Deutsches Institut
für Urbanistik

Christian Raffer, PhD
Frida von Zahn, MSc

Local Governments and Sustainable Finance

A cross-country comparison

Working Paper 01/2024 in the Policy and Working Paper series of the German Ministry of Education and and part of the Joint Research Project: „Nachhaltige Finanzierung kommunaler Klimainvestitionen unter Berücksichtigung der EU-Taxonomie (KlimKomInvest)“

1st of November 2024

Christian Raffer, PhD
Frida von Zahn, MSc

Local Governments and Sustainable Finance

A cross-country comparison

Working Paper 01/2024 in the Policy and Working Paper series of the German Ministry of Education and and part of the Joint Research Project: „Nachhaltige Finanzierung kommunaler Klimainvestitionen unter Berücksichtigung der EU-Taxonomie (KlimKomInvest)“

1st of November 2024

Research funded by the German Ministry of Education and Research within the funding line “Klimaschutz und Finanzwirtschaft (KlimFi)“

GEFÖRDERT VOM

Bundesministerium
für Bildung
und Forschung

Publishing Information

Auftragnehmer / Funding Recipient:

Deutsches Institut für Urbanistik gGmbH (Difu) / German Institute of Urban Affairs
Zimmerstraße 13–15 10969 Berlin
+49 30 39001-0 difu@difu.de https://difu.de/

Autorin und Autor / Authors:

Christian Raffer, PhD, Difu, Berlin
Frida von Zahn, MSc, Difu, Berlin

Im Auftrag von / Funded by:

Bundesministerium für Bildung und Forschung (BMBF) / Federal Ministry of Education and Reserarch
Heinemannstraße 2, 53175 Bonn

Research funded by the German Ministry of Education and Research within the funding line “Klimaschutz und Finanzwirtschaft (KlimFi)“.

Inhalt

Abstract 5

1. Introduction 5

2. Regulatory Frameworks in Public Finance 6

3. Sustainable Finance as a Vehicle for Public Infrastructure Investments? 7

4. Methodology and Case Selection 9

5. Case Studies 10

5.1 Germany 10

5.2 Austria 13

5.3 Italy 15

5.4 Czechia 16

5.5 France 19

5.6 Comparative Findings 20

6. Discussion and Conclusion 21

Sources 23

Authors 26

Annex 27

Abstract

With the EU Taxonomy, the European Commission is actively fostering the relevance of sustainable finance. The reason for this engagement is the massive need for investments in the private and public sector to master the socio-ecological transformation ahead. Across Europe, local governments in particular are responsible for large parts of public infrastructure. In this research paper, we inquire about their access to sustainable finance. First examples of cities and regions issuing green bonds have hit the headlines in the recent past. We ask the question whether this will lead to a broader development on the local level. Since local governments are usually subject to strict budget and debt regulation we add the second question whether this debt regulation may be a structural obstacle. To answer these questions, we refer to regulatory theory and analyze the current regulatory and sustainable finance situation in five European countries. We provide case studies based on literature analysis and semi-structured interviews. Our central result is that one cannot speak of a broader development so far. Moreover, we do not find strong indication that debt regulation is a cause for local governments' reluctance to experiment with new sustainability-related forms of debt. Since only larger cities and regions have emitted green bonds so far, the size of cities and regions appears to influence the likelihood of experimenting with sustainable funds more than the debt regulation of local governments.

1. Introduction

In face of the paramount challenges of climate change, biodiversity loss, and poverty, the socio-ecological transition of society and infrastructure is more important than ever. In many countries, local governments maintain large parts of public infrastructure and are responsible for sustainability-related investment, which imposes major challenges on their budgets. In the private sector, similar sustainable investment needs are discussed through the lens of Sustainable Finance (Krahnen et al., 2023). Sustainable Finance refers to the redirection of private investments to sustainability projects with the aim of providing a financial advantage to sustainable projects that are often referred to as Greenium (Directorate-General for Financial Stability, Financial Services and Capital Markets Union, 2024; Krahnen et al. 2023). Sustainable finance tools such as Green Bonds and SDG-linked loans have recently also moved towards the center of attention in the European Union. With the EU Taxonomy as part of the European Green Deal (a broad policy framework detailing sustainable investments), the EU has been massively pushing sustainable finance over the recent years (Lucarelli et al., 2020). So far, only limited policy discourse and research have dealt with the implications for local public investments in the light of Sustainable Finance (Raffer et al., 2023).

At the same time, previous research demonstrates how fiscal restraints in municipal budgets can have detrimental impact on equality and climate mitigation (Pavese & Rubolino, 2021; Brand & Steinbrecher, 2021). Especially the latter necessitates unprecedented public investments. Recent estimates indicate that the additional public resources needed for green investments range from 0.5% to 4.5% of GDP over the next decade (IMF, 2021). In the EU, Darvas and Wolff (2023) estimate that the additional public investments required to meet the climate goals of the EU Green Deal will be between 0.5% and 1% of GDP annually during this decade, while Ferdinandusse et al. (2022) estimate that it will range between 1% and 1.8% of GDP. A large portion of this will be spent at the local level. To address the financial hurdle of public sustainable investments, a variety of budget reforms, such as SDG-Budgeting and Green Budgeting, have been proposed to improve the allocation of financial means towards sustainability targets (Mulholland & Berger, 2019; Raffer et al., 2023). Although being of central relevance, these approaches can only be part of the broader (local) public finance reaction to existing transformation needs.

Kemfert and Schmalz (2019) discuss the influence of political decision-making on Sustainable Finance legislation, but not vice versa. Hence, despite first cities using Green Bonds to finance the sustainability transformation, the field of sustainable finance in local governments is widely understudied so far. In light of the first examples of sustainable finance on the local level, this paper addresses the questions whether

the management of sustainable finance by local governments is about to become a relevant phenomenon and whether existing local government debt regulation may be (an obstacle to sustainable finance). From the theoretical perspective, we embed these research questions in regulatory theory (Geißler et al., 2021). Especially after the 2008 financial crisis, much EU legislation has been dedicated to effective and financially sustainable regulation across all tiers of government (Wortmann & Geißler, 2021). Ensuring sound budgets, fiscal rules, monitoring, and enforcement are the cornerstones of financial regulation. We thereby understand local finance regulation as the continuous and targeted efforts by higher-level governments to influence the financial behavior of local governments according to specific standards and objectives, aiming to achieve financial sustainability (Lodge & Wegrich, 2012).

The empirical contribution of this paper is based on a qualitative cross-country comparison of Germany, Austria, France, Italy and Czechia. For each of the five analyzed countries we provide a case study based on a literature analysis and semi-structured expert interviews with two experts in each country except Germany, for which we possess sufficient information on the regulatory framework and additional expert interviews are not necessary (Adeoye-Olatunde & Olenik, 2021). We find that the usage of sustainable finance on the local government level is currently a niche phenomenon, which is likely to gain relevance in the future. So far, tools like Green Bonds are usually used by single forerunner cities or regions and sustainability or ESG-linked loans are provided only on a small scale by a few banks and not in all sample countries. However, the number of private and development banks that relate their local government lending to sustainability targets is increasing. The usage of external debt to finance the sustainability transformation depends critically on the local government structure (e.g., size of jurisdictions) and the culture of local government debt in the specific country and city. In countries in which local governments have low levels of debt, municipalities are naturally less inclined to look for alternative financing models. We further find that forerunner cities making use of green bonds have a history of diverse funding sources regardless of the regulatory country context. Debt regulation itself seems to be a minor obstacle.

In the following section, we outline some theoretical considerations regarding local fiscal regulation. Section three provides additional information on the concept of sustainable finance and gives some comparative data. In these two sections, we derive our research questions. In section four, we discuss the methodology before presenting the case studies in section five. In section six, we discuss our findings, provide two conclusions and shed light on limitations.

2. Regulatory Frameworks in Public Finance

Regulatory frameworks play a critical role in shaping local public financial management (see, e.g., Geißler et al., 2021). After the European sovereign debt crisis and the introduction of federal and local-level austerity measures, research debates centered on budgetary discipline and local fiscal autonomy. The latter refers to the extent to which local governments can independently manage their revenues and expenditures without excessive interference from higher levels of government. Research has shown that regulatory frameworks that enhance fiscal autonomy enable local governments to tailor their budgets to local needs more effectively (Boetti et al., 2012). Regulations that allow municipalities to set their tax rates and allocate expenditures independently foster an environment where local priorities can be addressed more directly. Turley et al. (2021) and others differentiate between four types of fiscal rules: (1) Budget balance rule (BBR) regard a ceiling on the budget deficit, which can range from mandatory sur-pluses to relative or absolute deficits. (2) Borrowing and debt rules (DR) refer to constraints on debt financing. These can be quantitative and qualitative in nature by applying to financing sources, expenditures, or to borrowing limits. (3) Expenditure rules (ER) restrict types or growth in expenditure, and (4) revenue rules (RR) apply to revenues collected from taxes and fees. To which extent these types of rules have been developed for and applied to local governments, differs across Europe. According to Raffer et al. (2018), the number of balanced budget rules for European local governments as well as the number of debt rules increased considerably since 1995. A core reason for this development is the harmonization of fiscal rules through EU legislative processes (Turley et al., 2021).

A central rationale for fiscal rules at the local level stems from the so-called deficit bias (Kotia & Lledó, 2016), which refers to overspending by public institutions. It is often associated with the presence of a

soft budget constraint (Kotia & Lledó, 2016) and emerges whenever local governments have the expectation that higher levels of government will step in and ease their fiscal (debt) burden by a bailout or by providing additional funds (Kornai et al. 2003). Additional to the soft budget constraint, short electoral cycles, unfinanced public service mandates or interregional competition may drive overspending (Plekhanov & Singh, 2006). The theoretical pillars for the soft budget constraint are common problems and moral hazard (Ter-Minassian, 2007; Kotia & Lledó, 2016). Whereas moral hazard and bailout expectations are closely connected, common pool issues arise since local governments usually are very much dependent on transfers from the central government, hence from a common pool. This prevents them from fully internalizing the cost of their public expenditure and may incentivize excess spending and borrowing (Hallerberg & von Hagen, 1999). Similarly, Wyplosz (2013) argues that local governments tend to push the burden of fiscal discipline to future legislators or expect intergovernmental transfers in case of struggle.

