terms of volumes, the percentage rate changed from 60 to 76%, however in absolute terms the growth was substantial: from 0.7 to 1.9 billion USD. In 2004 and in the first 9 months of 2005 the number of such issues remained stable - 66 issues, however there could be observed a decrease in the share to 67% of the total number of registered mid-term issues. Share by volume changed more substantially: despite increase in volumes of registered mid-term issues to 2.7 billion USD as of 9 months of 2005, their share in total amount decreased to 44%, first of all **due to fast growth of the share of long-term issues with maturity over 3 years.**

Significant growth of the share of long-term issues (with maturity over 3 years) testifies to the strengthening of the market, improvement of confidence in it both of investors and issuers. The growth rate was the highest in the segment of issues by financial organizations: as of 9 months of 2005 the share of long-term issues accounted for 51.85% of the total number of the registered issues or 82.08% in terms of volume (in comparison with 7.14% and 12.29% in 2003). The growth rate in issues by non-financial organizations was not so high: to 25.00% of the total number and 32.32% of the total volume of the registered issues as of 9 months of 2005 (in comparison with 11.76% and 24.40%, respectively as of 2003). In general, in 2004-2005 the volume of long-term issues exceeded 50% of the total volume for the first time over the time horizon considered.



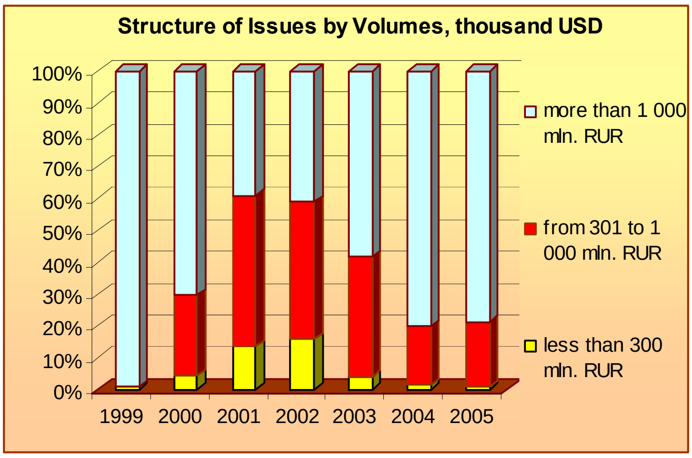

In 2002 - 2005 the share of short-term issues (with maturity less than 1 year) fell sharply. Such issues played the most important role in 2000 - 2001 when they accounted for 23.08% and 62.5% in total volume of issues by financial organizations, 51.72% - by non-financial organizations and 42.86% and 54.05% - in the total number of issues. In terms of value their share was at 3.76% and 31.79% for the financial organizations; 10.21% and 21.29% for non-financial organizations, and also 42.86% and 19.05% in total value of the registered issues. In 2005 there was only one short-term issue, which made 1.01% in total number and 0.29% in total value of issues. Most likely it was caused by improvement of short-term lending conditions and promissory note offerings aimed at short-term financing.

### 2.2.2 Structure of Corporate Bond Market by Volumes of Issues

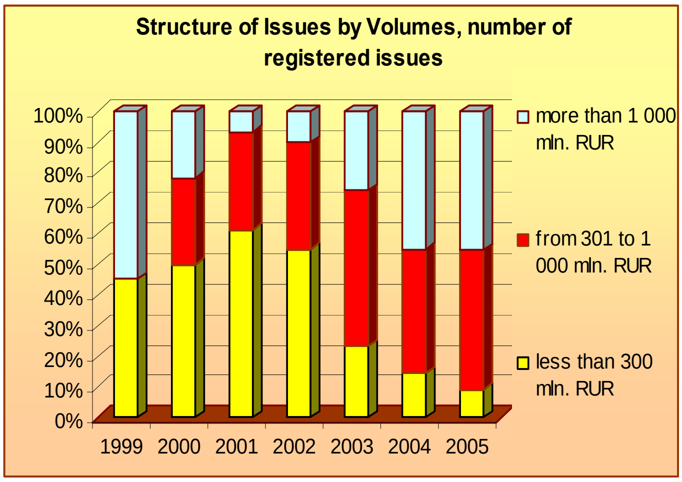
The size of individual bond issues is an important subject to analyze because it highlights a comparative advantage of bonds over bank credits in that the size of an individual bond issue tends to exceed the size of a typical bank credit.[7]

In general in 2000 - 2005 we can observe substantial enlargement of bond issues, particularly in issues of non-financial organizations and taking into account the results of 9 months of 2005 in issues of financial organizations as well. The share of small issues (with value below 10 million USD, referred to as non-market as it is impossible to create a liquid secondary market in them) significantly decreased: from 50.00% of total number of issues in 2000 to 14.29% in 2004 and 9.09% as of 3 quarters of 2005. In terms of volumes of registered issues, dynamics of share of small loans was less clear cut: in general it did not exceed 16%, as of 9 months of 2005 it made 10.7%, however in 2001 - 2002 it was rather high – 13.5 and 15.6%, accordingly.

In 2003 - 2005 the role of large issues (over 1 000 million roubles, or 35.5 million USD) in the total value of registered issues increased greatly in comparison with 2002. So, in the sector of issues by financial organizations their share increased to 89.20% in comparison with 28.21% in 2002, by non-financial organizations – 83.43% in 2004 and 70.86% in 2005 in comparison with 45.56% in 2002, and across the entire market to 80.23% in 2004 and 78.81% in 2005 in comparison with 41.24% in 2002. Thus, such a substantial increase in the share of large issues took place due to increase in their volumes from 730 million USD in 2002 to 4 762 million USD as of 9 months of 2005, coupled with stable value of average issues (within the limits of 764 - 1 216 million USD during the period under analysis).




Mirroring the direction of trend for illiquid loans reduction, the share of small issues in the total number decreased from 55% in 2002 to 9.09% in the first 9 months of 2005. An expansion of the share of large issues in total number can be observed, which additionally confirms conclusion about improvement of confidence of investors: while in 2002 only 10 large issues were registered that made 10% of the total number, just in the three quarters of 2005 45 issues with volume over 1 billion




[7] Statistical data are available in Appendix D.

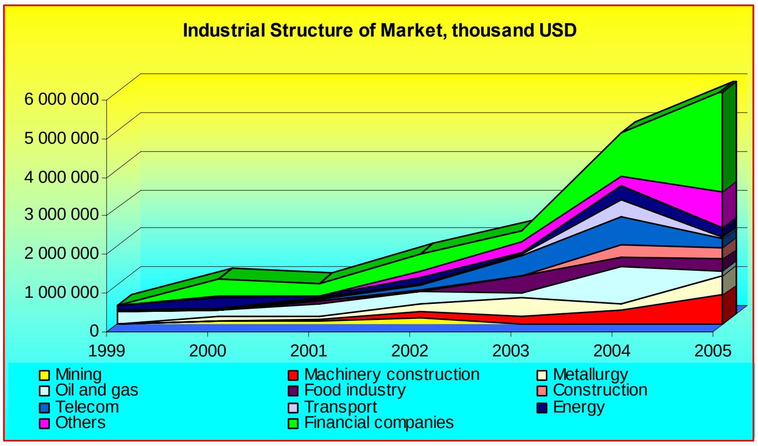
roubles (or 35.5 million dollars) were registered, or 45.45% of total number. Whereas in the segment of financial issues the trend of loan enlargement was obvious and as of 9 months of 2005 the number of registered large issues exceeded 50% of total number, non-financial organizations in 2005 showed a small decrease in comparison with the level of 2004 from 48.48% to 43.06% of the total number of registered loans, accompanied by steady growth of this indicator in 2002 – 2004 from 10.29% to abovementioned 48.48% respectively.

In general the basic trend in 2000 - 2004 together with development of the organized bond market was for standardization of issue parameters regarding volume and maturity: so, 2 and 3 years became the standard terms by 2003, with change to 3-6 years in 2004, and volumes of issue became multiple to 500 million roubles with prevalence of issues above 1 billion roubles.

### 2.2.3 Industrial Structure of Corporate Bond Market

The industrial structure of corporate bond issues underwent certain changes in 1999 - 9 months of 2005.[8]

In 1999 - 2000 the market was focused on key industries, but their share was decreasing (in 1999 the share of issues by oil and gas refinery companies accounted for 67.09% of the total amount, energy - 23.78%; in 2000 energy - 39%, oil and gas industry - 19.85%, 16.81% was attributable to machinery construction, and in 2001 oil and gas refinery made up 45%). The additional trend of the period that showed corporate bond market development, was the diversification of industrial structure of issuers and growth of the share of issues attributable to **light industry, trade, agro-industrial sector** companies both in terms of number and value of registered issues. This is proved by the growth rate of shares of “other industries” in terms of volumes of registered issues.



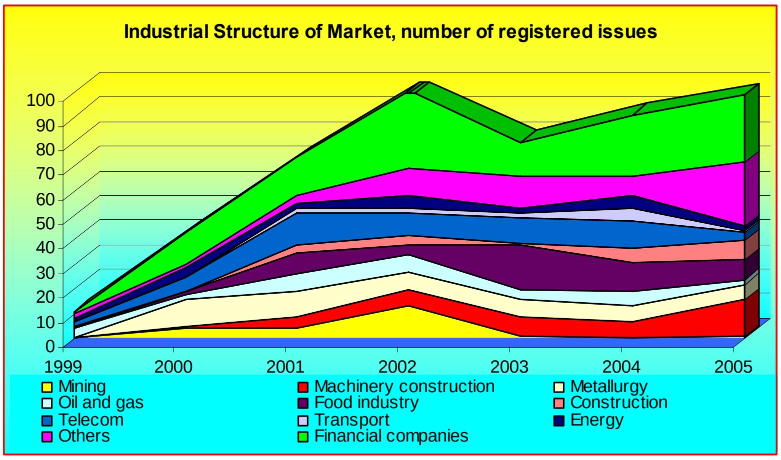

The characteristic of 2003 was a sharp change in ratio of volumes of issues by **financial** vice versa **non-financial organizations**. While in 2000 - 2001 the ratio remained at the level of 1:2, in 2002 it reached 1:3, and in 2003 the ratio made 1:7.5 whereas in 2004 this ratio returned to more suitable base of 1:3, and according to the results of 9 months of 2005 it fell to its minimum value for the period under analysis - 1:1.3.

