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Article

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Article

Program-Targeted Approach to Managing Financial Risks of Sustainable Development Based on Corporate Social Responsibility in the Decade of Action

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Abstract: This paper aims to find the prospects of improving the practice of managing financial risks of sustainable development in the Decade of Action. We substantiate—based on economic and mathematical modeling based on a sample of 185 countries—that the existing (project-based) approach to managing financial risks of sustainable development, which was successfully implemented in the pre-crisis period (2015–2019), demonstrates reduced effectiveness at the beginning of the Decade of Action (2020–2021). This showed a marked increase in the overall level of financial risk, as well as an increase in the importance of private investment, in financing sustainable development in the first two years of the Decade of Action (2020–2021) compared to 2018–2019. Additionally, the features of the continents are identified: Africa, America and the Caribbean, Asia, and Europe, and specific recommendations are proposed for them on the financial risk management of sustainable development in the Decade of Action. This paper's originality lies in the development of a new program-targeted approach to managing financial risks of sustainable development, which, due to its increased flexibility and the use of the market mechanism—is optimal for the conditions of the pandemic and will allow the ensuring of the full-scale (quantitative characteristics) financial provision of the SDGs in the Decade of Action using private investments. This paper's novelty is also due to the recommendation on the improvement of financial risk management based on corporate social responsibility (qualitative characteristics) to support the implementation of the SDGs in the Decade of Action.

Keywords: program-targeted approach; management of financial risks; corporate social responsibility; sustainable development; Decade of Action

1. Introduction

The UN initiative in the sphere of sustainable development is, without exaggeration, humanity's top-priority practice of global cooperation, which demonstrated prominent and successful results in the first years of its practical implementation (Cheng et al. 2022; Mikulčić et al. 2022). The Decade of Action is the final lap, which requires a powerful leapfrog ahead in the practical implementation of the SDGs. The COVID-19 pandemic caused the financial and economic crisis, which reduced the resource base of economies around the world (Cardoso et al. 2022; Thore 2022). Because of this, the implementation of the Sustainable Development Goals (SDGs) faced increased financial risks (Dong and Wu 2020; Mikulčić et al. 2021). The financial risk of sustainable development in this article

refers to a reduction in the capacity (e.g., government budget deficit) and volume (e.g., outflow of investment from their economy) of financing for sustainable development.

Being the strategic priority for the national and global economies, the SDGs received large-scale support during the entire pre-crisis period of their implementation (2015–2019; [Mezghani et al. 2021](#)). Under the conditions of the COVID-19 crisis, the resource (budget) capabilities of governments were substantially reduced, which required a search for more flexible market tools for the financing of the SDGs ([Akhtaruzzaman et al. 2021a, 2021b](#); [Pan et al. 2021](#)). Thus, an important scientific and practical problem is the issue of the increase in the volume of financial resources allocated for the implementation of the SDGs and the increase in the effectiveness of using these resources in the Decade of Action. Financial risks of sustainable development are high, as never before, and urgently require management ([Folqué et al. 2021](#); [Gambetta et al. 2021](#)).

The project-based approach to financial risk management, which was very effective in the pre-crisis world economy (2015–2019), turned out to be less reliable under the conditions of uncertainty and recession caused by the COVID-19 pandemic. When considering the dynamics of growth (growth rate of the world GDP, according to the statistics and model of the [World Bank \(2021\)](#)) of the world economy through the lens of Kondratiev cycles ([Tinbergen 1981](#)), we can see that the world economy is in the downward phase (implying a crisis) of the long wave, with the bottom in 2020 (−3.405%). If the start of this long wave was 1973 (the last peak: 6.434%), the rise could be expected only by 2033 (1973 + 60), i.e., after the end of the Decade of Action.

Therefore, the Decade of Action is a period characterized by the need for the most active efforts on the implementation of the SDGs; it falls on the downward phase of the economic cycle, which is accompanied by increased financial risks ([Sachs and Sachs 2021](#)). Accordingly, the practice of managing the financial risks of sustainable development requires adaptation to the new conditions ([Van Tulder et al. 2021](#)). The research question is as follows: how can the financial risks of sustainable development in the Decade of Action be managed?

Looking for an answer to this question, scholars agree that the key role in the financing of sustainable development in the Decade of Action must belong to private investments ([Adiyoh Imanche et al. 2021](#); [Brown 2021](#); [Chen 2021](#); [Goel et al. 2021](#); [Simionescu et al. 2021](#)). Along with this, many researchers ([Akhmadi and Januarsi 2021](#); [Brzeszczyński et al. 2021](#); [Daniels et al. 2021](#); [Singh et al. 2021](#)) acknowledge that the initiative in the sphere of sustainable development is unique and, thus, needs not only a large volume of investments (quantitative characteristics) but also special—responsible—investments (qualitative characteristics). Based on this, we propose the hypothesis that financial risk management of sustainable development in the Decade of Action requires a new management approach that will ensure the change of the quantitative (the key role of private investments) and qualitative (the use of corporate social responsibility—responsible investments) characteristics of sustainable development financing. Corporate social responsibility, in the context of this study, is interpreted as the involvement of private businesses in financing sustainable development through the placement of investments in support of the SDGs.

This paper aims to find the prospects of improving the practice of managing financial risks of sustainable development in the Decade of Action. This paper's originality lies in the development of a new program-targeted approach to managing the financial risks of sustainable development, which, due to its increased flexibility and the use of the market mechanism, is optimal for the conditions of the pandemic and will allow the ensuring of the full-scale (quantitative characteristics) financial provision of the SDGs in the Decade of Action. This paper's novelty is also due to the recommendation on the improvement of financial risk management based on corporate social responsibility (qualitative characteristics) to support the implementation of the SDGs in the Decade of Action.

2. Theory of Financial Risk Management of Sustainable Development

The current theory of financial risk management of sustainable development treats the implementation of the SDGs as an investment project, the sources of financing of which are as follows:

- Resources of national budgets (Puaschunder 2019; Setyowati 2020);
- Corporate resources—private investments (Cunha et al. 2021; Miralles-Quirós and Miralles-Quirós 2021).

Financial risks of sustainable development are comprised of the following risks:

- Risks of reduction of financing of sustainable development for all sources (quantitative characteristics) (Doni and Johannsdottir 2021; Pisani and Russo 2021);
- Risks of reduction of the contribution of financing to progress in the achievement of the SDGs (reduction of the effectiveness of financing of sustainable development—qualitative characteristics) (de Moraes et al. 2021; Wang and Wang 2021).

The available literature (Kharlanov et al. 2022; Shayan et al. 2022; Waheed and Zhang 2022; Wentzel et al. 2022) notes the importance of corporate social responsibility for sustainable development. In particular, in the works of Alda (2021), Bulavinova et al. (2021), Ferrat et al. (2022), Lean and Pizzutilo (2021), it is noted that responsible investment drives progress towards the SDGs and is, therefore, critical in the Decade of Action.

