FINANCIAL INFORMATION USE IN PARLIAMENTARY DEBATES IN A CHANGING CONTEXT

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Abstract

Applying quantitative and qualitative content and sentiment analysis, this study investigates the use of financial information by politicians in the Portuguese parliament, in a changing context.

There is clear preference for Budgetary Information. A change in the political majority in Parliament and an improvement in the country's economic and financial situation affect the intensity and intentions of using financial information by politicians – the use with positive sentiments of those government-related, to legitimize their policies, and with negative sentiments when they pass to the opposition, using it as ammunition or to divert attention from measures implemented when they were in power.

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Introduction

Politicians are often assumed to be the primary users of financial information regarding the public sector, because they are frequently the key decision-makers. However, questions may be risen about what type of information politicians do, in fact, use, for what purposes and with which intentions. Particularly interesting would be to understand whether politicians in the Parliament are *de facto* users of financial information in the debates, as well as to learn about their intentions in that use. This would help to realize whether financial information is helpful for politicians for accountability and decision-making purposes.

Several studies have analyzed how users perceive the accounting practice and financial information in the public sector. However, only a concise number of authors (e.g., van Helden et al., 2016; van Helden, 2016; Jorge et al., 2016b, 2019; Caruana & Farrugia, 2018; van Helden & Reichard, 2019; Giacomini, 2020; van Helden et al., 2021; Jethon & Reichard, 2022) specifically consider the perspectives of the politicians, as a group or compared to public sector managers, regarding the use and usefulness of financial information.

A few scholars (e.g., Guarini, 2016; Liguori & Steccolini, 2018; Jorge et al., 2019; Sedmihradská & Kučera, 2020; Faber & Budding, 2022; Raudla, 2022) uphold the relevance of the use of financial information by politicians in Parliaments, especially for political debates regarding budgets and governments assessment, but they also highlight that the selection and use of such information by politicians depend on different contexts, personal beliefs and preferences (e.g., Reichard & van Helden, 2016; van Helden & Reichard, 2019). Consequently, empirically analyzing the kind of financial information used, the frequency of use and intentions, underlying its use by politicians is a crucial addition to complement previous studies on this matter.

Accordingly, this study aims to analyze which type of financial information is used in parliamentary debates and the intentions for its use, considering a context of change (recovery of the economic and financial situation and a new accounting system, and a politically different legislature). Intentions behind the use of financial information are expected behaviors by the politicians when they resort to such information, according to their affiliation with parties of the government and of the opposition (Saliterer et al., 2019).

In this research, financial information is understood in a broad sense, comprising budgetary information (estimated and executed budget, according to budgetary legislation), financial accounting information (financial reporting according to accounting standards), and National Accounts outputs (government financial statistics – GFS). Also, it includes both cash- and accrual-based information.

The study relies on content analysis and sentiment analysis of the transcriptions of debates on financial matters in the Portuguese Parliament during two legislatures (2011-2019), embracing changes in economic and political conditions.

This research contributes to the existing (but not so abundant) literature on the use of financial information by politicians in several ways. It focuses particularly on the use of financial information by politicians in Parliament at the central

level; most literature regards the use of non-financial performance (management) information and addresses the local government, whose politicians usually are not under the scrutiny of (central) Parliament (van Helden, 2016; Nogueira et al., 2021). It adds in the type of information considered, going beyond the information produced by the accounting system to include budgetary information and that of the National Accounts. It is also innovative in the methodology, resorting to sentiment analysis techniques, combined with content analysis of speeches, which gives more objectivity to the findings, contrary to the prevalent use of (perceptions gathered from) questionnaires and interviews (Nogueira et al., 2021). Finally, using the Portuguese case between 2011 and 2019, this approach looks for an evolutionary analysis, addressing a context of several institutional changes. This is also an important contribution, considering that literature essentially focus the use of financial information by politicians in a particular moment in time or situation, for example, in the approval of the budget or of the budget execution.

Henceforth the paper is organized as follows. The next section explains the context of the financial information used in the Portuguese Parliament. Then, the literature review is summarized, especially addressing the use of financial information by politicians and its intentions; research questions are derived at the end. It follows a section describing the methodological issues, and another one presenting the main findings. The paper finishes discussing the results and synthesizing the main conclusions.

The Context of the Financial Information used in the Portuguese Parliament

Portugal is a unitary state and a Parliamentarian Republic. It became a member of the European Union in 1986 and consequently it must follow requirements in the EU treaties and other regulation. Worth to be mentioned is the Stability and Growth Pact and the Maastricht fiscal discipline criteria underlying the Euro currency, namely public deficit and debt limits as in the National Accounts. Portugal became under these restrictions from 2002. During the Euro joining process, a new Budget Framework Law was passed (Law 91/2001) to accomplish with the fiscal requirements. This law was revised several times, the most important changes happened from 2011 onwards. Firstly, as a consequence of the financial and economic crisis and of an austerity policy required by the Memorandum of Understanding (MoU) between the Portuguese government and the '*Troika*' (the European Commission, the European Central Bank and the International Monetary Fund). Then, in 2013 and 2014 other revisions happened to accomplish with the requirements of EU stricter fiscal targets, namely accommodating the Directive 2011/85/EU, which culminated the so-called 'Six-Pack' of EU legislation regarding fiscal discipline. To implement these revised Budget Framework Law, the lenders observed,[1] among other issues, handicaps in the existent public sector accounting (PSA) system, requiring Portugal to move towards a system based on the International Public Sector Accounting Standards (IPSAS). At

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[1] See Law 64C/2011, section 5.2.4.

the same time, the aforementioned EU Directive (article 3) required member states to put in place PSA systems covering all sub-sectors of the general government and endorsing accrual accounting, to support convergence between governmental accounting and the National Accounts. In 2013 the European Commission published a document (European Commission, 2013) about the suitability of the IPSAS to the member states. Subsequently, Portugal approved in 2015 a new Budget Framework Law (Law 151/2015), keeping the main budgetary principles as before, but endorsing a new PSA system and improving budgetary control and reporting, hence accomplishing with the EU requirements of more transparent and better-quality public sector financial information. Accordingly, the System of Accounting Standards for Public Administrations – SNC-AP (Decree-law 192/2015) was approved too.

During this process of change in the budgetary and accounting frameworks, in political terms the Portuguese Parliament[2] passed two different periods. In 2011-2015 (XII Legislature) there were six political parties and a parliamentary majority of center-right wing; this was a period of economic and financial crisis and austerity policy. In 2015-2019 (XIII Legislature) there were seven political parties, and the Parliament changed to center left-wing majority, as a result of a parliamentary agreement between left-wing parties. In this latter period, Portugal recovered from the economic and financial crisis and started implementing the new Budget Framework Law and the SNC-AP.