Against the theory of deficit bias, much research has been dedicated to the effectiveness of fiscal rules. Studies inquire the impact of fiscal regulation on budgetary discipline, compliance issues, and the impact of austerity measures on borrowing and debt making. There is a rich body of empirical work analyzing the impact of fiscal rules on all levels of government. The literature review of Potrafke (2023) as well as the meta-study of Heinemann et al. (2018) provide a good overview. These empirical studies generally agree that the existence of fiscal rules has a discipline-enhancing effect on governments on all levels. With a very convincing empirical setup analyzing population threshold effects of Italian municipalities, Grembi et al. (2016) show, for example, that the relaxation of fiscal rules on the local level triggers deficits. In addition, the cross-country empirical results of de Biase and Dougherty (2022) suggest that subnational debt rules improve the debt to GDP ratio.

Since not only common local government loans but also more innovative means like Green Bonds or ESG-linked loans increase the stock of local government debt, it seems plausible to assume that the existence of a well-implemented debt regulation for local governments can be an obstacle to the usage of sustainable finance. Based on this hypothesis, we formulate our first research question:

Q1: Does the existence of debt regulation on the local level hinder local governments to take advantage of sustainable finance (e.g., Green Bonds or ESG-linked loans)?

The question is mirrored by the current discussions on the impact of debt rules on public investment in Germany. A prominent argument in these discussions is that the existing debt rule on the central government and state level (so-called “Schuldenbremse”) is an obstacle for public investment (Hermes et al., 2022).

3. Sustainable Finance as a Vehicle for Public Infrastructure Investments?

Climate change, biodiversity loss, and the Sustainable Development Goals require increased investments at the local level. Although the topic of "Sustainable Finance" is currently reason for increased public debate, the idea of how financial markets and financial instruments could be used to promote social or ecological purposes is not new. In the 1970s, the initial focus was on socially responsible investments by companies that placed particular emphasis on their "Corporate Social Responsibility" (Cunha et al., 2021). In the 1980s, social or ethical investments came into focus. In the 1990s, the terms "Green Finance" and "Green Investment" became common in the international research literature. This terminology was associated with the idea of considering the ecological dimension of financial and investment strategies by capital market actors and companies. However, in practice, narrowing down the term "Sustainable Finance" proves to be rather difficult. Accordingly, there is currently no universally accepted definition of the term (Migliorelli, 2021; OECD, 2020a, 2020b).

In July 2021, the European Commission published its "Strategy for Financing the Transition to a Sustainable Economy" (European Commission, 2021a). This strategy underscores the fundamental goal of making Europe a climate-neutral continent by 2050 (European Commission).To achieve this, greenhouse gas

emissions must be reduced by 55% by 2030 and investments of approximately bln 350 EUR will be required solely for energy systems (European Commission, 2020). This is in addition to the roughly bln 800 EUR allocated under the NextGenerationEU (NGEU) fund for addressing the climate crisis and preserving biodiversity (NextGenerationEU, 2024). The European Commission emphasizes that such investment volumes cannot be mobilized by the public sector alone. Therefore, capital flows between the financial and real economy sectors should increasingly be directed towards ecological and social investments. To achieve this, sustainability risks must become more assessable for both capital providers and borrowers, and environmental, social, and governance considerations need to be more strongly integrated into financing processes. The latter in particular, addresses the role of the public sector debt to enable the sustainability transition.

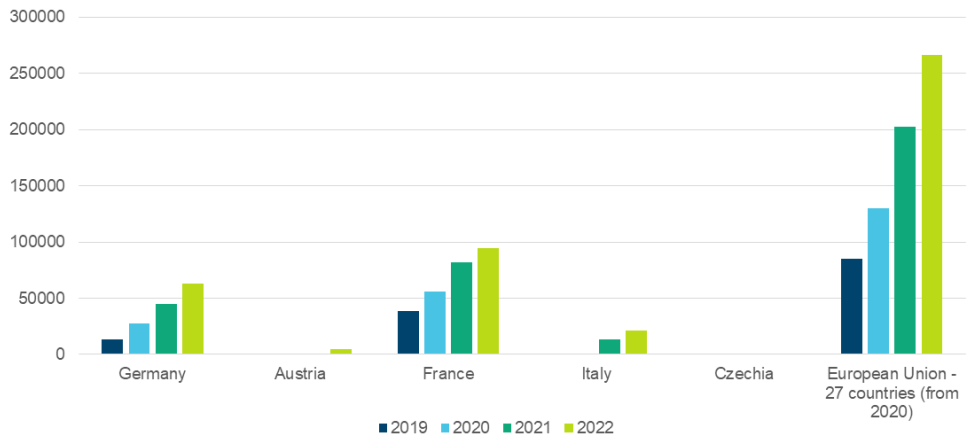
Sustainable finance research still heavily focuses on understanding how financial systems can be utilized to promote sustainable economic growth while simultaneously addressing social and ecological challenges. The relevance for the public sector is rarely problematized (for an overview: Brand & Steinbrecher, 2019; Heinbach et al., 2020; Kemfert & Schmalz, 2019a). In the field of policy, however, the trade-off between budget consolidation and increased green investment needs has led to different policy proposals such as a 'green golden rule', which would exempt green investments from fiscal rule compliance indicators (Darvas & Wolff, 2023). Further, embedded in the European Green Deal, the EU has set forth a taxonomy on ESG conformity of investments in 2020, which aims at determining the degree of sustainability of investment activities (Raffer et al., 2023).

Potentially, the taxonomy increases the availability of sustainable finance products for the public sector, too. One reason to believe that this may happen is based on the requirements the EU Taxonomy puts on banks in form of the so-called Green Asset Ratio (GRA)[1], which provides incentives to prefer lending for sustainable purposes over traditional lending without consideration of any ESG criteria (Brühl, 2023). Although government lending is only partially considered in the GRA, loans to publicly owned companies (which exceed certain staff and turnover thresholds) have an impact on the ratio. Moreover, banks more and more follow their own transition path. In this situation, it seems legitimate to assume that bank lending to public entities like local governments will become increasingly ESG driven and that sustainable finance will be on the rise.

In addition, there is some empirical indication that the issuance of green bonds became more relevant over the course of the past five years (see Figure 1). As Eurostat data show, the stock of general government debt securities issued as "Green Bonds" has risen significantly between 2019 and 2022. Although this development is driven by central government initiatives, the number of examples of local governments issuing green bonds is still rising.

[1] The GRA is a ratio each bank has to publish. It describes the share of green assets in the bank's portfolio. Currently, the EU Commission plans to review the GRA (Environmental Finance, 2024).

Figure 1: Stock of general government debt security issued as „green bonds“. Own graph, data: Eurostat



Deutsches Institut für Urbanistik

In sum, the changing institutional setting in terms of sustainable finance in Europe as well as the actual rise in the stock of green bonds brings us to our second research question:

Q2: Is sustainable finance playing an increasing role on local government borrowing in Europe?

At the same time, it is necessary to mention that several potential barriers may hinder the widespread adoption of sustainable finance in municipalities. One significant challenge is the scale of investment needed for borrowing. According to a study on German municipalities, local governments do not have the financial capacity to issue large-scale green bonds or other sustainable financial instruments (Brand & Steinbrecher, 2021). The complexity and cost associated with these financial products can be prohibitive, especially for smaller municipalities (Scheller et al., 2023). Furthermore, there is often a lack of expertise on and awareness about sustainable finance options within municipal administrations, leading to skepticism and reluctance about adopting new financial mechanisms (Brand & Steinbrecher, 2021).

4. Methodology and Case Selection

Whilst research on regulatory theory knows a wide range of research approaches and methodologies, it must account for the interplay between objective laws and subjective experiences of these laws (Losoncz, 2017). Critical realism upholds that the integration of several methods enables distinctions between generative mechanisms and observable events (Losoncz, 2017). For this research, the premise of integrating diverse perspectives to capture complexity is met by making use of the “diverse cases” sampling method by Seawright and Gerring (2008, p.300), accounting for regulatory diversity across the EU. This sampling method aims at achieving variance in dimensions that are crucial for the relationship in question (Seawright & Gerring, 2008).

We chose two scales to sample cases for analysis: The local government LAI2.0 borrowing autonomy index and the Climate Change Performance Index. The local government LAI2.0 borrowing autonomy index measures the degree of autonomy enjoyed by local governments (Ladner et al., 2022). It draws on data from 1990 to 2020 to construct an index based on indicators such as legal autonomy, financial autonomy, and political discretion. To sample diverse cases, the chosen case studies stem from countries that represent very different levels on the borrowing autonomy index. This limits the risk that conclusions about sustainable finance access stem from a biased sample of either very high or very low local autonomy, as it allows to draw inferences from a broad variety of regulatory frameworks on debt regulation and legal practice. The Climate Change Performance Index 2023 gathers information on greenhouse gas

emissions, renewable energy, energy use and climate policy from 53 countries and the EU to standardize and compare climate performance internationally (Climate Change Performance Index, 2023). A spread of national cases along the scale of the CCPI 23 allows us to infer sustainable finance usage without biasing the sample towards ambitious countries.

The selected EU countries are Austria, Czechia, France, Germany, and Italy. The table below shows the different scores of each country on the CCPI and the LAI respectively.

Table 1: Selected country cases with diverse scores on quantitative and qualitative indices: LAI 2.0 (Ladner et al., 2022) and the CCPI 2023 (CCPI, 2023).

Country	LAI Borrowing Index Autonomy 2020	LAI 2.0, qualitative	Climate Change Performance Index 2023	CCPI 23, qualitative
Czechia	3	High	44,16	Low
Austria	2	Medium	51,56	Medium
Italy	1	Low	52,9	Medium
France	2	Medium	52,97	Medium
Germany	1	Low	61,11	High

While France and Italy show both medium values of local borrowing autonomy and climate change performance, Italy even shows low borrowing autonomy. Czechia and Germany demonstrate two opposing cases, where borrowing autonomy is high in Czechia, but low in Germany, and vice versa in the case of climate performance.