However, the role of responsible investment is poorly understood and not defined in terms of the financial risk of sustainable development. This risk is associated mainly with the reduction of funding from national public budgets, with the uncertainty of the potential of private investment to carry out risk management (replacing public funding when its resources are scarce)—this is a gap in the literature.

The Decade of Action is a defining moment in the implementation of the SDGs, at which it is especially important to achieve high efficiency in managing the financial risks of sustainable development (Zhu et al. 2021). Therefore, it is important to fill this gap in the literature to fully leverage the possibilities of financial risk management and ensure the full financing of sustainable development in the Decade of Action (Strauß 2021). This article fills this gap in the literature by identifying the place of private investment in the structure of sustainable development financing and identifying the potential for sustainable development risk management by increasing private investment.

The current theory of financial risk management implies a project-based approach to management (Naji et al. 2021; Niederman 2021). The main provisions of the project-based approach to managing financial risks of sustainable development are systematized and demonstrated in Table 1.

According to Table 1, the condition of implementation of the project during the project-based approach is the stability of the economy and favorable conditions (low financial risks). In the pre-crisis period (2015–2019), this condition was observed—there was a relatively low level of entropy, stability of the market environment, and the rise of the world economy (low financial risks), which allowed the implementation of the project-based approach with high effectiveness. At the beginning of the Decade of Action (2020–2021), the COVID-19 pandemic ran into conflict with the conditions of the project implementation and put it at risk: the increased—high—financial risks reduced the effectiveness of the project-based approach (Chams et al. 2021; Kolodiziev et al. 2017; Kwak and Kim 2021; Park and Jang 2021).

The sources of financing (resources) during the project-based approach should be the most reliable sources, which allow for the full financing of the project. In the pre-crisis period (2015–2019), the financing was based on the resources of national budgets (although other sources were also used to a lesser extent). However, at the beginning of the Decade of Action (2020–2021), the COVID-19 pandemic caused a large deficit of resources in the main sources of financing of sustainable development, namely, national budgets, causing the necessity for the diversification of the sources of sustainable development financing (search for alternatives) (Bouri et al. 2021; Jackson 2021; Khan et al. 2021; Sadiq et al. 2021).

Table 1. The main provisions of the project-based approach to managing financial risks of sustainable development.

Characteristics of the approach	Essence of the project-based approach	Manifestation in practice during financial risk management of sustainable development	
		In the pre-crisis period (2015–2019)	At the beginning of the Decade of Action (2020–2021)
Condition of the project implementation	stability of the economy and favorable conditions (low financial risks)	low level of entropy, stability of the market environment, and the rise of the world economy (low financial risks)	the COVID-19 pandemic ran into conflict with the conditions of the project implementation and put it at risk (increased—high—financial risks)
Source of financing (resources)	the most reliable sources that allow full financing of the project	financing was based on the resources of national budgets	the COVID-19 pandemic caused a large deficit of resources in the main sources of financing of sustainable development: national budgets
Treatment of financial risks	change of the quantitative characteristics of financing	reduction of financing of sustainable development	the COVID-19 pandemic also raised the significance of the qualitative characteristics (nature of financing)
Method of financial risk management	a strictly fixed volume of financing (quantitative characteristics), which is set at the start	the volume of financing of sustainable development is adopted by governments and cannot be changed	the COVID-19 pandemic caused the budget deficit and did not allow full-scale financing of sustainable development while the need for resource provision grew

Source: authors.

Financial risks during the project-based approach are treated as the change of the quantitative characteristics of financing: reduction of financing of sustainable development, which was correct in the pre-crisis period (2015–2019). However, at the beginning of the Decade of Action (2020–2021), the COVID-19 pandemic also raised the significance of the qualitative characteristics (nature of financing) (Hübel and Scholz 2020; Soetanto et al. 2020; Walter 2020; Wulandari and Prijadi 2021; Yang et al. 2021).

The method of financial risk management in the project-based approach is brought down to the strictly fixed volume of financing (quantitative characteristics), which is set at the start. According to this, the volume of sustainable development financing in the pre-crisis period (2015–2019) was adopted by national governments and could not be changed (its reduction was not allowed). At the beginning of the Decade of Action (2020–2021), the COVID-19 pandemic caused a budget deficit and did not allow the full-scale financing of sustainable development while the need for resource provision grew (Liang et al. 2021; Morelli and Petrella 2021; Migliorelli 2021; Myklebust 2020).

Thus, the project-based approach to managing financial risks of sustainable development has the following disadvantages that reduce its effectiveness and prevent its application in the Decade of Action (according to the experience of its beginning: 2020–2021):

- Does not work under the conditions of instability and high financial risks;
- Is inflexible: uses a single (being the main) source of financing—resources of national budgets—and does not allow the raising of the volume of financing of sustainable development, which is required during the pandemic;
- Pays insufficient attention to the qualitative characteristics of financial risks (nature of financing) of sustainable development;
- Uses a limited resource base: insufficiently involves business, does not clearly define the role of business and requirements to it (expectations), and does not provide recommendations for business (projects of sustainable development are implemented at the national level through budget financing), which, under the conditions of the COVID-19 crisis, led to a deficit of resources.

The above disadvantages make the project-based approach unsuitable for managing financial risks of sustainable development in the Decade of Action (the COVID-19 pandemic and crisis and the post-pandemic crisis). The absence of an alternative is a gap in the existing literature, which is filled by this paper.

3. Methodology

To test the proposed hypothesis, we perform the economic and mathematical modeling of the financial risks of sustainable development and their management. We use a sample of 185 countries for which the statistics on financial resources in their economies are collected by the [International Monetary Fund \(2021\)](#); we also use the Sustainable Development Index, which is calculated by the [UNDP \(2019, 2020, 2021\)](#). The empirical basis of the research is given in the Microsoft Excel file (Table S1) in the supplementary materials.

Based on the existing theory of financial risk management of sustainable development, we use the following indicators to study the financing of sustainable development in the light of its designated sources:

- Corporate resources: total investment (res_1);
- Resources of national budgets: general government net lending/borrowing (res_2), general government structural balance (res_3), general government gross debt (res_4).

From the standpoint of the subject area of this study, the financial risks of sustainable development are:

- Outflow from the economy total investment (decrease in res_1);
- Increase in general government net lending/borrowing (res_2 increase);
- Decrease in general government structural balance (reduction of res_3);
- Accumulation of general government gross debt (increase res_4).

All considered indicators have the same measuring unit (% of GDP), which makes them fully compatible and excludes errors and inaccuracies during the treatment of results, guaranteeing the maximum precision and correctness of assessments and conclusions. The source of data for all of the above indicators is a respectable source of international economic statistics—the [International Monetary Fund \(2021\)](#).

