



RESEARCH ARTICLE

A STUDY ON THE IMPACT OF CLIMATE CHANGE IN THE FINANCE AREA WITHIN A YEAR AND ITS IMPLICATIONS

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ABSTRACT

Climate change has increasingly transcended its environmental dimensions, emerging as a critical financial risk with immediate and measurable consequences. Within a single year, climate-related events such as extreme weather, regulatory shifts, and market re-pricing can significantly disrupt financial systems, investment portfolios, and economic stability. This study examines the short-term impacts of climate change on the finance sector, focusing on market volatility, institutional risk exposure, insurance dynamics, and policy-driven financial adjustments. It further explores the implications for investors, financial institutions, and policymakers, emphasizing the urgent need for climate-resilient financial frameworks and adaptive risk management strategies.

INTRODUCTION

Climate change is no longer a distant or abstract concern confined to scientific discourse; it has become a tangible force shaping global financial systems. Traditionally, financial markets operated under the assumption of environmental stability, treating climate-related disruptions as long-term externalities. However, the increasing frequency of extreme climate events and rapid policy responses has compressed climate risk into shorter time horizons, often manifesting within a single fiscal year. The finance sector occupies a pivotal role in this evolving landscape. Banks, insurers, asset managers, and capital markets not only absorb climate-related shocks but also influence the allocation of capital toward mitigation and adaptation initiatives. This study seeks to analyse how climate change affects the finance area within a one-year timeframe and to assess the broader implications for financial stability, investment behaviour, and regulatory governance.

Climate Change as a Short-Term Financial Risk

Physical Risks and Immediate Financial Exposure: Physical risks arising from climate change—such as floods, hurricanes, wildfires, and heatwaves—can impose abrupt financial losses within a year. These events damage

infrastructure, disrupt supply chains, and reduce asset values, directly affecting corporate balance sheets and public finances. Financial institutions with concentrated exposure to climate-vulnerable regions may experience rapid deterioration in asset quality, increased loan defaults, and liquidity stress. In equity and bond markets, climate-induced disasters often trigger sudden price corrections. Companies operating in energy, agriculture, transportation, and real estate sectors are particularly susceptible, as their revenues and operational continuity are closely linked to environmental conditions. The immediacy of these impacts underscores climate change as a present, rather than prospective, financial risk.

Transition Risks and Market Repricing: Transition risks stem from the global shift toward a low-carbon economy. Within a single year, policy announcements, carbon pricing mechanisms, or regulatory reforms can materially alter market expectations. Assets associated with fossil fuels and carbon-intensive industries may undergo rapid devaluation, leading to what is commonly referred to as "stranded assets." Financial markets increasingly reprice securities in response to climate-related disclosures and sustainability metrics. The growing integration of environmental, social, and governance (ESG) criteria has accelerated capital reallocation, often within short investment cycles. As a result, climate change influences not

only long-term valuation models but also annual portfolio performance.

Impacts on Key Financial Institutions

Banking Sector: Within one year, climate change can significantly affect banking operations through credit risk, operational risk, and regulatory compliance costs. Climate-related events may impair borrowers' repayment capacity, particularly in sectors reliant on natural resources. Banks may be compelled to increase loan-loss provisions, thereby reducing profitability. Moreover, regulatory authorities are increasingly mandating climate stress testing and enhanced disclosure requirements. Compliance with these measures necessitates substantial investment in data systems and risk assessment frameworks, imposing short-term financial and operational burdens on banking institutions.

Insurance and Reinsurance Markets: The insurance sector experiences some of the most immediate financial impacts of climate change. Extreme weather events can lead to a surge in claims in a single year, challenging insurers' solvency and pricing models. Rising uncertainty has prompted insurers to revise premiums, limit coverage, or withdraw from high-risk regions altogether. Reinsurance markets, which provide risk transfer mechanisms for primary insurers, also face increased volatility. The cumulative effect of climate-related claims can destabilize insurance markets, with broader implications for financial resilience and social protection.

Capital Markets and Investment Behaviour

Market Volatility and Investor Sentiment: Climate-related news and events can amplify market volatility over short periods. Investor sentiment is increasingly influenced by perceptions of climate risk, regulatory direction, and corporate sustainability performance. Within a year, shifts in sentiment may lead to abrupt capital flows away from climate-exposed assets toward greener alternatives. Institutional investors, including pension funds and sovereign wealth funds, are progressively incorporating climate risk assessments into annual investment strategies. This shift reinforces the role of climate change as a determinant of short-term financial decision-making.

Growth of Sustainable Finance: The urgency of climate impacts has accelerated the expansion of sustainable finance instruments, such as green bonds and climate-linked loans. Within a year, issuance volumes can rise significantly in response to policy incentives and investor demand. While these instruments offer opportunities for risk diversification and innovation, they also require robust standards to prevent misallocation of capital and greenwashing.

Policy, Regulation, and Financial Governance: Government policies and regulatory interventions play a decisive role in shaping the financial implications of climate change.

Within a short timeframe, new disclosure mandates, taxonomies, and prudential regulations can transform financial practices. Central banks and financial supervisors increasingly recognize climate change as a systemic risk, integrating it into macroprudential oversight. The alignment of financial governance with climate objectives has profound implications for market transparency, capital adequacy, and investor confidence. However, inconsistent or abrupt policy shifts may also introduce uncertainty, underscoring the need for coherent and predictable regulatory frameworks.

Implications and Future Outlook: The short-term financial impacts of climate change reveal a fundamental reconfiguration of risk perception in the finance area. Within a year, climate-related factors can influence asset prices, institutional stability, and capital allocation patterns. These developments carry significant implications for economic resilience, social equity, and sustainable development. Financial institutions and policymakers must adopt proactive strategies that integrate climate risk into core financial decision-making. Failure to do so may exacerbate market instability and undermine confidence in financial systems. Conversely, effective integration of climate considerations can enhance resilience and foster a more sustainable financial architecture.

CONCLUSION

This study demonstrates that climate change exerts a measurable and profound influence on the finance sector within a single year. Through physical, transition, and regulatory channels, climate risks reshape financial outcomes and strategic priorities. The implications extend beyond immediate losses, challenging traditional financial models and governance structures. Addressing these challenges requires coordinated action, innovative financial instruments, and a commitment to embedding climate resilience at the heart of financial systems.

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