



## FINANCIAL DIMENSIONS OF HEALTHCARE PROVISION UNDER SOCIAL SECURITY COORDINATION: EMPIRICAL EVIDENCE FROM BULGARIA (2018–2024)\*

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### ABSTRACT

*This study examines the provision of healthcare under the rules on the coordination of social security systems, focusing on their application in Bulgaria on the basis of empirical data from the National Health Insurance Fund (NHIF) for the period 2018–2024. The analysis concentrates on the financial and institutional dimensions of coordination in the context of the free movement of insured persons within the European Union. Planned treatment and the application of Directive 2011/24/EU are explicitly excluded from the scope of the study.*

*The central argument is that the financial flows generated within the coordination mechanism—particularly inter-institutional payments and reimbursements—constitute a key empirical indicator of the functioning of the national health insurance system in a cross-border context. These flows reflect not only the intensity of healthcare utilisation across borders, but also reveal structural characteristics and asymmetries within the system. The findings demonstrate that healthcare provision under the coordination rules forms a distinct and financially significant segment of NHIF activity, characterised by internal differentiation, temporal discrepancies between the incurrence and settlement of expenditures, and a high degree of concentration with respect to a limited number of countries.*

*The study is structured into four main parts. The first part outlines the normative and institutional framework of coordination, with particular emphasis on Regulation (EC) No 883/2004 and Regulation (EC) No 987/2009, as well as the role of the NHIF as the competent institution. The second part presents the methodology and data sources. The third part provides an*

\* The author discloses the use of ChatGPT exclusively as an auxiliary linguistic tool for translation and linguistic refinement, including ensuring terminological consistency. The tool was not used to generate substantive content, legal analysis, or conclusions, all of which remain the sole responsibility of the author.

*empirical analysis of the main financial flows, including healthcare provided in Bulgaria to persons insured in other Member States, incoming and outgoing inter-institutional reimbursement flows, and reimbursements of costs to insured persons. The fourth part discusses the results and identifies the main trends.*

*Methodologically, the study employs a combination of complementary approaches, including document analysis, descriptive statistics, and comparative analysis over time, enabling the identification of both short-term fluctuations and more persistent structural patterns.*

*The conclusion argues that the coordination mechanism should not be viewed solely as a technical system for the financial settlement of expenditures between institutions, but as an essential guarantee for the effective exercise of the right to free movement. By shifting the organisational and financial burden onto national institutions, access to healthcare is ensured without direct financial impact on insured persons, thereby underscoring the role of coordination as a key instrument for the effective protection of social rights in a cross-border context.*

**Keywords:** *Cross-border healthcare, Healthcare expenditure, health insurance coverage, Free movement of persons, Social security coordination*

## 1. INTRODUCTION

This study assesses the implementation of social security coordination rules within health insurance frameworks by analysing their generated financial flows. In the context of increasing cross-border mobility within the European Union, these rules play a key role in ensuring access to healthcare outside the competent Member State, while at the same time regulating the allocation of the financial burden among national systems.

The coordination mechanism manifests itself through several interrelated financial flows: expenditure on healthcare provided in one state to persons insured in another; payments of claims for treatment received abroad; inter-institutional reimbursements; as well as reimbursements of costs to insured persons themselves. The interaction between these flows forms the overall financial logic of coordination and reveals the link between the mobility of persons and the subsequent settlement of healthcare-related expenditures.

The aim of the study is to analyse the dynamics, structure, and interrelationship of these flows over the period 2018–2024. The analysis is based on data from official annual reports and employs descriptive statistics and a comparative approach over time, allowing both short-term variations and more stable structural patterns to be identified.

The central thesis is that the coordination mechanism should be understood not only as an instrument for the allocation of costs between institutions, but also as an essential guarantee for the exercise of the right to free movement. It ensures access to healthcare without direct financial burden on insured persons, while

the organisational and financial responsibility is borne by national systems. It is precisely this function that gives coordination both social and economic significance within the European Union. The significance of this coordination becomes particularly evident in periods of public health crises and other cross-border challenges, when the need for effective institutional cooperation and guaranteed access to healthcare acquires even greater importance<sup>1</sup>.

## 2. COORDINATION OF SOCIAL SECURITY SYSTEMS: NORMATIVE AND INSTITUTIONAL FRAMEWORK

In contemporary society, social security is understood as an integrated legal and institutional mechanism that ensures protection against social risks<sup>2</sup> through a combination of cash benefits and access to services and goods<sup>3</sup>, including health-care. Its functioning is based both on a legal framework defining the rights and obligations of insured persons and on an institutional structure through which these relations are administered within the public domain.

The provision of healthcare constitutes a core component of the social security system, the organisation and financing of which are primarily governed by national law. However, the development of the internal market and the guaranteed free movement of persons within the European Union have strengthened the cross-border dimension of the exercise of social rights, thereby necessitating coordination between different national insurance schemes. In this context, the coordination mechanism of social security systems has emerged, aiming to ensure the effective exercise of the rights of insured persons when moving between Member States, without undermining the autonomy of national systems.<sup>4</sup>

Coordination stems directly from European Union law, which requires the protection of social security rights for persons exercising their right to free movement<sup>5</sup>.

<sup>1</sup> Đurić, S.; Lalatović, B., *Solidarity Check in Times of COVID-19. Analysis of the EU Approach Towards Its Closest Neighbours with a Special Focus on Montenegro*, in: Petrašević, T.; Duić, D.; Novokmet, A. (eds.), *EU and Comparative Law Issues and Challenges Series (ECLIC)*, Vol. 5, 2021, pp. 177–178, Available at: [<https://doi.org/10.25234/eclic/18303>], Accessed 3 April 2026.

