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Can We Determine Debt To Equity Levels In Non-Profit Organisations? Answer Based On Polish Case

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The goal of the article is to find the answer whether it is possible to propose a model for fixing the best debt levels in the capital structure of non-profit organisations. Capital structure is an indicator that corroborates the level of financial risk. Non-profit organisations are an essential part of the general social policy. When considering the efficiency of non-profit entities from a donor perspective, it is important to take into account the way management uses the resources of a non-profit organisation as well as efficiency of that management activity. Non-profit organisation efficiency should be considered in the context of risk. One of the most important ways to increase probability to face financial distress is too high debt to equity relation. The paper illustrates the relationship between debt and equity in 1,560 Polish non-profit entities. The model which can fix optimal capital structure for a non-profit organisation in its current environment was delivered. The proposal of the paper includes a model which helps to find the optimal level of debt for non-profit organisation environmental conditions. The novelty of the model is based on the full costs of debt financing non-profit entities in the context of donor expectations, which in the Polish social and economic environment means that costs indirectly linked with the realisation of the main aim of the social entity cannot be higher than 10 % of the collected money sources. An additional point of our findings is that in comparison with the current state, Polish non-profit organisations need to improve their way of fixing capital structure.

Keywords: *Equity; Foreign Capital; Non-Profit Organisations; Efficiency of NGO.*

Introduction

The research question of the paper is about the way to fix capital structure for non-profit organisations which operate with a defined, social economy positive, mission. Wedig et al. (1996) claim that the availability of tax-exempt financing provides tax-based incentives to non-profit entities to issue debt. They also developed a theoretical model in which non-profit entities behave as if they have target levels of tax-exempt debt. The relationship between debt financing and donation levels was also investigated by Kuo et al. (2014). Firstly, they noticed that, according to Magnus et al. (2003) and Yetman (2007), debt financing could have an adverse impact on the charitable donations of non-profit entities. Secondly, their empirical results proved that debt financing has both a crowd-in effect and crowd-out effect on non-profit entity donations. Thirdly, they showed that the crowd-in effect tends to exist in low debt ratio non-profit entities, and the crowd-out effect is often found to exist in not-for-profit entities with higher debt ratios (Kuo *et al.*, 2014). Our findings in the paper are moving in a similar direction, and we have included a model proposed in the paper.

Prentice (2016a) explored the organisational and environmental factors that affect non-profit financial health. Turner et al. (2015); and Borlea et al. (2017) focused on the differential use of debt financing among for-profit and non-profit entities. According to them, for-profit entities are

significantly and substantially more indebted than non-profit entities. Calabrese (2011b) analysed the static trade-off and pecking order capital structure theories and applied them to non-profits. He examined how non-profits adjust their debt to equity relation over time and also analysed the static trade-off and pecking order of capital structure theories and applied them to non-profit entities. He described how non-profits adjust their debt to equity relation over time and found that non-profit capital structure choices are best explained using the pecking order theory in which internal funds are preferred over external borrowing (Vunjak *et al.*, 2015; Calabrese, 2011b; Smith, 2010). Rosen and Sappington (2016) investigate the decisions of non-profit entities to issue debt, and they test whether the expected value and uncertainty of a non-profit entity non-financial income affects its capital structure. They also find that debt to equity increase is negatively related to both the expected value and the uncertainty.

Szymanska and Jegers (2016) theoretically described social enterprises taking into consideration their main aims and pointed out the direction which social enterprises should follow to obtain the highest value of their objective functions. Wedig (1994) pointed out that non-profit entities are similar to proprietary firms except that their financial residuals are expensed on a philanthropic activity which is similar to a dividend-in-kind for donors. He also showed how the constraint against paying cash dividends affects the intertemporal paths of capital structure and thus the non-profits dividend-in-kind are similar to dividends in for-profit firms. Non-profit entities are risk-averse over cash flows and fund balance and behave like a risk-averse consumer rather than a risk-neutral firm (Wedig, 1994). Wedig (1994) also used a dynamic model to derive closed-form expressions for the time paths of debt and in comparison with empirical data and confirmed the hypothesis of risk aversion.

