

має такі бренди, що враховують традиції окремих країн — Balay в Іспанії, Pitsos у Греції тощо. Глобальний же підхід припускає використання однієї стандартизованої ТМ, а елементи маркетингу-мікс уніфікуються в максимально можливій мірі (ТМ Sumsung, Electrolux, LG). Проміжний підхід, так званий регіональний розвиток ТМ, який припускає створення єдиних ТМ для деяких регіонів, наприклад, одна марка — для Європейського союзу, інша — для Америки. Регіональний розвиток отримали ТМ Атлант, Snaige та інші, що були створені для країн СНГ.

Висновки. Визначені етапи діяльності щодо формування КТМ є обов'язковими, але підприємство може повертатися на той чи інший рівень залежно від ряду факторів, що впливають на ТМ. Тому необхідно сформулювати критерії, які об'єктивно будуть характеризувати ступінь сформованості КТМ на кожному з рівнів. Це дозволить побудувати алгоритм дій щодо формування КТМ на рівні підприємства із зазначенням можливості переходу ТМ на наступний рівень чи навпаки її повернення на попередній, з метою корегування певних стратегій.

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D. N. Vasich, PhD Professor of FORKUP Faculty, Serbia,
Deputy General Manager of «Dunav Re» a.d.o.
N. N. Vasich, MSc ILF, Goethe Universitat, Frankfurt
PricewaterhouseCoopers trainee, Belgrade

PETICULARIES OF MANAGING THE LOAN BASED INFRASTRUCTURE PROJECT ON RAILWAYS

ANNOTATION: The authors explained some characteristics of financial management in the sphere of infrastructure. They presented the case study of investment project alternatives for freight wagons purchasing and operating by the Public Company of Railways of

Serbian Republic (Bosnia and Herzegovina) They suggest that many different elements should be considered before taking the final decision on the lending money form the bank and the influence of the loan terms to the profitability of the whole Project.

KEY WORDS: Managing inflow and outflow, investment loan for railways; interest rate; cost-effectiveness ratio; operating cost; profitability;

PETICULARIES OF MANAGING THE LOAN BASED INFRASTRUCTURE PROJECT ON RAILWAYS

Case study of the optimal loan choice for freight wagons purchasing and operating in Republica Srpska (Bosnia and Herzegovina)

Dushan Vasich, Nina Vasish

ABSTRACT: Interest rate represents the initial factor which each company takes into account before entering in a new project investment at the basis of a bank credit. But for a final decision on the most favorable option for project funding, the level of interest rate is not a decisive factor. Primarily it is whether the funds will be rationally engaged and to what extent the interest rate expense will participate in the total costs of current business operations. Feasibility study on investment in acquisition and exploitation of freight wagons for the need of Public Company «Reilways of Serbian Republic» (Bosnia and Herzegovina) proves this thesis. Discussing the impact of interest rate on other parameters of business, through the prism of diferent credit terms and conditions, author has been considering their effects to the profitability of business during the entire period of freight wagons exploitation. Text points out peticulars of optimal option choice for railways projects investment thorough the bank loan, arising from limited life of freight wagons (15 years) and from specific calculation metod of profitability based on the principle of kilometer/tone. The essence of a correct decision is the choice of such credit option which allows profitability, rentability and liquidity of investment during the entire period of wagons exploitation, and provides regulary loan return and opereting costs coverage.

Introducing consideration

Lending funds on the domestic and foreign money market has become increasingly significant generator of overall economic activity. Particularly, large-scale infrastructural project can't start without providing bank credit. Several factors are influencing the cost effectiveness of investment loans: length of grace period, amount of monthly annuities, percentage of borrower participation, requirements for additional funds obtaining and the speed of capital turn-over. But the level of interest rate always is subject to special assessment.

In theory, the bank credit is defined as a «debtor-creditor arrangement in which the bank as a lender makes available a certain

amount of funds to the customer — the debtor — in the form which, *inter alia*, includes assignment of the most important conditions: interest rates, method of repayment, guarantees and similar parameters^[1].» Bank loans can be systematized at the basis of the different criteria. Usually it is done according to form in which they are concluded, the purpose to which they serve and time period for which they are assigned. From the lender's point of view, loan represents a product, which bank temporarily lend to the natural or legal person, during a certain time period, and for a fee. From the borrower's point of view, loan represents specific goods, necessary for the production and consumption; which utilization requires compensation payment.