The indicator for measuring the results that are achieved in the sphere of sustainable development (SDI) is the generally acknowledged and respected Sustainable Development Index, calculated by the [UNDP \(2021\)](#) and measured in points from 0 to 100. To find the differences between the pre-crisis period and the start of the Decade of Action, the research is conducted on the dynamics of 2019–2021. The method of aggregation is used to calculate the arithmetic means of all four studied indicators in each of the three considered periods. The method of horizontal analysis is used to study the change of the arithmetic means in 2018–2021.

To find the contribution of each source of financing to the achievement of results in the sphere of sustainable development, we use the following research model:

$$SDI = a + b_1 \times res_1 + b_2 \times res_2 + b_3 \times res_3 + b_4 \times res_4$$

The model is compiled with the help of the method of regression analysis in isolation for 2018, 2019, 2020, and 2021. To assess the reliability of the model, we use the main generally recognized criteria: multiple determination (r^2) and significance F. The qualitative treatment of the model is performed based on the signs and values of the regression coefficients (b_1 – b_4).

The general (global) sample included 44 countries in Africa (24%), 34 countries in the Americas and the Caribbean (18%), 64 countries in Asia (35%), and 43 countries in Europe (23%). In order to obtain more specific results and develop more detailed recommendations, in addition to the study based on the general sample, studies by regions of the world (continents) are conducted, which makes it possible to identify differences between them. The statistical base of the study for the global (complete) sample of countries is given in Table S1 and by continent in Table S2.

This research is to discover (if they exist) and quantitatively measure the financial risks of sustainable development:

- Risks of reduction of the financing of sustainable development in aggregate for all sources (quantitative characteristics). For this, we study the dynamics of the change of the arithmetic means of the studied indicators in 2019–2021;
- Risks of reduction of the contribution of financing to progress in the implementation of the SDGs (reduction of the effectiveness of financing of sustainable development—qualitative characteristics). For this, the values of the regression coefficients at each factor variable (in absolute value) are compared for the regression models of different periods. The presence of the risk is shown by the reduction of the values of the regression coefficients. We also compare the sum of the regression coefficients (in absolute value) in 2019–2021, which allows the determining of the change of the significance of financing to achieve results in the sphere of sustainable development. The growth of this sum is a sign of the growth of significance of financing, and, vice versa, the reduction of the sum is a sign of the reduction of its significance.

The hypothesis is proved if the regression model shows the following:

- Growth of the significance of private investments to achieve results in the sphere of sustainable development: $res_1(2021) > res_1(2018)$; $res_1(2021) > 0$; $res_1(2018) > 0$;
- The necessity for the qualitative change of the essence of private investments. To substantiate it, we use the least-squares method to find the targeted volume of private investments that is necessary for the achievement of the pre-crisis growth rate of results in the sphere of sustainable development in 2021. If the solution is found but it requires a far too big increase in the volume of private investments (more than 30%), this will be a sign of the necessity or the qualitative change of the essence of private investments, namely, a transition to responsible investments that are based on corporate social responsibility.

4. Results

To find the differences between the pre-crisis period and the start of the Decade of Action, let us consider the dynamics of the arithmetic means of the sources of financing and results in the sphere of sustainable development in the world in 2019–2021 (Figure 1).

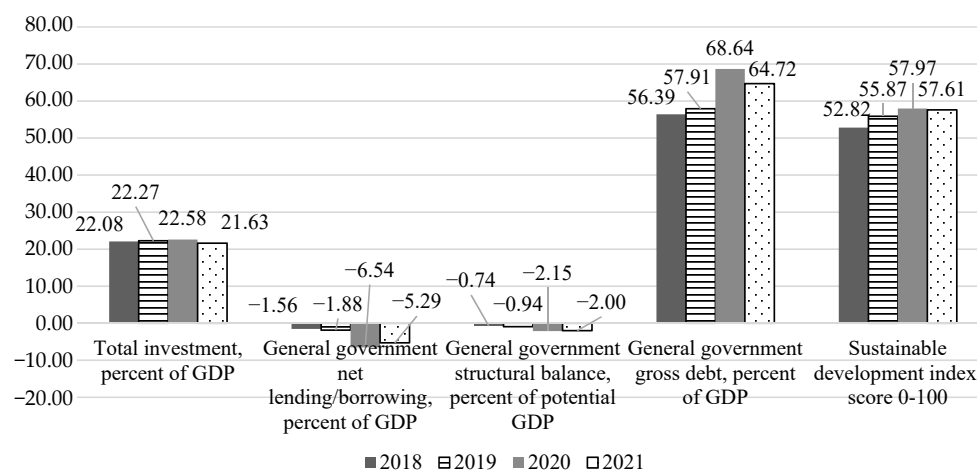


Figure 1. Dynamics of the arithmetic means of the sources of financing and results in the sphere of sustainable development in the world in 2018–2021. Source: calculated and compiled by the authors.

According to Figure 1, total investment showed an upward trend in 2019, having increased by 0.85% compared to 2018. In 2020, it increased even more (by 1.43%), and in 2021, it was slashed by 4.25%.

General government net lending/borrowing in 2019 (−1.56% of GDP) increased by 20.55% compared to 2018 (−1.88% of GDP). In 2020, it increased even more (by 248.05% to −6.54% of GDP), and, in 2021, it decreased by 19.16% (to −5.29% of GDP), which was largely due to a change in GDP rather than a change in borrowing.

The general government structural balance in 2019 (−0.74% of GDP) increased by 26.14% compared to 2018 (−0.94% of GDP). In 2020, it increased even more (by 129.79% to −2.158% of GDP), and, in 2021, it was slashed by 7.22% (to −5.29% of GDP), which was largely due to a change in GDP than a change in the structural balance.

General government gross debt in 2019 (57.91% of GDP) showed an upward trend, increasing by 2.70% compared to 2018 (56.39% of GDP). In 2020, it increased even more (by 18, 53% to 68.64% of GDP), and, in 2021, it was slashed by 5.72% (to 64.72% of GDP), which was more due to changes in GDP than changes in public debt.

The analysis carried out indicates a high risk of a reduction in financing for sustainable development in total from all sources (quantitative characteristics). This was probably the reason for the slowdown in sustainable development. In 2019 (55.87 points), the Sustainable Development Index increased by 5.77% compared to 2018 (52.82 points). In 2020, the growth rate of this index slowed down and amounted to 3.77% (to 57.97 points), and, in 2021, it decreased by 0.62% (to 57.61 points).

To identify the characteristics of each region of the world, a detailed study was conducted on the example of African countries (Table 2), America and the Caribbean (Table 3), Asian countries (Table 4), and European countries (Table 5).

Table 2. The dynamics and growth of arithmetic average sources of financing and results in the field of sustainable development in the world in 2018–2021 in Africa.