[8] Statistical data on industrial structure of the corporate bond market are available in Appendix E.

In comparison with indicators of 2000 - 2002 the share of **mining companies** decreased substantially. In 2003 - 2005: only 2 such issues were registered, and the volume of issues did not exceed 4% of the total volumes of the registered issues by non-financials, whereas in the recent years the share of issues attributable to this industry in the total amount of the funds ranged from 10.5% to 13.5%.

In practically full absence of bond issuers from **machinery construction** in 1999 - 2000 this industry took stable positions in 2001-2005. The share of these issues in number of registered issues by non-financials accounts to about 10-12%, and their share in value of registered issues is approximately 6.24% to 9.36%. Issuing activities of machine-building industry reached its maximum in 2005 when these issues amounted to 20.83% of the total number and 21.64% of total value of the registered bond issues by non-financial organizations.

Issuers operating **metallurgical industry** had stable high positions in 2000 - 2003: their share in the total number of issues by non-financial organizations rose from 10.14% (2002) to 36.67% (in 2000), and in the total number of registered issues from 11.35% (in 2001) to 22.74% (in 2003). In 2004 there was some decrease in industry's positions: its share in total number of issues made 9.09%, and in total value – 4.63%. Due to the placement of rather large issues according to results of the first 9 months of 2005 the share of issues by metallurgical enterprises in total volumes of issues by non-financials returned to its former value – 14.72% accompanied by further decrease in its share in the total volume of issues across all segments to 8.33%.




The share of **telecommunications** companies was rather steady in 1999 - 2004 – about 15 - 20% of the total number of registered issues. The share of these issues in the total value of registered issues increased significantly to 19 - 25% in recent years. By results of 9 months of 2005 the share of this industry in the corporate bond market decreased substantially to 4.17% of the number and 6.75% of the total volume of registered issues by non-financial organizations.

The share of issues by **transport companies** was rather small but stable in the total number of issues – about 3% in 2001-2003, the share of these issues in the total value of registered issues in these years was also about 2-3%. In 2004 these indicators increased sharply to 7.58% and 12.12%, accordingly, followed by a sharp decrease according to the results of 9 months of 2005, when there was registered a sole issue of insignificant value.

The share of issues by **food-processing industry** increased greatly. As mentioned above there was a trend to accelerate bond issues by trade and agricultural sector. These factors altogether fostered significant expansion of presence of "**other industries**": whereas in 2000 - 2001 the share of issues by such companies both in number and in value of all registered issues did not exceed 6 - 8%, just in the first 9 months of 2005 26 issues (36% of total number) were offered, their value exceeded 25% of the total amount of the issues registered in this period.

# 3. Innovative Character of Market: Development of Financial Engineering in Russian Corporate Bond Market[9]

Financial engineering applied to the Russian corporate bond market served various purposes depending on the basic market conditions, macroeconomic situation, investors preferences and segmentation of their demand, asymmetries in government regulation of separate segments of the financial market and of various groups of financial intermediaries, special interests of issuers. These applications varied from inflation - indexed securities and bond repayments made by commodity deliveries (this is usual for high-risk emerging markets), and up to the use of a number of different derivatives applied to bonds aimed at maximum regard of issuers' interests (traditional practice for developed markets, but very innovative in Russia). Evolution of financial engineering and accordingly its products in the Russian corporate bond market can be tracked by analyzing separate stages of development according to changes of macroeconomic situation.

## 3.1 Pre-1998 Spontaneous Developments

Characteristics of issues:

- Commodity indexation or bond repayments by deliveries of commodities;
- Issuers, companies of natural resource extracting industry;
- Small number of issuers and issues;
- Absence of organized secondary market.

For the first time in Russia the bond issues were constructed on the basis of financial engineering appeared in response to high inflation and shortage of goods in macroeconomic context. The enterprises could not use fixed-income securities to attract financing as there were no investors ready to accept risks of changing market rates, and interest rates of bank credits were too high. Thus shortage of goods induced consumers to search for new (non-conventional) ways of their purchase.

An instrument that met needs of both parties became corporate bonds with included

[9] More detailed analysis of financial engineering in the Russian corporate bond market with examples of issues are available in "Financial Engineering in Corporate Bond Market" by Z.A. Vorobieva./ Ph.D. Thesis. – M.: Financial Academy under the Government of RF, 2004. Online version is available at www.mirkin.ru.

commodity derivatives. To exercise them issuers had to deliver commodities which were produced by them to make repayments on their bonds.

## 3.2 Seeking the Foreigners (mid-1999 - mid-2000)

Characteristics of corporate bond issues:

- Constructed to raise non-residents funds;
- Pegged to USD;
- Maturity, 3 to 5 years with an opportunity of prescheduled buy-back;
- Volume of issue, up to 100 million USD;
- Issuers, basically the largest companies of oil-and-gas and energy industries;
- The organized corporate bond market was established

The first public offering of corporate bonds began in mid-1999. After the announcement of government debt default in August 1998 the non-residents who were owners of the defaulted bonds and whose funds were frozen in so-named “type "C" accounts” were authorized to buy corporate bonds of Russian issuers.

Desire to raise funds of non-residents on the one hand, and the growth of export proceeds of the largest Russian companies, such as OAO "NK "LUKoil”, OAO "Gazprom", OAO "TNK", RAO "UES Russia", on the other hand, and also significant change in rouble exchange rate to USD caused demand to peg bonds yields to hard currency value. Thus declared coupon yield in percentage of face value and the face value at maturity of rouble-denominated bonds were indexed depending on change in rouble exchange rate to USD, which allowed investors to receive hard currency yields and to hedge currency and inflation risks.

Other important and still actual feature of bonds was granting investors with opportunity to demand prescheduled buy-back of bonds on fixed dates. This characteristic allowed adjusting the maturity of bonds and making it shorter in comparison with that set in the prospectus. It served as an additional instrument to decrease investor risks.

Such structure of bonds was actively applied up to mid-2000, their yield fluctuated within the limits of 5 to 10% per annum in foreign currency.

***The basic concept of financial engineering*** in the bond market was ***an opportunity for the investor to participate in issuer’s additional incomes*****,** i.e. in the incomes, which the exporter with currency proceeds received due to fluctuation of national currency exchange rates**.** Corporate bonds were structured in as far as possible to accommodate requirements of the foreign investors. In order to meet such requirements ***the basic tool*** of financial engineering was the built-in ***USD options / bond options*** (regarding an opportunity of the investor to present an instrument for prescheduled buy-back).

### 3.3 Discovering Households as Investors (March 2000 - March 2001)

Characteristics of bond issues:

- Orientation to raise funds of households;
- Formation of bond yield depending on interest rates on household deposits set up by regional branches of the national-wide Savings Bank of the Russian Federation (Sberbank);
- Maturity, 1 - 3 years;
- Volume of issue, from 1 million USD;
- Issuers, regional telecommunications companies.

Aimed basically at funds of private investors, the volume of issues was less, than at the previous stage: less than 1 million USD. The corporate bonds ***included deposit interest rate options*** and provided income higher than that had been paid by the major saving bank (Sberbank) on retail deposits. The bonds were very attractive taking into account that further business development of issuers and their profitability and financial soundness were not doubted even by non-professionals.

### 3.4 Searching for Financial Institutions Money (September 2000 - April 2002)

Characteristics of issues:

- Orientation to raise funds of financial institutions;
- Formation of bond yield depending on the refinancing rate of the Central Bank of the Russian Federation (the Bank of Russia) and yields of government short- / mid-term obligations - federal treasury bills / federal bonds (GKO-OFZ);
- Maturity, 1 - 3 years;
- Early buy-back offerings, adjusting bond’s maturity and yield;
- Volume of issue, 1 to 65 million USD;
- Issuers, the broad group of the companies.

Additional trend:

- Use of bonds to convert debts into shares

By the end of 2000 the situation in the financial markets of Russia had stabilized. The opposite dynamics of 2 key bond indicators was discovered: USD constantly strengthened against rouble, on the one hand, and yield rates of government securities and the refinancing rate constantly lowered, on the other hand. At the same time the issuers that had no foreign currency proceeds entered the securities market and more domestic commercial banks and brokerages began to use rouble bonds as an investment vehicle.

In aggregate these factors provided reorientation of issuers from currency indexation of bond yields to indexation depending on change in the refinancing rate of the Bank of Russia and yields of GKO-OFZ. Simultaneously began to appear the bonds protecting the issuer against interest rate risk: the issuer had an opportunity to call bonds on coupon dates in the event if calculated rate after coupon payment exceeds a certain cap. It actually implied ***a cap-option*** as a part of ***the bond,*** apart from ***an interest rate option*** (basis of that was the yield rate of the government securities).

One more important characteristic of this period lies in reduction of average bond maturity coupled with increase in a number of coupons, i.e. current payments generated by bonds became more frequent. Issuers started to use buy-back offers to manage actual maturities of bonds. Offers allowed not only to reduce the maturity, but also to adjust bond yields by offering buy-backs on day of the next coupon payment at the price above or below the face value.

The next financial innovation was ***the bonds convertible in shares*** to restructure existing debts of issuers. As a rule, maturity was short (up to 2 months), bonds were offered at face value and did not assume periodic payments.

