CLOBAL STEEL DOO

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BUSINESS PLAN

Section 2 DECISION ANALYSES Project Profitability and Sensitivity Analyses

THIS SECTION IS DESIGNED FOR DECISION ANALYSIS DURING THE 7-YEARS LOAN LIFE: Worksheet Cap. Goods I

ONLINE CASH FLOW CONTROL ACCOUNTING SYSTEM [Cell F28]

7R PROGRAM for FINANCIAL RISK ASSESSMENT [Cell F29]

Brief marking and description of **both** topics in this Section 2 - presented in details for study and use during the credit period in a separate material.

INTRODUCTION*

The financial model (in Excel) of the investment project is created in two sections. The practice of investment design in the real economy shows in this Section 2 the following:

(1) In most cases, the management staff of the project company has a sufficiently high technological culture and experience in specific financial practice and accounting reporting;

and ② Sufficient qualification in the field of financial analysis and management in servicing investment credit, especially regarding the risk factors in the process of its repayment.

Online control of cash flows is critical for both loan servicing and additional lending (if needed to increase efficiency). The pyramidal structure of this financial project gives a visual presentation of the processes – in Section 1 (the lower 3 *levels*) – applying for credit *and* Section 2 (the upper 3 *levels*) – optimal management of the activity in the credit period (and subsequently).

Both sections are informationally linked parts of the financial model. From the practice has established the unconditional need for basic theoretical information both for the corporate expert and for an external consultant (for a certain period from the beginning of the credit period). What is presented in this **Section 2** is sufficient (with normal perception and practice of the provided information) for a perfect implementation of the **Project**.

This material is for use during the credit period by the management of the Project Company.

DECISION ANALYSIS ONLINE CASH FLOW CONTROL ACCOUNTING SYSTEM PROFITABILITY ANALYSIS

[Worksheet Bayes]

Level 3

Discount Cash-Flow Model for capital budgeting is the best measures of the financial effects of this investment^{*}

Here there are presented the final financial results of the cash flow from the **Project** and its **Level 3** assessment and management [Worksheet].

At this *Level 3* the cash flow information (Sales and Costs) is processed to calculate the ratios of the Project's qualitative assessments. They are leading in making the decision for the development and implementation of the Project, as well as for the auditors of the Agency / credit bank whether to support this Project. It is the source of output data for the next upper *Levels*—sensitivity analysis and quantitative financial risk assessment for calculation of the insurance fee and annual interest of the loan(s) [[Worksheett BUDGET].

a Sales, Revenue Pro-forma Budget	19 387 858	0	0	1 665 988	1 189 588	1 753 671	1 252 198	1 841 355	1 314 808
Less: Date:		30-Dec-18	30-Jun-19	31-Dec-19	30-Jun-20	31-Dec-20	30-Jun-21	31-Dec-21	30-Jun-22
b Costs, TOTAL (in €)	9 893 855	4 475	120 621	593 541	788 136	735 940	904 351	782 156	950 601

- Net Present Value (NPV) of the income from the purchased assets identified at Level 1 and their excess from the investment is profit and is calculated at Level 2. Discounting expected cash flows from the Project.
- On [Worksheet BUDGET] Earnings Before Interest and Taxes (EBIT Cell C75) to the present using the discount rate of 10% (Cell C71) is positive (too much: \$85,341,70 -). All expected discounted cash flows to the present time, NPV > 0, indicates that the investment should be pursued with hurdler rate = 10% (Cell C71).
- Debt Service Coverage Ratio (DSCR) (Row 67)—one of the financial ratios that every business manager should understand—for each six-month period, equal to EBT (Row 23) / total costs (Row 59) from the set of financial statements measuring ability of servicing its debt, including making payments on principal, interest, and leases. A ratio of 1 means that the company's net operating profits equals its debt service obligations.

Creditors want to know how much debt it currently owes and the available cash to pay the current and future debt.

DSCR is required to be 1.25 or more, DSCR = 1.87 is "Good" (Cell F67)

Internal Rate of Return (IRR) – Project Company (PCo) can expect to earn cash by the Project IRR = 10.3% (Cell C73).

(to check the NPV making it **0** – click the Button "Check IRR" and then click "Restore"

Solution Content in the second second

It is the time required for cumulative returns to equal cumulative costs as computed on *Level.2* when the designated approximate numbers are replaced with true amounts taken from the original offers and/or agreements with suppliers of goods and/or services specified on *Level 1*.

(Subject to adjustment with actual project data delivered by Manufacturer and offer local Builder).

Based on the old adage that a bird in the hand is worth two in the bush—the use of money has a cost (interest).

