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South African Regulation 28 amendments and the implications for pension fund investments in infrastructure

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South African Regulation 28 amendments and the implications for pension fund investments in infrastructure



This research report is submitted to the Faculty of Commerce, Law and Management in partial fulfilment for the degree of Master of Management in Development and Economics.

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March 2025, Johannesburg

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DECLARATION

I declare that this research report is my own unaided work. It is submitted for the degree of Master of Management in Development and Economics at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any other degree or examination in any other University. Where I have used the work of other authors, I have properly acknowledged them, and I have not copied any author or scholar's work with the intention of passing it off as my own.

Signature: P. Qina

25 March 2025

Phelisa Qina

DEDICATIONS

This thesis is dedicated to my late parents, Noluthando and Mawethu Qina.

I would have not be here if it wasn’t for your love and your teachings.

Ndiyabulela Nobetha nakuwe ntombi ezalwa kwaDlomo.

ABSTRACT

This thesis is premised on the argument that while infrastructure investments offer promising opportunities for economic development and portfolio diversification in South Africa, the regulatory mechanisms that facilitate such investments must be carefully evaluated within their historical, political, and socio-economic context. Focusing on the 2023 amendment to Regulation 28 of the Pension Funds Act in South Africa which permits retirement funds to invest up to 45% of their assets in infrastructure, this study interrogates the implications of the reform for retirement fund members, particularly the working-class majority who rely on these savings as their sole source of post-retirement income. The central argument posits that while infrastructure investments can contribute to economic growth and potentially enhance fund performance, the South African political economy is uniquely marked by public sector inefficiencies, governance failures, and a deeply contested history of asset prescription. These conditions raise critical questions about whether the reform serves developmental objectives without compromising the fiduciary duty to protect retirement savings. Employing a qualitative research methodology, the study draws evidence on document analysis of government reports, regulatory drafts, stakeholder submissions, policy statements, and media commentary to trace the motivations, contestations, and risks associated with the amendment. The research is situated within public-private partnership theory and institutional theory, allowing for a dual analysis of the transactional dynamics between government and retirement funds, and the enduring legacy of state intervention in pension fund governance. The findings highlight three key dynamics: first, the regulatory amendment was shaped by the state's need to address infrastructure backlogs without reviving the politically fraught policy of prescribed assets; second, infrastructure investments are shown to offer diversification and long-term return benefits, especially through their low correlation with traditional asset classes and muted volatility in unlisted markets; third, investment appetite is dampened by persistent risks, including political instability, environmental vulnerabilities, and the rise of organised crime groups within the infrastructure sector. The study's contribution lies in its critical examination of how retirement reforms, though economically rational on the surface, can reproduce historical patterns of state-fund entanglement if not buttressed by governance, transparency, and appropriate risk safeguards. It calls for more contextually grounded investment policy that accounts for South Africa's institutional fragilities while prioritising the long-term security of retirement fund members.

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ACRONYMS

ANC	African National Congress
ASISA	Association for Savings and Investment South Africa
BRICS	Brazil, Russia, India, China, South Africa
CBOE	Chicago Board Options Exchange
CISCA	Collective Investment Schemes Control Act
DB	Defined Benefit
DC	Defined Contribution
GDP	Gross Domestic Product
GEPF	Government Employees Pension Fund
JSE	Johannesburg Stock Exchange
KZN	KwaZulu Natal
ND-Gain Index	Notre Dame Global Adaptation Initiative Index
NDP	National Development Plan
NEDLAC	National Economic Development and Labour Council
NIP	National Infrastructure Plan
PPP	Public-Private Partnership
SAICE	South African Institution of Civil Engineering
SAIFM	South African Institute of Financial Markets
SAPS	South African Police Service
SAVI	South African Volatility Index
SOE	State Owned Enterprise
VIX	Volatility Index

CHAPTER 1

Contextualising the Regulation 28 Amendment: Retirement funds and infrastructure in South Africa

1.1 Introduction

The 2023 amendment to Regulation 28 of the Pension Funds Act marks a significant moment in South Africa's evolving approach to retirement fund governance, infrastructure financing, and economic development. By permitting retirement funds to allocate up to 45% of their assets to infrastructure investments, the state has effectively redefined the investment landscape for institutional capital, signalling a bold strategy to mobilise domestic savings for national development. This policy shift arrives at a time of deep structural challenges: widening fiscal deficits, deteriorating public infrastructure, sluggish economic growth, and alarming inequality, and is framed by the government as a pragmatic means of bridging the infrastructure investment gap (National Treasury, 2022).

At face value, the amendment aligns with global trends: many countries have successfully harnessed long-term pension capital to finance infrastructure projects that deliver both economic returns and public benefit (Clark & Monk, 2013; Tapia, 2008). Moreover, proponents argue that infrastructure assets offer inflation-linked returns, low correlation to traditional asset classes, and diversification benefits for retirement portfolios (Molefe & Van der Merwe, 2023). However, in the South African context, marked by a history of state overreach, public sector inefficiency, and financial mismanagement, the policy raises urgent questions about risk exposure, governance capacity, and the fiduciary responsibility to protect the retirement savings of ordinary workers.

This tension forms the core of the study. On the one hand, infrastructure investment is both urgent and necessary, offering the potential to revitalise the economy, create jobs, and address longstanding spatial and service delivery inequities. On the other hand, the decision to channel retirement assets into infrastructure cannot be removed from concerns about political interference, implementation risk, and the country's legacy of prescribed assets, a policy historically associated with poor returns and constrained investment freedom. Particularly in a

context where only 6% of retirement fund members are expected to retire comfortably (National Treasury, 2021), the margin for error is narrow, and the stakes are too high.

In this study, I examine the amendment of Regulation 28 as a policy instrument situated at the intersection of state-led development and pension fund governance. I seek to understand both the rationale behind the amendment and its implications for retirement fund members, especially the working poor, whose retirement security is uniquely vulnerable to underperformance and risk mismanagement. Through a qualitative, document-based analysis, the study explores the amendment's historical roots, the perceptions of key stakeholders, the comparative performance of infrastructure as an asset class, and the specific risks associated with investing in infrastructure in South Africa. In doing so, I aim to contribute to a more grounded, critical, and contextually relevant understanding of what this regulatory reform means, not only for infrastructure delivery, but for the long-term financial wellbeing of South African workers.

This thesis is premised on the argument that while infrastructure investments offer promising opportunities for economic development and diversification of retirement fund portfolios, the regulatory mechanisms that facilitate such investments must be carefully evaluated within their historical, political, and socio-economic context. The 2023 amendment to Regulation 28 of the Pension Funds Act which allows retirement funds in South Africa to allocate up to 45% of their assets to infrastructure investments, represents a significant departure from previous retirement fund policy frameworks. This regulatory change signals a strategic attempt by the state to leverage long-term domestic capital to address the country's worsening infrastructure deficit. However, this shift takes place within a complex and contested terrain shaped by historical legacies of state intervention in retirement assets, mismanagement of public funds, and persistent institutional fragilities.

The central concern of this study is whether the amendment meaningfully advances national development goals without compromising the fiduciary responsibility to safeguard retirement savings, particularly for the majority of working-class South Africans who rely solely on these funds for income in retirement. With only 6% of retirement fund members projected to retire comfortably, the stakes are high. This thesis interrogates whether the allocation of up to 45% to infrastructure, although framed as a mechanism for long-term growth and socio-economic upliftment, might inadvertently reintroduce state control over retirement assets under the guise of developmental reform.

Grounded in a qualitative research approach, this study employs document analysis to examine the genesis, rationale, and implications of the amendment. Key policy documents, regulatory drafts, stakeholder submissions, media commentary, and political manifestos were analysed to understand both the intentions behind and responses to the regulatory change. The study is situated within public-private partnership (PPP) theory and institutional theory, providing a dual analytical lens through which to assess both the transactional relationship between government and retirement funds, and the enduring institutional memory of asset prescription in South Africa's pension landscape.

The findings highlight a critical paradox: while infrastructure investments present clear benefits, including diversification, low correlation with traditional asset classes, inflation protection, and stable long-term returns; these are offset by substantial risks, particularly within the South African context. Political interference, governance challenges, environmental volatility, and the rise of organised crime in the infrastructure sector all serve to dampen investor confidence and weaken the policy's intended developmental impact.

By critically exploring this tension, the thesis contributes to broader debates on the role of financial regulation in post-apartheid development, the contested space between state and market, and the ethical obligations of trustees, asset managers, and policymakers in managing retirement assets. It argues for a more contextually responsive and institutionally grounded approach to investment regulation, one that acknowledges both the imperatives of development and the necessity of safeguarding retirement security.

1.2 Background to the study

The idea of directing pension capital toward state-led development is not new in the South African context. From 1956 to 1989, under the apartheid government, the prescribed assets regime mandated that retirement funds and insurance companies allocate a significant proportion of their portfolios, often in excess of 50%, towards government bonds and state-owned entities (ASISA, 2019; InvestSense, 2019). This policy was a response to international sanctions and capital flight, designed to secure domestic funding for infrastructure and parastatals in a time of economic and political isolation. While it achieved short-term liquidity objectives, it did so at a significant cost: the returns on prescribed assets consistently lagged

behind those of diversified market portfolios, and pension members bore the consequences in the form of diminished long-term outcomes (SAIFM, 2024).

This historical precedent casts a long shadow over contemporary regulatory debates. When the African National Congress (ANC) reintroduced the concept of prescribed assets in its 2019 election manifesto, proposing that pension funds could be used to finance national infrastructure as part of a developmental agenda (Patel, 2019), the proposal was met with strong opposition from the retirement fund industry. Concerns were raised about governance failures, lack of transparency, and the erosion of trust between the state and institutional investors (Sygnia, 2019; Moneyweb, 2020). The sector's resistance was shaped not only by technical and fiduciary considerations, but by the institutional memory of how state-directed investment had previously compromised fund performance and autonomy.

In response to this pushback, the government shifted strategy. Rather than impose direct mandates, it pursued a regulatory incentivisation model, amending Regulation 28 of the Pension Funds Act to expand the permissible allocation to infrastructure investments (Gouws, 2020). This change, gazetted in July 2022 and implemented in January 2023, now allows retirement funds to invest up to 45% of their assets in infrastructure, significantly higher than in previous iterations of the regulation (National Treasury, 2022). The intention is to leverage pension capital for developmental purposes, without crossing the line into overt compulsion.

Despite its voluntary nature, however, the amendment has not silenced concerns. Critics argue that the 45% cap appears arbitrary and lacks a clear technical rationale (National Treasury, 2021). Moreover, the return of prescribed assets to political discourse in 2024 (George, 2024) has revived fears that infrastructure-focused regulation may serve as a backdoor route to asset prescription. These anxieties are particularly acute given the current fiscal climate: South Africa faces a mounting debt burden, underperforming state-owned enterprises, and rising socio-economic pressures, all of which may increase the temptation for the state to intervene more assertively in private capital markets.

At the same time, there is recognition that infrastructure investment done well, can serve as a powerful tool for inclusive growth. Internationally, countries such as Australia, Canada, and Chile have demonstrated how pension funds can support infrastructure development while maintaining strong governance, portfolio diversification, and member protection (Clark & Monk, 2013; Tapia, 2008). In these cases, success has been contingent on robust institutional

frameworks, clear risk-sharing mechanisms, and political stability, conditions that cannot be assumed in the South African context.

This tension between developmental ambition and fiduciary caution, animates the regulatory reform and forms the backdrop to this study. As South Africa looks to unlock pension capital for national infrastructure, it must confront unresolved questions about governance, risk, stakeholder trust, and the historical baggage of state-led investment. The amendment to Regulation 28 thus becomes more than a technical change: it becomes a site of negotiation between competing visions of economic transformation, institutional autonomy, and social protection.

1.3 Problem statement

Retirement savings constitute the most significant and, in many cases, the only form of long-term financial security for the majority of South Africans. This reality makes the management and protection of these savings not only a technical and fiduciary responsibility, but a social imperative. In a country where only 6% of retirement fund members are projected to retire comfortably (Old Mutual, 2023; National Treasury, 2021), any policy that affects the investment profile of retirement funds demands close scrutiny. The stakes are especially high for the working poor, whose retirement outcomes hinge on the prudent stewardship of their limited contributions.

The 2023 amendment to Regulation 28 which now permits retirement funds to allocate up to 45% of their assets to infrastructure presents both a potential opportunity and a source of significant concern. On one hand, infrastructure investment may yield long-term, inflation-linked returns and contribute meaningfully to economic growth, job creation, and social transformation (Pieterse, 2021). On the other hand, infrastructure projects in South Africa have a well-documented history of mismanagement, cost overruns, implementation delays, and weak oversight, all of which threaten the stability and security of retirement savings (Smith, 2022).

Moreover, the regulatory amendment arrives amid renewed political rhetoric around prescribed assets, raising anxieties about whether the shift toward infrastructure is, in effect, a form of asset prescription by stealth (George, 2024). While the new framework does not impose compulsory allocations, the political momentum behind infrastructure investment, combined

with the absence of a robust justification for the 45% cap, has led some industry stakeholders to question the underlying intent of the reform (Sygnia, 2019; National Treasury, 2021).

While a growing body of literature highlights the positive correlation between infrastructure investment and economic growth (Perkins, Fedderke & Luiz, 2005; Kumo, 2012; Makalima, 2022), much of this work is drawn from developed contexts. In contrast, little empirical research exists that addresses the unique risks and structural constraints of infrastructure investment in emerging markets like South Africa where political instability, organised crime, weak project governance, and environmental fragility all present real threats to capital preservation (Magwedere & Marozva, 2023; Mugari & Obioha, 2024; SAICE, 2017). These contextual realities complicate the seemingly neutral logic of infrastructure as a low-correlated, inflation-linked asset class.

South Africa's case is further complicated by its legacy of prescribed assets during apartheid, which compelled retirement funds to invest in underperforming state-linked instruments. The policy was eventually abandoned due to poor investment outcomes and persistent erosion of retirement value (SAIFM, 2024; ASISA, 2019). The memory of this history continues to shape institutional behaviour and sectoral trust, suggesting that technical regulation cannot be divorced from its political and historical context.

In light of this, the recent amendment to Regulation 28 becomes an important case study through which to interrogate the balance between development objectives and fiduciary duty. Can the mobilisation of retirement capital for infrastructure serve both national priorities and the long-term financial interests of fund members? Or does it risk repeating past mistakes, particularly in a political climate marked by rising state intervention and deteriorating governance?

This study responds to these questions by analysing the regulatory change in context drawing from historical precedent, stakeholder perspectives, infrastructure risk profiles, and theoretical frameworks that explain the evolving relationship between the state and retirement funds. In doing so, it seeks to contribute to the scholarly and policy discourse on the governance of pension capital in times of crisis and reform.

1.4 Research purpose

The primary purpose of this study is to critically examine the implications of the 2023 amendment to Regulation 28 of the Pension Funds Act, with a particular focus on its effects for the financial security of South African retirement fund members, especially those from the working class, who may have no alternative savings beyond their pension contributions. The amendment, which allows for up to 45% of retirement fund assets to be allocated toward infrastructure investments, is a policy development of substantial consequence. It brings to the fore important tensions between state-led developmental ambitions and the fiduciary responsibility to protect and grow pension capital in the interest of fund members.

This research interrogates the rationale behind the amendment by situating it within its historical, political, and institutional context. Specifically, it draws connections to the apartheid-era policy of prescribed assets, which compelled institutional investors to channel funds into government bonds and state-owned enterprises, often at the expense of investment performance. The study also considers the re-emergence of this policy discourse in 2019 and 2024, as well as stakeholder concerns about whether the amendment constitutes a reintroduction of prescribed assets in a different form.

In addition to tracing the amendment's origins and policy trajectory, the study explores the characteristics of infrastructure as an asset class, focusing on risk, return, correlation, volatility, and inflation-hedging potential. It seeks to understand how stakeholders, particularly trustees, asset consultants, and investment managers perceive the role of infrastructure within retirement portfolios, and whether infrastructure investments can deliver sufficient long-term returns to justify the risks involved, especially in a context of poor infrastructure governance and ongoing fiscal constraints.

Ultimately, the study aims to assess whether the amended regulation advances or undermines the retirement security of vulnerable members. In doing so, it contributes to broader policy debates around the role of pension funds in financing public goods, the ethics of risk transfer to retirement fund members, and the conditions under which such regulatory reforms can be considered sustainable, equitable, and prudent.

1.5 Research questions

This study is guided by a central research question that seeks to uncover the broader implications of a significant regulatory shift in the South African retirement landscape. To enable a multi-dimensional exploration, the main research question is supported by a set of interrelated sub-questions that probe specific themes emerging from the regulatory amendment and its broader socio-economic context.

Main research question

- What are the potential risks and rewards of allowing retirement funds to invest up to 45% in infrastructure projects under the amended Regulation 28 of the Pension Funds Act?

Sub-questions

- What considerations informed the amendment of Regulation 28 allowing retirement funds to invest up to 45% in infrastructure?
- How do stakeholders, including trustees and investment managers, perceive the long-term financial returns of infrastructure investments compared to traditional asset classes?
- What are the specific risks associated with infrastructure investments in South Africa?

1.6 Theoretical framework

This study is grounded in two interrelated theoretical frameworks: Public–Private Partnership (PPP) theory and Institutional theory. Together, these frameworks provide a multidimensional lens to critically analyse the implications of the 2023 amendment to Regulation 28 of the Pension Funds Act, which permits South African retirement funds to invest up to 45% of their assets in infrastructure. The dual-theory approach enables the study to account for both the transactional dynamics between the state and retirement funds (PPP theory), and the deeper historical and institutional structures shaping regulatory choices and stakeholder responses

(Institutional theory). Both frameworks are particularly relevant given the study's central concern with the tension between developmental state imperatives and the fiduciary responsibility to safeguard retirement savings in a context marked by weak governance, historical mistrust, and economic inequality.