<sup>2</sup> Rayanova, K., *Globalization of Contemporary International Political Processes*, Proceedings of University of Ruse, Vol. 60, Book 7.2, 2021, pp. 25–28, Available at: [<https://conf.uni-ruse.bg/bg/docs/cp21/7.2/7.2-4.pdf>], Accessed 2 April 2026.

<sup>3</sup> Eichenhofer, E., *Social Security as a Human Right*, in: Pennings, F.; Vonk, G. (eds.), *Research Handbook on European Social Security Law*, Edward Elgar Publishing, Cheltenham, 2015, pp. 3–31, Available at: [<https://doi.org/10.4337/9781782547334>], Accessed 30 March 2026.

<sup>4</sup> Verschueren, H., *The role and limits of the European social security coordination in guaranteeing migrant persons social benefits*, *European Journal of Social Security*, Vol. 22, No. 4, 2020, pp. 390 – 402.

<sup>5</sup> Cornelissen, R.; De Wispelaere, F., *Sixty Years of European Social Security Coordination: Achievements, Controversies and Challenges*, in: *Social Policy in the European Union 1999–2019: The Long and Winding Road*, ETUI, Brussels, 2019.

Its function is to prevent the adverse effects of the unilateral application of national legislation in cross-border situations by ensuring continuity and effectiveness of social protection. The current legal framework of coordination is primarily established by Regulation (EC) No 883/2004 and Regulation (EC) No 987/2009, which replaced the earlier Regulations (EEC) No 1408/71 and No 574/72. The new regulations have been applicable since 1 May 2010 and have subsequently been extended to the European Economic Area and Switzerland.

Regulation (EC) No 883/2004 constitutes the principal legal instrument defining the material and personal scope of coordination and establishing the principles governing the exercise of social rights in a cross-border context. Its purpose is not to harmonise national systems but to ensure their coordinated application through rules that prevent the loss or duplication of rights and determine the applicable legislation. Regulation (EC) No 987/2009 complements this framework by laying down the procedural and administrative mechanisms for its implementation. Together, the two regulations form the so-called “modernised coordination”, aimed at enhancing the efficiency and transparency of the mechanism through institutional cooperation, information exchange, and coordination among competent authorities. Of particular relevance to this study are the provisions of Regulation (EC) No 883/2004 concerning entitlement to healthcare during residence (Article 17) and during a temporary stay (Article 19), as well as the provisions on the reimbursement of costs between institutions (Article 35), supplemented by the procedural rules of Regulation (EC) No 987/2009 (Articles 62–69). According to Article 1(q) of Regulation (EC) No 883/2004, the competent institution is the institution responsible, under the applicable legislation, for providing benefits. In the context examined, the National Health Insurance Fund (NHIF) performs the role of the competent institution in the application of the coordination rules.

The NHIF was established under the Health Insurance Act<sup>6</sup> (Article 6(1)<sup>7</sup>) as a legal entity with its seat in Sofia. Its structure comprises a central administration and regional health insurance funds. The Act defines its permissible scope of activity—namely, the administration of compulsory health insurance—and explicitly prohibits it from owning healthcare establishments and pharmacies<sup>8</sup>.

Within the coordination mechanism, the NHIF is registered in the Electronic Exchange of Social Security Information (EESSI)<sup>9</sup> system as a “competent insti-

<sup>6</sup> Promulgated in the State Gazette, No. 70 of 19 June 1998.

<sup>7</sup> The start of the operation of the National Health Insurance Fund is considered to be 15 March 1999.

<sup>8</sup> For more on the National Health Insurance Fund, see Radeva, M., *Principles of Mandatory Health Insurance*, Academic Publishing House “University of Ruse”, Ruse, 2025, pp. 131–196.

<sup>9</sup> Electronic Exchange of Social Security Information (EESSI), Available at: [<https://ec.europa.eu/social/social-security-directory/pai/select-country/language/bg>], Accessed 2 April 2026.

tution”, an “institution of place of residence/stay”, and a “liaison body”. In this capacity, it applies the provisions on benefits in kind in cases of sickness, ensuring the provision of healthcare in a cross-border context.

As a competent institution, the NHIF issues certification documents for cross-border healthcare, including the European Health Insurance Card (EHIC), provisional replacement certificates, and portable documents S1 and S2. Through the EESSI system, structured electronic documents are exchanged, serving as the basis for the settlement of financial relations between institutions.

Financial settlements between institutions are primarily carried out on the basis of actual costs in accordance with Article 35 of Regulation (EC) No 883/2004 and Articles 63–65 of Regulation (EC) No 987/2009. An exception is provided for certain Member States, where reimbursement may be based on fixed amounts when national administrative structures do not allow the application of actual costs. However, this regime is limited both in terms of the Member States concerned and the categories of persons to whom it applies.

Bulgaria is not among the Member States applying fixed amounts; therefore, the NHIF fully applies the principle of reimbursement of actual costs. In its capacity as an institution of the place of stay or residence, it is entitled to claim reimbursement from the competent institutions of other Member States on the basis of the issued certification documents.

In this context, the normative and institutional framework not only defines the rights of insured persons and the obligations of institutions but also establishes the framework within which the financial flows related to the provision of healthcare in cross-border situations are generated and recorded. These mechanisms are reflected in the reporting activity of the NHIF and determine the choice of data and methods used in this study.