SENSITIVITY ANALYSIS, CASH FLOW ONLINE CONTROL SYSTEM (CFOCS) Level 4

Here are the final financial results of the cash flow: from the **Project** and from its **Level 3** (assessment and management)

Section **PAYBACK PERIOD METHOD** (PB)

The real length of time required to cover the cost of investment will be computed when all prices, time periods, etc. are real, supported by the respective documents – contracts for purchase of capital goods and services, etc. However, based on the received offers and elements of this Financial Model, the expected length of time is a little bit over the half of the 7-year loan life (about 3 - 4 months) [Rows 128 – 132].



Section SENSITIVITY ANALYSES and Online Control [Worksheet Bayes]

A fundamental basis for the Operational and Risk Management—a general advantage of this Financial Model over massive investment business plans.



The emphasis of the Financial Project is its effectiveness, and it is the sales and repayment of the amount invested in the schedule within the planned timeframe. The results of the product marketing research and its step-by-step Sensitivity Analyses showed that for the selected Products offered by:

- (i) The previous experience of the company in the production and installation of buildings up to 13 meters high with American equipment (until its closure before the registration of the new / PCo), as well as the subsequent market research during the development of the financial model shows promising markets in EU and the Western Balkans.
- (ii) Project Company as a Croatian / EU
- (iii) (In a near perspective) enterprise, the theoretically best markets would be England (north London), EU, Balkan countries and Ukraine. As a result we have the relevant documents for intention and confirmed distribution readiness; and
- (iv) as an original producer in Croatia and Serbia the Ukrainean market (currently optional).

Some of the parameters in this **Project** are based on the information from the preliminary investment assessment. At the implementation stage, it is common to use **sensitivity analyses**, which here address the cash flow improvement problem. In this sense here it is made an analysis of the effect on the profitability of changes in sales as result of the marketing and management of the financial risk through **predictable and unpredictable events of interest**. The best method - mathematical algorithm for this purpose is **Bayes Theorem** [Worksheet **Bayes**].

Cash Flow Online Control System (CFOCS)

Cash flow is the true characteristic of the outcome of the management of any business whether the **PCo** company will succeed or not. Controlling the cash flow of the **PCo** is a protection for the lender and the investor. An online billing control application that has integrated accounting capabilities will be used. This will make it possible to easily enter all invoices/payables, track cash flows, generate the necessary reports and manage information - all from the website. **OCFCS** (including the risk assessment and management), part of this financial model, is one of the main functions, respectively the qualities of this financial model. They are designed to optimize costs according to the problems that may arise in the process, shown in Section **SENSITIVITY ANALYSES**.

The management of cash flows throughout the term of the loan can be monitored and controlled by the lender and insurer who have online access (with a password) to the operational part of the business plan. Twice a month, e.g. every other Friday, regularly accounting report data and graphic presentation of the cash flows will be appropriately available on the <u>Developer's website</u>. In this way, potential problems can be flagged before they become too big to handle and credit dependency can be reduced.^{*}

Event A1: part of QUANTITY for Agent A1 \rightarrow	65%	Percentage of prior probability for sale
Event A 2 : part of QUANTITY for Agent A 2 \rightarrow	35%	Percentage supplied to A2
Event A1: QUALITY <u>Good</u> services for Agent A1 →	80%	Percentage <u>Good</u> sales and payments (G)
Event A2: QUALITY <u>Bad</u> services for Agent	28%	Percentage <u>Bad</u> sales and payment (B)

In the pessimistic forecasts of the proforma budgeting - on one hand a different degree of application of factors (in thise case of Agents) with different levels of participation, Cell C7 (65%) and Cell C9 (35%), and on the other hand, there is an insufficiently predictable impact of these events.

The management of OCFCS is assigned to International Investment Council, Washington, D.C., through its auxiliary East Electric Company Ltd., Bulgaria, in close cooperation with <u>Brothers Global Ltd</u>., London, UK.

	SALES REVE	NUE EVENTS	PRIOR PROBABILITY	POSTERIOR PROBABILITIES that <u>Bad</u> part of product is:			
When Yu pay-cry	Percentage of total Sales	Percentage <u>Bad</u> QUALITY Sales	QUANTITY % from A10A2 Sales				
Agent A1	65%	0.20	0.65	From Agent 1 A1 0.570			
Agent A2	35%	0.28	0.35	From Agent 2 A2 0.430			

It is a product of different contingencies with different percentages of participation in the bottom line (Good and Bad sales), Cell C11 and Cell C13, (such as prices and terms of deferred payments) of the different buildings that are built.

