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Corporate Performance

A Ratio-Based Approach to Country and Industry Analyses

Springer

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Introduction

How to search for the factors determining corporate performance is a question asked by many researchers in the area of finance. The factors could be both external, e.g. macroeconomic, industrial, political or social conditions affecting an enterprise, as well as internal, i.e. controlled by an entity, such as the size or managerial competence of an enterprise. This study focuses on external aspects of corporate performance, specifically on the country and the industry in which a company operates. Both factors are believed to have a significant impact on corporate activity and therefore economic results, which are reflected in financial ratios.

The following research is involved in an important stream of contemporary economy and finance, which can be defined as the analysis of reasons and consequences of the diversity of objects. The objects can be treated here either as countries (country effect) or industries (industry effect). Most of the hitherto analyses focus on corporate performance reflected mainly in stock returns. There are few of those considering fundamental ratios, however, which can be an equally important criterion for investment decisions, especially long-term ones. Therefore, updating and broadening the study of the country and industry effects within the European Union area seems a useful addition of knowledge to this area.

Analysis of the country and industry effects is of particular importance for the theory and practice of modern finance. Projects undertaken by financial investors, especially institutional ones, are not limited to the local or national markets, but are often implemented at the sub-regional level and therefore have a global dimension. Identifying the factors responsible for the risk diversity for the selected groups of objects, measuring these differences as well as evaluating their significance are therefore important research tasks. The results of this type of research are used in the process of making investment decisions aiming at risk diversification both internationally and across industries.

On the one hand, the issue of corporate performance diversity depending on the industry, namely the industry effect in financial ratios, is of crucial importance for cross-industry diversification of investments. On the other hand, the country effect, understood as a variation of corporate performance due to the country of operation, is important mainly in the context of the integration processes taking place in Europe. Studies of ratios diversity across countries are therefore justified in terms of international investments diversification.

The main purpose of this book is the comparative evaluation of international and industrial factors affecting the financial condition of enterprises in the selected European Union countries. In order to implement the above formulated concept, some theoretical and empirical studies were performed concerning the occurrence of the country and industry effects in the financial health of companies located in the analysed area. In the theoretical part, the results of previous research on this issue were reviewed. The aim of the empirical study was to determine which factors – national or industrial ones – have a greater impact on the performance of economic entities. The cross-country and cross-industry comparative analysis of corporate economic and financial results was performed in order to solve the main research problem of this book, which can otherwise be described as an assessment of the relative importance of the country effect and the industry effect in the financial condition of companies.

To characterise the financial condition of entities, a set of appropriately selected ratios was used, which enabled a comprehensive assessment of the examined objects. The adopted financial ratios reflect two basic criteria used for assessing corporate performance, i.e. the broadly understood effectiveness and solvency. These criteria represent some of the most important factors taken into account when making investment decisions. For the purpose of this study, the analysed ratios were grouped into three categories: profitability and turnover ratios, liquidity ratios and long-term solvency ratios.

The analysis of empirical data derived from the aggregated and harmonised financial statements enabled the verification of the research hypotheses concerning the existence of the country and industry effects, which involve the differentiation of corporate performance depending on the country and industry, respectively. The research also allowed indicating which of these two effects prevails in affecting the financial health of companies.

Thus, the hypothesis to be verified in this study can be formulated as follows: the national factors have greater impact on the corporate performance of enterprises than the industrial factors. Rejecting the tested hypothesis would be a statistical proof of the truthfulness of the alternative hypothesis, i.e., that industrial factors affect financial conditions of enterprises more than national ones.

If there is no reason for rejecting the hypothesis, it could be concluded that companies from different industries of the same country have more mutual similarity than companies in the same industry but from different countries. Rejecting the hypothesis would mean that companies in a given industry but from different countries should be less diverse than companies from different industries of the same country. It might also occur that cross-country and cross-industry diversity of corporate performance is fairly uniform and that none of the examined factors can be identified as the dominant one. Simplifying, the main research problem can be reduced to the question whether, e.g., the performance of the construction industry enterprises in France is more similar to the performance of French transport companies or rather corresponds to the situation of enterprises in the construction industry, e.g., in Italy.

In addition, several more specific research tasks were formulated. One of them was to find out whether corporate financial parameters differ significantly across industries as well as internationally. Another problem to be solved was the question of the scope of the observed differences, i.e. whether they relate to all industries, countries and financial ratios or just to some of them. Financial analysis of companies in individual industries and countries was applied to establish whether and to what extent the corporate performance differs in these two sections and in which countries and industries the disparities are most apparent. In addition, the study was meant to specify which ratios or groups of ratios best reflect these differences. Consequently, one of the ancillary purposes was to identify financial ratios with the best discriminating properties, i.e. the most different in the analysed sections.

