## Borrowing dynamics of Hungarian local governments – a decade of experience

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In-depth explorations of Hungarian local governments' financial dynamics before 2010 and the factors influencing their indebtedness have been extensively presented in the literature. This trajectory led to debt consolidation and the centralisation of municipal responsibilities. Simultaneously, the central government aimed to mitigate public finance risks at the subnational level through active and passive regulatory measures. This study presents a comprehensive overview of the financial landscape, credit demand, and credit supply within the subnational sector over the last decade. Utilising a unique database comprising government decisions on local government borrowing requests spanning 2012 to 2022, we analyse the lending processes and criteria shaping government decisions. Our findings demonstrate the effective accomplishment of public finance objectives with local government debt notably below the European average and to the rate of the indebtedness slowing to one-third of its previous level. From a banking perspective, the local government sector's role has shifted from active to passive lending, primarily driven by liquidity management considera-However, the economic witnessed in 2022 and the significant budget deficit that year highlight the risks associated with an excessive reliance on central transfers. While the active oversight of local government credit transactions has successfully counterbalanced the positive effects of debt consoledation on credit supply, it is crucial to acknowledge that beyond public finance considerations, political favouritism also influences the approval of loan transactions.

#### **Keywords:**

general government, local government, credit market, banks, political favouritism

#### Introduction

In 1996, the World Bank conducted an examination of Organization for Economic Co-operation and Development (OECD) countries to evaluate the borrowing practices of subnational governments. The investigation yielded numerous significant findings and proposed potential models for local government borrowing, along with frameworks for both active and passive control mechanisms (Ter-Minassian 1996, Ter-Minassian-Craig 1997). Over the quartercentury since these studies, significant changes in operational dynamics have occurred at subnational levels in previously examined countries, notably within the local government sector in Hungary.

Hungary's indebtedness to the local government system is rooted in the circumstances surrounding its establishment. Despite the decentralised delegation of tasks in the early 1990s, fund allocation adhered to a centralised principle. This ambivalence resulted in insufficient funding for public services, perpetuating a continuous operational deficit at the sector level, while the decentralisation of the central budget deficit and public debt turned the subnational level into a *conflict container* within public finances (Vigvári 2010). After 2007, the Hungarian local government system faced compelled adjustments with the introduction of the new Act on Local Governments and the Act on Economic Stability, which outlined fiscal rules for municipalities. Consequently, unlike many OECD countries, Hungary embarked on a trajectory of recentralisation (OECD 2022).

Our study examines the interplay between new borrowing rules (comprising both active and passive controls) implemented in 2011 alongside the distinctive features of local government funding and market mechanisms. We explore how these factors collectively shape the landscape of credit supply and demand and ultimately define the indebtedness characteristics of local governments over the past decade. Our contribution to the literature lies in concentrating on both the direct and indirect consequences of legislative changes: while previous research analyses the indebtedness and budget deficit of the subnational sector (e.g. Rodden 2002, Cabasés et al. 2007, Afonso-Hauptmeier 2009, Martinez-Vazquez-Vulovic 2017), to our knowledge, no previous research has evaluated the impact of fiscal rules on credit demand and supply. Furthermore, active controls on municipal borrowing allow the central government to make discretionary decisions, providing an opportunity to scrutinise the factors influencing the government approval of municipal borrowing applications. Consequently, we introduce a probit regression model that incorporates the key loan parameters (amount and maturity) and the financial standing of the municipality as a debtor (financial capacity, own revenue, and indebtedness) while also considering the role of political relations.

First an in-depth review of the literature on the regulatory mechanisms governing capital market relations at the subnational level is conducted. This encompasses insights from international experiences and European examples, along with an

exploration of the relevant dimensions of political favouritism. Then a comprehensive overview of the Hungarian local government system from a lending perspective is provided. Subsequently, we provide a comprehensive overview of the research questions, dataset employed, and methodology applied. Next, results are presented, and it is followed by the discussion. Finally, conclusions are drawn.

#### Literature review

#### Capital market relationships at the subnational level

Borrowing principles at the subnational level are established by the golden rule (Musgrave 1959), which is based on the possibility and necessity of spreading the financial burden of borrowing over time. According to the golden rule, only investment expenditures can be financed by long-term debt, whereas debt services may be funded only by current revenues (Dafflon 2010). This condition is the basis for ensuring that borrowing does not lead to asset misappropriation, municipalities do not enter a debt spiral, and local debt does not pose further public financing risks. In practice, it lays the theoretical foundation for cash-flow-based financing in municipal finance. The source of repayment for such a project loan could be the project's own revenue generated by itself. Another source of debt services may be the introduction of a new tax, an increase in the rate of previously levied taxes, or income from asset disposal. Another important issue in project development is the need for ongoing financing, which should also be funded by the current revenue. Vigvári (2011) determines the amount of credit that does not threaten solvency using the term financial capacity, originally formulated by Gurley and Shaw (1955). Therefore, sustainable financial management requires that current revenues not only cover current expenditures but also encompass the annual debt service of outstanding loans (net operating income).

International Monetary Fund (IMF) studies on the regulation of local governments' indebtedness (Ter-Minassian 1996, Ter-Minassian—Craig 1997) distinguish four distinct models. The first is the *sole or primary reliance on market discipline* model, in which there is no need for regulation, as the model builds on the competitiveness of municipalities. The stronger the model, the more obvious the absence of an implicit government guarantee (Barati 2002). Under the model of *cooperation by different levels of government in the design and implementation of debt controls*, borrowing is subject to central authorisation. The literature distinguishes between two basic approaches. In the case of *active controls*, borrowing must be approved in advance by the central government or through a local referendum, while in the case of *passive controls*, a benchmark value or a maximum amount of credit may be set, or borrowing may be limited solely to investment purposes (Győrffi et al. 2009). State-supported guarantee institutions or credit insurance companies may provide guarantees over

municipal liabilities. The *rules-based controls model* is typically introduced in countries where excessive debt is limited by law. Finally, in the *administrative controls* model, the level of indebtedness is decided by the leaders of local authorities in agreement with the central government. The choice between the models is determined by local characteristics, particularly by country-specific evolution of the local government system. However, implementation typically involves a combination of these techniques (Kopányi–Vigvári 2003).

#### International experience

Research focusing on international practices of regulating municipal indebtedness (Halmosi 2005, Vigvári 2011) shows that among European Union (EU) member states, active control - that is, the requirement of government approval for borrowing - was present in both federal (e.g. Austria, Germany, and Spain) and unitary states (e.g. Slovenia, Romania, Portugal, and Ireland). Martinez-Vazquez-Vulovic (2017) synthesises previous research on the effectiveness of subnational borrowing rules by dividing active and passive approaches into two additional groups. Ex ante rules pertain to the preemptive regulation of borrowing activities and municipal spending. Within this framework, market discipline seeks to harness the regulatory influences of market mechanisms. An effective approach to achieve this goal involves evaluating municipalities, which is often facilitated by the engagement of external credit rating agencies. A prevalent example is when local authorities institute rules for themselves, as seen in Canada and the United States. Another category of ex ante methods comprises fiscal rules, primarily imposed by central governments and enshrined within constitutional or legislative frameworks. These rules encompass borrowing and debt ceilings, expenditure restraints, adherence to the golden rule, and constraints on debt repayment capacity. Switzerland is a notable example of such an approach. A third group employs administrative regulations that may involve setting limits on subnational government debt stocks, imposing annual or more frequent borrowing limits, prohibiting external borrowing, or centralising all government borrowing and subloaning at the subnational level. Countries such as Denmark, Greece, Ireland, Mexico, and the United Kingdom have implemented these systems. The fourth group adopts a cooperative approach, in which control over subnational borrowing is established through negotiation between central and subnational governments, as exemplified by the cases of Australia, Belgium, and Austria. Ex post rules are a set of predefined measures for mitigating and spreading default risk within which judicial and administrative approaches can be distinguished. The most important advantage of the judicial approach is that it can neutralise the possibility of political pressure, contrary to the administrative approach, where higher levels of government can intervene to resolve the insolvency of a local government, which can ultimately lead to the softening of

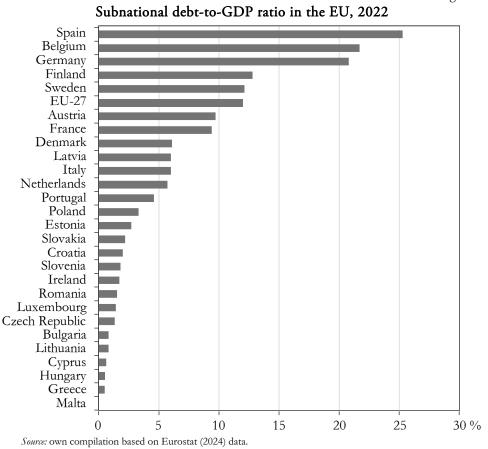
budget constraints. Brazil is an example of the latter, whereas South Africa and the United States are examples of a combination of the two.