Grizzle (2015) examined organisational factors that impact the level of operating reserves in non-profit entities and the relationship of operating reserves with organisational demographics and financial health variables. Tuckman and Chang (1993) analysed why non-profits accrue debt and whether the funds they borrow are used productively. Their work distinguished between productive, problematic, and deferred debt. They also examined the pervasiveness of non-profit debt and the relationship between this debt and non-profit financial health. They found that over 70 percent of the non-profits hold debt, the distribution of this debt is highly concentrated, and the level of debt and leverage varies with asset size and type of activity which is in accord with the findings of that paper. According to them, non-profit entities with higher debt levels are financially healthier than those with lower levels.

Long (1976) found that debt to equity decisions must be based on many inputs, including financial valuation, which has not been traditionally applied in the non-profits sector. Reiter et al. (2000) claim that decisions about capital structure in non-profits have the same rules as in for-profit entities (Zietlow, 2010; Marchioni & Magni, 2018).

Schrötgens and Boenigk (2017) and Strydom (2014) suggest that donor-funded non-profit entities have the primary objective of donor utility maximisation to ensure that the resources provided by the donor are utilised in the most efficient manner possible. Upadhyay et al. (2015) studied the relationship between non-profits' profitability and cash tied in operational activity.

Rauscher and Wheeler (2012) claim that increased financial pressures on non-profit entities have elevated the importance of working capital management. Efficient working capital management allows non-profit entities to reduce their holdings of current assets and that cash inflows can be used to reduce borrowing. They also examine the relationship between non-profit entity profitability and their performance at managing accounts payable. Singh and Wheeler (2012) investigated the data for 1,397 bond-issuing, not-for-profit US entities within the period 2000 to 2007. They also analysed the relationship between non-profit entity performance at managing the revenue cycle and their profitability and ability to build equity capital. Singh and Wheeler (2012) model four different measures of profitability and equity capital as functions of two key financial indicators. Their results indicated that higher amounts of revenue to a non-profit entity assets were associated with statistically significant increases in equity capital ($p < 0.01$ for all four models). The authors claim that non-profit entities which generated more revenue per invested assets reported improved financial performance (Singh & Wheeler, 2012). According to them, a statistically significant link exists between lower revenue collection periods and equity ($p < 0.01$ for three models; $p < 0.05$ for one model): non-profit entities that collected faster on their revenue reported larger equity values. The findings of Singh and Wheeler (2012) mean that non-profit organisations can enhance their financial viability by improving profitability and enabling equity growth.

Wheeler and Smith (1988) show that the appropriate discount rate for evaluation of capital expenditures depends on risk, leverage, and cost-based reimbursement (Habibpour *et al.*, 2018). The method presented by Wheeler and Smith can be used to account for these effects that are both practical and consistent with theory. Wacht (1978) deals with the financial problem of integrating debt financing and fund-raising campaigns in non-profit equities. The objective of Wacht´s findings is the model of the capital budgeting process for non-profit entities. Non-profit institutions, as claimed by Wacht, cannot use orthodox cost-benefit tests because of inappropriateness and impracticableness due to the multi-dimensional character of the capital structure decision.

Trussel (2012) claims that a capital structure used by non-profit entities is an important determinant of financial risk. Trussel also indicates that there is no difference in the amount of leverage between the two institutional types of NGOs. Non-profit and social economics entities have unique financing mechanisms which do not impact the relative amount of debt and equity in their capital structures (Trussel, 2012). Woronkowicz (2016) investigates non-profit financial vulnerability metrics resulting from the effect of a capital facilities project. Woronkowicz (2016) uses data for a sample of non-profit entities and models the relationship between financial vulnerability indicators and facilities investments. The findings of Marchioni and Magni (2018) and Woronkowicz (2016) are evidence of the fact that investments in facilities are associated with the costs of debt associated with facilities projects and influence non-

profit finances. Woronkowicz's findings have implications for the financial management of non-profit entities costs of capital (Woronkowicz, 2016).

