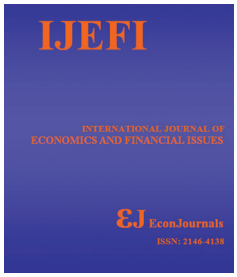

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The T.R.E.A.S.U.R.Y Framework: A Cognitive Architecture for Strategic Banking Decisions

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ABSTRACT

The global banking system operates in an environment of heightened uncertainty, structural complexity, technological disruption, and regulatory intensity. Although financial institutions increasingly rely on quantitative models, risk systems, and regulatory frameworks, recent banking failures reveal that technical capability alone is insufficient for sound strategic judgement. This conceptual paper introduces the Treasury Mindset Framework (T.R.E.A.S.U.R.Y), a structured cognitive architecture designed to strengthen strategic decision-making among treasury professionals, finance directors, chief financial officers, and senior banking executives. The framework consists of eight interconnected mental models: Time Horizon Thinking, Risk versus Return Trade-off, Embedded Optionality, Allocation Efficiency, System Thinking, Unintended Consequences, Resilience Over Optimisation, and Yield versus Stability Balance. Grounded in bounded rationality, dual-process cognition, institutional economics, modern portfolio theory, real options theory, systems thinking, and resilience science, the framework explains how cognitive discipline can improve the interpretation and application of financial models in complex banking environments. Illustrative evidence from the 2023 United States regional banking failures, European interest rate risk management, and Sub-Saharan African banking performance demonstrates the practical relevance of the framework. The paper contributes to behavioral finance, treasury management, and banking strategy by offering a theory-based and practice-oriented framework for improving institutional decision quality.

Keywords: Treasury Management, Mental Models, Cognitive Architecture, Bounded Rationality, Bank Performance, Resilience, Capital Allocation, Banking
JEL Classification: G21, G28, G32, D81, M10

1. INTRODUCTION

The global banking system faces a convergence of pressures that have no recent precedent in their simultaneity. The pandemic-era monetary expansion and its abrupt reversal, the failure of Silicon Valley Bank (SVB) and associated regional institutions in March 2023, the accelerating transformation of payments infrastructure, and the structural challenges facing Sub-Saharan African (SSA) banking systems collectively reveal an institutional environment characterised by non-linearity, irreducible uncertainty, and second-order consequences that consistently surprise even well-resourced organisations.

The premise of this paper is straightforward but consequential in an environment of irreducible uncertainty and structural change, the quality of financial decisions is primarily determined not by the sophistication of models but by the quality of the mental architecture through which practitioners interpret those models. Treasury professionals, CFOs, Finance Directors, and senior banking executives operate daily at the intersection of liquidity risk, interest rate risk, capital adequacy, regulatory compliance, and strategic positioning. Their decisions are not primarily computational; they are cognitive. Yet the academic and practitioner literature has devoted remarkably little attention to the cognitive architecture that underpins effective treasury decision-making.

This paper introduces the Treasury Mindset Framework (T.R.E.A.S.U.R.Y), depicted in Figure 1 below, a structured cognitive architecture comprising eight mental models for strategic decision-making in complex banking environments. The framework is not a procedural checklist or a risk management methodology. It is a set of structured cognitive lenses, disciplined ways of seeing financial problems, that are designed to be internalised by practitioners and applied contextually across the full range of treasury, capital, and institutional decisions.

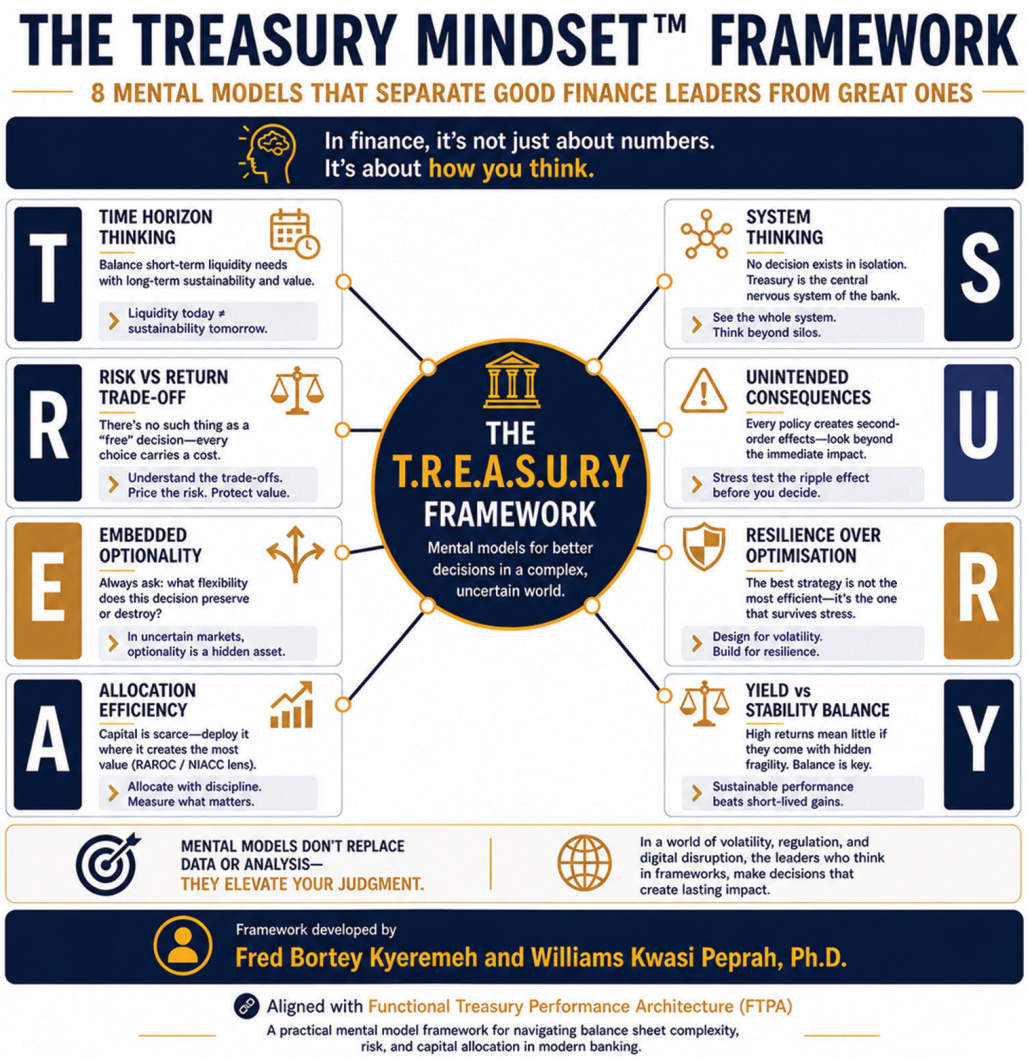
The paper makes four contributions to the literature. First, it formally theorises the eight components of the T.R.E.A.S.U.R.Y Framework, grounding each in established theoretical traditions from finance, economics, and cognitive science. Second, it demonstrates the framework's applied relevance through contemporaneous case evidence from the 2023 US banking crisis, European Interest Rate Risk in the Banking Book (IRRBB) management, and African banking performance. Third, it articulates how the eight models integrate into a mutually reinforcing cognitive system. Fourth, it proposes a structured empirical research agenda for validating the framework's impact on decision quality and institutional performance.

