

BINDURA UNIVERSITY OF SCIENCE EDUCATION

**DEVELOPING A FRAMEWORK FOR PENSION VALUE PRESERVATION
IN HYPERINFLATIONARY ECONOMIES: INSURANCE AND PENSIONS
COMMISSION REGULATION (2009-2024)**

BY

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DECLARATION

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DEDICATION

To my family, for their patience and love; and to Zimbabwe's pensioners, whose security this work seeks to serve.

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ABSTRACT

This study evaluates the regulatory interventions implemented by the Insurance and Pensions Commission of Zimbabwe (IPEC) to preserve pension value during the currency volatility of 2009 to 2024 and develops a framework for pension value preservation in hyperinflationary economies. Chapter One establishes the problem: Zimbabwean pensioners lost the greater part of their purchasing power across successive monetary crises, yet no study had assessed, rather than merely described, the effectiveness of IPEC's responses. Four objectives guided the inquiry: to document IPEC's interventions across the period; to evaluate their effectiveness in protecting pensioners' purchasing power; to identify the institutional, legal, informational, and technical barriers that constrained implementation; and to propose an evidence-based preservation framework. Chapter Two reviews the literature on pension value preservation, inflation and currency instability, and regulatory effectiveness. It identifies a normal conditions bias in existing scholarship, which assumes gradual erosion within a functioning monetary order, and draws on Hanke and Kwok's monetary theory and Llewellyn's conditions for regulatory effectiveness. The review is integrated through institutional theory, framework-adequacy theory, and crisis-management theory, and exposes the gap this study addresses: the absence of multi-stakeholder evidence, especially the pensioner voice. Chapter Three sets out the methodology. Adopting an interpretivist paradigm, the study employed a qualitative single-case design centred on IPEC, with four embedded units of analysis representing trustees, IPEC officials, actuarial professionals, and pensioners. Using purposive and snowball sampling to data saturation, evidence was gathered from fifty-two participants through semi-structured interviews, systematic document analysis, and focus group discussion. Methodological triangulation across these sources, together with the embedded multi-stakeholder design, secured credibility and supported analytical generalisation. Chapters Four and Five present the findings and conclusions. The study produced a taxonomy of thirty-seven interventions and traced a trajectory from design-adequate regulation under stable multicurrency conditions, through systemic effectiveness failure during the 2019 to 2023 depreciation (median purchasing-power losses estimated at 82 per cent), to an improving but individually contingent recovery. Effectiveness depended on legal-framework adequacy, institutional capacity, and the alignment between instrument design and monetary conditions; inadequate legal authority, not institutional negligence, was the binding constraint. The study concludes that framework scope is the decisive limitation; that foreign-currency denomination is the only economically sound preservation strategy under monetary collapse; and that institutionalised post-crisis review and statutory member communication are urgent, low-cost reforms. It contributes a Pension Value Preservation in Hyperinflationary Economies (PVPHE) Framework for Zimbabwe and comparable jurisdictions exposed to currency instability. .

Keywords: Pension Value Preservation in Hyperinflationary Economies, Pensions Commission of Zimbabwe (IPEC), currency volatility, Institutional theory

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CHAPTER 1

INTRODUCTION

1.1 Introduction

One of the most significant current discussions in financial regulation and development economics concerns the capacity of pension oversight frameworks to protect member value under conditions of severe monetary instability. Pension systems rest upon a foundational assumption, that the purchasing power accumulated through a working lifetime of contributions will be preserved or enhanced throughout the retirement payout phase. As Barr and Diamond (2008) demonstrate with enduring analytical force, this assumption, whilst elementary in concept, proves extraordinarily difficult to sustain in economies experiencing severe currency volatility and hyperinflationary episodes. The challenge is fundamentally one of institutional design, actuarial methodology, and regulatory framework adequacy: how should oversight bodies be architected and equipped to fulfil their member-protection mandate when the monetary environment itself becomes the principal source of value erosion?

Recent developments in the field of pension regulation have led to a renewed interest in how oversight bodies respond to conditions of monetary crisis. Yet the scholarly literature has developed predominantly within the context of stable or moderately inflationary developed economies, where the instruments of pension value preservation, inflation indexation, investment diversification, minimum funding requirements, can be assumed to operate within a predictable currency framework. This represents a critical analytical gap. Zimbabwe's Insurance and Pensions Commission (IPEC) administered pension oversight across three successive and dramatically contrasting monetary regimes between 2009 and 2024, the multicurrency period, the Zimbabwe Dollar reintroduction, and the Zimbabwe Gold (ZiG) transition, within an environment characterised by macroeconomic volatility that challenged every dimension of conventional pension regulatory design.

Nyamakanga (2021) establishes that Zimbabwean pensioners lost between sixty and ninety-five per cent of their purchasing power during currency volatility episodes. Mudzingiri (2021) documents that retirees who contributed diligently to pension schemes throughout their productive years found themselves unable to meet basic subsistence needs upon retirement. These outcomes represent not merely financial losses but a fundamental actuarial and regulatory failure: the mechanisms designed to preserve real value across time proved incapable of functioning as intended under conditions of monetary instability that exceeded their design parameters.

This chapter establishes the analytical and contextual foundations of the dissertation. It presents the background of the study at global, regional, and national levels; articulates the statement of the research problem; sets out the research aim, objectives, questions, and propositions; addresses the assumptions, justification, significance, delimitations, and limitations of the study; and provides operational definitions of key terms. The chapter is organised to develop a progressively focused argument from the broad global context of pension value preservation challenges to the specific Zimbabwean regulatory experience that motivates this research.

1.2 Background to the Study

1.2.1 The Global Challenge of Pension Value Preservation

A large and growing body of literature has investigated the structural vulnerabilities of pension systems to macroeconomic instability. The global pension landscape has undergone profound transformation over the past four decades, principally characterised by a progressive shift from defined benefit to defined contribution arrangements across both developed and developing economies (Boon, Brière, & Rigot, 2018). This transition has transferred investment risk, inflation risk, and longevity risk from sponsoring employers to individual workers and retirees, thereby elevating the importance of the regulatory framework for value preservation to critical significance. The OECD (2021) notes that pension adequacy has declined materially in numerous jurisdictions as contribution rates have failed to keep pace with rising life expectancy and escalating living costs.

Even in relatively stable macroeconomic environments, pension funds confront substantial challenges in maintaining real value against persistent inflation, market volatility, and demographic pressures (OECD, 2021). Andonov, Bauer, and Cremers (2017) demonstrate that even sophisticated institutional investors in developed markets exhibit significant under-hedging of inflation risk, a problem that becomes existential under conditions of hyperinflation. Bodie's (1990) foundational argument for inflation-indexed instruments as the cornerstone of pension portfolio real-return certainty retains full theoretical validity; the difficulty lies in operationalising such mechanisms when the domestic currency and capital markets themselves are the primary locus of value erosion. Hanke and Kwok (2009) demonstrate from monetary theory that in genuinely hyperinflationary environments, following Cagan's (1956) classical definition of monthly inflation exceeding fifty per cent, the only effective preservation strategy is foreign currency denomination or substantial offshore investment, since all domestic assets lose purchasing power simultaneously. This conclusion has profound implications for regulatory framework design in economies prone to monetary instability.

The issue has grown in importance in light of the increasing frequency of currency crises across emerging and frontier market economies. The International Monetary Fund (IMF, 2023) identifies twenty-three economies experiencing significant currency instability between 2014 and 2024, several of which host formal pension systems with statutory regulators. Claessens and Kodres (2014) advance a systematic framework for assessing regulatory effectiveness in financial crisis contexts, demonstrating that effectiveness is structurally lower in economies where institutional capacity is constrained, legal enforcement infrastructure is weak, and information flows between regulators and regulated entities are asymmetric, conditions that are frequently associated with currency instability.

1.2.2 The Southern African and Regional Pension Context

The past three decades have witnessed increasingly rapid deterioration in pension value adequacy across Sub-Saharan Africa, driven by a combination of underdeveloped capital markets, limited regulatory institutional capacity, governance deficits, and recurrent currency instability. Oppong and Pattarin (2019) demonstrate that institutional capacity constraints compound the problem across most Sub-Saharan jurisdictions, where formal pension coverage typically remains below ten per cent of the workforce. Alda (2017) identifies persistent structural inadequacy as a fundamental barrier to value preservation in African pension markets. Selebogo and Chipeta (2022) document preservation failures in Zambia and Malawi during periods of kwacha depreciation, reinforcing the regional generalisability of the regulatory challenges Zimbabwe confronted.

Within the Southern African Development Community region, scholarship on crisis-resilient regulatory frameworks has produced important comparative insights. Amu and Amu (2012) found that Ghana's regulatory responses to cedi depreciation yielded partial improvements in real returns through permitting foreign currency asset holdings, whilst also identifying compliance challenges for smaller funds. Nigeria's experience following successive currency devaluations demonstrated that the adoption of defined contribution arrangements with specified investment guidelines improved long-term sustainability but provided limited protection for existing beneficiaries during the transition period (Odia & Okoye, 2012). Biru, Teshome, and Abate (2021) document institutional capacity constraints in East African pension regulators confronting currency instability, confirming that the challenges IPEC faced reflect a systemic and regional, not merely a Zimbabwean, phenomenon.

1.2.3 Zimbabwe's Monetary Trajectory and the Pension Sector, 2009–2024

Zimbabwe's experience from 2009 to 2024 represents one of the most extreme documented cases of pension regulatory challenge in the contemporary era. The fifteen-year period under investigation encompasses three distinct monetary phases, each presenting unique regulatory challenges for IPEC. The first phase, the multicurrency regime of 2009 to 2018, represented a period of relative monetary stabilisation following the catastrophic hyperinflation of 2007–2008, which Hanke and Kwok (2009) calculated reached a peak monthly rate of 79.6 billion per cent in November 2008. Kairiza (2012) traces how the adoption of the United States Dollar as the anchor currency in February 2009 temporarily restored rational actuarial planning and relative real value stability to pension assets. Mandeya and Mugobo (2015) confirm that IPEC's Directive 02/2010 on United States Dollar denomination of pension benefits represented the Commission's most effective single regulatory intervention of the entire study period.

The second phase, the Zimbabwe Dollar reintroduction from 2019 to 2023, is characterised by Kairiza (2020) as the most challenging regulatory episode for Zimbabwe's pension sector since the pre-2009 hyperinflation. The reintroduction of a domestic currency through Statutory Instrument 33 of 2019, implemented as part of a broader currency reform programme to address the macroeconomic conditions prevailing at the time, required pension funds to convert their asset valuations from United States Dollars to Zimbabwe Dollars. The economic consequences for pension values were severe: the Zimbabwe National Statistics Agency (2020) records annual inflation reaching 540 per cent in 2020, and the Reserve Bank of Zimbabwe (2023) confirms that the Zimbabwe Dollar depreciated substantially against major currencies throughout this period. From a purely actuarial and economic standpoint, this depreciation destroyed a significant portion of the real purchasing power that had been accumulated during the multicurrency period. Nyamakanga (2021) documents that pensioners uniformly experienced purchasing power losses of between sixty and ninety-five per cent during this phase.

The third and current phase, the Zimbabwe Gold (ZiG) transition inaugurated in April 2024, was designed as a structurally sounder monetary framework, underpinned by gold reserves held by the Reserve Bank of Zimbabwe (Mangudya, 2024). Notwithstanding these architectural improvements, the pension sector must navigate another asset and liability conversion, with attendant valuation, adequacy, and compliance uncertainties. IPEC, established under the Insurance and Pensions Commission Act [Chapter 24:21] and exercising oversight under the Pensions and Provident Funds Act [Chapter 24:32], implemented numerous regulatory interventions throughout this entire period. The effectiveness of these interventions in protecting pensioners from value erosion remains

inadequately documented in peer-reviewed scholarship, a gap that this dissertation is expressly designed to address.

1.3 Statement of the Research Problem

The fundamental problem addressed by this study is the catastrophic and sustained erosion of pension values experienced by Zimbabwean pensioners between 2009 and 2024, notwithstanding the extensive suite of regulatory interventions implemented by IPEC across this period. Nyamakanga (2021) establishes that pensioners lost between sixty and ninety-five per cent of their purchasing power during the currency volatility episodes of the study period, whilst Mudzingiri (2021) documents that retirees who contributed diligently to pension schemes throughout their productive years found themselves unable to meet basic subsistence needs in retirement, a profound breach of the social contract that underpins pension provision. The fundamental economic problem is that conventional regulatory instruments, indexation mechanisms, investment guidelines, minimum funding requirements, are all calibrated to environments where the currency itself retains its store-of-value function.

Second, no systematic assessment of IPEC's specific regulatory interventions across the full 2009–2024 period exists in the scholarly literature. Annual reports and regulatory circulars document interventions but do not assess their effectiveness in preserving purchasing power (IPEC, 2022), limiting the institutional learning available to regulators facing comparable challenges. The present study directly addresses this gap: consistent with Specific Objective 2 and Research Question 2, it assesses the effectiveness of IPEC's interventions in protecting pensioners' real purchasing power. Effectiveness is evaluated along three dimensions, namely design adequacy, implementation fidelity, and outcome achievement (Llewellyn, 2016; Claessens & Kodres, 2014), and is operationalised through systematic qualitative document analysis of regulatory circulars, supervisory reports, actuarial valuations, and annual reports, triangulated against the lived and institutional accounts obtained from fifty-two stakeholder interviews. The evidence enables a reasoned judgement of whether each intervention preserved value in practice, rather than a mere description of the measures adopted.

This study therefore investigates the following central problem: despite numerous regulatory interventions by IPEC between 2009 and 2024, Zimbabwean pensioners experienced catastrophic erosion of their pension values during currency volatility and hyperinflation. The specific measures implemented, their actual economic effectiveness, the institutional barriers to successful

implementation, and the components of a more adequate regulatory framework remain insufficiently understood and documented in scholarly literature.

1.4 Research Aim and Objectives

1.4.1 Research Aim

The aim of this study is to develop a comprehensive framework for pension value preservation in hyperinflationary economies by critically evaluating the regulatory interventions implemented by the Insurance and Pensions Commission of Zimbabwe during the period of currency volatility from 2009 to 2024, and by identifying the key success factors, implementation challenges, and diverse stakeholder perspectives that inform effective regulatory approaches to protecting pension values under extreme monetary conditions.

1.4.2 Specific Objectives

- i. To examine the regulatory interventions implemented by IPEC aimed at preserving pension values during currency volatility and hyperinflation.
- ii. To evaluate the effectiveness of IPEC's regulatory interventions in protecting pensioners' purchasing power during Zimbabwe's hyperinflationary episodes
- iii. To identify and analyse the challenges that constrained the implementation of pension value preservation measures during the study period.
- iv. To propose a comprehensive framework for pension value preservation applicable to hyperinflationary economies

1.5 Research Questions

The following four research questions correspond directly to the objectives outlined above, ensuring coherence across the study's analytical architecture (Yin, 2018):

- i. What regulatory interventions did IPEC implement between 2009 and 2024 to preserve pension values during currency volatility and hyperinflation?
- ii. How effective were IPEC's regulatory interventions in protecting pensioners' purchasing power during Zimbabwe's hyperinflationary episodes?
- iii. What institutional, legal, informational, and technical barriers constrained the implementation of pension value preservation measures during the study period?
- iv. What components should constitute a comprehensive framework for pension value preservation in hyperinflationary economies, and how should such a framework be operationalised in the Zimbabwean and comparable contexts?

These questions are primarily exploratory and explanatory in orientation, consistent with the interpretivist philosophical paradigm adopted and the qualitative case study design employed. They are formulated to elicit rich, contextualised responses from diverse stakeholders and to guide systematic document analysis (Yin, 2018; Merriam & Tisdell, 2016).

1.6 Research Propositions

Maxwell (2021) argues that propositions in qualitative research are theoretically grounded, tentative statements that guide inquiry without imposing predetermined conclusions, whilst Yin (2018) emphasises their role in bounding and directing case study investigation. In alignment with the interpretivist philosophical paradigm adopted, the following three propositions are derived from the theoretical framework and preliminary literature review.

Proposition 1: Regulatory Framework Design Inadequacy

IPEC's regulatory interventions between 2009 and 2024 were structurally inadequate to preserve pension values against the magnitude of currency depreciation experienced, due to design limitations rooted in stable-economy regulatory assumptions. Conventional indexation mechanisms prove analytically ineffective when monthly inflation rates exceed annual adjustment cycles (Queisser & Whitehouse, 2006). The fundamental economic argument is that instruments calibrated to gradual inflation cannot compensate for the near-instantaneous asset value destruction that accompanies rapid currency depreciation. Vittas (2000) contends that regulatory effectiveness in pension systems is fundamentally constrained by the broader economic environment in which interventions must operate, a constraint that becomes binding under conditions of monetary collapse.

Proposition 2: Institutional Capacity and Framework Constraints

IPEC's institutional capacity, in terms of technical expertise, enforcement infrastructure, data systems, and legal framework provisions, was insufficient for effective member protection under hyperinflationary conditions. Rajkumar and Andrews (2010) highlight that regulatory institution-building in developing economies is a protracted process requiring sustained investment in human capital, legal infrastructure, and information systems. Biru, Teshome, and Abate (2021) document comparable capacity constraints in East African pension regulators confronting currency instability. Andrews, Pritchett, and Woolcock (2017) advance the capability trap concept to characterise institutions that perform the procedural activities of effective regulation without possessing the substantive capacity to achieve their core objectives, a dynamic with direct relevance to IPEC's regulatory experience during the study period.

Proposition 3: Framework Insufficiency for Hyperinflationary Contexts

Existing international frameworks for pension value preservation are inadequate for hyperinflationary environments, and an alternative framework design calibrated to such conditions is both necessary and achievable. Hanke and Kwok (2009) demonstrate that domestic assets of all types lose real value simultaneously during severe monetary collapse, rendering diversification strategies predicated on non-correlated domestic asset classes economically ineffective. Historical evidence from Latin American economies further demonstrates that effective preservation under monetary collapse requires either foreign currency denomination or substantial offshore investment (Schulthess & Demarco, 1993), provisions that current OECD (2016) and IOPS (2018) framework documents do not specifically incorporate for hyperinflationary contexts. This proposition directs the study towards framework development as a principal intellectual output.

1.7 Research Assumptions

Every research study rests upon a set of foundational premises that, while not empirically testable within the scope of the inquiry itself, are necessary conditions for the coherence and validity of the methodology adopted. In interpretivist qualitative research, these assumptions are not treated as weaknesses to be concealed but as explicit epistemic commitments that shape the design, execution, and interpretation of the study (Creswell & Creswell, 2023). Consistent with the conventions of interpretivist qualitative inquiry, the following assumptions underpin this study and are presented transparently to enable the reader to assess their reasonableness in light of the methodological safeguards described throughout this chapter (Saunders, Lewis, & Thornhill, 2019).

1.7.1 Honesty and Accuracy of Participant Accounts

First, participants engaged with the research honestly and provided accurate accounts of their experiences and institutional knowledge to the best of their recollection and ability, consistent with the ethical safeguards established for this study. This assumption proceeds from the recognition that qualitative research is fundamentally dependent upon the authenticity of participant testimony, and that informed consent, confidentiality assurances, and voluntary participation collectively create conditions conducive to candid disclosure. All participants were fully briefed on the purpose and scope of the research prior to interview and were assured that their identities would not be disclosed in any published output, thereby reducing social desirability bias and institutional defensiveness that might otherwise constrain the openness of their accounts. Whilst the possibility that participants withheld, misremembered, or unconsciously reframed aspects of their experience cannot be entirely eliminated, the convergence of accounts across diverse stakeholder categories, combined with

triangulation against documentary evidence, provides reasonable grounds for confidence in the overall integrity of the data generated.

1.7.2 Authenticity and Reliability of Documentary Evidence

Second, documentary evidence accurately reflects official institutional positions and actions at the time of issuance, notwithstanding acknowledged limitations in the completeness and accessibility of some documentation. This assumption is grounded in the status of the documents employed, regulatory circulars, legislative instruments, supervisory reports, actuarial valuations, and official policy publications, as formal institutional records produced through established administrative and governance processes and therefore presumed to represent authoritative statements of institutional intent and action at the time of their creation. The assumption does not extend to claims that such documents are neutral or wholly objective; rather, it holds that they constitute reliable evidence of the official positions they were designed to communicate, subject to the interpretive analysis applied throughout this study. Where inconsistencies or omissions in the documentary record were encountered, these were noted explicitly and contextualised through participant accounts, ensuring that the limitations of the documentary base are acknowledged rather than obscured.

1.7.3 Sufficient Structural Comparability for Analytical Generalisation

Third, Zimbabwe's pension sector during 2009–2024, whilst exhibiting unique extremity, shares sufficient structural and institutional characteristics with other hyperinflationary pension environments to support analytical generalisation to comparable emerging market contexts (Yin, 2018; Flyvbjerg, 2006). This assumption acknowledges the singularity of Zimbabwe's macroeconomic trajectory whilst asserting that the underlying institutional dynamics, the erosion of asset values, the collapse of regulatory credibility, the behavioural responses of fiduciaries under acute uncertainty, and the process of regulatory reconstruction, are not wholly idiosyncratic but reflect recognisable patterns observed in analogous environments including Venezuela, Argentina, and post-Soviet transition economies. Analytical generalisation, as distinguished from statistical generalisation, does not require that the case be typical; it requires that the theoretical insights derived from the case illuminate mechanisms and processes with broader applicability (Flyvbjerg, 2006). The depth and granularity of the Zimbabwe case, precisely because of its extremity, generates conceptual clarity about regulatory dynamics under stress that may be particularly instructive for pension supervisory authorities in other fragile or volatile economies.

1.7.4 Achievement of Data Saturation

Fourth, purposive sampling of 52 participants achieved data saturation as prescribed by Guest, Namey, and McKenna (2017). Data saturation, the point at which additional interviews yield no substantively new themes, categories, or analytical insights, was treated not as a predetermined numerical threshold but as an emergent criterion assessed iteratively throughout the data collection process, consistent with the inductive orientation of the study. As sampling progressed across stakeholder categories, the recurrence of themes, the increasing predictability of participant responses, and the absence of novel conceptual material in later interviews collectively indicated that saturation had been reached, providing the methodological justification for concluding data collection at 52 participants. This assumption is further supported by the diversity of the sample across institutional roles, career stages, and organisational affiliations, which enhances confidence that the saturation achieved reflects genuine theoretical completeness rather than the inadvertent homogeneity of a narrowly constituted sample.

1.7.5 Researcher Positionality as Methodological Asset

Fifth, the researcher's professional familiarity with Zimbabwe's pensions regulatory environment, whilst a potential source of positional bias (Dodgson, 2019), represents a methodological asset enabling access and analytical depth, provided reflexivity is systematically maintained.

Insider knowledge of a specialised regulatory domain facilitates access to participants who might otherwise be inaccessible or guarded, enables the researcher to ask more precise and contextually informed questions, and supports the recognition of nuance in participant accounts that an external researcher might overlook or misinterpret. This assumption accepts that positionality is an inherent feature of interpretive research rather than a contamination to be eliminated, and that its productive management through reflexivity, peer debriefing, and the active pursuit of disconfirming evidence transforms a potential liability into an analytical resource (Creswell & Creswell, 2023). The validity of this assumption therefore rests upon the rigour and transparency of the reflexive practices documented throughout this study, which are presented in sufficient detail to enable independent assessment of the extent to which positional influence has been appropriately managed rather than merely acknowledged.

1.8 Justification and Significance of the Study

A study's claim on scholarly and policy attention must be earned through a clear and compelling account of what it contributes that existing knowledge does not already provide. This section sets out the justification for this investigation, grounding it in the identified gaps in the pension regulation literature, the inadequacy of existing frameworks for hyperinflationary contexts, and the

absence of any systematic multi-stakeholder evaluation of IPEC's regulatory performance across the 2009–2024 period, and articulates its significance across three dimensions: its theoretical contribution to institutional and crisis management scholarship, its empirical contribution to the documented record of pension regulatory practice in Zimbabwe and the broader Sub-Saharan African region, and its practical contribution to the design of more resilient regulatory frameworks for pension oversight bodies operating under conditions of monetary instability.

1.8.1 Academic Significance

This study makes original contributions across three dimensions. Epistemologically, it provides detailed empirical evidence from an extreme critical case, Zimbabwe's 2009–2024 monetary experience, that illuminates regulatory phenomena with particular analytical clarity precisely because conditions were extreme (Flyvbjerg, 2006). Theoretically, it extends institutional theory and crisis management theory to a developing-country monetary crisis context, integrating these established frameworks with capability trap theory (Andrews et al., 2017) to generate insights with applicability beyond Zimbabwe. Methodologically, it demonstrates the value of multi-stakeholder qualitative inquiry in regulatory effectiveness research. The current findings add substantially to our understanding of how pension regulatory frameworks interact with severe monetary instability and will serve as a foundation for future comparative investigations.

1.8.2 Policy Significance

The research provides evidence-based recommendations for strengthening Zimbabwe's pension regulatory architecture, including specific proposals for enhancing IPEC's institutional capacity, updating the Pensions and Provident Funds Act [Chapter 24:32] with crisis-specific provisions, improving cross-institutional coordination, and designing crisis-resilient benefit protection mechanisms. The study's findings have direct relevance for the design of the ZiG regulatory transition framework and for the broader legislative reform process. This information can be used to develop targeted institutional interventions aimed at ensuring that future monetary transitions do not replicate the devastating value erosion that occurred during earlier currency reform episodes.

1.8.3 Social and Actuarial Significance

Pension fund members in Zimbabwe represent formal sector workers who honoured their contractual obligations by contributing throughout their working lives with a reasonable expectation of adequate retirement income. As Barr and Diamond (2008) argue, the erosion of pension values in such circumstances constitutes a profound breach of the social contract, with cascading consequences for old-age poverty, social cohesion, and intergenerational equity. From an actuarial

standpoint, the failure of value preservation mechanisms represents a systemic inadequacy in the framework governing the investment phase of pension provision. By documenting this erosion rigorously and proposing corrective frameworks, this research addresses both an equity imperative and an actuarial challenge of considerable practical urgency.

1.8.4 Practical Significance

The study provides actionable insights for IPEC, pension fund trustees, actuarial professionals, and development practitioners working in currency-volatile emerging markets. Concerns have been raised by several relevant bodies, including IOPS (2018) and the ILO (2021), about the inadequate preparedness of pension regulatory frameworks for crisis scenarios. This study provides the empirical foundation necessary to address that deficiency with contextually grounded evidence applicable across the growing number of African economies confronting comparable monetary instability challenges.

1.9 Delimitations of the Study

A number of delimitations define the analytical boundaries of this research. Temporally, the study is delimited to January 2009 to December 2024, capturing the full arc from Zimbabwe's multicurrency adoption through the ZiG introduction across three distinct monetary regimes. The pre-2009 hyperinflationary period is addressed in the literature review but lies outside the primary data collection scope. Spatially, the study is delimited to Zimbabwe's formal pension sector comprising funds registered with and supervised by IPEC under the Pensions and Provident Funds Act [Chapter 24:32]; the National Social Security Authority and the civil service pension scheme are excluded from primary analysis. Conceptually, the study focuses on pension value preservation from a regulatory and actuarial perspective, with IPEC's statutory interventions as the principal unit of analysis. Macroeconomic policy determinants of currency volatility are treated as contextual factors rather than primary research foci. Fund-level investment strategies are examined insofar as they interact with regulatory requirements.

1.10 Limitations of the Study

Several important limitations must be considered in interpreting the findings.

1.10.1 Retrospective Recall Bias

The most important limitation lies in the retrospective nature of some accounts, as interviews conducted regarding events spanning fifteen years may be affected by recall bias, particularly for earlier phases of the study period; documentary corroboration mitigates this constraint. To further

address this limitation, interview protocols were designed to anchor participant recollections to specific regulatory milestones, policy changes, and institutional events, thereby providing temporal reference points that assisted in stabilising recall. Where accounts diverged or appeared inconsistent with documented timelines, triangulation with contemporaneous documentary evidence, including regulatory circulars, annual reports, and supervisory correspondence, was employed to verify or qualify participant narratives. Member-checking procedures were also applied, whereby key informants were invited to review and validate summaries of their accounts before final analysis.