Regarding financial information possible to be used in parliamentary debates, Table 1 summarizes the main types, the typology of political actors involved, and the related debates.

Literature Review and Research Questions

Politicians are key managers and ultimate decision-makers in the public sector. Furthermore, they have obligations to discharge accountability towards citizens regarding the financial resources entrusted to them and the provision of public services; politicians in lower levels of government are also accountable to upper levels. As citizens representatives, politicians in the parliament scrutinize and assess governments and public administrations overall. Considering these general purposes, several authors have discussed the use/non-use of financial information by politicians, at different levels of government and, fewer, in parliaments.

The literature has focused some relevant aspects: i) characteristics of financial information that make it suitable for being used (types of information and documents); ii) politicians' perceptions of the relevance of public sector financial information and its actual use (politicians' preferences and behavior); and iii) circumstances and purposes for using by politicians – what information is used and how it is used (van Helden, 2016; van Helden & Reichard, 2019).

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[2] The Portuguese Parliament (*Assembleia da República*) is unicameral including 230 members, elected in plurinominal political cycles, in general elections every four years, usually in October. Currently, ten political parties are represented in the Parliament.

Table 1. Financial Information used in the Parliament

Type of Information	Political Actors	Debates
Budgetary Information (Estimated State Budget; Executed Budget – State General Account) CASH-BASED	• Central Government – preparers • Parliament – users (they discuss and approve the Budget and the State General Account according to Constitutional and other legal obligations)	• State Budget • Public Accounts processes (State General Account and Stability and Growth Program) • Document of Budgetary Strategy • Program of Economic and Financial Assistance (*Troika*) • Other financial matters (retained budget appropriations, overall financial-economic situation, public debt management, and privatizations)
Financial Accounting Information (financial reporting) ACCRUAL-BASED	• Parliament – users (the discussion and approval of financial accounting information is not required by law; there are not Whole of Government Accounts yet; they may use it in specific situations on a need to discuss)	
National Accounts (GFS) ACCRUAL-BASED	• Government – information provider to the National Institute of Statistics, which is the preparer, reporting to the Eurostat • Parliament – users (they use and discuss this type of information while approving the Budget and the Account, or they use it on a need to discuss)	

Regarding the characteristics of financial information, the study by Buylen and Christiaens (2015) mainly shows that (accrual-based) financial accounting information is not frequently used by politicians in their debates concerning budget approvals due to its complexity. (Cash-based) budgetary information is considered more appropriate for evaluating governments because politicians, in general, find it easier to understand. Further studies have also highlighted politicians' difficulties in understanding financial information and consequently in using it, leading to the preference for using non-financial information (e.g., Liguori et al., 2012; Poljašević et al., 2021).

Other studies argue that the lower use of financial accounting information by politicians does not necessarily arise from a lack of understanding but depends on the information available and the format in which it is presented – reports that are too long and have too many figures can intimidate even financial experts (Caruana & Farrugia, 2018; Jorge et al., 2016a, 2019; Sedmihradská & Kučera, 2020).

Politicians have political agendas, and so, training them in financial matters is not a solution to increase their use of financial reports. Cash-based *versus* accrual-based information is not an issue either; politicians' claims for financial information in a more integrated format is more likely what would increase its use (Caruana & Farrugia, 2018; Jorge et al., 2016a, 2016b).

Often, politicians use accrual-based information as that coming from the National Accounts. They need to evaluate and decide about the Government's finance indicators, especially those relevant to government assessment by Members of Parliament (Jorge et al., 2016a, 2016b). Particularly the use of this type of information is affected by external actors (e.g., EU and IMF) towards whom a country may have to report. This 'logic of discipline' (Roberts, 2010) implies use of information in parliaments to debate the acquiescence of the requirements by, and agreements with, those institutions. The discussion by politicians is subordinated to technical issues related to international commitments, which determine the financial information they may use.

Regarding the types of information used by politicians, the literature has not addressed sufficiently the context of national parliaments, where countries' financial matters are approached in a broader way, and the budget, budgetary process and the accomplishment with international targets, assume a key role (Cangiano et al., 2013; von Hagen & Harden 1995). Subsequently this study puts RQ1 as:

What specific types of financial information do politicians use in debates on financial matters in the Parliament?

About politicians' perceptions and behavior, Sinervo and Haapala (2019) and Jorge et al. (2019) underline that financial information used by politicians not only depends on their expertise, but also on their willingness to be duly informed and advised; the authors refer to other individual characteristics too, such as their political experience.

Additionally, politicians' needs and use of financial information varies according to their role inside the parliament and in the budget process (Jorge et al., 2019; Roudla, 2022; Saliterer et al., 2019). For example, it is likely that members of committees dealing with budget and financial issues use financial information differently and more intensively than those in other non-financial committees. Also, while

parliamentarians are more oversight oriented, governing politicians are responsible for preparing the budget, needing and using financial information differently (Posner & Park, 2007). Faber and Budding (2022), in a study including members of the Dutch Parliament and of the Central Government, conclude that the use of financial accounting information is higher by the members of Government than by the members of Parliament. Also, they observe no difference between the use of financial accounting information by members of parliament belonging to Government parties or to the opposition, Finally, their study evidences that new political parties in Parliament, as the younger ones, tend to use more financial accounting information, as well as those members that assume a financial role in the party.

Lastly, it seems that the intensity of financial information used by politicians also depends on the gap between information supply (information characteristics) and demand (politicians' needs), meaning that politicians tend to make selective use of financial information (Buylen & Christiaens, 2015; Grossi & Reichard, 2016; Ouda & Klischewski, 2019; van Helden et al., 2021; Faber & Budding, 2022), sometimes using it only symbolically (Giacomini et al., 2016; Liguori & Steccolini, 2018), and not as a function of its actual usefulness.

As to the circumstances and purposes for using financial information, while some authors sustain they may be affected by the political decision-making process (Guarini, 2016; Giacomini et al., 2016; van Helden et al., 2021), others argue that politicians hardly use financial information for decision-making. It is used essentially for accountability in parliaments (Caruana & Farrugia, 2018), namely for debates within the budget process and for the government's assessment (Buylen & Christiaens, 2015; Giacomini, 2020; Raudla, 2022).