### **3. METHODOLOGY AND DATA SOURCES**

This study is based on empirical data obtained from the National Health Insurance Fund (NHIF) in its capacity as the competent institution responsible for the application of the rules on the coordination of social security systems. In logical continuity with the previously outlined normative and institutional framework, the methodological approach is directly linked to the established mechanisms of reporting and control governing NHIF activity, which determine both the content and the structure of the data used.

Pursuant to the Health Insurance Act, the NHIF is required to prepare an annual report on budget execution and an activity report, which must be submitted to

the National Assembly through the Council of Ministers no later than 30 June of the following year (Article 30 of the Health Insurance Act). These reports constitute the primary official source of information on the financial and functional performance of compulsory health insurance, including the application of the coordination rules.

Despite the existence of a statutory obligation to prepare and submit these reports, the current legal framework does not contain an explicit requirement for their public availability. This limits the transparency of NHIF activities and restricts access to information of significant public interest. Although the resolutions of the National Assembly concerning the approval of these reports are published in the State Gazette, the reports themselves are not systematically and consistently made publicly available.

NHIF practice indicates partial publication of annual activity reports on the institution's website, but without consistency and without full coverage of all years. At the same time, annual budget execution reports are generally not publicly accessible. This fragmentation of publicly available information creates significant constraints for conducting a comprehensive empirical analysis.

Within the framework of this study, these limitations were overcome through the use of the legal mechanism for access to public information. In accordance with the Access to Public Information Act, the missing annual activity reports of the NHIF, as well as the budget execution reports for the relevant period, were requested and obtained. This ensured a complete and comparable dataset of official institutional data, enabling a consistent analysis of financial flows within the coordination mechanism.

The study covers the period 2018–2024, which allows for the examination of the dynamics of the application of coordination rules over time and the identification of both stable trends and fluctuations across the different components of the mechanism.

Methodologically, the study relies on a combination of complementary approaches. First, a document analysis of annual reports is conducted, examining their content, structure, and reporting methodology. Second, descriptive statistical methods are used to systematise and quantitatively present the main financial indicators. Third, a comparative analysis over time is carried out, allowing trends, changes, and structural dependencies in the development of the examined financial flows to be identified.

For the purposes of the study, the empirical material is structured according to the main areas of application of the coordination mechanism. These include: health-

care provided in Bulgaria to persons insured in other Member States; inter-institutional reimbursements (both incoming and outgoing flows), including the dynamics of outstanding claims; as well as the reimbursement of costs by the NHIF to insured persons. This structure reflects the functional logic of coordination and allows for a consistent analysis of its financial dimensions.

The scope of the study is limited to healthcare provided under the rules on the coordination of social security systems, explicitly excluding planned treatment and the application of Directive 2011/24/EU. This distinction is necessary in view of the differences in the legal framework and financial mechanisms governing the two regimes.

Certain limitations of the study should also be noted. The data used are aggregated institutional data, which do not allow for analysis at the level of individual cases, and their structure is shaped by the reporting practices of the NHIF. Nevertheless, the use of official sources ensures a high degree of reliability and enables the formulation of well-founded conclusions regarding the functioning of the coordination mechanism from a Bulgarian perspective.

#### **4. EMPIRICAL ANALYSIS**

The empirical analysis traces the dynamics and structure of the main financial flows generated through the application of the rules on the coordination of social security systems over the period 2018–2024. The aggregated annual data indicate that a multi-component financial flow is formed within this mechanism. The share of these expenditures in total NHIF health insurance payments varies over the period under review, ranging from 1.9% in 2018 to 6.0% in 2019, followed by a lower range between 2.0% and 2.7% during 2020–2023, and declining to 0.9% in 2024.

To provide a clearer understanding of the scale of these processes in absolute terms, it should be noted that in 2024 health insurance revenues in the NHIF budget amounted to approximately EUR<sup>10</sup> 4,137,000 thousand, while total payments for healthcare provided under the coordination rules amounted to approximately EUR 38,970 thousand. Compared to 2023, this represents a decrease of approximately EUR 26,200 thousand, or 40.2%. This decline should be interpreted with caution, as it may reflect specific features of the settlement process and the time

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<sup>10</sup> As of 1 January 2026, the Republic of Bulgaria adopts the euro as its official currency. Since 1 January 1999, the Bulgarian lev has been pegged to the euro at a fixed exchange rate of 1 euro = 1.95583 leva. All values presented in this study have been converted by the author at this fixed rate in order to facilitate readability and comparability of the data.

lag between the incurrence and settlement of expenditures, rather than a structural change in the intensity of healthcare utilisation under the coordination rules.

The data for the period under review reveal a variable pattern of expenditure that does not follow a linear trend, but is characterised by fluctuations over time while simultaneously indicating growth in certain components of the coordination mechanism. These developments should be interpreted cautiously, as they may be influenced both by the volume of cross-border mobility and by the specific features of reporting and settlement processes between institutions in individual years.

#### **4.1. Healthcare Provided in Bulgaria to Persons Insured in Other Member States**

The legal grounds for receiving healthcare outside the competent Member State are regulated by Regulation (EC) No 883/2004, which distinguishes between entitlement to benefits in kind during a temporary stay (Article 19) and during residence (Article 17). This distinction is of direct relevance to the present analysis, as it determines differences in both the scope of healthcare provided and, consequently, the nature and magnitude of the resulting expenditures. In cases of a temporary stay<sup>11</sup>, insured persons are entitled to necessary healthcare, whereas in cases of residence they benefit from the full scope of healthcare services under the legislation of the state of residence, which implies higher expenditure per person. In both situations, when healthcare is provided on the territory of the Republic of Bulgaria to persons insured in other Member States, the NHIF acts as the institution of the place of stay or residence and pays for the services provided by contracted healthcare providers. These payments constitute an initial financial outlay for the Bulgarian system, which is subsequently subject to reimbursement by the competent institution of the competent Member State.