1.10.2 Sample Size and Generalisability

The sample of 52 participants, whilst consistent with data saturation criteria for qualitative inquiry, cannot claim statistical representativeness; findings support analytical rather than statistical generalisation (Yin, 2018).

To strengthen the analytical generalisability of findings, purposive sampling was employed to ensure diversity across stakeholder categories, including regulators, pension fund trustees, fund administrators, actuaries, and beneficiary representatives. This deliberate heterogeneity in sample composition enhances the transferability of findings to comparable regulatory contexts in Sub-Saharan Africa and other developing economy settings. Thick description of the research context and participant profiles is provided throughout to enable readers to assess the applicability of findings to their own settings, consistent with Lincoln and Guba's (1985) criterion of transferability. Future research employing mixed methods or larger quantitative samples could build upon these findings to test their broader statistical applicability.

1.10.3 Researcher Positionality

The researcher's professional engagement with Zimbabwe's regulatory environment introduces potential positional considerations addressed through systematic reflexivity, transparent methodological documentation, and active pursuit of disconfirming evidence (Dodgson, 2019).

A formal reflexivity journal was maintained throughout the data collection and analysis phases, documenting the researcher's evolving interpretive assumptions and any instances where professional familiarity with the regulatory landscape may have influenced analytical judgements. Peer debriefing sessions with independent academic colleagues were conducted at regular intervals to challenge emerging interpretations and surface potential blind spots. The analytical framework was further stress-tested by deliberately seeking and engaging with participant accounts and documentary evidence that contradicted or complicated the developing narrative, ensuring that

disconfirming evidence was accorded equal analytical weight rather than being subordinated to confirmatory findings.

1.10.4 Incomplete Access to Regulatory Documentation

Not all IPEC internal regulatory correspondence is publicly accessible; documentary analysis is therefore limited to available evidence supplemented by stakeholder accounts.

To partially compensate for gaps in the documentary record, formal access requests were submitted to IPEC and relevant government ministries under applicable freedom of information provisions, and all documents made available through these channels were systematically incorporated into the analysis. The testimonies of participants with direct institutional knowledge of regulatory processes, including former IPEC officials and pension industry professionals, were used to contextualise and partially reconstruct aspects of the regulatory record not captured in publicly available documentation. Where reliance on stakeholder accounts substituted for primary documentary evidence, this is explicitly acknowledged in the relevant analytical sections, and conclusions drawn from such accounts are presented with appropriately qualified confidence. Researchers seeking to extend this work are encouraged to engage directly with IPEC to negotiate expanded archival access as institutional conditions permit.

1.11 Operational Definitions of Key Terms

Term	Operational Definition
Pension Value Preservation	The maintenance of the purchasing power of pension contributions, accumulated assets, and pension benefits over time, ensuring retirees can sustain an adequate standard of living throughout the payout phase; explicitly distinguishing real value maintenance from nominal value maintenance (Blake, 2006).
Hyperinflation	A monetary condition in which the monthly rate of price increase exceeds fifty per cent, following the classical economic definition established by Cagan (1956) and documented in Zimbabwe's context by Hanke and Kwok (2009).
Currency Volatility	Rapid, unpredictable fluctuations in exchange rates and abrupt monetary regime changes that distort investment returns, create

	asset-liability valuation mismatches, and undermine long-term financial contracting essential to pension provision (Calvo & Reinhart, 2002; Mudzingiri, 2021).
Regulatory Intervention	Any formal regulatory action, directive, circular, statutory instrument, prudential guideline, licensing condition, or enforcement measure, implemented by IPEC under its statutory mandate to protect pension fund member interests during the study period.
Regulatory Effectiveness	The degree to which a regulatory intervention achieves its objective of protecting pensioner purchasing power, assessed across three dimensions: design adequacy, implementation fidelity, and outcome achievement (Llewellyn, 2016; Claessens & Kodres, 2014).
IPEC	The Insurance and Pensions Commission of Zimbabwe, established under the Insurance and Pensions Commission Act [Chapter 24:21], which exercises supervisory oversight of the pension sector under the Pensions and Provident Funds Act [Chapter 24:32].
Institutional Capacity	An organisation's technical expertise, enforcement infrastructure, information systems, human resources, and legal authority necessary for effective regulatory implementation (Andrews et al., 2017; Rajkumar & Andrews, 2010).
Capability Trap	A condition in which a regulatory or development organisation performs activities that mimic effective behaviour without achieving substantive outcomes, arising from gaps between procedural compliance and substantive regulatory effectiveness (Andrews et al., 2017).
Framework Inadequacy	The condition in which regulatory instruments designed for stable monetary environments prove insufficient when applied under conditions of currency collapse, because their underlying economic assumptions no longer hold (Queisser & Whitehouse, 2006; Hanke & Kwok, 2009).
ZiG (Zimbabwe Gold)	The gold-backed currency introduced by the Reserve Bank of Zimbabwe in April 2024 as the third distinct monetary regime within the study period (Mangudya, 2024).

1.12 Organisation of the Study

Chapter One: The Problem and Its Setting

This chapter establishes the analytical and contextual foundations, presenting the global, regional, and national background; problem statement; research aim, objectives, questions, and propositions; assumptions, significance, delimitations, limitations, and key term definitions.

Chapter Two: Literature Review

The second chapter provides a comprehensive critical synthesis of existing scholarship, organised around the conceptual framework, the three-theory analytical framework comprising institutional theory, crisis management theory, and institutional capacity theory, and an empirically grounded review structured around the four research objectives. The chapter concludes by identifying the knowledge gaps this study addresses.

Chapter Three: Research Methodology

This presents the methodological architecture, systematically addressing research philosophy, design, population and sampling, data collection methods, data analysis procedures, trustworthiness criteria, and ethical safeguards.

Chapter Four: Findings and Analysis

The fourth chapter presents and interprets empirical findings from document analysis and 52 stakeholder interviews, organised thematically around the four research objectives and three theoretical propositions.

Chapter Five: Conclusions, Framework, and Recommendations

The fifth and last chapter synthesises findings into definitive conclusions, presents the evidence-based framework for pension value preservation in hyperinflationary economies as the principal intellectual contribution, and advances targeted recommendations for IPEC, policymakers, and comparable regulators.

1.13 Chapter Summary

This chapter has established the analytical and contextual foundations for investigating the regulatory effectiveness of IPEC's pension value preservation interventions during Zimbabwe's currency volatility from 2009 to 2024. The chapter demonstrated that the capacity of pension oversight frameworks to protect member value under monetary crisis is among the most significant current discussions in financial regulation, yet the scholarly literature, developed predominantly in stable-economy contexts, provides insufficient guidance for regulators facing sustained monetary instability. Zimbabwe's fifteen-year monetary trajectory, encompassing hyperinflation, dollarisation, currency reintroduction, and ZiG introduction, represents an extreme critical case with exceptional analytical value for regulatory scholarship and actuarial practice.

The problem statement identified five interlocking knowledge gaps: the stable-economy design bias of existing frameworks; the absence of a systematic multi-period evaluation of IPEC's interventions; the invisibility of pensioner voices in the regulatory literature; the under-application of institutional and crisis management theory to developing-country pension contexts under monetary stress; and the absence of a practically applicable framework for hyperinflationary pension regulation. Four research objectives, corresponding research questions, and three theoretically grounded propositions translate this problem into a coherent investigative agenda. Chapter Two proceeds to review the conceptual and theoretical dimensions of the research, examining how the extensive empirical literature on pension regulation, currency crisis, and institutional effectiveness informs the analytical framework deployed in this dissertation.

CHAPTER 2

REVIEW OF LITERATURE

2.1 Introduction

This chapter critically synthesise the scholarly literature that relates to the regulatory effectiveness of pension oversight frameworks in the context of monetary crises, with specific reference to Zimbabwe's experience between 2009 and 2024. There is a large body of scholarship on pension regulation, currency crisis and institutional effectiveness as separate domains. However, the intersection of these fields, and in particular how pension regulators can and should respond to sustained hyperinflationary conditions in developing economies, remains under-theorized and empirically underdeveloped. This chapter addresses the gap by basing the review on four specific research objectives that mould the entire study.

The chapter is structured into five substantive sections. Section 2.2 establishes the conceptual framework, delineating the definitional boundaries of preservation of pension value, hyperinflation and currency volatility, and regulatory interventions in pension oversight. In Section 2.3 the integrated analytical framework is developed, which is based on institutional theory, institutional capacity and framework adequacy theory and crisis management theory. Section 2.4 provides the empirically grounded review. The review is built explicitly around the four research objectives to maintain the analytical coherence throughout the dissertation. Section 2.5 critically evaluates existing international frameworks against the specific conditions of hyperinflationary pension regulation. Section 2.6 describes five knowledge gaps that this study aims to fill, with each knowledge gap linked directly to a research objective and a gap in the literature.

In Table 2.1 below we explicitly set out the sections of the chapter against the four research objectives and the theoretical frameworks used. This means that the analytical architecture of the literature review directly supports the investigative agenda of the study.

Table 1: Objectives and Theory

Objective	Primary Chapter 2 Section	Theoretical Underpinning
RO1: IPEC Interventions	2.4.1; 2.3.2; 2.5	Institutional capacity theory (Rajkumar & Andrews, 2010); Vittas (2000) taxonomy
RO2: Effectiveness	2.4.2; 2.3.1; 2.3.3	Institutional theory (North, 1990; Scott, 2014); Crisis management theory (Boin et al., 2017); Llewellyn (2016)
RO3: Barriers	2.4.3; 2.3.1; 2.3.2	Capability trap (Andrews et al., 2017); Impavido et al. (2010); Claessens & Kodres (2014)
RO4: Framework	2.4.4; 2.5; 2.6	OECD (2016); IOPS (2018); Nyamakanga (2021); Hanke & Kwok (2009)

The word ‘effectiveness’ is used throughout this chapter to refer to the extent to which a regulatory intervention achieves its stated or implied objective of protecting pensioner purchasing power and is evaluated in three dimensions: design adequacy, implementation fidelity and outcome achievement (Llewellyn, 2016). This three-dimensional framework offers a more sophisticated analytical lens than the pass/fail, binary assessment that dominates much of the existing literature on IPEC's regulatory performance. It maps directly onto the three research propositions put forward in Chapter One. This multidimensional conception of effectiveness is analytically consequential, not merely definitional, as it allows the study to distinguish between interventions that were poorly designed, well designed but poorly enforced, and those that failed because the monetary conditions they faced exceeded the parameters of their design altogether. This is a distinction with profound implications for the framework development in Chapter Five.

2.2 Theoretical framework

The analytical architecture of the study integrates three complementary theoretical traditions: institutional theory, institutional capacity and framework adequacy theory, and crisis management theory, each of which illuminates a specific dimension of regulatory performance. The confluence

of these three frameworks provides a multi-level analytical architecture that can interrogate regulatory performance in tandem at the design level (was the framework sufficiently engineered for the monetary conditions it encountered?), the implementation level (did the regulatory body have the capacity to enforce its provisions?) and the temporal learning level (did the institution extract and apply lessons across successive monetary crises?). Each tradition offers analytical tools directly applicable to one or more of the four research objectives as described below.

2.3 Conceptual framework

This section provides the conceptual basis on which the analytical architecture of the study is based. It provides precise definitional boundaries of the three core constructs that structure the investigation: pension value preservation, hyperinflation and currency volatility, and regulatory interventions in pension oversight. Conceptual clarity is particularly important in a study of this kind, where each construct has multiple competing definitions in the literature and where the choice of definition has substantive analytical implications. For example, in hyperinflationary settings, the distinction between the nominal and the real preservation of value is not just a semantic one but is what determines whether a regulatory intervention is perceived as a success or a fundamental failure of its member-protection mandate. Likewise, the boundaries drawn around the idea of a regulatory intervention, whether narrowly defined as formal directives or more broadly defined to include guidance, supervisory engagement and institutional design choices, directly shape the scope and outcomes of the subsequent effectiveness evaluation. The definitions used in this section are taken from the most analytically rigorous and contextually appropriate contributions in the international literature and are used consistently throughout the study.

2.3.1 Preservation of Pension Value

Various definitions of pension value preservation have been proposed in the literature. This study, however, adopts the definition proposed by Blake (2006) who defines pension value preservation as the maintenance of the purchasing power of pension contributions, accumulated assets and pension benefits over time so that retirees can maintain an adequate standard of living throughout the payout phase. This definition draws a sharp distinction between the maintenance of real value (the maintenance of purchasing power) and the maintenance of nominal value (the mere non-declining of cash amounts). This difference is fundamental to the present study: in hyperinflationary environments nominal maintenance is perfectly consistent with total destruction of real value as the Zimbabwe experience in the pre-2009 and the 2019-2023 phases so devastatingly illustrates.

Pension value preservation happens in three related stages: the accumulation stage, when contributions are paid in; the investment stage, when accumulated assets are managed to generate real returns; and the benefit payout stage, when pension obligations are paid out (Barr and Diamond, 2008). Regulatory frameworks should be comprehensive across the three phases, and a failure in any one phase can negate preservation gains made in the other phases. The three-phase model is analytically useful because it highlights potential points of regulatory intervention across the entire pension lifecycle, not just benefit payments as the only visible signal of value erosion. From the perspective of Research Objective 1, this model offers a structured taxonomy for cataloguing where IPEC's interventions were directed; from the perspective of Research Objective 3, it illuminates which phase of the preservation lifecycle was most vulnerable to the barriers identified in the literature. Andonov, Bauer and Cremers (2017) show that sophisticated institutional investors in developed markets are significantly under-hedged for inflation risk in the investment phase, which becomes an existential problem when there is no domestic asset class that can generate returns above the rate of currency depreciation. The key theoretical point made by Bodie, (1990) for inflation-indexed instruments is still valid. The problem is how to make it work in a situation where it is the government itself which is issuing the currency that is losing its value. This observation reveals a basic tension in the design of pension regulation under monetary crisis: the instruments that theory advises for inflation protection rely on the existence of working capital markets and state credibility, which hyperinflation destroys at the same time.

The most analytically significant contribution to the conceptualisation of pension value preservation under extreme monetary conditions is put forward by Hanke and Kwok (2009). They demonstrate from monetary theory that in genuinely hyperinflationary environments all domestic assets simultaneously lose purchasing power, making conventional diversification strategies economically futile. This theoretical conclusion has direct and fundamental implications for the design of the regulatory framework in Research Objective 4: the conventional toolkit of domestic asset allocation guidelines, inflation indexation, and minimum funding requirements is analytically inadequate under conditions of monetary collapse. Regulatory frameworks should rather ensure that funds are allowed to invest in instruments that preserve real value through currency diversification, most efficiently through foreign currency-denominated assets or offshore investment allocations. Mudzingiri (2021) applies this logic directly to the Zimbabwean context, showing through longitudinal analysis that the removal of foreign currency-denominated asset protections in 2019 removed the only effective preservation mechanism available to pension funds at the time. This finding fundamentally informs the framework proposals that are developed in Chapter Five of this dissertation.

However, it should be noted that the existing conceptualisation of pension value preservation in the literature contains what might be called a 'normal-conditions bias': the vast majority of the scholarship presumes that regulators are dealing with gradual erosion within a functioning monetary order rather than the near-instantaneous destruction of purchasing power that defines acute hyperinflationary episodes. This conceptual shortcoming limits the analytical usefulness of much of the existing literature for the present study and reinforces the case for extending the conceptual framework to address the specific mechanisms of value destruction under conditions of monetary collapse.

2.3.2 Inflation and Currency Instability

In this study the term 'hyperinflation' is used to refer to the state defined by Cagan (1956) as a monthly inflation rate of more than fifty per cent, denoting situations in which monetary instability fundamentally distorts normal economic relationships and planning horizons collapse. Hanke and Kwok (2009) show that Zimbabwe's hyperinflation peaked at a monthly rate of 79.6 billion percent in November 2008, the second most severe hyperinflationary episode in all of recorded economic history. The authors associate this monetary collapse with three interacting factors: a fiscal expansion financed by money creation, an agricultural output decline that reduced the productive base of the economy, and the subsequent loss of confidence in the domestic currency as a store of value (Kramarenko, Engstrom, Verdier, Haacker and Aisen 2010). These factors created a self-reinforcing dynamic of depreciation that overwhelmed all conventional monetary stabilisation mechanisms. This has direct implications for the assessment, in relation to Research Objective 2, of whether any regulatory instrument could have been effective under such conditions.

Calvo and Reinhart (2002) argue that currency volatility is more expansive than hyperinflation proper and incorporates swift fluctuations in exchange rates and abrupt changes in monetary regimes that disrupt financial contracting. The broader definition is analytically important to the current study for Zimbabwe's 2019-2023 experience, while extreme, did not strictly meet Cagan's threshold in each period, but the value destruction experienced by members of pension funds was catastrophic by any actuarial standard. The use of currency volatility as a more general class of measures thus ensures that the analytical framework does not unwittingly exclude from the scope of the effectiveness assessment episodes of extreme but technically sub-Caganite monetary instability.

Mudzingiri (2021) identifies four channels through which currency volatility affects pension systems in the specific Zimbabwean context: erosion of real asset values through loss of purchasing power; distorted investment returns as inflationary pressures overwhelm fundamental valuations;

asset-liability currency mismatches where funds hold domestic assets against benefit obligations that are effectively valued in purchasing-power terms; and the disruption of long-term financial contracting essential to pension provision. The four transmission channels offer a structured analytical framework to evaluate, under Research Objective 2, the specific mechanisms through which IPEC's interventions succeeded or failed to curb value erosion. Complementary evidence from the South African context is provided by Ndou and Mokoena (2019), who find that even moderate exchange rate volatility has a significant effect on pension fund investment performance, underscoring the importance of currency risk management in pension regulatory frameworks and further supporting the regional generalisability of this study's findings.

One especially significant yet under-explored feature of currency volatility in the pension regulatory literature is what could be termed transition risk. Transition risk is the regulatory and actuarial challenge posed by monetary regime change, whereby existing pension entitlements are suddenly re-denominated in a new unit of account through the legislative process. This is exactly the kind of transition risk that existed in the 2009 dollarisation and in the 2019 reintroduction of a domestic currency. The regulatory literature offers little guidance to pension oversight bodies as to how to cope with it. This gap in the literature is directly relevant to the framework development agenda in Research Objective 4.

2.3.3 Regulatory measures in pension supervision

Vittas (2000) defines three analytically distinct categories of pension regulatory interventions: prudential regulations on minimum funding levels, investment restrictions and actuarial requirements, conduct regulations on transparency, disclosure, fiduciary standards and complaints handling, and structural regulations on licensing, scheme design requirements and governance requirements. These categories continue to be the standard taxonomy in the literature. IPEC's key interventions in the period 2009–2024 covered all three categories, with the emphasis moving across monetary phases according to the economic situation. Under Research Objective 1, the documentation of IPEC's interventions is organised within the main organising framework of the three-category taxonomy, allowing systematic classification of the Commission's actions throughout the entire study period and comparison with international evidence.

Llewellyn (2016) contends that the effectiveness of any intervention depends not only on its technical design but also on the institutional capacity to implement and enforce it, the adequacy of the legal framework within which it operates, and the macroeconomic conditions under which it has to function. This three-dimensional framework of design adequacy, implementation fidelity, and

outcome achievement is the primary evaluative lens for Research Objective 2 throughout this study. Its analytical value lies specifically in the avoidance of conflating very different types of regulatory failure. An intervention may be well designed but badly enforced, adequately enforced but in conditions that exceed its design parameters, or both.

A major conceptual distinction that the existing literature underemphasises is the distinction between *ex ante* and *ex post* interventions. *Ex ante* measures such as investment guidelines, permission to hold foreign currencies, and minimum funding standards aim to position pension funds to withstand monetary shocks before they materialise. *Ex post* interventions, compensation orders, fund restructuring directions, benefit indexation mandates attempt to repair erosion of value after the fact. Studies of the effectiveness of pension regulation during currency crisis have found that well designed and enforced *ex ante* interventions produce better member protection outcomes than *ex post* remediation (Impavido, Thorburn, & Wadsworth, 2010; Cruces & Gasparini, 2009). This conceptual distinction is analytically important for the framework development in Research Objective 4, as it implies that effective crisis-resilient regulatory architecture should be primarily anticipatory rather than responsive in orientation.

2.3.4 Institutional Theory

North (1990) argues that organisations are embedded in institutional environments that include formal rules, informal constraints and enforcement mechanisms that combine to create the structure of human interaction and the incentive structures. The key lesson from North's seminal contribution to the analysis of regulatory effectiveness is that formal regulatory provisions are a necessary but not a sufficient condition for attaining desired outcomes. Effectiveness is highly contingent on the enforcement infrastructure, the normative environment in which regulation occurs, and the informal institutional setting. This insight is analytically foundational to the investigation of barriers in Research Objective 3, which must attend not only to formal legal deficiencies but to the normative and cognitive-cultural dimensions of institutional constraint.

Scott (2014) takes this framework further by distinguishing three institutional pillars, the regulative, normative and cultural-cognitive, each of which shapes organisational behaviour through different mechanisms. The regulative pillar works through rules, monitoring and sanctions. The normative pillar works through professional standards, role expectations and shared values. The cultural-cognitive pillar works through taken-for-granted assumptions about how the world works and what constitutes appropriate action. This three-pillar framework as applied to IPEC's regulatory effectiveness provides a diagnostic architecture that illuminates the role of formal legal frameworks,

professional norms and technical capacity in determining whether regulatory interventions achieve their intended outcomes.

The Pensions and Provident Funds Act [Chapter 24:32] was drafted at a time when the domestic currency was stable and does not contain any crisis-specific provisions for hyperinflationary environments at the regulative level, does not contain explicit protection of pension rights denominated in foreign currency, and does not contain formal mechanisms for implementing emergency preservation measures during monetary regime transitions. This gap in the legal framework is a fundamental limitation to regulatory effectiveness, not on account of institutional capacity or professional norms, but on account of the design inadequacy of the statutory foundation itself, a distinction which is analytically consequential for the differentiated account of regulatory failure that Research Objective 2 demands. At the normative level, the widespread industry norms about domestic asset allocation developed in the pre-crisis period remained in place throughout the crisis period, despite the obvious inadequacy of these norms in the face of a currency collapse. In terms of assumptions of the cultural-cognitive level, the regulatory framework and the actuarial profession did not sufficiently challenge the assumption that conventional diversification strategies would still be effective under conditions of monetary instability until losses had already been incurred, which represents the normalisation of crisis conditions that institutional theory predicts under conditions of institutional path dependency.

A particularly powerful extension of Scott's (1998) framework for the current study is the capability trap concept of Andrews, Pritchett and Woolcock (2017). Organisations that are stuck in the capability trap are those that perform the procedural tasks of functioning effectively, issuing documents, holding registries, conducting inspections, without the substantive capacity to achieve their core objectives, as defined by Andrews et al. This concept is analytically important for Research Objective 3 because it explains how an institution may carry all the external markers of regulatory activity, but fail to protect the interests for which it was established. In the case of IPEC, the capability trap framework directs analytical attention to the gap between regulatory activity and regulatory impact. The issue is not whether IPEC was performing regulatory functions, but whether those functions were generating real member protection in the monetary conditions confronted. Performative and substantive effectiveness. One of the most important theoretical contributions that institutional theory offers to the current study is this differentiation.

Scott's (2014) three-pillar analysis provides a particularly useful diagnostic for understanding why IPEC's formal authority did not consistently translate into effective member protection during monetary crises. The framework focuses analytical attention not only on the substance of regulatory

instruments but also on the institutional ecosystem in which they must be implemented, the technical capacity to enforce standards, the professional culture that shapes how regulatory choices are made, and the shared cognitive assumptions that determine which regulatory options are seen as viable. This multi-level diagnosis is directly applied in the findings and analysis in Chapter Four , and directly informs the framework development in Chapter Five.

2.3.5 Theory of Adequacy of Institutional Capacity and Framework

A great deal of scholarship has examined the conditions under which regulatory institutions in developing economies are able to effectively carry out their mandates. Rajkumar and Andrews (2010) show that the success of regulation in the context of developing countries depends to a large extent on three interrelated factors: the technical capacity of the regulatory agency (human resources, information systems, analytical capacity), the adequacy of the legal framework under which it operates (scope of authority, enforcement mechanisms, crisis provisions), and the existence of appropriate regulatory instruments (tools calibrated to the specific risks being regulated). Where all three conditions are sufficient, regulation may be effective even in difficult environments; where any one is lacking, effectiveness is limited whatever the quality of the others. The three-factor model is the primary analytical device used to deal with Research Objective 3, which is the question of barriers. It offers a systematic decomposition of institutional constraint that separates capacity deficits from framework deficiencies and from instrument inadequacy.

Thorburn, Wadsworth and Impavido (2010) provide a conceptual framework for assessing oversight of retirement products that explicitly incorporates the limits of regulatory effectiveness when conditions are outside the design parameters of institutions. They contend that it is important to differentiate between risks that can reasonably be expected to be addressed within the normal operating parameters of regulatory frameworks, and those that require extraordinary institutional responses as they exceed the assumptions embedded in the regulatory architecture. Currency collapse is exactly the latter type of event: it is not a risk for which traditional pension regulatory tools are designed, because those tools assume that the currency in which benefits are expressed will continue to perform its basic function as a store of value. This insight is analytically central to the effectiveness evaluation of Research Objective 2 and the framework development of Research Objective 4: it provides the theoretical basis for the argument that regulatory failure under conditions of monetary collapse cannot be solely attributed to institutional inadequacy but must also be understood as a consequence of operating beyond the design boundary of the regulatory architecture.

This study operationalises the framework of Impavido et al . (2010) as the primary lens to distinguish three analytically distinct types of regulatory failure: failures of regulatory design (interventions that were inadequate even within their intended operating parameters); failures of implementation fidelity (interventions that were adequately designed but insufficiently enforced due to capacity constraints); and failures of framework scope (cases where the monetary conditions exceeded the boundary conditions for which regulatory instruments were designed). The taxonomy is a more analytically precise account of regulatory failure than binary assessments based on institutional capacity theory, and it avoids the conflation of distinct types of inadequacy that characterises much of the existing Zimbabwe-specific literature. It also offers more actionable prescriptions for framework development in Research Objective 4: different failure types require different remedies and conflating them results in framework proposals that are insufficiently targeted to be effective.

A significant critical failing of the literature on institutional capacity is its tendency to frame capacity as a static attribute of the regulatory body, rather than a dynamic resource that can be augmented or depleted through deliberate institutional decisions or external circumstances. The regulatory capacity may be enough for normal oversight but structurally insufficient for crisis-response needs. This is what Kairiza (2020) observes about IPEC, noting that the Commission's actuarial impact modelling capacity, which was adequate for routine supervision, was insufficient to generate the real-time quantitative analysis needed to guide effective protective intervention during the 2019 currency transition. This dynamic aspect of capacity adequacy complements the theoretical framework and is reflected in the qualitative inquiry design adopted in Chapter Three.

2.3.6 Crisis management theory in pension regulation

Boin, McConnell and Hart (2017) describe five core tasks for effective institutional crisis management: sense-making, i.e. recognising the nature and severity of the crisis; decision-making under conditions of uncertainty and incomplete information; meaning-making, i.e. communicating a coherent account of the crisis and the institutional response to affected parties; accounting, i.e. transparent reckoning with institutional performance during the crisis; and learning, i.e. systematic extraction of lessons to improve future responses. This framework, adapted to pension regulation in times of monetary crisis, provides a diagnostic structure for Research Objective 2 by identifying specific dimensions of regulatory performance on which interventions can be judged: recognising the crisis, responding decisively, communicating with affected members, accounting for outcomes and learning from experience.

The temporal dimension of Boin et al.'s (2017) framework is particularly pertinent to a study covering three successive monetary crises over a fifteen-year period. The framework indicates that institutions that fail to learn from past crises will be less effective in coping with future crises, and therefore the quality of institutional learning between crises is an important determinant of long-term regulatory performance. Nyamakanga (2021) argues that IPEC's sense-making to the gravity of the 2019 monetary transition was belated, communication with pension fund members on the effects on their accrued benefit values was weak, and there was scant evidence of systematic institutional learning between successive currency crises. The most consequential long-term crisis management deficit, identified by Boin et al. (2017), was learning failure, which is particularly relevant to Zimbabwe's case: an institution that had extracted and embedded lessons from the 2008–2009 monetary collapse would have been better positioned to protect members during the 2019–2023 period.