The study includes a total of thirteen industries (in line with the European Classification of Activities) in ten European Union countries. The territorial scope of the research was deliberately restricted mainly to the countries which have long been integrated in the European structures. In addition, most of the countries are also members of the euro zone – the highly integrated area. This helps to avoid artificial exaggeration of the country effect which might happen if the study included countries with significantly different levels of development. The only exception to this relatively homogeneous population is Poland. The inclusion of Poland, for which the accession to the common currency area is probably a close prospect, allowed to compare it with other peer EU countries and thus to show the likely gap between them.

The subject of the study is the economic and financial standing of enterprises, characterised by a set of financial ratios for each industry, each country and each year in the period 1999–2005. The calculation of ratios is based on the harmonised and aggregated annual accounts from the BACH database.

The methodology of this study involves mainly multivariate statistical analysis, the choice of which is justified by the nature of the data – its range and numerousness. Some methods of data classification were also applied, such as cluster analysis, factor analysis, or multidimensional scaling.

Due to the relatively wide range of data characterising many objects, the natural procedure of the research was to organize the elements of the analysed population, i.e. to classify them according to certain criteria. Therefore, grouping the objects into categories characterised by a greater within-group similarity was one of the purposes of the analysis. The classification was applied to the objects treated either as industries or countries. The binomial objects – industries in countries – were also systematised. Some kind of categorisation was also employed for the diagnostic variables, i.e. the financial ratios used in the study.

The classification of industries and countries based on the economic and financial condition of enterprises was meant to distinguish such categories of objects (countries, industries, or industries in countries), which differ in terms of performance. The identification of such groups of objects – described by many features – was possible with the use of taxonomic methods.

Apart from this introduction, the study consists of five chapters and the ending which contains the summary and conclusions of the research.

The first chapter is a prolegomenon to the issues of cross-country and cross-industry diversification of business activity results. It discusses the various interpretations of the concept of corporate performance and also formulates its definition which is the most appropriate from the point of view of the empirical research performed in the later part of the study. It also outlines the theoretical foundations of the industrial economics which is the starting point for discussing the cross-industry diversity of enterprises. A classification of the factors influencing corporate performance was also attempted here. The author also discusses the nature, genesis and practical application of the financial ratios as measures of the corporate financial condition. Finally, various classification systems of ratios were presented and their limitations were signalled.

The second chapter is a methodical one. First of all, it reviews the previous research on the diversity of economic and financial performance of companies. The author also synthetically presents conclusions from earlier studies on the prevalence of the industry and country effects. This review was treated as the basis for the formulation of the essential methodical assumptions used in the following empirical research. Therefore, the chapter specifies the scope and methodology of the study of corporate performance diversity depending on the country and the industry.

The following part of the discourse contains a discussion of the findings of empirical research. The third chapter includes a preliminary analysis of corporate performance diversity. It mainly considers the basic statistics of financial ratios and, later, the diversification of corporate performance in various sections with the use of the analysis of variance.

The next – fourth – chapter aims to present the results of the classification of objects. It discusses the results of agglomerative cluster analysis of countries and industries as well as industries in countries. An important stage in the study was to assess the similarity of the clustering results between countries and industries. This part of the study also focused on the characteristics of the identified clusters.

The purpose of the last stage of analysis, presented in Chap. 5, was to identify the factors influencing corporate performance in different countries and industries. The factors isolated with the use of factor analysis were then compared across countries and industries. In order to simplify the data structure, a two-dimensional map of objects was constructed with the use of the multidimensional scaling method. Reduction of the number of dimensions was meant to increase the clarity of the detected patterns.

Deciding which of the two categories of factors considered in this research influences corporate performance more is an important theme of many studies on the coexistence of the country and industry effects. The evaluation of the relative importance of national and industrial factors may be significant in the context of investment diversification. If these are mainly industry factors which are responsible for the performance of enterprises, investment portfolios management strategies should be based mainly on cross-industry sections. However, the traditional strategy of portfolio diversification by countries would be more justified in the case of the country effect domination.

Multiple attempts to solve the problem of the mutual relation between the country effect and the industry effect have led to formulating some suggestions about the methods of portfolio diversification as well as ways about conducting research in the area of finance. However, the apparent lack of consensus among researchers on the relative importance of the country and industry effects gives rise to further verification of this problem. Some contradictions between the results obtained by different researchers, depending on the method used, the period of study or the research sample, prove that it is purposeful and advisable to use alternative methods of resolving the issue and continue exploring the research problem, which particularly concerns the area of integrated Europe.

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