

Green Investment Awareness and Sustainable Household Financial Decisions

Dr. Laura M. Nieminen

Associate Professor, University of Helsinki, Finland

Abstract

The growing integration of environmental considerations into personal finance has expanded the role of households from passive consumers of financial products to potential participants in the transition toward a more sustainable economy. Yet awareness of green investment opportunities does not necessarily translate into informed or sustained financial action. This study examines how green investment awareness influences sustainable household financial decisions through sustainable-finance literacy, environmental concern, perceived product credibility, financial risk evaluation, and sensitivity to greenwashing. Sustainable household financial decisions are conceptualized as choices that seek to preserve household financial well-being while incorporating environmental considerations into savings, investment, insurance, energy-related expenditure, and portfolio allocation. The study integrates financial-literacy theory, the Theory of Planned Behavior, socially responsible investment research, and recent sustainable-finance literacy evidence. Because no primary household dataset was supplied, the quantitative component uses 360 synthetic household financial profiles for methodological illustration rather than presenting generated observations as responses from actual participants.

The simulated regression model indicates that green investment awareness has the strongest positive association with sustainable financial decision quality, followed by sustainable-finance literacy and environmental concern. Perceived product credibility also contributes positively, whereas perceived greenwashing risk reduces the modeled propensity to allocate household resources toward sustainability-oriented financial products. The results further suggest that awareness alone has limited decision value when households lack the financial knowledge required to compare returns, risk, fees, liquidity, environmental claims, and investment horizons. A simulated portfolio-composition analysis demonstrates that sustainable household decisions may extend across green funds, green bonds, sustainability-linked savings products, renewable-energy investments, and climate-resilient household assets. The paper concludes that improving green investment awareness should not be treated merely as a communication exercise. Effective household transition requires understandable product information, credible sustainability disclosure, financial capability, protection against misleading environmental claims, and decision tools that allow households to reconcile environmental preferences with affordability, liquidity, diversification, and long-term financial security.

Keywords: green investment awareness; sustainable finance; household financial decisions; financial literacy; sustainable-finance literacy; ESG investment; greenwashing; responsible investment; household portfolio; environmental awareness

1. Introduction

Household financial decisions increasingly operate within an economic environment in which climate risk, sustainability considerations, environmental regulation, and new categories of financial products interact with conventional concerns such as return, liquidity, diversification, affordability, and financial security. Sustainable finance allows environmental and social considerations to enter financial decision-making, while individual consumers may express sustainability preferences through savings and investment choices. The OECD has consequently identified sustainable finance as an increasingly relevant area for financial consumers and has emphasized both its opportunities and its associated consumer-protection risks.

Green investment awareness refers to an individual's recognition and basic understanding of financial opportunities intended to support environmentally beneficial activities or to incorporate environmental considerations into capital allocation. Awareness may concern green bonds, sustainability-oriented funds, renewable-energy projects, climate-related investment products, sustainability-linked savings options, or other environmentally aligned assets. Awareness, however, should not be confused with investment competence. Anderson and Robinson's study of Swedish households found that pro-environmental preferences did not automatically generate environmentally aligned portfolios; financial disengagement and informational barriers played an important role, while green financial engagement was stronger where financial literacy was higher.

This distinction becomes especially important at household level because personal financial decisions involve competing objectives. Households must protect emergency liquidity, manage debt, accumulate retirement wealth, insure against risk, finance housing and education, and preserve purchasing power while evaluating investment opportunities. Conventional financial literacy has long been associated with stronger participation and decision capability in financial markets. More recent sustainable-finance research extends this reasoning by demonstrating that knowledge of sustainability-related financial concepts can contribute independently to sustainable investment ownership and decision-making.

Green investment decisions also involve challenges that differ from ordinary product comparison. Consumers may need to interpret sustainability labels, environmental objectives, ESG information, impact claims, exclusions, transition strategies, portfolio composition, and the distinction between environmental intention and measurable impact. The OECD has highlighted greenwashing, social washing, and impact washing as emerging risks for consumers of sustainable financial products, while experimental investment research indicates that willingness to pay for sustainable products does not necessarily increase proportionately with actual impact. This creates a potential gap between environmental motivation and financially informed sustainable decision-making.