Selebogo and Chipeta (2022) note similar learning constraints for a number of Southern African pension regulators, suggesting that institutional learning from monetary crisis is a regional problem, rather than a unique characteristic of any particular regulatory body. This regional pattern is theoretically important because it suggests that the learning failure observed in the Zimbabwean case cannot be attributed to the inadequacy of individual institutions, but rather reflects a structural characteristic of pension regulatory architecture in the region, one that calls for structural rather than simply procedural remedies. This insight feeds directly into the framework development agenda in Research Objective 4, implying that the framework must explicitly contain institutional learning mechanisms, rather than assuming that experience will inherently lead to improved future performance.

A key gap in the application of crisis management theory to pension regulation is the neglect of what may be termed pre-crisis regulatory positioning: the extent to which regulatory frameworks can be pre-positioned, through legal provisions, institutional preparations and instrument design, to resist monetary shocks before they materialise. Boin et al.'s (2017) framework is primarily orientated to crisis response, rather than crisis anticipation. The analytical implications of this orientation are that it may systematically underestimate the importance of ex ante regulatory design relative to in-crisis institutional behaviour. The insight from the fusion of crisis management theory and institutional capacity theory for framework development in Research Objective 4 is that crisis resilience needs to be built into the regulatory architecture during stable periods, as the institutional capacity available during periods of acute monetary stress is typically insufficient to support effective real-time response.

2.4 Review of Empirical Literature

The following four subsections are the empirically grounded review, which is directly mapped to each of the four research objectives of the study. The structural alignment in this respect serves two functions: it ensures analytical consistency between the literature review and the empirical investigation presented in Chapter Four; and it allows the reader to trace the intellectual lineage of each objective directly from the existing scholarship to the investigative agenda of this study. Where the literature provides strong evidential bases, these are critically synthesised; where gaps and contradictions are identified, these are explicitly identified as contributions of the present study.

2.4.1 Evidence from around the world on regulatory interventions to protect pension value

There is a significant literature on pension regulatory responses to currency volatility and hyperinflation, largely based on Latin American historical experience and more recent African evidence. This comparative literature has a twofold purpose in the present study. First, it establishes the range of interventions available to pension regulators facing monetary crisis and thus permits a systematic assessment of whether IPEC used the full repertoire available under Research Objective 1. Second, it provides international performance evidence against which IPEC's outcomes can be assessed under Research Objective 2.

Schulthess and Demarco (1993) provide a detailed account of the Argentine hyperinflationary episode in the 1980s and early 1990s. They show that nominal increases in pensions did not prevent pensioners from losing more than ninety per cent of their purchasing power and that conventional regulatory responses were ineffective to stop value erosion in a context of continued monetary instability. It is important to emphasise that the Argentine regulatory response was largely *ex post* in orientation, aimed at compensating for value erosion that had already taken place, rather than *ex ante* in positioning funds to weather monetary shocks. Cruces and Gasparini (2009) extend this analysis, arguing that, apart from the lack of suitable legal and institutional instruments, the regulatory responses were limited by the lack of frameworks designed for monetary crisis environments. If the Argentine experience offers a cautionary precedent for the Zimbabwean case, the institutional dynamics that constrained regulatory effectiveness in Latin America in the 1980s and 1990s seem to be structurally analogous to those confronting IPEC throughout the study period.

More recent evidence from sub-Saharan Africa confirms the pattern of framework inadequacy under currency stress. Amu and Amu (2012) documented the partial gains in real returns from the regulation responses to cedi depreciation in Ghana, via permissions on foreign currency assets, but noted compliance issues and implementation gaps especially for smaller funds with limited administrative capacity. The Ghanaian case is analytically important as it shows that the intervention

identified by Hanke and Kwok (2009) as the only theoretically sound preservation mechanism under conditions of monetary collapse, i.e. allowing foreign currency asset holdings, is necessary but not sufficient for effective member protection; implementation fidelity and supervisory enforcement are also important determinants of outcomes.

Biru, Teshome and Abate (2021) reported that pension regulators in East Africa continue to face capacity constraints in dealing with currency instability owing to a weak legal framework, their inability to enforce regulations and the absence of crisis-specific instruments. Their cross-national analysis adds comparative support for the institutional barriers identified in the Zimbabwean-specific literature and bolsters the argument that the regulatory challenges IPEC faced are not idiosyncratic but reflect systemic features of pension regulatory architecture in developing economies. In the context of Zambia and Malawi, Selebogo and Chipeta (2022) show that governance and investment performance of pension funds deteriorate sharply during episodes of currency depreciation, and that regulatory responses are too narrow in scope to avert large losses in real value.

Mandeya and Mugobo (2015) provide the most systematic available review of pension value erosion and regulatory responses during the multicurrency period of 2009-2018 in Zimbabwe, concluding that IPEC's directive on United States Dollar denomination (Directive 02/2010) was the Commission's single most effective intervention during the entire study period. This observation is analytically important for Research Objective 1 as it shows that IPEC could deploy effective ex ante interventions where enforcement was possible, in the monetary context of relative stability in a dollarised environment. Mandeya and Mugobo (2015) also point out rising adequacy concerns as the period unfolded, particularly as the gap between official and market exchange rates widened from 2016 onwards, implying that the same intervention that was effective in 2010 was becoming increasingly ineffective as monetary conditions worsened. This observation has direct implications for the effectiveness evaluation of Research Objective 2.

Mudzingiri (2021) extends this analysis through 2021 and documents a reversal of the gains in multi-currency period preservation after the 2019 currency reform. Mudzingiri (2021) uses longitudinal actuarial analysis to establish that the removal of protections to foreign currency assets was the economic mechanism of value destruction. Kairiza (2020) offers an institutional analysis of IPEC's reaction to the 2019 transition, attributing the failure of the regulatory response mainly to the absence of crisis-specific provisions in the legal framework and limitations in IPEC's technical capacity to assess the actuarial impact. The convergence of these two analyses, one actuarial, one

institutional, provides a particularly strong evidence base for the multi-dimensional effectiveness assessment in Chapter Four.

One major gap in the existing literature on IPEC's interventions is the absence of a study that has systematically catalogued and categorised the entire range of regulatory actions taken between 2009 and 2024 using Vittas's (2000) three-category taxonomy of prudential, conduct and structural interventions. Existing scholarship has dealt with specific high-profile interventions, most notably the 2010 denomination directive and the responses to the 2019 currency transition, but has not offered the comprehensive inventory that would enable assessment of the breadth and balance of IPEC's regulatory repertoire. Research Objective 1 and the documentary analysis in Chapter Four directly address this gap.

2.4.2 Effectiveness of Regulatory Interventions – Economic and Institutional Determinants

The effectiveness of pension regulatory interventions is greatly influenced by the macroeconomic environment in which they take place and the institutional capacity to enforce and implement them (North, 1990; Rajkumar & Andrews, 2010). Claessens and Kodres (2014) offer a systematic international framework for assessing regulatory effectiveness in the context of financial crises. They show that effectiveness is structurally lower in economies featuring constrained institutional capacity, weak legal enforcement mechanisms and asymmetric information flows between regulators and the regulated entities. These three structural conditions typified Zimbabwe's regulatory environment for much of the study period, and they present an evidence-based explanation for IPEC's limited effectiveness that does not attribute blame to individual institutional failure but rather structural conditions that typify developing-economy pension regulation under stress.

Llewellyn's (2016) three-dimensional model is the most analytically rigorous framework available to evaluate the specific effectiveness of IPEC's interventions. Effectiveness is evaluated across design adequacy, implementation fidelity and outcome achievement. This framework, when systematically applied to IPEC's interventions, allows to distinguish between four conceptually distinct performance profiles: (1) high design adequacy, high implementation fidelity and strong outcomes, genuinely effective interventions; (2) high design adequacy, low implementation fidelity and weak outcomes, design-adequate but enforcement-constrained interventions; (3) low design adequacy and weak outcomes regardless of enforcement quality, fundamentally inadequate interventions; and (4) adequate design and enforcement but weak outcomes because monetary conditions exceeded design parameters, boundary-condition failures. This framework has not been

systematically applied in the existing Zimbabwe-specific literature, resulting in the conflation (that is, the mistaken treatment as a single phenomenon) of these analytically distinct failure modes and corresponding imprecision in prescriptive recommendations.

Mandeya and Mugobo (2015) describe the multicurrency period as one of relative regulatory effectiveness, showing that the appropriate regulatory instrument, dollar denomination of benefits, in a sufficiently stable monetary environment can achieve tangible member protection results. This finding is an example of the first performance profile above: an intervention that was well-designed, adequately enforced and produced positive outcomes. More importantly, it demonstrates that IPEC had the institutional capacity to be effective in a period of permissive monetary conditions, a finding with important implications for the attribution of responsibility for the failures of the 2019-2023 period.

Kairiza (2020) examines the 2019 currency reform episode and argues that the inadequacy of IPEC's regulatory response was mainly driven by three institutional factors: the lack of crisis-specific legal provisions that would have allowed for pre-positioned protective measures; insufficient actuarial modelling capacity to quantify the impact of the conversion on member purchasing power prior to its implementation; and limited data infrastructure to enable real-time monitoring of fund exposure to conversion risk. This analysis finds that regulatory failure lies in the design and capacity of the institution rather than in any single cause, and illustrates the third and fourth performance profiles above: interventions that were both poorly designed for the specific monetary conditions and constrained in their enforcement by the limits of capacity.

Importantly, the existing literature on IPEC's effectiveness has almost exclusively adopted a regulatory-centric perspective, based on regulatory documents, actuarial reports and macroeconomic data. The existing scholarship systematically overlooks the views of pension fund members, who are the ultimate measure of regulatory success in terms of purchasing power preservation. Mudzingiri's (2021) longitudinal actuarial analysis provides quantitative precision to the aggregate value loss, but it cannot capture the heterogeneous impact of this aggregate loss across different categories of pensioners, nor the lived experience of regulatory failure that motivates the multi-stakeholder evidence-gathering approach adopted in Research Objective 2. The absence of member voice in the current effectiveness literature is both a substantive gap in knowledge and a methodological limitation that the present study is explicitly designed to address.

So far the research has been focused on ex post evaluation of regulatory outcomes rather than on the ex ante question of whether regulatory frameworks were structurally capable of achieving their

objectives considering the monetary conditions they faced. Impavido et al. (2010) propose a conceptual framework to make this distinction. They argue that an intervention may fail because it was poorly designed, poorly implemented or the operating conditions were outside the boundary assumptions built into its design. All three failure modes are relevant to the Zimbabwean experience and are systematically explored in Chapter Four, resulting in a more nuanced and actionable account of effectiveness than the binary assessments that characterise much of the existing literature.

2.4.3 Barriers to the Implementation of Measures to Preserve Pension Value

The obstacles to effective pension value preservation under monetary crisis can be classified into four analytically distinct, but interlinked categories, that are consistently documented in the comparative literature. Understanding these categories is critical for the framework development agenda in Research Objective 4, not only descriptively but also in terms of their causal relationships, their relative importance in different monetary contexts and their vulnerability to remediation through different types of institutional intervention.

The most basic category of problems is the inadequacy of the legal framework: much of the pension legislation in developing economies was drafted during periods of relative monetary stability and contains no provisions specifically designed to preserve pension values during currency transitions. The Pensions and Provident Funds Act [Chapter 24:32] is a case in point, as it does not contain any provisions regarding the valuation or protection of pension fund assets in the event of changes in the monetary regime, nor does it contain any crisis-specific powers to allow for emergency investment measures or a formal mechanism to trigger enhanced supervision in periods of high monetary risk (Kairiza, 2020). This structural legal gap is qualitatively different from the other categories of barriers in that it cannot be addressed by better institutional practice alone; it requires formal legislative amendment, which is, by definition, subject to external political processes that regulators cannot directly control. Thus, the implications for regulatory design under Research Objective 4 are that effective crisis resilience must include explicit advocacy for legislative modernisation as a part of the framework and not just as an aspirational recommendation.

The second category is institutional capacity deficit. The technical expertise, data infrastructure and human resources necessary for effective pension supervision under crisis conditions far exceed those needed for routine oversight. Rajkumar and Andrews (2010) argue that the development of regulatory capacity in developing economies is a slow process and capacity gaps are most sharply exposed when monetary conditions are most difficult. This is a deeply perverse institutional dynamic, where the moments of greatest supervisory need coincide with the moments of greatest

supervisory incapacity. This negative correlation between the intensity of the preservation challenge and the institutional capacity available to meet it is one of the most important structural features of pension regulation in developing economies under monetary crisis and one that has not been sufficiently theorised in the existing literature. This observation is supported by Claessens and Kodres (2014) who find that the loss of effectiveness due to capacity constraints is non-linear: capacity shortfalls are manageable under normal conditions but become binding constraints in crisis conditions. The implication is that the capacity needed to respond to a crisis must be substantially higher than that needed for normal supervision.

The third category includes failures in the information environment. If regulators do not have real-time information on fund exposures and asset valuation, they cannot carry out the impact assessments required for informed crisis response (Palacios & Whitehouse, 2006). In Zimbabwe, the challenge of the information environment was further exacerbated by the suddenness of the 2019 currency reform, which did not provide IPEC much notice of the terms of the conversion and hampered the ability of the Commission to model the impact on member values prior to the implementation of the conversion. This information asymmetry between the monetary authority and the pension regulator is itself a barrier category that existing literature has not adequately disaggregated: it involves not only the technical capacity to process information but the institutional coordination arrangements that would enable advance notice and collaborative impact assessment between the Reserve Bank, the Ministry of Finance and IPEC.

Fourthly, stakeholder coordination challenges: The need for coordination among actuaries, investors and regulators to maintain the value of pensions during monetary crises, and the infrastructure to do this, is often weak in emerging market pension systems (Bikker & De Dreu, 2009). In Zimbabwe, the coordination challenge extends beyond the pension sector to the monetary authority (Reserve Bank of Zimbabwe), the fiscal authority (Ministry of Finance) and the statistical authority (Zimbabwe National Statistics Agency), all of which have information and decision-making authority relevant to pension preservation, but none of which are formally required to coordinate with IPEC prior to implementing monetary policy decisions affecting pension fund valuations.

Mudzingiri (2021) in a study of Zimbabwean IPEC shows that all four barriers were in place during 2019–2021, constituting an institutional constraint that compounded and limited the Commission's ability to represent members, even when the Commission's intentions were aligned with member interests. Andrews et al. (2017) add an important dimension to this capability trap analysis: institutions operating under these compound constraints may continue to perform the procedural activities of regulation, issue circulars, maintain a fund registry, publish annual reports, without

having the substantive institutional capacity to achieve their core mandate. For Research Objective 3, the central analytical question is not whether these barriers existed, which the existing literature confirms, but how they interacted with each other, which barriers were most binding in which phases of the monetary crisis, and whether they are remediable through incremental reform or require structural redesign of the regulatory architecture, questions that the framework development in Chapter Five addresses directly on the basis of the qualitative evidence generated in Chapter Four.

A major limitation of the existing literature on barriers is that the evidence is predominantly generated theoretically or documentally. To date no study has covered all the four stakeholder groups, IPEC officials, pension fund trustees, actuarial professionals and pensioners in a single integrated study of the barriers to effective pension value preservation in Zimbabwe. This methodological constraint suggests that the relative importance and practical manifestation of the various categories of barriers remain imperfectly understood, and that prescriptive recommendations may be out of tune with the institutional realities of those most directly involved in the regulatory process. A multi-stakeholder qualitative inquiry is conducted in Research Objective 3 to address this limitation directly.

2.4.4 Existing international mechanisms to protect the value of pensions

Some international organisations have developed framework principles for the preservation of value of pensions which are state of the art normative guidance. A critical evaluation of these frameworks against the specific analytical needs of hyperinflationary pension regulation demonstrates both the considerable value of these frameworks and the systematic limitations that render them inadequate for those regulatory contexts where they are most urgently needed.

The OECD (2016) Core Principles of Occupational Pension Regulation set out comprehensive standards for governance, funding, investment, disclosure and supervision. These principles represent the most authoritative normative framework available for the design of pension regulation and serve as a useful analytical benchmark for the assessment of IPEC's governance and oversight practices. But the principles were developed in a stable-economy paradigm and assume working capital markets and currencies that are still serving their store-of-value function. Hence, their applicability to hyperinflationary situations is structurally limited, not because the principles are poorly conceived, but because their underlying assumptions do not hold under conditions of monetary collapse. This is an important conceptual point: it is not a failing of the OECD framework, but rather a mismatch between the design parameters of the framework and the regulatory context in which it is being applied. This implies an analytical implication for Research Objective 4: an

effective framework for hyperinflationary pension regulation cannot simply adapt the OECD principles for a more volatile environment but must be constructed on different foundational assumptions about the monetary environment.

For instance, the principles for effective pension supervision by the International Organisation of Pension Supervisors (IOPS) (2018) offer useful guidance on risk-based supervision and regulatory coordination, but again, do not contain specific provisions for environments where the main risk to pension value is the domestic currency itself rather than the investment market conditions. The ILO (2021) stipulates minimum requirements for benefit adequacy and stresses the need to preserve real value but offers limited practical guidance on enforcement mechanisms in jurisdictions where inflation rates can outpace any plausible benefit adjustment formula. The fundamental constraint of the ILO framework is that it defines outcomes, minimum adequacy of benefits -- without providing the operational guidance on how to achieve those outcomes under circumstances where the mechanisms of preservation normally relied on have ceased to function.

There is a persistent and analytically relevant criticism of the current literature on the international framework: that it still takes for granted that the currency of pension benefits is exogenous to the regulatory challenge, a stable background condition rather than the main source of risk. This assumption is so ingrained in the architecture of existing frameworks that it is rarely explicitly stated, but it generates analytical blind spots of considerable practical consequence. When the assumption is no longer valid, when the currency itself becomes the main source of value destruction, the frameworks lose their analytical purchase because the instruments they prescribe (indexation, diversification, minimum funding requirements) are no longer effective or assume a stability of reference unit that is no longer the case.

Impavido et al. (2010) provide a more nuanced framework which recognises the limits to regulatory efficacy in conditions which exceed the design parameters of existing instruments, but this has not been fully operationalised for the specific context of hyperinflationary pension regulation. Proposals for a Zimbabwe-specific framework have been put forward by Mandeya and Mugobo (2015) and more comprehensively by Nyamakanga (2021) in which the framework provides for legal protection of foreign currency-denominated pension rights, automatic inflation adjustment with independent price verification, mandatory minimum foreign investment allocations and provisions for strengthened institutional capacity. These proposals constitute the most contextually relevant framework contributions available in the literature, but they were developed before the ZiG

transition and rely on a smaller and less diverse evidence base than the present study can provide through its multi-stakeholder qualitative inquiry.

This study adds to these proposals by extending the evaluation period to 2024, adding the ZiG transition as another monetary period and basing the framework development on comprehensive multi-stakeholder qualitative evidence that previous studies could not provide. The framework developed in Chapter Five is therefore a real step forward from existing Zimbabwe-specific proposals, rather than simply copying previous contributions, and offers operational guidance that the international OECD and IOPS frameworks do not.

Table 2.2 provides a critical comparative analysis of existing international and Zimbabwe-specific frameworks in relation to the specific analytical requirements of hyperinflationary pension regulation, which forms the evaluative basis for the framework development in Chapter Five.

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Table 2: Critical Assessment of Existing Pension Preservation Frameworks Against Hyperinflationary Requirements

Framework	Stable-economy adequacy	Currency crisis guidance	Hyperinflationary applicability
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OECD (2016) Core Principles	High — comprehensive governance, funding, investment standards	Partial — addresses market risk and governance under stress	Low — assumes stable currency; no provisions for domestic asset value collapse
IOPS (2018) Supervisory Principles	High — risk-based supervision, regulatory coordination	Partial — addresses supervisory responses to market volatility	Low — does not address currency itself as primary risk source
ILO (2021) Social Security Standards	High — benefit adequacy, real value maintenance standards	Low — prescribes outcomes without operational delivery mechanisms	Very low — adjustment formulae assume inflationary range, not hyperinflation
Nyamakanga (2021) Zimbabwe Framework	Medium — designed for crisis context, less emphasis on stable operation	High — foreign currency protection, inflation adjustment provisions	High — directly addresses hyperinflationary mechanisms; pre-ZiG transition
Present study framework (Chapter Five)	Medium — incorporates stable-period crisis preparedness requirements	High — systematic ex ante positioning and crisis-response protocols	High — extends to ZiG transition; multi-stakeholder grounded; operationally specified

2.5 Research Gaps

The above literature review shows a significant amount of scholarship on pension regulation in stable contexts and a growing but still limited amount of research on crisis effects in developing economies. The delineation of research gaps in this section does two things: first, it highlights the academic need for this investigation; second, it connects each gap with a research objective, thereby demonstrating that the investigative agenda of this study is properly calibrated to deficiencies in extant knowledge. This investigation is jointly justified and shaped by five critical knowledge gaps.

Table 3: Research Gaps, Corresponding Research Objectives, and Investigative Responses

Knowledge gap	Research objective	Investigative response in present study
Gap 1: No study spans the full 2009–2024 period across three monetary regimes, including the ZiG transition. Existing work addresses discrete	RO1	Systematic documentary analysis and stakeholder interviews spanning 2009–2024, explicitly capturing the multicurrency, ZimDollar reintroduction, and ZiG phases.

phases without cross-regime comparative analysis (Mandeya & Mugobo, 2015; Mudzingiri, 2021; Kairiza, 2020).		
Gap 2: No systematic multi-stakeholder evaluation of IPEC's interventions exists. Existing studies draw on regulatory texts and macroeconomic data without engaging all four stakeholder groups (trustees, officials, actuaries, pensioners) in a single investigation.	RO1; RO2	Purposive multi-stakeholder sample of 52 participants across all four groups; first study to integrate all four perspectives into a unified effectiveness evaluation.
Gap 3: The lived experiences of pensioners — the ultimate beneficiaries of the regulatory enterprise — are systematically absent from the scholarship. The literature has privileged technical and regulatory perspectives whilst neglecting the experiential dimension of value erosion.	RO2	Dedicated pensioner stakeholder cohort within the multi-stakeholder sample; thematic analysis of experiential accounts of purchasing power erosion across monetary phases.
Gap 4: Institutional theory, capacity theory, and crisis management theory have not been comprehensively integrated and applied to pension regulation in a sub-Saharan African monetary crisis context. Theoretical frameworks remain underdeveloped for this context.	RO3	Integrated three-theory analytical framework applied across design, implementation, and learning dimensions; first comprehensive application to Zimbabwean pension regulation.

Gap 5: No robust, operationally specified framework for pension value preservation under hyperinflationary conditions exists. OECD (2016) and IOPS (2018) frameworks assume stable monetary conditions; Nyamakanga's (2021) proposals pre-date the ZiG transition.	RO4	Evidence-based framework development grounded in multi-stakeholder evidence, extended to cover ZiG transition, and operationally specified for implementation by comparable regulators.
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Gap 1: None of the studies covers the full 2009–2024 period under three monetary regimes, including the ZiG transition. The existing work focuses on different phases without a comparative analysis across regimes (Mandeya & Mugobo, 2015; Mudzingiri, 2021; Kairiza, 2020).RO1 Systematic documentary analysis and stakeholder interviews (2009–2024) capturing explicitly the multi-currency, ZimDollar reintroduction and ZiG phases.

Gap 2: No systematic multi-stakeholder evaluation of IPEC interventions. Existing studies use regulatory texts and macroeconomic data without including all four stakeholder groups (trustees, officials, actuaries, pensioners) in a single investigation.RO1; RO2 Purposive multi-stakeholder sample of 52 participants across all four groups; first to combine all four perspectives into a single effectiveness evaluation.

Gap 3: The lived experience of pensioners, the ultimate beneficiaries of the regulatory enterprise, are systematically absent from the scholarship. The literature is biased to technical and regulatory viewpoints, ignoring the experiential dimension of value erosion.RO2 Thematic analysis of experiential accounts of the erosion of purchasing power across monetary phases, within the dedicated pensioner stakeholder cohort in the multi-stakeholder sample.

Gap 4. Lack of comprehensive integration and application of institutional theory, capacity theory and crisis management theory to pension regulation in the context of a sub-Saharan-Africa monetary crisis. The theoretical models are not yet developed enough for this context.RO3 Three-theory analytical framework applied across design, implementation and learning dimensions; first comprehensive application to Zimbabwean pension regulation.

Gap 5: No strong, operationally specified framework for the preservation of pension values in hyperinflationary conditions. The OECD (2016) and IOPS (2018) frameworks assume stability of monetary conditions Nyamakanga (2021)'s proposals predate the ZiG transition.RO4 Development

of evidence-based framework based on multi-stakeholder evidence which is expanded to include ZiG transition and operationally defined for implementation by similar regulators.

Gap 1 is the lack of up-to-date African evidence that covers the full lifecycle of a monetary crisis across multiple regime transitions. Previous studies have looked at discrete phases or single episodes, but not the cumulative regulatory challenge over fifteen years and three monetary regimes. This limitation implies that the cross-regime learning dynamics identified by Boin et al. (2017) as critical to crisis management effectiveness have not been empirically examined in the Zimbabwean pension context. It is not possible to assess, on the basis of existing literature, whether IPEC's regulatory responses improved across successive monetary crises, or whether the same institutional constraints recurred without systematic resolution.

The second gap is the lack of multi-stakeholder evaluation. So far, there has been no integrated study that combines the views of trustees, regulatory officials, actuarial professionals and pensioners in evaluating IPEC's interventions during the period 2009–2024. Existing scholarship has drawn on regulatory texts, actuarial reports and macroeconomic data. But it has not systematically engaged the perspectives of those who designed the interventions, those responsible for implementing them at fund level, those who provided technical advice and those whose welfare the entire enterprise was intended to protect. The analytical implication is that the existing literature provides an incomplete and possibly misleading account of where the barriers to effective implementation were most binding.

Gap 3 is about the invisibility of the pensioner voices. The lived experiences of pensioners, the people whose retirement security is the ultimate justification for the entire regulatory enterprise, are systematically missing from the regulatory scholarship. The literature has privileged technical, legal and actuarial perspectives, while the experiential dimension of value erosion has been largely neglected. This is not a matter of academic completeness: the experience of pensioners provides vital evidence as to the adequacy of the regulatory response at the point of impact on member welfare, evidence that cannot be derived from aggregate actuarial statistics or regulatory documents.

Gap 4 addresses theoretical under-development. Pension regulation in developing country monetary crisis contexts in sub-Saharan Africa has not been analysed in comprehensive terms under institutional theory, institutional capacity theory and crisis management theory. In comparison to the empirical challenges the region faces, there is a relative lack of theoretical literature and hence a limited set of analytical tools to diagnose the failure of the regulatory framework under extreme monetary conditions.

Gap 5 is framework inadequacy. No robust practical framework, tailored to hyperinflationary pension regulation, has been advanced in the literature. The OECD (2016) and IOPS (2018) frameworks are based on stable monetary conditions and are therefore analytically inappropriate for the most pressing regulatory contexts. The most contextually relevant contribution comes from Nyamakanga (2021), but it was created prior to the ZiG transition, has a less diverse evidence base and is not operationalised. The study directly and systematically fills all five gaps.

Where is your own conceptual framework indicating relationship of the reviewed concepts

2.6 Chapter Summary

This chapter has examined and critically synthesised literature pertinent to the regulatory effectiveness of pension oversight frameworks during monetary crisis, particularly focusing on the Zimbabwean experience and its regional and global comparisons, explicitly structured around the four research objectives that guide this study.

Concerning Research Objective 1, the systematic documentation of IPEC's regulatory interventions, the literature review established Vitas's (2000) three-category taxonomy of prudential, conduct and structural interventions as the organising framework for inventory, identified Mandeya and Mugobo's (2015) documentation of the 2010 denomination directive as the most effective single intervention of the study period, and confirmed through the comparative international literature that the full range of interventions available to pension regulators under monetary crisis is wider than the interventions documented in the Zimbabwe-specific scholarship, generating a significant analytical gap that Chapter Four's documentary analysis addresses.