1.1. Contextual Motivation: The 2023 Banking Turmoil and its Cognitive Dimensions

The failure of Silicon Valley Bank (SVB) in March 2023, the largest US bank collapse since Washington Mutual in 2008, and the subsequent failures of Signature Bank and First Republic Bank, represent not merely a regulatory failure or a modelling error. Post-mortem analyses (Metrick, 2024; Choi et al., (2023); Jha et al., 2026; Board of Governors of the Federal Reserve System, 2023) consistently highlight a combination of factors that are fundamentally cognitive in character a failure to think across time horizons, an absence of systems thinking about the interaction between deposit concentration and interest rate risk, a failure to trace the unintended consequences of the asset-liability mismatch, and an optimisation orientation (maximising NII in the short run) that prioritised short-term interest income at the expense of institutional resilience.

This is precisely the domain the T.R.E.A.S.U.R.Y Framework addresses not the absence of data, regulation, or analytical capacity (SVB had all three), but the absence of a disciplined cognitive architecture for integrating these inputs into sound institutional judgement.

Figure 1: The treasury mindset framework (T.R.E.A.S.U.R.Y): Eight mental models for strategic banking decision-making source



2. LITERATURE REVIEW

2.1. Mental Models and Cognitive Architecture in Finance

The concept of mental models, which refer to internal cognitive representations that guide reasoning, prediction, and decision-making, was formalised by Johnson-Laird (1983) and has since been applied across disciplines from cognitive psychology to organisational management. In the context of financial markets and banking, the literature is sparse but growing. Bastianello et al. (2024), in one of the first systematic empirical studies of mental models in professional forecasting, find that individual mental model quality, measured by internal consistency and calibration, is a stronger predictor of forecast accuracy than institutional resources or market access.

The behavioural finance literature has documented the cognitive biases that impair financial judgement: Overconfidence (De Bondt et al., 2022), availability bias, anchoring, and loss aversion are well-established impairments to rational decision-making. However, this literature focuses primarily on diagnosing cognitive failures rather than constructing structured alternatives. The T.R.E.A.S.U.R.Y Framework is positioned in this gap: It accepts the behavioural finance diagnosis but provides a prescriptive response through structured cognitive models.

Munger's (1994) advocacy for a "latticework of mental models" drawn from multiple disciplines remains the most influential practitioner articulation of this approach, though it has not been operationalised for the specific context of banking and treasury management. Athota et al. (2023) demonstrate that structured decision-support mechanisms, particularly when combined with artificial intelligence, can help mitigate cognitive biases among financial planners, providing empirical support for the framework's underlying premise. Toader and Martin (2023) further argue that leaders influence organisational outcomes by shaping team cognition and shared mental models, thereby enhancing strategic decision-making and organisational performance.

2.2. Treasury, Banking Strategy, and Economic Profit Frameworks

Treasury management has evolved from an operational cash management function into a strategic architecture encompassing interest rate risk management (IRRBB), funds transfer pricing (FTP), capital allocation, and balance sheet optimisation (Choudhry, 2012; Association for Financial Markets in Europe [AFME], 2024; European Banking Authority [EBA], 2022). The academic literature on treasury strategy has expanded significantly in response to the post-2022 higher-for-longer rate environment, with particular focus on the IRRBB implications of rapidly rising rates (Basel Committee on Banking Supervision [BCBS], 2024; Izquierdo et al., 2025; Borio et al., 2017).

