Abstract: The aim of this paper is to evaluate the capital structure and its determinants in consumer co-operatives in the Czech Republic. Consumer co-operatives are associated in the COOP Group, which is the largest retail network of food stores in the country. This analysis uses quantitative data from the financial statements for the years 2014 to 2018 from the database of information on Czech economic entities Albertina. Financial indicators, regression as well as correlation analysis are all used to analyse the data. This paper reveals that the leverage of the entire group is low, as more than two-thirds of the assets are financed by equity. Internal financing from retained profits is prevalent. From the results of multiple linear regression analysis is apparent that tangibility and total assets turnover both have a positive effect on leverage while liquidity and retained profits negative.

Keywords: capital structure, leverage, determinant, consumer co-operative

JEL Classification: G30, G32
1. THE THEORY OF CAPITAL STRUCTURE

As it was stated, the significance of capital structure is evidenced by a long-lasting theoretical discussion, the emergence of several theories regarding it and various ways of how to divide it. Frank and Goyal (2007) are distinguishing between Modigliani-Miller theorem (M&M Model), trade-off theory and pecking order theory.

The theoretical basis of capital structure is associated with known articles by Modigliani and Miller (1958; 1963). Modigliani and Miller (1958) assume that capital markets are perfect – that means that the market is effective, without taxes, transactional cost and the asymmetry of information. The basis of capital structure of theory was based on unrealistic assumptions, which were gradually corrected. In the following research, which already takes taxes into consideration, Modigliani and Miller (1963), explain that the value of a company is increased by the usage of leverage.

The term trade-off theory describes a family of related theories. The trade-off theory states that companies have an optimal capital structure from which maximum company value can be attained (Kraus and Litzenberger, 1973; Myers, 1984). This theory understands the choice of the capital structure as a compromise between the interest tax shield and financial distress cost. According to the static trade-off theory the companies balance the tax benefits of debt with the risks of bankruptcy. A composition of capital, where the interest tax shield exceeds the financial distress cost at the most, is considered optimal (Titman and Wessels, 1988).

The works of Myers and Majluf (1984) are frequently connected to the pecking order theory. This theory begins with the existence of asymmetrical information in a company. Managers have more information about company's performance, risks, and prospects than investors or creditors. According to this theory, an optimal structure of capital simply does not exist. In the question of financing the company is making decisions based on its capabilities and the current state of the capital structure is the result of gradual financing over time (Seo and Choi, 2016). Due to the rejection of the principle of optimal capital structure, it does not lead to a certain ratio of equity and debt (Jarallah, Saleh and Salim, 2019). The financing of long-term assets is in the following order: internal financing, external financing (debt), external financing (emission of new stocks) (Brealey and Myers, 2000).

Most of the capital structure theories have originated from the Anglo-Saxon environment, therefore the conclusions of these theories cannot be applied in the Czech environment without any reservations. Czech literature is based on the conclusions of foreign publications and focuses mainly on empirical verification of the validity of capital structure theories and its determinants in the Czech environment.

In the past decades, several studies of Czech authors were formed, which mostly judge the level on indebtedness. Krauseová (1995) analyses the capital structure of privatized Czech companies in the period from 1990 to 1993. According to the selected criteria (debt to total liabilities) is the average level of indebtedness approx. 29%. The study of Bauer (2004) is the first study of a Czech author, which in its character is comparable with the foreign studies. This author analyses the relation between leverage and the potential determinants of capital structure of Czech non-financial companies (listed on the Prague Stock Exchange) in the period between the years 2000 and 2001. The study by Aulová and Hlavsa (2013) beside analysing joint stock companies and limited liability companies analyses also co-operatives.

Hrdý (2016) analyses the progression of leverage of Czech companies in the years from 2008 to 2014 in selected industries in selected branches of the manufacturing industry. The outcome of his analysis is that the average level of indebtedness in these industries is between 30 and 50 percent, which can be considered as a acceptable level in a prosperous company. Poulová (2018) analyses the structure of capital of joint stock companies and European joint stock companies. The average indebtedness of the entire sample is around 40%.

