THE ANALYSIS OF THE EFFECTS OF FINANCIAL DISTRESS ON THE TOP MANAGEMENT IN THE REPUBLIC OF SERBIA

Dragana Raden*  
Singidunum University, Department for Postgraduate Studies, Ph.D Candidate  
32 Danijelova Street, Belgrade, Serbia

Abstract:  
This study aims to examine the effects of financial distress on top management structures, as well as to identify the factors affecting managerial change in the companies that adopted the reorganization plan during bankruptcy proceedings in the Republic of Serbia for the period 2009-2014. Out of 39 companies that adopted the reorganization plan, the top management change was observed in 21 companies after the bankruptcy filing year, or within two years following the reorganization plan adoption. Research results indicate a strong negative correlation between the company’s liquidity and the probability of change in top management structures, with the impact of other observed factors not being statistically significant.

Key words:  
financial distress, top management, reorganization.

INTRODUCTION

Over the years, the empirical evidence has demonstrated that financial distress is accompanied by significant changes in top management structures. Therefore, multiple research perspectives have been developed with the aim to investigate such influence. Based on a sample of 69 companies that filed for Chapter 11 proceedings during 1979-1984, Gilson (1989) documented that 55% of them replaced their CEOs within the two years preceding the bankruptcy filing year, and 71% in the period of two years following the bankruptcy filing year. Based on a sample of 43 large companies which filed for Chapter 11 during 1979-1988, LoPucki and Whitford (1993) documented that 91% of them replaced their CEOs in the period starting eighteen months before the bankruptcy filing year and ending six months after the adoption of the reorganization plan. On a sample of 197 companies that filed for Chapter 11 proceedings during 1979-1988, Hotchkiss (1995) found that 70% of the observed companies replaced their CEOs upon the filing year. Having analyzed the sample of 75 companies that filed for Chapter 11 proceedings during 1982-1990, Betker (1995) documented that 51% of CEOs were replaced before the filing year, 75% just before the reorganization plan was adopted, and 91% following the adoption of the reorganization plan. On a sample of 267 German companies that faced financial distress during 1996-2004, Jostarndt and Sautner (2006) recorded that only 14% of chief executives and 22% of chief directors remained within the company four years after the company entered financial distress. Involuntary management turnovers in their sample exceeded 80%. Relying on a sample of 153 large privately and publicly held companies that filed for Chapter 11 during 2001, Ayotte and Morrison (2009) documented that 41% of CEOs were replaced within one year following the bankruptcy filing year and 70% within two years from the bankruptcy filing year. On a sample of 184 reorganized companies that filed for Chapter 11 between 1980 and 2006, Suredranath and Madura (2010) documented that CEOs were replaced in 69% of all bankruptcy cases. On a sample of 626 companies that were reorganized in Chapter 11, Bharath et al. (2013) documented increase in management turnover rates between 1980 and the

* E-mail: dragana_radjen@yahoo.com
early 2000s by 65%, and this increase was attributed to the creditors who took control over the company in financial distress. On a sample of 342 public companies that filed for Chapter 11 during 1996-2007, Eckbo et al. (2012) found that incumbent CEOs in the companies in financial distress are more likely to be forced to leave. More than half of the incumbent CEOs regain full-time employment while the other half experience an income loss with median percent value of $4 million (discounted until retirement age).

There is an abundance of empirical evidence regarding the factors affecting management turnover. Crain et al. (1977, pp. 1374) documented that turnover was very responsive to the profit performance of the company, and that non-profit maximization behaviour in the private sector is not typically tolerated in the market for executive services. Wagner et al. (1984) reported negative correlation between the company’s performance and top management turnover. This is supported by Healy (2011) who also determined significant negative relation between the company’s performance and the probability of a CEOs turnover. According to Fizel and Louie (1990), CEOs turnover is influenced more by internal governance structure than by profit or sale performance. Jostarndt and Sautner (2006) found that managerial replacement is more affected by shifts in ownership and control, rather than absolute levels of ownership concentration or the size of the equity holdings by private investors. In the companies in financial distress, management turnover was led by banks and financial investors who took control over the company in financial distress. Kesner and Dalton (2007) and Ting (2011) found that poor company’s performance prior to CEOs succession leads to greater turnover afterwards. The same result was confirmed by Kaplan and Minton (2012).

