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Influence of Mezzanine Financing on the Corporate Financial Profile

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Abstract

Due to global changes in the global economy, the importance of financing and building an optimal capital structure is increasing. Rapid changes in the exogenous environment and the investment climate lead companies to revise their financing strategies.

Currently, there are many financial instruments that provide cash inflow, but have certain restrictions. The tool that allows to eliminate them is the mezzanine.

However, the existing literature on mezzanine financing does not fully cover this financing method.

The novelty of this research lies in determining the financial profile of the borrower company that utilizes mezzanine financing, and in studying the impact of the mezzanine on the market value of a company's equity and its value.

Econometric analysis confirms that mezzanine financing is more often chosen by companies with a less attractive financial profile, based on ROA, EBITDA – CapEx cash flow, and beta. In addition, the interconnection between a company's life cycle and its desire to attract a mezzanine loan is revealed. Econometric and empirical analysis allow us to conclude that the market situation, managerial methods within the company and the operational strategy increase the chances of the effective use of the mezzanine.

Keywords: mezzanine financing, corporate market capitalization, econometric analysis, case study, nonfinancial analysis

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Introduction

Due to a volatile economic environment, the issues of financing and developing the optimal capital structure of companies acquire the highest relevance. In view of significant changes in the external environment and investment climate in Russia, the current financial policy and corporate financing strategies may not meet the challenge of the external environment, thus resulting in a deterioration in company performance and subsequent bankruptcy.

At present there are a lot of instruments that may provide an influx of funds, but all of them have certain limitations, which should be taken into consideration by companies when performing their operations. However, there are instruments that allow to eliminate these restrictions. The mezzanine, considered in this paper, is one of such instruments. The number of deals related to mezzanine financing in 2019–2021 increased more than twice – from 117 in 2019 to 317 in 2021, which is indicative of an interest on the part of large and medium-size companies. The number of transactions grew from RUB 251 billion in 2019 to RUB 837 billion in 2021.

The existing scientific literature offers insufficient coverage of the issues related to mezzanine financing. The purpose of this paper is to analyze the impact of procuring mezzanine financing on a company's future financial profile and its market value. The study is novel in that it defines the financial characteristics of a typical company that raises mezzanine financing, assesses its influence on the market value of equity capital and reveals the key conditions for an efficient application of funds obtained as a result of such financing. The main research methods comprise econometric analysis, comparative analysis, case study, financial analysis of a company and the dynamics of various indicators.

The paper includes three sections. In the first section, we perform a theoretical analysis of mezzanine financing, its advantages and drawbacks, and other alternative instruments based on scientific papers and literature by foreign and Russian authors. The second section presents an econometric analysis of several issues of mezzanine and classic financing instruments. The logistic model confirms the hypothesis that companies with a less attractive financial profile are more prone to issue a mezzanine instrument based on the coefficients preceding the Net income margin, ROA, Dividend dummy, EBITDA flow minus CapEx, corporate beta and Q Tobin indicators. We revealed a relationship between a company's life cycle stage and a drive for procuring mezzanine financing. It is confirmed by the coefficient preceding a company's Revenue CAGR, Q Tobin and beta. The classic linear model shows that in case of mezzanine financing, the share of issue in the total corporate debt, the amount of raised funds and the ratio of issue to company value have a positive impact on company value, while the coupon rate and life of an instrument have a negative impact. In the third section, the case study of actual transactions confirms the results of econometric analysis. It has been found out that a favourable market situa-

tion, highly qualified management and an optimal strategy enhance a company's chances of an efficient application of mezzanine financing.

1. Literature Review and Theoretical Analysis

Mezzanine Financing and Its Types

Mezzanine financing originated in the 1980s in the USA. The concept of mezzanine financing is one of the most advanced and flexible ones and companies use it all over the globe in developed financial markets (it is still gaining momentum in emerging markets).

When banks cannot provide financing for a company or a project because a company fails to meet the requirements and there is a high non-repayment risk, a company needs alternative financing sources [1]. Mezzanine financing [2] is hybrid financing that combines ordinary debt and equity capital. Mezzanine is used when a company/project needs financing, but it cannot raise funds in a standard way in the debt market by placing debt securities (bonds), obtaining an ordinary bank loan or placing shares in the equity capital market. In other words, mezzanine financing [3] is raised to implement a large project for which a company typically lacks internal funds. An enterprise turns to a bank and obtains up to 70% of the necessary amount. provided 30% is its own funds¹.

Generally, mezzanine is obtained to finance business growth or expansion to various markets in order to settle M&A, LBO or restructuring transactions, stock redemption, project financing due to lack of internal funds or in case of elevated risks of company bankruptcy.

Transaction parties. In this type of transactions, as elsewhere, there is a party providing funds for a company, or the lender. Besides, there is another party that accepts such funds and tries to use them. In this case, the lender accepts a part of equity risk in order to get a potential yield of 25–30%. The latter is always the borrowing company, while the former may include investment banks, hedge funds, mezzanine financing funds, or a private equity fund.

We should also distinguish two types of providers or lenders that provide financing [4]. The first type comprises banks and other financial institutions, mezzanine funds and institutional investors, while the second one includes PE funds that provide mezzanine financing to their portfolio companies to launch an IPO or to sell internally.

In the majority of transactions, payments consist of the following two parts [1]:

- payment of interest on the mezzanine loan;
- revenue from sale of shares by the lender (the lender assumes a risk and participates in corporate operations and growth; the transaction is structured by means of options and warrants).

¹ The percentage indicated in this paragraph is estimated.

Let us consider the following mezzanine financing forms:

- credit mezzanine characterized by the interest being paid at the end of its period – financing with the option of paying interest at the end of its period;
- warrant² credit mezzanine – financing by means of an instrument that makes the borrowing bank a partner and allows it to participate in the growth of shareholder value;
- equity mezzanine financing in the form of preferred shares – structuring of financing through the repurchase of newly issued preferred shares with guaranteed dividends;
- equity mezzanine with call/put options – repurchase of ordinary shares where a client has buyback obligations with a guaranteed return.

S. Sazanov et al. defines other mezzanine forms [1]:

- financing secured by the stock of a company that owns physical assets;
- financing characterized by the “non-public” participation of an investor who purchases a share in the borrower’s company, but assumes no responsibility to the company’s lenders;
- financing secured by issue of convertible bonds that provide for fixed interest payments and repayment of principal debt at the end of the financing period, at the same time offering investors an opportunity to purchase shares of the borrowing company at a pre-determined conversion price instead of repaying the principal debt;
- financing secured by the issue of preferred shares of the borrowing company, which grant pre-emptive rights to participate in profit-sharing and liquidation value sharing as compared to owners of other company shares.

There are numerous classifications of mezzanine financing, but all of them describe the two main models in one way or another. The first model entails lending characterized by interest and debt “body” payment at the end of the financing agreement’s validity period, the second model provides for additional issue of securities by the company or conclusion of option contracts in order to lock the transaction profit at previously stipulated terms.

1.2. Advantages and Drawbacks of Mezzanine Financing

So how do advantages and drawbacks of such financing manifest themselves? Paper [5] highlights several principal advantages. First, it is an opportunity to attract funds not just for large companies, but also for companies that face difficulties in raising financing due to problems of securing a loan/confirming their ability to make payments in the future. Besides, the costs of primary mezzanine debt servicing are significantly lower than those of issue of shares or

bonds (listing, roadshow, advertisement etc.). One of the main advantages is the ease of getting financing in comparison to issue of shares, bonds or obtaining an ordinary bank loan.

At the same time, mezzanine financing has a range of drawbacks, such as a higher required return for a prospective investor for the risk he assumes, transfer of a part of the shares (if the transaction provides for it) and a probable loss of control over the company.

Paper [5] names the reduced burden on cash flows during the financing period (a flexible approach to making the payment schedule), ease of obtaining in comparison to a standard bank loan, distribution of risks between the transaction parties among the main advantages of mezzanine financing. Its drawbacks include the high cost for the company, major risks for the investor/lender, loss of capital by the company owners that forces them to give up control, increase of interest payments due to a more long-term use of borrowed funds. Mezzanine investors risk losing their investments in case of a company’s bankruptcy.

Paper by L. Nijs [6] studies advantages and drawbacks of mezzanine financing.

Table 1. Advantages and drawbacks of mezzanine financing

Advantages	Drawbacks
Significant financial support of internal project implementation	More expensive than an ordinary loan
Improvement of the balance structure and creditworthiness	The money is granted for a limited period, unlike equity capital
Consolidation of capital without dilution of the shareholders’ share	More stringent requirements for company operation transparency
Non-taxable interest payments	
Greater entrepreneurial freedom for the company	

Thus, positions of different authors are somewhat alike and somewhat different. Some authors speak of a low cost of such financing in comparison to the initial costs of raising funds using ordinary instruments, others note the large costs due to the high return required because of the elevated risk for the investor who grants a mezzanine loan.

² Warrant is a derivative financial instrument that allows to have an additional return on a transaction from the value of business growth.

Underlying instruments. The following instruments are the underlying instruments of mezzanine financing:

- preferred shares;
- convertible bonds;
- warrant-linked bonds;
- options.

A preferred share is a share that confers no right to manage a joint-stock company to its owner, but grants privileges such as preferential payments. A convertible bond is a bond that accords its owner the right to exchange such a bond for an ordinary share under certain conditions. A warrant-linked bond is a hybrid of two instruments (ordinary bonds and warrants). This instrument allows the investor to buy company securities (in

this case – bonds) over a certain period at a certain price which, as a rule, is lower than the market price. An option is one of the most well-known derivative financial instruments. In case of an option, a share or a bond may be the underlying asset (there are currency options as well). It entitles the owner to purchase/sell the underlying asset after a certain time period (expiration date) at a predetermined price.

Comparison tables with alternating financing sources. S. Sazanov et al. [1] compares mezzanine, bank loan and direct investments. In his opinion, mezzanine may be used in almost all cases described in the abovementioned papers, except for joint company buyout with a direct investment fund. Table 2 shows the advantages of this instrument over other sources of financing for an enterprise [6].

Table 2. Methods of Financing of Business Development

Event	Financing method		
	Bank loan	Mezzanine financing	Direct investments
Working capital financing	+	+	
Business expansion/ Capital investments	+	+	+
Lombard financing	+	+	
LBO		+	+
M&A		+	+
Joint company buyout with a direct investment fund			
Manager buyout		+	
Buyout by one of the owners		+	+
Owner's partial cash out		+	+
Investment project for companies using the simplified taxation system		+	+

According to L. Tetreva [5], the following financing instruments are the most attractive:

- passive participation, which means raising large amounts of financing (especially for small companies unable to issue securities) through passive investors who make no claims to active participation in corporate operations through management decisions. It generally suits companies of any size and imposes no restrictions upon the borrowing company as to additional covenants;
- preferred shares allow to attract a large capital and reduce the debt burden at the same time, thus providing a certain advantage for companies with a large debt/EBITDA ratio. They suit large companies, but do not provide the same extent of freedom as passive participation;
- ordinary shares suit medium-size and large companies, but impose certain limitations, i.e., an opportunity for the investor to participate in corporate operations;

- a subordinated loan suits companies of any size, but the amount of raised capital is limited. It also suits companies that cannot issue securities for some reason. It does not stipulate for the lender's opportunity to make management decisions and provides tax benefits.

Thus, mezzanine financing may be defined as the optimal way of raising capital for companies of any size and for any needs (whether it pertains to the purchase of a rival company or to its international expansion).