Indicator Type	Year	Total Investment, % of GDP	General Government Net Lending/Borrowing, % of GDP	General Government Structural Balance, % of Potential GDP	General Government Gross Debt, % of GDP	Sustainable Development Index, Score 0–100
Value	2018	20.24	−2.85	−0.07	59.32	45.01
	2019	21.20	−2.74	−0.52	62.96	46.93
	2020	20.86	−6.25	−0.65	71.22	49.06
	2021	21.79	−5.13	−0.51	70.37	47.47
Growth %	2019/2018	4.75	−3.79	695.92	6.13	4.26
	2020/2019	−1.63	127.71	23.74	13.12	4.53
	2021/2020	4.45	−17.84	−20.72	−1.19	−3.24

Source: calculated and compiled by the author.

Table 3. Dynamics and growth of arithmetic average sources of financing and results in the field of sustainable development in the world in 2018–2021 in the Americas and the Caribbean.

Indicator Type	Year	Total Investment, % of GDP	General Government Net Lending/Borrowing, % of GDP	General Government Structural Balance, % of Potential GDP	General Government Gross Debt, % of GDP	Sustainable Development Index, Score 0–100
Value	2018	20.83	−3.80	−1.62	63.56	53.96
	2019	19.83	−3.45	−1.00	66.98	56.17
	2020	18.61	18.61	−7.62	83.98	59.09
	2021	20.42	−5.37	−5.37	71.90	58.38
Growth %	2019/2018	−4.76	−9.10	−38.31	5.38	4.11
	2020/2019	−6.16	−638.86	662.64	25.38	5.19
	2021/2020	9.69	−128.86	−29.50	−14.38	−1.20

Source: calculated and compiled by the author.

Table 4. The dynamics and growth of arithmetic average sources of financing and results in the field of sustainable development in the world in 2018–2021 in Asian countries.

Indicator Type	Year	Total Investment, % of GDP	General Government Net Lending/Borrowing, % of GDP	General Government Structural Balance, % of Potential GDP	General Government Gross Debt, % of GDP	Sustainable Development Index, Score 0–100
Value	2018	23.53	−0.30	−0.94	51.04	48.01
	2019	23.68	−1.43	−1.06	52.10	50.56
	2020	26.03	−6.13	−1.46	61.08	53.04
	2021	21.66	−5.02	−1.22	56.48	52.98
Growth %	2019/2018	0.65	381.85	13.51	2.09	5.31
	2020/2019	9.92	329.86	37.11	17.22	4.91
	2021/2020	−16.79	−18.12	−16.43	−7.53	−0.12

Source: calculated and compiled by the author.

Table 5. The dynamics and growth of arithmetic average sources of financing and results in the field of sustainable development in the world in 2018–2021 in European countries.

Indicator Type	Year	Total Investment, % of GDP	General Government Net Lending/Borrowing, % of GDP	General Government Structural Balance, % of Potential GDP	General Government Gross Debt, % of GDP	Sustainable Development Index, Score 0–100
Value	2018	22.79	−0.35	−0.46	55.68	67.06
	2019	23.17	−0.43	−1.13	54.22	72.67
	2020	22.37	−6.61	−3.74	65.15	73.55
	2021	22.37	−5.79	−3.93	65.52	74.27
Growth%	2019/2018	1.66	23.08	146.47	−2.63	8.36
	2020/2019	−3.46	1445.79	231.54	20.16	1.20
	2021/2020	0.01	−12.46	5.18	0.57	0.99

Source: calculated and compiled by the author.

According to Table 2, total investment showed an upward trend in 2019, having increased by 4.75% compared to 2018. In 2020, it decreased by 1.63%, and, in 2021, it increased by 4.45%.

General government net lending/borrowing in 2019 (−2.74% of GDP) decreased by 3.79% compared to 2018 (−2.85% of GDP). In 2020, it increased by 127.71% (to −6.25% of GDP), and, in 2021, it decreased by 17.84% (to −3.79% of GDP), which was largely due to changes in GDP rather than changes in lending/borrowing.

The general government structural balance in 2019 (−0.52% of GDP) increased by 695.92% compared to 2018 (−0.07% of GDP). In 2020, it increased by 23.74% (to −0.65% of GDP), and, in 2021, it decreased by 720.72% (to −0.51% of GDP), which was largely due to changes in GDP rather than a change in the structural balance.

General government gross debt in 2019 (62.96% of GDP) showed an upward trend, increasing by 6.13% compared to 2018 (59.32% of GDP). In 2020, it increased even more (by 13.12% to 71.22% of GDP), and, in 2021, it decreased by 1.19% (to 70.37% of GDP), which was more due to changes in GDP than changes in public debt.

The analysis carried out indicates a high risk of a reduction in financing for sustainable development in total from all sources (quantitative characteristics) in African countries. This likely contributed to the slowdown in sustainable development in Africa. In 2019 (46.93 points), the Sustainable Development Index increased by 4.26% compared to 2018 (45.01 points). In 2020, the growth rate of this index slowed down and amounted to 4.53% (to 49.06 points), and, in 2021, it decreased by 3.24% (to 47.47 points).

According to Table 3, total investment in 2019 showed a moderate reduction trend, decreasing by 4.76% compared to 2018. In 2020, this trend intensified, and it decreased by 6.16%; in 2021, it increased by 6.69%.

General government net lending/borrowing in 2019 (−3.45% of GDP) decreased by 9.10% compared to 2018 (−3.80% of GDP). In 2020, it increased by 638.86% (to 18.61% of GDP), and, in 2021, it decreased by 128.86% (to −5.37% of GDP), which was more due to changes in GDP than a change in lending/borrowing.

The general government structural balance in 2019 (−1% of GDP) decreased by 38.31% compared to 2018 (−1.62% of GDP). In 2020, it increased by 662.64% (to −7.62% of GDP), and, in 2021, it decreased by 29.50% (to −5.37% of GDP), which was largely due to changes in GDP rather than a change in the structural balance.

General government gross debt in 2019 (66.98% of GDP) showed an upward trend, increasing by 5.38% compared to 2018 (63.56% of GDP). In 2020, it increased even more (by 25.38% to 83.98% of GDP), and, in 2021, it decreased by 14.38% (to 71.90% of GDP), which was more due to changes in GDP than changes in public debt.

The analysis carried out indicates a high risk of a reduction in financing for sustainable development in total from all sources (quantitative characteristics) in the countries of the Americas and the Caribbean. This likely contributed to the slowdown in sustainable development in the Americas and the Caribbean. In 2019 (56.17 points), the Sustainable Development Index increased by 4.11% compared to 2018 (53.96 points). In 2020, the growth rate of this index accelerated and amounted to 5.19% (to 59.09 points), and, in 2021, it decreased by 1.20% (to 58.38 points).

