

Environmental and Social Risk Management in Public Finance

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Abstract

Environmental and social risks have become significant concerns in public finance due to their potential impacts on economic development, social welfare, and environmental sustainability. This paper provides an overview of the concept of environmental and social risk management in the context of public finance. The management of environmental risks involves identifying, assessing, and mitigating potential adverse effects on the environment caused by public finance activities. This includes activities such as project financing, procurement, and investment decisions. Mitigation measures may encompass carbon footprint reduction, pollution prevention, and sustainable resource management. Similarly, social risk management entails the identification and mitigation of potential negative social impacts resulting from public finance activities. This involves considering social issues such as income inequality, poverty, gender inequality, and displacement. Efforts to mitigate social risks may include promoting inclusive employment practices, community engagement, and ensuring the protection and promotion of human rights. Both environmental and social risk management in public finance require a comprehensive and integrated approach. This includes the establishment of frameworks, policies, and guidelines that ensure the consideration of environmental and social factors throughout the decision-making process. It also entails the integration of environmental and social risk assessments into the due diligence processes for projects and investments. Furthermore, effective environmental and social risk management requires building capacity and expertise within public finance institutions. This involves training staff to understand and address these risks, as well as fostering collaboration and partnerships with relevant stakeholders, including civil society organizations, affected communities, and environmental and social experts. By adopting an environmental and social risk management approach in public finance, governments and public finance institutions can contribute to sustainable development, safeguarding the environment, and promoting social justice. This paper highlights the importance of considering these risks in public finance decision-making processes and calls for the inclusion of environmental and social factors in the assessment of project viability and allocation of public funds.

Keywords: Environmental risk, Public finance, Risk, Risk management, Social risk

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1.0 INTRODUCTION

Public finance is no doubt the engine that drives our communities and holds immense power to shape our world. It builds roads and bridges, invests in education and healthcare, and fuels innovation. But like any powerful force, it carries responsibility, the responsibility to tread carefully, to consider not just the immediate impact of its decisions, but the ripples they create in the broader environment and the lives of those it serves. This is where the critical art of

environmental and social risk management (ESRM) comes into play. Imagine our public finance system as a tightrope walker, gracefully balancing progress on one foot and responsibility on the other. Environmental risks lurk below; climate change threatens infrastructure investments, pollution endangers public health, and resource depletion can stifle economic growth. On the other side, social risks demand attention, projects can displace communities, exacerbate inequality, and fail to address the needs of diverse populations. A misstep in either direction can have devastating consequences.

Yet, ESRM is not just about avoiding falls. It's about transforming the tightrope into a springboard for sustainable development. By proactively identifying and mitigating environmental and social risks, public finance can unlock a wealth of opportunities. Green infrastructure projects can create jobs, combat climate change, and improve public health. Investments in education and social services can empower communities, foster inclusivity, and drive long-term economic prosperity. By embracing ESRM, we can demonstrate that a balanced approach; one that prioritizes economic growth and environmental well-being, social justice, and long-term sustainability is not just possible, but essential. In view of the above among others, the purpose of this paper is to explore environmental and social risk management in public finance.

2.0 OVERVIEW OF PUBLIC SECTOR

The public sector is the segment of the economy owned, operated, and controlled by government agencies (Ahmeti & Vladi, 2017). It provides services to the general public that contribute to societal well-being, such as law enforcement, national defense, public transportation, transit infrastructure, educational institutions, and health services. Unlike the private sector, the public sector does not seek to make a profit from its services (Krugman, 2022). In addition to the entities it funds, the public sector implements public policy at all levels of government and includes public services provided by elected officials. It also includes outsourcing services provided to these agencies. The three levels of government services in the public sector are federal, state, and local.

2.1 Role of the Public Sector

The public sector provides essential support and services to society, creating a foundation for peace, economic growth, safety, and a sense of community (Ahmeti & Vladi, 2017). Public-sector services ensure that there are workers to put out fires, repave roads, deliver mail, as well as ensure your social security check arrives. Public sector services aren't just for certain people but for all people. They supply a safety net for those who need extra support due to poverty, sickness, disability, or old age. The public sector works under the premise that if you take care of those in need, everyone and everything will thrive, including the economic development of the private sector.

2.2 Examples of Public Sector Organizations

The public sector covers a wide variety of organizations offering a multitude of services. Some examples include:

i. Educational institutions

Public education from primary to university provides government-funded free or low-cost education.

ii. Emergency services

Fire departments, law enforcement organizations, and healthcare facilities such as hospitals and clinics may receive government funding.

iii. Postal service

Mail delivery and all other services provided by the post office belong to the public sector

iv. Public Utilities

Water, electricity, trash disposal, and sewage services often follow a public or hybrid public-private model.

v. Social services

Disability services, financial aid, food banks, public housing, and health care options assist those who need it.

vi. Transit infrastructure

The public sector includes public transit frameworks, such as the building and upkeep of airports, bridges, roads, and public transportation such as buses, and trains.

