

UDC 336.76**JEL: F65, G21, Q01, O16****TRANSFORMING FINANCIAL OUTSOURCING
SERVICES FOR SUSTAINABLE BUSINESS
DEVELOPMENT: A REVIEW ON GREEN FINANCE****Olga Laktionova**

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Introduction. Financial outsourcing services contribute to the effective management of economic relations arising in the process of the formation and use of financial resources. With the unchanged goal of financial outsourcing, its services are being transformed, associated with the development of the financial market and the emergence of innovative financial instruments, technologies and mechanisms.

Aim and tasks. The purpose of the article is to form a methodology for studying financial markets, growth points and development trends of "green" finance and tools for sustainable business development that require the transformation of financial outsourcing services.

Results. A review of sustainable business development based on the methodology of researching the green financial market and financial instruments was carried out, which consists in the use of biometric, predictive, and other methods of analysis that allow timely identification of innovative financial instruments, their development trends, empirical data on their significance, sources of funding, scale, models and trends in the development of economic relations arising in the process of environmental modernization of production. The proposed methodology for researching the financial market will make it possible to transform financial outsourcing services in a timely manner, especially for clients engaged in the development and implementation of engineering innovations aimed at developing a sustainable economy based on green finance.

Conclusions. The dynamics of the development of green bonds is significantly ahead of the dynamics of the development of the financial market as a whole. The concept of organizing regional sustainable financial systems is proposed, the infrastructure of which includes a financial outsourcer that contributes to the effective attraction and use of financial resources for sustainable business development. A classification of client groups of financial outsourcing services is proposed depending on the size of business entities and the involvement of specific financial instruments and management mechanisms carried out by an outsourcer, which provides capital management using financial management mechanisms, accelerating its turnover and reuse.

Keywords: financial outsourcing, financial market, financial instruments, green finance, green bonds.

Introduction.

Financial outsourcing can be considered as a scientific and practical direction of financial management (May, 2008; Mubako, 2019). The basis of outsourcing is a division of labor that enhances productivity (Wilson, 2007). Outsourcing is seen as an efficient and high-quality factor of production, and it is an integral part of the theory of delegation of authority and responsibility (May, 2005). Outsourcing tools in research are considered as part of the management strategy, including the process of transferring work or services to the contractor, based on the division of labor and management functions (Li, 2014; Miller, 2017). In this context, the transfer of financial management functions is defined as financial outsourcing ("F&A") as a specific type of outsourcing (Andone, 2010).

The active development of financial outsourcing was associated with the transfer of individual accounting processes to outsourcing, and with the subsequent maintenance of not only accounting, but also tax accounting, the formation of financial statements and their analysis (Farrell et al, 2005; Mubako, 2019), as well as individual operations for financial management (Krell, 2007). International financial outsourcing was further developed, in which outsourcing companies (mainly the USA and the EU) become customers, and companies performing services in the crowdsourcing mode acted as contractors (Gbani, 2013; Buckley, Munjal, Requejo, 2022). There is an organization of platforms SSC (shared services center), by centralizing and standardizing the operations of financial services and integrating IT systems in international markets.

Ukrainian companies in the global business services market do not carry out their activities in the fields of ordering and executing financial outsourcing services or outsourcing financial services. New opportunities for increasing the role of the financial aspect in management were provided by the Internet, web technologies, and business intelligence systems (Danna, 2014). Outsourcing organizations mainly provided services for payroll, budgeting, tax risk management, tax forecasting, registration of business transactions, bookkeeping, tax accounting and other manual operations (Miller, 2017).

The development of technologies, in addition to the quantitative effect in the form of saving time and labor costs, has led to qualitative changes, in which the registration of a business transaction coincides with the moment of obtaining some solutions in the financial management of business entities.

Services for the processing of financial and accounting information in the international business services market are classified as financial outsourcing services, and they are considered knowledge-intensive services. Their development is stimulated by the state by providing various preferences that provide a mechanism for indirect financing of the activities of outsourcers and service clients, including small and medium-sized businesses.

The reasons for the development of outsourcing services in the practice of developed countries are as follows: in the face of growing competition, it is difficult for enterprises, especially small and medium-sized businesses, to maintain the necessary competitiveness in all types of activities, this applies not only to secondary (non-core), but also mandatory types, including in financial activities, which is practically impossible and not rational. Therefore, in order to maintain competitiveness, companies, especially small and medium-sized businesses in developed countries, outsource financial accounting and financial management to executing firms specializing in these services. The transfer of the function of financial management by business entities to outsourcing - financial outsourcing, is considered as one of the most accessible and acceptable alternatives in the organization of financial management, especially for small and medium-sized businesses, both in the medium and long term.

Literature review.

Financial outsourcing is considered as a qualitatively new management model aimed at implementing the strategy of enterprises in a highly competitive environment, which also meets the conditions for the development of a sustainable economy. In the conditions of market relations, the "functions" of finance and their role are becoming more and more significant in the management of business entities (Table 1) (May, 2005).

Table 1. Periodization of the development of the theory of financial management in organizations under the influence of information technology.

