



Economics Bulletin

Volume 32, Issue 1

Methodological Approach to Company Cash Flows Target-Oriented Forecasting Based on Financial Position Analysis

Sergey Krylov
Ural Federal University

Abstract

The article treats a new methodological approach to the company cash flows target-oriented forecasting based on its financial position analysis. The approach is featured to be universal and presumes application of the following techniques developed by the author: financial ratio values correction techniques and correcting cash flows techniques. The financial ratio values correction technique assumes to analyze and forecast company financial position while the correcting cash flows technique is related to company cash inflows and outflows forecast enabling to improve its financial position. Basing on computation results one can put forward proposals to establish target-oriented company financial strategy with a view to improve its financial position.

Citation: Sergey Krylov, (2012) "Methodological Approach to Company Cash Flows Target-Oriented Forecasting Based on Financial Position Analysis", *Economics Bulletin*, Vol. 32 No. 1 pp. 830-836.

Contact: Sergey Krylov - sergey.krylov@yahoo.com.

Submitted: June 04, 2011. **Published:** March 04, 2012.

1. Introduction

Cash flow management is known to be an essential element of company financial management. Meanwhile, efficient cash flows management involves their competent planning and, consequently, forecasting, as the assessed and approved forecast may be considered as the basic planning assumption. To establish financial forecasting calls for adequate analytical supply.

The development of company cash flows forecasting techniques based on the synthetic financial information of balance sheet is of special interest. It should be noted, that a number of company cash flows forecasting techniques have been published so far, including those based on the balance sheet. However, the techniques described are considered as tedious, dependent on sales forecast and insufficiently accurate. That is why a new approach is needed to enable to forecast company cash flows basing on the balance sheet and some additional data (net operating revenues, cost of goods sold, operating income, dividends in case of corporation, etc.). The approach must be based on the forecasting techniques, lacking the disadvantages of conventional methods, sufficiently accurate, reasonably labor-intensive and appropriate for any entity. In addition, to raise the efficiency of both financial forecasting and analytical supply establishment the processes are desired to be combined into the integral complex.

2. A new approach to cash flows forecasting

The proposed approach to cash flows forecasting is assumed to be universal, it presumes combined application of two basic financial analysis leads: financial ratios and cash flows, linking basic features of company financial position and cash flows, and combines the techniques, developed by the author:

1. financial ratio values correction technique;
2. correcting cash flows technique.

The data base includes the balance sheet data at the reported period end and other necessary additional data. The balance sheet is reclassified (rearranged) to correspond fully to company cash flows flowchart (Fig. 1).

The information is used to establish the system of financial ratios, characterizing company tangible assets, its creditworthiness, liquid assets, financial stability and business activity. The financial ratios selected should meet the following requirements:

1. they should imply their practical application;
2. they should form an equation system taking into account balance equalities.

The financial ratio values correction technique implies the following:

1. Basing on the incoming data of the reclassified balance sheet and other additional data computed are financial ratios values.

2. In case of inconsistency, corrected are values of one or a few ratios. It should be noted, that financial ratios values may be corrected by means of the change (upgrade) company financial position rating should it be considered. In the latter case the correction may be made by two methods: by adjusting ratio values to the desired rating or by assuming necessary rating immediately and basing on it computing financial ratios values. The correction results in the change of the financial ratios values.

3. Assumed is initial condition which implies value of the most stable or anticipated parameter, included in the reclassified balance sheet and other additional data.

4. Proceeding from the changed financial ratios and initial condition, the equation system is solved, the solution being the forecast reclassified balance sheet and other additional data at the improved company financial position.

5. By deducting the initial balance sheet from the forecast reclassified one obtained are net cash flows for the reclassified balance sheet items.

Thus, the discussed technique, the flowchart to be presented in Fig. 2, enables to analyze and forecast company financial position basing on its balance sheet and other additional data and establishes database to forecast company cash flows within framework of the intracompany funds turnover, expressed by cash inflows and outflows.

