

## On Operative Cash-Flow Planning

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*Most managers after viewing the financial reports received from the accounting department ask one question "Where is the money?". Mostly they ask this question because the trial balance shows profit while most firms in Romania struggle in money slumps. Usually this sort of problems can be overcome in two ways: using a quick short time loan or by postponing some of the debts. Both ways are costly: the first one in money and the second one in image. In the conditions of the current Romanian market most managers of the small and medium firms take the second choice. In order to reduce these risks we developed an application which mainly warns and in a certain degree predicts shortages in cash.*

The application aims to solve firstly one big problem observed in most small and medium companies studied: there is no or very little control over cashing receivables and payment of debts. Secondly we aim to solve some collateral problems like having a history of company financial health (by calculating some relevant indicators during certain time frames), generating cash flows used in Romanian practice (mostly two kinds: cash flow for financial institutions and cash flows required by law as a part of the yearly financial reports). All these problems must take firstly into consideration that most managers of small and medium sized companies have very little or no managerial training (because this kind of companies are usually managed by the owners and only after reaching a certain size hiring a trained manager becomes an option) and in order to create a successful application the details must not be too complex. It means that the interface must be very simple and intuitive (many managers have very little computer related abilities) and the information presented must be put into common language with little use of scientific terms (one trait observed to Romanian managers is that when it comes to documents and to specific accounting terms there is quick rejection tendency. If this reaction is obtained at first contacts with the application we observed that there is a tendency of not using the application for a long time period.).

Most small companies use primitive hand kept books for keeping track of payment effects. This practice has many weak points: it is time consuming and involves a lot of manual work, the error risk is high, it only takes into consideration payments and cashing of invoices with effects and not the ones without documents (there are some customers that pay with bank orders, there are expenses not invoiced like salaries, interest rates, dividends). The application we developed overcomes all these problems because all data can be imported directly from the accounting program, risk error is greatly reduced and it takes into consideration all invoices (no matter the way of cashing or paying) and all other receivables and debts. The manual process also has little decision support capabilities because it is automatically assumed that all cashing effects will be cashed. It is not the case in Romanian economy in which not honoring debts frequently takes place. Here comes in handy another feature of the application which permits the decision maker to view different scenarios.

The risks associated with cash shortages are great and with potentially critical outcomes for the company. If one payment effect is not paid there are at least two problems: one is losing credibility among one or more suppliers, and if the sum involved is high among all business community, and the other one is the registration of the company in the national bad debt file and subsequently little or

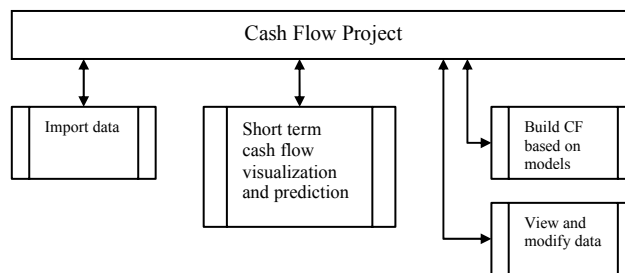
no access to credits from banks. Since not paying is not a good policy many companies use short time loans if faced with cash problems. Of course if the cash problem is predicted in advance the costs and the risk of not getting the loan in time decrease, while if the problem appears suddenly cost of loan is very high. Some companies have punctual cash problems usually induced by a few customers that do not respect the payment dates. In this case a good communication with this partners corroborated with a credit line can get the company out of problem. In this case the application offers the possibility to run a few scenarios to try and see the risks involved by relying on a certain cashing and it also determines at which point the firm will have to find alternate sources of cash. The other part of the firms is in more serious prolonged cash flow problems. The causes are multiple and vary from general domain problems to inadequate company organization. To observe those problems and pinpoint the causes the tool we propose is a carefully selected range of indicators calculated based on monthly trial balance. Those indicators must be very relevant while being easy to understand and interpret even by untrained managers.

In Romanian practice are used mainly two categories of cash flow: the one stipulated in O.M.F.P (Order of the Ministry of Public Finances) no. 94/2001 which is mandatory for large companies and the cash flow requested by the financial institutions. The mandatory cash flow is included among the financial statements that must be presented at the end of the year by the companies and usually its elaboration is externalized. Large companies hire experts to build this cash flow mostly because the accounting departments have very little experience in building cash flows. This cash flow is in conformity with the latest cash flows developed in the accounting and the financial reporting fields. The cash flows requested by the banks as part of the loan paperwork are shaped around their purpose: to evaluate the capacity of the firm to return the loan. We found in practice two categories of cash flows: one based entirely

on evaluating the capacity of the firm to produce enough money to pay the rates (most banks) and the other that has a more complex role to evaluate the general financial position of the company.

Taking into consideration the general analyze summarized above the first decision that had to be taken was the choice of the programming medium. Eventually Visual Basic 6 seemed the best choice for at least the following reasons: it is easy to use, it has enough data manipulation capabilities taking into consideration the relative small amount of data involved, it offers good tools for creating an easy to use and friendly interface. The application is based on this general considerations summarized above and the modules are created to match each general problem identified during general analyze. The main module is centered on solving the most important problem identified: how to rearrange all information in accounting so that it matches the real money movement in and out of the company. The other modules are considered secondary and they allow the user to: build cash flows based on four main models (a simplified model proposed by us, the OMFP 94/2001 model, the Transilvania Bank model (considered by us as the most relevant for the company) and the one used by Lectra France for reporting at the Paris stock exchange), calculate indicators based on the trial balance and view a history in the last three periods, import data from accounting program (WinMentor is the only one supported so far) and view and modify all invoices and other debts or receivables of the company.