Financial management (management organization)					
In manual mode	Consolidation and management of centralized finance	Consolidation and management of specialized finance	Organization of financial control centers (inside and outside the country)	General web-based financial management services	Organization of financial management using virtual technologies
Technology					
Doing consumables and financial books by hand, mode	Computer (mega sizes)	Local servers, personal computers	Accounting for globalization when planning the financial resources of enterprises	Fully integrated financial management processes, decision support systems	Use of business intelligence systems, web service, cloud technologies, business intelligence (BI)
Before 1970s	1970s	1980s	1990s	2000s	2020s

Source: based on May (2005).

The theoretical foundations of financial and tax outsourcing are theories and concepts:

- concepts of outsourcing and delegation of authority (Kalendzhyan, 2003; Lok et al., 2018 2013): the concept of reengineering (Kalendzhyan, 2002); ABC concepts for cost accounting by activity (Kaplan, 1987); latest Bauhaus concept, 2021);

- concepts of financial management (cash flow; cost of capital) (Stiglitz. 2007);

- concepts and theories of tax management: the theory of excess taxation; the theory of optimal taxation (Gordon, Varian, 1989; Harberger, 1990);

- theory of the use of "green" finance and environmental taxation in the transformation of financial and tax outsourcing (Coase, 1937; Krell, 2007; Cortellini, Panetta, 2021; Laktionova, 2021; Buckley, Munjal, Requejo; Koval, 2022; Liang, 2021; Reza-Gharehbagh et al., 2021; Morcillo, 2022;);

- concepts and theories of finance and investment portfolio (Markowits, 1952); theory of capital structure (F. Modigliani, 1958).

Currently, there is no methodology for studying the transformation of financial and tax outsourcing services. The study proposes the use of an analysis methodology, including methods, techniques, development of research

algorithms, a systematic analysis of factors affecting the transformation of financial and tax outsourcing services; development of own scientific hypotheses, concepts, methods. At the same time, the methods of a priori and a posteriori analysis, the method of comparisons and analogies, the methods of predicative and varimax analysis were applied in relation to the statistical data of municipal budgets in the context of the transformation of financial and tax outsourcing; methods of bibliometric analysis to the formation of a database for the theoretical analysis of financial instruments. The results of the analyzes make it possible to increase the efficiency of attracting financial sources and financial instruments in the formation of the fund (mixed capital) and its effective use for the activities of clients. The use of financial management mechanisms will accelerate the turnover of capital, including in a sustainable economy.

Most business entities are not able to independently organize the management of financial activities, which consists in organizing effective economic relations in the process of formation and use of financial resources (funds). Financial management services (including lending and insurance) are provided by financial outsourcing specialists.

In corporations, the functions of financial services are performed by centers on the terms of internal financial outsourcing. Small and medium-sized businesses seek services from external financial outsourcing centers. Financial outsourcing becomes an intermediary between clients: small and medium-sized businesses, including those developing green innovations, investors, municipal budgets in organizing effective economic relations to attract and use finance, financial instruments and mechanisms (Liang, 2021). One of the main directions of sustainable business development is "green" financing and "sustainable" investments" (International Financial Development Club, 2013; People's Bank of China, 2015; Cortellini, Panetta, 2021; Tolliver, Keeley, Managi, 2020; Koval, 2022).

Green finance is the backbone of a future green financial system that ensures sustainable and balanced development of the global economy (Morcillo, 2022; Government of Germany, 2021). "Green" financing is a set of financial instruments that take into account the impact on the environment and increase environmental sustainability, while ensuring activities to reduce environmental and climate risks of global economic development (UNEP, 2016).

Financial outsourcing is seen as a qualitatively new management model aimed at implementing the strategy of enterprises in a highly competitive environment, which also meets the conditions of sustainable economic development. Financial outsourcing services consist of the effective management of economic relations arising in the process of the formation and use of financial resources (funds). With the unchanged goal of financial outsourcing—improving the efficiency of financial management—there is a continuous development of financial markets, financial instruments involved in attracting financial resources, financial technologies, and financial management mechanisms, including "green" ones. Financial outsourcing services are also used by non-traditional clients who also need effective financial management such as municipal budget departments, especially in the period of decentralization. The problems of green financial instruments in the development of clean technologies were considered by the

authors (Reza-Gharehbagh et al., 2021). However, there is no methodology for studying the problems of transforming financial outsourcing services due to the emergence of innovative technologies, including green financial instruments in financial markets associated with climate change and man-made disasters.

Studies on the relationship and interaction of financial outsourcing services and "sustainable investment" for business development are practically not presented in academic materials, with the exception of some. A study on the problem of green technology development (GTD) of a manufacturing entrepreneur with limited capital who seeks financial support and sustainable investment turns to outsourcing is presented in (Reza-Gharehbagh et al., 2021).

Liang (2021) shows that the greening of industrial production requires financial resources and tools to attract them. For this purpose, an algorithm has been developed that allows you to identify significant and insignificant indicators in the revenues of municipal budgets. It was revealed that the proceeds from environmental taxes are insignificant and require changes in their elements to increase the taxable base within the framework of the legislation.

Despite the large amount of research aimed at finding sources of financing, financial instruments and management mechanisms, there is a constant shortage of financial resources in the development of a sustainable economy. There is no methodology for identifying and researching the development of financial instruments in financial markets, which are constantly replenished with innovative financial instruments, including green (environmental) ones. These studies could be carried out by a financial services outsourcer. Financial outsourcing services do not include functions for researching the financial market, searching for green financial instruments and sustainable investments, despite their great need, especially for small and medium-sized businesses. Non-traditional clients of financial and tax outsourcing services have also appeared such as municipal budgets, which require optimization and balancing of revenue and expenditure, attracting sustainable investments for issuing municipal bonds.