3.0 OVERVIEW OF PUBLIC FINANCE

Public finance is the management of a country's revenue, expenditures, and debt load through various government and quasi-government institutions (Inter-American Development Bank, 2019). This guide provides an overview of how public finances are managed, what the various components of public finance are, and how to easily understand what all the numbers mean. A country's financial position can be evaluated in much the same way as a business's financial statements (World Bank Group, 2013).

3.1 Components of Public Finance

The main components of public finance include activities related to collecting revenue, making expenditures to support society, and implementing a financing strategy (Inter-American Development Bank, 2019). The main components include:

i. Tax collection

Tax collection is the main revenue source for governments. Examples of taxes collected by governments include sales tax, income tax (a type of progressive tax), estate tax, and property

tax. Other types of revenue in this category include duties and tariffs on imports and revenue from any type of public services that are not free.

ii. **Budget**

The budget is a plan of what the government intends to have as expenditures in a fiscal year. The president submits to a joint session of the National Assembly a budget request, and the NASS thereafter pass the bill into law after the third sitting and transmits the same back to the President for approval.

iii. **Expenditures**

Expenditures are everything that a government spends money on, such as social programmes, education, and infrastructure. Much of the government's spending is a form of income or wealth redistribution, which is aimed at benefiting society as a whole. The actual expenditures may be greater than or less than the budget.

iv. **Deficit/Surplus**

If the government spends more than it collects in revenue there is a deficit in that year. If the government has fewer expenditures than it collects in taxes, there is a surplus.

v. **National Debt**

If the government has a deficit (spending is greater than revenue), it will fund the difference by borrowing money and issuing national debt. The Debt Management Office (DMO) is responsible for issuing debt in Nigeria.

3.2 Revenue and Expenditures

Below is a list of some of the most common revenues and expenditures in the world of public finance.

Revenue

- i. Oil Revenue
- ii. Non-Oil Revenue

Expenses

- i. Health care
- ii. Employment insurance
- iii. Pensions
- iv. Education
- v. Defense (military)
- vi. Infrastructure

3.3 Some Key Objectives of Public Finance

The following are the government's responsibilities so that the fundamental public needs are fulfilled and contribute to the development of the economy.

i. Promote economic efficiency

Allocate resources effectively to ensure maximum output and minimize waste. Imagine the ship sailing smoothly with minimal energy expended.

ii. Achieve equitable distribution of income

Address income inequality and ensure everyone has access to basic necessities and opportunities. Think of sharing the catch fairly among the crew members.

iii. Maintain macroeconomic stability

Control inflation, unemployment, and economic growth to create a stable and predictable environment for businesses and individuals. Picture the ship navigating calm waters with steady winds.

3.4 Functions of Public Finance

i. Raising revenue

This involves collecting taxes, fees, and other charges from individuals and businesses. Think of it as casting nets into the ocean to haul in resources.

ii. Allocating expenditure

Once the coffers are filled, the government must decide how to spend the money. This involves prioritizing different sectors like healthcare, education, infrastructure, and social security. It's like carefully distributing the catch among different crew members to ensure everyone has what they need to do their jobs.

iii. Managing debt

Governments often borrow money to cover shortfalls or invest in large projects. Public finance involves managing this debt responsibly, ensuring it doesn't become an anchor dragging down the economic ship of the country. Think of it as carefully balancing the weight of the cargo to keep the ship afloat.

4.0 OVERVIEW OF RISK AND RISK MANAGEMENT

All investments involve some degree of risk. In finance, risk refers to the degree of uncertainty and/or potential financial loss inherent in an investment decision (World Bank Group, 2013). In general, as investment risks rise, investors seek higher returns to compensate themselves for taking such risks. Every saving and investment product has different risks and returns. Differences include: how readily investors can get their money when they need it, how fast their money will grow, and how safe their money will be.

4.1 Identification and Assessment of Risks

The identification and assessment of risks in public finance are critical components of the risk management process. It involves recognizing and analyzing potential threats that could impact the fiscal performance and objectives of the public sector (Abd El-Karim, Nawawy, & Abdel-Alim, 2019). Several key aspects and resources related to the identification and assessment of risks in public finance include:

i. Risk Assessment Methodology

Each sector of public finance should develop and implement a method of identifying and analyzing risk. The implemented program must enable the identification and analysis of risks.

ii. Risk Identification and Analysis Guide

A guide for small public entities provides a user-friendly process to identify and analyze risks on an enterprise-wide basis, helping public entities protect their financial stability and their ability to provide services.

iii. Comprehensive Risk Assessment

Management's and auditors' risk assessment processes are critical to the decisions regarding financial reporting and the effectiveness of risk management. Changing economic conditions may have a significant and sudden impact on an issuer's business, which could change risks or create new ones.

iv. Operational Risk

Operational risk is the risk of loss resulting from many normal aspects of business, including failed processes, unskilled systems, and external events. It is an inherent part of daily business activity and must be managed effectively.

v. Public Financial Management Risk Assessment Framework (PFMRAF) Manual

This manual describes the risk management process and how risks are identified, as well as an assessment process that includes risk identification.

