Chapter 11

Role of Financial Markets in Climate Change Adaptation and Mitigation

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ABSTRACT

Financial markets act as the primary intermediaries between capital suppliers and users, thereby playing a decisive role in mobilizing, allocating, and channeling investments towards low-carbon, climate-resilient solutions. As the world faces mounting challenges from rising global temperatures, more frequent extreme weather events, biodiversity loss, and the socioeconomic disruptions that follow, the ability of financial markets to redirect capital flows from environmentally wealth funds, private equity, venture capital, and capital markets, holds the keys to accelerating the transition from fossil fuel dependency to clean energy systems, from linear re-

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silience. One of the most significant contributions of financial markets lies in their capacity to price climate risk. When risks are priced accurately, investors can better differentiate between climate-resilient and climate-vulnerable assets, leading to capital reallocation that strengthens sustainable businesses and reduces exposure to high-carbon sectors.

THE ROLE OF FINANCIAL MARKETS IN ADDRESSING CLIMATE CHANGE

Financial markets act as the primary intermediaries between capital suppliers and users, thereby playing a decisive role in mobilizing, allocating, and channeling investments towards low-carbon, climate-resilient solutions. As the world faces mounting challenges from rising global temperatures, more frequent extreme weather events, biodiversity loss, and the socioeconomic disruptions that follow, the ability of financial markets to redirect capital flows from environmentally wealth funds, private equity, venture capital, and capital markets, holds the keys to accelerating the transition from fossil fuel dependency to clean energy systems, from linear resilience. One of the most significant contributions of financial markets lies in their capacity to price climate risk. By incorporating (Alan et al., 2009)Organizations like the Task Force on Climate-related Financial Disclosures (TCFD) and the International Sustainability Standards Board (ISSB) have created frameworks that encourage companies and investors to assess and disclose material climate risks. When risks are priced accurately, investors can better differentiate between climate-resilient and climate-vulnerable assets, leading to capital reallocation that strengthens sustainable businesses and reduces exposure to high-carbon sectors. This pricing mechanism also has policy implications, as regulators and central banks increasingly recognize climate change as a systemic financial risk, -warning system, guiding both investors and policymakers in managing the transition to a net-zero economy.finance mechanisms provide targeted capital for projects that mitigate climate change or enhance adaptation. The green bond market, once niche, has grown into a trillion-dollar asset class, enabling governments, municipalities, and corporations to fund renewable energy, energy efficiency, and sustainable infrastructure projects. Similarly, carbon markets—both compliance-based and voluntary—create price signals that incentivize emission reductions while unlocking capital for carbon sequestration projects such as afforestation, reforestation, and soil carbon initiatives. Exchange-traded funds (ETFs) and climate-focused indices offer retail and institutional investors alike the ability to align portfolios with sustainability preferences, further mainstreaming climate-conscious investment strategies. These tools not only diversify financial products but also democratize access to sustainable investments, enabling wider participation

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