Bank loan provides company with a number of benefits. Funds obtained from the loan can be used for production financing or accelerating the process of reproduction. Further, bank loan can be used to encourage sales, as it allows return of necessary funds before effective buyer's payment of goods. Also loan may be used for strengthening liquidity, that is, for bridging the gap between inflows and outflows of the company's funds, which is especially important in the seasons depending industries.

For the modern market economies, the «interest rate represents the cost of the banking capital use and it is determined as a percentage of landed amount calculated for a period of one year»^[2]. In other words, the interest rate is the rate of calculating fee to the borrower and collecting money compensation for a temporary assignment or the use of the bank funds.

The interest rate has been influenced by many factors, which can be sorted in two basic groups — market and non-market. But, for the purposes of our topic, we will not enter in further explication of these indicator, or theories' on which they are based on. We will observe the interest rate as an objective, market given category, which each holder of financial functions has to respect if the company pretends to obtain bank loans for financing future business activities.

As regard the production of goods, i.e. the most important economic activity, the effect of interest rate can be identified both directly and indirectly. In a direct way, interest rate appears as the costs which, more or less, burden financial assets and for that reason affect the liquidity of each business entity. For example, when interest rate is low (sometimes

¹ *Дилџанинг, Јован*: POSLOVNO BANKARSTVO (Business Banking), «Consseco institut» Srpsko Sarajevo-Beograd, 2003, page. 174;

² *Labus, dr Mirosljub*: OSNOVI EKONOMIJE (The Essence of Economy), izdavaui «Jugoslovenska knjiga», Beograd, 1997, page. 409—411;

even negative in real terms), then the company operating costs are lower and liquidity higher, what lead to the conclusion that low interest rate has a short-term positive effect on production. However, in long run, lower interest rate has a negative impact on production because it stipulates irresponsible borrowing and irrational investing of cheaply acquired money. On the other hand, when interest rate is higher (sometimes even significantly above the real positive rate) the greater financial cost of business operations discourages production, both in the short and long term. Only a few companies could dare and afford to borrow such funds for production expansion, but not for investment in infrastructural projects. The only positive effect of high interest rates to the branch of production could be a more efficient use of borrowed funds, but its negative effect ultimately overcome such benefit, due to the fact that discourage production.

From the point of accumulation, the interest rate directs companies whether net profit to put on savings, to spend on workers salary or to reinvest in new projects. When the interest rate is high, the company will strive to direct its own assets toward accumulation and to avoid applying for bank loans for such purpose. In the reverse situation, when the interest rate is low, the company will tend to spend its own financial assets for consumption, not for strengthening accumulation. «Cheap» money encourages hazardous and rash borrowing behavior;

From the standpoint of investment, the effect of interest rate is multifold. It is expressed in different ways, but mostly indirectly. High interest rate on loans encourages companies to redirect financial resources to accumulation, rather than consumption, what stimulate highly rational and responsible investment of own funds. Borrowing money from banks for the purpose of investment is the last and expensive option. This is a model in which the accumulation and investment are growing alongside.

However, when interest rate is unrealistically low, the investment momentum is much stronger and it is mostly based on bank credit. As a consequence, profit flows to spending, not to accumulation. This is a model in which investment is growing, and accumulation is decreasing. This model proves that that the interest rate directly affects investment demand. Lower interest rate boosts investment activity, while higher interest rate suppresses «hunger» for new investment wave.

Interest rate also influences a company policy of investment project evaluation. When high, it reduces investment projects and makes requirements for project eligibility extremely sharp and demanding. Only projects of high efficiency, which yields sufficient income for credit repayment and regularly conducting of business

activities, could reach financial support. Conversely, when interest rate is low, the criteria for selecting investment projects are relaxed. Criteria softening make a list of projects approved for investment much longer, but significantly increase a list of uncompleted projects. At the same time, company's capability for due time installments repayment constantly reduces.