1.3. Areas of Mezzanine Financing Application

There are three main objectives of obtaining mezzanine financing. Each of them is substantiated by hypotheses. Econometric, comparative analysis and case study methods have been used to confirm or reject these hypotheses.

The first objective is to increase company value, which may be achieved by the purchase of a new related business (horizontal differentiation), development of new markets or purchase of a business unrelated to the core business (conglomerate).

The hypothesis stating that company value depends on optimal capital structure (econometric analysis (EA) was proven by J. Marszalek [7] using regression trees. He analyzed the dependence of the date of bond redemption and the period to its conversion, and reached a conclusion that this type of bonds helps to achieve the optimal capital structure, which has a positive influence on long-term values. The hypothesis proposed by O. Karpenko and T. Blokhina [8], according to which an increase in company value depends on the plans to issue convertible instruments (comparative analysis (CA), stated that an issuer was granted additional capital to use for investment purposes or to decrease the probability of a company's bankruptcy. A. Olivier et al. [9] asserts that the date of callable bond redemption plays a greater role in company performance than the date of redemption of non-callable bonds (case study). As per A. Abhyankar and A. Dunning [10], convertible bonds are most attractive for rapidly developing companies with an unstable financial status (econometric analysis (EA). However, an increase in the company value does not depend on the plans of issue of convertible bonds and the redemption date, which contradicts the previous two hypotheses.

The second objective consists in providing financing for large projects, for example, the establishment of a new business unit or the development of a new product. Thus, according to hypothesis proposed by A. Czajkowska [4], mezzanine is more effective when an ordinary loan (case study) cannot be obtained, while as per hypothesis set forth by S. Sazanov [1], mezzanine is an important alternative financing source for large and medium-sized companies (CA). They prove that when an ordinary bank loan is inaccessible, mezzanine financing becomes attractive, since it is much easier for the company to obtain due to the absence of numerous restrictions (such as bank cove-

nants), on the one hand, but on the other hand, it is much more expensive. Hypotheses proposed by J.-I. Yoo and E.-B. Lee [11], J.C. Stein [12] and L. Tetreanova [5] have been validated by comparing mezzanine to alternative financing sources. They state that convertible bonds have more advantages in terms of financing than issue of shares and ordinary debt securities (case study); mezzanine is more favourable than raising funds through ordinary debt and equity capital (CA); and that combinations of project and mezzanine financing may be more efficient for project financing than these instruments applied separately (EA).

The third objective is to achieve the optimal capital structure [13]. Thus, for companies with heavy debt, placement of ordinary or preferred shares is one of the few ways of raising funds without increasing debt. D. Kazmierczak [14], W. H. Li [15] and J. Marszalek [7] put forward the following hypotheses to substantiate this objective:

- optimal capital structure is achieved by issuing convertible bonds;
- callable convertible bonds are issued by companies with a lower ROA;
- companies are more willing to issue ordinary bonds than convertible ones;
- all companies try to reduce the probability of bond conversion.
- All the above-mentioned hypotheses have been confirmed by econometric analysis. These models create the basis for econometric analysis carried out in the following section.

2. Research methodology, econometric analysis

2.1. Data Description

The main purpose of econometric analysis is to determine the financial standing of the companies that decide to raise mezzanine financing. In order to solve this problem, we cooperated with a mezzanine financing expert to select a set of indicators for which we needed to collect data. For all indicators described below, we present a mean value for the three years preceding the start of mezzanine financing usage. First, we selected one set of financial status indicators, then we expanded it in the course of an in-depth study.

The primary analysis indicators are as follows:

- 1) revenue growth – a general indicator of corporate business operations over three years;
- 2) average EBITDA margin, EBIT, Net Income – these indicators allow to trace business profitability at several levels in comparison to revenue, respectively;
- 3) ROE (Return on equity) is a ratio of net income to equity capital that shows profitability of corporate capital;
- 4) ROA (Return on assets) is a ratio of net income to all corporate assets that represents efficiency of a company's asset use to generate profit;

- 5) EBITDA – CapEx – cash flow less capital expenditures, which shows the amount of funds available to the company before taking financial obligations into consideration;
- 6) EBITDA/Interest is a ratio that shows whether the company has sufficient profits to pay interest;
- 7) Q-Tobin is a ratio of company's market value to its replacement asset value that shows whether the company is underestimated or overestimated;
- 8) Total Debt/Equity is an indicator that shows the evaluation of financial leverage and equity capital ability to cover all outstanding debt obligations;
- 9) Net Debt/EBITDA is an indicator of corporate leverage that shows the number of years a company needs to settle its debt if the net debt and EBITDA remain unchanged.

Additional indicators include the following:

- 1) Total asset turnover – the asset turnover ratio shows the number of days required for asset turnover with the current level of proceeds;
- 2) CapEx/Total assets is a ratio of capital expenditures to the mean volume of company assets;

- 3) Beta is an indicator that shows the interrelation between a systematic risk and expected return on assets;
- 4) Coupon rate is an annual income of an investor in possession of a bond;
- 5) Dividend Yield is a coefficient that represents the amount of dividends paid by the company annually relative to stock price;
- 6) Dividend Dummy is a binary variable that reflects a company's dividend payouts.

When the list of financial indicators was determined using the Capital IQ analytical platform, we selected a dataset of financial indicators of the companies that issued mezzanine instruments and ordinary bonds in 2000–2022.

In order to define financial indicators that influence company decisions on mezzanine financing, we built a classic linear regression.

Descriptive Statistics

Descriptive statistics of companies that issued mezzanine instruments and ordinary bonds is presented in Table 3.

Table 3. Descriptive data statistics

Variable	Number of observations	Mean value	Standard deviation	Minimal value	Maximum value
Revenue Cagr	10.698	0.1426843	0.4628762	-1.976431	19.03343
EBITDA margin	10.777	-0.2645232	18.21164	-1244.917	1.832809
NI margin	10.777	-0.477214	20.35136	-1495.405	32.90036
ROE	10.76	0.035131	0.8110236	-50.32527	10.04037
ROA	10.77	0.015003	0.1185521	-2.508596	2.08468
Asset turnover	10.985	0.0060094	0.0060094	0	0.071242
CapEx/total assets	10.76	0.0573549	0.0573922	0	0.5942256
EBITDA – CapEx	10.985	847.0555	2987.904	-14,064.68	38582
Total debt/ total assets	10.76	0.3387827	0.1830465	0	1.771294
Q-Tobin	10.76	1.128425	4.003874	0	362.9334
D/E	9.696	1.121363	2.139755	0	109.1696
Dividend yield	11.243	0.0162133	0.0207334	0	0.2992307
Net debt/EBITDA	10.868	3.315545	27.87122	-1,197.893	1,705.048
EBITDA/interest	10.762	38.69965	999.9005	-15,608.79	78,261.61
Beta	10.97	0.9064686	0.6186393	-10.61568	4.22836
Coupon rate	10.216	0.0389504	0.0293433	0	0.16
Dividend dammi	11.243	0.5197011	0.4996339	0	1

Source: Capital IQ.

Approximately 40% of this sample consists of mezzanine instrument issues, the rest of the sample comprises examples of issue of ordinary shares. In the course of further regression building this will allow to determine which financial indicators have the greatest impact on a company's decision-making on the issue of mezzanine. Then we used the companies' market capitalization indicator over five years in order to determine the effect of mezzanine financing.

After the initial analysis of the sample's average ratios, one may note that in case of a positive cumulative average annual growth in the previous three years, the mean marginality values of EBITDA and Net Income are negative, which indicates certain operational difficulties in companies. Besides, one may observe that the ROE mean value (about 3.6%) is below average in all industries. It is significantly lower than the mean value in all industries and ranges from 10 to 13%. However, it should be noted that the mean value of the EBITDA – CapEx flow takes on a positive value; the mean value of EBITDA/Interest = 38.7x. This means that on average companies' EBITDA is sufficient for interest payouts. Besides, the average leverage (D/E) of companies in this sample amounts to 1.12. Consequently, the average debt load is not so large.

The next stage of research entails building a logistic and linear regression and interpreting the obtained data in order to accept or reject the hypotheses.

Empirical Analysis

The first objective of empirical analysis is to determine the influence of financial indicators on the probability of issue of mezzanine instruments. In order to solve it, one has to build a logistic regression. As a result, we will form an understanding of the financial profile of companies that use mezzanine financing. The authors of paper [11] car-

ried out a similar empirical analysis in order to evaluate the enhancement of investment opportunities by raising mezzanine financing. However, we expanded the set of indicators and used the generated hypotheses to achieve an altogether different goal. As long as there are two scenarios in the sample – issue of a convertible bond (mezzanine instrument) and ordinary bond – the use of a logistic regression seems optimal.

On the basis of the mezzanine instrument sphere analyzed above, two hypotheses have been put forward to address unexplored issues before building a logistic regression.

H1: Convertible bonds are issued by companies with a less attractive financial profile as compared to issuers of ordinary bonds.

H2: Issuers of convertible bonds have fewer growth opportunities than issuers of ordinary bonds.

The studied logistic regression model where a dummy variable with the parameters of 0 – issue of a mezzanine instrument and 1 – issue of an ordinary bond is an independent variable is as follows:

$$\ln [p/(1-p)] = \beta_0 + \beta_1 \text{Revenue_growth} + \beta_2 \text{Total_asset_turnover} + \beta_3 \text{ROE} + \beta_4 \text{ROA} + \beta_5 \text{Ebitda_margin} + \beta_6 \text{Totaldebt/Equity} + \beta_7 \text{Ebitda-Capex} + \beta_8 \text{Ebitda/Interest} + \beta_9 \text{Capex/Total_assets} + \beta_{10} \text{Net_debt/Ebitda} + \beta_{11} \text{Beta} + \beta_{12} \text{Q-tobin} + \beta_{13} \text{Coupon_rate} + \beta_{14} \text{Dividend_yield} + \beta_{15} \text{Dummy_dividend} + \beta_{16} \text{Net Income margin} + \beta_{17} \text{Total debt/Total assets} + \varepsilon$$

where p in this case is the probability of issue of a mezzanine instrument. Based on the results of the built model, pseudo- R^2 amounted to 27%, however, in order to ultimately verify the adequacy of the developed model and applied sample for the logistic regression, we performed the chi-squared test and Hosmer-Lemeshow goodness-of-fit test (Table 4).

Table 4. Chi-squared and Hosmer-Lemeshow goodness-of-fit test

Variable	Chi-squared test	Hosmer-Lemeshow goodness-of-fit test
Number of observations	9,346	9,346
Number of groups/covariance matrices	7,629	10
Chi ²	13,479.4	205.02
p-value	0	0

The chi-squared test results are indicative of a normal level of data adequacy. For instance, the number of observations and number of covariation groups are not particularly close, confirming that this test is rather accurate. The

results of the Hosmer-Lemeshow goodness-of-fit test also confirm adequacy of this model.

See the results of the developed logistic regression in Table 5.