The present study therefore examines sustainable household financial decisions through an integrated framework in which green investment awareness creates initial recognition, sustainable-finance literacy enables evaluation, environmental concern provides motivational relevance, product credibility supports confidence, and greenwashing risk can inhibit action. Rather than assuming that environmentally aware households automatically make sustainable investments, the study proposes that awareness becomes behaviorally meaningful only when households possess sufficient knowledge and trust to translate environmental preferences into financially defensible decisions. Recent household-level

evidence from Switzerland, Sweden, Italy, Cambodia, and the Philippines provides growing support for treating sustainable-finance knowledge and financial capability as central elements of this transition.

2. Objectives of the Study

2.1 Assessing the Role of Green Investment Awareness

The first objective is to examine how awareness of environmentally oriented financial products may contribute to sustainable household financial decision-making. The study distinguishes general environmental concern from actionable investment awareness, arguing that households require knowledge of available financial mechanisms before environmental preferences can influence portfolio construction or long-term savings behavior.

2.2 Examining Financial Knowledge and Credibility

The second objective is to evaluate the complementary roles of sustainable-finance literacy and perceived product credibility. Financial knowledge is expected to help households evaluate risk, return, diversification, fees, liquidity, and sustainability characteristics, whereas credibility determines whether environmental claims are sufficiently trustworthy to support financial commitment. This distinction is supported by evidence showing that financial literacy is related to sustainable-finance knowledge and that sustainable-finance knowledge itself is associated with sustainable financial choices.

2.3 Understanding Barriers to Sustainable Household Action

The third objective is to examine whether perceived greenwashing risk can weaken sustainable household decision-making even when investment awareness is relatively strong. The study therefore develops a framework in which sustainable financial behavior is treated as the outcome of interaction among knowledge, motivation, credibility, perceived risk, and financial capability rather than environmental concern alone.

3. Review of Literature

3.1 Financial Literacy and Household Investment Capability

Financial literacy provides an essential foundation for household financial decision-making because investments require individuals to understand concepts such as inflation, diversification, risk, interest, and long-term accumulation. Lusardi and Mitchell established the economic significance of financial literacy, while van Rooij, Lusardi, and Alessie demonstrated an association between financial literacy and participation in stock markets.

Sustainable investing introduces additional informational requirements. Anderson and Robinson observed that environmentally oriented households may remain financially disengaged and that informational barriers can prevent environmental preferences from being reflected in portfolios. Their results are especially relevant to the present research because they challenge the assumption that environmental attitudes alone produce green investment behavior.

Filippini, Leippold, and Wekhof formalized the concept of sustainable-finance literacy and found relatively limited sustainable-finance knowledge even among financially sophisticated Swiss households. Importantly, sustainable-finance literacy was associated with reported ownership of sustainable products. Lanciano and colleagues subsequently examined approximately 5,000 Italian

respondents and found that financial literacy was positively related to sustainable-finance knowledge and that such knowledge affected multiple sustainable investment variables.

These studies suggest a layered knowledge structure. General financial literacy enables individuals to understand investment fundamentals, whereas green or sustainable-finance literacy provides additional knowledge required to interpret sustainability characteristics. Green investment awareness may therefore serve as an entry point, but financial competence determines whether awareness becomes a reasoned household financial decision.

3.2 Environmental Preferences and Sustainable Investment Behavior

Socially responsible investment literature demonstrates that financial investors can derive value from both financial and non-financial characteristics. Riedl and Smeets found that social preferences and signaling contribute to socially responsible fund ownership and that some investors accept financial trade-offs to invest consistently with their preferences. Hartzmark and Sussman's natural experiment similarly provides evidence that investors respond to the salience of sustainability information when allocating capital.

Bauer, Ruof, and Smeets provide particularly strong behavioral evidence. Through field surveys connected to real pension-fund policy choices, they found substantial support for increased sustainable investment even where participants anticipated potential financial costs. Their findings indicate that social preferences can influence genuine financial choices rather than hypothetical attitudes alone.

The Theory of Planned Behavior offers a complementary behavioral explanation. Ajzen's framework proposes that behavior is influenced through intentions shaped by attitudes, social expectations, and perceived behavioral control. In a household green-investment context, environmental concern can contribute to favorable attitudes, but investment action may remain weak when households perceive limited knowledge, insufficient savings, inaccessible products, excessive risk, or uncertainty regarding sustainability claims.

Sustainable household finance should therefore not be reduced to moral preference. Sustainable choices emerge when environmental values coexist with perceived financial feasibility. The household must believe not only that a green investment is desirable, but also that it can be understood, afforded, compared, and incorporated into broader financial goals.