According to Table 4, total investment showed an upward trend in 2019, having increased by 0.65% compared to 2018. In 2020, it increased by 9.92%, and, in 2021, it decreased by 16.79%.

General government net lending/borrowing in 2019 (−1.43% of GDP) decreased by 3381.85% compared to 2018 (−0.30% of GDP). In 2020, it increased by 329.86% (to −6.13% of GDP), and, in 2021, it decreased by 18.12% (to −5.02% of GDP), which was largely due to changes in GDP rather than changes in lending/borrowing.

The general government structural balance in 2019 (−1.06% of GDP) increased by 13.51% compared to 2018 (−0.94% of GDP). In 2020, it increased by 37.11% (to −1.46% of GDP), and, in 2021, it decreased by 16.43% (to −1.22% of GDP), which was largely due to changes in GDP rather than a change in the structural balance.

General government gross debt in 2019 (52.10% of GDP) showed an upward trend, increasing by 2.09% compared to 2018 (59.32% of GDP). In 2020, it increased even more (by 17.22% to 522.10% of GDP), and, in 2021, it decreased by 7.53% (to 56.48% of GDP), which was more due to changes in GDP than changes in public debt.

The analysis carried out indicates a high risk of a reduction in financing for sustainable development in total from all sources (quantitative characteristics) in Asian countries. This is likely to be the reason for the slowdown in sustainable development in Asia. In 2019 (50.56 points), the Sustainable Development Index increased by 5.31% compared to 2018 (48.01 points). In 2020, the growth rate of this index slowed down and amounted to 4.91% (to 53.03 points), and, in 2021, it decreased by 0.12% (to 52.98 points).

According to Table 5, total investment showed an upward trend in 2019, having increased by 1.66% compared to 2018. In 2020, it decreased by 3.46%, and, in 2021, it increased by 0.01% (remained practically unchanged).

General government net lending/borrowing in 2019 (−0.43% of GDP) decreased by 23.08% compared to 2018 (−0.35% of GDP). In 2020, it increased by 1445.79% (to −6.61% of GDP), and, in 2021, it decreased by 12.46% (to −5.79% of GDP), which was largely due to changes in GDP rather than changes in lending/borrowing.

The general government structural balance in 2019 (−1.13% of GDP) increased by 146.47% compared to 2018 (−0.46% of GDP). In 2020, it increased by 231.54% (to −3.74% of GDP), and, in 2021, it increased by 5.18% (to −3.93% of GDP), which was largely due to changes in GDP rather than a change in structural balance.

General government gross debt in 2019 (54.22% of GDP) showed a downward trend, decreasing by 2.63% compared to 2018 (55.68% of GDP). In 2020, it increased even more (by 20.16% up to 65.15% of GDP) and, in 2021, by 0.57% (up to 65.52% of GDP), which was more due to changes in GDP than changes in public debt.

The analysis carried out indicates a high risk of a reduction in financing for sustainable development in total from all sources (quantitative characteristics) in European countries. This was probably the reason for the slowdown in sustainable development in Europe. In 2019 (72.67 points), the Sustainable Development Index increased by 8.36% compared to 2018 (72.67 points). In 2020, the growth rate of this index slowed down and amounted to 1.20% (to 73.55 points), and, in 2021, it increased by 0.9% (to 74,027 points).

A comparative analysis of data by regions of the world showed that in all regions, the pandemic and the COVID-19 crisis caused a high risk of reduced financing for sustainable development in total across all sources. The highest risk is typical for Asian countries: the outflow of investments in 2021 (compared to 2020) in the countries of this region was the highest and amounted to −16.79% (other regions showed an inflow of investments in 2021), while for other indicators of financing, the rate of their growth in the regions of the world is similar.

The largest decline in the Sustainable Development Index in 2021 (compared to 2020) occurred in Africa (−3.24%). In the Americas and the Caribbean, as well as in Europe, there was a noticeable increase in government lending/borrowing in 2020, which likely made it possible to achieve macroeconomic financial stabilization as early as 2021. A delayed effect was also identified, which is that the reduction in opportunities and funding in 2020 led to a decrease in the Sustainable Development Index only in 2021. The general trends in all the considered indicators in the regions of the world generally coincide with global trends (Figure 1).

It is noteworthy that Europe turned out to be the only region where there was, neither in 2020 nor even in 2021, no decrease in the Sustainable Development Index, which indicates highly effective financial risk management in Europe. The main difference between financial performances among regions of the world occurs in the area of investment. This suggests that investments form the basis of the financial risk of sustainable development. Consequently, the financial risks of sustainable development are highest in Africa and Asia.

To specify the cause-and-effect links of the change of the rate of sustainable development and to determine the contribution of each source of financing to the achievement of the results in the sphere of sustainable development based on the research model, we obtained the following results of the regression analysis (Table 6).

Table 6. Parameters of the regression models of the contribution of the sources of financing to the achievement results in the sphere of sustainable development in 2018–2021.

Regression Model Options	Models			
	SDI ₂₀₁₈	SDI ₂₀₁₉	SDI ₂₀₂₀	SDI ₂₀₂₁
Multiple determination (r^2)	21.94%	20.50%	41.54%	45.93%
F significance	0.063	0.10	6.55201×10^{-7}	1.09921×10^{-8}
a	48.86	47.36	50.75	46.40
b ₁	0.01	0.12	−0.06	0.14
b ₂	−0.52	−0.76	−0.08	0.31
b ₃	−1.59	−0.21	−2.94	−3.80
b ₄	0.03	0.07	0.03	0.03

Source: calculated and compiled by the authors.

According to Table 6, the importance of private investment in achieving results in the sphere of sustainable development has increased. In 2018, an increase in private investment

by 1% of GDP led to an increase in sustainable development results by 0.01 points, in 2019—by 0.12 points, and in 2021—already by 0.18 points. All conditions of the hypothesis are met: $\text{res1}(2021) > \text{res1}(2018)$ ($0.18 > 0.01$); $\text{res1}(2021) > 0$ ($0.18 > 0$); $\text{res1}(2018) > 0$ ($0.01 > 0$).

The impact of general government net lending/borrowing on results in the sphere of sustainable development was reduced by the pandemic and the COVID-19 crisis: the regression coefficient decreased (modulo) from -0.52 in 2018 and -0.76 in 2019 to 0.31 in 2021. The influence of general government structural balance on results in the sphere of sustainable development increased under the influence of the pandemic and the COVID-19 crisis: the regression coefficient decreased (modulo) from -1.59 in 2018 and -0.21 in 2019 to -3.80 in 2021. The impact of general government gross debt on results in the sphere of sustainable development decreased under the influence of the pandemic and the COVID-19 crisis: the regression coefficient decreased (modulo) from 0.03 in 2018 and 0.07 in 2019 to 0.03 in 2021. This indicates that there is a risk of a reduction in the contribution of financing to progress in the implementation of the SDGs (a decline in the effectiveness of financing for sustainable development—a qualitative characteristic).