A series of Czech and foreign studies are focusing on the analysis of the relationship (positive or negative) between leverage and the determinants of capital structure. The overview of selected empirical studies, based on which potential determinants of capital structure for the COOP Group are selected – see Table 1.
Tab. 1: Empirical Studies on the Determinants of Leverage

| Study                        | Results                                      |
|------------------------------|----------------------------------------------|
| Weill (2004) (Transition countries) | Profitability (-), Size (-), Tangibility (-), Growth (+), Size is not significant |
| Abdou et al. (2012) (UK Retail Industry) | Profitability (-), Quick ratio (-), Size (+), Operating profit margin (+), Deprecation ratio (+), … |
| Seo and Choi (2016) (Consumer co-operatives) | Profitability (-), Firm size (-), Growth (-), Tangibility (+), … |
| Bauer (2004) (Listened on the PSE) | Profitability (-), Tangibility (-), P/B (-), Non-debt tax shields (-), Size (+), Industry classification (+/-), Tax (+), … |
| Aulová and Hlavša (2013) (Agriculture sector) | Tangibility (-), Liquidity (-), Profitability (+), Retained profit (+), Size (+), Non-debt tax shield (+) |
| Static trade-off theory | Profitability (+), Tangibility (+), Firm size (+), Growth (-) |
| Pecking order theory | Profitability (-), Tangibility (-), Firm size (+), Growth (+) |

Source: Own processing based on literature research

Based on the above-mentioned theoretical aspects and outcomes of empirical studies, two specific key research questions are formed in order to reach the goal of this paper.

- How has the leverage of the COOP Group developed, and what is its value compared to the retail sector value?
- What is the dependence of leverage on the determinants of capital structure in the COOP Group?

2. METHODOLOGY

2.1 Data, Financial Indicators, Determinants of Capital Structure

The data with which we operate were obtained from the Czech economical subject information database Albertina and are recent, as they were acquired in the first half of 2020. More specifically, balance sheet and profit and loss statements from the period between 2014 and 2018 were necessary for this analysis. In certain cases of missing data, the remainder was filled in from the Commercial Register. As we stated, there are 47 co-operatives in the COOP Group, however due to incomplete or missing data, only 44 of these are included in the sample files (COOP Centrum, 2020). Detailed reserved funds analysis includes 30 co-operatives, where data completeness and integrity could be ensured.

In the quest for the answer to the first research question, we shall examine the COOP Group leverage. As stated by Swanson et al. (2003, p. 2): „Leverage is a frequently used business term and is sometimes used interchangeably with the term capital structure. There is no exact definition of what leverage is.“ In theory and practice, we can encounter several measures of leverage referred to as debt ratio: debt/equity, debt/assets, leverage ratio (Asquith and Weiss, 2016). In this paper, total liabilities/total assets indicator is calculated. With regard to the fact that the Ministry of Industry and Trade of the Czech Republic does not state this indicator in their analyses, equity ratio (equity/assets) is used for comparison with the sector of wholesale and retail trade. The vertical analysis of liabilities is used for the analysis of the development of capital structure. The overview of the applied financial indicators is shown in Table 4 and descriptive statistics is utilised for the summary and visualisation of the resulting values.

The potential determinant set is also created with regard to the business activities of the group (which is retail) and regarding to the availability of data. The determinants are the following: profitability (PROF), tangibility (TANG), liquidity (LIQ), asset turnover (TURN) and retained profits (RETP). These factors determining capital structure also belong to the important financial indicators that are used in the financial analysis to assess the financial health of a company.

2.2 Multiple Linear Regression Analysis

Within the second research question, the dependence of leverage on potential determinants of capital structure is analysed. For the analysis of relationship between one dependent variable (leverage) and a set of independent variables, multiple linear regression analysis is used. The number
of independent variables is reduced to five, and variables with empirically or theoretically proven relevancy are introduced. For the definition of all the variables see Table 2. Within the multiple linear regression, five-year variable averages of all the individual cooperatives are used.

Tab. 2: Definition of Variables

| Variables     | Definition                                                                 |
|---------------|-----------------------------------------------------------------------------|
| **Dependent** |                                                                             |
| Leverage (LEV) | Total liabilities/Total assets (Debt ratio)                                |
| **Independent** |                                                                             |
| Profitability (PROF) | Operating profit/Total assets (ROA)                               |
| Tangibility (TANG) | Tangible fixed assets/Total assets                                        |
| Liquidity (LIQ) | Current assets/Short-term payables (Current ratio)                        |
| Retained profits (RETP) | Funds from profit plus Profit (loss) previous years (current year)/Total liabilities |
| Asset turnover (TURN) | Revenues/Total assets                                                    |