However, the empirical research has provided a mixed picture of the effectiveness of these practices. Dufrénot et al. (2010) find that the introduction of the golden rule in France was not effective in controlling subnational indebtedness. In contrast, the introduction of institutional borrowing rules in Spain has contributed significantly to strengthening fiscal discipline (Cabasés et al. 2007). Afonso-Hauptmeier (2009) conclude that the fiscal rules introduced in the EU have contributed to positive developments in fiscal balances and public debt, however, they had little effect at the subnational level. A similar finding is reported by Fornasari et al. (2000), who investigated more than 30 developed and developing countries. Rodden (2002) argues that local governments tend to be more indebted in countries with stronger dependence on central transfers; therefore, subnational borrowing rules may be appropriate. Similarly, Asatryan et al. (2015) find that greater municipal autonomy is associated with higher fiscal discipline. Overall, the impact of institutional constraints and rules on subnational budgets and borrowing lacks a definitive explanation. Nonetheless, there is consensus regarding the necessity of differentiating between borrowing for long-term investments (projects) and borrowing for operational expenditures (public services). In line with theoretical perspectives, subnational borrowing should ideally be directed towards enhancing infrastructure development and fostering transparency in governance and operations at the local level (Martinez-Vazquez-Vulovic 2017).

#### European examples

The average debt-to-GDP ratio for the EU countries is 12% in 2022. However, most countries fall below this average, with the Czech Republic, Slovakia, Hungary, Romania, Slovenia, Greece, Poland, Bulgaria, Portugal, Ireland, Lithuania, Luxembourg, Malta, Cyprus, Croatia, Estonia, and Portugal exhibiting debt-to-GDP ratios below 5% (Figure 1). Among these countries, Romania, Slovenia, Portugal, and Ireland had active controls (government approval for municipal borrowing) even before 2010 (Vigvári 2011), which may explain the low level of indebtedness. European reforms spanning 2010 to 2020 indicate divergent trends among EU countries, with some undergoing decentralisation processes (e.g. France, Greece, Lithuania, Sweden), while others have witnessed recentralisation, as exemplified by Slovenia, the Netherlands, Hungary, and Ireland. Furthermore, various countries have implemented measures to regulate subnational indebtedness as outlined by the OECD (2022). The Fiscal Governance Database managed by the Directorate General for Economic and Financial Affairs indicates that fiscal rules have generally been strengthened across the EU since 2012 (EC 2024).

Figure 1



In 2017, the Czech Republic introduced debt rules for municipalities under which the gross debt of local governments could not exceed 60% of the four-year average revenues. If this target is not met, the revenue of the municipality or region could be reduced by 5% of the difference. Municipalities may also borrow from commercial banks, the State Environment Fund, and the Ministry of Agriculture and can issue bonds with the approval of the Ministry of Finance.

In Slovakia, borrowing and bond issuance by subnational governments are subject to the golden rule, which is further limited by regulations on debt service (interest and principal repayments on loans cannot exceed 25% of the previous year's current revenue) and on the debt ceiling (the total debt of a local government cannot exceed 60% of its total current revenue). If the debt ceiling is exceeded, the local government is subject to a fine of 5% of the overrun. Since 2018, the rules on fiscal balance have also been tightened; above a certain level of public debt, the central government and municipalities can only adopt a balanced or surplus budget.

In Greece, borrowing is subject to the golden rule; however, existing loans can be redeemed on better terms. To regulate indebtedness, a cap on debt service (interest payments cannot exceed 20% of annual income) and a debt ceiling (total debt cannot exceed 60% of annual income) have been set. Borrowing was subject to the approval of the Minister of Finance. Municipalities are not permitted to issue bonds.

In Poland, the borrowing rules introduced in 2014 stipulate that local government debt servicing cannot exceed the sum of the operating surplus and the three-year average of privatisation revenues. Local government debt is capped at 60% of GDP.

In Bulgaria, borrowing is subject to the golden rule and restructuring existing debt, paying off municipal guarantees, and financing PPPs are allowed. Municipalities can raise external funds not only from banks but also from the central budget (e.g. interest-free loans, financial leasing) and from the 'Fund for Local Authorities and Governments (FLAG) in Bulgaria', which provides funds to implement EU programmes.

In Croatia, municipalities can borrow under the golden rule with prior consent from the government. Two limits were introduced to regulate indebtedness: there is a ceiling on borrowing for the entire local government sector (2.3% of the previous year's current revenue), while the borrowing of each municipality is also capped (20% of the previous year's current revenue).

Figure A1 in the Appendix maps the EU countries considering the subnational debt-to-GDP and expenditure-to-GDP ratios, where the two axes illustrate the EU-27 average. In addition, we colour-coded the controls for local government management introduced in each country. The pattern shows that countries with active controls introduced before 2010 (green) or where active controls (blue) or passive controls (orange) were introduced between 2010 and 2020 are dispersed below the average debt-to-GDP ratio. Their share of the public budget is also low relative to the average of Nordic or federal states. The debt-to-GDP ratio of Hungarian municipalities was the third lowest in the EU, and recentralisation also led to a significant reduction in expenditure-to-GDP compared to 2010.

#### Active government control and political favouritism

The *centrally regulated model* bears significant relevance in the context of our research, as it embodies active controls that delegate decision-making authority to the central government. This model is noteworthy not only for its impact on public finance but also for its ability to integrate political considerations into decision-making processes. In the domain of political favouritism, existing literature commonly explores how governments attempt to influence electoral outcomes in a certain district (Lindbeck–Weibull 1987, Ward–John 1999, Case 2001, Johansson 2003) or reward core supporters (Cox–McCubbins 1986) through targeted central subsidies or discretionary decisions. However, a growing body of research has recently focused on the role of local government leadership in the decision-making processes. For

instance, Migueis (2013) demonstrates that in Portugal, municipalities led by politically aligned leaders received 19% more discretionary grants between 1989 and 2001. Solé-Ollé–Sorribas-Navarro (2008) and Bracco et al. (2015) find similar results for local governments in Spain and Italy. Another strand of research focuses on the link among fiscal discipline, indebtedness, and the political alignment of local governments. Vicente Lama et al. (2017) identify the relationship between political affiliations and changes in the debt ratio. Analysing the international credit ratings of subnational governments in Mexico, Hernández-Trillo et al. (2009) discover that, in addition to population size, the share of own revenue, the value of investment projects, and the degree of alignment with the current government also positively influence the rating of the municipality.

