

Debt Management of Urban Gminas on the Example of the Silesian Voivodeship



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1 Introduction

Under conditions of limited financial resources, activities of local governments have required, since the moment of their reactivation in the 1990s, continuous increasing of their debt so that appropriate investment activities could be undertaken to meet public needs, especially those concerning the development and modernization of the municipal infrastructure. Dafflon and Beer-Tóth [1] stressed that debt has a positive impact on the modernization of local economies. However, in the face of the increasing level of debt, implementation of effective debt management policies is needed, resulting in financing the tasks which are not covered by the entity's revenues, minimizing the financial risk, losing financial liquidity, or reducing debt costs.

As argued by Bitner and Cichocki [2], effective debt management depends on many factors, which include many-year financial planning, organizational methods conducive to management efficiency (presence in the capital market, debt management strategy, rating) and tools supporting effective debt management (debt diversification or use of derivatives). As emphasized by Jastrzębska [3], debt management is a complex process, including planning debt levels, organizing debt processes (financial decisions), managing and continuous monitoring of the level and structure of debt, budget load analysis, and adjustment of debt level to current ratios.

The reasons for approving the deficit budgets by local government units can be linked to the difficulties in achieving revenues at the expected level and impossibility of reducing expenditures. Often, the only solution that can be used to allow for financing the tasks, especially investments, is to approve budget deficit and use returnable sources of financing (revenues). Management of budget deficits and debt

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in local government units is primarily influenced by legal conditions independent of local governments that determine debt thresholds. Also important are the conditions that have an effect on financial standing of the units, determining the economic threshold of debt in local governments [4].

For the purpose of the present study, the focus was mainly (among the above stages of debt management in local governments) on continuous monitoring of debt level and adjustment of debt level to current ratios. It should be noted that the level and structure of debt have been subject to certain legal restrictions over the years, which, since 1990, have been modified for many times. The obligation to reduce and monitor debt reduces the risk of insolvency in the entity or losing financial liquidity. Debt limitation may result, as indicated by Galiński [5], from four concepts: (1) dependence on market factors (e.g. the concepts used in Canada and the USA); (2) cooperation between local governments within a debt control system (Austria and Belgium); (3) the functioning of debt thresholds, which in practice forces the development of debt limitation systems in local governments based on debt ratios (used in many countries, including Poland), (4) administrative control (for example in the Republic of Ireland).

In the beginning of 2014, local government units had to face new conditions regarding the possibilities of financing tasks with debt instruments. A total departure was observed from the debt reduction system based on the general debt ratios (60%) and debt service (15%) and the transition to debt limitation based on the individual debt ratio (IDR) calculated for each local government unit individually, depending on the financial resources held by the unit (in the past). As before, this also represents a universal solution, independent of the type and size of the local government unit [6, 7].

Public debt in a unit of local self-government is a total of financial liabilities due to public expenditures which exceed the revenues which can be allocated to cover these expenditures. Local self-government public debt is inherent in the concept of budget deficit since it is used for, among other things, its financing. In the case of budget deficit, the necessity occurs to finance this part of tasks which are not covered by own revenues. In this case, the previously acquired budget reserves or surplus from previous years can be utilized (if available) or liabilities can be extended in particular financial institutions [8, 9].

It should be emphasized that legal regulations in Poland allowed, until Law on Public Finance as of 27 August 2009 [10] was introduced, for using two limits for debt in local self-government units, i.e. limit of total debt level at the end of financial year and total amount of instalments from credits and loans, potential repayment of amounts due to sureties and guaranties and purchase of bonds and the costs of debt servicing. According to the Law on Public Finance as of 30 June 2005 [11], total amount of debt in local self-government units at the end of financial year could not exceed 60% of the budget revenues, whereas during a financial year, at the end of a quarter, it could not exceed 60% of the revenues planned for the financial year in this entity. The level of debt servicing could not be higher than 15% of the planned budgetary revenues or 12% if state public debt in relation to GDP exceeded 55%.