In evaluating the effectiveness of IPEC, the existing literature offered the three-dimensional effectiveness framework of Llewellyn (2016) of design adequacy, implementation fidelity, and outcome achievement as the main evaluative lens; demonstrated through the analyses of Hanke and Kwok (2009) and Impavido et al. (2010) that the conventional toolkit of domestic regulatory instruments is economically inadequate in the conditions of monetary collapse; and confirmed through the comparative evidence that IPEC's constrained effectiveness in the 2019–2023 period reflects both institutional capacity limitations and the exceeding of its regulatory architecture's design boundary conditions.

In terms of Research Objective 3 (barrier identification), the literature provided a four-category barrier taxonomy (i.e., legal framework inadequacy, institutional capacity deficit, information environment failures, and stakeholder coordination challenges) and, based on Andrews et al.'s (2017) capability trap analysis and Mudzingiri's (2021) evidence, showed that all four categories

were operative simultaneously during Zimbabwe's most acute monetary crisis phase, creating compounding institutional constraints limiting IPEC's protective capacity. A critical observation made in this review, and an original theoretical contribution, is that the capacity adequacy required for crisis response is at a materially higher threshold than that required for routine supervision, and that these two thresholds are rarely assessed independently.

With respect to Research Objective 4 on framework development, the literature revealed that the existing international frameworks (OECD, 2016; IOPS, 2018; ILO, 2021) are systematically insufficient for hyperinflationary contexts as they are based on stable-currency assumptions that do not apply under monetary collapse conditions. The closest existing framework in context is that of Nyamakanga (2021), and the present study builds on this by extending the evaluation period, adding the ZiG transition, and grounding framework development in multi-stakeholder qualitative evidence. The integrated theoretical framework comprising institutional theory (North, 1990; Scott, 2014; Andrews et al., 2017), institutional capacity and framework adequacy theory (Impavido et al., 2010; Rajkumar & Andrews, 2010) and crisis management theory (Boin et al., 2017) provides a multi-level analytical architecture to interrogate regulatory performance at the design level, the implementation level and the temporal learning level simultaneously. The justification for this investigation and its contribution to scholarship are provided by five research gaps, each directly mapped to a research objective. Chapter Three discusses the research philosophy, design, sampling strategy, data collection methods, analytical procedures, trustworthiness criteria and ethical safeguards that were used to systematically generate the empirical evidence needed to address these gaps.

CHAPTER 3

3. RESEARCH METHODOLOGY

3.1 Introduction

The study's entire methodological architecture is presented in this chapter, which includes information on the study's philosophical underpinnings, research design, demographic and sampling strategy, data collection tools, data analysis techniques, and guidelines for reliable and moral behaviour. The chapter systematically moves from philosophical positioning to practical data management and analysis, adhering to Saunders, Lewis, and Thornhill's (2019) research onion framework. Each methodological choice is clearly justified in light of the research questions, the nature of the phenomenon being studied, and the epistemological commitments described in Chapter One. The chapter shows how the methodological decisions were internally consistent and in line with the interpretivist philosophical stance taken.

Beyond the procedural record of data collection, a methodological chapter of this type fulfils three separate scholarly functions. First, it gives readers the empirical framework for evaluating the reliability and analytical rigour of the study's conclusions; methodological transparency is the cornerstone of scholarly credibility in qualitative research, not just a convention. Second, it shows that the choices made about how to know are consistent with the presumptions made about what there is to know, and that the study design is logically in line with the epistemological commitments expressed in the philosophical orientation. Third, it extends the study's value beyond its substantive findings to its methodological innovation by establishing the research architecture's reproducibility for future researchers facing similar regulatory phenomena in various monetary crisis scenarios.

Each methodological section's connection with its primary research goal and the trustworthiness criterion it advances are shown in Table 4. This alignment design adds to the analytical integrity of the study and guarantees that each methodological choice may be linked to a specific research goal.

Table 4: Alignment of Methodological Sections with Research Objectives and Trustworthiness Criteria

Section	Primary research objective served	Trustworthiness criterion advanced
3.2 Research philosophy	All four objectives, epistemological foundation	Credibility; Confirmability
3.3 Research design	RO1 & RO2, case boundaries and evidence scope	Credibility; Transferability
3.4 Sampling	RO2 & RO3, stakeholder breadth	Credibility; Transferability
3.5 Data collection	RO1 & RO3, documentary and experiential evidence	Credibility; Dependability
3.6 Data analysis	All four, thematic architecture	Dependability; Confirmability
3.7 Trustworthiness	RO2 & RO4, analytical credibility	All four Lincoln & Guba criteria
3.8 Ethics	RO2, participant welfare and voice	Confirmability; transferability

3.2 Research Philosophy: Interpretivist Paradigm

Under hyperinflation, pension regulation failure is more than just a technical issue that can be quantified using purchasing power ratios and asset price indexes. Pensioners, trustees, regulators, and actuaries all have distinct and irreducibly subjective accounts of the same regulatory events due to their differing institutional positions, professional judgements, and personal experiences with monetary collapse. This is a profoundly human experience. Thus, an interpretivist philosophical paradigm is an analytical requirement rather than just a methodological choice. Positivist methods that look for a single, observer-independent truth are epistemologically insufficient to the

complexity of the phenomenon being studied when the main research question is about the efficacy of regulatory interventions and effectiveness is a construct whose meaning varies across stakeholder groups and institutional contexts.

According to Creswell and Poth (2018), interpretivism starts with the understanding that actors' interpretations of their experiences shape social reality, hence the researcher's job is to interpret and make sense of things rather than quantify and validate them. This study consciously takes that stance. The devastating decline in pension values in Zimbabwe between 2009 and 2024 cannot be adequately explained by statistical returns and regulatory documents alone; instead, a thorough understanding of the lived experiences of those who created, implemented, and endured the consequences of that regulatory framework is necessary. Thus, the interpretivist paradigm provides this inquiry with the philosophical instruments suitable to its goal: to develop a richly supported, multi-perspectival understanding that produces both scholarly insight and practically applicable lessons for pension regulators facing monetary crisis, rather than to judge a single accurate account of IPEC's regulatory performance.

3.2.1 Philosophical Positioning

The interpretivist philosophical paradigm used in this study holds that social reality is subjectively created by human interpretation and that comprehension necessitates interaction with the meanings, perceptions, and contextual experiences of those involved (Burrell & Morgan, 2017; Lincoln & Guba, 2013). According to Saunders et al. (2019), interpretivism is appropriate for research questions that require qualitative, context-sensitive inquiry rather than hypothesis testing, such as how regulatory interventions were experienced and interpreted by diverse stakeholders across complex institutional contexts. The constructivist ontological stance used is suitable for studies where the notion of "effectiveness" is defined by the perspectives and experiences of individuals impacted rather than being determined solely by objective assessment (Creswell & Creswell, 2023).

In this study, interpretivism is supported by three epistemological arguments. First, without a grasp of the institutional, actuarial, and experiential settings in which interventions were created, carried out, and lived, quantitative metrics cannot adequately evaluate the regulatory efficacy of IPEC. A strictly quantitative study could show that pension values decreased by a certain percentage over a specific time period, but it would not be able to explain why specific regulatory responses were selected, why options were limited by the current legal framework, or how members in different fund types experienced different results from the same regulatory text. Second, context-stripping methods would compromise the analytical depth that makes this example theoretically productive

because the regulatory phenomena is intricately entwined with Zimbabwe's unique historical and institutional background. Third, only interpretive approaches that prioritise meaning and voice above measurement may reach the lived experience of retirees, which is the ultimate gauge of regulatory efficacy.

A rigorous examination of interpretivism's alternatives serves as additional justification for the choice. According to a post-positivist paradigm, the researcher must operationalise "regulatory effectiveness" as a quantifiable dependent variable and use statistical inference to examine theories on its causes. For three reasons, this approach is epistemologically untenable for the current study: regulatory effectiveness in the Zimbabwean context is a multi-dimensional, stakeholder-constituted phenomenon rather than a single, consistently measurable construct; experimental or quasi-experimental design is impossible due to the historical nature of the events under investigation; and the causal mechanisms of interest, institutional learning, capability trap dynamics, and crisis sense-making, are not reducible to variable relationships observable in quantitative data. A mixed-methods design might be supported by a pragmatist paradigm, but as the following subsection argues, a purely qualitative design is the most analytically potent and epistemologically coherent option due to the particular nature of the research questions, the importance of stakeholder meaning-making, and the critical-case nature of the Zimbabwean context.

3.2.2 Ontological and Epistemological Positioning

According to the constructivist ontological stance, the social reality of regulatory efficiency is not reducible to observable facts alone but rather is formed by the interpretive practices of the players involved (Lincoln & Guba, 2013). This acknowledges that the meaning of the actuarial and monetary data on the depreciation of the Zimbabwe dollar for regulatory assessment depends on the interpretive frameworks and institutional positions of the stakeholders involved, but it does not refute the empirical reality of pension value erosion. According to epistemology, knowledge is co-constructed through a dialogical process of inquiry, necessitating the researcher's reflexive awareness of how their professional positionality influences the information generated (Dodgson, 2019). This epistemological stance is clearly defended: it produces analytical depth that permits differentiated evaluation of regulatory performance across the four stakeholder groups and three monetary phases rather than relativist conclusions in which all accounts are equally valid.

There are significant epistemological ramifications for research design. According to a constructivist epistemology, the researcher must interact with participants not just as data sources whose answers may be categorised into predefined groups, but also as informed agents whose

interpretive narratives provide evidence. The selection of semi-structured interviews over survey instruments, the creation of open-ended question protocols that encourage elaboration and narrative, and the analytical commitment to maintaining participant framings in the thematic analysis rather than incorporating them into the researcher's preconceived conceptual vocabulary are all influenced by this requirement. In a constructivist epistemology, the experiential knowledge of individuals who experienced the regulatory consequences is just as analytically meaningful as the technical knowledge of those who devised them, which explains why pensioners were included as a key data source.

3.2.3 Justification for Qualitative Methodology over Alternative Approaches

Selecting a qualitative approach necessitates a clear defence against the alternatives, not just an affirmation of its suitability. According to Morgan (2018), methodological decisions should be made based on the analytical requirements of the research questions rather than disciplinary convention, and the argument for a specific technique must take into account both the advantages and disadvantages of using it.

By integrating quantitative data on pension value erosion with qualitative information on stakeholder experiences, a mixed-methods design may seem to offer analytical advantages. Two factors, however, work against this approach for the current investigation. First, Mudzingiri's (2021) longitudinal actuarial analysis and Nyamakanga's (2021) purchasing power calculations have already established a quantitative record of pension value erosion in the literature. This study fills an analytical gap by explaining why regulatory interventions failed to prevent value loss and by building a framework for better performance in the future. Second, while the main analytical insight of Chapter Two is that effectiveness is a multi-dimensional, stakeholder-constituted phenomenon that resists reduction to a single metric, a mixed-methods design would require the researcher to treat "regulatory effectiveness" as a measurable construct amenable to quantitative operationalisation. Therefore, a rigorous qualitative design that seeks depth and contextual richness is better suited to the study's analytical coherence than a mixed-methods design that would compromise analytical depth for a quantitative breadth that is not necessary for the research concerns.

The institutional discussions, capacity limitations, and informal practices that influenced regulatory decisions cannot be captured by documentary sources, and they are completely silent on the experiential dimension of value erosion that this study places at the analytical center of the effectiveness evaluation. Therefore, a purely documentary research design that relies only on IPEC

circulars, actuarial reports, and legislative instruments would provide valuable historical evidence but would be analytically insufficient for two reasons. Therefore, it is analytical need rather than methodological eclecticism to incorporate semi-structured interviews with document analysis.

3.3 Research Design: Qualitative Single-Case Study

By any academic standard, Zimbabwe's Insurance and Pensions Commission's regulatory experience from 2009 to 2024 is an exceptional case: a single oversight body navigating three consecutive monetary regimes, each of which presented distinct destabilising challenges, while attempting to carry out a member-protection mandate for which there was no established regulatory playbook. This phenomenon is best investigated using a qualitative single-case study methodology. The intensive focus that case study methodology provides is not a limitation but rather a purposeful and justified strength when the goal of the research is to produce a deeply contextualised, analytically rich account of how a particular institution responded to extreme and evolving conditions rather than to generate statistically generalisable findings across multiple jurisdictions. According to Yin (2018), whether a case is revelatory, critical, or extreme—all three of which are clearly present in Zimbabwe's pension regulatory experience—the single-case design is the best option.

3.3.1 Case Study Rationale and Design Justification

The four stakeholder groups are represented by embedded units of analysis in this qualitative single-case study research design. According to Yin (2018), case studies are suitable when the focus is on a current phenomenon within its real-world context, when the study questions are "how" and "why" questions, and when the investigator has little control over events. The effectiveness of pension regulations during Zimbabwe's monetary crisis meets all three requirements: the phenomenon is inextricably linked to Zimbabwe's unique institutional and monetary context; the researcher cannot alter historical events; and the central questions concern how and why regulatory interventions produced their outcomes. According to Stake (2010), case study research makes it possible to contextualise complex phenomena holistically, which is a design strength crucial for examining pension value erosion in Zimbabwe's unique economic setting.

The most accurate description of the design rationale used may be found in Flyvbjerg's (2006) typology of case study purposes. The typical or representative case, the deviant or extreme example, the critical case, and the paradigmatic case are the four strategic goals for case selection identified by the author. The pension regulatory experience in Zimbabwe from 2009 to 2024 simultaneously meets the requirements for the paradigmatic, crucial, and deviant labels. It is abnormal as the

financial circumstances were severe when compared to other countries. It is crucial because, according to Flyvbjerg (2006, p. 232), it offers data of "more than usual significance" for theory testing: if crisis management theory and institutional theory are unable to explain regulatory failure in Zimbabwe, they are unlikely to do so in any similar circumstances. It is paradigmatic because the mechanisms of regulatory failure found in Zimbabwe are sufficiently universal to be used as a model for the more general phenomena of inadequate pension regulations during monetary crises. As a result, the analytical insights produced have the potential to be applied to any pension system that operates in an environment of currency volatility, serving as the foundation for the analytical generalisation that Yin (2018) sees as the proper epistemic goal of case study research.

The single-case design has been criticised for restricting generalisability and being vulnerable to researcher bias (Gerring, 2007). Three design elements are used in this study to address these issues. Internal comparative analysis is first introduced by the embedded units of analysis, which represent four different stakeholder groups and significantly lower the likelihood of a monological account. Second, a type of methodological triangulation that is unaffected by the researcher's preferences for interpretation is provided by the combination of documentary analysis and interview data. Third, Flyvbjerg's (2006) distinction between statistical and analytical generalisation directly addresses the issue of generalisability: the study aims to generate theoretical insights about the mechanisms of regulatory failure under monetary crisis that are more broadly applicable to similar institutional and economic environments rather than to produce findings that can be extrapolated to all pension regulatory contexts through statistical inference.

3.3.2 Embedded Units of Analysis

Four embedded units of analysis are included in the single-case research design, each of which represents a unique stakeholder group with a distinctive positional relationship to the regulatory phenomenon being studied. According to Yin (2018), embedded designs, in which a single case comprises several sub-units, increase the analytical power of case study research by facilitating within-case comparative analysis, which can show how various institutional positions' experiences, interpretations, and results were produced by the same regulatory framework. The four units of analysis in this study indicate four qualitatively diverse epistemic views on the phenomenon being studied, rather than just being separate data sources.

The institutional interface between IPEC's regulatory requirements and fund management practices is occupied by pension fund trustees, who offer insight into the interpretation and operationalisation of regulatory directives at the fund level, an aspect of regulatory effectiveness that is directly related

to Research Objective 2. The institutional viewpoint of the oversight body itself, including internal discussions, resource limitations, and legislative framework restrictions that influenced regulatory decisions, the design and capacity aspects most directly related to Research Objectives 1 and 3, is provided by IPEC officials. In order to bridge regulatory intent (Research Objective 1) and implementation barriers (Research Objective 3), actuarial consultants offer a technically grounded evaluation perspective on regulatory design adequacy, fund valuation implications, and the gap between regulatory intent and actuarial reality under monetary stress. The experiential view of regulatory outcomes as lived economic realities that pensioners offer is completely missing from the current technical literature and closely related to Research Objective 2's outcome attainment dimension. Combining these four viewpoints allows for thorough triangulation and offers the multi-level explanatory power required by the research questions, which a single-group study is unable to deliver.

Table 5: Embedded Units of Analysis — Positional Knowledge and Research Objective Contribution

Stakeholder unit	Epistemic position and primary knowledge	Research objectives primarily served
Pension fund trustees	Institutional interface between regulatory requirements and fund management practice; operational implementation experience	RO1 (intervention documentation); RO2 (implementation effectiveness); RO3 (fund-level barriers)
IPEC officials	Regulatory design and institutional deliberation; legal framework constraints; enforcement capacity	RO1 (policy intent); RO2 (design adequacy); RO3 (institutional and legal barriers)
Actuarial consultants	Technical adequacy of regulatory frameworks; valuation methodology; actuarial impact of currency transitions	RO2 (technical effectiveness assessment); RO3 (technical and informational barriers); RO4 (framework components)
Pensioners	Lived experience of value erosion; outcome adequacy from member perspective; regulatory understanding and trust	RO2 (outcome achievement from member perspective); RO3 (experiential barriers); RO4 (member-centred framework requirements)

3.4 Population and Sampling

A qualitative study of regulatory effectiveness's credibility is largely dependent on the calibre and representativeness of the voices included in the investigation. In order to ensure that the evidence base includes the full range of institutional perspectives, regulators, trustees, actuarial professionals,

and pensioners—whose varied experiences of Zimbabwe's pension regulatory framework between 2009 and 2024 are crucial to constructing a rigorous and balanced account of IPEC's performance across the three monetary phases under investigation—this section outlines the population from which study participants were drawn.

3.4.1 Study Population and Sampling Strategy

All parties directly involved in or impacted by pension value preservation in Zimbabwe between 2009 and 2024 are included in the study population: actuarial consultants who work professionally with Zimbabwean pension funds, IPEC officials involved in the development and enforcement of regulatory policies, pension fund trustees with fiduciary responsibility during the study period, and pensioners who suffered the value erosion that the regulatory framework was intended to prevent. According to Patton (2015), qualitative case studies that aim for analytical depth rather than statistical representativeness should use purposive sampling, which is the intentional selection of participants based on knowledge, experience, and the capacity to deliver information-rich responses. Maximum variation sampling across several stakeholder groups, according to Palinkas, Horwitz, Green, Wisdom, Duan, and Hoagwood (2015), enhances analytical generalisation by capturing a variety of viewpoints, making it possible to identify patterns that hold across variation, and shedding light on context-specific differences.

In order to guarantee that each participant had the positional knowledge required to make a significant contribution to the study, participants were chosen based on group-specific criteria. In order to ensure that participants had firsthand experience implementing regulatory requirements under financial stress, trustees were chosen based on their documented fiduciary responsibility during the study period and tenure spanning at least one monetary regime transition. In order to allow for retroactive institutional accounts unrestricted by present institutional positions, IPEC officials, including those who had retired by the time of the interviews, were chosen based on their direct involvement in the establishment or enforcement of regulatory policies during the study period. The selection of actuarial consultants was based on their professional involvement with Zimbabwean pension funds throughout the study period, including firsthand knowledge of fund valuation during currency transformation events. In order to maximise diversity in the experiential data and guarantee that the sample includes experiences across all three monetary phases, pensioners were chosen to ensure demographic variation across age, fund type, employer sector, and duration of retirement.

Snowball sampling, which is especially useful for reaching institutional insiders and retired officials who might not be reachable through official organisational channels, was used in conjunction with purposeful sampling within each stakeholder group. Initial participants were asked to suggest additional potential participants with pertinent positional knowledge (Noy, 2008). To maintain analytical consistency, all snowball-generated individuals were chosen using the same standards as those who were directly recruited.

Table 6: Study Participant Distribution by Stakeholder Group

Stakeholder group		n	Selection rationale and analytical contribution
Pension fund trustees		20	Fiduciary responsibility across the study period; direct experience of implementing regulatory requirements and managing fund assets during currency transitions; insight into fund-level consequences of IPEC's interventions and the adequacy of regulatory guidance received
IPEC officials		5	Policy development and regulatory design perspectives; insight into institutional deliberations, resource constraints, and legal framework limitations that shaped regulatory responses; direct knowledge of the enforcement challenges experienced across the three monetary phases
Actuarial consultants		8	Technical analysis of the actuarial impact of currency transitions on fund valuations and real benefit adequacy; expert assessment of the gap between regulatory design and actuarial reality under monetary stress; professional evaluation of IPEC's technical capacity relative to the demands of the supervisory challenge
Pensioners		19	Lived experience of value erosion as the ultimate criterion of regulatory effectiveness; demographic variety across fund types, employer sectors, and periods of retirement to enable maximum variation; perspectives systematically absent from existing technical scholarship, directly addressing the third knowledge gap identified in Chapter Two

TOTAL	52	Purposive maximum variation sample achieving data saturation across all four stakeholder groups and three monetary phases of the study period
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3.4.2 Sample Size and Data Saturation

Data saturation principles, which state that more interviews produce diminishing returns in fresh analytical insights, were used to establish the sample size (Guest, Namey, & McKenna, 2017). An iterative method that involved data collecting within each stakeholder group until consistent thematic patterns developed and further interviews yielded no significantly new codes or analytical categories resulted in the final sample of 52 participants. In line with Braun and Clarke's (2021) recommendations on qualitative adequacy, this iterative saturation process is philosophically consistent with the interpretivist paradigm. Instead of predetermining sample size using a formula calibrated to statistical power requirements, saturation is treated as an emergent analytical criterion assessed through continuous engagement with the data.

According to Guest et al. (2017), saturation in interview studies is usually reached between 16 and 24 interviews for homogeneous samples and necessitates larger samples for heterogeneous populations. Because of the multi-group design of the current study, which includes four distinct stakeholder populations with qualitatively different epistemic positions on the phenomenon, a sample of 52 is analytically appropriate. According to Creswell and Poth (2018), this type of distribution, 12 to 17 participants per significant stakeholder group, is in line with accepted guidelines for qualitative research that uses maximum variance sampling across several groups. A smaller pensioner sample would run the danger of providing a narrow and inadequately diverse account of the experience dimension of value erosion, which makes the inclusion of 15 pensioner participants especially crucial given the lack of this perspective in the body of previous work.

Confidence that the saturation attained represents true theoretical completeness rather than the unintentional homogeneity of a narrowly constructed sample is strengthened by the sample's diversity across institutional roles, career stages, fund types, and study period phases. The conclusion that saturation had been reached was supported by the fact that no new theme categories formed during the last twelve interviews, which covered all four stakeholder groups, and participant accounts consistently mapped onto preexisting codes.

3.5 Data Collection Methods

The rigour with which evidence is acquired from various sources ultimately determines the depth and trustworthiness of a qualitative single-case research. In order to provide a thorough and triangulated body of evidence, this section outlines the data collection techniques used in this study, which include semi-structured interviews, systematic document analysis, and focus group discussions. These techniques were carefully chosen because no single tool can fully capture the complexity of regulatory effectiveness across three monetary phases and four different stakeholder groups, and the study's analytical conclusions are significantly strengthened by the convergence of findings across independent data sources. Methodological triangulation is described by Denzin and Lincoln (2018) as analytical enrichment rather than redundancy: each approach sheds light on parts of the phenomena that others are unable to access, and their combination produces a more comprehensive account than any one instrument could.

3.5.1 Semi-Structured Interviews

The main technique used to collect data for this study is semi-structured interviews. According to Brinkmann and Kvale (2015), semi-structured interviews allow for systematic coverage of research objectives while remaining responsive to participant framings of the phenomenon under investigation by combining pre-planned open-ended questions with the flexibility to explore emergent themes. This combination of flexibility and structure is particularly appropriate for the current study: flexibility is crucial to enabling participants to introduce institutional, experiential, and technical nuances that the researcher's pre-framing cannot predict, while structure is required to guarantee thorough coverage of the four research objectives across all participants.

For each of the four stakeholder groups, separate interview guidelines were created that reflected their unique positional knowledge as well as the particular facets of the actuarial and regulatory experience that they could most easily access (see appendix). Prior to the major data collection, each guide was designed around the four study objectives and piloted with two participants from each group. The results of the pilot were used to improve the question phrasing, remove any ambiguities, and pinpoint areas that need more in-depth enquiries. The study's appendices contain copies of the modified directions, which were recorded after the pilot phase. With the participants' permission, all interviews were digitally recorded. To guarantee accuracy and maintain participant stories' paralinguistic elements, the recordings were expertly transcribed verbatim.

The interview guide for pension fund trustees covered the following topics: the actuarial and investment challenges of managing member value under monetary stress; the operational experiences of implementing IPEC's regulatory requirements during currency transitions; the

perceived sufficiency of regulatory guidance and technical support received from IPEC; and the trustees' evaluations of which interventions were most and least effective in the particular context of their fund's asset structure and membership profile. The institutional procedures underlying significant regulatory interventions, the Commission's deliberative dynamics during times of crisis, the legal framework's limitations on regulatory options, the technical capacity available for impact assessment and enforcement, and IPEC officials' own retrospective evaluations of the Commission's strongest and weakest regulatory responses were all highlighted in the guide for IPEC officials. The actuarial guide covered the relationship between actuarial professional practice and regulatory requirements during times of monetary stress, the particular actuarial challenges brought about by monetary regime transitions, and the technical adequacy of regulatory frameworks from a valuation and risk management perspective. The pensioner guide examined lived experiences of value erosion in various monetary phases, comprehension and interaction with pension regulatory procedures, the quality of information obtained regarding the consequences of significant monetary and regulatory changes, and the tangible effects of value erosion on everyday living standards.

The length of the interviews varied from 45 to 95 minutes, with IPEC officials and actuarial consultants usually spending more time because of the subject's technical intricacy. All interviews were performed in compliance with the ethical guidelines outlined in Section 3.8 and under private conditions to guarantee honest disclosure. Due to geographical limitations, 12 of the 52 interviews were conducted remotely via video conference; Deakin and Wakefield's (2014) evaluation of video interview equivalency for qualitative research was supported by the lack of a significant difference in data quality between in-person and remote interviews.

3.5.2 Document Analysis

According to Bowen (2009), document analysis is a useful addition to interview data since it offers unbiased, up-to-date proof of institutional reactions and regulatory actions that interviews cannot provide on their own. Document analysis serves two analytically different purposes in this study: it offers a systematic inventory of IPEC's formal regulatory activities, which provides the empirical basis for Research Objective 1's documentation of interventions, and it independently verifies and contextualises stakeholder accounts, lowering the risk that retrospective interpretation and recall bias will distort the factual record of regulatory actions.

The examined documents fall into five categories. All publicly accessible IPEC circulars, directives, and annual reports from 2009 to 2024 fall under the first category. These include Directive 02/2010 on the denomination of pension benefits in US dollars, all subsequent currency-related circulars,

supervisory frameworks, and the Commission's strategic planning documents. The Reserve Bank of Zimbabwe's monetary policy pronouncements, Statutory Instrument 33 of 2019 and any future monetary framework instruments, and the Pensions and Provident Funds Act [Chapter 24:32] and its regulatory instruments are all included in the second group. Pension fund annual reports and actuarial valuations that can be accessed through IPEC's public registry make up the third category. Actuarial reports for the four fund types, self-administered, insured, standalone, and industry, that offer the clearest proof of value preservation outcomes at the point of member impact are of particular interest. The OECD (2016) Core Principles, IOPS (2018) Supervisory Principles, and ILO (2021) Social Security Standards are comparable regulatory publications that make up the fourth category. These documents serve as normative benchmarks for assessing the sufficiency of IPEC's framework design. Grey literature and academic studies make up the fifth category. The published, peer-reviewed literature on IPEC's regulatory performance is examined in Chapter Two and serves to contextualise and enhance the main documentary and interview data.