Based on the case selection, a structured literature review guided the development of a questionnaire for the semi-structured interviews (see Annex for the questionnaire). A primary source constitute country reports as found in Geißler et al. (2020), which compares local government financial regulation systematically for a range of European countries. In addition, we looked for recent changes in the legislation of the selected countries and researched known examples of sustainable finance initiatives at the local level. Qualitative expert interviews in the tradition of Meuser and Nagel (2002) were conducted from October 2023 to February 2024 with two experts from each country, which represent diverse functions such as interest groups, local governments, research, and public management (for an overview of the interviewed experts, see Table A1 in the Annex). This sampling ensures a variety of perspectives on existing legislation to satisfy a differentiation between objective legislation and subjective experience. Semi-structured interviews thereby contained questions on existing legislation, monitoring, financing mix, debt making, and sustainable finance to verify and contextualize our literature review as well as unstructured questions about opinions and predictions on the relationship between debt regulation and sustainable finance. Additionally, this approach supports the comparative analysis of different regulatory frameworks by enabling a nuanced understanding of both commonalities in debt regulation and unique local contexts.

5. Case Studies

5.1 Germany

General regulations of municipal budgets

The German constitution (Grundgesetz) comprises the right of local self-governance in its article 28-2. In terms of financial constitutional guarantees, article 106 (numbers 5 to 8) is central. It covers fiscal autonomy of local governments by setting the terms of tax sharing arrangements with higher levels of government and by prescribing the principles for own taxation rights (Gern & Brüning, 2019). Due to Germany's federal political system, the financial sovereignty of local governments is further codified in the constitutions of the German states (Länder). In its article 83, for example, the Bavarian state constitution obliges municipalities to set up a budget. Municipal laws (e.g., Gemeindeordnungen) and local government

budget laws (e.g. Kommunalhaushaltsverordnung) of the states regulate the specifics of municipal financial management. Consequence of the federal system is a certain variation of local public financial management requirements across the states. A prominent example is the varying application of accrual and cash accounting.

Regulation of municipal debt

Local government laws of the German states grant municipalities the freedom to take on debts as soon as they cannot finance their expenditure requirements otherwise (Gern & Brüning, 2019). There is a broad differentiation between longer-term investment debt and short-term loans, the latter limited to bridging liquidity shortages and to be voted for by the council (e.g., Art. 73 Bay. GO). In the past, financially weak local governments in some states have piled up large amounts of short-term debt. Experts regard this as an indicator for fiscal crisis (Boettcher et al., 2019). To ease their burden, in the past some states repeatedly decided to bail out their local governments in parts or completely. This, for example, happened in Hesse in 2017/18 (Duve & Kümpel, 2020).

In terms of long-term debt, local governments have no explicit debt limit. The states' local government laws, however, foresee that a local government must not come in a situation of "over-indebtedness" (see, for example, article 75 in the local government law of North Rhine-Westphalia). In accrual accounting terms, a local government is over-indebted, if there is a deficit that is larger than the government's equity (as reported in the balance sheet, Gern & Brüning, 2019). Hence, as long as there is positive equity, there is no over-indebtedness and additional debts are – broadly speaking – possible up to a stock that equals the sum of a government's fixed and current assets. To avoid a situation of over-indebtedness, local governments in most states must obtain approval from the supervisory authority for the entirety of new debts in a certain budget year (Faber, 2010), which usually is just a formality as long as the general financial situation of the local government is sound.

In Germany, local governments are free to borrow from private and public banks equally. In past years, debt intermediaries such as online brokers became more important. Still, the basic local government loan is the most prevalent form of taking on debt (Raffer & Scheller, 2023). Only a small share of municipalities uses bonds.

Monitoring of municipalities in financial distress

Following constitutional law, German local governments (cities, municipalities, and counties) are not an independent administrative state level but have to be attributed to the respective state in which they are located. Consequently, the states – and here the ministries of the interior – are responsible for legal and technical supervision, which also comprises budget monitoring (Gern & Brüning, 2019; Brüning & Söbbeke, 2024). Whereas budget monitoring for municipalities is located at the county level, counties themselves and larger cities are either monitored by the ministry or in some states by an additional intermediate administrative level (e.g., Regierungsbezirke).

In terms of the annual local budget, it is the supervisory body's major task to check whether it complies with the state budget law. A special focus lies on the requirement of balanced budgets. If a local government fails to balance the budget, the supervisory body does not approve the budget and the local government comes in a situation of preliminary budget management, which considerably limits the freedom to take financial decisions. To gain approval, the local government has to provide a proposal on how to reduce the deficit and reach the budget balance in the medium term (Haushaltssicherungskonzept). The share of local governments, which are in such a state of financial distress, usually ranges between 10 and 15% in any given year (Raffer & Scheller, 2023). In theory, supervisory bodies can do whatever is necessary to enforce fiscal rules. An option of last resort is sending in a state commissioner, replacing the local government, and taking measures to improve the budgetary situation (Geißler et al. 2020). In reality, this escalation has hardly ever been implemented. German local governments cannot go bankrupt because the "federal principle of standing up for each other" effectively establishes a federal liability association between the levels.

At the end of each budget year, a local government has to prepare its annual statement (Gern and Brüning, 2019) which has to be presented to the supervisory body and to be assessed by the internal audit

office. In exceptional cases, an audit by external auditors is possible (IDR, 2009). In some states, the supervisory body also evaluates the statement (Brüning & Söbbeke 2024).

Regulation of local fiscal autonomy

As seen above, local revenue autonomy is an element oft he German Constitution, which finds its restrictions in state law (Geißler et al., 2020). Cities and municipalities enjoy the freedom to create new taxes and to set the rates for the local property and business tax (Gern & Brüning, 2019). In reality, however, if a local government creates a new tax like a tourist, dog, or hunting tax, the revenues are negligible compared to the more important taxes like business or property tax. However, in accordance with the municipal principles of generating income and payments, the municipalities should always initially implement fees for local public services and contributions to certain infrastructure investments.

In terms of expenditure autonomy, local governments are in theory free to allocate their funds according to local preferences. This freedom is limited by the existence of mandatory (e.g., social) services, which in many local governments consume the major part of the budget. If existent at all, the unbound share of funds is usually not very large. With it, local governments can provide non-mandatory services in the fields of e.g., culture or sports. Although the law knows the so-called "Konnexitätsprinzip" (Gern & Brüning 2019), which describes the local right to receive sufficient funds from higher levels of governments whenever a new mandatory task is created or decentralized, local governments repeatedly report that this principle is not always fulfilled. This further limits local expenditure autonomy.

Revenue and debt structure

The local government revenue basket consists of taxes, transfers, fees, and contributions. The tax revenue share of all revenues in 2023 was at 40% (Statistisches Bundesamt, 2024a), while the business tax accounted for close to 50% of all tax revenues. The business tax is therefore the most relevant local government tax in Germany. Further local taxes are the property tax and miscellaneous, less relevant taxes like tourist or dog taxes. Additionally, local governments benefit from tax sharing arrangements with the higher levels in terms of the income as well as the value added tax (Gern & Brüning 2019). Unconditioned transfers from the existing equalization system plus investment transfers accounted for close to 20% of all revenues, fees for 7% (Statistisches Bundesamt, 2024a).

Local government debt consists of investment loans, short-term loans, and bonds. With 78%, the share of longer-term investment loans in total debt was the largest, followed by short-term loans to bridge liquidity shortages (20%), and bonds with a share of only 2% (Statistisches Bundesamt, 2024b). Relative to general government debt, the share of local government debt ranges around 5% and therefore is in its aggregate form no reason for concern. However, due to the heterogeneous distribution of debt there are certain local governments concentrated in states like North Rhine-Westphalia, Rhineland Palatinate or Saarland, which suffer from high debt burdens.

Sustainable Finance and local public finance

Although the topic of sustainable finance for local governments has reached the academic debate in Germany (Scheller et al. 2023), it is not yet of significant relevance for the local government level. Some larger cities (Munich, Münster, Hannover, Cologne or Bonn) have emitted green and/or social bonds in the last years and received a great deal of public attention for it. For smaller cities and municipalities, there are no comparable examples so far. In addition, there exists a green local government loan provided by the regional development bank of North Rhine-Westphalia (NRW Bank). At the moment, the interest rate conditions for traditional financing via loans are still very favorable for German local governments which removes the incentive to experiment with financing innovations like sustainable finance.

On the state level, the government of North Rhine-Westphalia has a tradition of issuing a green bond every year. Also, the federal government has repeatedly placed green bonds on the market over last years, among those are the so-called twin bonds, which allowed for the determination of interest rate differences (greenium) of green bonds, compared to normal sovereign bonds. The learning is that although there existed a small greenium at first, it vanished over time.

5.2 Austria

General regulations of municipal budgets

Whilst local autonomy is a core principal set in the Austrian constitution, the financial relations between federal, state, and local level are regulated in their own constitutional law "Finanzverfassungsgesetz" from 1948 (Federal Ministry Republic of Austria Finance, 2024). It both states that authorities are financially responsible for their respective jurisdictions and limits to overstraining of this principle. In addition, three basic laws are set at the federal level concerning subnational finance. Firstly, the VRV (Österreichischer Städtebund, 2024) regulates financial reporting at all Austrian government levels. Secondly, the fiscal equalization law ("Finanzausgleichsgesetz") determines tax shares between and across regions and local governments. Thirdly, the Austrian stability pact regulates how the adherence to the EU Maastricht criteria is safeguarded across government levels. The latter demonstrates an implicit debt regulation, whilst explicit budgetary rules are set in state law (Geißler et al., 2020).

Regulation of municipal debt

Whilst Austrian municipalities adhere to a balanced budget rule, the Austrian stability pact between all levels of governments foresees the absence of deficits at the aggregate level only (Geißler et al., Interview 1). Despite general adherence, balanced budget rules are not explicitly set in all state laws (Geißler et al., 2020).

The regulations on municipal debt making are strict compared to other European countries. Local governments can go in debt for the purpose of investments only whilst sticking to a balanced current budget, and need permission from municipal supervision at state level (Interview 1). Large cities demonstrate an exception to this rule, as they are granted flexibility on debt making more often. The latter, however, does not result from explicit laws and rather builds on historical contingencies (Interview 2). Should municipalities surpass a balanced budget in the current household, they are referred to as deficit municipalities ("Abgangsgemeinden") (Interview 2). This condition activates a range of state laws permitting (but not requiring) financial support from the state under fiscal requirements. Whilst states are not formally required to assist their municipalities, talks between municipal supervision and deficit municipalities are common to ensure that austerity measures are being implemented and followed (Interview 2; Geißler et al., 2020).