Public–Private Partnership (PPP) Theory

Public–Private Partnership theory provides an analytical framework for examining collaborative arrangements between governments and private entities in the financing, development, and management of infrastructure (Grimsey & Lewis, 2004; Hodge & Greve, 2007). Although there is no singular definition, PPPs are broadly understood as long-term cooperative relationships that distribute risks and responsibilities between the public and private sectors, particularly where the state faces fiscal constraints (World Bank, 2015; Asian Development Bank, 2008). PPP theory is especially relevant in emerging economies like South Africa, where infrastructure backlogs are extensive, public capital is limited, and developmental needs are pressing. As argued by Yescombe (2011), PPPs are not merely technical or financial arrangements, but complex governance mechanisms that rest on mutual trust, regulatory clarity, and appropriate allocation of risk. In this study, PPP theory helps illuminate the rationale behind the amendment of Regulation 28 namely, to mobilise long-term, domestic capital from retirement funds to meet public infrastructure demands in ways that are framed as beneficial to both parties.

However, PPP theory also draws attention to the preconditions for success such as transparent governance, enforceable contracts, and institutional accountability (Hodge & Greve, 2007). These factors are particularly salient in the South African context, where political interference and mismanagement of public funds have historically undermined trust in state-led projects (Makalima, 2022; State Capture Reports). The application of PPP theory in this research thus enables a critical examination of whether South Africa's retirement fund infrastructure strategy adheres to global PPP principles or diverges in ways that reproduce risk without delivering commensurate benefits.

Institutional Theory

Institutional theory offers a complementary and historically grounded perspective. Propounded by North (1990) and later developed by Scott (2005), the theory posits that formal rules, informal norms, and institutional memory shape how organisations behave, adapt, and respond

to policy changes. It is particularly useful for analysing sectors such as retirement fund regulation where historical precedent and path dependency exert significant influence.

In the South African context, institutional theory helps explain the enduring scepticism towards infrastructure-related policy shifts. The imposition of prescribed assets under the apartheid regime (1956–1989), whereby retirement funds were compelled to invest in low-yielding government bonds to support state-owned enterprises, created a negative institutional memory (ASISA, 2019; InvestSense, 2019). Although this policy was abolished in the early 1990s during the wave of financial liberalisation, its legacy continues to shape sectoral perceptions of state-led asset allocation. The reintroduction of asset prescription in political discourse, particularly in the 2019 and 2024 ANC manifestos (George, 2024; Patel, 2019), has reignited fears among stakeholders. The amended Regulation 28, while framed as voluntary, raises concerns about soft compulsion or a creeping return to state-directed investment. As DiMaggio and Powell (1983) note, institutional pressures, whether coercive, mimetic, or normative, shape how organisations conform to or resist state expectations.

This theory also explains why the retirement fund sector's response to Regulation 28 has been cautious, despite policy assurances. Institutional theory allows the study to trace how historical patterns of government overreach, combined with ongoing governance failures, have cultivated a defensive institutional posture that prioritises fund protection over national developmental goals.

Together, PPP theory and institutional theory provide a powerful composite lens. While PPP theory helps analyse the transactional and governance challenges of mobilising private capital for public infrastructure, institutional theory explains the underlying mistrust, regulatory caution, and path-dependent resistance that continue to shape retirement fund behaviour in South Africa. This dual-theoretical approach enriches the study's analysis of the Regulation 28 amendment, not just as a legal change, but as a politically charged and historically situated policy move.

1.7 Overview of the research report

In order to present a coherent and critically engaged narrative, I have structured this research report in a manner that allows each chapter to advance a specific component of the overarching

thesis argument. While the report departs slightly from conventional structures in its arrangement of findings and analysis, this choice is intentional, as it enables deeper engagement with each of the research sub-questions in their own right. Chapters Three to Five serve as dedicated spaces to explore the findings and interpretive insights, framed thematically rather than as a single aggregated chapter.

Chapter One, the current chapter, lays the conceptual and contextual foundation for the study. It introduces the research problem, establishes its relevance, and presents the key research questions. In this chapter, I have also explained the theoretical frameworks that guide the analysis: Public-Private Partnership theory and Institutional theory and provided the rationale for their selection.

Chapter Two outlines the research methodology. Here, I discuss the decision to adopt a qualitative research approach, and I explain why document analysis is the most appropriate method for exploring the amendment of Regulation 28. I also reflect on my positionality as a practitioner within the retirement fund industry and consider how this influences both my access to the material and the interpretive lens I bring to the study. In addition, this chapter covers ethical considerations, limitations, and the measures I undertook to ensure the credibility and trustworthiness of the findings.

Chapter Three addresses the first sub-question: *What considerations informed the amendment of Regulation 28 allowing retirement funds to invest up to 45% in infrastructure?* In this chapter, I explore the historical, economic, and political context that informed the policy shift, including the resurfacing of prescribed asset discourse and the state's broader developmental agenda. I also draw on stakeholder submissions, media statements, and government policy documents to trace the rationale behind the amendment.

Chapter Four takes up the second sub-question: *How do stakeholders, including trustees and investment managers, perceive the long-term financial returns of infrastructure investments compared to traditional asset classes?* In this section, I examine infrastructure as an asset class, with a specific focus on correlation, volatility, and inflation-hedging properties. I reflect on how these investment characteristics are understood by key stakeholders and whether they support or complicate the case for infrastructure investment in the context of retirement portfolios.

Chapter Five addresses the third sub-question: *What are the specific risks associated with infrastructure investments in South Africa?* Drawing on both primary documents and secondary literature, I identify and analyse three major categories of risk: political risk, environmental risk, and the increasingly prominent role of organised crime in the construction sector. I argue that these risks, though not unique to South Africa, have particular implications in this context, given the country's institutional fragilities and history of state-linked investment failure.

Finally, Chapter Six brings the study to a close. In this concluding chapter, I consolidate the findings and revisit the main research question. I reflect on the key tensions and possibilities raised throughout the study and offer a final analysis of what the amended Regulation 28 may mean for retirement fund governance, infrastructure investment, and economic development in South Africa. I also highlight areas for future research, particularly the need for further empirical investigation once infrastructure investments begin to materialise under the amended framework.

CHAPTER 2

Methodology and research methods

2.1 Introduction

This chapter outlines and justifies the methodological choices that inform this study, with particular emphasis on the use of qualitative methods and document analysis as the primary data collection technique. Given the aim of the study, to explore the amendment of Regulation 28 of the Pension Funds Act (1956) and the rationale, perceptions, and risks surrounding the permission for retirement funds to invest up to 45% in infrastructure, qualitative methods are both appropriate and necessary. This chapter presents the research design, discusses the ontological and epistemological foundations of the study, and elaborates on how relevant documents were accessed, analysed, and interpreted.

The chapter also details the data analysis strategy, focusing on the use of thematic analysis to uncover patterns and meanings embedded within the regulatory discourse and stakeholder responses. I reflect on my positionality as a practitioner within the retirement fund industry and acknowledge how this perspective may shape the research process. In addition, the chapter addresses ethical considerations and outlines the measures undertaken to ensure the reliability and validity of the findings.

2.2 Research design

This study adopts a qualitative research design, driven by the need to explore and interpret the nuanced motivations, historical precedents, stakeholder perceptions, and institutional implications surrounding the amendment of Regulation 28 of the Pension Funds Act (1956). I chose a qualitative approach because the research is not aimed at measuring quantifiable outcomes or establishing causal relationships. Rather, it seeks to generate a deep, contextually grounded understanding (Guba & Lincoln, 1994) of a contested policy space that touches on finance, development, regulation, and institutional trust.

From the outset, I recognised that the amendment of Regulation 28 is not simply a technocratic shift in investment thresholds, it is a multi-layered regulatory moment, situated within South Africa's fraught economic landscape and shaped by historical legacies such as prescribed assets and state-led development. A qualitative design enables me to engage with the political and discursive construction of this amendment, and to trace how it is framed, justified, and resisted by different institutional actors (Guba & Lincoln, 1994).

Ontologically, this research is situated within a constructivist paradigm, which assumes that reality is not objective or fixed but is continuously co-produced through human interaction, discourse, and institutional dynamics (Guba & Lincoln, 1994). The constructivist position provides a strong rationale for engaging with multiple documents, regulatory texts, and stakeholder submissions, each of which carries embedded meanings and institutional memories. I do not assume that the policy exists in a vacuum; instead, I treat it as a product of institutional negotiation, informed by trust, memory, and political economy.

Epistemologically, I work within an interpretivist framework, which privileges depth over breadth and seeks to understand how social actors make meaning in particular contexts (Bryman, 2016). The amendment to Regulation 28 is not uniformly understood: to some, it signals a progressive realignment of capital toward developmental ends; to others, it evokes historical anxieties about state overreach and fiduciary compromise. A quantitative or positivist approach would be ill-suited to capture these divergent perceptions. Instead, interpretivism allows me to trace meaning-making processes (Bryman, 2016), to understand how policy actors interpret risk, investment potential, and fiduciary responsibility through the texts they produce.

The choice of qualitative design is further informed by the historically and politically charged nature of the research terrain. Infrastructure investment, retirement security, and fiscal policy are all contested domains in South Africa's post-apartheid landscape. As argued earlier, Regulation 28 sits at the intersection of these concerns, and so any attempt to understand its amendment must account for the discursive, institutional, and socio-economic forces that shape policy shifts (see *Chapter 1*). The qualitative design allows me to engage not just with what is written in policy documents, but with the subtexts, silences, and contradictions that are often equally revealing.

In adopting this design, I also acknowledged my positionality as a practitioner within the retirement fund industry. As I show later in this chapter, my proximity to the investment value

chain offers valuable insight into how regulatory changes are interpreted by trustees, consultants, and investment managers. However, I am also aware that this positionality requires careful reflexivity. I have approached this research not as an advocate of any one interpretation, but as a scholar committed to rigorous analysis. The qualitative design provides the space to draw on my insider knowledge while holding that knowledge up to critical scrutiny (Bryman, 2016).

2.3 Accessing relevant documents regarding the amendment of Regulation 28

Given the qualitative and interpretive nature of this study, I relied primarily on document analysis as a method of data collection. This required the careful identification, selection, and critical review of policy documents, stakeholder submissions, media releases, and grey literature that speak to the amendment of Regulation 28 of the Pension Funds Act (1956). The aim was to construct a comprehensive and layered understanding of how this regulatory shift was conceptualised, debated, contested, and ultimately enacted within the broader policy and financial ecosystem.

The process of sourcing documents was intentional and iterative. I began by identifying the core regulatory texts; namely, the first and second drafts of the amended regulation, the final gazetted version, and the accompanying media statements released by the National Treasury. These documents form the official record of the regulatory change and were critical for understanding both the procedural steps and the policy rationale as presented by the state. The National Treasury's website (www.treasury.gov.za) served as the primary portal through which these materials were accessed.

Initial keyword searches using variations such as *"Regulation 28 infrastructure change pdf"*, *"Regulation 28 of the Pension Funds Act"*, and *"Pension fund infrastructure amendment"* returned only a limited number of direct hits. This made it clear that a more refined and targeted search strategy was required. By using more specific strings such as *"amendments to Regulation 28 of the Pension Funds Act to encourage infrastructure investment by retirement funds"*, I was able to identify and retrieve a series of four key media statements released by the National Treasury between February 2021 and July 2022. These statements provided critical insight into the government's justification for the amendment and the nature of public participation invited during the two comment rounds.

Equally important were the stakeholder commentary documents published by the National Treasury following each round of public engagement. These commentaries revealed the positions, concerns, and recommendations of various actors, including asset managers, labour unions, industry associations, and civil society organisations. I found these documents to be particularly valuable, not only for what they contained but for how they revealed the discursive tensions and competing interests that animated the amendment process. They served as a vital lens through which I could analyse how different actors constructed the meaning, risks, and opportunities of infrastructure investment under the amended regulation.

Beyond formal regulatory texts, I also consulted grey literature and political documents to understand the ideological and historical backdrop against which this amendment was introduced. Of particular significance was the ANC's 2019 election manifesto, which revived the debate on prescribed assets, a debate that many in the retirement fund industry interpreted as a precursor to the Regulation 28 amendment. The ANC's position, while not translated into direct legislative action, played a critical role in shaping the political framing of the amendment and in stoking anxiety among institutional investors. In addition, reports produced by NEDLAC (National Economic Development and Labour Council) were reviewed to track how the issue of infrastructure financing was discussed within tripartite structures.

It is important to acknowledge that not all documents were easily accessible or centrally archived. In some instances, I had to manually navigate institutional websites, refine search strings multiple times, and cross-reference citation trails to access full texts. This process highlighted the fragmented nature of regulatory transparency in South Africa and reinforced the importance of researcher persistence and reflexivity in sourcing data for document-based research. Throughout the document sourcing process, I was guided by two key considerations: relevance and credibility. I focused on documents that either directly contributed to the policy-making process or offered critical interpretation of its implications. At the same time, I remained attentive to the institutional origin, political orientation, and potential bias embedded in each text. Consistent with my interpretivist approach, I did not treat these documents as neutral or self-evident sources of truth (Bryman, 2016). Rather, I understood them as socially and politically situated artefacts, each reflecting a set of interests, assumptions, and strategic framings.

2.4 Research methods

This study is underpinned by a qualitative methodology, rooted in the interpretivist tradition, and driven by the need to explore and interpret the meanings, contestations, and institutional dynamics surrounding the amendment of Regulation 28 of the Pension Funds Act (1956). In order to interrogate this complex and politically charged regulatory change, I employed document analysis as my primary research method, supported by thematic analysis as the analytical framework.

As indicated above, these methods enabled me to engage critically and contextually with a range of texts, including policy documents, stakeholder submissions, media releases, and political manifestos, not simply as administrative artefacts, but as sites where institutional memory, power, and ideology are inscribed and negotiated. The goal was not just to understand what the amendment entailed, but to uncover how it was framed, justified, contested, and situated within South Africa's broader developmental and financial policy landscape.

2.4.1 Document analysis

Document analysis is particularly suited to studies such as this one, where the subject of inquiry: regulatory reform, is mediated through a discursive field shaped by institutional actors, historical legacies, and shifting economic narratives. I draw on Bowen's (2009) definition of document analysis as a systematic procedure for reviewing or evaluating documents, both printed and electronic, in order to elicit meaning, gain understanding, and develop empirical knowledge. In this study, documents function not simply as static records but as constructs of meaning and instruments of power (Prior, 2002).

As a researcher working within a constructivist paradigm, I approached each document as a product of particular institutional and political conditions. I remained cognisant that these texts were not neutral or transparent. Rather, they reflect specific interests, omissions, assumptions, and positionalities. What is said in a National Treasury media release, for instance, cannot be separated from the institutional authority of the state, just as what is left unsaid in a stakeholder comment may reflect deeper anxieties around historical policy failures or fiduciary risk.

The dataset included the following key sources:

- Draft versions of the amended Regulation 28 (2021 and 2022),
- The final gazetted version and accompanying legal instruments,
- Four official media statements issued by the National Treasury,
- Consolidated stakeholder commentary reports from the two public participation rounds,
- The African National Congress (ANC) 2019 election manifesto, which reignited debates on prescribed assets,
- Reports and discussion documents from the National Economic Development and Labour Council (NEDLAC),
- Grey literature, including think tank commentaries and financial media analysis.

I selected these documents based on their institutional relevance, discursive influence, and proximity to the regulatory process. As a corpus, these texts allowed me to trace both the formal regulatory trajectory and the competing discourses that shaped its reception. I was particularly attentive to how infrastructure investment was positioned, either as a developmental opportunity, a political risk, or a financial liability, and how different stakeholders constructed their arguments around these framings.

Following Prior (2002), I approached documents not as sources of singular 'truth' but as textual performances that do political and institutional work. I read them intertextually, paying attention to silences, contradictions, shifts in tone, and rhetorical strategies. For example, while the National Treasury consistently framed the amendment as enabling and growth-oriented, many industry submissions emphasised fiduciary risk, historical mistrust, and the potential erosion of retirement security. These tensions provided insight not only into stakeholder positions, but into the deep discursive cleavages within South Africa's financial and policy ecosystem.

2.4.2 Thematic analysis

To make sense of the data drawn from the document corpus, I employed thematic analysis, drawing on the interpretive framework as outlined by Braun and Clarke (2006). This method provided the flexibility and depth needed to work through a complex, multilayered dataset and was particularly appropriate given my aim to unpack the regulatory, political, and institutional

dimensions of the amendment to Regulation 28. Thematic analysis enabled me not only to identify recurring motifs and arguments across the texts, but also to probe the deeper assumptions, tensions, and silences embedded within them.

I began by immersing myself in the documents, reading them repeatedly to familiarise myself with both their content and context. In this phase, I was particularly attentive to how infrastructure, risk, fiduciary responsibility, and public interest were framed explicitly and implicitly, by different institutional actors. The goal was not only to surface what was said, but to understand how certain meanings were constructed, which voices were amplified, and which perspectives were marginalised or left unsaid (Braun & Clarke, 2006).

As I moved into coding, I engaged in a close reading of the texts, systematically annotating extracts that were analytically significant or resonant with the research questions. This included passages that directly addressed the rationale for the amendment, concerns around infrastructure's investment profile, the legacy of prescribed assets, and perceptions of state capacity. These codes became the building blocks of a broader thematic architecture.

Themes began to emerge around key domains of concern and meaning. For instance, one central theme emerged around the idea of infrastructure as a developmental imperative, which was juxtaposed with another theme highlighting fears of state overreach and fiduciary compromise. The tension between enabling economic growth and protecting retirement savings was a thread that ran through many of the documents, often refracted through institutional histories and political positioning.

Importantly, I did not treat themes as isolated categories. Instead, I worked to understand their interrelations and contradictions. Stakeholder scepticism, for example, could not be fully understood without reference to South Africa's post-apartheid fiscal trajectory, state-owned enterprise failures, and the re-emergence of discourses around asset prescription. In this way, the analysis foregrounded both the explicit arguments made by institutional actors and the discursive formations within which those arguments were located.

