

**A BIBLIOMETRIC ANALYSIS OF VOLUNTARY DISCLOSURE RESEARCH**

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**Abstract**

*Voluntary disclosure is a concept used in the sense of publishing information that goes beyond the scope of mandatory reporting. The main objective of this paper is to determine the current state of research on voluntary disclosure, according to the Web of Science platform through a bibliometric analysis conducted using VOSviewer. The results of the analysis showed that in terms of the voluntary disclosures researches carried out so far, the focus is on the determinants of voluntary disclosure and the associated risks, as well as its quality, information asymmetry and costs involved. The terminology used in this field of research focuses around concepts such as corporate disclosure, corporate governance, management, quality, CSR, non-financial information, sustainability, sustainability reporting and integrated. Therefore, voluntary disclosure is a current topic of international interest for researchers and the results of the bibliometric analysis show that voluntary disclosure is approached in the context of the financial and non-financial sphere, from managers' decision to reporting information, associated risks and providing voluntarily disclosed information.*

**Key words:** *Bibliometric analysis; voluntary disclosures; non-financial information; VOSviewer.*

**JEL Classification:** *M41*

**I. INTRODUCTION**

The complexity of the business environment has led to an increase in the information requirements of stakeholders. This increase in stakeholder requirements, both in terms of volume and structure, has led companies to respond to these needs that go beyond mandatory reporting, and the concept of voluntary disclosure has emerged. Voluntary disclosures usually refer to non-financial information in the category of information on risk, corporate governance, environment, social, CSR or sustainability. Their role is to complete the mandatory reporting in order to provide a clear image of the activity of companies that meet the requirements of stakeholders. Over time, corporate reporting has evolved beyond mandatory reporting, using increasingly effective tools to meet the legitimate expectations of stakeholders, namely by disclosing certain high-quality information that falls within the scope of voluntary reporting. The specific tools for voluntary disclosure are sustainability reporting or integrated reporting, along with the inclusion of certain categories of information in annual reports and these have become essential in meeting current information demand. All this aims to ensure an optimal communication process with the stakeholders of a company (Manes-Rossi, Tiron-Tudor, Nicolo & Zanellato, 2018; Cosmulese, Socoliuc, Ciubotariu, Mihaila & Grosu, 2019).

The main objective of this paper is to determine the current state of research on voluntary disclosure, according to the Web of Science (WoS) platform. Moreover, through the deductive analysis of the results provided by WoS, the main concepts that revolve around voluntary disclosure were identified and presented. In the specialized literature, there is a bibliometric analysis of the voluntary disclosures concept that presents the state of research published on WoS between 2009 and 2018 (Coan, Durigon, de Oliveira & Ott, 2019). Therefore, the research results contribute to the development of the literature, thus completing the analysis performed previously and confirms the upward trend of interest in this topic.

The paper is structured in five sections as follows: the next section presents a brief review of the literature on the concept of voluntary disclosures; the third section includes the research methodology regarding the search protocol on the WoS platform; the fourth section presents the research results and finally the conclusions and contributions of the paper are presented.

## II. LITERATURE REVIEW

The concept of voluntary disclosure has long been debated in the international literature considering that in the practice of the companies the reporting of non-financial information was required in order to support the mandatory reporting. The simplest definition of voluntary disclosure would be the reporting of any information in addition to the mandatory disclosure that involves the reporting of information in order to comply with the requirements of legal regulations (Shehata, 2014).

The voluntary disclosure is, in fact, the adoption of an effective strategy to increase the credibility and transparency of financial and non-financial information, which contributes to improving the relationship with stakeholders (Prado-Lorenzo & Garcia-Sanchez, 2010). From another perspective, voluntary disclosure is assimilated to a concept that has been increasingly seen as a performance generator, in addition to the notoriety of the function usually performed by voluntary reporting (Socoliuc, Grosu, Hlaciuc & Stanciu, 2018; Cosmulese, 2019).

In the specialized literature, the term voluntary disclosures are closely related to the concept of CSR and non-financial information. Benlemlih, Ge & Zhao (2021) demonstrate that the voluntary disclosure of non-financial information on CSR is influenced by the evolution of companies in the stock market. In the sense that there is a greater chance for undervalued companies to publish news or information about CSR in periods when the share price is lower than their intrinsic value, precisely to improve their market performance and image. At the same time, voluntary disclosure contributes to reducing information asymmetry which increases the quality of information reporting (Cormier, Ledoux, Magnan & Aerts, 2010; Saa'deh, Mohamad & Hashim, 2017; Suharsono, Nirwanto & Zuhroh, 2020). On the other hand, Francis, Nanda & Olsson, (2008) demonstrate that the quality of earnings directly influences the voluntary disclosures of companies. Thus, a better quality of earnings leads to more extensive voluntary disclosures. We must also take into account the quality of voluntary disclosure which is positively influenced by the adoption of IFRS standards (Consoni & Colauto, 2016), the previous internal experience of the CEO in a company (Brockman, Campbell, Lee & Salas, 2019), or the presence of Big Four auditors and the effectiveness of the audit committee (Agei-Mensah, 2019).

