A Methodological Framework of Financial Analysis Results Objectification in the Slovak Republic

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Abstract

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The applicability of financial analysis results meets in practice a serious problem how to objectify analysis results with regard to the comparable values and information sources. Financial analysis results cannot be taken as useful and acceptable without their objectification on the basis of chosen reference rates, values. The article is focused on key information about financial analysis objectification methods, sources and databases in conditions of Slovak enterprises. Current database for the comparison in Slovakia is provided by the CRIF – Slovak Credit Bureau, which provides a complete range of solutions for business and consumer information as well as credit and marketing management. This information is very useful for financial analysis objectification, but not available for all potential users.

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1. Introduction

The applicability of financial analysis as a complex of diverse methods and techniques oriented towards feedback or prediction of an enterprise financial situation meets, in practice, a serious problem how to objectify analysis results with regard to the comparable values and where to find the source of relevant and reliable information for such comparison. Interpretation of the numerical values of indicators based on the so-called recommended values proved not only insufficient, but often

misleading. Each rated entity is unique in its own way; what appears to be the optimum in case of one enterprise, may be under the conditions of another one inconvenient because of its specific financial objectives, business strategy, development stage, etc. Comparing is therefore the solution. However, this brings another problem, the comparability. If we want to be consistent, we must ask ourselves: What shall be compared? What are the comparability limits? When shall we consider two or more economic entities to be comparable, or at least similar? What to do in case the similarity supposition of rated enterprises is in conflict with reality? If financial analysts manage to answer these questions, they face only a "trivial" issue – where to obtain necessary information for the aforementioned comparison.

2. Comparison in time and economic space

Trend analysis, which compares changes of selected indicators in time series, can be relatively easily provided with the information from accounting statements and annual reports, or from enterprise statistics. Combined with solid understanding of the basis of statistics, it is possible to gain a decent amount of information from such sources. Within this context, it shall be necessary to point out to the essential characteristics of handled data to prevent undue distortion of the results of analysis – objectivity, integrity, accuracy, reliability, demonstrability, etc. Implementation of mandatory statues and Generally Accepted Accounting Principles in the financial accounting system should be sufficient to guarantee them. *Comparison in economic space,* defined in different ways, is not that simple as the comparison in time. Facts that influence the comparison under Slovak conditions, either in space or time:

- lack of theoretical models of sample enterprises,
- there are no generally applicable values of indicators (ratios) that could be considered "normal" (as contrast to the extreme, resp. midpoint between good and bad valuation),
- It has been shown that the economy often faces some not applicable data processing methods, which may be applied in other fields without any problems.

This is related to the following facts: financial analysis of an enterprise situation is based on a comparison of a number of indicators calculated from financial statements and with values that are considered as the standard. However, although every company has its own financial statements, there is a problem with the acquisition of relevant standard values of indicators. The complexity of its solution has three basic groups of causes (Kovanicová, Kovanic, 1997):

- *Principal:* in economics, it is not possible to state standard values of indicators theoretically, it is necessary to build on the experience, hence from data.
- *Specific:* these are connected with the lack of mostly micro-economic data that should be used to create necessary standards. Not in the far past, there was a processing centre of large database of Slovak enterprises, the Slovak National Clearing Centre Inc. Bratislava, which provided the results of statistical processing as one of their many products designed for commercial banks as well as for business sector.

- *Universal:* data files shall be substantial so the compared is comparable, i.e. rated enterprise with companies of the similar size, focus, working conditions, etc.

3. Dimensions of the objectification of analysis results

The objectification of analysis results has a few dimensions. One of them is represented by the placement of enterprise into space, which shall give us an idea about its location. It is achieved in a way that company indicators are compared individually, as well as with a whole set of variables in an economy sector, eventually in a field, or with the indicators of other businesses. In this procedure, it is necessary to act cautiously and to compare comparable data. It is to go to the level of fields in which the material terms of comparability are better than at the level of the sector. The challenge is to ensure the formal comparability, i.e. to compare the same and well-constructed indicators, as well as the time comparability – to compare results of the same periods and with identical duration, which of course is a prerequisite for the application of this procedure. The most common comparison is then realised with the average value; due to smaller sensibility to extreme values, it is expressed better by the median than by the average. However, it is also possible to compare with the extreme values (the best or the worst ones). If necessary, "businesses in a field" set shall be divided into more zones. In such case, mathematical-statistical methods shall be applied, e.g. quantiles, mean values with variability rates, multi-criteria evaluation methods, cluster analysis, and other methods (Bartošová, 2002).

