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International Journal of Management & Entrepreneurship Research

P-ISSN: 2664-3588, E-ISSN: 2664-3596

Volume 5, Issue 9, P.No.652-673, September 2023

DOI: 10.51594/ijmer.v5i9.547

Fair East Publishers

Journal Homepage: [www.fepbl.com/index.php/ijmer](http://www.fepbl.com/index.php/ijmer)



## SUSTAINABLE INVESTMENT STRATEGIES IN PENSION FUND MANAGEMENT: A COMPARATIVE REVIEW OF ESG PRINCIPLES ADOPTION IN THE U.S. AND NIGERIA

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**Article Received:** 05-08-23

**Accepted:** 01-09-23

**Published:** 08-09-23

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### ABSTRACT

The integration of Environmental, Social, and Governance (ESG) principles into pension fund management has garnered significant attention in the global financial sector. This study offers a comprehensive comparative analysis of ESG adoption in pension fund management between the U.S. and Nigeria. Through an in-depth exploration, the research unveils the current state, challenges, and implications of ESG integration in these distinct financial landscapes. The U.S., with its advanced financial markets, has demonstrated a systematic and mature approach to ESG adoption, driven by technological advancements, robust regulatory frameworks, and a shift towards sustainable investment. In contrast, Nigeria, an emerging market, is in the early stages of ESG integration, grappling with challenges such as limited data availability, regulatory intricacies, and the pressing need for ESG education. A pivotal finding of this research is the positive correlation between ESG integration and enhanced financial performance. Pension funds that prioritize ESG principles have showcased resilience in

volatile markets, often outpacing their non-ESG counterparts. This underscores ESG's dual role as both a moral and financial imperative. The study further delves into the future outlook of ESG adoption in both nations. While the U.S. is poised for deeper ESG integration, leveraging technological innovations and refined regulations, Nigeria stands at a crossroads, with its trajectory dependent on addressing current challenges and fostering a culture of sustainable investment. In conclusion, the research emphasizes that ESG integration in pension fund management is a profound shift in the financial paradigm, promising a secure, sustainable, and ethically grounded financial future for beneficiaries. The comparative journey of the U.S. and Nigeria offers invaluable insights, setting a benchmark for pension funds globally as they navigate the complexities of sustainable investment in an ever-evolving financial landscape.

**Keywords:** ESG Integration, Pension Fund Management, Sustainable Investment, Comparative Analysis.

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## INTRODUCTION

### Background on Sustainable Investment Strategies

Over the past few decades, the global financial landscape has witnessed a paradigm shift towards sustainable investment strategies. This transformation is underpinned by the growing recognition of the importance of integrating Environmental, Social, and Governance (ESG) principles into investment decisions. ESG principles have emerged as a pivotal model for sustainable business development, influencing a myriad of industries on an international scale (Mazhorina, 2022).

Sustainable investment strategies, also known as environmental, social, and governance (ESG) investing, have gained significant attention in recent years. ESG criteria refer to the consideration of environmental, social, and governance factors in investment decision-making (Friede et al., 2015). The search for a relationship between ESG criteria and corporate financial performance (CFP) dates back to the 1970s, and since then, numerous empirical studies have been conducted on this topic (Friede et al., 2015).

The surge in interest among investment professionals to align their portfolios with socially responsible choices is evident. For instance, the adoption of Corporate Social Responsibility (CSR) and ESG principles in investment decisions has been explored, with frameworks being established to guide corporations in their strategic management (Weston & Nnadi, 2023). Furthermore, ESG factors are increasingly becoming mainstream in portfolio investment strategies. Investors are aligning their investment values with the Sustainable Development Goals (SDG) declared by the United Nations Principles for Responsible Investments. This alignment raises the question of whether investors might be sacrificing returns for pursuing ESG-aligned goals. However, studies have shown that certain environmental megatrends and disruptive technologies have yielded positive financial outcomes, suggesting that ESG-aligned investment strategies can promote SDGs without necessarily sacrificing returns (Naffa & Fain, 2020).

A comprehensive review study by Friede et al. (2015) analyzed over 2,000 empirical studies and found that roughly 90% of them reported a nonnegative ESG-CFP relation. The positive impact of ESG on CFP appears to be stable over time and is observed across different asset classes, regions, and investment strategies. High Sustainability companies that adopt

sustainability policies exhibit distinct organizational processes and outperform their counterparts in terms of stock market and accounting performance (Friede et al., 2015; Eccles et al., 2012).

Investors have various motivations for sustainable investments. Busch et al. (2015) categorized investor motives into financial, deontological, consequential, and expressive, each driven by different underlying logics. Sustainable investments can contribute to global sustainability, improve long-term risk management, and potentially increase expected investment returns (Cunha et al., 2019). Investors commonly implement strategies such as negative screening, positive screening, norms-based screening, ESG integration, sustainability-themed investing, impact or community investing, and corporate engagement and shareholder action (Cunha et al., 2019).

Sustainable investment is aligned with global initiatives for sustainable development, and the asset management industry plays a crucial role in contributing to sustainable development goals (SDGs) (Folqué et al., 2022). However, there is a need for further research on advanced sustainable investment practices that can effectively integrate the SDGs into the financial market (Folqué et al., 2022).

In essence, the integration of ESG principles into investment strategies is not merely a trend but a reflection of the evolving priorities of investors, corporations, and society at large. As the global community grapples with pressing challenges such as climate change, social inequalities, and governance issues, the role of sustainable investment strategies in shaping a resilient and inclusive financial future cannot be overstated.

### **Importance of ESG Principles in Pension Fund Management**

The integration of Environmental, Social, and Governance (ESG) principles into pension fund management has become a focal point in the investment landscape. The evolving expectations of investors and society underscore the significance of ESG principles. ESG principles provide a framework for sustainable business development and serve as a risk mitigation tool for fund managers (Przychodzen et al., 2016).

The rise in socially responsible investment decisions over recent decades has led to a heightened interest in aligning portfolios with ESG criteria. Such alignment is not merely a reflection of ethical considerations but is increasingly seen as a strategic imperative. For instance, research has shown that firms adhering to the Principles for Responsible Investing (PRI) tend to outperform those that do not, highlighting the potential financial benefits of ESG integration (Weston & Nnadi, 2023).

Furthermore, the changing dynamics of pension fund management, especially in the context of the UK, have emphasized the importance of aligning assets with liabilities. ESG considerations are increasingly influencing this alignment, with fund managers recognizing the potential risks and rewards associated with ESG factors (Blake, 2003).