We conclude that voluntary disclosures target non-financial information such as environmental and social information, CSR and sustainability that cover the area of voluntary reporting. They contribute to increasing the credibility and transparency of the information reported, as well as to a broader vision of companies' activity, thus strengthening the relationship with stakeholders.

## III. RESEARCH METHODOLOGY

In order to achieve the main objective of this paper we have defined the following secondary objectives:

- *Analysis of the specialized literature through the WoS platform.*
- *Bibliometric analysis of research on the concept of voluntary disclosures using VOSviewer software based on the results provided by WoS.*
- *Identify the most used terms in relation to voluntary disclosures.*

For an in-depth analysis of the international literature, we used the WoS platform in order to determine the current state of scientific research on the concept of voluntary disclosures. The search protocol on the WoS platform was as follows:

- Database: Web of Science Core Collection;
- Search topic: voluntary disclosures;
- Types: All documents;
- Analysis period: 2000 - May 2021.

Thus, there were 1340 papers in the form of 1206 articles, followed by proceedings with 107, 37 reviews, 33 early access, book covers 23, editorial materials 6 and a book presented in fig. 1 depending on the year and place of publication, fields of research and sources of publication.

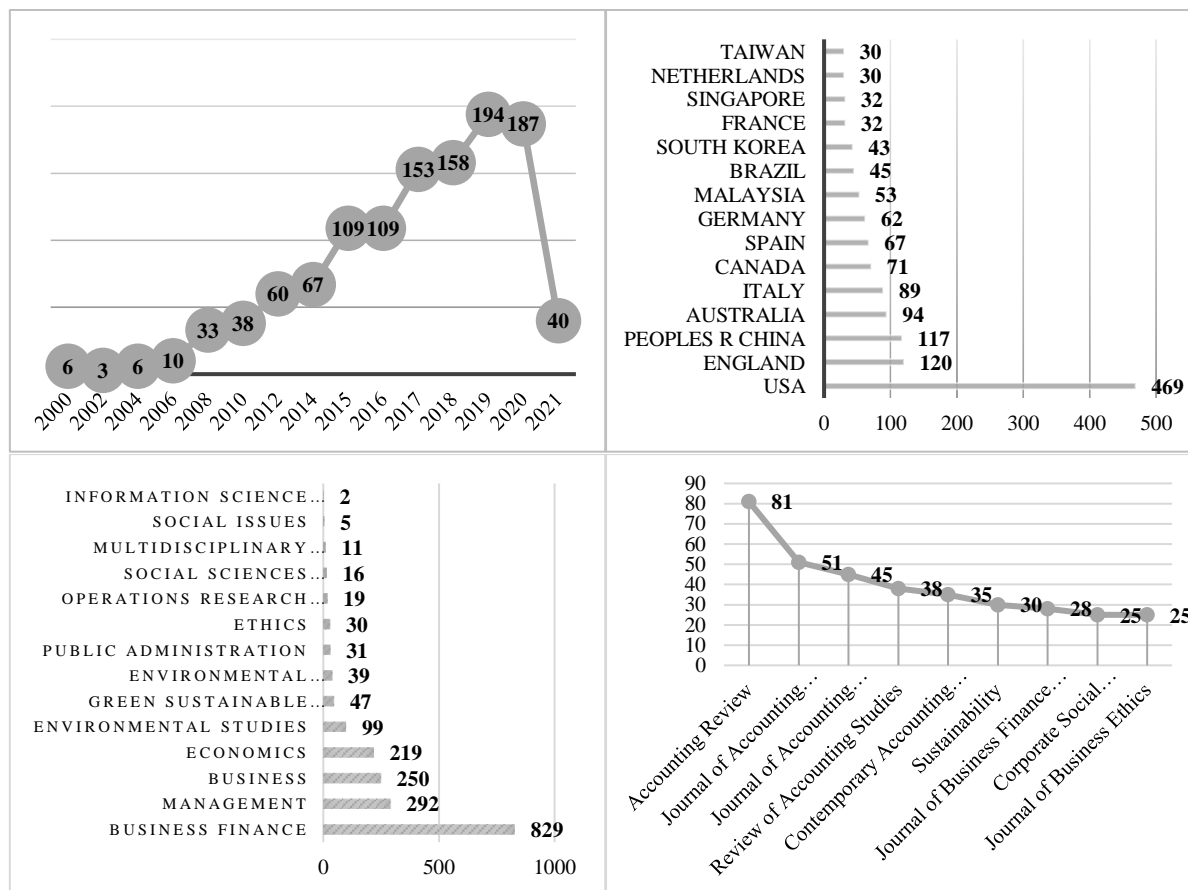


Figure 1 – The profile of research on voluntary disclosure between 2000 and 2021

Source: developed by the author on the Web of Science database

The profile of research published on voluntary disclosure demonstrates the high interest of researchers on the international level. Thus, we notice that there is an upward trend of the published works since 2000, with a significant evolution starting with 2015 and 2016 when 109 works were published. The maximum point is reached in 2019 with 194 papers published followed by a minor decrease in 2020. From the point of view of countries, the top is led by the USA with 469 papers, followed by England, China, etc. Also, research with the topic of voluntary disclosure can be found in many fields of research such as Business Finance, Management, Economics, Environmental Studies, etc. which indicates that this concept is approached from different perspectives, highlighting the multidisciplinary of the topic. Finally, the analysis of the main publication sources shows that voluntary disclosure is a topic of interest for both the financial and non-financial spheres in the context of information reporting. The results were exported and uploaded to the VOSviewer program based on the Full Record and Cite References option.

#### IV. RESULTS AND DISCUSSIONS

Through VOSviewer, we generated a co-occurrence map of terms for voluntary disclosures, based on data exported from the Web of Science, using the full count method. The software selected 222 key terms from the 3,692 initially identified that reached met the threshold of at least 10 occurrences. From this list of 222 terms, 42 were removed because they were common words, recurring terms, country names, etc. so 180 terms resulted. The complete network of key terms of the voluntary disclosures concept is presented in fig. 2 where seven different groups are highlighted in color depending on their relevance.