The RAROC (Risk-Adjusted Return on Capital) paradigm, developed at Bankers Trust in the late 1970s and now ubiquitous in large banking institutions (Zaik et al., 1996; de Weert, 2012), represents the dominant framework for linking risk, capital, and return in banking. Stewart's (1991) Economic Value Added (EVA) concept, later operationalised through the EVA financial management system (Stern et al., 1995), and extended into banking through NIACC (Net Income After Capital Charge) frameworks such as that operationalised by FirstRand Group (FirstRand, 2022; 2024), provides the foundation for the Allocation Efficiency model within the framework.

Recent scholarship on banking performance in the higher-for-longer interest rate environment reinforces the relevance of the T.R.E.A.S.U.R.Y. Framework. Gaul and Palvia (2013) demonstrate that supervisory assessments of management quality are informative predictors of banks' future accounting performance and risk, providing empirical support for the proposition that executive judgement and managerial capability materially influence institutional outcomes. Furthermore, analyses of the 2023 banking turmoil show that rapid monetary tightening exposed complex interactions among interest rate risk, funding structures, depositor behaviour, and unrealised securities losses, highlighting the importance of Systems Thinking and Unintended Consequences in strategic treasury decision-making (Board of Governors of the Federal Reserve System, 2023; Metrick, 2024).

2.3. Systems Thinking, Complexity, and Unintended Consequences in Banking

The recognition of banking systems as complex adaptive systems, with non-linear feedback loops, emergent behaviours, and systemic interconnections, has been a productive research programme since the global financial crisis (Haldane and May, 2011; Bookstaber, 2017; Battiston et al., 2016). The application of complexity theory and systems thinking to bank management practice, however, remains underdeveloped relative to its theoretical articulation. Senge's (1991) Fifth Discipline framework, which introduced systems thinking to management practice, has not been systematically adapted for banking and treasury contexts.

Recent analyses of the 2023 banking turmoil further demonstrate the importance of systems thinking in banking. The official review of Silicon Valley Bank concluded that supervisory and managerial failures underestimated the interactions among interest rate risk, concentrated deposits, unrealised securities losses, and liquidity pressures (Board of Governors of the Federal Reserve System, 2023). Likewise, Metrick (2024) argues that the 2023 banking crisis reflected cascading systemic interactions rather than isolated risk events, illustrating how second-order effects amplified institutional vulnerabilities. These findings provide strong empirical support for the Systems Thinking and Unintended Consequences dimensions of the T.R.E.A.S.U.R.Y. Framework.

2.4. Resilience, Anti-fragility, and Yield-Stability Trade-offs

The literature on institutional resilience has expanded significantly since the pandemic. Taleb's (2012) anti-fragility thesis, that appropriate responses to uncertainty involve constructing systems that benefit rather than merely survive from disorder, has been applied to banking by Adrian et al. (2019), who demonstrate that "vulnerable growth" environments require institutions to prioritise resilience over short-term return optimisation. The Basel Committee on Banking Supervision (BCBS, 2022) found that

Basel III capital and liquidity reforms improve banking resilience by deliberately constraining excessive risk-taking and short-term optimisation in favour of long-term institutional stability, thereby reinforcing the Resilience over Optimisation dimension of the T.R.E.A.S.U.R.Y. Framework.

The yield-stability trade-off has become the defining tension of the 2021-2025 period. Borio et al. (2023) document the duration mismatch consequences of the post-pandemic rate environment, demonstrating that institutions which prioritised yield in the low-rate period (2020-2021) were structurally exposed when rates normalised. Banks operating in emerging and frontier markets face a particularly acute version of the resilience–yield trade-off because exchange rate volatility, foreign currency mismatches, and rapidly changing interest rate conditions amplify balance sheet vulnerabilities and financial stability risks (Mamonov et al., 2024).

2.5. African Banking: Performance, Cognition, and Structural Challenges

African banking has undergone rapid structural transformation. A recent McKinsey analysis identifies strong growth potential across African banking markets while highlighting the structural opportunities and risks confronting financial institutions, including macroeconomic volatility, exchange rate pressures, and intensifying competition (McKinsey & Company, 2026). The literature further highlights distinctive cognitive and strategic challenges in African banking contexts including, multi-currency operating environments, volatile macroeconomic conditions, shallow capital markets, and a persistent gap between regulatory compliance and strategic risk management capability.

Appiah et al. (2025), in a study of 99 SSA banks across six countries, find that sustainable banking performance is significantly associated with governance quality and long-term orientation, variables that are conceptually aligned with the Time Horizon Thinking and Resilience Over Optimisation components of the framework. Cull et al. (2023) demonstrate the systemic interconnections within African banking systems, confirming the relevance of Systems Thinking and Unintended Consequences models in this context.

FirstRand Group's NIACC framework, operationalised across a portfolio of banking, insurance, and asset management businesses in Southern and West Africa, represents the most sophisticated application of economic profit thinking in the African banking context (FirstRand, 2022; 2024). The framework's demonstrated ability to generate sustained NIACC-positive returns across a multi-currency, multi-jurisdiction portfolio provides empirical grounding for the Allocation Efficiency model.

3. THEORETICAL FOUNDATIONS

The T.R.E.A.S.U.R.Y Framework is grounded in four theoretical traditions that collectively justify a structured cognitive approach to banking decision-making: bounded rationality, dual-process theory, institutional economics, and resilience science.