Aim and tasks.

The purpose of the article is to form a methodology for researching financial markets, growth points and development trends of "green" finance and financial instruments for sustainable business development, requiring the transformation of financial outsourcing services. There is a need to form a hypothesis for the creation and development of a regional green financial system, in the management infrastructure of which the central place belongs to the outsourcer, whose activities should be aimed at organizing effective economic relations between customers, creditors, investors, municipal budgets and other parts of the system. The solution of these problems and other tasks confirmed the relevance of this study.

Methodology.

For the study, an array of documents was formed from the international database Scopus or Web of Science, incl. patents. Documents were selected using complex analysis methods, including bibliometric, predictive-factorial (Varimax) analysis methods, identified by queries: finance, financial outsourcing, green finance, green financial instruments.

Methods of bibliometric and other types of analysis made it possible to identify the total value of documents and the dynamics of their publication by years; active authors and organizations researching these areas; funding sponsors; active sources of publications; branches of knowledge in which the studied financial instruments are used; patents, patent offices; countries of patenting; "points of growth for innovative financial instruments, including various types of green bonds. It is shown that the results of the analysis make it possible to increase the efficiency of identifying financial instruments and attracting financial sources in the formation of the fund (mixed capital) and its effective use for the activities of clients. Financial outsourcing services include analysis of the financial instruments market, incl. choosing the required format of green bonds using income: simple bonds, project bonds, green bonds, securitized bonds.

It was revealed that the organization of the issue of green corporate bonds is also influenced by the municipality, which forms the fiscal (budgetary and tax) policy of the region, manages the regional economy. It was revealed that the outsourcer is a link in economic relations between a business entity, an investor, a municipality, a department of finance, and tax authorities in the region. The outsourcer forms a model of mixed capital, manages the structure of capital aimed at the development of green technologies. Mixed capital is managed with the help of financial management mechanisms, which allows using the capital "multiple times" by increasing the turnover rate. Thus, the increase in the return on equity is carried out through the mechanism of financial leverage.

A broader composition of mixed capital in order to finance projects for the environmental modernization of the production of goods and services was presented by the authors as follows: own financial resources of business entities; targeted use of environmental tax revenues to the local budget; subsidies; transfers; proceeds from the sale of corporate conventional and green value instruments; public and private loans; swaps; fiscal investment; funds received as a result of optimization of local budgets, preferential taxation, preferential investment loans; entitlement to accelerated depreciation; and other financial instruments (FI) using financial management mechanisms – financial management (FM) as a cash flow management system (The Global ISG Outsourcing Index, 2021). From the standpoint of financial management, the main functions of a financial outsourcer include: monitoring indicators of financial analysis of clients, developing measures to improve the financial condition of a client, planning, organization and control.

All of these functions are used in the process of substantiating effective management decisions in the field of financial activities for clients of financial and tax outsourcing services in their integrated form. It was revealed that in modern financial outsourcing services, it is proposed to use the following financial sources, tools, and mechanisms (Figure 1).

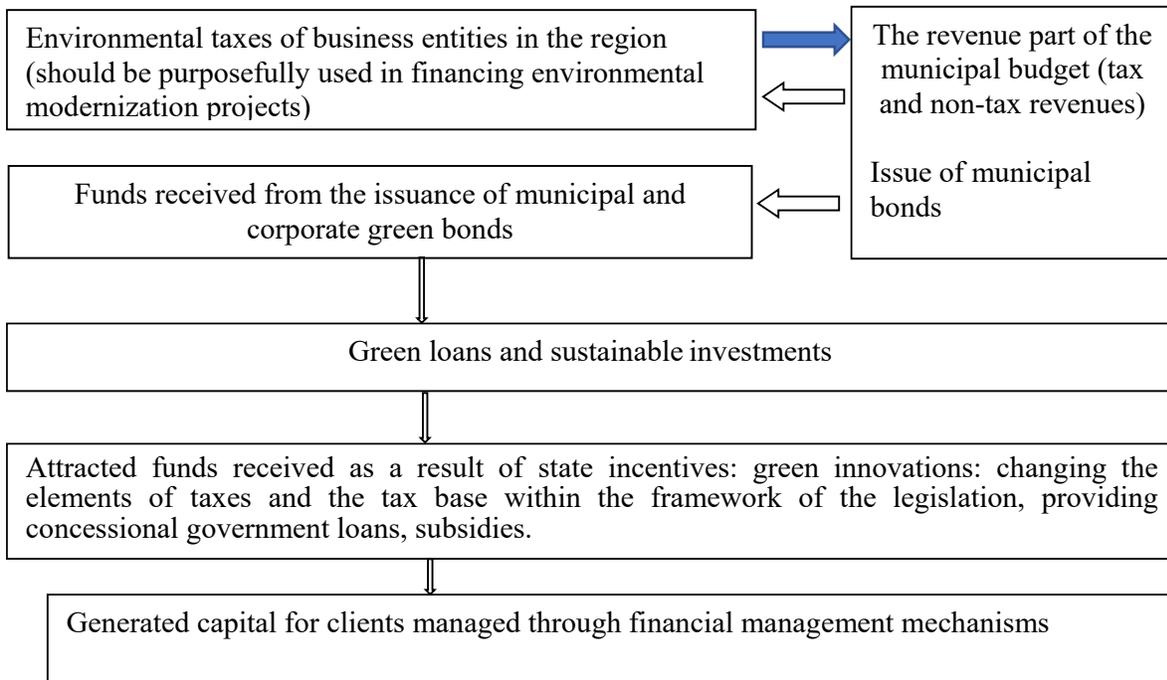


Fig.1. Organization of the activities of the financial services outsourcer for the formation of capital for a business entity carrying out environmental modernization.