Van Helden (2016) points out that politicians' actual use of financial accounting information is much lower than their appreciation or perceived usefulness of those items. Later, van Helden and Reichard (2019) emphasize that the actual use of financial information depends essentially on the intentions of use. The authors explain that, in some circumstances, politicians may be inclined to use financial accounting information to accommodate their political preferences. Considering specific intentions, politicians may show they use financial information to a much higher extent (illusory) than the actual use. In a recent study, van Helden et al. (2021) emphasize the relevance of using financial accounting information concerning controversial projects, exemplifying with two case studies. They conclude that both *ex-ante* and *ex-post* types of financial accounting information use is associated with actors' behaviors (regardless whether they are politicians or not), as ammunition or to justify the projects choice, moving from a negative to a positive standpoint, depending on their financial empowerment on those projects. By analyzing politicians' speeches in municipalities, Sinervo and Haapala (2019) also concluded that local politicians use financial information to legitimize their opinions and decisions concerning the municipality's financial situation.

Guarini (2016) highlights a preference both in the production and in the interpretation of financial accounting information by newly-elected local politicians as ammunition to attack previous governments.

Giacomini et al. (2016) analyze the uses of financial accounting information by local politicians, considering specific contexts, such as: different situations where decisions

occur and the level of political conflict deriving from different politicians' goals (political competition); and at a policy formulation phase, depending on the policy cycle. They conclude that the degree of political competition and conflict influences financial accounting information and the types of uses. If the conflict level is low, financial accounting information is used to support decisions. In contrast, if the conflict level is high, it is used to answer questions in policy formulation and to attack/legitimize economic policies during the decision-making process. Giacomini (2020) also analyses the use of financial accounting information by local politicians in different stages of the policy decision-making process (*ex-ante* and *ex-post*), addressing both the types and the intensity of use. He concludes that financial accounting information, although with similar importance during the policy process, have different roles depending on the moment when it is used: rational and ammunition at the *ex-ante* decision, and a more evaluative and justifying role at the *ex-post* monitoring, in order to convince the council members. Jethon and Reichard (2022) reach similar conclusions concerning the role of budgetary information.

Within the branch of literature addressing the purposes for using financial information by politicians, Saliterer et al. (2019) categorized politicians' intentions while using performance-based budgets information. Their study was based in the Austrian parliament, when discussing a new experience with performance budgets. The analysis considered the perspectives of members of the parliament associated to the government party, and of those in the opposition. Four main categories of intentions were derived from their analysis – politicians may use information to: legitimizing and supporting; improving and understanding; de-legitimizing and ammunition; and deflecting and attention diversion.

Regarding the circumstances and behavior of politicians while using financial information, the above literature, with a few exceptions, focus the local government. Therefore, it is relevant to continue exploring those issues at central level, namely in the parliamentary context. So, RQ2 is:

With what intentions financial information is used in the parliamentary debates, either by politicians in the government or members of parliament (associated with the government or in the opposition)?

A topic interesting to explore concerns the effects of contextual changes in the use of financial information by politicians at central level. Particularly changes in the political composition of the legislature and in the economic and financial situation in the country. Such topic appears to have been ignored in the literature so far, except by Guarini (2016). This author evidences in the local government of Italy that, when there is a political alternation, politicians tend to make more use of financial information, namely when political competition intensifies, by the increasing the number of political parties represented. Consequently, the present study tries to go further in this theme establishing RQ3 as:

Are the types, intensity and intentions for using financial information by politicians affected by a changing context, namely in the composition of the parliament, in the economic and financial situation of the country (overcoming a financial crisis), and in the PSA system?

All in all, the present research aims to analyze what type of financial information is indeed used, and with what intentions, by politicians in the Portuguese Parliament, in the debates on financial matters, in a context of change. It fills a gap in the above literature, as no study so far addressed an evolutionary changing context.

Methodology

This research is descriptive and follows an interpretative nature, based on quantitative and qualitative content analysis (Bardin, 2009) and sentiment analysis (Luo et al., 2013; Kharde & Sonawane, 2016). It resorts to a methodology of text analytics and text mining (Struhl, 2015) to drill over Parliament's records. Specifically, this investigation uses the journals with transcriptions of the debates on financial matters (as in Table 1) that took place in plenary sessions of the Portuguese Parliament from 20th June 2011 to 24th October 2019,[3] reflecting a longitudinal analysis.

"Sentiment analysis can be defined as a process that automates mining of attitudes, opinions, views and emotions from text, speech, tweets and database sources through Natural Language Processing… involves classifying opinions in text into categories like 'positive' or 'negative' or 'neutral'" (Kharde & Sonawane, 2016, p.5). It aims to determine the attitude of a writer/speaker concerning some topic (Luo et al., 2013).

The research started by analyzing the **types of financial information used**, considering whether certain financial concepts and terms are mentioned in politicians' speeches. The use is evaluated by the frequencies.

Accounting concepts and financial information terms were defined from PSA and financial management literature, considering the scope of financial information established for this research. Accordingly, these terms relate to budgetary, financial accounting and National Accounts perspectives.[4] This dictionary of terms was then used to support the directed content analysis (Hsieh & Shannon, 2005) finally performed. The use of terms as data for content analysis in political discourse followed the pattern already used in other studies involving politicians (e.g., Laver et al., 2003; Buylen & Christiaens, 2015).

Like that used by Buylen and Christiaens (2015), the scoring technique counted these keywords over the years under analysis, making it possible to perceive differences in the number of references per term from one legislature to another.

One did not differentiate between the acquaintance of the speaker with financial matters (for example, whether he/she can be considered 'user with expertise', namely being a member of the Budget Permanent Committee; or 'user without expertise'). Also, the type of information used and the intentions of its use in the debates was not cross-referenced to the interventions per individual political parties. However, in the analysis of the intentions of use, it was considered whether the politician was related to the Government and the government political party or the parties in the opposition.

This analysis allowed extracting a list of interventions where politicians use financial information – parts of their speeches mentioning the key financial terms. These citations were the starting point for the following analysis, where **the intentions with which those terms were used** are identified.

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[3] XII Legislature (2011-06-20 to 2015-10-22); XIII Legislature (2015-10-23 to 2019-10-24).

[4] The list of terms as initial keywords for the analysis were translated to English. It may be provided upon request, together with the list of terms related to the intentions of use, by categories. Both lists originally in Portuguese were used in the text mining procedures, with the software *IBM SPSS Modeler Text Analytics.*

This second analysis combined the initial list of keywords with another dictionary of terms related to the intentions of use (sentiments), within categories like those by Saliterer et al. (2019). The type of speaker (Government or opposition) was considered too. Accordingly, four main categories of use were considered: legitimizing and supporting, and improving and understanding (positive sentiments); de-legitimizing and ammunition, and deflecting and attention diversion (negative sentiments). The dictionary of terms within these categories derived from the researchers' interpretation, resulting of the analysis of the citations previously selected.