3.1. Bounded Rationality and the Case for Structured Cognitive Frameworks

Simon's (1955) bounded rationality, that decision-makers operate under cognitive limitations, information constraints, and time pressures that prevent optimisation, provides the foundational justification for the T.R.E.A.S.U.R.Y Framework. If practitioners cannot be fully rational, the appropriate response is not to assume rationality (as neoclassical models do) but to construct structured decision-making architectures that partially compensate for cognitive limitations. The eight mental models of the framework are precisely such architectures: they are structured heuristics that guide attention, organise information, and prompt systematic consideration of factors that unaided cognition tends to overlook.

3.2. Dual-process Theory and System 2 Activation

Watson and Kahneman (2011) dual-process theory distinguishes System 1 (fast, intuitive, heuristic-driven) from System 2 (slow, deliberate, analytical) cognition. Under time pressure and in familiar environments, financial practitioners default to System 1, which is efficient but susceptible to systematic bias. The T.R.E.A.S.U.R.Y Framework functions as a System 2 activation mechanism: by requiring practitioners to explicitly apply each mental model to a decision, it forces deliberate rather than automatic processing. This is particularly critical for high-stakes, low-frequency decisions, precisely the decisions where System 1 failures are most consequential and where structured frameworks have the greatest value.

3.3. Institutional Economics and Framework Embeddedness

North's (1990) theory of institutions as "the rules of the game" provides a lens for understanding how cognitive frameworks become embedded in organisational decision-making. The T.R.E.A.S.U.R.Y Framework is not intended to function as an individual practitioner tool alone; its full value is realised when adopted as an institutional cognitive standard, a shared language and set of lenses through which senior finance teams evaluate decisions. This institutional embeddedness creates what Oliver and Holweg (2023) term "institutional cognition," which they find to be positively associated with strategic competitive advantage in banking contexts.

3.4. Resilience Theory, Anti-fragility, and Complexity Science

Taleb's (2012) anti-fragility thesis, that appropriate responses to uncertainty involve constructing systems that benefit rather than merely survive from disorder, provides the theoretical foundation for the Resilience Over Optimisation and Embedded Optionality models. Complexity science, drawing on the work of Forrester (1964) and Senge (1991), provides the basis for the System Thinking and Unintended Consequences models. Together, these traditions support the framework's central claim: that in complex banking environments, structured cognitive diversity, thinking across multiple mental models simultaneously, produces better institutional outcomes than narrow technical optimisation.

4. MATERIALS AND METHODS

This study adopted a conceptual and theory-building research design to develop the Treasury Mindset Framework (T.R.E.A.S.U.R.Y)

as cognitive architecture for strategic banking decision-making. The study did not use primary survey, interview, or experimental data. Instead, it relied on theoretical synthesis, integrative literature review, and illustrative case-based analysis to construct a framework that explains how finance professionals can improve judgement under uncertainty, complexity, regulatory pressure, and institutional risk.

The materials used in the study consisted of peer-reviewed academic literature, regulatory publications, banking industry reports, and contemporary banking cases. The literature was reviewed across four major domains: cognitive architecture and mental models in finance, treasury management and banking strategy, systems thinking and complexity theory, and resilience science. These sources provided the theoretical foundations for the eight components of the T.R.E.A.S.U.R.Y Framework: Time Horizon Thinking, Risk versus Return Trade-off, Embedded Optionality, Allocation Efficiency, System Thinking, Unintended Consequences, Resilience Over Optimisation, and Yield versus Stability Balance.

The framework was developed through a three-stage analytical process. First, recurring cognitive weaknesses in strategic banking decisions were identified from the literature and recent banking events. These weaknesses included short-term orientation, mispricing of risk, poor asset-liability integration, inefficient capital allocation, siloed decision-making, neglect of second-order consequences, excessive optimisation, and yield-seeking behaviour. Second, each weakness was matched with relevant theoretical foundations, including bounded rationality, dual-process theory, institutional economics, modern portfolio theory, real options theory, systems thinking, and resilience theory. Third, the eight mental models were organised into an integrated framework and examined through four interaction axes: The Time-Resilience Axis, the Risk-Allocation-Yield Triangle, the System-Consequence Axis, and Embedded Optionality as the integrating layer.

Illustrative evidence was drawn from the 2023 United States regional banking failures, European interest rate risk management under the higher-for-longer rate environment, and Sub-Saharan African banking performance studies. These cases were not used for statistical inference but to demonstrate the practical relevance of the framework in real-world banking contexts. Since the study relied only on publicly available sources and did not involve human participants or confidential institutional data, formal ethical approval was not required.

5. RESULTS AND DISCUSSION

5.1. The Eight Pillars: An Expanded Examination

This section elaborates each of the eight mental models comprising the T.R.E.A.S.U.R.Y Framework (Figure 1), providing theoretical grounding, applied banking context, and contemporaneous case evidence for each model. Taken together, the eight models constitute a complete cognitive architecture for strategic banking decision-making.

5.2. T: Time Horizon Thinking

5.2.1. Theoretical grounding

Time preference theory (Fisher, 1930) and Laibson's (1997) hyperbolic discounting establish that agents systematically discount the future at rates that are inconsistent across time horizons, producing present-biased decisions that sacrifice long-term value for short-term gain. In banking, this manifests as the systematic prioritisation of near-term NII over structural balance sheet resilience, a pattern documented across multiple bank failure analyses (Metrick, 2024; Aldoseri et al., 2025).

