

# **The impact of the founding body on financial performance of Polish hospitals**

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## **Abstract**

This article is devoted to assessing the impact of the hospital founding body on financial efficiency of the subordinated hospitals. The main aim of the study is to assess if there exist differences in financial performance of hospitals of different founding bodies in Poland. It will allow to evaluate the quality of financial management in hospitals of different founding bodies. In the analysis there are used typical financial ratios used for assessing financial performance. The study is subjected to selected types of hospital units from the region of Lodz. The conclusions from the article are that the founding body significantly affects financial performance of subordinated hospitals.

**Keywords:** hospital management, financial performance, hospital financing

**Main Conference Topic:** Social sciences and business

## **Introduction**

The problem of financing Polish hospitals remains one of the most important areas in the field of healthcare financing in Poland. This is due to the fact that the hospital treatment takes the largest part of the healthcare funding devoted to the whole healthcare system in Poland (National Health Fund, 2005-2013).

Bearing this in mind it is possible to establish that efficient management of hospital units might be beneficial for financing whole healthcare system in Poland. It is undoubtedly very important, especially now in the time of public finances crisis. It is worth to point out that in Poland, like in many other European countries, most of the funds spent on financing healthcare – approximately 70% – comes from public funds (Krajewski-Siuda, Romaniuk, 2011: 16).

The main aim of this study is to assess if there exist differences in financial performance in Polish hospitals of different founding bodies. It will allow to evaluate the quality of financial management in hospitals of different founding bodies. The analysis will be carried out on the example of hospitals from the region of Lodz. The article is based on the hypothesis that there are significant differences in financial performance between hospitals of different founding bodies.

## **Types of hospitals in Poland and the problem of financial performance assessment of hospital units**

The problem of hospitals' financial performance assessment in Poland is widely discussed in the literature. However, still it causes a lot of confusions and disagreements among authors of different works.

Some authors stress out that hospitals should not be regarded as typical market participants. It is due to the fact that hospitals in Poland are not characterized by market features. Among these features there can be distinguished: the possibility of imposing by the National Health Fund certain conditions of contracts with hospitals. Here this is necessary to point out that the National Health Fund acts as a payer for health services financed from public funding in the Polish healthcare system. What is more, it is worth to note the

dependence of Polish hospitals on their founding bodies which is also not a characteristic feature for the market economy (Sobczak, 2009: 268-276). This is particularly evident in the case of public hospitals when they are not able to cover their financial losses. Then hospitals' founding bodies must take responsibility for them (Witczak, 2009: 43). Certainly these are not the characteristics of a typical market enterprises.

By contrast other authors suggest that to every Polish hospital, regardless of the form of ownership, may be attributed such features as: making decisions aimed at rational choices, economic freedom, individuality, taking responsibility for the consequences of economic decisions (Witczak, 2009: 11). With this in mind it can be concluded that the financial activities of hospitals can be evaluated in a similar manner as in the case of other companies.

Hospitals can be classified in various ways. One of the ways to classify them is in accordance to the founding body. According to the definition provided by the Central Statistical Office of Poland the founding body is defined as a public authority, which establishes or controls an organizational unit of public administration (The Central Statistical Office, 2014). However, in practice as far as Polish health sector is concerned, the founding body concept is attributed to all organizations – not just public authorities – establishing and controlling healthcare facilities. It could also be for example a legal person, foundation, association, etc. (Wrześniewska-Wal, 2014). So, in Poland according to their founding bodies there might be distinguished: local government (municipal, county, provincial) hospitals, departmental hospitals, as well as hospitals set up by churches or religious organizations, the companies of civil and commercial law, non-governmental organization, or medical schools (Rój J., Sobiech J, 2006: 20-21). The synthetic classification of hospitals in Poland, taking into consideration foregoing attributes, is presented below:

- 1) Local government hospitals,
  - a. Marshal (or provincial) hospitals,
  - b. County hospitals,
  - c. Municipal hospitals,
- 2) Departmental hospitals,
- 3) University hospitals,
- 4) Non-public hospitals.
- 5) Others.

Other important ways to classify hospitals may be according to such factors as for example: a type of ownership, a scope and nature of the health services offered, a size of the hospital, a territorial scope of activity, a period of treatment, a type and a number of medical specialties represented in the hospital (Rój J., Sobiech J, 2006: 20-21).