Table 5. Results of logistic regression

Variable	Coefficient	Standard deviation	z	p> z
Revenue Cagr	-0.9089938	0.1269724	-7.16	0.000
EBITDA margin	-0.0903942	0.0978064	-0.92	0.355

Variable	Coefficient	Standard deviation	z	p> z
NI margin	0.6164126	0.1563201	3.94	0.000
ROE	0.0227867	0.0321762	0.71	0.479
ROA	2.423588	0.4707016	5.15	0.000
Asset turnover	5.784607	4.789286	1.21	0.227
CapEx/total assets	0.6669391	0.630926	1.06	0.290
EBITDA – CapEx	0.0002032	0.0000175	11.59	0.000
Total debt/ total assets	2.353959	0.1996201	11.79	0.000
Q-Tobin	-0.116596	0.0153788	-7.58	0.000
D/E	0.0190041	0.0192718	0.99	0.324
Dividend yield	1.840811	1.87524	0.98	0.326
Net debt/EBITDA	0.0001585	0.0010792	0.15	0.883
EBITDA/interest	-0.0001893	0.0000815	-2.32	0.020
Beta	-0.572886	0.0591948	-9.68	0.000
Coupon rate	42.6273	1.389099	30.69	0.000
Dividend dummy	1.02352	0.072505	14.12	0.000
Offering amount	0.0003947	0.0000735	5.37	0.000

Source: Authors' calculations.

The logistic model confirms the statistical significance of the majority of presented financial indicators at a 1% significance level. This suggests that after primary analysis at least hypothesis H1 is not rejected yet, however, it may be defined more precisely. EBITDA/Interest was at a 5% significance level. The indicators of business profitability and efficiency (EBITDA margin, ROE, Asset turnover), as well as the leverage indicator (D/E) were statistically insignificant. It means that not all indicators are indicative of corporate financial performance and they may not influence the decisions on the issue of a mezzanine instrument in every instance.

Based on the signs that precede the coefficients, one may conclude that when corporate operations improve, i.e. the revenue, market capitalization (Q-Tobin) and EBITDA increase along with the beta value, a company is more likely to aim at issuing mezzanine instruments.

We may make the following conclusions on the basis of the obtained data. This set of financial characteristics is mainly typical of companies at the earlier stages of their lifecycle (youth and prime). Such companies grow rather rapidly, their market value is high and when these companies face a high risk, the correlation of their value to the market increases.

From the investors' point of view, such companies have a high credit rating when ordinary bonds are concerned.

However, if a company demonstrates a growth potential that may be forecasted based on market fluctuations, participation in mezzanine financing will allow investors to profit off the growth of a company's shareholder value. The presence of an equity component in the mezzanine instrument provides for this opportunity. In view of the assumptions that companies are young and have a growth potential, hypothesis H2 should be rejected because in this case the result suggests the opposite: companies aiming to issue a mezzanine instrument often have growth potential.

An increase in the value of other financial indicators in this sample is more likely to become a signal for the company to issue ordinary bonds. Generally, hypothesis H1 is not rejected based on the first model, but needs a more precise definition. Thus, companies with a less attractive profile will issue convertible bonds, however, the following indicators will be considered the indicators of the attractiveness level: Net income margin, ROA, Dividend dummy, EBITDA – CapEx flow, Total debt/Total assets, as well as a company's beta because its growth increases the company's commitment to issue a mezzanine instrument. This issue is considered in more detail in the third section using the example of case analysis.

Defining the influence of mezzanine instrument issue on corporate market capitalization. After defining the financial

profile of the companies that decided to issue mezzanine instruments, it is necessary to perform an empirical analysis of the way in which the use of mezzanine may influence their corporate financial profile.

In order to solve this problem, two classic linear regressions are presented to demonstrate how mezzanine financing influences corporate market value. Market capitalization of companies five years after issue is the dependent variable in these models. A five-year period was selected on the basis of the assumption that a company will be unable to change its operations immediately after obtaining mezzanine financing using the raised funds, rather, it will need time.

The following indicators have been added in the current sample for linear regression models:

- 1) Coupon rate is the coupon rate for a convertible bond (the indicator has been used in the logistic regression);
- 2) Offering amount in this case is the amount of money raised by means of issue of convertible bonds;
- 3) Tenor period is the maturity term of an issued bond;
- 4) Offering amount to Market cap is a ratio of obtained

funds to a company's market capitalization that helps to understand how critical the raised amount is;

- 5) Offering amount to Net debt is a ratio of the obtained funds to corporate net debt that allows to compare the corporate debt amount with the amount of raised funds;
- 6) Conversion premium is the difference between the convertible bond price and the market value of ordinary shares into which such bond may be converted;
- 7) Conversion ratio is a conversion coefficient that shows the number of shares into which a bond may be converted.

The linear regression model has been built for two situations: issue of an ordinary bond and a mezzanine instrument. It provides an opportunity to compare these situations and distinguish between the influence of an ordinary bond and mezzanine on a company's market capitalization. The model is as follows:

$$\text{Market cap 5Y after} = \beta_0 + \beta_1 \text{Tenor} + \beta_2 \text{Coupon rate} + \beta_3 \text{Offering amount.}$$

After building the regression, we obtained the following results from the two scenarios (Tables 6 and 7).

Table 6. Convertible bond model data

MC5Yearsafter	Coefficient	Standard deviation	T	p> t
Coupon rate	-127,672.2	22,539.86	-5.66	0.000
Offering amount	.0876267	.0866445	1.01	0.312
Tenor years	-69.95156	86.21081	-0.81	0.417

Table 7. Data of the model for ordinary shares

MC5Yearsafter	Coefficient	Standard deviation	Z	p> z
Coupon rate	-606575.7	67252.06	-9.02	0.000
Offering amount	3.929689	.6591785	5.96	0.000
Tenor years	3315.133	243.921	13.59	0.000

The explanatory power of the model, i.e. R^2 in case of convertible bonds takes on the value of 0.0094 and in case of ordinary shares – 0.0352, which is below 10%. Based on this evidence, we may conclude that there are other factors that have a strong impact on a company's market value within five years.

It should also be noted that for the companies issuing ordinary bonds the ratios are significant at any level. It

means that these parameters influence the market value during the selected period. However, in case of a mezzanine instrument, only the borrowing rate has any impact (at any significance level), besides, in this case the influence is smaller and has a smaller negative impact than in case of ordinary bonds. In order to refine this conclusion, we have considered the borrowing rates in detail (Table 8).

Table 8. Comparison of the borrowing rates of ordinary and convertible bonds

Variable	Number of observations	Mean value	Standard deviation	Minimal value	Maximum value
Coupon rate (mezzanine)	3.238	0.0244365	0.0245279	0	0.13
Coupon rate (ordinary bond)	7.978	0.0448411	0.0448411	0	0.16

Thus, we can see that in case of issue of convertible bonds the average coupon is less than in case of ordinary bonds because it is possible to convert bonds into shares. This fact explains the reasons for the difference in the extent of influence on company value.

The second model was built only for the convertible bond issue cases and has restrictive covenants in order to enhance accuracy. So, the sample comprises companies with

bond maturity period under or equal to ten years. Besides, we excluded the situations when the conversion premium and the conversion ratio equaled 0 (Table 9).

The developed model is as follows:

$$\text{Market cap 5Y after} = \beta_0 + \beta_1 \text{Tenor} + \beta_2 \text{Coupon rate} + \beta_3 \text{Offering amount} + \beta_4 \text{OA / MC} + \beta_5 \text{OA / ND} + \beta_6 \text{Conversion premium} + \beta_7 \text{Conversion Ratio.}$$

Table 9. Results of the refined convertible bond model

MC5Yearsafter	Coefficient	Standard deviation	Z	p> z
Coupon rate	-133,301.9	23,878.47	-5.58	0.000
Tenor years	-1,341.522	409.4802	-3.28	0.001
Offering amount	1.41968	.2269948	6.25	0.000
Offering amount / Market cap	-3,692.917	607.6544	-6.08	0.000
Offering amount / Net debt	10.13027	5.748276	1.76	0.078
Conversion premium	-2.40e-06	.0000266	-0.09	0.928
Conversion ratio	-.0046534	2233.554	-1.25	0.211

The conversion rate and premium turned out to be insignificant at all levels. The positive influence of the issue's share in corporate debt is significant (at a 10% level). From the economic point of view this may be due to the fact that a company may use a part of raised funds to refinance the debt and reduce its debt level. The coupon rate is also significant at all levels, and we know that the converted bond rate is less than the ordinary bond coupon. This means that a smaller coupon rate offers the company an opportunity to use the saved amount to develop the company. We can also note from the viewpoint of corporate development that a large amount of raised funds expands a company's horizon of planning and implementation of investment projects. At the same time, the ratio of issue to a company's market value is negative. It is shown in the model that presents the risks of a company's insolvency.

According to the conducted empirical analysis we may reject hypothesis H2, which states that issuers of convertible bonds have fewer growth opportunities unlike issuers of ordinary shares. Hypothesis H1 is accepted, but with certain adjustments: it is confirmed for the following indicators: net income margin, beta, EBITDA/Interest, Q – Tobin and Dividend dummy.

Besides, we have revealed a correlation between the choice of an instrument of financing and the lifecycle stage [16]. We describe it in more detail in the final section.

3. Case Study

This section is dedicated to the study of the influence of mezzanine instruments on corporate operations based on two cases. The examination of these cases includes the analysis of the financial indicators of the borrowing company, as well as the qualitative characteristics of the situation.

Financial analysis implies an evaluation of the key elements of the corporate financial profile – dynamics of revenue, EBITDA, net income (substantiated by operating indicators of the borrowing company in kind), as well as debt load indicators – Net debt / EBITDA and EBITDA / Interest. It also refers to the econometric part of the paper concerning the distinctive features of borrowing companies (logit-regression) and the value of borrowing companies (the least squares method regression). Output with financial indicators is the result of financial analysis.

Consideration of the qualitative characteristics of the case allows to define the final result of a mezzanine deal, assess the

internal (management quality, strategy efficiency) and external (macroenvironment, market situation) profiles of the borrowing company. SWOT analysis sums up the research.

The first case is that of a company operating in the market of doors and tumbler plate locks. It offers an example of a company's distressed debt refinancing with option profitability calculated into the transaction.

Case 1

3.1.1. History of Transaction I³

The key parties in the case are company X (borrower), mezzanine fund Y and several of the largest banks of the Russian Federation (top 100 of the banking system) that have concluded a refinancing agreement. Company X is one of the main participants of the lock and door market, it is the market leader with a 25% share and ranks among the TOP 3 of participants in the steel door market with a share of 1% (the market leader accounts for 3%). Company X develops rapidly and implements an aggressive investing policy of quick branch network expansion.

In 2012–2014 company X had two key lenders in its loan portfolio (hereinafter Bank 1 and Bank 2). In the summer of 2013, Bank 1 offered to refinance multiple small credit lines and buy out other banks' loans in order to provide a syndicated loan. In December 2013 company X was notified that all contractual relations should be broken off due to a management change in Bank 1. Consequently Bank 1 limited lending and forced Bank 2 to refinance and sell its debt to it. As a result of controversies between the cornerstone lenders company X lost access to current assets, which led to a default.

Under such circumstances company X considered two options: 1) turning to fund Y to conclude a mezzanine financing transaction; and 2) going bankrupt and selling assets in order to pay according to lenders' claims. Alternative financing sources were unavailable because of the company's insufficient credit quality. After the end of Q2 2015, a mezzanine financing transaction was made.

3.1.2. Nonfinancial Analysis of Case 1

Internal analysis of the market. A distinctive feature of the steel door and tumbler plate lock market where company X operates is its saturation. The market structure is subject to frequent changes; the leader's share ranges from 2 to 3%. It means that it is a highly competitive market characterized by frequent introduction of new equipment, search for new sales channels, development of a dealer network, optimization of business processes and operating costs.