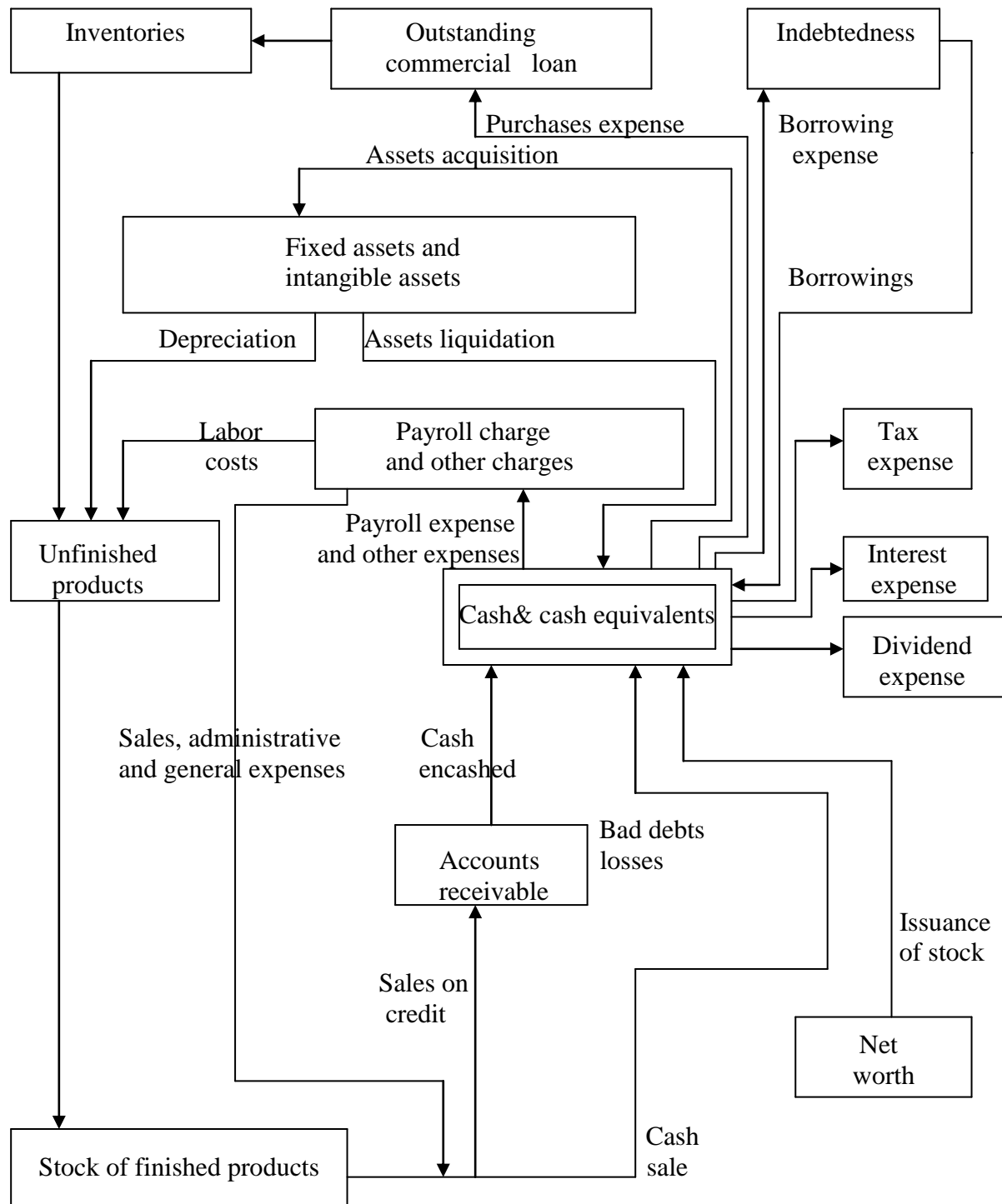


Fig. 1. Flowchart of company cash flows

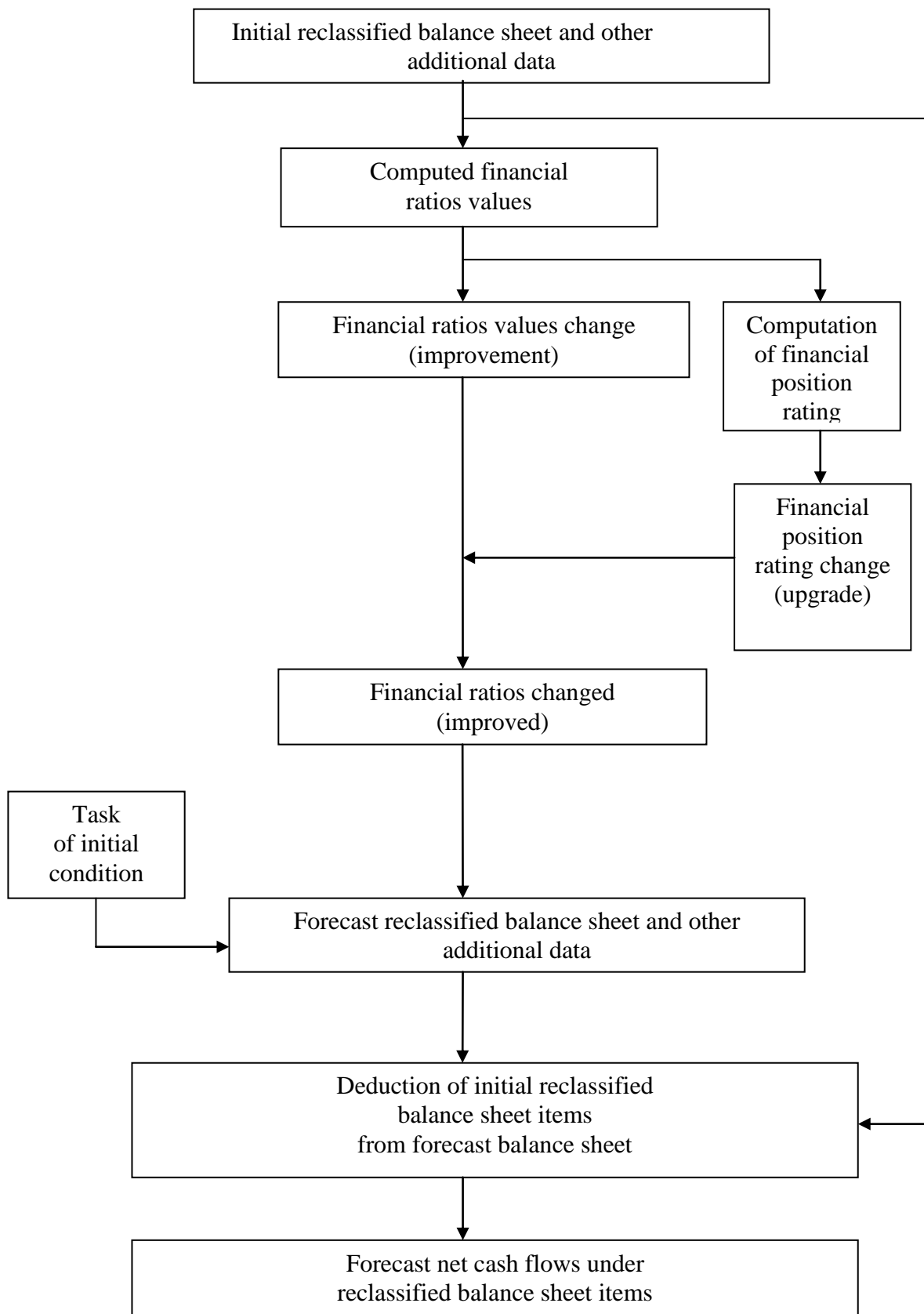


Fig. 2. Flowchart of financial ratio values correction technique

The financial ratio values correction technique implies:

1. Established is data base for the coming computations which includes forecast net cash flows under the items of the balance sheet and forecast additional data (net operating revenues, cost of goods sold, operating income, dividends in case of corporation, etc.), being cash flows by their economic nature. It should be noted, that the following relationship holds true for the cash flows under the reclassified balance sheet items:

$$K_i = H_i + \Pi_i - O_i, \quad (1)$$

$$\Delta\Phi_i = K_i - H_i = \Pi_i - O_i, \quad (2)$$

where K_i – forecast value (at end of the forecast period) of the i -th item of the reclassified balance sheet;
 H_i – initial value (at beginning of the forecast period) of the i -th item of the reclassified balance sheet;
 Π_i – forecast cash inflow under the i -th item of the reclassified balance sheet (cash inflow) for the period;
 O_i – forecast cash outflow under the i -th item of the reclassified balance sheet (cash outflow) for the period;
 $\Delta\Phi_i$ – forecast change of the i -th item of the reclassified balance sheet for the period (net cash flow).

