USE OF CENTRAL GOVERNMENT ACCOUNTING

REPORT
OF THE SUPREME AUDIT OFFICE
AND THE FACULTY OF FINANCE AND ACCOUNTING
OF THE PRAGUE UNIVERSITY OF ECONOMICS AND BUSINESS

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SUMMARY

The report is the result of collaboration of teams of experts from the Supreme Audit Office and the Faculty of Finance and Accounting of the University of Economics and Business. It aims at mapping and evaluating the use of public sector accounting within the Czech Republic, specifically that information produced by central government institutions, namely organisational units of the state, typically ministries.

The report clearly shows that there are significant differences in the use of central government accounting. While for macroeconomic and statistical purposes, central government accounting is used extensively and adequately fulfils these functions, its practical use for the management and decision-making of central government institutions is limited.

The conclusions from the evaluation of the use of central government accounting are as follows:



Central government accounting in the Czech Republic has the potential to serve.



Central government accounting as a set of background documents for macroeconomic and statistical purposes is of a high standard and is widely used for said purposes. However, certain data from financial statements are used for these purposes only occasionally or not at all.



The current structure of public sector financial reports and the way they are used indicate a potential for simplification.



A systematic use of central government entities' financial reports for decision-making of users has not been confirmed.



Off-balance sheet items are not commonly used; in specific cases, only partial data are used.



The use of central government accounting for the preparation of the budget or reconciliation of economic results with the budget, that is, the management plan for the funds of the central government, has not been confirmed. This means that one of the key principles of the public sector accounting reform in the Czech Republic – linking the accounting and budgetary perspectives – was not met.

In general, the accounting data are available and fulfil the requirement of transparency as to how the public sector manages public funds, i.e. the requirement of accountability for its activities to the general public. In a democratic society, this is viewed positively in the management of public finances.

Based on the results of this report, we conclude that the following parts of the financial statements or directly related accounting-generated reports **are not sufficiently used and there is a potential for simplification or reduction in:**

- **cash flow statement;**
- **statement of changes in equity;**
- **some items monitored and reported in off-balance sheet accounts;**
- **extent of certain parts of the auxiliary analytical overview.**

In our view, the regulator, which is the Ministry of Finance, should use this report as a basis for its post-implementation review and take it into account in the preparation of the new Act on Accounting and its implementing regulations. This forthcoming legislation offers a natural opportunity to reassess the scope and extent of the financial statements and the accounting of public sector entities – without unnecessary extra costs or the need of organisational interventions in the processes already in place. We are aware of the publicly declared aim of the MoF to reduce the obligations concerning the cash flow statement and the statement of changes in equity, but we believe that other statements, especially those with off-balance sheet items, should also be simplified or partially reduced.

However, the main conclusions of the report and the way they were reached can also serve to inspire other countries and institutions. The knowledge of public sector accounting users and their information needs helps international benchmarking and identification of the best practice. It can also support ongoing discussions on the relationship between the costs of providing public sector accounting information and its benefits to users.

1. PURPOSE OF THE REPORT

The objective of this report is to identify the main users of central government accounting, analyse their information needs and assess whether these needs are sufficiently met. Emphasis is placed on practical use of accounting information in public administration, both for decision-making and for accountability purposes[1]. The primary focus of this report is on how the explicit aim stated in the Act on Accounting is being met, i.e. the use of central government accounting for decision-making of users. This analysis was undertaken, *inter alia*, in response to the findings of the Supreme Audit Office (specifically Audit No 17/36[2]), which pointed to the fact of limited use of the accounting data.

A common tool of international best practice for conducting such ex-post impact analysis is the post-implementation review, which assesses the impacts of a new standard or accounting regulation, including whether the intended aims have been achieved and whether the information contained in the accounting actually meets the information needs of users that were identified as material when the accounting regulations were amended. The post-implementation review should primarily be carried out by the accounting rulemaker. In the conditions of public sector accounting in the Czech Republic, however, the Ministry of Finance of the Czech Republic (MoF CR) acts both as the regulator and as one of the key users. Therefore, it is advisable to also carry out an independent assessment to enhance objectivity and feedback necessary to develop the system further.

This report is the result of expert collaboration and research of the Faculty of Finance and Accounting of the Prague University of Economics and Business and the Supreme Audit Office of the Czech Republic and provides initial insights into the use of central government accounting after the accounting reform.

The report was implemented in two stages. First, a systematic review of scientific literature was conducted (see **Annex 1**), which maps the current state of knowledge in the field of implementation of accrual basis accounting in the public sector worldwide, with a primary emphasis on the identification of users of this information. The systematic review yielded a classification of users of central government accounting according to their user needs, both in terms of the information scope and its extent (level of detail). This classification was the starting point for the second stage, which, through a survey and semi-structured interviews, identified the areas of use of central government accounting by the relevant user groups, including the constraints they encounter when working with the accounting data. The results of the survey and interviews are further complemented by an analysis of findings from SAO audits.

1 From the legislative viewpoint, specifically Act No 563/1991 Coll., on Accounting, (see Section 2.1 of this report for details) explicitly underscores the accounting objective of enabling users of the financial statements to make "economic decisions" on the basis of this information. Another characteristic objective of public sector accounting, i.e. accountability, means to achieve transparency towards citizens, taxpayers, etc. The current Act on Accounting does not state this aim, hence so far with regard to state accounting in the Czech Republic, it only applies implicitly. The draft of the new Act on Accounting already defines this function explicitly (see Section 3 Article 1d) as *"assessing the proper management of public funds in the exercise of public administration in the case of financial reporting by a public sector entity"*.

2 Audit No 17/36 – *Accounting Reform in Public Finance* (the audit report was published in issue 6/2018 of the *SAO Bulletin*).

2. CONTEXT AND IMPORTANCE OF PUBLIC SECTOR ACCOUNTING

Public sector accounting is part of public service and aims to provide information on the management of public funds by individual public sector institutions and, ideally, in aggregate for the public sector as a whole. In practical terms, public sector accounting fulfils a fundamental requirement that is also inherent to business accounting, i.e. **to generate financial information** that is relevant to users for making informed decisions. In addition to decision-making, the outputs from public sector accounting allow to assess how public resources have been managed (**accountability** to the general public).

In the public finances of the Czech Republic, accounting and budgetary data are the two key sources for assessing the financial position of the state and its management. While budgetary data are important for planning and controlling expenditure, accounting information offers a more accurate and better comparable view thanks to the accrual principle, which provides higher relevance. This is because, in addition to data on funds, it also presents the financial position reflected in other balance-sheet items, thereby providing a comprehensive view of both the operational and long-term aspects of the situation.

The use of accounting information can be broken down into internal and external. **Internal use** includes primarily the needs of the management of entities that may use, in addition to accounting data, also managerial or tailored analytical data not subject to accounting regulations. In contrast, for **external users** who do not have access to specifically processed data[3], financial statements are often the only formally available source of data about an entity's comprehensive economic position on which informed decisions may be made.

Accrual basis accounting has a vast information potential for the public sector but providing it reliably and in adequate quality is neither easy nor inexpensive. It must therefore be justified in its application, implementation and expansion, which also includes verifying that it actually serves its users.

3 Referred to in the IPSAS as "general purpose Financial Statements".

3. REFORM OF PUBLIC SECTOR ACCOUNTING IN THE CZECH REPUBLIC IN CONTEXT

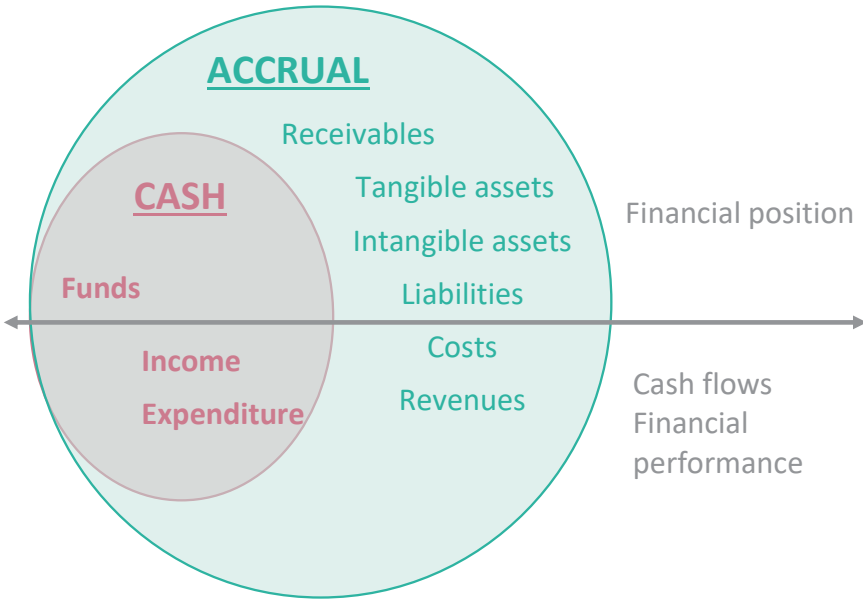
Based on a systematic search of relevant scientific literature and expert studies, this part of the report maps out the reasoning, practical experience, and theoretical context of the implementation of accrual basis accounting in the public sector around the world. This information provides the initial context for outlining the most important steps of the public sector accounting reform in the Czech Republic.

3.1 ACCRUAL BASIS ACCOUNTING IN THE PUBLIC SECTOR: EXPERIENCE FROM ABROAD AND THEORETICAL CONTEXT

Public sector accounting is an integral part of public service, and its function is to provide comprehensible and relevant financial information on the management of the public sector, thereby establishing a basis for informed decision-making, management and public control. At the theoretical and practical level, a long-standing question has been to what extent **cash basis** accounting systems can provide the necessary information and whether and to what extent it is necessary to adopt, even in the public sector, the **accrual basis** approach.

Both systems have their positives and negatives. Cash basis accounting is the less costly system with lower requirements for expertise in data acquisition and interpretation, although at the cost of potentially substantial distortions in reflecting actual reality (e.g., shifting payments between periods). An accrual system better reflects reality (although even there is still a risk of “creative accounting”, e.g., through accounting estimates) with the downside of higher costs and the need to be able to work with the data in a professional manner.

Figure 1: Accounting basis



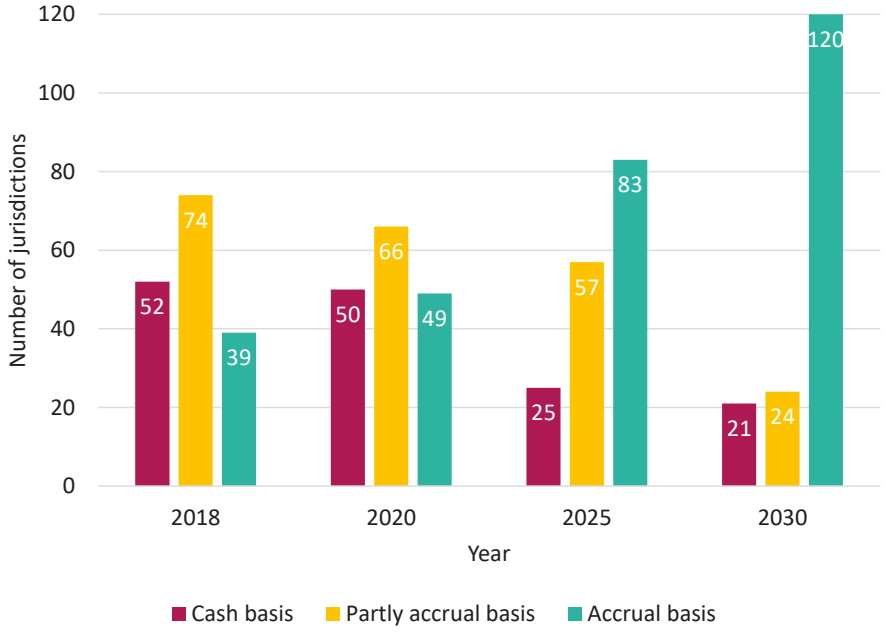
Source: Prepared by the team of authors of the SAO and the Prague University of Economics and Business.

Consequently, this part of the report focuses on the results of reforms involving accrual basis accounting in the public sector abroad. The source of information were the closing accounts or similar statements of several selected countries, combined with OECD expert studies, scientific papers and other expert documents[4]. The combination of these sources has enabled us to map the different approaches to accrual basis accounting in each country, assess the practical implications and highlight the problems and challenges that each country faced in the course of the reform, including how they relate to broader theoretical concepts that can help highlight the potential and limits of using this type of accounting information in the public sector.

As for public sector accounting reforms aimed at implementing accrual basis accounting, it can be stated that this is a general trend. The key pioneers of accrual basis accounting in the public sector and the associated expert debate were Australia and New Zealand, where respective reforms were initiated as early as in the 1980s; and as for Europe, the UK and Sweden were at the forefront. A comprehensive overview of global progress in the implementation of accrual basis accounting in the public sector is provided by the *International Public Sector Financial Accountability Index 2021* (IFAC & CIPFA, 2021). Between 2018 and 2020, there was a significant spike in the number of jurisdictions moving from cash basis to accrual basis accounting. This trend is projected to continue, with 50% of the monitored jurisdictions expected to report on an accrual basis by the end of 2025. Although the outlook for 2030 carries a higher degree of uncertainty due to the long-term nature of the reforms, up to 120 jurisdictions are anticipated to report on an accrual basis by that year, which is approximately 73% of the total of 165 jurisdictions monitored.

4 Consolidated Financial Statements of the Commonwealth of Australia, The Whole of Government Accounts of the UK, Der Bundesrechnungsabschluss Österreich, Federal Consolidated Financial Statements of the Swiss Confederation, Financial Statements of the Government of New Zealand, Rapport de présentation du Compte général de l'État (CGE), Compte général de l'État (CGE), Rapport sur le contrôle interne comptable de l'État et de ses organismes publics (France), The Public Accounts of Canada, OECD Journal on Budgeting.

Chart 1: Global trends in the transition of the public sector to accrual basis accounting



Source: Prepared by the team of authors of the SAO and the Prague University of Economics and Business according to the cited IFAC & CIPFA publication of 2021.

In regional terms, the most dynamic developments are expected mainly in Africa, Asia and Latin America. Within the European context, accrual basis accounting is being introduced within the preparation for the implementation of the European Public Sector Accounting Standards (EPSAS). The number of European jurisdictions using accrual basis recognition is set to increase to 29 by 2025, up from 19 in 2020. Accrual basis accounting and budgeting are becoming common practice in many OECD countries. However, some European countries such as Germany and the Netherlands still prefer to use a modified form of cash basis accounting (Hepworth, 2025). Using Germany and Norway as examples, Moretti & Youngberry (2018) present the reasons why these countries have chosen to stick with cash basis accounting and cash basis budgeting. Although the reasons differ, the common denominator for both countries is that they consider their cash basis systems to be of such high quality that a switch to accrual basis systems would bring only marginal additional benefits at substantial additional costs. The motivation to move to accrual basis accounting often depends on the level of development of a country. In advanced economies, the main impetus tends to be an effort to have better quality information available for managerial decision-making, including the recording of depreciation/amortisation and the monitoring of liabilities, contingent liabilities included, which can significantly affect long-term fiscal stability. In developing countries, external pressures, especially from international organisations, and the desire to enhance the credibility of public expenditure often play a role.

Concerning the various motives for launching state accounting reforms, Ansari & Euske (1987) point out that it is necessary to examine the role of accounting in such reforms. In general, it can be a technical/rational role (a tool for improving decision-making), a socio-political role (a tool for rationalising the organisation's behaviour towards members or gaining advantage in negotiations) or an institutional role (a tool for legitimising the organisation vis-à-vis external stakeholders). In this context, it is important not to consider the accounting reform as a purely technical matter, but as an essential element of public choice that goes beyond the actual scope of public sector financial reporting (Hyndman & Connolly, 2011).The socio-political and institutional role of accounting can also explain the ambiguous impacts of public sector accounting reforms on both external and internal users, as follows from the search of literature presented in **Annex 1** (in particular Chapter 2, Parts B & C of the Annex).

The question of the costs and benefits of these reforms thus remains a relevant topic of expert debate and often depends on country-specific factors.

However, reliable data on the costs incurred are not always available. Estimates of the costs of a forthcoming reform are sometimes freely available, as was the case, e.g. in 2008 in the Czech Republic with the estimate of future expenditure for the implementation of the 2009 public sector accounting reform (see Chapter 3.4 herein for more details) or in the EU context for the EPSAS initiative (see Chapter 3.2 herein for more details). However, the actually incurred follow-up costs or even their estimates may no longer be available, as was the case, e.g., with the Czech Republic's costs of implementing the reform (see also Chapter 3.4 herein for details). The amount of costs incurred and their development are important variables, and without systematic monitoring or relevant estimates, it is impossible or very difficult to assess the effectiveness of a reform.

As for the question of the benefits of such reforms, a review of scientific literature and international comparative studies suggests that for the successful implementation of state accounting reforms, the technical/rational function of accounting in particular is key. Accordingly, the primary objective of the reform must be to improve the quality, relevance and utility of the accounting information provided, and it must not be motivated solely by legislative or institutional pressures. However, even if the real objective of a reform is to **improve the information base for management,** decision-making and control in public administration, the actual implementation of accrual basis accounting in the public sector, as with other large-scale change initiatives, typically entails a number of conceptual and practical challenges (Arnaboldi & Lapsley, 2009; Bathó, 2012). Such difficulties may result not only in questioning the benefits of the reform (Wynne, 2008) but also in its outright rejection by some of the actors involved (Carnegie & West, 2003).

One of the main risk factors is the **discrepancy between the needs of internal and external users** of accounting information. Internal users – which are often those who directly implement the reform – have specific, short-term oriented requirements that differ from the information needs of external users, such as the public, the parliament or control institutions (van Helden & Reichard, 2019). Moreover, the persons compiling the financial statements often do not have a clear idea of who the external users are and what accounting information they are interested in. As a result, the accounting system design is primarily tailored to the internal needs of organisations, while outputs intended for external users are created for the most part only formally and often without in-depth analysis of their actual usability (van Helden & Reichard, 2019).

International comparative studies, e.g. Carlin (2005), Flynn et al. (2016) or Moretti & Youngberry (2018), confirm the assumption that **the implementation of the accrual principle in public sector accounting is not without practical difficulties.** These complications are common. Although unique challenges can be identified for each country due to national specificities of public administration, most of the problem areas are common across countries, including:

- the objective of the reform is not always clearly defined, or its feasibility is not properly assessed;
- the speed, scope and timing of the different stages of the accounting reform are not determined by its objectives, but are determined in a non-systematic manner;
- the implementation of accrual basis accounting in the public sector is always a long-term effort;
- the success of an accounting reform is not only about the quality of new accounting regulations or accounting standards, but above all about the quality of their implementation;
- the objectives and progress of the reform are not clearly communicated to stakeholders and users; the persons in charge of the reform are often being replaced and lack the necessary "political power";
- accrual data are used haphazardly, unsystematically and often with a lack of understanding of their meaning;

- accrual basis information supplements and enhances the utility of cash basis information; it is necessary to combine both approaches for the best possible decisions;
- no distinction is made between the recipients of accounting information and its users;
- information is not actively presented by the state to potential stakeholders; there is a lack of user-friendly key outputs.

3.2 INTERNATIONAL STANDARDISATION FOR THE PUBLIC SECTOR

Discussions on the information potential of accrual basis accounting in the public sector are also taking place at the international level and have been ongoing for a long time. They have brought internationally organised projects to develop multinational accounting standards, which are:

- the International Public Sector Accounting Standards (IPSAS);
- the European Public Sector Accounting Standards (EPSAS).

The IPSAS accrual standards serve as a crucial model of good work and help spread accrual basis accounting and comparable recognition in the public sector. There is a growing demand among countries for the application of accrual basis accounting and the use of the IPSAS.

The International Public Sector Accounting Standards (IPSAS) project was initiated in 1986 with the establishment of the Public Sector Committee (PSC) of the International Federation of Accountants (IFAC). This committee was later transformed into the IPSAS Board (IPSASB). In 1997, the PSC issued the first accrual basis standard (CIPFA, 2017). To date, the IPSASB has issued a total of 50 accrual standards and 1 comprehensive cash basis standard (IPSASB, 2025).

The IPSAS standards have been gradually adopted by several international organisations, such as the European Commission and the European Space Agency. At the level of individual states, their full implementation remains rather rare, but the use of the IPSAS as an inspirational framework and direct references to these standards are widespread. Forecasts suggest that their importance will continue to grow in the future (IFAC & CIPFA, 2021). Within the context of the Czech Republic, they have been a motivation for the MoF, which has declared its intention to move towards the IPSAS (the Government Office of the Czech Republic, 2025a, 2025b): *"The proposed changes to the process of financial recognition for public sector entities clearly underscore the move towards the IPSAS, in particular the IPSAS Conceptual Framework. Due to its complexity, a full implementation of all IPSAS standards (currently over 50 individual standards) would be not feasible for most public sector entities. Consequently, it appears much more viable to incorporate the most important methodological rules from the IPSAS directly into new law without their direct implementation."*

The IPSAS are an important example of good practice and contribute to the spreading of accrual basis accounting in the public sector. At the same time, they support the comparability of recognition across countries, while the growing interest of countries in the application of accrual basis accounting is driving the demand for the IPSAS standards themselves.

Although **the EPSAS standards project** has not yet reached the stage of publication of standards, it is nevertheless a major initiative by the European Commission.

Its aim is to ensure harmonisation of public sector financial recognition across EU Member States, i.e. to create a single **accrual basis accounting** framework for the public sector throughout the EU. Their introduction is meant to enhance the transparency, comparability and quality of financial information and so help effectively manage public finances and ensure fiscal accountability. The introduction of the EPSAS is also a response to the European Commission's finding that the fiscal crisis in the EU has highlighted the **need for more reliable and better comparable accounting data** in public administrations (Eurostat, 2025a).

The EPSAS are meant to improve the transparency of public finances, promote responsible budgeting and streamline the monitoring of Member States' fiscal policies. They should help informed decision-making in public administration, while respecting the principles of proportionality and subsidiarity. In this way, the specific conditions, priorities and institutional arrangement of each Member State should be taken into account without compromising the overall objective of harmonising financial recognition across the EU (Eurostat, 2024).

The EPSAS should be conceptually based on the IPSAS, but at the same time reflect the particularities of the European regulatory environment and policy priorities (Eurostat, 2025a), meaning it should be a separate set of accrual standards. The development of the EPSAS should be gradual and it is envisaged to support Member States in the transition from cash basis or modified accrual basis accounting to a **fully accrual basis system.** The entire process is coordinated by Eurostat, as the needs of government statistics are central to this initiative. While the implementation of the EPSAS poses significant challenges, including the need for investment, reform of information systems and improvement in professional capabilities, it should also bring significant benefits. These include improving the quality of fiscal data, enhancing transparency and comparability of budgetary results across Member States, and promoting fiscal discipline. The EPSAS should also help better consistency between financial recognition and national accounts, which is essential for economic policy-making and coordination within the EU (Eurostat, 2025b).

However, the implementation of the EPSAS is also subject to criticism by experts, mainly due to its high financial and administrative complexity, with PwC estimating that the total cost could be in the order of billions of euros (Eurostat, 2018). Estimates of the total cost of EPSAS implementation at the EU level by 2025 show considerable variation depending on the scenario chosen. In the case of adapting existing IT systems, the costs range from EUR 1.1 to 2.4 billion, while the implementation of a new IT system is estimated at EUR 2.2–9.2 billion. By comparison, the original estimates from 2014 were EUR 1.2–6.9 billion (Eurostat, 2025b; PwC, 2025). As for the Czech Republic, PwC estimated the costs to exceed EUR 6 million (Eurostat by PwC, 2020).

In terms of implementation practice, the transition to accrual basis accounting is a challenge that requires not only systemic but also cultural changes in public financial management, and insufficient preparation can result in misreporting (Cohen et al., 2022). Studies also point out that the public may, for example, misconstrue the recognition of negative net assets, which is common for some public sector institutions, as a sign of financial instability (Biondi, 2017). It is also noted that the introduction of accrual basis accounting alone does not necessarily guarantee a higher level of transparency and accountability without adequate support for the interpretation and use of the data (Eulner & Waldbauer, 2018). **These facts underscore that a successful implementation of the EPSAS will require not only a coordinated effort but also sensitive adaptation to the specific conditions of individual Member States.**

Both the IPSAS and EPSAS projects show that there is a demand for the application of accrual basis accounting at national level and the use of internationally accepted good practice.