To study the further transformation of F&A services, the authors suggest dividing service customers into several groups:

The first is business entities that transfer financial management to an outsourcer, incl. financial Accounting. These are business entities, mainly SMEs – participants in the regional economy – taxpayers to the local budget. Local authorities (tax authorities, department of finance) can carry out state incentives for the development of certain industries: determine the list and rates of certain local taxes, fees and payments within the limits permitted by law; provide soft loans; subsidies.

The second group is large business entities that, in addition to all of the above, need outsourcing services to effectively attract additional financial instruments for the development of their activities, including environmental ones. This work of an outsourcer is connected with financial markets, insurers, investors, municipal budgets.

The third group of financial and tax outsourcing clients are budgets of different levels. Services provided by F&A are: optimization of budget revenues by applying various methods of predictive analysis;

monitoring of receipts and identification of significant and insignificant receipts in order to change the elements of taxes within the framework of the legislation; development of proposals for the formation of fiscal policy; and attracting financial instruments, including tools for working with capital to increase the revenue side of budgets. The use of financial outsourcing services to form a fund, including one aimed at preventing or eliminating the consequences of environmental man-made disasters in a certain region, etc.

The fourth group of clients are business entities of certain industries, such as ferrous metallurgy, for which financial outsourcing services are provided by an internal financial outsourcing center.

The fifth group of clients of financial outsourcing services are enterprises that develop innovative technologies, environmental modernization technologies, the implementation of which requires financial outsourcing services due to the need for efficient formation and efficient use of financial resources, by attracting constantly developing specific financial instruments and financial sources in the financial market.

For each group, it is required to search and justify the use of certain financial instruments and management mechanisms carried out by the specialists of the financial outsourcer. As part of the mixed capital, we considered own and borrowed capital (investments), and it was also proposed to take into account the attracted capital, the concept and essence of which was clarified.

The outsourcer balances and optimizes the revenue and expenditure side of the local budgets of the regions. There are tax elements that can be used when managing the significance of budget revenues: mandatory (taxpayer, object of taxation, tax base; tax period; tax rate; tax calculation procedure; tax payment procedure; tax payment deadlines);

optional (benefits); additional (tax carrier; tax subject; tax source; tax scale; tax unit; tax salary; tax calculation; tax calculation submission deadline; tax recipient).

The financial outsourcer forms a mixed capital for the development of clean technologies in the region (defines its own financial resources; searches for financial instruments and attracts borrowed financial sources; optimizes the elements of taxes and manages the revenue side of the local budget in order to identify financial resources to send to "polluters"). The transformation of the services of financial outsourcing services in the organization of relations between participants in the development of clean technologies in the region is shown in Figure 2.