2. Established is an equation system interrelating forecast additional data, cash inflows and outflows under the reclassified balance sheet items within math model framework, reflecting company cash flows.

3. Assumed are initial conditions, as the number of the unknowns exceeds a number of equations, implying values of the most predicted cash inflows and outflows.

4. According to the forecast additional data, forecast net cash flows under the reclassified balance sheet items and initial conditions the equation system is solved. The solutions imply forecast cash inflows and outflows under the reclassified balance sheet items.

The flowchart of the correcting cash flows is presented in Fig. 3.

Thus, the application of the correcting cash flows results in the company cash flows forecast (inflows and outflows) for the coming period, enabling to improve its financial position. It may be presented in the form of a table.

The forecast is feasible for any time period.

While changing its financial position the company incurs certain costs connected with cash flows to streamline its balance sheet structure.

The computation of the forecast cash flows may be effected without prediction of company financial position change, i.e. changed are only assumed initial conditions while financial ratios values are retained. So, one should take into account extra costs arising from the balance sheet structure change and reflecting extra funds flows to improve company financial position compared with the forecast variant without its change (improvement) under equal initial conditions. Extra costs reduce company net income.

Any business strives to maximize its profit, effectively using its capital, so they need to develop conditions to effect practical changes (improvement) of company financial position, leading to the balance sheet structure streamlining.

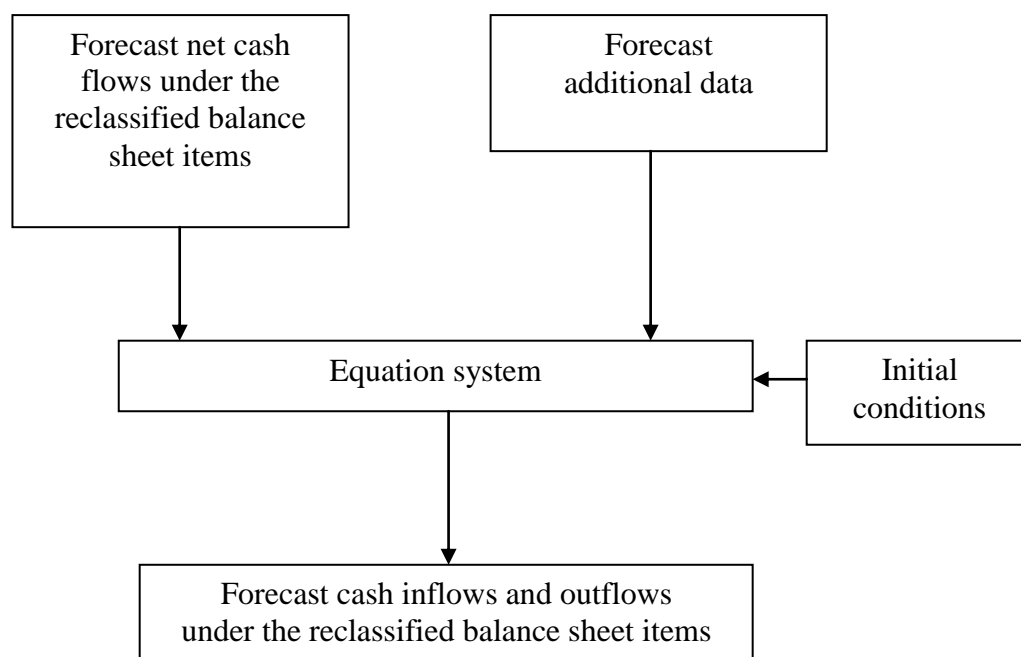


Fig. 3. Flowchart of correcting cash flows technique

Available are computed values for the basis period and two variants of the forecast data for the coming time period: the first variant implies the data connected with the change of company financial position and the second variant deals with the data without the change under equal initial conditions. We also have data for the following indicators: net operating revenues, cost of goods sold and tax expense.