First of all, it is necessary to note the market volume dynamics since 2012. Up to 2014, the market had been rather steady and demand amounted to 3.3–3.4 million units per year. In 2014 as a result of the import reduction policy the product volume decreased by 1 million units. In order to meet the market needs, domestic production volume grew annually by an average of 300,000 units up to the end of

2015, but in 2016 it fell by 11% due to contraction of demand. According to the DISCOVERY Research Group analytical agency, the steel door market in Russia in 2015 amounted to RUB 83.0 billion (maximum for 2010–2015), but it decreased to RUB 67.0 billion in 2017 due to a drop in population's solvency and a delayed effect of the sale of new buildings. 76% of the market in 2015 consisted of domestic manufacturers, with this share growing to 86% in 2019. Major market participants are Torex with a 16% market share, companies Le Grand (16% of the market) and Guardian (9% of the market).

The lock market is characterized by a high product differentiation, nevertheless the competition is not as strong as in the door market. At the same time, the lock market is related to dynamics of the steel door market because tumbler plate locks are complementary goods.

Let us elaborate on the product range and target users of these goods. Markets of this type are differentiated greatly in terms of products and are subject to rapidly updating trends due to frequent changes in the quality and safety regulations. As a result, companies have to change their strategy often, and to upgrade production facilities, thus improving the flexibility of the manufacturing process and to adapt actively to market trends.

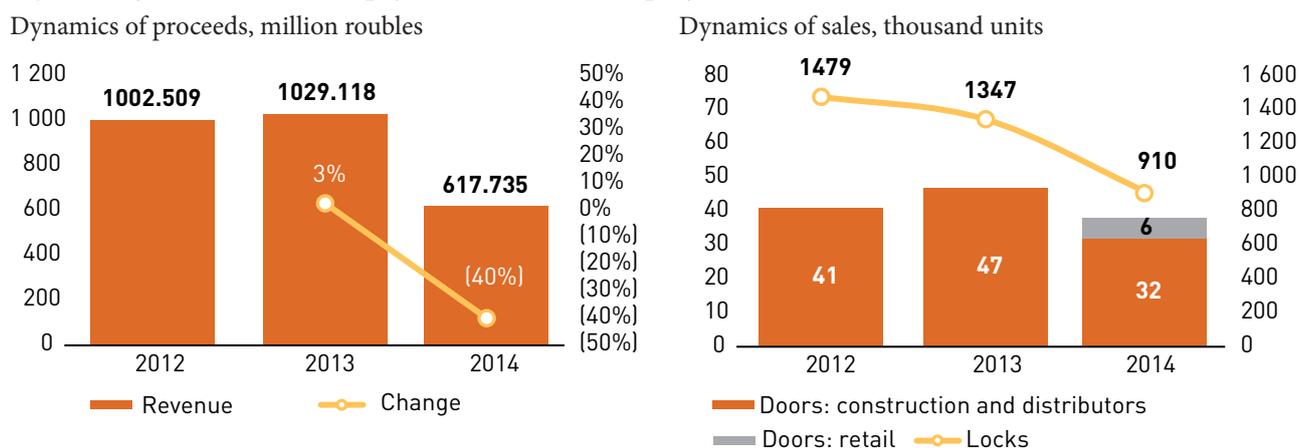
There are two main market consumer segments: B2B and B2C. The volume of consumption by construction companies or B2B is significantly higher, however, this segment is less marginal because construction companies prefer the low cost of doors in the prejudice of differentiation.

Internal analysis of the company. Company X is the apparent leader in the market of tumbler plate locks with a share of 25%, in the door market its share amounts to approximately 1% due to saturation and a highly competitive environment. At present, the company is in the "prime" stage of its lifecycle. It means that it has a well-defined structure, and each employee has a clear set of functions. The company controls a manufacturing cluster near Nizhny Novgorod and has been automating production since 2011. For instance, equipment that manufactures 20,000 doors per month without human involvement has been installed. The products include five different door model ranges with over 100 finishings.

Sales through distributors have been an important sales channel up to 2014, but later the company decided that it needed to focus on its own retail stores and a stable network of small distributors in order to ensure the best results. In spite of underuse of facilities, the company managed to preserve its growing profit margins up to 30% in 2014 due to its focus on profitable orders.

By 2015, company X managed to establish cooperation with a number of federal-level construction companies (similar to PIK) and to enter foreign markets. Nevertheless, development of B2B sales slowed down due to the ongoing legal defense of the company's assets after the default of 2014. Since the end of 2015, active TV marketing was carried out in order to increase sales.

³ The information on the transaction is not public.

Figure 1. Dynamics of value and physical indicators of company X in 2012–2014

Source: Data provided by company X.

Company X needed significant funds in 2012–2014 in order to establish distribution channels, and it implemented an aggressive credit policy to finance its investment program. It resulted in a large debt on bank and lease payments amounting to RUB 1,082 million, which was followed by a mezzanine financing transaction conducted with fund Y.

After making the transaction, the company demonstrated positive dynamics of specific revenue per sales point, however, since the end of 2016 the company has experienced problems with door retail. They are related to a general market slowdown in the market, as well as to management problems (long time required to replace managers from Moscow and understaffing of sales personnel.) By mid-2017 the company failed to overcome the generally negative trends in retail in spite of a significant increase in the marketing budget. See 'SWOT analysis of company X in Table 10.

Table 10. SWOT analysis of company X

Strength	Weakness
<ul style="list-style-type: none"> Market leader; Product differentiation; Recognized brand 	<ul style="list-style-type: none"> Large debt; Capacity utilization of 40%; Problems with expansion of the contractor base (legal disputes); Weak management team
Opportunities	Threats
<ul style="list-style-type: none"> Establishing relations with partners; Gain in sales through new sales channels; New marketing strategy 	<ul style="list-style-type: none"> Bankruptcy; Loss of a market share

Company X is a leader of the lock and steel door market. Its brand is identifiable in the B2B and B2C segments; the company offers a differentiated range of products that satisfies the needs of a wide range of customers. At the same time, its financial standing is unstable due to an aggressive credit policy implemented in 2012–2014. A large debt load and unavailability of current assets have a negative impact on the company's financial indicators. A production decline at the time of turning to fund Y is indicative of possible problems and decreased yield in the future. In order to improve the situation, first, company X has to focus on its market strategy and change it, thus increasing sales and the number of sales channels. It is also necessary to settle legal disputes in order to create an image of a reliable contractor and to increase B2B sales.

The main threat for company X is bankruptcy due to a default to lenders. Besides, due to its incorrect financial and marketing strategy, the company faced the threat of loss of its market share, which may result in a decrease of its proceeds.

Thus, company X encountered difficulties that made it raise mezzanine financing in order to continue normal functioning. In order to improve the current situation, it is necessary to apply the ST (Strength-Threats) strategy to mitigate the threats by using the strengths. In order to implement this strategy, the following steps should be taken:

- change the market strategy and study new sales channels;
- reinforce management teams with new employees;
- use new modern promotion channel.

3.1.3. Financial Analysis of Case 1

In 2012–2013 proceeds of company X remained unchanged, amounting to ~ RUB 1 billion due to the preservation of sales volumes with an insignificant rearrangement of the sales structure between the segments of doors and locks in kind and the preservation of the company's pricing policy. In the steel door segment the company's sales increased in 2013 by 15% as compared to 2012 due to a favourable market environment: 1) the number of

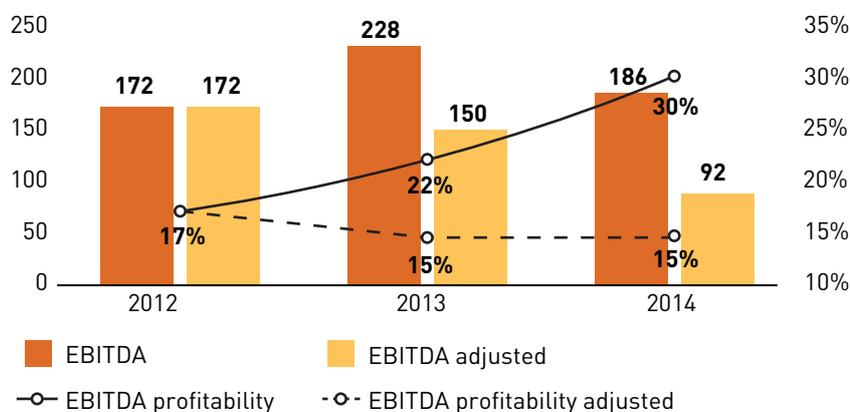
commissioned apartments in the Russian Federation in 2013 increased by 929,000 (+20% in comparison to 2012); 2) the share of domestic manufacturers in the Russian market grew from 56 to 58% due to a better quality of steel doors in comparison to foreign manufacturers mainly represented by Chinese contractors. In 2013, sales of company X showed a slowdown of 9% in the lock segment in comparison to 2012, when the situation was opposite: the share of domestic manufacturers decreased and the share of Chinese suppliers grew. In 2014 revenue fell sharply by 40% – down to RUB 618 million. Revenue dynamics are due to a significant drop in sales (–19% in the door segment and –32% in the lock segment), which was caused by the crisis of 2014. One of its consequences was the slowdown of commissioning of new buildings and deterioration in consumer demand for apartments. In its turn, it brought about a contraction of the door and lock market. The dynamics of these indicators are presented in Figure 1.

In 2012–2013 the financial result of company X as reflected by EBITDA amounted to ~ RUB 200 million. EBITDA margin was stable at an approximately ~20% level, and in 2014 in spite of a reduction in business volume, EBITDA margin grew to ~30% due to the focus on more profitable retail orders. Improvement in operating efficiency with regard to the unfavourable macroeconomic situation is in-

dicative of high-quality crisis management and an ability to optimize branch operations quickly. Nevertheless, according to the data obtained during the financial due diligence review performed in order to conduct a transaction, an independent advisor proposed EBITDA corrections for 2013–2014. The advisor calculated the following amount of reserves for this period: 1) depreciation of inventory by ~ RUB 22 million due to no inventory movements over one year; 2) accrual of reserves for questionable debts of ~ RUB 56 million in 2013 and of ~ RUB 71 million in 2014. It should be noted that a classic understanding of EBITDA (Operating income + D&A) implies that this indicator is provided without deduction of non-cash income and expenditures (Schweser, CFA level 1). Nevertheless, it is common practice to leave non-cash income and expenditure items out of calculations for a more accurate statement of the cash flows received by the company. For this reason, corrections offered by the advisor should be incorporated into the EBITDA calculation.

At the same time the advisor's comments call attention to potential future problems of company X in the manufacturing process (in case of confirmed impossibility of using the inventory) and cooperation with contractors (if the contractors fail to fulfill their obligations to company X). See dynamics of EBITDA and adjusted EBITDA (with regard to the advisor's comments) in Figure 2.

Figure 2. EBITDA dynamics of company X in 2012–2014, million roubles



Source: Data provided by company X.

In the historic period company X had a high load of interest payments. Cash coverage ratio (EBITDA / Interest) in 2012–2014 was 2.0x–2.4x. There were no critical values for the cash coverage ratio, nonetheless, at 2.0x the interest

load is high because half of the cash earned by company X is spent on interest payments. Table 11 represents the Income Statement of company X for 2012–2014 including the metrics described above.