The first group is the largest comprising 65 key terms centered around the concept of voluntary disclosures that mainly cover the financial sphere such as accounting information, accounting standards, capital markets, costs, efficiency, financial reporting, financial analysis, forecasts, investors, forecasts managerial, corporate disclosures, credibility, reputation, decision, but also the non-financial sphere through environmental information, etc. We also identified two terms that were antithetical to voluntary disclosures, namely, mandatory disclosures and private information.



Term	Cluster	No. of occurrences	Total link strength	Term	Cluster	No. of occurrences	Total link strength
capital-markets	1	22	150	independent directors	2	11	83
consequences	1	48	345	information disclosure	2	31	176
conservatism	1	12	73	institutional ownership	2	10	70
corporate disclosure	1	135	900	integrated reporting	2	25	200
corporate disclosures	1	10	79	legitimacy	2	72	498
costs	1	25	151	legitimacy theory	2	14	84
credibility	1	34	196	listed companies	2	15	107
decisions	1	18	107	management	2	208	1372
discretionary disclosure	1	89	588	market valuation	2	16	123
earnings	1	93	603	media	2	15	107
earnings announcements	1	13	75	nonfinancial disclosure	2	31	228
earnings forecasts	1	45	270	ownership	2	153	1098
earnings guidance	1	21	151	ownership structure	2	59	399
efficiency	1	11	51	performance	2	236	1539
environment	1	33	214	perspective	2	11	64
expectations	1	19	138	profitability	2	11	65
financial analysts	1	13	85	relevance	2	14	75
financial reporting	1	30	168	responsibility	2	17	86
firms	1	98	631	size	2	11	73
forecast accuracy	1	14	101	social-responsibility	2	34	226
forecasts	1	50	345	social-responsibility disclosure	2	25	192
guidance	1	15	105	stakeholder theory	2	29	191
incentives	1	62	416	stakeholders	2	14	105
information	1	299	1749	strategy	2	13	75
information environment	1	16	116	sustainability	2	55	358
information-content	1	57	374	sustainability reporting	2	10	79
informativeness	1	12	66	sustainability reports	2	17	113
initial public offerings	1	12	66	sustainable development	2	14	99
institutional investors	1	71	501	transparency	2	45	266
investment	1	26	169	agency costs	3	50	386
investor protection	1	30	211	asymmetric information	3	13	62
investors	1	15	108	competition	3	36	223
litigation	1	21	144	cost	3	183	1183
litigation risk	1	17	79	cost of capital	3	21	144
management earnings forecasts	1	70	463	disclosure	3	211	1154
management forecasts	1	43	306	earnings quality	3	35	223
managerial incentives	1	10	78	equilibrium	3	13	64
mandatory disclosure	1	34	203	equity	3	35	233
market	1	165	1118	financial disclosure	3	44	325
market reaction	1	13	75	implied cost	3	12	88
precision	1	10	60	industry	3	20	124
press releases	1	10	62	information asymmetry	3	121	823
price	1	11	58	innovation	3	17	99
private information	1	10	73	liquidity	3	49	330
readability	1	12	81	managers	3	18	98
regulation	1	12	67	policy	3	41	231
regulation fair disclosure	1	10	68	product market competition	3	11	70
reputation	1	22	115	proprietary costs	3	18	149
returns	1	39	241	research-and-development	3	14	90
shareholder litigation	1	18	113	risk	3	53	289
stock returns	1	23	140	sfas no. 131	3	12	74
stock-prices	1	13	61	accruals quality	4	11	70
timeliness	1	13	97	association	4	140	1022