Several studies have explored the Hungarian case. Kornai (2014) investigated the role of political alignment in debt consolidation, and the impact of informal relationships on central decisions is presented by Jelinek (2020), while others analysed the role of political competition and partisanship in central grant allocation (Gregor 2020, Vasvári 2022a), and the political patterns of government decisions on municipal borrowing (Vasvári 2020). Muraközy–Telegdy (2016) scrutinise EU grant decisions and found that aligned municipalities were more likely to receive favourable decisions. However, Vasvári (2024) concludes that the channels of political favouritism (i.e. whether core supporters, mayors' alignment, or MP's political affiliation are decisive) may also depend on the grant scheme. Following the 2019 municipal elections, political favouritism in municipal financing issues became more pronounced; however, the central government sought to divert attention by addressing issues such as the pandemic (Reszkető et al. 2022, Kovarek–Dobos 2023, Vasvári–Longauer 2024) or the energy price shock (Vasvári 2022b), further disadvantaging opposition municipalities.

# Evolution of active and passive control mechanisms in Hungary Period of adjustment (1990–2010)

Following the transition in 1990, the regulation of local governments' indebtedness included some elements of a rule-based approach, specifying that annual debt commitments must not exceed 70% of their revenue minus current liabilities (Ötv. 1990). The law also stipulated that the central government would not guarantee the obligations of local governments. Additionally, the simultaneous introduction of the *debt settlement* process strengthened financial discipline and market control by regulating excessive indebtedness and inoperability. The law defined the rules for the initiation of the process, the rules of debt settlement between the municipality and creditor, the conditions of reorganisation, and even the mandatory public tasks to be delivered during the process (Jókay–Veres-Bocskay 2009).

Studies describing the municipal lending market concluded that domestic practices tended to follow a market-regulated model before 2010 (e.g. Homolya–Szigel 2008, Vigvári 2009a, 2009b). Gál (2011) argues that the inherent risks of municipal operations signalled that compliance and enforceability of the statutory borrowing limit were not assured, which allowed indebtedness at the expense of future generations. Gál (2010b) also introduced the concept of internal indebtedness into the literature, which refers to liabilities arising from the replacement cost of the depreciation of assets. Further aspects of indebtedness come from contingent liabilities related to guarantees for municipality-owned enterprises, guarantees for PPP projects, severance payments, and early retirement pensions. All of these components contributed to the actual indebtedness of the subnational sector (Gál 2010a, 2010b, Hegedűs–Tönkő 2007).

#### Consolidation and recentralisation after 2011

The new local governance system introduced in 2011 is based on the principles of sound management and sustainable operations. One of the first steps was to erase the entire subnational debt by fully repaying or assuming local liabilities (e.g. loans and bonds) in the total amount of HUF 1,369 billion (EUR 3.6 billion). Simultaneously, a new Act on Local Governments was enacted in 2011, which introduced significant changes across various domains (Mötv. 2011). First, a significant part of public service provision (e.g. county institutions, fire brigades, and municipal hospitals) was taken over by the central government in 2012, amounting to HUF 523.5 billion (EUR 1.4 billion). Additional public tasks were centralised as of 1 January 2013 such as in the case of the Klebelsberg Institution Maintenance Centre taking over responsibility for primary and secondary education (Kákai-Vető 2019). In addition, beginning in 2013, the financing system, mainly based on block grants, was replaced by task-based allocation of funds, while in four priority areas (administration, pre-school care, social care, and childcare), central grants were calculated by considering the number of employees. Since 2011, county municipalities have no longer been tasked with public services; instead, their role has shifted to the coordination of territorial development (Rechnitzer et al. 2019). Administrative responsibilities have been transferred to the newly created district government offices. The recentralisation of public service delivery has led to a substantial reduction in local funds, intensifying reliance on central transfers and diminishing the sovereignty of municipalities. The redistributive nature of the local business tax, coupled with legislative constraints on how it is spent, further constrains financial flexibility. The solidarity contribution paid by larger municipalities to the central budget further depletes local funds (Vasvári 2021). Collectively, these changes have resulted in a noteworthy decrease in the subnational expenditure-to-GDP (from 12.4% to 5.9%; see Figure A1 in the Appendix) and the overall public finance weight of the municipal sector in the last decade.

<sup>&</sup>lt;sup>1</sup> For a detailed analysis of the consolidation process, see Lentner (2014) and Berczik et al. (2019).

Several studies have examined and expressed views on these reforms. Kornai (2015, 2016) considers the changes a U-turn and interprets the reforms as clear recentralisation accompanied by a loss of autonomy for local governments. Hegedűs-Péteri (2015) argued that the restructuring of the local government system may set back socio-economic modernisation and further increase inequalities between local governments.<sup>2</sup> Empirical research by Jelinek (2020) also highlights that although a new governance model has been built, the true maturation of local governments in fiscal terms has not occurred; instead, local governments have been kept in grip by the central government. Lentner (2014) studies debt consolidation and stresses that imposing hard budget constraints on local governments is not a precondition for the balanced operation of the sector. He also argues that the main drivers of debt consolidation can be traced back to regulatory deficiencies and weak and decentralised fiscal policy. In contrast, Jankovics (2016) and Horváth (2014) argue that broad and unconditional debt consolidation is not prompted by substantial sectoral financial issues. Instead, they contend that the misleading portrayal of a crisis and the perceived necessity for intervention were orchestrated to cloak the underlying motives for sector restructuring. Bethlendi et al. (2021) examined whether stronger centralisation could soften budget constraints. Through cluster analysis, they conclude that centralisation benefits both weak and medium-sized municipalities with low liquidity without triggering the mechanisms of soft budget constraints. However, Vasvári (2022a) notes that debt consolidation may send a message to the municipal lending market that, in the case of financial problems, the central government is willing to bail out local governments.

#### The era of rule-based indebtedness in Hungary

To avoid re-indebtedness, several measures were put in place to control the borrowing activities of local governments, following the principles of cooperation by different levels of government in the design and implementation of debt controls model. At its core is a legislative triangle of the Local Government Act, the Fundamental Law (2011), and the Economic Stability Act to ensure economic and sustainable operations at the local level. Accordingly, a combination of active and passive control elements was implemented. Any borrowing or long-term commitment is subject to certain conditions and to the consent of the central government. According to Martinez-Vazquez-Vulovic (2017), active control falls into a group of administrative regulations within ex ante rules. Among passive controls, an ex ante budgetary rule is introduced, prescribing that no operating deficit may be planned. Fiscal rules include a cap on annual debt service (it may not exceed 50% of its own revenue), the municipality intending to borrow has to levy local taxes, and borrowing may be incurred primarily for development purposes, in line with the golden rule (Pocsai 2023). The Act on Debt Settlement Procedure (Har. 1996) serves as the fourth pivotal element

 $<sup>^{2}</sup>$  See Kóti (2018) that evaluates the public employment system introduced in 2011.

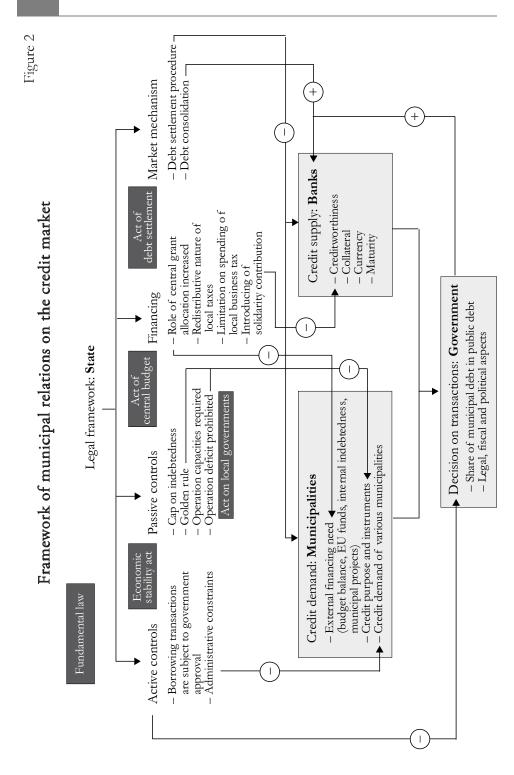
overseeing indebtedness, functioning as a focal point in regulating market dynamics between municipalities and creditors, and is classified as an *administrative approach* under *ex post* rules. This legislation remained practically unchanged during the municipal reform, with its first major amendment occurring only at the end of 2023 (Har. 2023). Among the main changes are the definition of the minimum debt for which proceedings can be initiated and the authorisation of the municipal trustee in bankruptcy to sell existing assets to creditors. Another crucial aspect is that during the two years following the debt settlement procedure, the local government's financial management undergoes rigorous oversight (maintaining the current account exclusively with the Hungarian State Treasury and the appointment of a budget commissioner to the local government), the municipality is excluded from participation in development tenders, and there is a possibility of withholding the salaries of the local decision-makers, such as the mayor and council representatives.