Table 11. Historic financial results of company X

Company X, million roubles	2012A	2013A	2014A
Revenue	1,003	1,029	618
Change, %	X	3	(40)
Operating expenditures	(778)	(771)	(370)

Company X, million roubles	2012A	2013A	2014A
Other income and expenses	(52)	(108)	(156)
including inventory	–	(78)	(94)
Miscellaneous	(52)	(30)	(62)
EBITDA	172	228	186
EBITDA margin, %	17	22	30
EBITDA adjusted	172	150	92
EBITDA margin adjusted, %	17	15	15
Depreciation	(56)	(71)	(110)
Interest	(85)	(94)	(87)
Profit before income tax	31	(15)	(105)
Income tax	–	–	(0)
Net profit	31	(15)	(105)
Net profit margin, %	3	(1)	(17)

Source: Data provided by the financial advisor on the transaction.

In 2012–2014, the working capital of company X (before adjustments) showed growth due to an increase in corporate inventory. At the end of Q1 2015, inventory had grown by ~81% as compared to 31.12.2012. However, as noted above, revenue demonstrated opposite dynamics in the considered period. It is indicative of overstocking and inefficient management of warehouse inventory (also emphasized by the advisor). According to the management of company X, an increase in inventory is related to inventory buildup at regional warehouses implemented in order to develop its retail network. However, the advisor notes that it is impossible to confirm the correctness of comments because there are errors in warehouse inventory recording in the 1C system. In view of this, an inventory reserve was calculated in the amount of RUB 134 million as at 31.03.2015. At the end of Q1 2015 accounts receivable decreased by 61% in comparison to 31.12.2013 since the company's op-

erations were retargeted from the construction segment at contractors and sales through proprietary retail networks while reducing the sales to distributors. A reserve for distributors' accounts receivable was accrued (RUB 26 million as at 31.03.2015) because a significant share of contractors among distributors was insolvent. In spite of an almost twofold reduction in operating expenditures in 2014, accounts payable decreased by only 13% due to problems with external financing of operating activity. It resulted in a decline in the amount of purchased materials (steel, production materials) and postponing of days payable outstanding.

Thus, taking into consideration the adjustments offered by the advisor, working capital remained approximately the same since 2012 up to Q1 2015. It is in line with the dynamics of operational and financial indicators (Table 12).

Table 12. Working capital of company X

Company X, million roubles	2012	2013	2014	Q1 2015
Inventory	417	574	705	756
Accounts receivable	132	165	82	64
Advances paid	76	26	26	35
Miscellaneous	12	7	34	20
Current assets	636	772	848	875
Accounts payable	150	208	180	186
Advances received	19	44	67	64

Company X, million roubles	2012	2013	2014	Q1 2015
Taxes and duties payable	85	87	84	100
Miscellaneous	4	14	16	9
Short-term liabilities	257	354	348	358
Net working capital	379	418	500	517
(-) inventory reserve	-	(56)	(127)	(134)
(-) provision for accounts receivable	-	-	(44)	(26)
Net working capital *	379	362	328	357

* taking into consideration advisor's comments

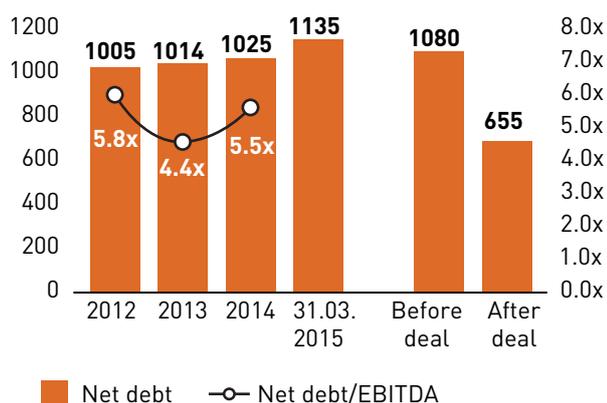
Source: Data provided by the financial advisor on the transaction.

In 2012–2015 the aggregate debt remained stable, amounting to ~ RUB 1 billion. The debt load ratio Net debt / EBITDA was critically high - 5.0x–6.0x. It is indicative of sig-

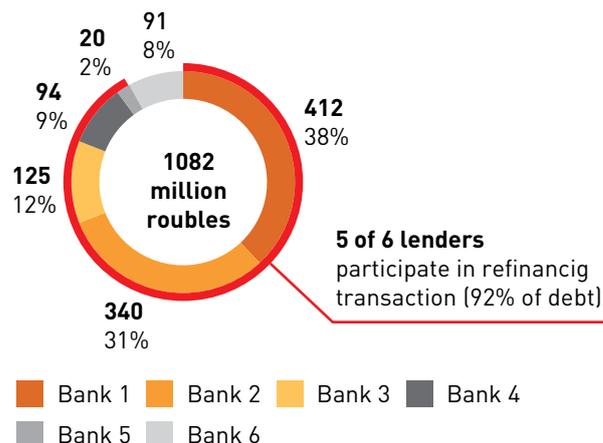
nificant solvency risks of company X. The aggressive credit policy conducted by company X aimed to finance an expansive investment program led to high leverage (Figure 3).

Figure 3. Debt dynamics and profile of company X in 2012–2015 and at the date of the transaction, million roubles

Net debt dynamics



Debt profile at the date of the transaction



Source: Data provided by company X.

At the date of the transaction, the loan portfolio of company X comprised six banks, three of them (bank 1, 2 and 3) were ready to sell receivables to a new lender at a total discount of RUB 427 million (49% of the initial amount of claims). Refinancing of liabilities to banks 4 and 5 was planned without a discount. Bank 6, which did not take part in refinancing in accordance with the preliminary agreement, was also present in the loan portfolio.

Summing up the financial standing of company X as at the date of the transaction, we should note the following:

- 1) The business volume of company X in terms of revenue demonstrated stagnation in 2012–2013 and negative dynamics in 2014 (–40%) in comparison to 2013. EBITDA margin was stable at ~20% and increased up to 30% in 2014, however, net income margin decreased gradually from 3% in 2012 to –17% in 2014. Thus, the case confirms the results of
- 2) Deterioration in working capital management quality due to) disproportionate accumulation of the remaining finished products in order to develop a retail network and poor accounting; b) accrual of allowance for inventory and accounts receivable; c) postponing of payment dates of accounts payable due to cessation of credit line payments by one of the key lenders of company X;
- 3) low credit quality of company X in terms of EBITDA/Interest (2.0x) and Net debt / EBITDA (5.5x) metrics. A large group of six lender banks also impedes the settlement of the insolvency and default problem.

Nevertheless, at the time of the transaction, company X had some advantages that allowed to make a favourable forecast concerning its financial state. First, company X planned to implement a new strategy that focused on a more marginal segment of its operations – retail sales and on a gradual shifting away from sales through distributors. In 2014 the implementation of this strategy already resulted in an up to 30% increase in profitability of company X. Second, by the time of the transaction, company X had established cooperation with a range of the largest construction companies in Russia and entered foreign markets by starting cooperation with a Finnish construction company. Considering the fact that these results had been achieved under the restrictions on raising working capital and legal disputes concerning the defense of corporate assets, the sales volume of company X in kind was expected to

grow significantly after the transaction and the settlement of legal disputes and obtaining access to funds required to finance working capital. Third, the lock and door market where company X operates is fragmented, and the share of its largest participant does not exceed 3%. There is a large number of small local manufacturers that may potentially be replaced with large federal-level participants. At the end of 2014 company X ranked among the TOP 4 market participants based on revenue (~RUB 1 billion), while the revenue of the largest company in the industry amounted to ~ RUB 2.4 billion. Company management set an objective to cover 5% of the market in terms of quantity and 8% - in terms of cash.

Based on these suppositions we created a financial model of company X after the transaction. See the results in Table 13.

Table 13. Forecasted cash flows of company X at the time of transaction

Company X, million roubles	2012A	2013A	2014A	2015F	2016F	2017F	2018F	2019F	2020F
Lock sales, thousand units.	1,479	1,347	910	705	980	1,189	1,238	1,288	1,340
Door sales, units.	41,000	47,000	38,000	23,787	35,839	43,604	46,156	49,818	55,044
Retail	–	–	6,000	10,330	15,899	18,599	21,759	25,454	29,778
Construction companies	x	x	x	8,257	14,000	20,505	21,338	22,204	23,106
Distributors	x	x	x	5,200	5,940	4,500	3,060	2,160	2,160
Revenue	1,003	1,029	618	766	1,161	1,451	1,637	1,862	2,139
Locks	495	458	318	286	410	517	560	606	656
Doors	401	421	255	427	670	833	963	1,127	1,335
Retail	–	–	29	298	476	579	705	858	1,044
Construction companies	x	x	x	79	138	209	227	245	266
Distributors	x	x	x	50	57	45	32	23	24
Miscellaneous	107	150	45	52	81	101	114	129	149
Change, %	x	3	(40)	24	52	25	13	14	15
EBITDA	172	228	186	79	221	332	434	543	660
EBITDA margin, %	17	22	30	10	19	23	27	29	31
Cash flow from operations before %	x	x	x	(79)	165	280	354	416	311
Investment flow	x	x	x	(24)	(114)	(133)	(156)	(182)	(213)
CFADS	x	x	x	(103)	51	146	199	234	98
Paid interest	(85)	(94)	(87)	(51)	(139)	(144)	(124)	(94)	(72)
CFADR	x	x	x	(153)	(88)	3	75	140	27
Net liabilities	1,005	1,014	1,025	807	895	892	818	678	651
EBITDA / Interest	2.0x	2.4x	2.1x	1.6x	1.6x	2.3x	3.5x	5.8x	9.2x
Net liabilities / EBITDA	5.8x	4.4x	5.5x	10.2x	4.1x	2.7x	1.9x	1.2x	1.0x

According to the forecasts of fund Y, if the abovementioned suppositions came true, the company would increase door sales in kind by almost 1.5 times, leading to an almost twofold growth of revenue by 2020 (the last payments under the transaction). A significant reduction in EBITDA margin in 2015 was due to forecasts of a rise in steel and production material prices, which was partly balanced by the subsequent redistribution of sales to the retail segment. An allowance was made for capital expenditures aimed at the purchase and repair of a company's sales areas in order to develop the retail network. Due to the financing of an extensive innovation program, cash flows before interest payment (CFADS) fully covered the interest payable only in 2017. In the same year the company started paying off the debt "body" using the mezzanine loan. These payments were covered partially – CFADR in 2017 amounted to just RUB 3 million, while the amount of payments was RUB 94 million (the debt "body" was paid each quarter from Q3

2017 through Q2 2020 in the amount of RUB 47 million). Nevertheless, the mezzanine fund anticipated this scenario – the mezzanine loan was slated for repayment from the operational corporate cash flow or through loan refinancing. In 2020, option payments were also accounted for under the transaction amounting to RUB 208 million calculated as a put option premium. Thus, the financial model forecasts showed a consistent improvement of the financial profile of company X after the transaction. As for the loan debt burden, Net debt / EBITDA decreased significantly from 10.2x in 2015 to 1.0x at the end of 2020, and cash coverage ratio increased from 1.6x in 2015 to 9.2x in 2020.

However, the initial suppositions of the financial model were not implemented and the financial results of company X were lower than expected. The financial model of company X in the middle of 2017, i.e. in two years after the transaction, showed that the cash flow forecast for company X changed for the worse (Table 14).