3.3 Credibility, Impact Evaluation, and Greenwashing Risk

Sustainable financial products are unusually dependent on information credibility because environmental characteristics are often less directly observable than conventional financial metrics. Consumers may readily observe interest rates, fees, or historical returns but can find it harder to evaluate whether an investment meaningfully contributes to climate mitigation, renewable energy, environmental innovation, or other sustainability objectives.

The OECD identifies misleading sustainability representations as a significant financial-consumer risk and emphasizes clear information, appropriate disclosure, consumer education, and monitoring of sustainable-finance advertising. The OECD's more recent sustainable-finance literacy work likewise emphasizes that financial education can help consumers align financial choices with sustainability preferences while protecting them against emerging risks such as greenwashing.

Heeb, Kölbel, Paetzold, and Zeisberger demonstrate another difficulty: investors may possess a meaningful willingness to pay for sustainable investments without responding proportionately to differences in the absolute level of impact. Their findings suggest that emotional value can influence sustainable investment choices and reinforce the importance of understandable impact information.

Accordingly, perceived credibility is included in the present framework as an enabling variable and greenwashing risk as an inhibiting variable. A household may possess strong environmental motivation and investment awareness but avoid action where sustainability claims appear vague, incomparable, or unreliable.

4. Research Methodology

4.1 Research Design

The study adopts a conceptual and simulation-based quantitative research design. The conceptual component synthesizes financial-literacy theory, sustainable-finance literacy, socially responsible investment research, household portfolio behavior, and the Theory of Planned Behavior.

No actual households were surveyed for the present manuscript. To avoid presenting invented observations as empirical evidence, the quantitative component uses 360 synthetic household financial profiles generated exclusively to illustrate how the proposed relationships could be evaluated in a future field study.

The principal dependent construct is Sustainable Household Financial Decision Quality. Green Investment Awareness, Sustainable-Finance Literacy, Environmental Concern, Perceived Green Product Credibility, and Perceived Greenwashing Risk serve as explanatory constructs.

4.2 Proposed Measurement Framework

Future empirical implementation should use validated multi-item scales wherever available and should assess reliability, convergent validity, discriminant validity, common-method bias, and measurement invariance before structural relationships are interpreted.

Table 1: Proposed Measurement Architecture

Construct	Operational Meaning	Proposed Indicators	Analytical Role
Green Investment Awareness	Knowledge of environmentally aligned investment alternatives and their basic characteristics	5	Main predictor
Sustainable-Finance Literacy	Ability to understand financial and sustainability information simultaneously	5	Predictor
Environmental Concern	Degree to which environmental consequences enter household financial preferences	4	Predictor

Construct	Operational Meaning	Proposed Indicators	Analytical Role
Green Product Credibility	Confidence that sustainability claims accurately reflect underlying financial activities	4	Predictor
Greenwashing Risk Perception	Concern regarding misleading or exaggerated environmental investment claims	4	Negative predictor

Source: Author-developed conceptual framework informed by established financial literacy, sustainable-finance literacy, responsible investment, and financial-consumer protection research.

4.3 Simulation and Analytical Procedure

The synthetic profiles were parameterized on standardized construct measures. Positive relationships were modeled between awareness, literacy, environmental concern, credibility, and sustainable decision quality. Greenwashing risk was assigned a negative relationship because uncertainty concerning the authenticity of environmental claims is expected to discourage household participation.

Multiple regression was used for illustrative estimation. Standardized coefficients were selected to demonstrate relative theoretical contribution rather than estimate population parameters. A separate allocation exercise categorized simulated sustainability-oriented household decisions into five broad financial areas.

All numerical results reported below are therefore methodological illustrations. They should be replaced with estimates derived from a properly sampled household dataset before the study is submitted or described as an original empirical survey.

5. Analysis

5.1 Predictors of Sustainable Household Financial Decisions

The simulated results indicate that Green Investment Awareness has the largest positive standardized association with sustainable household financial decision quality at $\beta = 0.36$. Sustainable-Finance Literacy follows at $\beta = 0.29$, suggesting that exposure to green financial opportunities becomes more useful when households understand how such products operate.

Environmental Concern generates a positive coefficient of $\beta = 0.18$, while Green Product Credibility records $\beta = 0.16$. Perceived Greenwashing Risk produces a negative coefficient of $\beta = -0.21$.