Source: Own

Before proceeding with multiple linear regression, we must verify that the data meet several requirements. The assumptions of linear regression are most notably: variable types, the normal distribution of residuals, multicollinearity, homoscedasticity (Tranmer et al., 2020). The basic assumption of linear regression is that the dependent variable is continuous. In this paper, all the variables are continuous metric values; specifically, these are the ratio variables that are considered to have the greatest information value. Furthermore, independent variables should not be too highly correlated with each other (the requirement of multicollinearity). If multicollinearity occurs in the model, it is recommended to remove it before using the regression analysis (Hindls et al., 2018). Any failure condition multicollinearity in the model can be assessed based on the matrix pairwise correlation coefficients. What could be considered as a high level of correlation is subjective. As stated by Tranmer el al. (2020), a general rule that any correlation above |0.7| is considered high.

Multiple linear regression analysis is created in Microsoft Excel. The output of the regression and correlation analysis consists of three parts: output of correlation analysis, output of ANOVA and the third part is the output of regression analysis.

3. RESULTS AND DISCUSSION

3.1 Analysis of Leverage of the COOP Group

In this subchapter, the first research question concerning the development of COOP group leverage is answered. The basic financial indicators listed in Table 3 are used for the initial assessment of leverage. A descriptive statistic is used to summarise the resulting values.

Tab. 3: Financial Indicators in the period 2014 to 2018

| Indicator          | Characteristic | Year 2014 | 2015 | 2016 | 2017 | 2018 |
|--------------------|----------------|-----------|------|------|------|------|
| Debt ratio         | Mean           | 0.3318    | 0.3294 | 0.3290 | 0.3189 | 0.3318 |
| COOP Group         | Median         | 0.3504    | 0.3326 | 0.3403 | 0.3237 | 0.3504 |
|                    | Standard deviation | 0.1359 | 0.1398 | 0.1273 | 0.1241 | 0.1359 |
| Equity ratio       | Mean           | 0.6600    | 0.6599 | 0.6611 | 0.6705 | 0.6957 |
| COOP Group         | Median         | 0.6495    | 0.6644 | 0.6577 | 0.6690 | 0.6765 |
|                    | Standard deviation | 0.1384 | 0.1450 | 0.1328 | 0.1304 | 0.1206 |
| Equity ratio       | Mean           | 0.4089    | 0.4210 | 0.4326 | 0.4380 | 0.4350 |
| Retail sector      |                |           |      |      |      |      |

Source: Own processing and Ministry of Industry and Trade (2014; 2016; 2018)
Based on median and average values, it can be stated that the share of external resources (debt) in the total balance sheet slightly exceeds 30%. The level of this indicator does not change in the observed period. To compare the COOP Group with the retail sector, the equity ratio is used. Development of equity ratio over the period of five years is shown in Table 3. It is obvious, that the level of indicators is diametrically different. In the COOP Group, almost 70% of assets are financed by equity, while the indicator of the entire industry oscillates around 40%.

For a more detailed analysis of financing a vertical analysis is performed (see Table 4). The share of registered capital and funds from profit and other items in the balance sheet total is examined. The share of long-term (or short-term, respectively) capital in the balance sheet total is also stated. For the possibility of assessing property financial stability, the last line shows the share of fixed assets in total assets.

| Ratio         | Year     | 2014  | 2015  | 2016  | 2017  | 2018  |
|--------------|----------|-------|-------|-------|-------|-------|
| RC/TL        |          | 0.0710| 0.0727| 0.0677| 0.0723| 0.0597|
| CF/TL        |          | 0.0805| 0.0807| 0.0793| 0.0787| 0.0839|
| FFP/TL       |          | 0.5501| 0.5351| 0.5322| 0.5411| 0.5425|
| FFP/E        |          | 0.8542| 0.8559| 0.8233| 0.8286| 0.8161|
| ORF/TL (N=30)|          | 0.4695| 0.4720| 0.4538| 0.4489| 0.4542|
| PROF/L       |          | -0.0412| -0.0279| -0.0177| -0.0218| -0.0003|
| RETP/L       |          | 0.5089| 0.5072| 0.5145| 0.5194| 0.5421|
| LT-PAY/TL    |          | 0.0371| 0.0375| 0.0346| 0.0335| 0.0331|
| ST-PAY/TL    |          | 0.2872| 0.2850| 0.2854| 0.2769| 0.2513|
| LTL/L        |          | 0.6970| 0.6974| 0.6957| 0.7040| 0.7288|
| FA/TA        |          | 0.6172| 0.6109| 0.5999| 0.5896| 0.5837|