The sum of the regression coefficients (modulo) turned out to be the following:

- In 2018: $0.01 + 0.52 + 1.59 + 0.03 = 2.15$;
- In 2019: $0.12 + 0.76 + 0.21 + 0.07 = 1.16$;
- In 2020: $0.06 + 0.08 + 2.94 + 0.03 = 3.11$;
- In 2021: $0.14 + 0.31 + 3.80 + 0.03 = 4.28$.

The identified increase in the sum of the regression coefficients (by modulus) indicates an increase in the importance of financing for achieving results in the sphere of sustainable development. To assess the qualitative characteristics of private investment as a source of financing for sustainable development in the Decade of Action, the least-squares method, based on regression models from Table 6, revealed that the pre-crisis ($55.87/52.82 = 1.06$) rate of sustainable development in 2021 ($57.97 \times 1.06 = 61.45$ points in 2021 instead of the actual 57.61 points) could be achieved by increasing the volume of private investment by 125.95%: from 21.63% of GDP to 48.87% of GDP.

The found solution requires too much increase in the volume of private investment (by more than 30%), which indicates the need for a qualitative change in the essence of private investment—the transition to responsible investment (based on corporate social responsibility).

Let us add the results obtained at the global level with in-depth studies on the example of the regions of the world (Table 7).

Table 7. Parameters of regression models of the funding sources' contribution to achieving results in the sphere of sustainable development in 2018–2021.

World Region	Regression Model Options	Models			
		SDI ₂₀₁₈	SDI ₂₀₁₉	SDI ₂₀₂₀	SDI ₂₀₂₁
Africa	Multiple determination (r^2)	28.96%	41.93%	53.20%	39.57%
	F significance	0.48	0.10	0.01	0.15
	a	33.71	33.62	47.25	43.39
	b ₁	0.25	0.40	0.52	0.47
	b ₂	−1.71	−1.92	1.42	0.99
	b ₃	2.99	2.25	−2.76	−4.49
	b ₄	0.03	0.01	−0.03	−0.05

Table 7. Cont.

World Region	Regression Model Options	Models			
		SDI ₂₀₁₈	SDI ₂₀₁₉	SDI ₂₀₂₀	SDI ₂₀₂₁
America and the Caribbean	Multiple determination (r^2)	49.65%	39.93%	67.80%	68.16%
	F significance	0.08	0.27	0.00	0.00
	a	89.28	84.16	96.26	80.46
	b ₁	−1.30	−1.01	−1.46	−1.00
	b ₂	0.26	−0.40	2.44	1.03
	b ₃	−2.30	−2.91	−4.70	−4.79
	b ₄	−0.17	−0.18	−0.09	−0.14
Asia	Multiple determination (r^2)	35.75%	49.45%	48.22%	44.24%
	F significance	0.08	0.00	0.00	0.01
	a	40.37	34.17	42.71	36.19
	b ₁	0.04	0.10	−0.17	0.22
	b ₂	−0.72	−0.80	−0.93	0.15
	b ₃	−0.93	1.79	−1.59	−1.36
	b ₄	0.11	0.28	0.11	0.20
Europe	Multiple determination (r^2)	29.98%	19.49%	31.89%	36.14%
	F significance	0.45	0.83	0.38	0.24
	a	70.67	63.49	53.20	54.38
	b ₁	−0.05	0.32	0.55	0.52
	b ₂	−1.69	−0.92	−0.75	−0.62
	b ₃	−2.27	−0.37	−0.84	−1.35
	b ₄	−0.07	0.02	0.00	−0.01

Source: calculated and compiled by the author.

According to Table 6, in Africa, the importance of private investment in achieving results in the sphere of sustainable development has increased. In 2018, an increase in private investment by 1% of GDP led to an increase in results in the sphere of sustainable development by 0.25 points, in 2019—already by 0.40 points, and in 2021—already by 0.47 points. The sum of the regression coefficients (modulo) in Africa was as follows:

- In 2018: $0.25 + 1.71 + 2.99 + 0.03 = 4.98$;
- In 2019: $0.40 + 1.92 + 2.25 + 0.01 = 4.58$;
- In 2020: $0.52 + 1.42 + 2.76 + 0.03 = 4.73$;
- In 2021: $0.47 + 0.99 + 4.49 + 0.05 = 6.00$.

The identified increase in the sum of the regression coefficients (by modulus) indicates an increase in the importance of financing for achieving results in the sphere of sustainable development in Africa. To assess the qualitative characteristics of private investment as a source of financing for sustainable development in the Decade of Action, the least-squares method, based on regression models from Table 7, revealed that the pre-crisis ($46.93/45.01 = 1.04$) rate of sustainable development in 2021 ($49.06 \times 1.04 = 51.02$ points in 2021 instead of the actual 47.47 points) could be achieved by increasing the volume of private investment by 37.21%: from 21.79% of GDP to 29.90% of GDP.

The found solution requires too much increase in the volume of private investment (by more than 30%), which indicates the need for a qualitative change in the essence of

private investment—the transition to responsible investment (based on corporate social responsibility).

In America and the Caribbean, the importance of private investment for achieving results in the sphere of sustainable development has increased. In 2018, there was no positive contribution of private investment to the growth of sustainable development results (all regression coefficients for investment have a negative sign). Therefore, optimization is not available in this region. At the same time, the sum of the regression coefficients (modulo) in America and the Caribbean turned out to be as follows:

- In 2018: $1.30 + 0.26 + 2.30 + 0.17 = 4.03$;
- In 2019: $1.01 + 0.40 + 2.91 + 0.18 = 4.50$;
- In 2020: $1.46 + 2.44 + 4.70 + 0.09 = 8.69$;
- In 2021: $1.00 + 1.03 + 4.79 + 0.14 = 6.96$.

The identified increase in the sum of the regression coefficients (modulo), despite a slight decrease in 2021 compared to 2020, with an increase compared to 2018, indicates the growing importance of financing for achieving results in the sphere of sustainable development in America and the Caribbean. Therefore, in America and the Caribbean, it makes sense to maintain a project-based approach to sustainable development financial risk management.

In Asia, the importance of private investment in achieving results in the sphere of sustainable development has increased. In 2018, an increase in private investment by 1% of GDP led to an increase in results in the sphere of sustainable development by 0.04 points, in 2019—already by 0.10 points, and in 2021—already by 0.22 points. The sum of the regression coefficients (modulo) in Asia was as follows:

- In 2018: $0.04 + 0.72 + 0.93 + 0.11 = 1.80$;
- In 2019: $0.10 + 0.80 + 1.79 + 0.28 = 2.97$;
- In 2020: $0.17 + 0.93 + 1.59 + 0.11 = 2.80$;
- In 2021: $0.22 + 0.15 + 1.36 + 0.20 = 1.93$.