This second stage excluded from the analysis some parts of the speeches initially selected, where it was not possible to identify neither the type of speaker nor the type of sentiment/intention, according to the dictionaries. Subsequently, text mining was applied to a lower number of politicians' interventions in the debates. After selecting relationships by the software, there was a random check by the researchers for reassurance.

Main Findings

The results of the analysis of the types of financial information are firstly presented in order to map their use in the debates. Table 2 displays the frequency and descriptive statistics of terms used by politicians. Table 3 additionally provides a categorization of these terms, according to the dimensions assumed in the scope of financial information. A total of 5,306 parts of speeches were considered (2,471 from the XII Legislature and 2,835 from the XIII Legislature), extracted from the journals based on the initial dictionary of financial terms.

Subsequently, the results about the intentions of using that information are presented, applying sentiment analysis to the politicians' speeches. A total of 1,989 talks were used (1,025 from the XII Legislature and 964 from the XIII Legislature), fewer than in the first part, considering that in some fractions of speeches initially extracted, one could neither identify the sentiment nor the speaker.

Types of financial information used

Table 2 shows that, in both legislatures, the most used term is *Budget* (and its synonyms), presenting 2,654 records in the XII Legislature (average number 663.5 per legislative session) and 4,168 records in the XIII Legislature (average number 1,042 per legislative session). The second most used term differs between legislatures: in the XII Legislature it is *Indebtedness/Debt*, 1,082 records (average number 270.5 per legislative session), whereas in the XIII Legislature it is *Deficit/Budgetary Deficit*, 510 records (average number 127.5 per legislative session). The term *Expenditure(s)* is also among the most used by politicians – 781 records and average number 195.25 in the XII Legislature, and 475 records and average number 108.75 in the XIII Legislature.

The minimum number of used terms in both legislatures reveals that *Accrual/Accrual Accounting* and *Income Statement* (terms specifically related to financial accounting information) were never mentioned during the debates. *Accounting Information/Financial Information* is referred to only once in the XIII Legislature.

Table 2. Types of Financial Information Used

Keywords	XII Legislature (2011-06-20 to 2015-10-22)					XIII Legislature (2015-10-23 to 2019-10-24)				
	Total	Min	Max	Mean	St. Dev.	Total	Min	Max	Mean	St. Dev.
1. Budget / State General Budget / SGB / State Budget / SB	**2,654**	476	822	**663.5**	126.88	**4,168**	856	1,298	**1,042.00**	190.15
2. Budgetary Accounting/Budgetary Information/Budgetary Execution	104	6	36	26	11.75	94	8	36	23.50	10.62
3. Expenditure(s)	**781**	124	243	**195.25**	45.12	**435**	52	189	**108.75**	52.21
4. Revenue(s)	483	71	161	120.75	33.18	364	62	118	91.00	20.62
5. Cash/Cash Accounting	25	0	18	6.25	7.15	5	0	3	1.25	1.09
6. Budgetary Framework Law/BFL	25	0	17	6.25	6.57	34	0	27	8.50	11.06
7. Public Sector Accounting/Public Accounting	6	0	4	1.5	1.50	5	0	2	1.25	0.83
8. State General Account/SGA	55	1	35	13.75	12.79	44	0	23	11.00	11.02
9. Budgetary Balance	11	0	8	2.75	3.11	13	2	6	3.25	1.64
10. Public Accounts	159	26	50	39.75	8.84	119	23	38	29.75	6.83
11. Accrual/Accrual Accounting	0	0	0	0	0.00	0	0	0	0.00	0.00
12. Accounting Information/Financial Information	0	0	0	0	0.00	1	0	1	0.25	0.43
13. Balance Sheet/Balance Sheet Statement	9	0	6	2.25	2.28	5	1	2	1.25	0.43
14. Income Statement	0	0	0	0	0.00	0	0	0	0.00	0.00
15. Assets	33	3	16	8.25	4.82	64	2	32	16.00	11.75
16. Liabilities	17	1	9	4.25	3.11	1	0	1	0.25	0.43
17. Indebtedness/Debt	**1,082**	156	394	**270.5**	84.46	**502**	72	228	**125.50**	61.16
18. National Accountants/National Accounting	24	2	9	6	2.55	3	0	2	0.75	0.83
19. Deficit/Budgetary Deficit	**791**	118	361	**197.75**	96.56	**510**	72	166	**127.50**	38.92
20. Surplus/Budgetary Surplus	20	1	8	5	2.74	6	0	3	1.50	1.12
21. Public Debt	309	40	123	77.25	31.74	253	33	152	63.25	51.24
Total	**6,588**					**6,626**				

Note: The bold lettering highlights, on the one hand, the keywords never mentioned; and on the other hand, the highest frequencies of the most used keywords

The total number of terms did not change significantly from one legislature to the other, remaining around 6,600 terms. Nevertheless, the findings reveal considerable differences among the several financial information types, ranging from a minimum of 0 (zero) to a maximum of 1,298 occurrences. Additionally, the terms *Budget* (and its synonyms) and *Assets* almost duplicate the references, whereas *Cash/Cash Accounting* and *Liabilities* are reduced considerably. Also, there is a significant reduction in using the terms *Expenditure(s)*, *Indebtedness/Debt*, *Deficit/Budgetary Deficit* and *Public Debt*, to the detriment of the term *Budget*.

It should be noted that, except for *Assets* and *Liabilities*, most terms associated with financial accounting information produced on an accrual basis (financial accounting) were not mentioned. The fact that the Budget is the basis for political negotiations between the Government and the other political parties with parliamentary seats can, to some extent, justify the preferences of use of information by politicians.

The analysis per category (Budgetary Information, Financial Accounting Information and National Accounts) in Table 3 enables the reinforcement of what was observed when using the terms individually. Considering the whole period of analysis, one can see that the majority of the terms found in the politicians' speeches relate to Budgetary Information (about 73%); terms related to Financial Accounting Information, like those regarding the National Accounts, were much less referred to (about 13% and 15%, respectively).

Not surprisingly, politicians refer to budgetary information, as well as to National Accounts terms (e.g., deficit and debt), significantly more than to financial accrual-based accounting information terms (as the financial statements), also because government financial statistics include core financial targets for the country, often at the center of parliamentary debates.

From one legislature to the other, the predominant category did not change. Proportionally, the Budgetary Information category even increased its relative weight, whereas the other two categories decreased (especially the use of the terms classified within the Financial Accounting Information category).