#### Research questions and methodology

#### Research questions

The revamped Hungarian local government model exercises control over financial management and borrowing opportunities using a comprehensive approach. These include a combination of active and passive elements, restricted opportunities stemming from the financing system, and adherence to market mechanisms, as depicted in Figure 2.

The left-hand side of the graph shows active and passive controls. The latter largely determine the structure of credit demand (credit purposes and instruments) and range of borrowers. This may be further constrained by the multistep preparation and approval processes required for government decisions, which may create administrative hurdles for smaller municipalities. The introduction of active control also means that, even if the supply and demand for credit meet, transactions cannot take place without government approval. The right-hand side includes factors that indirectly affect credit market relations. Local business tax, one of the main sources of loan repayments, now has a clear redistributive function, and its spending is further constrained, which results in tightening credit supply; however, central subsidies (including EU subsidies) may also reduce credit demand. Debt consolidation and expectations of future bailouts may contribute to credit expansion, which may be further enhanced by the implicit state guarantee stemming from government approval. Therefore, while active control is an effective tool for controlling subnational indebtedness, it can paradoxically fuel the credit supply and leave room for political considerations. Furthermore, the liquidity credit market, exempt from government approval, remains dynamic and potentially amplifies lending activities. Nonetheless, the 2023 amendment to the debt settlement procedure has the potential to encourage more judicious practices among municipalities and banks, which could strengthen fiscal discipline and harden budget constraints.



Within this framework, we address how legislative changes have impacted local governments' credit market dynamics over the past decade. This includes an examination of subnational credit demand and credit supply as well as an exploration of the factors considered in government decisions regarding municipal borrowing.

#### Data and methodology

The analysis of credit demand and supply is based on descriptive statistical tools and trend analysis, mainly on municipal reports provided by the Hungarian State Treasury as well as sector-level statistics from the Hungarian Central Statistical Office and Hungarian Central Bank. In addition, we have processed and compiled into a database the government decisions on municipal borrowings issued between 2012 and 2022, including 1,344 transactions with a total value of HUF 683.7 billion (EUR 1.8 billion) (Table 1).

Table 1 Number and value of transactions in government decisions

Political cycle	Approved	Rejected	Total	Rejection rate, %				
Number of transactions								
2010-2014	228	44	272	16.2				
2014-2019	632	38	670	5.7				
2019-2022	337	65	402	16.2				
Total	1,197	147	1,344	10.9				
Value of transactions (HUF billion)								
2010-2014	97.8	20.2	118.0	17.1				
2014-2019	364.3	18.0	382.3	4.7				
2019-2022	126.1	57.3	183.4	31.2				
Total	588.2	95.5	683.7	14.0				

Source: own compilation based on Government Decisions (2012–2022).

Government decisions include the name of the borrower's municipality, value of the transaction, currency,<sup>3</sup> maturity, development purposes, total funding required for the project (if applicable), and timing of the loan drawdown. However, they did not include the reasons for rejection. Consequently, to examine government control as a tool for central fiscal policy, we apply a binary probit regression model to estimate the factors that might play a role in the approval or rejection of a loan. This model is described as follows:

 $Pr(Decision_i^T = 1) = F(\alpha^T Credit_i^T + \beta^T Debtor_i^T + \gamma^T Alignment_i^T + X_i^{T-1} + \frac{T}{i})$  (1) where the binary variable *Decision* indicates whether the government approved (1) or rejected (0) the transaction. The independent variables are grouped into four groups.

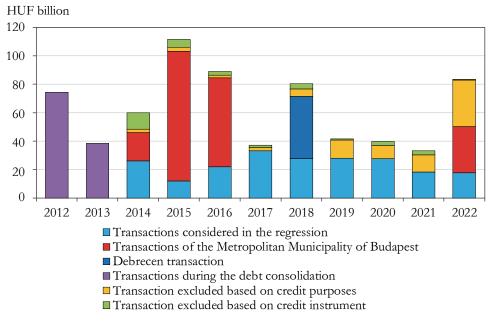
<sup>&</sup>lt;sup>3</sup> For the determination of the HUF value of transactions denominated in foreign currency, we consider the exchange rate of the Hungarian Central Bank on the date of the government decision.

Credit variables are used to estimate the role of transaction parameters, namely, their amount and maturity. Debtor variables incorporate the creditworthiness of the municipality. On the one hand, the model includes financial capacity, which captures the debt repayment capacity of the municipality, defined as the difference between the operating balance and debt service of the previously approved and current transactions. In addition, we consider the indebtedness of the municipality, its share of own revenue in the budget, and the municipality's population, which, in addition to the size of the municipality, is a good indicator of soft budget constraints (Wildasin 1997, Kornai 2014). Alignment variables estimate the role of political affiliation in government decisions, determined according to mayors' political affiliations. The value of the variable Government Party is 1 if the mayor is nominated by the government coalition (Fidesz-KDNP in this period) and 0 in all other cases. The value of the variable Opposition is 1 if the mayor's nominating party is in opposition and 0 in all other cases. Consequently, independent settlements are the point of reference. In addition, we introduce an interaction term to denote opposition municipalities after the 2019 municipal elections. This is an attempt to estimate the effect of the 2019 municipal elections on government decisions (e.g. Kovarek-Dobos 2023, Vasvári-Longauer 2024). Finally,  $X_i$  includes the traditional control variables: the share of operating expenditure in the budget, unemployment, and the share of the elderly population over 65 years old (e.g. Muraközy-Telegdy 2016, Vasvári 2024). The descriptive data, calculations, and sources of the variables are presented in Table A1 in the Appendix.

There are several limitations when applying this model. To make transactions as homogeneous as possible, only development loans and bonds were considered; thus, we excluded transactions related to debt renewal, contract amendments, or financing operations as well as applications for guarantees, deferred payments, and financial leasing. Given that debt consolidation was ongoing from 2012 to early 2014, transactions during this period (typically related to debt renewals and contract amendments) were also dropped. Owing to their specific legal status and the guarantees provided by the government, we excluded from the analysis the transactions of the Metropolitan Municipality of Budapest (for a total of HUF 206 billion) and the HUF 44 billion loan of the Municipality of Debrecen for the purchase of the BMW factory site. In some cases, a government decision may have included several transactions for a municipality; to eliminate this distorting effect, transactions have been grouped by municipality and outcome (approved or rejected). Finally, the database used for the regression model contains 665 transactions worth 212.1 billion HUF (EUR 554 million), which provides coverage of 49.5% in terms of the number of transactions and 31% in terms of value. The derivation of the transaction values is shown in Figure 3.

Figure 3

Transactions included and excluded in the regression



Source: own compilation based on Government Decisions (2012–2022).

#### **Results**

#### Subnational credit demand

In this section, we analyse shifts in the external financing needs of local governments by assessing changes in budget balance, EU subsidies, internal indebtedness, and the volume of municipal projects. Additionally, we investigate the alterations in credit purposes and borrower municipality profiles.