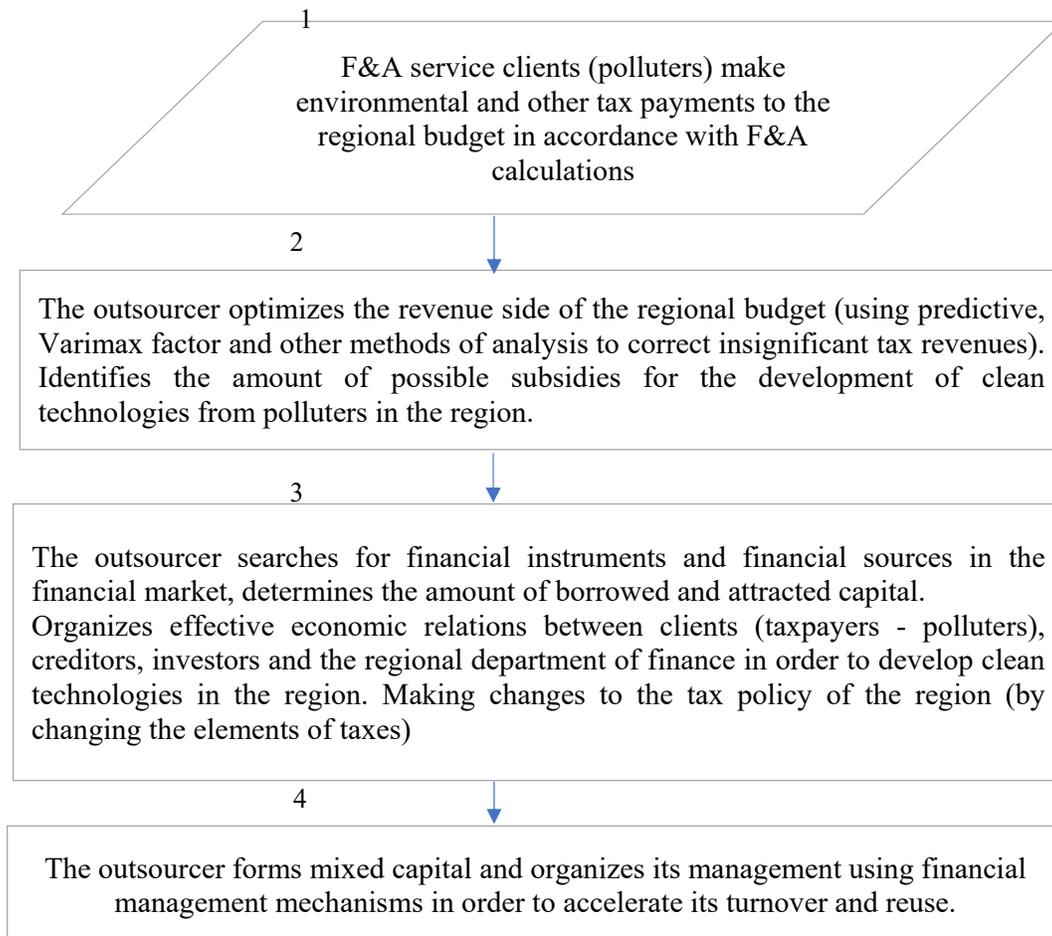


Fig. 2. Transformation of the services of financial outsourcing services in the organization of relations between participants in the development of clean technologies in the region.

Results.

The authors proposed the use of methods for the complex analysis of academic materials from the international database Scopus or Web of Science, including patents. To obtain data as of December 31, 2021, a formalized forecasting method was used based on the available information about the objects of forecasting and

an analysis of the history of their development (green finance and green bonds) for the period 2014-2021. To build predictive models, a common method of advanced forecasting was used: the publication method, based on an analysis of the content and dynamics of publications (Figure 3).

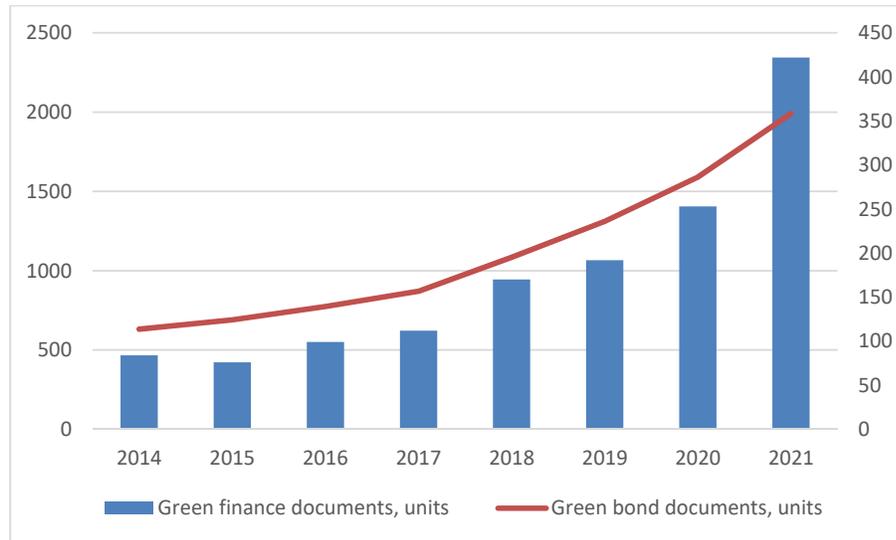


Fig. 3. Distribution of green finance documents and green bonds by years 2014-2021, units.
 Source: based on Elsevier (2022), Clarivate Analytics (2022).

The dynamics of green finance, green bonds, and green bond-related patents are explosive (Table 2). According to Table 2, there is a significant increase in the growth rate of

documents from 2021 to 2014: "Green finance" (555.3%); "green bonds" (215.1%); patents related to green bonds (23.9%).

Table 2. Dynamics of green finance, green bonds and green bond-related patents, units.

	2014	2015	2016	2017	2018	2019	2020	2021	Growth rate 2021/2014	Rate of increase 2021/2014
Green finance documents	84	76	99	112	170	192	253	422	555,3%	455,3%
Green bond documents	632	690	774	870	1085	1311	1590	1991	315,1%	215,1%
Patents	29435	30165	31451	33041	33370	35418	36736	36488	123,9%	23,9%

Source: based on Elsevier (2022), Clarivate Analytics (2022).

The list of branches of knowledge, organizations, sponsors involved in the development of the theory and practice of

"green" finance management is presented in Table 3.

Table 3. Distribution of "green finance" documents.

Distribution by organizations that conducted the study		Distribution by branches of knowledge	
Jiangsu University	29	Environmental Science	1100
Southwestern University of Finance and Economics	27	Social Sciences	792
Chinese Academy of Sciences (27)	27	Economics, Econometrics and Finance	729
Hong Kong Polytechnic University	25	Energy	653
Tokai University	24	Business, Management and Accounting	643
Country Country/territory		Country Country/territory	
China	903	Australia	112
United States	368	Italy	108
United Kingdom	314	Malaysia	95
Germany	132	Pakistan	85
India	117	France	80
Distribution by organizations providing funding			
National Natural Science Foundation of China		211	
Philosophy and Social Sciences		110	
Fundamental Research Funds for the Central Universities		41	
Ministry of Education of the People's Republic of China		40	
National Office for Philosophy and Social Sciences		110	
Fundamental Research Funds for the Central Universities		41	
European Commission		31	
Horizon 2020 Framework Programme		23	
Economic and Social Research Council		19	
National Science Foundation		19	
China Postdoctoral Science Foundation		17	

Source: based on Elsevier (2022), Clarivate Analytics (2022).