Table 14. Forecasted cash flows of company X in two years after the transaction (as at 30.06.2017) (million roubles)

Company X	2012A	2013A	2014A	2015A	2016A	2017F	2018F	2019F	2020F
Locks sales, thousand units.	1,479	1,347	910	806	684	553	580	603	628
Door sales, units	41,000	47,000	38,000	25,980	30,040	27,078	30,487	33,297	36,591
Retail	–	–	6,000	10,635	18,485	18,049	20,321	22,871	25,742
Construction companies	x	x	x	12,018	10,260	8,479	10,019	10,426	10,849
Distributors	x	x	x	3,327	1,295	550	147	–	–
Revenue	1,003	1,029	618	878	1,307	1,359	1,526	1,744	1,997
Locks (wholesale)	495	458	318	332	303	256	282	306	331
Doors	401	421	255	505	955	975	1,107	1,281	1,486
Retail	–	–	29	328	781	818	957	1,120	1,312
Construction companies	x	x	x	145	158	150	148	160	174
Distributors	x	x	x	33	16	7	2	–	–
Miscellaneous	107	150	45	41	49	128	138	157	180
Change, %	x	3	(40)	42	49	4	12	14	15
EBITDA	172	228	186	136	149	(90)	(162)	(81)	12
EBITDA margin, %	17	22	30	15	11	(7)	(11)	(5)	1
Cash flow from operations before %	x	x	x	54	331	2	(143)	(49)	(164)
Investment flow	x	x	x	(43)	(34)	(19)	(22)	(25)	(28)
CFADS	x	x	x	10	297	(17)	(165)	(75)	(192)
Paid interest	(85)	(94)	(87)	(61)	(124)	(113)	(119)	(124)	(136)
CFADR	x	x	x	(51)	173	(130)	(284)	(198)	(328)
Net liabilities	1,005	1,014	1,025	704	531	661	944	1,143	1,471
EBITDA / Interest	2.0x	2.4x	2.1x	2.2x	1.2x	0.8x	(1.4x)	(0.7x)	0.1x
Net liabilities/EBITDA	5.8x	4.4x	5.5x	5.2x	3.6x	(7.3x)	(5.8x)	(14.1x)	127.0x

In 2015–2016, the revenue of company X exceeded the initial forecasts due to a successful switch to retail. In 2015, actual retail sales exceeded the forecasted indicators by 3% in kind and 10% in terms of value, in 2016 – by 16 and 64% respectively. A rise of the average sale price in the retail segment had a significant positive impact. An actual average sales price of one door in 2016 amounted to ~ RUB 42,000 (exceeding the forecasts by ~41%). Nevertheless, EBITDA margin in 2015–2016 decreased significantly due to a rise in overhead and business expenses. It was caused by increased retail expenditures: growth of labour remuneration payments due to an expansion in the number of sales outlets and recruitment of new employees (business coaches, group leaders), as well as growing advertisement expenses. In 2015–2016, overhead costs increased by 33%, and business expenses – by 75%.

One of the key drivers of the negative forecast were the problems related to door retail that have emerged since 2016. It was due to a general decline of the door market and management problems of the studied Group of companies. The forecast for the door market in mid-2017 was negative due to a growing market competition. A significant increase of the marketing budget in mid-2017 did not entail a gain in sales (underfunding of the marketing budget was stated as one of the main reasons for degradation of the retail results. In Q2 2017 retail of doors amounted to 4,500 thousand units (–13% as compared to Q4 2016).

There was also a significant sales slowdown in the lock segment due to a rise in the retail margin of lock products and a reduction in payment deferrals, thus causing an incremental downturn in lock sales. The market environment in the two years since the date of the transaction has also become more complicated due to strengthening of the position of Chinese companies, which offered lower prices, in the lock market. Judging by the actual results of the company for the two years, the financial model forecasts were revised significantly in the negative direction. Under the new circumstances company X would have only achieved a positive EBITDA by 2020, while it would have been impossible to pay interest and pay off the body of the debt.

Thus, mezzanine financing had a positive impact on the financial profile of company X immediately after the transaction due to the following: 1) access to funds to finance working capital and investment program; 2) writing off a significant part of the debt and consolidating debt with one lender instead of six; 3) postponing of the debt “body” payments (including put option payment).

However, over the long term the corporate financial portfolio changed for the worse for the following reasons: 1) negative trends in the lock and door market (market stagnation and increased competition); 2) corporate management’s inability to organize the efficient functioning of retail outlets and an erroneous distribution of the market budget, which resulted in increased expenses. It should be noted that management of company X was initially considered ineffective, and an unfavourable market environment in 2017 aggravated the situation for company X even further. These conditions are unacceptable for a successful

transaction (Rosenbaum, Pearl – Investment Banking).

Finally, negative factors outweighed the positive effect of raising mezzanine financing in 2015 and fund Y decided to launch a bankruptcy procedure of company X. In this case, the mezzanine loan obtained by company X just postponed its bankruptcy. So, mezzanine financing did not assist company X in overcoming financial difficulties over the long term.

Section 3.2 Case 2

3.2.1. Record of Transaction 2

Due to the restrictions on the data about the transaction, new designations for related information were introduced. Presumably, there are four main parties to this transaction. Bank A, its subsidiary company AB, holding C and shareholder D, which controls the holding and the subject of the case – company Z.

Bank A established company AB. D was a shareholder of holding C. Company AB was granted a loan of \$10 million. The received amount was contributed to the authorized capital of company Z. Thus, a new shareholder AB emerged with a 3% share in company Z. Then a retroactive agreement was signed, which structurally resembled REPO – holding C undertook to purchase 3% of shares from company AB after the expiration of the mezzanine financing transaction.

The payment schedule under this transaction contemplated a target return for bank A. Besides, bank A financed the entire group of companies to support their operations and helping to boost production. In 2015, investments in company Z increased up to €40 million in the form of a loan extended to company AB, which forwarded the money to a company outside of company Z’s sphere of operations. This company repaid the loan to bank A. Since the loan was granted to company AB, bank A increased its share of direct ownership up to 16%, and another 35% of shares was a guarantee for the entire transaction, providing control in case of a default.

3.2.2. Nonfinancial Analysis of Case 2

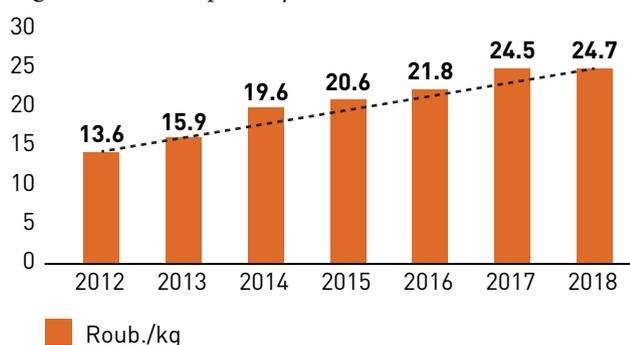
External analysis of the 2012–2018 market. Since the mezzanine financing transaction was concluded in 2013, let us consider the company’s macroenvironment in 2012–2018. For a long time, the food market in the region has been developing rather unevenly. So, the growth rate of product manufacturing was low. The maximum annual increment in the production volume did not exceed 1.8–2%, the average increment rate was 0.4–0.5%. This was related to the limitations of the product’s raw material base, and the country’s climate since the fodder base and livestock population used further in the production chain depend on the weather.

In 2012 after a drop in production by 0.3% in 2011, the Russian market for this product recovered and even grew by approximately 3.5% in comparison to the previous year. At the same time, in the context of Russia’s accession to the WTO and a crisis in the country caused by increased

expenses for livestock keeping that resulted in livestock reduction, foodstuff production volume in 2013 was at the minimum level since 2000 and amounted to 30.5 million. However, after imposing an import embargo in 2014 for various types of foodstuffs, domestic production share started growing, and amounted to 31.8 million tons by 2017. Since the end of 2013, the share of Russia's self-sufficiency in relation to this food product started growing, increasing from 76.5% in 2013 to 82.4% in 2017. The remaining part of the needs for this product was satisfied by import from Europe and the CIS (Belarus and Kazakhstan), although it should be noted that the share of CIS countries in the import grew from 40 to 80% after the embargo was introduced.

Foodstuff prices have increased gradually starting in 2012. The price changes were caused by the abovementioned factors – Russia's accession to the WTO, climatic changes, import embargo. Thus, the price of this food product grew from RUB 13.6 in 2012 to RUB 24.7 in 2018. Price dynamics are reflected in Figure 4.

Figure 4. Product price dynamics, 2012–2018



Summing up, it should be noted that the market is sufficiently saturated, with 1,300–1,400 manufacturers operating in it simultaneously. Besides, the number of manufacturers is increasing due to the government support of this industry. Moreover, the market is differentiated and has no apparent leader. 50 major manufacturers in 2015 covered approximately 4% of the market and their share grew slowly. Access to the market is restricted for many foreign participants.

Table 15. SWOT analysis of company Z

Strength	Weakness
<ul style="list-style-type: none"> Vertically integrated business; High growth rates; Market leader. 	<ul style="list-style-type: none"> Serious debt; Weak marketing activity; Operating in the market of one country.
Opportunities	Threats
<ul style="list-style-type: none"> International expansion; Production automation; Scale effect. 	<ul style="list-style-type: none"> Termination of supply of imported fertilizers and fodder; Great dependence on climatic and ecological environment.

Internal analysis of the company. Company Z has been in existence since the 2000s and is one of the largest manufacturers of food products in the Russian Federation. The company managed to become a successful manufacturer of foodstuffs after expansion and switch to a vertically-integrated structure. At the time of the transaction, the company was between the “prime” and “stabilizing” stages. The company has a well-defined structure, pre-set employee functions, but at the same time it is beginning to lose its flexibility, is not involved in international expansion and focuses on the expansion of the current coverage areas.

Company Z's business is grouped into three main subdivisions: grain growing, manufacturing of dairy products, cattle breeding and keeping. It is a vertically diversified organization that is successful at all levels of the supply chain (from the manufacturing process to the subsequent sale).

The company's main business driver is cattle breeding and keeping. In 2008–2018 its livestock population grew from 5,000 to 65,000. The manufactured products generate the main portion of corporate revenue; the volume of manufactured products has increased annually due to the growth in production capacity, as well as the improvement of the manufacturing process. It should also be noted that the company operates in only one country, which imposes certain restrictions. The company's main production facilities are located in Moscow, Saint-Petersburg, Ekaterinburg and Omsk. The company also operates in six other Russian cities for logistic purposes.

The company operates actively and develops rapidly, which is confirmed by its revenue dynamics that reflect an average annual growth of 35% in 2012–2019. The revenue indicator changed without any visible trend due to a serious debt burden. The corporate debt annually increased by an average of 20%.

Thus, it should be noted that the company's performance was possible due to an infusion of funds obtained from a mezzanine transaction, however, it influenced debt obligations that increased continuously. See the SWOT analysis of company Z in Table 15.

First of all, it should be noted that the company is a vertically-integrated business – from manufacturing and rendering services to bringing the finished product to the consumer – which gives it a certain advantage over other market participants. The company was established long ago and is one of the key market players. Annual revenue increment rates characterize the company as a developing but unstable one, since the change in profit due to the annual growth of debt influences its financial profile. Besides, the company operates in the market of only one country and does not actively promote its brand. This entails a loss of opportunities, such as new customers and profit growth.