Term	Cluster	No. of occurrences	Total link strength	Term	Cluster	No. of occurrences	Total link strength
tone	1	10	53	audit committee	4	24	172
uncertainty	1	25	167	audit fees	4	10	69
valuation	1	29	185	audit quality	4	16	94
voluntary disclosure	1	952	5281	board	4	24	168
accountability	2	22	128	choice	4	11	54
agency theory	2	27	212	directors	4	66	507
assurance	2	23	156	disclosure quality	4	11	74
banks	2	13	80	earnings management	4	130	858
board characteristics	2	14	114	fees	4	10	68
board composition	2	57	482	independence	4	15	114
board independence	2	21	172	internal control	4	17	110
board of directors	2	27	219	quality	4	204	1336
carbon disclosure	2	14	103	annual reports	5	14	65
ceo duality	2	12	99	firm value	5	38	275
climate change	2	15	94	forward-looking information	5	15	109
communication	2	19	110	intangible assets	5	15	70
companies	2	50	359	intellectual capital	5	34	175
compensation	2	22	157	intellectual capital disclosure	5	30	188
corporate governance	2	263	1749	market value	5	10	62
corporate social-responsibility	2	106	705	risk disclosure	5	16	124
csr disclosure	2	20	130	statements	5	13	72
determinants	2	255	1762	value relevance	5	35	241
diversity	2	15	115	adoption	6	12	90
economic-performance	2	17	117	economic consequences	6	35	216
emissions	2	10	73	ifrs	6	19	122
environmental disclosure	2	56	403	international accounting standards	6	11	69
environmental performance	2	39	269	investor relations	7	12	74
executive-compensation	2	16	120	managerial ownership	7	11	75
extent	2	13	77	stock	7	11	73

Source: developed by the author on the results provided by VOSviewer

Depending on the link strength and the occurrences of terms, we can see that voluntary disclosure is closely related to information, corporate governance, determinants, management, quality, market, ownership, cost, corporate disclosures, information asymmetry. The sphere of development for voluntary disclosure is that of non-financial reporting.

## V. CONCLUSION

In the context of globalization, companies have adapted to the conditions of the ever-changing business environment, and in particular to the requirements of stakeholders. They have played an important role in the evolution of corporate reporting because their pressures have led, first, to the voluntary disclosure of certain non-financial information in annual reports and subsequently to the inclusion of this information in various types of specific reports (e.g., sustainability) and published voluntarily. Therefore, voluntary disclosures concern the decision of the company and its managers regarding the reporting of certain information, precisely to support stakeholders and ensure a qualitative communication process.

Published research on voluntary disclosures under the WoS platform has seen an upward trend between 2000 and 2021, peaking in 2019. In terms of publication place, the top countries are led by the USA and the variety of research areas demonstrates multidisciplinary of the subject. The results provided by WoS were analyzed using VOSviewer software. Thus, we generated a co-occurrence map of key terms for the voluntary disclosure consisting of 180 terms grouped into seven categories. The first two groups and the fifth group contain terms specific to the financial and non-financial sphere regarding voluntary disclosures until information is reported. The third group highlights the risks associated with voluntary disclosure. The fourth group raises the issue of auditing or providing information in the area of voluntary disclosure and the last two groups associate this concept with the adoption of

IFRS. We consider that the results of this research have significant implications for researchers, contributing to the development of the specialized literature and to the drawing up of future research directions.