Relative drawbacks of comparison in space are contrary to relative advantages of comparison in time. Every business is unique in its own way. Moreover, apart from various business conditions, it is often very difficult to find out exactly the differences in accounting methodology of compared businesses. Accounting legislation in the Slovak Republic gives entities the space to choose, within the regulated financial accounting, some alternative accounting procedures, e.g. methods of depreciation of fixed assets, valuation parameters within the limits of applicable legislation, etc. The identification of such differences is of a high importance because if a financial analyst does not realise them, this may lead to misconstruction of different values of indicators. On the other hand, comparison in space is of a concern, mainly the average values of indicators in a particular field in a comparable time play an important role in the analysis, although they cannot be considered as the general optimum (Bartošová, 2015)

4. Comparability conditions

The comparability of economic entities is conditioned primarily by the following factors (Kovanicová, Kovanic, 1997):

- *field aspect of comparability*
    - comparability of company inputs (raw materials, materials, energy, workforce, etc.)
    - comparability of technologies (similar level of mechanization, automatization, etc.)
    - comparability of outputs (i.e. products, services being provided, goods being sold)

- comparability of the range of customers
- *geographical aspect* (company location with regard to raw materials, energy, workforce, etc.)
- *political aspect* (polity and related type of economic system)
- *legislative aspect* (regulation on business activities, taxes, customs, credit and other terms, which influence company results)
- *historical aspect* (significant changes in science, technology, in the development of information and communications technologies, in the field of advertisement, marketing, etc.)
- *environmental aspect* (comparison of economic results achieved in the comparable environmental care)
- *information source aspect* (the comparability of accounting/financial statements of individual companies)

All these factors always need to be carefully evaluated.

5. Comparability of domestic enterprises in terms of information sources

The cross-sectional comparability of businesses in Slovakia is supported by the fact that the accounting as the fundamental source of information for the financial analysis and financial management is regulated by the state. Guidance is subject to both the routine accounting (bookkeeping during the accounting period) and the financial statements. Nevertheless, in accordance with the practice of market economics, there is still some space left for the freedom of choice by defining limits within which a company accounting can move. This gives rise to the substantive differences among the same entries of accounting statements of different businesses, distorting the comparability of reported data. Among these are (Kovanicová, Kovanic, 1997), (Bartošová, 2015):

- *differences following from different accounting policy*
  - depreciation accounting policy
  - the method of allocating long-term tangible and intangible assets, which does not meet the price criterion laid down by a special regulation (Income Tax Act)
  - methods of stock pricing and chosen pricing methods of its consumption
- *differences in the implementation of Generally Accepted Accounting Principles (GAAP) and also International Financial Reporting Standards (IFRS), mostly:*
  - the precautionary principle (how the company creates adjusting entries in the asset accounts, whether and to what extent it involves expected risks and losses in the accounting/financial statement, what is the volume of statutory reserves it creates, if it ever uses the opportunity to create other reserves, for what purpose, etc.)
  - the accrual basis principle; the comparability of accounting statements of various businesses is also distorted by the differences following from the fact how an individual enterprise deals with the allocation of costs and revenues for those periods to which they relate, mostly how it uses accrual based accounting
- *methodical differences* are caused by different interpretation of generally formulated regulations and by different implementation of framework-based regulations on accounting principles, which

results in different display of a particular transaction in the books of various companies, and thus in their different disclosure in the financial statement.

Comparison with foreign businesses is much more complex due to the distinct level of economies and a whole set of specific factors, e.g. each country has its own national accounting regulation, different legislation, different economic and social environments, and different accounting traditions, etc.

Knowledge of the enterprise position in the field provides only one-dimensional picture on its financial situation. *Analysis of the development in time* is therefore second important factor that needs to be taken into account. In this case, observed values of indicators are compared with the values of the same indicators calculated for the particular enterprise in the past. Comparability of these results in the time sequence is ensured by the generally accepted principle of consistency based on the requirement that in cases when valid accounting regulations allow a free choice, a company uses chosen accounting policy, accounting method, depreciation procedure, asset pricing, etc. unchanged, i.e. continuously precisely in terms of time. The advantage of the comparison in time is both the elimination of unrepeatable operating conditions of every company, as well as easy identification of the impact of changes in the accounting methodology which may have occurred. The main disadvantage of this type of comparison is the fact that there is a lack of any general standard. Very useful and simple tool when comparing in time is the graphical representation of the development of various indicators values, on the basis of which it is possible to assume certain typical breakdowns in heathy operating business and to predict its future development (Bartošová, 2015).