The initiative towards the EPSAS confirms that public sector accounting is considered particularly important for the purposes of reliable EU statistics and that maintaining it on a full accrual basis within the financial accounting framework is considered desirable. This information aids the systematic production of high-quality macroeconomic statistics of the central government sector while reducing the need for additional statistical surveys and other operations.

3.3 PUBLIC SECTOR ACCOUNTING REFORM IN THE CZECH REPUBLIC

The fundamental legislative framework for the reform of public sector accounting in the Czech Republic was established by Government Resolution No 561/2007, which declared the creation of public sector accounting effective from 1 January 2010. The principle of creating adequate conditions for the establishment of public sector accounting was to be met **through a comprehensive set of legal regulations,** while the existing fundamental structure of accounting regulations was found by the MoF to be satisfactory for the establishment of public sector accounting. Table 1 provides an overview of the accounting regulations issued or amended in connection with the reform.

Table 1: Overview of accounting regulations governing the central government accounting reform

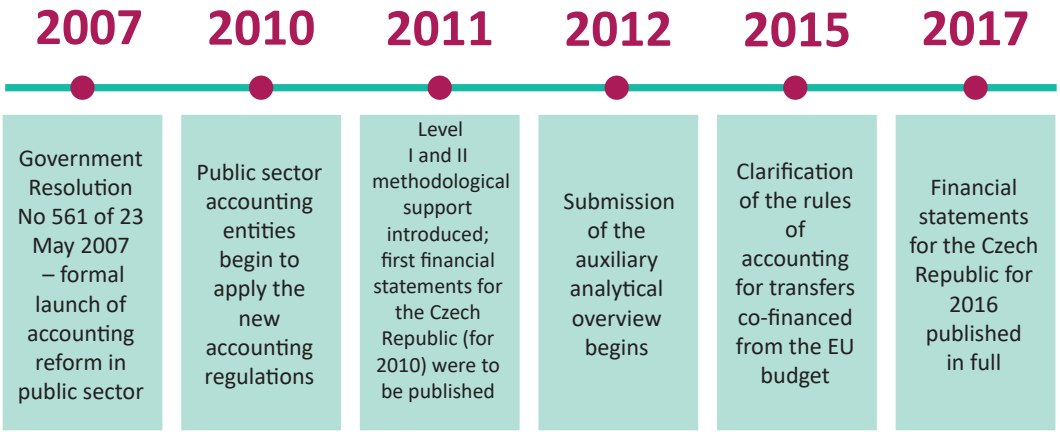
Accounting regulation[5]
Act No 563/1991 Coll., on Accounting
Decree No 383/2009 Coll., on the Accounting Records in the Technical Form of Selected Accounting Entities and on their Transmission to the Central System of Public Sector Accounting Information and on the Requirements Applicable to Technical and Mixed Forms of Accounting Records ("Technical Decree on Accounting Records")
Decree No 410/2009 Coll., implementing certain provisions of Act No 563/1991 Coll., on Accounting for Certain Public Sector Accounting Entities
Decree No 270/2010 Coll., on the Stocktaking of Assets and Liabilities
Decree No 220/2013 Coll., on Requirements for the Approval of the Financial Statements of Certain Public Sector Accounting Entities
Decree No 312/2014 Coll., on the Conditions for Compiling Whole of Government Financial Statements for the Czech Republic (the Public Sector Consolidation Decree)
Czech Accounting Standards for certain public sector accounting entities No 701 to No 710

Source: Prepared by the team of authors of the SAO and the Prague University of Economics and Business according to ASPI (2025).

Figure 2 shows the key milestones of the public finance accounting reform in the Czech Republic since its formal launch in 2007. The development shows the successive steps from the implementation of the new regulations through the introduction of methodological support to the publication of the financial statements for the Czech Republic for 2016.

5 All the accounting regulations included are stated as amended.

Figure 2: Milestones of the public sector accounting reform in the Czech Republic



Source: Prepared by the team of authors of the SAO and the Prague University of Economics and Business

In general, **public sector accounting** is a vital tool not only for internal management of individual organisational units of the country, but also for **decision-making** of external users and for **ensuring the transparency** of public finances. Act No 563/1991 Coll., on Accounting, states in Section 7 Article 1 that the financial statements should provide information to users to enable them **to make economic decisions**[6]. Although the act does not specify concrete users, it creates the preconditions for efficient use of the information in practice by setting the structure of the reports, accounting procedures and methods and dates of publication.

In the forthcoming new Act on Accounting, the **objective of financial recognition,** the very **concept of external user and the specification of some elements** of the financial statements is expected to be defined in detail, reinforcing the orientation of the accounting system towards users of accounting information[7].

Accounting legislation does not oblige organisational units of the state to use accounting data for their own economic decision-making, including budget planning, or for any other purpose. However, the Act on Accounting requires these entities to systematically make their reports available for the needs of others through the *Central System of Public Sector Accounting Information* ("Centrální systém účetních informací státu", abbreviated as CSÚIS in Czech) and so enable their use. Specifically, these are the financial statements, the auxiliary analytical overview (AAO; in Czech *"Pomocný analytický přehled"*) and operational accounting records. Entities with access to these data are in particular the Czech Statistical Office (CSO), the Czech National Bank (CNB), the Supreme Audit Office (SAO) and the Ministry of Finance, and they work with the data analytically and, if necessary, adapt it to their own needs.

To the public, certain accounting information is available through the **Monitor**[8] information portal in which the MoF publishes information from the financial statements of organisational units of the state pursuant to Section 21a of Act No 563/1991 Coll., on Accounting, as amended. External users, such as citizens, media or non-profit organisations, are thus solely dependent on this public source for information, as non-public data stored in the CSÚIS are not readily accessible to them. Other public sources are, for example,

6 Provision of Section 7 Article 1 of Act No 563/1991 Coll., on Accounting: "Accounting entities are required to keep accounts so that the financial statements are drawn up on a basis that is understandable and gives a true and fair view of the subject of the accounting and of the financial position of the entity so that the person who uses the information ((the user) can make economic decisions on the basis of that information."

7 New Act on Accounting: working version of the updated draft as of 1 November 2024, Ministry of Finance of the Czech Republic. See https://www.mfcr.cz/cs/dane-a-ucetnictvi/ucetnictvi/nova-ucetni-legislativa-soukromeho-a-verejneho-sek/pravni-predpisy/novy-zakon-o-ucetnictvi. The latest version submitted to the Government of the Czech Republic is from July 2025 and is available at https://odok.gov.cz/portal/veklep/material/KORNCKKHGM1N/.

8 Monitor is a specialised information portal of the Ministry of Finance that allows the public free access to budgetary and financial information at all levels of central and local government. The information presented comes from the Integrated Treasury Information System (State Treasury) (abbreviated as IISSP in Czech) and is updated quarterly; accessible at https://monitor.statnipokladna.gov.cz/.

the **CNB ARAD**[9] public database as well as data published by the **CSO**[10] within the framework of the so-called **Public Sector Satellite Account**[11].

Data on the use of publicly available information portals suggest that financial and budgetary information from these sources is indeed used by external users. More detailed information on access statistics for the individual information portals is provided in **Annex 2**.

3.4 SAO FINDINGS FROM AUDIT NO 17/36

In 2017, the SAO carried out Audit No 17/36 – *Accounting Reform in Public Finance,* which focused on two key institutions – the Ministry of Finance and the Czech Statistical Office – and provided, among others, a detailed assessment of the extent of use of accounting information in their operations.

The audit examined, *inter alia,* the costs and benefits of the public sector accounting reform implemented in 2009.

However, the costs were not known even to the MoF, as the SAO stated in the Audit Report from Audit No 17/36:

> *"While resources were expended by the MoF, the CSO and the public sector accounting entities in connection with the implementation of the accounting reform, these resources were not monitored separately and were not quantified in the course of the audit, either. For example, these resources include the cost of the acquisition of the Central System of Public Sector Accounting Information, the cost of the modification of accounting information systems, increased personnel costs concerning the staff involved, and the cost of methodological support and training."*

Only the pre-reform estimate was available, see the explanatory memorandum of the Parliament of the Czech Republic (2008), in aggregate and separately for municipalities on the one hand and for the central government sector and the MoF on the other:

- 2009: cumulative EUR 18.4 million (CZK 460 million), of which the state sector (including the MoF) EUR 12 million (CZK 300 million),
- 2010: cumulative EUR 25.6 million (CZK 640 million), of which the state sector EUR 5.6 million (CZK 140 million).

The audit report further revealed that accrual accounting information **was not systematically used** by the Ministry of Finance in preparing the state budget, which fundamentally undermines the intended link between accounting and the budgeting process, as declared in Government Resolution No 561 of 23 May 2007, *on the Establishment of Public Sector Accounting.* This means that **one of the key principles** of the reform – linking the accounting and budgetary perspectives – **was not fulfilled.** Non-fulfilment of the requirement for routine use was also identified in the area of off-balance sheet data and information from the cash flow statement and statement of changes in equity, both for the MoF and the CSO. The SAO also found that the MoF did not systematically evaluate the benefits of the accounting reform or its key principles, which **made it impossible to assess** its actual **effectiveness** due to unclearly defined objectives. The audit also revealed that in compiling the draft closing accounts, accrual accounting

9 ARAD is a public database that is part of the information service of the Czech National Bank. The system presents aggregated data for individual statistics and financial market areas across time series in a uniform manner, available at https://www.cnb.cz/arad/#/en/home.

10 Czech Statistical Office. Public Sector Satellite Account Database – Provides a comprehensive view of the public sector economy for which the consolidated debt and the balance of the economy are compiled; available at https://apl.czso.cz/pll/rocenka/rocenka.indexnu_svs?mylang=EN.

11 The Public Sector Satellite Account comprises all entities controlled by government institutions. In addition to entities classified in the government sector, whose data are used to calculate the Maastricht convergence criteria, the public sector includes government-controlled non-financial enterprises that operate on a market basis and public financial institutions, including the central bank. It thus represents a comprehensive view of the public sector economy, for which the consolidated debt and the balance of the economy are compiled.

information[12] is used to a very limited extent.

On the other hand, examples of the use of accrual accounting data (e.g. balance sheets, profit and loss statements) were evaluated positively. The CSO **makes efficient use of these accrual accounting data when compiling national accounts** in accordance with the ESA 2010 methodology. The MoF uses the accounting information mainly to prepare **government financial statistics** according to the International Monetary Fund methodology and to compile the **consolidated financial statements for the Czech Republic.**

Furthermore, the above-mentioned Audit Report states that the Ministry of Finance was preparing so-called **management reports** since the second quarter of 2015. These quarterly reports tracked operating expenses and labour costs, staff numbers and expenditure estimates for selected ministries. The individual ministries supplied data as requested by the MoF, which then used these to compare cost indicators between ministries. The reports thus exemplified how accounting information can be used also for internal management, beyond statutory obligations. However, as part of efforts to reduce the administrative burden and simplify the whole process, the MoF decided to discontinue this activity at the end of 2021.

The SAO Audit No 17/36 thus pointed out a core **discrepancy between the potential of accrual basis accounting and its actual use in public administration.** While one of the core expectations was to provide the government and parliament with better evidence for public financial management and better-quality budgetary decisions aligned towards long-term sustainability and spending efficiency, the reality is that key decisions on spending priorities and saving measures are not adequately backed up by accrual data. In particular, this discrepancy manifested in an insufficient use of accrual data in planning, management and evaluation of public finance, despite their ability to provide a more comprehensive and accurate view of how the public sector manages public funds.

In this aspect, the audit findings match some of the international research results and raise the need to identify the reasons why the potential of accrual basis accounting for decision-making is not being exploited.

12 The draft closing account [provision of Section 30 Article 4 of Act No 218/2000 Coll., on Budgetary Rules and on Amendments to Certain Related Acts (Budgetary Rules)] is a summary document of the budget chapter administrators on the budgetary outcome of the previous year. This includes mainly an overview of the implementation of revenue and expenditure and the budgetary outcome; in the closing account, accrual data are more of an exception. The draft closing account of the state is subject to discussion in the relevant committees of the Chamber of Deputies prior to its discussion by the Chamber of Deputies and subsequent publication in electronic form in a manner allowing remote and permanent access. In contrast, there is no obligation for financial statements of the central government entities or the consolidated financial statements for the Czech Republic to be discussed in Parliament.

4. SURVEY METHODOLOGY

This chapter summarises the methodological approach used in the research, which combines the theoretical background identified through the search of scientific and expert literature with data obtained through a survey. The analysis of users' information needs and how they are met uses a combination of qualitative and quantitative methods.

The applied procedure and evaluation method used in compiling the report are the result of collaboration of teams of experts from the Supreme Audit Office and the Faculty of Finance and Accounting of the University of Economics and Business.

4.1 LITERATURE REVIEW

Literature review represents the initial starting point of the research. It focused on scientific and expert papers, reports of international organisations (Eurostat, IFAC, OECD) and documents of national institutions (MoF, SAO, CSO). Particular attention was paid to publications related to the European **EPSAS (European Public Sector Accounting Standards)** initiative, their theoretical grounding in the **IPSAS (International Public Sector Accounting Standards),** and experience with the implementation of accrual basis accounting in the public sector in different countries.

The search included available national and international strategic and **methodological documents,** including materials of the Ministry of Finance, selected outputs of the Supreme Audit Office, analyses of audit firms (such as PwC) and **research reports** of international organisations (e.g., IFAC & CIPFA, 2021). Special emphasis was placed on the identification of the benefits, barriers and institutional factors affecting the implementation of accrual basis accounting in public administration. Substantial attention was also paid to **the Czech legislative framework,** in particular the Act on Accounting, its implementing decrees and the Government Resolution No 561 of 23 May 2007, which established the conditions for the introduction of public sector accounting in the Czech Republic.

A summary of the relevant results of this search is presented in Chapter 3; a more detailed overview and classification of the studies and sources by their research subjects is provided in **Annex 1** herein.

4.2 SURVEY

The empirical part of the research was conducted in the form of a survey that focused on **three primary user groups.** These distinct groups were identified based on the results of the scientific literature review in the first stage of the project. The questionnaires were distributed electronically to capture the attitudes and practical experience of multiple groups of public sector actors. Where necessary, the responses of selected respondents were further expanded through additional semi-structured interviews aimed at clarifying or further interpreting the obtained data.

The core set of questions for respondents addressed the following topics:

- What type of accounting information do you work with and how often?
- To what extent do you use accounting information?
- What do you use the accounting information for (including specific examples for decision making and accountability)?
- What weight does accounting information have in relation to other sources of economic data (budgetary data, macroeconomic analyses and projections, etc.)?

1) Legislators and expert community

The first group consisted of a sample of holders of political offices and the professional community. The survey was conducted in two stages during the years 2023 and 2024 and was aimed at determining the extent and form of use of financial and budgetary information in the public sector. A total of 300 respondents were approached, including **MPs, senators, analysts, consultants and representatives of the non-profit sector.** The analysis focused on the frequency of use of financial and budgetary data, the perceived shortcomings of the current system and the potential for wider use of the data, including further training in this area.

2) Employees of central state administration bodies

The second group included respondents working in **selected ministries** of the Czech Republic, namely the Ministry of Culture, the Ministry of Regional Development, the Ministry of Industry and Trade, the Ministry of Labour and Social Affairs, the Ministry of Education, Youth and Sports and the Ministry of the Interior. These respondents are involved within their respective ministries in accounting administration and economic management. The surveys mapped the extent of the use of accounting data in planning, expenditure management, asset accounting and asset management. The aim was also to determine the attitude of employees to changes associated with the transition to the accrual basis and the possibilities of its practical use in decision-making processes.

3) Experts from specific institutions influencing fiscal and macroeconomic decision-making

The third group comprised experts with institutions that play a key role particularly in shaping the state's economic policy and gathering underlying information for its assessment – the **Czech National Bank, the Czech Statistical Office, the Ministry of Finance and the Czech Fiscal Council.** The survey focused on the analysis of the benefits, barriers and limits associated with the use of data recognition. It was examined which data sources are used by each institution, what their quality is and which parts of the reports (in particular financial statements and the auxiliary analytical overviews) the expert users consider to be of key importance. The survey also included a discussion of the options for simplifying the process of recognition and discussion of the institutional needs for harmonisation of accounting standards.

This three-stage structure of the survey sample allowed us to obtain a multi-tier view of the current state of use of accounting information in the public sector in the Czech Republic. The results can serve as evidence for assessing the readiness for reforms related to a potential implementation of the EPSAS and as a basis for recommendations on methodological support, training and streamlining the process of recognition.

4.3 ANALYSIS OF FINDINGS FROM AUDITS OF THE SUPREME AUDIT OFFICE

The methodology also included an analysis of the audit reports carried out by the Supreme Audit Office. The analysis focused on parts of the reports concerning errors in public sector accounting and on the extent to which accounting information is used.

5. RESULTS OF THE QUESTIONNAIRE SURVEY AND INTERVIEWS

The aim of this chapter is to present the results of the survey focused on the use of financial and budgetary information in the public sector of the Czech Republic. The survey targeted selected representatives of the public administration, lawmaking bodies and the expert community. The survey explored several topic areas, such as the extent of use of budgetary and accounting data on state organisations and the Czech Republic, barriers to their use, perceived availability and quality of this information, data sources, and the perceived importance of accrual information for decision-making processes.

The chapter provides a quantitative and qualitative summary of the findings, including respondents' attitudes towards systemic shortcomings in recognition. The results serve as evidence for further analysis and recommendations on improving the efficiency and usability of financial and budgetary data in public administration.

5.1 EVALUATION OF THE USE OF FINANCIAL AND BUDGETARY INFORMATION FROM THE PERSPECTIVE OF EXTERNAL USERS

The analysis is based on a two-round survey conducted in 2023 and 2024 to determine the extent and form of use of financial and budgetary information in the public sector. Respondents came from across the political spectrum and the professional community – including MPs, senators, analysts, consultants and representatives of the non-profit sector. The analysis included 20 surveys that met the required criteria for evaluation. Of the total of 300 surveys distributed, the return rate was comparatively low, which made drawing general conclusions from the results relatively difficult.

The results suggest that information on the **budget of state organisations and the Czech Republic** is used to a rather limited extent – four respondents use it regularly, eight occasionally. Even with that, however, there are complaints about the availability and quality of the data, including the lack of long-term consistent time series, the lack of a clear breakdown of assets or the absence of a performance budgeting system[13].

Regarding **accounting information,** the results show that it is used selectively, with seven respondents using it, while eight indicated they did not need it at all in their work. Among the reasons for non-use, insufficient expertise, unavailability of information, or preference for other data sources prevail. A specific problem mentioned was the low linkage of data from the auxiliary analytical overview with information on public contracts or from the register of contracts.

When it comes to using the information, the most commonly used were data from **financial statements (assets, revenues and costs),** and from Part X of the auxiliary analytical overview **(AAO X)[14]**. Most often, the listed expected users of this information are **state administration bodies, consultancies, investment agencies, auditors and foreign investors.** An overview of examples of the main uses is provided in **Annex 3**.

The question on further training returned a positive result – the majority of respondents would welcome the opportunity to become more familiar with accrual basis accounting information, for example through training events or workshops. This signals a growing interest in quality accounting data and their linkage to the budgetary framework for better information and strategic decision-making in the public sector.

13 Performance budgeting refers to a system whereby the allocation of public funds is linked to specific results and measurable targets in order to improve efficiency and accountability in managing the funds (OECD, 2019).

14 AAO X – opening and closing balances and turnover on selected balance sheet accounts broken down by asset/liability partner.

The selected main users mostly utilise budgetary information; accounting information is used rather selectively, with the users mainly citing **insufficient expertise.**

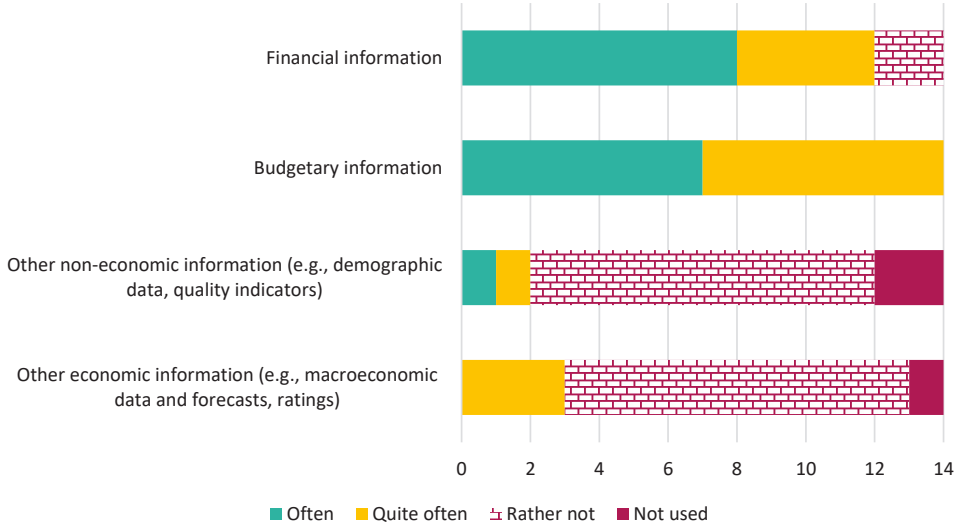
Users require reliable linkage of information with other sources, such as the register of contracts or information on public contracts.

5.2 EVALUATION OF THE USE OF ACCOUNTING AND BUDGETARY INFORMATION FROM THE PERSPECTIVE OF INTERNAL USERS (MINISTRIES)

The survey conducted among employees of central state administration bodies included a total of 14 respondents representing the following ministries: Ministry of Regional Development, Ministry of Industry and Trade, Ministry of Culture, Ministry of Labour and Social Affairs, Ministry of the Interior and Ministry of Education, Youth and Sports. Most of the respondents hold management positions, in particular relating to economics, accounting, auditing and asset administration.

The evaluation of the responses shows that budgetary and accounting information is mainly used in financial planning, monitoring budget implementation, cost management and auditing activities. In contrast, other types of information, such as macroeconomic estimates or demographic data, are used only marginally.

Chart 2: Use of budgetary and accounting information in the management of public organisations



Source: Prepared by the team of authors of the SAO and the Prague University of Economics and Business according to the survey results.

Most often, **budgetary information** is used for expenditure management, monitoring of expenditure, managerial control pursuant to Act No 320/2001 Coll., on Financial Control in Public Administration and on Amendments to Certain Acts (Act on Financial Control), and preparation of contracts and orders. The planning and decision-making function of the budget is rated as essential by the respondents as it serves to allocate funds, manage expenditure and coordinate between dedicated departments. The oversight function is also strongly represented, particularly in relation to meeting binding indicators and

ongoing monitoring of how funds are managed. In contrast, the incentive function of the budget is rated as weak as the budgetary rules are not directly linked to motivating staff to perform better. Problems were identified in the area of digitalisation and system interconnection, particularly in relation to the low speed of data transfer into nation-wide systems such as the CSÚIS. There was also criticism that political decisions can distort the balance between planning and evaluation. The challenge remains the technological integration of budgeting tools with other agendas and the more robust use of the budget as a performance measurement tool. Improvement potential has also been identified in the areas of human resources development and crisis planning which are not yet systematically addressed.

Accounting information is used primarily for inspecting assets, liabilities and receivables, recognition and auditing, and recording accounting transactions (invoices, depreciation/amortisation, inventories). Respondents also work with complementary sources, e.g. registers (ARES, CRAB), statistics or macroeconomic data. However, the use of these complementary data is limited.

Data from the main financial statements (balance sheet and profit and loss statement) and off-balance sheet data have different levels of use and different practical applications. **Balance sheet data** are one of the most commonly used types of accounting information. Primary emphasis is placed on items such as tangible and intangible fixed assets, capital, inventories and profit or loss. For some entities, i.e., on a relatively limited basis, this information serves as basic indicators of economic stability and asset structure of the organisation, helping to plan investments, monitor the efficiency of asset use, and control the financial position. **Profit and loss statement** provides an overview of the costs, revenue and overall economic result of the organisation. In practice, the most commonly used data are operating cost and revenue data, which allow tracking, for example, cost-effectiveness over time. **Off-balance sheet items** are used only to a limited extent. The majority of respondents stated that they use them rather occasionally or not at all, while some did not comment on their use at all. This lack of interest may be due to methodological complexity, lack of analytical tools or insufficient linkage with budgeting processes, yet these items often contain important data on risks, liabilities or safeguards that could be beneficial for practical decision-making.