The overall budget balance/deficit is a good indicator of the resources that municipalities need, in addition to current revenues. This can be met from external sources (debt) or from their own reserves (financial assets). Figure A2 in the Appendix illustrates the change in net financial assets and debt as well as the budget balance in the subnational sector. In this respect, there has been a significant improvement in the post-reform period. Although the budgetary position has continued to be cyclical, showing deterioration in election years, this has not been accompanied by a significant reduction in net financial assets. The sole exception to this trend is the exceptionally high budget deficit of HUF 169 billion (EUR 442 million) in 2022, a level that was surpassed only in 2006 and 2010. However, because debt remains relatively stable in 2022, the deficit may have been predominantly offset by financial assets. In addition

to cash deposits, these assets could potentially have originated from pre-financing funds provided by the government for EU projects, which local governments have been receiving since 2016 but only commenced spending from 2022, as indicated by the decline in net financial assets in Figure A2 in the Appendix. As these funds increase the stock of other liabilities to the central government, they became drivers of indebtedness after 2016 (Berczik et al. 2019).

Comparing the periods before and after the reform, local governments accumulated a budget deficit of HUF 902 billion between 2001 and 2011 and a surplus of HUF 321 billion between 2012 and 2022. One of the primary factors contributing to this trend was the substantial increase in the volume of EU subsidies after 2010, which was further augmented by pre-financing funds from the government. However, the share of local governments in public projects has remained at around 25% for several years, falling short of pre-reform levels (Figure A3 in the Appendix). Growth in the internal indebtedness of municipalities has also decelerated, which can be attributed to the transfer of assets related to recentralised public services and the fact that renovation outpaced depreciation in some years. Table 2 provides a summary of the indicators reflecting the external financing needs of local governments, showing that the external funds required by local governments have markedly diminished compared to the period between 2001 and 2011. This shift was coupled with a substantial deceleration in debt accumulation, reducing it to approximately one-third of its previous level.

Indicators of municipalities' financing needs

(HUF billion)

Table 2

			(1	TCT Dimony
Indicators of municipalities	2001–2011	2012–2022	Change (amount)	Change %
Cumulative budget balance	-707.3	1,461.7	n/a	n/a
Cumulative budget balance (w/o debt consolidation)	-903.3	320.7	n/a	n/a
Change in net financial assets	-943.4	+1,641.4	n/a	n/a
Change in net financial assets				
(w/o debt consolidation)	-943.4	+304.4	n/a	n/a
Cumulative EU transfers (from 2004 to 2021)	660.8	2,846.9	2,186.1	+330.8
EU transfers (annual average)	82.6	284.7	202.1	+244.7
Cumulative government grants for municipal projects				
(from 2004 to 2021)	363.3	925.4	562.2	+154.8
Government grants for municipal projects				
(annual average)	45.4	92.5	47.1	+103.7
Cumulative change in internal indebtedness				
(from 2004 to 2021)	+121.9	+124.0	2.1	+1.7
Change in internal indebtedness (annual average)	+15.2	+12.4	-2.8	-18.4
Change in debt stock	+1,047.8	+303.0a)	-744.9	-71.0
Change in debt stock (annual average)	+104.8	+37.9a)	-66.9	-63.6

a) From 2014 (following the debt consolidation).

Source: own compilation based on data from the Hungarian Central Statistical Office (2023a), Hungarian State Treasury (2022), and Hungarian Central Bank (2023).

Regarding credit instruments, loans account for more than 80% of the transactions (by value), whereas bond issues ceased after 2014. In terms of credit purposes, over three-quarters are related to municipal projects, with debt renewals and contract modifications comprising almost 20% of the total. The remaining 5% funded public service delivery, with the majority relating to municipal guarantees and suretyships, while only eight transactions directly financed operations. The decrease in bond issuances also indicates that freely usable, long-term funds are no longer available to municipalities. Conversely, the utilisation of short-term loans exempt from government authorisation has remained consistent compared to 2010. According to Hungarian Central Bank (2023) data, the proportion of short-term loans was 10.7% at the end of 2021, similar to the figures of 2010 (Homolya-Szigel 2008).4 This is also attributed to the ongoing need for municipalities to secure liquidity loans, even after the reform, bridging the temporal gap between revenue and expenditure. The exceptionally high budget deficit in 2022 also highlights that after the pandemic, ownrevenue capacities declined, making it difficult for local governments to handle the surge in energy prices and heightened inflationary burdens. Furthermore, government grants to deal with economic shocks were disbursed only ex post, forcing municipalities to pre-fund expenditures, which is a post-financing mechanism, rather than task-based allocation of funds. Similar to the pre-reform era, this situation generates liquidity pressures in the sector, resulting in the deferred payment of supplier invoices and the overutilisation of liquidity loans. This issue is further highlighted by the fact that nearly 54% of the total sector, encompassing approximately 1,700 municipalities, sought extraordinary budget support in 2022 (Sereg 2023).

More than half of the total sector's debt is now owed to a single municipality, the Metropolitan Municipality of Budapest, which marks a notable shift compared to the pre-reform years. Another significant observation is that with the recentralisation of all county-level public services, the need for funding at the intermediate level has also ceased. Conversely, the proportion of villages in the debt stock is approaching the level observed in 2010.

<sup>&</sup>lt;sup>4</sup> Contrary to the data from the Hungarian Central Bank, municipal accounts showed hardly any short-term loans at the end of 2021. Resuming a pre-reform practice, municipalities typically repay liquidity loans at year end, when banks also approve the new transactions, disbursing them right at the beginning of the new year. It is also common for municipalities to seek an increase in the credit amount or to apply for new liquidity loans during the year.

Table 3 Composition of local government debt by municipalities

Manisimalities	20	10	2021		
Municipalities	HUF billion	%	HUF billion	%	
Metropolitan Municipality of Budapest	163.4	15.2	167.0	55.7	
Budapest districts	86.6	8.0	13.3	4.4	
Cities with county rights	295.3	27.4	51.6	17.2	
Towns	317.5	29.5	50.3	16.8	
Villages	76.4	7.1	17.3	5.8	
Counties	137.5	12.8	0.2	0.1	
Total	1,076.7	100.0	299.7	100.0	

Source: own compilation based on data from the Hungarian State Treasury (2022).

#### Subnational credit supply

The competition to acquire municipal bank accounts was already fierce, even prior to the consolidation process, owing to the exclusivity of managing municipalities' bank accounts. Moreover, the competitive landscape is constrained by the limited number of clients with budgets exceeding HUF 1 billion. Research conducted during the 2010s revealed that the OTP Bank held the largest market share, accounting for approximately 65% of the market. Following them, the Hungarian Savings Cooperative Integration, Erste Bank, and K&H Bank secured significant market shares (Gál 2011). Although we lack a recent survey detailing the current distribution of market share, 2022 reports from major banks suggest that the municipal lending market is likely to be shared among OTP Bank, MBH Bank, K&H Bank, Erste Bank, and Raiffeisen Bank, with OTP Bank and MBH Bank being market leaders.

In addition to lending activities, a crucial aspect of the interplay between banks and municipalities revolves around the level of municipal deposits, which significantly shapes banks' lending and account management policies from a liquidity management perspective. Figure A4 in the Appendix presents the changes of municipal loan-to-deposit ratio between 2001 and 2022. The ratio consistently exceeded 100% from 2002 until the debt consolidation, when it experienced a substantial decline from 315% to 8.5%. It remained below 20% thereafter, mainly because of the implementation of active and passive controls on local government lending. Therefore, the attractiveness of the sector to financing institutions does not primarily come from lending activities but is largely driven by the favourable liquidity opportunities provided by municipal deposits. Consequently, banks are ranked based on their market position in current account management rather than on their lending activity.

Further evaluation of credit supply encompasses four key aspects: the creditworthiness of municipalities, structure of collateral, currency of loans, and evolution of maturities.