MATHEMATICAL MODELIN QUANTITATIVE APPROACH TO DECISION MAKING

In modeling terminology phisical replicans are repsented to as icons models. It is an attempt of physical conditional appearance as the idea of the object being analogicaly modeled. It represents a problem by a system of symbols and mathematical relationship or expressions - called "mathematical models". The purpose is that both models enable us to draw conclusion about the real situation.

This computer Quantitative Model involves volume variables - such as production volume or sales volumeand cost, revenue or profit to help .

In this financial modeling are developed and involved a software package containing one model, herein presented, and one program for financial risk assessment, 8R-PROGRAM. Both interprete the output information make it possible to control the operational deceision making and risk management through Online Cash-Flow Control System.

Our approach is to describe deceision making situation in which quantitative methods have been successfully applied. It shows how the appropriate methods can be used to help the auditor and manager make better decision. Problem solving can be defined as the process of identifying a difference between some actual and some desired stake of affairs herein this Project and then taking actions to resolve the difference making the "best" or optimal solution.

Back to BUDGET ←



As project evaluation is critical to the lender and underwriter, and subsequently to the development of the PCo business, this mathematical model for analysis and management provides accurate objective information on sales and profits until credit installments are paid off. Given the special emphasis on this part of the entire software package, a specific symbol, a cartoon, is used here, atypical for computer practice, but to be remembered by the operator, including a brief description of

QUANTITATIVE APPROACH TO **DECISION MAKING^{*}**



Management of the

through these already "predictable events of interest" (the feedback) results in potential changes to the costs. One of all obvious examples is presented on Row 66 [Worksheet BUDGET] is in Cell B66. There is a fixed percentage of sales determining the marketing expenses for each period. Through feedback from Level 4 with the changes for improvement of the distribution, including the quantity of Homes and Halls (and materials) for selling by the Agent A1 (percentage of the Good sales) these costs will be reduced.

business

^{*} More about the about this visualization approach for your information 👉 😢

There is a fixed percentage of sales determining the marketing expenses for each period. Through feedback from *Level 4* with the changes for improvement of the distribution, including the quantity of products for selling to the Agent A1 (percentage of the <u>Good</u> sales) these costs will be reduced. This model calculates lower value of the evaluation (2.82) in Cell P21 [Worksheet **Bayes**].

Monitoring of accounts receivables allows to identify quickly trends in payment behavior. If an Agent (salesman) routinely pays on time but has had from time to time some months of late payments (possible <u>bad</u> events), this increases Risk Receivables Factor and could be a red flag. In this decision making situation for Sensitivity Analyses we use a single feedback model to examine and control several alternatives of changing input values of the model from *Level 4*. They are due to the impact of two unpredictable events of interest identified on *Level 2* through Bayes Theorem and show the degree of impact to the cash inflows. During this period of time the ordinary yields of Products (Homes and Halls) are not achieved. This section is developed for operational purposes on Worksheet [Bayes] and subsequent risk management which efficiently manage the cash flows not to be significantly affected.

The Program algorithm for analyses of decisions (Bayes Theorem) in the Excel-based financial model [Worksheet **Bayes**] is an alternative of the accepted market decisions, following this option in definite cash-flow parameters during the loan life. Then (an option) in this case in compliance with the results of risk assessment it is recommendable diversification of the distribution to another prospective market. In this **Project** this is the only alternative, developed in capacity of so called "pessimistic forecast", obligatory in the financial modeling for project financing application and conditional – in the business management and operational control of the financial risk during the credit(s) pay-off period.







RISK ASSESSMENT AND MANAGEMENT

Level 5 Debt Service Reserve Accounts (DSRA)



INTRODUCTION

This Section is intended for an overview of periodic quantitative assessment of financial risk during the credit period (and subsequently) of the Project Company (PCo). The software is built for an average evaluation by three assessors - an expert of PoC (INSIDE EXPERTISE) and EXTERNAL ASSESSOR. In case of a big difference in their results, a third assessment by an external / independent assessor (INDEPENDENT EVALUATION) should be made.



Sales and **Costs** data for each six-month period of one calendar year, separately and total, are presented on the top of Worksheet **BUDGET** on Rows 15 and 16 (and TOTAL Capital Investment) on Row 20 as pro-forma budgeting. In addition to the Financial **Project** there are sections adding functions of a business management model and the associated withit quontative financial risk.

DSRA is one option to manage the risk. It takes great shape and it is fully recorded within the project financing documentation and is developed from Project cashflows throughout procedure in this Section in addition to the functions of Cash Flow Online Control System (OCFCS).