According to bibliometric studies and reports of the authors (Cortellini, Panetta, 2021) It is revealed that the "drive" of the financial market is a financial instrument - "green bonds". The distribution of documents by years is shown

in Figure 4. The growth of the financial instrument ("green bonds") is carried out exponentially. Along with green bonds, there is an increase in patents associated with green bonds (Figure 4).

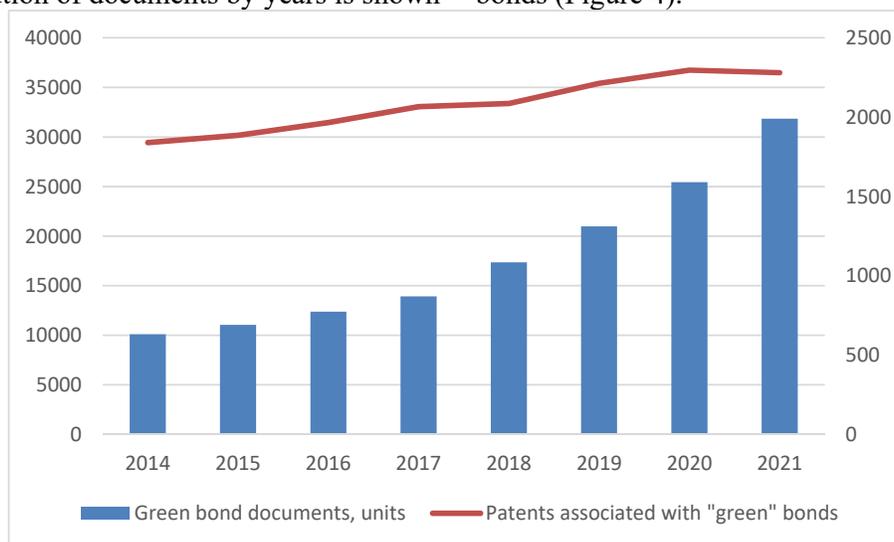


Fig. 4. Growth dynamics of financial instruments "green" bonds (green AND bonds), patents that are associated with green bond, units.

Source: based on Elsevier (2022), Clarivate Analytics (2022).

Documents devoted to the description of financial instruments (green bonds) are presented in Table 4. As for the field of knowledge, it is mainly chemical sciences or engineering solutions in the field of chemistry. This direction is especially in need of

sustainable investment, which is provided by various green bonds. It should be noted that engineering solutions protected by patents are also developing thanks to green bonds (Table 4).

Table 4. Distribution of the results of documents (financial instruments and "green bonds").

Branch of knowledge		Branch of knowledge	
Chemistry	8837	Engineering	2421
Chemical Engineering	4194	Environmental Science	1922
Materials Science	5049	Energy	1183
Biochemistry, Genetics and Molecular Biology	3331	Pharmacology, Toxicology and Pharmaceutics	903
Physics and Astronomy	2989	Agricultural and Biological Sciences	754
Publication sources		Publication sources	
Journal Of The American Chemical Society	285	Angewandte Chemie International Edition	216
Inorganic Chemistry	246	New Journal Of Chemistry	195
Rsc Advances	232	Journal Of Molecular Liquids	158
ACS Sustainable Chemistry And Engineering	231	International Journal Of Biological Macromolecules	153
Green Chemistry	225	Chemistry A European Journal	141
Funding Sponsors		Funding Sponsors	
Ministry of Education China	766	CNRS Centre National de la Recherche Scientifique	247
Chinese Academy of Sciences	666	University of Chinese Academy of Sciences	231
Country/territory		Country/territory	
China	5276	Iran	669
United States	2820	France	610
India	1849	Italy	509
Germany	981	South Korea	467
Japan	940	Spain	441
United Kingdom	702	Canada	418
Funding Sponsor		Funding Sponsor	
National Natural Science Foundation of China	2991	National Institute of General Medical Sciences	229
National Key Research and Development Program of China	390	National Institutes of Health	216
National Science Foundation	389	Department of Science and Technology, Ministry of Science and Technology, India	187
Fundamental Research Funds for the Central Universities	387	National Research Foundation of Korea	182
Japan Society for the Promotion of Science	311	Deutsche Forschungsgemeinschaft	170
China Postdoctoral Science Foundation	236	Conselho Nacional de Desenvolvimento Científico e Tecnológico	155
Council of Scientific and Industrial Research, India	233	U.S. Department of Energy	140

Source: based on Elsevier (2022), Clarivate Analytics (2022).

The most active country in the study of financial instruments called "green bonds" is China (Table 4), where the financing sponsor is the National Natural Science Foundation of

China. The largest number of green bond patents were issued by the United States Patent and Trademark Office and the World Intellectual Property Organization (Table 5).

Table 5. Distribution of Green Bond Patents by Patent Office.