Monitoring and municipalities in financial distress

Fiscal regulations and financial oversight are typically governed by state law. While the federal constitution establishes some basic principles of oversight, it is the responsibility of individual states to carry out fiscal supervision at the local level, whether through ministerial departments or district-level authorities. The choice of supervisory office depends largely on the specific area of oversight. In cases where a municipality struggles to adhere to fiscal regulations, the supervisory body has a range of tools at its disposal. These may include requiring special measures or allowing municipalities to apply for conditional grants from the federal government. Additionally, supervisory bodies conduct audits to gain a deeper understanding of the fiscal situation (Geißler et al, 2020).

Whilst the state of being in deficit does not necessarily trigger a mandated response, Austrian law foresees two stricter conditions of financial distress. If municipalities do not adhere to austerity measures, state law permits the replacement of the mayors by government commissioners, sent from municipal supervision to enforce debt regulation. However, this measure exists primarily in theory (Interview 1). A second theoretically possible but virtually non-existent consequence of financial distress is bankruptcy. The most recent bankruptcy occurred during the 1930s (Geißler et al., 2020). Like in many federal nations, there is an underlying anticipation of bailouts, typically borne by the states. Furthermore, in the event of bankruptcy, liquidation is restricted to assets that are not essential for providing local public services. Should the need arise, states step in to assist their municipalities in order to avert more significant financial difficulties (Interview 2). The distinction between possible consequences, as outlined in state law, and the expectation and practice, as demonstrated in the interviews, reveals contrasts between lived reality

and written rules. However, in the case of Austria, the former also arises due to an absent need for escalating measures, as financial distress seems to be the exception rather than the rule.

Regulation of local fiscal autonomy

According to the OECD (Dougherty et al., 2019), Austria places low on local fiscal autonomy in several dimensions. Firstly, Austrian municipalities' only autonomous source of income are a local business tax, which functions as a payroll tax, and a local property tax. Secondly, local governments only have discretion over its level since the payroll tax rate is set at federal level, and financial aids from state level depend on local governments maximizing their local revenue sources in regard to the latter (Interview 2). Accordingly, most local governments set the property tax at the highest level depending on their size (Interview 2, Geißler et al., 2020).

With regards to fees, municipalities used to have considerably more leeway whilst generally adhering to the principle of covering costs from a long-term perspective (Interview 1). In recent years, however, this leeway has decreased due to the introduction of separate budgeting for respective fees, making differing uses increasingly impossible (Interview 2). Legal ambiguity remains with regards to Pigouvian fees that are, for example, increased above cost coverage to achieve behavioral change (Interview 2).

As there is no principle of comprehensive coverage, meaning that all revenues should be used to cover all costs to increase efficiency, municipalities can take up loans for specific investment purposes. Since state level municipal supervision has to approve of municipal debt making, credits can usually be linked to specific investments both in budget and in oversight. The latter is particularly meaningful against the background of sustainable finance. Given that sustainable finance products usually require reporting procedures for investment purposes, the uptake of loans for designated projects eases reporting procedures considerably.

Financing mix

The biggest share of local revenue is generated from shared taxes, which are agreed on in the Fiscal Equalization Law between local, regional, and state level. Shared taxes and transfers amounted to 47,2% of local revenue in 2021 (Österreichischer Städtebund, 2023, p. 15), of which 10,4% result from state level and 36,8% stem from the federal level. Slightly more than a third of revenue (36,9%) is generated through local fees and taxes: The property tax amounts to 2,9% and the municipal tax to 11,4%. Another 9,5% stems from local fees. The remaining 13,2% are gathered from other economic activities and additional fees. Hence, only 7,6% of local revenue originate from banks through loans and securities, making their overall share rather small. Whilst the local property tax has been under reform for a long time, its current design was decided upon in 1973 and has not changed ever since (Geißler et al., 2020; Interview 1). Further, larger municipalities generate more local revenue per capita through local taxes.

Municipalities in Austria are free to choose loans from public and private banks. Both local and regional public banks offer municipal loans, and there is no great diversity in the types of financial products used for municipal finance (Interview 1). There has been experimentation with foreign currency loans in the past, but administrative burden and volatility has considerably decreased its popularity (Interview 1).

Sustainable Finance in Austrian municipalities

Despite first efforts in sustainable finance initiatives such as green- and climate budgeting in larger cities, there does not exist a systematic local approach to sustainable finance in Austrian municipalities (Interview 1). Banks sometimes apply criteria for sustainability in local loans, but do not standardize this procedure across banks (Interview 1). In comparison to other countries, however, Austrian banks active in local financing show greater interest in sustainability reporting at the local level for refinancing purposes (Interview 1). Interviewees therefore expect the relevance of sustainable finance to grow in the future, especially due to reporting requirements of banks, which will then indirectly affect municipalities. Due to a return to conservative borrowing practices at the local level and an overall small share of loans, however, there is neither a broad awareness nor a strategic plan among municipalities.

5.3 Italy

General regulations of municipal budgets

Article 119 of the Italian constitution outlines the basic fiscal framework for municipalities, provinces, metropolitan cities and regions. Additional to revenue autonomy and equalization, it stipulates that expenditure autonomy is subject to the obligation of a balanced budget. The constitution limits municipal borrowing to the financing of investment expenditure and makes it subject to the condition that budget balance is ensured for all authorities of each region, taken as a whole (Italian Constitution, Art. 119). Further relevant laws for local government budgets are the Fiscal Federalism Law (no. 42) of 2009, which aimed to increase autonomy, efficiency and accountability of local governments, as well as the Decree 118, putting down the standard budgeting procedure. General principles and provisions regarding the organization of local authorities are enshrined in the legislative decree No. 267 of 2000 (Testo Unico Enti Locali).

Regulation of municipal debt

Fiscal rule setting is located at the central government level. Until 2015/16, local government fiscal regulation in Italy was bound to the so-called Internal Stability Pact (ISP), introduced in 1999. It covered all local jurisdictions larger than a minimum number of inhabitants varying between 1.000 and 5.000 over the years. The ISP was under constant modification until its replacement by a simpler accrual based balanced budget rule for all local governments (Geißler et al., 2020). Breaking this new rule entails a reduction of financial resources from the equalization fund, a hiring freeze plus an obligation to reduce costs by 30% in the following year. Moreover, in case of rule-breaking loans can no longer be used for in-vestment purposes.

Since in Italy loans are limited to investment financing, it is not possible to finance current expenditure by bank credit (Interview I2). The total stock of debt per local government is indirectly limited by a maximum ratio of debt cost and annual current revenues: Debt cost must not exceed ten percent of annual current revenues (Decree 190 of 2014). In general, local governments do not need any kind of approval for taking out an investment loan (Interview I1).

Monitoring and municipalities in financial distress

Fiscal supervision of Italian local governments lies within the responsibility of the general accounting department at the Ministry of Economy and Finance as well as the national Court of Auditors with its 21 region-al units (Raffer & Padovani, 2019). Each year, each regional unit audits a selected group of local governments in its territory. In addition, the ministry conducts supervision and control through an integrated system of public finance controls. Since 2016, every local government must submit a certified report by the end of March.

Italy is one of the few European countries in which local governments can go bankrupt (Ambrosanio et al. 2016: 233). The law distinguishes three different types of financial distress with bankruptcy with „dissesto" being the most severe (Raffer & Padovani 2019). The intermediate condition is pre-default (predissesto). The least acute type is imbalance, which results in the rebalancing procedure. A local government is considered being bankrupt if either it cannot fulfill its functions and provide basic services anymore or it cannot pay creditors with its regular resources.

Regulation of local fiscal autonomy

In terms of own taxes and based on the Fiscal Federalism Law No. 42 of 2009, Italian municipalities have only limited freedom to determine new tax bases or increase existing surcharges any further as they already have. Compared to this, Italian municipalities have a rather high autonomy in determining service fees for waste collection and disposal, public transport, etc. (Interview I1). Expenditure autonomy is widely determined by the compulsory nature of some local functions (fundamental services) like administration, roads, kindergarten, etc. Discretionary expenditures, i.e., non-fundamental services like cultural events, sports and so on represent less than a quarter of municipal current expenditure.

Revenue and debt structure

In terms of local government debt of 2022, on average 1.8% of revenues stemmed from short term debt, with large differences ranging from 8.1% on average in the special region Sicilia to 0% in the regions Emilia-Romagna, Puglia, Friuli-Venezia, Giulia, Valle d'Aosta, and Sardegna (Aida PA database, Moody's Analytics). On average 1.7% of revenues were long-term debt with on average 1.9% in Umbria and 0.2% in the special region of Sardegna. While Italian municipal tax revenues accounted for 37.9%, no less than 16.8% of revenues have been generated through user fees. The remaining 41.8% of revenues came from governmental transfers. Central government transfers to municipalities consist exclusively of general-purpose equalization grants (Raffer & Padovani, 2019). Additional to ordinary short- and long-term debt, Italian municipalities hold what experts call "off-budget debt". These comprise current expenditure, which remained unregistered in the previous year's accounting and must then be covered by the local government council (Interview I1). This off-budget debt increased by 54% between 2011 and 2016.

Most of Italy's local debt comes from bank loans, largely issued by domestic banks. The most important bank in this field is the Cassa Depositi e Prestiti (CDP), of which the Ministry of Economy and Finance owns 85% (Interview I1). The CDP accounted for more than three quarters of Italian local debt. The bank "Istituto per il Credito Sportive" holds less than five percent and provides finance mainly for sport facilities. The remaining share of debt is taken from other private banks. Compared to total lending of Italian banks, loans to local governments account for less than 2%.

Italian local governments have the option to issue bonds since the late 1990s and have used it extensively in the early 2000s (Interview I1). Today, however, municipalities and cities do not issue bonds anymore since they are more costly and complex to manage compared to local government loans. Currently, the stock of municipal bonds lies around bln 3,5 EUR out of a total debt of bln 32,5 EUR. These are concentrated in a few big municipalities, mainly Rome and Milan.

Sustainable Finance and local public finance

Currently, environmental, social or governance (ESG) criteria are hardly linked to ordinary municipal finance in Italy (Interview I1). However, there are first signs that sustainable finance considerations may play a bigger role in the future.