So far it has been possible to explain empirical evidence in two ways. Firstly, having in mind that poor financial performance is predominately the result of previous management decisions, turnover of the top management could be forced by owners, even if the poor performance is not the result of decisions made by incumbent management, Fisman et al. (2013). Secondly, the turnover could be forced by creditors and investors who take control over the company in financial distress (Jostarndt & Sautner, 2006; Eckbo et al., 2012; Bharath et al., 2013).

The main aim of this study is to investigate the impact of financial distress on the top management and identify the factors that influence the change in managerial structures in the companies that have been reorganized in bankruptcy. Most research in this area focuses on the developed countries while this is the first time that someone examines the impact of financial distress on top management structures within the companies that have been reorganized during bankruptcy in the Republic of Serbia. This influence was investigated on a sample of 39 large and medium-sized non-financial companies in financial distress that were reorganized in bankruptcy in the Republic of Serbia during 2009-2014. In order to exclude the impact of financial distress on the ownership structures, this study takes into account only the change in the top management that was not involved in the company’s ownership.

Having in mind that the quality of the top management could affect the survival of companies following the adoption of the reorganization plan, Bogan and Sandler (2012) claimed that this study could be used for future improvement of the existing reorganization knowledge and practice in the Republic of Serbia. Banks are particularly interested in such improvement, as they are the main creditors of the real estate sector in the Republic of Serbia.

The paper is organized as follows. After the literature overview, the paper presents the methodology used. The Methodology section provides some basic information on the companies included in the sample, depicts the data used, summarizes descriptive statistics, outlines the used research methodology, employed variables, and the model used to examine the impact of the variables on the change in top management structures. The following section depicts the results, whereas the final section contains the main findings.

**METHODOLOGY**

**Sample Selection Process**

Given the aim of this study, the sample includes medium-and large-sized non-financial companies that completed the bankruptcy proceedings through adoption of the reorganization plan during 2009-2014 in the Republic of Serbia. Bearing in mind that financial crises and failures of large and medium-sized Serbian companies started in 2009, and continued during 2010-2014, this research period could be considered representative.

For the purpose of this research, a company is considered to be in private ownership if the state has less than 50% of ownership share in bankruptcy filing year. Based on the statistics of the Bankruptcy
The reorganized companies filed for bankruptcy until February 15, 2015, while the change in top management structures was observed in 8 companies.

As regards the impact of financial distress on corporate governance, the change in top management structures was observed in 21 companies in the final sample after the bankruptcy filing year or two years following the adoption of the reorganization plan. Also, 8 companies changed their ownership structures, while in 18 companies the reorganization plan envisaged the establishment of the Board of Creditors or some other similar body with the aim to control the company’s business or monitor the realization of the reorganization plan, as shown in Table 2.

In order to determine the factors that increase the probability of change in the top management structures, research considers explanatory variables demonstrated by previous research to be relevant for top management turnover. In order to analyze the impact of the variables, a model was developed in the research.

**Model Inputs**

The model developed in this research utilizes one binary dependent variable, a variable with two possible outcomes, and six explanatory variables. All analyses were performed using the SPSS software.

**Dependent Variable**

This research uses the dependent variable TURN-OVER, with two outcomes: attributing 1 in the event that the top management structures changed after the bankruptcy filing year, or two years following the adoption of the reorganization plan; and 0 if no change was made in the top management structures during the observed period. Management turnover is defined as a change in the position of the company’s top executives (director, president of supervisory board and/or members of the supervisory board), which were not involved in the company’s ownership during the observed period. The change of the top executives was observed after the bankruptcy filing year and two years following the adoption of the reorganization plan. The timeframe for the top management turnover has to balance the two opposing considerations. On one hand, reorganization is viewed as a time-consuming process whose effects may be felt substantially prior to or following the adoption of the reorganization plan. On the other hand, the change of the top management is not an unusual event in