## **Methods**

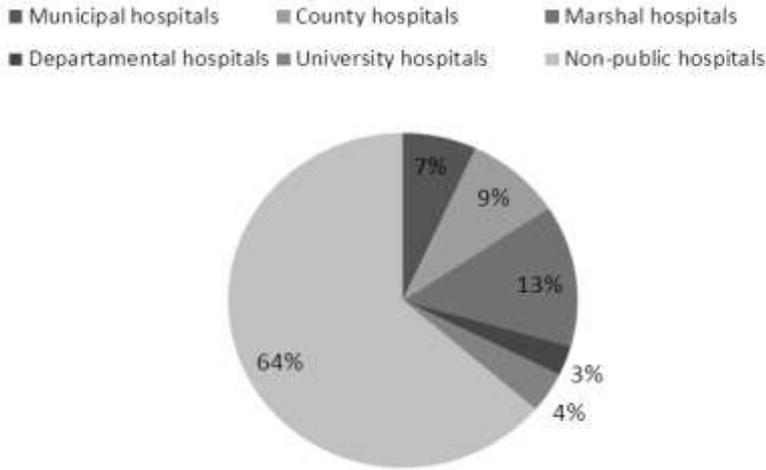
The following study is aimed at assessing the financial performance of hospitals in Poland according to their founding body. The study is conducted on the example of hospitals from the region of Lodz. This simplification has been applied because of difficulties with gathering and processing huge amount of data from hospitals situated across the country. It is worth to emphasize that the region of Lodz is an interesting subject of research and analysis. It is due to the fact that there occur the highest number of healthcare centers in Poland but this region is featured by the highest mortality rates in the whole country. On the other hand, things in the region have been changing for better as Lodz got the World Health Organization certificate supporting engagement into activities aimed at improving health and quality of life of its inhabitants.

To assess the financial performance of Polish hospitals served a set of indicators constructed on the basis of analysis of: subject literature, earlier studies, reports and recommendations in the matter (Sobczak et al. 2007-2008: 5-10; Ministry of Health 2007;

Chwierut et al., 2000: 91-101). This allows for a direct reference of the current situation to historical analysis. In the study the following indicators are included: net profit ratio, operating profitability ratio, asset turnover ratio, fixed-asset turnover ratio, current ratio, debt ratio and solvency ratio. The study is based on mean values of analyzed ratios calculated for particular types of hospitals according to their founding bodies. In the analysis there were eliminated extreme observations, so as not to disturb overall findings.

The financial data used in the study comes from the Amadeus database providing economic information on a number of private and public companies operating in Europe. Unfortunately, in the database there were not available complete data for all hospitals from the region of Lodz. That is why in the study there is included data from 49 hospitals. Of these hospitals – in accordance to their founding body – 23 units are classified as local government hospitals (including municipal, county and marshal units), 4 units are classified as university units, 2 units are classified as departmental hospitals and 10 units are classified as non-public hospitals. The overall structure of the hospitals in the region of Lodz according to their founding body is presented below:

**Chart 1 – The structure of Polish hospitals in the chosen region according to the founding body**



Source: Own elaboration on the basis of Zdrowie Lodzkie (2014).

The analysis covers period 2006-2011. It allows for static as well as dynamic assessment of financial ratios. For the majority of hospitals in the sample there were available full time series of financial data necessary for the analysis. In the case of several hospital units in each group, there were occasional gaps in the data on a particular financial category from one year to maximum two years. However, these deficiencies were incidental and therefore, according to the author should not affect the overall conclusions of the study.

**Findings**

The results of the study are presented below. In the table underneath there is a detailed analysis of the financial ratios for each hospital category. Generally, it is visible that hospitals in Poland are not companies that are aimed at profits. It is despite the fact that there have been taken many steps to introduce some aspects of market economy in Polish healthcare system. Financial situation of many types of Polish hospitals seems rather unstable.