Owsiak [12] indicated that these limitations have been often criticized both in the related literature and in local government environments. The set limits of debt ratios are the same in all local government units, without taking into account the financial potential of individual units [13].

The new act institutes individual debt ratio for local self-government units. According to new principles, the executive body in local self-government units cannot sign the budget if it causes that in the financial year and in each year following financial year, relation of total amount of debt to planned revenues in total exceeds arithmetic mean for relation (calculated for the last three years) of its current revenues, extended with revenues on selling the property and reduced with current expenditures to the revenues in total within the budget [13, 14].

Legal regulations oblige local government units (LGUs) only to comply with the statutory debt thresholds. However, these units should control debt levels and debt service payments to prevent from the debt trap, thus losing financial liquidity and ability to complete tasks [15]. It is important to maintain the adequate level of financial liquidity that guarantees credit standing of the local government unit, without the risk of debt trap. Such defined indebtedness allows local government units to estimate the level of possible investments and does not lead to overinvestment ([16], p. 27).

Therefore, the aim of this paper was to discuss problems related to the management of debt in gminas (gminas are principal units of territorial division in Poland), especially one of the stages of the debt management process i.e. changes in debt limitation by introducing the individual debt ratio (IDR) from 2014 and its monitoring in the following years. Based on the theoretical investigations regarding the basic aspects of debt management in gminas, the study analysed and evaluated the debt in urban gminas of the Silesian Voivodeship in 2014–2017.

2 Selected Problems of Debt Management in Urban Gminas

2.1 Methodology and Data

The main goal of this study was to identify the degree of debt of urban gminas on the example of the Silesian Voivodeship. The analysis of debt concerned in particular the level of individual debt ratio (IDR). The diagnosis of the level debt of Polish municipal can represent the basis for capturing of specific regularities which can contribute to the improvement in finance management in local government. A research methodology used in the study was the analysis of the acceptable theoretical concepts and financial analysis.

One of the most popular approaches to assess financial standing of local government units in the USA is the Financial Trend Monitoring System (FTMS) developed by the International City/County Management Association (ICMA) in 1980. This system operates based on around 35 indicators for the analysis of variables that have the greatest impact on the financial standing of LGUs [17]. A 10-point test was used

for small LGUs, with the results compared with the benchmark. The calculated ratios were compared with the ratios for other LGUs and they were assigned the appropriate numbers of points. However, one of the most recent approaches uses a method based on 11 ratios categorized into four groups of solvency ratios [18]. It is worth emphasizing that in the USA, different methods are used in different states to measure financial standing and use ratios which represent a combination of financial and demographic indices [19]. In Poland, the Ministry of Finance uses three groups of ratios: the first so-called budget ratios (including 7 types of ratios), indices calculated per inhabitants (3 types of measures), and the last group, containing ratios for liabilities by debtors (four ratios). For the purposes of this study, three ratios were chosen from the first group (share of own revenues in total revenues, self-financing ratio and share of capital expenditures in total expenditures), whereas four ratios were chosen from the last group (share of total liabilities in total revenues, debt service, share of own revenues in total liabilities, share of due liabilities in total liabilities). Furthermore, debt level, individual debt ratio, financial liquidity in cash basis, and operational and total development capability were computed.

The choice of this group of indicators was considered appropriate to verify the research hypotheses:

- The introduction of new legal regulations in the field of limiting the debt level led to a slowdown in the investment activity of urban gminas in the Silesian Voivodeship in 2014.
- Limiting the level of indebtedness of local government units in Poland determined a high level of self-financing of urban gminas in the *Silesian* Voivodeship.
- The policy of indebted urban gminas in the Silesian Voivodeship contributed to the stabilization of the level of financial liquidity.

The problems covered by the research included the assessment of the level of indebtedness based on the reports on the implementation of the budget of urban gminas of the Silesian Voivodeship using the ex-post analysis in dynamic terms. The research period was the years 2014–2017 in order to identify the trends and pace of changes of individual ratios.