These results may derive from political and economic conditions that changed from the XII to the XIII Legislature. During the former, most of the Parliament was from the center-right political wing, like the Government (majority of the liberal democrat party). That was also the period of austerity policies, associated with, on the one hand, more stringent EU fiscal policies, and, on the other hand, with Portugal's experiencing a period of financial crisis. Therefore, this may explain why fiscal matters, namely debt and deficit, were at the center of the debate, being subjects of extreme importance for politicians in Parliament. The XIII Legislature changed the Government to center-left (socialist party), which, even if without a parliamentary majority, negotiated an agreement with the other parties to the left, creating a majority that allowed political stability. Additionally, Portugal overcame the crisis, initiating an economic recovery; therefore, as expected, the fiscal matters previously debated, though still significant, became less central in the debates, except for the *Budget*.

Meanwhile, the new accounting system SNC-AP – which can also be considered a by-product of the crisis, as it was pushed by the *'Troika'* – was approved at the end of the XII Legislature, and was due to start implementation from January 2017 (see section above, on the context of the financial information used in the Portuguese

Table 3. Use of Financial Information per Category

Keywords	Total	%	Category	XII Legislature (2011-06-20 to 2015-10-22)	XIII Legislature (2015-10-23 to 2019-10-24)	Total
1. Budget/State General Budget/SGB/State Budget/SB	6,822	71.18%	**Budgetary Information**	**65.33%**	**79.70%**	**72.53%**
2. Budgetary Accounting/Budgetary Information/Budgetary Execution	198	2.07%				
3. Expenditure(s)	1,216	12.69%				
4. Revenue(s)	847	8.84%				
5. Cash/Cash Accounting	30	0.31%				
6. Budgetary Framework Law/BFL	59	0.62%				
7. Public Sector Accounting/Public Accounting	11	0.11%				
8. State General Account/SGA	99	1.03%				
9. Budgetary Balance	24	0.25%				
10. Public Accounts	278	2.90%				
Subtotal	**9,584**	**100%**				
11. Accrual/Accrual Accounting	0	0.00%	**Financial Accounting Information**	**17.32%**	**8.65%**	**12.97%**
12. Accounting Information/Financial Information	1	0.06%				
13. Balance Sheet/Balance Sheet Statement	14	0.82%				
14. Income Statement	0	0.00%				
15. Assets	97	5.66%				
16. Liabilities	18	1.05%				
17. Indebtedness/Debt	1,584	92.42%				
Subtotal	**1,714**	**100%**				

Table 3. (continued)

Keywords	Total	%	Category	XII Legislature (2011-06-20 to 2015-10-22)	XIII Legislature (2015-10-23 to 2019-10-24)	Total
			National Accounts	**17.36%**	**11.65%**	**14.50%**
18. National Accountants/National Accounting	27	1.41%				
19. Deficit/Budgetary Deficit	1,301	67.90%				
20. Surplus/Budgetary Surplus	26	1.36%				
21. Public Debt	562	29.33%				
Subtotal	**1,916**	**100%**				
Total	**13,214**					

Parliament). Some effect could be anticipated from this change, as expected to impact the public financial management system overall. However, except for *Assets*, there was no increase of references to the terms of accrual-based financial accounting information, which may also be a consequence of the postponement of the implementation of SNC-AP to 2018 for most public sector entities; only in April 2019 their first complete set of financial reports based on SNC-AP was made available.

Intentions with which politicians use financial information in the debates

Table 4 shows the findings for using financial information derived from the sentiment analysis, separating Government and opposition and identifying a single intention in each intervention.

Despite a similar number of interventions by politicians in both legislatures, the panorama of intentions for which financial information is used changes from one to the other.

In the XII Legislature, there is a prevalence of politicians in Government or those associated with government parties in using financial information to legitimatize and support (positive) and to deflect and divert attention (negative). Politicians in opposition tend to use financial information essentially as ammunition (negative). This legislature was marked by a period of financial crisis and austerity policies (including those imposed by the EU fiscal restrictions) from a conservative government. This may explain the use of financial information by politicians linked to the Government to justify specific policies and divert attention from other matters they did not have interest to discuss in the debates.

In the XIII Legislature, there is a considerable increase in the use of information by politicians in the opposition with all kinds of intentions. On the other hand, politicians linked to the Government considerably reduced the use of this information in the debates. The primary intentions are legitimatizing and supporting, and resorting to financial information to improve explanations and understanding (positive). In the opposition, the use with negative intentions continues to prevail, not only for de-legitimizing and ammunition but also to deflecting and attention diversion. The opposition uses with these latter intentions in at least ¾ of the interventions in the whole legislature. In this legislature, the former Government became opposition, so it should be expected that the use of financial information would reflect the political change (conservative to labor) and the improvement in the country's financial condition after the *'Troika'*. In fact, politicians in the opposition may use financial information with all intentions, namely, to justify and improve understanding of policies implemented before, when they were in power, but also to confront the new Government or to divert attention from possible confrontation regarding not so successful measures previously taken by themselves.

Table 5 displays the findings for using financial information considering the possibility of more than one intention in each intervention.

Even if one admits that more than one intention of use is aimed in each intervention in the debates, the findings do not differ from the more restricted analysis in Table 4.

Complementing the analysis above, Figures 1 to 3 allow a graphical visualization, evidencing the intensity of terms associated with the four intentions of use, and the related speakers.[5]

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[5] The terms in these figures are in Portuguese, given that this is the language in the politicians' speeches, hence extracted by the software.
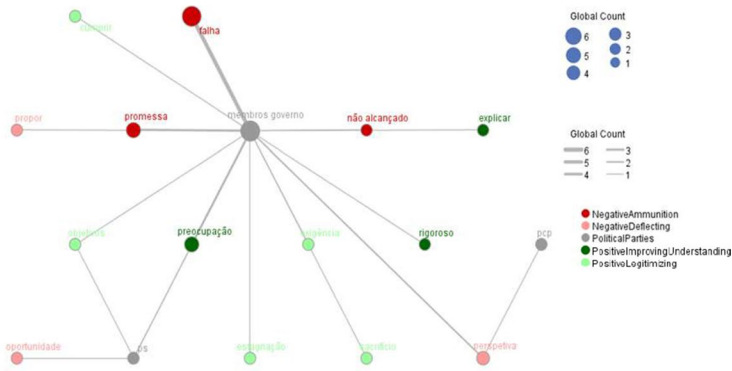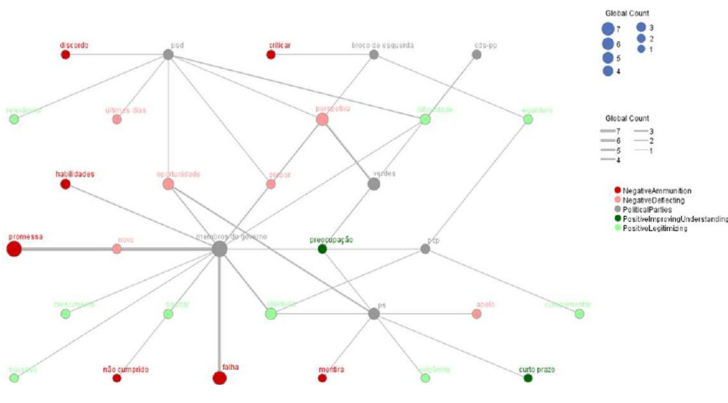
Table 4. Use of Financial Information – single intention