Wacht (1984) claims that the characteristics of non-profit entities prevent the transfer and successful application of standard financial management solutions to financial management decisions in the non-profit context. Such characteristics include a dual management structure composed of professional and financial managers, restrictions on the disposition of assets and earnings, and the constant threat of illiquidity as the result of the uncoupling of organisational goals and cash flows. The theory of financial management separates the financial management goals from the professional goals (Wacht, 1978). A non-profit entity can survive financially through time while its professional manager pursues utility- denominated goals delineated by the organisation's tax- exempt status (Wacht, 1984).

Tuckman and Chang (1992) claim that non-profit decision makers have an incentive to earn and accumulate surpluses. They also developed a behavioural model and used it to derive a demand function for equity. They applied such a model to a national sample of 6,168 charitable non-profits and established the hypothesis that non-profit decision makers consciously plan to increase their organisation's equity (Tuckman & Chang, 1992).

Prentice (2016b) claims that financial measures are used in non-profit research to predict funding opportunities. The findings of Prentice suggest that using debt to equity measures in non-profit entities do not guarantee to find the searched answer.

A non-profit organisation may be defined as an entity that is concerned with its activities about the realisation of social value adding mission. Such a mission is realised thanks to sources collected through donations from donors. A donor is an individual (person, firm, other entity) who appreciates social value generated by the realisation of missions by the non-profit organisation. Such appreciation results in supporting non-profit organisations by means of donor donations. A donation is supporting non-profit organisation activities by an amount of money, other assets or volunteer work that the donor delivers to the supported non-profit organisation. The presented discussion contributes to the corporate finance theory in its narrower area concerned about the non-profit entity model of financial management in financial liquidity with efficiency measures as the context. That context is seen by some authors as controversial, especially from the technical point of view. Some authors claim that non-profit finance and its managerial decisions in them are not any different from for-profit business decisions (Hansmann, 1987; Jegers, 2011; Gavurova & Korony, 2016). Such a position is only partially correct. Sloan et al. (1988) and Wedig (1994; 1996) use financial management portfolio theory with modifications to non-profit organisation financial management (see also Jegers & Verschueren, 2006; Soltes & Gavurova, 2015). In this paper, the model of financial debt management in non-profit entities is used from the perspective which states that the primary financial target of the non-profit organisation is the best financially efficient implementation of the mission that causes the donors to support the non-profit organisations (as can be found for example in the works of Leone & Van Horn, 2005; Eldenburg *et al.*, 2011. Non-profit organisation financial debt management decisions need to take into account the relationship between future effects in the context of risk as debt financing in a specific form that increases financial risk (Bem, 2015). That perspective is close to the creation of for-profit firms' value (Chapelle, 2010; Siedlecki & Bem, 2016). The requirements for net-working capital linked with the elements shaping it, such as the level of cash tied up in inventories, accounts receivable, cash and near cash assets, the early settlement of accounts payable, are those where the difference can be seen. Not many non-profit entities have to deal with all aspects of debt decisions. Some non-profit entities use only equity and sources from direct donations, redistributing it from the donors to the beneficiaries. Other non-profit entities collect free of charge goods for resale, using incomes for realising the mission (Banociova & Martinkova, 2017). Many non-profit entities are almost identical in operating processes with for-profit businesses but are non-profit because of their mission.

Non-profit entities are an important part of the general social policy in the Polish economy. Numerous targets in education, healthcare, and many other socially key areas are realised by them. It should be remembered, considering the efficiency of non-profit entities from the donor's perspective, that it is important how the management team uses the resources of the non-profit organisation and if they are used efficiently. The efficiency of a non-profit organisation should be considered in the context of the risk. The lack of financial flexibility is one of the most important reasons for winding up a business. The relationship between debt measures is considered in the paper. Those relationships are also illustrated with data from Polish non-profit entities.