The study covered municipalities of one of the most dynamically developing regions in Poland with a high degree of urbanization, industrialization and population density. The Silesian Voivodeship, based on Statistic Poland data, covers 3.9% of the country's area, is inhabited by over 4.5 million people, which represents 11.8% of Poland population, with 369 people per 1 km². GDP per capita in 2017 exceeded 0.50 million zlotys per capita, with the 0.48 million zlotys average for Poland. Silesian Voivodeship is the first in the ranking of 16 provinces in terms of the number of roads and railway lines, and the second in terms of the number of employed people. The municipalities of the Silesian Voivodeship have been chosen to examination on the basis of their willingness to assess the possibility of issue debt, after introduction of the new legal regulations and their impact on the investment policy of an exemplary group of entities. This is a pilot test, further research will be conducted on a larger scale in different regions of Poland and in other types of local government units.

Table 1 The level of debt and liquidity ratio on cash basis of urban gminas in the Silesian Voivodeship in 2014–2017

	2014	2015	2016	2017
The amount of debt [in million PLN]	581.5	623.5	542.1	602.2
Credits, loans and issue of securities [in million PLN]	105.3	98.3	59.9	71.0
Repayment of loan installments, loans and redemption of securities [in million PLN]	77.8	82.7	80.5	76.3
Liquidity ratio on cash basis	1.09	1.09	1.11	1.09

Source: Own study based on data from the Ministry of Finance

It should be emphasized that 2478 gminas are present in Poland, including 302 urban gminas, including 66 cities with powiat status (powiats are principal units of territorial division in Poland of the second level), 628 combined urban and rural gminas and 1548 rural gminas. There are 167 gminas in the Silesian Voivodeship, 49 urban gminas (including 19 cities with powiat status, which accounts for 28.79% of the population of all entities of this type, and 30 urban gminas, i.e. 12.71% of the population). Only urban gminas excluding cities with powiat status were selected for the study. Overall, the study sample included 30 urban gminas located in the Silesian Voivodeship. The analysis was performed using a comparative approach, comparing the computed measures to urban gminas in Poland in total.

2.2 Results and Discussion

The main objective of the research was to assess one of the stages of debt management in local government units i.e. analysis and evaluation of debt ratios of selected local governments in gminas. In this respect, debt level and financial liquidity were first evaluated based on the financial ratio analysis, with detailed data presented in Table 1. Analysis of the data leads to the conclusion that the total debt of the 30 urban gminas in 2014 was 581.5 million zlotys. In 2015, it increased by 7.2% to 633.5 million zlotys, and then it declined by 13.1% in 2016 to 542.1 million zlotys. In 2017, a further rise of ca. 11.1% to 602.2 million zlotys was observed. The highest level of loans generated as part of the returnable budget revenues, credits, borrowings and issued securities was recorded during the period of the year 2014 (105.3 million zlotys). In 2015–2016, a regression (by 7.7% and 29%, respectively) of the examined indicator could be observed (to 59.9 million zlotys in 2016), while in 2017, an increase by 18.5% compared to the previous year was recorded (71 million zlotys). The repayment of credits and loans and the purchase of securities ranged between 76.3 million and 82.7 million zlotys, with the lowest level recorded in 2017, and the highest—in 2015.

Urban gminas of the Silesian Voivodeship were also characterized by low financial liquidity, although it should be emphasized that the incomes and budgetary

revenues allowed for full coverage of budgetary expenditures since financial liquidity in cash terms in all the years represented a value above unity. The average liquidity ratio on the cash basis was shaped for communes in Poland on the level between 1.05 and 1.07, and for urban gminas of the Silesian Voivodeship at 1.09–1.11 in the years 2014–2017. Furthermore, it can be noted that except for 2016, when the indicator was 1.11, it amounted to 1.09 on average in the remaining years. It can therefore be concluded that the introduction of new legal regulations in the field of debt in local governments has led to the stabilization of the financial liquidity ratio in urban gminas in the Silesian Voivodeship. Amplitudes of fluctuations in the examined measure were small in the analysed period of time.