The company's potential opportunities are international expansion and reduction of manufacturing costs by means of automation and scale effect.

Climatic and ecologic conditions are the greatest threat for the company's normal functioning. So, the future revenue depends entirely on this factor, which is beyond control. It should also be noted that at the date of the 2013 transaction, geopolitical factors exerted their influence. Loss of suppliers of imported fertilizers and fodder halted the growth of financial indicators in 2015 because the company had to change suppliers.

The company has to implement the WO (Weakness – Opportunities) strategy to preserve its leading position. It means mitigating the weaknesses using the existing opportunities. It is necessary to take the following steps to implement this strategy:

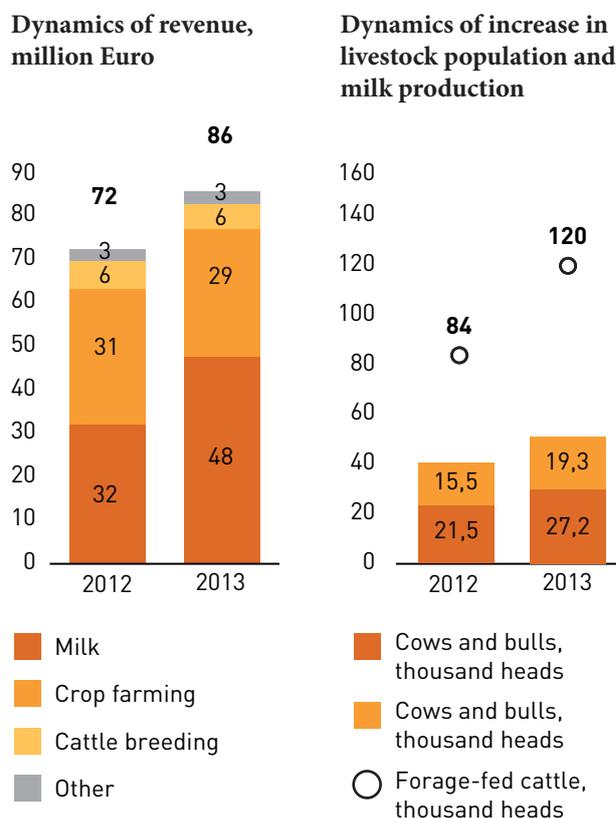
- automation and scale effect will help the company to reduce its current expenditures; the saved amounts may be used for marketing or repayment of the accrued debt;
- a new marketing strategy and international expansion will help the company to attract new customers, thus increasing the revenue and profit manifold;
- additional funds should be used to repay the debt in order to improve the company's investment attractiveness.

3.2.3. Financial Analysis of Case 2

According to IFRS reports, in 2013 the revenue grew by 19% in comparison to 2012 due to increase in revenue by 48% in the dairy segment, which is the company's key manufacturing segment. Against the background of stable prices in 2012–2013 (~14–15 RUB/l of raw milk), a growth in revenue in 2013 was caused by a significant increase in livestock population from 37,000 to 46,500 (25%). A 25% increase occurred in both segments: forage-fed cattle and cows and bulls. Growth of livestock population was caused by the implementation of the corporate strategy of increasing production capacities (in terms of milk production) in order to become the leader in Russia and Europe. Apart from the increase in livestock population in order to increase milk yield, the company invested its own funds in the modernization of milking systems and obtained gov-

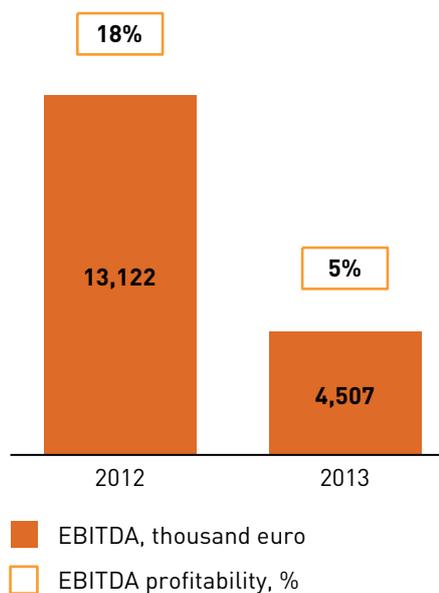
ernment subsidies. The crop farming segment in 2013 experienced a 6% drop in revenue due to lower prices for cereal crops as compared to 2012. The revenue from the cattle breeding segment and other revenues were at the same level (Figure 5).

Figure 5. Dynamics of value and physical indicators, company Z in 2012–2013



Source: Data provided by company Z.

EBITDA dynamics were very different from revenue dynamics. In 2013 EBITDA equaled €4.5 million, decreasing by € 8.6 million (66%) in comparison to 2012. The root cause of EBITDA reduction was an increase in operating costs (+41%). All expenditures grew: 1) increase in livestock population entailed the growth of fodder expenditures (+45%), fuel and lubricants for milking systems (+37%), repair of milking systems (+20%); 2) expansion of owned lands (including crop land) by 16,500 ha (+9%) up to 192,500 ha entailed an increase in fertilizer (+78%) and pesticides (+58%) expenses. Growth in production volume caused a 26% increase in payroll costs. Thus, the company's operational problems were not the reason for the EBITDA margin decline. The reason was the production growth in the milk segment and the need to seed and cultivate agricultural lands, whose harvest (and consequently - the financial result) could be only sold the following year (Figure 6).

Figure 6. EBITDA dynamics, company Z in 2012–2013, thousand Euro

Source: Data provided by company Z.

In 2012 the interest payment burden with respect to the EBITDA of company Z was already critically low – 0.6x (regardless of interest revenue). After a drop of EBITDA in 2013, the cash coverage ratio decreased to 0.2x. It meant that the company could not pay interest from its internal funds. The corporate net income in 2013 decreased by ~3 times, net profit margin went down from 9 to 2%. See the company's actual financial results in 2012–2013 in Table 16.

Table 16. Forecasted cash flows of company Z at the date of the transaction (million Euro)

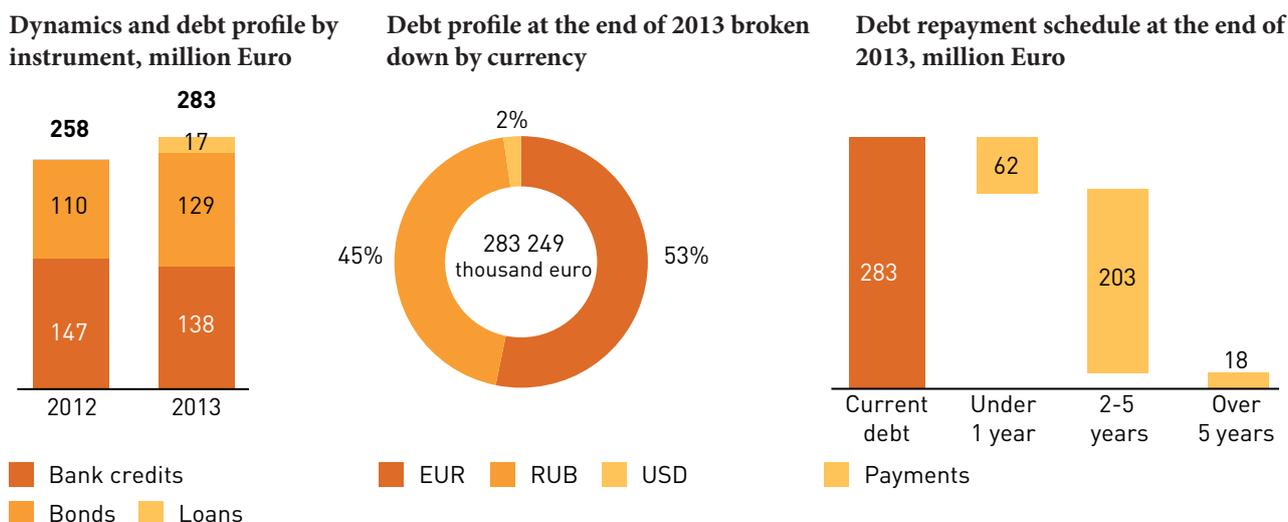
Company Z	2012A	2013A
Revenue	72	86
Change, %	x	3
Change of cost of ploughed lands	1	2
Change of cost of biological assets	19	35
Other income	16	18
Prime costs of materials	(32)	(46)
Payroll cost	(25)	(32)
Depreciation	(16)	(20)
Other expenses	(18)	(19)
EBITDA	13	5
EBITDA margin, %	18	5
Interest	(12)	(21)
Profit before income tax	5	3
Income tax	1	(0)
Net income	6	2
Net profit margin, %	9	2

In 2012–2013, net working capital decreased insignificantly in spite of an increase in the company's business volume. It is mainly due to growth of accounts payable and advances received, which correspond to an increase in corporate operating expenditures for manufacturing and labour remuneration. The working capital dynamics are presented in Table 17.

Table 17. Working capital of company Z

Company Z, million Euro	2012A	2013A
Inventory	52	63
Advances paid	2	1
Accounts receivable	3	3
VAT payable	9	6
Miscellaneous	7	9
Current assets	72	82
Accounts payable	23	31
Advances received	1	6
Miscellaneous	11	13
Short-term liabilities	0	0
Net working capital	72	82

At the end of 2013 corporate debt amounted to €301 million, increasing by 13% in comparison to 2012. The company's debt consists of leasing liabilities and credit funds. Credit funds comprise bonded obligations secured by bank loans and other obtained loans. At the end of 2013 bank loans amounted to 49% of the debt portfolio (aside from leasing), bonds – 45%, other loans – 6%. 42% of the portfolio is nominated in roubles, 50% – in Euro and 2% – in US dollars. Considering the fact that the company operates in Russia and its cash flow is nominated in roubles, a large currency share in the portfolio poses a serious currency risk in case of rouble depreciation. In 2012–2013 in terms of the Net debt/EBITDA burden, the company had critical values of 20.1x and 66.4x, respectively. The debt portfolio comprises bank organizations, which conclude agreements with obligatory covenants (in particular, concerning the Net debt / EBITDA burden). In IFRS reports the company indicated that in 2012–2013 it broke such covenants, but obtained permission from bank organizations to continue its operations. It means that in spite of a serious debt burden, bank organizations believed that the company could repay its debt in future. See the main information on the company's loan portfolio in Figure 7.

Figure 7. Main debt indicators in 2012–2013

Source: Data provided by company Z.

Summing up the financial standing of company Z at the date of the transaction, the following should be emphasized:

- 1) The business volume of company Z in terms of revenue showed positive dynamics in 2012–2013 (+19%), however, in 2013 the EBITDA margin decreased significantly from 18 to 5%. Net income dynamics followed the EBITDA dynamics, dropping from 9 to 2%. Thus, this case confirms all the results obtained in the econometric part of the paper, namely, the fact that the financial profile of a company raising mezzanine financing demonstrates revenue growth and a decrease in net profit margin;
- 2) In 2012–2013, the company showed no significant changes in operating capital. In general, the change in expenditure items of operating capital was in line with production growth and an increase in operating expenditures;

- 3) It should be noted that the company did not merely have a significant amount of debt and negative credit metrics, but that such amounts broke all established covenants on the Net debt/EBITDA burden. For this reason, the company had to modify the terms of loan agreements and obtain permissions from credit organizations, which prevented the default.