These resources and frameworks emphasize the importance of a systematic and comprehensive approach to identifying and assessing risks in public finance, enabling public entities to protect their financial stability and fulfil their missions effectively.

4.1.1 Risk Identification Techniques

There are several techniques for identifying and assessing risks in public finance. Some of these techniques include (World Bank Group, 2013):

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ii. **Risk Identification and Analysis Guide**

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iv. **Statistical and Numerical Analysis**

Identifies potential risks using statistical methods, such as evaluating a company's historical performance using specific financial ratio calculations.

v. **Risk Identification Approaches**

Risk identification approaches must enable institutions to better understand their vulnerabilities and to mitigate or capitalize against them. These approaches should incorporate different perspectives on risks, effectively distinguish the most significant risks from more minor risks, and sufficiently consider the underlying drivers of risks and how they could interact and amplify or how minor risks might become severe in certain environments (World Bank Group, 2013).

By using these techniques, public entities can identify and assess risks effectively, enabling them to develop appropriate risk management strategies and safeguard their financial stability and operational continuity.

4.1.2 Risk Mitigation Strategies

Risk mitigation strategies are essential for organizations to minimize the impact of potential risks. Some common risk mitigation strategies include:

i. **Risk Acceptance**

Acknowledging a risk and accepting its potential consequences without taking further action, which is appropriate when the likelihood and impact of the risk are both low, and the cost of addressing it outweighs the potential benefits.

ii. **Risk Avoidance**

Completely avoiding the activity that carries the potential risk. For instance, if a customer has a history of defaulting on loans, the organization may choose to avoid doing business with them.

iii. **Risk Control**

Implementing measures to reduce the likelihood or impact of a risk. This may involve enhancing security measures to reduce the risk of a cyberattack.

iv. **Risk Transfer**

Transferring the risk to a third party, such as through insurance or outsourcing.

v. **Establishing Key Risk Indicators**

Identifying and monitoring key risk indicators to provide an early warning of increasing risk exposure.

vi. **Tabletop Exercises and Simulations**

Conducting exercises and simulations to test the organization's response to potential risks.

vii. **Documenting and Monitoring Risks**

Maintaining thorough documentation of risks and their mitigation plans, and continuously monitoring the effectiveness of the mitigation strategies.

These strategies help organizations effectively manage and mitigate risks, safeguarding their operations and ensuring their long-term success.

4.1.3 Risk Avoidance

Risk avoidance is a risk management strategy that aims to eliminate the chance of a particular risk from happening or its ability to impact the organization. It is a more conservative approach that involves sacrificing potential benefits to eliminate danger. This strategy is typically adopted when the risk has the potential to cause catastrophic damage or when the costs of addressing it are too high.

In practice, risk avoidance can be implemented in various ways, such as:

i. **Company Policies**

Establishing policies that prohibit certain activities or decisions that could expose the organization to risk.

ii. **Employee Training**

Providing training to employees on how to identify and avoid potential risks in their work.

iii. **Small Business Insurance Coverages**

Purchasing insurance policies that protect against specific risks.

iv. **Hold Harmless Agreements**

Negotiating contracts that require another party to indemnify the organization against certain losses.

While risk avoidance can be an effective risk mitigation strategy, it may also result in the organization missing out on positive opportunities, such as lower expenses or operational improvements. Therefore, it is essential to conduct a thorough risk analysis and assessment before implementing this strategy.

4.1.4 Risk Reduction

Risk reduction is a risk management strategy that aims to minimize the likelihood and impact of potential risks. It involves implementing measures to make risks less severe and more manageable. Some common risk reduction strategies include:

i. Implementing Controls

Establishing policies, procedures, or controls to reduce the chances of harm and mitigate the potential impact of risks.

ii. Diversification

Spreading investments across different asset classes or industries to reduce the impact of potential losses.

iii. Employee Training

Providing training to employees on how to identify and avoid potential risks in their work.

iv. Regular Maintenance

Ensuring that equipment and facilities are well-maintained to reduce the likelihood of accidents or equipment failures.

v. Monitoring and Review

Regularly monitoring and reviewing the effectiveness of risk reduction measures and making necessary adjustments to ensure continued improvement.

By implementing risk reduction strategies, organizations can effectively manage and mitigate risks, safeguarding their operations and ensuring their long-term success.

4.2 Environmental Risk and Social Risk

Environmental risk refers to the potential adverse effects on the environment caused by human activities or natural disasters. These risks can include pollution, deforestation, habitat destruction, climate change, and resource depletion. Environmental risks can have far-reaching consequences, including the loss of biodiversity, damage to ecosystems, and negative impacts on human health (World Bank Group, 2013).