The CDP has recently introduced a green loan program aimed at benefiting municipalities, local governments, and other non-territorial public entities with a total funding cap of mio. 200 EUR. This initiative is supported by 50% funding from the European Investment Bank (EIB) and, compared to the standard offerings from the CDP, it presents more favorable financial terms. Under this program, local entities can request green loans ranging from 40,000 EUR to mio. 25 EUR for projects related to energy efficiency, sustainable transport, and water infrastructure. Municipalities keen on availing this loan must fulfill specific reporting requirements. For projects in the realm of energy efficiency, they are required to furnish pre- and post-intervention energy efficiency documentation. Additionally, each project funded through the green loan is associated with an impact Key Performance Indicator (KPI). To meet this requirement, local governments must provide an estimate of the energy savings anticipated post-intervention.

Another example is a mio. 55 EUR green loan for the Italian public company "BrianzAcque" which manages water services in the province of Monza and Brianza. It is partially owned by 55 member municipalities. The loan was provided by the EIB for improving the efficiency of water infrastructure and wastewater management between 2022 and 2025. It is the EIB's first green loan to the water sector and the project is assessed in line with the Paris Agreement and the low-carbon targets of the EIB's Climate Bank Roadmap.

5.4 Czechia

General regulations of municipal budgets

Though budgetary rules for local governments are not constitutional, regulations of municipal and regional finance can be found at the national level. The Act on Budget Responsibility Rules 23/2017 regulates general budgetary principles, such as the purpose of public finance at different tiers of governments,

and general budgetary procedures. It further defines public budgets, governing bodies, monitoring and reporting procedures, and debt regulation (Czech Fiscal Council, 2022)

Regulation of municipal debt

In the realm of municipal debt regulation in the Czech Republic, local governments face the obligation of adhering to a scarcely enforced balanced budget mandate and are subject to a 60% debt-to-revenue ratio as regulated in section 17 of the Act on budget responsibility, stemming from the country's adoption of EU post-crisis fiscal regulations. The recommended limit for the share of external resources in the total of assets should not exceed 25% and the current liquidity measured in the ratio of current liabilities to current assets should not be more than 1 (Ministry of Finance, 2024). Despite the implementation of a numerical debt rule and medium-term budgetary planning during the fiscal reform process between 2015 and 2017, the oversight and the enforcement of fiscal rules in the country are notably lenient (Geißler et al., 2020).

Before 2017, central government constraints on local borrowing were indirect, primarily revolving around the Ministry of Finance's approval of municipal bond issuance. There was no direct limitation on the credit or borrowing volume for local units until the aforementioned period (Geißler et al. 2020, p. 47).

However, should a municipality surpass the stipulated debt threshold, corrective actions are mandated. Should the debt of a local or regional authority at the balance-sheet date exceed 60% of its average annual revenues over the last four budget years, the local or regional authority shall reduce it in the following calendar year by at least 5% of the difference between the amount of its debt and 60% of its aver-age revenues over the last four budget years. Failure to address the excess debt prompts the central government to withhold a portion of shared tax revenue (Interview 1). This mechanism entails that the Minister of Finance requires an explanation and improvement measures from any municipality exceeding a 30% case ratio overrun within three months. The municipality must submit an audit report and a multi-annual budget outlook. If the debt service ratio surpasses the limit in the subsequent year, the municipality is placed on a list given to grant providers, influencing decisions on new grants (Geißler et al., 2020, p. 39, 47).

Monitoring and municipalities in financial distress

If municipalities exceed all three indicators of budgetary responsibility, they are considered municipalities with a higher level of management risk (Ministry of Finance, 2024). The Ministry of Finance furthermore reports on the compliance of local and regional governments each year, where statistics are pro-vided on general share of compliant municipalities (Interview 2). However, there is no financial institution, which oversees and approves local debts: In Czechia, local governments are autonomous in their financing decisions (Interview 1).

Each year, municipalities are subject to an external audit, which can take place at any point of the budget cycle (Interview 2). The regions audit municipalities annually, which is, however, not considered a full financial audit. This audit is usually performed by public officials employed at the regional level and its results are reported to the ministry.

In instances of financial distress, Czech municipalities commonly resort to the involuntary sale of municipal property as a coping mechanism. Municipal bailouts, involving the takeover or guarantee of debts by higher territorial administrative units, are infrequent occurrences (Geißler et al., 2020, p. 48). Municipalities in financial distress, which do not comply with the mandated requirements, can face temporary withholding of their tax share (Interview 1). However, as of today, there are no reports on any instances of withheld tax shares yet (Interview 2).

Regulation of local fiscal autonomy

Local governments primarily rely on transfers, mostly earmarked and tied to specific tasks, and on taxes as their crucial revenue sources. Due to the dominance of shared taxes over which they have little influence, local fiscal autonomy is limited. The local property tax is an exception, that provides some flexibility by allowing adjustments to the tax rate to counter revenue fluctuations (Geißler et al., 2020, p. 39).

A significant portion of local revenue comes from shared taxes, including personal income tax, corporate income tax, value-added tax, and income tax on the self-employed, all centrally collected and distributed. State grants, local fees, and capital income also contribute to municipal and regional finances, with transfers constituting a substantial share, particularly from the state budget and funds (Geißler et al., 2020, p. 41). Municipalities have the right to create their own fees, but they commonly do not sum up to a significant level of the budget (Interview 2)

The municipal property tax exclusively contributes to municipal budgets. Municipalities have some discretion regarding its level, but rarely use their fiscal leeway due to intermunicipal competition (Interview 2). Grants and subsidies play a vital role in regional and municipal income, mostly earmarked for specific purposes, covering a range of delegated tasks and self-government responsibilities (Geißler et al., 2020, p. 41). However, earmarked grants are rarely accounted for in a separate budget, providing local governments with some autonomy regarding their spending (Interview 1).

Financing mix

In 2022, approximately two thirds of municipal revenue stemmed from tax sharing. An additional 20% generally stems from transfers for delegated administrative tasks at the local level. This large proportion of non-adjustable revenue demonstrated the limited municipal autonomy in fiscal issues. An additional 8% are made up of non-tax revenue, 3.48% of user charges, whilst only 2.82% stems from the adjustable municipal property tax (Financing of Territorial Budgets Department, 2023). Another 1.72% stems from local fees. Total municipal revenue has been steadily increasing from 261 billion CZK in 2013 to 449 billion CZK in 2022.

Only a very small percentage of municipal revenue, 0.6%, stems from short-term loans. While the public debt at the local level in the Czech Republic is a minor fraction of general government debt, decreasing from 9% in 2000 to 5% in 2016, financial management at the local level has generally been prudent. The majority of municipal debt is concentrated in the four largest cities, posing minimal risk to the municipal economic environment. The two indicators of financial distress only apply to a handful of municipalities over a longer period of time, which implies that there is a relative financial sustainability in the vast majority of Czech municipalities.

Whilst municipalities do not have institutional constraints in debt making beyond national regulations on budgetary responsibility, there are no public banks that offer municipal loans (Financing of Territorial Budgets Department, p.4). Municipalities therefore commonly borrow from private banks, and only 0.5% of the entire banking system's business in Czechia is determined by municipal lending (Financing of Territorial Budgets Department, p.4-5). Municipal real estate also makes a huge difference in wealth of municipalities (Interview 2).

Sustainable Finance and local public finance

Despite growing relevance of ESG finance through, for example,shared climate taxation there is no structural or institutional knowledge on sustainable finance for local governments in Czechia. Prague constitutes a notable exception: Not only does it make use specifically of sustainable finance products to finance its Sustainable Energy and Climate Action Plan of 2023 (SECAP), these products constitute green bonds rather than traditional loans (Interreg Europe, 2022). The issuance was prepared and guided by international peers in subnational climate finance, such as Malmö, Göteborg, and Munich (Interreg Europe, 2022). However, there is no evidence of a broader national effort for alternative financing methods. Instead, local debt making stays low and the expectation persists that transformational efforts align top down rather than independently at the local level.

5.5 France

General regulations of municipal budgets

The most general principles of French local government finance are part of the French constitution. Article 72 constitutes their administrative and financial autonomy. The constitutional provision of financial autonomy as well as the wider local financial framework is detailed out in the "Code général des collectivités territoriales" (CGCT), which summarizes and organizes laws and regulations concerning territorial administration. The current budget and accounting framework, particularly for local authorities, is called M57 and is part of the Law 2022-2017 of 2022. It is mandatory for local governments with less than 3.500 inhabitants and obligatory for the rest.

Regulation of municipal debt

Local governments in France can debt-finance investment projects but must not take on debts for covering current expenditure ("golden rule", Interview 1). However, it is possible to balance a deficit in the operating budget with surplus money made free in the investment budget by taking on additional debt for investment purposes (Interview 2). Local governments are not allowed to repay current debt with new debt and the interest rate of any loan needs to be fixed for the entire repayment period.

Apart from that, there is no explicit debt limit for French local governments. They are free to take on as much as they can shoulder. However, the strict requirement to repay debt with other revenues than debt must be understood as an implicit limit since technically annual repayment cannot exceed revenues that are not conditioned otherwise (e.g., for financing compulsory tasks) (Interview 2).

In terms of different types of debt, French local governments usually take on ordinary loans. However, in recent years the number of (mostly larger) cities issuing bonds is rising (Interview 1). Local authorities are free to choose the amount, the interest rate, and the organization they turn to for funding. Taking on loans is not subject to budgetary control executed by higher levels of government (Vie Publique, 2024). One long-standing organization in local government financing is the "Caisse de Dépôts et Consignations (CDC)". In 2013 – after the financial crisis – the "Agence France Locale" was created, an organization fully-owned by the French local authorities and dedicated to their funding by distributing loans to the members through pooled financing (OECD, 2016). Hence, it functions as loan intermediary between the financial market and local governments. Apart from that, there is a well-functioning market for local government finance in France (Vie Publique, 2024).

Monitoring and municipalities in financial distress

In order to identify local governments in financial distress, there is an "alert network" executed by the "Direction General de Finance Publiques (DGFP)" (Interview 2). The DGFP evaluates the fiscal state of local governments with the help of four different ratios (like the ratio of debt over operating income). Whenever the financial situation of a local government deteriorates, there will be internal consultations with elected officials.