Consistent with my constructivist and interpretivist paradigm, I also paid close attention to the discursive dynamics of power, silence, and positionality within and across the texts. Some documents, particularly those from the National Treasury, presented a clear narrative of economic stimulus and reform, while others such as stakeholder submissions reflected institutional anxiety, strategic ambiguity, or outright resistance. I treated these differences not

as noise, but as data: they revealed how infrastructure investment, though technically positioned as a neutral asset class, was in fact saturated with political meaning.

Finally, I ensured that the themes remained closely tied to the research questions and that they advanced the broader analytical aims of the study (Braun & Clarke, 2006). Rather than seeking thematic saturation in a positivist sense, I remained open to contradiction, tension, and dissonance. This allowed the analysis to stay faithful to the political and institutional complexity of the policy terrain, while also generating meaningful insight into how the Regulation 28 amendment was constructed, contested, and received.

2.5 Reliability, validity and ethical considerations

As a qualitative researcher working within a constructivist and interpretivist framework, I am acutely aware that reliability and validity do not carry the same meanings as they would in a positivist, quantitative paradigm. Rather than seeking reproducibility or objectivity in the traditional sense, my focus has been on ensuring credibility, transparency, trustworthiness, and interpretive coherence throughout the research process (Lincoln & Guba, 1985; Miller, 2008). In this section, I reflect on how I approached these concerns in the context of document analysis, and how ethical and positional considerations were integrated throughout the research design and execution.

2.5.1 Reliability and validity in qualitative research

Reliability in qualitative research is not about achieving identical results through repetition, but about demonstrating consistency in the reasoning process, showing that the findings are grounded in a systematic engagement with the data (Ozkan, 2023). To this end, I adopted a transparent and iterative approach to coding and thematic analysis. I maintained detailed records of the coding process, including the development of thematic categories and the shifts that occurred as I moved between data, theory, and interpretation. The analytical logic underpinning each finding is documented, which allows the reader to trace the interpretive decisions made throughout (Bowen, 2009).

Validity, similarly, is understood here not as measurement accuracy but as interpretive plausibility. I sought to ensure that the themes generated from the data were not only empirically supported but also conceptually meaningful and theoretically grounded (Bowen, 2009). One key strategy was to engage with multiple document types from Treasury policy

statements to industry commentary and political manifestos in order to capture a range of institutional voices and discursive positions. This allowed for internal triangulation within the document corpus and helped to surface both consensus and contestation (Leung, 2015).

Where possible, I cross-referenced claims made in one document against others, and also paid attention to omissions, silences, and rhetorical strategies, recognising that what is absent or underemphasised can be as significant as what is foregrounded. In adopting this reflexive stance, I aimed to avoid over-reliance on dominant institutional narratives and instead attend to marginal or resistant perspectives.

2.6. Ethical considerations

While this study did not involve direct human participants, it remained subject to ethical scrutiny. The analysis drew from publicly available documents, many of which were authored by organisations, policymakers, and institutions. Nevertheless, I treated these texts with respect and care, ensuring that quotations or paraphrased content was attributed appropriately and contextualised to avoid misrepresentation. This is in line with best practice in qualitative document analysis, which recognises that texts are produced by actors embedded in particular institutional and political environments (Bowen, 2009).

Additionally, I was mindful of the political sensitivities that underpin discussions of retirement funds, public trust, and infrastructure financing in South Africa. While my aim was to analyse critically, I also sought to do so without assigning blame or essentialising institutions (Bowen, 2009). I have strived to present all perspectives, even those I may disagree with, as grounded in specific institutional logics, constraints, and histories.

2.6.1. Researcher positionality and reflexivity

As an investment consultant operating within the South African retirement fund sector, I occupy a position of insider-researcher. This positionality afforded me practical insight into how regulatory changes like the amendment of Regulation 28 are perceived by trustees, asset consultants, and investment managers. However, it also required ongoing reflexivity, particularly in recognising how my professional training and embeddedness could shape my interpretive lens.

I was conscious not to use the research to affirm pre-existing assumptions. Rather, I approached each document, and each theme that emerged from the data, with a critical awareness of my own standpoint. I kept a reflective research journal throughout the process, noting points of resonance, discomfort, and dissonance between my practitioner experience and the data I was engaging with (Ozkan, 2023). This allowed me to hold space for multiple perspectives, and to treat my own voice not as neutral, but as one positioned among many within the field I was studying.

In sum, reliability and validity in this research are enacted through methodological transparency, analytical reflexivity, and an ethical orientation that foregrounds interpretive integrity over neutrality. These principles guided not only how I engaged with the data, but how I positioned myself in relation to the broader institutional and political terrain that the research seeks to interrogate.

2.7 Limitations of the study

As with any research project, this study is subject to certain limitations, both methodological and contextual, which I acknowledge openly here. These limitations do not invalidate the findings but rather help to clarify the scope, boundaries, and interpretive commitments of the work. They are, in many respects, the result of deliberate choices made in line with the qualitative, interpretivist orientation of the study.

One of the most prominent limitations is the exclusive reliance on document analysis as the primary method of data collection. While this method was well-suited to the study's aims, especially given its focus on regulatory change, public discourse, and institutional perception, it inherently limits the research to what has been officially produced, publicly stated, or archived in textual form (Bowen, 2009). As such, the analysis cannot capture the full range of informal or internal deliberations that may have shaped the regulatory amendment, nor does it include experiential narratives that might have been accessed through interviews or participant observation.

The study also relies heavily on documents produced by state institutions and organised stakeholders, including the National Treasury, political parties, financial associations, and formal regulatory bodies. While these sources are central to the research questions, they tend to reflect dominant voices within the policy and financial ecosystem. Perspectives from marginalised or underrepresented groups such as ordinary retirement fund members, smaller

asset managers, or community-based organisations, are less present in the data. This reflects, in part, the nature of public consultation processes in South Africa, where access, power, and visibility often determine whose voices are recorded and archived.

Another limitation arises from the time-boundedness of the data. The document corpus largely spans the period from 2019 to 2023, capturing the moment in which the amendment to Regulation 28 was conceived, debated, and implemented. However, the implications of the policy change, particularly in terms of actual investment behaviour, portfolio performance, and risk exposure, will continue to unfold over the coming years. As such, this study offers a snapshot of meaning-making and stakeholder positioning during the regulatory transition, rather than an evaluative account of long-term outcomes.

There is also the matter of researcher positionality, which I have addressed in previous sections but reiterate here as a source of both insight and limitation. As an investment consultant working within the retirement fund industry, I bring professional experience that shaped my understanding of the policy context and the technical language of risk, returns, and asset allocation. While I have approached the research with rigour and reflexivity, I acknowledge that my proximity to the field may have influenced which issues stood out most saliently to me during the analysis, and how I interpreted certain discursive framings.

Finally, the research is limited by the absence of disaggregated infrastructure investment data specific to South Africa's retirement fund industry. In several areas such as correlation, volatility, and inflation hedging, international data had to be referenced due to the unavailability of robust domestic indices. This is itself a significant finding, as it highlights the structural opacity and underdevelopment of infrastructure performance measurement tools within the local market. Nevertheless, it constrained my ability to draw empirical comparisons between traditional and alternative asset classes using South African data alone.

Despite these limitations, I believe the research offers a valuable and timely contribution. By situating the amendment of Regulation 28 within its historical, political, and institutional context, and by critically examining how different actors constructed and contested its meaning, the study sheds light on the stakes, tensions, and implications of a reform that is likely to shape South Africa's retirement and infrastructure landscape for years to come.

2.8 Conclusion

In this chapter, I have outlined the research design, methodological choices, and analytical framework that guide this study. Anchored within a qualitative paradigm and framed by a constructivist ontology and interpretivist epistemology, the study seeks to critically engage with the amendment of Regulation 28 not as a mere technical adjustment, but as a discursive and institutional event, one saturated with meaning, history, and contestation.

I justified the selection of document analysis as the primary method by foregrounding the need to trace how different actors and institutions framed, justified, or resisted the shift to allow retirement funds to invest up to 45% in infrastructure. In doing so, I treated documents not as neutral artefacts, but as politically situated texts, embedded in broader struggles over development, risk, governance, and trust. Through thematic analysis, I was able to identify key patterns and tensions across the dataset, linking them back to the study's central research questions and theoretical underpinnings.

I have also reflected critically on the reliability and validity of the study, attending to issues of transparency, consistency, and interpretive rigour. Ethical considerations and the role of my own positionality as a practitioner-researcher were addressed throughout, recognising both the insight and limitations that come with proximity to the field under investigation.

While the study is necessarily bounded by its reliance on textual data, institutional perspectives, and a defined temporal frame, I believe that its design offers a robust, critical, and contextually grounded foundation for understanding the regulatory, financial, and political dynamics surrounding the amendment of Regulation 28. The methodology outlined here sets the stage for the empirical chapters that follow, in which the data is analysed through the themes and categories developed during the research process. In the next chapter, I begin this analysis by interrogating the considerations that informed the amendment of Regulation 28, situating the policy reform within South Africa's broader fiscal constraints, infrastructure needs, and retirement fund landscape.

CHAPTER 3

From prescription to partnership: Considerations for the amendment of Regulation 28

3.1 Introduction

In this chapter, I examine the underlying considerations that informed the South African government's decision to amend Regulation 28 of the Pension Funds Act, thereby allowing retirement funds to invest up to 45% of their assets in infrastructure. The primary aim is to unpack the historical, economic, and regulatory rationale that influenced this policy shift, with a particular focus on how the amendment serves as a strategic alternative to the previously mooted reintroduction of prescribed assets. I argue that the amendment reflects a pragmatic response to the country's mounting fiscal pressures, infrastructure backlog, and stagnant economic growth, while also recognising the need to enhance the long-term performance and resilience of retirement fund portfolios.

A key finding that emerges from this inquiry is that the amendment to Regulation 28 was largely driven by the government's constrained fiscal position. South Africa's public sector infrastructure needs significantly exceed what the state is able to finance independently. The amendment represents a deliberate shift away from coercive mechanisms such as asset prescription and instead reflects a market-oriented, partnership-based approach to mobilising private capital for public infrastructure. This policy transition was shaped by the negative legacy of prescribed assets under apartheid, when retirement funds were compelled to invest in low-yield government securities.

Another important finding relates to the recognition of infrastructure as a catalyst for economic growth. Over the past decade, South Africa has experienced subdued economic performance, compounded by high unemployment, deteriorating state-owned enterprises, and deepening inequality. Infrastructure investment is now widely viewed as a mechanism for both economic revitalisation and social transformation. The amendment to Regulation 28, which permits greater participation of retirement funds in infrastructure, reflects the state's intent to harness private capital for public development objectives.

The amendment also addresses strategic investment considerations for retirement funds. Infrastructure assets, although traditionally underrepresented in institutional portfolios, offer several benefits, including diversification, inflation protection, and stable long-term returns.

Given that the performance of infrastructure assets tends to have low correlation with traditional asset classes such as equities and bonds, their inclusion enhances the overall risk-adjusted returns of retirement fund portfolios. While infrastructure has not been formally designated as a distinct asset class within the regulation, the increased permissible allocation underscores its growing strategic importance. Simultaneously, the amendment raises the investment ceilings for other alternative assets such as private equity and refines the treatment of hedge funds. These changes signal a broader shift in retirement fund investment strategy, aimed at achieving improved diversification in an increasingly volatile global financial environment.

This chapter is structured as follows. It begins by analysing South Africa's infrastructure financing deficit and the growing reliance on private capital, especially from retirement funds, to address this shortfall. It then provides a historical account of prescribed assets, reflecting on their origins, implications, and recent re-emergence in policy debates. The next section explores the economic rationale for infrastructure investment in light of South Africa's broader macroeconomic challenges. Following this, the discussion turns to the investment case for infrastructure from the perspective of retirement funds. The chapter concludes by synthesising these insights and reflecting on the wider implications of the Regulation 28 amendment for South Africa's developmental and regulatory trajectory.

3.2 Addressing the infrastructure financing deficit through private capital

The investment case for infrastructure in South Africa is not only grounded in developmental urgency, but also in longstanding empirical and policy consensus that infrastructural investment has a multiplier effect on both economic and socio-economic outcomes. As Makalima (2022), Gupta and Sharma (2023), and Inderst and Croce (2013) argue, infrastructure facilitates trade, employment, mobility, energy security and health, while also acting as a catalyst for long-term productivity. These effects extend beyond the economy into social cohesion and basic service delivery. Kumo (2012) reinforces this by situating infrastructure at the nexus of inclusive growth and inequality reduction, two of South Africa's most pressing macroeconomic objectives. The National Treasury (2016:243) reflects this integrated understanding in its development planning framework, stating that:

> Investment in infrastructure can create economic growth and benefit society, particularly the poor and vulnerable. Infrastructure for health and education, for example, has a direct impact on the quality of health and on education outcomes.

This view is echoed in the National Development Plan (NDP), which argues for scaled-up infrastructure delivery not as a standalone intervention but as the structural underpinning for "socio-economic growth, good quality basic education and healthy lives for all South Africans" (Government, 2012:160).

The commitment to increased infrastructure investment has, however, collided with South Africa's structural fiscal limitations. This contradiction is at the heart of the state's infrastructure conundrum: the public sector lacks the fiscal space to finance large-scale projects on its own, but the imperative to expand infrastructure investment remains urgent. National Treasury (2021) and the Institute for Economic Justice (2021) have both flagged the growing unsustainability of the sovereign debt path, noting that debt service costs are crowding out investment in capital formation. It is within this fiscal squeeze that the idea of mobilising private capital, particularly retirement savings, has become a prominent policy tool.

This context was explicitly recognised in the 2019 ANC manifesto, which noted:

> The rate of investment in the productive economy and infrastructure has slowed in the recent past. Increasing such investments will help us grow the economy faster, create jobs and boost incomes (ANC, 2019:21).

This policy shift towards leveraging domestic institutional capital, particularly from the retirement industry, reflects both pragmatism and necessity. According to the Financial Sector Conduct Authority (2022), South African retirement assets exceed R4 trillion, representing a significant pool of potential capital. However, the redirection of this capital into infrastructure assets requires a well-calibrated balance between public need and private risk tolerance.

This tension is not new. As discussed in *Chapter 1*, historically, the South African state has sought to draw from the retirement sector through mechanisms such as the *Pension Funds Act* of 1956, which required pension funds and insurance companies to allocate significant portions of their portfolios to state-issued securities. During the apartheid era, this policy served the dual function of funding state expenditures in the face of international sanctions while ensuring domestic liquidity for parastatal development. The performance trade-offs of this policy are now well-documented. The Association for Savings and Investment South Africa

(2019) illustrates how, over three consecutive decades, returns on prescribed assets lagged significantly behind equities. This underperformance is illustrated in Table 1:

Table 1: Equity market performance vs prescribed assets performance

Period	Equity Performance	Prescribed Assets Performance	Performance Differential
1960s	11.3%	4.9%	6.4%
1970s	24.5%	7.3%	17.2%
1980s	20.2%	13.5%	6.7%

Source: Adapted from The Association for Savings and Investment South Africa (ASISA), 2019.

The historical record thus reveals that while prescribed assets served a short-term fiscal function, they compromised the long-term returns of retirement portfolios. This trade-off reverberates into the current policy discourse. When the concept of prescribed assets was reintroduced in 2019 by the ANC, the response from the retirement industry was swift and adverse. ASISA (2019:9) articulated a central concern:

> The primary concern regarding prescription is that it leads to South Africa's savings... becoming an instrument of state policy... resulting in lower-than-market returns for investors.

The critique, however, was not rooted merely in financial return considerations but also fiduciary and governance principles. Trustees of pension funds are bound by statutory duties (see Pension Funds Act 24 of 1956, section 7C) to act in the best interests of members, a responsibility that precludes politically driven allocation mandates without sound economic rationale or risk-adjusted performance expectations.

In light of this pushback, the state recalibrated its approach. Instead of coercive mandates, it pursued regulatory reform to facilitate voluntary participation. This culminated in the 2022 amendment to Regulation 28 of the Pension Funds Act, which increased the allowable infrastructure allocation to 45%. This represents a significant structural shift. Regulation 28,

traditionally a risk-mitigation tool to prevent overconcentration, now simultaneously functions as a catalyst for crowding in private capital into developmental assets.

This evolution mirrors international best practice. In Australia, where defined contribution funds dominate the pension landscape much like South Africa, pension capital has been effectively deployed into infrastructure through blended finance models and well-structured public-private partnerships (PPPs). Inderst and Croce (2013) identify Australia as a leader in pension-fund-financed infrastructure, facilitated by strong regulatory oversight and performance benchmarking. Chile's experience, as Tapia (2008) shows, further demonstrates how a developing country context, when accompanied by regulatory reform and fiduciary transparency, can enable pension funds to act as infrastructure financiers.

Yet, as Clark and Monk (2013) argue, the success of these models rests not only on technical risk-sharing mechanisms but also on institutional trust. In Chile and Australia, governments invested in governance reform and transparency, thereby building investor confidence over time. South Africa's challenge is therefore not solely about creating regulatory room, but about building institutional credibility, something that has been undermined by corruption scandals, procurement failures, and inefficiencies in infrastructure delivery. The NDP recognises this credibility gap, cautioning that:

> The government needs to better coordinate collaborative investment by businesses and provincial and local government into key infrastructure projects... (South African Government, 2012:160).

Similarly, Ninety-One (2024:2) notes the importance of PPPs but implicitly underscores the requirement for effective execution and governance:

> The public and private sectors both play critical roles in infrastructure development. Public-private partnerships (PPPs) are an essential model for South Africa, allowing the government to leverage private sector capital and expertise while significantly improving the delivery of services.

The extent to which South Africa can replicate the infrastructure investment successes of countries like Australia and Chile will therefore depend on more than regulatory permissiveness. It will depend on the ability of the state to address project pipeline weaknesses, governance lapses, and institutional inertia that erode investor confidence. It will also depend on its willingness to maintain a voluntary investment framework that respects fiduciary obligations and prioritises returns alongside impact.