## REFERENCES

1. Agyei-Mensah, B. K. (2019). The effect of audit committee effectiveness and audit quality on corporate voluntary disclosure quality. *African Journal of Economic and Management Studies*, 10(1), 17–31. <https://doi.org/10.1108/AJEMS-04-2018-0102>
2. Benlemlih, M., Ge, J., & Zhao, S. (2021). Undervaluation and non-financial information: Evidence from voluntary disclosure of CSR news. *Journal of Business Finance & Accounting*, jbfa.12505. <https://doi.org/10.1111/jbfa.12505>
3. Brockman, P., Campbell, J. L., Lee, H. S. (Grace), & Salas, J. M. (2019). CEO internal experience and voluntary disclosure quality: Evidence from management forecasts. *Journal of Business Finance & Accounting*, 46(3–4), 420–456. <https://doi.org/10.1111/jbfa.12361>
4. Coan, F. J., Durigon, A. R., de Oliveira, C., & Ott, E. (2019). Voluntary disclosure: Scientific production published on the Web of science database from 2009 to 2018. *Reunir-revista de administracao contabilidade e sustentabilidade*, 9(3), 76–95.
5. Consoni, S., & Colauto, R. D. (2016). Voluntary disclosure in the context of convergence with International Accounting Standards in Brazil. *Review of Business Management*, 18(62), 658–677. <https://doi.org/10.7819/rbgn.v18i62.2242>
6. Cormier, D., Ledoux, M., Magnan, M., & Aerts, W. (2010). Corporate governance and information asymmetry between managers and investors. *Corporate Governance: The International Journal of Business in Society*, 10(5), 574–589. <https://doi.org/10.1108/14720701011085553>
7. Cosmulese, C. G., Socoliuc, M., Ciubotariu, M.-S., Mihaila, S., & Grosu, V. (2019). An empirical analysis of stakeholders' expectations and integrated reporting quality. *Economic Research-Ekonomska Istraživanja*, 32(1), 3963–3986. <https://doi.org/10.1080/1331677X.2019.1680303>
8. Cosmulese, C.G. (2019). The Contribution of Disclosure of Non-Financial Information to the Increase of the Quality of Economic-Financial Communication, *European Journal of Accounting, Finance & Business*, 10(20). Retrieved December 15, 2020 from <http://accounting-management.ro/index.php?page=showcontent&issue=21&year=2019>
9. Francis, J., Nanda, D., & Olsson, P. (2008). Voluntary Disclosure, Earnings Quality, and Cost of Capital: DISCLOSURE AND EARNINGS QUALITY. *Journal of Accounting Research*, 46(1), 53–99. <https://doi.org/10.1111/j.1475-679X.2008.00267.x>
10. Manes-Rossi, F., Tiron-Tudor, A., Nicolò, G., & Zanellato, G. (2018). Ensuring More Sustainable Reporting in Europe Using Non-Financial Disclosure—De Facto and De Jure Evidence. *Sustainability*, 10(4), 1162. <https://doi.org/10.3390/su10041162>
11. Prado-Lorenzo, J.-M., & Garcia-Sanchez, I.-M. (2010). The Role of the Board of Directors in Disseminating Relevant Information on Greenhouse Gases. *Journal of Business Ethics*, 97(3), 391–424. <https://doi.org/10.1007/s10551-010-0515-0>
12. Saa'deh, M. Y., Mohamad, N. R., & Hashim, H. A. (2017). The Role of Voluntary Disclosure on Information Asymmetry and Its Impact on the Cost of Capital. *Advanced Science Letters*, 23(9), 8389–8394. <https://doi.org/10.1166/asl.2017.9897>
13. Shehata, N. F. (2014). Theories and Determinants of Voluntary Disclosure. *Accounting and Finance Research*, 3(1), p18. <https://doi.org/10.5430/afr.v3n1p18>
14. Socoliuc, M., Grosu, V., Hlaciuc, E., & Stanciu, S. (2018). Analysis of Social Responsibility and Reporting Methods of Romanian Companies in the Countries of the European Union. *Sustainability*, 10(12), 4662. <https://doi.org/10.3390/su10124662>
15. Suharsono, R. S., Nirwanto, N., & Zuhroh, D. (2020). Voluntary Disclosure, Financial Reporting Quality and Asymmetry Information. *The Journal of Asian Finance, Economics and Business*, 7(12), 1185–1194. <https://doi.org/10.13106/JAFEB.2020.VOL7.NO12.1185>