In essence, the integration of ESG principles into pension fund management is not just about adhering to ethical standards. It is about recognizing the broader societal shifts, understanding the associated risks, and leveraging ESG criteria as a strategic tool to enhance financial performance and ensure long-term sustainability.

### **Rationale for Comparing the U.S. and Nigeria Overview of Sustainable Investment**

The decision to juxtapose the adoption of sustainable investment strategies, particularly the integration of Environmental, Social, and Governance (ESG) principles, in the pension fund

management landscapes of the U.S. and Nigeria is grounded in several compelling reasons. Firstly, the U.S. represents one of the most mature and sophisticated financial markets globally, with a long-standing history of pension fund management. The country's pension funds have been at the forefront of integrating ESG principles, driven by both regulatory and market dynamics (Hoepner et al., 2021). The U.S. experience offers valuable insights into the evolution, challenges, and successes of ESG integration in a developed market context.

Conversely, Nigeria presents a contrasting landscape as one of Africa's largest economies. Emerging markets like Nigeria are grappling with unique challenges, including socio-economic disparities, governance issues, and environmental concerns. The integration of ESG principles in Nigeria's pension fund management is a matter of ethical alignment and a strategic response to these challenges. Moreover, emerging markets' regulatory and institutional settings can significantly influence asset owners' decisions to adopt sustainable investment practices (Tomassetti, 2022).

Comparing these two distinct markets provides a comprehensive understanding of sustainable investment's global trends, challenges, and opportunities. It sheds light on how different regulatory, cultural, and economic contexts shape the adoption of ESG principles in pension fund management. Furthermore, such a comparison can offer valuable lessons for other countries, both developed and emerging, in their journey towards sustainable investment.

## LITERATURE REVIEW

### Definition and Evolution of Sustainable Investment

Sustainable investment, also known as socially responsible investment (SRI), is a financial approach that integrates environmental, social, and governance (ESG) criteria into investment decision-making. This strategy goes beyond traditional financial analysis by considering non-financial factors that can impact investments' risk and return profile (Eccles et al., 2012).

The concept of sustainable investment has evolved over time. In the past, socially responsible investing primarily focused on excluding certain industries or companies from investment portfolios based on ethical or moral considerations. However, the definition of sustainable investment has expanded to include a broader range of ESG factors and strategies (Eccles et al., 2012).

High Sustainability companies, which are organizations that have adopted sustainability policies, exhibit distinct organizational processes compared to their counterparts. These companies are more likely to have established processes for stakeholder engagement, demonstrate a long-term orientation, and provide higher measurement and disclosure of nonfinancial information. Furthermore, High Sustainability companies have been found to outperform their counterparts in terms of stock market and accounting performance over the long term (Eccles et al., 2012).

The 1990s and 2000s witnessed a significant acceleration in the adoption of sustainable investment strategies, driven by a growing awareness of global challenges such as climate change, social inequalities, and corporate scandals. Institutional investors, including pension funds and insurance companies, began to recognize the potential risks and opportunities associated with ESG factors. This recognition led to the development of various ESG standards, frameworks, and indices, facilitating the systematic integration of sustainability considerations into investment decisions (Eccles & Serafeim, 2013).

Sustainable investment has evolved from a niche practice driven by ethical considerations to a mainstream approach recognized for its potential to enhance financial performance and address global challenges.

In conclusion, sustainable investment involves the integration of ESG criteria into investment decision-making. The concept has evolved from a focus on ethical considerations to a broader approach that considers a range of ESG factors. High Sustainability companies have been found to exhibit distinct organizational processes and outperform their counterparts in terms of financial performance. The evolution of sustainable investment has been driven by factors such as the recognition of the financial benefits, investor demand, and regulatory developments.

### **Role and Significance of Pension Funds in Sustainable Investment**

Pension funds, with their vast pools of capital and long-term investment horizons, play a pivotal role in the realm of sustainable investment. Their significance in this context can be attributed to several factors:

1. **Long-Term Investment Horizon:** Pension funds are inherently long-term investors, given their primary objective to secure retirement benefits for their beneficiaries over extended periods. This long-term perspective aligns well with sustainable investment goals, which often focuses on long-term value creation and the mitigation of long-term risks, such as those posed by climate change or social inequalities (Clark & Urwin, 2008).
2. **Fiduciary Duty:** Pension funds have a fiduciary duty to act in the best interests of their beneficiaries. As understanding what constitutes beneficiaries' best interests evolves, there is a growing recognition that integrating ESG factors can be a crucial part of fulfilling this duty. By considering ESG risks and opportunities, pension funds can better ensure their portfolios' long-term sustainability and performance (Hawley & Williams, 2007).
3. **Scale and Influence:** Given the substantial assets under management, pension funds can exert significant influence on the companies in which they invest. This influence can be leveraged to promote sustainable business practices, advocate for better ESG disclosures, and drive positive change in industries and markets (Barzuza et al., 2019).
4. **Risk Management:** Sustainable investment strategies, underpinned by ESG integration, offer pension funds tools to identify, assess, and manage potential risks that might not be captured through traditional financial analysis. By understanding ESG risks, pension funds can make more informed investment decisions and potentially enhance the risk-adjusted returns of their portfolios (Riedl & Smeets, 2017).

In conclusion, pension funds, given their scale, influence, and long-term perspective, are uniquely positioned to champion the cause of sustainable investment. Their role in this context is securing financial returns and contributing to a more sustainable and equitable global economy.

### **Benefits and Challenges of Sustainable Investment for Pension Funds ESG Principles: An Overview**

Sustainable investment offers several benefits for pension funds. Firstly, numerous empirical studies have shown a positive relationship between environmental, social, and governance (ESG) criteria and corporate financial performance (CFP) (Friede et al., 2015). This suggests that integrating ESG factors into investment decisions can potentially lead to improved

financial returns for pension funds (Friede et al., 2015). High Sustainability companies, that have adopted sustainability policies, have been found to outperform their counterparts in terms of stock market and accounting performance over the long term (Eccles et al., 2012).

In addition to financial benefits, sustainable investment allows pension funds to align their investment strategies with their values and contribute to positive societal and environmental outcomes (Rossi et al., 2019). This can enhance the reputation and trust of pension funds among their participants (Rossi et al., 2019). Furthermore, by considering ESG factors, pension funds can better manage long-term risks and identify investment opportunities related to sustainability trends (Friede et al., 2015).