Analysis of the relationship among financial indicators contributes to obtain the objective results of the business evaluation. Indicators describing individual sides of financial situation are a set of elements with logical and factual internal ties. This shall be used in the analysis of factors which have determined the financial situation of analysed enterprise. The possibility of degradation and aggregation of financial indicators, both in horizontal and vertical directions, is described by so-called pyramidal system of indicators. Pyramidal construction of system indicators and mathematical relations among them allow, by means of suitable methods, to quantify the impact of the change of any indicator on the change of the top indicator (Janošková, 2011).

When comparing actually achieved values of indicators with the values calculated on the basis of planned input data, it is necessary to take into account mostly the development of external conditions and their relationship to supposed conditions that were anticipated in the plan drawing. *Comparison with the plan* is a really good way of analysis because it meets the original goal of financial analysis, i.e. identification and analysis of possible disproportion between supposed and actual effect of decision. A very important part of the previous practice is the subjective idea of an analyst on what the optimal values of indicators in a particular company should be, especially in the case of an experienced expert. It is the role of *comparison on the basis of expert experience*.

6. Evidence base for the analysis and prediction in the Slovak Republic

Each analysis, not only the financial one, has four fundamental characteristics: data, methods, implementation, and interpretation. Key information sources for the company analysis are usually known and accessible. The structure of information sources is created by (Kovanicová, Kovanic, 1997), (Janošková, 2009):

- *financial information sources*, including mostly:
    - accounting (financial) statements and annual reports
    - internal accounting statements
    - forecasts of enterprise situation done by financial analysts and top management
    - stock market news
    - reports on the development of currency relationships and interest rates
    - information media economic reports
- *quantifiable non-financial information sources*
    - enterprise statistics on the production, demand, employment, sales, etc.
    - brochures and internal enterprise directives
    - official economic statistics
- *non- quantifiable information sources*
    - reports from the managers of individual company departments and from auditors
    - managerial comments
    - professional journals comments
    - personal contacts
    - independent evaluations and prognoses, etc.
- *various institutions analysts' forecasts*

These include mostly information by the Statistical Office, business associations, professional chambers, etc.

As mentioned above, the incomplete list of conditions and issues that the pursuit of intercontinental comparison brings shows that it simply in not possible to ensure complete comparability of enterprises. It is necessary to come to terms with the fact that there will still be lack of comparable data, much less with the narrower scope for choice and with more consistent implementation of the comparability aspect (Poniščiaková, Litvaj, 2010).

A suitable tool in analysing the position of the companies in the Slovak economic space was for many years the publication *Mean Values of the Financial Indicators of Economic Activities in the Slovak Republic*, which presented an overview of mean values of financial indicators of Slovak enterprises, according to organizational and legal form, field of business and the size. It was published annually by the Slovak National Clearing Centre, later by the Slovak Rating Agency which was renamed the European Rating Agency in 2007. Such information was then provided by the company CRIF – Slovak Credit Bureau whose current range of services can be browsed at <

http://www.cribis.sk/Portfolio.aspx>. Relatively sufficient and sufficiently credible information source for intercompany comparisons in Slovakia was for many years *Commercial Bulletin* published by the Ministry of Finance of the Slovak Republic.

Important information source for the analyses and forecasts of businesses financial situation is the Register of Financial Statements, which was created in order to the administrative burden of business activities and thus to improve and simplify the business environment in the Slovak Republic. The register was established by the Act No. 431/2002 Coll. on Accounting as amended and it is the information system of the public administration whose provider is DataCenter, on the authority of the Ministry of Finance of the Slovak Republic. The register began to perform their duties on 1 January 2014, it compulsorily publicizes documents according to § 23 par. 2 of the Act. The website allows its users to:

• search through the list of accounting entities

• browse available financial statements and other documents publicized in the register

• browse, safe and print accounting statements and other documents publicized in the register

The absolute indicators taken from accounting statements themselves provide a basic view on the financial health of an analysed enterprise and they indicate, in the time sequence, the development trend.