Social risk, on the other hand, refers to the potential adverse impacts on society caused by certain activities or events (World Bank Group, 2013). Social risks can include labour practices, human rights violations, community displacement, cultural disruptions, and the potential for social unrest. These risks can arise from business operations, government policies, or even natural disasters.

Environmental risk and social risk are often interconnected and have a significant influence on one another. For example, an environmental risk such as pollution can lead to negative health impacts on local communities, thus creating a social risk. Similarly, social risks such as labour

exploitation can contribute to environmental degradation if companies engage in unsustainable practices in order to cut costs.

Both environmental and social risks have gained increasing attention in recent years due to growing awareness of their potential impacts and the need for sustainable development. Businesses and governments are under pressure to manage and mitigate these risks by adopting sustainable practices, ensuring responsible supply chains, and engaging with stakeholders to address social and environmental concerns.

Various frameworks and tools have been developed to help organizations assess and manage environmental and social risks. For example, Environmental Impact Assessments (EIAs) are conducted to evaluate the potential environmental impacts of proposed projects. Social Impact Assessments (SIAs) are used to assess the potential social risks and impacts of projects, including their effects on local communities and indigenous people.

Overall, environmental risk and social risk are multidimensional and interconnected challenges that require a holistic and integrated approach to address them effectively. By understanding and managing these risks, organizations and governments can work towards sustainable development that balances economic growth with social well-being and environmental protection.

4.3 Risk Management

Risk management is a vast and essential area, crucial for individuals, businesses, and even governments like Nigeria. Risk management is a proactive and methodical approach to identifying, assessing, and mitigating potential risks (WBCSD, 2023). It's like building a safety net under your tightrope walk, giving peace of mind and increasing chances of success.

4.3.1 Steps in Risk Management

Here are the five essential steps of risk management (WBCSD, 2023):

i. Identify potential risks

This involves brainstorming and analyzing all the possible negative events that could occur in a given situation.

ii. Assess the likelihood and impact of each risk

Once identified, we need to evaluate the probability of each risk happening and the potential consequences it might have.

iii. Develop mitigation strategies

Based on the assessment, we can formulate plans to reduce the likelihood or impact of each risk. This could involve avoidance, control, transfer, or acceptance of the risk.

iv. Implement and monitor

Putting the mitigation strategies into action is crucial, and regularly monitoring their effectiveness ensures we're on the right track.

v. **Review and adapt**

As circumstances change, risks evolve, and our understanding improves, we need to continuously review and adapt our risk management plan.

4.3.2 Benefits of Effective Risk Management

By embracing risk management, we reap numerous benefits:

i. **Reduced uncertainty and anxiety**

Knowing we've proactively addressed potential pitfalls brings peace of mind and allows us to focus on achieving our goals.

ii. **Improved decision-making**

When risks are thoroughly assessed and mitigated, we can make informed choices with greater confidence.

iii. **Enhanced efficiency and productivity**

By minimizing disruptions and setbacks, we can operate more smoothly and achieve results faster.

iv. **Financial protection**

Proactive risk management can prevent financial losses and safeguard valuable assets.

v. **Boosted reputation and credibility**

Demonstrating effective risk management builds trust and confidence from stakeholders.

4.3.3 Application of Risk Management

Risk management principles apply across various contexts. Here are some examples:

i. **Businesses**

Implementing safety protocols, diversifying investments, and conducting regular security audits are examples of risk management in business.

ii. **Individuals**

Buying insurance, setting up emergency funds, and maintaining healthy habits are ways individuals manage personal risks.

iii. **Governments**

Building flood defenses, enacting disaster preparedness plans, and diversifying the economy are examples of risk management at the national level.

4.4 Environmental and Social Risk Management

Environmental and social risk management (ESRM) is a process of identifying, assessing, and prioritizing environmental and social risks that may arise from business operations and activities (Inter-American Development Bank, 2019). It involves developing strategies and measures to mitigate or manage these risks, ensuring compliance with applicable laws and regulations, and promoting sustainable development. Here are some key elements of ESRM:

i. Identification of Environmental and Social Risks

The first step in ESRM is to identify the environmental and social risks associated with business activities. This may involve conducting environmental and social impact assessments, stakeholder consultations, and reviews of relevant regulations and guidelines (Inter-American Development Bank, 2019).

ii. Data Collection and Analysis

ESRM requires the collection and analysis of accurate data related to environmental and social risks. This involves monitoring and measuring key performance indicators (KPIs), such as greenhouse gas emissions, water use, and waste generation.

iii. Risk Assessment and Prioritization

After identifying risks and collecting data, the next step is to assess and prioritize the risks based on their likelihood, severity, and impact. This process involves ranking risks according to their potential impact on the environment, human health, and social well-being.

iv. Mitigation Strategies and Management Plans

ESRM involves developing and implementing strategies and plans to mitigate or manage environmental and social risks. This may include measures such as pollution control, waste reduction, biodiversity conservation, and stakeholder engagement (Inter-American Development Bank, 2019).

v. Monitoring and Reporting

ESRM requires ongoing monitoring and reporting of environmental and social performance. This involves tracking KPIs, identifying trends, and reporting on performance against established targets. It also involves regular communication with stakeholders, including investors, customers, regulators, and local communities (Inter-American Development Bank, 2019).