The "prefect", who represents the central state on the level of the departments ("départements") and the local chamber of accounts monitor the regularity of local government budgets from the legal as well as the financial perspective (Vie Publique, 2024). The procedure is codified in the CGCT. After the council has voted a budget, the prefect checks whether the compliance with budgeting principles (the adoption and transmission date, like the golden rule, etc.) has been respected (Interview 2; see also: L.2131, 1-6 of the CGCT). In case a local government cannot balance its budget, it is the prefect's task to step in, taking power over the local government and implementing expenditure cuts. The prefect also summons the regional chamber of accounts to issue a proposal addressing the problem. (Geißler et al. 2020).

French local budgets are not audited so far. However, based on the NOTRe law from 2015 there was an experiment with 25 local governments, which ran a test of public account certification by 2023 (Vie Publique, 2024). Following the results and due to the costs of certification, the French Senate suggested to not make auditing obligatory for local governments. On a more general note, there is no bankruptcy procedure for French local governments meaning they cannot go bankrupt (Interview 2).

Regulation of local fiscal autonomy

The most relevant regulation of local government budgets is a strict balanced budget rule, imposed in 1982 by the Law No. 82-213 (Moysan, 2020). The regulation demands annual balances in the operational and the investment budget (CGCT, L.1612-4), whereas a local government can balance deficits in the operational budget with surpluses in the investment budget (Interview 1). Moreover, it is possible to use the previous year's surpluses for budget balancing (Interview 2). One peculiarity of the French balanced budget rule is the possibility to run ex post deficits during budget execution (Geißler et al., 2020). They must stay, however, below 5% of the current revenue (10% for small municipalities).

Only the central government is authorized to create new taxes (Art. 34 of Law 77-574, 1977) (Geißler et al. 2020). However, there is the possibility for municipalities to set an additional rate on certain statewide taxes – although these rights have been limited over the past decade. Currently, regions and departments have no power to set tax rates. Hence, fiscal autonomy on the local level is decreasing. This is corroborated by the high shares of revenues stemming from the central government (Geißler et al. 2020). What they still have is financial autonomy, meaning that they have sufficient money provided by higher-level grants (Interview 2). In terms of expenditure autonomy, local governments are free to allocate their expenditure according to local preferences (although some expenditure categories like religion are not allowed). However, there is an ongoing discussion to control the evolution of local government spending. As long as the budget remains in balance, local governments do not face capped expenditures.

Revenue and debt structure

In 2023, municipal revenues from local taxes and fees accounted for 64% of all revenues in the operational budget (Collectivites Locales, 2024a). Transfers from the central state accounted for 19.2%. Municipalities receive the largest part of the three main taxes grouped as "household taxes" – including council and property tax (Geißler et al. 2020). They also receive "taxes économiques" – which are taxes linked to the local economic activity. Referring to financial autonomy (see above), French local governments enjoy a state guarantee that they receive the tax receipts they have voted for in their budgets (Interview 2). If there are unforeseen tax shortfalls, the central government provides the municipalities with the amount they had expected. This leads to a stable revenue situation.

In terms of local level debts, municipalities, departments, and regions took on new loans of bln 16.5 EUR (DGCL, 2023). In 2023, the total amount of outstanding debt of these three jurisdictional levels was at bn. 138 EUR of which municipalities held 51.6%, the departements 22,7% and the regions 25.7% (Collectivites Locales, 2024b). The majority of local government debt consists of common bank loans (Interview 2). However, in 2021 there was also a considerable share of local financing via bonds (37%) – which can be traced back to a small number of just 25 issuers. In other words, for the majority of French local governments, financing via bonds is not relevant.

Sustainable Finance and local public finance

In France, the sustainable finance development in the local public sector is still under development (Interview 1). However, there are examples of green bond issuance on the local, especially on the regional level (Interview 2). The French regions were the first who issued green bonds.For example, the central Île-de France has issued a bond over mio. 500 EUR and the region Hauts-de-France has issued its first mio. 50 EUR green bond already in 2008 (la gazette, 2019 and 2023). The city of Paris has issued a green bond in 2015. The French central government issued its first green bond in 2017. Since required volumes for green bonds are quite high, smaller municipalities are more bound to loans offered by the banking sector. One example for an ESG-linked loan comes from the bank "Credit Agricole", which offers a local government loan with more favorable conditions that are linked to the loan's relevance for sustainable development (Interview 1).

5.6 Comparative Findings

In our first research question, we ask whether the existence of strict debt regulation in one of the sample countries may be a theoretical obstacle to the local government usage of sustainable finance. Table 2

summarizes the results on existing debt regulation. In each of the sample countries there exists a balanced budget rule (BBR) for local governments with a relatively weak enforcement in Czechia. Local governments in all countries except in Czechia are subject to a golden rule, meaning that long-term borrowing is legally limited to investment spending. In terms of explicit debt limits, only Czechia has a very explicit regulation. In three out of the four remaining countries, the level of debt is implicitly limited by binding the stock of debt to the stock of fixed assets by forbidding over-indebtedness (Germany), by binding the debt cost to current revenues (Italy) or repayment to free revenues (France).

Table 2: Comparison of budget/debt regulation in sample countries.

	BBR	Golden Rule	Explicit debt limit	Implicit debt limit	Choice of bank
Germany	X	X		X	X
Austria	X	X			X
Italy	X	X		X	X
Czechia	X (weak enforcement)		X		X
France	X	X		X	X

The second research question asks whether there is significant evidence of local government usage of Green Bonds or green/ESG-linked loans. Table three summarizes the results. In Germany, there are some forerunner cities which have already issued a green bond (in the case of Münster even twice). The Czech as well as the French capital have also already emitted a Green Bond. In France, several regions have done the like. In terms of local government loans, there are examples of green local government loans in Germany and Italy. Moreover, in France, there exists an ESG-linked local government loan.

Table 3: Usage of sustainable finance by the local government level.

	Green Bond	Green Loan	ESG-linked loan
Germany	Forerunner cities (Munich, Hannover, Münster, Cologne)	One example	
Austria			
Italy		One example	
Czechia	City of Prague		
France	City of Paris; Several Regions		One example

In addition to the local government activity, also publicly-owned companies may issue green bonds. One example is the Vienna public utilities company (Stadtwerke).

6. Discussion and Conclusion

The implications of debt regulation have been so far predominantly discussed against the background of financial sustainability. Current debates around investment needs for social and ecological sustainability beg the question of how public investments can be increased to achieve necessary infrastructural transformations. Sustainable finance, along with exemptions from existing debt regulation have been discussed by previous literature (Scheller et al., 2023). Darvas and Wolff (2021), for example, discuss exemptions from the debt rules as set in the supranational Maastricht criteria for green investment purposes (green golden rule). Proponents of sustainable finance uphold that private capital must be directed towards sustainable investment purposes both in the public and private sector. As the results of our case studies show, current sustainable finance initiatives have hardly reached public institutions below the national level, although the EU fosters respective regulation on the supranational level. This research aligns

with previous findings of limited public uptake of sustainable finance. Referring to our first research question regarding the relevance of debt regulation for local government usage of sustainable finance, there is no systematic relation in our case studies.

This is not say that the national debt regulations do not show great diversity in their written and practiced form. Only Czechia has a numerical debt limit for their local governments, while in Germany, Italy, and France there exist indirect limits. The golden rule can be found in every country except Czechia. Compared to that, there are some but limited examples for the issuance of green bonds or the existence of green/ESG-linked local government loans in all but one country. The exception is Austria. Hence, there is no clear pattern that would indicate a limitated effect of debt regulation. Bonds were widely used in both Czechia and Italy in the 1990s. Austrian municipalities experimented with foreign currency loans and in Germany and France, local governments use bonds to a certain extent. Hence, the usage of less conservative means of finance is or has been common. Therefore, the limited enthusiasm towards means of sustainable finance is supposed to have other reasons. Possible causes are the requirement of large volumes when issuing green bonds, which is supported by the fact that within our sample of countries, only larger cities or regions have opted for them. Another potential explanation for the reluctance of local governments towards green bonds are the emission costs and related reporting requirements. In addition, favorable interest rates for conservative borrowing in a situation of a negligible "greenium" may destroy any incentive to experiment with sustainable finance. These potential causes would require further investigation.

Several conclusions emerge from this picture. Firstly, one could argue that in terms of borrowing practices, debt limits at best show an indirect effect on the products chosen by municipalities (which favor conservative loans). Liquidity issues necessitate short-term loans like in Germany and Czechia, but the noticeable reluctancy should be attributed to market factors rather than to regulation. Secondly, across all sample countries, apart from Austria, a limited number of larger cities and – in the French case– regions seem to be an exception to this finding. These forerunner cities and regions show to this date a greater usage of bonds; the same also holds true for emergence of sustainable finance at the local level. These juris-dictions have all issued green bonds in the absence of local level effort and coordination in their respective countries. In the case of Prague, the issuance was even explicitly linked to an international network of peer cities taking up forerunner roles in sustainable finance. This clear distinction across all countries leads to the hypothesis that the size of cities and regions determines sustainable finance efforts, as only larger local governments can provide the required volumes for green bonds. From this observation, it follows that the large number of local governments equally responsible for infrastructural transformations require different preconditions of market rather than regulatory nature.

These findings point towards the assumption that municipalities might be hesitant to fully take on the role as agents of change by debt-financing infrastructure projects that are necessary for a socio-ecological transformation. Instead, (small) municipalities might prefer waiting for regional and national government resources to realise this transformation. Although this attitude is not principally wrong, other domains such as crisis prevention have demonstrated that it can lead to adverse consequences and a lack of preparedness at the local level (Herbert-Maul et al., 2022). Moreover, it is unclear whether large cities can serve as a sufficient role model for their respective national context or will fail to generate traction. It should be discussed further whether other actors than larger cities can take up these roles. As the country case studies show, for example, development banks like the EIB can play a central role in approaching smaller municipalities (EIB, 2023).

While current research sheds light on the landscape of sustainable local finance in Europe, several limitations need to be acknowledged. Firstly, despite using a diverse-cases sampling method, these cases are not representative in a statistical sense for the larger European landscape of municipal finance. Future studies should conduct comprehensive cross-country comparisons to validate our initial findings. Furthermore, the roles of country experts were not coded or evaluated with respect to their access to the field. While this acknowledges diverse expertise equally, it does not account for their role in legislative or market processes. Hence, additional research should ensure more balanced perspectives from the local and national level, as well as from interest groups and administrations. Lastly, as the EU taxonomy is still under development, the legislative framework in this study is temporally bound. The case studies point towards early developments and actors that can play a role in the future of sustainable local finance, yet much is to be determined regarding the relevance of sustainable finance at the local level.