Source: Own

The vertical analysis of liabilities shows that funds from profit (FFP/TL) have the largest total share in the balance sheet. This share is about 55%. Profit funds are thus a crucial source of financing for consumer co-operatives. Due to the significance of this item, a more detailed explanation is given regarding its creation. Profit funds include other reserve funds (ORF) and statutory funds. Reserve funds were created in accordance with the law until 2013 and were intended to cover potential losses. Additionally, co-operatives were required to create a so-called statutory reserve account for co-operatives (at least 10% of the registered capital). This fund had to be replenished from net profit until its amount reached half the value of the registered capital. This fund could not be used during the existence of a co-operative for distribution among members (Dědič, 2002). Given that most consumer co-operatives were established in the 1950s, the balances of these funds have accumulated to their current level in recent decades.

Changes in legislation in the Czech Republic since 2014 have brought the abolition of the mandatory creation of reserve funds in companies and co-operatives. The currently valid Business Corporations Act (No. 90/2012 Coll.) no longer addresses the creation of these funds for co-operatives. The creation of profit funds and their management is now regulated by the statutes of co-operatives (Štenglová et al., 2017). The question that can be asked in this context is how were the balances of these funds handled? The following solutions are available: co-operatives can continue to form them, or they can cancel them. Resources from the cancelled reserve fund may be transferred to other funds (and then used for a specific purpose) or may be transferred to retained profits.
To analyse the impact of the abolition of the mandatory creation of a reserve fund on the capital structure of the COOP Group, it is necessary to obtain the item other reserve funds (ORF). It was found that about a third of consumer co-operatives do not state this item in the balance sheet. The analysis of the remaining co-operatives (N = 30) showed that the share of other reserve funds in the total liabilities (ORF/TL) oscillates around 45% and slightly decreases by about 1.5pp during the period under review. It is clear, that in the COOP Group, the other reserve funds remain a crucial source of financing.

At first glance, the negative value of the share of profit or loss in the balance sheet total (PROFL/TL) is interesting. This means that many co-operatives show a loss and indicate a low ability to value the invested capital. In conclusion, the equity financing predominates. External resources consist mainly of short-term payables and their share in total liabilities (ST-PAY/TA) is about 28%.

### 3.2 Summary Statistic and Determinants of Capital Structure – COOP Group

In this subchapter, the results of performed statistical calculations are presented, on the basis of which the second research question examining the dependence of leverage on the determinants of capital structure is answered.

First, Table 5 presents descriptive statistics of individual variables for the entire five-year period (N=44). All variables are calculated as ratios and are expressed as percentages. For analysis, a reasonable degree of variability can be expected in both the dependent variable and all independent variables. A dependent variable (leverage) with low standard deviation would mean that there is nothing to explain. Independent variables with low variability are unlikely to increase the quality of the model (Tranmer et al., 2020).

**Tab. 5: Summary Descriptive Statistics for the period of 2014–2018**

| Variables          | Mean  | Qu.1 | Median | Qu.3 | Max.  | Min.  | St. dev. |
|--------------------|-------|------|--------|------|-------|-------|----------|
| **Dependent**      |       |      |        |      |       |       |          |
| Leverage (LEV) %   | 32.06 | 23.07| 33.20  | 40.37| 65.96 | 3.37  | 12.93    |
| **Independent**    |       |      |        |      |       |       |          |
| Profitability (PROF) % | 2.22  | 0.95 | 2.40   | 3.77 | 70.93 | -15.39| 6.31     |
| Tangibility (TANG) % | 56.48 | 46.51| 57.60  | 65.85| 84.81 | 10.18 | 13.41    |
| Liquidity (LIQ) %  | 188.58| 93.90| 146.59 | 205.68| 1117.17| 51.15 | 172.26   |
| Retained profits (RETP) % | 51.05 | 44.95| 54.90  | 64.66| 84.38 | -35.61| 22.23    |
| Asset turnover (TURN)% | 208.66| 167.79| 221.67 | 268.52| 333.95| 8.05  | 88.13    |

**Source: Own**

Before performing a regression analysis, it is necessary to focus on the mutual correlation between individual regressors. High cross-correlations are a source of multicollinearity. The correlation matrix (see Table 6) is used to measure multicollinearity, containing the values of mutual correlation coefficients.