United States Patent &	391421	World Intellectual Property Organization	38295
Japan Patent Office	176756	United Kingdom Intellectual Property Office	9333
European Patent Office	50459		
Patent offices that issued patents in 2022 in the direction of "green" bonds			
United States Patent & Trademark Office	21914	European Patent Office	2417
Japan Patent Office	3721	United Kingdom Intellectual Property Office	123
World Intellectual Property	2492		

Source: based on Elsevier (2022), Clarivate Analytics (2022).

Green bonds were raised for the development and patenting of engineering solutions in the field of greening, which were most issued by the US Patent Office (39,1421) and the Japan Patent Office (17,675 units) for the study period (Table 5).

Such a number of engineering patents, brought to patenting by attracting investments and other financial instruments, indirectly indicates that you will have to pay both for the use of patents and for the use of the green bond mechanism. It is possible for the country itself to protect itself with its own patents in this area, but this requires more thorough research and additional funding.

Additional documents were also looked at, these are documents retrieved from the list of

Scopus document links, but not directly available in the Scopus database because they are not indexed by Scopus. There were 1,906 results for additional documents for the keywords: (green AND bonds). Thus, "green" bonds are the most demanded financial instrument in the financial market. F&A specialists arrange for their clients, especially SMEs in the region, the issuance of these "green" or climate bonds, search for environmentally responsible investors, or investors who purchase bonds for portfolio diversification, for example with fixed bonds.

Data on documents with the strongest connection in the direction of "green" bonds among the supporting documents are presented in Table 6.

Table 6. Distribution of results of supplementary papers with the strongest link Green Bonds.

Sources		Sources	
Financial Times	25	Green Bonds	8
Climate Bonds Initiative	20	Reuters	7
Environmental Finance	17	J Chem Soc	6
Green Chem	12	Journal Of Risk And Financial Management	6
Green Left Weekly	11	Bloomberg	5

Source: based on Elsevier (2022), Clarivate Analytics (2022).

In more detail, a study of “additional” documents on the financial instrument - green bonds showed the following that green bonds are used to invest in renewable energy sources in Latin America and the Caribbean, but in addition, the green bond market is entering into a new era in the face of oil price fluctuations. Green bonds and dynamic causation volatility are side effects and implications for portfolio management, this is presented in a study (Tolliver, Keeley, Managi, 2020).

There is information about upcoming green bond issues. The results of the study show that green bonds are a suitable tool to promote green energy projects and significantly reduce CO₂ emissions (Cortellini, Panetta, 2021).

Conclusions.

Financial outsourcing services are confirmed to consist in the effective management of economic relations arising from the formation and use of financial resources (funds). Financial outsourcing services are evolving in tandem with the ongoing development of the financial market and the emergence of innovative financial instruments, financial technologies, mechanisms, and new client groups. The study made it possible to form a methodology for studying the financial market and financial instruments, which consists in the use of bibliometric, predictive, and other methods of analysis that allow timely identification of innovative financial instruments, their development trends, empirical data on their significance, sources of financing, scale, models, and trends in the development of economic relations arising in the process of "green" modernization of the production of goods and services. The following classification of client groups for financial outsourcing services is proposed:

- 1) business entities that transfer financial management to an outsourcer, incl. financial Accounting;
- 2) large business entities that attract additional financial instruments for the development of their activities, including environmental ones;
- 3) budgets of different levels;
- 4) business entities of certain industries,

- for example, ferrous metallurgy, for them, financial outsourcing services are provided by an internal financial outsourcing center;
- 5) enterprises engaged in the development of innovative technologies, environmental modernization technologies.

For each group, it is required to search and justify the use of certain financial instruments and management mechanisms carried out by the outsourcer.

It was revealed that in order to carry out activities aimed at improving the ecology of the regions, there is a need to effectively form a mixed capital aimed at the development and implementation of environmental modernization measures, not only by large enterprises but also by small and medium-sized businesses that are engaged in green engineering innovations. When providing these services, the outsourcer acts as an intermediary, organizing effective economic relations between the participants (clients, investors, or creditors) and the local finance department in order to effectively attract and use finance, including green finance. Mixed capital is effectively made up of own and borrowed (investment) capital; the possibility of using borrowed capital is being explored. The outsourcer provides management of mixed capital using financial management mechanisms, accelerating its turnover and reuse. For this purpose, the possibility of using "green" bonds, a change in fiscal policy, and other financial instruments is being considered. It was revealed that in the green bond market, it is extremely important to track the fulfillment of the requirements of the target investment; this can be provided by the blockchain system in the future, which requires additional research.

A hypothesis is proposed for the formation of a regional environmental financial system, the infrastructure of which includes a financial services outsourcer that organizes effective economic relations among the links of the financial system: service clients that develop or implement green engineering innovations; creditors; investors; and a local finance department.