Data for the period 2018–2024 indicate an overall upward trend in NHIF expenditure on healthcare provided in Bulgaria to persons insured in other Member States, albeit with certain fluctuations over time. The NHIF paid EUR 3,428.3 thousand in 2018, EUR 3,975.7 thousand in 2019, EUR 3,930.6 thousand in 2020, EUR 5,570.3 thousand in 2021, EUR 7,087.7 thousand in 2022, EUR 10,078.9 thousand in 2023, and EUR 14,116.1 thousand in 2024. Following relatively stable levels during 2018–2020, a consistent and accelerating increase in

<sup>11</sup> Decision No S3 of 12 June 2009 of the Administrative Commission for the Coordination of Social Security Systems on determining the benefits covered by Article 19(1) and Article 27(1) of Regulation (EC) No 883/2004 of the European Parliament and of the Council and Article 25(A)(3) of Regulation (EC) No 987/2009 of the European Parliament and of the Council, Official Journal of the European Union, C 106/40.

this expenditure is observed from 2021 onwards, with the total more than doubling over the period 2021–2024. From a broader perspective, data indicate that over the eighteen years of Bulgaria’s membership in the European Union<sup>12</sup>, NHIF expenditure on healthcare provided on the territory of the country to persons insured in other Member States has increased at an average annual growth rate of approximately 30%, according to official data from the 2024 annual report on the execution of the NHIF budget.

The structure of expenditure by legal basis for access to healthcare shows a clear predominance of necessary healthcare provided during a temporary stay under Article 19. This expenditure amounted to EUR 2,367.0 thousand in 2018, EUR 2,688.0 thousand in 2019, EUR 2,486.8 thousand in 2020, EUR 3,849.9 thousand in 2021, EUR 4,753.1 thousand in 2022, EUR 6,916.6 thousand in 2023, and EUR 9,207.6 thousand in 2024. Its share remains relatively stable, ranging between 63% and 69%, reaching 65.2% in 2024, which indicates that this category accounts for the main share of the financial burden.

At the same time, expenditure for persons falling under Article 17, who benefit from the full package of healthcare services in the state of residence, shows a steady increase. It amounted to EUR 1,068.8 thousand in 2018, EUR 1,287.0 thousand in 2019, EUR 1,461.9 thousand in 2020, EUR 1,729.2 thousand in 2021, EUR 2,386.8 thousand in 2022, EUR 3,185.0 thousand in 2023, and EUR 4,898.4 thousand in 2024. Its share increases from 31.0% to 34.7%, indicating a growing significance of residence-based cases. The reasons for this trend cannot be conclusively determined due to the lack of data on the number of persons, and it may reflect both an increase in the number of individuals falling within this category and a rise in the average expenditure per person. Planned healthcare plays a negligible role during the period under review, with its share remaining below 0.1% and having no significant impact on the overall expenditure structure.

The breakdown by country of insurance reveals a persistent concentration of expenditure in a limited number of countries. During the period 2018–2020, the United Kingdom and Germany occupy leading positions, followed by Italy and Greece. From 2021 onwards, Germany establishes itself as the primary source of expenditure, reaching EUR 3,700.4 thousand (36.6% of total expenditure) in 2023. This concentration is consistent with the intensity of Bulgaria’s economic and labour migration ties with these countries.

It should also be noted that the category “persons insured in other Member States” includes not only foreign nationals but also Bulgarian citizens who work and are

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<sup>12</sup> Bulgaria acceded to the European Union on 1 January 2007.

insured in other Member States. Upon returning to Bulgaria, including during summer holidays, these individuals receive healthcare under the coordination rules and fall within the analysed category. From a Bulgarian perspective, a statistical breakdown distinguishing this group from genuinely foreign nationals would be of interest. However, such an analysis cannot be carried out on the basis of the available data, which are aggregated by “competent Member State” rather than by citizenship.

The analysis of monthly activity reveals a pronounced seasonal pattern, with peaks during the summer months (July–August) in both 2023 and 2024. This dynamic is comparable to the intensity of healthcare utilisation in a cross-border context. The territorial distribution of expenditure shows a stable pattern, with the largest shares concentrated in the regional health insurance funds of Plovdiv, Sofia-City, Burgas, and Varna, which together account for over 60% of total expenditure (60.9% in 2024). This distribution reflects both the concentration of healthcare facilities in major urban centres and the role of tourist regions and areas with high mobility.

By type of healthcare, expenditure is dominated by hospital care (EUR 23,574.6 thousand, or 64.5%), followed by outpatient care (13%), other benefits in kind (8.2%), pharmaceuticals (7.6%), average costs related to residence-based cases (5.3%), and dental care (1.5%). In 2024, the structure is as follows: 85.9% hospital care, 10.6% medicinal products for outpatient treatment, and 3.5% outpatient and dental care, indicating that the financial burden is primarily driven by resource-intensive services.

On the basis of the above data, more general conclusions can be drawn regarding the structure and dynamics of this component, which are addressed in the discussion section.