**Tab. 6: Correlation Matrix**

|       | PROF | TANG | LIQ  | TURN | RETP |
|-------|------|------|------|------|------|
| PROF  | 1.000|      |      |      |      |
| TANG  | -0.2922| 1.000|      |      |      |
| LIQ   | -0.0482| -0.2887| 1.000|      |      |
| TURN  | 0.2842| -0.1600| -0.4697| 1.000|      |
| RETP  | 0.2887| -0.0670| 0.0559| 0.0042| 1.000|

**Source: Own**

It is clear from the correlation matrix that there are no values of correlation coefficients above |0.7| between regressors, which would mean a significant correlation. The only value that approaches a moderately strong linear correlation (approaching |0.5|) is the value of the correlation coefficient between the variable’s turnover (TURN) and liquidity (LIQ) (r = -0.47). It follows from the above output that the assumption that the individual independent variables are uncorrelated (no multicollinearity) is fulfilled.
Further, the regression analysis results are presented. Within multiple linear regression, five-year averages of variable values for individual consumer co-operatives are used. Table 7 presents all significant and non-significant coefficients, whereas table 8 includes only the significant ones.

Tab. 7: Results of Regression Analysis I.

| Observations | Multiple R 0.8688 | R Squared 0.7549 |
|--------------|-------------------|------------------|
|              | Coefficient       | St. error | t-Stat | p-value |
| Intercept    | 0.277             | 0.081     | 3.442  | 0.001   |
| PROF         | 0.671             | 0.433     | 1.550  | 0.130   |
| TANG         | 0.231             | 0.091     | 3.538  | 0.001   |
| LIQ          | -0.036            | 0.008     | -4.547 | 0.001   |
| TURN         | 0.047             | 0.015     | 3.088  | 0.004   |
| RETP         | -0.256            | 0.049     | -5.270 | 0.001   |

Significant at 5% level

Source: Own

The multiple R correlation coefficient reaches the value of 0.87, which means a high correlation. The R squared value is 0.75. The independent variables have explained a 75% variance in leverage, which can be considered a very good result. Value Sign. F (0.001) is less than the selected significance level (0.05), meaning that the model is statistically significant. Regarding the significance of individual regression coefficients, these variables are relevant for explaining leverage: tangibility (TANG), liquidity (LIQ), asset turnover (TURN) and retained profits (RETP) – all are statistically significant (p-value is less than 0.05). The remaining profitability predictor (PROF) is not significant. The model can be considered suitable, but it is possible to omit an insignificant variable and perform the second multiple linear regression.

Tab. 8: Results of Regression Analysis II.

| Observations | Multiple R 0.8599 | R Squared 0.7575 |
|--------------|-------------------|------------------|
|              | Coefficient       | St. error | t-Stat | p-value |
| Intercept    | 0.290             | 0.082     | 3.551  | 0.001   |
| TANG         | 0.197             | 0.090     | 2.193  | 0.034   |
| LIQ          | -0.036            | 0.008     | -4.502 | 0.001   |
| TURN         | 0.052             | 0.015     | 3.436  | 0.001   |
| RETP         | -0.234            | 0.047     | -4.949 | 0.001   |

Significant at 5% level

Source: Own

The value of Multiple R is 0.86 and it is a high degree of correlation. The value of R Squared is 0.76. The independent variables explained a 76% variance in indebtedness, which is again a good result. Sign. F (0.001) is less than 0.05, which means that the model is statistically significant. The third part of the output presents estimates of regression coefficients. The p-value shows that all remaining independent variables are statistically significant.

4. DISCUSSION

In this paper, we found that the assets of the COOP Group are from more than two-thirds financed by equity, which is diagnostically different from industry averages, where debt financing predominates. From past research of the financial situation of the COOP Group (from 2008 to 2013), the same conclusion can also be made (Kozáková and Pevná, 2016), i.e. in the past decade the capital structure of COOP Group has not changed.