The first module in logical order is the one that imports data from the WinMentor accounting program. WinMentor has export capability and even more, lists can be exported in various formats: dbf, excel, text, paradox. For purposes of compatibility and easy access and manipulation of original files the chosen format was excel. At this stage the data table structure had to be defined in parallel because the head row of the excel table became the name of the data field that had to be manipulated.



Modules for the cash flow application

The main module aims to solve the short term cash flow planning problem. All data comes from two sources: payment dates for all invoices (incoming and outgoing) and, in addition to this, the data gathered by the fourth module regarding other debts and receivables (rates for loans and leasing, interests). This data from accounting is not always accurate and we consider that the manager has to overview and modify it if necessary. We observed some changes that usually have to be made: if one invoice value is split into several payments and that the date of the invoice is not the date the firm actually cashes the money (the delay comes from the time money is transferred between banks). In order to solve those problems the application offers the manager the possibility to specify different amounts to be cashed at certain dates (in accordance to the agreements with the partners) and the application automatically calculates the actual date of cashing depending on the bank of the partner and the cashing instrument used (bank order, Check). While reviewing information the manager can specify the degree of confidence in cashing each invoice. This degree can range from 1 to 100 and it is the base for three different scenarios: optimist (100 to 80), normal (79 to 50) and pessimist (49 to 1). These scenarios offer the possibility to see how much the company relies on cashing one or another invoice.

The third module builds four models of cash flow considered the most important for Romanian economy. Of course, depending on needs the format can be modified. The application proposes a simplified (covers all normal transactions and is easy to understand by

untrained persons) model to cover the needs of small companies, which can be altered by programmers if some extraordinary transactions occur.

The fourth module allows the manager to review all invoices and other receivables and debts and modify them if necessary. All debts and receivables not invoiced must be imputed manually as they are not imported from accounting program.

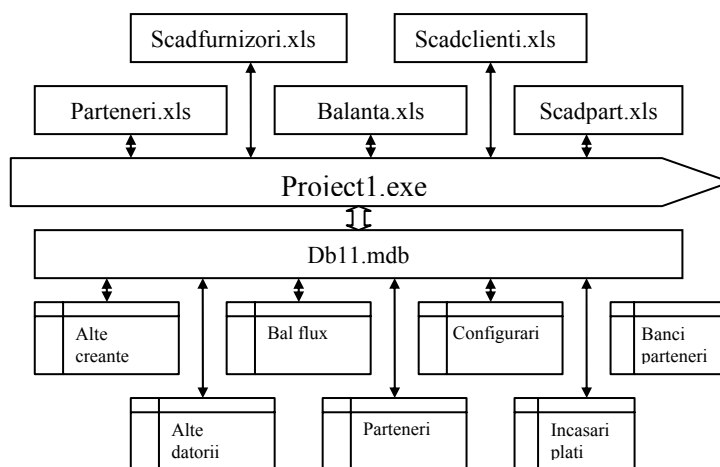
There will be a fifth module which based on each customer history will determine automatically the degree of trust which is used for the three scenarios presented above. This trust percentage will rely mainly on how the partner respected payment dates, the amounts paid before, the management of the firm, the general conditions of the economic branch and on particular rate given by the manager.

The data is imported, as we explained before, from the accounting program and is deposited in an access database. The application uses both the database as well as each particular excel file. As the application development progressed we encountered some compatibility issues between Visual Basic 6 and Access 2003 used to create the database. Eventually, the database was converted to Access 8 format but that made impossible structural changes of the tables in the database, which led to versioning our project. The files and tables used by the application are as follows:

In the import module data from excel files is added to the access database so that based on the original structure of the table new tables are added in the database and to the original name is added the month and the year (in one month can be only one table and if the data

import is repeated all data in previous table is replaced). The application uses at this point all the data in tables and some data from the

excel files. When the application development will be complete only the data placed in tables will be used.



Files and tables used by application

So far the project is still in development phase but one version is already implemented in Lectra Romania. Before implementation a punctual analysis was done and it revealed one significant extra problem: the company had to pay external invoices and since internal invoice value is rather small the problem was to predict when the external payment could be done without jeopardizing internal payments.

The benefits for the company adopting this application can be very important: the periods when extra money will be needed can be predicted in advance and thus the risk of not paying the debts reduced, the loan costs can be cut down, managers can have a new perspective on the firm's activity and tendencies by consulting regularly the cash flow indica-

tors and in case the firm needs a loan, building cash flows for the bank is very simple.

### References

1. Bătrâncea Ioan (coordinator) - "Diagnosticul și evaluarea întreprinderii", editura Risoprint, Cluj-Napoca, 2003
2. Kruchten, Philippe, "The Rational Unified Process: An Introduction", 2nd ed. Addison-Wesley, 2000.
3. Schneider, David I, "Computer programming Concepts and Visual Basic", Pearson Custom Publishing, 2000
4. O.M.F.P. 94/2001 published in Monitorul Oficial nr. 85/20.02.2001
5. O.M.F.P. 306/2002 published in Monitorul Oficial nr. 279 bis/25.04.2002
6. <http://www-130.ibm.com/developerworks/rational/products/rup>