However, there are also challenges associated with sustainable investment for pension funds. One challenge is the availability and quality of ESG data. There is a sheer variety and inconsistency in the data and measures used to assess ESG performance, making it difficult to compare and analyze investments (Kotsantonis, 2019). This lack of standardization and transparency in ESG data can undermine the reliability of assessments and lead to market-wide inconsistencies. To address this, stock exchanges should consider issuing guidelines for ESG disclosures, and data providers should agree on best practices and enhance transparency. Furthermore, pension funds face regulatory and governance challenges in implementing sustainable investment strategies. Regulatory frameworks can influence the extent to which pension funds can incorporate ESG factors into their investment decisions (Gitau & Sang, 2022). Pension funds also need to establish appropriate governance structures and processes to effectively integrate sustainability considerations into their investment strategies (Gitau & Sang, 2022).

In summary, sustainable investment offers several benefits for pension funds, including the potential for improved financial returns, alignment with values, and better risk management. However, challenges related to ESG data, potential trade-offs between financial returns and ESG considerations, and regulatory and governance issues need to be addressed. Pension funds can effectively integrate sustainable investment practices and contribute to positive societal and environmental outcomes by overcoming these challenges.

## **ESG PRINCIPLES**

### **Definition and Components of ESG Principles**

Environmental, Social, and Governance (ESG) principles have become a pivotal framework in the domain of sustainable investment (Izmailova, 2021). These principles offer investors a structured approach to evaluate their investments' sustainability and ethical implications.

The environmental component pertains to an organisation's ecological impact and sustainability practices. It encompasses a broad spectrum of issues, from carbon emissions and waste management to energy efficiency, deforestation, and water conservation. Companies that prioritize this aspect demonstrate a commitment to minimizing their ecological footprint, conserving vital resources, and adopting environmentally beneficial practices (Izmailova, 2021).

The social dimension of ESG focuses on a company's relationships with its diverse stakeholders, including employees, suppliers, customers, and the communities within which it operates. This component delves into areas such as labor practices, human rights adherence, health and safety standards, community engagement, and the responsibility associated with

products or services. A robust emphasis on the social aspect indicates a company's dedication to valuing its stakeholders and fostering positive societal outcomes (Izmailova, 2021).

Lastly, governance relates to the internal systems and protocols guiding a company's operations and stakeholder interactions. This includes, but is not limited to, board composition, executive remuneration, rights of shareholders, transparency in operations, and adherence to ethical standards. Effective governance ensures that companies function transparently, ethically, and in alignment with the interests of shareholders (Cerrato & Ferrando, 2020).

Incorporating ESG principles into investment decisions signifies a departure from traditional financial analysis. Instead, it represents a more comprehensive approach that considers the broader ramifications of investments. By assessing companies based on ESG criteria, investors can glean insights into potential risks and opportunities, ensuring their investments resonate with both financial objectives and broader sustainability goals (Izmailova, 2021).

### **Global Trend of ESG Adoption in Investment Strategies**

The global trend towards the adoption of Environmental, Social, and Governance (ESG) principles in investment strategies has been gaining momentum over the past few decades. This shift can be attributed to a growing recognition of the long-term risks and opportunities associated with ESG factors. Institutional and individual investors are increasingly aligning their investment values with Sustainable Development Goals (SDG) declared by the United Nations Principles for Responsible Investments (Naffa & Fain, 2020).

One of the primary drivers behind this trend is the understanding that ESG factors can have a material impact on financial performance. For instance, companies with robust environmental practices might be better positioned to navigate regulatory changes, avoid environmental liabilities, and benefit from operational efficiencies. Similarly, firms that prioritize social and governance factors may foster stronger relationships with their stakeholders, mitigate reputational risks, and ensure better governance structures (Daugaard & Ding, 2022).

Furthermore, the rise of ESG-themed megatrend investments in global equity markets has showcased that investors do not necessarily have to sacrifice returns when aligning their portfolios with ESG criteria. In fact, several environmental megatrends, such as energy efficiency and disruptive technologies, have yielded positive financial outcomes, reinforcing the viability of ESG as a strategic investment approach (Naffa & Fain, 2020).

### **Significance of ESG in Pension Fund Management**

Pension funds, given their long-term investment horizons, are uniquely positioned to benefit from the integration of ESG principles. The significance of ESG in pension fund management can be viewed from both a risk mitigation and value creation perspective.

By incorporating ESG criteria, pension funds can identify and manage potential long-term risks that might not be evident through traditional financial analysis. For instance, a company with poor environmental practices might face regulatory fines, reputational damage, or operational disruptions, which can adversely impact investment returns. Similarly, governance issues, such as lack of board diversity or executive compensation misalignment, can signal potential management and oversight challenges (Folque et al., 2021).

On the value creation front, ESG integration can uncover investment opportunities in companies that are leading in sustainable practices, innovating in green technologies, or tapping into new markets driven by sustainability trends. Such companies are likely to be

better positioned for long-term growth and can offer competitive returns to pension funds (Folque et al., 2021).

In essence, the integration of ESG principles in pension fund management is not just about ethical or responsible investing; it's about making informed investment decisions that align with long-term value creation and risk management objectives.

### **PENSION FUND MANAGEMENT IN THE U.S.**

The United States, with its diverse and dynamic financial landscape, has a robust pension fund industry that plays a pivotal role in safeguarding the retirement savings of millions of Americans. Pension funds in the U.S. are structured to provide retirees with a steady stream of income, ensuring financial security during their post-working years.

#### **Overview of the U.S. Pension Fund Industry**

The U.S. pension fund industry is characterized by its vast size and complexity, encompassing both public and private pension plans. State and local governments typically sponsor public pension plans for their employees, while private pension plans are established by corporations for their workforce. Over the years, there has been a notable shift from defined benefit plans, which guarantee a specific retirement benefit amount, to defined contribution plans, where the amount determines the retirement benefit contributed and the performance of the investments (Mathews & Kidney, 2010).

One of the significant challenges faced by the U.S. pension fund industry is the funding gap. Many pension funds, especially public ones, have unfunded liabilities, meaning the promises made to current and future retirees exceed the assets available to meet those promises. This has led to concerns about some pension funds' long-term sustainability and prompted calls for reforms to ensure their solvency (Mésonnier & Nguyen, 2020).