**Table 1 – Financial performance ratios of Polish hospitals**

Type of hospital/Year	2007	2008	2009	2010	2011
<b>Net profit ratio</b>					
Local government hospitals	8,18%	5,10%	4,63%	-0,33%	-2,80%
Departmental hospitals	-4,27%	-5,43%	2,25%	-3,70%	-9,85%
University hospitals	-0,66%	-2,55%	0,45%	-0,22%	-2,76%
Non-public hospitals	1,31%	7,11%	5,62%	6,25%	5,98%
<b>Operating profitability ratio</b>					
Local government hospitals	2,47%	3,79%	2,47%	-1,21%	-2,50%
Departmental hospitals	-1,07%	-2,99%	4,11%	4,20%	0,86%
University hospitals	-1,17%	-3,07%	0,62%	-0,15%	-2,43%
Non-public hospitals	2,87%	10,67%	7,33%	9,06%	5,87%
<b>Asset turnover ratio</b>					
Local government hospitals	7,35%	8,47%	5,03%	-2,51%	-4,58%
Departmental hospitals	-2,33%	-8,24%	4,08%	2,53%	-3,38%
University hospitals	-3,35%	-8,14%	-0,10%	-1,30%	-5,13%
Non-public hospitals	4,57%	20,55%	19,01%	19,09%	12,15%
<b>Fixed-asset turnover ratio</b>					
Local government hospitals	0,56	0,90	0,86	0,67	0,80
Departmental hospitals	-0,67	0,08	-0,07	-0,07	0,31
University hospitals	1,05	0,96	1,04	1,03	0,67
Non-public hospitals	0,93	1,19	1,87	2,10	1,71
<b>Current ratio</b>					
Local government hospitals	0,76	1,05	1,18	1,29	1,03
Departmental hospitals	0,20	0,43	0,42	1,59	1,55
University hospitals	1,18	1,00	1,25	1,33	0,78
Non-public hospitals	1,07	1,60	1,75	2,22	2,05
<b>Debt ratio</b>					
Local government hospitals	1,21	1,01	0,88	0,92	0,68
Departmental hospitals	1,85	1,60	1,43	1,54	2,02
University hospitals	0,38	0,47	0,47	0,52	0,68
Non-public hospitals	0,82	0,75	0,51	0,41	0,41
<b>Solvency ratio</b>					
Local government hospitals	0,07	0,23	0,33	0,24	0,31
Departmental hospitals	-2,48	-6,01	5,14	-0,13	-0,16
University hospitals	0,63	1,00	1,08	1,48	3,70
Non-public hospitals	0,54	0,40	1,12	1,17	0,97

Source: Own elaboration on the basis of Amadeus database.

Net profit ratio is intended to illustrate the efficiency of the overall financial operations of the hospital. It shows the relationship of net profit to total income. It is assumed that the higher the values are, the better the financial situation of the unit is. Analyzing presented values of the hospitals in Poland it can be observed that in case of most types of hospitals situation is rather poor. Only non-public hospitals are featured by relatively stable situation. Situation of local government hospitals in the analyzed period is constantly worsening. However, it seems relatively good in comparison to university hospitals and departmental hospitals, of which situation as far as net profit ratio is concerned seems to be the worst.

In the case of operating profitability ratio, similarly to the previous indicator, it is desirable for this ratio to remain at the highest levels. In the analyzed period, again the best situation is as far as non-public hospitals are concerned. In this matter it can be observed that the worst situation is in the case of university hospitals as for most of the time they generate negative values of the indicator.

Asset turnover ratio allows to assess the management of the assets of the unit. In other words, it determines the ability of assets involved in company's activity to generate the operating profit. Here again it is desirable to obtain the highest values of this indicator. In this case the interpretation is very similar like in the case of previous ratio. The best situation is as far as non-public hospitals are concerned and the worst is in the case of university hospitals. Negative values in different years in the case of many analyzed units might be portrayed as a threat to hospital activity.

Another indicator – fixed-asset turnover ratio – illustrates the extent to which assets are financed by equity and long-term commitments. Optimum value of this indicator is 1 as far as hospital activity is concerned. Then financial stability is ensured, as assets are fully financed by hospital equity and long-term commitments. However, it is also advantageous when this ratio has a value greater than 1 (Sobczak, et al., 2007-2008: 5-10). In this case situation is different than in the case of previous indicators. The worst situation is in the case of departmental hospitals. Also in the case of local government hospitals obtained values could be higher. But in the case of other types of units the situation is relatively good. University hospitals in whole analyzed period are really close to optimum value. There is also very good situation as far as non-public hospitals are concerned.