Next, the individual debt ratio (IDR) was evaluated. Table 2 and Fig. 1 present a comparison of the computed measures. The research indicated that since 2014 (which was the first year of obligatory monitoring of the IDR ratio), urban gminas in total, similar to all types of local government units in Poland, have been characterized by upward tendencies for the examined measure. In the case of urban gminas in total, this value ranged from 8.97 to 10.67%, in powiats—from 6 to 7.7% and in voivodeships—from 9.1 to 12.47%. Therefore, it can be concluded that voivodeship governments had the highest capability of incurring and repaying liabilities during the period studied, whereas powiats showed the lowest capability. Compared to gminas in total, urban gminas in the Silesian Voivodeship showed higher values of the examined indicator in each analysed period. The ratio was characterized by a progression from 9.43 to 10.95%.

Analysis of all the urban gminas revealed no negative values of the indicator over the adopted period of study. In 2014, the IDR ratio of 0–5% was generated only in 5 in 30 urban gminas (Poręba 1.84%, Wojkowice 3.29%, Pyskowice 3.86%, Mikołów 4.4%, Szczyrk 4.68%). In 2015, this was the case in two gminas (Mikołów 2.93%, Będzin 3.36%), whereas in 2016—only in one (Mikołów 4.4%). In 2017, all the units had much higher IDR values, with only one urban gmina of Knurów exceeding 23.7%. High values of individual debt ratio were also found for the gminas of Lubliniec (17.24%) and Imielin (18.8%). It can also be noted that the ratio over 10% was found in 15 urban gminas in 2016, and in 14 urban gminas in 2017. This demonstrates greater opportunities of the entities studied to use foreign capital to finance development activities.

A deeper analysis of the IDR ratio is provided by referring to four ratios illustrated in Table 3. It should be noted that the first two ratios represent previous obligatory thresholds of indebtedness, which had to be respected by local government units as part of their debt policies. The share of total liabilities in total revenues, which were not allowed to exceed 60% by the end of 2013, showed a constant decline in the analysed urban gminas of the Silesian Voivodeship. From 26.1% in 2014, this value decreased to 19.1% in 2017.

Slightly higher average values were generated in urban gminas in total, although they were also characterized by a downward tendency, decreasing from 32.1 to 22.7%. The burden of revenues with debt service expenditures for urban gminas in total decreased from 5 to 3.6%, whereas for gminas of this type in the Silesian Voivodeship, this value declined from 4.4 to 3.1% in 2014–2017. However, it

Table 2 The level of individual debt ratio (IDR) of urban gminas

	2014	2015	2016	2017
IDR voivodeship total [%]	9.1	9.7	11.1	12.47
IDR powiat (polish counties) total [%]	6	6.23	6.77	7.7
IDR gminas total [%]	9.11	9.78	10.3	10.45
IDR urban gminas total [%]	8.97	9.7	10.4	10.67
IDR urban gminas in the Silesian Voivodeship total [%]	9.43	10.04	10.85	10.95
BĘDZIN	5.09	3.36	5.31	6.84
CZELADŹ	6.75	7.67	8.91	9.57
WOJKOWICE	3.29	5.18	6.61	6.47
SŁAWKÓW	9.73	9.17	10.26	6.87
SZCZYRK	4.68	6.99	13.84	13.87
CIESZYN	7	6.07	6.08	6.74
USTROŃ	14.13	13.44	13.09	12.9
WISŁA	10.19	10.72	11.66	11.9
KNURÓW	14.05	21.82	22.9	23.74
PYSKOWICE	3.86	5.17	6.75	7.94
LUBLINIEC	15.08	16.6	17.12	17.24
ŁAZISKA GÓRNE	9.47	10	9.92	9.07
MIKOŁÓW	4.4	2.93	4.45	5.57
ORZESZE	5.23	6.6	8.94	9.2
MYSZKÓW	8.74	9.29	10.75	10.97
RACIBÓRZ	12.11	12.26	12.61	11.5
KALETY	17.37	16.45	15.76	13.97
MIASTECZKO ŚLĄSKIE	11	12.13	11.47	11.27
RADZIONKÓW	16.42	13.6	13.57	13.04
TARNOWSKIE GÓRY	7.41	9.31	10.1	10.17
BIERUŃ	8.75	8.9	10.99	14.64
IMIELIN	14.31	15.06	17.63	18.8
ŁĘDZINY	15.15	16.77	13.07	13.87
PSZÓW	10.51	9.8	12.61	10.2
RADLIN	13.64	10.6	8.18	6.3
RYDUŁTOWY	9.49	9.02	6.41	9.97
WODZISŁAW ŚLĄSKI	7.9	9.36	11.05	10.4
PORĘBA	1.84	5.38	7.41	7.1
ZAWIERCIE	8.66	8.88	8.82	9.24
ŻYWIEC	6.68	8.83	9.12	9.14