Regarding revenue and profit, the effect of interest rate always appears indirectly. In other words, this effect is inversely proportional to interest rate increase or decrease. When interest rate is low, financial cost of credit investment is lower, while revenue and profit grow, provided that other business parameters are stable and rational. In the circumstances of higher interest rate, price of credit servicing is higher; which describes savings and reduces revenue and profit as the final result. Hence, when other factors of production are immutable, tendency of reducing interest rate leads to gradually profit grow. Also, gradual increase in interest rates leads to company's profit decline.

Two basic methods of calculating interest rate have usually been practiced — simple interest and compound interest rate account. They must be equally well-known to credit providers and loans recipients, i.e. to banks and to companies. For each specific production cycle a precise calculation of inflow and outflow of funds provided from credit has to be made by the holders of company's financial functions, in order to synchronize money withdraw and assets immobilization according to daily reproduction requirements, as well as to other financial needs of businesses and to expected financial trends.

Case study: acquisition of freight wagons

In this article we present the results of comparative feasibility study aimed at reaching optimal financing options for acquisition of freight wagon for the need of the Public Company «Railways of the Serbian Republic» (Bosnia and Herzegovina), at the basis of foreign bank credit line. Effects of different interest rate to the violability of project investment and to annual income can be observed directly from our comparative analysis of offered credit terms. Company's final business outcome and its capability for regularly credit repayment have been analyzed during the whole period of project implementation. Feedback effect of different credit terms to overall project income and ongoing financial operations has been calculated year by year.

Basic parameters for our research were led down into the European Union Transport Master Plan in Bosnia and Herzegovina (BIHTMAP)^[1].

¹ BIHTMAP Final Report, Executive Summary, «Pacific Consultants International» (Japan) and «IPSA «Sarajevo (BiH), www-wds.worldbank.org/.../multi0page.txt (accessed 01.12.2011);

The main task of that plan is to rebuild and substantially improve all forms of transport in Bosnia and Herzegovina, especially rail. Then we choose two of relatively favorable credit bids for loan, among a dozen received. Finally we worked out a comparative analysis (per year, per ton/kilometer, per installment and so on) which made clear the results of project effectiveness of each credit options. The final outcome, presented in tables attached, illustrates to which degree different credit terms influence profitability of investment project, liquidity of borrower, profitability of business operations, accumulative capability of company and other parameters of railway transport performing in the Serbian Republic (Bosnia and Herzegovina) by 2020th year.

In regard to the aforementioned plan of the European Union, the Public Company Railways of the Serbian Republic of intended to buy new freight wagons open type (so called «EANS»), whose market price is 50,000 euros per unit, and the average life-time of exploitation 15 years. Purchasing contract had to be concluded by mid of 2006 year.

As the financial manager of the project, we started our research analyzing trends in demand grow for railway transportation of goods, foreseen for the period 2006-2020 year^[1]. We made it separately for the area operating by PC «Republic of Serbian Railways, out of area operating by the PC «Railways of the Bosnia and Herzegovina Federation». Gradually we were including in analyses other parameters for project assessment, as are the length of railway lines, the number of freight stations, the distance from the industrial mines pool, the prevalence of production facilities, the estimated demand for the raw materials and final industrial products, supposed increase of population, employment and standard of life, as well as other relevant indicators. Cross-examining these indicators we concluded that 180 open wagons (type EANS) would be sufficient to meet the needs for goods transportation by railways in the Serbian area of Bosnia and Herzegovina.

These 180 wagons, transporting goods across the area of the Serbian Republic of Bosnia and Herzegovina, could carry out approximately 1,234,000 tons of goods per year, amounting 18,510,000 tons during the whole period of exploitation. Further calculations, based on projections of price trends per ton/kilometer, indicated that 180 railways cars during the next 14.5 years of exploitation could earn total income of ₴ 69,423,061, i. e. ₴ 4,787,797 per year ($69,423,061 : 14,5 = 4,787,797$). Apparently, revenue could not be equal in each year, but would

¹ Feasibility study on justification an investment in acquisition of 180 wagons EANS for international transportation in Serbian Republic (Bosnia and Herzegovina), MSNET expert team, Belgrade, February 22, 2006;

oscillate between ₺ 1,539,615 in the second half of 2006, as a minimum, and ₺ 6,091,634 in 2020th as a maximum.