Table 2: Simulation-Based Regression Model of Sustainable Household Financial Decision Quality

Predictor	Standardized β	Standard Error	t-value	Illustrative p-value	Interpretation
Green investment awareness	0.36	0.05	7.20	<0.001	Strong positive association

Predictor	Standardized β	Standard Error	t-value	Illustrative p-value	Interpretation
Sustainable-finance literacy	0.29	0.05	5.80	<0.001	Substantial positive association
Environmental concern	0.18	0.04	4.50	<0.001	Moderate positive association
Green product credibility	0.16	0.04	4.00	<0.001	Positive confidence effect
Greenwashing risk perception	-0.21	0.05	-4.20	<0.001	Meaningful negative association
Model statistics	$R^2 = 0.58$	Adjusted $R^2 = 0.57$	F = 97.74	<0.001	Strong illustrative model

5.2 Awareness Is Necessary but Not Sufficient

The modeled coefficient for awareness is larger than that of environmental concern. Conceptually, this distinction matters because environmental concern may establish a preference for sustainable outcomes without revealing which financial products are available or whether they suit the household's financial circumstances.

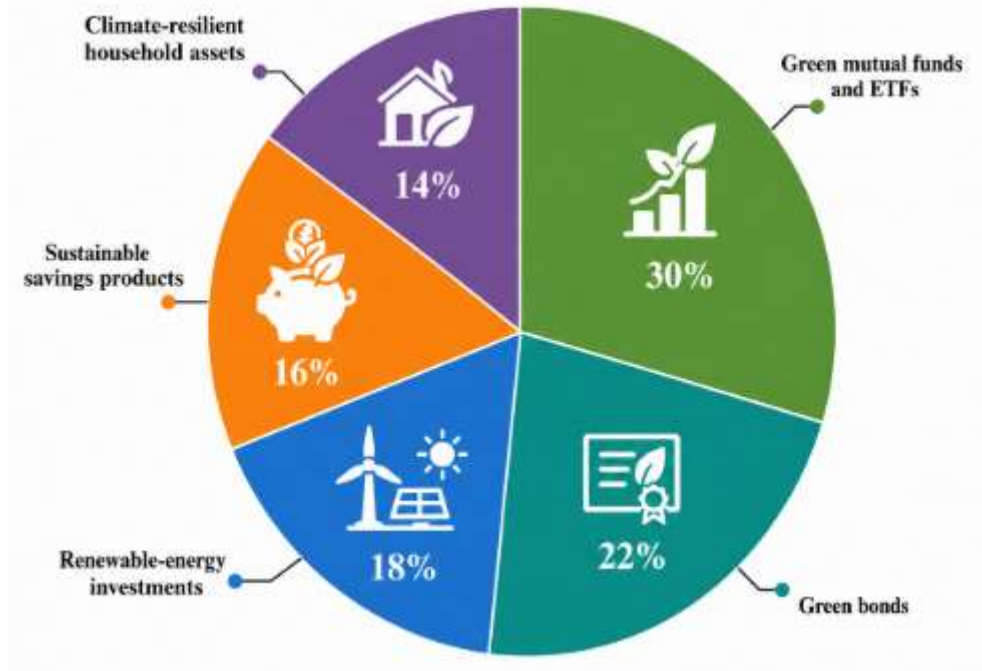
Evidence from Swedish households demonstrates that environmental values do not necessarily translate directly into environmentally aligned portfolios, particularly when households are financially disengaged or face informational barriers. Recent evidence from Italy and Switzerland similarly suggests that sustainable-finance knowledge contributes additional explanatory value to sustainable investment decisions.

The results therefore support an awareness-to-capability interpretation. Awareness exposes households to possible actions; literacy allows them to evaluate those actions; credibility influences whether claims are trusted; and financial circumstances ultimately determine whether the household can act.

5.3 Composition of Sustainable Household Financial Choices

The simulated allocation exercise shows that sustainable household finance need not be restricted to equity-oriented ESG products. Households can express sustainability preferences through several financial channels. In the illustrative distribution, green and sustainability-oriented mutual funds or ETFs account for 30% of modeled decisions, green bonds represent 22%, renewable-energy or community-green investments account for 18%, sustainability-linked savings products represent 16%, and climate-resilient household assets account for 14%.