What emerges from this discussion is not a binary choice between state-led development and private capital autonomy, but rather the need for calibrated co-investment frameworks that offer return-enhancing, risk-mitigated opportunities to retirement funds while enabling state infrastructure objectives. The amendment of Regulation 28, seen in this light, is not just a policy tool but a site of negotiation between developmental imperatives and fiduciary prudence. It reflects a broader effort to reconcile the infrastructure deficit with the realities of capital markets, in a context where state resources alone are no longer sufficient.

3.3 Economic justifications for expanding infrastructure investment

The prevailing macroeconomic conditions in South Africa emphasise the urgency of deploying infrastructure investment as a lever for economic revitalisation. Over the past decade, South Africa's economic growth has remained persistently subdued. This stagnation is well-documented in both national statistics and academic literature. According to Statistics South Africa (2023), average annual GDP growth since 2012 has hovered around 0.8%, a figure corroborated by National Treasury (2024), which notes:

> South Africa has experienced over a decade of weak economic growth. GDP growth has averaged only 0.8 per cent annually since 2012, entrenching high levels of unemployment and poverty. To turn the tide... government is prioritising energy and logistics reforms... [and] structural reforms… [that] will... raise confidence, increase investment and employment, and accelerate economic growth (National Treasury, 2024:11).

This policy positioning reflects a growing consensus that infrastructure investment serves as both a direct and catalytic input in economic recovery strategies. Ruch and Geyer (2017) trace South Africa's long-term growth trajectory and note a sustained deceleration since the early 2000s, with only brief recoveries post-democratisation. The contributory factors to this stagnation are multifaceted, including an expanding fiscal deficit, structural unemployment, declining productivity, corruption, and the systemic underperformance of state-owned enterprises (South African Government, 2020; Fedderke, 2022; National Treasury, 2024).

These domestic conditions have coincided with a broader continental challenge. Arezki and Sy (2016) highlight that Africa's infrastructure deficit is a principal constraint on integration, trade, and structural transformation. While governments remain central to infrastructure provision, widespread fiscal constraints have compelled a reconfiguration of funding models. As Arezki and Sy (2016) argue, governments are increasingly relying on public-private partnerships, sovereign wealth funds, and retirement savings to close the financing gap. Within

South Africa, a similar logic underpins the adoption of the National Infrastructure Plan 2050 (NIP 2050), which projects capital spending of over R6 trillion between 2016 and 2040 to support the objectives of the National Development Plan (NDP) (South African Government, 2022).

The NDP, formulated as an inclusive and consultative policy instrument, situates infrastructure not as an end in itself, but as a means of fostering inclusive growth, spatial equity, and productivity enhancement. Ruch and Geyer (2017) note that the commitment to infrastructure has been backed by substantial public sector expenditure, with over R1 trillion invested between 2009 and 2017. However, as fiscal headroom narrows, and debt-service costs escalate, the state has sought to complement its funding efforts through partnerships with institutional investors, most notably retirement funds.

The 2022 amendment to Regulation 28 of the Pension Funds Act reflects this shift. While this amendment allows for increased allocation of retirement fund assets to infrastructure (up to 45%), it emerged in a context shaped by historical contestation. Proposals to reintroduce prescribed assets, a mechanism that previously compelled pension funds to allocate portions of capital to state-led investments, were met with industry resistance (ASISA, 2019; Sygnia, 2019). In response, the government shifted toward a model based on collaboration rather than compulsion, aligning regulatory reform with international trends. As Paklina and Stanko (2021) demonstrate, countries such as Canada, Egypt, Turkey, Namibia, and Colombia have similarly amended pension regulations to allow for expanded infrastructure investment.

The economic logic underpinning these reforms is grounded in a well-established literature. Infrastructure investment is not only associated with direct multiplier effects, such as job creation, but also with long-term productivity gains and competitiveness. Gupta and Sharma (2023) argue that infrastructure acts as an enabling condition for private investment, logistics optimisation, and industrial diversification. Makalima (2022) and Kumo (2012) similarly contend that infrastructure investment supports both the demand and supply sides of the economy, providing countercyclical stimulus while building long-term productive capacity.

Government policy documents reinforce this position. The 2022 National Infrastructure Plan articulates infrastructure investment as foundational to structural transformation. It states:

> Infrastructure delivery will be one of the most significant contributors to South Africa's transition from a historically closed minerals economy to one

> that is globally and regionally integrated, inclusive and host to the dynamic industries of the future... Public infrastructure investment is central to achieving greater productivity and competitiveness, reducing spatial inequality and supporting the emergence of the new job creating sectors (South African Government, 2022: iii).

This view links infrastructure investment directly to employment generation, spatial integration, and empowerment. In this context, the amendment of Regulation 28 is not only a financial policy shift, but a developmental tool intended to mobilise dormant capital for strategic national purposes.

The economic imperative is further reinforced by labour market statistics. According to Stats SA 2024 report, total employment declined by 133 000 jobs (1.2%) in Q3 of 2024 relative to Q2, and by 294 000 jobs (2.7%) year-on-year. Part-time employment, often a proxy for marginal labour absorption, experienced a contraction of 17.8%, compared to 0.5% for full-time jobs. These figures, combined with a Gini coefficient of 0.65 - the highest globally (StatsSA, 2024), highlight the need for inclusive, employment-generating growth. Infrastructure, given its labour-absorptive and productivity-enhancing characteristics, is well-positioned to address these multidimensional challenges.

International case studies provide additional support. The Chinese development model, particularly post-1980s, is widely recognised for its reliance on infrastructure-led growth. World Bank (2010) highlight that, between 1981 and 2004, poverty in China declined by more than 30%, driven in large part by infrastructural expansion that facilitated trade, mobility, and industrialisation. Dinlersoz and Fu (2022) show that infrastructure investment rose from 8% of GDP in 2002 to 24% in 2016, with economic growth averaging 9.5% annually between 2003 and 2016. This transformation was championed by the Chinese state's Five-Year Plans, which provided policy coherence and implementation discipline.

The parallels with South Africa are instructive, though not directly comparable. While China's economic transformation was state driven, coordinated, and supported by a strong central planning apparatus, South Africa's governance environment is more decentralised and, at times, fragmented. Implementation remains a key vulnerability. As Dinlersoz and Fu (2022) note, infrastructural expansion in China was accompanied by strategic reforms in technology, trade, and industrial policy. In contrast, South Africa continues to face misalignments between strategic intent and delivery capability. Political contestation, weak state capacity, and

institutional misalignment have hindered effective implementation of infrastructure programmes.

These structural constraints suggest that while infrastructure investment is necessary for economic stimulation, it is not sufficient on its own. The effectiveness of infrastructure as a stimulus mechanism is contingent on governance quality, implementation capability, and inter-sectoral coordination. The divergence between planning and execution, evident in stalled mega-projects and underperforming PPP frameworks, remains a critical bottleneck. This has implications for the deployment of retirement fund assets under Regulation 28, where return expectations, fiduciary duties, and capital preservation must be balanced with developmental objectives.

Importantly, the case for infrastructure-led economic stimulation is analytically robust and globally validated. The South African context, with its unique constraints and opportunities, lends itself to this approach. However, the translation of infrastructure spending into sustained growth, job creation, and inclusion hinges on the credibility of institutions, the efficiency of project pipelines, and the ability to crowd in private capital under sound governance arrangements. Drawing on lessons from countries like China, as well as peer economies that have successfully integrated pension capital into development finance, remains a vital strategic consideration.

3.4 Evaluating infrastructure as an investment opportunity for retirement funds

Financial market volatility is an ever-present reality. Its cyclical and often unpredictable nature highlight the necessity for robust, systematic mitigation strategies across the investment landscape. No investor, whether institutional or retail, is insulated from market fluctuations. In this regard, regulatory mechanisms such as Regulation 28 of the Pension Funds Act play a pivotal role in framing risk-aware portfolio construction strategies within the retirement fund sector. National Treasury (2010) articulates that the very architecture of Regulation 28 is designed with explicit cognisance of imminent financial market risks, particularly volatility. The prescribed asset allocation limits within the regulation are structured to reduce concentration risks and promote portfolio resilience through diversification.

The imperative of diversification is consistently emphasised within the investment literature and among global policy institutions. The World Bank (2017), for example, presents diversification not only as a technical risk management tool but also as an enabler of long-term

adequacy in retirement savings. The argument is clear: the more diversified a portfolio, the better its capacity to absorb macroeconomic shocks, capture long-term returns across market cycles, and contribute to the financial security of retirement fund members.

This logic extends into the realm of infrastructure, classified under the broader spectrum of alternative asset classes. Infrastructure, in particular offers investors access to long-duration, often inflation-linked cash flows. ASISA (2019) points to the socio-economic dimension of this asset class:

> Opportunities in infrastructure can be diverse and can enable investment in projects that ensure the provision of essential goods and services, thereby adding to the quality of communities' lives (ASISA, 2019:3).

This quote highlights two important analytical strands. First, infrastructure provides diversification not only in a statistical or asset allocation sense, but also through its embedded linkages to essential services. Second, infrastructure investment aligns financial returns with tangible developmental outcomes, an aspect increasingly valued in South Africa's socio-economic context where infrastructure gaps persist alongside fiscal constraints.

Skully (2007) adds depth to this argument, defining alternative asset classes as those that lie outside the conventional domains of equities, bonds, property, and money markets. These include private equity, hedge funds, and infrastructure. Skully argues that alternatives contribute a qualitatively distinct return and risk profile, largely due to their limited liquidity and weaker correlation with listed financial markets. Hence, the inclusion of these assets tends to smooth portfolio returns, especially during periods of volatility.

Empirical research further validates these theoretical propositions. Jaggi, Jeanneret and Scholz (2011), in their comparative analysis of hedge fund-inclusive and hedge fund-exclusive portfolios, found statistically significant enhancements in performance when alternatives were included. Similarly, Fischer and Lind-Braucher (2009) conducted a systematic investigation of diversification benefits arising from the addition of alternative assets to traditional portfolios. Their results clearly demonstrate a reduction in volatility and improvement in Sharpe ratios, a measure of risk-adjusted return. Bessler, Opfer and Wolff (2017) corroborate these findings in their broader analysis of portfolio construction, again confirming the diversification and performance-enhancing benefits of alternatives.

However, not all studies present an unqualified endorsement. Platanakis, Sakkas and Sutcliffe (2019), while acknowledging the potential contribution of alternative asset classes, caution against overexposure. Their research indicates that the effectiveness of alternatives is highly contingent on the specific type, quantity, and strategic alignment within the broader portfolio. The authors argue that a 'more is better' approach to alternatives may be misguided, and that asset allocation decisions must remain underpinned by prudential considerations, especially when fiduciary duty to beneficiaries is involved.

This tension between opportunity and caution is central to understanding the rationale and structure of the amendments to Regulation 28. Although infrastructure is not listed as a separate asset class under the revised regulation, the amendment permits up to 45 percent exposure to infrastructure-related instruments across asset classes, including equities, debt instruments, and property. Additionally, a 10 percent cap is introduced for infrastructure exposure elsewhere on the African continent (National Treasury, 2022). These shifts reflect an implicit encouragement for retirement funds to meaningfully participate in infrastructure investment, while retaining a layered approach to risk control.

ASISA (2019) underscores the implications of this change:

> The amendments seek to make it easier for retirement funds to invest in infrastructure. Infrastructure is not currently listed as a separate asset class under Regulation 28. The review of the regulation will allow for infrastructure investments to be more clearly defined under existing asset classes, such as equities, debt instruments and property (ASISA, 2019:3).

By integrating infrastructure across asset categories rather than isolating it, the amendment reflects an understanding of how infrastructure exposure is often structured in practice. It is common for infrastructure projects to be accessed through equity stakes in infrastructure companies, debt instruments backed by infrastructure assets, or unlisted property vehicles. This layered definitional approach provides flexibility in implementation, though it also necessitates improved monitoring and risk oversight.

Moreover, the amendments were not confined to infrastructure alone. The reconfiguration also affected hedge funds and private equity allocations. Previously grouped under a 15 percent combined limit, these asset classes have now been disaggregated. The maximum exposure to private equity has been increased to 15 percent, while the hedge fund ceiling remains at 10 percent. Importantly, hedge fund eligibility is now restricted to those complying with the

Collective Investment Schemes Control Act (CISCA), a regulatory tightening that aims to enhance transparency and reduce operational risk (National Treasury, 2022).

From a governance perspective, these amendments place heightened emphasis on the fiduciary responsibilities of trustees and asset managers. The increased exposure limits to alternative assets introduce new layers of complexity, particularly in illiquid and opaque markets. As has been stated throughout the broader thesis, the South African retirement fund industry operates within a context of constrained household savings and limited retirement adequacy. National Treasury (2014) reports that only 6 percent of South Africans are expected to retire comfortably, a statistic that underscores the stakes involved in every asset allocation decision.

It is within this broader context that the prioritisation of alternatives, including infrastructure, must be viewed with a tempered sense of opportunity. While alternatives can mitigate volatility and contribute to risk-adjusted returns, they are not a panacea. Their role must be operationalised through rigorous due diligence, governance oversight, and strategic alignment with long-term investment objectives. As ASISA (2019) and Platanakis et al. (2019) both suggest, the pursuit of alternatives requires discretion, discipline, and an informed understanding of the trade-offs involved.

The regulatory shift under Regulation 28 reflects a recalibration of state policy: one that seeks to mobilise long-term capital for developmental ends, while retaining market discipline and fiduciary oversight. The diversification rationale is analytically sound, empirically supported, and increasingly aligned with global best practice. However, the realisation of these objectives depends not merely on regulatory permission, but on execution, prudence, and institutional capacity.

3.5 Conclusion

The amendment of Regulation 28 of the Pension Funds Act marks a notable shift in South Africa's approach to infrastructure financing and the role of retirement funds in the country's developmental agenda. Rather than pursuing coercive mechanisms akin to the apartheid-era prescribed assets regime, the state has opted for a market-oriented strategy that seeks to incentivise private sector participation through regulatory alignment. This recalibration reflects an evolving understanding of the financial ecosystem in which retirement funds operate: one that is highly regulated, risk-sensitive, and accountable to millions of members whose financial security depends on prudent asset management.

The amendment does not merely create room for increased infrastructure investment. It signals a broader policy realignment, one that balances fiscal necessity with financial stewardship. The South African government, confronting deepening debt levels and persistent underinvestment in public infrastructure, has identified retirement funds as a credible domestic source of long-term capital. With over R4 trillion in assets under management (Financial Sector Conduct Authority, 2022), the retirement fund sector offers a pool of capital whose investment horizons and liability structures align closely with infrastructure's long-duration profile.

This chapter has demonstrated that the decision to amend Regulation 28 was not undertaken in a vacuum. It must be situated within the country's historical memory of prescribed assets and the enduring mistrust that persists within the financial sector. The poor returns of that era, vividly illustrated in the findings of the Jacobs Committee in 1988, continue to colour industry perceptions. The legacy of coerced investment into low-yield government securities has created a cautious investor culture, especially among trustees and fund managers whose fiduciary obligations leave little room for politically motivated risk-taking (The Association for Savings and Investment South Africa, 2019; SAIFM, 2024). This explains the calculated nature of the regulatory shift. By avoiding the language and mechanisms of prescription, the amendment instead encourages retirement funds to explore infrastructure investment through a voluntary, market-justified lens. Government has moved from compulsion to collaboration. This is a key thematic departure that reinforces the central argument of this thesis: that the amendment reflects a policy compromise aimed at satisfying urgent developmental needs while safeguarding the autonomy and fiduciary duties of retirement funds.

Moreover, the expansion of allowable allocations to infrastructure and other alternative assets reflects a recognition that diversification is both a financial imperative and a risk mitigation strategy. Empirical literature consistently demonstrates that infrastructure, while illiquid, offers valuable characteristics such as inflation protection, low correlation with traditional asset classes, and reliable long-term cash flows (Skully, 2007; Fischer & Lind-Braucher, 2009; Bessler & Wolff, 2017). These features make it a logical addition to retirement portfolios, particularly in a context where macroeconomic volatility and market dislocation remain constant threats.

Nevertheless, as the findings of this chapter have shown, the practical implementation of this amendment is not without complications. Infrastructure projects are susceptible to political interference, construction delays, and governance weaknesses. These risks are especially

pronounced in South Africa, where state-owned enterprises and public procurement have long been sites of mismanagement and inefficiency (National Treasury, 2021). For infrastructure to deliver on its promise, both as a developmental tool and as a financial asset class, robust project governance and accountability structures are essential.

In this regard, the amendment should be seen not as a solution in itself, but as a structural enabler. It provides the regulatory foundation for retirement funds to invest in infrastructure, but it cannot substitute for strong project pipelines, viable investment vehicles, and regulatory clarity. The success of the amendment depends on the collective efforts of government, fund managers, asset consultants, and trustees. It requires not only technical competence but also political commitment to building credible partnerships between the state and the private sector.

Ultimately, the Regulation 28 amendment embodies the delicate balance this thesis interrogates: the tension between mobilising retirement savings for public good and preserving their investment integrity. This tension is not unique to South Africa. However, given the country's stark inequalities, historical baggage, and low retirement readiness, only six percent of members are expected to retire comfortably (Old Mutual, 2023), the stakes are especially high. The amendment's success will therefore be judged not only by the volume of infrastructure funding it catalyses but by its ability to uphold the fiduciary principle that retirement savings must first and foremost serve the interests of their members.

In this context, the amendment becomes more than a technical regulatory change. It becomes a litmus test for how South Africa navigates the dual imperatives of inclusive development and financial prudence. It is this complex policy terrain, straddling the demands of capital markets and the imperatives of the state, that this thesis seeks to critically engage with.

CHAPTER 4

Between stability and risk: Stakeholder perspectives on infrastructure investments and traditional asset classes

4.1 Introduction

In this chapter, I examine how key stakeholders in the retirement fund investment value chain, most notably trustees and investment managers understand and assess the long-term financial performance of infrastructure investments relative to traditional asset classes. Given the fiduciary duties enshrined in South Africa's Pension Funds Act, stakeholders are expected to construct investment strategies that are not only return-seeking but also risk-conscious, particularly in light of the fact that the vast majority of South African retirement fund members, approximately 90%, do not retire with sufficient income. It is therefore imperative that the asset allocation strategies adopted are built on a clear understanding of how infrastructure assets behave across different financial market conditions, especially with regard to their correlation, volatility, and inflation-hedging characteristics.