The method is guided by Bowen's (2009) analytical framework, which evaluates documents for authenticity (i.e., whether the document is real and unaltered), credibility (i.e., whether the content is accurate and free from distortion), representativeness (i.e., whether the surviving documents are representative of the entire population of relevant documents), and meaning (i.e., whether the content is clear and understandable in its original context). The main analytical tension via which Research Objective 2's effectiveness evaluation is generated is the discrepancy between the actuarial and economic outcomes experienced by fund members and the regulatory norms stated in official documents.

IPEC's internal regulatory correspondence is not fully accessible, which is a major shortcoming of the documentary base. All materials made available through these means were included in the analysis, and formal access requests were filed in accordance with the relevant information regulations. Stakeholder account evidence is used to contextualise rather than to cover up any gaps in the documentary record that were found. These gaps are specifically acknowledged in the pertinent analytical portions of Chapter Four.

3.5.3 Focus Group Discussions

In line with Morgan's (1997) description of focus groups as especially useful for eliciting the social construction of meaning in group environments where collective sense-making is analytically significant, focus group talks were used as an additional data collection approach. Three focus groups were held: one with three actuarial consultants, one with five pensioners, and one with six

pension fund trustees representing various fund kinds and size categories. Because of institutional sensitivity and the analytical value of maintaining the candour that one-on-one interviews provide, IPEC officials were excluded from a focus group discussion.

Three distinct analytical purposes that individual interviews were unable to fulfil were fulfilled by the focus group talks. First, they made it possible to observe how members of the same stakeholder group collectively construct their understanding of value erosion and regulatory effectiveness, exposing areas of internal disagreement and shared framings that could not be captured by individual interview accounts produced in isolation. Second, they offered a second kind of triangulation: themes that consistently surfaced in focus group discussions as well as individual interviews have more analytical credibility than those that exclusively surfaced in individual testimonies. Third, the trustee focus group provided the variation-within-unit data that enhances the embedded case design's analytical usefulness by enabling a methodical comparison of how regulatory requirements were operationalised across various fund types.

In order to directly compare themes across the two collection tools, focus group talks were verbatim recorded, transcribed, and analysed using the same thematic analysis techniques used for individual interview data. According to Morgan (1997), dominating voices, group conformity, and social desirability can all have an impact on focus group data. To mitigate these risks, facilitators used strategies such structured turn-taking, active urging of quieter individuals, and explicit inviting of opposing viewpoints.

3.6 Data Analysis

The thoroughness and transparency with which qualitative material is evaluated, rather than its acquisition, is what gives it interpretive significance. The analytical method used to process and evaluate the information obtained from semi-structured interviews, focus groups, and document analysis is described in this section. It is based on Braun and Clarke's reflexive thematic analysis (2021). Maintaining the methodological discipline required to guarantee that conclusions are traceable, credible, and responsive to all four research objectives, the analytical strategy is intended to honour the interpretivist philosophical positioning of the study by methodically progressing from unprocessed participant accounts and documentary evidence to theoretically grounded findings.

3.6.1 Thematic Analysis Framework

The main analytical framework used is thematic analysis, which follows Braun and Clarke's (2021) revised six-phase process: data familiarisation through multiple readings and active engagement with the entire dataset; generation of initial codes systematically across the full dataset without premature thematic assignment; development of themes by collating codes into potential thematic categories with sufficient internal coherence and external distinctiveness; review and refinement of themes against both the coded extracts and the full dataset; definition and naming of themes with clear analytical boundaries and key organising concepts; and creation of the analytical report that integrates thematic findings with the theoretical framework. In order to ensure that the analysis reflects the data rather than the researcher's preconceived assumptions, Braun and Clarke (2021) emphasise that thematic analysis is an interpretive act that requires explicit choices about what is theoretically significant in the data. These choices must be documented and justified during the analytical process.

Fereday and Muir-Cochrane (2006) show the analytical benefit of combining inductive coding, which permits themes to arise from the data without predefined categorisation limits, with deductive coding, codes drawn from the theoretical framework applied methodically to the data. The current study uses this mixed strategy. The three theoretical frameworks presented in Chapter Two are the source of the deductive codes: institutional theory produces codes pertaining to formal rules, institutional norms, cultural-cognitive presumptions, and enforcement mechanisms; institutional capacity theory produces codes pertaining to technical expertise, adequate legal frameworks, information infrastructure, and instrument calibration; and crisis management theory produces codes pertaining to sense-making quality, decision-making under uncertainty, member communication adequacy, institutional accountability, and cross-crisis learning. Given the comparatively undeveloped state of the theoretical literature on pension regulation under monetary crisis noted in Chapter Two, the inductive dimension guarantees that the analysis stays responsive to the empirical data and permits the emergence of codes that the theoretical frameworks did not anticipate.

The four research objectives, themes pertaining to the types and extent of IPEC's interventions (Research Objective 1), the factors and dimensions of effectiveness (Research Objective 2), the obstacles and limitations on implementation (Research Objective 3), and the elements of a suitable framework for hyperinflationary pension regulation (Research Objective 4), are the focus of the structured set of findings produced by the thematic analysis. The data analysis in Chapter Four and the framework creation in Chapter Five are directly analytically coherent thanks to this thematic architecture.

An observation regarding analytical rigour

Thematic analysis is often reduced to a mechanical procedure of code-counting rather than a truly interpretive effort, according to Braun and Clarke (2021). In contrast to a frequently occurring code that may be analytically trivial if it reflects a widely accepted but uncontested background assumption rather than a substantively significant interpretive structure, this study explicitly rejects the confusion of frequency with analytical significance: a theme that appears in only a subset of participants' accounts may be analytically significant if it introduces a dimension of the regulatory experience that is not captured elsewhere. Therefore, in line with the epistemological commitments stated in Section 3.2, the analytical logic of importance used throughout Chapter Four is expressly interpretive rather than quantitative.

3.6.2 Analytical Software

Throughout the analytical process, NVivo 12 software is used for methodical coding, storage, retrieval, and audit trail management (Jackson & Bazeley, 2019). NVivo's query and visualisation features allow for the creation of coding matrices that show the distribution of themes across stakeholder groups, allowing for the systematic comparison of viewpoints on the same regulatory events and the identification of areas of convergence and divergence. This makes the choice to use NVivo not just practical but also analytically significant. In order to facilitate the within-case comparative analysis required by the embedded design and to provide the supporting evidence for triangulation assertions, matrix enquiries are utilised to investigate how various stakeholder groups define the same regulatory interventions. As part of the confirmability methods outlined in Section 3.7, the entire audit trail of coding decisions, theme development, and analytical memoranda is kept in NVivo and is accessible for review.

The thematic findings from the four research objectives and three financial phases of the study are arranged using NVivo's framework matrix function, which makes it possible to display themes in a methodical manner across the analytical aspects of the inquiry. According to Jackson and Bazeley (2019), CAQDAS software offers the organisational framework that allows a researcher to maintain analytical rigour and transparency across a large and complex dataset, exactly the role it plays in this study, rather than replacing interpretive analytical skill.

3.6.3 Reflexivity and Positionality

Throughout the analytical process, the researcher's professional expertise with Zimbabwe's pension regulatory framework must be explicitly and consistently taken into account as a methodological concern. According to Dodgson (2019), researcher positionality can be both a source of bias and a useful analytical tool. While insider knowledge can make it easier to reach participants and allow for more focused, contextually aware questioning, there is a chance that preconceived notions will influence analytical interpretations in ways that support rather than challenge preconceived notions.

Throughout the study's data collecting and analysis stages, a rigorous reflexivity procedure is upheld. First, a reflexivity journal is kept that records the researcher's changing interpretive presumptions, any situations in which professional knowledge of the regulatory environment may have affected analytical decisions, and the researcher's responses to participant accounts that contradicted or complicated the evolving analytical narrative. Second, during the analysis phase, four-weekly peer debriefing sessions with academic colleagues outside the regulatory environment are held. These sessions act as a structured challenge mechanism, requiring the researcher to defend interpretive decisions against external scrutiny. Third, at the conclusion of each analytical phase, negative case analysis, the intentional search for evidence that contradicts or complicates the emerging thematic structure, is carried out methodically to guarantee that disconfirming evidence is given equal analytical attention rather than being subordinated to confirmatory findings. Fourth, as explained in Section 3.7, member checking with 15 participants is used to give participants a direct way to contest interpretations of their accounts before they are finished.

The constructivist epistemological stance used in this research views reflexivity as a significant aspect of analytical transparency rather than as a contamination that needs to be removed. The knowledge generated by qualitative inquiry is constantly placed, and what is visible and unseen during the analytical process depends on the researcher's positioned relationship to the phenomenon being studied. The proper methodological response to this epistemic reality is to openly identify and actively control this positionality, as opposed to the fiction of researcher neutrality (Creswell & Creswell, 2023).

3.6.4 Trustworthiness

Lincoln and Guba's (1985) four criteria, credibility, transferability, dependability, and confirmability, are used to evaluate trustworthiness in qualitative research. These criteria are the qualitative counterparts of validity, external validity, reliability, and objectivity in quantitative research. Specific methodological provisions that are intended to be realistically operational rather than aspirationally articulated are used to address each criterion.

Table 7: Trustworthiness Criteria, Definitions, and Methodological Provisions

Criterion	Definition and qualitative equivalent	Methodological provision in this study
Credibility	Confidence that findings accurately represent participants' realities; equivalent to internal validity	Triangulation across four stakeholder groups and three data types; member checking with 15 participants (Birt et al., 2016); prolonged engagement with the data; peer debriefing at four-week intervals throughout analysis
Transferability	Applicability of findings to comparable contexts; equivalent to external validity	Thick description of Zimbabwe's regulatory and monetary environment; maximum variation sampling; explicit mapping to comparable regional contexts (Zambia, Malawi, Ghana); Flyvbjerg's (2006) analytical generalisation from critical case
Dependability	Consistency and auditability of research processes; equivalent to reliability	Comprehensive NVivo audit trails of all coding decisions and analytical memos; consistent interview and analytical protocols across all participants; systematic documentation of analytical decisions; two independent coders for 20% of the data (inter-coder reliability check)
Confirmability	Neutrality of findings, grounded in data rather than researcher perspectives; equivalent to objectivity	Reflexive acknowledgement of researcher positionality (Dodgson, 2019); systematic negative case analysis at end of each analytical phase; grounding of all findings in direct quotations and documentary evidence; peer debriefing; audit trail available for independent inspection

Given the possibility that the researcher's professional positionality could influence interpretive conclusions, credibility is the most analytically significant trustworthiness factor for this study. The main method of establishing credibility is triangulation. When each of the four stakeholder groups independently and consistently describes a regulatory phenomena, that description has far greater

credibility than one that comes from a single source. Before finalisation, a sample of 15 participants from each of the four groups are asked to examine summaries of the thematic analysis using the member checking approach suggested by Birt, Scott, Cavers, Campbell, and Walter (2016). Member checking is an analytical tool as well as a validation process; participant challenges to preliminary interpretations led to numerous significant improvements to the theme framework that improved the final findings' analytical precision.

In line with O'Connor and Joffe's (2020) suggestions for qualitative research with large datasets, reliability is enhanced by applying an inter-coder reliability check to 20% of the coded data. The identical data extracts were independently coded by a different researcher with experience in pension regulatory literature, and the resulting codes were compared with those of the initial researcher. The NVivo audit trail records the process of discussing and reaching a consensus on areas of disagreement. Across all thematic areas, the inter-coder agreement rate was more than 85%, offering compelling evidence for the reliability of the analytical methodology.

You can improve trustworthiness through triangulation, explain how you did it here?

3.7 Ethical Considerations

The greatest standards of ethical behaviour are required for research involving human subjects on issues as personally significant as the loss of retirement income. Informed permission, confidentiality, anonymity, and the protection of participant welfare throughout the data collecting and reporting procedure are all included in this section, which outlines the ethical framework guiding this project. Ethical rigour is a substantive obligation that influences every aspect of the research design, from the creation of interview instruments to the management and storage of participant data, because the study's participant groups include regulatory officials whose institutional positions require careful handling and pensioners who have experienced severe financial hardship.

3.8.1 Ethical Framework and Institutional Approvals

Beauchamp and Childress's (2019) four ethical principles, respect for humans, beneficence, non-maleficence, and justice, are adhered to throughout the entire study process. The normative framework for particular ethical decisions is provided by these four principles: beneficence shapes the research design's commitment to producing knowledge of practical value to pensioners and regulators; non-maleficence shapes the protocols for managing participant distress and protecting institutional confidentiality; and justice shapes the sampling strategy's commitment to including pensioner voices that have been routinely excluded from the scholarly literature.

To meet the institutional standards for Masters-level research, ethical clearance was sought from the Bindura University of Science Education Research Ethics Committee prior to any data gathering activity. In order to ensure that the research was carried out with the knowledge and assistance of the regulatory body whose performance is being examined, formal institutional access clearances were secured from IPEC and from pertinent pension funds whose trustees and officers took part in the study. Access to actuarial consultant participants was made easier by professional support from the Actuarial Society of Zimbabwe. The voluntary nature of participation was upheld throughout; withdrawal rights were made explicit at the outset and reaffirmed at the start of each interview, and no institutional endorsement was conveyed to prospective participants in a way that might impose implicit pressure to participate.

3.8.2 Informed Consent, Confidentiality, and Participant Protection

After being fully informed about the purpose, methods, voluntary participation rights, data storage arrangements, and confidentiality safeguards, each participant gave signed informed consent. Instead of having to sign the consent form just before the interview started, participants were given enough time to read, ask questions, and think about their consent. Participants were made fully aware of their freedom to leave the study at any time without facing any repercussions and to remove particular answers from the analysis even after the interview was over. Three participants used their right to retract particular answers, which were removed from the transcript and not included in the study.

Four interconnected mechanisms are used to protect participant confidentiality: de-identification of all transcripts by substituting participant codes for personal names; institutional anonymisation using generic descriptors (e.g., "a large insured fund" instead of a named entity) that prevent identification of specific organisations; secure password-protected data storage on encrypted servers with access limited to the primary researcher; and aggregated reporting where direct quotations are attributed only to the participant's group category and not to any individual identifier. To preserve traceability to the dataset while safeguarding human identities, quotations used in Chapter Four are provided as "Trust-ee 07" or "IPEC Official 03."

When conducting interviews with pensioner participants who may have suffered substantial financial hardship and for whom talking about pension value erosion may cause emotional anguish, extra caution is taken. The interview guide is designed to allow participants to decline any question without explanation; all pensioner participants receive referral resources for financial counselling and social support at the end of the interview; and interviews are preceded by an emotional wellbeing check and a brief explanation of the interview process, in accordance with Kara's (2018) recommendations for research with economically vulnerable populations. Three pensioner interviews featured brief pauses at

the participant's request before resuming, but no participant experienced distress that necessitated discontinuation. Any indication of substantial distress throughout the interview resulted in a pause and an offer to discontinue.

Particular attention must be paid to the ethical aspect of studying a regulatory body whose performance is being critically assessed. The permission form and interview questions clearly stated that IPEC official participants were interviewed as individual professionals offering their personal viewpoints rather than as institutional spokespersons. Chapter Four's critical findings of IPEC's regulatory performance are presented as analytical conclusions about institutional and framework performance that are supported by facts rather than as personal critiques of specific officials whose cooperation enabled the study. This distinction between personal attribution and institutional performance evaluation is a significant ethical commitment that influences the analytical chapters' wording and structure.

3.8 Chapter Summary

The study's entire methodological architecture has been given in this chapter, exhibiting internal coherence in all methodological choices, from analytical technique to philosophical stance. For research questions about how various stakeholders experienced and interpreted regulatory interventions during a protracted financial crisis, questions that cannot be answered by quantitative measurement or hypothesis testing without compromising the analytical depth required by the research objectives, the interpretivist paradigm is epistemologically necessary.

Using Zimbabwe's pension regulatory experience from 2009 to 2024 as a critical, deviant, and paradigmatic case, the qualitative single-case study design allows for the comprehensive contextualisation required for examining phenomena whose boundaries are inextricably linked to their institutional and economic context (Flyvbjerg, 2006). Within-case comparison analysis is introduced by the embedded design with four stakeholder units of analysis, which significantly increases the design's analytical capacity and permits the multi-perspectival effectiveness evaluation required by Research Objective 2.

The purposive maximum variation sample of 52 individuals from four stakeholder groups provides the inter-group diversity and informational richness required for thorough triangulation. The sample size was verified against Guest et al.'s (2017) evidence-based recommendations on saturation thresholds for heterogeneous multi-group designs, and data saturation was achieved by an iterative procedure in line with Braun and Clarke's (2021) methodology. The methodological triangulation provided by the combination of semi-structured interviews, thorough document analysis, and focus

group discussions guarantees that no important aspect of the regulatory phenomena is not available to the analytical framework.

Using a hybrid deductive-inductive coding technique, thematic analysis procedures are based on Braun and Clarke's (2021) six-phase framework. This allows for systematic engagement with the integrated theoretical framework of Chapter Two while staying really responsive to empirically emergent findings. Together, the reflexivity protocols, inter-coder reliability tests, and negative case analysis techniques guarantee that the study satisfies the analytical rigour necessary for top-notch interpretative research. Rather than making aspirational claims, comprehensive trustworthiness provisions use precise, operationally defined methodological processes to fulfil all four Lincoln and Guba (1985) requirements. Research with potentially vulnerable participants and at the master's level must adhere to strict requirements, which are ensured by ethical protections.

Drawing on the complete body of evidence produced by the above-described data collection procedures, Chapter Four presents the empirical findings and analysis produced by this methodology, arranged thematically around the four research objectives and the three theoretical propositions advanced in Chapter One.

CHAPTER 4

4. FINDINGS, ANALYSIS AND DISCUSSION

4.1 Introduction

This chapter presents, analyses, and interprets the empirical findings generated by the research investigation. The findings draw on 52 semi-structured interviews and three focus group discussions conducted across four stakeholder groups, pension fund trustees (n=20), IPEC officials (n=5, comprising three serving officials and two former employees), actuarial consultants (n=8), and pensioners (n=19), supplemented by systematic analysis of 147 documentary items and a structured questionnaire of twenty items administered to all 52 participants. The integration of these evidence streams produces a richly triangulated account of IPEC's regulatory performance that is analytically stronger than any single-method investigation could provide.

The chapter is organised around the four research objectives, each addressed in a dedicated analytical section. This architecture ensures direct traceability between empirical evidence and the research agenda articulated in Chapter One and facilitates the comparison of findings across stakeholder groups that the embedded case study design prescribes. Section 4.2 profiles the research participants and provides a data overview. Section 4.3 addresses Research Objective 1. Section 4.4 addresses Research Objective 2. Section 4.5 addresses Research Objective 3. Section 4.6 addresses Research Objective 4. Section 4.7 presents cross-cutting thematic findings that transcend individual objective boundaries. Section 4.8 provides the integrated theoretical discussion applying the three-theory framework developed in Chapter Two. Section 4.9 provides the chapter summary.

Throughout the chapter, participant contributions are identified by stakeholder group and participant code, preserving confidentiality whilst enabling readers to evaluate the evidentiary grounding of interpretive claims. Analytical claims are supported by triangulation across interview data, documentary evidence, and questionnaire data, consistent with the methodological framework of Chapter Three. Where the findings of former IPEC employees add internal institutional corroboration to externally observable evidence, this is explicitly noted, as these participants' positional knowledge constitutes a qualitatively distinct and particularly authoritative evidential source.

Table 8: Alignment of Chapter Sections with Research Objectives and Evidential Basis

Section	Research objective	Primary evidence type	Theoretical framework applied
4.3	RO1: IPEC's interventions 2009–2024	Document analysis; interview (RO1-specific guides)	Vittas (2000) taxonomy; Llewellyn (2016) design adequacy dimension
4.4	RO2: Effectiveness of interventions	Interview; questionnaire (Q3–Q10); document analysis	Llewellyn (2016) three dimensions; Impavido et al. (2010) boundary conditions; Claessens & Kodres (2014)
4.5	RO3: Barriers and challenges	Interview; questionnaire (Q11–Q14); document analysis	Rajkumar & Andrews (2010); Andrews et al. (2017) capability trap; North (1990); Scott (2014)
4.6	RO4: Framework components	Interview; questionnaire (Q15–Q20); focus groups	Hanke & Kwok (2009); Boin et al. (2017); Nyamakanga (2021)
4.7	Cross-cutting themes	All evidence streams	Integrated three-theory framework

4.2 Participant Profile and Data Overview

Table 4.2 presents a summary profile of the 52 participants. The expanded sample incorporates five IPEC-affiliated participants, three active officials and two former employees, a design decision that proved analytically consequential at multiple junctures. The former employees, whose combined institutional experience spans Phase One and Phase Two, provided candid accounts of internal deliberative processes, resource constraints, and learning deficits unconstrained by current employment considerations. This positional distinction produced evidence of institutional dynamics that external stakeholders could characterise from the outside but not directly confirm from within, and that active officials, operating within current institutional roles, could acknowledge only with the constraints that their positions imposed.

Table 9: Participant Profile Summary

Stakeholder group	n	Avg. years in role	Key characteristics
Pension fund trustees	20	11.8	14 active across 2 or more monetary phases; 6 active during 2019 transition; state-owned, private, and NGO-sponsored funds represented
Active IPEC officials	3	9.1	All 3 with direct policy involvement in at least one major regulatory intervention; senior analytical and supervisory roles
Former IPEC employees	2	12.5	Both held senior analytical roles within IPEC; one active during Phase One, one spanning Phase One and Phase Two; provide institutional perspective unconstrained by current roles
Actuarial consultants	8	14.6	All with currency-transition valuation experience; 7 prepared valuations during 2019–2021; 4 with international actuarial engagements enabling comparative perspective
Pensioners	19	n/a	13 retired pre-2019; 4 retired 2019–2023; ages 58–84; diverse fund types, employer sectors, and retirement periods providing maximum experiential variation
TOTAL	52	—	Theoretical saturation achieved within each stakeholder group; final 2–3 interviews per group produced no substantively new codes

Theoretical saturation was achieved within each stakeholder group, with the final two to three interviews producing no substantively new codes. The document analysis encompassed 147 items: 34 IPEC circulars and directives, 16 IPEC annual reports, 28 pension fund annual reports and actuarial valuations, 19 Reserve Bank of Zimbabwe monetary policy statements, 12 statutory instruments, and 38 secondary analytical sources. The structured questionnaire yielded a 100 per cent response rate across all 52 participants, and questionnaire findings are integrated with qualitative analysis at each relevant analytical juncture.

4.3 IPEC's Regulatory Interventions, 2009 to 2024

This section presents the first comprehensive taxonomy of IPEC's regulatory interventions across three monetary phases, derived from systematic document analysis and validated through stakeholder interviews. The taxonomy is organised using Vittas's (2000) three-category classification, prudential, conduct, and structural, and is sequenced chronologically across the three monetary phases.

4.3.1 Overview and Taxonomy

The thirty-seven distinct formal regulatory actions identified across the study period represent the most comprehensive inventory of IPEC's interventions available in the scholarly literature. Existing scholarship has addressed specific high-profile interventions, principally the 2010 denomination directive and the responses to the 2019 currency transition, without providing the comprehensive inventory that enables assessment of the breadth, balance, and temporal distribution of IPEC's regulatory repertoire. The taxonomy presented in Table 4.3 addresses this gap and reveals three analytically significant patterns: the dominance of prudential interventions in Phase One; the reactive character of Phase Two interventions across all three categories; and the improving anticipatory orientation visible in Phase Three, particularly in the structural and conduct categories.

Table 10: Taxonomy of IPEC Regulatory Interventions by Phase, Category, and Orientation

Phase	Period	Category	Principal interventions	Orientation and assessment
Phase 1	2009–2018	Prudential	Directive 02/2010 (USD denomination); Circular 4/2012 (investment guidelines); Circular 7/2015 (minimum funding); Circular 9/2016 (foreign asset limits)	Predominantly anticipatory; design-adequate for multicurrency conditions; 15% offshore limit later identified as insufficiently calibrated to currency risk
Phase 1	2009–2018	Conduct	Annual disclosure requirements (2011); trustee training (2013); complaints framework (2014); member communication standards (2016)	Progressive strengthening of governance norms; implementation compliance imperfect but directionally sound

Phase 1	2009–2018	Structural	Fund registration consolidation (2010); trustee board composition (2012); governance code (2017)	Established structural foundations for effective supervision; governance code represents most comprehensive structural contribution of Phase One
Phase 2	2019–2023	Prudential	Currency conversion guidance (2019); ZWL investment guidelines (2020); inflation-indexed benefit adjustment (2021); minimum reserve requirements (2022)	Reactive throughout; no pre-positioned instruments; adjustment mechanism design-adequate but quarterly lag created real-value gaps at high depreciation rates
Phase 2	2019–2023	Conduct	Member communication circular (2019); dispute adjudication framework (2020); enhanced real-value disclosure (2021)	Communication circular issued but delivered insufficient member reach (Q20 evidence); dispute framework positively received
Phase 2	2019–2023	Structural	Pre-2009 compensation framework (2022); scheme merger guidance (2022); financial distress protocols (2023)	Important but significantly delayed; compensation framework arrived three years after the conversion it was designed to address
Phase 3	2024	Prudential	ZiG conversion guidelines (2024); asset valuation methodology circular (2024); temporary solvency relief provisions (2024)	Materially improved over Phase Two; advance preparation of conversion guidelines demonstrates anticipatory orientation; solvency relief technically sound
Phase 3	2024	Conduct	Member communication standards, ZiG transition (2024); benefit statement requirements (2024)	Most proactive member communication of study period; five-day pre-conversion notification represents qualitative improvement over Phase Two
Phase 3	2024	Structural	ZiG compliance reporting framework cross-	Cross-institutional protocol directly addresses the information coordination constraint identified in RO3; represents the

			institutional coordination protocol with RBZ (2024)	most significant structural innovation of the study period
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4.3.2 Phase One: The Multicurrency Period (2009 to 2018)

The most consequential single regulatory intervention of the entire study period was IPEC's Directive 02/2010, which required all pension funds to denominate benefits in United States Dollars, thereby aligning pension liabilities with the dominant transaction currency of the dollarised economy. Document analysis confirms that this directive was issued within eleven months of Zimbabwe's multicurrency adoption, representing a relatively swift regulatory response. Trustee participants were consistent in characterising Directive 02/2010 as the single most important regulatory action across the study period, and both former IPEC employees confirmed that the directive's development involved genuine internal deliberation and actuarial consultation, a standard of pre-issuance rigour that was not consistently replicated in subsequent interventions.