Figure 1: Simulated Composition of Sustainable Household Financial Decisions



The distribution should not be interpreted as an estimate of actual household market shares. Its purpose is to illustrate the multidimensional nature of household sustainability-oriented finance.

6. Discussion

6.1 Transforming Awareness into Financial Capability

The central finding of the conceptual model is that green investment awareness should be understood as the beginning of a decision process rather than its completion. Financial consumers may become aware of environmentally oriented products through banks, investment platforms, social media, advisers, government programs, or sustainability campaigns, yet awareness provides little protection against unsuitable products or poor portfolio decisions.

Financial literacy remains essential because households must compare sustainable investments using the same financial discipline that should apply to conventional investments. Return expectations, fees, inflation exposure, liquidity, concentration, credit quality, investment horizon, taxation, and diversification remain relevant even where a product has strong environmental characteristics.

The sustainable-finance literacy literature adds another layer. Filippini and colleagues demonstrate that knowledge specifically related to sustainable finance is distinct and relevant to ownership of sustainable financial products, while Lanciano and colleagues find a positive relationship between financial literacy, sustainable-finance knowledge, and multiple sustainability-related investment outcomes.

The implication is that green financial education should combine financial competence with sustainability competence rather than teaching environmental motivation separately from investment analysis.

6.2 Managing the Intention–Action Gap

A second implication concerns the gap between sustainability preferences and actual financial behavior. Research has repeatedly demonstrated that people may possess genuine social or environmental preferences while their portfolios do not fully reflect these values. Anderson and Robinson attribute part of this gap to financial disengagement and information constraints, whereas Riedl and Smeets demonstrate that social preferences can matter strongly once consumers participate in socially responsible investing.

Bauer, Ruof, and Smeets provide further evidence that individuals can support more sustainable real-world investment policies even where they anticipate financial trade-offs. Sustainable financial action is therefore not reducible to return maximization. Households can derive value from financial decisions that correspond with environmental or social preferences.

However, sustainable preferences should not justify inadequate financial evaluation. A household that directs excessive emergency savings toward illiquid environmental investments, assumes inappropriate risk, or fails to diversify may weaken its own resilience despite pursuing an environmentally desirable objective.

Sustainable household financial decision quality therefore requires balance between personal financial sustainability and environmental sustainability.

6.3 Credibility as a Condition for Sustainable Participation

The negative modeled effect of greenwashing risk highlights the importance of trust. Sustainable investments often rely on labels, impact reports, ESG classifications, corporate disclosure, or fund-level sustainability objectives that ordinary households may find difficult to independently verify.

The OECD recommends stronger consumer education, clearer information, monitoring of sustainability-related promotion, product oversight, and safeguards against misleading claims. Its 2026 survey framework further recognizes sustainable-finance knowledge, climate-related risks, attitudes, and behavior as relevant components of contemporary household financial capability.

These considerations imply that increasing the supply of green financial products without strengthening disclosure quality may not maximize household participation. Complexity can create uncertainty, and uncertainty may produce avoidance.

Financial institutions can therefore support sustainable household decisions by explaining clearly what environmental objective a product pursues, how that objective is measured, what assets the product actually finances, how sustainability affects risk and return, what charges apply, and what limitations remain. Such transparency helps convert general awareness into informed confidence.

7. Conclusion

Green investment awareness is becoming an increasingly relevant component of household financial capability as environmental considerations enter savings, investment, retirement, insurance, energy, and broader asset-allocation decisions. Yet awareness alone is insufficient to produce sustainable and financially sound household behavior.

This study developed an integrated framework linking Green Investment Awareness, Sustainable-Finance Literacy, Environmental Concern, Green Product Credibility, Greenwashing Risk, and Sustainable Household Financial Decision Quality. The simulation-based analysis illustrates that



awareness and sustainable-finance literacy may provide the strongest positive contributions, whereas greenwashing concerns may materially weaken willingness to translate sustainability preferences into financial action.

The findings reinforce an important distinction between wanting to invest sustainably and being capable of doing so responsibly. Environmental concern provides motivation, but households also require financial knowledge, trustworthy information, accessible products, and the ability to evaluate financial trade-offs.

For financial institutions, policymakers, educators, and consumer-protection authorities, green-investment initiatives should therefore emphasize understandable sustainability information alongside conventional financial education. Communication should explain not only environmental benefits but also risk, liquidity, fees, diversification, expected financial performance, investment horizon, and limitations of sustainability claims.