Respondents in the survey repeatedly highlighted a number of **problems associated with the use of accounting and budgetary data** in the public sector. Among the most frequently mentioned difficulties is insufficient linkage between the accounting and budgeting systems, which complicates transfer and sharing of data across agendas. Obsolete IT systems that do not allow efficient and timely information handling are also a significant constraint. Redundant data recognition is a common problem – the same information is required in both financial statements and budgetary reports, causing unnecessary administrative burden. Furthermore, differences in the legislative status of organisational units of the state and state contributory organisations were identified, which make it difficult to unify the process of recognition and methodologies. In addition, accounting data are not systematically used for management of reporting organisations – there is often a lack of regular structured outputs and tools for their evaluation.

Of the financial statements, **ministries** most commonly use selected data from the **balance sheet** and **profit and loss statement,** typically information on assets, liabilities, revenue and expenses. **Off-balance sheet items are not** commonly **used,** or only partial data in specific cases.

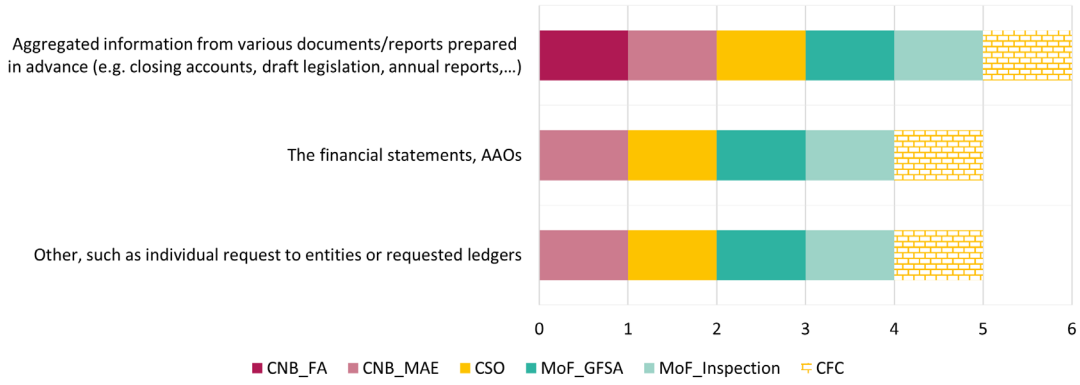
5.3 EVALUATION OF THE USE OF ACCOUNTING AND BUDGETARY INFORMATION FROM THE PERSPECTIVE OF SPECIFIC USERS

This survey aimed at analysing the extent and forms of use of recognition data by professionals in institutions with significant influence on fiscal and macroeconomic decision-making. The panel of respondents comprised experts from the Czech National Bank, the Czech Statistical Office, the Czech Fiscal Council and the Ministry of Finance. The survey focused on identifying the benefits, obstacles and limitations associated with the practical use of recognition.

The results of the survey showed that the extent of use of financial and budgetary data varies according to the nature of each institution and its agenda, with some institutions using the data very intensively and systematically while others more selectively or ad hoc.

Data analysis of the sources of accounting information used at work indicates that all respondents use aggregated information from various **documents and reports prepared in advance,** such as closing accounts and evaluation reports or annual reports. This type of source appears to be crucial for all survey participants. **Financial statements and auxiliary analytical overviews** are an important source of information for total of five respondents. For example, for general ledger accounts with significant balances, the **CSO** requires that **they be accurately reported** in the appropriate line item – that is, in the correct account, the appropriate amount and in the correct reporting period. Any substitution, time shift or aggregation is essentially unacceptable from the methodological viewpoint, as correct assignment is crucial for further statistical processing. All institutions also use other means of obtaining information, such as requesting ledgers or sending individual requests to entities (the CNB approaches entities through the MoF). Overall, **aggregated information and financial statements are the preferred sources for most respondents, while other sources are used selectively.**

Chart 3: Overview of the sources of accounting information used



Source: Prepared by the team of authors of the SAO and the Prague University of Economics and Business according to the survey results.

Note: The respondents were analysts and senior staff from two divisions of the Czech National Bank – the Monetary Policy and Fiscal Analyses Division (CNB_FA) and the Macroeconomic Statistics Division (CNB_MAE), the Government and Financial Accounts Department of the Czech Statistical Office (CSO) and the economic analyst team of the Czech Fiscal Council (CFC). The Ministry of Finance was represented by Department 17 – Inspection (MoF_Inspection) and Unit 3701 – Government Financial Statistics and Analyses (MoF_GFSA). Furthermore, at the MoF, Section 06 – Budget (Department 14 – Budget Policy for Socially Important Sectors, Department 19 – Strategic Sectors Budget Policy and Department 20 – National Debt and Financial Assets Management) was approached, which stated that they work mainly with budgetary data while accounting data are generally not used.

Particular emphasis in the survey was placed on the use of accounting data from the auxiliary analytical overviews. Although it appears that some parts of this statement are of rather marginal importance and are used rarely, others prove to be crucial for specific institutions, particularly the CNB and the CSO. Parts I to VIII and X to XIII of the AAO[15] (auxiliary analytical overview) are considered vital and their reduction would compromise the quality of the outputs, especially in the area of national accounts and international reporting. In contrast, a lot of data have limited use and are processed only for specific, often ad hoc purposes. This applies, in particular, to data from the off-balance sheet accounts in Parts XIV, XV and XVI of the AAO[16], which in practice fulfil a rather supportive role in selected analytical activities and are not systematically used.

From the above, it follows that it is possible to make a partial reduction of the AAO, specifically in the underused parts mentioned. However, it also needs to be considered that potential modifications to the system already in place will require interventions in the setup of economic information systems, so the risk of systemic errors or methodological inconsistencies in the event of a change needs to be taken into account.

In terms of institutional needs, there is a fairly clear agreement between the CSO and the CNB as to the identification of items that can be simplified or merged in the recognition, for example AAO XIV or some items from statements, such as detailed breakdowns of labour costs, social insurance, exchange rate differences, valuation differences on initial application of the method, or highly specific items such as proceeds from the sale of mineral resource deposits. In contrast, items relating to allowances on financial assets or derivative transactions remain of key importance, especially for the CNB, which considers their retention essential, just as the CSO does concerning the recognition of long-term advances on transfers.

Overall, it can be concluded that experts from the mentioned institutions find relatively detailed **standardised formal outputs** based on accounting classification as **the most useful,** as they allow analytical comparability, legal reliability and methodological consistency. **The preference for aggregated information and financial statements** can be seen as evidence of the increasing professionalisation of data handling in the public sector.

From the point of view of the CSO, the MoF, the CNB, and the CFC, the **preferred sources** are **aggregated information and financial statements,** i.e. the balance sheet and profit and loss statement data and selected data from the notes; other sources, meaning the cash flow statement, statement of changes in equity and parts of the notes (off-balance sheet accounts), are used rarely.

Parts XIV, XV and **XVI of the AAOs are not used systematically,** only on a rather case-specific, limited or random basis.

15 AAO I – Balance Sheet, II – Expenses, III – Revenues, IV – Changes in Fixed Assets, V – Changes in Inventories, VI – Changes in Receivables, VII – Changes in Liabilities, VIII – Changes in Other Assets, X – Opening and Closing Balances and Turnover on Selected Balance Sheet Accounts Broken Down by Partner, XI – Selected Expenses and Revenues by Partner, XII – Types of Changes in Selected Balance Sheet Accounts Broken Down by Transaction Partner, XIII – Types of Changes in Selected Balance Sheet Accounts Broken Down by Asset/Liability and Transaction Partner.

16 AAO XIV – Summary of Ownership Interests, XV – Summary of Off-Balance Sheet Accounts, XVI – Opening and Closing Balances of Selected Off-Balance Sheet Accounts Broken Down by Individual Off-Balance Sheet Account Partners.

6. RESULTS OF THE ANALYSIS OF FINDINGS FROM FINANCIAL AUDITS CARRIED OUT BY THE SUPREME AUDIT OFFICE

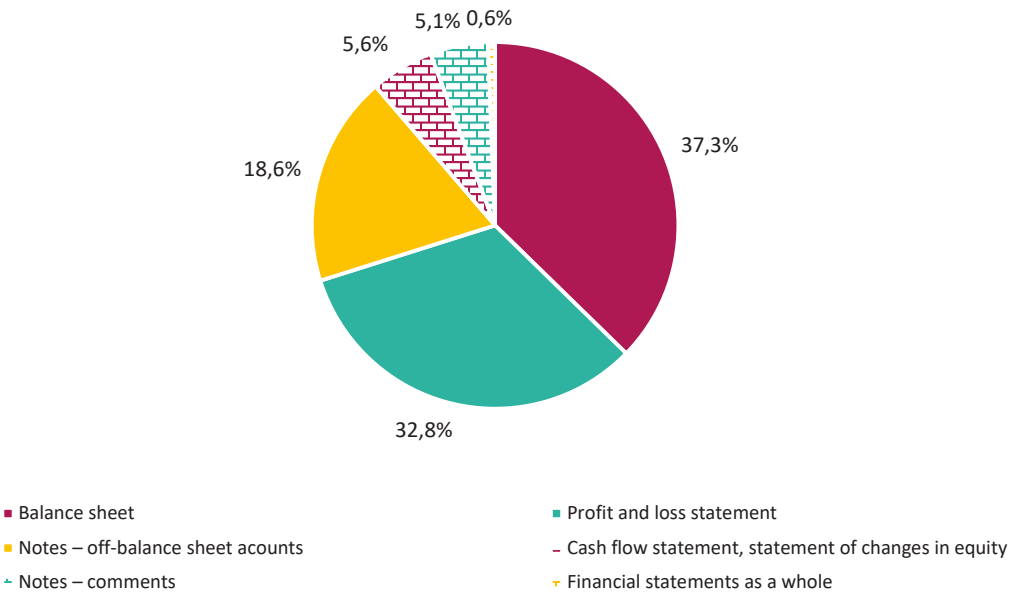
The Supreme Audit Office deals with the reliability of accounting and budgetary reporting in its financial audits. The aim of these audits is to improve the quality and usability of accounting information so that it better serves to assess how the state manages public funds, decision-making in public administration and accountability towards the public. The output for the public is the audit report; the audit reports from financial audits have been analysed with the results provided below.

6.1 RELIABILITY OF ACCOUNTING INFORMATION ACCORDING TO FINDINGS OF THE SUPREME AUDIT OFFICE

Misreported data

Since the launch of the accounting reform, the Supreme Audit Office has carried out a total of 59 audits aimed at verifying the accuracy of financial statements of selected entities. These audits identified 646 instances of **non-compliance with accounting regulations** that had an impact on the data recognised in the financial statements of the audited entities. From 2010, the SAO started to carry out selected regular financial audits that take place during the current recognition period and allow to rectify identified misstatements during the very audit, thus helping to mitigate misstatements that would affect the final financial statements. From 2022 onwards, only regular audits have been performed. The following chart shows the breakdown of the identified misstatements by the individual statements that make up the (annual) financial statements.

Chart 4: Summary of misstatements detected in audits of (annual) financial statements by individual statements during the period under review



Source: Prepared by the team of authors of the SAO and the Prague University of Economics and Business based on insights from audits.

The following table shows the most common types of misstatements found during the audits (included are misstatements that occurred in at least 12 instances).

Table 2: The most frequent types of misstatements found by the Supreme Audit Office in financial statements of organisational units of the state

Misstatements	Number of instances
Incorrect valuation of long-term assets	56
Non-recognition of contingent liabilities	33
Incorrect expense accruals and deferrals	28
Misreporting of cash flow statement items	25
Non-recognition of liabilities	24
Incorrect revenue accruals and deferrals	18
Incorrect valuation of receivables and liabilities denominated in foreign currency	18
Misreporting of transfers granted to state contributory organisations for the acquisition of assets	18
Non-recognition of contingent receivables	18
Recognition of non-existent contingent receivables	18
Failure to disclose information on the accounting methods used	17
Recognition of non-existent contingent liabilities	17
Late activation of long-term assets for use	16
Misclassification of long-term assets	14
Misclassification of expenses (other than transfer expenses)	14
Misclassification of transfer expenses	14
Misclassification of transfer revenues	14
Incorrect valuation of overdue receivables	14
Failure to disclose additional information for balance sheet and profit and loss statement items	13
Recognition of non-existent receivables	12

Source: Prepared by the team of authors of the SAO and the Prague University of Economics and Business.

More detailed information on the misstatements is provided in **Annex 4.**

Problematic areas in public sector financial reporting

As part of its audits, the SAO has long been pointing out some of the **problematic areas of public sector financial reporting.** Several of these have already been **successfully resolved** (such as the issue of unclear recognition of pre-financed transfers co-financed from abroad or recognition of ownership

interests in financial statements of organisational units of the state), while others have been taken **into account in the preparation of new accounting legislation** (e.g. the lack of a conceptual framework and objectives of public sector accounting/reporting, unclear definitions of basic categories including the concept of transfer or the lack of rules for revaluation of foreign currency advances). Persistent problem areas include, e.g.:

- the recognition of specific public sector assets (e.g. financial instruments, *National Recovery Plan* funds, greenhouse gas emission allowances and annual emission allocations (from administrator's perspective), Modernisation Fund resources or COVID-19 vaccines);
- the fact that the closing accounts of the state budget chapters and similar publicly treated documents do not contain most of the accounting data;
- the recognition of certain liabilities related to the receipt of transfers from abroad in equity;
- the inability to comment significant balances on off-balance sheet accounts in the notes and unclear rules for the measurement of contingent long-term receivables and liabilities.

Off-balance sheet accounts

Off-balance sheet accounts form a separate category. They constitute a specific section of accounting that is used to record contingent or uncertain assets and liabilities that do not meet the criteria for recognition in the balance sheet but the inclusion of which contributes to a better understanding of the entity's financial position. In international terminology, they are referred to as "off-balance sheet items" and are part of accrual basis accounting, where they are used to capture risk and potential events such as guarantees or litigation. The SAO audits show that off-balance sheet accounts are one of the most problematic parts of accounting for the selected entities. In the period 2022 to 2024, the financial audits also focused on the content, extent and number of entries reported in off-balance sheet accounts.

Contingent assets and contingent liabilities in the Czech public sector accounting can be broken down in terms of the likelihood of occurrence and subsequent recognition in the balance sheet into the following categories:

- generally certain and expected assets/liabilities – this means that the payment of the contingent receivable or contingent liability is already budgeted and it is only a matter of time before it is fulfilled; the average balance of these items reported for the audits under review was more than EUR 800 million (CZK 20 billion);
- assets/liabilities contingent on specific risks – contingent receivables and liabilities associated with situations that may arise but the outcome is not within the control of the entity and therefore represent a monitored risk to the entity (e.g. litigation, guarantees provided); the average balance of these items recognised for the audits under review was just below EUR 30.4 million (CZK 760 million);
- uncertain assets/liabilities, not expected to be settled – these are hypothetical contingent receivables and liabilities; their occurrence and consequently their settlement are not expected (e.g. potential compensation for possible destruction of borrowed assets); the average balance of these items reported for the audits under review amounted to almost EUR 3.8 million ((CZK 95 million)).

Of the total number of accounting entries made by the accounting entities in the audits under review, on average 9% of the entries were related to off-balance sheet accounts.

The SAO audits carried out between 2010 and 2024 also identified **misstatements in off-balance sheet accounts** in a total of 120 instances. The most frequent errors were non-recognition of contingent receivables and contingent liabilities (51 cases) and recognition of non-existent contingent receivables and contingent liabilities (35 cases).

One of the problems of the off-balance sheet accounts is the **methodological inconsistency** in recognition, which limits comparability and clarity. Furthermore, the lack of mandatory comments in the notes further complicates the use of this information. Also, **the administrative complexity** of off-balance sheet accounting is in some cases disproportionate to its actual information value. At the same time, the SAO once again points to the **low practical use** of off-balance sheet data, whether in budgeting, financial risk control or in the preparation of the closing accounts of the state budget chapters. Off-balance sheet information is thus often only formal without sufficient explanation and is used neither internally within the accounting entity nor externally by other entities.

Off-balance sheet accounts as an information resource have considerable potential in theory, but in practice they face major problems of reliability, methodological consistency, clarity and relevance. The SAO therefore highlighted these problems in its 2024 Annual Report[17]. In this context, in our opinion, there is a need to **review the scope** and **rules** for recognition of the items tracked in the off-balance sheet accounts, in the sense of simplifying or reducing the information so that it can be used in practice.

Specific use of central government accounting at the SAO

In order to streamline its analytical and auditing capacities, the SAO developed its own automated tool for analysing data from the *Integrated Treasury Information System (State Treasury)* (IISSP). This tool allows analyses and breakdowns on time series of financial and budget reports (see **Annex 5** for more details). The tool also allows to detect potential risks in reporting, which the SAO uses in planning audits across the entire organisation. The analytical tool also serves as a platform for methodological and auditing cooperation with other institutions, such as the Czech Statistical Office.

6.2 USE OF ACCOUNTING INFORMATION BY AUDITED ENTITIES

The use of accounting information in the organisational units of the state has a significant potential for streamlining management and decision-making processes. The SAO therefore addressed this area in its financial audits in the years 2019–2023. The audited entities often state that they use accounting data rather on an auxiliary basis, nevertheless in practice at least some of them have specific and relevant uses. This supports the view that accounting information is a potentially important resource for the management of public institutions, even where it is not yet systematically integrated into everyday decision-making. The examples found show that accounting data can make a significant contribution to improving transparency and monitoring or ensuring efficiency and economy in the use of public funds. An overview of these examples is provided in **Annex 6**.

The items monitored cover all the main areas of accounting, but not all entities work with them. For those that do, movements in asset accounts, accumulated depreciation and free transfers of assets are tracked in the **fixed assets** area. This information is used by some entities to plan capital expenditure, asset renewal or disposal and also to assess budget implementation. **Current assets,** in particular receivables, are monitored in terms of status, development in time, recovery success rate and, for selected organisational units of the state (OUS), by individual lease relationships. For **inventories,** the emphasis is on evaluating the acquisition of new inventories, their turnover and composition, which, for those entities that do so, contributes to their efficient management, or so they believe.

17 SAO Annual Report 2024, p. 102, Table 11 – Persisting and significant methodological problems; available at https://www.nku.cz/assets/publications-documents/annual-report/annual-report-2024.pdf

Within **equity,** movements in reserve funds and the cultural and social needs fund are monitored and serve as a basis for decisions on their use. **Debt financing sources,** in particular payables, are used to monitor payment discipline and repayment capacity, and to identify risks (e.g. from labour disputes). In the area of costs, data are kept by type, with use for budgeting, recording operating expenses (e.g., rent, energy costs) and other data for specific systems such as the CRAB. The **revenue** data are used to make decisions on the release of funds to state contributory organisations. The **off-balance sheet accounts** are used to track contingent liabilities and contingent receivables, mainly in relation to EU-funded programmes. Intuitively, accounting information is used in the context of audits, the course of which is usually linked to the circulation of accounting documents. The inventory review process, an integral part of which is the comparison of actual balance with the reported balance (records), is of substantial importance within the internal auditing system of the organisation.

Accounting information is mainly of **evidential value** to the **OUS.** It is used in the performance of legal duties rather than on a systematic basis for decision-making. Nevertheless, practice also shows instances of their use for decision-making. Its **potential** can be systematically **developed** further.

6.3 COMPARISON OF ACCRUAL CENTRAL GOVERNMENT ACCOUNTING INFORMATION WITH THE CASH BASIS BUDGET DATA

At present, it is not common practice for organisational units of the state to compare accrual data with cash data on budget implementation, nor is this required by current law. They also do not compare the reported economic result (profit or loss) with the budgetary outcome (surplus or deficit), nor do they comment on the resulting differences.

As part of the promotion of good practice in its audits, in recent years, the SAO has been analysing the economic results from both the accrual and cash perspectives and presenting the differences between the two views[18]. This reinforces the quality of fiscal reporting while also highlighting the practical importance of accrual data for decision-making processes.

An example of such comparison is the payment of financial compensation to churches and religious communities in the reporting of the state budget chapter 334 – Ministry of Culture[19] (MoC), described in the audit reports from Audits No 24/20 and No 19/03[20].

The MoC has been paying compensation to churches and religious communities since 2013, pursuant to Act No 428/2012 Coll.[21] The financial compensation was not paid all at once, but is to be paid in 30 consecutive annual instalments, increased annually by the yearly inflation rate. If the compensation were paid all at once, the state would pay approximately CZK 59 billion.

While cash (budgetary) data only capture the annual instalment, accrual basis accounting also captures the total amount of debt and its change:

- from the budget reports of the MoC for 2024, the user finds that an instalment of CZK 2.8 billion was paid in that year. The amount of the state debt was reduced by this amount, while the budget deficit of the MoC was increased;
- from the accrual financial statements of the MoC for 2024, the user finds that the state debt on account of these compensations actually increased, due to a contractual arrangement adjusting

18 E.g. Audit No 22/16, Audit No 22/17, Audit No 22/18, Audit No 22/19, Audit No 23/17, Audit No 23/18, Audit No 23/19, Audit No 23/20, Audit No 24/19, Audit No 24/20 and Audit No 24/23.

19 Financial statements of the MoC as of 31 December 2024, available at https://monitor.statnipokladna.gov.cz/ucetni-jednotka/00023671/ucetni-zaverka/priloha?rad=t&obdobi=2412.

20 Audit reports from Audit Nos 24/20 and 19/03:
See https://www.nku.cz/scripts/rka-en/detail.asp?cisloakce=24/20&rok=0&sestava=0,
https://www.nku.cz/scripts/rka-en/detail.asp?cisloakce=19/03&rok=0&sestava=0.

21 Act No 428/2012 Coll., on Property Settlement with Churches and Religious Societies and on Amendments to Certain Acts of Law (Act on Property Settlement with Churches and Religious Societies).

the debt by the inflation rate, by almost CZK 6.9 billion. The debt thus rose and added to the MoC's accounting loss.

The total budget deficit of the MoC for 2024 was approximately CZK 14.8 billion; however, accrual basis accounting shows that the economic loss of the MoC was actually higher, namely CZK 18.1 billion. The reason was the increase in debt by the inflation rate, which was not covered by the actual instalment. The paradox that emerges from the financial statements, which can be explained specifically thanks to the information provided by accrual basis accounting, is therefore the increase in total debt despite regular repayments. If the user were to assess the MoC's performance only on the basis of its budgetary reports and not take into account accrual accounting information from the financial statements, they would not have a complete view of the MoC's economic results.

7. RECOMMENDATIONS

In the public finance of the Czech Republic, accounting and budgetary data are two key information pillars used to assess the financial position of the state, its organisations and the overall efficiency of management of public funds.

Although accrual basis accounting data provide a more comprehensive view of the financial position and performance of the state, their importance remains overshadowed by budgetary data, which are firmly embedded in legislative and approval processes at the central government level. The budgetary data are part of the **closing account of the state,** which is presented annually by the Government and **approved by the Chamber of Deputies of the Parliament of the Czech Republic.** This formal process gives budgetary data a high degree of political and institutional weight.

7.1 RECOMMENDATIONS FOR THE REGULATOR

The Ministry of Finance plays a key role in the public sector accounting system of the Czech Republic as a regulator, methodological body and a major user of accounting information. However, the results of the analysis and the findings from the SAO's audit activity (e.g. Audit No 17/36) show that the potential of accrual basis accounting has not yet been fully used. The benefits of the accounting reform remain limited, mainly due to the weak interconnection of accounting and budgetary data, insufficient use of detailed accounting data for decision-making and the lack of systematic evaluation of the impacts of the reform.

In view of these facts, we make the following recommendations:

1.1 **Boost the use of accounting information in the budgetary process –** linking accrual data to the state budgeting process will allow to better capture the long-term economic reality of individual chapters of the state budget and confirm that budgeting processes reflect reality. Accrual data, especially at the consolidated level for the Czech Republic, can predict future problems (e.g. rising indebtedness or budgetary insufficiency) and help governments address these situations preventively, not when the problem starts affecting the cash flow (such as when there is a need to cover actual debt with additional subsidies);

1.2 **Place greater emphasis on the practical usability of reported data –** impose requirements for recognition of accounting information that is actually used;

1.3 **Promote training and professional growth –** potential users themselves perceive there is room for improvement in this area. Systematic capacity building and methodological support in existing and emerging accrual basis accounting, financial analyses and data-based control should be part of a strategic approach to building the public sector's professional, managerial and user skills base. The accounting reform alone will not guarantee better performance; processes and people's mindsets also need to be changed.

Accrual basis accounting is not just a strategic tool for record-keeping, but above all a tool for informed decision-making, inspection and responsible management of public funds, as well as for providing information on the financial position to relevant users. Thus, the accounting reform can only fulfil its true potential if accompanied by active use of outputs and an orientation towards their utility to all relevant actors in and outside public administration.

The key recommendations for the Ministry of Finance are to **boost the use of accounting information** in the budgetary process, place greater **emphasis on practical usability** of reported data, further develop digital infrastructure and **system interconnection,** and **promote training** and professional growth.