The current ratio determines the ability to repay short-term liabilities with current assets. Low values indicate low ability or no ability to pay its current liabilities. It is assumed that in the case of hospitals the optimal values of the ratio oscillate in the range of 1.2-1.7, while higher values indicate inefficient management of working capital (Sobczak, et al., 2007-2008: 5-10). Actually in the case of this indicator none of the types of hospitals do not maintain model indicator values throughout the entire period. It can be observed that for most of the time local government and university hospitals are close to optimal values. Very good situation is in the case of departmental hospitals in the years 2010 and 2011 whereas in these years non-public hospitals are featured by higher values than optimal ones, which should be evaluated negatively.

Debt ratio shows the degree of foreign capital to assets. Low values of this ratio may indicate little use of external funding, while too high values may indicate a low financial credibility of hospitals. It is assumed that in the case of hospital activity accepted values are up to 0.8 (Sobczak, et al., 2007-2008: 5-10). The study shows that all types of hospitals, except departmental hospitals, are featured by proper values.

Solvency ratio indicates the extent to which equity covers liabilities. It is assumed that the optimal values of the indicator to evaluate hospital activity should take values in the range of 0.01-0.5. Values below 0 and above 4 are portrayed as a negative situation for hospitals (Sobczak, et al., 2007-2008: 5-10). In this matter the best situation is as far as local government hospitals are concerned. In the entire period they obtained optimal values. By contrast the worst situation is in the case of departmental hospitals which values are always below 0 or higher than 4. University and non-public hospitals usually obtain values that are higher than optimal ones.

## **Discussion**

Hospitals consist a very important part in healthcare systems all around the world. The problem what determines their financial performance still becomes an open question. This

study is aimed at finding out if a hospital founding body might be portrayed as a factor that determines financial performance of hospital.

Foregoing results of the study presented as findings suggests that there exist differences in financial performance amongst Polish hospitals of different founding bodies. However, it is worth to bear in mind some limitations of the carried out study. The analysis are based on the average values of the indicators. Such an approach may not take into account some significant differences that may occur not only between the compared groups of hospitals but also within them – for example: size of hospital, the scope of its activities, etc. Moreover, non-public hospitals represent probably the most diverse group in the study. It includes both private healthcare providers running at least one ward as well as entities that used to be public hospitals but as a result of transformations associated with the commercialization processes in Poland became non-public hospitals, in which local government has a majority stake.

Another problem is that every healthcare system in the world has its own rules for the process of financing healthcare services. Therefore it would be useful also to perform similar analysis in other countries to confirm the presence of the influence of a founding body on hospital's financial performance.

The conducted study requires surely further analysis, which would allow to determine the statistical significance of the results. In addition, consideration could be also given to the causes of differences in financial performance between hospitals of different founding bodies. Perhaps they stem from the scope of medical services or benefits in terms of contracting with the payer, which could have a direct impact on the different composition of revenues and expenses of these hospitals. The considerations contained in the article opens the field for further discussion on the possible causes of differences in financial performance between hospitals of different founding bodies.

### **Conclusions**

The main aim of the article is to assess if there exist differences in financial performance in Polish hospitals of different founding bodies. As it is presented in Table 1 such differences can be observed.

It is visible that hospitals in Poland are featured by pretty low profitability. In most types of hospitals situation in this matter is rather unstable. However, it is necessary to point out that the main role of each hospital should be rather saving lives than focusing on profitability. On the other hand, if hospitals must operate in market economy they should be balanced entities.

Considerations contained in the article allow for positive verification of the hypothesis that the founding body significantly affects financial performance of subordinated hospitals. Significant differences in the assessment of financial performance, described in details in findings, confirms the differences in the management of hospitals according to their founding bodies. This means that the founding body can be actually considered as a factor affecting the financial performance of the hospital.

### **Brief biography of the author**

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An assistant and PhD candidate in the Centre for Corporate Finance at University of Lodz (Poland). He graduated in a 5-year course in Banking and Finance at Faculty of Economics and Sociology at University of Lodz (MA, 2010) and in a 3-year course in Management at Faculty of Management at University of Lodz (BA, 2012). His interests are

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