Source: Own study based on data from the Ministry of Finance

should be emphasized that in the first three years, this ratio showed no significant changes, since the amplitude of fluctuations did not exceed 0.1%. In conclusion, the introduction of new legal regulations in the area of debt thresholds resulted in the reduction of previous obligatory indicators, with the largest decrease recorded in 2017.

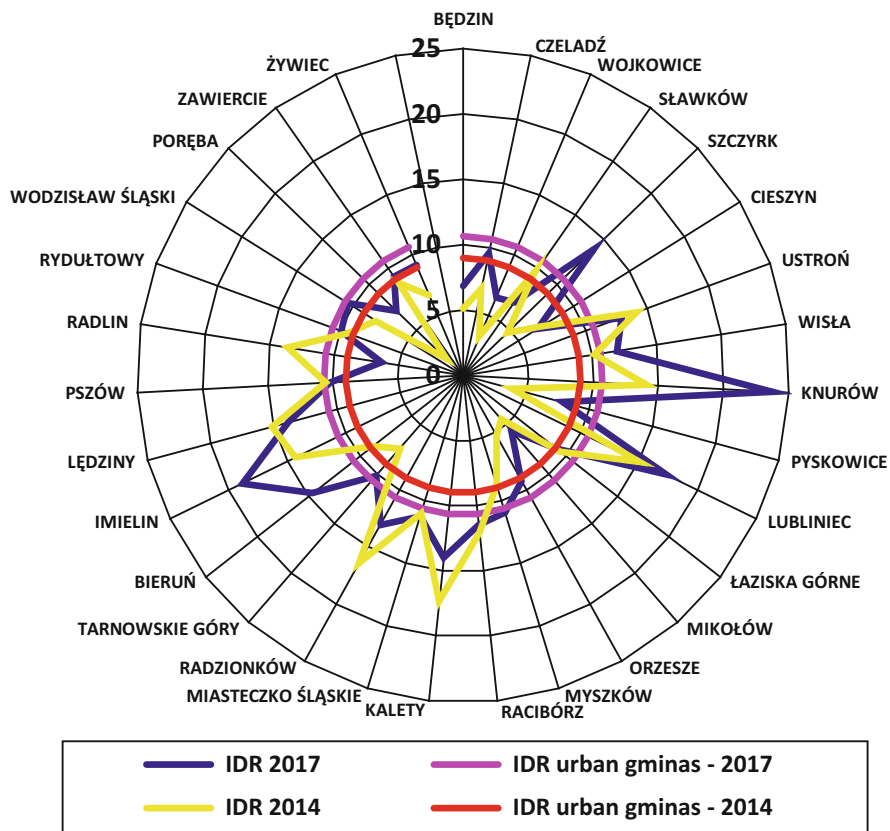


Fig. 1 Individual debt ratio of urban gminas in Silesian Voivodeship and urban gminas total.
Source: Own study based on data from the Ministry of Finance