Research Goal, Research Sample and Methodology

The decisions about the financial debt level policy are about finding a balance of gaining new opportunities to serve through realisation of the missions. Those kinds of decisions shape the level and quality of financial debt. Paraphrasing the observations of McGuinness and Hogan (2018) and Gonzales-Bustos and Hernandez-Lara (2016) it is possible to observe what we can say about the risk involved in financial debt level decisions which must be accepted by financial institutions pledging the financial debt level of the non-profit organisation. A further point is how the portfolio theory might be used to decrease financial debt level risk. Debt to equity could be viewed in the portfolio context as presented by Burak Guner et al., (2008); Gonzales-Bustos and Hernandez-Lara, (2016). Gonzales-Bustos and Hernandez-Lara (2016) tried to adapt the theory of various governance models to innovative elements in organisations. Seifert et al. (2013) and Gonzales-Bustos and Hernandez-Lara (2016) discuss the granting policy of an organisation and show that financial innovative or debt level policy requires balancing the future sales gains against possible losses. The question discussed in the presented paper concerns the non-profit decision making in the area of financial debt level in connection with efficiency measures.

In the paper, the goal is to answer the question if it is possible to find the way to determine capital structure in

non-profit organizations. Firstly, the paper introduction discusses the current state of the field, next the theoretical model is presented and is confronted with empirical data. A set of Polish data collected from Polish non-profit organizations is used as a research sample in the paper.

The NOFDEL Model

Holding financial debt level at a level defined by the organisation provides advantages rather than negatives, and therefore causes the growth of efficiency. (Garcia-Teruel & Martinez-Solano, 2007; Ranjith, 2008). To measure the effects that changes in financial debt levels produce we can use the NOFDEL model (for non-profit entity financial debt to equity levels). The model is based on the assumption that the non-profit organisation efficiency is the sum of the future free cash flows (FCNPO) discounted by the rate of the cost of the financing capital, which is used for the realisation of a non-profit organisation mission:

$$p \times (EREV_t - CE_t - \Delta NWR_t - CAPEX_t) = FCNPO \Rightarrow$$
$$\Rightarrow \Delta V_{npo} = \sum_{t=1}^{n} \frac{\Delta FCNPO_t}{(1+CoC)^t} + \sum_{t=1}^{n} \frac{\Delta SVI_t}{(1+CoC)^t} + \sum_{t=1}^{n} \frac{\Delta HVI_t}{(1+CoC)^t} \quad (1)$$

where SVI – social value indicator, HVI – hedonistic value index, EREV - expected revenues of non-profit organisation, p - probability of realisation expected revenues, CE - cash expenditures (fixed and variable costs), NWR - net working capital requirements, ΔNWR – net working capital requirements increase, CAPEX - capital expenditures resulted from long-term operational investments; ΔVnpo - non-profit organisation efficiency increase; ΔFCNPOt - future free cash flow growth in period t; and CoC - discount rate equal to cost of the capital rate.

The acceptation of a discount rate to the amount of the average weighted cost of capital (CoC) is needed to estimate the changes in efficiency. Results of the mentioned changes are long-term in their character and strategic in some meaning, although they refer to financial debt level and traditionally short run area decisions, see: (Maness, 2016). We note that the primary financial target of a non-profit organisation is not the enterprise value creation but as close as possible to the realisation of the mission (Zietlow *et al.*, 2007; Bachmann, 2012). Although it may be, for the above reason, controversial to use similar rules for for-profit enterprises, such a solution is proposed in textbook literature (Brigham & Daves, 2004; Khouri *et al.*, 2017; Brigham, 2006).

A modified version of that classical approach is used in the paper is used because the higher risk should be linked with the higher capital cost used to evaluate the future results of the current decision. That approach is also positively connected with the level of efficiency and effectiveness in the realisation of the non-profit organisation mission (Gavurova *et al.*, 2017), while effectiveness is understood here as the more accurate realisation of non-profit organisation donors. The donors spent their money by issuing the organisation the capital and by the revenues sourced in answer as to how the organisation's mission appeals to their social aims. The cost of financing financial debt level policy is a result of the risk included in the organisation strategy of financing and/or investment in the financial debt level.