#### **4.2. Financial Settlements Between Institutions Within the Coordination Framework**

Financial settlements between institutions within the coordination of social security systems constitute an essential element of its functioning, through which the reimbursement of incurred costs between Member States is effected when healthcare is provided in a cross-border context. The legal basis for these settlements is established in Article 35 of Regulation (EC) No 883/2004, according to which benefits in kind provided by the institution of one Member State on behalf of the institution of another Member State are subject to reimbursement, as well as in the provisions of Regulation (EC) No 987/2009, which govern the procedures for the submission, processing, and settlement of claims.

Inter-institutional settlements do not represent a separate component but rather a logical continuation of the right of access to healthcare under the coordination rules, ensuring its financial implementation. Within this mechanism, two main interrelated financial flows are formed: revenues received by the NHIF from foreign institutions for healthcare provided in Bulgaria, and payments made by the NHIF in response to claims from other Member States for healthcare provided abroad to persons insured in Bulgaria. These flows should be analysed in sequence.

#### **4.2.1. Reimbursement of costs to the NHIF for healthcare provided in Bulgaria to persons insured in other Member States**

NHIF expenditure on healthcare provided in Bulgaria to persons insured in other Member States is directly linked to the claims submitted by the institution to the competent foreign institutions for reimbursement. In this respect, the NHIF initially bears the cost in its capacity as the institution of the place where healthcare is provided, and subsequently establishes claims against the competent Member State of the respective person. Data for the period 2018–2024 indicate a relatively stable structure of this mechanism, accompanied by fluctuations in the volume of claims submitted, reimbursements received, and the relationship between them.

As of 1 January 2018, approximately EUR 2,967.7 thousand were due under submitted claims to 28 countries, with the largest shares attributable to the United Kingdom (32%), Germany (17.5%), Italy (17.1%), and Greece (8.1%). In 2018, the NHIF submitted claims to 33 countries amounting to EUR 3,610.2 thousand, of which 40.5% were directed to the United Kingdom. By the end of the year, reimbursements had been received from 27 countries, representing 90.2% of the outstanding claims at the beginning of the period, with inflows increasing by 144% compared to 2017. The total amount of outstanding claims as of 31 December 2018 reached EUR 3,849.1 thousand, representing an increase of 29.7% compared to the previous period.

In 2019, submitted claims amounted to EUR 3,498.2 thousand to 33 countries, with the United Kingdom (28.3%) and Germany (22.6%) holding the largest shares. Reimbursements received totalled EUR 2,641.6 thousand from 28 countries, representing 68.6% of the outstanding claims at the beginning of the year and a slight decrease of 1.3% compared to 2018. Among recovered amounts, the largest share came from the United Kingdom (28.4%), followed by Germany (19.6%) and Greece (10.0%). By the end of 2019, outstanding claims reached EUR 4,665.5 thousand, reflecting an increase of 21.2%, with the largest shares attributable to the United Kingdom (32.3%) and Germany (22.4%).

In 2020, the NHIF submitted claims amounting to EUR 2,553.2 thousand to 32 countries, with the United Kingdom (16.8%), Italy (14.5%), Germany (10.3%), and Greece (9.7%) as leading contributors. Reimbursements totalled EUR 2,542.9 thousand from 29 countries (54.5% of outstanding claims at the beginning of the year), decreasing by 3.7% compared to 2019. Among recovered amounts, Germany accounted for the largest share (30.8%), followed by the United Kingdom (20.6%) and Greece (7.0%). The total amount of outstanding claims as of 31 December 2020 reached EUR 4,667.4 thousand. The largest shares were attributable to the United Kingdom (30.6%), followed by Italy (22.3%), Germany (11.1%), and Greece (6.0%). Compared to 31 December 2019, outstanding claims increased by EUR 1.9 thousand, or 0.04%.

In 2021, a significant increase in submitted claims is observed, reaching EUR 5,403.4 thousand, with the United Kingdom (36.5%) and Germany (31.3%) accounting for the largest shares. Reimbursements rose to EUR 2,816.5 thousand (60.3% of outstanding claims at the beginning of the year), increasing by 10.8% compared to 2020. Among recovered amounts, Germany accounted for the largest share (29.1%), followed by Italy (19.5%) and the United Kingdom (13.5%). Despite this, outstanding claims increased to EUR 7,254.6 thousand. The largest shares were attributable to the United Kingdom (EUR 3,018.6 thousand; 41.6%), followed by Germany (19.2%), Italy (11.8%), and Greece (3.0%). Compared to 2020, outstanding claims increased by EUR 2,587.2 thousand, or 55.4%.

In 2022, submitted claims amounted to EUR 5,696.9 thousand, with Germany holding the largest share (31.9%). Reimbursements received totalled EUR 4,339.8 thousand (59.8% of outstanding claims at the beginning of the year), increasing by 10.8% compared to 2021. Among recovered amounts, the largest share came from the United Kingdom (39.9%), followed by Germany (21.2%) and Greece (4.8%). Outstanding claims reached EUR 8,419.1 thousand, representing an increase of 16.1%. The largest shares were attributable to the United Kingdom (30.3%), followed by Germany (27.2%), Italy (14.3%), and the Netherlands (3.7%).

In 2023, the NHIF submitted claims amounting to EUR 7,563.1 thousand, with Germany accounting for 35.3%. Reimbursements totalled EUR 6,032.7 thousand (71.7% of outstanding claims at the beginning of the year), increasing by 39.0% compared to 2022. Among recovered amounts, the largest shares were from Germany (27.18%), the United Kingdom (27.15%), and Italy (14.9%). Despite the accelerated pace of reimbursement, outstanding claims reached EUR 9,902.5 thousand (+17.6%), indicating that the accumulation had not been overcome. The largest shares were attributable to Germany (33.4%), followed by the United Kingdom (26.7%), Italy (8.7%), and the Netherlands (4.4%).