Despite these challenges, the U.S. pension fund industry remains crucial in the global financial market. Pension funds are significant institutional investors whose investment decisions can influence market dynamics. With the growing emphasis on sustainable investment, there's a notable trend of U.S. pension funds integrating ESG principles into their investment strategies, reflecting a broader shift in the investment landscape (Mésonnier & Nguyen, 2020).

#### **Adoption and Drivers of ESG Principles in U.S. Pension Funds**

The adoption of Environmental, Social and Governance (ESG) principles in U.S. pension funds has been driven by a confluence of factors, reflecting the broader global trend towards sustainable investing. The integration of ESG principles into pension fund management in the U.S. is not merely a reflection of ethical considerations but is increasingly seen as a prudent approach to risk management and value creation.

One of the primary drivers behind the adoption of ESG principles in U.S. pension funds is the recognition of the long-term financial implications of ESG risks. For instance, environmental risks, such as those related to climate change, can have material impacts on the valuation of assets and liabilities. Similarly, social and governance risks, ranging from labor practices to board diversity, can influence investments' long-term sustainability and profitability (Hoepner, Majoch, & Zhou, 2019).

Furthermore, the United Nations-supported Principles for Responsible Investment (PRI) has played a pivotal role in promoting the adoption of ESG principles among asset owners, including pension funds. The PRI, which has seen significant growth in its signatories,



emphasizes the importance of integrating ESG factors into investment decision-making processes. Asset owners, such as public service employees, and labor union pension funds, that are culturally aligned with the values represented by the Responsible Investment (RI) movement, have been more likely to sign the PRI. Interestingly, voluntary legislation on ESG issues in certain jurisdictions has also influenced the decision to adopt the PRI (Hoepner, Majoch, & Zhou, 2019).

### **Challenges and Case Studies of U.S. ESG Adoption**

The integration of Environmental, Social, and Governance (ESG) principles into the investment strategies of U.S. pension funds has been met with both enthusiasm and challenges. While the potential benefits of ESG integration are widely recognized, significant hurdles also need to be addressed for its full-scale adoption. These challenges and case studies provide valuable insights into the current landscape of ESG adoption in U.S. pension fund management. Furthermore, they highlight pension funds' different approaches and experiences in incorporating ESG principles into their investment strategies. This section will delve into the challenges U.S. pension funds face in adopting ESG principles and present case studies that highlight both the successes and pitfalls of ESG integration.

#### ***Challenges in ESG Adoption***

1. **Data Inconsistency and Quality:** The inconsistency and varying quality of ESG data pose significant challenges. Different companies and industries may report ESG metrics differently, making it challenging for investors to make apples-to-apples comparisons (Kickbusch et al., 2018).
2. **Short-termism:** The investment industry often focuses on short-term returns, which can conflict with the long-term perspective required for effective ESG integration.
3. **Lack of Standardization:** The absence of standardized frameworks and benchmarks for assessing ESG performance complicates the evaluation and comparison of the ESG credentials of different investments (Kickbusch et al., 2018).

#### ***Case Studies***

1. **ESG Integration in Public Pension Funds - CalPERS:** The California Public Employees' Retirement System (CalPERS) has been a pioneer in ESG advocacy. Recognizing that sustainable investment practices can lead to better long-term returns, CalPERS has actively engaged with companies in their portfolio on ESG issues, leading to positive changes in corporate behavior (Opazo, Raddatz, & Schmukler, 2009).
2. **Challenges in ESG Data Utilization:** A mid-sized pension fund sought to integrate ESG data into its investment decision-making process. However, the fund faced challenges in data interpretation due to inconsistencies in ESG reporting across companies. This underscores the need for standardized ESG reporting frameworks (Wagemans, van Koppen, & Mol, 2018).
3. **Mobile Payments and ESG:** The case of mobile payments in China, particularly Alipay and WeChat Pay, offers insights into the broader implications of ESG adoption. These platforms have transformed financial transactions, emphasizing the importance of governance and social considerations in technology adoption. The lessons from this case can be applied to the U.S. context, where technology and ESG considerations intersect (Shen et al., 2020).

In conclusion, the adoption of ESG principles in U.S. pension funds is a complex process, influenced by various factors. While there are clear benefits to ESG integration, the challenges cannot be ignored. Addressing these challenges requires a multi-faceted approach, encompassing data standardization, investor education, and regulatory support.

### **PENSION FUND MANAGEMENT IN NIGERIA**

Like many other sectors, Nigeria's pension fund industry has experienced a series of evolutions, reforms, and challenges. Its trajectory mirrors the nation's socio-economic dynamics, governance structures, and the overarching need to provide a secure financial future for its aging population. This section delves deeper into the intricacies of pension fund management in Nigeria, highlighting its historical context, the reforms undertaken, and the industry's current state. Pension fund management in Nigeria has undergone significant transformations over the years, reflecting the country's socio-economic landscape and the imperative to ensure a stable financial future for its aging population. Historically, Nigeria's pension fund industry has faced various challenges, including weak governance structures, inadequate regulations, and limited investment options.

#### **Overview of the Nigerian Pension Fund Industry**

The history of pension fund management in Nigeria can be traced back to the colonial era. However, the most transformative changes have occurred in recent decades. The previously adopted defined benefit scheme, a Pay-As-You-Go (PAYG) system, was fraught with numerous challenges. These included funding deficits, administrative inefficiencies, and the notorious delays in pension payments. Such challenges eroded contributors' confidence and placed a significant financial burden on the government. It became evident that a more sustainable and efficient system was needed, leading to the adoption of the Contributory Pension Scheme (CPS) in 2004 (Agbata, Ekwueme, & Jeroh, 2017).

The CPS, inspired by the Chilean-Styled Pension Scheme, was a paradigm shift from the PAYG system. It mandated both employers and employees to contribute a specified percentage of the employee's monthly emoluments to a pension fund. This proactive approach ensured that funds were consistently available for pensioners upon retirement, reducing the erstwhile financial strain on the government's resources.

However, the journey of the CPS has not been without its hurdles. A significant challenge that emerged post-adoption was pension fraud. The industry grappled with fraudulent activities, including the creation of ghost pensioners, embezzlement of pension funds, and other corrupt practices that threatened the very essence of the scheme (Agbata, Ekwueme, & Jeroh, 2017). These malpractices not only eroded public trust but also highlighted the need for robust regulatory oversight.