The holding and increasing of financial debt level ties up money used for financing financial debt level. On the basis of that it is possible to make an estimation of the free cash flows which are treated as the free amount of money after cash expenses which could be used for future non-profit organisation activities (Trussel, 2012; Hroncova Vicianova, *et al.*, 2017). Non-profit organisation growth usually necessitates increased levels of debt of a non-profit organisation.

The remaining money requirements (that are noted as net working capital requirements growth, ΔNWR) will require a different form of financing. In Figure 1, the influence of financial debt level policy changes on non-profit organisation efficiency is presented. The following decisions change: future free cash flows generated by non-profit organisation operations (FCNPO), time of the organisation life (t) and rate of the cost of capital financing the non-profit organisation operations (CoC). Changes to these three components influence the efficiency of a non-profit organisation (ΔVnpo = non-profit organisation efficiency increase). Financial debt level policy decisions changing the terms of realisation of operating cycle create a new financial capital requirements level. Consequently, financial debt level policy has an influence on non-profit organisation efficiency. This comes about as a result of alternative costs of money needed to cover burdens connected with financial debt level and general costs associated with managing financial debt level. Both the first and the second involve modification of the future cost of the capital rate and as a consequence, the non-profit organisation efficiency changes.

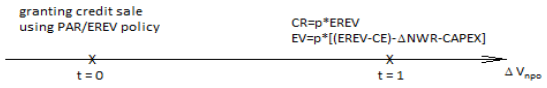

Figure 1. The Debt Policy Influence on Non-Profit Organisation Efficiency

where: EREV - expected revenues of the non-profit organisation, CR - cash revenues, CE - cash expenses (cash expenditures), CAPEX - capital expenditures linked with investing in fixed operating assets; PAR - projected accounts receivable level in the non-profit organisation; ΔNWR – changes in net working capital requirements; p - probability of expected revenues realisation; and t - the time the decision is taken and their results on FCNPO and ΔVnpo.

Source: own study based on Holmstrom and Tirole (1996, 2000 and 2001), Garcia-Rodriguez and Jegers (2017), Siekelova et al. (2017).

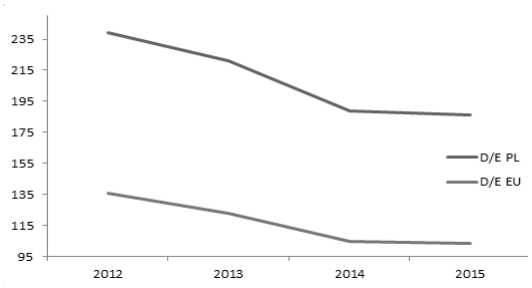

Figure 2. D/E Levels in Polish and European Non-Profit Entities

Source: own study based on data from 1560 Polish Non-profit Entities reported in Database Amadeus product of Bureau van Dijk, [date: 2016 DEC 01] and BOPP.

Non-profit entities are a kind of entity that are almost identical as for-profit businesses from the organisational side (Garcia-Rodriguez & Jegers, 2017, Rahman *et al.*, 2017a). Such entities offer unpaid and paid products and services, and as non-profit entities, they are allowed to generate even large revenues which are sufficient to cover the costs of realisation of their mission, but non-profit entities have no right to collect equity capital through stock issuing and have no stockholders. The main difference between non-profit organisations and for-profit businesses is an economic calculation and the financial motivation of the staff, capital providers, and the whole group of stakeholders. In our results (Figure 2) we can see that the relationship between debt and equity between 2012 and 2015 decreases for Polish non-profit entities. These results provide the information that we can expect a smaller financial risk in such organisations. Similar information is presented in Figure 3., where the same decreasing tendency is illustrated.