The argument pursued in this chapter is that infrastructure investments present a compelling long-term value proposition for retirement funds, particularly through their low correlation with traditional asset classes, their resilience to volatility, and their potential (albeit contested) inflation-hedging benefits. I argue that the inherent characteristics of infrastructure assets, especially those in the unlisted segment, provide meaningful downside protection, enhance portfolio diversification, and deliver steady, inflation-sensitive returns over time. While global evidence tends to affirm these benefits, the South African case remains under-examined, particularly with regard to inflation-hedging ability, where findings remain inconclusive due to a dearth of local infrastructure index data.

The key findings from this analysis are threefold. First, infrastructure assets exhibit low correlation with traditional listed asset classes, thereby offering diversification benefits that can be particularly useful in periods of market turbulence. This finding is consistent with international literature and supported by quantitative studies that demonstrate how including infrastructure in investment portfolios can reduce overall portfolio risk and enhance risk-adjusted returns. Second, the volatility profile of infrastructure assets, especially in the unlisted space, is significantly muted compared to listed equities and bonds. This is primarily due to the inelastic demand for infrastructure services and the illiquidity of the unlisted market, which

cushions the asset class from the daily shocks that characterise more liquid markets. Third, while global studies suggest that infrastructure can function as a partial inflation hedge, especially in developed markets, the absence of robust local data limits the ability to draw a definitive conclusion for the South African market. Inflation-hedging, therefore, remains a theoretical possibility rather than an empirically validated outcome within the local context.

This chapter is structured into four thematic sections. I begin by exploring the correlation profile of infrastructure and its implications for portfolio diversification, grounding the discussion in both regulatory considerations and empirical studies. I then focus on the volatility characteristics of infrastructure investments, particularly in comparison to listed assets, drawing on both theoretical frameworks and market performance data, including the SAVI and VIX indices. The next section turns to the inflation-hedging capacity of infrastructure, reviewing the mixed and at times contradictory findings in the literature, while reflecting on the limitations posed by the South African data environment. The chapter concludes with a synthesis of the findings and a reflection on their implications for retirement fund strategy formulation.

4.2 Infrastructure investments, traditional asset classes, and diversification benefits

One of the central tenets of prudent retirement fund management is the pursuit of risk-adjusted returns. At the heart of this pursuit lies diversification, and the structural uncorrelated nature of infrastructure investments relative to traditional asset classes has attracted attention from both regulators and institutional investors. The case for infrastructure as a diversifying asset hinges not only on its unique characteristics but also on its contribution to long-term stability in investment portfolios, particularly in an environment marked by economic and financial volatility.

The fiduciary obligation to manage retirement fund assets in a manner that does not prejudice members is codified in Section 7C of the Pension Funds Act 24 of 1956. This section stipulates that trustees must act “in the best interests of the fund and its members” (South African Government, 1956). In the South African context, this obligation is magnified by the social reality that retirement savings often constitute the only significant pool of long-term household savings. National Treasury (2012:4) confirms this, stating that:

> Retirement savings constitute nearly 60 per cent of South African household savings.

This figure illustrates the burden that retirement funds carry in shaping not only individual financial security but also national savings and investment capacity. However, despite this centrality, the long-term adequacy of retirement savings remains alarmingly low.

National Treasury (2014:1) has previously warned:

> Currently, only an estimated 6 per cent of South Africans are able to maintain their lifestyle and replace their income fully at retirement.

This sobering statistic elevates the importance of rigorous portfolio construction, where diversification is not an abstract theoretical concept but a practical tool for protecting and compounding value. Risk management, while not always explicitly highlighted in trustee mandates, is embedded throughout the investment value chain. Chan, Chen and Lakonishok (2002) argue that risks such as financial market volatility and concentration exposures necessitate robust diversification frameworks, especially for institutions managing intergenerational capital such as retirement funds.

From a regulatory perspective, Regulation 28 of the Pension Funds Act exists precisely to safeguard against undue exposure to any single asset or issuer. By prescribing limits to asset class allocations, the regulation enforces diversification, thereby mitigating idiosyncratic and systemic risks. As articulated by the National Treasury (2022:1):

> Regulation 28, issued in terms of section 36(1)(bB) of the Pension Funds Act, protects retirement fund member savings by limiting the extent to which funds may invest in a particular asset or in particular asset classes, and prevents excessive concentration risk.

The statement affirms that regulatory intent aligns with best-practice portfolio management, particularly in a system where savings pools must be safeguarded from overexposure to volatile or illiquid asset classes. The World Bank (2017) echoes this sentiment, arguing that diversification delivers meaningful benefits when properly implemented. Empirical studies have reinforced this view. Newell and Peng (2008), demonstrate that the inclusion of infrastructure in a diversified portfolio enhances returns while reducing volatility. The underpinning logic is that asset classes which do not move in tandem with one another provide countercyclical ballast during periods of market stress.

Although there are various approaches to achieving diversification such as blending managers with differing investment styles, the focus of this section is on diversification through asset class selection. Traditional asset classes include equities, bonds, listed property, and money market instruments. These are typically liquid, exchange-traded, and subject to frequent valuation shifts (Oyedele, 2014 and Umar, Zaremba, Gull & Sokolova, 2024). By contrast, alternative asset classes, including hedge funds, private equity, and infrastructure, are generally unlisted, and hence illiquid, but offer unique return and risk profiles (Skully, 2007).

Concerns around the liquidity of infrastructure investments surfaced prominently during the stakeholder consultations for the Regulation 28 amendments. For instance, Sygnia Asset Management cautioned:

> These are not liquid assets that can be jumped in and out of at the mercy of an 'updated' list (National Treasury, 2021:26).

FEDUSA echoed these concerns, noting:

> In an already concentrated risk situation trustees and fund managers may try to spread risks into less liquid asset classes such as infrastructure projects and private equity which will add to the over risks by introducing liquidity risks to the concentration risk (National Treasury, 2021:38).

These statements reflect a cautious stance from stakeholders wary of increased exposure to asset classes that may be difficult to divest from during market stress. However, other stakeholders proposed solutions rather than outright rejections. ASISA (2021:27), while acknowledging the illiquidity of unlisted assets, advocated for procedural safeguards, suggesting that:

> Before making a contractual commitment to invest in a third-party managed asset, or investing in an asset, including infrastructure assets, [funds should] perform reasonable due diligence taking into account risks relevant to the investment, including but not limited to credit, market, liquidity as well as operational risk for assets not listed on an exchange.

The CFA Society of South Africa adopted a more pragmatic stance, stating:

> Forty-five percent maximum may be considered a high allocation to infrastructure but would be dependent on each pension fund's liquidity and other needs (National Treasury, 2021:29).

The differentiated stakeholder views highlight a tension between infrastructure's strategic value and its practical challenges. While liquidity constraints must be managed, they do not negate the diversification benefits that infrastructure offers.

At the heart of the diversification argument is correlation. Correlation measures how closely asset classes move in relation to each other. Kenett, Huang, Vodenska, Havlin and Stanley (2015) explain that correlation values range between plus one and minus one. A value of plus one indicates perfect positive correlation, minus one indicates perfect negative correlation, and zero signifies no correlation. Umar et al. (2024) argue that a robust investment portfolio is not solely built on maximising return but must also account for the correlation between constituent asset classes.

This principle is particularly important in times of financial turbulence, where assets with high positive correlations tend to move downward simultaneously, thereby compounding losses. Infrastructure's low correlation with traditional assets provides insulation during such periods. As stated by Batseta, a non-profit organisation representing principal officers and retirement fund trustees:

> There are diversification and correlation benefits to investors (National Treasury, 2021:41).

ASISA (2019:2) elaborates on this further:

From a portfolio-construction perspective, infrastructure investments offer portfolio diversification due to their low correlation with more traditional asset classes such as listed equity and can enhance yields, while also providing inflation protection.

Furthermore, these assets can also be defensive during economic downturns. This framing introduces a multidimensional argument. Not only do infrastructure investments behave differently from traditional equities, but they also tend to be more stable during economic contractions, making them suitable for defensive allocations.

Quantitative evidence reinforces these assertions. In a study covering US infrastructure investments from 2000 to 2006, Newell and Peng (2008) found that the inclusion of infrastructure in investment portfolios increased returns and reduced volatility. In this study, the correlation between infrastructure and equities dropped from 0.73 to 0.16 when infrastructure was introduced. Carlo, Eichholtz, Kok and Wijnands (2023), in their analysis of

1132 defined benefit pension funds between 1991 and 2018, confirmed that infrastructure improves overall investment performance and portfolio diversification, precisely because of its weak correlation with traditional asset classes.

Taken together, these insights strongly validate the proposition that infrastructure offers genuine diversification benefits. In a volatile global financial environment marked by geopolitical instability, currency swings, and unpredictable capital flows, diversification is no longer a theoretical ideal but a practical necessity. Retirement fund stakeholders have a responsibility to understand the interplay of asset classes, their correlation patterns, and the implications for fund solvency and member outcomes.

The integration of infrastructure into investment portfolios under Regulation 28 must be guided by this nuanced understanding. While liquidity risks are real and must be managed, they do not outweigh the benefits of diversification, especially when infrastructure is approached through a due diligence framework. The low correlation profile of infrastructure serves not just as a buffer against market volatility, but also as a tool for return optimisation within long-term portfolios. Given the high proportion of South Africans unlikely to retire comfortably, maximising the efficiency of every rand invested becomes not only a fiduciary duty, but a national imperative.

4.3 Lower volatility and broader listed investments

Volatility, as a central pillar of risk management, remains a critical focus for all stakeholders within the retirement fund investment value chain. This is particularly salient in jurisdictions like South Africa, where household wealth is disproportionately concentrated in retirement savings and where institutional investors must carefully manage risk exposure while still achieving long-term growth objectives. The findings presented in this section substantiate the view that infrastructure investments offer comparatively lower volatility than listed traditional asset classes. This characteristic, as will be argued, is not merely technical but foundational to the rationale behind increased infrastructure allocations under the amended Regulation 28 of the Pension Funds Act.

As a conceptual foundation, volatility refers to the degree of variation in asset prices over time and is commonly interpreted as a proxy for investment risk (Poon & Granger, 2003; John & Amudha, 2019). Volatility has implications for derivative pricing, hedging strategies, and strategic asset allocation, all of which are relevant for long-term institutional portfolios such as

retirement funds. The prominence of volatility as an analytical variable is reinforced by the proliferation of volatility indices across jurisdictions. The Chicago Board Options Exchange (CBOE) launched the Volatility Index (VIX) in the early 1990s to track investor sentiment based on S&P 100 options, later revised in 2003 to align with the broader S&P 500 (Yang, 2012). Colloquially referred to as the "fear index," the VIX rises in times of market stress, thereby acting as a barometer of uncertainty (Pati, Barai & Rajib, 2018).

In South African, the South African Volatility Index (SAVI) was launched in 2007, revised in 2009, and is based on the FTSE/JSE Top 40 index (Johannesburg Stock Exchange, 2009). According to the JSE, the Top 40 index is negatively correlated with the SAVI. That is, when market optimism drives up equity values, volatility tends to decline, and vice versa. This inverse relationship illustrates the cyclical vulnerability of listed equities to exogenous shocks, a risk profile that does not apply equally across all asset classes.

The empirical findings discussed in this section align with this theoretical understanding. Infrastructure assets, by contrast to listed equities, exhibit lower susceptibility to volatility. This is consistently supported by a range of market actors and empirical evidence. Ninety-One (2024:4), an investment manager, notes that:

> Infrastructure assets tend to offer lower volatility than traditional equity investments, making them attractive to institutional investors seeking long-term, predictable income streams.

This insight confirms that infrastructure's appeal lies not only in yield potential but also in the smoothing effect it introduces to the overall portfolio return profile. Deloitte (2023:6) builds upon this, stating:

> We believe the infrastructure asset class can serve as a foundation portfolio asset class aimed at securing diversified, less volatile, low correlation long-term returns. In addition to its defensive and diversifying characteristics, infrastructure boasts a strong growth momentum.

Here, the emphasis on infrastructure as a 'foundation' asset class introduces a critical framing for its role within retirement funds, highlighting that infrastructure is not simply a satellite or tactical allocation but a structural component of long-term portfolio design. Mergence Investment Managers (2023:1), a domestic custodian of retirement fund assets, reinforces the same conclusion:

> The benefits of adding infrastructure to a portfolio include diversification, reduced volatility (particularly from infrastructure debt allocations), more resilience in changing markets conditions...

This notion of resilience is particularly important in the post-pandemic context, where systemic uncertainty has intensified, and the economic outlook remains clouded. As noted by National Treasury (2022:3):

> The global outlook is also becoming less favourable, with a broad slowdown marked by higher levels of volatility.

This macroeconomic reality strengthens the case for asset classes like infrastructure that can provide a degree of stability against a backdrop of rising geopolitical risk, global supply chain disruptions, and interest rate volatility.

Infrastructure's low volatility characteristics are, in part, attributable to its monopolistic, oligopolistic, and inelastic demand structure. As Magweva and Sibanda (2020) argue, these structural features render infrastructure less sensitive to fluctuations in market demand. This is corroborated by ASISA (2021:3), which states:

> Infrastructure investments are less tied to economic cycles, therefore providing more stable returns.

This statement is critical in understanding the structural logic of infrastructure assets. Unlike equities whose prices fluctuate with market expectations and short-term performance, infrastructure assets, particularly those delivering essential services such as transport, energy, and water, tend to enjoy long-term contracts, regulated revenue streams, and stable user demand. Carlo et al. (2024) extend this understanding by identifying heterogeneity as an additional asset class feature, noting that infrastructure encompasses a wide array of sub-sectors and contractual structures that further diversify its risk exposure.

Skully (2007) previously suggested that infrastructure investments are uniquely positioned to generate consistent, stable returns across different market regimes. Empirical evidence provided by KKR (2022) lends weight to this argument. In their ten-year comparative analysis from 2012 to 2022, which notably includes the peak of the COVID-19 pandemic in 2020, a period marked by extreme volatility, the firm tracks average investment returns and standard deviation (a proxy for volatility) across several asset classes.

Figure 1: Average Investment Return and Standard Deviation (2012–2022) *(Source: KKR, 2022)*



While the findings from KKR are based on U.S. data, the use of this dataset is justified given the relatively limited historical infrastructure performance data available in South Africa. The SAVI, launched in 2007, does not offer the same historical depth as the VIX, which has been tracking market volatility since the early 1990s. Moreover, infrastructure as a formalised asset class remains underrepresented in South African capital markets, making cross-jurisdictional comparisons a useful point of reference (Yang, 2012; Johannesburg Stock Exchange, 2009).

The implications of these findings are profound for retirement fund stakeholders. For investment managers, infrastructure's low volatility profile supports a strategic allocation rationale, particularly within liability-driven investment frameworks. For trustees, the asset class offers peace of mind in aligning fiduciary responsibility with investment prudence. For policymakers, the evidence supports regulatory adjustments that promote infrastructure without undermining the retirement system's integrity.

Volatility is, and will remain, a persistent investment headwind. In the context of an emerging market like South Africa, characterised by political instability, currency weakness, and capital flow volatility, the role of unlisted, stable-return assets such as infrastructure becomes even more critical. The amendment of Regulation 28, which encourages increased allocations to

infrastructure, must therefore be viewed not only through a developmental lens but also as a prudent response to the shifting dynamics of global financial markets.

Thus, the empirical and theoretical analysis presented in this section demonstrates that infrastructure investment offers an effective buffer against market volatility. By providing consistent, inflation-linked returns with lower standard deviation, infrastructure stands out as a compelling asset class for retirement portfolios. This finding contributes directly to the broader thesis argument: that the strategic deployment of retirement capital into infrastructure must balance development imperatives with sound investment principles, particularly in a context where volatility can rapidly erode retirement outcomes.

4.4 Infrastructure and inflation-hedging benefits

The fundamental risk exposure of retirement portfolios to inflation is well established. Inflation erodes real returns, compromises the purchasing power of pension benefits, and undermines the long-term sustainability of defined contribution and defined benefit schemes alike. In the South African context, where household reliance on retirement savings is disproportionately high, this vulnerability is particularly pronounced. The findings presented in this section engage with the inflation-hedging potential of infrastructure assets and interrogate the empirical and theoretical tensions surrounding this role.

Magweva and Sibanda (2020) contend that inflation, as a macroeconomic variable, exacerbates uncertainty, disrupts financial markets, and materially impairs living standards. Their observation that an economic environment with increased levels of inflation does not bode well for retirement funds, retail investors and lenders highlight inflation not merely as a technical indicator, but as a structural threat to financial resilience. This emphasises the importance of asset classes that either withstand or adapt to inflationary pressures.

National Treasury (2022:3) offers empirical testimony to this broader macro-financial risk, noting:

> Global inflation has risen sharply as a result of supply chain shortages exacerbated by the Russia Ukraine war. As central banks take necessary action to combat inflation by raising interest rates, developing countries are experiencing tightening financial conditions, constraining investment and household demand.

This quote draws attention to the link between geopolitical instability, supply chain disruptions, and inflationary spikes, ultimately tightening global liquidity. Importantly, this tightening has dual effects. On one hand, it stifles capital availability, particularly for developing economies; on the other, it reconfigures investment allocation logics, pushing managers to reassess defensive strategies. In the South African case, National Treasury (2022:11) further illustrates the domestic impact of inflation, stating:

> Simultaneously, after a strong start to 2022, the impact of historic flooding focused on KwaZulu-Natal, the domestic electricity crisis and persistent constraints in network industries such as transport have severely affected economic activity, while high inflation and unemployment have weighed on private consumption.

Here, inflation is situated within a constellation of endogenous and exogenous shocks: floods, energy supply constraints, and structural unemployment, making the inflationary context more severe and locally embedded. This reinforces the rationale for institutional investors, particularly retirement funds, to identify instruments capable of preserving real value.