Effective ESRM can help companies reduce environmental and social risks, improve operational efficiency, enhance stakeholder engagement, and ensure compliance with applicable laws and regulations. Ultimately, ESRM can support the achievement of sustainable development goals, promoting long-term business success and environmental and social well-being.

4.5 Overview of Risk Management in Public Finance

Risk management in public finance refers to the process of identifying, assessing, and managing risks that can affect the financial health and stability of government entities and the communities they serve (Inter-American Development Bank, 2019). It involves the implementation of

strategies and policies to mitigate or eliminate potential risks, as well as the monitoring and evaluation of these measures to ensure their effectiveness.

4.5.1 Objectives of Risk Management in Public Finance

The main objectives of risk management in public finance are to protect public funds, maintain financial stability, and ensure the delivery of essential services to citizens (IOS, 2018). These objectives are achieved through various risk management practices such as risk identification, risk assessment, risk mitigation, and risk monitoring (IOS, 2018).

Risk identification involves recognizing and understanding the potential risks that public finance entities may face (Sarens, De-Visscher, & Van-Gils, 2010). Common risks in public finance include economic instability, budgetary shortfalls, liquidity problems, policy and regulatory changes, fraud, cyber threats, and natural disasters. By identifying these risks, government entities can develop appropriate strategies to manage them effectively.

Risk assessment involves evaluating the likelihood and impact of identified risks. This step helps prioritize risks based on their significance and determine the resources required to manage them. Quantitative and qualitative methods are used to assess risks, including statistical analysis, financial modelling, and scenario planning.

Risk mitigation focuses on reducing or eliminating the likelihood and impact of identified risks (Sarens, De-Visscher, & Van-Gils, 2010). This can be done through various measures such as financial planning and budgeting, diversification of revenue sources, establishing internal controls and governance frameworks, implementing sound financial management practices, and purchasing insurance coverage. The goal is to minimize potential losses and protect public funds.

Risk monitoring involves continuously monitoring and evaluating the effectiveness of risk management strategies and controls. This includes ongoing assessment of the changing risk landscape, regular review of risk management policies and procedures, and monitoring key risk indicators. By monitoring risks, public finance entities can detect and address emerging risks promptly, as well as ensure the effectiveness of their risk management efforts.

Overall, risk management plays a crucial role in public finance by helping government entities safeguard public funds, maintain financial stability, and improve overall financial management performance. By identifying, assessing, mitigating, and monitoring risks, government entities can enhance their ability to fulfil their fiscal responsibilities and provide quality public services to the community.

4.5.2 Risk Management Strategies for Public Finance

To navigate the treacherous waters of public finance, prudent public finance professionals employ the following risk management strategies (UNEP, 2015):

- i. **Fiscal planning and forecasting**

Building robust economic models and scenario planning helps anticipate potential risks and prepare for future fluctuations.

ii. **Diversification of revenue sources**

Reducing dependence on volatile sources like oil revenue and broadening the tax base creates a more resilient financial foundation.

iii. **Cost-benefit analysis and project management**

Thoroughly assessing potential costs and benefits before undertaking projects, coupled with effective project management practices, minimizes waste and maximizes returns.

iv. **Transparency and accountability**

Openly communicating financial information, engaging in public consultations, and implementing strong internal controls build trust and deter corruption.

v. **Internal audit and risk assessment**

Regularly evaluating departmental practices, identifying vulnerabilities, and implementing corrective measures to mitigate internal risks and promote efficient resource allocation.

4.6 Challenges and Opportunities of Risk Management in Public Finance

Effectively managing risk in public finance is not without its challenges (UNEP, 2015):

i. **Short-term political pressures**

Balancing long-term risk management strategies with the immediate needs of the current political cycle can be difficult.

ii. **Limited resources**

Governments often face budget constraints, making it challenging to allocate sufficient resources for effective risk management efforts.

iii. **Lack of awareness and expertise**

Building institutional capacity and raising awareness about risk management within government organizations requires ongoing efforts.

Despite these challenges, opportunities abound for enhancing risk management in Public Finance:

i. **Adopting innovative financial instruments**

Exploring tools like insurance schemes, derivatives, and public-private partnerships can transfer or mitigate certain risks effectively.

ii. **Embracing new technologies**

Big data analytics and artificial intelligence can help identify emerging risks, improve forecasting accuracy, and optimize resource allocation.

iii. **International collaboration and knowledge sharing**

Learning from the experiences of other countries and engaging in global knowledge exchange can accelerate progress in risk management practices.