## 3.5 Diversifying Bonds Yield / Maturity Structures (April 2002 – December 2005)

Characteristics of issues:

- Focused to attract funds of the broad circle of investors;
- Prevalence of fixed-income debt instruments;
- In case of variable-rate bonds establishment of one or several coupons at auctions or by decisions of the debtor’s executive bodies;
- Early repayments and buy-backs as a part of market landscape;
- Increasing and diversifying number of issuers.

***Fixed-income bonds*** had been placed in Russia since 1999. However till 2002 due to general instability of the Russian economy and due to fact that the domestic corporate bonds were taken as extremely risky vehicles, these bonds were used either for small issues placed at closed offerings by first class borrowers. At the beginning of 2002 growing confidence of investors, being combined with improving macroeconomic conditions were reflected in fast development of fixed-income segment.

At the same time new classes of ***variable-rate debt products*** have appeared – ***step-down bonds*** –as an evidence of optimistic financial forecasts of the most market participants. The basic advantage in this case is simplicity of issue, i.e. the investor knows in advance what volume of money and at what time horizon he can expect to return. The issue also becomes attractive in case of decrease in market rates – this is today's situation in the Russian securities market.

Different ***methods*** to establish ***variable coupon rates*** were developed in financial engineering of corporate bonds: by public auctions; by announcements of schedule of decreasing coupon rates in the prospectus (modification of step-down bonds); by consecutive decisions of the issuer's executive boards day before interest payment / buy-backs dates (to give the issuer a chance to manage it's debt portfolio more effectively); by pegging auctioned coupon rates to additional corrections made to take into account the government bonds yields or another financial indicators; by combination of these techniques on different stages of the bonds life cycle. The world of non-fixed income debt products has been developed by a number of issues of corporate ***zero coupon bonds***.

The semiannual offers to buy bonds back have been supplemented by early repayments options as an opportunity for bondholders ***to demand repayments*** in cases of essential negative changes in activities and ownership structure of both issuer and bond guarantors (essential deterioration of financial position, delays to pay interest, worrying changes in corporate control and management, etc.).

Further innovation of the period was issues of ***amortization bonds*** which guaranteed repayments of parts of the principal on predetermined interest payment dates.

Thus every corporate bond issue has become an engineered financial structure with hand-made design which has been purposed to give chances for issuers and investors to make any financial decisions during bond life depending on their current interests and financial position - to buy bonds back or to keep them in the market, to hold bonds in portfolios or to liquidate them.

# 4 Foreign Investments Potential in Domestic Corporate Bond Market

## 4.1 Improvement of Corporate Bond Investment Quality: Long-term Trend

### 4.1.1 Basic Indicators of Risks

Like in the international practice, in Russia indices are calculated separately for ***the government, municipal and corporate bonds***, including:

- ***price indices*** reflecting changes in prices of bonds (calculated by the leading stock exchange - the MICEX and by ZENIT Bank);
- ***total return indices,*** calculation of, which considers changes in prices and coupon yields of bonds (published by "RTS-Interfax" Index agency, "Cbonds" Information agency, ZENIT Bank);
- ***indices showing dynamics of bond returns*** (aggregated indicators of bond yields developed by ZENIT Bank).

The statistics on majority of indices have been available since January, 1st, 2003 (start of calculation of the MICEX bond index), indices of ZENIT Bank ZETBI - ZENIT Bond Indices have been calculated since January, 1st, 2002, indices of RUX-Cbonds – since late 90th.

***ZETBI (ZENIT Bank) indices*** are calculated on the basis of four bond portfolios (the government bonds, subfederal bonds traded on the MICEX, corporate bonds traded on the MICEX and the ten most liquid corporate bonds) and include six basic indicators: total return index; price index; average yield to maturity (YTM); current spread; average duration; capitalization (market capitalization).[10]

***MICEX bond indices*** (www.micex.com) are presented by two basic indicators: corporate bonds price index **RCBI** calculated on the basis of trades executed at MICEX; corporate bonds total return index **RCBI-s**.

Indicators of the corporate bond market developed ***by "RTS-Interfax" Index Agency and "Cbonds" Information Agency*** (www.cbonds.ru) are presented by two indices: **total return index RUX-Cbonds**; **price index** of corporate bonds **RUX-Cbonds**.

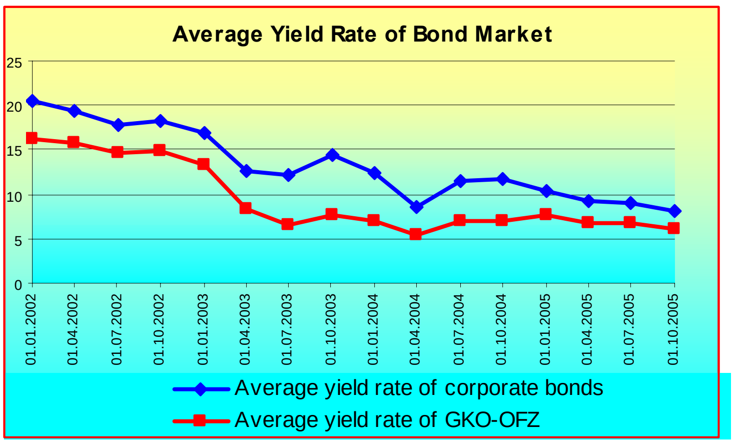
Analysis of changes in the main indices of the Russian corporate bond market including yield, duration and trade volumes is given in ***section 4.2***.

Credit risks of major corporate bonds are measured by international and a number of domestic rating agencies. However the majority of the Russian medium-sized companies cannot reach international ratings because of their high costs and discrepancies between international and domestic systems of accounting. As a consequence own rating systems have been developed by a number of the commercial banks – leading underwriters of the bond issues. In addition, credit risks of issuers are usually disclosed in investment memorandums widely required by financial intermediaries and potential investors.

## 4.1.2 Risks and Yield[11]

***Yield***

Development of the corporate bond market, strengthening of macroeconomic situation and growth of the financial depth of the Russian economy launched the process of gradual decrease~~ing~~ of average yields both in corporate segment, and in the market of public debt from 20.60% and 16.11 % as of 01/01/2002 to 8.10% and 6.02% as of 01/10/2005 by sectors accordingly.




All fluctuations did not interrupt the main trend.

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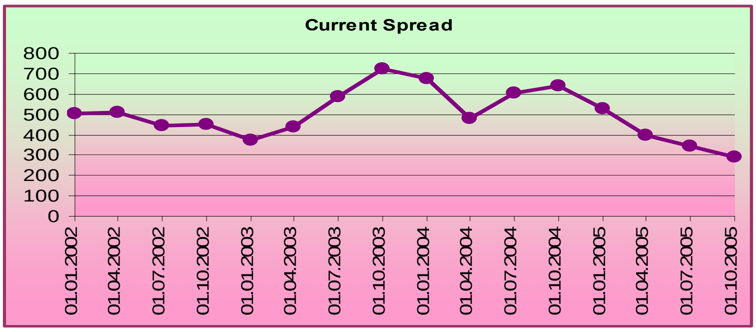
[10] Techniques of calculation of separate indexes are available on web-site of ZENIT Bank in Internet – www.zenit.ru
[11]Data on changes in yields and risks of the Russian corporate bond market is available in ***Appendix F.***

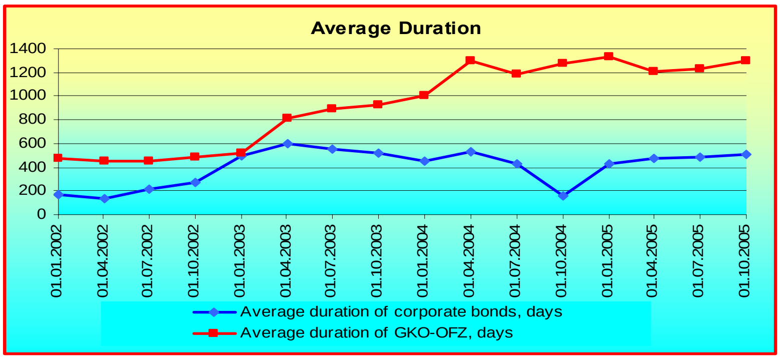
### *Current spreads*

Current spread of corporate bonds over the risk-free yield curve (average yield of GKO-OFZ market) changed within the borders of 288.12 – 725.92 points. The major trend became steady and essential narrowing of spread from 641.43 points as of 01/01/2005 to 288.12 as of 10/01/2005.[12]




### *Average Duration*

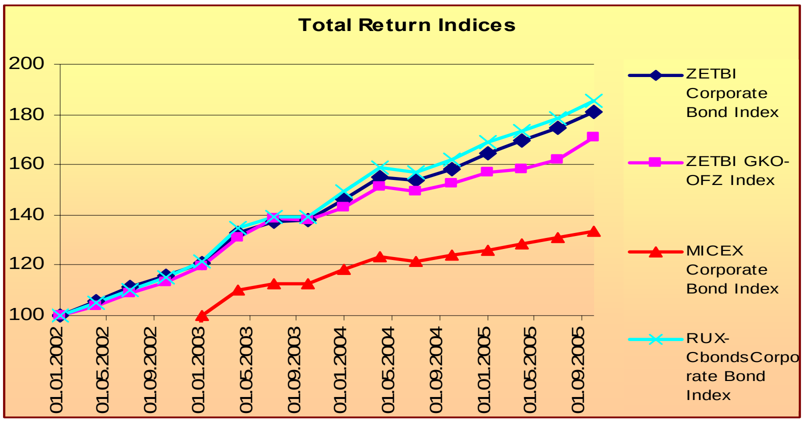
In 2003 - 2005 the average duration of corporate bonds essentially increased in comparison with indicators of 2002. That means growing interest risk of the corporate bond market. While in 2003 duration never rose above 270 days, in the next 2 years it fluctuated within 430 - 600 days. The duration of the state bonds also substantially increased to demonstrate analogous dynamics of interest risk.