In a broader context, legislative changes have affected the creditworthiness of municipalities through three channels. First, recentralisation has resulted in reduced municipal budgets and a decrease in assets, while assets that can be pledged is further restricted by law (Aczél-Homolya 2011). Second, beyond local taxes as redistributive elements of the new financing mechanisms, legislation has imposed limitations on the use of tax revenue. In settlements with minimal or no tax revenue, municipalities predominantly finance public services and development through earmarked central subsidies and liquidity loans, significantly reducing the resources available for debt services. Third, during the debt consolidation process, the central government demonstrated its willingness to bail out local governments, if necessary, which was further reinforced by the central authorisation of municipal borrowings. Further creditworthiness assessment was conducted based on the legal status of the municipality and the share of own revenue in the budget. The former serves as a reliable indicator for size and regional significance of a municipality, whereas the latter captures the funds available for debt services. The pre- and post-reform debt stocks of local governments by legal status and the share of their own revenue are shown in Table 4, which presents a mixed picture. On the one hand, there is an increase in lending activity towards larger municipalities with an own-revenue-to-budget ratio above 40% (by 8.9 percentage points), while at the same time, there is also an increase in the share of municipalities with a lower ratio (below 20%) in lending. Furthermore, this trend is primarily attributed to loans extended to villages, underscoring that liquidity loans are predominantly sought by smaller settlements. However, in terms of indebtedness, the change is clearly positive. While in 2010, more than threequarters of the debt stock was concentrated in municipalities with a loan-to-budget ratio above 40%, in 2021, none of the local governments had indebtedness above 40%. As observed in the credit demand analysis, the debts of the Metropolitan Municipality of Budapest have undergone a resurgence.<sup>5</sup> However, a substantial portion of the financing did not originate from the domestic banking sector but, rather, from the European Investment Bank (EIB), with an initial value of approximately HUF 94 billion (EUR 300 million).

<sup>&</sup>lt;sup>5</sup> In 2022, a credit institution prepared a HUF 32 billion development deal, potentially escalating the municipality's debt to almost HUF 200 billion, constituting 63% of the total budget; however, the government ultimately withheld approval for this transaction. Furthermore, according to government decisions, municipality-owned companies also secured loans in the amount of HUF 25.5 billion (EUR 66 million), while two proposed borrowing HUF 30 billion (EUR 78 million) from the Budapest Transport Company (BKV), and a loan of EUR 1.4 million to Budapest Waterworks did not receive approval.

Table 4

Breakdown of local government long-term liabilities

					(%)		
Own revenue/budget	Below 20	20-40	40–60	Above 60	Total		
2010							
Budapest districts	0.0	0.3	10.6	0.3	11.2		
Cities with county rights	0.9	35.4	1.7	0.0	38.1		
Towns	11.2	21.9	7.1	0.8	40.9		
Villages	2.3	4.8	2.4	0.4	9.8		
Total	14.4	62.4	21.8	1.4	100.0		
		2021					
Budapest districts	0.0	0.4	5.2	4.5	10.0		
Cities with county rights	2.7	27.6	8.7	0.0	39.0		
Towns	9.7	15.3	9.1	3.8	38.0		
Villages	10.1	2.0	0.6	0.4	13.0		
Total	22.5	45.2	23.6	8.7	100.0		
	2010-20	21, percentage	points				
Budapest districts	0.0	0.1	-5.4	4.1	-1.1		
Cities with county rights	1.8	-7.8	6.9	0.0	0.9		
Towns	-1.4	-6.6	2.0	3.1	-3.0		
Villages	7.8	-2.8	-1.8	0.0	3.2		
Total	8.1	-17.1	1.7	7.2	0.0		

Source: own compilation based on data from the Hungarian State Treasury (2022).

Regarding collateral structure, the available data primarily cover the pre-reform period (e.g. Homolya-Szigel 2008). During the early 2000s, real estate and other collateral played significant roles in municipal lending transactions, comprising 75% of the collateral structure. However, with the surge in municipal lending, there was a parallel shift towards financing based on cash flow. By the second quarter of 2008, a substantial 83% of transactions were unsecured, although the share of transactions secured by institutional guarantees reached 6%. While the reform should have pushed credit institutions to revert to collateral-based financing, challenges may have arisen due to the narrow scope of acceptable collateral and the fact that institutional guarantees are no longer available. Despite the lack of comparable statistics on changes in collateral requirements, insights from the lending survey conducted by the Hungarian Central Bank (2014) suggest that lending conditions tightened from the 2008 financial crisis (2008) until the beginning of the reform and debt consolidation. Since 2012, the stringency of collateral requirements has diminished, and creditworthiness requirements have eased with an increase in maximum loan amounts.

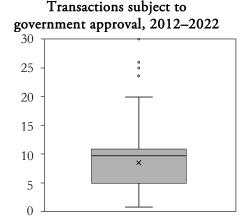
Before the local government reform, foreign currency indebtedness presented a formidable challenge, constituting 60% of total debt (Aczél–Homolya 2011). This

situation led to a pronounced exchange rate risk that the municipalities struggled to manage. Despite these issues, current legislation has not imposed restrictions on the currency used in local government transactions. However, lending in foreign currencies became negligible after the reform. According to the Hungarian Central Bank, the proportion of foreign currency exposure has consistently declined since debt consolidation, reaching only 1.9% by the end of 2022.

Before the reform and ascendancy of bonds, municipal loans typically spanned 10-year maturity, while bonds, in contrast, often extended to 20–25 years. Accordingly, in 2008, over half of the municipal debt and nearly 60% of long-term transactions had maturities exceeding 15 years (Homolya–Szigel 2008). Post-reform, the average maturity of transactions has seen a notable decrease: the median maturity of transactions now stands at 10 years, compared to the median maturity of bonds issued between 2006 and 2010, which is 20 years (see Figure 4). However, in some post-reform cases, the maturities equalled or surpassed 25 years. Interestingly, in addition to several towns and Budapest, two villages acquired loans with maturities of 25–26 years.

Figure 4 Maturity of municipal bonds and government-approved transactions

# Municipal bonds, 2006–2010 30 25 20 15 10 5 0



Source: own compilation based on data from KELER Zrt. (2011) and Government Decisions (2012–2022).

#### Government decisions on municipal borrowing transactions

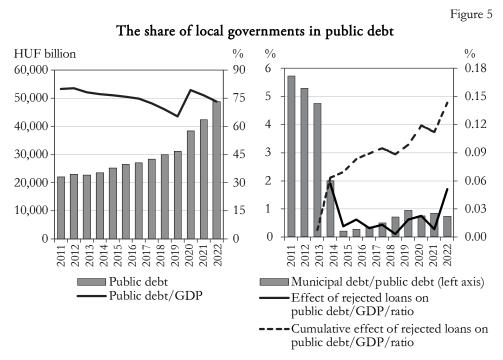
There is a detailed list of cases, defined by law, in which the central government may approve or reject a local government's application for a loan, as summarised in below (Table 5).

Table 5 Conditions for central approval of local government transactions

The government shall approve an application if the following conditions are met (§ 10/B (1)):	The government may refuse consent if (§ 10/B (5)):
A1. The level of public debt as defined in the Law on the Central Budget does not jeopardise the fulfilment of the targets.	B1. The transaction is related to a non-mandatory public task.
A2. The transaction is related to a public task defined by law, while the continuous delivery of services is ensured.	B2. The municipality can finance the development without the transaction.
A3. The municipality has levied local business tax or local property tax.	B3. The timetable for implementing the development is not sufficiently prepared financially.
A4. Debt service does not exceed 50% of own revenue in any year during the maturity.	B4. The future operation of the development is not sufficiently justified.

Source: Economic Stability Act (GST. [2011]).