The use of accrual accounting information in audit activity of the European supreme audit institutions

In 2021, the Supreme Audit Office of the Czech Republic asked selected European supreme audit institutions and the European Court of Auditors whether they monitor the use of accrual accounting information in the public sector as part of their audit work. Of the twenty responses received, one third indicated that the issue is not relevant due to the absence of accrual basis accounting, while the remaining institutions do not explicitly address the issue. The exceptions are the partial informal approaches mentioned by the UK, Estonia and the European Court of Auditors, which have taken an interest in this topic for the sake of communication with stakeholders such as parliamentary committees or ministries of finance.

7.2 RECOMMENDATIONS FOR USERS

The information needs of different user groups vary considerably in terms of content and level of detail. Moreover, accrual information is preferred in some cases, while for other decision-making processes cash basis information is given preference instead. For realising the information potential of accrual basis accounting (which also contains information on cash), identifying the information needs of users is a key prerequisite[22]. It is also conditioned by the existence and availability of alternative information resources[23] and critically dependent on the user's ability to obtain and subsequently process and correctly interpret the required data.

The requirements of internal and external users of accounting data will often differ significantly. Internal users – typically staff with economic departments of public institutions – tend to favour information of an operational and budgetary nature that is useful for short-term management. External users, such as the public, the Parliament of the Czech Republic, the Supreme Audit Office or the Czech Statistical Office, require clear, standardised and reliable information for analytical, auditing and accountability purposes.

Internal users

In the overall system of providing accounting information, public sector entities play a key role. Their accountability lies not only in the technical processing of data, but principally in their ability to produce quality, comprehensible and usable outputs that aid responsible management and decision-making in public administration. The survey shows that although the fundamental financial reports are formally produced, their actual use in practice is often limited.

Entities should see their role not only as a formal fulfilment of legal requirements, but crucially as an active part of a system that supports transparent, data-driven and accountable public sector management.

For this reason, we make the following recommendations aimed at increasing the practical uses of accounting:

2.1 **promote improvements in quality and relevance of reported information,** i.e. support the improvement of staff competences in the field of accrual basis accounting and data analysis, for example through professional training and methodological tools; long-term training of key staff is vital to ensure that the accounting fulfils not only a technical but also the analytical function;

22 The needs will be different between a citizen user checking the economic standing of a small municipality, and an analyst user with a rating agency making recommendations on the riskiness of bonds issued by a country's government.

23 For example, in the Czech Republic, an important source of information for public control over the state's management is the register of contracts. Its use by citizens or their indirect representatives may of course result in less demand for information from state accounting.

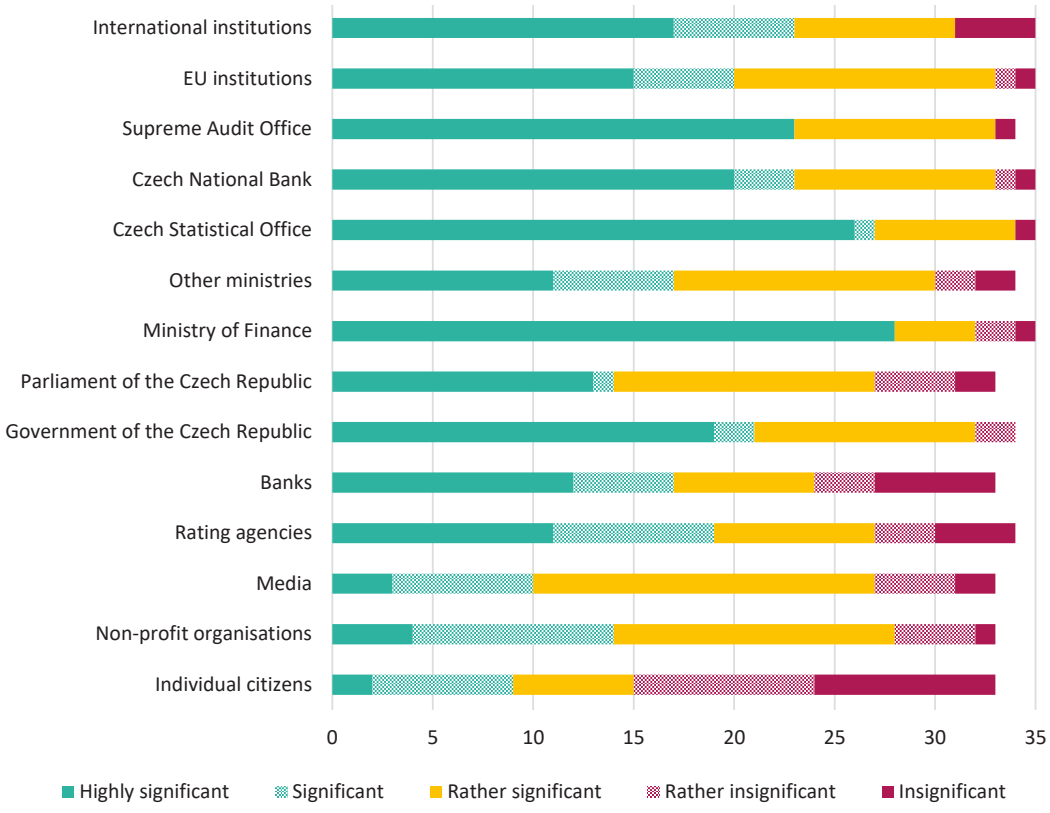
2.2 **promote the integration of the accounting and budgeting systems and the systematic use of accounting information for management,** as interconnecting the two systems ensures data consistency and can serve as a tool for managerial decision-making and planning. It is useful to monitor how budgetary policy translates into the economic position and the economic result.

External users

With the growing emphasis on transparency in the public sector, there is increasing pressure on the quality and availability of accounting information. External users expect this information to be not only accurate and complete, but also comprehensible and easily accessible. In the present day of digitalisation and open data, there is a growing demand for accounting information to be provided publicly in electronic form and in real time, which allows for more efficient monitoring and control of how the state manages public funds.

Chart 5 illustrates how respondents[24] perceived the importance of accounting information for different groups of external users.

Chart 5: Assessment of the materiality of accounting information for selected institutions by external users



Source: Prepared by the team of authors of the SAO and the Prague University of Economics and Business based on the questionnaire survey.

24 The group of external users includes ministries, the CNB, the CSO, the MoF, the CFC and the SAO.

Respondents perceive accounting information as most crucial especially for key institutions of public administration and supervision, such as the Ministry of Finance, the CSO, the SAO or the CNB, which reflects their requirements for transparency and quality of reporting. In contrast, this information is considered less important for individuals and the non-profit sector, where its use is expected to be rather marginal.

To increase the use of accounting information in the public sector, we therefore further recommend:

3.1 **promote training and the use of methodological support,** i.e. the ability to correctly read, interpret and use accrual basis accounting outputs and to use them in conjunction with other information, in particular budgetary information (expert financial analysts can extract valuable insights from financial statements, without which decision-making must rely on monitoring simpler indicators, e.g. cash deficit).

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LIST OF TERMS AND ABBREVIATIONS

AAO	Auxiliary analytical overview
ARES	Administrative Register of Economic Subjects (information system in the Czech Republic)
CIPFA	Chartered Institute of Public Finance and Accountancy
CRAB	Central Register of Administration Buildings (information system in the Czech Republic)
CSÚIS	Central System of State Accounting Information (information system in the Czech Republic)
CNB	Czech National Bank
CR	Czech Republic
EPSAS	European Public Sector Accounting Standards
ESA 2010	European system of accounts
EU	European Union
IISSP	Integrated Treasury Information System (State Treasury)
IPSAS	International Public Sector Accounting Standards

DFAA FFA of the Prague University of Economics and Business	Department of Financial Accounting and Auditing of the Faculty of Finance and Accounting of the Prague University of Economics and Business

MoF	Ministry of Finance
MoC	Ministry of Culture
SAO	Supreme Audit Office
CFC	Czech Fiscal Council
OECD	Organisation for Economic Co-operation and Development
OUS	organisational unit of the state
PSC	Public Sector Committee (of the International Federation of Accountants)
PwC	PricewaterhouseCoopers
SAI	Supreme Audit Institution
VŠE	Prague University of Economics and Business

ANNEXES

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Annex 1: Use of accounting and budgetary information in the public sector

VŠE / FAKULTA FINANCÍ A ÚČETNICTVÍ

Prague University of Economics and Business
Faculty of Finance and Accounting
Department of Financial Accounting and Auditing

Public sector accounting reforms from the perspective of identifying users and their information needs: a literature review

Research report

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SUMMARY

This research report analyses and systematises research in the field of public sector accounting reform, with a primary focus on the prerequisites and consequences of implementing accrual accounting. The first part of the report places the issue of public sector accounting reforms within the concept of New Public Management reforms, which are motivated by the demand for a transition from a public to a private model of public service provision, including the application of quasi-market principles in the public sector. The main part of the report contains a review of normative and empirical research studies focusing on the specifics and impacts of introducing the accrual principle into public sector accounting. The relatively heterogeneous scope of the research is categorised according to related characteristics into sub-groups: prerequisites and practical problems of implementation; usefulness of accrual accounting in the public sector for external users; usefulness of accrual accounting in the public sector for internal users; accrual accounting and accrual budgeting; accrual accounting in the public sector and earnings management. Based on a systematic review of the literature, the third part of the report formulates implications for practice, both from the perspective of initial implementation and ongoing evaluation of the results of the reform. A key element of a successful public sector accounting reform process is the identification of the users of accounting information of a specific accounting entity and their information needs.

1. CONCEPTUAL BASIS FOR PUBLIC SECTOR ACCOUNTING REFORMS

Public sector accounting reforms are an important part of comprehensive public administration reforms, which are collectively referred to as "New Public Management (NPM) reforms" (Marti, 2006). These trends have been evident for several decades, initially in common law countries (Hood, 1991). One of the primary reasons for introducing the NPM concept was to respond to the decline in public revenues as a result of the oil shocks and subsequent economic crises of the 1970s. The reduction in public funds created a need to increase taxes or reduce the scope of public services provided. However, both options for addressing budget deficits are politically unpopular. One option of addressing this problem is the application of optimisation procedures used by the private sector, from which NPM draws inspiration.

However, the actual implementation of NPM has a broader background than simply trying to reduce the costs of providing public services. Specifically, it is related to the growing demand for a transition from a public to a private model of public service provision, or the application of basic (quasi-market) elements (marketisation of services and effective management and decision-making) in the public sector (Kapucu, 2019). The marketisation of public services means perceiving the recipient of a public service as a customer who has certain expectations regarding the satisfaction of their needs. Effective management and decision-making in the public sector should be focused on customer satisfaction while respecting a balanced relationship between the benefits that the customer derives from the public service provided and the costs of providing that service. NPM is implemented using several key tools. One of these is the transition from a bureaucratic concept of public administration to a managerial concept, where professional management has the authority and responsibility for the provision of public services, with decision-making being delegated to lower levels of organisational structures. The pressure to decentralise decision-making and professionalise management reflects the fact that the public sector also operates (in part) in a competitive environment.[1] Strengthening the perception of competition should reinforce the use of traditional tools for managing and measuring the effectiveness of public services, including the definition of performance indicators and the subsequent measurement of the effectiveness of outputs and the overall evaluation of the performance of the institution providing the public service. The concept of NPM is summarised by Fig. 1.

[1] Competition can be understood in two dimensions. Competition within the public sector, also called "voting with your feet" (Tiebout, 1956) , where citizens choose their place of residence based on the different levels and quality of services provided by the public sector. Then there is external competition, where certain services (e.g. health, social, educational or other) are provided by the private or non-governmental non-profit sector, usually more efficiently (e.g. Dronkers & Robert (2003) in the case of education).

Fig. 1 New Public Management: objectives, elements, tools

Objective of NPM
• Increasing efficiency and customer focus in the provision of public services using quasi-market elements
Basic elements
• Marketisation and incentivisation • Effective management and decision-making
Main tools
• Professional management with powers and responsibilities • Decentralisation of decision-making and service provision • Increased competition in the public sector • Emphasis on efficient use of resources • Explicit standards and performance measures • Emphasis on output control

Source: own creation based on (Hood, 1991), (Dunleavy, 2005) and (Kapucu, 2019)

The actual implementation of NPM faces a number of problems, as it requires a holistic approach integrating technical and factual knowledge, financial aspects and human resource management, as well as constant adaptation to a changing external environment (OECD, 1995). Although the goal of NPM is indisputable, many sub trends have proven to be a "dead end". This was due to the fact that the initial implementation of NMP did not have sufficient support in empirical data and involved a mix of ideological perspectives and ad hoc tools which were mutually inconsistent or downright contradictory (Christensen & Lægreid, 1999). Dunleavy (2005) reaches similar conclusions, stating that 13 development trends (out of a total of 34) that were originally implemented as part of NPM were subsequently abandoned due to their ineffectiveness. Another 13 trends (sub-tools) continue to be used, but with less than expected effect. Christensen & Lægreid (1999) further emphasise that NPM as a complex change is critically dependent on the individual response of the local political, institutional and civic environment. Although NPM generally contributes to the cultivation and streamlining of public service delivery, the results do not always meet expectations.

Hammerschmid et al. (2019) examine the real impacts of NPM reforms this context, specifically the consequences of introducing five key tools (downsizing, creation of specialised agencies, outsourcing, customer orientation, flexible employment) on four main performance indicators (cost efficiency, quality of public services, policy coherence and coordination, equal access to public services). Using the example of 20 European countries, they demonstrate that customer orientation and flexible employment policy have a positive impact on all four dimensions of performance. Outsourcing and

downsizing are positively correlated with cost efficiency, but downsizing leads (as expected) to a deterioration in the quality of services provided. On the contrary, the establishment of specialised agencies does not bring positive effects, and the authors recommend focusing on improving management practices within existing structures instead of structural reorganisation reforms of the public sector and the creation of new institutions and agencies.

Last but not least, some authors, such as Dunleavy (2005), point out that rapid developments in information technology have a fundamental impact on change management in the public sector, including the redefinition of the basic elements of NPM. A holistic approach has been newly included among the key elements (in line with the OECD's position). The original decentralisation of decision-making is shifting towards the reintegration of sub-processes (specialisation and economies of scale in public procurement; use of network effects; partial restoration of centralised processes, etc.). Last but not least, digitisation is mentioned, which is related to the use of information technology for process management and service provision, but also for informing the public (so-called open-book government).

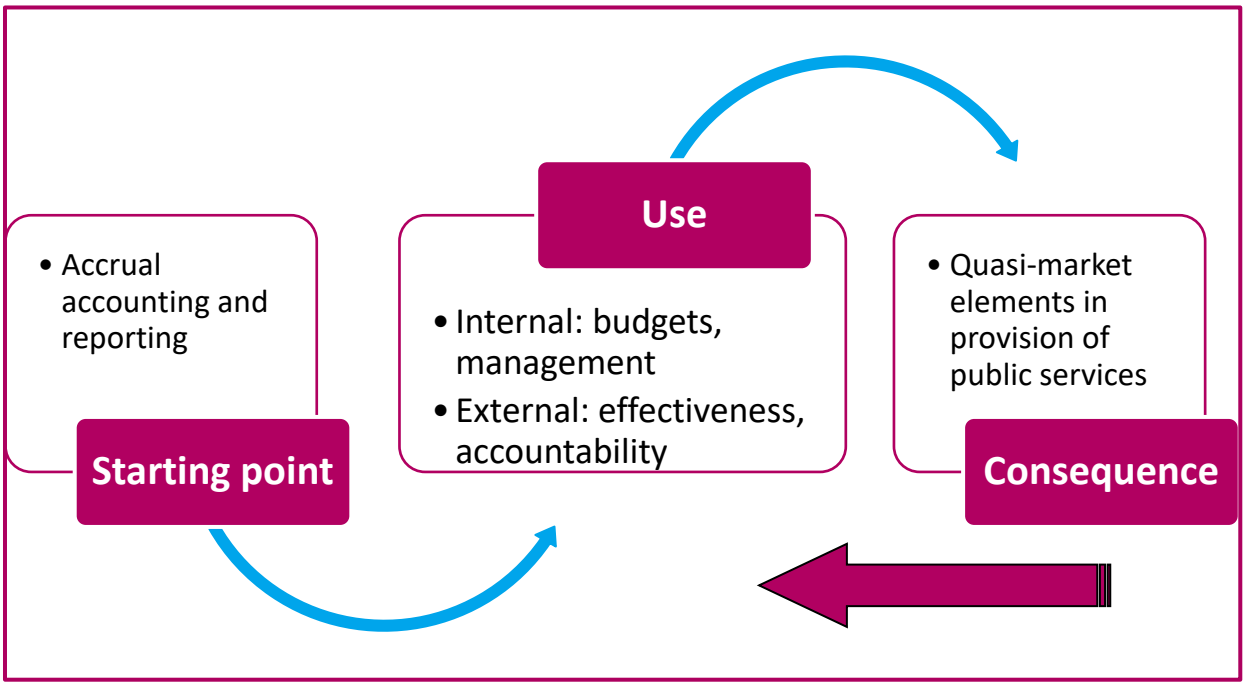
A key insight from NPM theory and practice for any public administration reform is that changes should be primarily focused on increasing customer satisfaction with a newly defined or otherwise provided service. In the case of public sector accounting reform, a necessary condition for its success is the definition of the user, the identification of their user needs and an assessment of the extent to which these are met by the existing system. If the existing system is no longer fully adequate, a detailed analysis of the expected direct and indirect benefits and costs should be carried out to assess whether the required information can be obtained by "fine-tuning" the existing system or whether a comprehensive change based on a completely different accounting concept is necessary or more beneficial.

2. PUBLIC SECTOR ACCOUNTING REFORMS: RESEARCH OVERVIEW

Although public sector accounting reforms, which were primarily aimed at introducing accrual accounting, were in many cases the result of political rivalry (M. Christensen & Parker, 2010) or ideological convictions (Hyndman & Connolly, 2011) rather than the result of adequate and rational debate, there are relevant factual arguments as to why the use of the accrual principle in public sector accounting can be useful (Arnaboldi & Lapsley, 2009). Firstly, shifting the focus from cash expenditures to assets, liabilities, and revenues and expenses related to a given period provides a more complete picture of the financial situation and performance of public sector entities, thereby increasing the transparency of public funds management and thus better fulfilling the function of accountability and its evaluation by external users. At the same time, internal users of accounting can use information on the "full costs" of public services provided to improve the quality of public service provision (including the realisation that the provision of public services requires long-term commitments of financial resources that cannot be used alternatively for the provision of other public services[2]), but also in internal management processes, including budgeting. Accrual accounting should therefore be understood as "merely" a starting point or tool, i.e. one of several available sources of information on economic phenomena and processes. Its usefulness in reality always depends on how the outputs produced from accounting will be used in follow-up activities of public administration – see Fig. 2. Feedback is also an integral part of a functional accounting information system.

[2] At first glance, this paradoxically emphasises the existence of budgetary constraints, where resources are always limited in contrast to needs.

Fig. 2 Integration of accrual accounting into the overall concept of public administration financial reforms



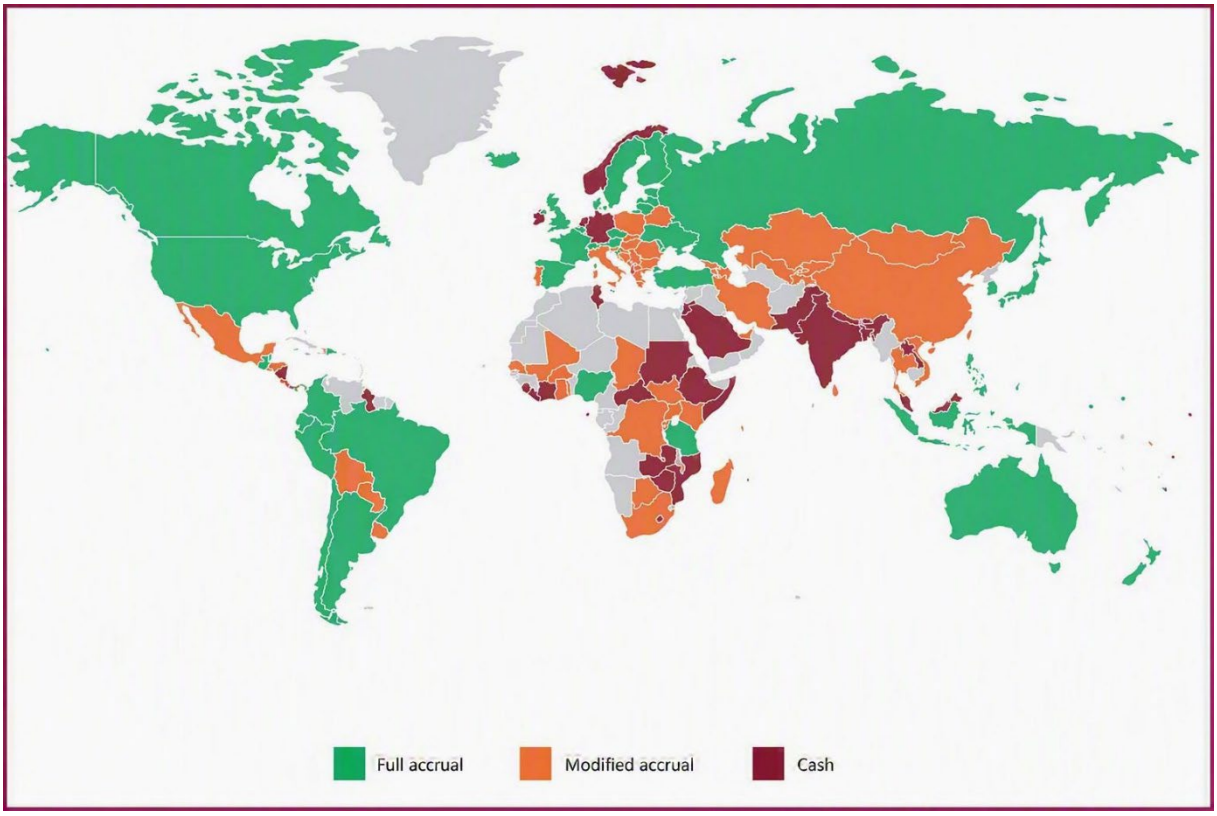
Source: own creation based on (Carlin, 2005)

Despite open conceptual questions regarding the existing limitations of accrual accounting for public administration purposes, its gradual adaptation in the accounting systems of individual countries is a widespread phenomenon. According to IMF statistics, 41 countries completed the transition to accrual accounting (in 2015 or earlier) and another 16 countries applied a modified version of accrual accounting; together, this represented 29% of the 199 countries included in the (Flynn et al., 2016) survey. According to joint research by IFAC and CIPFA for 2020, 49 countries (out of a total of 165) use full accrual accounting and 66 countries are in a transitional phase – see also Fig. 3. Half of the countries plan to fully implement accrual accounting by 2025 (IFAC & CIPFA, 2021).[3] An intensive professional debate focused on the prerequisites for successful introduction, the implementation process and the risks of achieving the expected benefits from the introduction of accrual accounting in the public sector took place mainly in countries with traditionally above-average quality of public administration

[3] Despite the urgent need to address the COVID-19 pandemic, there has been no significant slowdown in the process. Compared to the same report for 2018, the number of countries with accrual accounting for public administration has increased by ten. However, the current pandemic situation has highlighted the fact that work with available economic data (e.g. for the introduction of measures to mitigate the economic consequences of the pandemic on selected economic sectors) is not always at the required level. A higher-quality data base does not automatically ensure higher-quality decision-making. As the NPM conclusions indicate, it is also essential that decision-makers are motivated to use the information and, if they are positively motivated to use it, that they are able to work with the information properly, which also applies to public sector accounting, whether cash-based or accrual-based.

management, or in countries that generally set trends in public administration and are open to change (Hood, 1995).