One of the reasons is the noticeable growth of share of corporate bonds with rather long maturities. Growing confidence of investors, their readiness to buy and keep mid-term securities, increasing market value of securitized corporate debt meant that market has become long way optimistic.

### *Price Dynamics*

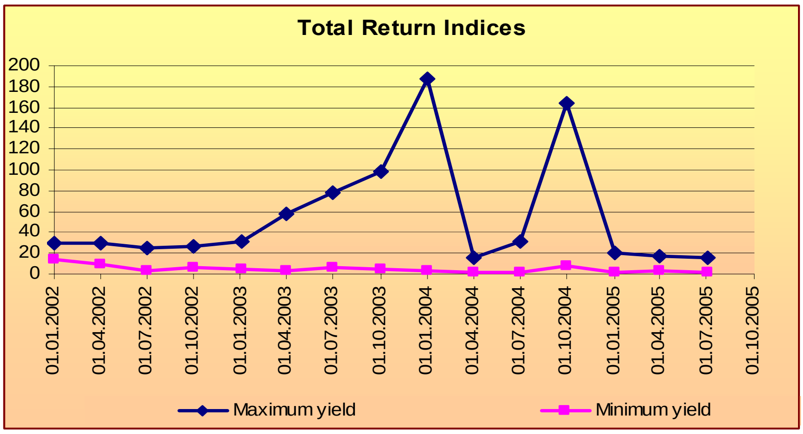
Changes in total return indices were similar for the markets of corporate and government bonds. Almost during the whole period these indicators grew, except for the insignificant decrease as of 10/01/2003 (only in public sector) and as of 07/01/2004 (both in public and in corporate sectors), which shows steady and dynamical development of the debt segment of the Russian securities market. ZETBI total return index




[12] The presented analysis of the average yields is made on the basis of changes in ZETBI indices. The conclusions are proven by comparable dynamics of RUX-Cbonds data on average yields (both simple and effective).

grew from 100.00 as of 01/01/2002 to 181.01 (in corporate sector) and 171.18 (in GKO-OFZ market) as of 10/01/2005, the RUX-Cbonds total return index grew from 100.00 to 185.68, accordingly and the MICEX total return index of corporate bonds - to 133.86 (2003 - 2005).

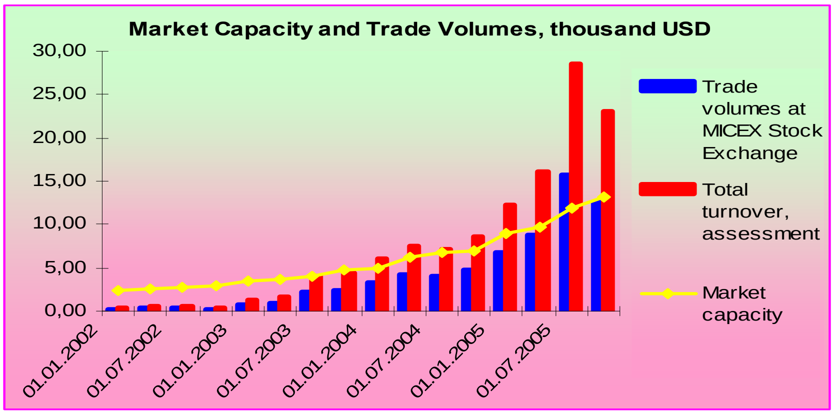
The basic trend in corporate bond market development since mid-2003 was sharp rise in number of issuers due to entrance of the middle-size companies into the market, whose bonds




gave higher yield in comparison with large cap issuers, however had higher risks. While in 2002 – early 2003 the minimum and maximum yield to maturity differed by 2-7 times, the difference between the specified indicators made 12-51 times since mid-2003, which testifies essential segmentation of bonds by risks and presence of both highly reliable and extremely risky securities in the market. In 2005 the max / min yields were a little narrowed to the difference in 6 - 12 times.

***Liquidity of Corporate Bond Market***

Annually corporate bond market demonstrates significant growth in terms of liquidity. Taking into account the fact that over 90% of volume of corporate bond exchange turnover is




made by the MICEX (according to estimates it amounts to 55% of total corporate bond trade volume) it is possible to consider statistics of this trade floor representative enough for estimation of corporate bond turnover as a whole. While before 2003 the total trade volume did not exceed 30% of the bond's market capacity – total face-value of outstanding bonds (very low market liquidity of corporate bonds), by 2005 this liquidity ratio has increased significantly. From the beginning of 2004 annual turnover of corporate bonds steadily and in growing number of times exceeded their market value.[13]

[13] Trade volume is given by the quarter and market capacity – as for the end of the quarter.

### 4.2 Access of Non-resident Investors to Domestic Market

Step-by-step liberalization of the Russian capital account and currency regime has simplied the access for foreign investors to the domestic securities market including corporate bond segment.

For the initial transfer of funds for their subsequent investment in rouble assets in domestic Russian corporate bond market the foreign investor needs:

1. To open accounts in one of the Russian commercial banks:

- account in foreign currency;
- special "O"-type account in roubles (on conditions of obligatory reservation of 2% of the transferred sum for one year with subsequent refund)

2. To sign contracts with the Russian broker dealer (e.g. Eurofinansy Investment Banking OJSC) for brokerage / depository services and to open a brokerage account in roubles as a direct gateway to the corporate bond market.

The MICEX Stock Exchange (the main corporate bond market) keeps the reliable and liquid market based on double continuous auction with automatic matching; pre-depositing to minimize the counterparty risk; multilateral clearing; delivery versus payment principle in settlements.

Repatriation of funds does not entail additional expenses and time on the part of foreign investor, on whose demand funds from the account with the brokerage firm are transferred to the special “O”-type account with the Russian bank. The bank converts roubles into foreign currency and credits the investor’s account in the foreign currency with the option of onward transfer into account with the foreign bank.

# 5 Forecast of Corporate Bond Market in Russia

### 5.1 Long-term Factors

The forecast of the dynamics of Russian corporate bond market and financial engineering developments in our opinion could be built taking into account the following:

- ✓ the debt model of capital market in Russia (not stock-based or market-based financial system); a major role of the foreign investors in creating demand for the Russian securities; a conservative nature of retail investors inside country;
- ✓ financial intermediaries, and sometimes issuers are very innovative and pro-Western; corporate bond market development is accompanied by the trend implying expansion in number of financial engineering products based on derivatives and modern financial technologies;
- ✓ the main focus in financial innovations will be not minimization of macroeconomic

risks (the Russian economy has become richer and less volatile since 1990-s); the bonds will be mostly being engineered to mitigate microeconomic risks of specific industries and issuers.

## 5.2 Dynamics of Corporate Bond Market

Considering the scope of development of this financial market segment in 1999 - 2005 and assuming that high prices for Russian exported goods and macroeconomic stability will remain in the mid-term, it is possible to predict the further growth in the number of issues with accompanying growth of market value and liquidity of the corporate bonds.

Considering gradual development of domestic financial market, weakening of corporate conflicts and risks together with pertaining simplicity of the structure of mid-term securitized debt (predominately bonds with maturities of 2-3 years), it is possible to predict ***qualitative changes in structure of issuers***, including market entrance of affiliates of foreign non-financial companies, as well as of insurance companies (not present in the market as issuers) and increase in the share of the businesses not related to telecommunication, power and mining industries, for example, ones with roots in light, chemical and food-processing industries. Thus the industrial structure of issuers will be significantly determined by structural changes in the Russian economy.

Financial engineering will be fully applied  to design risky bonds of Russian mid caps that can be deemed promising, for example for young and dynamically developing holding structures (to finance further developments and business consolidations and to provide their gradual entrance to the capital market with diversified lines of financial products (commercial paper, corporate bonds, IPO).

## 5.3 Management of Bond Maturities

Two simultaneous trends are most likely in changing maturity structure of Russian corporate bonds. Firstly the current volumes of mid-term bond issues will be kept (mainly due to entrance of new issuers into the market), secondly the volume of the long-term issues will increase, caused by development of debt programs of issuers known to the market in the context of relative macroeconomic stability.

Long-term bonds will most likely be characterized by application of options for buybacks and prescheduled repayments, by wide-spread experiments with bond amortization and annuity bonds, with options allowing the investor to demand prescheduled repayment in the case of tangible change in the borrower's conditions. It can be done particularly due to accelerating covenants and embeddings of so-called "poisoned" options. Such options give bondholders the right to present bonds for repayment before maturity in case of unfriendly takeover.

Provision of chastity bonds will be rather promising in the Russian market. They assume repayment at the face value as soon as unfriendly takeover is completed.

Investors may find the opportunity to redeem the bond at the price above the face value in the case of borrower's credit quality deterioration attractive. Bond issues with embedded credit derivatives could prove attractive if offered by larger borrowers. It gives the investor an opportunity to present bonds for repayment in case of downgrading of borrower's credit rating.

Callable bonds will be widely demanded by issuers to make bond maturity more flexible.

On the whole design of bonds will include immediate repayment covenants in case of certain circumstances occurrence or an opportunity to exercise call-and-put-options under such circumstances.

## 5.4 Market Segmentation

Within the process of yield determination a number of trends directed to make the bond market more segmented are expected.

Firstly, the structure of mid-term bonds will become simpler. It will be expressed as the continued refusal of financial engineers to use indexations, as well as the shift from use of complex systems of coupon yield determination to fixed rates for the entire maturity.

Secondly, more advanced securities design is expected to protect investors against greater risks of investments in the growing number of bonds with longer maturities. Collar options could be used when determining yield of long-term issues. They simultaneously set both maximum and minimum yields.