Sources

Ambrosanio, Maria Flavia; Balduzzi, Paolo; Bordignon, Massimo (2016): Economic crisis and fiscal federalism in Italy. In: Ahmad, Etisham; Ambrosanio, Massimo; Brosio, Giorgio (eds.): Multi-level Finance and the Euro Crisis. Edward Elgar, Cheltenham, 212–246.

Adeoye-Olatunde, O. A., & Olenik, N. L. (2021). Research and scholarly methods: Semi-structured interviews. Journal of the american college of clinical pharmacy, 4(10), 1358-1367.

De Biase, P. de; Dougherty, S. (2022): The past and future of subnational fiscal rules: An analysis of fiscal rules over time. OECD (OECD Working Paper on Fiscal Federalism, 41).

Blanchard, O. J.; Chouraqui, J.; Hagemann, R.; Sartor, N. (1990): The Sustainability of Fiscal Policy: New Answers to an Old Question. OECD. Washington (OECD Economic Studies, 15). https://www.oecd.org/tax/public-finance/34288870.pdf

Boettcher, F., Freier, R., Geißler, R., Schubert, M. & Stollhoff, R. (2019). Kommunaler Finanzreport 2019. Bertelsmann Stiftung.

Boetti, Lorenzo; Piacenza, Massimiliano; Turati, Gilberto (2012): Decentralization and Local Governments' Performance: How Does Fiscal Autonomy Affect Spending Efficiency?. In: FA 68 (3), S. 269. DOI: 10.1628/001522112X653840.

Brand, S. & Steinbrecher, J. (2019). Green Bonds - nachhal-tige Alternative für die kommunale Infrastrukturfinan-zierung? (KfW Research, Fokus Volkswirtschaft Nr. 245). KfW Bankengruppe.

Brand, S. & Steinbrecher, J. (2021): Sustainable Finance in Kommunen - ist der grüne Kommunalkredit die Zukunft? KfW. Frankfurt (Fokus Volkswirtschaft, XX).

Brühl, V. (2023). The Green Asset Ratio (GAR): a new key performance indicator for credit institutions. Eurasian Economic Review, 13, 57-83. https://doi.org/10.1007/s40822-023-00224-0

Brüning, C. / Söbbeke, M. (2024). Die Kommunalaufsicht – Aufgaben, Rechtsgrundlagen, Organisation. Berlin, Erich-Schmidt-Verlag.

Climate Change Performance Index. (2023) | The Climate Change Performance Index (CCPI) is a scoring system designed to enhance transparency in international climate politics. Accessed 2024. Climate Change Per-formance Index (CCPI). https://ccpi.org/

Collectivites Locales. (2024a). Dossier - L'encours de dette des collectivités locales et son coût. https://www.collectivites-lo-cales.gouv.fr/files/Accueil/DESL/2024/OFGL/Dossier%20dette%202024.pdf

Collectivites Locales. (2024b). Fiches par niveau de collectivités: Les finances du secteur communal. https://www.collectivites-lo-cales.gouv.fr/files/Accueil/DESL/2024/OFGL/Fiches%20communes%20et%20inercos%202024.pdf

Cunha, F.; Meira, E.; Orsato, R. J. (2021): Sustainable finance and investment: Review and research agenda. In: Bus Strat Env 30 (8), S. 3821-3838. DOI: 10.1002/bse.2842.

Darvas, Z., & Wolff, G. B. (2023). A green fiscal pact for the EU: increasing climate investments while consolidat-ing budgets. Climate Policy, 23(4), 409-417.

DGCL. (2023). Les finances des collectivités locales en 2022. Direction générale des collectivités locales.

Directorate-General for Financial Stability, Financial Services and Capital Markets Union (2024). EU taxonomy for sustainable activities. Retrieved from: https://finance.ec.europa.eu/sustainable-finance/tools-and-standards/eu-taxonomy-sustainable-activities_en

Dougherty, S., Harding, M., & Reschovsky, A. (2019). Fiscal Federalism Working Paper 29: Twenty Years of Tax Autonomy across Levels of Government Measurement and Applications (29).

Duve, T. & Kümpel, K. (2020). Vollständige Kassenkreditentschuldung kommunaler Gebietskörperschaften. Verwaltung & Management, 26(1), 28-36. https://doi.org/10.5771/0947-9856-2020-1-28

EIB (23. Oktober 2023). Czech Republic: EIB signs CZK 24 billion green funding for railway modernisation. European Investment Bank. https://www.eib.org/en/press/all/2023-390-eib-signs-czk-24-billion-green-funding-for-czech-railway-modernisation

European Commission. (2020). State of the Union: Questions & Answers on the 2030 Climate Target Plan. European Commission. https://ec.europa.eu/commission/presscorner/detail/en/qanda_20_1598

European Commission. 2050 long-term strategy: Striving to become the world's first climate-neutral continent by 2050. European Commission. https://climate.ec.europa.eu/eu-action/climate-strategies-targets/2050-long-term-strategy_en

European Commission. (2021). Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: Strategy for Financing the Transition to a Sustainable Economy. COM(2021)390. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021DC0390

Faber, M. (2010). Kein Buch mit sieben Siegeln: Der kommunale Haushalt (Crashkurs Kommune). Rosa-Luxemburg-Stiftung.

Federal Ministry Republic of Austria Finance. (2024). Allgemeine Informationen zu den Finanzbeziehungen zu Ländern und Gemeinden. Federal Ministry Republic of Austria Finance. https://www.bmf.gv.at/themen/budget/finanzbeziehungen-laender-gemeinden/finanzbeziehungen-allgemeine-informationen.html

Ferdinandusse, M., Nerlich, C., & Téllez, M. D. (2022). Fiscal policies to mitigate climate change in the euro ar-ea. Economic Bulletin Articles, 6.

Financing of Territorial Budgets Department. (2023). Report on the development of budgetary management of municipalities and regions as at 30 September 2023. Ministry of Finance of the Czech Republic. https://www.mfcr.cz/en/fiscal-policy/monthly-reports-on-the-management-of-ter/2023/report-on-the-development-of-budgetary-m-53995

Geißler, R., Hammerschmid, G., Raffer, C. (2021). Introduction: The Relevance and Conceptualisation of Local Finance Regulatory Regimes. In: Geißler, R.; Hammerschmid, G.; Raffer, C. (eds.): Local Public Finance. An International Comparative Regulatory Perspective. Springer.

Geißler, R., Hammerschmid, G., Raffer, C., (2020). Local Public Finance in Europe. Country Reports. Hg. v. Hertie School und Bertelsmann Stiftung.

Geißler, R., Hammerschmid, G., Raffer, C. (2021). Local Public Finance. Cham: Springer International Publishing.