5.2.2. Applied banking context

Time Horizon Thinking requires the finance leader to simultaneously hold three temporal frames: the immediate liquidity horizon (days to weeks), the strategic risk horizon (quarters to years), and the structural capital horizon (multiple years). Decisions that are optimal within one temporal frame are frequently destructive across another. The SVB failure exemplifies the consequence of horizon collapse: A portfolio strategy rational within a 12-month NII optimisation framework proved catastrophically irrational within a 24-month balance sheet resilience framework.

5.2.3.Contemporary case evidence

The Prudential Regulation Authority's (2022) supervisory expectations for the Internal Liquidity Adequacy Assessment Process (ILAAP) require treasury functions to undertake robust forward-looking liquidity and funding assessments under both business-as-usual and stressed conditions.

These expectations institutionalise Time Horizon Thinking as a regulatory requirement. The T.R.E.A.S.U.R.Y. Framework extends this principle by arguing that genuine three-horizon integration should be embedded within the cognitive architecture of finance leaders rather than treated solely as a compliance exercise undertaken by risk management functions.

5.3. R: Risk versus Return Trade-off

5.3.1 Theoretical grounding

The foundational insight of modern portfolio theory (Markowitz, 1952) and the CAPM (Sharpe, 1964), that expected return is compensation for systematic risk, is well-established but frequently misapplied in banking practice. The relevant adaptation for banking is RAROC: Risk-Adjusted Return on Capital (Zaik et al., 1996), which requires that every return be evaluated relative to the economic capital consumed to generate it. The psychological literature on risk (Watson and Kahneman, 2011) further establishes that practitioners systematically underweight risk under euphoric or competitive conditions, producing systematic over-extension at cyclical peaks.

5.3.2. Applied banking context

The Risk versus Return Trade-off mental model requires the finance leader to consistently ask: what capital charge does this decision attract, and does the expected return justify that charge? This question applies equally to loan pricing, treasury investment decisions, fee income strategies, and capital structure choices. The model is reinforced by the NIACC framework (FirstRand, 2022; 2024`), which makes capital charges explicit and visible at the

business unit level, transforming an abstract principle into a live management metric.

5.3.3.Contemporary case evidence

In the higher-for-longer rate environment of 2024-2025, several UK challenger banks pursued aggressive fixed-rate mortgage origination strategies to maintain market share, accepting duration extension in their asset books in exchange for volume. The Risk versus Return Trade-off model would require explicit RAROC analysis of these positions under +200 and +300 basis point shock scenarios, analysis that BCBS (2024) guidelines specifically mandate under the revised IRRBB framework.

5.4. E: Embedded Optionality

5.4.1. Theoretical grounding

Options theory (Black and Scholes, 1973; Merton, 1973) establishes that the right but not the obligation to take future actions has positive value, value that is frequently overlooked in standard NPV analysis. Trigeorgis & Reuer (2017) contend that real options thinking encourages managers to recognise how strategic decisions create, preserve, or destroy future optionality, thereby improving strategic decision-making under uncertainty.

5.4.2. Applied banking context

Finance leaders must evaluate decisions not only on their static NPV but on the option value they create or destroy. A decision to extend duration on the asset book may have a positive static NPV but destroys the option to redeploy capital at higher rates, an option whose value can be substantial in volatile rate environments. Similarly, a decision to concentrate a commercial real estate portfolio generates current fee income but destroys the option to pivot the book in response to sector deterioration.

5.4.3. Contemporary case evidence

Pan-African development finance institutions (DFIs) structuring long-dated project finance facilities frequently embed explicit optionality provisions, namely rate reset mechanisms, early repayment options, and currency conversion rights, that preserve strategic flexibility for both borrower and lender. The Embedded Optionality mental model requires finance leaders to evaluate these provisions not as administrative add-ons but as fundamental determinants of the facility's economic value.

5.5. A: Allocation Efficiency

5.5.1. Theoretical grounding

The theory of capital allocation in banking draws on Jensen and Meckling's (1976) agency theory, the Modigliani-Miller theorem, and the RAROC framework. The central insight is that capital is scarce and its allocation across business units, products, and geographic markets determines institutional value creation. Stern and Stewart's (1991) EVA framework, and its banking adaptation through NIACC, provides the operationalisation of this insight, making economic profit (return minus the full cost of capital) the primary performance metric.

5.5.2. Applied banking context

Allocation Efficiency requires the finance leader to view every balance sheet position through a capital lens: Does this position generate returns above the cost of the capital it consumes? The model requires disciplined exit from chronically sub-RAROC business lines, even when those lines are generating accounting profits, a distinction that is particularly consequential in retail banking, where relationship cross-subsidies frequently obscure economic value destruction at the product level.

5.5.3. Contemporary case evidence

FirstRand Group's NIACC framework (FirstRand, 2022; 2024) normalised net income minus (allocated capital × cost of equity) across banking, insurance, and asset management businesses in Southern and West Africa, generating sustained NIACC-positive returns. The framework's demonstrated ability to produce R7.8bn in positive NIACC in FY2024 across volatile multi-currency environments demonstrates the practical power of disciplined economic capital allocation as an institutionalised cognitive and management tool.