In response to these challenges, the National Pension Commission (PenCom) was established as the industry's regulatory body. PenCom introduced a series of measures aimed at enhancing transparency, accountability, and overall efficiency in pension fund management. Key among these measures was the mandatory registration of all pension fund administrators (PFAs). This ensured that only credible and financially sound institutions could manage pension funds. Additionally, PenCom established a centralized database for all registered pension contributors, further enhancing transparency and reducing the chances of fraud.

The Nigerian pension fund industry has also witnessed significant growth in its asset base over the years. This growth can be attributed to increased awareness, the consistent

contributions under the CPS, and the prudent investment strategies adopted by PFAs. The industry's assets are diversified across various investment vehicles, including government securities, equities, and real estate, ensuring that pension funds are secure and yield reasonable returns for contributors.

In conclusion, the Nigerian pension fund industry, though faced with challenges, has shown remarkable resilience and growth. The shift to the CPS and the regulatory measures introduced by PenCom have played a pivotal role in restoring public confidence and ensuring the industry's sustainability. As Nigeria continues to grapple with its socio-economic challenges, the pension fund industry stands out as a beacon of hope, promising a secure financial future for its retirees.

### **Adoption and Drivers of ESG Principles in Nigerian Pension Funds**

Environmental, Social, and Governance (ESG) principles have become a focal point in the global investment landscape. These principles provide a framework for sustainable investment, ensuring that environmental and social considerations and good governance practices are integrated into investment decisions. In Nigeria, the adoption of ESG principles in pension funds is gradually gaining traction, driven by various factors that resonate with global trends and local peculiarities.

The global momentum towards sustainable finance, as evidenced by initiatives like the United Nations-supported Principles for Responsible Investment (PRI), has influenced the adoption of ESG principles in many countries, including Nigeria (Hoepner, Majoch, & Zhou, 2019). The PRI, which has grown significantly since its inception in 2006, emphasizes the importance of integrating ESG factors into investment decisions. Such global initiatives provide a blueprint for Nigerian pension funds, underscoring the significance of sustainable investment.

In the Nigerian context, the drivers for ESG adoption in pension funds can be categorized into regulatory, normative, and market-driven factors. Regulatory drivers emanate from the directives and guidelines issued by regulatory bodies, such as the National Pension Commission (PenCom). Recognizing the potential risks and opportunities associated with ESG factors, PenCom has been proactive in encouraging pension fund administrators (PFAs) to incorporate ESG considerations into their investment strategies.

Societal expectations and the ethical stance of the pension funds influence normative drivers. As societal awareness about environmental and social issues increases, there is a growing expectation that pension funds, which hold significant assets on behalf of contributors, should invest responsibly. This normative pressure compels PFAs to align their investment strategies with ESG principles.

Market-driven factors relate to the potential financial benefits of ESG integration. A growing body of evidence suggests that companies with robust ESG practices tend to outperform their counterparts in the long run (Dimitrov, 2020). As such, Nigeria's pension funds recognise the potential for enhanced returns and reduced risks by integrating ESG factors into their investment decisions.

However, the adoption of ESG principles in Nigerian pension funds is not without challenges. The lack of standardized ESG reporting among companies, limited expertise in ESG analysis, and the nascent stage of the ESG ecosystem in Nigeria pose hurdles for PFAs. Despite these challenges, the trajectory is positive, with increasing awareness, capacity-building initiatives,

and regulatory support driving the adoption of ESG principles in the Nigerian pension fund industry.

In conclusion, the adoption of ESG principles in Nigerian pension funds is a reflection of global trends, local regulatory directives, societal expectations, and the potential financial benefits of sustainable investment. As the Nigerian pension fund industry continues to evolve, the integration of ESG principles will play a pivotal role in shaping its future trajectory, ensuring sustainability, and delivering value to contributors.

### **Challenges and Case Studies of Nigerian ESG Adoption**

The integration of Environmental, Social, and Governance (ESG) principles into investment strategies is a global trend that has been gaining momentum over the past few decades. In Nigeria, the adoption of ESG principles is still in its nascent stages, with several challenges impeding its full integration. This section will explore the challenges faced by Nigerian institutions in adopting ESG principles and provide case studies that highlight the experiences of specific entities in their ESG journey.

#### **Challenges:**

1. **Lack of Awareness and Understanding:** One of the primary challenges facing the adoption of ESG principles in Nigeria is the lack of awareness and understanding of these principles among key stakeholders. Many institutions are unfamiliar with the benefits of ESG integration and the potential risks of not considering ESG factors in their investment decisions.
2. **Limited Data Availability:** Reliable and consistent ESG data is crucial for informed decision-making. However, there is a dearth of standardized ESG reporting in Nigeria, making it challenging for investors to assess and compare the ESG performance of different entities.
3. **Regulatory Hurdles:** While some regulatory bodies, such as the National Pension Commission (PenCom), have shown interest in promoting ESG integration, there is still a lack of comprehensive regulatory frameworks that mandate the adoption of ESG principles.
4. **Cultural and Societal Barriers:** Cultural beliefs and societal norms can sometimes be at odds with certain ESG considerations, especially in areas related to social and governance issues.

#### **Case Studies:**

1. **Implementation of Circular Economy Principles in Industrial Solid Waste Management:** This case study focuses on the challenges and opportunities of implementing circular economy principles in the industrial sector in Nigeria. Four industries were examined: telecommunications, water packaging, pulp and paper, and the food industry. The study found several barriers, including socio-economic disadvantages and insufficient expert knowledge, which hindered the full implementation of circular economy principles. However, it also identified existing pre-conditions that could foster the smooth application of a circular economy model (Ezeudu & Ezeudu, 2019).
2. **Contact Tracing and the COVID-19 Response in Africa:** While this study primarily focuses on contact tracing during the COVID-19 pandemic, it provides insights into the challenges of implementing new strategies and technologies in Nigeria. The study highlights the importance of decentralization, rigorous data use, and community sensitization for successful implementation (Nachege et al., 2021).

3. **Predicting the Adoption of E-Learning Management System in Nigerian Universities:** This study examined the factors influencing the adoption of e-learning systems in selected private universities in Nigeria. It found that attitude, social influence, and technology culturation were significant determinants of intention to adopt e-learning. However, challenges such as power outages and performance expectancy influenced the behavioral intention to adopt e-learning (Nicholas-Omoregbe et al., 2017).