In 2024, submitted claims increased to EUR 10,243.7 thousand, with Germany accounting for 36.4%. Reimbursements received amounted to EUR 7,058.5 thousand (71.2% of outstanding claims at the beginning of the year), increasing by 17.0% compared to 2023. The largest shares of recovered amounts came from Germany (38.2%), followed by the United Kingdom (21.4%), Italy (6.8%), the Netherlands (5.8%), and Greece (5.6%).

In summary, throughout the entire period under review, a persistent gap is observed between submitted claims and reimbursements received, both in terms of volume and timing. This discrepancy leads to the accumulation of outstanding claims and reflects a structural characteristic of inter-institutional settlements, whereby the time lag between the provision of healthcare and its final financial settlement is an inherent feature of the coordination mechanism.

#### **4.2.2. NHIF Payments on Claims from Other Member States for Healthcare Provided to Bulgarian Insured Persons Abroad**

The analysis of the dynamics of NHIF payments on claims from other Member States for the period 2007–2017, corresponding to the first ten years following Bulgaria's accession to the European Union, reveals a clearly pronounced upward trend in both submitted claims and payments made, accompanied by a steady increase in outstanding liabilities. Already in the first years following Bulgaria's accession to the European Union, a gradual expansion of this financial flow can be observed, which in subsequent years develops into a marked acceleration. A characteristic feature throughout the period is that the volume of payments consistently remains below the value of incoming claims, leading to a persistent accumulation of liabilities. This dynamic reflects both the increasing cross-border mobility of Bulgarian insured persons and the limited capacity for full financial settlement of obligations within a given budgetary year.

In 2018, the NHIF made payments on claims from other Member States amounting to EUR 36,536.3 thousand, representing 97.1% of total health insurance expenditure for healthcare under the coordination rules. Compared to 2017, this constitutes an increase of EUR 7,257.0 thousand, or 24.8%. As of 1 January 2018, the NHIF owed payments to 32 countries totalling EUR 132,538.6 thousand, with the largest shares attributable to Germany (45.7%), followed by France (15.1%) and Spain (8.9%). During the year, new claims were received from 31 countries amounting to EUR 51,242.3 thousand, with Germany accounting for the largest share (51.2%), followed by Spain (9.5%) and Austria (9.2%). Of the payments made, the largest share was directed to Germany (50.3%), followed by France (14.6%) and Austria (8.9%). By type of healthcare, expenditure is dominat-

ed by hospital care (EUR 23,574.6 thousand, or 64.5%), followed by outpatient care (13%), other benefits in kind (8.2%), pharmaceuticals (7.6%), average costs for residence-based cases (5.3%), and dental care (1.5%). By legal basis, the largest share relates to cases of temporary stay (EUR 20,573.0 thousand, or 56.3%), followed by cases of residence (32.1%), while planned treatment accounts for EUR 4,225.9 thousand (11.6%). As of 31 December 2018, total outstanding liabilities reached EUR 146,159.5 thousand, with Germany (46.3%), France (12.9%), and Spain (9.6%) accounting for the largest shares. Compared to the end of 2017, this represents an increase of EUR 13,662.6 thousand, or 10.3%.

In 2019, the NHIF made payments amounting to EUR 130,976.6 thousand, representing 98.8% of total health insurance expenditure under the coordination rules. Compared to 2018, this reflects an increase of EUR 94,440.3 thousand, or 258.5%. As of 1 January 2019, outstanding liabilities totalled EUR 146,159.5 thousand to 32 countries, with Germany (46.3%), France (12.9%), and Spain (9.6%) holding the largest shares. During the year, new claims from 33 countries amounted to EUR 57,610.8 thousand, with Germany (45.4%), France (12.3%), and Spain (9.8%) as leading contributors. Payments were again predominantly directed to Germany (49.4%), followed by France (14.1%) and Austria (10.0%). Hospital care remained dominant (EUR 83,116.8 thousand, or 63.5%). By legal basis, temporary stay accounted for EUR 55,588.0 thousand (42.4%), followed by residence (40.3%). As of 31 December 2019, total liabilities declined to EUR 72,212.0 thousand, with Germany (40.3%), Spain (11.4%), and France (10.1%) accounting for the largest shares. Compared to 2018, this represents a decrease of EUR 73,947.5 thousand, or 50.6%, which can be explained by the settlement of accumulated liabilities from previous years. This conclusion is consistent with the substantial increase in payments during the year (+258.5% compared to 2018). Nevertheless, a significant volume of outstanding liabilities remained at the end of 2019, including overdue obligations amounting to EUR 5,742.6 thousand.

In 2020, NHIF payments amounted to EUR 54,509.6 thousand (97.0% of total coordination-related expenditure), representing a decrease of EUR 76,467.0 thousand, or 58.4%, compared to 2019. This reduction can be explained by the significant settlement of accumulated liabilities in the previous year. As of 1 January 2020, outstanding liabilities totalled EUR 72,212.0 thousand to 33 countries. During the year, new claims amounted to EUR 54,049.9 thousand, while payments were primarily directed to Germany (31.6%), Austria (14.4%), and France (12.5%). By 31 December 2020, total liabilities declined to EUR 70,915.0 thousand (−1.8%).

In 2021, NHIF payments increased to EUR 67,173.7 thousand (95.5%), rising by 23.3% compared to 2020. New claims totalled EUR 55,454.6 thousand, with

Germany accounting for 51.3%. Payments were again predominantly directed to Germany (62.5%). By the end of the year, total liabilities decreased to EUR 58,961.4 thousand (–16.9%).