Purposes	XII Legislature (2011-06-20 to 2015-10-22)					XIII Legislature (2015-10-23 to 2019-10-24)				
	Total	Government		Opposition		Total	Government		Opposition	
		n	%	n	%		n	%	n	%
Positive – Legitimizing and Supporting	310	214	69.0%	96	31.0%	187	67	35.8%	120	64.2%
Positive – Improving and Understanding	125	69	55.2%	56	44.8%	158	49	31.0%	109	69.0%
Negative – Deflecting and Attention diversion	53	36	67.9%	17	32.1%	109	28	25.7%	81	74.3%
Negative – De-legitimizing and Ammunition	79	27	34.2%	52	65.8%	78	11	14.1%	67	85.9%
Total	567					532				

Table 5. Use of Financial Information – multiple intentions

Purposes	XII Legislature (2011-06-20 to 2015-10-22)					XIII Legislature (2015-10-23 to 2019-10-24)				
	Total	Government		Opposition		Total	Government		Opposition	
		n	%	n	%		n	%	n	%
Positive – Legitimizing and Supporting	701	430	61.3%	271	38.7%	504	161	31.9%	343	68.1%
Positive – Improving and Understanding	406	227	55.9%	179	44.1%	390	109	27.9%	281	72.1%
Negative – Deflecting and Attention diversion	250	143	57.2%	107	42.8%	342	90	26.3%	252	73.7%
Negative – De-legitimizing and Ammunition	274	110	40.1%	164	59.9%	288	54	18.8%	234	81.3%

XII Legislature

XIII Legislature

Key: Membros Governo = Members of Government
XII Legislature (2011-06-20 to 2015-10-22): PSD and CDS-PP – politicians of political parties in the Government; other political parties are opposition
XIII Legislature (2015-10-23 to 2019-10-24): PS – politicians of the political party in the Government; other political parties are opposition

Fig. 1. Relationships and Intensities in the Intentions of Use of Financial Information – all speakers

Relationships and intensities are extracted simultaneously by the software performing the sentiment analysis and must be read together. The thickness of the line represents the intensity of the relationship, i.e., the frequency of both link and terms/speakers together.[6] The circles represent the frequency of the term or speaker in all interventions – the size of the circles must be read considering the relationship with other circles, associating to the thickness of the line.

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[6] Only the relationships with the most intensity are extracted and displayed in the networks (figures). The scale presented in the right side of the figures is not *a priori* defined, but produced as default by the software, according to the relationships and intensity present in the data.

Figure 1 displays, in XII Legislature, a total of 17 circles: 3 representing speakers in the Government or opposition and 14 representing terms related to intentions of use (sentiments) of financial information. Despite the number of red (negative sentiments) and green (positive sentiments) circles being similar, it seems clear the use of financial information with negative intentions around the Government, and higher intensity, than financial information with positive intentions. The terms that appear more often in the interventions related to «members of government» are «failure», «promise», and «unreached», all within the intention of de-legitimizing and ammunition. However, there is higher intensity when the term «failure» is associated with «members of government» than when the term «not reached» is associated with «members of government». On the positive side, for example, when the terms «meet», «stagnation» (intention of improving and understanding) and «rigorous» (intention of legitimizing and supporting) are used in the interventions, they also relate to «members of government», but with lower frequency or less intensity in the relationship. These findings make sense, given the austerity government in power, severely criticized for the financial impact of its measures, and justified by the demands of the economic context in the country at that time, under tremendous pressure from the international financial creditors. These circumstances could also explain the higher intensity in criticisms, especially from the opposition, than in justifications and compliments from the Government's politicians or those members of parliament supporting the Government.

In the XIII Legislature there is an obvious increase in the variety of terms related to all sorts of intentions of use financial information, by several speakers (31 circles in total, 7 representing speakers, 2 in government or government-related parties (PS) and 5 as political parties in the opposition), but mainly with the same intensity of use (similar size of circles and thickness of lines). This means that the intensity of use of financial information in the political debates overall increased after the crisis and the change of Government to an opposite political wing.

Terms related to the negative use of financial information again stand out associated with «members of government» and (though with less intensity) related to one political party in the opposition – PSD, which was in power in the previous legislature. Again, the terms most insensitively used together with «members of government» are «failure» and «promise», followed by «maneuvers» and «unaccomplished», meaning the use of financial information to confront and de-legitimize. The terms relating politicians of «PSD» to the use of financial information are mostly to deflect and divert attention. In interventions regarding «PSD» and «members of government», the word most intensively used is «opportunity», also to deflect and divert attention. As this party was formerly in Government, it may negatively use financial information to divert attention from matters not wanted to be discussed in the debates. In contrast, it may also be expected that the current Government uses financial information to fiercely attack those who are now in the opposition (ammunition, for example, against measures that did not work, formerly implemented by PSD). When the

word «lie» appears, it relates to politicians of «PS» (government party), which evidences the use of financial information again as ammunition, either by this party or towards this party.

Not surprisingly, terms related to positive intentions of use appear mainly associated with politicians in parties either in the Government or those in the opposition who were part of the parliamentary agreement. Some terms related to the intention of improving and understanding (e.g., «concern»). In interventions relating «PSD» and «CDS-PP», two parties in the former Government, there is the term «difficulty», evidencing use of financial information to legitimize and support, which could also be expected. In those terms relating to «members of government» and «PS», the party in the Government, the term «objectives» also evidence the use of financial information with that same intention.

In the XII Legislature, in the interventions of speakers related to the Government (Figure 2), terms associated with positive uses of financial information stand out; the term most intensively used together with «members of government» is «concern», within the intention of improving and understanding. On the negative side, «unreached» and «to propose» are the terms related to «members of government», though less intensively (smaller circle and thinner lines). Not surprisingly, in the interventions by politicians in the opposition (Figure 3), there is a higher intensity of terms and relationships on the negative use of financial information, namely, as ammunition. The terms «failure» and «promise» are the ones most intensively linked with «members of government», somehow confirming the analysis with all interventions (Figure 1). On the positive side, also linked with «members of government», but with less intensity and more diversity, are the terms «to explain» and «rigorous», within the intention of using financial information for improving and understanding; this could be related, for example, to further explanations requested from, or provided by, politicians in the opposing parties.