The study is limited by its conceptual and simulation-based design. Its numerical results are not population estimates and should not be presented as primary household evidence. Future research should test the framework with representative household surveys, longitudinal portfolio observations, behavioral experiments, and cross-country samples. Particular attention should be given to income differences, age, gender, financial experience, digital-finance use, access to professional advice, perceived greenwashing, and the extent to which stated environmental preferences correspond with verified portfolio holdings.

The broader conclusion is that green investment awareness creates sustainable financial possibility, but financial literacy and credible information convert that possibility into responsible household action.

References

1. I. Ajzen, "The theory of planned behavior," *Organizational Behavior and Human Decision Processes*, vol. 50, no. 2, pp. 179–211, 1991, doi: 10.1016/0749-5978(91)90020-T.
2. A. Lusardi and O. S. Mitchell, "The economic importance of financial literacy: Theory and evidence," *Journal of Economic Literature*, vol. 52, no. 1, pp. 5–44, 2014, doi: 10.1257/jel.52.1.5.
3. M. van Rooij, A. Lusardi, and R. Alessie, "Financial literacy and stock market participation," *Journal of Financial Economics*, vol. 101, no. 2, pp. 449–472, 2011, doi: 10.1016/j.jfineco.2011.03.006.
4. A. Riedl and P. Smeets, "Why do investors hold socially responsible mutual funds?" *The Journal of Finance*, vol. 72, no. 6, pp. 2505–2550, 2017, doi: 10.1111/jofi.12547.
5. S. M. Hartzmark and A. B. Sussman, "Do investors value sustainability? A natural experiment examining ranking and fund flows," *The Journal of Finance*, vol. 74, no. 6, pp. 2789–2837, 2019, doi: 10.1111/jofi.12841.
6. R. Bauer, T. Ruof, and P. Smeets, "Get real! Individuals prefer more sustainable investments," *The Review of Financial Studies*, vol. 34, no. 8, pp. 3976–4043, 2021, doi: 10.1093/rfs/hhab037.
7. A. Anderson and D. T. Robinson, "Financial literacy in the age of green investment," *Review of Finance*, vol. 26, no. 6, pp. 1551–1584, 2022, doi: 10.1093/rof/rfab031.
8. F. Heeb, J. F. Kölbel, F. Paetzold, and S. Zeisberger, "Do investors care about impact?" *The Review of Financial Studies*, vol. 36, no. 5, pp. 1737–1787, 2023, doi: 10.1093/rfs/hhac066.



9. OECD, *Financial Consumers and Sustainable Finance: Policy Implications and Approaches*. Paris, France: OECD Publishing, 2023, doi: 10.1787/bf84ff64-en.
10. M. Filippini, M. Leippold, and T. Wekhof, “Sustainable finance literacy and the determinants of sustainable investing,” *Journal of Banking & Finance*, vol. 163, Art. no. 107167, 2024, doi: 10.1016/j.jbankfin.2024.107167.
11. E. Lanciano, D. Previati, O. Ricci, and G. Santilli, “Financial literacy and sustainable finance decisions among Italian households,” *Journal of Economics and Business*, vols. 134–135, Art. no. 106220, 2025, doi: 10.1016/j.jeconbus.2024.106220.
12. M. Oehmke and M. M. Opp, “A theory of socially responsible investment,” *The Review of Economic Studies*, vol. 92, no. 2, pp. 1193–1225, 2025, doi: 10.1093/restud/rdae048.
13. OECD, *Sustainable Finance and Financial Literacy in Cambodia and the Philippines*, OECD Business and Finance Policy Papers, no. 92, Paris, France, 2025, doi: 10.1787/f1fa5fb2-en.
14. OECD, *OECD/INFE Survey Instrument on Knowledge, Attitudes and Behaviours on Climate-Related Risks and Sustainable Finance*. Paris, France: OECD Publishing, 2026, doi: 10.1787/6837ed84-en.
15. [15] A. Fatemi and I. Fooladi, “Sustainable finance: A new paradigm,” *Global Finance Journal*, 2013, doi: 10.1016/j.gfj.2013.07.006.
16. S. Aren and A. N. Zengin, “Influence of financial literacy and risk perception on choice of investment,” *Procedia–Social and Behavioral Sciences*, vol. 235, pp. 656–663, 2016, doi: 10.1016/j.sbspro.2016.11.047.