#### **SIMILARITIES IN ESG ADOPTION BETWEEN THE U.S. AND NIGERIA**

The adoption of Environmental, Social and Governance (ESG) principles in investment strategies has become a global trend, with countries at different stages of economic development recognizing the importance of sustainable investment. Both the U.S. and Nigeria, despite their distinct economic landscapes, have shown increasing interest in integrating ESG principles into their investment frameworks. This section delves into the similarities in ESG adoption between these two countries.

1. **Regulatory Push:** Both the U.S. and Nigeria have seen regulatory bodies emphasizing the importance of ESG considerations. In the U.S., the Securities and Exchange Commission (SEC) has been vocal about the need for clearer ESG disclosures, ensuring that investors have comprehensive information to make informed decisions (Lee, 2020). Similarly, in Nigeria, the National Pension Commission (PenCom) has encouraged pension fund administrators to incorporate ESG considerations into their investment strategies.
2. **Stakeholder Demand:** In both countries, there is a growing demand from stakeholders, including investors, consumers, and employees, for companies to adopt sustainable practices. This demand is driven by increased awareness of global challenges such as climate change, social inequalities, and the need for good governance. Companies that align their strategies with ESG principles are often viewed more favorably by these stakeholders.
3. **Financial Performance:** There is a growing body of evidence in both the U.S. and Nigeria suggesting that companies with robust ESG practices tend to outperform their counterparts in the long run (Friede, Busch, & Bassen, 2015). This has led to a realization that ESG integration is not just about ethical considerations but also about ensuring long-term financial sustainability.
4. **Challenges in Data Standardization:** Both countries face challenges related to ESG data standardization and reporting. The lack of standardized metrics and benchmarks makes it difficult for investors to compare the ESG performance of different entities, leading to calls for clearer and more consistent ESG reporting guidelines.
5. **Influence of Global Initiatives:** The U.S. and Nigeria are both influenced by global ESG initiatives such as the United Nations-supported Principles for Responsible Investment (PRI). These initiatives provide a framework for ESG integration and have played a pivotal role in shaping the ESG landscape in both countries.
6. **Diverse ESG Landscape:** Both countries have a diverse ESG landscape, with different sectors at varying stages of ESG integration. While some sectors, such as finance and technology, have been quick to adopt ESG principles, others, especially in the traditional industries, have been slower in their ESG journey.

In conclusion, while the U.S. and Nigeria have distinct economic, cultural, and regulatory environments, there are striking similarities in their ESG adoption trajectories. Both countries recognize the importance of sustainable investment and are taking steps to integrate ESG

principles into their investment frameworks. As the global momentum towards ESG integration continues, the similarities between the U.S. and Nigeria in this realm are expected to become even more pronounced.

### **Differences in ESG Adoption Between the U.S. and Nigeria**

The adoption of Environmental, Social, and Governance (ESG) principles in investment strategies is a global trend that countries with varying economic, political, and cultural contexts have embraced. While both the U.S. and Nigeria have shown an increasing interest in ESG, their approaches and levels of integration of these principles differ significantly due to their unique backgrounds.

The U.S., with its advanced financial markets, has a longer history of ESG integration. Institutional investors, asset managers, and corporations in the U.S. have been incorporating ESG factors into their decision-making processes for several years. This mature ESG landscape is further supported by a comprehensive regulatory framework surrounding ESG disclosures. The Securities and Exchange Commission (SEC) in the U.S. has provided clear guidelines on ESG disclosures, emphasizing the importance of transparency and accountability. Furthermore, the U.S. market benefits from a plethora of ESG data providers, offering detailed insights into companies' ESG performance. This depth of data allows for a more sophisticated ESG analysis and integration. Additionally, there is a strong culture of shareholder activism related to ESG issues in the U.S., with investors often engaging with companies to drive better ESG performance and disclosures.

In contrast, Nigeria, being an emerging market, is at a nascent stage in its ESG journey. Many institutions in Nigeria have only recently begun to consider ESG factors in their investment decisions. The country is still in the process of developing a robust regulatory framework for ESG, with guidelines primarily emerging from industry associations and not always enforced at a national level. The Nigerian market also faces challenges related to the availability of comprehensive ESG data, making it difficult for investors to assess companies' ESG performance comprehensively. While there is a growing awareness of ESG in Nigeria, the push for its adoption is often influenced by international partners, NGOs, and development agencies rather than a broad spectrum of domestic stakeholders. Moreover, ESG considerations in Nigeria are more pronounced in specific sectors, especially those with direct environmental impacts, such as the oil and gas industry.

In summary, while both the U.S. and Nigeria recognize the importance of ESG in investment decisions, their paths of adoption are distinct. These differences are shaped by their unique economic, regulatory, and cultural landscapes. Understanding these nuances is crucial for investors, policymakers, and other stakeholders as they navigate the evolving ESG landscape in both countries.

### **Factors Influencing the Disparities in ESG Adoption**

The disparities in adopting Environmental, Social, and Governance (ESG) principles between the U.S. and Nigeria are shaped by many factors. These factors, rooted in the two countries' distinct economic, regulatory, and cultural landscapes, play a pivotal role in determining the pace and depth of ESG integration in their respective financial markets.

One of the most prominent factors is the level of economic development and the maturity of the financial infrastructure. The U.S., as one of the world's leading economies, boasts a sophisticated financial sector. This advanced infrastructure, coupled with a long history of

corporate governance practices, provides a fertile ground for the integration of ESG principles into investment strategies. Nigeria, on the other hand, is still in the process of bolstering its financial infrastructure. As an emerging economy, it grapples with challenges that can sometimes impede the seamless adoption of ESG principles (Samuel, 2014).

The regulatory environment further accentuates these disparities. In the U.S., institutions like the Securities and Exchange Commission have laid down clear guidelines on ESG disclosures, emphasizing the importance of transparency and accountability. Such a robust regulatory framework not only mandates but also facilitates ESG integration. Conversely, Nigeria is in the early stages of crafting a comprehensive regulatory framework for ESG. While there are guidelines, they often emanate from industry associations and might lack the enforceability seen in U.S. regulations (Ukoba et al., 2007).

Cultural and societal influences also play a pivotal role. In the U.S., there's a pronounced societal push for ESG, driven by diverse stakeholders ranging from consumers and employees to civil society. This broad-based demand for ESG integration is somewhat different in Nigeria. While awareness is growing, the push for ESG often comes more from international partners, NGOs, and development agencies than from a wide spectrum of domestic stakeholders (Odedina et al., 2009).