Consequently, unlike case 1, the corporate financial portfolio was much more attractive in spite of the debt amount: 1) the company is a growing business that increased its revenue in the main segment by 48% in the previous year; 2) the company's transparency causes much less concern in comparison to case 1: the company issued shares that require a certain level of information disclosure including IFRS reports.

At the date of the transaction, the financial model of forecasted cash flows was as follows (Table 18).

Table 18. Company's forecasted cash flows in 2014–2019 (million Euro)

Company Z	2012A	2013A	2014F	2015F	2016F	2017F	2018F	2019F
Forage-fed cattle, heads	15,500	19,300	22,087	24,892	28,970	29,318	29,926	29,926
Cows and bulls, heads	21,500	27,200	27,710	29,870	31,350	32,508	31,284	31,284
Milk production, tons	84,000	120,000	153,860	177,559	204,133	220,303	223,915	226,213
Revenue	72	86	97	99	109	122	125	128
Milk	32	48	64	61	68	74	77	79
Crop farming	31	29	25	27	32	32	33	34
Cattle breeding	6	6	6	9	8	13	14	14
Miscellaneous	3	3	3	1	2	2	2	2
Change, %	x	19	13	2	11	11	3	2

Company Z	2012A	2013A	2014F	2015F	2016F	2017F	2018F	2019F
EBITDA	13	5	19	21	29	36	37	38
EBITDA margin, %	18	5	19	22	26	30	30	30
Operating flow before %	(11)	20	15	15	25	31	33	33
Investment flow	(45)	(38)	(42)	(31)	(18)	(10)	(9)	(9)
CFADS	(55)	(18)	(27)	(16)	6	21	24	24
Interest paid	(21)	(29)	(21)	(22)	(25)	(21)	(19)	(15)
CFADR	(77)	(47)	(48)	(38)	(18)	0	5	9
Net liabilities	264	299	323	282	275	259	239	215
Loans	266	301	325	284	276	260	240	216
Monetary funds	2	1	2	1	1	1	1	1
EBITDA / Interest	0.6x	0.2x	0.9x	1.0x	1.2x	1.7x	2.0x	2.5x
Net liabilities /EBITDA	20.1x	66.4x	17.2x	13.1x	9.6x	7.2x	6.4x	5.6x

According to bank forecasts, if the abovementioned suppositions are realized, the company would (the last payments under the transaction) increase the number of forage-fed cattle by 55% and milk production – by 89% by 2019. So, it would be possible to increase the revenue by 49% in comparison to 2013. The company's EBITDA margin in 2014–2015 remained at approximately the historic level (taking into consideration the expenses that increased previously in 2013). In 2016–2020 the margin grew to ~30% due to the economy of scale accompanied by revenue growth. The existing loans were serviced in accordance with the above-described payment schedule, and payments under REPO were made in full in 2016–2019. For the entire period of the CFADS and CFADR transaction, the company lacked the funds to repay the existing loans in full. Nev-

ertheless, as mentioned above in the description of the transaction, the bank financed the company at the operating level. This enabled the company to borrow the funds required for stock buyback. In 2014–2019 the debt level remained unchanged, however, due to credit funds the business grew significantly in terms of revenue and EBITDA, producing a positive impact on the company's credit metrics. By 2019, Net debt / EBITDA amounted to 5.6x as compared to 66.4x. Cash coverage ratio also improved from 0.6x in 2013 to 2.8x in 2019.

The company's actual financial results exceeded the initial expectations included in the financial model. They were obtained from IFRS reports for the entire period of the transaction (Table 19).

Table 19. Data from IFRS reports of company Z for 2012–2019 (million Euro)

Company Z	2012A	2013A	2014A	2015A	2016A	2017A	2018A	2019A
Forage-fed cattle, heads	15,500	19,300	22,000	24,900	27,400	45,100	63,100	97,640
Cows and bulls, heads	21,500	27,200	30,700	32,850	34,900	52,420	69,960	84,570
Milk production, tons	84,000	120,000	153,700	179,600	220,000	297,000	484,000	759,000
Revenue	72	86	98	98	119	175	245	403
Milk	32	48	64	62	75	124	166	294
Crop farming	31	29	25	25	29	33	49	78
Cattle breeding	6	6	7	9	14	15	18	19
Miscellaneous	3	3	3	1	1	3	12	12
Change, %	x	19	14	0	21	47	40	64

Company Z	2012A	2013A	2014A	2015A	2016A	2017A	2018A	2019A
EBITDA	13	5	18	20	35	41	11	52
EBITDA margin, %	18	5	19	21	30	24	5	13
Operating flow before %	(11)	20	29	24	23	39	44	102
Investment flow	(45)	(38)	(40)	(66)	(40)	(159)	(392)	(344)
CFADS	(55)	(18)	(10)	(42)	(16)	(120)	(348)	(242)
Interest paid	(21)	(29)	(30)	(34)	(36)	(49)	(59)	(79)
CFADR	(77)	(47)	(40)	(76)	(53)	(169)	(407)	(320)
Net liabilities	264	299	280	302	414	565	832	1 244
Loans	266	301	282	307	416	579	845	1 248
Monetary funds	2	1	2	4	2	14	13	4
Net liabilities taking into consideration REPO	264	299	290	350	462	613	880	1 292
EBITDA / Interest	0.6x	0.2x	0.6x	0.6x	1.0x	0.8x	0.2x	0.7x
Net liabilities/EBITDA	20.1x	66.4x	15.3x	14.9x	11.8x	13.7x	75.2x	24.0x
Net liabilities / EBITDA taking into consideration REPO	20.1x	66.4x	15.8x	17.3x	13.2x	14.8x	79.6x	25.0x

In 2016–2019 corporate financial indicators significantly exceeded the indicators estimated in 2012–2014 due to increase of the company's production capacities. First, the milk segment made the most important contribution to the company's financial result. In 2018, the revenue in the segment amounted to ~ € 166 million, growing ~ 4-fold in comparison to 2013. This result is due to the increase in the number of forage-fed cattle to almost 100,000 heads (5-fold in comparison to 2013) and a rise in the milk price from 15.9 RUB/l in 2013 to 24.7 RUB/l in 2018. Second, the crop farming and cattle breeding segments also showed a manifold revenue growth. Growth of revenue in the crop farming segment is due to a 3-fold expansion of agricultural land used by the company from 193,000 ha in 2013 to 599,000 ha in 2019. The revenue of the cattle breeding segment increased 3.2 times because livestock population expanded 3.1 times.

The following should be noted in regard to the EBITDA financial result: 1) according to forecasts of the financial model, EBITDA margin in 2014 recovered to the historic level because expenses for agricultural land improvement did not grow (the size of owned land in 2014 remained unchanged); 2) in 2015–2016 the EBITDA margin was still growing due to efficient company management; operating expenditures were preserved at the level of 2014, while sales and revenues grew.

Nevertheless, in 2014–2019 the company was unable to pay interest and repay the debt “body” because of high capital investments that exceeded the values estimated in the financial model. It is due to a higher rate of growth of the cattle herd and the agricultural lands in use.

As for loan debt burden in 2015–2018, the Net debt/EBITDA (also taking REPO debt into consideration) and EBITDA/Interest metrics improved. It means that credit funds were used efficiently. However, the company continued investing in the expansion of production and could not pay interest and the debt “body” under the REPO loan. According to the materials we received in these circumstances the bank decided to withdraw from the transaction and notified the company shareholder about this decision. Therefore, in 2018 another bank refinanced the transaction, copying its structure in full.

Thus, in case 2 raising of mezzanine financing had a positive impact on the financial profile of company Z within the entire transaction period due to the following: 1) providing access to funds at the companies' operational level; 2) obtaining additional funds to finance an ambitious investment program; 3) a complicated transaction structure in which payment of interest and repayment of the debt “body” under REPO were actually carried out by the shareholder's affiliated companies, while the borrowing company was released from this burden.

Over the long term, the company also showed an improvement in credit metrics, however, it made no actual payments to the bank. It is characteristic of the companies at an early development stage due to expansion of their business and the need for continuous expenditures to further develop their business.

It should also be noted that in this case mezzanine financing had a positive effect on the market value of equity capital. According to the initial forecast, the equity capital value defined by DCF amounted to ~ € 27 million. After obtaining mezzanine financing and concluding the transaction, the company continued to ramp up production, and as at 2020 the equity capital value increased up to ~ € 480 million. So, the company converted initial growth opportunities using a mezzanine loan.

Thus, this transaction is an example of a positive influence of a mezzanine financing instrument, which finally enabled the borrowing company to significantly expand its business in kind and in terms of value and to improve credit metrics, thus increasing the corporate credit rating and opening prospects of further improvement (accompanied by a decrease of investment costs). It should be additionally noted that the influence of mezzanine financing on the capital market value was positive because the raised funds enabled the company to implement the investment program and cope with a serious loan debt burden.

Conclusion

Mezzanine financing is one of numerous market instruments of raising funds, which combines the characteristics of debt and equity capital. In the majority of cases, mezzanine is obtained in order to implement a large project, for which a company typically lacks its own funds or when the company is unable to get an ordinary bank loan. As compared to alternative financing sources, mezzanine is easy to attract, has a flexible payment schedule and an improved structure of balance and creditworthiness. However, it has some shortcomings, for example, a higher required return for a prospective investor to offset the risk he assumes, transfer of a part of the stock (if the transaction presupposes it) and a probable loss of control over the company.

The econometric analysis performed in the present paper enabled us to generate two hypotheses that answer the previously unresearched questions.

H1: Convertible bonds are issued by companies with a less attractive financial profile than issuers of ordinary bonds.

H2: Issuers of convertible bonds have fewer opportunities for growth unlike issuers of ordinary bonds.

Based on the obtained data, we may make the following conclusions. This set of financial characteristics is mainly typical for companies at earlier stages of their lifecycle (period of youth and prime). Such companies grow rather rapidly, their market value is high, and the value of high-risk companies correlates with the market in a stronger way

Hypothesis H1 was confirmed: convertible bonds are issued by companies that have a less attractive financial pro-

file than issuers of ordinary bonds. Confirmed indicators of the financial profile attractiveness are Revenue CAGR, Net income margin, ROA, Dividend dummy, EBITDA – CapEx flow, Total debt/Total assets, Q Tobin, Coupon rate, EBITDA/Interest, as well as the company's beta since its growth increases the company's striving to issue a mezzanine instrument.

From the investors' point of view such companies have a high credit rating in case of ordinary bonds. However, if a company demonstrates a growth potential that may be forecasted based on market fluctuations, participation in mezzanine financing will enable investors to profit off the company's growing shareholder value. The presence of an equity component in the mezzanine instrument provides for it. If one assumes that companies may be young and have growth potential, one should reject hypothesis H2 because in this case the result suggests the opposite: companies aiming to issue a mezzanine instrument may have growth potential.

Besides, case analysis did not confirm the obtained conclusion that companies that tend to issue mezzanine instruments may be less mature. The case study revealed that using mezzanine financing instruments has a positive influence on the financial profile of a borrowing company (in terms of credit metrics), and the market value of equity capital provided that the following conditions are met: 1) a company's growth potential after the mezzanine transaction is concluded; 2) a favourable market situation; 3) highly qualified top management and an efficient corporate strategy.

In the paper we describe a typical company that raises mezzanine financing, evaluate its influence on the market value of equity capital and define the key conditions for an efficient application of funds provided in the framework of such financing.

The research was restricted by the amount of publicly available information on mezzanine financing transactions, multiplicity of the types of mezzanine financing and confidentiality of case study data.

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