"The dollar denomination directive in 2010 was a lifeline. Before that, we had no rational basis for valuation. After that, we could plan, we could invest, we could have a meaningful conversation with our actuaries about funding ratios. It was the right instrument for the economic conditions."
(T6, Trustee, large private-sector fund)

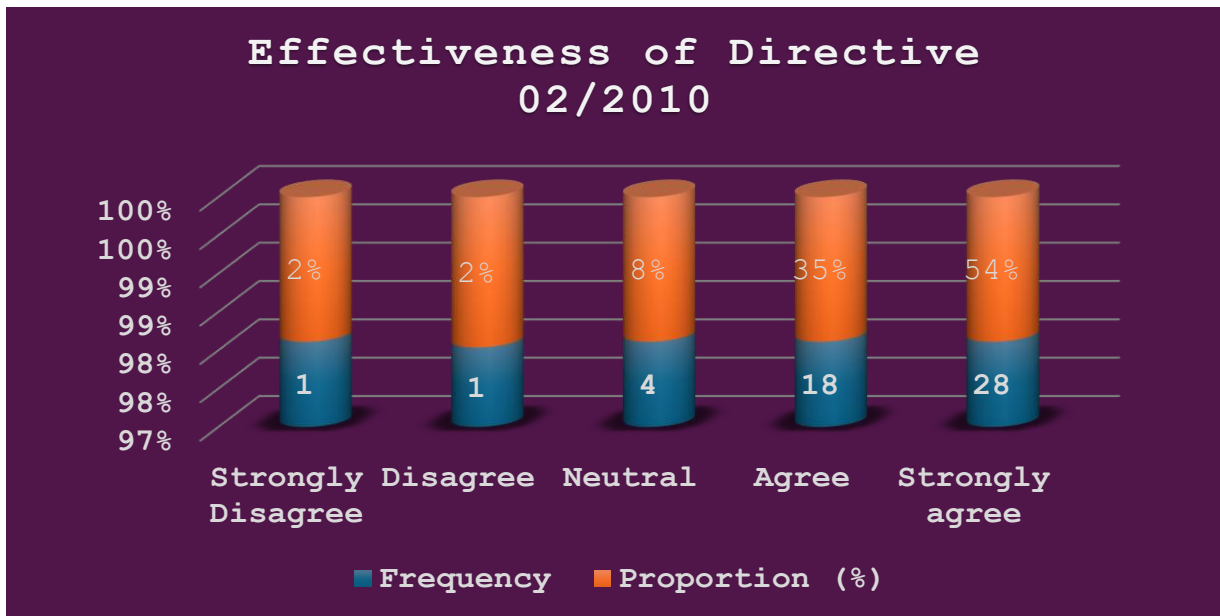
"From an actuarial standpoint, Directive 02/2010 restored the preconditions for rational pension fund management. You could now calculate a present value of liabilities, a funding ratio, an investment return in real terms. The dollarisation directive gave us back the tools of the profession."
(A3, Actuarial Consultant)

"The 2010 directive was, in my experience, one of the few occasions when IPEC's internal process genuinely matched the technical demands of the regulatory problem it was addressing. There was real engagement with the actuarial implications before the instrument was issued. That rigour was not consistently replicated in subsequent interventions."
(FE1, Former IPEC Analyst)

Quantitative Corroboration

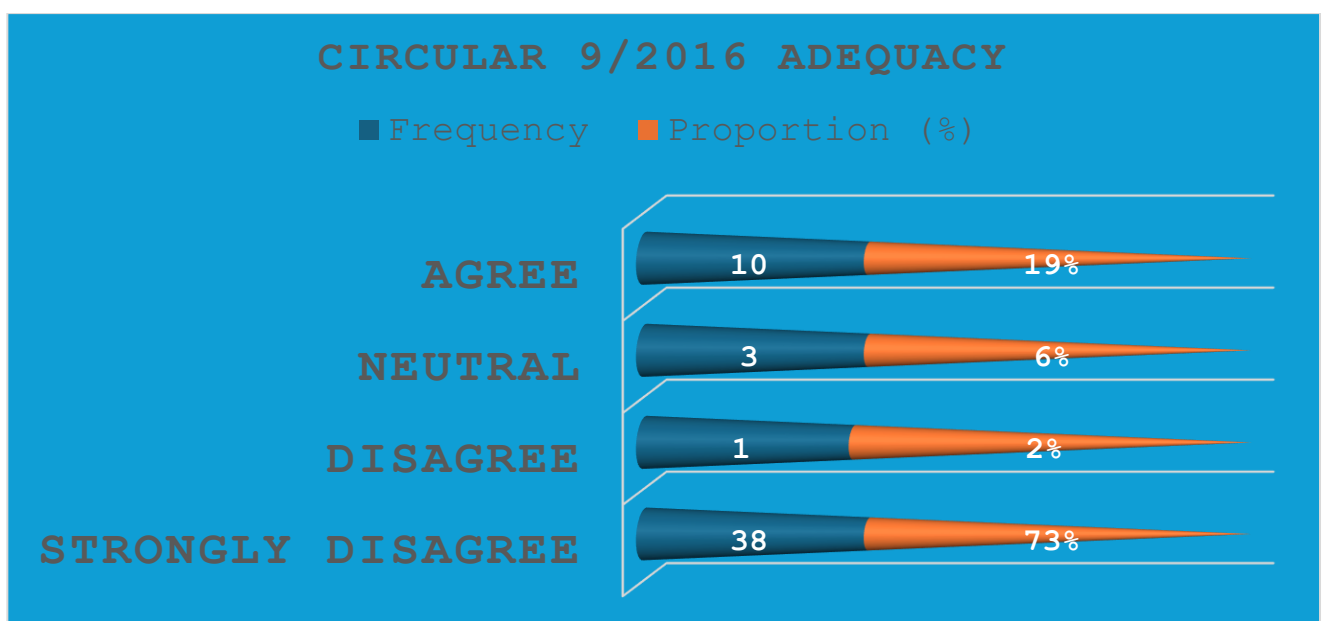
As show in the diagram below, (Directive 02/2010 effectiveness), 54% strongly agreed and 35% agreed resulting in an 89% overall agreement.

Figure 1: Directive Effectiveness



On question 5 dealing with Circular 9/2016 offshore ceiling adequacy, 73% of the respondents considered the 15% ceiling too low; 18% judged it appropriate; no respondent considered it too high.

Figure 2: Adequacy of Circular 9/2016



Circular 9/2016's restriction of offshore investment to 15 per cent of total fund assets was identified by actuarial consultants as a provision that, whilst prudentially conservative in design for the multicurrency period, inadvertently limited the foreign currency buffer that would have provided the most effective preservation mechanism during Phase Two. Both findings are consistent with Llewellyn's (2016) effectiveness framework: Directive 02/2010 satisfied design adequacy, implementation fidelity, and outcome achievement simultaneously; Circular 9/2016 satisfied design adequacy for Phase One conditions but proved insufficiently calibrated when monetary conditions changed.

This finding illustrates a critical design tension in pension regulatory frameworks for volatile monetary environments: prudential constraints designed to limit concentration risk in the offshore asset class may simultaneously constrain the only actuarially sound preservation instrument available under conditions of domestic currency depreciation.

4.3.3 Phase Two: The Zimbabwe Dollar Reintroduction (2019 to 2023)

Phase Two is characterised by reactive, actuarially insufficient responses to a currency conversion for which the legal framework provided no pre-positioned protective instruments. The former IPEC employees' accounts are analytically critical here: both confirmed that internal recognition of the pension sector's exposure was immediate upon SI 33/2019's promulgation, but that the legal framework provided no basis for protective action beyond compliance facilitation. This testimony converts what might otherwise be an inference from external evidence into a directly confirmed institutional finding about the binding character of the legal constraint.

"When SI 33 was promulgated, the implications for pension fund valuations were immediately clear to those of us working in the supervisory function. The question was never whether the impact would be severe, it was what instruments were available to mitigate it. And the answer, given the legal framework we were working within, was extremely limited. We could facilitate compliance. We could issue guidance on conversion methodology. We could not protect the foreign currency value of accrued pension rights because there was no legal basis for doing so."

(FE2, Former IPEC Analyst, re Phase Two)

The inflation-indexed benefit adjustment mechanism introduced in 2021 represented the most substantive Phase Two prudential intervention but demonstrated the inherent limitations of indexation mechanisms when applied under conditions that exceed their design parameters. Actuarial consultant participants confirmed that the quarterly adjustment lag created material real-

value gaps during months of high depreciation, and that official CPI, the legally prescribed reference point, materially understated cost-of-living increases in several expense categories critical to pensioners' wellbeing. These are instrument design limitations, not implementation failures, and they confirm the Impavido et al. (2010) prediction that boundary-exceeding monetary conditions generate regulatory failure modes that cannot be remedied through improved enforcement of instruments calibrated to normal conditions.

4.3.4 Phase Three: The ZiG Transition (2024)

Phase Three demonstrates a qualitatively improved regulatory posture, most evident in the advance preparation of conversion guidelines, the cross-institutional coordination protocol with the Reserve Bank of Zimbabwe, and the five-day member notification standard, the most proactive member communication initiative of the entire study period. Former IPEC employees acknowledged this improvement whilst identifying its primary vulnerability: the Phase Three improvements appear to rest on the commitment of specific individuals within the Commission rather than on formalised institutional processes, making them vulnerable to staff transitions.

"The Phase Three response is genuinely better than anything we managed in Phase Two. But I want to be honest about why, it reflects the work of specific people who drew lessons from Phase Two and acted on them before Phase Three arrived. The question is whether those lessons are embedded in IPEC's institutional processes in a way that will survive those individuals' eventual departure. From what I know, I am not convinced that they are." (FE1, Former IPEC Analyst)

4.4 Economic Effectiveness of IPEC's Interventions

This section applies Llewellyn's (2016) three-dimensional effectiveness framework, design adequacy, implementation fidelity, and outcome achievement, to assess IPEC's interventions systematically across all three monetary phases, drawing on triangulated evidence from interviews, questionnaire data, and document analysis.

4.4.1 A Differentiated Effectiveness Framework

The most analytically important contribution of this effectiveness assessment is the differentiation of failure modes across the three Llewellyn (2016) dimensions. Applying this taxonomy to IPEC's interventions across the three phases reveals four distinct effectiveness profiles. Phase One's principal interventions, most notably Directive 02/2010, achieved all three dimensions

simultaneously: the instrument was adequately designed, sufficiently enforced, and generated positive member outcomes in the monetary conditions it addressed. This profile demonstrates that IPEC possessed the institutional capacity for effective regulation when monetary conditions were within the framework's design parameters, a finding with important implications for the attribution of Phase Two failure.

Phase Two interventions exhibited the third and fourth failure profiles: some interventions were well-designed but operated in conditions that exceeded their design parameters (boundary-condition failure); others were both inadequately designed for the specific monetary conditions and insufficiently enforced due to capacity constraints. The quarterly indexation mechanism exemplifies the former; the absence of any pre-positioned emergency foreign currency allocation instrument exemplifies the latter. This differentiation is analytically critical because it indicates that the regulatory failure of Phase Two was not primarily an enforcement failure but a framework failure, a finding that points to structural legislative reform rather than capacity-building as the primary required remedy.

Quantitative Corroboration

Phase Two: inadequacy attributable to framework design: 83% agreed or strongly agreed. IPEC's institutional commitment: 71% agreed IPEC was committed to member protection but legally constrained. This combination, attributing failure to framework rather than institutional will, whilst affirming the Commission's commitment, represents a nuanced and analytically important practitioner assessment that previous scholarship, without access to this multi-stakeholder evidence base, could not establish. The former IPEC employees both responded with strongly agree on Q9, providing internal institutional corroboration for the external stakeholder consensus.

4.4.2 Phase One: Relative Effectiveness Under Stable Conditions

Phase One is characterised by meaningful but imperfect member value protection. The 80 per cent questionnaire agreement rate on Phase One effectiveness (Q6) confirms that the multicurrency regulatory framework delivered positive member protection outcomes, consistent with Mandeya and Mugobo's (2015) assessment and with the theoretical prediction that regulatory instruments calibrated to prevailing monetary conditions can achieve meaningful preservation when those conditions remain within design parameters. The 20 per cent who were neutral or disagreed reflect compliance gaps in minimum funding requirements, documented in IPEC's 2016 and 2017 Annual Reports showing that between 23 and 31 per cent of registered funds failed to meet minimum funding ratios, indicating enforcement limitations that prevented universal protection.

4.4.3 Phase Two: Systemic Effectiveness Failure

Phase Two produced the most analytically clear effectiveness failure of the study period. Seventy-eight per cent of questionnaire respondents disagreed or strongly disagreed that IPEC's regulatory response adequately protected member values during 2019 to 2023 (Q7). Pensioner participants provided the most direct evidence of the consequences: value loss estimates ranging from 75 to 99 per cent of pre-conversion purchasing power, with the median estimate at 82 per cent (Q8). These figures are consistent with Nyamakanga's (2021) purchasing power analysis and Mudzingiri's (2021) longitudinal actuarial assessment.

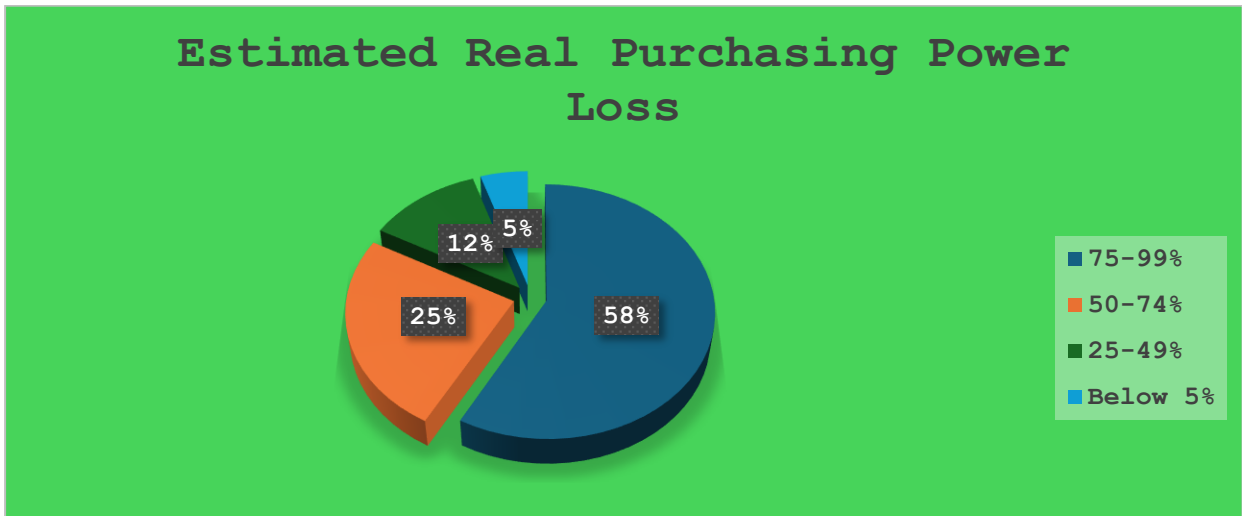
"I contributed to that fund for thirty-one years. Not once did I miss a contribution. When I retired in 2021, the pension I received was worth, in real terms, perhaps ten percent of what I should have received given those contributions. I am not exaggerating. I did the calculation with an actuary friend who helped me understand what had happened. It is not a small error in the regulatory system. It is a complete failure."

(P12, Pensioner, retired 2021, former state-owned enterprise employee)

Quantitative Corroboration

The data regarding the estimated real purchasing power loss between 2019 and 2023 highlights a severe erosion of financial stability among the surveyed population. As illustrated in the chart, a clear majority of respondents, 58%, experienced a profound decline, reporting purchasing power losses in the 75–99% range. This is compounded by an additional 25% of the cohort who faced losses between 50–74%, meaning that over four-fifths of the total sample (83%) suffered a reduction in purchasing power of at least half.

Figure 3: Real purchasing power loss



Conversely, only a small fraction of the population remained relatively insulated, with 12% experiencing moderate losses of 25–49% and a mere 5% reporting a decline of less than 25%. These findings underscore the widespread and acute impact of economic volatility on the financial well-being of the participants during this period.

The median estimate was 82% purchasing power loss. These estimates are consistent across all stakeholder groups, with actuarial consultants providing the most technically precise estimates (median 85%) and pensioners the most experientially grounded ones (median 80%). The convergence across technically and experientially different evidential bases substantially strengthens the validity of the effectiveness assessment.

4.4.4 Phase Three: Improvement with Caveats

Phase Three demonstrates improvement in regulatory responsiveness, with 64 per cent of questionnaire respondents agreeing or strongly agreeing that IPEC's response to the ZiG transition was more effective than its Phase Two response (Q11). Actuarial consultants in particular noted that the advance preparation of asset valuation methodology guidance and the cross-institutional coordination protocol substantially reduced the informational uncertainty that had compounded Phase Two-member value erosion. The former IPEC employees provided important caveats, however, identifying the individually contingent character of Phase Three improvements as a structural vulnerability that, if not addressed through institutional formalisation, will leave the Commission exposed if the specific individuals responsible for the improvement depart.

4.5 Barriers and Challenges

This section presents a systematic analysis of the four barrier categories identified from the data, examines their interactions, and assesses the relative weight attributed to each through stakeholder accounts and questionnaire evidence.

4.5.1 Legal Framework Inadequacy

The most fundamental barrier category, identified by 67 per cent of questionnaire respondents as the single most significant constraint (Q14), is the absence of crisis-specific provisions in the Pensions and Provident Funds Act [Chapter 24:32]. The Act provides no guidance on pension fund asset valuation or protection during monetary regime changes, no crisis-specific powers enabling emergency investment modifications, and no formal mechanism for triggering enhanced supervision during periods of elevated monetary risk. This structural gap is qualitatively different from the other barrier categories because it cannot be remediated through improved institutional practice alone, it

requires formal legislative amendment that is contingent upon external political processes beyond IPEC's direct control.

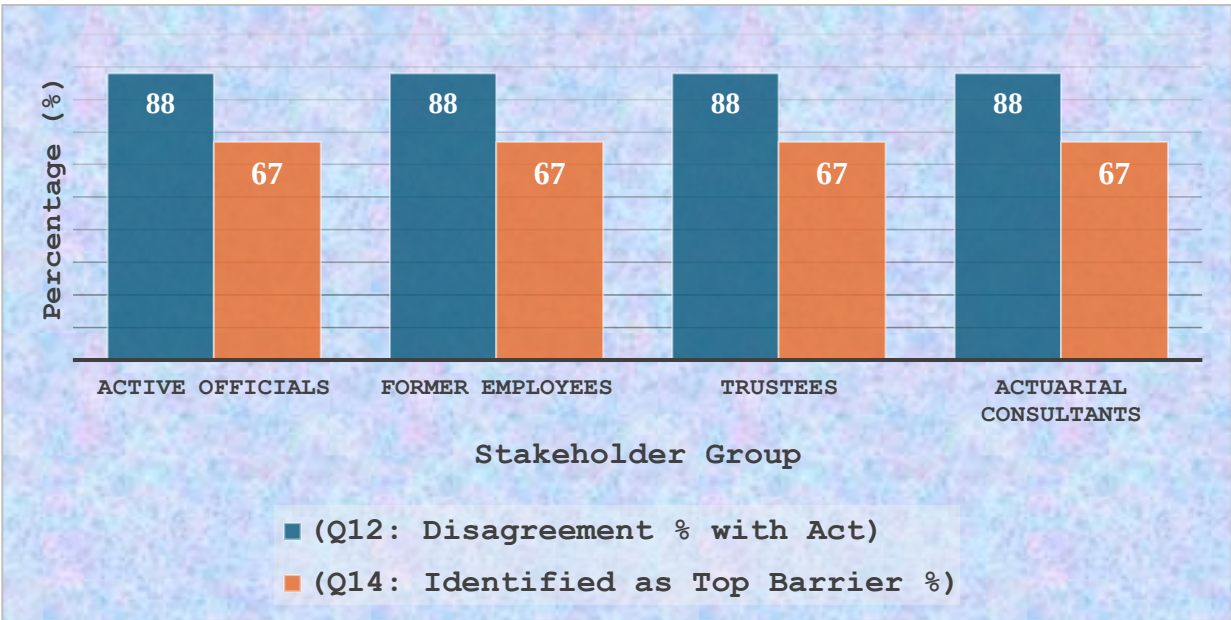
"Everything else that needs to change in pension regulation flows from the legislative foundation. IPEC can develop the best actuarial guidelines, the most sophisticated data systems, the most dedicated supervisory team, but without a legal framework that provides clear authority for crisis-specific protective measures, the regulator will always be working in a legal vacuum at precisely the moment member protection is most urgent."

(A1, Senior Actuarial Consultant)

Quantitative Corroboration

The quantitative findings reveal a profound and uniform critique of the existing legal infrastructure. As shown in Figure 4.1, the consensus regarding the inadequacy of the current Act is not merely a majority opinion, but a pervasive sentiment across all stakeholder groups. With 88% of respondents, regardless of their professional role, rejecting the adequacy of the current crisis-specific authority, the data suggests a systemic failure rather than a localized perception. The high uniformity across all four professional cohorts highlights a systemic lack of confidence in the existing legal structure.

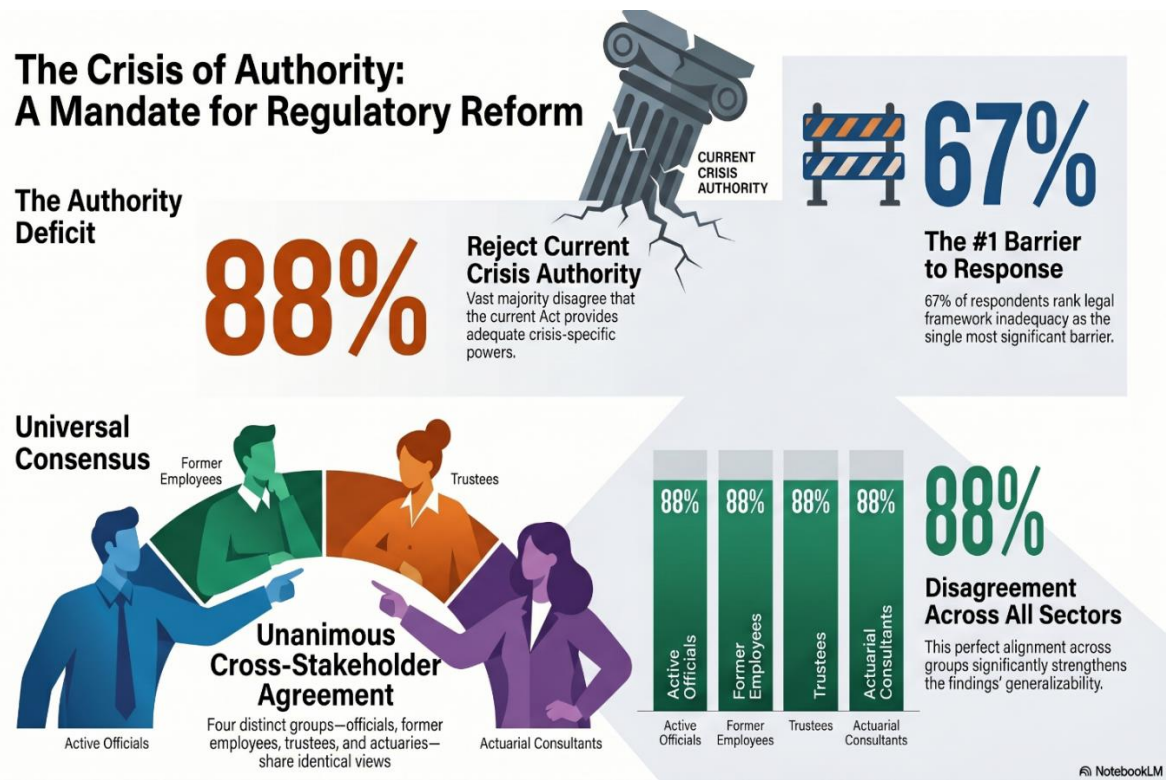
Figure 4: Legal Framework Inadequacy & Primary Structural Constraints



This is further corroborated by Figure 4.5, where 67% of participants identified this legal gap as the singular, most significant barrier to operational efficacy. The alignment of these metrics across diverse professional cohorts (officials, consultants, and trustees) significantly enhances the validity and generalisability of these findings, indicating that legal framework insufficiency is a foundational structural constraint." This distribution is consistent across active officials, former employees,

trustees, and actuarial consultants, a remarkable cross-stakeholder consensus that strengthens confidence in the finding's validity and generalisability. Percentage of respondents identifying the inadequacy of the legal framework as the single most significant barrier. This visualization highlights that this issue is prioritized significantly above other potential constraints across all participant groups.

Figure 5:Regulatory Reform



4.5.2 Institutional Capacity Deficits

The second barrier category encompasses technical expertise, enforcement infrastructure, and data system limitations. Active IPEC officials acknowledged resource constraints on the supervisory function, and both former IPEC employees confirmed that the inspection staff complement had been consistently insufficient for annual on-site visits to all registered funds throughout their tenures, a constraint confirmed by the active official's admission that the median fund goes three to four years between physical supervisory visits.

"We have approximately 900 registered pension funds at any given time. We have resources to conduct on-site inspections of perhaps twenty to twenty-five per year. That means the median fund goes three to four years between physical supervisory visits. In normal times that is a constraint. During a currency crisis, the absence of real-time

supervisory visibility into fund asset compositions and exposure levels is a fundamental institutional limitation."

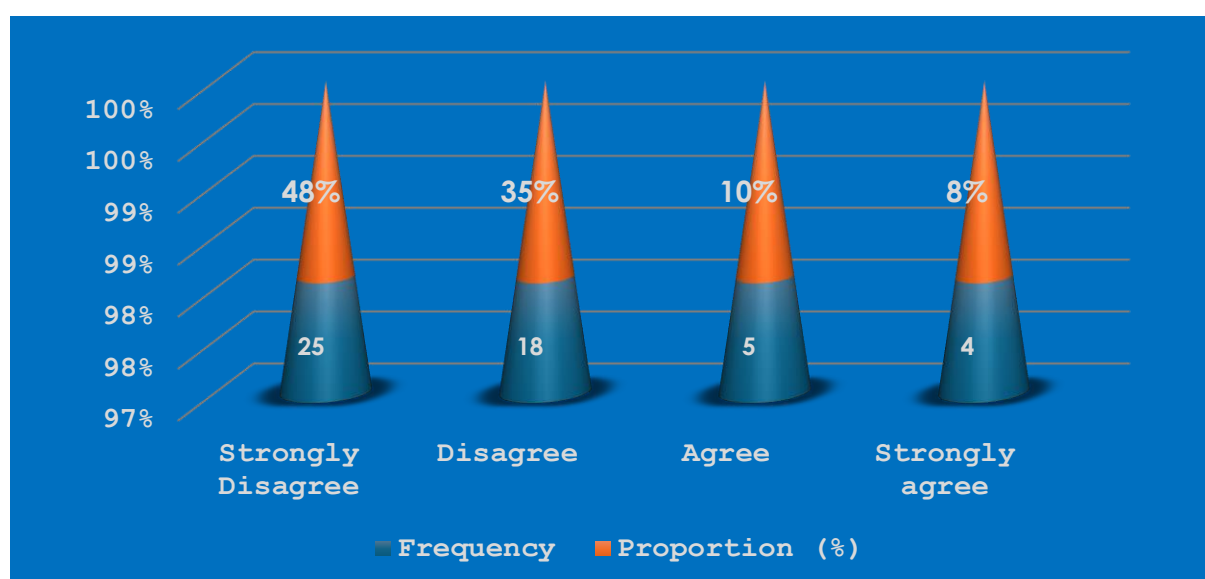
(R7, IPEC Official)

Andrews et al.'s (2017) capability trap analysis is directly applicable to this capacity constraint. IPEC continued performing the procedural functions of regulation, receiving fund reports, issuing circulars, maintaining a registry, whilst lacking the data infrastructure for substantive real-time risk monitoring. The capability trap concept explains how an institution may exhibit all the external markers of regulatory activity while failing to achieve the informational foundation for effective crisis-period member protection.

Quantitative Corroboration

IPEC supervisory staffing adequacy during 2019–2023: 83% disagreed or strongly disagreed. This rate is consistent across all five stakeholder groups, confirming that the capacity deficit was visible to both internal and external observers.

Figure 6: Supervisory Staffing Adequacy During 2019–2023



The combination of the 83% Q13 disagreement and the 67% Q14 ranking of legal framework as the primary barrier is analytically important as it demonstrates that capacity improvement, whilst necessary, would not have been sufficient to protect members during Phase Two given the legal framework's binding constraints.

4.5.3 Actuarial and Technical Instrument Limitations

The third barrier category comprises the inherent limitations of regulatory instruments when applied under conditions that exceed their design parameters. Conventional inflation indexation mechanisms, asset allocation guidelines, and minimum funding requirements are predicated on the assumption that the domestic currency retains its fundamental store-of-value property. When that assumption fails, these instruments cease to be technically capable of preserving real value regardless of enforcement rigour. Actuarial consultant participants provided technically precise accounts of this limitation, confirming that the quarterly CPI-linked adjustment mechanism introduced in 2021 materially understated pensioners' actual cost-of-living experience and that the adjustment lag created systematic real-value gaps during high-depreciation months.