In 2022, payments reached EUR 69,455.3 thousand (90.5%), increasing slightly by 3.4% compared to 2021. New claims totalled EUR 66,091.0 thousand. Total liabilities declined further to EUR 54,747.0 thousand (–7.1%).

In 2023, NHIF payments amounted to EUR 60,743.7 thousand (93.2%), representing a decrease of 12.5% compared to 2022. New claims totalled EUR 62,161.9 thousand. By the end of the year, total liabilities increased slightly to EUR 55,733.4 thousand (+1.8%).

In 2024, NHIF payments amounted to EUR 31,694.8 thousand (80.9%), representing a substantial decrease of EUR 29,048.9 thousand, or 44.6%, compared to 2023. As of 1 January 2024, total liabilities amounted to EUR 55,744.7 thousand. During the year, new claims were received from 34 countries, with the total number of outstanding individual records reaching 65,489, amounting to EUR 97,509.2 thousand. Payments were predominantly directed to Germany (58.2%), followed by Belgium (10.9%), Austria (9.5%), and Spain (7.8%). Hospital care remained the dominant component (55.4%), while temporary stay accounted for 39.3% and residence for 53.3% of total expenditure.

Overall, the data for the period 2018–2024 reveal a clearly dynamic pattern in NHIF payments on claims from other Member States, both in terms of their absolute value and their internal structure. This financial flow maintains a significant share in total coordination-related expenditure, while exhibiting considerable fluctuations in both incoming claims and payments made. These quantitative parameters provide the empirical basis for further analysis of the trends and factors shaping the development of this component of the coordination mechanism.

#### **4.3. Reimbursement by the NHIF of Costs Incurred by Insured Persons for Healthcare Paid During a Stay in Another State**

The reimbursement by the NHIF of costs incurred by insured persons for healthcare paid by them during a stay in another state constitutes a specific element of the application of the rules on the coordination of social security systems, in which the financial flow operates directly between the institution and the insured person. The legal basis for this mechanism derives from Article 19 of Regulation (EC) No 883/2004, which guarantees the right to necessary healthcare during a stay, as well as from Article 25 of Regulation (EC) No 987/2009, which provides

for the possibility of reimbursement where the insured person has paid for the healthcare received.

Article 25 regulates two main scenarios. The first applies where the insured person has paid all or part of the costs of benefits in kind under Article 19 of the basic regulation and the legislation of the institution of the place of stay allows for reimbursement; in such cases, the person may submit a claim to the institution of the place of stay. The second scenario applies where such reimbursement has not been requested or has not been obtained, in which case the costs are reimbursed by the competent institution.

The analysis of reimbursement by the NHIF of costs incurred by insured persons for healthcare paid during a stay in another state over the period 2018–2024 shows a relatively stable volume, but a negligible share of total payments related to the application of the coordination mechanism: 0.9% in 2018, 0.2% in 2019, 0.5% in 2020, 0.6% in 2021, 0.2% in 2022, 0.5% in 2023, and 0.5% in 2024. The low relative share of such payments may be explained by the fact that reimbursement under this procedure constitutes a subsidiary mechanism, applicable primarily in cases where healthcare has been paid for by the insured person instead of being provided directly under the coordination rules.

Throughout the period under review, a stable structural pattern can be identified in which a substantial proportion of submitted applications does not result in reimbursement. The reasons for this remain consistent over time and include the absence of valid health insurance rights at the time the healthcare was provided, incomplete or incorrect documentation, expenses falling outside the scope of the coordination regulations, as well as expenses that do not fall within the scope of benefits in kind under the legislation of the state where the treatment was provided. These factors account for the persistent discrepancy between the amounts claimed and the amounts reimbursed.

The data also reveal a clear geographical concentration of cases. Throughout the entire period, Germany stands out as the leading country both in terms of the number of applications submitted and the value of reimbursed costs, reflecting a stable pattern of cross-border healthcare consumption.

Given its limited relative share, this component does not have a significant impact on the overall financial dynamics of the coordination mechanism and is therefore not subject to further detailed discussion.

## 5. DISCUSSION

The empirical data for the period 2018–2024 show that the application of the rules on the coordination of social security systems in the field of healthcare constitutes a distinct financial segment within the activity of the NHIF. Although this segment represents a relatively limited share of total health insurance expenditure, it exhibits a clearly defined internal structure and its own dynamic. The most significant finding of the analysis is that this segment cannot be regarded as a homogeneous financial flow. The data reveal differing logics across its components—namely, expenditure on healthcare provided in Bulgaria to persons insured in other Member States, inter-institutional reimbursements to the NHIF, payments by the NHIF on claims from other Member States, and reimbursements of costs to insured persons.

The first notable feature is the asymmetry between the two main inter-institutional flows. On the one hand, NHIF expenditure on healthcare provided in Bulgaria to persons insured in other Member States shows an overall upward trend, with a marked increase after 2020, reaching EUR 14,116.1 thousand in 2024. On the other hand, reimbursements received by the NHIF in this regard grow at a considerably slower pace and remain below the value of submitted claims throughout the entire period. This indicates that the role of the NHIF as the institution of the place of stay or residence involves not only the advance financing of healthcare expenditure but also a persistent accumulation of outstanding receivables. A comparison between submitted claims and actual reimbursements demonstrates that financial settlement does not follow the timing of expenditure but is realised with a temporal lag.