**Sample Statistics**

The majority of the companies in the final sample belong to the manufacturing industry (48.7%), with a significant number belonging to wholesale trade (28.2%) and construction industry (12.8%). A large fraction of the sample companies experienced a strong decline in profitability, 32 companies experienced net loss in the year preceding the bankruptcy filing year and 38 companies experienced net loss in the filing year. One of the largest problems in the Republic of Serbia is that the filings for the reorganization are late, due to long, expensive and unsuccessful private negotiations with creditors preceding the reorganization. For the same reason, most of the reorganizations are inefficient and the reorganized companies file for bankruptcy within 2 years after the adoption of the reorganization plan. In the final sample, 14 of the reorganized companies filed for bankruptcy within 2 years after the adoption of the reorganization plan.
some of the companies and may not be related to financial distress. For the same reason, the choice of a timeframe, which is a quite time-consuming process, could lead to potentially misleading conclusions.

**Explanatory Variables**

The following explanatory variables were used in the research: the company’s size, financial health, change in the ownership structures and the presence of the Board of Creditors. The last two variables reflect the change in corporate governance mainly initiated by the creditors.

- **Size.** Change in corporate control is less likely to occur in large companies (Mulherin & Boone, 2000; Köke, 2001; Heiss & Köke, 2004). This can be explained by the fact that monitoring and agency costs could be greater in larger companies. Thus, larger companies employ more skilled managers who are more likely to be retained in the company upon adopting the reorganization plan. The natural log of the company’s total assets \( \text{LN(} \text{AT} \text{)} \) is used to measure the company’s size.

- **Financial health.** Strong negative correlation between the probability of CEOs turnover and the company’s performance is consistent with the previous research results. In order to examine the impact of the company’s performance on the probability of change in the top management structures, current ratio (LIQUIDITY) and debt-to-asset ratio (LEVERAGE) were employed in the research as measures of the company’s indebtedness. The current ratio (LIQUIDITY) was calculated as a ratio between current assets and current liabilities. The debt-to-asset ratio (LEVERAGE) was calculated as a ratio between the total debt and the total value of assets, with the total debt including a book value of the company’s short and long-term debt. As regards this, total debt takes the total company’s liabilities and not only financial liabilities. EBITDA margin (EBITDAMARGIN) was used as a measure of the company’s profitability. The EBITDA margin was calculated as a ratio of EBITDA to sales revenue, whereby EBITDA is defined as the earnings before interest, taxes, depreciation and amortization.

- **Ownership change.** According to Graham and Smart, (2011, p. 20), managers act as agents of the owners who hired them and provided them with the decision-making authority. The empirical evidence also indicates that change in the existing ownership structures might influence the incumbent top management positions. Accordingly, an assumption was made in the research that in case the ownership structure changed after bankruptcy filing year or after the adoption of the reorganization plan, new owners would most likely place new managers (intuitive conclusion). In this respect, the model used the dependent variable OWNCHANGE with two outcomes: attributing 1 in the event that the ownership structure has undergone changes after the bankruptcy filing year, or following the adoption of the reorganization plan; and 0 if no change has been made to the ownership structure.

- **Board of Creditors.** The turnover in top management could be forced by creditors and investors who take control over the company in financial distress (Jostarndt & Sautner, 2006; Bharath et al., 2013). One of the strategies for taking control over a company in financial distress is through the Board of Creditors or some other similar body established to monitor the company’s business after the adoption of the reorganization plan. In this respect, the model employed the dependent variable CREDITORS COMMITTEE, taking the value of 1 if the Board of Creditors or some similar body was established in the company following the adoption of the reorganization plan, and 0 if such a body was not established.

**Model**

The following regression analysis was used in this research to explain the impact of the explanatory variables on the dependent variable:

\[
\text{TURNOVER} = \beta_1 \times \text{LN(} \text{AT} \text{)} + \beta_2 \times \text{LIQUIDITY} + \beta_3 \times \text{LEVERAGE} + \beta_4 \times \text{EBITDAMARGIN} + \beta_5 \times \text{OWNCHANGE} + \beta_6 \times \text{CREDITORS COMMITTEE} + \varepsilon
\]

where \( \varepsilon \) represents random error.

Binary Logistic Regression (BLR), as one of the most widely used statistical techniques, was used in this research. In the first research phase, all explanatory variables were included in the model by applying the “Enter” method. In order to verify the results
obtained in this phase, “Forward” method was implemented in the second phase, where explanatory variable LIQUIDITY was first included in the model, considering that this variable had the most statistically significant influence on the dependent variable compared to other explanatory variables, based on the BLR estimates obtained in the first research phase.