The identified increase in the sum of the regression coefficients (modulo) indicates an increase in the importance of financing for achieving results in the sphere of sustainable development in Asia. To assess the qualitative characteristics of private investment as a source of financing for sustainable development in the Decade of Action, the least-squares method, based on regression models from Table 7, revealed that the pre-crisis ($50.56/48.01 = 1.05$) rate of sustainable development in 2021 ($53.04 \times 1.05 = 55.69$ points in 2021 instead of the actual 52.98 points) could be achieved by increasing the volume of private investment by 57.28%: from 21.55% of GDP to 34.07% of GDP.

The found solution requires too much increase in the volume of private investment (by more than 30%), which indicates the need for a qualitative change in the essence of private investment—the transition to responsible investment (based on corporate social responsibility).

In Europe, the importance of private investment in achieving results in the sphere of sustainable development has increased. In 2018, an increase in private investment by 1% of GDP led to an increase in results in the sphere of sustainable development by -0.05 points, in 2019—already by 0.55 points, and in 2021—by 0.52 points. The sum of the regression coefficients (modulo) in Europe was as follows:

- In 2018: $0.05 + 1.69 + 2.27 + 0.07 = 4.08$;
- In 2019: $0.32 + 0.92 + 0.37 + 0.02 = 1.63$;
- In 2020: $0.55 + 0.75 + 0.84 + 0.00 = 2.14$;
- In 2021: $0.52 + 0.62 + 1.35 + 0.01 = 2.50$.

The identified increase in the sum of the regression coefficients (modulo), despite the decrease compared to 2018, while maintaining the overall upward trend, indicates an increase in the importance of financing for achieving results in the sphere of sustainable development in Europe. To assess the qualitative characteristics of private investment as a source of financing for sustainable development in the Decade of Action, the least-

squares method, based on regression models from Table 7, revealed that the pre-crisis ($72.67/67.06 = 1.08$) rate of sustainable development in 2021 ($73.55 \times 1.08 = 79.43$ points in 2021 instead of the actual 74.27 points) could be achieved by increasing the volume of private investment by 43.95%: from 22.37% of GDP to 32.20% of GDP.

The found solution requires too much increase in the volume of private investment (by more than 30%), which indicates the need for a qualitative change in the essence of private investment—the transition to responsible investment (based on corporate social responsibility).

Based on the obtained results for improving financial risk management of sustainable development in the Decade of Action, we propose—as an alternative to the project-based approach—the program-targeted approach. Its scientific framework is set in the works of Bordley et al. (2015) and Mitrofanova et al. (2020).

The main provisions of the new approach, as applied to managing financial risks of sustainable development in the Decade of Action, are systematized and demonstrated in Table 8.

Table 8. The main provisions of the program-targeted approach to managing financial risks of sustainable development.

Characteristics of the approach	Essence of the project-based approach	Manifestation in practice during financial risk management of sustainable development in the Decade of Action
Condition for the project implementation	any economic environment, including unstable and unfavorable conditions (high financial risks are allowed)	the approach can be used under the conditions of uncertainty caused by the COVID-19 pandemic and the recession of the world economy in the Decade of Action, based on N.D. Kondratiev's model of economic cycles (with increased—high—financial risks)
Sources of financing (resources)	flexible and differentiated, reconsidered in the process of the project implementation	due to the COVID-19 crisis, government finances should be supplemented with corporate finances (private investments), which will allow the overcoming of the deficit of sustainable development financing
Treatment of financial risks	change of the quantitative and qualitative characteristics of financing	increased attention in the Decade of Action to quantitative (full-scale character of financing) and qualitative (responsible nature of investments) characteristics of sustainable development financing
Method of financial risk management	the flexible volume of financing (quantitative characteristics), which is reconsidered depending on the change of the project's needs and the context	increase—through the increase in private investments—in the volume of financing (improvement of the quantitative characteristics) of sustainable development in the Decade of Action due to the increased need for financing under the influence of the pandemic context

Source: authors.

According to Table 8, the proposed program-targeted approach implies a less strict condition for the project implementation—the new approach can be applied in any economic environment, including unstable and unfavorable conditions (high financial risks are allowed). The practical manifestation of this during the financial risk management of sustainable development in the Decade of Action is the applicability of the approach to the conditions of uncertainty that are caused by the COVID-19 pandemic and the recession of the world economy in the Decade of Action, based on N.D. Kondratiev's model of economic cycles (with the increased—high—financial risks). This distinguishes the new (program-targeted) approach from the existing (project) approach, which applies only to stable conditions and allows the managing of only low financial risks.

The sources of financing (resources) in the proposed approach are flexible and differentiated; they are reconsidered in the process of the project implementation. The practical manifestation of this during financial risk management of sustainable development in the Decade of Action is that because of the COVID-19 crisis, government finances should be supplemented with corporate financing (private investments), which will allow the overcoming of the deficit of sustainable development financing. This distinguishes the new (program-targeted) approach from the existing (project) one, in which the main sources of financing are the resources of national state budgets.

The treatment of financial risks in the new approach is complex—it includes the change of the quantitative and qualitative characteristics of financing. The practical manifestation of this during the financial risk management of sustainable development in the Decade of Action is the increased attention during the Decade of Action to the quantitative (full-scale character of financing) and qualitative (responsible nature of investments) characteristics of financing of sustainable development. This distinguishes the new (program-targeted) approach from the existing (project) approach, which takes into account only the quantitative characteristics of financing (the amount of financing for sustainable development) when identifying financial risks.

The method of financial risk management in the proposed approach is the flexible volume of financing (quantitative characteristics), which is reconsidered depending on the change of the project's needs and context. The practical manifestation of this during financial risk management of sustainable development in the Decade of Action is the increase—through the increase in private investments—of the volume of financing of (improvement of quantitative characteristics) of sustainable development in the Decade of Action due to the increased need for financing under the influence of the pandemic context. This distinguishes the new (program-targeted) approach from the existing (project) approach, in which the amount of funding is strictly fixed, and it is assumed that this (funding sufficiency) makes it possible to reduce the financial risks of sustainable development.