5.6. S: System Thinking

5.6.1. Theoretical grounding

Systems thinking, developed by Forrester (1964) and later by Senge (1991), recognises that institutions are complex adaptive systems in which decisions in one domain produce feedback effects across multiple other domains. In banking, silo structures (risk teams, treasury, commercial banking, and retail banking operating with limited cross-functional integration) systematically produce sub-optimal system-level outcomes even when each silo individually optimises its own metrics. Haldane and May's (2011) analysis of systemic risk confirms that systemic fragility frequently emerges from the aggregation of individually rational decisions.

5.6.2. Applied banking context

A decision to reprice retail deposit rates cannot be evaluated in isolation from its effects on deposit volumes, funding composition, FTP rates across the loan book, NII in the commercial banking division, capital ratios, and regulatory liquidity metrics. System Thinking requires the finance leader to trace these interdependencies explicitly before making pricing decisions. In institutions where treasury, risk, and business units operate in silos, system-level effects are routinely invisible until they have already propagated into institutional results.

5.6.3.Contemporary case evidence

The 2023 US regional banking failures illustrate silo thinking's consequences. SVB's individually rational asset allocation decisions, extending duration to maximise NII in the low-rate environment, were made without systemic integration of the deposit concentration risk in its liability structure, the interest rate sensitivity of its equity base, or the speed of information propagation via social media in a bank-run scenario. System Thinking would have required explicit modelling of these cross-domain interactions as an integrated system rather than as separate risk categories.

5.7. U: Unintended Consequences

5.7.1. Theoretical grounding

Merton's (1936) theory of unintended consequences, that purposive social action regularly produces unanticipated outcomes, is directly applicable to complex banking environments where decisions interact with regulatory, competitive, and

behavioural responses in non-linear ways. Brunnermeier and Krishnamurthy's (2020) work on corporate debt overhang demonstrates that individually rational financial decisions aggregate into system-level amplification effects that surprise their originators. The Financial Stability Board (FSB, 2024) has identified AI-driven decision-making as a new source of correlated and potentially systemic unintended consequences in financial markets.

5.7.2. Applied banking context

The Unintended Consequences mental model requires the finance leader to systematically trace second and third-order effects of proposed decisions before implementation. A decision to tighten credit standards in response to NPL concerns will, in the short term, improve asset quality metrics; it will also reduce new business volumes, affect cross-sell revenue, potentially trigger covenant breaches in existing facilities, and alter the competitive dynamics of the markets in which the institution operates. The model requires this second-order mapping to be explicit.

5.7.3. Contemporary case evidence

The Bank of England's (2022) decision to increase its Short-Term Repo (STR) facility rates to align with Bank Rate, combined with the simultaneous increase in reserve remuneration, produced significant and partially unanticipated impacts on bank funding costs and net interest margins across UK institutions. The transmission mechanism, through FTP rates, deposit pricing, and competitive dynamics, illustrated the importance of tracing the institutional consequences of policy changes through a systematic second-order lens rather than responding only to the direct, first-order impact.

5.8. R: Resilience Over Optimisation

5.8.1. Theoretical grounding

Classical financial optimisation assumes a known and stationary distribution of outcomes. Knightian uncertainty (Knight, 1921), the condition of genuine unpredictability where probability distributions themselves are unknown, invalidates this assumption in complex banking environments. Taleb's (2012) anti-fragility thesis establishes that under Knightian uncertainty, the appropriate response is to build systems that are robust to a wide range of outcomes rather than optimised for the most likely outcome. Adrian et al. (2021) formally model this as a "vulnerable growth" environment in which short-term optimisation trades off against long-term resilience in predictable and measurable ways.

5.8.2. Applied banking context

Resilience over optimisation requires the finance leader to subordinate efficiency gains that compromise structural robustness. This manifests in several concrete ways: maintaining capital buffers above regulatory minima; diversifying funding sources even when concentrated funding is cheaper; accepting lower short-term NII in exchange for reduced asset-liability duration mismatch; and preserving optionality rather than committing fully to positions whose tail risks are Knightian rather than probabilistic. The BCBS (2022) capital conservation buffer and LCR requirements are institutional expressions of this principle.

5.8.3. Contemporary case evidence

Pan-African banks operate in multi-currency environments characterised by exchange rate volatility, constrained foreign currency liquidity, and heightened macroeconomic uncertainty. Recent analyses by McKinsey & Company (2026) highlight the importance of resilient balance sheet structures, diversified funding sources, and prudent liquidity management in enabling banks to navigate these operating conditions. In such environments, maintaining adequate foreign currency liquidity buffers, capital strength, and funding diversification may reduce short-term net interest margin (NIM) optimisation but enhances institutional resilience during periods of market stress. The experience of African banking institutions illustrates that resilience-oriented balance sheet management provides a stronger foundation for sustained lending, operational continuity, and long-term value creation than strategies focused solely on short-term financial optimisation.

5.9. Y: Yield versus Stability Balance

5.9.1. Theoretical grounding

The tension between yield maximisation and portfolio stability is the defining cognitive challenge of the contemporary banking environment. The theoretical foundation draws on Markowitz's (1952) mean-variance optimisation, extended into the banking context through duration management, NII sensitivity analysis, and the IRRBB frameworks of the EBA (2022) and BCBS (2024). The fundamental insight is that yield and stability are not simply in tension; they represent different points on an efficiency frontier, and the appropriate position on that frontier is context-dependent, time-horizon-dependent, and institution-specific.