Table 3 The level of debt ratio of urban gminas in 2014–2017

		2014	2015	2016	2017
Share of total liabilities in total revenues [%]	Urban gminas total	32.1	29.6	23.9	22.7
	Urban gminas in the Silesian Voivodeship total	26.1	26.0	20.9	19.1
Debt service [%]	Urban gminas total	5.0	5.0	4.3	3.6
	Urban gminas in the Silesian Voivodeship total	4.4	4.4	4.5	3.1
Share of own revenues in total liabilities [%]	Urban gminas total	8.6	8.7	8.2	7.1
	Urban gminas in the Silesian Voivodeship total	6.8	6.7	7.8	5.2
Share of due liabilities in total liabilities [%]	Urban gminas total	1.2	0.9	0.8	0.3
	Urban gminas in the Silesian Voivodeship total	1.5	1.4	0.5	0.5

Source: Own study based on data from the Ministry of Finance

Urban gminas experience fewer problems with the repayment of due liabilities. Their share in total liabilities was reduced from the level of 1.2% in 2014 to 0.3% in 2017. For urban gminas of the Silesian Voivodeship, these values were 1.5% and 0.5%, respectively. When assessing the burden of revenues with debt service expenditures, it can be emphasized that the ratio showed regression, with the expenditures on debt service having lower burden on revenues in urban gminas of the Silesian Voivodeship (5.2–6.8%) compared to urban gminas in total (7.1–8.6%). The difference between them in the analysed years was about 2%, except for 2016 (0.4%). It should also be noted that in 2014–2017, the share of own revenues in total revenues also decreased, which is shown by the data contained in Table 3.

The financial independence ratio concerning generating revenues in urban gminas in total ranged from 52.5 to 59.2%, whereas in such entities in the Silesian Voivodeship, this value was from 59.2 to 64.4%. In both examined groups of gminas, a downward tendency was observed for the indicator, although it can be stressed that these values were high, illustrating a high financial independence of the analysed entities, which to a lesser extent used financing within transfers from the statutory budget (total subsidies and specific grants).

Assessment of the impact of debt on the budget management in urban gminas should also refer the level of the individual debt ratio to the level of self-financing, investment activity and development potential (Table 4).

The high share of operating surplus and property revenues in total property expenditures was observed in the first three years and showed progression from 124.8% to 177.1% in the case of urban gminas in total and from 138.7 to 176.9% for urban gminas of the Silesian Voivodeship. Unfortunately, the investment activity of urban gminas was slower in this period. Despite the substantial self-financing opportunities, the share of property expenditures in total expenditures of urban gminas decreased from 15.9 to 10.3%, whereas in urban gminas in the Silesian Voivodeship, this decline was from 17.4 to 10.8%. This situation was caused by both the operational and total capability of the entities to develop, which was also characterized by a downward tendency throughout the period studied. The potential of the urban gminas of the Silesian Voivodeship to generate operating surplus from current revenues decreased in the analysed years from 10.68% in 2014 to 7.5% in 2017 and did not differ significantly from mean values for urban gminas in Poland in total. Total development capacity of the examined urban gminas ranged from 11.62 to 17.32%, whereas in the four years of the analysis compared to 2014, it decreased by 5.7%. Nevertheless, urban gminas showed greater capabilities of development and performed very moderate investment activities. They did not take full advantage of their development potential.

Table 4 The level of budget ratio of urban gminas in 2014–2017

		2014	2015	2016	2017
Share of own revenues in total revenues (financial independence indicator) [%]	Urban gminas total	59.2	59.3	53.6	52.5
	Urban gminas in the Silesian Voivodeship total	66.4	66.3	59.5	59.2
Self-financing ratio (share of operating surplus and property revenues in total property expenditures) [w%]	Urban gminas total	124.8	156.8	177.1	124.6
	Urban gminas in the Silesian Voivodeship total	138.7	148.6	176.9	114.8
Share of capital expenditures in total expenditures [%]	Urban gminas total	15.9	14.2	10.3	13.2
	Urban gminas in the Silesian Voivodeship total	17.4	15.3	10.8	13.3
Operational development capability (share of operating surplus in operating revenues) [%]	Urban gminas total	8.76	9.22	8.89	7.92
	Urban gminas in the Silesian Voivodeship total	10.68	9.11	8.58	7.5
Total development capability (share of operating surplus and property revenues in total revenues) [%]	Urban gminas total	16.33	16.12	13.81	12.98
	Urban gminas in the Silesian Voivodeship total	17.32	15.68	14.34	11.62