In the absence of explicit justifications for government decisions, it is assumed that rigorous scrutiny of adherence to stringent legal conditions occurs during the initial stages of the multistep submission process (A2-A4, B1). Although the assessment of soft conditions (B2-B4) cannot be verified, an examination of the municipal debt and rejected transactions in the public debt trajectory (A1) is pivotal before presenting the regression results. The graph on the left in Figure 5 illustrates a consistent rise in gross public debt, reaching HUF 48.8 trillion (EUR 127 billion) by 2022. Despite this, the public debt-to-GDP ratio has decreased annually, except for a spike in 2020, reaching 73.3% by the end of 2022. The right-hand graph delineates the influence of local government debt on public debt, revealing that their share stood at almost 6% before debt consolidation but has remained stable below 1% since 2014. Even if the government had approved all rejected deals, its cumulative impact on public debt between 2012 and 2022 would have been merely 0.14%, suggesting that the sector's weight in public debt would have continued to remain below 1%. Consequently, local government transactions (approved or not) do not jeopardise the attainment of a centrally budgeted public debt ratio.



Source: own compilation based on data from the Hungarian Central Statistical Office (2023a) and Government Decisions (2012–2022).

The probit regression estimates for the marginal effects are summarised in Table 6. In the Appendix Figure A5 depicts the ROC curves for each specification. Initially, we focus solely on the credit variables, which are later supplemented with debtor variables in the second specification. The third specification additionally incorporates variables capturing political alignment, whereas the fifth specification includes an interaction term that captures the effects of the local election held in 2019. Finally, we add the control variables to specifications (4) and (6). Generally, smaller loan amounts, shorter maturities, smaller municipalities, and lower levels of indebtedness increase the likelihood of approval. The impact of financial capacity and the share of own revenue tend to be positive but are not estimated to be significant. The introduction of political variables significantly enhances explanatory power, while the corresponding estimates suggest that if a municipality is in opposition, the probability of approval decreases by 8.7% compared to independent municipalities (and it is 13.1% less likely to be approved compared to politically aligned municipalities). Furthermore, the probability of approval for local governments in opposition shows a further decline after the 2019 elections (-15.7% compared to independent settlements and -19.3% compared to politically aligned municipalities).

Table 6

Marginal effects estimated from probit regression (N = 665)

	(1)	(2)	(3)	(4)	(5)	(6)
I can amount/hudast	-0.013	-0.030***	-0.034***	-0.039***	-0.035***	-0.039***
Loan amount/budget	(0.009)	(0.011)	(0.011)	(0.011)	(0.011)	(0.011)
Maturity (years)	-0.006***	-0.002	-0.002	-0.002	-0.001	-0.001
Maturity (years)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Population (log)		-0.031***	-0.029***	-0.034***	-0.026***	-0.031***
1 optilation (log)		(0.010)	(0.010)	(0.010)	(0.010)	(0.010)
Financial capacity/budget		0.100	0.058	0.032	0.040	0.019
Tiliancial capacity/ budget		(0.092)	(0.086)	(0.082)	(0.075)	(0.071)
Indebtedness/budget		-0.012**	-0.013**	-0.011**	-0.011**	-0.009*
maebteaness/ budget		(0.006)	(0.005)	(0.005)	(0.005)	(0.005)
Own revenue/budget		-0.020	0.056	0.008	0.037	-0.006
Own revenue/ budget		(0.071)	(0.071)	(0.071)	(0.068)	(0.069)
Aligned mayor			0.036	0.044*	0.029	0.036
Aligned mayor			(0.025)	(0.026)	(0.024)	(0.024)
Opposition mayor			-0.103***	-0.087***	0.005	0.013
—————————————————————————————————————			(0.032)	(0.032)	(0.049)	(0.049)
Opposition mayor after					-0.173***	-0.157***
2019					(0.054)	(0.054)
Operating				0.120		0.072
expenditure/budget				(0.072)		(0.072)
Unemployment rate				-0.784***		-0.728***
- Chempioyinent rate				(0.277)		(0.265)
Elderly population				-0.315		-0.226
Elderly population				(0.249)		(0.241)
Pseudo R square	0.026	0.084	0.145	0.174	0.178	0.200

Note: \* significant at 10%, \*\* significant at 5% \*\*\* significant at 1%.

#### **Discussion**

We examine the intricate effects of municipal reform and legislative changes on local governments' credit market dynamics. Contrary to the simplistic assertion that debt consolidation and central control over lending eliminate the risk of municipal debt to public finances, our findings reveal a more nuanced landscape. Legislative adjustments have a substantial influence on municipalities' creditworthiness and credit supply from banks. Government decisions play a pivotal role in shaping how and which municipalities have access to external financing.

While reforming the grant allocation framework for municipalities negatively affected their creditworthiness, the external financing needs of local governments also decreased, partly because of EU subsidies and other government grants for municipal projects. However, local governments with limited own-revenue potential faced challenges in pre-financing central subsidies during the pandemic or in the recent era of high inflation burdens, leading to a gradual increase in the sector's reliance on liquidity loans. This underscores the stretched financial management of the sector and

its dependence on central subsidies. Long-term operating loans and bond issues are extremely rare, highlighting a conservative lending policy that prioritizes short maturities and domestic currency. This finding reaffirms that financing credit institutions gradually establish their market positions after debt consolidation, while the transformation on the supply side of the credit market is characterised by greater fluidity, a reduced number of players, and a shift from active (lending) to passive (deposit collecting) engagements. The evolution of the loan-to-deposit ratio further underscores the importance of municipalities in liquidity management; accordingly, preserving market share in the management of municipal bank accounts holds greater significance than lending activities.

In addition to the largest municipalities, there is a surprising trend in dynamic debt growth in rural municipalities, particularly those with limited own revenue. Notably, only villages maintained a debt share close to the 2010 level. The high maturity observed in some of these rural municipalities might be attributed to their attempts to absorb debt services and adhere to the borrowing limit stipulated by law, while their constrained financial flexibility also led to a significant surge in liquidity loans. The dynamic lending growth to smaller rural municipalities also demonstrates that the administrative burdens did not impose any constraints and that these municipalities are more likely to secure approval for their lending operations from the government. A noteworthy aspect is the government's tolerance of concentrated bank exposure, with over half of the sector's debt concentrated in a single municipality. While a considerable portion of these funds comes from the European Investment Bank, it also signifies a substantial commitment from domestic financiers. This suggests that despite legislative changes impacting the creditworthiness of municipalities, debt consolidation may have reassured banks that the government is still willing to bail out larger settlements in the case of financial trouble, which is exemplified by the case of Pécs, which sought a government bailout in 2017.6 However, expectations of future bailouts may be tempered by the amendment to the debt settlement procedure, which introduces significant sanctions for both municipalities and creditors in case of insolvency. This could encourage more cautious lending practices and potentially pave the way for phasing out active control over time. This may become even more pivotal, as the regression model of government decisions underscores the significant role played by political considerations in the likelihood of approval. The fact that a municipality's mayor is nominated by opposition parties substantially diminishes the probability of approval, which has nearly doubled in magnitude since 2019. This could lead to opposition municipalities anticipating rejection and refraining from borrowing attempts (e.g. Muraközy-Telegdy 2016). During the 2010-2014 political cycle, the share of

<sup>&</sup>lt;sup>6</sup> The financial aid implemented during the bailout of Pécs, which was subject to stringent conditions, can serve as a model for other municipalities (Vasvári 2020), potentially fostering the enhancement of financial discipline. Certain elements, such as the appointment of a budget commissioner or maintaining the current account exclusively with the Hungarian State Treasury, are already reflected in the amendment of the debt settlement procedure.

opposition municipalities in the initiated transactions closely mirrored their sectoral budget share (7.5%),<sup>7</sup> which was significantly lower during 2015–2019 (a 3.3% share in transactions compared with a budget share of 9.6%). However, after 2019, there was a resurgence in opposition borrowing, with 30% of the intended loans (compared to 20% budget share). Nevertheless, only HUF 10.5 billion of the HUF 56.3 billion loan amount was eventually approved by the government. The heightened demand for funds may be attributed to a decrease in discretionary transfers received by opposition municipalities since the most recent municipal elections (Vasvári 2022b, Kovarek–Dobos 2023, Vasvári–Longauer 2024). This, combined with sector-wide constraints (Reszkető et al. 2022), further intensifies the resource shortfall for local governments in opposition.