4.7 Importance of Considering Environmental and Social Risks in Public Finance Decision-making

Considering environmental and social risks in public finance decision-making is of utmost importance for several reasons (Inter-American Development Bank, 2019). This is because:

i. **Sustainable Development**

Integrating environmental and social risks ensures that public finance decisions align with the principles of sustainable development. By assessing and managing these risks, governments can promote economic growth, social equity, and environmental protection in a balanced manner.

ii. **Long-term Viability**

Ignoring environmental and social risks can lead to short-sighted decision-making, resulting in negative long-term consequences. By considering these risks, governments can avoid investing in projects or sectors that may harm the environment, contribute to social inequalities, or lead to financial instability in the future.

iii. **Resilience and Adaptation**

Environmental risks, such as climate change, natural disasters, and resource depletion, pose significant threats to communities and economies. By incorporating these risks into public finance decision-making, governments can prioritize investments in resilient infrastructure, adaptation measures, and sustainable resource management, thus enhancing the overall resilience of societies.

iv. **Social Equity and Inclusion**

Social risks, such as labour exploitation, displacement of communities, and human rights violations, can exacerbate social inequalities and marginalize vulnerable populations. By considering these risks, governments can ensure that public finance decisions contribute to inclusive development, address social issues, and protect the rights and well-being of all individuals.

v. **Accountability and Transparency**

Considering environmental and social risks enhances accountability and transparency in public finance decision-making. By disclosing the risks associated with projects and investments, governments can engage with stakeholders, foster public participation, and build trust in the decision-making process.

vi. **International Commitments**

Many countries have made international commitments, such as the Sustainable Development Goals (SDGs) and the Paris Agreement, which require considering environmental and social risks in policy-making and financing decisions. Incorporating these risks in public finance can help countries fulfil their obligations and contribute to global sustainable development efforts.

Overall, considering environmental and social risks in public finance decision-making ensures that investments and policies are aligned with long-term sustainability, social well-being, and international commitments. This approach can help build resilient, inclusive, and environmentally responsible economies and societies.

5.0 OVERVIEW OF INVESTMENT AND INVESTMENT STRATEGIES

Investment refers to the allocation of money or resources with the expectation of generating future returns or benefits (United Nations Environment Programme Finance Initiative & Global Reporting Initiative, 2015). The goal of investment is to grow wealth, generate income, or achieve specific financial objectives. Investors typically choose from a range of investment options, such as stocks, bonds, real estate, mutual funds, and alternative assets, depending on their risk appetite, financial goals, and time horizon (UNEP, 2015).

5.1 Key Aspects of Investments in Public Finance

Developing a public funds investment is essential to effective financial management. Government responsibility in managing their funds includes (Inter-American Development Bank, 2019):

i. Government Bonds

Governments issue bonds to raise funds for infrastructure projects or cover budgetary needs. Investors receive periodic interest payments and the return of principal upon maturity.

ii. Treasury Securities

These are debt instruments issued by the government. They include Treasury bills, notes, and bonds, each with different maturities. Investors receive fixed interest payments, and the principal is returned upon maturity.

iii. Infrastructure Investments

Governments may invest in infrastructure projects, such as roads, bridges, and utilities. These long-term investments aim to enhance public services and stimulate economic growth.

iv. Public-Private Partnerships (PPPs)

Governments may collaborate with private entities to fund and manage projects. This involves a combination of public and private investments, sharing risks and rewards.

v. **Sovereign Wealth Funds**

Some countries establish sovereign wealth funds, which are investment pools funded by a nation's reserves. These funds aim to generate long-term returns to support government programmes and future obligations.

5.2 **Investment Strategies**

There are various investment strategies that individuals and institutions adopt based on their investment goals and risk tolerance. Here are some common investment strategies (United Nations Environment Programme Finance Initiative & Global Reporting Initiative, 2015):

i. **Growth Investing**

Growth investors focus on investing in companies expected to have above-average growth rates in their earnings and revenue. They look for companies in high-growth sectors or emerging industries with the potential to deliver significant capital appreciation over time.

ii. **Value Investing**

Value investors look for stocks or assets that are undervalued relative to their intrinsic value. They seek out companies or assets that are trading at a discount compared to their fundamental worth and have the potential to appreciate over time.

iii. **Income Investing**

Income investors prioritize investments that generate a regular income stream, such as dividend-paying stocks, bonds, or rental properties. They seek out stable and reliable cash flows to provide a consistent income source.

iv. **Dividend Investing**

Dividend investors focus on investing in companies that regularly distribute a portion of their profits as dividends to shareholders. They aim to generate income through dividend payments and often prioritize companies with a track record of consistent dividend growth.

v. **Index Investing**

Index investors seek to match the performance of a specific market index, such as the S&P 500 or FTSE 100, by investing in a portfolio that replicates the holdings and weightings of the index. This strategy is often used in passive investing, where investors aim to achieve broad market returns rather than beat the market.

vi. **Momentum Investing**

Momentum investors aim to identify and invest in assets that have shown upward price momentum. They believe that assets that have recently experienced positive price movements will continue to do so in the short term and seek to capitalize on this trend.

vii. **Contrarian Investing**

Contrarian investors take positions that go against prevailing market sentiment. They search for assets that are undervalued or unpopular but have the potential for a turnaround. They believe that the market can be irrational and seek to profit from buying assets when others are selling.

viii. **Environmental, Social, and Governance (ESG) Investing**

ESG investors consider environmental, social, and governance factors in their investment decisions. They assess companies' sustainability practices, social impact, corporate governance, and ethical standards alongside financial performance to make investment choices aligned with their values.