Fig. 3 Expansion of accrual accounting in the public sector



Source: IFAC & CIPFA (2021)

The key pioneers of accrual accounting in the public sector and the associated professional debate were Australia and New Zealand, where reforms began as early as in the 1980s; in Europe, the pioneers were the United Kingdom and Sweden. Ongoing empirical (but also normative) evaluation of the results already covers a larger sample of countries. The following section of this report summarises the findings of the most significant studies, which are grouped according to common features of their subject matter.[4]

A/ PREREQUISITES AND PROBLEMS OF IMPLEMENTING ACCRUAL ACCOUNTING IN THE PUBLIC SECTOR

As with other significant changes, the professional community's attention is focused on: a) ex-ante discussion of the key prerequisites for the successful introduction of accrual accounting and

[4] In many cases, the scope of the studies is broader and does not focus on a single narrow topic. The classification into individual categories cannot therefore be considered fixed. The most important conclusions were taken into account in the final classification into the relevant group.

identification of possible risks, and b) ex-post discussion of practical problems that have arisen during actual implementation and possible solutions. Ex-ante analysis is, by its very nature, mostly normative, based on comparative analysis and other qualitative methods. Ex-post discussions also rely (to a greater or lesser extent) on empirical (quantitative) data. Most of the available literature focused on ex-post evaluation of the degree of fulfilment of the objectives of public sector accounting reform comes from the United Kingdom, Ireland, Australia and New Zealand. More recent studies have a more global scope.

Reforms are not always driven by rationality or improved functionality; in accordance with institutional theory, internal and, above all, external expectations regarding the quality of public services have a significant influence (Hyndman & Connolly, 2011). The implementation of accrual accounting often reflects a decline in the role of the state in the economy, where the state ceases to act as a provider of public services and shifts its focus towards enforcing rules for the proper provision of these services by other entities (Ellwood & Newberry, 2007). In this context, it is important not to view accounting reform as a purely technical matter, but rather as an essential element of public choice that transcends the boundaries of public sector financial reporting. In some cases, unfortunately, accounting reform can serve only as a tool to obscure the implementation of controversial measures in unrelated areas, such as the privatisation of state assets, deregulation, etc. (Ellwood & Newberry, 2007). Even in the case of public sector accounting, accounting is not a neutral tool, but rather, by depicting economic reality, it subsequently influences it (Guthrie, 1998). In this context, a useful starting point for assessing the chances of successful completion of the reform is the model according to Ansari & Euske (1987), according to which accounting can play three roles:

- technical-rational: a tool for improving decision-making;
- socio-political: a tool for rationalising the actions of organisations towards their members or gaining an advantage in negotiations;
- institutional: a tool for legitimising the organisation vis-à-vis external stakeholders.

In the specific conditions of a given country, the implementation of accrual accounting in the public sector may be motivated by an effort to genuinely improve the quality of information for decision-making, but it may also be merely a purposeful change to promote an unrelated political interest.

From the perspective of practical implementation, studies agree that even in countries positively inclined towards public sector accounting reform on substantive grounds, accrual accounting was ultimately implemented with a relatively long delay from the initial presentation of the intention and the start of public debate (Arnaboldi & Lapsley, 2009). In addition to proper discussion of realistic goals (Moretti & Youngberry, 2018) to be achieved, the success of the reform also requires gradual phasing

of the implementation itself, which must be derived from the objectives pursued. The implementation process involves complex changes not only in accounting regulations (standards) but also in related IT areas and decision-making processes (Flynn et al., 2016). The effort to reach a general consensus on realistic objectives, individual stages and the content of changes has, in addition to prolonging the implementation phase, another negative feature, namely the inclusion of the possibility of alternative accounting solutions as a tool for defusing conflicts, with a logical impact on a lower degree of comparability of financial statements across entities and the failure to utilise the information potential for decision-making within the entity (Arnaboldi & Lapsley, 2009).

In the subsequent discussion of the final results of the public sector accounting reform and the degree to which expectations were met, the studies conclude that the best results are provided by a combination of cash-based and accrual-based information, including the reporting of links between balance sheet items and cash flow statement items (Flynn et al., 2016). However, it is important to bear in mind that both approaches – accrual and cash – are only an information base for decision-making, which will only be of high quality if the information is properly understood (Moretti & Youngberry, 2018). Failure to understand the nature of accrual information can lead to poor decisions, such as outsourcing public services, even though the public sector is actually able to provide them more efficiently (Ellwood & Newberry, 2007).

B/ ACCRUAL ACCOUNTING IN THE PUBLIC SECTOR AND ITS USEFULNESS FOR EXTERNAL USERS

Another part of the research studies is devoted to evaluating the fulfilment of the primary objective of introducing accrual accounting in the public sector, namely its usefulness for external users. This objective naturally follows from the general function of accounting to provide useful information for decision-making, but in the context of NPM findings, this objective may also be set for other reasons (ideological, broader change in the system of public service provision, concealment of the real intention, etc.). The group of countries under study is similar to that in the previous group of studies.

The first study dates back to the 1990s and focuses on identifying users of public sector accounting in New Zealand. Hay (1994) identifies several groups of users whose information needs and requirements for public sector external reporting differ significantly. Although the survey was conducted locally in one country, the systematisation of potential users can be considered comprehensive and applicable internationally. The first group consists of citizens (voters) who are not direct users of accounting and are rather represented by interest groups (e.g. civic associations). If they are interested in public sector accounting at all, they prefer a close link between accounting and budgets (for the purpose of accountability). At the same time, they emphasise the inclusion in public sector accounting of aspects currently referred to as environmental accounting or sustainable development accounting (the

promotion of which is more typical for the corporate sector). Another group is resource providers (not only creditors, but also public administration employees), whose attitudes are influenced by their own practical experience. Public administration employees lack awareness of who the public sector accounting information is actually intended for. Another group of users (politicians or elected representatives) prefer the most extensive data structure possible. Last but not least, analysts and the media can work with the information. However, the media in particular do not have sufficient human capital (and time) to process the information properly. Therefore, if the public sector is interested in making information about public sector accounting available to the widest possible audience, it is advisable to compile information summaries and distribute them automatically to the media and other interested parties. In the context of general NPM findings, the digitisation of public administration again appears to be an important factor.

In the case of Australia, two normative studies are interesting, which assess the impact of the transition to accrual accounting in two narrowly defined areas of the public sector. Carnegie & West (2003) use the example of library and museum collections to argue that the method of asset valuation subsequently determines the method of accountability evaluating. They point out that the monetary valuation of artistic and historical objects is often problematic or even impossible, given that the responsibility for managing these collections is not solely financial in nature.[5] Nevertheless, they do not reject accrual accounting, but merely recommend modifying certain procedures based on a subsequent assessment of the impact of the newly introduced requirements.[6] Carlin (2005) analyses the impact of the standard for the valuation of long-term assets and demonstrates that historical cost is no longer the dominant basis for valuation. It has been primarily replaced by replacement cost so that decisions can take into account the capital tied up in the provision of public services. The pressure for "economic rationalisation of decision-making" has resulted in the percentage of depreciation costs of those chapters that provide services (and are not capital-intensive) being even higher than the percentage of depreciation costs of private companies in capital-intensive industries. The question is how such information is subsequently used and whether it has any real impact – see the findings of Ellwood & Newberry (2007), who state that the transition to outsourcing public services as a result of

[5] In this context, the requirement of Section 25(1)(k) of Act No 561/1991 on Accounting, which requires cultural monuments, museum collections, objects of cultural value and church buildings to be valued at CZK 1 if their acquisition cost is unknown, appears to be a logical reflection of the impossibility of determining the value of such assets and, at the same time, emphasising the existence of the item and thus the responsibility for its management.

[6] The so-called post-implementation review is a common part of the process of creating accounting standards in countries that regulate accounting through an independent standard-setter.

"artificially increased costs" through the use of real values for asset valuation ultimately proved to be an ineffective solution.

In Europe, the results of the reform in the Netherlands are interesting. Schoute & Budding (2017) examine the influence of users' information needs on the design of a cost management system. In line with institutional theory, they confirm that the complexity of the cost system is influenced by the requirements of external, but not internal, users. Cost management systems are less comprehensible to non-financial internal users if they primarily address the requirements of external users and vice versa, which means that public sector must be aware of the need to balance the requirements of both user groups in order to achieve an acceptable level of comprehensibility.

Van Helden (2016) takes a critical approach to previous research on the usefulness of information for external users, pointing out that questionnaire and similar surveys, which are the primary method of data collection for this area of research, tend to exaggerate the extent of use and perceived usefulness of financial information by external users. Studies examining the actual extent of financial information use are rather rare. On the other hand, questionnaire surveys at least make it possible to identify when information is used. For example, financial information is not used systematically by politicians; its potential systematic use requires formalised procedures. The extent of use can be increased by precisely defining the problem being addressed and taking a comprehensive approach to it (accounting can also provide information for 'non-economic' decisions, e.g. when selecting the most effective option for a measure that has already been decided upon), which should, among other things, help to reduce excessive spending. The research study by van Helden & Reichard (2019) concludes by emphasising that the function of accounting in terms of information for decision-making (ex-ante perspective) is essential for both internal and external users, while the second function of accountability is primarily relevant for external users, which also has an impact on the different requirements for preferred information. Combined with the inherent desire of financial statements preparers to primarily comply with accounting regulations, even at the expense of the usefulness and comprehensibility of the financial statements themselves, incorrect identification of accounting users and their needs can lead to accounting failing to fulfil its functions.

C/ ACCRUAL ACCOUNTING IN THE PUBLIC SECTOR AND USEFULNESS FOR INTERNAL USERS

A significant number of studies also examine the extent to which accrual accounting information is used for internal purposes, i.e. in public sector management decision-making. The dominant method of (primary) data collection is questionnaire surveys and interviews. Evidence from Sweden (Paulsson, 2006) shows that accrual accounting is used to a relatively large extent, but not systematically, rather as a general source of information for ad hoc decision-making. The extent of its use depends on the

organisational structure and financial context (e.g. greater use by large organisations, organisations primarily financed by taxes, or organisations with financial difficulties). For internal use, data from financial statements is not usually used; instead, more detailed information on unit costs is preferred.

Senior officials from selected local government departments in Australia report that in approximately 75% of decision-making tasks, information provided by accrual accounting is perceived as more useful than cash-based information (Andriani et al., 2010). Similar conclusions are reached by de Sousa et al. (2013). Cohen et al. (2013) examine experiences from Greece at the municipal level, where cash accounting is primarily used and accrual accounting is used more as a supplementary (secondary) source of information (with the degree of use of accrual information increasing with the size of the municipality). Cash accounting thus plays a predominantly technical and rational role (i.e. a decision-making tool), while accrual accounting is more oriented towards a socio-political role (i.e. it is used as a basis for argumentation in political debates, without actually being used to improve decision-making processes).

D/ ACCRUAL ACCOUNTING AND ACCRUAL BUDGETS

A specific area where the outputs of accrual accounting in the public sector can be used for internal decision-making processes is budgeting. The number of countries applying accrual accounting for financial reporting and, in some cases, for budgeting is growing, with the trend being more evident in developed countries (Reichard & van Helden, 2016). The authors consider the fact that money is the primary focus of interest in public administration and consistent with the annual fiscal cycle (although the accrual dimension is significantly more useful for longer-term budgetary outlooks) to be arguments in favour of cash budgeting. Cash budgets are more understandable to laypeople (the accrual approach to budgeting limits the influence of elected representatives at the expense of "technically proficient" officials, thus weakening public control). The advantages of accrual budgets include consistency in reporting and budgeting (provided that the budget follows the logic of accrual income statements), comparability with macroeconomic statistics (within the EU or IMF) and the presentation of information on the full costs of government activities.

Marti (2006) based on a comparative analysis of the United Kingdom, Sweden and New Zealand, concludes that a necessary condition for achieving the required quality of budgets is the ongoing adjustment of accounting rules based on their regular evaluation. Another condition is the (gradual) inclusion of information on specific assets (infrastructure, military, collections) in budgets. A positive effect of the accrual approach is its caution (conservatism), which leads to larger deficits in accrual budgeting (due to the inclusion of more relevant factors that are not usually taken into account in cash budgeting). At the same time, it is necessary to respect the different functions of cash and accrual

budgets (legality in cash budgeting vs. usefulness for decision-making in accrual budgeting) and therefore consider them as complements rather than (mutually exclusive) substitutes.

Using the examples of Belgium, Portugal, the United Kingdom and Austria, van Helden & Reichard (2018) demonstrate that internal users have the final say in deciding whether to switch to accrual budgets or to stick with traditional cash accounting. The budget is perceived as a much more important tool than accounting, and budget reforms are more difficult to implement than accounting reforms. The final outcome of the relationship between financial reporting and budgeting is influenced by the main reasons for maintaining cash budgeting (or for switching to accrual budgeting), the scope of the pre-implementation debate on the advantages and disadvantages of both systems (including the "power" of the main users who participated in the decision-making process), but also contextual circumstances (political, historical, institutional, etc.).

Fig. 4 Factors determining the choice between cash and accrual budgets

	Belgium (A/C)	Portugal (A/C)	United Kingdom (A/A)	Austria (A/A)
Who influenced the reform?	For: ○ Ministry of Finance	For: ○ Accounting Standards Committee VS ○ Professional organisations ○ Managers of local government units Against: ○ Ministry of Finance ○ Politicians ○ Department managers	For: ○ Ministry of Finance ○ Audit Office	For: ○ Ministry of Finance ○ Audit Office Against: ○ some ministers (to a limited extent)
Advantages/disadvantages for decision-making	○ Politicians prefer cash budgets ○ Budget more important than accounting→ Accrual basis is for accounting	○ Politicians prefer cash budgets ○ Budget more important than accounting ○ Managers' inability to work with accrual information ○ Concerns about losing control over cash flows	○ Accrual accounting more important (assets, liabilities) & better control ○ Consistency of accounting and budgets ○ Possibility of losing control over cash flows with higher budgets	○ Consistency of accounting and budgets ○ Accrual data better for financial management ○ Accrual accounting does not neglect cash data
External and internal influences	○ EU pressure ○ NPM policies ○ Concurrence with other administrative reforms ○ Long-standing tradition of cash budgets	○ Pressure from the IMF and EU ○ NPM policies ○ Standardisation of business accounting reporting ○ Long tradition of cash budgets	○ Efforts to achieve value for money ○ NPM policies ○ Positive experience with independent standard setters ○ Possibility of involving accountants from the private sector	○ Long tradition of cash budgets & cameral accounting ○ Accrual elements in existing cash accounting ○ Positive experience with previous budget reform ○ Following international trends

Implementation incentives and constraints	○ Long and cautious process (complex multi-level government structures & lack of qualified accountants)	○ Sluggish implementation of individual stages (inappropriate organisational structure, lack of qualifications at lower levels)	○ No significant complications thanks to pragmatism	○ Positive impact of robust strategy ○ Relatively quick process ○ Pragmatic and user-friendly budget concept ○ Lack of qualified accountants

Source: taken from van Helden & Reichard (2018); A/C – accrual accounting & cash budgeting, A/A– accrual accounting & accrual budgeting

E/ PUBLIC SECTOR ACCRUAL ACCOUNTING AND EARNINGS MANAGEMENT

In order for financial statements to provide a useful source of information for decision-making, they must be prepared in accordance with the requirements for a true and fair view. The quality of financial statements may be compromised by reduced comparability due to the existence of multiple accounting methods – see also Arnaboldi & Lapsley(2009). The quality of financial statements may also be reduced in situations where accounting is perceived not as a technical and rational tool, but as a socio-political tool for promoting partial interests (Ansari & Euske, 1987). In line with public choice theory, it is necessary to assume that politicians and public sector managers will promote private interests at the expense of public interests if given the opportunity to do so, including using accounting for their own purposes (Cohen et al., 2019).

Expert literature, which primarily focuses on business entities, refers to the adjustment of financial statements (within the limits permitted by accounting regulations) as earnings management. Earnings management is defined as conduct in which the management of an accounting entity uses judgement in financial reporting and in performing economic operations with the aim of changing the form of the financial statements in order to mislead users of accounting information when assessing the economic situation of the company, or to influence contractual parameters that depend on published accounting data (Healy & Wahlen, 1999).[7] Earnings management methods are diverse, but they can be generalised into two groups: accrual earnings management (using the choice of accounting methods, accounting estimates, etc.) and real accrual earnings management (carrying out real transactions that do not make economic sense).

A part of studies focused on accrual accounting in the public sector therefore also addresses the issue of the existence and extent of earnings management in the public sector, as accrual accounting a priori provides more opportunities to influence the final form of financial statements. Vinnari & Näsi (2008),

[7] It is clear from the definition that the subject of manipulation is not only accounting profit, but can be any item in the financial statements.

using the example of the impact of Finnish accounting reform on the water industry, conclude that the transition to accrual accounting does not lead to an improvement in the quality of accounting outputs. The conclusion is based on the finding that not only accrual but also cash accounting can be manipulated (albeit by different techniques) to achieve the desired effect. Efforts to conceal the true rate of taxation led to relatively complex transactions, including the establishment of special water companies to provide public services. Inappropriate accounting rules (combined with the existence of regulation in the sector) were used to conceal the true state of affairs.

Cohen et al. (2019) compare Italian and Greek municipalities, and the data collected confirm the use of earnings management techniques, the extent of which is influenced by political factors (in the case of Greece, a statistically significant correlation with elections has been identified) and is directly proportional to the size of the city council. The "tuning" of financial statements is primarily aimed at reporting results close to the "tipping point", i.e. not too bad, but not too good either, because any deviation from the "norm" may be subject to criticism.

3. PUBLIC SECTOR ACCOUNTING REFORMS: IMPLICATIONS OF RESEARCH FOR PRACTICE

Although this view is not prevalent, public sector accounting must also be understood as a public service, albeit one with many specific characteristics that lead to fundamental differences from "traditional" public services. The aim of public sector accounting is to provide information on the management of public funds by individual public sector institutions (and, ideally, for the public sector as a whole) in fulfilling the functions that citizens have delegated to the state. In practical terms, public sector accounting should therefore fulfil the basic requirement that is also typical of business accounting, i.e. to produce financial information that is useful to users for their informed decision-making. In addition to providing a basis for decisions about the future, accounting outputs should also make it possible to evaluate how public resources have been used (i.e. accountability to the general public).

Since public sector accounting is also a public service, any fundamental changes to the accounting system (e.g. replacing cash accounting with accrual accounting or other reforms of public sector accounting) can be viewed through the prism of research findings in the field of NPM. The following can be identified as key prerequisites for a successful reform:

- a precisely defined target state of the reform, factual reasons for change, a timetable and tools;
- based on the defined target state and identified reasons for change, determining whether a conceptual change to the system is necessary or whether restructuring of the current system is sufficient;
- careful planning of the individual stages of implementation, setting control milestones and appropriate communication of the entire implementation process within the public administration;
- regularly evaluating whether the set objectives have been achieved and taking corrective measures, including adjusting the objectives if they prove to be unrealistic or inappropriately defined;
- awareness of local specifics (it is not always possible to automatically adopt best foreign practices due to the specific political and historical anchoring of local social institutions that affect the public administration and, therefore, also public sector accounting);
- increased pressure for openness in public administration, including online public information (using user-friendly methods).

Last but not least, it should be noted that the above assumptions can only lead to the successful completion of accounting reforms if public sector accounting, or rather its reform, is understood as a thoroughly technical and rational process, i.e. the reform is driven by a genuine desire to improve the quality and usefulness of accounting information.[8]

In the case of public sector accounting reforms aimed at implementing accrual accounting, it can be said that this is a general trend, although it cannot be claimed that there is general agreement that accrual accounting provides better information on public sector management than cash accounting.[9] Using the examples of Germany, the Netherlands and Norway, Moretti & Youngberry(2018) present the reasons why these countries have decided to stick with cash accounting (and cash budgeting). Although the reasons vary, the common denominator for all three countries is that they consider their cash-based systems to be of such high quality that a possible transition to accrual-based accounting would bring only insignificant additional benefits, but would be accompanied by substantial costs. This view of the (in)appropriateness or necessity of switching to accrual accounting is in line with the recommendations made by Hammerschmid et al. (2019) based on a more comprehensive evaluation of NPM reforms. As a general conclusion, the authors recommend that before launching any reform in the public sector, consideration should be given to whether, instead of building new structures, it would be preferable to fine-tune management practices and other processes within the existing system.

If the reform is ultimately adopted, it can be expected – as with any other complex project – that the implementation of accrual accounting will be accompanied by a number of conceptual and practical problems (Arnaboldi & Lapsley, 2009; Bathó, 2012). These complications may result in the rejection of reforms (Carnegie & West, 2003) and questioning of their benefits (Wynne, 2008). The main risk factor is the fact that the accounting information requirements of internal users, who also significantly influence the course of the reform itself, differ from those of external users (van Helden & Reichard, 2019). Furthermore, financial statements preparers often do not even know who the external users are and what information they require. Therefore, internal requirements are usually reflected in the design of the accounting system, and financial statements and any other external reports are prepared in a rather formalistic manner (van Helden & Reichard, 2019).

[8] If the reason for launching the reform is to achieve a different, power-related goal, the above assumptions are irrelevant.

[9] Alternatively, it is argued that although accrual accounting can be considered a better information tool, the costs associated with accounting reform outweigh the additional benefits.

A key common point in research studies is the recommendation to carry out systematic regular evaluations of whether the defined objectives of the accounting reform have been achieved. The so-called post-implementation review should be comprehensive, i.e. it should determine the one-off and recurring costs associated with the reform; describe and, if possible, quantify the newly acquired benefits; identify the dysfunctional elements of the reform and the causes of the dysfunctionality. Based on the ex-post evaluation, the implementation process should iteratively return to the beginning and reassess (and possibly redefine) the initial objectives of the reform and propose corrective measures. A possible procedure is summarised in Fig. 5 .

Fig. 5 Problem areas of accrual accounting and its continuous improvement

Objective	Problem	Action	Expected result
A true and fair view of public finances	The publication of financial statements does not affect the perception of government openness due to negative audit opinions	○ Professionalisation of accounting departments ○ Modernisation of IT & processes ○ Improvement of risk management and internal controls (internal audit)	Elimination of qualified auditor's opinions and subsequent greater use of reliable accounting outputs
Better analysis of public finances	Accrual data considered irrelevant for analysing the government's financial position	○ Accounting outputs in at least a 3-year time series for trend analysis ○ Integration of accounting information into fiscal sustainability analysis and public finance risk analysis ○ Supplementing budget outcome information with expected impacts on future budgets	Improving the quality and reliability of fiscal reports
Increasing public awareness of public finances	Accounting is too technical for the media and the public	○ Simplification ○ Brochures ○ Open data ○ Unconventional approaches to presentation ○ Social networks ○ Educational programmes ○ Active provision (distribution) of news	Greater focus of the media (public) on conceptual (long-term) issues facing the state
Definition of fiscal targets	Fiscal policy continues to be implemented primarily from a cash flow perspective, including statistical evaluation/control	○ Fiscal rules based on accrual terms ○ Harmonisation of standards	Greater interest among politicians in accrual accounting outputs and accrual outlooks
Budgets	Budget decisions continue to be based primarily on cash flows	○ Technical and economic support for politicians ○ Comments and analyses on the future impact of current decisions	Better parliamentary control of executive power
Management of assets and liabilities	Low level of understanding of opportunities, risks and interrelationships between public sector assets and liabilities	○ Identification of "operationally unnecessary" assets ○ Imputed cost of capital ○ Regular analysis of financial position	Rational decision-making on the acquisition and disposal of assets and how they are financed
Performance measurement	Data from accrual accounting is not applied, or is applied inappropriately	○ Use of cost accounting tools	Greater use of accrual data by managers and other decision-makers

		○ Use of different cost variants for different decision-making tasks ○ Distinguishing between controllable and uncontrollable costs ○ Identification of decision-related costs	
Management of the accounting entity	Cash flow-based monitoring	○ Creation of a coherent management system ○ Indicators of operational sustainability (maturity of liabilities, liquidity of assets)	More targeted monitoring of units

Source: taken from Moretti & Youngberry(2018) and supplemented on the basis of generalised findings from other studies

International comparative studies, e.g. Carlin (2005), Flynn et al. (2016) and Moretti & Youngberry (2018), confirm the expectation that the implementation of the accrual principle in public accounting will not be without practical difficulties. These complications are commonplace. Although each country has its own unique problems caused by the specific characteristics of its public administration, most of the problem areas are common across countries, including:

- the objective of the reform is not always clearly defined, or the possibility of achieving it is not realistically assessed;
- the speed, scope and timing of the individual stages of accounting reform are not determined by its objectives, but are determined in an unsystematic manner;
- the implementation of accrual accounting in the public sector is always a long-term process; [10]
- the success of accounting reform is not only about creating high-quality new accounting regulations or accounting standards, but above all about their high-quality application;
- the objectives and progress of the reform are not clearly communicated to the entities concerned and users; those responsible for the reform change frequently and lack the necessary "political power";
- Accrual data is used randomly, unsystematically and often without understanding its content.
- Accrual-based information complements and enhances the usefulness of cash-based information; for the best possible decisions, it is necessary to combine both dimensions.
- No distinction is made between the recipient of accounting information and its user.

[10] Only a few countries have managed to complete the process successfully within three years, and it is not unusual for implementation to take ten years or more (Flynn et al., 2016).