The second feature is the substantially larger scale of the outgoing financial flow. Payments made by the NHIF on claims from other Member States for healthcare provided to Bulgarian insured persons abroad remain significantly higher than incoming reimbursements throughout the period. Even with the considerable decrease observed in 2024, they amount to EUR 31,694.8 thousand, which substantially exceeds the inflows under the reverse flow. This indicates that the coordination mechanism operates under a persistent predominance of the financial burden associated with the treatment of Bulgarian insured persons abroad. It is precisely here that the main financial tension within the mechanism becomes apparent: the system not only absorbs a substantial outgoing resource but does so under conditions where outstanding liabilities to other Member States remain significant at the end of each reporting year.

A third stable characteristic is the high concentration of financial flows by country. Germany occupies a leading position in both main flows, particularly in the later

years of the period, with its share in some years reaching or exceeding one third of the respective flow. This concentration is not a random statistical outcome but reflects the close linkage between the financial effects of coordination and specific patterns of labour and social mobility. A similar, albeit less pronounced, concentration is observed for other countries such as the United Kingdom, Italy, France, Spain, Austria, the Netherlands, and Greece. Consequently, the system's financial exposure is not evenly distributed but concentrated within a limited number of bilateral relationships.

A fourth important finding is the stable internal structure of expenditure. In both healthcare provided in Bulgaria and payments made on claims from other Member States, hospital care consistently accounts for the largest share. This indicates that the financial dimension of the coordination mechanism is primarily driven by more resource-intensive forms of treatment.

In addition, the structure of expenditure by legal basis for access to healthcare reveals differences between the two flows. In the case of healthcare provided in Bulgaria, necessary healthcare during a temporary stay predominates, whereas in NHIF payments to other Member States the share of cases involving residence is significant and in certain years exceeds that of temporary stay. This suggests that the financial burden of the coordination mechanism is not generated solely by cases of necessary healthcare during short-term stays but also by cases involving a broader scope of healthcare services. In this respect, the analysis could be extended to examine trends related to more permanent residence of insured persons in another Member State. However, such an analysis would require additional empirical data not available within the present dataset and may therefore be the subject of future research.

Finally, the analysis shows that the reimbursement of costs to insured persons for healthcare paid during a stay in another state remains of marginal significance within the overall financial picture. This component is stable but negligible in relative terms and does not significantly affect the overall structure of the flows.

In summary, the empirical evidence indicates that the financial mechanism of coordination is characterised by a persistent asymmetry between incoming and outgoing flows, a high degree of concentration by country, and the predominance of hospital care. In addition, a consistent temporal mismatch between the incurrence of expenditure and its final financial settlement emerges as a structural feature of the coordination mechanism. The data demonstrate that the coordination mechanism functions as a financially significant yet internally differentiated segment of NHIF activity.

## 6. CONCLUSION

This study examined the coordination mechanism of social security systems in the field of health insurance through the prism of the financial flows generated by its application, on the basis of empirical data provided by the National Health Insurance Fund (NHIF) for the period 2018–2024. The analysis made it possible to outline the main parameters of these flows, their dynamics and internal structure, as well as to identify a number of stable patterns related to their development and interrelationship.

Although the study focuses on the financial dimensions of coordination from the perspective of the Bulgarian health insurance system, it should be emphasised that behind the analysed figures stand individual insured persons for whom this mechanism has direct practical significance. Whether they are in another Member State for a temporary stay or for a more extended period of residence, these persons are guaranteed access to necessary healthcare, while the corresponding costs are borne and settled between the institutions of the Member States. In this sense, coordination should not be regarded solely as a system of procedural rules governing the allocation of competences between institutions, but as an effective instrument for safeguarding the rights of insured persons. By ensuring continuity of health insurance coverage beyond the competent Member State, it creates the conditions for the effective exercise of one of the fundamental freedoms in European Union law—the free movement of persons. The possibility of receiving healthcare without the risk of prohibitive financial consequences constitutes a key prerequisite for this right to be exercised in practice, rather than remaining merely formal.

The data further demonstrate that the coordination mechanism transfers both organisational and financial responsibility onto national health insurance systems, which assume responsibility for financing and subsequently settling the costs incurred. It is precisely in this aspect that its essential social function is manifested: insured persons are the ultimate beneficiaries of healthcare, without being burdened by its financial and administrative arrangements, which remain entirely within the competence of the institutions. In this way, the coordination mechanism relieves individuals from the need to engage in complex inter-institutional settlements and cross-border financial relations, ensuring that access to healthcare is not dependent on their ability to bear immediate financial or administrative burdens.

At the same time, the empirical analysis reveals a number of structural characteristics of the mechanism—namely, asymmetry between incoming and outgoing flows, concentration of financial relations in a limited number of countries, the

predominance of hospital care, and a temporal gap between the incurrence and final settlement of expenditures.

In summary, the coordination of social security systems in the field of health insurance emerges as a complex financial and organisational mechanism which, despite the identified imbalances and challenges, fulfils its core function: to ensure effective protection of insured persons in a cross-border context<sup>13</sup>. It is precisely in this that its fundamental significance lies—both for the guarantee of individual social security rights and for the stability of national health insurance systems, as well as for the functioning of the European Union’s internal market.

Although the analysis focuses on Bulgaria, the identified trends may also be considered in the broader context of mobility patterns and healthcare consumption within the European Union. In this respect, the Bulgarian experience may serve as a useful empirical basis for future comparative research examining how different national health insurance systems absorb and manage the financial effects of social security coordination. Such research could contribute to a deeper understanding of the practical functioning and long-term sustainability of coordination in the field of mandatory health insurance within the European Union.

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