It's important to note that investment strategies come with varying levels of risk and potential returns, and each strategy may be better suited to different market conditions or personal circumstances. Investors should carefully evaluate their goals, and risk tolerance, and conduct thorough research before implementing any investment strategy. Additionally, seeking advice from a financial advisor can provide valuable guidance in developing an investment strategy that aligns with individual needs and objectives.

5.3 Choosing the right strategy for your Investment

The following are factors to consider in choosing the right strategy for your investment (UNEP, 2015):

i. **Risk Tolerance**

Can you stomach volatility, or do you crave stability? Value and income investing tend to be less risky, while growth and momentum strategies involve higher potential returns but also greater risk.

ii. **Investment Horizon**

Are you planning for retirement in 30 years or aiming for short-term gains? Long-term strategies like value and income investing typically outperform in the long run, while momentum and technical analysis cater to shorter timeframes.

iii. **Financial Goals**

Are you building wealth for your future, securing retirement income, or generating passive income? Align your strategy with your specific financial aspirations.

iv. **Personal Preferences**

Do you enjoy in-depth research or prefer technical analysis? Choose a strategy that aligns with your interests and personality for sustained engagement.

5.4 Sustainable Investment Strategies

Sustainable investment strategies, also known as socially responsible investing (SRI), impact investing, or ESG investing (Environmental, Social, and Governance), aim to generate positive

financial returns while considering the environmental, social, and ethical implications of the investments (Global Reporting Initiative, 2015). These strategies incorporate sustainability factors, such as climate change, human rights, diversity, corporate governance, and resource depletion, into the investment process (WBCSD, 2023). Some common sustainable investment strategies include:

i. Screening

This strategy involves excluding certain industries or companies from the investment portfolio based on predefined criteria. For example, investors may avoid companies involved in tobacco, weapons manufacturing, or fossil fuels.

ii. ESG Integration

This strategy involves considering environmental, social, and governance factors along with financial analysis when making investment decisions. Investors assess companies based on their sustainability performance and incorporate these factors into the valuation process.

iii. Impact Investing

Impact investors seek to generate measurable positive social or environmental impact alongside financial returns. They invest in companies, organizations, or funds that aim to address specific social or environmental challenges, such as renewable energy, affordable housing, or clean water (WBCSD, 2023).

iv. Thematic Investing

Thematic investors focus on specific sustainability themes, such as clean energy, water scarcity, sustainable agriculture, or healthcare (WBCSD, 2023). They invest in companies positioned to benefit from or contribute to these thematic areas.

v. Community Investing

Community investors allocate capital to benefit disadvantaged communities or underserved areas. They invest in community development banks, credit unions, or funds that support projects like affordable housing, small business development, or microfinance.

vi. Corporate Engagement

This strategy involves engaging with companies as an investor to encourage positive change. Shareholders may use voting rights, dialogue, or filing resolutions to influence company behaviour in areas such as equal pay, climate change, or board diversity.

vii. Green Bonds

Green bonds are fixed-income securities exclusively used to finance environmentally friendly projects, such as renewable energy, energy efficiency, or sustainable infrastructure. Investors buy these bonds to support sustainable initiatives and diversify their fixed-income portfolios.

viii. Divestment

Divestment involves selling investments in companies or industries deemed unsustainable or unethical. It is often a strategy used to align investment portfolios with personal values or protest against specific practices, such as fossil fuel extraction or tobacco production.

Sustainable investment strategies are rapidly growing in popularity as investors increasingly prioritize environmental and social considerations in their investment decisions. These strategies aim to generate positive long-term financial returns while making a positive impact on society and the planet (WBCSD, 2023). However, it's important to note that sustainable investment strategies may still carry investment risks and require careful evaluation and due diligence. Seeking advice from professionals experienced in sustainable investing can help individuals and institutions navigate these strategies effectively.

6.0. DECISION-MAKING IN ENVIRONMENTAL AND SOCIAL RISK MANAGEMENT IN PUBLIC FINANCE

Decision-making in environmental and social risk management in public finance involves considering and managing potential risks and impacts on the environment and society when making financial decisions and investments. This process typically includes the following steps:

1. Identifying and assessing environmental and social risks: Public finance institutions need to identify and assess potential risks and impacts on the environment and society associated with their investment decisions. This includes evaluating the potential negative impacts on ecosystems, climate change, biodiversity, human rights, labour standards, and indigenous peoples' rights.

2. Setting policies and guidelines: Public finance institutions need to establish policies and guidelines that outline their commitment to addressing environmental and social risks. These policies should include criteria for screening investments and determining when additional mitigation measures are necessary.