- information is not actively presented by the public sector to potential interested parties; user-friendly main outputs are lacking.

The root cause of the fact that the implementation of accrual accounting does not bring the expected benefits is usually found in the first step of the implementation process, i.e. in setting the reform objective. First and foremost, the definition of the objective cannot be achieved without accurately identifying the users of accounting information and their information needs. However, the identification of users and their needs is often very general, partly due to the fragmentation of external users, which is also a major challenge for accounting research when reflecting on the results of reforms. At the same time, it is necessary to emphasise the main limitations of the recommendations that emerge from the literature reviewed. Empirical research focuses exclusively on countries with stable economic and legal systems, and there is a lack of studies addressing the specifics of implementing accrual accounting in the public sector in the context of transition economies (such as those in Central and Eastern Europe). Accounting reforms in these countries cannot always be separated from general reforms towards a market economy, and the transferability of knowledge from, for example, the original EU countries may be significantly limited.

The IPSAS text can serve as a starting point for defining objectives and users. Its Conceptual Framework states that the objective of general purpose financial reporting (GPFR) by public sector entities is to provide information about the entity that is relevant to users of GPFR for accountability and decision-making purposes (IPSAS.CF2.1) and further that financial reporting is not an end in itself, as its purpose is to provide necessary information to users. The objectives of financial reporting are therefore set with reference to the users of general purpose financial statements and their information needs (IPSAS.CF2.2). The conceptual framework defines the primary users of GPFR as recipients of public sector services and their representatives, and providers of funds and their representatives (IPSAS.CF2.4). In addition to primary users, other entities may also find the information contained in GPFR useful, such as government statisticians, analysts, the media, financial advisers, public interest groups, lobbying groups, or organisations (e.g. regulatory bodies, supervisory bodies, legislative committees or other government institutions, central agencies and budget controllers, budget managers, accounting entity management, rating agencies and, in some cases, credit institutions) that have the authority to request the preparation of statements for their specific information needs. However, according to IPSAS.CF2.6, while GPFR may be useful to these user groups, they are not primarily designed for these groups and their information needs.

The CF IPSAS analysis shows that it is necessary to distinguish between primary and other users of public sector financial statements. Hay (1994) and van Helden & Reichard (2019) show that the population, as the main primary user of public sector accounting, is in fact only a user to a negligible

extent. It is therefore more appropriate to focus on the information needs of citizens' representatives. These can be understood either in the sense of elected representatives (politicians) or in the sense of independent institutions monitoring the public interest. However, the second group does not fall within the scope of primary users according to IPSAS.

In view of the above, users of public sector accounting can be classified into the following groups:

- Primary representatives of the population:
  - elected representatives
- Providers:
  - public services financed from public budgets
  - state financing (banking institutions; foreign entities)
- Internal users and decision-makers:
  - central government and central state authorities
  - local governments and municipalities
- Other users:
  - media
  - non-profit organisations
  - academic and research sphere

The information needs of individual groups vary significantly in terms of content and level of detail. At the same time, in some cases accrual information is preferred, while in other decision-making tasks cash information is preferred. Fully realising the information potential of accrual accounting therefore requires identifying the information needs of users in the specific conditions of a given organisation[11], is co-determined by the existence and availability of alternative information sources[12], and is critically dependent on the user's ability to obtain and subsequently process the required data.

[11] A citizen user will have different needs when auditing the finances of a small municipality than a rating agency analyst who issues recommendations on the riskiness of bonds issued by a particular country's government.
[12] For example, in the Czech Republic, the Register of Contracts is an important source of information for public control over state finances. Its use by citizens or their indirect representatives may, of course, result in lower demand for information from state accounting.

APPENDIX: OVERVIEW OF RELEVANT STUDIES

A/ PREREQUISITES AND PROBLEMS OF IMPLEMENTING ACCRUAL ACCOUNTING IN THE PUBLIC SECTOR

Authors: Guthrie (1998)

- Country: Australia
- Focus: generalisation of experiences with the implementation of accrual accounting and identification of outstanding issues
- Type of study: normative study
- Main results:
    - Accounting is not a neutral tool; rather it influences economic reality by reflecting it
    - The transition to accrual accounting brings public sector decision-making processes closer to best practice in the private sector, but at the cost of sidelining the traditional functions of the state (redistribution of wealth, ensuring equal opportunities, protecting the environment, providing and maintaining adequate infrastructure)
    - One option is to adapt the principles of accrual accounting for business entities to the specific requirements of the public sector.

Authors: Hodges & Mellett (2003)

- Country: United Kingdom
- Focus: monetary evaluation of operational efficiency vs. accrual accounting
- Type of study: normative study based on the example of National Health Service accounting
- Main results:
    - Accrual accounting information cannot be incorporated into the traditional cash-based framework for evaluating the efficiency of public service provision
    - Some accrual items[13] do not "fit" into the traditional model of healthcare evaluation

[13] This study explicitly mentions the specifics of capital accounting, i.e. the revaluation of assets to take into account capital commitment. However, hospitals cannot respond, for example, to rising property prices, which reduce profitability through increased depreciation/imputed capital costs, by moving their operating buildings to a cheaper area, as this would worsen or completely limit the availability of healthcare.

- Two possible solutions: exclusion of the items concerned (technical approach) or a conceptual change in processes that will exploit the strengths of accrual accounting (more demanding in terms of practical implementation)

Authors: Ellwood & Newberry (2007)

- Countries: United Kingdom and New Zealand
- Focus: the role of accrual accounting in promoting (neoliberal) public sector reforms
- Type of study: comparative normative study
- Main findings:
  - Accrual accounting enables/is associated with a decline in the role of the state in the economy, with the state as provider shifting its focus to enforcing rules
  - The shift from cash accounting to accrual accounting is not only a technical (or technocratic) change, but also an instrument of public choice
  - The introduction of accrual accounting serves as a political tool to push through a controversial (disputed) political agenda; in the case of the countries studied, this mainly concerned the privatisation of state assets
  - The substantive debate on the benefits and risks of privatisation was replaced by a technical debate on the (in)appropriateness of individual accounting standards from the perspective of specific privatised sectors
  - The general requirement of accrual accounting for full costing, combined with fair value revaluation, leads to an artificial increase in cost indicators for the provision of public services by the public sector itself→ This perceived inefficiency is then used as an argument for outsourcing public services to the private sector

Authors: Arnaboldi & Lapsley (2009)

- Country: United Kingdom
- Focus: implementation study emphasising conflict and ambiguity in implementation
- Type of study: comprehensive study including qualitative analysis of public documents and public debates & empirical research using questionnaires and interviews & case study
- Sample: local institutions in Scotland
- Period studied: 1975–2006
- Main results:

- Final implementation of accrual accounting with a long delay between the initial presentation of the intention for public discussion (more than 20 years)
- The main conflicts concerned capital accounting (taking into account elements of the use of fixed assets for the purposes of evaluating internal efficiency)
- Long-term discussions and conflicts led to the adoption of a variant solution that left considerable room for ambiguous implementation, which was also reflected in practice (different approaches by individual local institutions when taking into account/adjusting imputed costs in various investment decisions)
- Alternative approaches to implementation are also reflected in the perception of the usefulness of individual management tools from the perspective of different managers, as the decision on the method of implementation is left to accountants and managers may not even have access to potentially useful information.

Authors: Hyndman & Connolly (2011)

- Country: United Kingdom and Ireland
- Focus: identifying the reasons why Ireland, unlike the UK, did not implement accrual accounting
- Type of study: semi-structured interviews
- Sample: representatives of central authorities, accountants, commentators
- Period studied: 2008–2009
- Main findings:
  - In line with institutional theory, NPM reforms are not always driven by rationality or improved functionality; internal and external expectations and, more generally, cultural and social aspects of the environment in which the organisation/public sector operates influence internal organisational changes, including accounting reforms
  - Reforms are often motivated by an effort to satisfy external rules or expectations of external entities (i.e. an effort to create the appearance of legitimacy of the organisation's activities) and thus avoid critical evaluation.
  - The UK was classified as a "high-intensity adopter", i.e. a country that perceived the need to transition to accrual accounting in a highly ideological/dogmatic manner, without examining in detail whether the conditions for successful implementation and, above all, utilisation were met

- Ireland classified as a "medium-intensity adopter", i.e. a country that approached the implementation of accrual accounting pragmatically, taking into account the practical implications of the change in the accounting paradigm when comparing the expected benefits and costs
- A detailed assessment of the possible impacts, combined with efforts to achieve a general consensus, led to a situation in Ireland where accrual elements were implemented to a much lesser extent than originally intended.

Authors: Flynn et al. (2016)

- Country: global
- Focus: generalisation of experiences with the implementation of accrual accounting and identification of outstanding issues
- Type of study: International Monetary Fund implementation manual
- Main results:
  - The phasing of implementation must be derived from the objectives that accrual accounting is intended to help achieve
  - Implementation requires comprehensive changes not only in accounting regulations (standards) but also in related areas (IT, decision-making processes, etc.)
  - The best results are achieved by combining cash-based and accrual-based information, including reporting links between balance sheet items and CF items

Authors: Moretti & Youngberry (2018)

- Countries: 11 OECD countries
- Focus: generalisation of experiences with the implementation of accrual accounting and identification of outstanding issues
- Type of study: comparative qualitative study
- Main results:
  - Base reform on realistic expectations regarding goals and pace
  - Strong leadership and high-quality project management by the responsible minister, including adequate explanation of conceptual goals and individual steps, are key prerequisites for success

- The combination of cash and accrual perspectives provides more useful information, although it is still necessary to view it only as a basis for subsequent decision-making
- The usefulness of information is determined by the extent to which it is used, and it is therefore necessary to ensure mechanisms for using accrual information at all levels of public administration
- Feedback within the budget cycle should not be forgotten.

B/ ACCRUAL ACCOUNTING IN THE PUBLIC SECTOR AND ITS USEFULNESS FOR EXTERNAL USERS

Authors: Hay (1994)

- Country: New Zealand
- Focus: identification of users of public sector accrual accounting and their user needs
- Type of study: interviews and document analysis
- Main results:
  - Significant individual differences in knowledge of public sector external reporting requirements and the information possibilities offered by accrual accounting; minor differences within subgroups of similar users
  - Citizens, voters, taxpayers, benefit recipients:
    - are not direct users, but are rather represented by interest groups, civic associations, etc.
    - Accounting reforms towards accrual accounting are not perceived as positively as by other groups
    - great emphasis on "mineral wealth and environmental accounting"[14]
    - Other subgroups of "ordinary" users emphasised the need for public budgets to be prepared on a larger scale in order to fulfil their function in conjunction

[14] Although demand for non-financial reporting has grown significantly in recent years and there are many concepts (some studies record over 100 different methodologies), a global solution is still not available, even though it is being addressed by both the IASB (https://www.ifrs.org/projects/work-plan/sustainability-reporting/) and the EU (https://www.efrag.org/Activities/2010051123028442/Non-financial-reporting-standards).

with accounting, while interim financial statements of the state are not required, or if they are published, they do not have to be audited.

- Resource providers (creditors, employees):
  - Attitudes strongly influenced by the "managerial perspective", i.e. based on experience in identifying what should/should not be included in accounting.
  - Public service employees usually have no idea who the recipients of accounting information actually are, even though they individually identify parliament, the government, civil servants, international institutions and the media.
- Elected representatives of citizens:
  - combination of analysis of parliamentary proceedings & opinions of non-parliamentary parties
  - unequivocal support for a more extensive database, albeit accompanied by the usual criticism (unclear, incomplete, etc.)
- Analysts and the media:
  - the media recognise the qualitative and quantitative positive shift in the information presented to the public; however, in the vast majority of cases, the media do not have the time or human resources to process the information and draw conclusions from it
  - if the financial statements (annual reports) are not automatically distributed to the media by accounting entities, they are not actively sought out and no information is provided about them (confirmed by press analysis)
  - The academic sphere is sceptical about the existence of local users of public sector accounting (relevant users are international institutions or financing providers), and an analysis of users and their information needs should always precede any decision on reform.

Authors: Carnegie & West (2003)

- Country: Australia
- Focus: the usefulness of accrual accounting for accountability
- Type of study: normative study using the example of library and museum collections

- Main results:
    - The approach to determining the valuation of assets subsequently determines how the rendering of accounts (accountability) of public sector entities is assessed.
    - In the case of collections of historical value, it is problematic to express them in monetary terms, particularly given that the responsibility for managing these collections is not solely financial in nature
    - The authors do not propose abandoning accrual accounting (they recognise its advantages in other areas), but rather modifying procedures in problematic areas
    - Adjustments to accounting practice should be preceded by a comprehensive assessment of the impact of current requirements (a so-called post-implementation review)

Authors: Carlin (2005)

- Country: Australia
- Focus: impacts of the introduction of accrual accounting on the type of information provided
- Type of study: normative study using a case study
- Sample: long-term assets held by nine local government chapters in the Australian state of Victoria
- Period studied: 1998–2001
- Main results:
    - The transition to a full accrual basis, combined with the requirement to reflect economic factors (in particular the need for tied-up capital) in decision-making, meant that historical costs ceased to be the predominant basis of valuation for fixed assets (share of approximately 30%).
    - Historical cost was replaced in particular by replacement value
    - The percentage share of depreciation costs of those chapters that provide services (and are not capital-intensive) is even higher than the share of depreciation costs of private companies in capital-intensive industries (such as manufacturing or mining).
    - The impacts of introducing accrual accounting must be assessed comprehensively in relation to the activities for which accounting provides information for decision-

making. The assessment of the impacts cannot be separated from the remaining parts of the chain of interrelated public sector reforms.

Authors: Schoute & Budding (2017)

- Country: Netherlands
- Focus: internal and external user requirements and their impact on the design of the cost management system and assessment of its effectiveness
- Type of study: questionnaire survey (87 respondents – municipal finance directors)
- Period studied: 2010–2011
- Main results:
    - Since 2003, municipalities have had the freedom to decide on the setting of the cost system and the method of reporting to external users, while at the same time having to fulfil their information obligation to the central government regarding full cost calculations (without, however, rules for the allocation of overheads being specified)
    - In line with institutional theory, it was found that the requirements of external users influence the complexity of the cost system, while the requirements of internal users have no impact on the complexity of the system.
    - Cost management systems are less comprehensible to non-financial internal users if they primarily address the requirements of external users, and vice versa → it is necessary to balance the requirements of both user groups in relation to the degree of comprehensibility.
    - The complexity of systems is positively correlated with the extent to which they are used for control purposes and independent from the need for information on the costs of products/public services; conversely, information on product costs leads to more factors being taken into account in management systems, without increasing the complexity of the systems.

Authors: van Helden (2016)

- Country: international
- Focus: scope of use of accounting information by elected representatives (politicians)
- Type of study: literature review
- Main results:

- Empirical studies provide conflicting results regarding the extent to which politicians use accounting, financial and budgetary information
- Questionnaire and similar surveys usually exaggerate the extent of use/perceived usefulness of financial information, but they do allow the manner of use to be identified
- Studies examining the actual extent of financial information use are rare
- In the case of public sector performance information, the usefulness of accounting information depends on the availability and quality of alternative information sources and on the existence of a benchmark for "what is good and what is bad"
- Financial information is not used systematically by policymakers; systematic use requires formalised procedures (even if they may become formal)
- Information is often (mis)used "opportunistically" on controversial issues
- The degree of utilisation can be increased by precisely defining the problem being addressed and comprehensively conceptualising it (accounting can also provide information for "non-economic" decisions, e.g. when selecting the most effective option for action), which should, among other things, help to reduce excessive spending.

Authors: van Helden & Reichard (2019)

- Country: international
- Focus: identification of users of public sector accounting information
- Type of study: normative study based on literature review
- Main results:
  - Accounting is expected to provide information for decision-making (ex-ante perspective) and for accountability (ex-post perspective); the first function is essential for both internal and external users, while the second function is primarily for external users.
  - Empirical studies also indicate marginal use/misuse of accounting in other areas: formal basis for budget preparation, arguments for supporting/manipulating political decisions
  - It is important to distinguish between recipients of accounting outputs and users.

- The primary concern of financial statements preparers is to comply with accounting regulations, even at the expense of the usefulness and comprehensibility of the financial statements themselves
- Different preferences of individual user groups regarding the information required (politicians tend to prefer budgets, creditors tend to prefer financial statements; internal users tend to prefer accrual accounting, other users tend to prefer cash information)

C/ ACCRUAL ACCOUNTING IN THE PUBLIC SECTOR AND ITS USEFULNESS FOR INTERNAL USERS

Authors: Paulsson (2006)

- Country: Sweden
- Focus: use of accrual accounting by central government
- Type of study: empirical study based on a questionnaire survey and interviews
- Sample: 124 respondents – heads of finance departments of the largest organisations + 60 senior advisers to government agencies
- Period studied: 2003
- Main results:
  - Accrual accounting is used to a relatively large extent, but not systematically, rather as a general source of information in various situations
  - Rather than information from financial statements, information on unit costs is used
  - Its use depends on the organisational and financial context: larger organisations use it more often, as do organisations that are primarily financed by taxes or fees rather than subsidies
  - Accrual information is more often taken into account by organisations facing financial problems
  - In the budgeting process, the role of accrual accounting is overshadowed, and accrual accounting serves more as a management tool for public sector units than as a comprehensive tool for making decisions on the allocation of financial resources

Authors: Andriani et al. (2010)

- Country: Australia
- Focus: the usefulness of accrual accounting compared to cash accounting for internal decision-making by public sector managers
- Type of study: empirical study based on a questionnaire survey
- Sample: 62 respondents from among directors and managers at the senior and middle levels of individual chapters of the local government of the State of Western Australia
- Period studied: 2003
- Main results:
    - In 15 out of 19 decision-making tasks (e.g., evaluating departmental performance, evaluating programme performance, assessing the effectiveness of public service delivery, accountability, etc.), information provided by accrual accounting is perceived as more useful than cash-based information (the differences are statistically significant, even when individual characteristics of respondents are taken into account)
    - The only area in which the cash basis is perceived as more useful is for determining the amount of cash needed to finance the activities of the relevant department.
    - In the remaining three areas (evaluating the ability to generate cash; determining input data for internal departmental budget preparation; deciding on resource allocation), both approaches are considered comparable.

Authors: Cohen et al. (2013)

- Country: Greece
- Focus: the usefulness of accrual accounting compared to cash accounting for internal decision-making by public sector managers
- Type of study: empirical study based on a questionnaire survey
- Sample: 106 respondents – heads of municipal finance departments
- Period studied: 2008
- Main results:
    - The starting point is the model according to Ansari & Euske (1987), according to which accounting can play three roles (technical-rational, socio-political, institutional)

- With both systems coexisting, the data base used primarily by municipalities is based on cash accounting; accrual accounting is used more as a supplementary (secondary) source; larger municipalities use accrual accounting to a greater extent
- Cash accounting primarily fulfils a technical-rational role, while accrual accounting is more oriented towards a socio-political role (i.e. accrual accounting is used as "ammunition in debates" without actually being used to improve decision-making processes).

Authors: de Sousa et al. (2013)

- Country: Brazil
- Focus: the usefulness of accrual accounting compared to cash accounting for internal decision-making by public sector managers and other decision-makers
- Type of study: empirical study based on a questionnaire survey
- Sample: 194 respondents from among internal and external users and preparers of financial statements at three levels of government (federal, state, municipal)
- Main results:
  - The initial assumption that the cash basis is not sufficiently transparent and is unsuitable for accountability → examining the usefulness of accrual accounting in 10 decision-making scenarios
  - In 9 out of 10 scenarios, accrual accounting is considered a better information system for decision-making; the only area where the cash basis is more useful is for determining the amount of cash needed to finance activities – the same conclusion as Andriani et al. (2010)
  - The greater usefulness of accrual accounting is common to all three groups of respondents & there are no statistically significant differences in the perceived usefulness of individual areas, with the exception of two areas (determining the cost of public services and evaluating the effectiveness of public service provision), where preparers of accounting information perceive the usefulness of accrual accounting more strongly than internal and external users of information

D/ ACCRUAL ACCOUNTING AND ACCRUAL BUDGETS

Authors: Marti (2006)

- Countries: United Kingdom, Sweden, New Zealand

- Focus: problem areas of accrual accounting reporting for the purposes of preparing accrual budgets
- Type of study: qualitative study based on analysis of regulatory provisions, data from financial statements and budgets, and interviews with representatives of public sector entities
- Period studied: 2003–2004
- Main findings:
    - The need for ongoing adjustments to accounting rules in order to achieve the necessary quality of budgets
    - Gradual inclusion of specific assets (infrastructure, military, collections)
    - The accrual approach is more conservative and tends to result in larger deficits
    - Different functions of cash and accrual budgets (legality vs. usefulness for decision-making) & the accrual basis also works with CF → these are complements

Authors: van Helden & Reichard (2018)

- Countries: Belgium, Portugal, Great Britain, Austria
- Focus: identification of motivations for (non-)implementation of accrual budgeting in countries that use accrual accounting
- Type of study: comparative study
- Main results:
    - Internal users play a key role in deciding whether to switch to accrual budgets – the budget is perceived as much more important than accounting → budgetary reforms are more difficult to implement than accounting reforms
    - The final outcome of the accounting and budgeting system is influenced by:
        - the main reasons for maintaining cash budgeting/switching to accrual budgeting
        - the extent of the pre-implementation debate on the advantages and disadvantages of both systems
        - the main users who participated in the decision-making process, their positions and ability to assert their views

        - contextual circumstances (political, historical, institutional, etc.) that influence the decision
        - implementation incentives and constraints
    - Arguments for cash budgeting:
        - the budget should provide information on how money is spent
        - greater clarity for key user groups
    - Arguments for accrual budgeting:
        - Consistency of reporting and budgeting
        - greater scope of potentially available information

Authors: Reichard & van Helden (2016)

- Country: global
- Focus: identification of limitations on the use of accrual accounting for budgeting
- Type of study: normative study based on a review of the literature
- Main results:
    - The number of countries applying accrual accounting for financial reporting and, in some cases, for budgeting is growing over time, with the trend being more pronounced in developed countries (e.g. OECD).
    - Arguments for cash budgeting:
        - cash is primary
        - consistency with fiscal policy (but only traditional; new approaches seek to point out that fiscal measures do not only have monetary consequences in the current period, but can also affect cash flows in subsequent periods → accrual approach more suitable for budget outlooks)[15]
        - Comprehensibility of the complex budgeting process: the accrual approach limits the influence of elected representatives at the expense of "technically proficient" officials, thereby weakening public control (this can be addressed through technical support and training of elected representatives) & the

[15] See also Moretti & Youngberry (2018).

question of how to capture future financing requirements or expected future revenues remains unresolved

- Cash budgets are less susceptible to manipulation.

- Arguments for accrual budgeting:
  - Consistency of reporting and budgeting (provided that the budget follows the logic of the accrual income statement)
  - comparability with macroeconomic statistics (within the EU or IMF)
  - presentation of information on the full costs of government activities
  - Accrual budgets are less susceptible to manipulation[16]

E/ PUBLIC SECTOR ACCRUAL ACCOUNTING AND EARNINGS MANAGEMENT

Authors: Vinnari & Näsi (2008)

- Country: Finland
- Focus: assessment of the success of introducing accrual accounting in combination with the establishment of business entities by municipalities
- Type of study: case study on water supply (financial statements, budgets, official documents)
- Period studied: 1994–2007
- Main results:
  - The transition to accrual accounting does not necessarily mean an improvement in the quality of accounting outputs, as both systems can be manipulated to achieve the desired effect
  - Reducing the EM rate is conditional on improving the quality of accounting regulations
  - The establishment of special enterprises to provide public services (e.g. water supply) is often motivated by an effort to hide the true level of taxation from citizens, and inappropriate accounting rules (combined with the existence of regulation in these sectors) can further obscure the true situation

[16] There is no consensus on this argument – some studies indicate that cash budgets are more reliable, while others favour accrual budgets. The ambiguity is confirmed by another study by these authors (van Helden & Reichard, 2018).