At present, some entities find the available information base using the ratio indicators and other methods of financial analysis and mathematical and statistical methods cost ineffective, so it does not substitute the former publication *„Mean Values of Financial Indicators"* whose sponsor was the Slovak National Clearing Centre. This serial was published in the Slovak Republic annually since 1994, and although it was created on the banks initiative as the information support for the reduction of business risk, it involved information valuable not only for banks but also for the business sector and a wide scope of users. Apart from defining *company position in the sector*, it enabled to know the structure of the sector, its elements, bonds, and behaviour characteristics arising from analyses results, to know the opportunities and risks of business activities in the particular sector and to identify subsequently the key factors of the competitive success. The information base for the comparison was created by the anonymous database of the accounting statements data of the business entities registered in the commercial register. Number of entities included into data processing was annually represented by 70-80% of all registered entities, giving presumption that the weight of quantified analysis results was significant. The publication contained values of chosen 22 ratio indicators characterizing the condition and development of financial situation of individual sectors, resp. of chosen Slovak organizational forms, and territorial and regional division of the Slovak Republic in terms of solvency, liquidity, effectiveness, liability, and activity. View of the situation was supplemented by the indicators characterizing structure of revenues, costs, assets and sources of its financing. Financial analysis results of individual sectors for the last four years then created time sequence enabling to answer the question of their future development, particularly in terms of profitability as a result of competitive rivalry.

Calculated values of the financial analysis ratios determined by a mean position – median formed the comparative base enabling to stipulate the position of an evaluated entity between either 50% better or 50% worse entities having economic results within the particular sector, therefore enabling to determine its „risk rating". Method of calculating these values conformed to the standard indicators in the developed countries of Western Europe. It should be reminded, that the choice of financial analysis indicators, their construction, as well as the algorithms for their calculations were conditioned by the purpose of their use in order to evaluate client creditworthiness according to the criteria of banks. The enhanced version of the publication in an electronic form, on CDs, was also the source of this information, containing values of financial analysis ratios stipulated by various mathematical and statistical methods, supplemented with the graphs of their development in the form of boxplots.

7. Conclusion

Financial analysis results cannot be taken as useful and acceptable without their objectification on the basis of chosen reference rate – value. Current database for the comparison is currently provided by the company CRIF – Slovak Credit Bureau, as mentioned before. It manages the banking and non-banking credit registers in the Slovak Republic and provides a complete range of solutions for business and consumer information as well as credit and marketing management. Business solutions include a wide spectrum of services: credit reporting, business information, rating and scoring, software for process management, debt collection, etc. Business information services, especially Universal Register Plus SR, provide high-quality information, analysis and reports to successfully manage business risks. Banks, leasing, service and other companies can speed up decision processes and use CRIF – Slovak Credit Bureau business information services as an assessment tool to prevent potential risks. This information is very useful for financial analysis results and their objectification, too. Our findings in this area are as follows: current information and data sources for the comparison of the financial analysis results exist, but useful, well ordered – systematic database such as that of Slovak National Clearing Centre is not available for all potential users. Current database provided by Credit Bureau is for many interested persons too expensive.

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References

Bartošová, V. & Kicová, E. (2015). Finančná analýza a plánovanie. Žilina: Žilinská univerzita v Žiline vo vydavateľstve EDIS.

Bartošová, V. (2002). Objektivizácia výsledkov finančnej analýzy a jej informačné zabezpečenie. *Práce a štúdie Fakulty prevádzky a ekonomiky dopravy a spojov Žilinskej univerzity v Žiline,* 18, 3-8.

Kovanicová, D. & Kovanic, P. (1997). Poklady skryté v účetnictví. Díl II. Praha: Polygon.

Janošková, K. (2011). MOP analýza – inovatívny prístup k hodnoteniu prostredia podniku. *Ekonomicko-manažérske spektrum,* 2(5), 42-46.

Janošková, K. (2009). Postup fundamentálnej analýzy podniku. *Ekonomicko-manažérske spektrum,* 2(3), 25-30.

Poniščiaková, O. & Litvaj, I. (2010). Riadenie podniku a ekonomický informačný system. *Ekonomicko-manažérske spektrum,* 2(4), 80-85.
http://www.crif.sk/site/en/Pages/default.aspx
http://www.registeruz.sk/
http://finance.gov.sk/