5.9.2. Applied banking context

The yield versus stability balance mental model trains the finance leader to evaluate yield opportunities through the lens of their impact on portfolio stability, liability structure resilience, and regulatory metric sustainability. A treasury investment that maximises short-term yield by extending duration may simultaneously deteriorate the IRRBB outlier test result, increase EVE sensitivity, and create AOCI volatility that affects reported capital ratios. The model requires this multi-dimensional stability impact to be explicitly assessed before yield optimisation.

5.9.3. Contemporary case evidence

Ngo et al. (2024), in their study of 71 SSA banks, find that institutions which maintained disciplined NIM management, resisting the temptation to maximise yields through excessive duration extension or credit risk concentration, demonstrated superior stability and sustained performance across the volatile 2015-2022 study period. This finding provides empirical support for the yield-stability framework's prescription of disciplined trade-off management over yield maximisation as a primary objective.

6. INTEGRATION ARCHITECTURE: HOW THE EIGHT MODELS INTERACT

The T.R.E.A.S.U.R.Y Framework is most powerful not as a checklist of independent tools but as an integrated cognitive

architecture in which the eight models interact in mutually reinforcing ways. This section articulates four integration axes that capture the primary interdependencies within the framework.

6.1. The Time-resilience Axis

Time Horizon Thinking (T) and Resilience Over Optimisation (R) form the temporal backbone of the framework. Adrian et al. (2019) demonstrate that resilience-oriented behaviour is, at its core, a long-horizon strategy: institutions that prioritise structural stability are implicitly adopting a long time horizon in which the avoided tail risks justify the sacrificed short-term returns. The integration of these two models requires the finance leader to explicitly align time horizon choices with resilience commitments, recognising that a short-term orientation and a resilience commitment are fundamentally incompatible positions.

6.2. The Risk-allocation-yield Triangle

Risk versus Return Trade-off (R), Allocation Efficiency (A), and Yield versus Stability Balance (Y) form a mutually reinforcing triangle of capital discipline. Risk assessment determines the RAROC framework within which allocation decisions are made; allocation efficiency determines which business lines and positions receive capital; and yield-stability management determines how that capital is deployed within each position. The NIACC framework of FirstRand Group (2022; 2024) represents a working institutional embodiment of this triangle, demonstrating that all three elements must be simultaneously operationalised to produce sustained economic profit across complex portfolios.

6.3. The System-consequence Axis

System Thinking (S) and Unintended Consequences (U) govern the institutional and environmental context of decisions. System Thinking provides the map of interdependencies; Unintended Consequences analysis traces the probable and improbable pathways through which decisions propagate within that map. Brunnermeier and Krishnamurthy (2020) demonstrate that the most consequential financial failures occur precisely when these two models are simultaneously absent, when decision-makers neither see the systemic map nor anticipate the second-order pathways. The integration of S and U requires institutionalised pre-mortem processes: explicit mapping of system-level consequences before major decisions are finalised.

6.4. Embedded Optionality as the Integrating Layer

Embedded Optionality (E) is the integrating layer that connects all other models. Every financial decision creates or destroys future options: The option to reprice, to reposition, to exit, to expand. Decisions made with explicit optionality awareness are inherently more resilient (they preserve the option to adapt), more capital-efficient (they avoid destroying future flexibility for present convenience), and more system-aware (they acknowledge that future states of the system will differ from present states in ways that cannot be fully specified). Trigeorgis and Reuer (2017) confirm that real options awareness consistently improves strategic decision quality when embedded as an organisational rather than merely an analytical capability.

7. APPLICATIONS IN BANKING PRACTICE

7.1. Application to Treasury and Interest Rate Risk in the Banking Book (IRRBB) Management

The T.R.E.A.S.U.R.Y Framework's most immediate application is in treasury decision-making, particularly in the IRRBB context that has dominated bank management since 2022. Consider the decision whether to extend duration on the treasury investment book to capture the higher yields available at longer maturities. A systematic application of the framework to this decision would require the finance leader to explicitly address the following questions:

- Time Horizon Thinking (T): What is the structural impact of duration extension on NII stability over a three to five-year horizon, not merely the immediate yield enhancement?
- Risk versus Return Trade-off (R): What is the mark-to-market risk on the extended position under the BCBS +200 and +300 basis point shock scenarios, and does the incremental yield justify this capital at risk?
- Embedded Optionality (E): Does extending duration destroy the optionality to redeploy capital at higher rates if the yield curve shifts further?
- Resilience Over Optimisation (R): Is the portfolio robust to the IRRBB outlier test, does the EVE reduction remain within the 15% of Tier 1 capital threshold under the outlier scenarios?
- Yield versus stability balance (Y): Does the incremental spread justify the AOCI volatility and NIM sensitivity profile that duration extension creates?

The systematic application of these five models would have substantially altered the portfolio decisions of US regional banks in 2021-2022. The Board of Governors (2023) and Metrick (2024) confirm that SVB's management did not apply this type of multi-model cognitive architecture to its duration decisions, a deficiency that proved fatal.

7.2. Application to Capital Allocation and CFO Decision-making

At the capital allocation level, the framework provides a cognitive architecture for CFOs and Finance Directors making annual budget and capital plan decisions. The Allocation Efficiency model requires that the capital plan explicitly allocate based on RAROC-adjusted returns, with chronic sub-RAROC performers identified for remediation or exit. The System Thinking model requires that the capital plan consider cross-divisional interactions: the capital freed by exiting a sub-RAROC retail segment, for example, creates allocation options in higher-RAROC commercial or treasury activities. The Unintended Consequences model requires explicit consideration of how the capital plan will interact with competitive responses, customer behaviour, and regulatory review.