Upon determining the exact number of freight coach units that should be purchased, we considered the two foreign loan offers that we deemed favorable. Both variants of credit we will shortly outline below.

The first option (A) refers to a five-year loan, with interest rate of 4.5 percent, and a grace period of 6 months, providing that the repayment of principal and interest rate simultaneously begin from the 1st January 2007 year. Approved credit should be withdrawn in the total value of EUR nine million, which «cover» the value of all new units (180 x 50,000). Under such circumstances, total interest rate that should be repaid during the next five year amounts EUR 1,012,500 (which is ₺ 16,875 per month). Apart of that, for the purpose of a principal loan repayment, the company should return through installment the sum of EUR 9,000,000 (which is EUR 150.000 EUR per month). When one add fist sum to other, it becomes clear that company, during the five years, should repay ₺ 166,875 each month (interest rate of EUR 16,875 plus principle loan installment of ₺ 150,000). The final price of the credit under the terms of A option should be ₺ 10.012.500.

The main indicators and effects of such loan arrangement and the price of credit are exposed in the Table 1, below.

Table 1

BASIC ELEMENTS OF THE FIRST CREDIT OPTION (A)

| № | Name of source | Loan terms | Amount in euros |
|---------------------------------------------|-------------------------------------------------------|-------------|-------------------------------|
| 1 | The value of 180 cars (loan amount) | | (180 x 50.000 =) 9.000.000 |
| 2 | Percent of Interest rate per annum | 4.5 % | |
| 3 | Interest repayment period | 5 years | |
| 4 | Grace period | 6 months | |
| 5 | Annual amount of principal loan rapayment (x 5 years) | 1.800.000 ₺ | 1.800.000 x 5 = 9.000.000 |
| 6 | Annual amount of interest (x 60) | 202.500 ₺ | 202.500 x 5 = 1.012.500 |
| 7 | Annual commitments under loan | 2.002.500 ₺ | |
| 8 | Monthly commitments under loan (60 months) | 166.875 ₺ | |
| TOTAL AMOUNT FOR RETURN ₺ 10.012.500 | | | |

The second option (B) refers to a seven years loan, with interest rate of 5 percent, and different terms of repayment (interest rate to be paid during 10 years, while principal loan to be paid during 7 years). The interest payment period begins on the day of January 1st, 2007 and follows up ten years consequently. The principal loan repayment starts much later, after the grace period of three years, i.e. from January 1st, 2010 up to the end of the year 2017. Under the terms of this second option, for the same amount of credit withdrawn as in the first case (of ₸ 9,000,000) company should pay total interest rate of ₸ 2,250,000. In other worlds the second credit will cost the company ₸ 11.250.000.

The main indicators and effects of second loan arrangement (B options) and the price of credit are exposed in the Table 2, below

Table 2

BASIC ELEMENTS OF THE SECOND CREDIT OPTION (B)

| № | Name of source | Loan terms | Amount in euro |
|---------------------------------------------|-------------------------------------------------------|-------------|-------------------------------|
| 1 | The value of 180 cars (loan amount) | | (180 x 50.000 =) 9.000.000 |
| 2 | Percent of interest rate per annum | 5 % | |
| 3 | Interest repayment period | 10 years | |
| 4 | Principal loan repayment period | 7 years | |
| 5 | Grace period for principal loan | 3 years | |
| 6 | Annual amount of principal loan repayment (x 7 years) | 1.285.714 ₸ | 1.285.714 x 7 = 9.000.000 |
| 7 | Annual amount of Interest repayment (x 10 years) | 225.000 ₸ | 225.000 x 10 = 2.250.000 |
| TOTAL AMOUNT FOR RETURN ₸ 11.250.000 | | | |

Simply comparing the price of both credit options (between ₸ 10,012,500 and ₸ 11,250,000) one could conclude that the first (A) option is more favorable. The difference of ₸ 1,237,500 is not negligible. But let's continue with the analysis in order to verify the accuracy of this first impression.