Gern, A. & Brüning, C. (2019). Deutsches Kommunalrecht (4., neu bearb. Aufl.). Nomos.
Grembi, V., Nannicini, T., Troiano, U. (2016). Do Fiscal Rules Matter? In: American Economic Journal: Applied Economics 8 (3), S. 1-30. DOI: 10.1257/app.20150076.
Hallerberg, M., Hagen, J. (1999). Electoral institutions, cabinet negotiations, and budget deficits in the Euro-pean Union. In: J. M. Poterba und J. von Hagen (Hg.): Fiscal institutions and fiscal performance. Chicago: The University of Chicago Press, S. 209-232.
Heinbach, K., Scheller, H., Krone, E., Reiß, P., Rupp, J., Walter, J., Altenburg, C., Heinecke, S. & Walter, B. (2020). Klimaschutz in finanzschwachen Kommunen: Potenziale für Haushaltsentlastungen, lokale Wertschöpfungseffekte sowie alternative Finanzierungsansätze kommunaler Klimaschutzmaßnahmen (Schrif-tenreihe des IÖW 219/20). Institut für Ökologische Wirtschaftsforschung (IÖW); Deutsches Institut für Ur-banistik (Difu).
Hermes, G., Vorwerk, L., Beckers, T. & Hans-Böckler-Stiftung. (2020). Die Schuldenbremse des Bundes und die Möglichkeit der Kreditfinanzierung von Investitio-nen: Rechtslage, ökonomische Beurteilung und Hand-lungsempfehlungen. Study / IMK, Institut für Mak-roökonomie und Konjunkturforschung. Düsseldorf, Germany : Hans-Böckler-Stiftung. https://www.boeckler.de/de/faust-detail.htm?sync_id=9095
Heinemann, F., Moessinger, M.-D., Yeter, M. (2018). Do fiscal rules constrain fiscal policy? A meta-regression-analysis. European Journal of Political Economy 51, S. 69-92.
IDR. (2009). IDR Prüfungsleitline 200: Leitlinien zur Durchführung von kommunalen Jahresabschlussprüfungen.
IMF, (2021). REACHING NET ZERO EMISSIONS. As prepared for the Group of Twenty. Retrieved from: https://www.imf.org/external/np/g20/pdf/2021/062221.pdf
Interreg Europe. (2022). Design and implementation of green bonds for the Prague SECAP 2030. https://www.interregeurope.eu/find-policy-solutions/expert-support-reports/design-and-implementation-of-green-bonds-for-the-prague-secap-2030
Kemfert, C., Schmalz, S. (2019). Sustainable finance: political challenges of development and implementation of framework conditions. Green Finance 1 (3), S. 237-248. DOI: 10.3934/GF.2019.3.237.
Kornai, J., Maskin, E., Roland, G. (2003). Understanding the soft budget constraint. Journal of Economic Literature 41 (4), S. 1095-1136.
Kotia, A., v. d. Lledó. 2016: Do subnational rules foster fiscal discipline? New empirical evidence from Europe. Inter-national Monetary Fund (Working Paper, WP/16/84).
Krahnen, J., Rocholl, J., Thum, M. (2023). A Primer on Green Finance: From Wishful Thinking to Marginal Impact. Review of Economics 74 (1), S. 1-19. DOI: 10.1515/roe-2023-0019.
Ladner, A., Keuffer, N. & Bastianen, A. (2023). Local autonomy around the world: the updated and extended Local Autonomy Index (LAI 2.0). Regional & Federal Studies, 1-23. https://doi.org/10.1080/13597566.2023.2267990
Lodge, M., & Wegrich, K. (2012). Managing regulation: Regulatory analysis, politics and policy. Bloomsbury Publishing.
Losoncz, I. (2017). Methodological approaches and consid-erations in regulatory research. In P. DRAHOS (Hrsg.), Foundations and applications. Regulatory globalisation (S. 77-96). ANU Press. http://www.jstor.org/stable/j.ctt1q1crtm.12
Lucarelli, C., Mazzoli, C., Rancan, M., Severini, S. (2020). Classification of Sustainable Activities: EU Taxonomy and Scientific Literature. Sustainability. 2020; 12(16):6460. https://doi.org/10.3390/su12166460
Meuser, M., Nagel, U. (2002). Experteninterviews – vielfach erprobt, wendig bedacht. Ein Beitrag zur qualitativen Methodendiskussion. In: A. Bogner, B. Littig, W. Menz (eds.): Das Experteninterview. Opladen: Leske & Budrich, S. 71-95.
Migliorelli, M. (2021). What Do We Mean by Sustainable Finance? Assessing Existing Frameworks and Policy Risks. In: Sustainability 13, Artikel 975. DOI: 10.3390/su13020975.
Ministerstvo financí ČR. (2024, 23. Januar). Monitoring hospodaření územních samosprávných celků | Ministerstvo financí ČR. https://www-mfcr-cz.translate.goog/cs/rozpoctova-politika/uzemni-rozpocty/hospodareni-uzemnich-rozpoctu/monitoring-hospodareni-uzemnich-samospra?_x_tr_sl=auto&_x_tr_tl=de&_x_tr_hl=de
Moysan, E. (2020). Local finances in France: what place? What challenges? Prawo Budżetowe Państwa i Samorządu, 8(2), 9. https://doi.org/10.12775/PBPS.2020.008
Mulholland, E., Berger, G. (2019). "Budgeting for the SDGs in Europe: Experiences, Challenges and Needs", ESDN Quarterly Report 52, April 2019, ESDN Office, Vienna.
OECD. (2016). Subnational Governments Around the World: Structure and Finance. https://www.uclg.org/sites/default/files/global_observatory_on_local_finance_0.pdf
Österreichischer Städtebund. (2023). Stadtdialog. Schriftenreihe des Österreichischen Städtebundes Mai 2023.
Österreichischer Städtebund. (2024). VRV. Österreichischer Städtebund. https://www.staedtebund.gv.at/themen/finanzen/vrv/
Pavese, C., & Rubolino, E. (2024). Austerity Harmed Student Achievement. The Economic Journal, 134(659), 1199-1227.
Potrafke, Niklas (2023): The Economic Consequences of Fiscal Rules. Ifo Institut (CESifo Working Papers, 10765).
Raffer, C. & Scheller, H. (2023). KfW Kommunalpanel 2023 (KfW Research). KfW Bankengruppe. https://repository.difu.de/handle/difu/42
Raffer, C., Scheller, H., Zahn, F. v., Peters, O. (2023). Sustainable Finance für Kommunen. In: 2941-6124.
Scheller, H., Raffer, C., Zahn, F. von & Peters, O. (2023). Sustainable Finance für Kommunen: Themenfelder, Berührungspunkte und Zielkonflikte (Difu Policy Papers 3). Deutsches Institut für Urbanistik (Difu).
Seawright, J. & Gerring, J. (2008). Case Selection Techniques in Case Study Research. Political Research Quarterly, 61(2), 294-308. https://doi.org/10.1177/1065912907313077
Statistisches Bundesamt. (2024a). Vorläufiger Schulden-stand der Gemeinden/Gemeindeverbände: Vorläufiger Schuldenstand der Gemeinden/Gemeindeverbände1 am 31.03.2024. Statistisches Bundesamt. https://www.destatis.de/DE/Themen/Staat/Oeffentliche-Finanzen/Schulden-Finanzvermoegen/Tabellen/liste-vorlaeufiger-schuldenstand-gemeine-gemeindeverbaende.html#1340680
Statistisches Bundesamt. (2024b, April 3). Kommunen im Jahr 2023 mit 6,8 Milliarden Euro erstmals wieder seit 2011 im Defizit: Pressemitteilung Nr. 135 vom 3. April 2024 [Press release]. https://www.destatis.de/DE/Presse/Pressemitteilungen/2024/04/PD24_135_71137.html
Ter-Minassian, T. (2007). Fiscal rules for subnational governments: Can they promote fiscal discipline? OECD Journal on Budgeting 6 (3), S. 1-11. DOI: 10.1787/16812336.

Turley, G., Raffer, C., & McNena, S. (2021). Budget institutions for subnational fiscal discipline: Local fiscal rules in post-crisis EU countries. Local public finance: An in-ternational comparative regulatory perspective, 23-38.
Vie Publique. (2024). Les finances des collectivités territoriales. https://www.vie-publique.fr/fiches
Wortmann, M., & Geißler, R. (2021). Global Crisis, Local Impact: A Comparative Approach to the Financial Crisis' Impacts on European Local Levels. Local public finance: An international comparative regulatory perspective, 249-266.
Wyplosz, C. (2016). The six flaws of the Eurozone. Economic Policy, 31(87), 559-606.

Authors

Christian Raffer, PhD

Christian Raffer is a research associate in the research area "Infrastructure, Economy and Finance" at Difu. His work focuses on the areas of municipal surveys, regional economics and municipal finances. His projects in these areas generally involve the empirical analysis of municipal data sets and the collection of primary data. Christian Raffer has a degree in economics and before joining Difu worked for the "Gesellschaft für internationale Zusammenarbeit" and the "Hertie School of Governance". He has conducted research on various issues in the field of regional economic clusters and has published nationally and internationally.

Frida von Zahn

Frida von Zahn is a research associate in the research area "Infrastructure, Economy and Finance" at Difu. Her work focuses on the areas of policy evaluation, regional economics and sustainable finance. Frida von Zahn has studied Liberal Arts and Sciences at Maastricht University and Public Policy with a focus on Climate Policy at the „Hertie School“. Before joining Difu, she worked at the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) in the field of climate protection in cities, at the German Institute for Economic Research (DIW) in the field of climate policy and at EBP Schweiz AG in sustainability consulting and circular economy. Since October 2024, she pursues a PhD in the field of housing inequality at the Humboldt University of Berlin.

Annex

Table A1: List of interview partners

Country	Interview	Position	Date
Austria	Interview 1	Managing director at research institute on public administration	26.07.2023
	Interview 2	Senior research associate in sustainable finance at NGO	10.01.2024
Czechia	Interview 1	Assistant professor in economics and public administration (university)	19.09.2023
	Interview 2	Associate professor in economics and business (university)	30.11.2023
Italy	Interview 1	Research associate on comparative federalism (research institute)	12.09.2023
	Interview 2	Professor in business administration (university)	04.08.2023
France	Interview 1	Lending expert at platform provider for municipal finance	23.03.2023
	Interview 2	Research associate in public management (university)	23.10.2023

Questionnaire: Exploratory Expert Interviews

Interviewer		
Country		
Interviewee	Name	
	Position	
Date		
Length of interview		
Interview location		
Notes		
Consent for interview was given on… by …		Date: .. .., signed _____

Guiding Questions

I) Legal Framework:

14.1. In federal states, which level of government is responsible for formulating the legal framework for municipal debt?

14.2. Which constitutional or statutory provisions are relevant to municipal financial and budgetary management?

- Constitutional provisions
- Statutory provisions (federal or state level)
- Any other relevant regulations

14.3. How much financial autonomy do municipalities have concerning revenue and expenditure?

- To what extent can municipalities determine their own revenue (create taxes, set tax rates, etc.)?
- To what extent can municipalities determine their own expenses? (What percentage of expenses is tied to mandatory tasks?)

14.4. What is the financial mix of municipalities like?

- What proportion of their revenue comes from taxes?
- What proportion comes from user charges and/or fees for services?
- What proportion comes from short-term and long-term loans?

14.5. To what extent and under what conditions are municipalities in your country allowed to take on loans?

- Are there specific purposes for which loans can be obtained?
- Are there debt limits or debt brakes in place?
- Is approval required for taking on debt?

14.6. Apart from traditional loans, do municipalities in your country incur debt through other instruments like bonds?

14.7. Do financially distressed municipalities (i.e., officially acknowledged by the supervisory institution as "municipalities under financial stress") exist in your country? If yes, what are the indicators and thresholds to identify these municipalities? What are the financially distressed municipalities' rights and obligations?

14.8. Is there a comprehensive coverage principle in municipal budgeting, or do municipal loans serve to finance specific investments? Are there different earmarked municipal budgets?

14.9. Is there municipal supervision in your country? Which institutions oversee compliance with budgetary regulations?

II) Characteristics and Operational Conditions of the Banking System:

15.1. Which banks, both public and private, are involved in municipal lending in your country? Do municipalities directly engage in the credit market?

15.2. Are there regional and national development banks?

15.3. What is the role of financial service providers/brokers in facilitating municipal loans?

15.4. What proportion of the entire banking system's business in your country is determined by municipal lending (e.g., percentage share of municipal lending in all lending)?

15.5. Are there any other significant stakeholders involved in municipal financing?

15.6. To what extent are public entities such as municipalities subject to ESG-linked or other ratings? What is the significance of such ratings for loan approval?

III) Sustainable Finance, ESG Reporting Obligations, and Taxonomy in Municipal Lending:

16.1. Does your country have experience with "Green Bonds" and other "green financing instruments" in municipal financing?

16.2. Do individual cities issue such bonds, or is it mainly done by regional banks?

16.3. a) To what extent do ESG criteria already play a role in municipal lending in your country? Are there any particular focus areas?

16.3. b) Are there any assessments/opinions regarding the potential impact of the EU Taxonomy on municipal lending (e.g., through the Green Asset Ratio)?

16.4. a) Are there existing reporting obligations for municipalities when applying for (green) loans?

16.4. b) If yes, are there discussions about standardizing such reporting requirements?

16.5. Are there (digital) tools available for local governments to demonstrate ESG compliance?

16.6. Is there any academic or professional discourse on this topic?

IV) Contacts for Possible Further Interviews:

17.1. What are the relevant research institutions in your country concerning "Municipal Finance"?

17.2. Are there any major associations or federations involved in municipal finance?

17.3. Who would be suitable for further interviews on this topic?