While implementing the forecast variant by the change (improvement) of company financial position compared with the implementation of the forecast variant without the change of company financial position under equal initial conditions, the following processes take place:

1. Net operating revenues change is likely.
2. Costs and tax expense change is likely:
 - a) due to extra costs arising from the efforts to improve company financial position;
 - b) due to likely changes of the cost of goods sold and tax expense arising from the change (improvement) of company financial position.

Thus, the change of company financial position translates in extra revenues, costs and tax expense. It is evident, that the change of the company financial position provides economic effect to the company or, at least, it will not cause damage, if extra costs and tax expense does not exceed extra revenues. The statement may be considered as a condition of the efforts efficiency to change (improve) company financial position. When assumed initial conditions forecast do not differ from the appropriate data of the basis period we have to compare appropriate basic and forecast data.

3. Practical application of the forecast results

Basing on the forecast cash flows we can develop specific efforts to improve company financial position to become a foundation for its financial strategy for the forecast time period.

The main areas of application of the proposed approach to company cash flows forecast are as follows:

1. crisis management at bankrupt companies and companies at the brink of bankruptcy;
2. improvement of company investment attractiveness.

The methodological approach is the same for both situations, differing in financial ratios values and initial conditions.

It should be noted in conclusion, basing on the financial ratio values correction techniques and correcting cash flows techniques we have worked out a computer program "Financial Resources Forecast" dealing with company financial position analysis and forecast of its financial position and cash flows and coming in two options: the first is designed for corporations, the second – for state-run companies. The program enables to analyze company financial position, forecast reclassified balance sheet and additional data (net operating revenues, net income, dividends (in the first case), net cash flows, and cash inflows and outflows under the items of reclassified balance sheet.

The forecast of reclassified balance sheet is effected by means of correction of financial ratios values.

As soon as the desired financial ratios values are defined, computed are forecast values of reclassified balance sheet and additional data by selected initial conditions referring to predicted values of the most stable items: net worth, or long-term liabilities, or outstanding commercial loan, or current loans, or borrowings, or net operating revenues. The comparison of the computed forecast reclassified balance sheet and initial reclassified balance sheet results in the establishment of the forecast net cash flows table, demonstrating how to obtain a forecast reclassified balance sheet out of the initial one.

Then computed are forecast cash inflows and outflows under the items of company reclassified balance sheet, assuming forecast net cash flows under the items of reclassified balance sheet and forecast additional data, taking into account appropriate initial conditions, referring to the most predicted cash inflows and outflows.

Basing on the computation results, developed are proposals to establish company target-oriented financial strategy in order to improve its financial position.

The methodological approach discussed has been tested and evaluated at the number of Russian companies and provided a beneficial effect.

References

- Bernstein, L.A. (1993) *Financial Statement Analysis. Theory, Application and Interpretation*, Irwin: Boston.
- Block, S.B and G.A. Hirt (1989) *Foundations of Financial Management*, Irwin: Homewood.
- Brealey, R.A and S.T. Myers (1991) *Principles of Corporate Finance*, McGraw-Hill: New York.
- Brigham E.F. (1983) *Fundamentals of Financial Management*, Holt Saunders: New York.
- Helfert, E.A. (1994) *Techniques of Financial Analysis*, Irwin: Boston.
- Knot, G. (1985) *Understanding Financial Management*, Pan Books: London, Sydney.
- McLaney, E.J. (1992) *Business Finance For Decision Makers*, Pitman Publishing: London.
- Penman, S. (2004) *Financial Statement Analysis and Security Valuation*, Irwin: McGraw-Hill.
- Van Horne, J.C. (1989) *Fundamentals of Financial Management*, Prentice-Hall: New Jersey.
- Wheelwright, S.C and S. Markidaris, (1977) *Forecasting Methods for Management*, John Wiley: New York, London.