Since 2014, the legislation of business corporations in the Czech Republic has undergone changes. In certain areas, it’s a response to developments in the legal systems of European countries, and Czech legislation is thus getting closer to that of Germany or the United Kingdom.
These are particularly the changes concerning registered capital and the abolition of mandatory creation of reserve funds in capital companies and co-operatives. This makes it possible for the company to decide that the reserve fund created so far will, for example, be abolished (reduced) or transferred to retained earnings. As the analysis showed, in terms of the origin of resources, internal financing from retained profits predominates. It is obvious, that in the COOP Group, the other reserve funds remain a crucial source of financing.

Finally, the influence of individual determinants of capital structure on leverage is discussed, including the connection of these results with selected empirical studies. The collateral value of assets (tangibility) has a positive effect on leverage in the COOP Group, which conforms to the theoretical assumptions of the static trade-off theory. A positive relationship between leverage and tangibility is identified in G7 countries by Rajan and Zingales (1995), by Weill (2002) in Western and Eastern European countries or by Seo and Choi (2016) in Korean consumer co-operatives (iCOOP). It can be expected that with a higher share of fixed assets, the willingness of creditors to provide credit also increases. According to Titman and Wessels (1988), companies with a higher level of fixed assets, which have a high mortgage value, are also more interested in using debt financing. Alternatively, some empirical studies suggest that tangibility is negatively correlated with leverage (Weill, 2004; Serghiescu, 2014). Studies by Czech authors (Aulová and Hlavsa, 2013; Bauer, 2004) also showed a negative relationship between leverage and tangibility.

Liquidity has a negative effect on the leverage of the analysed group. Regarding the relationship between leverage and liquidity, theories generally state a positive relationship (static trade-off theory). Companies with a higher liquidity ratio can afford relatively higher leverage, due to their greater ability to repay short-term payables when they fall due. For this reason, a positive effect of liquidity on leverage can be expected (Abdou et al., 2012). Shleifer and Vishny (1992) or Sibilkov (2009) also find a positive relationship between leverage and liquidity. In contrast, Myers and Rajan (1998) or Morellec (2001) found a negative relationship. The study of Czech authors (Aulová and Hlavsa, 2013) shows a negative relationship. Retained profits are expressed in the study Aulová and Hlavsa (2013) as the sum of funds from profits, profit (loss) of previous years and profit (loss) of the current year. These authors find a positive effect on leverage. In this paper, this determinant is determined differently, however, as a ratio variable (see Table 2). The negative effect on leverage is confirmed and of all the selected determinants it has the greatest influence on leverage. Retained profits account for more than 50% of the balance sheet total and are a crucial source of funding for consumer co-operatives. The result can be interpreted as meaning that due to the increase in retained profits, more profitable companies can use internal financing and therefore may have a lower leverage (Weill, 2004). In other words, due to the accumulation of retained profits over the life of the company, internal financing replaces debt financing, as is the case with the COOP Group.

Total asset turnover has a positive effect on leverage in COOP Group. Serghiescu and Văidean (2014) also reached the same conclusion. As mentioned, it is a financial indicator that captures how efficiently assets are being utilised to generate revenues (Wahlen et al., 2015). The resulting value of this indicator is influenced by affiliation to the industry. For some industries, the value of assets turnover of 1 is certainly not exceptional (e.g. trade), for others it is almost unattainable. In the COOP Group, the average value of this indicator is higher than 2. This group appears to be pursuing a policy of increasing profitability by accelerating the turnover of assets.

CONCLUSION

This paper is focused on one of the most significant areas of financial management – deciding about the total amount and structure of capital. The aim is the evaluation of capital structure and its determinants in consumer co-operatives (COOP Group) in the Czech Republic. This paper reveals that the leverage of the entire group is low, as more than two-thirds of the assets are financed by equity capital (from retained profits, which mainly include reserve funds). Consumer co-operatives finance all fixed assets with long-term capital and use this more expensive long-term capital to finance current assets.
as well, which is a conservative financing strategy. From this perspective, financial stability is achieved, but at a cost. The financial situation of the COOP Group is characterised by a low ability to value invested capital, a high share of tangible fixed assets and a satisfactory turnover of total assets. This paper reveals that tangibility and asset turnover both have a positive effect on leverage while liquidity and retained profits negative. Profitability has a negative effect, but not significantly. Although the number of studies analysing the factors affecting capital structure of retail businesses is not large, a degree of consistency can be observed when comparing them with the results of this research. Empirical results in this paper, especially given the predominant funding from retained earnings, suggest that pecking order theory can be favoured.