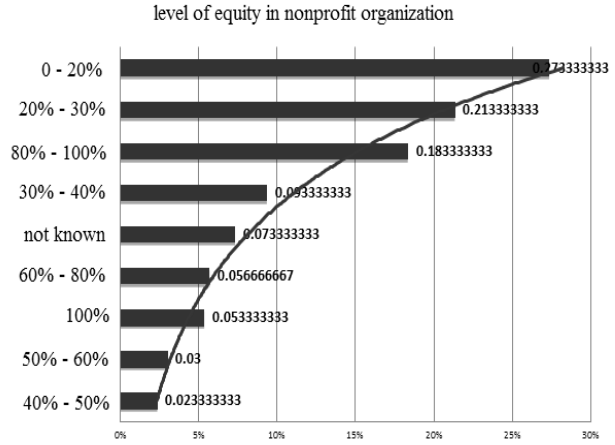

Figure 3. The Debt Policy Influence on Non-Profit Organisation Efficiency

Source: own study based on data from 300 Polish non-profit entities reported in Database Amadeus product of Bureau van Dijk, [date: 2017 MAR 01]

Figure 3. illustrates a Polish non-profit organisation anomaly, where it is clear that many surveyed Polish non-profit organizations want to have debt levels higher than the NOFDEL model suggests,. Figure 3 presents the results of the survey among Polish non-profit organisations and can be used as a warning signal about the condition of Polish non-profit organization management teams in the surveyed organisations. Using the rule from equation (1) we can make a simulation for the most suitable debt to capital {D / (D+E)} relationship. In the case of Polish conditions, for 2016, the risk-free rate was about 1.2 % and the endowment rate of return was about 2 %.

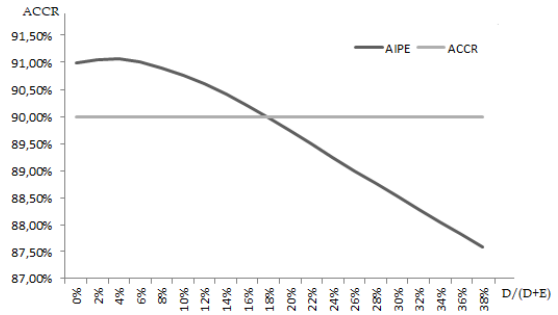

Figure 4. Debt to Capital Rate for 2016 Data

Where: ACCR = accepted level of aim performance, AIPE = rate of performance in realization of main goal of social economy entity (according to Polish reality it is not socially accepted if that level is less than 90 %).

Source: own calculations combined with Polish macroeconomic data for 2016.

As presented in Table 1, there is the NOFDEL model mechanism that can be used to fix the best debt share in non-profit organisation. Table 1, together with Fig. 4, shows that, thanks to the knowledge provided by the macroeconomic data about risk free rate and the cost of holding and management of endowment, if there are borderline expectations in indirect expenses for non-profit organisations, debt share cannot provoke crossing that borderline. In 2016 (as presented in Table 1), such a borderline NOFDEL model fixed the expected debt share for the average Polish non-profit organization at a higher level than in 2014. The main source of that difference was the macroeconomic environment represented by a higher financial risk in 2014 than in 2016.

Table 1

Debt to Capital Relationship Influence on Future Performance in Goal Realisation for 2016 Data

k (rf)	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
k (end)	2.0	2.18	2.33	2.43	2.45	2.45	2.43	2.38	2.31	2.21	2.10
Debt share	0	2	4	6	8	10	12	14	16	18	20
k(d)	4	4.06	4.12	4.18	4.24	4.31	4.38	4.46	4.53	4.61	4.70
Indirect expenses	11	11	11	11	11	11	11	11	11	11	11
Endowment share	100	98	96	94	92	90	88	86	84	82	80

Where: k(rf) = risk free rate estimated as the Polish government bonds rate of return, k(end) = productivity of endowment kept by social economy entities, DEBT = share of debt in whole social economy entity capital, k(d) = rate of cost of debt financing social economy entity, Indirect expenses = information about expenses of a social economy entity that are not mutually linked with the main goal for which the organisation operates, Endowment share = information how large is the endowment part in capital involved in a social economy entity, Aim performance (AIPE) = rate of performance in realization of the main goal of a social economy entity (according to Polish reality it is not socially accepted if that level is less than 90 %).