Thirdly, entrance of new issuers to capital markets and development of activities of international rating agencies in Russia will expand the segment of securities with recognized credit ratings. One can forecast development of corporate bonds with coupon rates dependent on changes in issue's credit quality.

Increased competition for financial resources makes the bond issuers more focused on specific groups of investors. As a consequence the bond product lines will increasingly take into account the market segmentation concept (at present the overwhelming majority of bonds is focused on the "broad range of investors" and does not consider peculiarities of investment preferences of various groups).

Probably, discounted bonds placed at auction will be back to the market. The creation of special legal infrastructure to develop short-term corporate bonds market could act as an additional stimulus to establish of this segment of bonds manifesting itself in simplification of procedures of securities registration and information disclosure.

# Conclusion

During the years of development the Russian corporate bond market proved itself as highly profitable, moderately risky and very dynamic. Not one meaningful default of corporate issuer could be discovered since 1999.

Foreign investors taking the opportunity presented by unrestricted entry into the market and subsequent easy repatriation of revenues receive all advantages of trading inside the world of Russian high-yielding corporate bonds, offering the capability to create multi-instrumental, liquid and less risky bond portfolios. Financial engineering offers very different classes of Russian bonds establishing many ways and opportunities to take into account special interests and tastes of investors.

Market expansion due to entrance of new issuers, diversification of their industrial structure followed by active development of debt instruments of already known borrowers, on the one hand, strengthening of securities regulator in Russia in its attempts to establish necessary legal infrastructure adequate to the level of the market development and to provide an efficient supervision on the other hand, alongside with influence of fundamental factors predetermining the debt dominant of the Russian capital market, allow positive forecast regarding investment opportunities and adventurous activities of foreigners inside the Russian corporate bonds universe.

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# Appendices

# Appendix A. Initial Offerings and Repayments of Corporate Bond Issues

| | Issues by financial organizations | | | | Issues by non-financial organizations | | | | Total | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number of issues | | Value of issues in USD | | Number of issues | | Value of issues in USD | | Number of issues | | Value of issues in USD | |
| | placed | Redeemed | placed | redeemed | placed | redeemed | placed | redeemed | placed | redeemed | placed | redeemed |
| II quarter, 1999 | 0 | 0 | 0 | 0 | 1 | 0 | 123 153 | 0 | 1 | 0 | 123 153 | 0 |
| III quarter, 1999 | 0 | 0 | 0 | 0 | 4 | 0 | 171 394 | 0 | 4 | 0 | 171 394 | 0 |
| IV quarter, 1999 | 0 | 0 | 0 | 0 | 6 | 0 | 214 047 | 0 | 6 | 0 | 214 047 | 0 |
| I quarter, 2000 | 1 | 0 | 35 | 0 | 4 | 0 | 73 710 | 0 | 5 | 0 | 73 745 | 0 |
| II quarter, 2000 | 3 | 0 | 54 720 | 0 | 13 | 2 | 365 574 | 10 571 | 16 | 2 | 420 294 | 10 571 |
| III quarter, 2000 | 3 | 1 | 60 455 | 6 117 | 2 | 4 | 80 245 | 6 369 | 5 | 5 | 140 699 | 12 487 |
| IV quarter, 2000 | 7 | 1 | 326 210 | 4 052 | 9 | 2 | 175 034 | 3 586 | 16 | 3 | 501 244 | 7 637 |
| I quarter, 2001 | 2 | 1 | 33 275 | 35 | 10 | 2 | 190 630 | 35 026 | 12 | 3 | 223 905 | 35 061 |
| II quarter, 2001 | 4 | 0 | 112 034 | 0 | 21 | 2 | 116 034 | 3 276 | 25 | 2 | 228 069 | 3 276 |
| III quarter, 2001 | 1 | 0 | 34 095 | 0 | 9 | 2 | 131 947 | 2 411 | 10 | 2 | 166 042 | 2 411 |
| IV quarter, 2001 | 8 | 2 | 90 604 | 23 389 | 18 | 6 | 288 507 | 23 893 | 26 | 8 | 379 111 | 47 282 |
| I quarter, 2002 | 6 | 1 | 126 665 | 16 239 | 13 | 8 | 226 080 | 45 063 | 19 | 9 | 352 744 | 61 302 |
| II quarter, 2002 | 5 | 7 | 92 711 | 57 513 | 19 | 15 | 222 347 | 50 480 | 24 | 22 | 315 058 | 107 992 |
| III quarter, 2002 | 9 | 2 | 47 529 | 6 337 | 10 | 5 | 237 991 | 25 821 | 19 | 7 | 285 520 | 32 158 |
| IV quarter, 2002 | 12 | 3 | 275 645 | 125 865 | 21 | 11 | 588 405 | 222 939 | 33 | 14 | 864 050 | 348 804 |
| I quarter, 2003 | 4 | 2 | 106 286 | 10 423 | 13 | 3 | 227 732 | 90 019 | 17 | 5 | 334 018 | 100 442 |
| II quarter, 2003 | 9 | 10 | 158 193 | 57 738 | 22 | 12 | 617 552 | 441 418 | 31 | 22 | 775 745 | 499 156 |
| III quarter, 2003 | 2 | 2 | 17 088 | 12 062 | 26 | 4 | 868 551 | 200 460 | 28 | 6 | 885 639 | 212 522 |
| IV quarter, 2003 | 1 | 5 | 10 064 | 72 123 | 12 | 13 | 326 065 | 199 950 | 13 | 18 | 336 129 | 272 073 |
| I quarter, 2004 | 4 | 1 | 349 284 | 10 479 | 17 | 14 | 937 827 | 271 708 | 21 | 15 | 1 287 111 | 282 187 |
| II quarter, 2004 | 10 | 3 | 292 489 | 53 652 | 16 | 11 | 571 495 | 150 467 | 26 | 14 | 863 984 | 204 119 |
| III quarter, 2004 | 4 | 2 | 144 669 | 61 707 | 5 | 5 | 283 599 | 103 702 | 9 | 7 | 428 269 | 165 410 |
| IV quarter, 2004 | 7 | 8 | 331 346 | 278 752 | 28 | 14 | 2 048 562 | 256 457 | 35 | 22 | 2 383 415 | 535 209 |
| I quarter, 2005 | 2 | 2 | 108 402 | 77 738 | 17 | 10 | 758 320 | 255 966 | 19 | 12 | 866 722 | 333 704 |
| II quarter, 2005 | 12 | 4 | 577 430 | 62 834 | 40 | 14 | 2 021 716 | 228 088 | 52 | 18 | 2 599 146 | 290 922 |
| III quarter, 2005 | 7 | 4 | 482 118 | 44 530 | 20 | 7 | 1 107 994 | 246 318 | 27 | 11 | 1 590 112 | 290 849 |

# Appendix B. Market Capacity in Terms of Value and Number of Issues Outstanding

| | Issues by financial organizations | | Issues by non-financial organizations | | Total | |
|---|---|---|---|---|---|---|
| | Number of issues outstanding | Market capacity in USD | Number of issues outstanding | Market capacity in USD | Number of issues outstanding | Market capacity in USD |
| 01.07.99 | 0 | 0 | 1 | 123 153 | 1 | 123 153 |
| 01.10.99 | 0 | 0 | 5 | 292 264 | 5 | 292 264 |
| 01.01.00 | 0 | 0 | 11 | 490 179 | 11 | 490 179 |
| 01.04.00 | 1 | 35 | 15 | 525 693 | 16 | 525 027 |
| 01.07.00 | 4 | 54 755 | 26 | 882 735 | 30 | 937 458 |
| 01.10.00 | 6 | 110 255 | 24 | 975 351 | 30 | 1 085 606 |
| 01.01.01 | 12 | 432 018 | 31 | 1 143 303 | 43 | 1 575 321 |
| 01.04.01 | 13 | 455 271 | 39 | 1 272 477 | 52 | 1 727 748 |
| 01.07.01 | 17 | 560 241 | 58 | 1 365 490 | 75 | 1 925 731 |
| 01.10.01 | 18 | 588 032 | 65 | 1 479 663 | 83 | 2 067 695 |
| 01.01.02 | 24 | 645 973 | 77 | 1 720 940 | 101 | 2 366 912 |
| 01.04.02 | 29 | 719 389 | 82 | 1 846 623 | 111 | 2 566 011 |
| 01.07.02 | 27 | 743 318 | 86 | 1 989 562 | 113 | 2 732 880 |
| 01.10.02 | 34 | 777 915 | 91 | 2 184 081 | 125 | 2 961 996 |
| 01.01.03 | 43 | 922 309 | 101 | 2 534 427 | 144 | 3 456 736 |
| 01.04.03 | 45 | 1 021 667 | 111 | 2 681 747 | 156 | 3 703 414 |
| 01.07.03 | 44 | 1 147 929 | 121 | 2 925 619 | 165 | 4 073 547 |
| 01.10.03 | 44 | 1 169 931 | 143 | 3 636 973 | 187 | 4 806 904 |
| 01.01.04 | 40 | 1 132 204 | 142 | 3 840 275 | 182 | 4 972 479 |
| 01.04.04 | 43 | 1 517 674 | 145 | 4 664 673 | 188 | 6 182 347 |
| 01.07.04 | 50 | 1 742 852 | 150 | 5 043 721 | 200 | 6 786 573 |
| 01.10.04 | 52 | 1 809 085 | 150 | 5 175 204 | 202 | 6 984 288 |
| 01.01.05 | 51 | 1 902 910 | 164 | 7 085 257 | 215 | 8 988 167 |
| 01.04.05 | 51 | 1 979 354 | 171 | 7 758 064 | 222 | 9 737 417 |
| 01.07.05 | 59 | 2 477 038 | 197 | 9 485 407 | 256 | 11 962 445 |
| 01.10.05 | 62 | 2 877 279 | 210 | 10 204 070 | 272 | 13 081 349 |