Authors: (Capalbo et al., 2014)

- Country: Italy
- Focus: earnings management (EM) of state-owned enterprises applying accrual accounting
- Type of study: empirical study based on data from financial statements
- Sample: 3,892 privately owned companies and 1,457 publicly owned companies (at least 30% share in registered capital)
- Period studied: 2009–2012
- Main results:
    - The extent of EM (measured via discretionary accruals) is lower in public companies than in private companies
    - The extent of EM decreases with increasing company size and increases with increasing profitability
    - Standard financial statements analysis techniques can be applied to publicly controlled enterprises (corresponds to the arguments of proponents of accrual accounting in the public sector)

Authors: Cohen et al. (2019)

- Country: Italy & Greece
- Focus: earnings management (EM) of municipalities applying accrual accounting
- Type of study: empirical study based on balance sheet and income statement data
- Sample: 4,300 observations (Greece) & 1,130 observations (Italy)
- Period studied: 2002–2015 (Greece) & 2008–2015 (Italy)
- Main results:
    - In line with public choice theory, it is assumed that municipalities should also be viewed as sectors with "sellers" on one side and "buyers" on the other
    - Public sector politicians/managers are assumed to promote private interests at the expense of public interests if given the opportunity to do so, including EM in financial statements
    - Empirical data confirm the use of EM techniques in municipal financial statements, with the extent of EM being influenced by political factors: in the case of Greece, a

statistically significant correlation between EM and elections has been identified (the rate is higher in election years than in other years).

- EM is greater in municipalities with a larger number of city council members (the number of council members depends on the size of the municipality).
- EM primarily aims to report results close to the "tipping point", i.e. not too bad, but not too good either, because any deviation from the "norm" may be subject to criticism (inefficient management vs. unnecessarily high taxes, etc.).

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LIST OF ABBREVIATIONS

CIPFA: Chartered Institute of Public Finance and Accountancy

EM: Earnings Management

GPFR: General-purpose financial reporting

IASB: International Accounting Standards Board

IFRS: International Financial Reporting Standards

IMF: International Monetary Fund

IFAC: International Federation of Accountants

MoF: Ministry of Finance of the Czech Republic

NPM: New Public Management

OECD: Organisation for Economic Co-operation and Development

PS: Public Sector

Annex 2: Access statistics

OVERVIEW OF ACCESS TO INFORMATION SYSTEMS CONTAINING ACCOUNTING AND BUDGETARY INFORMATION

Access to the Monitor information portal (administered by the MoF):

Period	Number of user logins
2015	81,381
2016	80,517
2017	91,197
2018	115,665
2019	130,847
2020	76,687
2021	79,765
2022	16,958
2023	22,000*
2024	51,584**
until 31 May 2025	13,715

Source: prepared by a team of authors from the Supreme Audit Office and the Prague University of Economics and Business based on information from the MoF.

* Data is unavailable until May 2023, when the transition to the new version of Google Analytics (GA4) took place

** Data for the period September–November 2024 may be inaccurate due to the simultaneous operation of two domains. (At the end of August 2024, Monitor was migrated to the new gov domain.)

Access to data on the so-called public sector satellite account[1] (administered by the CSO):

Period	Number of user logins
2015	2,346
2016	2,520
2017	896
2018	895
2019	950
2020	851
2021	1,217
2022	939
2023	842
2024	495
until 31 May 2025	484

Source: prepared by a team of authors from the Supreme Audit Office and the Prague University of Economics and Business based on information from the CSO.

1 The public sector satellite account includes all units controlled (managed) by government institutions. In addition to entities classified in the central government sector, whose data are used to calculate the Maastricht convergence criteria, the public sector includes non-financial corporations controlled by government institutions that operate on a market basis, and public financial institutions, including the central bank. It thus provides a comprehensive view of the public sector economy, for which consolidated debt and the fiscal balance are calculated.

Access to government sector data in the ARAD system[2] (administered by the CNB):

Period	Number of operations involving sets*	Number of operations involving indicators**
June 2023–May 2024	30,598	765,367
June 2024–May 2025	36,438	975,056

Source: prepared by a team of authors from the Supreme Audit Office and the Prague University of Economics and Business based on information from the CNB.

* Operation refers to exporting a set to an XLS file, viewing a set, or exporting it via a user service call (ARADS-REST-API). These sets include: revenues and expenditures of government institutions, transactions with the EU budget and the European Development Fund, consumption of government institutions and other non-financial categories, financing of the deficit of government institutions (consolidated version), debt of government institutions and its structure, debt of government institutions – consolidation elements, collection of national tax revenues, and selected state budget indicators.

** Operation refers to exporting a set to an XLS file, viewing a set or a selection, exporting via a user service call (ARADS-REST-API), or viewing the shopping cart. These include indicators contained in the sets listed in the previous column, which are displayed separately and independently of the sets, as well as quarterly financial accounts, the balance of payments, and investment positions, or foreign debt derived from these statistics.

2 ARAD is a public database which forms part of the CNB's information service. The system presents aggregated data for individual statistics and financial market sectors in a standardised format across time series.

Annex 3: Use of accounting and budgetary information in the public sector

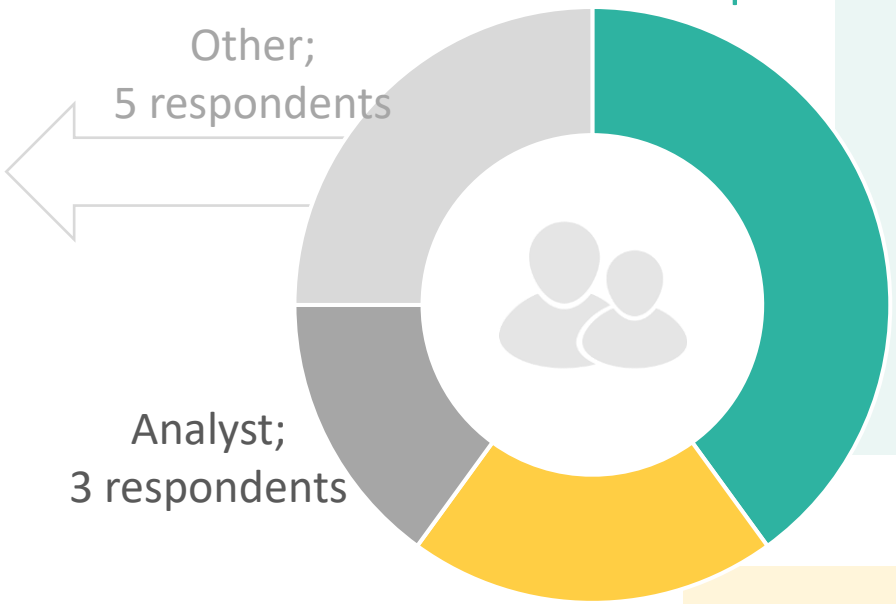
Czech Republic
Supreme Audit Office

SURVEY REPORT

USE OF ACCOUNTING AND BUDGETARY INFORMATION IN THE PUBLIC SECTOR

2 rounds of survey 2023 and 2024

Respondent demographics



Committees :

- Committee on Budget (2×),
- Steering Committee (2×),
- Committee on Environment (2×),
- Committee on Agriculture (2×),
- Committee on National Economy, Agriculture and Transport (2×),
- Committee on Economic Affairs,
- Committee on Social Policy,
- Committee on Science, Education, Youth and Sport,
- Committee on Public Administration and Regional Development.

Committees:

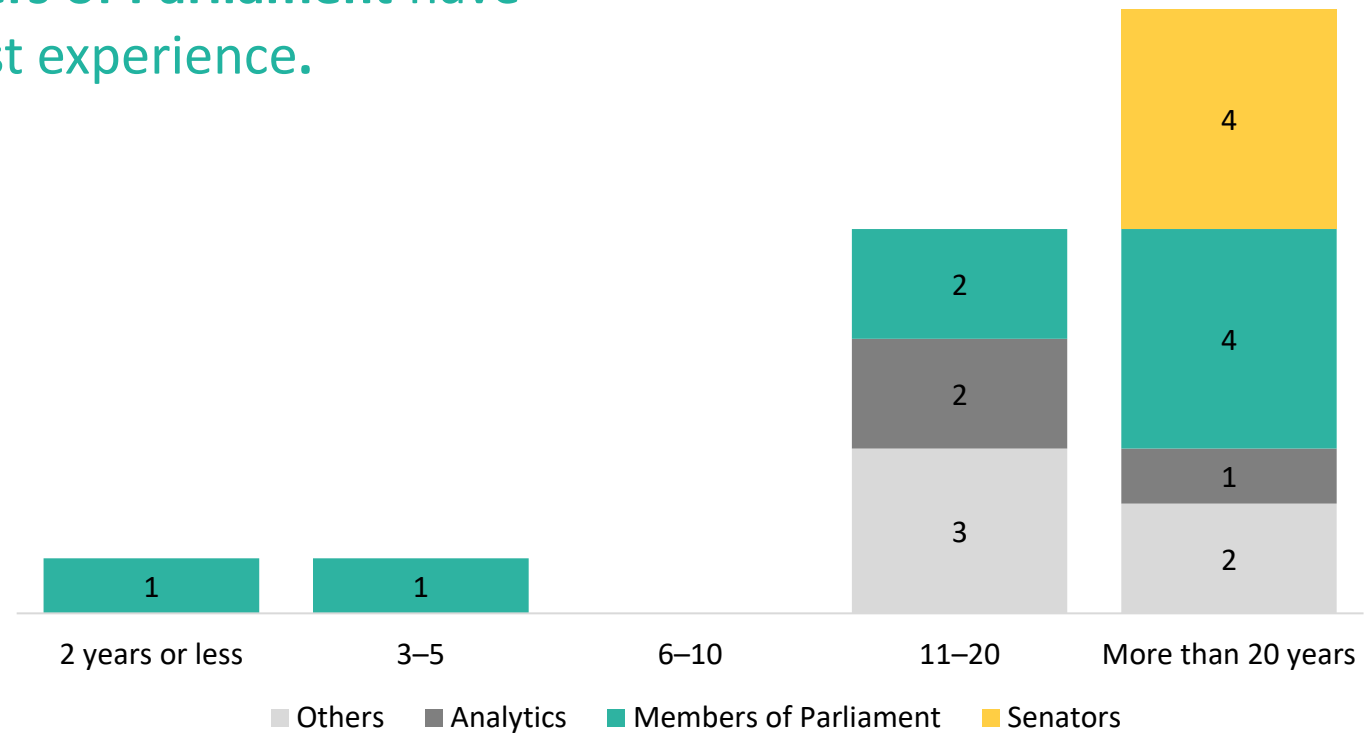
- Committee on National Economy, Agriculture and Transport,
- Committee on Education, Science, Culture, Human Rights and Petitions,
- Committee on Foreign Affairs, Defence and Security
- Committee on Health.

N=20

Length of work experience

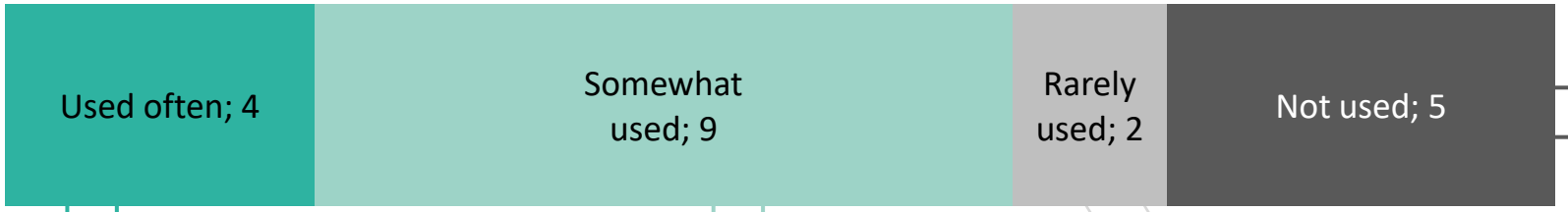
All four **senators** among the respondents have more than 20 years of experience

Among respondents, **Members of Parliament** have the least experience.



N=20

Use of budgetary information of central government organisations and the Czech Republic



- budget items,
- analysis of the government's financial performance,
- forecasts of public finance trends.

- taxes,
- subsidies (4×),
- mandatory and capital expenditures,
- wages,
- legislative proceedings,
- subsidies, macroeconomic data concerning the state budget, trends over time,
- information acquisition.

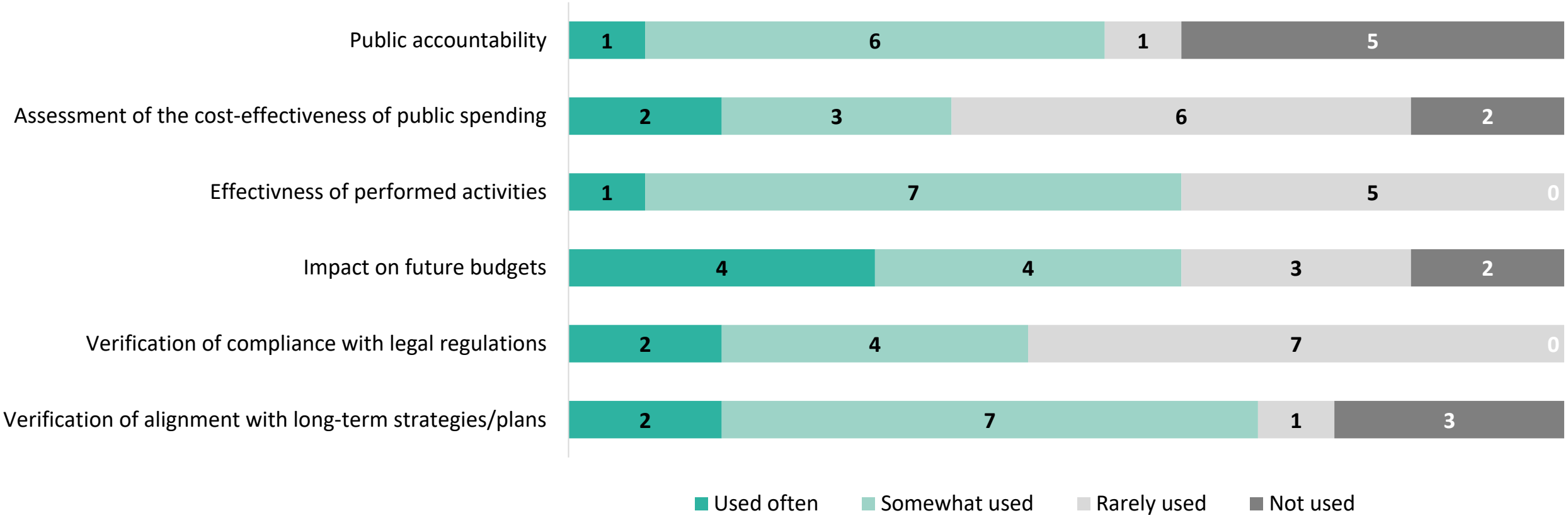
- analyses for public administration,
- when creating presentations

Reasons for not using the information

- They do not know how or where to get the information they need (2×)
- They do not need the information for their work (2×)
- They use other sources of information for their work

N=20

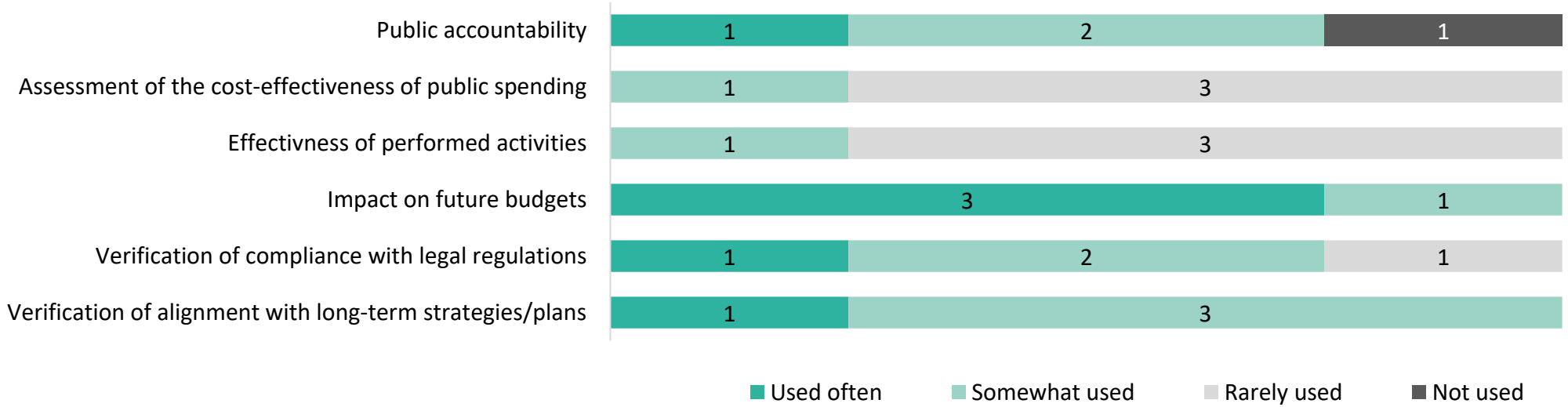
Use of budgetary information of central government organisations and the Czech Republic



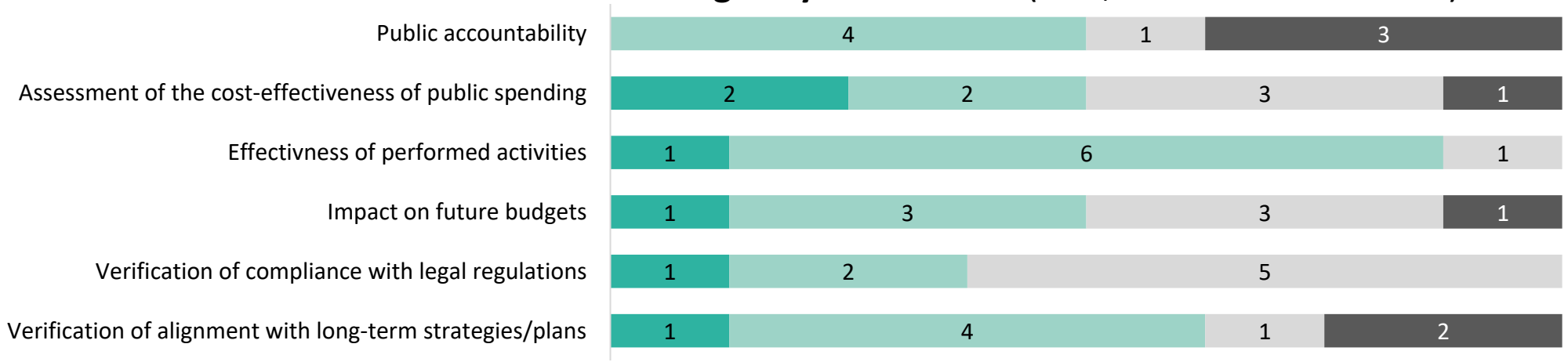
N=13

Use of budgetary information of central government organisations and the Czech Republic

Those who use the budgetary information often (N=4):



Those who somewhat use the budgetary information (N=8; 1 without an answer):



N=12

Use of budgetary information of central government organisations and the Czech Republic

3 **Three** respondents lack **some information**

What kind:

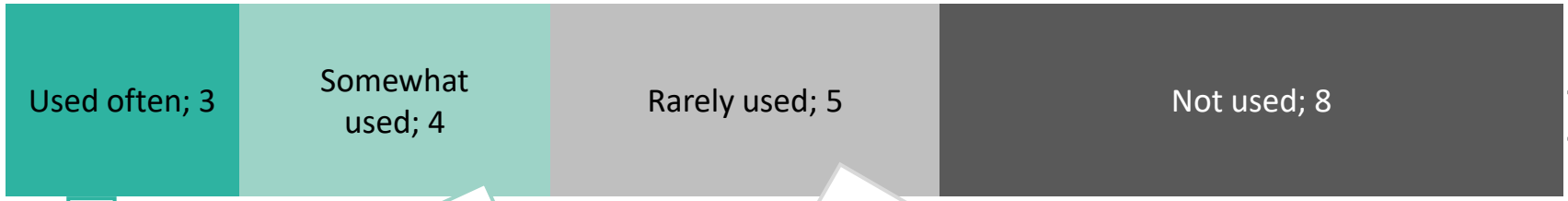
- *"Long-term consistent time series (the methodology of recognition is changing)."*
- *"Performance budgeting – value for money – is missing."*
- *"Assets by individual organisations and their appraisal, budget revenues (both state and municipal) broken down by type of tax and fee."*

Ten respondents **do not lack any information**

10

N=13 (new answer highlighted)

Use of budgetary information of central government organisations and the Czech Republic



- complete financial statements
- public procurement analyses from the SP Monitor, data from individual Authorities for zindex.cz, AAOs for “kontrola.datlab.eu”
- proposals for procurement, service offerings, product offerings

- revenue and expenses, wages
- Standing Senate Commission on Supervision of Public Funds
- subsidies

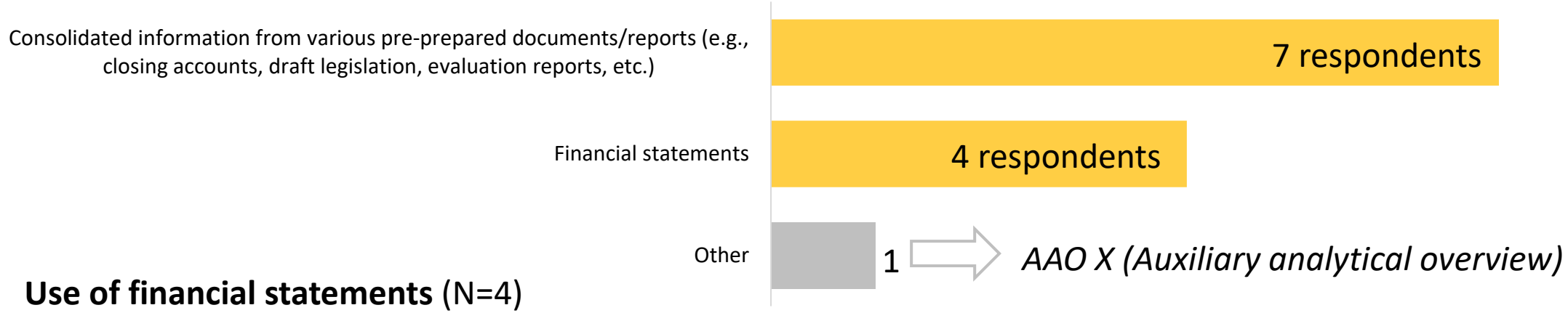
- budget, revenue, expenses
- assets, liabilities
- taxes, subsidies, wages
- accounting information (financial statements, appendix to financial statements, etc.) in the case of a request for services by our auditing firm

Reasons for not using the information:

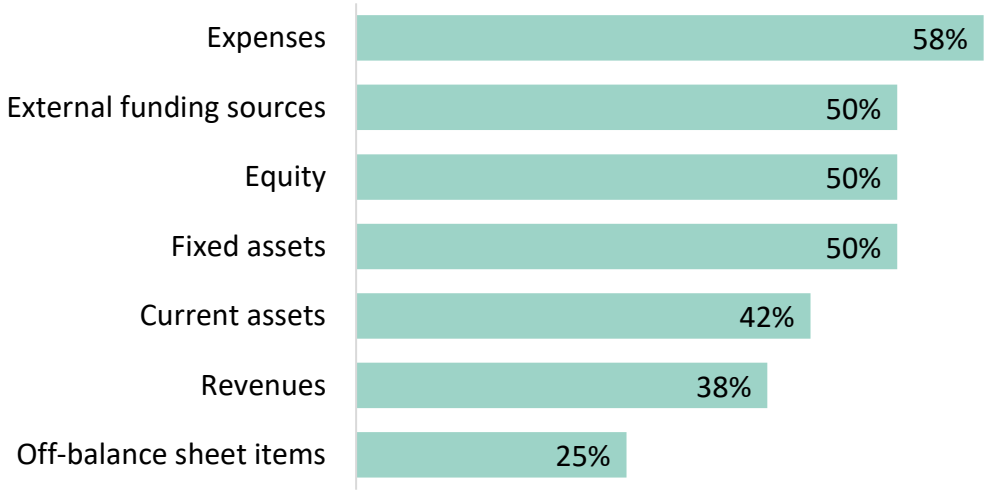
- *"I do not need this kind of information for my work."* (5×)
- *"I had no idea where or how to get the needed information."* (3×)
- *"I do not consider myself sufficiently knowledgeable to work with this type of information."* (2×)
- *"I use other sources of information for my work."*

N=20

Sources of accounting information



Use of financial statements (N=4)



One of the respondents (an analyst) is missing the following:

"Linkage between AAO and public procurement (the obligation exists but is not being followed), or, similarly, the linkage of payments to the Registry of Contracts and the record of subsidies."