The imperative to hedge against inflation has therefore gained prominence in portfolio construction theory. Mugambi and Okech (2016) underscore that inflation's effects go beyond markets to disrupt trade flows, employment, and household welfare. This multi-dimensionality intensifies the need for asset classes with inherent inflation-resilience. Wurstbauer and Schafers (2014) and Magweva and Sibanda (2020) trace this concern to the inflation crises of the 1970s, when equity markets underperformed in real terms. Since then, inflation-hedging research has proliferated, with increasing attention given to alternative assets.

The findings indicate that infrastructure investments have emerged as one of the leading candidates for inflation mitigation. Proponents argue that this stems from the monopolistic or oligopolistic market structures of infrastructure providers and the essential nature of their services. These characteristics foster inelastic demand, allowing providers to pass cost increases on to consumers. Croce (2011) and Martin (2010) support this view, emphasising that infrastructure assets have relatively low operational costs post-construction, which cushions them from inflation-induced margin erosion. ASISA (2019:2) reinforces this argument in its statement:

> From a portfolio-construction perspective, infrastructure investments offer portfolio diversification due to their low correlation with more traditional asset classes such as listed equity - and can enhance yields, while also

> providing inflation protection. Furthermore, these assets can also be defensive during economic downturns.

This quote neatly captures the multidimensional value proposition of infrastructure: diversification, yield enhancement, inflation protection, and cyclicality resistance. However, these claims are not uncontested.

Wurstbauer and Schafers (2014) conducted an empirical investigation on the inflation-hedging capacity of direct infrastructure investments across multiple time horizons. Their findings suggest that while infrastructure can act as a partial hedge, the statistical significance of this relationship is limited, particularly over the short term. Similarly, Rödel and Rothballer (2012) conclude that infrastructure's inflation responsiveness is present, but not robust enough to be considered a full hedge. In both studies, the inflation-hedging capacity of infrastructure is shown to be more nuanced than previously assumed.

Moreover, Magweva and Sibanda (2020), in an emerging market-specific study, found no statistically significant relationship between infrastructure investment returns and inflation levels. Their findings are critical to this thesis, as they challenge the universal applicability of infrastructure's inflation-hedging capacity. These results suggest that while developed markets may offer regulatory environments and contractual mechanisms (such as inflation-linked concessions) that embed inflation protection, emerging markets like South Africa may lack such structural guarantees.

Thus, while literature from developed contexts provides evidence of inflation insulation through infrastructure, there is a notable gap in South African data. The absence of local empirical research on this relationship weakens the conclusiveness of the inflation-hedging hypothesis in the South African case. This limitation invites caution. The inflation-protection benefits observed in global studies cannot be uncritically applied in South Africa's socio-political and regulatory terrain.

Nevertheless, the broader logic of infrastructure as a real asset with tangible and essential service delivery characteristics remains persuasive. Brown (2024) argue that in inflationary environments, investment managers tilt toward alternative assets in search of inflation resilience and portfolio preservation. Their findings suggest that traditional asset classes, particularly cash and nominal bonds, are less effective at preserving value during inflationary shocks. National Treasury (2010:3) echoes this sentiment, stating:

> Given that retirement savings need to at least match inflationary pressures, no recognition is given to the fact that an overly conservative investment strategy (dominated for example by cash and non-inflation-linked bonds) can be as damaging to long-term savings as one that is overly exposed to perceived risky assets.

This extract highlights a critical paradox. Overly conservative strategies, while seemingly risk-averse, may in fact expose retirement funds to real value erosion. Infrastructure, by contrast, offers a strategic middle ground; an alternative asset that can provide both return enhancement and some level of protection against inflation.

In framing these findings within a broader macroeconomic context, it is crucial to recall the global synchronisation of interest rate hikes post-2020. Central banks across more than 30 countries responded to inflationary spikes, initially deemed 'transitory,' with assertive monetary tightening. As Old Mutual (2023) notes, these interventions began to show signs of efficacy in 2024, when inflation trajectories began to taper. This macro-level intervention complements, but does not replace, portfolio-level inflation mitigation strategies, including asset allocation decisions.

In summary, while the empirical evidence on infrastructure's inflation-hedging capacity is mixed, the theoretical justification remains sound. Infrastructure's essential service nature, low correlation, and partial inflation pass-through capacity render it a viable candidate in a diversified portfolio. However, local evidence from South Africa is lacking, creating a gap between theory and contextual application. For retirement fund stakeholders operating under Regulation 28, this reinforces the need for robust due diligence, context-sensitive asset modelling, and scenario testing to validate infrastructure's protective role under domestic inflationary conditions.

4.5 Conclusion

This chapter set out to interrogate how retirement fund stakeholders including trustees, investment managers, and consultants, perceive the long-term financial value of infrastructure investments relative to traditional asset classes. The objective was not simply to summarise characteristics of infrastructure, but to assess whether infrastructure meaningfully contributes to risk-adjusted return, portfolio resilience, and inflation protection, thereby justifying its growing role in post-Regulation 28 investment strategies.

The findings offer a cautiously affirmative response, while also surfacing key gaps. First, infrastructure assets, particularly in their unlisted form, exhibit low correlation with traditional asset classes, a quality that renders them effective instruments for diversification. This correlation dynamic is especially important in South Africa's retirement sector, where most members are over-exposed to market cycles and under-prepared for financial shocks. Empirical studies from both developed and developing markets support this proposition, showing that infrastructure enhances portfolio efficiency by reducing total volatility and improving risk-adjusted returns. The implication for stakeholders is that infrastructure deserves a deliberate and well-integrated position in strategic asset allocation models.

Second, the volatility profile of infrastructure assets presents a strong case for inclusion, particularly in long-term portfolios seeking capital stability. The chapter showed that the monopolistic, long-duration, and essential service-based nature of infrastructure allows it to absorb external shocks better than listed equities or short-duration instruments. As supported by global data (e.g. KKR, 2022), infrastructure consistently delivers stable performance with muted standard deviations - even during crises. For South African trustees operating in a volatile domestic environment marked by currency risk, policy uncertainty, and global contagion, this quality is not ancillary, it is central to fiduciary duty.

Third, the chapter examined the claim that infrastructure serves as an inflation hedge. Here, the evidence was more ambiguous. While global studies, particularly in developed markets, suggest that infrastructure can partially protect against inflation, especially where CPI-linked contracts exist, this relationship is contextual and contingent. In South Africa, the lack of enforceable inflation linkages in many infrastructure projects, combined with political risk and data scarcity, undermines the strength of this narrative. The findings ultimately suggest that infrastructure should be seen as a complementary inflation buffer, not a standalone hedge. This nuance is critical for trustees constructing liability-sensitive portfolios in the current inflationary climate.

Collectively, the chapter's analysis contributes to a central theme: infrastructure offers tangible financial advantages across several dimensions, but only when its unique risk-return profile is well understood and appropriately managed. The diversification, volatility insulation, and potential inflation resilience of infrastructure can enhance portfolio outcomes, but these benefits are not automatic, they must be earned through due diligence, investment structure selection, and regulatory navigation. Furthermore, stakeholder perceptions must be aligned

with empirical reality. Overstating infrastructure's hedging capabilities, or underestimating its execution and governance risks, would jeopardise rather than enhance member outcomes.

CHAPTER 5

The fragile investment climate of infrastructure in South Africa

5.1 Introduction

In this chapter, I examine the specific risks that undermine the investment case for infrastructure in South Africa. While infrastructure is globally regarded as a catalyst for economic and social development and has more recently been embraced within South Africa's investment regulation framework through the amendment of Regulation 28, the actual appetite for infrastructure investment remains relatively muted. I argue that this hesitation among both local and foreign institutional investors, is not incidental, but rather reflective of a set of persistent and systemic risks that cast doubt on infrastructure's ability to deliver consistent long-term value.

The aim of this chapter is to explore the three dominant risks that emerge from the South African context: political risk, environmental risk, and the risk posed by organised crime groups. While these are not the only risks associated with infrastructure investments, they are among the most visible and impactful in the South African setting. Importantly, I do not treat these risks as abstract or theoretical; rather, I show how they manifest in tangible ways, disrupting infrastructure projects, eroding investor confidence, and ultimately compromising both economic development goals and fiduciary responsibility.

The central argument I pursue in this chapter is that South Africa's infrastructure sector is characterised by an entrenched and compounding risk profile. These risks not only undermine project viability and financial return but also raise fundamental questions about the governance and sustainability of infrastructure as an asset class. Political instability, environmental degradation, and criminal infiltration, each with their own dynamics, coalesce in ways that make long-term capital deployment in infrastructure exceedingly difficult. As a result, despite regulatory reforms that now permit retirement funds to allocate up to 45% of assets to infrastructure, the risks attached to the asset class continue to outweigh the incentives in the eyes of many investors.

My analysis reveals three key findings. First, political risk remains a powerful deterrent, manifesting through policy uncertainty, institutional instability, corruption, and infrastructure vandalism. The misalignment between short-term political cycles and the long-term nature of

infrastructure investments is particularly acute and continues to corrode project continuity and investor trust. Second, environmental risks such as flooding, climate change, and poor infrastructure resilience are escalating. These risks are intensified by systemic underinvestment, poor maintenance, and the degradation of environmental buffers, all of which render South Africa's infrastructure highly vulnerable. Third, the rise of organised crime groups, particularly in the construction and infrastructure sector, has emerged as a significant and disturbing trend. These groups, often operating through peripheral complicity with local political structures, introduce both direct and reputational risks that investors cannot ignore.

I structure the chapter as follows. In the first section, I interrogate the infrastructure-political risk nexus, contrasting developed and emerging market patterns while focusing on how South Africa's political climate has depressed infrastructure investment. The next section turns to environmental risks, examining how natural disasters and climate vulnerabilities interact with the country's already fragile infrastructure stock. In last section, I explore the rise and entrenchment of organised crime groups, particularly in the construction sector, and analyse how these networks erode governance, disincentivise investment, and drive-up project risk. I conclude the chapter by drawing these risk dimensions together, reflecting on their implications for South Africa's infrastructure investment outlook, especially in light of recent retirement fund regulation changes.

5.2 The infrastructure investments and political risk nexus

Extensive research in both the global and South African contexts affirms the role of infrastructure investment not only as a stimulant for economic growth but also as a lever for addressing deep-seated socio-economic challenges (Makalima, 2022; Kumo, 2012; South African Government, 2020; Perkins et al., 2005; Inderst & Croce, 2013). These studies present a consistent narrative: infrastructure spending has a catalytic effect, enhancing employment, facilitating trade, and stimulating foreign direct investment. Perkins et al. (2005), in particular, argue that infrastructure plays an enabling role in economic activity, acting as a backbone for strategic sectors such as transport, energy, and telecommunications.

While the public sector has traditionally carried the responsibility for infrastructure provision, fiscal constraints increasingly necessitate private sector involvement. Gupta and Sharma (2023) recognise that although infrastructure development is conventionally a state function, governments' growing budgetary shortfalls have rendered them reliant on private capital to

close infrastructure funding gaps. This situation is especially acute in emerging markets. Magwedere and Marozva (2023) note that despite gradual growth in infrastructure investment across the developing world, emerging markets such as South Africa continue to fall well below the World Economic Forum's (2014) recommended threshold of five percent of GDP in annual infrastructure spending. This is alarming, given that failure to meet this threshold significantly impairs long-term developmental goals.

The constraint, however, is not merely fiscal. Political and governance risks play a central role in curbing infrastructure investment. In South African, the poor maintenance of ageing infrastructure alongside calls for intensified investment have elevated the role of retirement funds in plugging this funding gap. The 2022 amendment of Regulation 28 of the Pension Funds Act, which allows retirement funds to allocate up to 45% of their assets to infrastructure, reflects this shift. However, this transition is fraught with risk, not least of which are political risks that, if left unaddressed, may deter investment entirely.

Goncalves and Serfontein (2022) offer a comprehensive framework of the risks surrounding infrastructure assets, including political, economic, environmental, regulatory, and organised crime risks. Among these, political risk remains one of the most volatile and investor sensitive. Investors, particularly institutional investors such as retirement funds, remain highly attuned to these risks. According to Magwedere and Marozva (2023), political risk heavily influences the geographical allocation of investment capital. Infrastructural assets may offer long-term economic productivity, but exposure to political volatility erodes investor confidence and, by extension, investment appetite.

This sensitivity is grounded in real experiences. The South African National Treasury (2022:10), in its appraisal guidelines for strategic infrastructure grants, highlights the importance of holistic risk analysis:

> Risk analysis is concerned with the identification of a project's risk variables, the analysis of the impacts of these risk variables on the project, and the interpretation of the results in the presence of uncertainty... Qualitative analysis uses a relative or descriptive scale to measure the probability of a risk event occurring... Quantitative risk analysis takes into account the fact that circumstances may occur, which result in future (actual) benefits/outcomes and costs being different from the expected values.

This guideline recognises the complexity of infrastructure delivery and the high possibility of divergence between planned outcomes and eventual reality, particularly when political risks

materialise. Nowhere is this more evident than during South Africa's state capture era. The Government of South Africa (2022:65) provides a damning assessment of the impact of political corruption on infrastructure:

> The threat and impact of corruption in the procurement of infrastructure deepened during the period of State Capture but has continued in recent years. This corruption raises the cost of infrastructure. There are also important instances where corruption led to significant expenditure without any material infrastructure delivery… Most important are threats arising from corruption within the institutions that own the bulk of South Africa's public infrastructure: Eskom, Transnet, SAA, PRASA and the local government. The period of State Capture was characterised by this kind of risk, all of which dramatically raises the costs of delivering infrastructure.

This excerpt captures the dual burden of corruption: inflated infrastructure costs and incomplete or non-existent delivery. The long-term effect, as noted, includes elevated tariffs and mounting fiscal pressure, compounded by declining investor confidence and weakened macroeconomic indicators. This aligns with the findings of Gillanders (2014), who statistically confirms a strong correlation between political corruption and underinvestment in infrastructure. Similarly, the World Bank (2018) argues that while financial shortfalls are often cited as the primary barrier to infrastructure expansion in developing countries, the underlying constraint is often political. Poor governance frameworks, lack of transparency, and unstable policy environments are the real culprits in hindering investment mobilisation. Muller and Dorobantu (2022) support this argument, highlighting that the long-term nature of infrastructure projects makes them uniquely vulnerable to political shocks.

Rose-Ackerman (2008) deepens the critique by linking corruption to specific characteristics of infrastructure projects. Drawing on Transparency International survey data, she asserts that construction and public works departments are ranked as the most corrupt department globally. The monopolistic nature of infrastructure contracts, combined with large budgets and complex procurement procedures, creates fertile ground for corruption. Corruption "kickbacks," therefore, are easily disguised within construction budgets, often hidden in vague project specifications or overpriced service agreements (Rose-Ackerman, 2008). This poses a particular risk in contexts where procurement lacks strong oversight.

The political risk spectrum also includes the temporal misalignment between government terms and the lifecycle of infrastructure projects. Henisz and Zelner (1999) explain that short electoral cycles, often five years in many African countries, clash with the long timelines of

infrastructure development, which can span decades. This mismatch jeopardises policy continuity and raises the risk of project abandonment or reversal under new administrations. As Wiebusch and Murray (2019) observe in their study of African presidencies, 80% of countries limit a presidential term to five years. Given that most infrastructure assets, particularly those financed through pension funds, are designed to deliver returns over 15 to 30 years, such political discontinuity introduces long-term uncertainty. In South African, where government administrations also operate on five-year cycles, this risk is particularly pronounced.

Political risk within the infrastructure investment environment is not limited to institutional corruption or regulatory instability. It also manifests in highly localised, yet profoundly disruptive, socio-political sabotage in the form of infrastructure vandalism and theft. These acts, while often treated as criminal offences, have deeper political and social dimensions. They are symptomatic of a fractured social contract, and in many cases, represent targeted expressions of frustration with the state's failure to meet its developmental obligations.

In South Africa, the economic toll of such sabotage is staggering. Government (2022:63) reports:

> It is estimated that copper theft on South Africa's rail and electricity grids imposed an economic cost of more than R45 billion in 2020/21. This figure includes replacement costs, lost revenues on the rail network, forgone revenue in the mining industry and some other costs.

This figure is not merely an accounting of physical damages or lost revenue. It serves as a stark indicator of the extent to which public infrastructure has become vulnerable to sustained and systemic forms of criminal exploitation. The reference to forgone revenues across multiple sectors illustrates the interconnected nature of infrastructure systems and the wide-ranging ripple effects that such sabotage can unleash on the broader economy.

Beyond the financial loss, the socio-political roots of this problem demand closer interrogation. Ikejemba and Schuur (2018) frame infrastructure vandalism not as random criminality but as an antagonistically informed response, to persistent government failures, particularly in job creation, public service delivery, and social welfare. In this reading, sabotage becomes a form of protest or retaliation, signalling that infrastructure is not only a site of economic value but also a contested symbol of governance legitimacy. Its destruction, therefore, is both material and symbolic, eroding not only physical assets but also institutional credibility.

This argument is echoed and extended by Mugari and Obioha (2024), who assert that infrastructure-related threats such as vandalism and theft must be treated as national security issues. According to their research, the scale and persistence of these threats position them as existential risks to the country's development trajectory. When infrastructure becomes both a victim and a reflection of state dysfunction, it ceases to be a safe or attractive investment vehicle, especially for long-term institutional investors such as pension funds. Their findings quantify the cost of this endemic problem. An estimated R7 billion is lost annually by state-owned entities including Telkom, Eskom, Transnet, and PRASA due to infrastructure vandalism and cable theft (Mugari and Obioha, 2024). This loss is not confined to asset depreciation. It represents a major opportunity cost, as funds that could be allocated toward upgrading, innovating, or expanding infrastructure networks are instead redirected toward reactive maintenance and enhanced security. This reallocation of capital not only stalls progress but also undermines the core developmental rationale for infrastructure investment.