# Appendix C. Maturity Structure of Corporate Bond Market [14]

| | | Issues by financial organizations | | | | Issues by non-financial organizations | | | | Total | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Number of issues | As percentage of the number of issues | Value of issues In thousands of USD | As percentage of the value of issues | Number of issues | As percentage of the number of issues | Value of issues In thousands of USD | As percentage of the value of issues | Number of issues | As percentage of the number of issues | Value of issues In thousands of USD | As percentage of the value of issues |
| 1999 | up to 1 year | 1 | 100.00% | 40 | 100.00% | 1 | 10.00% | 636 | 0.13% | 2 | 18.18% | 676 | 0.13% |
| | more than 1 year, but no more than 3 years | 0 | 0.00% | 0 | 0.00% | 4 | 40.00% | 144 895 | 32.28% | 4 | 36.36% | 144 895 | 32.29% |
| | more than 3 years | 0 | 0.00% | 0 | 0.00% | 5 | 50.00% | 292 561 | 67.57% | 5 | 45.45% | 292 561 | 67.58% |
| 2000 | up to 1 year | 3 | 23.08% | 17 059 | 3.76% | 15 | 51.72% | 74 161 | 10.21% | 18 | 42.86% | 91 220 | 7.73% |
| | more than 1 year, but no more than 3 years | 4 | 30.77% | 138 605 | 30.51% | 12 | 41.38% | 570 194 | 78.49% | 16 | 38.10% | 708 799 | 60.03% |
| | more than 3 years | 6 | 46.15% | 298 570 | 65.73% | 2 | 6..90% | 57 574 | 7.93% | 8 | 19.05% | 356 144 | 30.16% |
| 2001 | up to 1 year | 10 | 62.50% | 106 239 | 31.79% | 30 | 51.72% | 153 150 | 21.29% | 40 | 54.05% | 259 390 | 24.62% |
| | more than 1 year, but no more than 3 years | 4 | 25.00% | 137 127 | 41.03% | 25 | 43.10% | 360 216 | 50.08% | 29 | 39.19% | 497 343 | 47.21% |
| | more than 3 years | 2 | 12.50% | 90 847 | 27.18% | 3 | 5.17% | 205 759 | 28.61% | 5 | 6.76% | 296 606 | 28.15% |
| 2002 | up to 1 year | 14 | 43.75% | 77 506 | 17.58% | 15 | 21.74% | 151 852 | 11.42% | 29 | 28.71% | 229 358 | 12.95% |
| | more than 1 year, but no more than 3 years | 15 | 46.88% | 267 762 | 60.72% | 52 | 75.36% | 1 170 401 | 87.99% | 67 | 66.34% | 1 438 163 | 81.20% |
| | more than 3 years | 3 | 9.38% | 127 582 | 28.93% | 2 | 2.90% | 7 974 | 0.60% | 5 | 4.95% | 135 555 | 7.65% |
| 2003 | up to 1 year | 2 | 14.29% | 17 918 | 6..32% | 2 | 2.94% | 6 516 | 0.30% | 4 | 4.88% | 24 434 | 1.00% |
| | more than 1 year, but no more than 3 years | 11 | 78.57% | 230 819 | 81.39% | 58 | 85.29% | 1 628 929 | 75.30% | 69 | 84.15% | 1 859 749 | 76.01% |
| | more than 3 years | 1 | 7.14% | 34 859 | 12.29% | 8 | 11.76% | 527 773 | 24.40% | 9 | 10.98% | 562 632 | 22.99% |
| 2004 | up to 1 year | 1 | 4.00% | 34 719 | 3.11% | 4 | 6.06% | 213 523 | 5.59% | 5 | 5.59% | 248 242 | 5.03% |
| | more than 1 year, but no more than 3 years | 17 | 68.00% | 490 235 | 43.96% | 49 | 74.24% | 2 474 976 | 64.77% | 66 | 72.53% | 2 965 211 | 60.07% |
| | more than 3 years | 7 | 28.00% | 590 227 | 52.93% | 13 | 19.70% | 1 132 631 | 29.64% | 20 | 21.98% | 1 722 857 | 34.90% |
| over 9 months 2005 | up to 1 year | 1 | 3.70% | 17 760 | 0.68% | 0 | 0.00% | 0 | 0.00% | 1 | 1.01% | 17 760 | 0.29% |
| | more than 1 year, but no more than 3 years | 12 | 44.44% | 451 812 | 17.24% | 54 | 75.00% | 2 205 423 | 64.45% | 66 | 66.67% | 2 657 234 | 43.98% |
| | more than 3 years | 27 | 51.85% | 2 150 722 | 82.08% | 18 | 25.00% | 1 216 552 | 35.55% | 32 | 32.32% | 3 367 274 | 55.73% |

[14] The table is drawn on the basis of issues registration dates, while the previous one was drawn on the basis of issues initial offering dates. The time lag caused by subjective and objective factors may lead to mismatches in periods of registration and initial offering of issues.

A number of issues of convertible bonds have no fixed maturity. It is set as “before the date of issues registration plus t days”. As these issues can be mandatory converted and give no chance to the issuer to refuse shares, we have not included these issues in our calculations.

We believe that when analyzing issues features it would be more appropriate to rely on the dates of issues registration as the issues is normally structured according to the trends going on in the market, whereas the initial offering may be substantially delayed due to changes in the market.

# Appendix D. Structure of Corporate Bond Market by Volumes of Issues

| | | Issues by financial organizations | | | | Issues by non-financial organizations | | | | Total | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Number of issues | As percentage of the number of issues | Value of issues in thousands of USD | As percentage of the value of issues | Number of issues | As percentage of the number of issues | Value of issues in thousands of USD | As percentage of the value of issues | Number of issues | As percentage of the number of issues | Value of issues in thousands of USD | As percentage of the value of issues |
| 1999 | less than 300 mln. roubles | 1 | 100.00% | 40 | 100.00% | 4 | 40.00% | 4 492 | 0.89% | 5 | 45.45% | 4 532 | 0.90% |
| | from 301 to 1 000 mln. roubles | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| | more than 1 000 mln. roubles | 0 | 0.00% | 0 | 0.00% | 6 | 60.00% | 497 575 | 99.09% | 6 | 54.55% | 497 575 | 99.10% |
| 2000 | less than 300 mln. roubles | 4 | 30.77% | 17 095 | 3.77% | 19 | 57.57% | 34 691 | 4.78% | 23 | 50.00% | 51 786 | 4.39% |
| | from 301 to 1 000 mln. roubles | 5 | 38.46% | 99 511 | 21.91% | 8 | 24.24% | 197 737 | 27.22% | 13 | 28.26% | 297 249 | 25.18% |
| | more than 1 000 mln. roubles | 4 | 30.77% | 337 628 | 74.33% | 6 | 18.18% | 494 003 | 68.00% | 10 | 21.74% | 831 630 | 70.44% |
| 2001 | less than 300 mln. roubles | 7 | 43.75% | 37 676 | 11.27% | 39 | 66.10% | 102 910 | 14.31% | 46 | 61.33% | 140 586 | 13.35% |
| | from 301 to 1 000 mln. roubles | 7 | 43.75% | 159 410 | 47.70% | 17 | 28.81% | 342 132 | 47.56% | 24 | 32.00% | 501 543 | 47.61% |
| | more than 1 000 mln. roubles | 2 | 12.50% | 137 127 | 41.03% | 3 | 5.08% | 274 254 | 38.13% | 5 | 6.67% | 411 382 | 39.05% |
| 2002 | less than 300 mln. roubles | 21 | 65.63% | 128 379 | 29.11% | 34 | 50.00% | 148 457 | 11.16% | 55 | 55.00% | 276 836 | 15.63% |
| | from 301 to 1 000 mln. roubles | 8 | 25.00% | 188 183 | 42.68% | 27 | 39.71% | 575 712 | 43.28% | 35 | 35.00% | 763 894 | 43.13% |
| | more than 1 000 mln. roubles | 3 | 9.38% | 124 392 | 28.21% | 7 | 10.29% | 606 012 | 45.56% | 10 | 10.00% | 730 404 | 41.24% |
| 2003 | less than 300 mln. roubles | 4 | 30.96% | 18 407 | 6.49% | 15 | 22.05% | 79 166 | 3.66% | 19 | 23.18% | 97 573 | 3.99% |
| | from 301 to 1 000 mln. roubles | 8 | 57.14% | 165 173 | 58.24% | 34 | 50.00% | 753 869 | 34.85% | 42 | 51.22% | 919 042 | 37.56% |
| | more than 1 000 mln. roubles | 2 | 14.29% | 100 016 | 35.27% | 19 | 27.94% | 1 330 184 | 61.49% | 21 | 25.61% | 1 430 200 | 58.45% |
| 2004 | less than 300 mln. roubles | 3 | 12.00% | 16 318 | 1.46 | 10 | 15.15% | 63 536 | 1.66% | 13 | 14.29% | 79 854 | 1.61% |
| | from 301 to 1 000 mln. roubles | 13 | 52.00% | 326 361 | 29.27% | 24 | 36.36% | 569 586 | 14.91% | 37 | 40.66% | 895 946 | 18.15% |
| | more than 1 000 mln. roubles | 9 | 36.00% | 772 502 | 69.27% | 32 | 48.48% | 3 188 008 | 83.43% | 41 | 45.05% | 3 960 510 | 80.23% |
| over 9 months 2005 | less than 300 mln. roubles | 2 | 7.40% | 10 656 | 2% | 7 | 9.72% | 53 280 | 1.56% | 9 | 9.09% | 63 936 | 1.07% |
| | from 301 to 1 000 mln. roubles | 11 | 40.74% | 272 437 | 10.40% | 34 | 47.22% | 943 760 | 27.58% | 45 | 45.45% | 1 216 197 | 20.12% |
| | more than 1 000 mln. roubles | 14 | 51.85% | 2 337 201 | 89.20% | 31 | 43.06% | 2 424 935 | 70.86% | 45 | 45.45% | 4 762 136 | 78.81% |