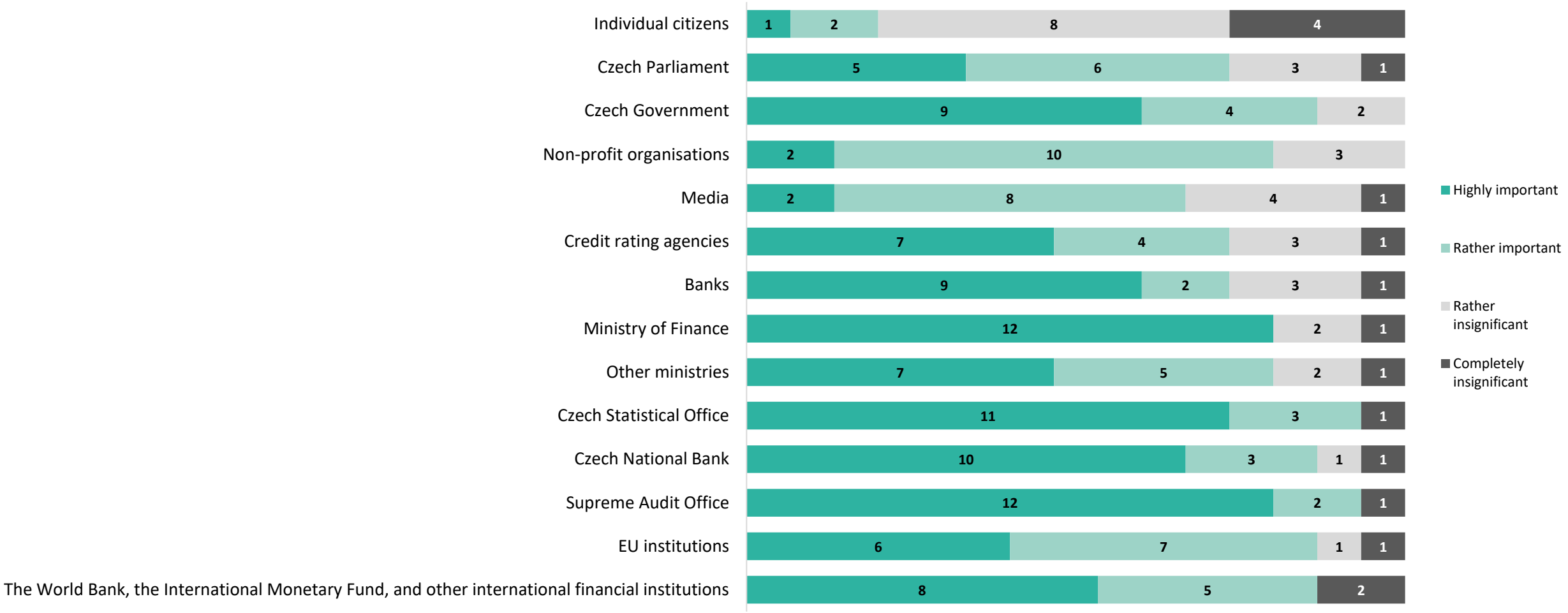
N=9; multiple-choice

Use of the financial statements:



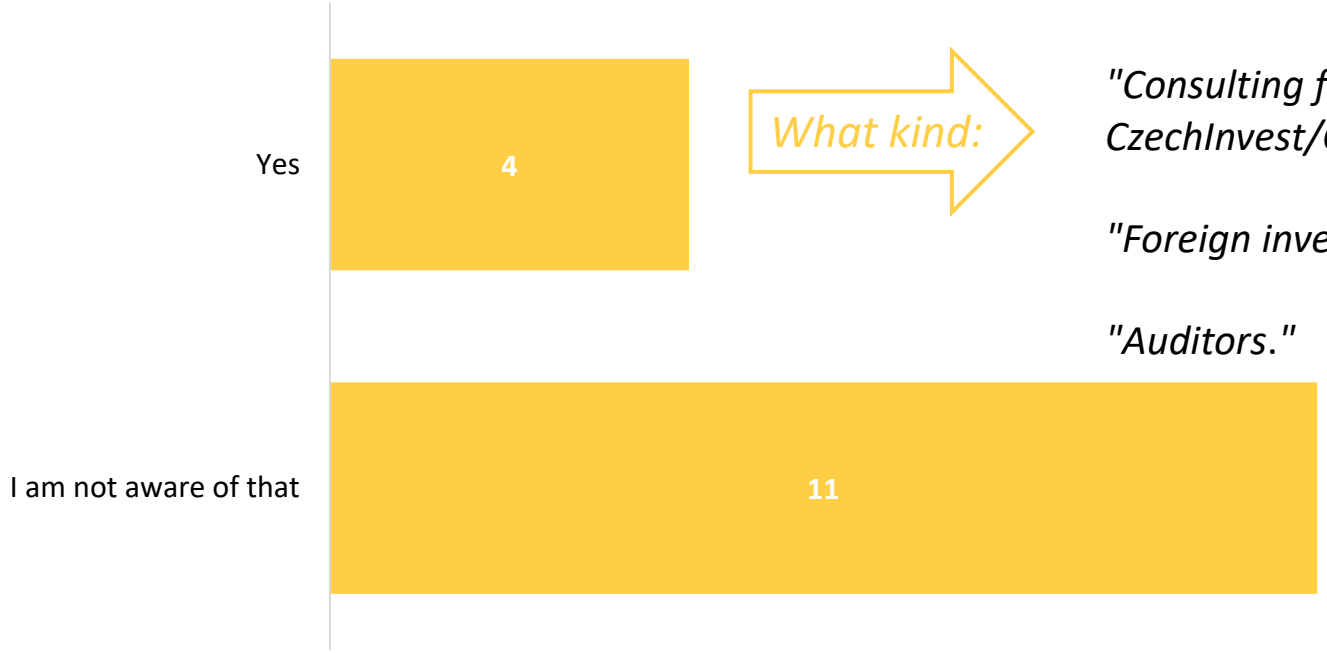
N=6

How respondents perceive the importance of accounting information for the following groups:



N=15

Are there any other groups that use the financial statements or other accounting information?



What kind:

"State Administration."

"Consulting firms (in terms of various analyses for clients), CzechInvest/CzechTrade, foreign investors."

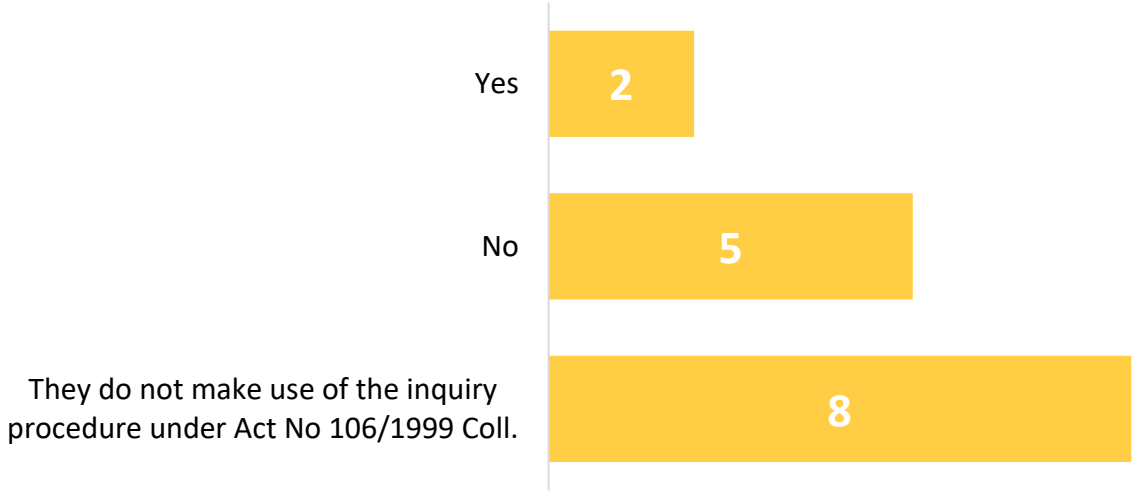
"Foreign investors, research institutions."

"Auditors."

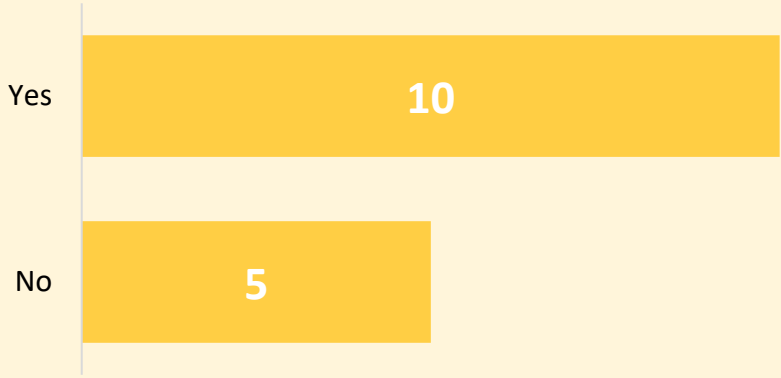
N=15

Additional information

1. Did they receive information derived from accounting pursuant to Act No 106/1999?



2. Would they welcome the opportunity to learn more about the informational value of accrual accounting information?



1. When you filed a request under Act No 106/1999 Coll., on Free Access to Information, did you receive information that, in your opinion, originated from accounting?

2. Would you be interested in learning more about the informational value of accrual accounting data and how it relates to budget data (e.g., through training, workshop, etc.)?

N=15

Annex 4: Overview of the types of misstatements found in SAO audits by financial report items

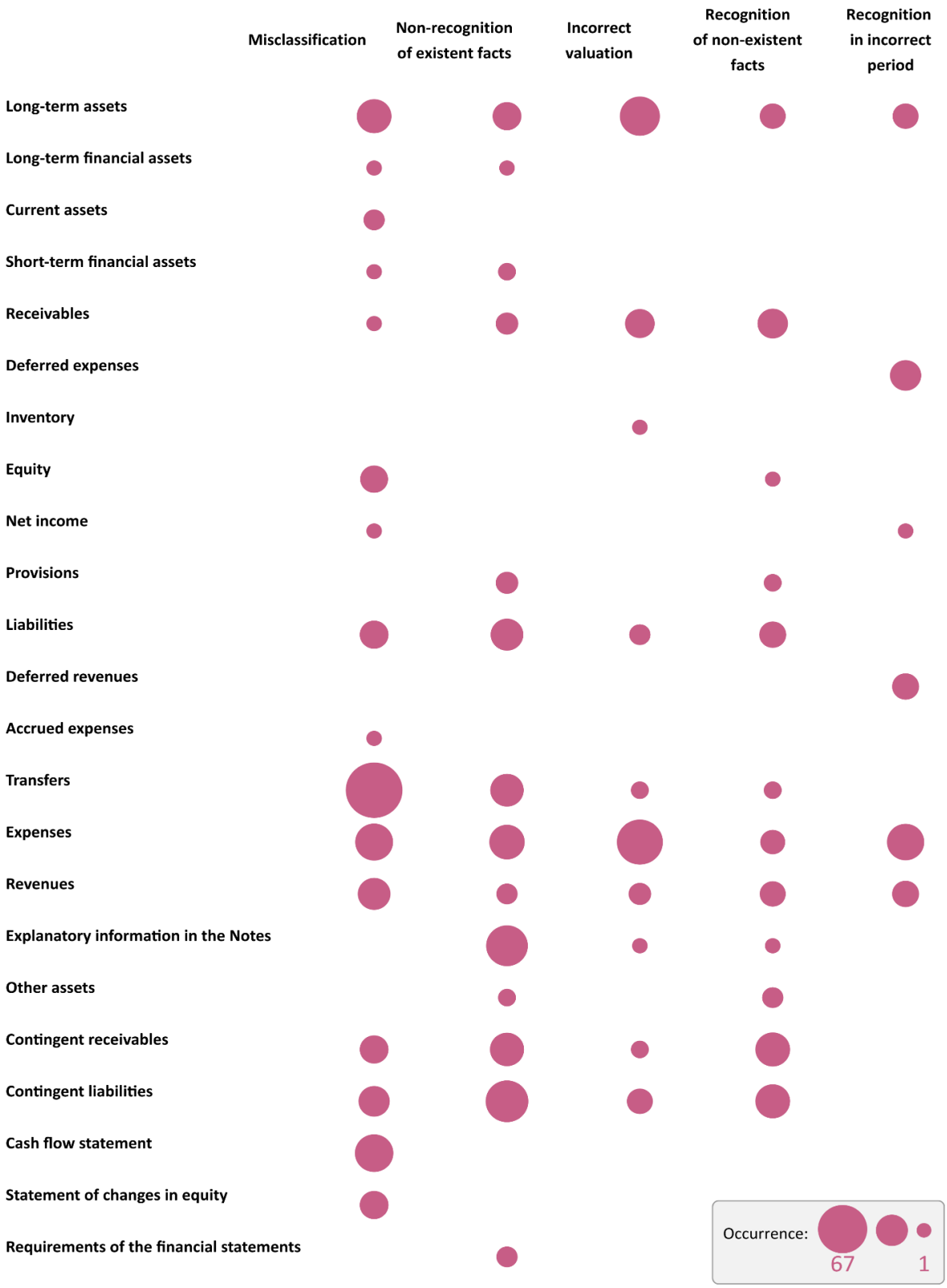
AN OVERVIEW OF THE TYPES OF MISSTATEMENTS IDENTIFIED DURING SAO AUDITS

BY ITEM IN THE FINANCIAL STATEMENTS

Since the implementation of the accounting reform, 59 financial audits have been conducted, during which a total of 646 violations of accounting regulations was identified, all of which affected the recognised data. Since 2010, interim financial audits have been gradually incorporated into the audit process, thus making it possible to correct identified misstatements right during the audit itself. This approach has helped to reduce the number of misstatements in final financial statements. And since 2022, only interim financial audits have been conducted.

The following chart clearly illustrates the frequency of identified misstatements and their distribution across individual items of the financial statements that make up the (annual) financial statements of selected accounting entities.

For those who want to view the results in greater detail, an Interactive Annex is available at: https://nku.gov.cz/scripts/detail.php?id=15754 or via scanning the QR code.

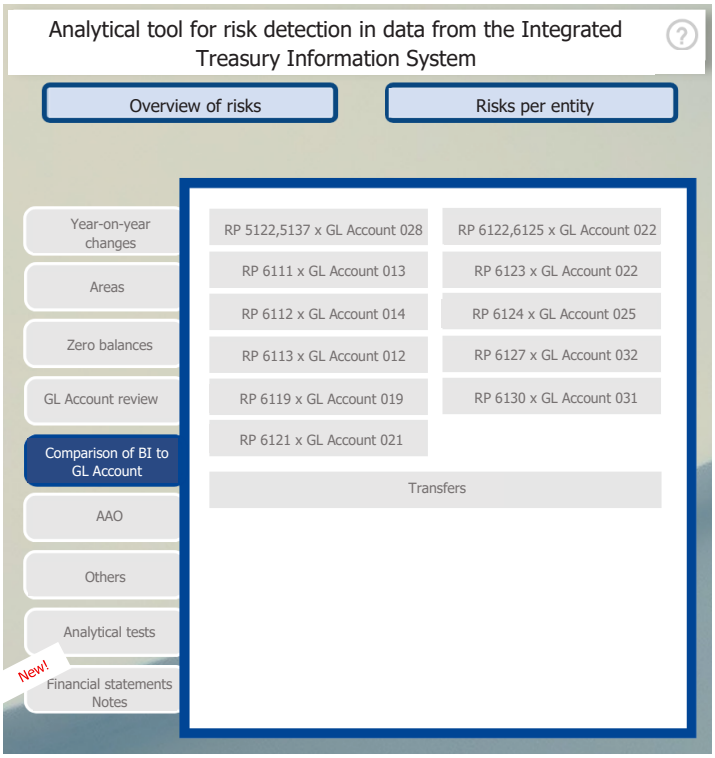

Misclassification
Non-recognition of existent facts
Incorrect valuation
Recognition of non-existent facts
Recognition in incorrect period
Long-term assets
Long-term financial assets
Current assets
Short-term financial assets
Receivables
Deferred expenses
Inventory
Equity
Net income
Provisions
Liabilities
Deferred revenues
Accrued expenses
Transfers
Expenses
Revenues
Explanatory information in the Notes
Other assets
Contingent receivables
Contingent liabilities
Cash flow statement
Statement of changes in equity
Requirements of the financial statements
Occurrence:
67
1

Annex 5: Analytical tool of the SAO

AN ANALYTICAL TOOL FOR RISK DETECTION DEVELOPED BY THE SAO

Introduction

In 2013, the Department of Financial Audits of the Supreme Audit Office (SAO) developed an in-house analytical tool designed to effectively aid risk identification and help with horizontal and vertical analyses performed in financial audits. The tool has gradually evolved from a simple database in the MS Access to a system connected to the data warehouse of the SAO, which is now available throughout the entire office.



List of Abbreviations:
BI – budget item; GL Account – general ledger account; AAO – auxiliary analytical overview

History of development

The original version of this tool consisted of two databases in the MS Access – one database was intended for accounting data, and the other for budgetary data. Both of them were updated twice a year with data from the Integrated Treasury Information System (abbreviated as IISSP in Czech) for approximately 40 entities, primarily administrators of the state budget chapters. Automated risk detection tests allowed for the detection of incorrect accounting entries, errors in financial statements, or the incorrect classification of expenditures under budget items.

The tool has proven effective in preparation of audits, especially during the risk identification phase, and its use has gradually expanded to the planning phase as well. Though the tool was user-friendly, its wider adoption across the SAO was limited by infrequent data updates, a limited scope of data in relation to the types of entities, and the need for manual data import.

Transformation and the current state

To address these limitations, we partnered with data analysts at the SAO, which resulted in the migration of the tool to the modern Power BI platform (PBI) and its integration with the SAO's data warehouse. The new tool enables quarterly data updates for all organisational units of the state and, in the case of horizontal and vertical analyses, also for state contributory organisations, thereby significantly expanding its potential applications.

As of now, the tool is available to all SAO employees, and its outputs are broadly used across the SAO's Audit Section – from preparation of proposals for the audit plan and implementation during the audit itself to processing of annotated analyses by the administrators of budget chapters and other entities. Moreover, this analytical tool has not attracted interest only within the SAO but also among external expert institutions. For example, it serves as a platform for methodological and audit cooperation with the Czech Statistical Office.

Tool features

The analytical tool generates horizontal and vertical analyses used to identify significant items and items with specific risks. It also allows for the generation of various analytical reports, such as:

- Balance sheet and balance sheet continuity,
- verification of the budget classification of capital expenditures using AAO IV,
- verification of the correct recognition of receivables and liabilities using AAO X,
- verification of the budgetary classification of transfer expenditures using AAO XI,
- verification of balances in depreciation and allowance accounts,
- verification of the Reserve Fund, Cultural and Social Needs Fund, payroll expenses, or deposits,
- analytical tests for generating expected depreciations and costs from the acquisition of minor long-term assets.

Examples of identified risks

Since its implementation, the tool has identified a number of risks, which were then confirmed during audits. Among these were, for example:

- classifying expenditures on subsidies to national entities under the budget line for international cooperation,
- classifying expenditures on subsidies to state-owned enterprises and municipal and regional hospitals under incorrect budget items,
- duplicate accounting of calculated depreciation,
- incorrect accounting for allowance for receivables,
- single-entry bookkeeping,
- violation of the Act No 338/1992 Coll., on Real Estate Tax.

Future development

In 2025, the tool continued to be expanded with new risk detection tests. A whole range of additional features is in the planning stage and will be implemented gradually. Among them are, for example, analytical records that verify:

- accounting for non-exchange transfers of assets,
- the completeness of contingent receivables and liabilities arising from closed contracts,
- completeness of the Registry of Contracts.

THE USE OF ACCOUNTING INFORMATION FOR DECISION-MAKING AND MANAGEMENT PURPOSES IN THE CONTEXT OF OUSS

Organisational units of the state /OUSs/ use accounting information to prepare their own financial statements. Accounting information from subordinate OUSs and contributory organisations (COs) is then used to compile whole-of-government financial statements for the relevant chapter of the state budget. Some OUSs use the accounting information for their own decision-making and management in several key areas, primarily working with information on fixed and current assets, equity and external sources. Data on operating expenses and revenues, as well as on certain contingent receivables and liabilities, are also important.

Some OUSs have stated that they use accounting information in their own decision-making and management only marginally as a supplementary data source and some have stated that they do not use the information at all. Nevertheless, many of these organisations were able to provide specific practical examples in which accounting information played a role. This thus suggests that even though the use of accounting data may not be a priority in some OUSs, there are still situations where this information proves to be useful and relevant to their activities. The attached table therefore not only illustrates current practice but also reveals the potential of accounting information which could be further developed.

Table 1: Use of OUSs accounting information by areas

Areas	Tracked items	Purpose	Audit
Fixed assets	Depreciation of assets	• for the purpose of planning future capital expenditures (to make decisions regarding the acquisition and replacement of assets), or the disposal of unnecessary assets • for the possible development of a repair and replacement plan	19/29 – CSSA 20/25 – MoJ; 20/33 – GACR; 22/19 – SÚJB; 21/25 – CZDA; 23/20 – MoRD
	Non-exchange transfer of assets	• in the area of budget preparation and assessment of budget implementation	22/18 – MoE
Current assets	Receivables	• monitoring the current status of receivables and their development in a time series	19/29 – CSSA; 22/19 – SÚJB; 20/33 – GACR
		• monitoring the rate of receivables repayment and the success of their collection	20/25 – MoJ 22/19 – SÚJB
		• monitoring the status of receivables and tracking overdue receivables from lease agreements for the purposes of decision-making and management	22/16 – MC Prague
	Inventory	• evaluation of newly acquired goods based on accounting data	20/33 – GACR
		• monitoring inventory turnover and composition to ensure effective inventory management	22/19 – SÚJB
Equity	Reserve Fund (fund balance and funding method)	• to assist the decision-makers in determining what will be funded from the RF and in what amounts	22/19 – SÚJB
	Cultural and Social Needs Fund (abbreviated as FKSP in Czech) – creation and use	• to prepare a quarterly report on fund disbursements • to assist the decision-makers in deciding what will be funded from the FKSP and in what amounts	23/19 – IPO CZ
Liabilities	Liabilities	• monitoring the repayment rate of liabilities in individual departments (record of outstanding liabilities)	20/25 – MoJ; 22/16 – MC Prague
		• monitoring repayment capacity and risks associated with late payments	20/25 – MoJ; 22/16 – MC Prague
		• monitoring potential risks arising from labour-related legal disputes	22/16 – MC Prague
		continuous monitoring of the fulfilment of long-term and short-term liabilities	22/19 – SÚJB

Areas	Tracked items	Purpose	Audit
Expenses	Expenses per building	• use in various supporting applications • also serves as a data source for Central Registry of Administrative Buildings (CRAB)	19/29 – CSSA
	Data on individual cost categories	• as a basis for preparing and evaluating budget performance	20/33 – GACR; 22/16 – MC Prague
	Operating expenses	• to monitor project evaluation costs and increases in rent and energy prices, with these factors typically tracked in terms of budget status and spending on individual budget items	23/18 – TACR
		• to monitor energy costs of buildings that are under the management of OUSs or in use	21/27 – MoI
	Transfer expenses	• when reviewing account balances and deadlines for the disbursement of subsidies, with these factors typically monitored in terms of the budget status and the use of funds for individual budget items	23/18 – TACR
		• to monitor spending and revenue for EU programmes	23/20 – MoRD
Revenues	Revenue from other shared taxes and fees	• to determine the amount to be allocated to state contributory organisation	22/18 – MoE
	Revenue from transfers	• monitoring the disbursement of funds from EU programmes as well as the revenue from such programmes	23/20 – MoRD
		• when evaluating request from subordinate contributory organisations for the provision of contributions	22/17 – MoA
Off-balance sheet	Information on contingent assets and contingent liabilities	• to monitor the disbursement of funds from EU programmes as well as the revenue from such programmes • for ongoing and subsequent monitoring of expenditure based on purchase orders and contracts	23/20 – MoRD
	Contingent liabilities	• to monitor the next four years in transfers	23/18 – TACR

Source: relevant audit reports published by the SAO.

List of Abbreviations: CRAB – Central Registry of Administrative Buildings; CZDA – Czech Development Agency; CSSA – Czech Social Security Administration; FKSP (Czech acronym) – Cultural and Social Needs Fund; GACR (Czech acronym) – Czech Science Foundation; MoRD – Ministry of Regional Development; MC Prague – Municipal Court in Prague; MoJ – Ministry of Justice; MoI – Ministry of the Interior; MoA – Ministry of Agriculture; MoE – Ministry of the Environment; RF – Reserve Fund; SÚJB (Czech acronym) – State Office for Nuclear Safety; TACR – Technology Agency of the Czech Republic; IPO CZ – Industrial Property Office of the Czech Republic.