For a moment we will ignore the fact that there are some additional costs which equally burden both credit arrangements. Precisely Custom Duty of 5 % for import of 180 wagons amounts to ₸ 450,000, Bank services of 1 % amounts to ₸ 90,000, while cost of

credit insurance of 2 % amounts to ₴ 180,000. All together there are additional ₴ 720,000 costs for the borrower.

At this point of analysis we will introduce additional indicator, which refers to costs of wagons maintenance. The average annual cost of 180 wagons maintenance should be ₴ 3.275.167 for the period July 2006 — December 2020, or ₴ 47.489.919 for the whole period. At the beginning of the process this cost would be significantly below the average, while at the end would be significantly above the average. Given the process of wagon aging, the costs of maintenance would oscillate from ₴ 1.727.443 in first year to ₴ 2.995.949 in the last year. As we already have determined the average annual gross income of ₴ 4.787.797 during the whole period of exploitation (2006-2020), after deduction of planned maintenance costs from the planned total gross income we could find out the net annual profit of the business. The average «cline» profit of the PC «Railways of the Serbian Republic» could amount to ₴ 1.512.631 (4.787.797 — 3.275.167) annually, or ₴ 8.403 per wagon.

Let as now reassess the acceptability of both credit option, after introducing the maintenance costs indicator. Under the terms of first credit option (A) the financial result of business during the first four years (2006-2010) should prove to be negative, due to negative influence of fixed costs (customs, interest rate, principal loan repayment, credit insurance, etc.). During the four years shortfall should amount to ₴ 1.817.507. This gap could be «covered» by taking a new short term loan, but it would raise the costs of whole Project. The positive business result could appear not before the end of the year 2010. The positive growth should continue up to the end of the Project in 2020.

The financial effects of business at the basis of first credit option (A) with taking in account the wagon maintenance costs are exposed in Table 3, bellow:

Table 3

**DYNAMICS OF FINANCIAL FLOWS OF THE PROJECT
AT THE BASIS OF FIRST CREDIT OPTION (A)**

| № | Year | Total income of the Project | Total costs of the Project | Financial result per business year (in ₴) |
|---|-------|-----------------------------|----------------------------|-------------------------------------------|
| 1 | 2006 | 1.539.615 | 1.727.443 | – 187.828 (negative) |
| 2 | 2007. | 3.320.062 | 4.086.644 | – 766.582 (negative) |
| 3 | 2008. | 3.606.212 | 4.164.608 | – 558.397 (negative) |

| № | Year | Total income of the Project | Total costs of the Project | Financial result per business year (in ₸) |
|-------|--------------|-----------------------------|----------------------------|-------------------------------------------|
| 4 | 2009. | 3.948.814 | 4.253.514 | – 304.700 (negative) |
| 5 | 2010. | 4.361.847 | 4.355.903 | + 5.943 (positive) |
| 6 | 2011. | 4.509.527 | 4.411.362 | + 98.165 (positive) |
| 7 | 2012 | 4.662.316 | 2.466.101 | + 2.196.215 (positive) |
| 8 | 2013 | 4.820.394 | 2.525.182 | + 2.295.213 (positive) |
| 9 | 2014 | 4.983.949 | 2.586.167 | + 2.397.781 (positive) |
| 10 | 2015 | 5.153.173 | – 2.649.124 | + 2.504.049 (positive) |
| 11. | 2016 | 5.328.286 | – 2.714.120 | + 2.614.148 (positive) |
| 12 | 2017 | 5.509.442 | 2.781.225 | + 2.728.217 (positive) |
| 13 | 2018 | 5.696.911 | 2.850.514 | + 2.846.396 (positive) |
| 14 | 2019 | 5.890.898 | 2.922.063 | + 2.968.835 (positive) |
| 15 | 2020 | 6.091.634 | 2.995.949 | + 3.095.685 (positive) |
| Total | 06-20 | ₸ 69.423.061 | ₸ 47.489.919 | ₸ + 21.933.143 (positive) |

Hence, five years credit arrangement, with the grace period of only 6 months, would produce loss and insolvency at the beginning of the whole business and require additional short term borrowing (2006—2010), while in the second period of business (2010—2020) would certainly result fruitfully and financial successfully. The total business profit finally should amount to ₸ 21.933.143. But the financial flows of business would not permit credit repayment without new borrowing and risk of insolvency.