From an investor standpoint, particularly within the context of retirement fund allocations under the amended Regulation 28 framework, this introduces a significant dilemma. Pension funds are, by design, long-term investment vehicles tasked with preserving and growing the retirement savings of workers. Their fiduciary duty requires them to prioritise risk-adjusted returns, capital preservation, and sustainability. However, in a policy environment where infrastructure is both a developmental imperative and a high-risk asset class due to political sabotage, the calculus becomes complicated.

This complexity is deepened by South Africa's broader retirement savings landscape. According to National Treasury (2021), only 6 percent of South Africans are projected to retire comfortably. This statistic highlights the precariousness of retirement security and amplifies the consequences of any investment decision that exposes savings to heightened systemic risk. In such a context, diverting a significant portion of retirement fund assets toward infrastructure projects that are susceptible to political vandalism or socio-economic unrest must be accompanied by robust risk mitigation measures.

The relationship between infrastructure investment and political risk is not only structurally embedded but also behaviourally reinforced. Infrastructure occupies a unique space in the political economy; it is both a mechanism for inclusive development and a lightning rod for political grievance. In the post-amendment Regulation 28 landscape, this dual identity must be carefully negotiated. While the policy seeks to unlock much-needed capital for national

development, its success will ultimately depend on whether the systemic risks such as socio-political sabotage, can be effectively anticipated and managed. If not, the very objective of improving retirement outcomes through infrastructure-led growth may become self-defeating.

5.3 Environmental risks

Historically, the private sector's posture towards environmental risks could be characterised as passive, underpinned by the implicit belief that environmental risk mitigation is primarily the responsibility of the public sector (Somers & Svara, 2009). This laissez-faire approach, while once considered acceptable, is now increasingly untenable. The growing prevalence of extreme environmental events, combined with heightened regulatory scrutiny and political momentum around climate change, has repositioned environmental risk as a fundamental concern for both private and public stakeholders (Verschuur, Fernández-Pérez, Mühlhofer Nirandjan, Borgomeo, Becher, Voskaki, Oughton, Stankovski, Greco, Koks, Pant & Hall, 2024).

This paradigmatic shift is echoed in the 2024 Budget Review, where the National Treasury acknowledges the growing severity of climate-related disasters and the rising cost of traditional response mechanisms. As explicitly stated:

> Climate-related disasters are occurring with increasing frequency and severity, with correspondingly larger effects on lives and livelihoods. Methods previously developed by the public and private sectors to manage disaster response and recovery are becoming unrealistic in terms of their costs. The financing of disaster relief depends heavily on budget allocations through funding mechanisms for unforeseeable and unavoidable events. Government is exploring options for purchasing insurance for certain events where such a practice would not undermine budget sustainability (National Treasury, 2024:46).

This excerpt reflects a deeper recognition by the state that environmental volatility now poses a systemic risk to both fiscal policy and macroeconomic planning. In response, infrastructure has emerged as a critical interface between environmental sustainability and economic resilience. However, the duality of infrastructure as both a solution and a risk-exposed asset class demands further interrogation. In alignment with this, National Treasury (2022) recommends that infrastructure planning and appraisal processes explicitly assess climate resilience as a precondition for project selection. Treasury's planning guideline notes:

> The impacts of climate change are felt across the globe, and in South Africa, where more frequent and extended droughts, higher temperatures and heat

> days, more variable and more intense rainfall events are increasingly prevalent. The infrastructure planning and appraisal process should identify climate-resilient properties of infrastructure projects and assess their incremental costs and benefits. Climate change impacts will change the without-project scenario and, as a result, cause the net benefits of alternative technologies to change (National Treasury, 2022:5).

This quote explicitly calls for infrastructure investment decisions to be grounded in a climate risk-adjusted framework, which is crucial in emerging markets such as South Africa where climate-induced disruptions are already materially impacting infrastructure systems.

South Africa's vulnerability to environmental risks is compounded by the deteriorating state of existing infrastructure. Magnusson (2023) argues that while infrastructure systems differ in their susceptibility to climate risks, none are entirely immune. The degree of resilience is often contingent upon design, maintenance, and contextual exposure. Rust, Wall, Smit and Amod (2021) support this assertion, noting that South Africa's infrastructure report cards compiled by the South African Institution of Civil Engineering (SAICE) in 2006, 2011, and 2017 consistently rated key sectors such as water, sanitation, roads, and healthcare as being in poor condition. Key drivers of this degradation include inadequate maintenance, financial constraints, skills shortages, and technological obsolescence.

Notably, this concern is not unique to South Africa. Magnusson (2023), in a comparative study of England, demonstrates how long-standing budgetary deficits and workforce limitations delay infrastructure delivery and undermine resilience planning. The study shows that countries with declining infrastructure investment and poor execution capacity face compounding risks when hit by climate-related events. These findings are mirrored in the South African context, where similar constraints delay infrastructure upgrades and intensify the country's exposure to climate-related shocks.

Environmental risks are also highly geographically contingent. As Palin, Stipanovic, Gavin and Quinn (2021), Shortridge and Camp (2019), and Verschuur et al. (2024) show, risk profiles vary significantly across locations, requiring bespoke technical solutions. Verschuur et al. (2024) highlight that flooding disproportionately affects energy generation, rail, and road systems, while rising sea levels pose a more serious threat to harbours and airports. These differentiated vulnerabilities mean infrastructure design must be locally adapted, technically sophisticated, and forward-looking.

Despite this need for specificity, Palin et al. (2024) remind us that infrastructure systems are co-dependent. Interdependencies between power grids, transportation systems, and water infrastructure mean that failure in one system can quickly cascade across others. This interlinkage multiplies the cost and complexity of failure. As the authors argue, a single failure can produce disproportionately large social and economic consequences, especially where there is no redundancy built into system design.

Griffin (2022), writing specifically on South Africa, points to deforestation as one of the environmental risks with long-term structural implications. According to data from Global Forest Watch (2023), South Africa lost 27 percent of its tree cover between 2021 and 2023. Griffin (2022) argues that this deforestation is accelerating soil erosion and contributing to global warming. The interlinked nature of these outcomes, from climate to food systems, reinforces the point that environmental risks must be treated as systemic rather than isolated.

Climate change has already begun to exert significant economic drag in South Africa. According to the World Bank (2021), the increasing frequency of extreme weather events threatens to dampen South Africa's long-term growth trajectory unless robust mitigation strategies are urgently implemented.

The 2022 KwaZulu-Natal floods offer a sobering case study. In April 2022, unprecedented rainfall caused widespread devastation, claiming over 400 lives (Hattingh, 2022). According to Laldas (2023), these floods were anecdotally deemed to be the most catastrophic environmental adversity in the history of KZN. A joint study by Grab and Nash of the University of the Witwatersrand traced the region's flood history back to the 1850s and concluded that the 2022 floods were exceptional in both scale and impact (Grab & Nash, 2023).

Laldas (2023) further details the economic consequences of the floods on agriculture, noting that the sugar cane farming industry suffered infrastructural and crop losses amounting to R223 million. Specifically, R195 million was needed to replant damaged crops, while farming infrastructure losses were pegged at R28 million. Crucially, this figure excludes the cost of repairing surrounding roads and bridges, underscoring the wide-ranging impact on critical infrastructure beyond the immediate site of disaster.

Taken together, these environmental disruptions have significant implications for institutional investors such as retirement funds. The deterioration of public infrastructure and exposure to

climate-related events weaken investor confidence and challenge the risk-return profile of infrastructure as an asset class. Calderón and Servén (2004) argue that adverse political environments compound these risks. This confluence of environmental fragility and political uncertainty heightens the caution required in allocating long-term retirement savings toward infrastructure development.

This risk aversion becomes even more pronounced when viewed against the backdrop of South Africa's weak retirement outcomes. National Treasury (2021) reports that only 6 percent of retirement fund members are expected to retire comfortably. In such a context, the exposure of pension savings to environmentally vulnerable infrastructure projects raise serious concerns about fiduciary responsibility. While infrastructure investment is rightly regarded as the backbone of economic growth, this must be balanced against the long-term security of the retirement savings entrusted to institutional investors. Moreover, given South Africa's persistently low household savings rate, it is plausible that pension contributions may represent the only savings many households have. This introduces a moral imperative to safeguard these funds from underperforming or high-risk investments, especially in sectors increasingly impacted by environmental risk.

Thus, the evidence presented in this section reinforces the thesis argument that while infrastructure investment is a national imperative, its risk profile must be rigorously interrogated. Environmental risk, particularly in emerging markets such as South Africa, is not a secondary concern but a fundamental determinant of investment viability. Regulation 28's amendment to increase allowable infrastructure allocations for retirement funds must therefore be accompanied by robust environmental screening, inter-agency coordination, and policy safeguards to ensure that these investments are not only productive but also resilient.

5.4 Organised crime groups risk

Organised crime groups, colloquially referred to as 'mafias,' present a significant and systemic threat to infrastructure development, both globally and within the South African context. These entities thrive in environments where governance is weak, institutions are vulnerable, and regulatory oversight is porous. Di Cataldo and Mastrorocco (2022) characterise these groups as economic parasites that exploit institutional fragilities, noting that their presence is reflective of the failure of institutions. They do not merely operate on the peripheries of legality but often

infiltrate formal structures, undermining governance, economic stability, and the effective delivery of public goods.

In South Africa, the threat posed by organised criminality to infrastructure is no longer peripheral:

> Criminality, in multiple forms, is undermining the delivery of public infrastructure, its maintenance and the use of its services. The threat is omnipresent, heterogeneous, flexible and shifting and affects the entire value chain from project conception to the delivery of infrastructure services (National Infrastructure Plan 2050, 2022).

This quote exposes the depth and breadth of the threat: it is not isolated or episodic but systemic, adaptable, and deeply embedded across all phases of infrastructure development. The financial impact is profound measured in wasted spending, reduced utilisation, project delays, and inflated costs. Yet the consequences extend beyond monetary loss. When criminality distorts procurement, project execution, and service delivery, it undermines public trust in both state and market institutions.

The notion that organised crime operates independently of the state is increasingly difficult to defend. As Ferrante, Reito and Fontana (2021) observe, “the mafia is a particular form of organised crime, which has specific characteristics that make it a social construct with a quasi-governmental role.” These groups exert influence not only through coercion but by co-opting public authority. This sentiment is echoed by Monnye (2023), who in his analysis of South Africa’s construction sector, notes that construction mafias often operate with the tacit or active support of political actors, including ward councillors and local government officials.

This complicity renders enforcement efforts ineffective. Hansen (2023) and Di Cataldo and Mastrorocco (2022) both argue that anti-mafia policies have largely failed because of the deeply entrenched networks that connect criminal organisations with political and administrative elites. Even the Prevention of Organised Crime Act 121 of 1998, which provides for the prohibition of racketeering, money laundering, and gang-related activities, has struggled to make a significant impact due to limited institutional enforcement capacity and corruption within enforcement agencies.

The severity of this risk is not abstract (National Infrastructure Plan 2050, 2022) offers tangible evidence:

> Extortion of service providers occurs at the point of delivery, leading to delays, non-delivery and higher costs... at least 183 infrastructure and construction projects worth more than R63 billion had been affected by these disruptions... The prevalence of such incidents mean that construction costs are significantly higher than they need to be.

This illustrates not just the prevalence of mafia-related disruption but also its opportunity cost. Delays and inflated costs represent foregone service delivery, undermining infrastructure's developmental function. These disruptions are particularly devastating in a country like South Africa, where infrastructure is not only a growth imperative but also a mechanism for social redress.

The construction sector remains a key site for organised crime activities. Scognamiglio (2018) argues that its high transaction volumes, complex subcontracting arrangements, and limited transparency make it particularly susceptible. Monnye (2023) supports this, noting that the laundering of illicit funds is easily facilitated within the construction value chain, where paper trails are difficult to audit and project budgets often have large discretionary components.

Yet despite the legal frameworks and growing awareness, organised crime groups remain highly adaptive. As the government warns:

> Criminality shapes decision-making and resource allocation in infrastructure providers and drives changes in the use of services... Additionally, some attacks on infrastructure appear to be politically motivated, making prevention even more difficult (National Infrastructure Plan 2050, 2022).

This shows that organised crime is not merely an economic actor but a political one. These groups can alter public policy trajectories, manipulate resource flows, and undermine democratic accountability. For retirement funds, whose primary mandate is to safeguard long-term financial security for their members, this environment poses profound fiduciary risks.

The implications for the Regulation 28 amendment are substantial. While the amendment seeks to facilitate developmental finance by permitting retirement funds to allocate up to 45% of their assets to infrastructure, this ambition is significantly compromised by the systemic presence of organised crime. Theessen (2023) highlights investor reluctance in this context, stating that few, if any, companies would willingly deploy capital into infrastructure projects that are exposed to such high levels of extortion and sabotage. Furthermore, the policing capacity to respond is constrained. Theessen (2023) and Monnye (2023) both observe that law enforcement

officials are often either overwhelmed, complicit, or intimidated, making prosecution and deterrence elusive. Although government has introduced specialised task forces to address the rise in construction-related crime, these are still nascent and face significant institutional inertia.

Given that only 6% of South Africans are projected to retire comfortably (National Treasury, 2021), the stakes are too high for pension assets to be exposed to environments riddled with criminal risk and governance dysfunction. Unless the political will and institutional coherence required to dismantle these networks are demonstrably present, organised crime will continue to corrode the developmental promise of infrastructure investment.

5.5 Conclusion

In this chapter, I set out to examine the specific risks that constrain infrastructure investment in South Africa, and in particular, to understand why infrastructure, despite its centrality to development goals and recent regulatory support through the amendment of Regulation 28, continues to be approached with caution by institutional investors. My analysis focused on three critical risk categories: political risk, environmental risk, and organised crime group risk. I argue that these risks do not operate in isolation. Rather, they converge and compound, forming a structural barrier to sustained, large-scale infrastructure investment in South Africa. For trustees and investment managers making asset allocation decisions under fiduciary duty, these risks are not marginal, they are decisive.

First, political risk remains a dominant constraint. The South African infrastructure landscape is heavily shaped by policy instability, corruption, and a misalignment between political cycles and infrastructure timelines. These risks create uncertainty around project continuity, delivery timelines, and regulatory integrity. I showed that this instability erodes investor confidence, undermines procurement systems, and opens the door to infrastructure vandalism, an increasingly common form of socio-political protest that has imposed real and rising costs on the state and investors alike. Despite the public sector's commitment to infrastructure-led growth, the political context often sabotages the very conditions needed to make such growth feasible.

Second, environmental risks are becoming not only more frequent but also more severe. I examined how infrastructure assets, particularly those already in poor conditions are

increasingly vulnerable to flooding, climate change, deforestation, and extreme weather events. Empirical evidence from the KwaZulu-Natal floods of 2022 and the findings of the SAICE infrastructure report cards demonstrate that South Africa's infrastructure base is both under-maintained and under-resourced. In this context, even relatively minor environmental shocks can result in significant economic and human costs. These risks are amplified by the interdependency of infrastructure systems, where the failure of one sector (such as roads or energy) cascades into others, compounding the scale of impact and the cost of recovery. For investors, this level of systemic vulnerability is untenable, particularly in the absence of reliable insurance coverage and state-led adaptation measures.

Third, I demonstrated how organised crime has emerged as a central threat to infrastructure delivery. The rise of so-called construction mafias - criminal groups that extort money from developers, threaten workers, and infiltrate tender processes, has introduced a high-impact, low-accountability risk that is deeply entangled with political structures. Drawing on both international and South African literature, I showed that this risk erodes institutional legitimacy, distorts project economics, and inflates delivery timelines. The complicity of political actors with criminal networks makes this risk especially difficult to eradicate, and conventional enforcement tools such as police interventions or court interdicts, have proven largely ineffective. This presents a direct and serious challenge to retirement fund investors, who must uphold fiduciary standards while operating in an increasingly compromised investment environment.

Taken together, these findings reinforce my broader argument that South Africa's infrastructure sector is characterised by a compounded and systemic risk profile. While Regulation 28 has created a regulatory space for greater investment in infrastructure, that space is not underpinned by the governance, environmental resilience, or criminal deterrence mechanisms required to make infrastructure a truly investible asset class. The theoretical case for infrastructure, as long-duration, stable, and socially productive, is deeply undermined by on-the-ground realities. And while these risks are not unique to South Africa, their severity and entrenchment here render infrastructure investment a far more fragile proposition than the regulatory reforms suggest.

For retirement funds in particular, this is a high-stakes dilemma. On the one hand, infrastructure offers diversification and the potential for real economic impact. On the other, the sector is rife with operational, ethical, and financial risk that threatens both returns and public trust. As the state seeks to crowd in private capital to meet its infrastructure goals, I argue that greater

attention must be paid to de-risking the environment, rather than simply broadening the mandate. Without meaningful progress on political governance, environmental adaptation, and criminal enforcement, the infrastructure sector will remain structurally constrained, and investors will remain rightly cautious.

CHAPTER 6

Concluding reflections on infrastructure, retirement, and risk

6.1 Introduction

This final chapter brings the thesis to a close by synthesising its core arguments, reflecting on the research process, and offering concluding insights that respond to the research questions posed at the outset. The chapter revisits the central aim of the study: to critically explore the implications of the 2023 amendment to Regulation 28 of the Pension Funds Act, which permits retirement funds in South Africa to invest up to 45% of their assets in infrastructure projects. At the heart of this inquiry lies a fundamental tension, one that this thesis has sought to interrogate with nuance and care, between the state's developmental ambitions and the fiduciary duty to protect and grow retirement savings, particularly for the poor and working-class majority who rely almost exclusively on retirement funds as their sole form of savings.

The study was motivated by an intellectual and empirical gap: while much literature celebrates the macroeconomic benefits of infrastructure investment, few studies engage critically with the implications of this investment strategy within the unique historical, political, and institutional context of South Africa's retirement fund sector. Particularly absent is analysis of how regulatory frameworks like Regulation 28 may reinscribe or resist the legacy of prescribed assets, and how they are perceived by key stakeholders responsible for stewarding retirement savings. In seeking to address this gap, the study foregrounds the lived tensions between national policy objectives and long-term financial security for retirement fund members.