The practical benefit of the article can be seen in the possibility of using the results for management purposes in the development of comparative analyses and conceptual materials. The findings can be used during the decision-making process of consumer co-operatives in the indebtedness and capital structure area.

The limitation can be seen in the fact that among the factors determining the capital structure only internal factors are included. In several studies, other internal factors such as age, growth, or external factors like the degree of development of the capital market and tax rate are also considered.

The findings of the analysis suggest other issues that can be addressed in further research. As mentioned, the financial situation of the COOP Group is characterised by a low ability to value the invested capital, so it offers the opportunity to focus on improvement in the area of financial performance.

REFERENCES

Abdou, H. A., Kuzmic, A., Pointon, J. & Lister, R. J. (2012). Determinants of Capital Structure in the UK Retail Industry: A Comparison of Multiple Regression and Generalized Regression Neural Network. Intelligent Systems in Accounting. Finance & Management, 19(3), 151-169. Retrieved July 24, 2020, form: <https://doi.org/10.1002/isaf.1330>.

Asquith, P., Weiss, L. A. (2016). Lessons in corporate finance: A case studies approach to financial tools, financial policies and valuation. Hoboken: Wiley.

Aulová, R., Hlavsa, T. (2013). Capital structure of agricultural businesses and its determinants. Agri online Papers in Economics and Informatics, 5, 23-36.

Bauer, P. (2004). Determinants of Capital structure. Empirical Evidence from the Czech Republic. Finance a úvěr, 54 (1/2), 2-21.

Birchall, J. (2009). A comparative analysis of co-operative sectors in Scotland, Finland, Sweden and Switzerland. Retrieved September 27, 2020, from: <https://institute.coop/sites/default/files/resources/094%202009_Birchall_A%20comparative%20analysis%20of%20cooperative%20sectors%20in%20Scotland,%20Finland,%20Sweden,%20and%20Switzerland.pdf>.

Brealey, R. A., Myers, S. C. (2000): Teorie a praxe firemních financí. Prague: Computer Press.

COOP Centrum (2020). About COOP. Retrieved July 15, 2020, form: <https://www.coop.nl/nl-not-translated-profyl-skupiny-coop>.

Dědič, J. (2002). Obchodní zákoník: komentář (1. vyd.). Praha: Polygon.

Frank, M. Z., Goyal, V. K. (2007). Trade-Off and Pecking Order Theories of Debt. Available et SSRN <https://ssrn.com/abstract=670543>.

Hindis, R., Artlová, M., Hronová, S., Malá, I, Marek, L., Pecáková, I. & Řezanková, H. (2018). Statistika v ekonomi (1. vyd.). Praha: Professional Publishing.

Hrdý, M. (2016). The Development of the Indebtedness of the Czech Enterprises in Selected Branches. In: New Trends 2016. Proceedings of the 11th International Scientific Conference, 62-69.

Jarallah, S., Saleh, A.S. & Salim, R. (2019): Examining pecking order versus trade-off theories of capital structure: New evidence from Japanese firms. International Journal of Finance&Economics, 24(1), 204-211.
Kozáková, P., Pevná, J. (2016). Analysis of the Financial Situation of the COOP Group in the Czech Republic. In: New Trends 2016. Proceedings of the 11th International Scientific Conference, 125-133.

Kraus, A., Litzenberger, R. H. (1973). A State-Preference Model of Optimal Financial Leverage. The Journal of Finance, 28 (4), 911–922. Retrieved June 12, 2020 from: https://doi.org/10.1023/2978343.

Krauseová, J. (1995). Analysis of the Capital Structure of the Czech Firms. Finance a úvěr, 45(9), 481-491.

Ministry of Industry and Trade (2020). Finanční analýza podnikové sféry za rok 2014. Retrieved July 11, 2020 from: https://www.mpo.cz/dokument157262.html.

Ministry of Industry and Trade (2020). Finanční analýza podnikové sféry za rok 2016. Retrieved May 12, 2020, from: https://www.mpo.cz/cz/rozcestnik/analyticke-materialy/analyticke-materialy/financni-anaalyza-podnikove-sfery-za-2016-228985/.

Ministry of Industry and Trade (2020). Finanční analýza podnikové sféry za rok 2018. Retrieved May 12, 2020, from: https://www.mpo.cz/cz/rozcestnik/analyticke-materialy/analyticke-materialy/financni-anaalyza-podnikove-sfery-za-2018-248883/.