3. Due diligence: Public finance institutions need to conduct thorough due diligence on potential investments to determine their environmental and social risks and impacts. This may involve conducting environmental and social impact assessments, engaging with local communities and stakeholders, and evaluating the project's compliance with relevant environmental and social standards and regulations.

4. Mitigation measures: Public finance institutions should implement measures to mitigate identified environmental and social risks. This may include requiring project developers to implement specific environmental and social management plans, ensuring compliance with relevant regulations, and monitoring ongoing project performance.

5. Stakeholder engagement: Public finance institutions should engage with relevant stakeholders, including affected communities, non-governmental organizations, and experts, to

seek their input on potential investments and to ensure that their concerns and interests are adequately addressed.

6. Reporting and transparency: Public finance institutions should provide transparent and accessible information on their environmental and social risk management practices. This may include regular reporting on investments, disclosure of project-specific environmental and social information, and public consultation processes.

7. Continuous improvement: Public finance institutions should continuously monitor and evaluate their environmental and social risk management practices to identify opportunities for improvement. This may involve learning from best practices, engaging in knowledge-sharing and capacity-building activities, and updating policies and guidelines in response to new challenges and emerging risks.

Overall, decision-making in environmental and social risk management in public finance requires a comprehensive and proactive approach to ensuring that investments are environmentally and socially sustainable and contribute to the overall well-being of both current and future generations.

7.0. ROLES OF PROFESSIONAL ACCOUNTANTS IN ENVIRONMENTAL AND SOCIAL RISK MANAGEMENT IN PUBLIC FINANCE

There are several roles that professional accountants play in environmental and social risk management in public finance:

1. Identifying and assessing risks: Professional accountants can analyze public finance projects and programs to identify potential environmental and social risks. They can conduct risk assessments to evaluate the likelihood and potential impact of these risks.

2. Reporting and disclosure: Accountants can ensure that accurate and transparent reporting of environmental and social risks is undertaken. They can develop reporting frameworks and guidelines to capture relevant data and information. This includes preparing financial statements, sustainability reports, and other disclosures that accurately reflect the environmental and social risks associated with public finance activities.

3. Compliance and regulatory requirements: Accountants are responsible for ensuring compliance with environmental and social regulations. They can advise on the regulatory framework and requirements relevant to public finance activities. They can also help develop internal control systems to monitor compliance and provide adequate assurance.

4. Integration of environmental and social considerations: Professional accountants can help integrate environmental and social considerations into decision-making processes. They can

analyze the financial impacts of different options, considering both financial and non-financial factors. By considering environmental and social risks, accountants can contribute to the development of sustainable public finance strategies.

5. Auditing and assurance: Accountants can provide independent assessment and assurance services to evaluate the management of environmental and social risks in public finance. They can conduct audits to review compliance with environmental and social policies, procedures, and regulations. This helps ensure accountability and transparency in the management of public funds.

6. Stakeholder engagement: Professional accountants can engage with stakeholders, such as government agencies, civil society organizations, and the public, to understand their concerns and perspectives regarding environmental and social risks. They can facilitate dialogue and collaboration to address these risks effectively.

Overall, professional accountants play a crucial role in identifying, reporting, managing, and providing assurance on environmental and social risks in public finance. Their expertise and ethical standards contribute to the effective management of these risks, leading to more sustainable and responsible public finance practices.

8.0 CONCLUSION AND RECOMMENDATIONS

Public finance, like a sturdy ship navigating turbulent seas, demands constant vigilance and strategic manoeuvring. While charting a course towards economic prosperity and social well-being, governments must remain attentive to hidden reefs and sudden squalls, the ever-present risks that threaten to capsize the vessel of progress. This is where risk management, the vigilant watchtower, plays a crucial role. Environmental disasters, economic fluctuations, and social unrest act as unexpected squalls in the realm of public finance. They can cripple infrastructure, disrupt service delivery, and plunge nations into financial turmoil. Neglecting these risks would be akin to setting sail without a weather map, inviting misfortune and jeopardizing the well-being of millions.

By proactively and strategically managing risks, governments can ensure responsible use of public funds, foster economic stability, and build a future where citizens can thrive. This not only demands robust frameworks and innovative tools but also a spirit of collaboration and continuous learning. A tightrope walker will not only be mindful of just balancing precariously but confidently striding across the canyon, equipped with a safety net and a map of potential challenges. In recommendation, public finance should strive for a future where risk management will not be an afterthought, but a woven thread into the tapestry of every policy, every project, and every financial decision. This paper would among others also recommend the following:

- i. Invest in building strong risk management frameworks within government institutions;
- ii. Allocate sufficient resources for risk assessment, monitoring, and mitigation activities;

- iii. Foster a culture of transparency and accountability within government operations;
- iv. Embrace innovative technologies and data analytics to enhance risk management capabilities; and
- v. Actively collaborate with other countries and international organizations to share best practices.

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