# Appendix E. Industrial Structure of Corporate Bond Issues

| | Industry | Number of issues | As percentage of the total of issues | Issue value in thousands of roubles | As percentage of the total value |
|---|---|---|---|---|---|
| 1999 | Mining | 0 | 0.00% | 0 | 0.00% |
| | Machinery construction | 0 | 0.00% | 0 | 0.00% |
| | Metal | 0 | 0.00% | 0 | 0.00% |
| | Oil and gas | 4 | 40.00% | 336 541 | 67.03% |
| | Food | 0 | 0.00% | 0 | 0.00% |
| | Construction | 1 | 10.00% | 41 750 | 8.32% |
| | Telecommunications | 2 | 20.00% | 1 709 | 0.34% |
| | Transportation | 0 | 0.00% | 0 | 0.00% |
| | Energy | 1 | 10.00% | 119 284 | 23.76% |
| | Other | 2 | 20.00% | 2 784 | 0.55% |
| | **Non-financial sector in total** | **10** | **100.00%** | **502 067** | **100.00%** |
| | **Financial companies** | **1** | **100.00%** | **40** | **100.00%** |
| 2000 | Mining | 4 | 13.33% | 88 849 | 12.35% |
| | Machinery construction | 1 | 3.33% | 36 | 0.00% |
| | Metal | 11 | 36.67% | 120 971 | 16.81% |
| | Oil and gas | 2 | 6.67% | 142 870 | 19.85% |
| | Food | 1 | 3.33% | 25 | 0.00% |
| | Construction | 0 | 0.00% | 0 | 0.00% |
| | Telecommunications | 6 | 20.00% | 32 874 | 4.57% |
| | Transportation | 0 | 0.00% | 0 | 0.00% |
| | Energy | 4 | 13.33% | 280 764 | 39.01% |
| | Other | 1 | 3.33% | 53 310 | 7.41% |
| | **Non-financial sector in total** | **30** | **100.00%** | **719 699** | **100.00%** |
| | **Financial companies** | **13** | **100.00%** | **454 234** | **100.00%** |
| 2001 | Mining | 4 | 6.90% | 75 420 | 10.49% |
| | Machinery construction | 5 | 8.62% | 44 909 | 6.24% |
| | Metal | 10 | 17.24% | 81 591 | 11.35% |
| | Oil and gas | 7 | 12.07% | 327 391 | 45.53% |
| | Food | 9 | 15.52% | 69 798 | 9.71% |
| | Construction | 3 | 5.17% | 1 179 | 0.16% |
| | Telecommunications | 13 | 22.41% | 60 850 | 8.46% |
| | Transportation | 2 | 3.45% | 21 049 | 2.93% |
| | Energy | 2 | 3.45% | 34 282 | 4.77% |
| | Other | 3 | 5.17% | 2 657 | 0.37% |
| | **Non-financial sector in total** | **58** | **100.00%** | **719 126** | **100.00%** |
| | **Financial companies** | **16** | **100.00%** | **334 213** | **100.00%** |
| 2002 | Mining | 13 | 18.84% | 181 804 | 13.47% |
| | Machinery construction | 7 | 10.14% | 124 886 | 9.26% |
| | Metal | 7 | 10.14% | 212 104 | 15.72% |
| | Oil and gas | 7 | 10.14% | 312 575 | 23.17% |
| | Food | 4 | 5.80% | 23 922 | 1.77% |
| | Construction | 4 | 5.80% | 12 184 | 0.90% |
| | Telecommunications | 9 | 13.04% | 131 824 | 9.77% |
| | Transportation | 2 | 2.90% | 47 843 | 3.55% |
| | Energy | 5 | 7.25% | 162 666 | 12.06% |
| | Other | 11 | 15.94% | 139 510 | 10.34% |
| | **Non-financial sector in total** | **69** | **100.00%** | **1 349 318** | **100.00%** |
| | **Financial companies** | **32** | **100.00%** | **472 849** | **100.00%** |
| 2003 | Mining | 1 | 1.52% | 19 547 | 0.92% |
| | Machinery construction | 8 | 12.12% | 167 780 | 7.89% |
| | Metal | 7 | 10.61% | 483 792 | 22.74% |
| | Oil and gas | 4 | 6.06% | 154 748 | 7.27% |
| | Food | 18 | 27.27% | 410 816 | 19.31% |
| | Construction | 1 | 1.52% | 651 | 0.03% |
| | Telecommunications | 10 | 15.15% | 522 235 | 24.55% |
| | Transportation | 2 | 3.03% | 37 791 | 1.78% |
| | Energy | 2 | 3.03% | 61 899 | 2.91% |
| | Other | 13 | 19.70% | 268 122 | 12.60% |
| | **Non-financial sector in total** | **66** | **100.00%** | **2 127 382** | **100.00%** |
| | **Financial companies** | **14** | **100.00%** | **283 597** | **100.00%** |
| 2004 | Mining | 0 | 0.00% | 0 | 0.00% |
| | Machinery construction | 7 | 10.61% | 357 608 | 9.36% |
| | Metal | 6 | 9.09% | 177 068 | 4.63% |
| | Oil and gas | 6 | 9.09% | 937 419 | 24.53% |
| | Food | 12 | 18.18% | 274 629 | 7.19% |
| | Construction | 6 | 9.09% | 292 527 | 7.66% |
| | Telecommunications | 11 | 16.67% | 719 472 | 18.83% |
| | Transportation | 5 | 7.58% | 463 501 | 12.13% |
| | Energy | 5 | 7.58% | 347 192 | 9.09% |
| | Other | 8 | 12.12% | 251 714 | 6.59% |
| | **Non-financial sector in total** | **66** | **100.00%** | **3 821 130** | **100.00%** |

| | Industry | Number of issues | As percentage of the total of issues | Issue value in thousands of roubles | As percentage of the total value |
|---|---|---|---|---|---|
| | **Financial companies** | **25** | **100.00%** | **1 115 181** | **100.00%** |
| over 9 months 2005 | Mining | 1 | 1.39% | 14 208 | 4.15% |
| | Machinery construction | 15 | 20.83% | 740 587 | 21.64% |
| | Metal | 6 | 8.33% | 503 670 | 14.72% |
| | Oil and gas | 2 | 2.78% | 117 215 | 3.42% |
| | Food | 8 | 11.11% | 299 787 | 8.76% |
| | Construction | 8 | 11.11% | 291 973 | 8.53% |
| | Telecommunications | 3 | 4.17% | 230 879 | 6.75% |
| | Transportation | 1 | 1.39% | 35 520 | 1.04% |
| | Energy | 2 | 2.78% | 266 398 | 7.78% |
| | Other | 26 | 36.11% | 921 738 | 26.94% |
| | **Non-financial sector in total** | **72** | **100.00%** | **3 421 975** | **100.00%** |
| | **Financial companies** | **27** | **100.00%** | **2 620 294** | **100.00%** |