Source: own calculations combined with Polish macroeconomic data for 2016.

As we can see, when the accepted level of aim performance is not less than 0.9 (ACCR = min 90 %), then the debt to capital (D/{D+E}) relationship should not be higher than 16 %. That level should be recommended for non-

profit social economy entities under Polish conditions with a risk-free rate of 1.2 % and the average unleveraged cost of debt at a level of 4.0 %. If the risk-free rate will be similar to that in Poland in 2014, i.e. 3 % and the average unleveraged cost of debt at a level of 7.0 %, then the situation with the choice should be the same as that in table 2.

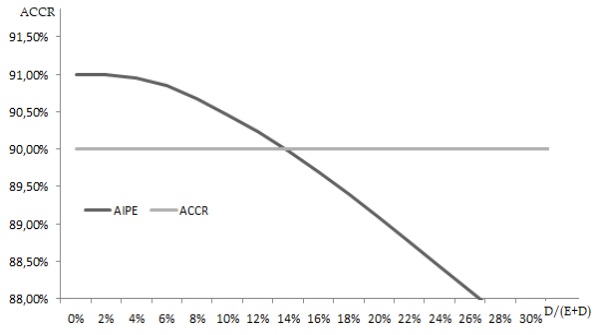

Figure 5. Debt to Capital Rate for 2014 Data

Source: own calculations combined with Polish macroeconomic data for 2014.

Table 2

Debt to Capital Rate Influence on Future Performance in Goal Realisation for 2014 Data

k (rf)	3	3	3	3	3	3	3	3	3	3	3
k (end)	2.0	2.1	2.3	2.4	2.4	2.4	2.4	2.3	2.3	2.2	2.1
Debt share	0	2	4	6	8	10	12	14	16	18	20
k(d)	7	7	7.2	7.3	7.4	7.4	7.6	7.7	7.8	7.9	8
Indirect expenses	11	11	11	11	11	11	11	11	11	11	11
Endowment share	100	98	96	94	92	90	88	86	84	82	80

Source: own calculations combined with Polish macroeconomic data for 2014

As we can see in Fig. 5 and Table 2, when the accepted level of the aim performance (ACCR) is no smaller than 90 %, the debt to capital (D/{D+E}) relationship should not be higher than 12 %. That level should be recommended for non-profit social economy entities under Polish conditions with a risk-free rate at 3 % and the average unleveraged cost of debt at a level of 7 %.

Practical Consequences for Non-Profit Entities

There are the differences in treating the entitlements of people who control entities in prohibiting the distribution of earnings and excess of revenues over expenses of the organisation: Equity type capital providers can expect a return on money in case the business makes an excess of revenues over expenses from operations (Bayaraa, 2017). Non-profit entities do not have the right to issue stock whereas the equity of non-profit entities is issued by donors and persons who have no right to express control over the non-profit organisation (Rahman *et al.*, 2017b; Dubravska *et al.*, 2015). Equity type capital providers of non-profit entities in the case of non-profit organisations generate money or excess of revenues over expenses from operations and can consider future support for the organisation but cannot withdraw the money previously tied in the organisation (Calabrese & Grizzle, 2012; Aregbeyen, 2013). In non-profit entities, there is no equity capital, but non-profit entities collect fund capital, which is the equivalent of equity capital. Fund capital is collected in non-profit entities by earning an excess of revenues over expenses, which are forced by regulation as money, which should be retained within the non-profit organisation. Another source of fund capital is by receiving contributions from individual persons, from private or public entities, and from for-profit businesses. The last possibility to collect fund capital is money from grants received by non-profit entities from governmental entities. Calabrese (2011a; 2011b); indicates that non-profit capital structure choices are best explained using the pecking order theory, which means that in non-profit entities their internal funds are used more likely than external borrowing (Zwolak, 2016).