In continuation of our analysis we applied the some method of financial flows calculation of business at the basis of the second credit option (B), complemented with the wagon maintenance costs. The less favorable credit arrangement (with grace period of 3 years, principal loan repayment of 7 years, and interest rate repayment of 10 years), which produce greater

costs on a long run, gives quite different picture of business success after introducing wagon maintenance indicator and measuring its influence to the business efficiency. Furthermore it becomes clear that second credit option (B) gives significant advantage in business operating. Although more expensive, this credit option B allows the company to operate business without insolvency and financial dubiousness, as in the case of option A. It can be seen from the Table 4, bellow.

Table 4

**ANNUAL AND TOTAL FINANCIAL FLOWS OF THE PROJECT
AT THE BASIS OF SECOND CREDIT OPTION (B)**

| № | Year | Total income of the Project | Total costs of the Project | Financial results per (business) year in ₸ |
|--------------|-------|-----------------------------|----------------------------|--------------------------------------------|
| 1 | 2006 | 1.539.615 | - 1.457.443 | + 82.172 (positive) |
| 2 | 2007 | 3.320.062 | - 2.347.716 | + 72.346 (positive) |
| 3 | 2008 | 3.606.212 | - 2.425.680 | + 1.180.532 (positive) |
| 4 | 2009 | 3.948.814 | - 2.514.585 | + 1.434.229 (positive) |
| 5 | 2010. | 4.361.847 | - 3.902.689 | + 459.158 (positive) |
| 6 | 2011 | 4.509.527 | - 3.958.148 | + 551.379 (positive) |
| 7 | 2012 | 4.662.316 | - 4.015.387 | + 646.929 (positive) |
| 8 | 2013 | 4.820.394 | - 4.074.467 | + 745.927 (positive) |
| 9 | 2014 | 4.983.949 | - 3.886.668 | + 887.067 (positive) |
| 10 | 2015 | 5.153.173 | - 4.159.838 | + 993.335 (positive) |
| 11 | 2016 | 5.328.286 | - 4.224.852 | + 1.103.434 (positive) |
| 12 | 2017 | 5.509.442 | - 2.781.225 | + 2.728.217 (positive) |
| 13 | 2018 | 5.696.911 | - 2.846.397 | + 2.846.396 (positive) |
| 14 | 2019 | 5.890.898 | - 2.922.063 | + 2.968.835 (positive) |
| 15 | 2020 | 6.091.634 | - 2.995.949 | + 3.095.685 (positive) |
| TOTAL | 06-20 | ₸ 69.423.061 | ₸ - 48.727.418 | ₸ + 20.695.643 (positive) |

The greatest advantage of B option, comparing to A option, is a low level of financial commitments during the first three years. These commitments refer only to interest rate installment (€ 18.750 per month, or € 225.000 per year), not to the principal loan repayment. The favorable effect of minimum credit repayment is even more positive due to the fact that the growth income at the beginning of the period of wagons exploitation is relatively slow. The next advantage of B option results from the fact that regular principal loan installment per year (€ 1.285.714) will be lower than in the case of A option (€ 1.800.000). Although such repayment would last two years longer, the burden for credit repayment would be far less. Both the interest rate and the principal loan remain lower. It makes make wagons business operating for PC «Railways of the Serbian Republic» profitable and rentable during the whole period of Project realization. Positive financial effects, solvency, accumulation and profitability will stay secured for the whole period of wagon exploitation.