# Appendix F. Basic Indicators of Yield and Risks of Russian Corporate Bond Market

| | 01.01.2002 | 01.04.2002 | 01.07.2002 | 01.10.2002 | 01.01.2003 | 01.04.2003 | 01.07.2003 | 01.10.2003 | 01.01.2004 | 01.04.2004 | 01.07.2004 | 01.10.2004 | 01.01.2005 | 01.04.2005 | 01.07.2005 | 01.10.2005 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Average yield, % * | 20.6 | 19.39 | 17.77 | 18.32 | 16.85 | 12.54 | 12.05 | 14.45 | 12.43 | 8.62 | 11.57 | 11.76 | 10.33 | 9.22 | 8.94 | 8.10 |
| As percentage of the previous period | | 94.13 | 91.65 | 103.10 | 91.98 | 74.42 | 96.09 | 119.92 | 86.02 | 69.35 | 134.22 | 101.64 | 87.84 | 89.25 | 96.96 | 90.60 |
| Average yield of GKO-OFZ, % * | 16.11 | 15.78 | 14.55 | 14.76 | 13.21 | 8.28 | 6.52 | 7.68 | 6.9 | 5.49 | 6.92 | 6.92 | 7.73 | 6.71 | 6.84 | 6.02 |
| As percentage of the previous period | | 97.95 | 92.21 | 101.44 | 89.50 | 62.68 | 78.74 | 117.79 | 89.84 | 79.57 | 126.05 | 100.00 | 111.71 | 86.80 | 101.94 | 88.01 |
| Current spread* | 501.38 | 511.34 | 441.92 | 449.71 | 371.88 | 438.52 | 584.68 | 725.92 | 674.82 | 480.17 | 601.73 | 641.43 | 529.89 | 399.2 | 343.91 | 288.12 |
| As percentage of the previous period | | 101.99 | 86.42 | 101.76 | 8269 | 117.92 | 133.33 | 124.16 | 92.96 | 71.16 | 125.32 | 106.60 | 82.61 | 75.34 | 86.15 | 83.78 |
| Average duration, days* | 164.9 | 132.57 | 216.84 | 265.86 | 494.71 | 599.79 | 552.02 | 518.91 | 453.03 | 526.7 | 430.88 | 158.39 | 432.25 | 473.7 | 484.77 | 507.96 |
| As percentage of the previous period | | 80.39 | 163.57 | 122.61 | 186.08 | 121.24 | 92.04 | 94.00 | 87.30 | 116.26 | 81.81 | 36.76 | 272.90 | 109.59 | 102.34 | 104.78 |
| Average duration of GKO-OFZ, days * | 476.88 | 446.57 | 453.16 | 490.48 | 515.32 | 815.37 | 892.11 | 926.79 | 1 005.61 | 1 295.11 | 1 190.22 | 1 274.94 | 1 332.00 | 1 206.55 | 1 231.55 | 1 303.58 |
| As percentage of the previous period | | 93.64 | 101.48 | 108.24 | 105.06 | 158.23 | 109.41 | 103.89 | 108.50 | 128.79 | 91.90 | 107.12 | 104.48 | 90.58 | 102.07 | 105.85 |
| Total Return Index* | 100 | 105.95 | 111.33 | 115.79 | 121.17 | 132.64 | 137.51 | 138.28 | 146.33 | 155.25 | 153.84 | 158.39 | 164.59 | 169.4 | 174.38 | 181.01 |
| As percentage of the previous period | | 105.95 | 105.08 | 104.01 | 104.65 | 109.47 | 103.67 | 100.56 | 105.82 | 106.10 | 99.09 | 102.96 | 103.91 | 102.92 | 102.94 | 103.80 |
| Total Return Index of GKO-OFZ* | 100 | 103.81 | 108.93 | 113.09 | 119.55 | 130.83 | 138.33 | 138.13 | 143.16 | 151.39 | 149.44 | 152.46 | 156.72 | 158.43 | 161.95 | 171.18 |
| As percentage of the previous period | | 103.81 | 104.93 | 103.82 | 105.71 | 109.44 | 105.73 | 99.86 | 103.64 | 105.75 | 98.71 | 102.02 | 102.79 | 101.09 | 102.22 | 105.70 |
| Price Index* | 100 | 102.03 | 103.56 | 103.72 | 104.85 | 111.3 | 111.46 | 108.16 | 111.11 | 114.51 | 109.96 | 109.87 | 110.58 | 111.04 | 111.34 | 112.56 |
| As percentage of the previous period | | 102.03 | 101.50 | 100.15 | 101.09 | 106.15 | 100.14 | 97.04 | 102.73 | 103.06 | 96.03 | 99.92 | 100.65 | 100.42 | 100.27 | 101.10 |
| Price Index of GKO-OFZ* | 100 | 100.56 | 102.27 | 103.19 | 105.97 | 113.18 | 116.57 | 113.24 | 114.14 | 118.02 | 113.58 | 113.05 | 113.2 | 112.23 | 112.15 | 116.01 |
| As percentage of the previous period | | 100.56 | 101.70 | 100.90 | 102.69 | 106.80 | 103.00 | 97.14 | 100.79 | 103.40 | 96.24 | 99.53 | 100.13 | 99.14 | 99.93 | 103.44 |
| Capitalization in billions of USD* | 0.75 | 0.59 | 0.83 | 0.89 | 1.69 | 2.01 | 2.70 | 3.07 | 4.04 | 5.01 | 5.06 | 5.54 | 6.35 | 7.86 | 9.27 | 9.98 |
| As percentage of the previous period | | 82.10 | 142.25 | 108.78 | 189.94 | 118.57 | 131.23 | 111.92 | 128.87 | 119.06 | 101.93 | 110.64 | 112.05 | 120.83 | 119.02 | 109.24 |
| Capitalization of GKO-OFZ in billions of USD * | 5.59 | 5.81 | 5.42 | 5.46 | 6.56 | 8.36 | 10.13 | 8.15 | 8.53 | 10.94 | 9.31 | 9.82 | 16.34 | 15.91 | 14.59 | 16.37 |
| As percentage of the previous period | | 107.48 | 94.78 | 101.65 | 120.85 | 126.97 | 118.21 | 79.34 | 102.53 | 123.16 | 85.90 | 106.41 | 16.,72 | 95.10 | 92.52 | 113.87 |

| | 01.01.2002 | 01.04.2002 | 01.07.2002 | 01.10.2002 | 01.01.2003 | 01.04.2003 | 01.07.2003 | 01.10.2003 | 01.01.2004 | 01.04.2004 | 01.07.2004 | 01.10.2004 | 01.01.2005 | 01.04.2005 | 01.07.2005 | 01.10.2005 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RUX-Cbonds Total Return Index ** | 100 | 105.02 | 110.38 | 115.2 | 121.68 | 134.7 | 139.5 | 139.45 | 149.23 | 158.6 | 157.08 | 162.21 | 168.98 | 173.71 | 178.78 | 185.68 |
| As percentage of the previous period | | 105.02 | 105.10 | 104.37 | 105.63 | 110.70 | 103.56 | 99.96 | 107.01 | 106.28 | 99.04 | 103.27 | 104.17 | 102.80 | 102.92 | 103.86 |
| RUX-Cbonds Price Index ** | 100 | 101.62 | 103 | 103.16 | 104.93 | 111.96 | 112.18 | 108.32 | 112.59 | 116.25 | 111.71 | 111.82 | 112.54 | 112.99 | 113.39 | 114.93 |
| As percentage of the previous period | | 101.62 | 101.36 | 100.16 | 101.72 | 106.70 | 100.20 | 96.56 | 103.94 | 103.25 | 96.09 | 100.10 | 100.64 | 100.40 | 100.35 | 101.36 |
| RUX-Cbonds average Yield (simple), ** | - | - | - | - | - | - | 10.07 | 12.32 | 9.86 | 7.62 | 9.6 | 9.36 | 9.33 | 8.45 | 8.04 | 7.16 |
| As percentage of the previous period | | | | | | | | 122.34 | 80.03 | 77.28 | 125.98 | 97.50 | 99.68 | 90.57 | 95.15 | 89.05 |
| RUX-Cbonds average yield (eff.), ** | - | - | - | - | - | - | 10.33 | 12.7 | 10.11 | 7.78 | 9.84 | 9.59 | 9.56 | 8.64 | 8.22 | 7.29 |
| As percentage of the previous period | | | | | | | | 122.94 | 79.61 | 76.95 | 126.48 | 97.46 | 99.69 | 90.38 | 95.14 | 88.69 |
| RUX-Cbonds Duration** | - | - | - | - | - | - | 706.00 | 704.00 | 615.00 | 580.00 | 526.00 | 489.00 | 538.00 | 653.00 | 606.00 | 651.00 |
| As percentage of the previous period | | | | | | | | 99.72 | 87.36 | 94.31 | 90.69 | 92.97 | 110.02 | 121.38 | 92.80 | 107.43 |
| MICEX Corporate Bond Price Index *** | - | - | - | - | 99.88 | 107.28 | 107.28 | 103.89 | 106.12 | 108.21 | 103.65 | 103.36 | 103.45 | 103.28 | 102.73 | 102.63 |
| As percentage of the previous period | - | - | - | - | - | 107.41 | 100.00 | 96.84 | 102.15 | 101.97 | 95.79 | 99.72 | 100.09 | 99.84 | 99.47 | 99.90 |
| MICEX Corporate Bond Total Return Index*** | - | - | - | - | 100.02 | 110.05 | 112.81 | 112.50 | 118.30 | 123.72 | 121.54 | 123.83 | 125.94 | 128.61 | 130.71 | 133.86 |
| As percentage of the previous period | - | - | - | - | - | 110.03 | 102.51 | 99.73 | 105.16 | 104.58 | 98.24 | 101.88 | 101.70 | 102.12 | 101.63 | 102.41 |
| Value in billions of USD*** | 0.21 | 0.30 | 0.28 | 0.23 | 0.70 | 0.94 | 2.17 | 2.40 | 3.36 | 4.13 | 3.94 | 4.78 | 6.73 | 8.81 | 15.66 | 12.68 |
| As percentage of the previous period | - | 148.78 | 95.53 | 82.44 | 307.33 | 133.62 | 225.26 | 109.12 | 137.35 | 118.07 | 96.28 | 122.33 | 137.61 | 127.93 | 179.25 | 82.19 |
| Maximum yield**** | 28.97 | 29.08 | 25.06 | 26.75 | 31.73 | 57.84 | 78.8 | 99.07 | 187.89 | 16.19 | 31.73 | 164.42 | 21.04 | 16.55 | 15.61 | н/д |
| As percentage of the previous period | | 100.38 | 86.18 | 106.74 | 118.62 | 182.29 | 136.24 | 125.72 | 189.65 | 8.62 | 195.99 | 518.18 | 12.80 | 78.66 | 94.32 | - |
| Minimum yield**** | 14.38 | 9.03 | 3.31 | 6.91 | 4.94 | 3.56 | 6.48 | 3.95 | 3.66 | 0.88 | 1.34 | 7.51 | 1.38 | 2.47 | 2.06 | н/д |
| As percentage of the previous period | | 62.80 | 36.66 | 208.76 | 71.49 | 72.06 | 182.02 | 60.96 | 92.66 | 24.04 | 152.27 | 560.45 | 18.38 | 178.99 | 83.40 | - |
| Ratio of minimum and maximum yield, % | 201.5 | 322 | 757.1 | 387.1 | 642.3 | 1 624.70 | 1 216.10 | 2 508.10 | 5 133.60 | 1 839.80 | 2 367.90 | 2 189.40 | 1 524.60 | 670.04 | 757.77 | н/д |

| | 01.01.2002 | 01.04.2002 | 01.07.2002 | 01.10.2002 | 01.01.2003 | 01.04.2003 | 01.07.2003 | 01.10.2003 | 01.01.2004 | 01.04.2004 | 01.07.2004 | 01.10.2004 | 01.01.2005 | 01.04.2005 | 01.07.2005 | 01.10.2005 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| As percentage of the previous period | | 159.80 | 235.12 | 51.13 | 165.93 | 252.95 | 74.85 | 206.24 | 204.68 | 35.84 | 128.70 | 92.46 | 69.64 | 43.95 | 113.09 | - |

* According to the data published in the analytical section of Zenit Bank's website

** According to the MICEX Group data

**** According to the data published in monthly informational and analytical bulletin "Corporate and Bank Bonds" owned by Cbonds Information Agency