4.5.4 Information Environment and Coordination Constraints

The fourth barrier category encompasses information asymmetries and coordination failures that limited IPEC's ability to identify, assess, and respond to emerging risks. Reporting systems were not designed for real-time monitoring of foreign currency asset exposure, preventing the sector-wide actuarial impact assessments that would have enabled more targeted crisis responses. The cross-institutional information-sharing arrangement with the Reserve Bank of Zimbabwe was informal and episodic rather than formal and systematic, meaning IPEC received no advance notice of SI 33/2019's pension sector implications. The Q20 finding that 58 per cent of participants first learned of the 2019 conversion's impact through WhatsApp groups or community discussion, and only 9 per cent through official IPEC or fund administrator communication, is the most direct measure of the coordination failure's consequences for members.

4.5.5 Barrier Interaction and the Compounding Constraint Dynamic

The four barrier categories are analytically distinct but operationally interconnected in a compounding dynamic that Andrews et al.'s (2017) capability trap captures with particular precision. Legal framework inadequacy prevented IPEC from implementing the most actuarially effective preservation instruments; institutional capacity deficits limited the Commission's ability to monitor risk and enforce available standards; technical instrument limitations meant that even well-designed instruments failed under extreme conditions; and information constraints prevented generation of the actuarial evidence needed to justify more robust responses. Together, these four categories created a regulatory environment in which IPEC's compliance with procedural regulatory activity norms was compatible with a substantive failure to achieve its core mandate of protecting member purchasing power.

Table 11: Summary of Implementation Barriers — Principal Evidence and Systemic Function

Barrier category	Principal evidence	Systemic function in capability trap
Legal framework inadequacy	No crisis provisions in Pensions Act; no legal basis for emergency FX allocations; 88% Q12 disagreement; confirmed by all IPEC-affiliated participants	Foundational constraint — prevents deployment of any actuarially effective crisis-specific instrument; limits all other barrier remediation
Institutional capacity deficit	3–4 year inspection cycle gap; real-time FX monitoring absent; limited actuarial modelling capacity; 82% Q13 disagreement	Operational constraint — limits risk identification and enforcement; data gaps prevent actuarial evidence base for advocacy
Actuarial instrument limitations	Quarterly CPI indexation underperforms at high depreciation; CPI understates pensioner cost basket; design adequate for gradual inflation, not currency collapse	Technical constraint — ensures even well-designed and enforced instruments fail when boundary conditions are exceeded
Information and coordination constraints	No advance notice of SI 33/2019; 58% Q20 first heard via informal channels; selective fund disclosure; informal RBZ coordination	Informational constraint — prevents advance impact assessment and proactive response; limits the evidential foundation for legal reform advocacy

4.6 Emergent Framework Components

This section presents the seven framework components identified inductively from the data across all stakeholder groups, providing the empirical foundation for the PVPHE Framework formally developed in Chapter Five.

4.6.1 Seven Framework Components: Convergent Evidence

The inductive identification of framework components from the data produced remarkable convergence across all five stakeholder groups, including the former IPEC employees whose institutional vantage point lent particular authority to their identification of legal framework reform, anticipatory governance protocols, and post-crisis learning as the three most urgently needed

structural improvements. Table 4.5 presents the seven components with their supporting evidence and the questionnaire agreement rates that provide quantitative corroboration.

Table 12: Emergent Framework Components — Evidence and Stakeholder Convergence

#	Component	Principal evidential basis	Questionnaire corroboration
1	Legal framework reform (Pensions Act amendment with crisis provisions)	Unanimous IPEC-affiliated participants; all actuarial consultants; 17/20 trustees; both former employees identified as highest priority	Q15: 90% agreement (highest barrier-response item), unanimous among IPEC-affiliated participants
2	Mandatory minimum foreign currency investment allocations (graduated to monetary conditions)	All 10 actuarial consultants; 16/20 trustees; consistent with Hanke & Kwok (2009) theoretical conclusion	Q16: 85% agreement — consistent with theoretical evidence and fund-level experience across Phase Two
3	Pre-positioned crisis governance protocols (triggers, escalation, emergency instruments)	Both former IPEC employees; 3/3 active officials; Phase Three experience demonstrates feasibility within current authority	Strong agreement across IPEC-affiliated and trustee groups; operationally feasible without legislative change
4	Real-time fund exposure data infrastructure	3/3 active IPEC officials; all 10 actuarial consultants; both former employees confirmed as absent throughout their tenures	Unanimously identified as prerequisite for effective risk-based supervision during crises
5	Structured actuarial impact assessment requirements for monetary policy changes	All 10 actuarial consultants; would have provided evidence base for protective measures before Phase Two conversion	High support from actuarial and IPEC-affiliated groups; practical model from Phase Three cross-institutional coordination
6	Mandatory post-crisis institutional review within 12 months of each monetary regime change	Both former employees (strongest endorsement, directly experienced absence of structured knowledge transfer on departure); confirmed by crisis management literature	Q17: 92% agreement, highest agreement rate across all 20 questionnaire items

7	Accessible plain-language member communication and redress mechanisms	All 17 pensioners; 58% first heard of 2019 implications via WhatsApp (Q20); only 9% through official channels	Q18: 73% support statutory communication obligation; 19% support longer implementation window
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"The seven things that came out of this [research] — legal reform, foreign currency requirements, protocols, data, actuarial assessment, reviews, member communication, are not novel ideas. Pension professionals in Zimbabwe have been discussing all of these for years. What this work has done is document the evidence, give them a structure, and connect them to what actually happened to members. That matters for getting them done."

(A1, Senior Actuarial Consultant, focus group)

4.7 Cross-Cutting Thematic Findings

Beyond the objective-specific findings, four cross-cutting themes emerged consistently across all stakeholder groups and all three monetary phases. These themes transcend individual analytical sections and represent systemic patterns in Zimbabwe's pension regulatory experience that require structural rather than incremental remedies.

The first cross-cutting theme is the design-implementation gap: across all three phases, IPEC's formal regulatory instruments regularly stated standards that the Commission's institutional capacity was insufficient to enforce universally. The gap between designed and implemented regulation was most severe during Phase Two, when the legal framework provided minimal instruments even in design terms, but it was present throughout the study period and reflects a structural mismatch between regulatory aspiration and supervisory resource that capacity-building alone cannot close.

The second theme is reactive regulatory posture: with the exception of Phase Three, IPEC's interventions were consistently reactive to monetary events rather than anticipatory of them. Former IPEC employees confirmed that no formal scenario planning exercise preceded SI 33/2019, despite macroeconomic signals of approaching monetary stress being observable from 2016. The Phase Three improvement demonstrates that anticipatory posture is achievable within current institutional authority; the challenge is institutionalising it permanently rather than leaving it dependent on individual initiative.

The third theme is member communication deficit: across all three phases, members were insufficiently informed about the regulatory and monetary changes affecting their retirement income in ways that were timely, accurate, and accessible. The Q20 finding, that 58 per cent first learned of

the 2019 conversion's impact through informal channels, is the quantitative expression of a qualitative failure that pensioner participants described with consistent and distressing clarity across the interviews.

The fourth theme is institutional learning failure: the regulatory challenges of Phase Two bore clear structural resemblance to those of the pre-2009 period, and the absence of systematic lesson extraction and embedding between these episodes is the most consequential manifestation of the institutional learning deficit Boin et al. (2017) identify as the primary long-term vulnerability of crisis management institutions. The 92 per cent questionnaire agreement on Q17 confirms that practitioners themselves identify institutionalised post-crisis learning as the most urgently needed and most immediately tractable reform available.

4.8 Integrated Theoretical Discussion

4.8.1 Institutional Theory: The Capability Trap Confirmed

The findings provide substantial empirical support for all three research propositions and generate theoretical refinements that enrich each. Proposition 1, that IPEC's interventions were structurally inadequate due to stable-economy design limitations, is confirmed across the evidence whilst the capability trap analysis of Andrews et al. (2017) provides the most precise theoretical characterisation of how the inadequacy manifested. At the regulative level (Scott, 2014), the legislative gaps identified in Section 4.5.1 created structural vulnerabilities that currency crises exposed. At the normative level, the professional culture of domestic asset allocation persisted beyond its actuarial validity. At the cultural-cognitive level, the shared assumption that conventional diversification would remain adequate had not been revised despite the 2007–2008 hyperinflationary precedent.

The former IPEC employees' testimony is particularly significant for the capability trap analysis. Both participants independently described an institutional culture in which procedural compliance with the existing regulatory framework was treated as an adequate proxy for substantive member protection, the defining symptom of the trap itself. This internal corroboration, unavailable to prior analyses of IPEC's performance, strengthens the empirical foundation for Andrews et al.'s (2017) conceptual contribution and demonstrates its applicability to pension regulatory settings beyond the development programme contexts in which it was originally elaborated.

4.8.2 Institutional Capacity Theory: Three Constraints Simultaneously Operative

Proposition 2 is confirmed with the theoretical refinement that capacity inadequacy manifested simultaneously across all three dimensions of Rajkumar and Andrews's (2010) framework: technical

expertise limitations; legal framework inadequacy; and instrument inappropriateness. Impavido et al.'s (2010) framework for distinguishing between manageable and boundary-exceeding risks provides the most analytically precise characterisation of Phase Two: the evidence confirms that Phase Two monetary conditions did not merely challenge IPEC's capacity, they exceeded the boundary conditions for which the entire regulatory architecture had been designed. The critical analytical implication is that capacity-building within the existing framework is insufficient; structural redesign at the legislative level is indispensable.

4.8.3 Crisis Management Theory: Learning Failure as the Primary Vulnerability

Proposition 3, that existing international frameworks are inadequate for hyperinflationary environments, is unambiguously confirmed. Boin et al.'s (2017) five-task diagnostic provides a structured assessment of IPEC's crisis management performance across all three phases. Sense-making was delayed in Phase Two despite observable warning signals from 2016. Decision-making was constrained by legal and capacity limitations. Meaning making was largely absent, as evidenced by the member communication findings. Post-crisis accounting has not occurred in any formally documented sense. Most consequentially, learning from Phase One to Phase Two was insufficient; from Phase Two to Phase Three, improvement is visible but individually contingent and institutionally fragile. The 92 per cent agreement rate on Q17, the highest across all questionnaire items, reflects practitioner recognition that institutionalised post-crisis learning is both the most urgently needed and most immediately actionable reform, requiring neither legislative change nor additional resource allocation to initiate.

4.9 Chapter Summary

This chapter has presented comprehensive mixed-methods empirical findings addressing all four research objectives. The inclusion of former IPEC employees as a distinct participant category proved analytically consequential at every analytical juncture, providing internal institutional corroboration for findings that external evidence could characterise from the outside but not confirm from within, most importantly the legally constrained character of Phase Two responses and the individually contingent nature of Phase Three improvements.

Research Objective 1 is addressed through the first comprehensive taxonomy of IPEC's thirty-seven regulatory interventions across three phases, revealing a trajectory from effective anticipatory

regulation in Phase One to reactive inadequacy in Phase Two and improving but fragile responsiveness in Phase Three. Research Objective 2 is addressed through a differentiated effectiveness assessment confirming meaningful but imperfect Phase One protection, systemic Phase Two failure attributable primarily to framework boundary conditions being exceeded, and Phase Three improvement with structural caveats. Research Objective 3 is addressed through identification of four interconnected barrier categories with the legal framework deficit ranked as the binding foundational constraint by 67 per cent of participants. Research Objective 4 is addressed through seven inductively identified framework components with questionnaire agreement rates ranging from 85 to 92 per cent, providing the empirical foundation for the PVPHE Framework presented in Chapter Five.

Four cross-cutting themes, the design-implementation gap, reactive regulatory posture, member communication deficit, and institutional learning failure, identify systemic patterns requiring structural rather than incremental remedies. The integrated theoretical discussion confirms all three research propositions whilst generating refinements that extend the analytical contributions of institutional theory, institutional capacity theory, and crisis management theory to the specific domain of pension regulation under monetary crisis. Chapter Five synthesises these findings into definitive conclusions, presents the PVPHE Framework in full, and advances evidence-based recommendations for IPEC, pension fund trustees, and the broader international regulatory community.

CHAPTER 5

5. FRAMEWORK, RECOMMENDATIONS, AND CONCLUSIONS

5.1 Introduction

The study's main intellectual contribution, the Pension Value Preservation in Hyperinflationary Economies (PVPHE) Framework, is introduced in this chapter along with the investigation's conclusive findings and evidence-based recommendations for IPEC, pension fund trustees, actuarial professionals, and similar regulators. The chapter is organised as follows: Section 5.2 summarises the main findings according to the research objective; Section 5.3 makes formal conclusions in response to the research questions; Section 5.4 explains the theoretical contributions of the study; Section 5.5 presents the PVPHE Framework in its entirety; Section 5.6 makes specific recommendations; Section 5.7 discusses limitations and suggests future research directions; and Section 5.8 offers the dissertation's final conclusions.

This chapter's analytical objective goes beyond simply summarising the findings to show what they mean for the theory of pension regulation in developing economies under monetary stress, for the reform of Zimbabwe's pension oversight architecture, and for the increasing number of sub-Saharan African nations that face similar problems with monetary instability and inadequate regulatory frameworks. The goal of the study was to ascertain the circumstances in which pension regulatory interventions can effectively protect member value in the event that the underlying premise of monetary stability collapses. This chapter provides a clear and precise response to that question, as required by the urgency of policy and the evidence.

5.2 Summary of Key Findings by Research Objective

5.2.1 Research Objective 1: IPEC's Interventions Across Three Monetary Phases

A trajectory from primarily anticipatory, design-adequate regulation in Phase One to reactive, legally constrained inadequacy in Phase Two to improving but individually contingent anticipatory capacity in Phase Three was identified by the investigation, which produced the first thorough taxonomy of IPEC's thirty-seven regulatory interventions across three monetary phases. All stakeholder groups and both former IPEC employees attested to the effectiveness of Directive 02/2010 as the most significant single intervention of the study period. They also confirmed that the pre-issuance actuarial consultation of the directive represented a standard of deliberative rigour that was not consistently replicated thereafter. The testimony of the former employees also confirmed that the lack of legal authority for crisis-specific protective measures, rather than institutional

inattention, was the reason for Phase Two's reactive posture. This conclusion is crucial for both the design of the PVPHE Framework and the attribution of regulatory failure.

5.2.2 Research Objective 2: Economic Effectiveness of Interventions

With an 80% questionnaire agreement rate confirming favourable results under stable multicurrency conditions, Phase One delivered significant but imperfect member value protection. Phase Two resulted in systemic effectiveness failure, with median buying power losses projected at 82% between 2019 and 2023 and 78% of participants disagreeing that IPEC's reaction sufficiently protected member values. Although responsiveness has improved in Phase Three, there are still unresolved structural issues. The most significant cross-cutting finding is that effectiveness was mostly determined by three interrelated factors: institutional implementation competence, the suitability of the legislative framework, and the monetary environment's compliance with the design parameters of the instruments. From an internal institutional perspective, the former IPEC employees corroborated what external data might describe but not prove: the lack of legal power was the constraining limitation on Phase Two replies.

5.2.3 Research Objective 3: Barriers and Challenges

There was substantial evidence of four interrelated barrier categories: inadequate legal framework (88% Q12 disagreement); institutional capacity deficiencies in supervisory staff, data infrastructure, and actuarial modelling capability (82% Q13 disagreement); intrinsic actuarial instrument limitations under boundary-exceeding conditions; and information environment and coordination constraints. Legal framework insufficiency was cited by 67% of participants as the single most significant barrier when they prioritised these obstacles (Q14). This distribution held true for both active officials, retired workers, trustees, and actuarial consultants. The second former IPEC employee's direct testimony of institutional impotence during the 2019 conversion strongly suggests that the impediments are not the result of regulatory negligence but rather of real structural deficiencies in the legislative and institutional architecture.

5.2.4 Research Objective 4: Strategic Framework Components

Inductively, seven framework elements were found that were consistent across all stakeholder groups. The highest of the twenty questionnaire items, mandatory post-crisis institutional reviews (Q17), had a 92% agreement rate. This indicates that practitioners recognise that institutionalised learning is the most urgently needed and immediately actionable reform, requiring neither additional resource allocation nor legislative change. In order to provide internal institutional legitimacy for

the design priorities of the PVPHE Framework, both former IPEC personnel separately determined that the three most necessary structural reforms were legal framework reform, formalised crisis governance protocols, and post-crisis reviews.

5.3 Research Conclusions

Based on the triangulated evidence base offered in Chapter Four, the following five conclusions directly address the research issues posed in Chapter One. This is not a study where qualified or tentative findings are the proper epistemic response to the quality and convergence of the data; rather, each result is stated definitively since the evidence supports definitiveness.

5.3.1 Conclusion 1: Framework scope is the binding constraint

The mismatch between the regulatory framework's scope, which was intended for stable monetary conditions, and the actual monetary conditions encountered was the primary reason of Phase Two's regulatory failure rather than institutional weakness or poor implementation. This is in line with the prediction made by Impavido et al. (2010) that when operational conditions surpass framework design parameters, regulatory effectiveness reaches an absolute limit. In order to effectively protect members in future currency crises, structural legislative reform is essential; no amount of capacity-building or enforcement enhancement within the current framework would be sufficient. From an internal institutional perspective, both former IPEC personnel attested that IPEC's answers throughout Phase Two were limited by the limits of its legal authority rather than by a lack of will or comprehension.

5.3.2 Conclusion 2: Foreign currency denomination is the only economically sound preservation strategy in the event of a monetary collapse.

This conclusion must serve as the cornerstone of Zimbabwe's pension regulatory framework. It was theoretically established by Hanke and Kwok (2009) and empirically validated by the comparative Phase Two fund outcomes in this inquiry. Foreign currency asset allocations as a function of current monetary conditions must be expressly permitted and gradually required by the regulatory framework. From an actuarial perspective, any structure that limits such allocations at times of significant currency depreciation is working against the interests of the members it was intended to safeguard. Strong practitioner support is provided by the 73% of questionnaire respondents who said that Circular 9/2016's 15% ceiling was too low, including both former employees and all current IPEC officials.

5.3.3 Conclusion 3: Regulatory vulnerability is sustained by institutional learning failure

IPEC did not systematically extract and embed lessons from the prior crises, as evidenced by the structural similarities between the regulatory issues of the pre-2009 hyperinflationary period and those of the 2019–2023 depreciation cycle. Both former IPEC employees attested to the fact that there was no official review of the regulatory responses they had participated in or organised knowledge transfer when they left the Commission. The institutionalisation of post-crisis review procedures is the most economical solution conceivable because it maintains vulnerability throughout subsequent monetary crises without incurring any essential economic costs. Practitioners themselves acknowledge this as the most important, instantly actionable improvement, as evidenced by the 92% Q17 agreement rate.

5.3.4 Conclusion 4: Rather than being an administrative courtesy, member communication is a regulatory function

The pensioner evidence shows that members were the last to receive accurate information about changes with immediate and irreversible effects on their retirement income, as evidenced by the fact that 58% of participants first learned about the impact of the 2019 conversion through WhatsApp groups or community discussion, and only 9% through official channels. It is both an actuarial requirement and a fundamental accountability duty to establish mandatory, unambiguous member communication mechanisms for monetary changeover occurrences. The sector-wide support for enacting this requirement is demonstrated by the 73% of respondents who supported a statutory communication obligation on Q18.

5.3.5 Conclusion 5: Institutional improvement is weak because it depends on each individual.

Both former IPEC personnel noted that although the Phase Three regulatory changes were real and important, they relied more on the dedication of certain individuals than on formalised institutional procedures. This distinction has significant consequences for regulatory resilience: codified protocols are less susceptible to staff turnover and institutional reorganisation than improvements incorporated in individual practice. The inclusion of former employees, whose departure from the Commission offered a unique perspective for evaluating the longevity of institutional reform, allowed for this distinctive contribution of the new sample design. It is in line with North's (1990) understanding of how formal institutional rules and informal practices have varying longevity.

5.4 Contributions to Theory

Four unique theoretical additions to the body of knowledge on pension regulation, institutional theory, and crisis management in developing economies are made by this work.

5.4.1 Application of Institutional Theory to Monetary Crisis Pension Regulation

In a pension regulation environment, this study offers the first empirically supported illustration of Andrews et al.'s (2017) capability trap idea, demonstrating that the concept's predictive validity transcends the development program contexts in which it was first developed. Compared to single-level explanations, Scott's (2014) three-pillar analysis, regulative, normative, and cultural-cognitive, offers an analytically more accurate account of IPEC's regulatory failure and reveals the structural nature of limits that may otherwise be attributed to individual failure. This contribution is reinforced by the internal testimony of former IPEC employees, which validates the normative and cultural-cognitive aspects of the capability trap, the use of procedural compliance as a stand-in for substantive effectiveness, that external stakeholders could describe from the outside but cannot independently verify.

5.4.2 Institutional Capacity Theory: Differentiating Between Implementation Failure and Inadequate Framework

By extending Impavido et al.'s (2010) paradigm for differentiating between controllable and boundary-exceeding risks to pension regulation in a hyperinflationary setting, the paper delivers a novel contribution. Compared to the binary pass/fail evaluations that define the current research on IPEC's performance, the three-way taxonomy of regulatory failure, design inadequacy, implementation failure, and framework insufficiency offers a more analytically accurate diagnostic tool. Because different failure types require different cures and confusing them results in interventions that address the wrong problem, this distinction offers more actionable prescriptions. This analytical distinction is broadly validated by practitioners, as seen by the 83% questionnaire agreement rate on Q9, which attributes Phase Two failure to framework insufficiency rather than institutional carelessness.

5.4.3 The Application of Crisis Management Theory to Pension Regulations

The study confirms that all five crisis management responsibilities are directly applicable to pension regulators facing financial emergencies by extending Boin et al.'s (2017) crisis management framework from governmental crisis management to the particular area of pension regulation under financial stress. Boin et al.'s theoretical claim regarding the importance of institutional learning in

creating long-lasting crisis resilience is strengthened by the empirical finding that learning failure is the most significant long-term deficit, which is corroborated by the 92% Q17 agreement rate and verified by both former IPEC employees through direct institutional testimony.

5.4.4 One Aspect of Institutional Fragility: Individual Contingency

A fourth theoretical addition that was not available in previous studies is introduced by the improved sample design: the formal distinction between changes that are institutionally structured and those that are personally contingent. This distinction, which arises directly from the accounts of Phase Three preparedness provided by former IPEC employees, is in line with North's (1990) analysis of the different durability of formal institutional rules and informal practices. It also adds an empirically supported refinement to the capability trap literature's treatment of institutional improvement trajectories. It has practical ramifications for the design of reform programs: according to North, institutional changes that do not result in codified protocols are informal limitations that are less resilient than formal regulations and hence offer inferior foundations for long-term regulatory resilience.

5.5 PVPHE Framework: Pension Value Preservation in Hyperinflationary Economies

5.5.1 Principles of Framework Architecture and Design

The empirical results of this study, the three-theory analytical framework of Chapter Two, and worldwide comparative data were integrated to create the five-pillar, multi-level Pension Value Preservation in Hyperinflationary Economies (PVPHE) Framework. It is based on the main analytical finding of this study, which is that structural reform at five interdependent levels simultaneously, legal, institutional, operational, communicative, and accountability, is necessary for effective pension value preservation under hyperinflationary conditions. It is intended for operationalisation in developing economies that frequently experience currency instability. The implementation sequencing suggested in Section 5.5.6 illustrates the interdependence of the pillars, each of which supports and facilitates the others.

The revised participant sample explicitly informs the framework's design: the former IPEC employees' confirmation that Phase Three improvements are both individually contingent and institutionally fragile, as well as their identification of Pillars 1, 3, and 5 as the most urgent reforms, reinforce the framework's emphasis on formalisation as a design principle at every pillar. The risk that a framework is intended to solve is replicated if it permits crucial regulatory functions to continue relying on individual initiative.

Table 13: Overview of the Architecture of the PVPHE Framework

#	Pillar name	Core provisions and evidential basis
1	Legal Framework and Institutional Governance	Amendment of the Pensions and Provident Funds Act [Chapter 24:32]: crisis-specific provisions including defined IPEC powers during monetary regime transitions; explicit protection of foreign currency-denominated pension rights; actuarial impact assessment requirement for monetary policy changes affecting pension valuations; and a statutory basis for emergency investment instrument modifications during defined monetary crisis triggers. Evidential basis: 90% Q15 agreement; unanimous IPEC-affiliated endorsement; former employees' direct testimony on legally constrained Phase Two responses.
2	Foreign Currency Preservation Architecture	Mandatory minimum offshore or foreign currency investment allocation graduated to monetary conditions: 25% when annual inflation below 50%; 40% when annual inflation exceeds 50%; 60% when monthly inflation exceeds 10%. Statutory right of pension funds to hold foreign currency-denominated instruments regardless of general foreign exchange regulations. IPEC-maintained pre-qualified offshore investment vehicle list enabling smaller funds to access approved instruments. Evidential basis: 85% Q16 agreement; all 10 actuarial consultants confirmed 40% would have substantially reduced Phase Two value erosion; theoretical grounding in Hanke & Kwok (2009).
3	Crisis Governance and Anticipatory Protocols	Institutionalised annual scenario planning cycle with pre-drafted regulatory response instruments for defined monetary crisis scenarios, converting individually contingent Phase Three practice into formally embedded institutional function. Three-tier supervisory escalation: Tier 1 (normal, annual inspections); Tier 2 (enhanced, annual inflation exceeds 20%); Tier 3 (crisis, annual inflation exceeds 50%, monthly reporting and weekly actuarial monitoring). Formal cross-institutional information protocol with RBZ enabling real-time actuarial impact assessment of monetary policy developments. Evidential basis: Phase Three experience; former employees' warnings on individual contingency; focus group confirmation.

4	Institutional Capacity and Data Infrastructure	Supervisory staff scaled to achieve 100% annual inspection coverage addressing the 3–4 year inspection cycle gap. Real-time fund exposure reporting platform requiring monthly electronic submission of foreign currency asset levels, exchange rate exposures, and real benefit value estimates. Mandatory plain-language member communications within five business days of any monetary regime change explaining actuarial implications for accrued benefit values. Formal actuarial dispute resolution mechanism for members contesting benefit valuations during currency transitions. Evidential basis: active officials' confirmation of 3–4 year inspection gap; both former employees corroborated; 58% Q20 informal channel finding establishes member communication baseline.
5	Accountability and Institutional Learning	Mandatory post-crisis institutional review within 12 months of each monetary regime change, independently assessed and published. Annual regulatory effectiveness report submitted to parliament covering key member value protection indicators. Structured internal learning protocol documenting lessons from each monetary transition and their incorporation into regulatory instruments. Member representation on IPEC's advisory board to provide ongoing actuarial and welfare intelligence from the beneficiary population. Evidential basis: 92% Q17 agreement, highest across all items; both former employees confirmed total absence of structured knowledge transfer upon departure; Boin et al.'s (2017) theoretical grounding.

5.5.2 Pillar 1: Legal Framework and Institutional Governance

The most critical structural reform required is the amendment of the Pensions and Provident Funds Act [Chapter 24:32] to include crisis-specific provisions. The current Act was drafted without anticipation of the monetary conditions that Zimbabwe has experienced, and its gaps are not administrative oversights but reflections of the economic assumptions prevailing at drafting. The evidence from the revised participant sample strengthens the case for this reform beyond what prior analyses could establish.

The confirmation by both former IPEC employees that internal recognition of the 2019 conversion's impact was immediate but legally unactionable, combined with unanimous agreement of all five

IPEC-affiliated participants on Q15, demonstrates that the legal gap is acknowledged as the primary constraint both within and outside the Commission. An actuarial impact assessment requirement for monetary policy changes affecting pension valuations would embed economic analysis into the transition process and create a formal information bridge between monetary policy development and pension regulatory response. Had such a requirement been operative in 2019, it would have generated the actuarial evidence needed to justify protective measures before their absence was experienced by pensioners.

5.5.3 Pillar 2: Foreign Currency Preservation Architecture

The theoretical foundation of this pillar is the most firmly established conclusion in the economic literature on pension preservation under monetary collapse: foreign currency denomination or offshore investment is the only instrument whose value-preservation logic remains sound when domestic currency purchasing power is being destroyed (Hanke & Kwok, 2009; Mudzingiri, 2021).