RESULTS

BRL Estimates

Table 3 shows the BLR estimates for the model in which the “Enter” method was applied, while Table 4 presents BLR estimates for the model in which the “Forward” method was applied. The results of the BLR estimates in both cases show that the explanatory variable LIQUIDITY has a statistically significant influence on the dependent variable TURNOVER with a significance level of 0.05. The sign of coefficient indicates a strong negative correlation between the explanatory variable LIQUIDITY and dependent variable TURNOVER. Also, the influence of other empirical variables used in the model was not statistically significant – a result confirmed in the first and second phase of the research. The signs of the regression coefficients for variables LN (AT), and CREDITORS COMMITTEE are not consistent with the assumptions made in the Model inputs section, while the signs of the regression coefficients for explanatory variables LEVERAGE and EBITDAMARGIN are consistent with the assumptions. As regards the impact of the variable OWNCHANGE, the results of BLR estimates show that this variable does not have significant influence on the dependent variable TURNOVER, while the sign of regression is negative. This is not supported by the empirical evidence and might be caused by a relatively small number of observations within the categories (i.e. small sample). The second explanation for such result could be found in the existing conditions in the top managers market. As in any other transition economy, the top managers market in the Republic of Serbia is small and undeveloped. The transition from a planned socialist economy to market-oriented economy was followed by dramatic changes in the company’s core activities and business models. There was insufficient number of experienced and educated managers that could keep pace with such changes. This led to development of the young generation of managers who were closely controlled by the largest equity holders of the company. As regards this, decisions made by the top management were influenced by the owners. Given that general and specific human capital is of vital importance for the success of the company, CEOs with a high level of human capital are less likely to be replaced (Crook et al., 2011; Hutchinson & Russell, 2013). Consequently, if the new owners are not familiar with the business model of the reorganized company, they will probably be willing to keep the existing top managers with a high level of human capital and use other means of control to influence the choice of top management and provide them with incentives to improve the overall company’s performance, Evans et al. (2014).

Limitations

This study encounters four significant limitations. First, while change in top management is likely to be the result of involuntary turnover, some managers do leave voluntarily due to better job opportunities. At this point, it is not possible to identify the factors that caused change in top management structures. Secondly, this research does not take into account the dynamics of management change. Thirdly, it utilized publicly available data from the annual reports. Despite the fact that large and medium-sized companies in Serbia are subject to external financial audits, financial statements are burdened with hidden losses that could influence the accuracy of ratios used in the research. However, no appropriate substitute for this data could be found. Moreover, due to relatively small number of observations within the categories, the estimated significance of the variables used in the model does not allow a researcher to define a statistically defensible model. Despite the aforementioned limitations, the results offer valuable insights for future research.

CONCLUSIONS

The paper provides evidence on the extent to which financial distress affects the top management structures. It shows that in the majority of the companies in the Republic of Serbia, financial distress exerts statistically significant impact on the top management structures. In 21 companies that completed bankruptcy via adoption of the reorganization plan, top management structures changed after the filing year, or within two years following the adoption of the reorganization plan. This indicates that financial distress and reorganization may play a significant role in providing discipline to the corporate governance system as a whole. We believe that future research should be more focused on examining whether changes in top
management structures affect the long-term performance of the reorganized companies. Despite the fact that the existing statistics are not encouraging, they could be improved by larger involvement of creditors in management of the reorganized companies. In this way, they will be more willing to provide the company in financial distress with additional financial resources.

The question that imposes itself is whether socio-demographic characteristics and differences in legal regimes affect change in corporate control in the companies in financial distress. As regards this, international comparison could improve the existing knowledge and corporate governance practices in the companies in financial distress.