Modigliani, F., Miller, M. H. (1958). The Cost of Capital, Corporation Finance and the Theory of Investment. The American Economic Review, 48(3), 261-297.

Modigliani, F., Miller, M. H. (1963). Corporate Income Taxes and the Cost of Capital: A Correction. The American Economic Review, 53(3), 433-443.

Morellec, E. (2001): Asset Liquidity, Capital Structure, and Secured Debt. Journal of Financial Economics, 61, 173-206.

Myers, S. C. (1984). The Capital Structure Puzzle. The Journal of Finance, 39(3), 575–592. DOI: https://doi.org/10.2307/2327916.

Myers, S. C., Majluf, N. S. (1984). Corporate Financing and Investment Decisions when Firms Have Information that Investors Do Not Have. Journal of Financial Economics, 13, 187-221.

Myers, S.C., Rajan, R.G. (1998) Information that Investors Do Not Have. The Journal of Finance, 53(2), 449-470.

Poulová, L. (2018). Capital Structure of Czech joint stock companies. Český finanční a účetní časopis, 4, 25–39. DOI: https://doi.org/10.18267/j.cfcu.503.

Rajan, R. G., Zingales, L. (1995). What Do We Know about Capital Structure? Some Evidence from International Data. The Journal of Finance, 50(5), 1421-1460. DOI: https://doi.org/10.1111/j.1540-6261.1995.tb05184.x.

Seo, J., Choi, W. (2016). What Determinants Affect the Capital Structure of Consumer Co-operatives? The Case of iCOOP Korea. Annals of Public & Cooperative Economics, 87(1), 117-135. DOI: https://doi.org/10.1111/apce.12088.

Sergheiucu, L., Văidean, V-L. (2014). Determinant Factors of the Capital Structure of a Firm: an Empirical Analysis. Procedia Economics and Finance, 15, 1447-1457. DOI: https://doi.org/10.1016/S2212-5671(14)00610-8.

Shleifer, A., Vishny, R. W. (1992). Liquidation Values and Debt Capacity: A Market Equilibrium Approach. The Journal of Finance, 47(4), 1343-1366. DOI: https://doi.org/10.2307/2328943.

Sibilkov, V. (2009): Asset Liquidity and Capital Structure. The Journal of Financial and Quantitative Analysis, 44(5), 1173-1196. DOI: https://www.jstor.org/stable/40505964.

Swanson, Z., Srinidhi, B. N. & Seetharaman, A. (2003). The Capital Structure Paradigm: Evolution of Debt/Equity Choices. Westport: Greenwood Publishing Group.

Štenglová, I., Havel, B., Cileček, F., Kuhn, P. & Šuk, P. (2017). Zákon o obchodních korporacích: komentár (2. vyd.). Praha: C.H. Beck.

Titman, S., Wesless, R. (1988). The Determinants of Capital Structure Choice. The Journal of Finance, 43(1), 1-19. DOI: https://doi.org/10.1111/j.1540-6261.1988.tb02585.x.

Tranmer, M., Murphy, J., Elliot, M. & Pampaka, M. (2020). Multiple Linear Regression (2nd ed.). Cathie Marsh Institute Working Paper 2020-01. Retrieved July 20, 2020, from: <https://doi.org/10.24132/jbt.2021.11.1.30_40>.
Trendy v podnikání - Business Trends (2021), 11(1), 30-40.

https://doi.org/10.24132/jbt.2021.11.1.30-40

from: <http://hummedia.manchester.ac.uk/institutes/cmist/archive-publications/working-papers/2020/multiple-linear-regression.pdf>.

Wahlen, J. M., Baginski, S. P. & Bradshaw, M. T. (2015). Financial Reporting, Financial Statement Analysis and Valuation: A Strategic Perspective. Boston: Cengage Learning.

Weill, L. (2002). Determinants of Leverage and Access to Credit: Evidence on Western and Eastern Europe countries. Retrieved May 23, 2020, from: <https://www.researchgate.net/publication/253293146_Determinants_of_Leverage_and_Access_to_Credit_Evidence_on_Western_and_Eastern_Europe_countries>.

Weill, L. (2004). What Determines Leverage in Transition Countries. Finance a úvěr, 54(5/6), 234-242.

Zákon č. 90/2012, Sb., o obchodních korporacích. Retrieved June 20, 2020, from: <https://www.zakonyprolidi.cz/cs/2012-90>.