5. Discussion

This paper contributes to the development of the theory of financial risk management of sustainable development, offering a new program-targeted approach to this management. We prove that financial risk management in the Decade of Action must envisage the following:

- Unlike the theory of [Chams et al. \(2021\)](#), [Kolodiziev et al. \(2017\)](#), [Kwak and Kim \(2021\)](#), and [Park and Jang \(2021\)](#), there is high adaptability: applicability to the conditions of instability and high financial risks;
- Unlike the theory of [Bouri et al. \(2021\)](#), [Jackson \(2021\)](#), [Khan et al. \(2021\)](#), [Liang et al. \(2021\)](#), [Morelli and Petrella \(2021\)](#), [Migliorelli \(2021\)](#), [Myklebust \(2020\)](#), and [Sadiq et al. \(2021\)](#), there is high flexibility and the use—as the foundation—of an expanded resources base: the key source of financing of sustainable development should not be the resources of national budgets but private investments, which allow an increase in the volume of financing of sustainable development, which is required during the pandemic;
- Unlike the theory of [Hübel and Scholz \(2020\)](#), [Soetanto et al. \(2020\)](#), [Walter \(2020\)](#), [Wulandari and Prijadi \(2021\)](#), and [Yang et al. \(2021\)](#), it is necessary to pay more attention to the qualitative characteristics of financial risks (nature of financing) of sustainable development and imply the stimulation of responsible investments (which are based on corporate social responsibility).

All the above requirements are observed in the proposed new program-targeted approach to managing financial risks of sustainable development, which makes it preferable for the practical use in the Decade of Action (the COVID-19 pandemic and crisis and the post-pandemic period).

6. Conclusions

The results of the research demonstrated a high risk of reduction of sustainable development financing in aggregate from all sources (quantitative characteristics). Thus, total investment was reduced by 2.62%, general government net lending/borrowing grew by 201.40%, general government structural balance (deficit of the national budget) grew by 123.28%, and general government gross debt grew by 12.49% in 2021 compared to 2019.

This caused the decrease in the rate of sustainable development (the Sustainable Development Index grew in 2020 by 3.69% compared to 2019, but, in 2021, it was reduced by 0.60% compared to 2020) since the aggregate contribution of financing (from all sources) to the achievement of the results in the sphere of sustainable development grew from 1.16% in 2019 to 4.28% in 2021.

We also discovered the risk of reduction of the contribution of financing to progress in the implementation of the SDGs (reduction of effectiveness of sustainable development financing—qualitative characteristics). This is shown by the fact that the impact of general government net lending/borrowing on the results in the sphere of sustainable development was reduced under the influence of the COVID-19 pandemic and crisis: the regression coefficient reduced (in absolute value) from -0.70 in 2019 to 0.34 in 2021. The impact of general government gross debt on the results in the sphere of sustainable development was reduced under the influence of the COVID-19 pandemic and crisis: the regression coefficient reduced (in absolute value) from 0.07 in 2019 to 0.02 in 2021.

Therefore, the need for sustainable development financing in the Decade of Action is especially high, but the traditional source of this financing (national budgets) cannot fully satisfy this need. It should be replaced with a new perspective source—private investments, the significance of which for the achievement of results in the sphere of sustainable development grew from 0.01 in 2018 and 0.12 in 2019 to 0.18 in 2021.

An in-depth study and comparative analysis by regions of the world show that the countries of Europe have achieved the greatest success in the field of financial risk management of sustainable development. The financial risks of sustainable development are highest in Africa and Asia. The highest need for investment for financial risk management of sustainable development is observed in Asia (a 57.28% increase in investment is required compared to 2021). For comparison, this need in Europe is +43.985%, and, in African countries, it is the lowest and is estimated at 37.21%.

We also found an answer to this paper's research question. The existing (project-based) approach to managing financial risks of sustainable development shows the reduced effectiveness at the start of the Decade of Action (2020–2021). The financial risks of sustainable development in the Decade of Action should be managed based on a new program-targeted approach, which will ensure the change of the qualitative (key role of private investments and an increase in their volume) and qualitative (use of corporate social responsibility—responsible investments) characteristics of sustainable development financing.

The prospects of improving the practice of managing financial risks of sustainable development in the Decade of Action include the transition to the new approach; its specifics features and advantages are as follows:

- Applicability under the conditions of uncertainty, caused by the COVID-19 pandemic and the recession of the world economy (increased—high—financial risks);
- Using—as the basis—the market mechanism and a more flexible source of financing, namely, corporate financing (private investments), which allows the overcoming of the deficit of government financing of sustainable development;
- Improvement of the quantitative (full-scale character of financing) and qualitative (responsible nature of investments) characteristics of sustainable development financing;
- Increase—through the increase in private investments—in the volume of financing (improvement of the quantitative characteristics) of sustainable development in the Decade of Action for the full-scale satisfaction of the need for financing under the influence of the pandemic context.

The contribution of the article to the literature lies, firstly, in the fact that, unlike the works of Chams et al. (2021), Kolodiziev et al. (2017), Kwak and Kim (2021), and Park and Jang (2021), the article shows that the financial risks of sustainable development are quite strongly differentiated among the regions of the world. They are highest in Asia and Africa. Therefore, in the Decade of Action, it is necessary to pay more attention to the peculiarities of the financial risks of sustainable development in each region of the world (continents). To do this, the author's recommendations for increasing private investment are proposed to achieve the pre-pandemic pace of sustainable development in Africa, Asia, and Europe.

Secondly, in contrast to Naji et al. (2021) and Niederman (2021), a new program-targeted approach to managing the financial risks of sustainable development is recommended, the features and advantages of which are high adaptability (applicability to conditions of instability and high financial risks), high flexibility and reliance on an expanded resource base (private investment), a focus on the qualitative characterization of financial risks (the nature of financing), and the promotion of responsible investment (based on corporate social responsibility).

The theoretical significance of the results is due to the adaptation of the program-targeted approach to the specifics and needs of financial risk management of sustainable development in the Decade of Action. The practical significance of the conclusions is due to the improvement of the methodological framework of financial risk management of sustainable development and the support of the practical implementation of the SDGs in the Decade of Action.

As for limitations of the research, it should be noted that the Decade of Action has only recently started, and the authors' recommendations are based on the assumption that the world economy will stay in the downward phase (implying a crisis) of the long wave of Kondratiev cycle until 2030. If this authors' forecast does not come true, the perspectives of using the developed program-targeted approach to managing the financial risks of sustainable development in the Decade of Action will be limited by the phase of the current COVID-19 crisis.

Future studies should test the proposed approach and evaluate its effectiveness in the real world. Additionally, it would be expedient to test whether the authors' forecast comes true and, depending on this, strengthen the scientific arguments of the preferred use of the project-based or the program-targeted approach to managing the financial risks of sustainable development in the Decade of Action.

It should also be noted that econometric modeling in America and the Caribbean has indicated the inapplicability of the proposed program-target approach in this region. Therefore, in America and the Caribbean, it is advisable to retain the project approach; the cause-and-effect relationships of sustainable development financial risk management in this region need further in-depth study in future case studies.

Supplementary Materials: The following supporting information can be downloaded at: <https://www.mdpi.com/article/10.3390/risks10030058/s1>, Table S1: Empirical basis and characteristics of the research sample by income and geographical regions of the world; Table S2: Data systematized by the regions of the world.

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