REFERENCES


TABLES

<table>
<thead>
<tr>
<th>Mean characteristics and Std. deviation</th>
<th>Initial population</th>
<th>Excluded companies</th>
<th>Final sample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Std. Deviation</td>
<td>Mean</td>
</tr>
<tr>
<td>Number of months spent in bankruptcy</td>
<td>11.542</td>
<td>10.530</td>
<td>5.676</td>
</tr>
<tr>
<td>No. of companies</td>
<td>42</td>
<td>3</td>
<td>39</td>
</tr>
</tbody>
</table>

Table 1. Composition of the initial population versus excluded companies and companies in final sample

<table>
<thead>
<tr>
<th>Variable/Frequency</th>
<th>No change in management</th>
<th>Change in management</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percent</td>
<td>Frequency</td>
</tr>
<tr>
<td>Ownership changed</td>
<td>1</td>
<td>12.50</td>
<td>7</td>
</tr>
<tr>
<td>Creditors’ committee established</td>
<td>9</td>
<td>50.00</td>
<td>9</td>
</tr>
</tbody>
</table>

Table 2. Influence of financial distress on the corporate governance

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>S.E.</th>
<th>Wald</th>
<th>Df</th>
<th>Sig.</th>
<th>Exp (B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIQUIDITY</td>
<td>-4.265</td>
<td>1.931</td>
<td>4.876</td>
<td>1</td>
<td>0.027</td>
<td>0.014</td>
</tr>
<tr>
<td>LEVERAGE</td>
<td>-1.874</td>
<td>2.886</td>
<td>0.422</td>
<td>1</td>
<td>0.516</td>
<td>0.153</td>
</tr>
<tr>
<td>EBITDAMARGIN</td>
<td>-0.625</td>
<td>0.628</td>
<td>0.991</td>
<td>1</td>
<td>0.320</td>
<td>0.535</td>
</tr>
<tr>
<td>LN(AT)</td>
<td>0.180</td>
<td>0.447</td>
<td>0.162</td>
<td>1</td>
<td>0.687</td>
<td>1.198</td>
</tr>
<tr>
<td>CREDITORS COMMITTEE</td>
<td>0.229</td>
<td>0.884</td>
<td>0.067</td>
<td>1</td>
<td>0.795</td>
<td>1.257</td>
</tr>
<tr>
<td>OWNCHANGE</td>
<td>-1.989</td>
<td>1.292</td>
<td>2.370</td>
<td>1</td>
<td>0.124</td>
<td>0.137</td>
</tr>
<tr>
<td>Constant</td>
<td>3.937</td>
<td>7.402</td>
<td>0.283</td>
<td>1</td>
<td>0.595</td>
<td>51.272</td>
</tr>
</tbody>
</table>

Note: Variable(s) entered on step 1: LIQUIDITY, LEVERAGE, EBITDAMARGIN, LN(AT), CREDITORS COMMITTEE, OWNCHANGE, α=0.05.

Table 3. BLR estimates (enter method)

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>S.E.</th>
<th>Wald</th>
<th>df</th>
<th>Sig.</th>
<th>Exp (B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIQUIDITY</td>
<td>-4.006</td>
<td>1.603</td>
<td>6.243</td>
<td>1</td>
<td>0.012</td>
<td>0.018</td>
</tr>
<tr>
<td>Constant</td>
<td>3.404</td>
<td>1.357</td>
<td>6.292</td>
<td>1</td>
<td>0.012</td>
<td>30.080</td>
</tr>
</tbody>
</table>

Note: Variable(s) entered on step 1: LIQUIDITY, α=0.05.

Table 4. BLR estimates (forward method)

ANALIZA UTICAJA FINANSIJSKIH TEŠKOĆA NA TOP MENADŽMENT U REPUBLICI SRBIJI

Režime:
Ova studija nastoji da ispita uticaj finansijskih teškoća na top menadžment i da identifikuje faktore koje utiču na promenu top menadžmenta u kompanijama koje su usvojile plan reorganizacije u stečaju u Republici Srbiji od 2009. do 2014. godine. Od 39 kompanija koje su usvojile plan reorganizacije, u 21 kompaniji je došlo do promene top menadžmenta nakon otvaranja stečajnog postupka ili dve godine po usvajanju plana reorganizacije. Rezultati istraživanja ukazuju na postojanje jake negativne korelacije između likvidnosti kompanije i verovatnoće promene top menadžmenta, dok uticaj ostalih posmatranih faktora na top menadžment nije statistički značajan.

Ključne reči:
finansijske teškoće, top menadžment, reorganizacija.

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