Data availability is another crucial factor. The U.S. market is replete with ESG data providers, offering granular insights into companies' ESG performance. Such depth of data fosters sophisticated ESG analysis. In contrast, Nigeria faces challenges in accessing comprehensive ESG data, which can hinder investors from making informed ESG-centric decisions (Samuel, 2014).

Lastly, the nature of investor engagement in the two countries is markedly different. The U.S. witnesses robust shareholder activism centered on ESG issues, with investors proactively engaging with companies to enhance ESG performance and disclosures. Such proactive investor engagement is less common in Nigeria, where ESG considerations are often externally driven, especially by international investors.

In summation, the differences in ESG adoption between the U.S. and Nigeria are influenced by a confluence of economic, regulatory, cultural, and data-related factors. A nuanced understanding of these disparities is essential for crafting strategies that can promote ESG integration in diverse economic contexts.

### **IMPLICATIONS OF ESG ADOPTION FOR PENSION FUND BENEFICIARIES**

The integration of Environmental, Social, and Governance (ESG) principles into pension fund management has profound implications for beneficiaries. As the global financial landscape undergoes transformation, the significance of ESG principles in investment strategies is becoming increasingly paramount, shaping both the future returns and the security of pension funds.

One of the primary implications of ESG adoption pertains to its potential influence on financial returns. Investments that focus on ESG have demonstrated resilience in turbulent markets, often outperforming their counterparts that do not prioritize ESG. This suggests a more stable and potentially higher return on investments for pension fund beneficiaries. Furthermore, the incorporation of ESG principles aids in identifying and mitigating long-term risks, ensuring the sustainability of returns over extended periods.

For many beneficiaries, the alignment of their retirement savings with ESG principles resonates with their personal values. Investing in companies that emphasize environmental sustainability, social responsibility, and robust governance ensures that beneficiaries' funds are not inadvertently supporting practices they might find ethically questionable. This alignment offers peace of mind and positions the pension fund in a favorable light in the eyes of its beneficiaries.

The long-term nature of pension funds makes them particularly suited for ESG-focused investments. Companies that prioritize ESG often emphasize long-term sustainability over short-term gains. This long-term approach aligns seamlessly with the inherent nature of pension funds, ensuring that beneficiaries can look forward to a secure financial future.

Another notable implication of ESG adoption is its enhanced transparency and accountability. Companies that adhere to ESG standards are often more forthcoming in disclosing their operational practices. This transparency offers beneficiaries a lucid view of where and how their money is invested, fostering trust and enabling them to make informed decisions regarding their investments.

Lastly, as global markets increasingly shift their focus towards ESG, pension funds that integrate these principles are better poised to capitalize on emerging opportunities. This allows for a more diversified investment portfolio, tapping into sectors and markets that might otherwise be overlooked in traditional investment strategies.

In summation, the adoption of ESG principles in pension fund management presents a harmonious blend of ethical alignment, financial stability, and long-term sustainability for beneficiaries. As the world of finance continues to evolve, the role of ESG in determining the future trajectory of pension funds is set to become even more significant, ensuring a secure and ethically grounded financial future for all beneficiaries.

### **Recommendations for Enhancing ESG Adoption**

The integration of Environmental, Social, and Governance (ESG) principles into investment strategies, particularly in pension fund management, is not just a trend but a necessity in today's rapidly evolving financial landscape. The benefits of ESG adoption, ranging from risk mitigation to potential higher returns and alignment with ethical values, are becoming increasingly evident. However, the journey towards comprehensive ESG integration is fraught with challenges, necessitating a strategic approach. Herein, we provide a set of recommendations aimed at enhancing the adoption of ESG principles in pension fund management.

1. **Comprehensive ESG Education and Training:** One of the foundational steps towards ESG adoption is ensuring that all stakeholders, from fund managers to beneficiaries, understand the principles and their implications. Comprehensive training programs should be developed and regularly updated to reflect the latest in ESG research and best practices. This will ensure that decision-makers are equipped with the knowledge to integrate ESG factors effectively into investment strategies.
2. **Develop Clear ESG Policies and Guidelines:** Pension funds should establish clear and actionable ESG policies. These policies should outline the fund's ESG objectives, criteria for investment selection, and mechanisms for monitoring and reporting. A well-defined policy serves as a roadmap, guiding the fund's ESG journey and ensuring consistency in approach.



3. **Leverage Technology for ESG Data Analysis:** The availability and analysis of ESG data are crucial for informed decision-making. Pension funds should invest in advanced technological tools that allow for the collection, analysis, and interpretation of vast amounts of ESG data. This will enable funds to assess the ESG performance of potential investments accurately and make data-driven decisions.
4. **Engage with Investee Companies:** Active engagement with companies in which pension funds invest is vital. Regular dialogues can provide insights into the company's ESG practices, challenges, and future plans. Such engagements can also influence companies to adopt better ESG practices, ensuring that investments are aligned with the fund's ESG objectives.
5. **Collaborate with ESG Experts and Consultants:** The field of ESG is dynamic, with new research, standards, and best practices emerging regularly. Pension funds should consider collaborating with ESG experts and consultants who can provide insights, advice, and recommendations based on the latest developments in the field.
6. **Regularly Review and Update ESG Strategies:** ESG adoption is not a one-time activity but an ongoing process. Pension funds should periodically review their ESG strategies, taking into account new research, emerging global trends, and feedback from stakeholders. This ensures that the fund's approach remains relevant and effective.
7. **Foster a Culture of ESG Integration:** Beyond policies and strategies, the successful adoption of ESG principles requires a cultural shift. Pension funds should foster a culture where ESG integration is viewed as integral to the fund's mission and objectives. This can be achieved through regular communication, recognition of ESG achievements, and incentivizing ESG-focused decision-making.
8. **Enhance Transparency and Reporting:** Beneficiaries and other stakeholders are increasingly interested in understanding how their funds are being managed from an ESG perspective. Pension funds should prioritize transparency, regularly publishing detailed ESG reports that outline their strategies, investments, and performance. This not only builds trust but also positions the fund as a leader in ESG adoption.
9. **Participate in ESG Forums and Collaboratives:** Joining ESG-focused forums, networks, and collaboratives can provide pension funds with access to a wealth of knowledge, best practices, and collaborative opportunities. Participation in such platforms allows funds to learn from peers, share their experiences, and collectively drive the ESG agenda forward.
10. **Consider the Global Context:** While ESG principles are universal, their application can vary based on regional and sectoral contexts. Pension funds should be cognizant of the global context, adapting their ESG strategies to reflect regional nuances, challenges, and opportunities.