The above noted figures, based on second option, make the choice of the credit line B the highly favorable solution for financing the Project. Through the whole period of exploitation of newly acquired wagons (since 2006. to 2020.), the Project based on option B shall remain profitable. The Project shall generate the positive financial result for the PC «Railways of the Serbian Republic» at the end of each and every business year. Option B assures the continuous liquidity and increase in accumulation of the Company. And what is particularly important, the Project will be paid back from its own revenue. In addition, it will run independently to the other business and will not burden the company's current activities. Indeed, the final profit (€ 20.695.643) will be lower for about half million euro, comparing to the option A (€ 21.933.143) but the credit would be far easier to return and highly simulative for whole business.

Conclusion remarks. Which of these credit arrangements could be more favorable? The answer comes out from the calculation of the cost-effectiveness ratio, which compare effects of both loans to the running of current business and the overall Project profitability. This calculation confirmed that credit option B give more positive results during the first seven years of repayment, partially greater profitability during the next five years, while only in the period of the last five years of repayment both credit arrangement could reach the same profitability.

This index of cost-effectiveness could be seen in the Table 5.

Table 5

COMPARATIVE OVERVIEW OF FINANCIAL FLOWS DYNAMIC OF BOTH LOANS ARRANGEMENT'S, AS A BASIS FOR CALCULATING THE INDEX-PROFITABILITY RATIO OF THE PROJECT

| Comparison of the financial results and project's profitability according to the A and B loan arrangements | | | |
|------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|---------------------------------|
| Years of realization | First Loan Option (A) | Second Loan Option(B) | Index of profitability 3/2 in % |
| 1 | 2 | 3 | 4 |
| 2006 | - 187.828 | + 82.172 | - 229 % |
| 2007 | - 766.582 | + 972.346 | - 79 % |
| 2008 | - 558.397 | + 1.180.532 | - 47 % |
| 2009 | - 304.700 | + 1.434.229 | - 21 % |
| 2010 | + 5.943 | + 459.158 | + 1 % |
| 2011 | + 98.165 | + 551.379 | + 18 % |
| 2012 | + 2.196.215 | + 646.929 | + 339 % |
| 2013 | + 2.295.213 | + 745.927 | + 308 % |
| 2014 | + 2.397.781 | + 887.067 | + 270 % |
| 2015 | + 2.504.049 | +993.335 | + 257 % |
| 2016 | + 2.614.148 | + 1.103.434. | + 237 % |
| 2017 | + 2.728.217 | + 2.728.217 | + 100 % |
| 2018 | + 2.846.396 | + 2.846.396. | + 100 % |
| 2019 | + 2.968.835 | + 2.968.835. | + 100 % |
| 2020 | + 3.095.685 | + 3.095.685 | + 100 % |
| TOTAL: 2006—2020 | ₮ + 21.933.143 | ₮ + 20.695.643 | average +106.7 % |

One can see that both credit options ultimately gain positive financial result to the Project of 180 wagons purchasing and operating for the period July 2006 — December 2020. But there is a great

difference regarding the influence of the each loan arrangement to the ongoing business. If the option A is accepted, the revenue will reach euro 21.933.143, but the company shall become non liquid and non-profitable during the first four years of wagon exploitation. If the option B is accepted the profit will be slightly lower and amount to euro 20.695.643, but during the whole period of Project implementation the company will be profitable and possess enough funds, while the wagons will be paid back from the revenue gained during the exploitation.

At one side, although some terms of loan A appears favorable (lower interest rate of 4,5 %, shorter period of repayment of 5 years and higher revenue of euro 21.933.143) the burden of this credit option is far greater and makes project incapable for self-repayment. During the first five years the annuities for repayment of the loan would be twice greater than in the case B, and could be funded only by taking additional loan. Such additional borrowing makes the business non profitable and generate financial loss.

On the other side, although the B loan appears less attractive (higher interest rate of 5 %, twice times longer period of credit repayment -10 years, and profit lower for euro 1.237.500) it comes out as a more favorable option. The loan will be returned after ten years, the annuities would be lower and the Project will be paid off from the revenue gained during the 15 years wagon exploitation.

Suma summarum, the costs of A loan repayment overcome the gain in profit and makes the Project more expensive than acquiring the B credit options.

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