#### Conclusion

In this study, we analysed recent developments in municipal credit demand, credit supply, and indebtedness over the past decade within the context of public finance reforms in Hungary. The post-2011 Hungarian model exhibits a blend of active and passive elements uniquely shaped by municipal financing specificities and market dynamics. Within this framework, direct budgetary rules and controls, coupled with the indirect effects of legislative changes, significantly influence multiple dimensions, including credit demand, the creditworthiness of municipalities, and banks' lending activities. Although the ultimate decision on transactions rests in the hands of the central government, this practice is not unfamiliar in Europe, given the introduction of similar fiscal rules in several other EU countries over the last decade.

From the public finance perspective, the implemented measures achieved their objectives. Local government debt remains remarkably low even by European standards (see Figure 1), and the pace of debt accumulation has significantly slowed, reducing it to approximately one-third compared to the decade preceding the reform. The fiscal balance also improved, partly because of EU funds, contributing to a reduction in credit demand. However, economic shocks and spikes in budget deficits in 2022 underscore the risks associated with overreliance on central transfers, persistent demand for liquidity loans, and, ultimately, the stretched financial management of municipalities. Active control of municipal credit transactions effectively counterbalances the positive credit supply effects of debt consolidation. However, it may also have exerted a substantial influence on the distribution of accumulated debt. Our results reveal that both public finance and political considerations play a role in the approval of loan transactions. The central government tends to favour shorter terms and smaller deals for municipalities with lower debt levels. Conversely, opposition municipalities face a much lower likelihood of approval than politically aligned or independent municipalities, which is in line with

<sup>&</sup>lt;sup>7</sup> The aggregate budget of opposition municipalities in relation to the overall budget of the subnational sector.

prior research on political favouritism in Hungary (e.g. Muraközy–Telegdi 2016, Vasvári 2022a, Vasvári–Longauer 2024).

The current regulatory framework of the Hungarian subnational system is characterised by over-regulation, central dependency, and political favouritism. While it reduces public finance risks to zero, it also heavily constrains local governments. Amending the rules of the debt settlement procedure may be a crucial component in transitioning towards market mechanisms. However, achieving fiscal discipline requires a broader approach, encompassing reduced reliance on central subsidies, minimisation of active controls driven by political considerations, and fortification of local governments' own-revenue potential.

#### **Acknowledgement**

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### **Appendix**

 $\label{eq:Table A1} \textbf{Dependent variables in the regression model}$ 

Variable -group	Changing	Approved	Rejected	Total	Calculation	Source	
Credit	Number of transactions	614	51	665	Number, value, and maturity		
	Total amount (HUF million)	184,028	28,077	212,105	of development loans between 2014 and 2022, excluding all Budapest and	Government Decisions (2012–2022)	
	Average amount (HUF million)	300	551	319	Debrecen transactions		
	Loan amount/ budget, %	18.4	12.4	12.8	Loan amount per total budget of the previous year		
	Maturity (years)	9.3	11.3	9.5	Maturity of loans in years		
Debtor	Population (average)	15,910	27,171	16,773	Population of the municipality as of 1 January of the current year	Ministry of Interior (2023)	
	Financial capacity/ budget, %	3.3	2.5	3.2	Operating balance for the current year minus debt service <sup>a)</sup> of the current and prior ongoing transactions per total budget of the current year <sup>b)</sup>	Municipal accounts	
	Indebtedness/ budget, %	4.3	7.7	4.6	Liabilities at the end of the previous year plus transaction already approved in the current year per total budget of the previous year	provided by the Hungarian State Treasury (2022)	
	Own revenue/ budget, %	22.9	30.6	23.5	Own revenue per total budget in the previous year		

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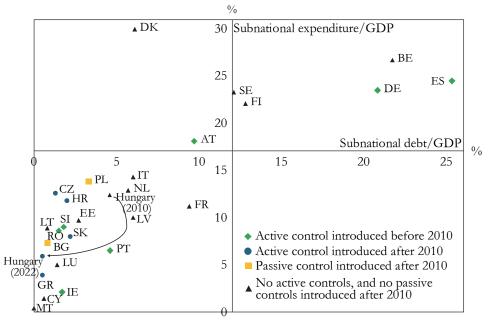
-						(Continued.)	
Variable -group	Changing	Approved	Rejected	Total	Calculation	Source	
Party	Settlements with aligned mayor	273	14	287	At the time of the government decision, the mayor of the municipality was aligned to the government parties		
	Settlements with opposition mayor	38	16	54	At the time of the government decision, the mayor of the municipality was aligned to the opposition parties	National Election Office (2023)	
	Settlements with opposition mayor after 2019	13	14	27	After the 2019 elections, the mayor of the municipality was aligned to the opposition parties at the time of the government decision <sup>c)</sup>		
Control	Operating expenditure/budget, %	77.6	75.8	77.5	Operating expenditure per total budget in the previous year	Municipal accounts of the Hungarian State Treasury (2022)	
(X) <sub>i</sub>	Unemployment rate, %	5.9	6.5	6.0	Share of unemployed in the active population of the settlement	HCSO (T-STAR, BP-STAR [2023c])	

a) Calculated value based on loan amount and maturity, assuming no grace period.

b) To capture the legal requirement to ensure the continuous delivery of public services (Economic Stability Act [GST.] 10/B (1) b.), the calculation of financial capacity considers the budget for the current year and debt service resulting from contingent transactions (e.g. guarantees).

c) In the 2019 local elections, several municipalities had mayors who won as independent candidates but enjoyed the support of the government coalition or the opposition parties (see Kovarek–Dobos 2023), therefore, 17 transactions were reclassified accordingly.

Figure A1 Subnational debt-to-GDP and expenditure-to-GDP ratios in the EU (2022) and controls over subnational indebtedness



Note: axes represent the EU-27 average.

Source: own compilation based on Vigvári (2011), the OECD (2022), and Eurostat (2024) data.

Figure A2

## **HUF** billion 1,600 1,200 800 400 0 -4002015 2014

External financing needs of local governments

----Change in net financial assets -Source: own compilation based on data from the Hungarian Central Statistical Office (2023a), the Hungarian State Treasury (2022), and the Hungarian Central Bank (2023).

Other liabilities

■ Liabilities to banks

-Budget balance

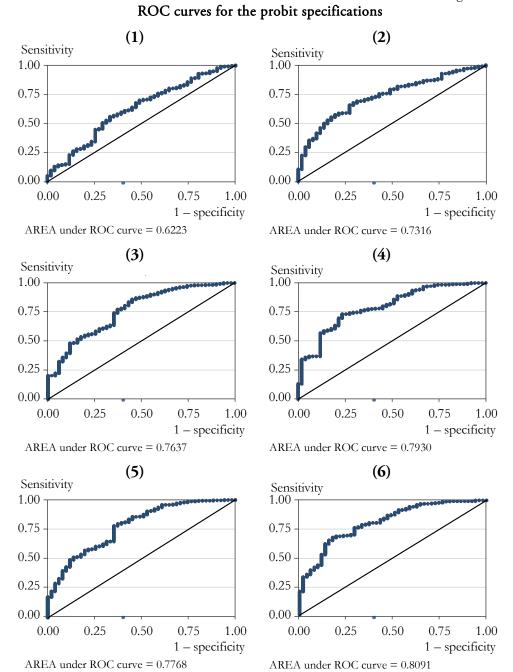
Figure A4

Figure A3 Government grants for Share of local governments municipal projects in public projects **HUF** billion **HUF** billion 600 3,600 60 500 3,000 400 2,400 300 1,800 200 1,200 20 100 600 10 0 ■EU funds Municipal projects Government grants of municipal projects Government projects Share of municipal projects, %

Source: own compilation based on data from the Hungarian Central Statistical Office (2023b) and the Hungarian State Treasury (2022).

 $\it Source:$  own compilation based on data from the Hungarian Central Bank (2023).

Figure A5



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