Non-profit entities act because of expected future advantages measured by the realisation of ideas and missions that are an expression of the donors' vision of the world. Both non-profit and for-profit entities have an aim, which is a result of its owner's preferences (Pope, et. al. 2014). For-profit entities are active because of expected future advantages measured in money; non-profit entities do their business because of expected future advantages measured by the degree of realisation of their mission (Stryckova, 2017; Mura *et al.*, 2017; Duda *et al.*, 2017).

Non-profit entities serve in each area of social activities and depending on their size can be registered or not with the internal revenue authorities. Types of non-profit entities are, for example, educational businesses like universities or schools, healthcare entities like hospitals, and charities working as branches of religious institutions.

Because of the benefits to society generated by non-profit entities most governments allow tax exemptions both for donors and for the non-profits. Such tax exemptions are usually limited only to charitable non-profit organisations which are listed on government records of organisations which meet the tax exemptions policy, often based on the criteria of size, usefulness or helpfulness. The definitions and understanding of those criteria differ from country to country and also depends on the dominant philosophy or religion of the local societies. There are two types of non-profit tax exemption. The first one, less common, is applicable for all money generated as profit. The second one, more popular, is based on the principle that the tax exemption is applicable only to the effect of realisation of programmes or activities which concern the non-profit's main mission; other profits are subject to normal taxation. Such a solution helps to prevent the situation when, under the non-profit banner, full for-profit activity not concerned with social needs and does not help in levelling out the disabilities of weaker participants of social interaction is hidden. Usually, non-profit entities, to retain their tax exemption status, are required to keep all excess revenues for the realisation of their mission of the non-profit organisation. There is not a custom among governments to allow non-profit organisations to pay out money from excess of revenues over expenses to anyone who normally deserves it in for-profit entities. Board members, employees and clients of non-profit entities are excluded from receiving money that is larger than average expenses. Each amount of any money in non-profit entities should be directed to beneficiaries as defined by the mission of the non-profit organisation.

Conclusion

According to our model, Polish non-profit organizations should use debt levels of around 18–20 %. That is a smaller debt level than they use now. According to our survey data, the surveyed non-profits wished to have higher than 30 percent of debt in their capital structure, these are levels also reported in other European studies. Garcia-Rodriguez and Jegers (2017) found that average levels for the EU non-profits analysed in their study are more than 32 percent of debt (for Belgium, Spain and the United Kingdom). In our study, we have used macroeconomic indicators for 2014 and 2016 for the Polish environmental conditions. The 2016 data is the most recent possible data, whereas the 2014 data was the first earlier data which significantly differs from the most recent one.

Polish non-profit entities are an important part of general social policy in the Polish economy. They realise important aims in healthcare, in education and many other socially important areas. When considering any efficiency of non-profit organisations it should be remembered that from the donor perspective, it is important the way the management team uses the resources of the non-profit organisation and if they are used as efficiently as possible. The non-profit organisation efficiency should be considered in the context of risk (Gaver *et al.*, 2016). One of the most important ways to be out of business is the lack of money for the realisation of the aim of the organisation. The paper considered the relationship between debt measures. That relationship was also illustrated for the data of Polish non-profit entities.

Our research goal was reached, and we can conclude that it is possible to determine the capital structure of non-profit organisations if we know the habits among the donors of non-profit organisations and the macroeconomic data from the environment in which the non-profit organisation operates. Thanks to our findings it is possible to be closer to a much more efficient management of non-profit organisation debt, which is necessary to have a much more efficient non-profit sector in society. The policy makers, who should be interested in the efficiency in realisation of the mission of social economy entities, can influence part of the indicators which describe the environment of non-profits and they have the possibility to increase social effects through economic indicator engineering.

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