There are five Rows (38 to 44), which do not contain budgeting data but are designed for managing the business within the debt term. They will create DSRA which can really a cash reserve for several months. Purposes: (i) PCo has inadequate funds or CADS* to pay for debt service, (ii) implementation of some innovation, or (iii) refinement of some part of the technology lines (our case) building an additional energy supply system Solar energy supplier for own use – the next 2nd stage.



Cash Available for Debt Service (CADS) - Investopedia

INTRODUCTION.

Quantitative financial risk assessment is the main priority for the

final version of the cash flow (Pessimistic Forecast), which is the basis for assessment and acceptance of the application for project financing of the industrial investment project. The assessments are presented graphically on Page File of the 8R Program.





The following descption provides more information for experts and auditors regarding the application of the software product that will be used in this Project

8R-CI Program 🗞 DRAFT 🗞

by way of example only

MBrief Description of **Risk Assessment**

Setting the parameters of anticipated events is done in Section Sensitivity Analyses on Worksheet [Bayes]



and through Level 4 [Worksheet BUDGET] for control the whole system which computed two predictable prior probability of interest through Buyes' Theorem. In other words, this information for prior probability of events on the basis of the principle of hierarchical structures (the first principle of Cybernetics) is transmitted to the upper Level 5. At this level will takes place the second principle of Cybernetics – the negative feedback.

The information from the output of the Object (\mathbf{Y}) is returned back ($-\mathbf{Y}_{c}$) through the **C**ontrol system. So called "disturbance impact" (**F**) see the technology description below.

GENERAL DESCRIPTION

From there, Sensitivity Analysis begin with preliminary estimates of the probability of specific events of interest- the QUANTITY of products A1 supplied to Agent 1 for sale on the market. His percentage of the whole quantity of products is introduced in Cell M72 with **SpinButton** for **Event A1**. Respectively, the remaining part up to 100 percent is for Agent 2. Both are indicated on Cell C7 and Cell C9 on [Works heet [Bayes] and in the tabular presentation below. Then from sources such as special accounting reports, periodic values of cash inflow indicated on the financial model, and so on, we obtain additional information about the events. Given this new information we want to revise or update the above prior probability values by computing through specific algorithm and thus receive the *posterior probabilities* (tabular presentation in **POSTERIOR PROBABILITIES** below). The steps of probability revision process are shown in figures, and the final result is a ratio of Cell P21 2.85, transferred for convenience in Cell M76 Worksheet [BUDGET]. The result, this ratio, forms Row 66 as a part of the Fixed Costs of the Business Plan for operational control of cash flows.* This is a real feedback to the subject to automatic control of one and the same Level 4.

So far as this financial model is construed as pessimistic forecast for development of the Project, the presentation of this Section "SENSITIVITY ANALYSIS" is limited to this application only. There are other activities on Worksheet Bayes5. Thay are related to online cash management to be used in developing a complete decision strategy.

Pre-project Assessment of Risk Factors

The following is set out in the shortest possible form and the contents of the quantitative financial risk assessment program for general information only.



This graph of the main matrix is a model for visualization of the program only; the values of the axes are not the real value of the PCo's model.

<u>Feasibility Assessment</u>. Once the final parameters of the capital investments are available, a full version of the program will be provided for management of the risk during the loan life.

The assessor introduces in the Main Operational Matrix (MOM) data based on information about general accepted criteria for quantitative assessment in relevant adequacy on the scale from 0 to 10, to be processed by the software product.

The program is based on Excel-file of Microsoft Office 2013 package of Windows 10 with macros and algorithm of VBA-program language. This program is widely used on the East Coast of the United States after the failure of conventional products for **risk assessment** (**RA**) from before the mortgage financial meltdown in 2008. Sensitive analyzes are aimed mainly (but not only) to two risk factors, default (*d*) and operational (σ) of special significance for financing and insurance institutions and, of course, to conceptually related Developer / Borrower.

 \leftarrow These figures on the left present the introductory segment of **MOM** of expertise in a mathematical model of geometric figures, proportional to the value at risk (VaR) factors and the extent of its impact on the field of their investment project.