7.3. Relevance for Emerging Market and African Banking

The framework has particular resonance for SSA banking institutions, where the conditions of decision-making amplify each of the eight model's importance. McKinsey (2025) identifies the cognitive demands of managing banking institutions across multi-currency,

high-volatility, and shallow-market environments as a primary differentiator of outperforming SSA banking leadership. The framework provides a structured response to these amplified demands:

- Allocation Efficiency (A): SSA banks frequently exhibit persistent sub-RAROC business lines in retail and agricultural segments where social and political considerations override economic profit discipline. The framework provides a structured cognitive basis for making explicit the trade-offs being made when economic profit is subordinated to social mandate.
- Resilience Over Optimisation (R): Multi-currency SSA banks must build structural FX liquidity buffers because FX market disruption is a frequent occurrence rather than a tail risk. The framework explicitly validates this resilience-first approach as cognitively sound rather than sub-optimal.
- System Thinking (S) and Unintended Consequences (U): Cull et al. (2023) demonstrate that SSA banking systems have dense interconnections between banking, sovereign debt, and real economy performance that create amplified systemic feedback loops. System Thinking and Unintended Consequences analysis is particularly critical in this context.
- Allocation Efficiency and NIACC (A): FirstRand Group's demonstrated ability to generate NIACC of R7.8bn in FY2024 across volatile multi-currency African markets confirms that disciplined economic profit management is achievable in SSA banking contexts, even under challenging macro conditions.

8. LIMITATIONS AND FUTURE RESEARCH AGENDA

8.1. Limitations

This paper presents a conceptual framework grounded in practitioner experience and theoretical synthesis. Several limitations constrain the scope of its claims. First, the framework has not been subjected to empirical validation. No psychometric instrument currently exists for measuring individual or institutional adoption of the T.R.E.A.S.U.R.Y mental models, and no causal evidence links framework adoption to decision quality or institutional performance outcomes. Second, the framework is constructed primarily from evidence in the UK, US, and SSA banking contexts; its applicability in other regulatory environments, particularly Asia-Pacific, Latin American, and Middle Eastern banking systems, is asserted but not demonstrated. Third, the framework's eight components have been developed with primary attention to treasury and capital management functions; their applicability to retail banking, payments, and insurance is plausible but requires context-specific adaptation. Fourth, the case evidence cited, while drawn from academic studies and regulatory documents, is illustrative rather than probative: the cases are used to demonstrate plausibility, not to establish causal claims about the framework's effectiveness.

8.2. Proposed Empirical Research Agenda

The T.R.E.A.S.U.R.Y Framework creates four research agenda priorities:

- Psychometric Instrument Development: Drawing on established frameworks for measuring cognitive style in finance (Bastianello et al., 2024; Fein et al., 2023), develop and validate a psychometric instrument for measuring individual and institutional adoption of the eight T.R.E.A.S.U.R.Y mental models. This instrument would form the foundation for subsequent empirical studies of the framework's performance impact.
- Framework Adoption and Bank Performance: An empirical study examining whether banks whose senior finance teams demonstrate higher T.R.E.A.S.U.R.Y adoption scores exhibit superior risk-adjusted performance, measured through RAROC, NIACC, NIM stability, and capital adequacy metrics, across a multi-year panel of institutions.
- SSA Banking Panel Study: A panel dataset study across SSA banking institutions from 2015 to 2025, examining whether governance structures and management practices consistent with the T.R.E.A.S.U.R.Y Framework, particularly Allocation Efficiency, Resilience Over Optimisation, and System Thinking, are associated with superior performance on the McKinsey (2025) six-factor competitive capability framework.

9. CONCLUSION

The Treasury Mindset Framework (T.R.E.A.S.U.R.Y) represents a structured response to a persistent and underexamined challenge in banking and financial management: the gap between technical analytical capability and the quality of strategic cognitive architecture through which that capability is applied. The 2023 US regional banking failures, the European IRRBB management challenges of the higher-for-longer rate environment, and the structural decision-making demands of African banking all confirm that this cognitive gap has real and material consequences for institutional performance and stability.

The eight mental models (Time Horizon Thinking, Risk vs. Return Trade-off, Embedded Optionality, Allocation Efficiency, System Thinking, Unintended Consequences, Resilience Over Optimisation, and Yield vs. Stability Balance) are individually grounded in established theoretical traditions and collectively form an integrated cognitive architecture that addresses the full dimensionality of strategic banking decision-making. Their integration, through the four axes of Time-Resilience, Risk-Allocation-Yield, System-Consequence, and Embedded Optionality as integrating layer, creates a framework whose value exceeds the sum of its components.

The framework's application in treasury management, capital allocation, and African banking contexts demonstrates its practical relevance across diverse institutional environments. The research agenda proposed in Section 7 provides a pathway for transforming this conceptual contribution into empirically validated knowledge about the relationship between cognitive architecture quality and banking performance.

The central thesis bears restating as a conclusion: in finance, data matters. Models matter. Regulation matters. Strategy matters. But the framework through which all of these are interpreted and applied, the cognitive architecture of the finance leader, is

the ultimate determinant of institutional decision quality. The T.R.E.A.S.U.R.Y Framework is a contribution to the construction and professionalisation of that architecture.

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