The study is anchored in the argument that while infrastructure investment can, under the right conditions, enhance portfolio diversification and economic growth, the risks associated with infrastructure investment in South Africa are especially acute; ranging from political volatility and weak governance to environmental threats and the growing role of organised crime in construction sectors. These risks, as the findings suggest, have contributed to a cautious or even muted investor appetite, raising legitimate concerns about whether the regulatory amendment can achieve its intended objectives without compromising retirement outcomes.

Drawing on the three empirical chapters, the study finds that while infrastructure assets possess diversification and volatility-mitigating characteristics, the actualisation of these benefits is constrained by South Africa's institutional weaknesses (see *Chapter 5*). The inconclusive

findings around inflation-hedging, owing to a dearth of local infrastructure index data, further complicate the case (see *Chapter 4*). The study concludes with a call for more robust oversight, enhanced transparency, and further empirical research into the performance of infrastructure assets within retirement portfolios.

What follows in this chapter is a consolidation of the main argument, a reflection on the methodological choices, a revisiting of the theoretical framework, and a discussion of key findings as guided by the research objectives. The chapter ends by considering the intellectual contributions of the study, offering recommendations for policy and practice, and suggesting directions for future research.

6.2 Discussion of the main argument

The central argument advanced in this thesis is that the 2023 amendment to Regulation 28 of the Pension Funds Act represents a policy moment characterised by a structural tension between the state's developmental agenda and the fiduciary imperative to safeguard retirement savings, particularly for South Africa's poor and working-class majority. I have argued throughout that this amendment, while framed as an enabling mechanism to unlock capital for infrastructure investment, cannot be understood outside the country's fraught institutional history, especially the legacy of prescribed assets and the broader governance failures that have historically plagued public sector investments.

At its core, the thesis contends that this policy shift is not merely a technical adjustment to asset allocation limits, but rather a strategic and ideologically significant attempt to reposition retirement funds as instruments of national development (see *Chapter 3*). It is precisely this reorientation that requires close scrutiny. The notion of leveraging long-term patient capital from retirement funds to support infrastructure is not inherently problematic; indeed, international precedents in countries such as Australia, Canada, and Chile suggest that under the right conditions; robust regulatory oversight, sound governance, and transparency, such partnerships can be mutually beneficial (see *Chapter 4*).

However, what distinguishes the South African context, and what this thesis foregrounds, is the institutional fragility and political volatility that complicate this investment landscape. My analysis shows that, while infrastructure investment offers potential benefits such as diversification, steady returns, and economic stimulation, these are undermined by poor implementation capacity, political risk, environmental exposure, and the growing influence of

organised criminal networks (see *Chapter 5*). These realities contribute to a context where investor confidence is dampened, and the risk of suboptimal or even negative returns becomes a legitimate concern, particularly when such investments are made using retirement savings that many South Africans cannot afford to lose.

This argument is most sharply illustrated in the disjuncture between the regulatory change and its political lineage. The fact that prescribed assets were formally abolished in 1989 due to their poor performance and yet re-emerged in political discourse as recently as 2019 and again in 2024, suggests that the amendment to Regulation 28 must be understood as part of a longer historical trajectory of state involvement in pension fund governance (see *Chapter 3*). In this sense, the thesis argues that while the amendment may not constitute a return to explicit asset prescription, it does bear the institutional echoes of that past and is thus perceived with mistrust by key stakeholders.

Ultimately, the argument pursued in this thesis is not a binary for-or-against infrastructure investment. Rather, it is a call for critical engagement with the conditions under which such investment occurs, and for greater attention to the long-term consequences of policy shifts that affect the retirement security of the most economically vulnerable. Infrastructure investment may well be part of the solution to South Africa's development challenges, but when retirement funds are at stake, the balance between national interest and fiduciary responsibility must be constantly interrogated.

6.3 Discussion of methodology and methods

The methodological orientation of this study was shaped by the need to engage with complex, historically layered, and politically contested material. I adopted a qualitative research approach, underpinned by a constructivist ontology and interpretivist epistemology, which allowed me to explore not only the formal content of policy documents but also the meanings, intentions, and tensions embedded in the regulatory discourse surrounding the amendment of Regulation 28. This methodological position enabled me to treat policy not as a static set of rules but as a dynamic, socially constructed outcome shaped by institutional histories, power relations, and stakeholder negotiations (see *Chapter 2*).

To pursue this aim, I relied on document analysis as the primary method of data collection. This was not a choice of convenience, but a deliberate and strategic decision. Given the politicised nature of the amendment and the richness of publicly available materials, including

government gazettes, media statements, policy drafts, stakeholder submissions, and party manifestos, document analysis provided a suitable method to access and interpret the evolving discourse around the regulation. The method also offered a means to trace the amendment's genealogy, from early proposals in ANC policy platforms, through the formal consultation phases, to its final enactment in 2023.

The qualitative methodology employed in this research facilitated a deep and contextualised exploration of the Regulation 28 amendment. It allowed me to engage not just with what the policy aims to do, but with how it is situated within broader historical and institutional logics, and how it is perceived and contested by those tasked with implementing it.

6.4 Theoretical considerations

The analytical work undertaken in this study was scaffolded by two interrelated theoretical frameworks: Public-Private Partnership (PPP) theory and Institutional theory. Together, these frameworks provided a lens through which to critically examine the regulatory, historical, and governance dynamics surrounding the 2023 amendment of Regulation 28 of the Pension Funds Act (see *Chapter 1*).

Public-Private Partnership (PPP) theory was useful in conceptualising the transactional relationship between the state and private capital, particularly in the context of financing public infrastructure through retirement fund investments. As South Africa faces deep fiscal constraints, the shift toward enabling private capital, specifically pension savings, to support national infrastructure agendas fits squarely within the PPP model. PPP theory enabled me to assess the promises and limits of this model: while such partnerships can enable the state to leverage private resources for public benefit, they also require strong regulatory frameworks, equitable risk-sharing arrangements, and mutual trust, all of which are currently contested in the South African context.

Crucially, PPP theory illuminated the fragile legitimacy underpinning the state's infrastructure ambitions. As the findings revealed, while the policy is presented as a 'win-win,' addressing both development and investment needs, it rests on a deeply uneven terrain shaped by past governance failures, corruption, and weak institutional capacity. These tensions call into question whether the enabling legislative framework (such as Regulation 28) is sufficient to ensure accountability and long-term success without additional safeguards.

Institutional theory, as developed by North (1990) and Scott (2005), allowed me to unpack the historical sedimentations that continue to shape perceptions of state involvement in retirement savings. The South African government's relationship with retirement funds is not new; it dates back to the era of prescribed assets under apartheid, during which pension fund allocations were used to finance state initiatives, often at the expense of beneficiary returns. This institutional memory, I argue, deeply informs contemporary resistance to policies that are seen to echo that history, even when framed in market-friendly or developmentalist terms (see *Chapter 3*).

Through the lens of institutional theory, I interpreted the pushback from the retirement fund sector not as a simple rejection of infrastructure investment, but as a rational response informed by historical patterns of state overreach, inefficiency, and regulatory volatility. The ongoing tension between the developmental role of the state and the fiduciary responsibility of retirement fund trustees is therefore not just a technical challenge; it is a structurally embedded conflict that recurs each time the state seeks to direct private savings toward public aims.

Together, these theories offered a framework for understanding the dialectic of ambition and constraint that defines the Regulation 28 amendment: the ambition to use pension funds as developmental levers, and the constraint posed by historically grounded mistrust, institutional weaknesses, and the broader political economy of South Africa. The theories were not applied in an abstract sense but grounded in the empirical realities captured in policy documents, stakeholder commentaries, and the evolution of retirement fund regulation over time.

6.5 Discussion of key findings

The findings of this research point to a persistent and unresolved tension at the heart of the 2023 amendment to Regulation 28: the ambition to harness retirement fund capital for developmental infrastructure investment on the one hand, and the fiduciary responsibility to safeguard member returns on the other. The amendment's proposition: to permit retirement funds to invest up to 45% in infrastructure, was framed by government as an opportunity to simultaneously unlock capital for public infrastructure and provide long-duration, inflation-linked returns for pension portfolios. However, the findings in this study show that this regulatory optimism rests on fragile ground, shaped by deep structural contradictions, institutional mistrust, and a legacy of state overreach.

A notable finding across the empirical chapters is that infrastructure investment is understood as both opportunity and risk; a duality that manifests not only in technical investment discourse but also in the political and historical anxieties embedded in retirement fund governance (see *Chapter 3*). From an investment strategy perspective, infrastructure assets are recognised for their low correlation to traditional asset classes and for their ability to stabilise returns over time. These characteristics render infrastructure an attractive asset class in theory, particularly in a high-volatility macroeconomic climate. Yet the documents analysed reflect widespread concern among stakeholders that the government's developmental intent may be decoupled from investment performance imperatives. In other words, the possibility that retirement funds are being nudged, if not overtly prescribed, into high-risk infrastructure exposures for political rather than financial reasons is a theme that emerged consistently and critically throughout the data.

Indeed, the 45% threshold was repeatedly flagged by stakeholders as arbitrary and poorly substantiated, undermining the credibility of the amendment. The lack of an empirical rationale for this figure raises questions not only about the policy design process but about the capacity of the state to balance economic ambition with market integrity (see *Chapter 4*). Where international jurisdictions such as Australia and Canada have introduced infrastructure allocations in tandem with robust governance frameworks and risk mitigation protocols, the South African case reveals a policy vision that has outpaced its institutional scaffolding. This disconnect deepens the sense of scepticism among institutional investors, many of whom draw on historical memory, particularly the apartheid-era prescribed assets regime, as a cautionary reference point. The legacies of forced, underperforming investments have not dissipated; they reappear subtly in policy discourse and overtly in stakeholder submissions, framing the amendment as potentially coercive, even in the absence of legal compulsion.

Furthermore, the findings show that while infrastructure investments are, in principle, able to offer inflation-linked returns, the evidence in the South African case is empirically weak and methodologically underdeveloped. The absence of a domestic infrastructure index and the lack of comprehensive performance data impede both investor confidence and policy credibility. Claims about infrastructure's inflation-hedging ability therefore remain largely speculative within the South African context and suggest an urgent need for more rigorous data development and disclosure (see *Chapter 4*).

This epistemic gap becomes even more problematic when considered alongside the material risks that currently characterise the South African infrastructure sector. The findings show that political instability, policy inconsistency, and short-termism in public administration continue to undermine investor certainty. Even more concerning is the documented impact of organised crime networks commonly referred to as construction mafias, which are not only disrupting project timelines and costings but also undermining the very governance structures designed to protect public and private investments (see *Chapter 5*). The entrenchment of these networks within local government procurement processes, coupled with the complicity of certain public officials, adds a layer of systemic risk that no regulatory amendment can neutralise on its own.

The cumulative implication of these findings is that regulatory reform alone is insufficient to generate infrastructure investment at scale. Without the parallel development of enforcement mechanisms, institutional trust, and risk-sharing instruments, the amendment to Regulation 28 is unlikely to deliver on its dual promise of stimulating economic growth and protecting retirement capital. The political economy of infrastructure investment in South Africa continues to be shaped by asymmetries in power, information, and accountability. This creates a policy environment in which even well-intentioned reforms are vulnerable to capture, misalignment, and eventual stagnation.

Moreover, the findings complicate the often-celebrated notion of public-private partnerships (PPPs) by showing that partnership does not imply parity. Retirement funds, while positioned as "partners" in development, are simultaneously burdened with the disproportionate risk of capital loss should projects fail, particularly in the absence of clear government guarantees or risk mitigation frameworks (see *Chapter 4*). The expectation that the private sector, and by extension retirement fund members, should shoulder the risk of state-driven infrastructure investments without corresponding institutional protection, reveals the asymmetry at the heart of the PPP logic as currently implemented.

Thus, while the amendment to Regulation 28 was framed as a progressive reform, the findings of this study suggest that it may reproduce long-standing structural tensions between state developmental ambition and market prudence, unless deeper systemic reforms accompany the policy. These include strengthened oversight institutions, transparent infrastructure pipelines, the prosecution of procurement-related corruption, and the re-establishment of trust between the state and retirement fund stakeholders. Without these, the regulatory shift risks becoming

another iteration of policy overreach that places vulnerable retirement fund members, most of whom are unlikely to retire comfortably, in the path of infrastructural and political risk.

6.6 Contribution of the study

This research makes several significant contributions to the existing body of knowledge on pension fund regulation, infrastructure finance, and public-private investment models in emerging economies, with particular emphasis on the South African context. At its core, the study advances a critical and historically situated understanding of the 2023 amendment to Regulation 28 of the Pension Funds Act, offering insights that extend beyond policy commentary to interrogate the underlying institutional logics, political dynamics, and risks embedded in the policy shift.

One of the key intellectual contributions lies in the way the study reframes the amendment not merely as a technical change to pension fund regulation, but as a site of contested power, memory, and institutional negotiation. In doing so, it foregrounds how policy instruments, particularly in countries with legacies of state overreach, cannot be divorced from their historical genealogies. By tracing the parallels and disjuncture between apartheid-era prescribed assets and the current infrastructure investment framework, the study offers a more nuanced account of how past institutional experiences shape present-day regulatory legitimacy. This temporal framing is often underdeveloped in infrastructure finance literature, which tends to adopt ahistorical or depoliticised perspectives. The study thus contributes to closing a critical gap in the literature by highlighting how historical mistrust continues to mediate contemporary policy reception and implementation.

Additionally, the study offers a contribution to the field of infrastructure investment by applying a critical lens to the financialisation of development policy, particularly as it pertains to retirement funds. While much of the global literature treats the use of pension assets for infrastructure development as a normative good, often pointing to successful examples in the Global North, this study interrogates the material and institutional conditions under which such models are deployed in the Global South. It cautions against a simplistic transposition of international best practice to structurally different environments. In this way, the study contributes to a growing body of scholarship that complicates dominant PPP narratives and highlights the asymmetries of power, risk, and return in these arrangements.

Finally, the study's emphasis on the intersection between infrastructure policy and social justice represents a valuable contribution to debates about financial inclusion and economic transformation. Centring the lived realities of retirement fund members, particularly the working-class majority who are unlikely to retire comfortably, the research shifts the focus from abstract investment theory to the material consequences of regulatory choices. In doing so, it offers a normative provocation: that developmental finance must not only be effective and efficient, but also ethically grounded in the protection of those least able to absorb loss.

Together, these contributions position the thesis as a timely intervention in ongoing scholarly and policy conversations about infrastructure investment, pension reform, and state-market relations in post-apartheid South Africa and beyond.

6.7 Recommendations

In light of the findings and analysis presented throughout this study, three key recommendations are proposed to strengthen the implementation of the amended Regulation 28, while maintaining the integrity of retirement savings in South Africa. These recommendations emerge directly from the concerns raised in the empirical chapters and reflect a balance between pragmatism and long-term sustainability.

Firstly, there is an urgent need to enhance transparency and clarity around the infrastructure project pipeline that retirement funds are expected to consider. The lack of a clearly communicated, credible, and regularly updated list of investable infrastructure projects remains a barrier to effective implementation. It is recommended that National Treasury, working alongside relevant state entities, establish a central, accessible project register that outlines the financial viability, governance standards, and implementation status of each project. This would enable more informed investment decisions and ensure that retirement funds are not compelled to navigate opaque or politically compromised investments.

Secondly, it is necessary to reassess the current 45% allocation ceiling for infrastructure investment. While the intention behind the cap is well-meaning, the findings indicate that it lacks a clear empirical basis and may not be fully aligned with market readiness or fiduciary prudence. A more consultative and phased approach to this allocation may be more suitable in the South African context. Re-engaging with stakeholders, including trustees, asset managers,

and independent economists, could lead to the development of a more grounded threshold, one that better reflects the sector's capacity, liquidity needs, and appetite for alternative assets.

Thirdly, stronger institutional safeguards must be put in place to mitigate the risks posed by political volatility and organised crime, which emerged as serious concerns in the findings. These risks not only deter infrastructure investment but also threaten the credibility of the entire regulatory reform. Government must commit to strengthening procurement integrity, improving oversight mechanisms, and fostering accountability in the delivery of infrastructure projects. Without visible and sustained commitment to combating these systemic risks, retirement funds will remain justifiably cautious, and the policy's developmental goals will remain unfulfilled.

Given the inconclusive evidence surrounding the inflation-hedging properties of infrastructure investments, especially in the South African context, a key area for further research is a focused empirical assessment of how infrastructure performs relative to other asset classes during inflationary cycles. The current dearth of domestic infrastructure index data limits our ability to make reliable assessments in this regard, and future studies could make a meaningful contribution by developing or utilising proxy datasets to interrogate this relationship more fully.

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Appendices

Appendix 1

UNIVERSITY OF THE WITWATERSRAND JOHANNESBURG

SCHOOL OF GOVERNANCE ETHICS COMMITTEE

CONSTITUTED UNDER THE UNIVERSITY HUMAN RESEARCH ETHICS COMMITTEE (NON-MEDICAL)

CLEARANCE CERTIFICATE: WSG-2024-46W

PROJECT TITLE: South African Regulation 28 amendments and the implications for pension fund investments in infrastructure

INVESTIGATOR	Phelisa Qina
SCHOOL/DEPARTMENT OF INVESTIGATOR	School of Governance
DATE CONSIDERED	29 October 2024
DECISION OF THE COMMITTEE	Approved unconditionally
RISK LEVEL	No Risk
EXPIRY DATE	Date of submission of the Research Report

ISSUE DATE OF CERTIFICATE 5th of November 2024 **CHAIRPERSON** _____
Rekgotsofetse Chikane

cc: Supervisor: Dr Hlengiwe Ndlovu

DECLARATION OF INVESTIGATOR

To be completed in duplicate and **ONE COPY** returned to the Chairperson of the School/Department ethics committee.

I fully understand the conditions under which I am are authorized to carry out the abovementioned research and I guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I/we undertake to resubmit the protocol to the Committee.

_____ 11 / 11 / 2024
Signature **Date**

PLEASE QUOTE THE PROTOCOL NUMBER ON ALL ENQUIRIES