Additionally, the terms «stagnation», «sacrifice», «objectives» and «meet» are associated with «members of government», though less intensively, which may be explained by the fact that this was the austerity government, possibly resorting to these terms in the debates to support and legitimize the measures being implemented.

The scenario changed considerably in the XIII Legislature. In the interventions by government party-related politicians (Figure 2), three sets of relationships were evidenced, with the same intensity (similar size of circles and thickness of lines). Together with «members of government» only a few terms appear, either concerning positive or negative use of financial information, to legitimize and support («success», «compliment» and «objectives») and to divert attention («new» and «perspective»). Politicians in the Government or in the government-related party, when mentioning «PS» (their party), use financial information with positive intentions of improving understanding («concern») and legitimizing («demand»). In contrast, when mentioning «PSD» (party in the opposition), they use more intensively the terms «difficulty» (intention legitimizing) and «latter days» (intention of diverting attention). No relationships were found between terms used by government-related politicians when mentioning «PSD», «PS», and «members of government». Three
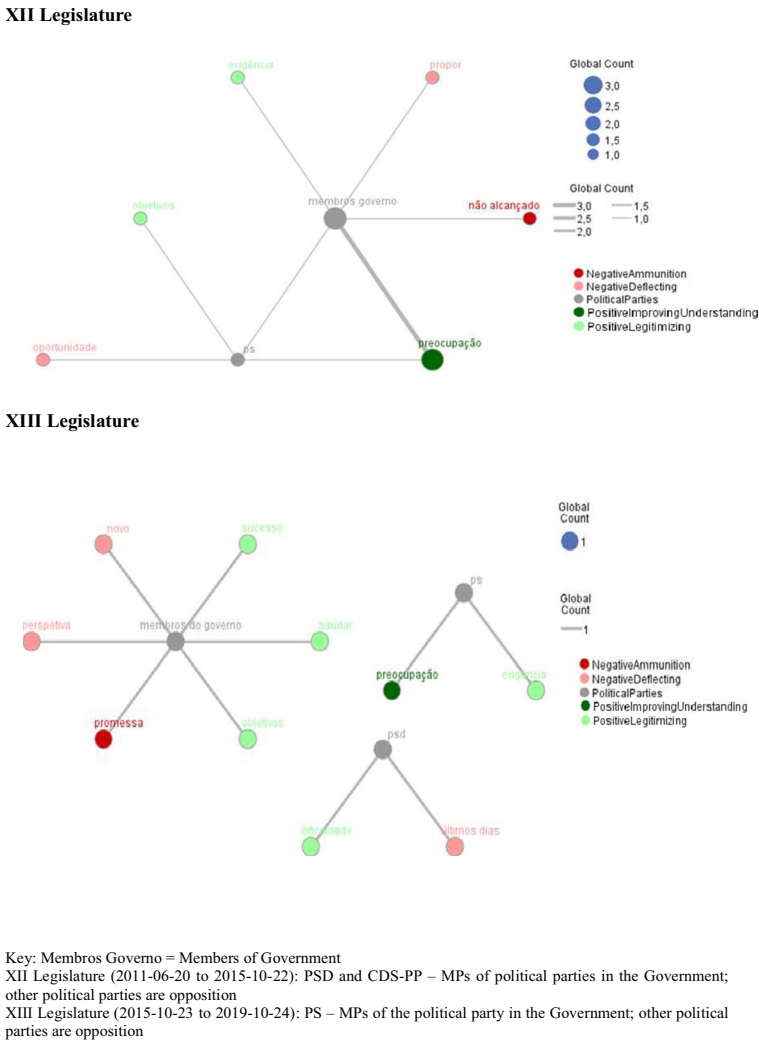
XII Legislature

XIII Legislature

Key: Membros Governo = Members of Government
XII Legislature (2011-06-20 to 2015-10-22): PSD and CDS-PP – MPs of political parties in the Government; other political parties are opposition
XIII Legislature (2015-10-23 to 2019-10-24): PS – MPs of the political party in the Government; other political parties are opposition

Fig. 2. Relationships and Intensities in the Intentions of Use of Financial Information – Government

patterns of intentions of use were identified with no relationship between them. The interventions of politicians primarily do not refer to «members of government» and «PS» and «PSD» all together.

Conclusions on the interventions from politicians in the opposition (Figure 3) are rather different from those on interventions by government-related speakers (Figure 2) but somehow confirm the findings in Figure 1. Overall, there is a greater diversity of terms reflecting the use of financial information with all intentions and mentioning several political parties and government members, meaning that this network of relationships and intensities is better defined than those in Figure 2 (government-related speakers). The patterns in the network are similar to Figure 1,

XII Legislature

XIII Legislature

Key: Membros Governo = Members of Government
XII Legislature (2011-06-20 to 2015-10-22): PSD and CDS-PP – MPs of political parties in the Government;
other political parties are opposition
XIII Legislature (2015-10-23 to 2019-10-24): PS – MPs of the political party in the Government; other political
parties are opposition

Fig. 3. Relationships and Intensities in the Intentions of Use of Financial Information – Opposition

meaning that these relationships and intensities in the intentions of use of financial information are the most relevant.

When mentioning «members of government», politicians in the opposition use terms related to negative intentions («failure» and «promise» with higher intensity, as ammunition). This is expectable because the main parties in the opposition were formerly Government, so the debate may involve terms to attack the current and the former Government (by parties other than PSD and CDS-PP). On the other hand, related to «PSD» and «CDS-PP», the former government parties use terms within

the positive intention to legitimize («difficulty» and «relevance») and to improve and explain («concern»). Associated to «PSD» are also the negative terms «to propose», «perspective» and «opportunity», used to divert attention; and «I disagree» to de-legitimize, which, as shown in Figure 1, may be convenient to this party after being formerly in power. Also, compared to Figure 1, one can now confirm that when «lie» is associated with «PS», the party in power in this legislature, it is mentioned in interventions by politicians in the opposition.

Finally, it is worth noting the positive use of financial information by politicians in the opposition when mentioning the party «Verdes» and the term «complement» to legitimize, evidencing that politicians in the opposition tend to use financial information to refer to each other positively.