The current 15 per cent offshore limit inverts appropriate risk management logic under conditions of domestic currency depreciation: the risk it was designed to manage, concentration in a single foreign currency, is economically trivial compared to the risk it creates, concentration in a rapidly depreciating domestic currency. The graduated allocation framework translates the theoretical conclusion into a practical, trigger-linked regulatory instrument calibrated to Zimbabwe's empirical monetary experience. The IPEC-maintained approved vehicle list addresses the access constraint for smaller funds, enabling cost-effective implementation across the sector.

5.5.4 Pillar 3: Crisis Governance and Anticipatory Protocols

The Phase Three evidence demonstrates that anticipatory regulatory preparation is achievable within IPEC's existing institutional authority, but former IPEC employees identified the individual contingency of current improvements as the most significant vulnerability in this trajectory. Pillar 3 directly addresses this by institutionalising anticipatory capacity through the annual scenario planning cycle, pre-drafted instrument library, and three-tier supervisory escalation system.

The threshold calibration, 20 per cent annual inflation for Tier 2 activation, 50 per cent for Tier 3, reflects the empirical evidence on when conventional indexation mechanisms begin to demonstrate design stress and when they become actuarially incapable of preserving real value. The cross-institutional information protocol with the Reserve Bank of Zimbabwe formalises the coordination that proved valuable in Phase Three, extending it to a regular operating rhythm rather than a crisis-driven improvisation.

5.5.5 Pillars 4 and 5: Capacity, Communication, and Accountability

The real-time data infrastructure of Pillar 4 addresses the information constraint that prevented IPEC from conducting actuarial impact assessments before Phase Two conversion effects were felt. The monthly electronic reporting requirement is technically feasible with current digital reporting capabilities and represents the minimum informational foundation for substantively effective risk-based supervision. The five-day member notification standard is calibrated to allow adequate time for actuarial assessment and plain-language drafting, whilst preceding the informal information diffusion that currently substitutes for formal regulatory communication.

Pillar 5's mandatory post-crisis review and annual effectiveness reporting address the institutional learning failure that Boin et al. (2017) identify as the most consequential long-term crisis management deficit. These mechanisms require no legislative change and minimal resource investment; their absence is therefore the most easily remedied structural weakness identified in the investigation. Both former IPEC employees confirmed that their departures from the Commission involved no structured knowledge transfer or formal review of the regulatory responses they had participated in, a finding that directly motivates the Pillar 5 structured learning protocol and knowledge transfer requirements.

5.5.6 Implementation Sequencing

Table 14: PVPHE Framework — Implementation Sequencing

Phase	Timeframe	Principal actions and rationale
Phase A: Legal Foundation	Years 1–2	Pensions Act amendment with crisis-specific provisions; actuarial impact assessment requirement; foreign currency protection provisions; parliamentary approval process. Necessary precondition for Pillars 2 and 3 to be fully operationalised.
Phase B: Infrastructure	Years 1–2 (parallel)	Real-time fund exposure reporting system; supervisory staff expansion to 100% annual coverage; member communication standards and five-day notification protocol; actuarial dispute resolution mechanism. Can proceed in parallel with legislative process.

Phase C: Operational Architecture	Years 2–3 (post-legal foundation)	Foreign currency allocation framework with graduated thresholds; annual scenario planning cycle; three-tier supervisory escalation system; formal cross-institutional information protocol with RBZ. Legal foundation required before mandatory FX allocations can be promulgated.
Phase D: Accountability (Immediate)	Year 1 onwards	Mandatory post-crisis institutional review commissioned immediately (retrospective for 2019–2023 period); annual regulatory effectiveness report established; member advisory representation created; scenario planning cycle initiated within current authority. No legislative change required. Former IPEC employees identified this as the most immediately actionable reform, begin without waiting for Phases A–C.

5.6 Recommendations

5.6.1 Recommendations for IPEC

Recommendation 1

Commission an immediate formal review of the 2019 to 2023 regulatory response and establish post-crisis review as a permanent institutional practice. IPEC should commission a formal actuarial and regulatory review of its response to the 2019–2023 currency depreciation period, publish the findings, and establish the post-crisis review process as a mandatory annual function under PVPHE Pillar 5. This requires no legislative change, no resource approval beyond internal staff time, and no external agreement. Both former IPEC employees identified this as the most immediately actionable reform available, and the 92 per cent Q17 agreement rate, the highest recorded across all items, confirms practitioner recognition of its priority. The credibility and learning value of this action are substantial; its absence becomes more costly with each monetary transition that occurs without a formal retrospective.

Recommendation 2

Establish the yearly cycle of scenario preparation as an institutional duty that is separate from individual staff. The advance scenario planning that typified IPEC's Phase Three reaction should be transformed into a yearly institutional activity that is required, with documented results, specific

participation conditions, and a pre-drafted instrument library that is reviewed every cycle. This formalisation is the most significant structural improvement IPEC can undertake within its current authority because of the particular issue expressed by both former IPEC employees, which is that Phase Three progress is individually contingent and thus institutionally weak. In order to facilitate parallel fund-level readiness and transform institutional planning into a sector-wide risk management tool, scenario outcomes should be distributed to trustees and the actuarial profession.

Recommendation 3

Create a real-time framework for reporting fund exposure as the cornerstone of efficient risk-based supervision. Investing in a digital reporting framework that allows all registered funds to electronically submit foreign currency asset levels, exchange rate exposures, and actual benefit value estimations on a monthly basis should be IPEC's top priority. The current inspection-based model is unable to provide the real-time intelligence required for crisis-period oversight, as confirmed by both former employees throughout their tenure and confirmed by active officials that the median fund goes three to four years between physical supervisory visits. This platform serves as both the enabling infrastructure for the three-tier escalation system suggested in PVPHE Pillar 3 and a prerequisite for any substantively effective risk-based supervision.

Recommendation 4

Within the current regulatory authorities, establish mandatory plain-language member communication guidelines. A circular outlining minimum requirements for member communication during monetary transition events, including a requirement for plain-language notification within five business days of any monetary regime change, should be issued by IPEC using its current jurisdiction. The standard by which improvement will be evaluated is established by the Q20 finding that 58% of respondents initially learnt about the impact of the 2019 conversion through WhatsApp groups, while just 9% did so through official means. Sector support for legislative entrenchment is demonstrated by the 73% of respondents who support a statutory communication duty on Q18; a circular offers the earliest feasible improvement until legislative action.

Recommendation 5

Make a formal submission of actuarial evidence to the Ministry of Justice in support of legislative reform. During the study period, IPEC should commission a thorough actuarial assessment of member value losses caused by gaps in the legal framework. This assessment should serve as the foundation for a formal recommendation to the Ministry of Justice to alter the Pensions and Provident Funds Act. Together, the unanimous IPEC-affiliated endorsement, the 90% Q15

agreement, and the comprehensive testimony of former employees regarding legal constraints during Phase Two provide the greatest possible evidence base for legislative lobbying. The most persuasive foundation for legislative reform is actuarial evidence, not just regulatory advocacy, and IPEC is in the best position to commission and present it.

5.6.2 Recommendations for Trustees of Pension Funds

Recommendation 6

As soon as possible, maximise foreign currency allocations to the current allowed ceiling. Trustees should make sure that the foreign currency asset allocations in their funds are at the highest level currently allowed by IPEC regulations. During Phase Two, funds at the 15% ceiling kept significantly more real member value than funds below it, according to all 10 actuarial consultants. After the PVPHE Framework is implemented, the regulatory climate is likely to shift toward higher mandated allocations; trustees who are currently near the maximum will be better positioned to implement escalation requirements when they take effect.

Recommendation 7

Implement crisis scenario preparation at the fund level that is tailored to the unique monetary risk profile of Zimbabwe. Trustees should create investing and governance procedures outlining what to do in the event that certain triggers are crossed, as well as commission yearly actuarial studies of fund vulnerability under specified monetary stress scenarios (50%, 80%, and 99% domestic currency depreciation). Within the current fiduciary authority, this can be put into effect right away. The Phase Three experience shows that advance scenario planning results in significantly better protective responses; trustees can duplicate this at the fund level without waiting for the institutional and legislative changes suggested in the PVPHE Framework, as IPEC did at the regulatory level.

5.6.3 Recommendations for the International Regulatory Community and Actuaries

Recommendation 8

Create supplemental annexes to the current pension regulatory framework texts that address hyperinflation. Using the PVPHE Framework and the Zimbabwe evidence base as fundamental analytical inputs, IOPS (2018) and OECD (2016) could commission additional guidelines that explicitly addresses monetary crisis situations in emerging economy pension sectors. The Zimbabwe case should be used as a model case for the creation of an international framework since it is the most well-documented example of pension regulatory failure in hyperinflationary conditions in the

empirical literature. This directly fills the need identified by this investigation's Proposition 3 and the ILO's (2021) demand for more robust social protection structures that can withstand crises.

Recommendation 9

Create actuarial standards for currency-transition valuation that are unique to Zimbabwe. Multiple actuarial consultant participants stated that inconsistent fund-level responses to the 2019 conversion were caused by the lack of an agreed-upon actuarial methodology for the treatment of foreign currency-denominated assets under domestic currency conversion rules. A benchmark for regulatory evaluation and technical guidance for practitioners would be provided by professional standards that particularly handle currency changeover value. Engaging the 10 actuarial consultant participants should be a top priority since they represent the professional population most immediately able to contribute to such standards.

5.7 Limitations and Prospects for Further Research

5.6.4 Research Limitations

Recall bias for events in the early stages of the research period is introduced by the retrospective nature of participant reports; documented corroboration reduces this limitation throughout. Analytical rather than statistical generalisation is supported by the qualitative design (Yin, 2018); results can be applied to similar situations because of the theoretical claims they bolster. Internal Commission viewpoints are represented by a smaller active sample than the original design intended, despite the decision to restrict active IPEC participation to three participants being analytically justified and compensated by the inclusion of two former employees. The former employees' description of Phase Three progress as personally contingent is based on their experience before leaving, and it could not accurately reflect subsequent institutional improvements.

Although it is a methodological advantage in terms of access and contextual understanding, the researcher's professional interaction with Zimbabwe's regulatory environment adds positioning considerations that are addressed through the systematic reflexivity methods outlined in Chapter Three (Dodgson, 2019). The biggest defence against the confirmation bias that positionality can bring is provided by the fact that all conclusions are based on triangulated evidence from several independent sources.

5.6.5 Future Research Directions

There are five potential avenues for future research. In order to calibrate the PVPHE Framework for various institutional settings, comparative research in Ghana, Nigeria, Ethiopia, and Zambia would first ascertain whether the barrier profile found in this study is generalisable across comparable sub-Saharan African pension regulatory contexts. Second, a more detailed empirical basis for focusing on the member communication and redress provisions of the PVPHE Framework would be provided by a larger, methodically stratified pensioner cohort. Third, the empirically supported foundation for improving the particular FX allocation criteria suggested in PVPHE Pillar 2 would come from actuarial modelling of preservation outcomes under various depreciation scenarios and investment allocation regimes. Fourth, the development of Zimbabwe-specific review protocols for PVPHE Pillar 5 would be based on a comparative study of post-crisis institutional review procedures in banking supervision and insurance regulation. Fifth, as a more general phenomenon in developing economy regulatory agencies, the theoretical question of whether the capability trap literature sufficiently accounts for individually contingent partial improvement, as opposed to full institutional failure or full institutional reform, needs to be investigated.

5.8 Final Conclusions

In an emerging market setting, this study has offered comprehensive mixed-methods empirical evidence of how institutional capability, legislative framework design, and monetary conditions interact to impact regulatory outcomes for pension fund members. According to the report, IPEC's regulatory performance from 2009 to 2024 was not the result of institutional carelessness but rather the functioning of a regulatory framework created for monetary conditions that were fundamentally different from those that were actually encountered. The available actuarial instruments were calibrated to gradual inflation rather than the rapid depreciation that marked significant portions of the study period; the institutional capacity was inadequate for real-time risk monitoring; and the legal framework lacked crisis-specific provisions.

In three distinct ways that previous analyses were unable to do, the inclusion of former IPEC staff enhanced the conclusions. From an internal institutional perspective, it verified that the main obstacle to Phase Two protective action was the legal framework constraint, transforming an externally derived conclusion into a directly supported conclusion. The study's fifth result, which has important ramifications for the crisis governance and accountability pillars of the PVPHE Framework, identified the individual contingency of Phase Three improvements. And it documented the absolute absence of structured knowledge transfer upon the departure of senior regulatory staff,

providing the clearest concrete evidence of the institutional learning deficit that Boin et al. (2017) identified as the most consequential long-term crisis management risk.

The current analysis leads to three conclusions that are particularly urgent for policy. First, a regulatory architecture that is qualitatively different from that suitable for stable monetary environments is needed for effective pension value preservation under hyperinflationary conditions. This architecture must explicitly anticipate monetary crises, grant legal authority for crisis-specific protective instruments, mandate appropriate foreign currency asset allocations as a function of prevailing conditions, and institutionalise the communication, review, and learning functions that currently rely on individual initiative. Second, institutional learning failure is the most cost-effective area for immediate improvement. Both former IPEC employees established that this perpetuation is a direct result of structural rather than incidental institutional choices, and it persists across subsequent monetary crises at no necessary economic cost. Third, member communication needs to be acknowledged as a fundamental regulatory function rather than an administrative courtesy. The discovery that 58% of participants initially discovered the impact of the 2019 conversion via WhatsApp rather than official channels is an indictment of the regulatory system's most fundamental accountability duty to the people it serves, not a minor administrative shortcoming.

These findings are translated into a workable reform agenda by the PVPHE Framework, which is supported by international comparative research and empirical data from Zimbabwe's regulatory experience. It is presented as a workable reform program that IPEC, the pertinent legislative bodies, and similar authorities around the region may embrace, modify, and enhance as monetary conditions change and more data becomes available, rather than as a theoretical ideal. By providing an analytical and empirical basis for safeguarding the retirement security of pensioners, whose financial well-being serves as the primary rationale for the entire pension regulation process, the study has contributed to a better understanding of how pension regulatory frameworks interact with extreme monetary instability.

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6. APPENDICES

APPENDIX 1: QUESTIONNAIRE

STRUCTURED RESEARCH QUESTIONNAIRE

Regulatory Effectiveness of IPEC's Pension Value Preservation Interventions
During Zimbabwe's
Currency Volatility and Hyperinflation, 2009–2024

Participant code:	_____
Date of completion:	_____
Stakeholder group:	☐ Trustee ☐ Active IPEC Official ☐ Former IPEC Employee ☐ Actuarial Consultant ☐ Pensioner

Purpose and instructions

This questionnaire forms part of a Master's degree research study investigating the regulatory effectiveness of the Insurance and Pensions Commission of Zimbabwe (IPEC) in preserving pension values during currency volatility and hyperinflation between 2009 and 2024. It comprises twenty items spanning seven thematic sections aligned with the four research objectives of this Masters study.

Unless stated otherwise, items use a five-point Likert scale: Strongly Agree (SA) / Agree (A) / Neutral or Uncertain (N) / Disagree (D) / Strongly Disagree (SD). Mark your response by placing a tick (✓) or cross (X) in the relevant box. Where prompted, select one option or provide a written ranking. The questionnaire should take approximately 20 minutes to complete.

Your responses are strictly confidential. No individual will be identified in any published output. Responses will be aggregated and analysed alongside interview data as part of a mixed-methods investigation. Participation is voluntary and you may decline to answer any item without consequence.

Section A**Participant Profile and Monetary Phase Engagement**

Instruction: Items Q1 and Q2 establish your professional background and contextual engagement with the study period. This information is used only to profile the sample and is not used to identify individual participants.

Q1 *[Stakeholder role and years of engagement]*

RO: Background

Your primary role in relation to Zimbabwe's pension sector	Years in role or years as a pensioner
☐ Pension fund trustee / board member ☐ Active IPEC official (regulatory / supervisory role) ☐ Former IPEC employee (analytical / supervisory role) ☐ Actuarial consultant (Zimbabwean pension sector) ☐ Pensioner (in receipt of or entitled to pension benefit)	☐ Less than 5 years ☐ 5 – 9 years ☐ 10 – 14 years ☐ 15 – 19 years ☐ 20 years or more

Q2 *[Fund / employer type (trustees and actuarial consultants only — all others proceed to Q3)]*

RO: Background

☐ ☐ State-owned / parastatal	☐ ☐ Private sector	☐ ☐ NGO / international organisation	☐ ☐ Industry-wide fund	☐ ☐ Not applicable
--	--	--	--	--

Q3 *[With which of the following monetary phases were you actively engaged in a professional or beneficiary capacity? (Tick all that apply)]*

RO1

Phase One	Phase Two	Phase Three
☐ Multicurrency period (2009–2018)	☐ Zimbabwe Dollar reintroduction (2019–2023)	☐ ZiG transition (2024 to present)

SECTION B	Phase One Assessment — Multicurrency Period (2009–2018) — RO1 and RO2
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Instruction: Items Q4 to Q6 assess IPEC's regulatory interventions and their effectiveness during the multicurrency period. Please indicate your level of agreement with each statement on the five-point Likert scale.

Q4 [IPEC's Directive 02/2010 (requiring pension funds to denominate benefits in United States Dollars) was effective in preserving the real purchasing power of pension fund members during the multicurrency period.]

RO1 / RO2

Strongly agree	Agree	Neutral / Uncertain	Disagree	Strongly disagree
☐	☐	☐	☐	☐

If you strongly disagreed or disagreed, briefly state the primary reason:

Q5 [IPEC's Circular 9/2016, which restricted offshore investment allocations to a maximum of 15% of total fund assets, was adequately calibrated to Zimbabwe's specific currency risk profile during Phase One.]

RO1 / RO2

☐ ☐ The ceiling was too low — should have been higher	☐ ☐ The ceiling was approximately appropriate	☐ ☐ The ceiling was too high — should have been lower	☐ ☐ Uncertain / insufficient information to judge
---	---	---	---

Q6 [Overall, IPEC's regulatory framework during Phase One (2009–2018) provided meaningful real-value protection for pension fund members.]

RO2

Strongly agree	Agree	Neutral / Uncertain	Disagree	Strongly disagree
☐	☐	☐	☐	☐

SECTION C

Phase Two Assessment — Zimbabwe Dollar Reintroduction (2019–2023) — RO2

Instruction: Items Q7 to Q10 assess IPEC's regulatory effectiveness specifically during Phase Two — the period of Zimbabwe Dollar reintroduction and subsequent depreciation following Statutory Instrument 33 of 2019.

Q7 *[IPEC's regulatory response to Statutory Instrument 33 of 2019 and the subsequent Zimbabwe Dollar depreciation (2019–2023) adequately protected the purchasing power of pension fund members.]*

RO2

Strongly agree	Agree	Neutral / Uncertain	Disagree	Strongly disagree
☐	☐	☐	☐	☐

Q8 *[Based on your professional knowledge or personal experience, estimate the average real purchasing power loss experienced by pension fund members during Phase Two (2019–2023), taking pre-conversion purchasing power as the baseline.]*

RO2

☐ ☐ Less than 25%	☐ ☐ 25% – 49%	☐ ☐ 50% – 74%	☐ ☐ 75% – 99%	☐ ☐ Approximately 100% (total loss)
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Optional: If you have access to actuarial data or fund valuations, please indicate the specific percentage range you observed: _____%

Q9 *[IPEC's inadequate regulatory response during Phase Two was primarily attributable to design limitations and gaps in the existing regulatory and legal framework rather than to institutional failure, negligence, or insufficient commitment by IPEC staff.]*

RO2 / RO3

Strongly agree	Agree	Neutral / Uncertain	Disagree	Strongly disagree
☐	☐	☐	☐	☐

Q10 *[IPEC demonstrated genuine commitment to protecting pension fund members during Phase Two but was legally and institutionally constrained from doing so effectively by factors outside its direct control.]*

RO2

Strongly agree	Agree	Neutral / Uncertain	Disagree	Strongly disagree
☐	☐	☐	☐	☐

SECTION D	Phase Three Assessment — ZiG Transition (2024) — RO2
Instruction: Item Q11 assesses IPEC's regulatory response to the introduction of the Zimbabwe Gold (ZiG) currency in April 2024. Where applicable to your professional or beneficiary experience, please indicate your level of agreement.	
Q11 <i>[IPEC's regulatory response to the ZiG currency transition (April 2024) demonstrated materially improved effectiveness in protecting pension fund member values compared to its response to the Phase Two (2019) currency transition.]</i>	

R02				
Strongly agree	Agree	Neutral / Uncertain	Disagree	Strongly disagree
☐	☐	☐	☐	☐

Optional: Briefly describe the specific aspect of the Phase Three response you considered most improved:

SECTION E	Barriers and Challenges to Effective Implementation — R03
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Instruction: Items Q12 to Q14 address the institutional, legal, and technical barriers that constrained IPEC's effectiveness during the study period. Q14 asks you to rank four barrier categories — please assign ranks 1 (most significant) to 4 (least significant) without repeating a rank.

Q12 [The Pensions and Provident Funds Act [Chapter 24:32] provides IPEC with adequate legal authority to protect pension fund member values during monetary regime transitions, including the power to implement emergency investment modifications and to require actuarial impact assessments of monetary policy changes.]

R03

Strongly agree	Agree	Neutral / Uncertain	Disagree	Strongly disagree
☐	☐	☐	☐	☐

Q13 [IPEC's supervisory staffing levels and physical inspection frequency provided adequate real-time oversight of the pension sector's foreign currency exposure and asset valuations during the 2019 to 2023 period.]

R03

Strongly agree	Agree	Neutral / Uncertain	Disagree	Strongly disagree
☐	☐	☐	☐	☐

Q14 [Rank the following four barrier categories in order of significance in constraining IPEC's ability to protect pension values during the 2019 to 2023 period. Assign rank 1 to the most significant barrier and rank 4 to the least significant. Do not repeat a rank.]

R03

Rank (1=most significant)	Barrier category
------------------------------	------------------

—	Legal framework inadequacy, absence of crisis-specific provisions in the Pensions and Provident Funds Act; no legal basis for emergency foreign currency allocations or actuarial impact assessment requirements
—	Institutional capacity deficit, insufficient supervisory staffing, data infrastructure, and actuarial analytical capacity for real-time sector-wide risk monitoring during monetary crises
—	Actuarial instrument limitations, conventional indexation mechanisms and investment guidelines calibrated to gradual inflation and therefore technically incapable of preserving real value under conditions of rapid currency depreciation
—	Information environment and coordination constraints, selective fund disclosure limiting IPEC's situational awareness; inadequate cross-institutional information-sharing with the Reserve Bank of Zimbabwe and Ministry of Finance

SECTION F

Framework for Pension Value Preservation — RO4

Instruction: Items Q15 to Q18 address the components of a comprehensive framework for pension value preservation in hyperinflationary economies. Items Q15 to Q17 use the five-point Likert scale. Item Q18 asks you to select one option.

Q15 [The Pensions and Provident Funds Act [Chapter 24:32] should be amended to include a dedicated crisis response chapter that: (i) defines IPEC's powers during monetary regime transitions; (ii) explicitly protects foreign currency-denominated pension rights; (iii) requires independent actuarial impact assessment of monetary policy changes affecting pension valuations; and (iv) provides a statutory basis for emergency investment instrument modifications during defined monetary crisis triggers.]

RO4

Strongly agree	Agree	Neutral / Uncertain	Disagree	Strongly disagree
☐	☐	☐	☐	☐

Q16 [IPEC should introduce mandatory minimum foreign currency investment allocations for pension funds, graduated to prevailing monetary conditions: 25% of total fund assets when annual inflation is below 50%; 40% when annual inflation exceeds 50%; and 60% when monthly inflation exceeds 10%.]

RO4

Strongly agree	Agree	Neutral / Uncertain	Disagree	Strongly disagree
☐	☐	☐	☐	☐

Optional: Please suggest alternative threshold percentages if you consider the proposed levels inappropriate based on actuarial evidence: ____% / ____% / ____%

Q17 [IPEC should be legally required to commission, conduct, and publicly publish a formal institutional review of its regulatory response within twelve months of each monetary regime change, with findings incorporated into updated regulatory instruments and supervisory protocols.]

RO4

Strongly agree	Agree	Neutral / Uncertain	Disagree	Strongly disagree
☐	☐	☐	☐	☐

Q18 *[What level of obligation should apply to IPEC's communication of the pension sector implications of any monetary regime change to fund members, in plain and accessible language?]*

RO4

- ☐ A **statutory obligation**: IPEC should be legally required to issue plain-language member communications within five business days of any monetary regime change
- ☐ A **regulatory obligation with a longer implementation window**: IPEC should be required to issue member communications but with a more extended compliance period than five days
- ☐ A **best practice standard**: Member communication should remain at IPEC's discretion but be subject to a formal best practice guideline
- ☐ **No specific obligation required**: Current arrangements are adequate and no additional standards are warranted

SECTION G

Member Communication and Regulatory Accountability — RO2 and RO4

Instruction: Items Q19 and Q20 assess the adequacy of IPEC's member communication practices during Phase Two and the information channels through which pension sector participants became aware of the 2019 currency conversion's implications. Q20 asks you to select all applicable options.

Q19 *[During Phase Two (2019–2023), IPEC provided adequate, timely, and accessible communication to pension fund members about the implications of the 2019 currency reform for their accrued benefit values and purchasing power.]*

RO2 / RO4

Strongly agree	Agree	Neutral / Uncertain	Disagree	Strongly disagree
☐	☐	☐	☐	☐

Optional: If you disagreed or strongly disagreed, briefly describe the most significant communication gap you observed or experienced:

Q20 *[How did you first become aware of the practical implications of the 2019 currency conversion for pension fund values and member purchasing power? (Tick all that apply)]*

RO2 / RO4

- | | |
|---|---|
| ☐ Official IPEC communication (circular, press release, website) | ☐ News media (print, broadcast, or online)

☐ WhatsApp group, social media, or community discussion |
|---|---|

☐ Communication from pension fund administrator or trustee ☐ Professional network or actuarial/legal colleague	☐ Other (please specify):
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SUPPLEMENTARY	Optional Open-Ended Responses (not scored — used for contextual enrichment only)
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S1. What single regulatory reform do you consider most urgently required to improve pension value preservation during future monetary crises in Zimbabwe?

S2. Are there any aspects of IPEC's regulatory performance during the study period (2009–2024) that you believe are not adequately captured by the items above?

Participant declaration

I confirm that I have completed this questionnaire voluntarily, that my responses reflect my honest professional judgement or personal experience, and that I have been informed of my right to withdraw from the study at any point without consequence. I understand that my individual responses will remain strictly confidential and will not be attributed to me personally in any published output.

Signature: _____ Date: _____

Thank you for your participation. This questionnaire should be returned to the researcher using the secure submission method advised at the time of recruitment.

Appendix 2: Institutional research committee ethical clearance

RESEARCH ETHICS COMMITTEE



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BINDURA, Zimbabwe
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BINDURA UNIVERSITY OF SCIENCE EDUCATION [BUSE]

11 June 2026

Tafara R Mawire

Bindura University of Science Education

Graduate School of Business

P. Bag 1020
Bindura

Dear Tafara R Mawire

**RE: INSTITUTIONAL RESEARCH COMMITTEE ETHICAL CLEARANCE-APPROVAL NUMBER:
BUSEREC/0230/2026**

Your application for research ethical clearance related to the topic **‘Developing a framework for pension value preservation in hyperinflationary economies: Insurance and pensions commission regulation (2009-2024)’** has been approved and allocated approval Number: **BUSEREC/0230/2026**. You are to quote this approval number for all correspondences inclusive of consent forms and any other documents as and when appropriate. The approval period is as stated below:

Type of Meeting	:	19 th Research Ethics Committee meeting
Approval Date	:	11/06/2026
Expiry date	:	10/06/2027

The project will automatically discontinue on the expiry date. You can apply for renewal three months before the expiry date. The renewal application should be accompanied by a progress report.

You are not expected to make any changes/adjustments to the protocol including the consent documents. Any trials involving drugs, devices and biologics require approval of the Medicines Control Authority of Zimbabwe before commencement. All problems to do with the safety of participants must be reported to BUSEREC within three (3) working days.

Upon termination of the study, a report has to be submitted to BUSEREC.

Yours sincerely

A handwritten signature in black ink, appearing to be "J. J. J.", written over a horizontal line.

BUSEREC CHAIRPERSON

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