Source: Own study based on data from the Ministry of Finance

3 Conclusion

In order to develop, local government units cannot operate only based on the principle of self-financing. Therefore, external measures are becoming an integral element of the supply system. It is worth emphasizing that a chronic problem of asymmetry between the amount of funds available and the scope of tasks conducted leads to specific consequences, including, in addition to the effect of ousting investment tasks by current tasks and abandoning taking certain actions recognized at a given moment (subjectively) as of low priority, the increase in debt level should be mentioned as first [20]. The use of debt instruments by local government units occurs according to legal regulations, which have an effect on the level of local government debt, including the level of debt service liabilities [3]. The abolition of the debt level limits in local government units and the introduction of a limit only for payments for debt service in individual years covered by the debt forecast should encourage local government units to effectively manage debt (its level and service costs). In practice, debt limitation may encourage some LGUs to increase off-budget

debt, which remains outside the scope of monitoring and control of supervising bodies (hidden debt), in order to increase debt at high costs and risks [21].

Important elements of the LGU debt management process include continuous monitoring of debt level, budget burden analysis, and adjustment of the debt level to currently used ratios. Debt ratio analysis in local governments in gminas takes into account changes in time, environmental factors, multidimensional relations, and both explicit and implicit liabilities [18]. The debt ratio analysis conducted in the study for urban gminas of the Silesian Voivodeship confirmed that the introduction of new legal regulations in the field of limiting the debt level led in the first three years of 2014–2016 to a slowdown in the investment activity despite the fact that the opportunities for using foreign capital were increasing, and the self-financing rate allowed for involvement in investment activities to a broader extent. Moderate investment policies and budget surpluses resulted in accumulation of budgetary funds, which is confirmed by the high level of self-financing ratio in urban gminas. While monitoring debt thresholds, local governments in gminas were unwilling to engage in investment policies, thus limiting the risk of overinvestment. However, this led to stabilization of financial liquidity on a cash basis. It was only in 2017 that the trend was reversed and investment expenditures were escalated, with the simultaneous increase in individual debt ratio. However, this period was marked by the decreasing financial independence in terms of generating revenues, self-financing level, and operational and total development capabilities.

As argued by Poniatowicz et al. [22], the need for the use of repayable financial instruments in LGUs was associated with the deficiency of funds to finance all planned budget expenditures or disbursements. Dylewski [7] emphasizes, however, that access to fund was reduced due to individual debt limitations. Local government units have to more effectively adapt their financial policies to individual budget periods, adopting a more perspective rather than an ad-hoc approach.

Jastrzębska [23] also postulated that the increase in investment activity of local government units, resulting from the increasing social needs, striving to reduce the development gap and using the European funds, may lead to overinvestment. Furthermore, the extending the scope of tasks imposed on LGUs, rising public service costs in the absence of adequate financial compensation from the state budget, the slowdown in LGU revenue growth, unfavourable modifications of the tax system, increasing tendencies to adopt liberal local tax policies and low efficiency of debt enforcement led to the tendencies of LGUs to increase debt, with the necessity to implement effective debt management.

In conclusion, debt management policies in urban gminas cannot be considered efficient, especially because the conditions were not conducive to taking effective actions in this area. As demonstrated in the study and assuming that effectiveness is synonymous with maximization of effects, and that the effects can be measured by the number and size of tasks, particularly of an investment nature, these activities were substantially limited in 2014–2016. This observation is confirmed by e.g. computed investment activity ratios, which in the case of urban gminas of the Silesian Voivodeship were characterized by regression in the first three years. It should be noted that a specific level of effects cannot be achieved at decreasing

expenditures (investment expenditures in this case). However, the year 2017 was a period when the opportunities for generating debt were improved, leading to a recovery of investment activities in urban gminas after three years of regression, especially in the gminas of the Silesian Voivodeship.

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