All in all, there is a clear pattern of use of financial information with negative intentions by politicians affiliated with opposition parties, who assume a posture of questioning actions and non-compliance. Politicians who are members of the Government or of government-related parties use that information with positive intentions, assuming an explanatory and defensive posture, to legitimize and support their actions, for example, public policies generally reflected in the State Budget and the State Account. This is evident in both legislatures, although the specific patterns of the intentions of use of financial information change with the modification of the composition of the Parliament (from right-wing majority to left-wing) and the changes in the country's economic context – the crisis and its aftermath.

Discussion and Conclusions

This paper started by analyzing what specific types of financial information politicians intervening in the Parliament use in the debates on financial issues. It further explored the intentions with which such information is used by politicians in government-related parties and in the opposition.

Regarding the first research question, the most mentioned keywords were budget-related. Terms within Budgetary Information, either *ex-ante* or *ex-post*, were those most frequently used in the debates.

Most terms associated with accrual-based financial accounting information were never referred. This somewhat defeatist attitude on the use of non-budgetary financial information by politicians in the Parliament happened despite the PSA reform meanwhile started with SNC-AP, which was never referred to in the politicians' speeches.

These findings reinforce the conclusion of previous research (e.g. Buylen & Christiaens 2015; Jorge et al., 2016a, 2016b, 2019; Caruana & Farrugia, 2018; and Giacomini, 2020), but using different sources of evidence – registrations of politicians' interventions in the debates.

Given that the budget is the basis for political negotiations between the Government and the other political parties in Parliament, it is not surprising that politicians demonstrated their preference for items associated with Budgetary Information in detriment of those related to Financial Accounting Information. As in Reichard and van Helden (2016), budgets and fiscal control have historical importance in

Parliaments, being central in the debates of financial issues (Cangiano et al., 2013; von Hagen & Harden 1995). Some accrual-based information from the National Accounts, namely about *Deficit* and *Debt*, related to critical targets concerning convergence within the EU, was used too, even if to a much less extent, following the imposed 'logic of discipline' (Roberts, 2010) (see section above on the context of the financial information used in the Portuguese Parliament). However, politicians never mentioned the keyword *accrual accounting*. This was also evidenced by Jorge et al. (2016a, 2019).

As to the second research question, about with what intentions politicians use financial information in the parliamentarian debates, considering negative and positive perspectives, this study concludes that, in general, politicians use financial information to defend their political opinions and measures. Those who belong to government-related political parties use financial information for legitimizing and supporting (positive sentiments). Those in the opposition, use it predominantly as ammunition against the current Government, or even to divert attention from measures they had implemented before (negative sentiments); less frequently, they can also use financial information to support and explain policies implemented when they were in power.

This evidence corroborates the research of, for example, van Helden and Reichard (2019), Saliterer et al. (2019), as well as that of Faber and Budding (2022), who highlighted that the actual use of financial information is related to politicians' intentions, who use financial information adapted to their political preferences.

The same broad conclusion was emphasized by Giacomini et al. (2016), especially concerning the level of political conflict and competition. When this level is higher, the use of financial information increases either to attack or to legitimize public policies.

This is also aligned with the findings of Guarini (2016) and of Sinervo and Haapala (2019), according to whom politicians use financial information to sustain (further explain and legitimize) their opinions regarding the financial situation of their institutions.

The findings related to the third research question show that the use of financial information by politicians in the Portuguese Parliament is influenced by the changing context, once two different legislatures were considered, embracing distinctive political compositions and a alteration in the economic and financial condition of the country.

Whereas the types of preferred financial information in the debates have not changed, with Budgetary Information continuing to be privileged, intensity and intentions of using financial information by politicians were affected by those changes, as Posner and Park (2007) also underlined. In the XIII Legislature, when the Parliament composition represented a political alternation, moving from a right- to left-wing majority as mentioned, and consequently politicians previously government-related passed to the opposition, all categories of intentions of using financial information were evident with minor differences. Also, during this period the level of political competition intensified, because more political parties came to the Parliament and politicians then in the opposition were previously in Government

and *vice versa* (change in the political cycle). These findings show, as in Guarini's (2016) study, that more political competition implies a more intensive use of financial information in the debates.

Regarding the intentions of use, the main conclusions highlight different intentions of using financial information as politicians belong to the government-related parties or to the opposition, going along with the findings of Saliterer et al. (2019). The changing of political cycle evidenced that the intentions of use increased either for ammunition or even to divert attention from measures implemented when politicians were previously in power (negative sentiments), because in the second legislature there were more parties in the opposition. Likewise, the uses with positive intentions (positive sentiments) were more frequent in the XIII Legislature by previous government-related speakers (that became opposition) to legitimize and supporting as well as for improving and understanding, in order to defend their policies.

The changing political context is coincident with an improved country's economic and financial situation, moving from a crisis during the first legislature (EU fiscal restriction and *'Troika'* supervision) to a recovering situation that started with the second legislature.

Therefore, the overall findings of this study allow to underline that the change in both the political and the economic and financial condition in a country affects the intensity and the intentions of using financial information by politicians in the parliament.

In the period of analysis, namely during the XIII Legislature, a new IPSAS-based PSA system started to be implemented in Portugal. However, this fact did not seem to have affected politicians' financial information preferences and intentions of use in the Parliament. Perhaps due precisely to the fact that this new system has never been brought to the debate, politicians may have not been aware of the 'new' type of information they could use. This point was highlighted by Jorge et al. (2019).

This paper brings valuable additions, specifically extending the literature on the use of financial information to politicians in parliamentary debates, aiming at identifying what information they need. For the first time an evolutionary changing context is considered, highlighting the effect on that use of a political change in the Parliament composition (politicians moving from government-related parties to the opposition). Despite based on the Portuguese reality, the study provides essential insights for other realities, particularly about the types of financial information used by politicians, and intentions of that use, in changing contexts, either in the political scene or in the fiscal situation of the jurisdictions. Overall, the paper represents an important step towards a theoretical framework about the use of financial information by politicians.

As main limitations one can point the way the dictionaries have been predefined and built, especially the terms used in the sentiment analysis. The final list could not be ultimately validated, given the difficulties of contacting with the politicians regarding past speeches. Therefore, the selected terms mainly resulted from the authors' interpretation, undergoing a certain degree of subjectivity. Furthermore, the use of software, if, on the one hand, may have brought robustness and exemption to the analysis, on the other hand may also

have made it too automatic and blind, despite the researchers' intervention for reassurance (Sydserff and Weetman, 2002).

This research can continue exploring whether financial information use changes according to a specific political party (e.g., left-wing or right-wing) and politicians' financial (non) expertise. It can also address the role of external actors (e.g., EU and IMF) in affecting the use of financial information in central parliaments.

Compliance with Ethical Standards

Ethical approval None.

Informed consent None.

Conflict of Interest None.

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