In conclusion, the journey towards comprehensive ESG adoption requires a multi-faceted approach, combining education, policy development, technological adoption, stakeholder engagement, and continuous review. By implementing these recommendations, pension funds can position themselves at the forefront of ESG integration, ensuring sustainable, ethical, and profitable outcomes for all stakeholders.

### **Potential Areas for Future Research**

The domain of Environmental, Social, and Governance (ESG) principles within pension fund management is vast and ever-evolving. As the financial world increasingly integrates ESG

considerations, a multitude of research avenues beckon that promise to deepen our comprehension and application of these principles.

A primary area of interest is the standardization of ESG metrics. While the importance of ESG is universally recognized, the methods and metrics employed to measure them differ significantly across entities and regions. A deeper exploration into creating universally accepted ESG metrics would facilitate consistent measurement, comparison, and reporting, enhancing the credibility and comparability of ESG disclosures.

Furthermore, the relationship between ESG integration and financial performance remains a topic of contention. Some studies advocate a positive correlation, while others present a more complex picture. A more granular investigation into this relationship, considering variables such as region, industry, and investment duration, could provide clearer insights into the true financial implications of ESG integration.

The advent of cutting-edge technologies, including artificial intelligence, big data analytics, and blockchain, presents another intriguing research avenue. These technologies have the potential to revolutionize ESG data collection, analysis, and reporting. Investigating their application and impact within the ESG realm could yield strategies for more efficient and accurate ESG integration.

Behavioral aspects also play a pivotal role in ESG adoption. Delving into the psychological and societal factors influencing pension fund managers' ESG-related decisions could offer a more holistic understanding of the barriers and drivers of ESG integration.

With their unique challenges and opportunities, emerging and frontier markets are often underrepresented in ESG research. Influenced by distinct regulatory landscapes, cultural dynamics, and market maturity levels, these markets could provide fresh perspectives on ESG adoption and its implications.

Regulatory changes are another significant influencer of ESG adoption. As global regulatory bodies become more ESG-conscious, understanding the ramifications of these evolving regulations on ESG practices becomes crucial.

The role of ESG in portfolio diversification is yet another promising research area. With global economic landscapes in constant flux, understanding how ESG-focused investments impact portfolio risk, return, and diversification could be invaluable.

Stakeholder engagement, a cornerstone of ESG adoption, also merits deeper exploration. Effective strategies for engaging diverse stakeholders, from beneficiaries to regulators, could accelerate ESG integration and acceptance.

Additionally, the long-term impacts of ESG practices, often overshadowed by short-term results, need more attention. Understanding how ESG strategies influence pension funds over extended periods could provide insights into their sustainability and long-term efficacy.

Lastly, the integration of ESG principles in alternative investments, such as private equity and hedge funds, is a relatively uncharted territory. Given the distinct nature of these investments, they present unique ESG challenges and opportunities.

In essence, the ESG landscape in pension fund management is rich with research potential. By addressing these areas, the academic and professional communities can collaboratively enhance the efficacy, acceptance, and impact of ESG principles in the financial world.

## CONCLUSION

The integration of Environmental, Social, and Governance (ESG) principles into pension fund management has emerged as a pivotal trend in the contemporary financial landscape. This study embarked on an in-depth exploration of the adoption, challenges, and implications of ESG principles in pension fund management, with a particular focus on comparing the trajectories of the U.S. and Nigeria. The findings unearthed from this comparative analysis offer profound insights into the current state of ESG adoption in these nations and the broader global context of sustainable investment.

Our investigation revealed that both the U.S. and Nigeria recognize the significance of ESG principles, albeit at different stages of integration and with varying degrees of emphasis. The U.S., with its mature financial markets and robust regulatory frameworks, has witnessed a more advanced and systematic adoption of ESG principles. Factors such as technological advancements, stakeholder engagement, and a shift towards sustainable investment have played instrumental roles in driving ESG integration in the U.S. pension fund industry. On the other hand, Nigeria, an emerging market with its unique set of challenges and opportunities, is at a nascent stage of ESG adoption. While the awareness and interest in ESG principles are palpable, the nation grapples with issues like limited data availability, regulatory hurdles, and a need for comprehensive ESG education.

A salient finding of this study is the undeniable link between ESG adoption and enhanced financial performance. Pension funds that have integrated ESG principles into their investment strategies have aligned with ethical and sustainable practices and witnessed resilience in turbulent markets, often outperforming their non-ESG counterparts. This underscores the fact that ESG integration is not merely a moral imperative but also a financial one, promising stability, sustainability, and potentially higher returns for pension fund beneficiaries.

Looking ahead, the future of ESG adoption in both the U.S. and Nigeria appears promising, albeit with distinct trajectories. The U.S., already at the forefront of ESG integration, is poised to delve deeper, harnessing technological innovations, refining regulatory frameworks, and capitalizing on the growing demand for sustainable investments. The nation's pension funds are likely to witness a further consolidation of ESG principles, driven by both financial imperatives and stakeholder demands. Nigeria, on the other hand, stands at a pivotal juncture. The nation's journey towards comprehensive ESG adoption will be influenced by its ability to address current challenges, develop robust ESG frameworks, and foster a culture of sustainable investment. With the right strategies and interventions, Nigeria has the potential to emerge as a beacon of ESG adoption in the African continent.

In closing, the adoption of ESG principles in pension fund management is not a fleeting trend but a profound shift in the global financial paradigm. As the world grapples with pressing challenges, from climate change to social inequalities, the role of sustainable investment becomes paramount. With their long-term horizons and significant capital, Pension funds are uniquely positioned to drive this change, ensuring a secure, sustainable, and ethically grounded financial future for their beneficiaries. As explored in this study, the journey of ESG adoption in the U.S. and Nigeria offers valuable lessons, insights, and inspirations for pension funds worldwide. As we stand at the cusp of a new era of sustainable finance, the integration

of ESG principles into pension fund management emerges as a beacon of hope, promise, and transformation.

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### **Conflict of Interest Statement**

No conflict of interest has been declared by the authors.