For more information about the applied software see application Risk Assessment and Management

Description of Project

C	PERAT	ſIN	G									
		M		EXAMP	LE							
FORWARDING L				Button to enter data of the assessor with code index 1 004 Risk 1						Value of the Factor multiplied the Rate of impact – this is the real VaR in the business		
Assessmen	Risk	ctor 🖌	TOTAL		2 2 2	1.11 1.20 0.80	2.2 2.4 1.6	3 2 2		environment.		
2 2 2	Ratio ^{1 001} 1.11 2.2	l l d	0 3 2	Coefficient(s) < 1 indexing subsequent strong impact of the risk management	4	1.05	2.4	2		Area roundup of O o i = 1.1 x 1.0 (average of two linked factors: Reputational and Operational)		
2 4	0.80 1.6 0.61 2.4	e c	2 3		7	0.60	4.2	4]			
1 7	1.05 1.1 0.60 0.3	i o	0 0	Risk assessment	- 1	2.63	Area:	17 0.3		Total area - Total assessment		
2 1	1.05 2.1 1.03 1.0	р Ъ Area:	1 1 17	Risk factoring - Total assessment	[Fotal ri the si	sk asse pecific	ssed w	vith :s			
Σrisk 1	factors: 3 L	evel:	0.3									

- 123 Three successive assessments were made as feasibility study and effective management as follows below:
 - Pre-design INSIDE EXPERTISE of the PCo, made together by the Project developer & PCo's manager as curent manufactorer of single-story Homes. Relatively high level of risk at critical level *;
 - 2) EXTERNAL ASSESSOR made the next quantitative assessment after the decisions taken from the first expertise: registered in EU outsourcing of the US Project developer PCo will contract and make export of final products; permanent online cashflow control,
 operative risk management; and final accounting reports. Result: <u>Significant increase of financial risk</u>; and
 - INDEPENDENT EVALUATION made by the Project Developer after proposal / decision to register a new (project company) for credit application in Croatia (the PCo's CEO is Croatian citizen).

During the in-depth study of each risk factor and predictable events related to those risks emerged new unpredictable events of interest. They have been evaluated in the current operative assessments. This is a kind of preliminary virtual management of the risk of unpredictable events. It is performed with quantitative methods in practice, and in this particular case of conditional probability of the quality indicators of salesman - only with Bayes' Theorem (see the next section below).

The computed results showed values of some factors (curencu and fraud risks) with their impact on the Operational Risk (o) in critical value. The feedback from top Level 5 to the basic Level 0 indicated requirement of making exchange of organizational decision of the Project. When in the financial model have been entered real figures of the value of capital investment, sales and costs, etc., a new Risk Assessment has been made by INSIDE EXPERTISE only. **Default Risk** (dv) = 2 in this pessimistic forecast covers an acceptable low level. It is a key factor for the positive resolution of a loan application. The system, called OCFCS (for short), that is recommended and includes as a key element successful control, is Point of zero risk an instrument that serves post factum in the investment throughout on Level Ln the Financial Model as an provider current information to the lender, Level La insurer and to the investor. It is more important for the **d**-Factor to be foreseen not only in the Sensitivity Analysis of the Cash-flow Proforma Budgeting of the business plan as an effect over the cash Level Lp inflow, but its magnitude to be assessed prior to the final investment decision making and the approval Level Lo of first Quantity of the loan Aapplication. Risk Assessment (done)

Many organizations suffer from a lack of

standardization with regards to 'financial modelling language'. This affects the transparency, integrity, and operational efficiency of an organization's processes, resulting in incorrect analytical insights, poor business decisions and staff morale and frustrations within management. Analysis of different levels of the structure of business management facilitates making the right management decisions.

The software of Quantitative Risk Assessment based on Excel and Visual Basic for Applications is friendly for operation, increases likelihood and magnitude of events and their possible impact. It treats eight risk factors – seven financial and the operational risk.

Generally, three groups of experts make inside, external and, when the case so requires, independent evaluations. In case the level of the total risk and the Operational Risk (o) factor achieves preset critical values, the system automatically recommends making evaluation of **Personal Traits** of the decision makers or the top managing staff (not happened in this case).

MARKETING TOOLS

Marketing Study Sales Strategy (brief description)

Strategy focused on local and neighboring countries, exports to the EU, including Ukraine (after the war). The PCo will participate in various trade fairs to expand its network, especially in the Western Balkans, where there is often a climate invasion (and not only, for example - in Bulgaria in August 2022 and in the USA).

"Existing home sales have now fallen for six months in a row, and are 26% lower than the January peak. Home sales likely have further to fall" <u>Odeta Kushi</u>, deputy chief economist at First American Financial, tweeted. This 10% annual rise in real estate prices growth in 2022 was confirmed by <u>Kinght Frank</u> agency and <u>Eurostat</u> (Sofia: 11.9%; Berlin: 11.7%; Slovakia 24%; Hungary: 20%; Lithuania: 17%;).

This is relevant when introducing the assessment of the political factor into the Financial Risk Assessment Program. The necessary funding for this is provided in the Cash-flow Pro-forma Budgeting on Level 2 of the Financial Model.