REFERENCES

- Andone, I.I. (2010). Outsourcing the Business Services. *Informatica Economica*, 14, 165-170.
- Buckley, P. J., Munjal, S., & Requejo, I. (2022). How does offshore outsourcing of knowledge-intensive activities affect the exports and financial performance of emerging market firms? *Journal of International Business Studies*, 53(9), 1971–1996. <https://doi.org/10.1057/s41267-022-00511-z>
- Clarivate Analytics (2022). Web of Science: Summary of Coverage. Retrieved on March 3, 2022. <https://clarivate.libguides.com/home>
- Coase, R.H. (1937). The Nature of the Firm. *Economica*, 4, 386-405. <https://doi.org/10.1111/j.1468-0335.1937.tb00002.x>
- Cortellini, G., & Panetta, I. C. (2021). Green bond: A systematic literature review for future research agendas. *Journal of Risk and Financial Management*, 14(12), 589. <https://doi.org/10.3390/jrfm14120589>
- Danna, M. (2014). Domestic outsourcing: A key component in successful reshoring. *Solid state Technology*, 40-42
- Elsevier (2022). Scopus: Content Coverage Guide. Retrived on July 13, 2022. <https://www.elsevier.com/solutions/scopus/how-scopus-works/content>
- Farrell D, Laboissière M, Pascal R, Rosenfeld J, De Segundo C, & Stürze S. (2005). The Emerging Global Labor Market: Part I—the demand for offshore talent in services. McKinsey Global Institute, McKinsey & Company.
- Gbani, E. (2013). Diaspora and Outsourcing. Evidence from oDesk and India. Policy Reseach Working Paper: The World Bank.
- Gordon, R. H., & Varian, H. R. (1989). Nber working paper series Taxation of asset income in the presence of a world securities market. *International Economics, Journal of International Economics*, 26, 205-226.
- Government of Germany. (2021). Green finance. <http://www.greengrowthknowledge.org>
- Harberger, A. (1990). Principles of taxation applied to developing countries: What have we learned. *World tax reform: Case studies of developed and developing countries*-San Francisco: ICS Press, 25-46.
- International Financial Development Club. (2013). Green finance. <https://www.idfc.org>
- Kalendzhyan, S. (2002). Workshop on delegation of authority and responsibility. MELAP.
- Kaplan, R. S. & Bruns, W. (1987). *Accounting and Management: A Field Study Perspective*. Harvard Business School Press.
- Koval, V., Laktionova, O., Atstāja, D., Grasis, J., Lomachynska, I., & Shchur, R. (2022). Green financial instruments of cleaner production technologies. *Sustainability*, 14(17), 10536. <https://doi.org/10.3390/su141710536>
- Krell, E. (2007). Outsourcing the finance and accounting functions. *Cimaglobal.com*.
- Laktionova, O., Harbar, Z., Melikhov, A., Slobodianiuk, O., Gevko, V., and Desiatskyi, S. (2021). Financing the greening of enterprises in industrial regions of Ukraine in the context of sustainable development. *Management Theory and Studies for Rural Business and Infrastructure Development*, 43(4), 574–584. <https://doi.org/10.15544/mts.2021.52>
- Li, E.-L. (2014). Economic influence analysis of offshore outsourcing based on host country's view. *International Journal of U- and e- Service Science and Technology*, 8(3), 63–72. <https://doi.org/10.14257/ijunesst.2014.7.3.07>
- Liang, Y. (2021). Impact of financial development on outsourcing and aggregate productivity. *Journal of Development Economics*, 154(102770), 102770. <https://doi.org/10.1016/j.jdeveco.2021.102770>
- Lok, K. L., Opoku, A., & Baldry, D. (2018). Design of sustainable outsourcing services for facilities management: critical success factors. *Sustainability*, 10(7), 2292.
- Markowits, Harry M. (1952). Portfolio Selection. *Journal of Finance*, 7, 71-91.

May, M. (2008). *Business Process Management: Integration in a web-enabled environment*. Pearson FT Executive Briefing.

May, M. (2005). *Transforming the Finance Function. Adding company-wide value in a tech-tax-driven environment*. Second Edition.

Miller, J. (2017). Outsourcing review: Contract manufacturing through the years. *Pharmaceutical Technology Europe*, 7, 13 – 14.

Modigliani, F. (1958) Cost of Capital, Corporation Finance and the Theory of Investment. *The American Economic Review*, 48, 261-297.

Morcillo García J. (2022). Analysis and discussion of financial outsourcing case studies in the pharmaceutical industry, *Dirección y Organización*, (76), 13–24. <https://doi.org/10.37610/dyo.v0i76.615>

Mubako, G. (2019). Internal audit outsourcing: A literature synthesis and future directions. *Australian Accounting Review*, 29(3), 532-545.

Pavaloaia, A. (2010). University of Iasi, Faculty of Economics and Business Administration *Outsourcing the Business Services Informatica Economic*, 14, 160-162.

People's Bank of China. (2015). Green finance. <http://unepinquiry.org>

Reza-Gharehbagh, R., Asian, S., Hafezalkotob, A., & Wei, C. (2021). Reframing supply chain finance in an era of reglobalization: On the value of multi-sided crowdfunding platforms. *Transportation Research Part E: Logistics and Transportation Review*, 149, 102298.

Stiglitz, J. (2007). *Making Globalization Work*. W. W. Norton & Company Ltd.

The Global ISG Outsourcing Index (2021). <http://www.isg-one.com/web/research-insights/isg-outsourcing-index>

Tolliver, C., Keeley, A. R., & Managi, S. (2020). Policy targets behind green bonds for renewable energy: Do climate commitments matter? *Technological Forecasting and Social Change*, 157, 120051.

UNEP (2016). *Inquiry into the Design of a Sustainable Financial System*. <https://wedocs.unep.org>

Wilson, A., & Brown, D. (2007). *The Black Book of Outsourcing*. John Wiley & Sons, New Jersey.