

Exchange Rate Resilience, Capital Expenditure, and Capital Structure: Mediating Effects of Flexibility, Hedging, Liquidity

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Abstract: Exchange rate volatility constitutes one of the most pervasive sources of financial uncertainty for non financial corporations engaged in international trade, foreign currency borrowing, and cross border investment. While prior research has examined exchange rate exposure, corporate hedging, liquidity management, and capital structure individually, no systematic synthesis has integrated these elements under the unifying lens of exchange rate resilience the firm level capacity to withstand and adapt to currency shocks while preserving strategic and financial continuity. This study presents a Systematic Literature Review (SLR) following the PRISMA 2020 framework, drawing on Scopus indexed Q1 and Q2 publications from 2016 to 2026. From an initial pool of 601 records identified through 11 targeted keyword combinations via the Wase Uake platform, 46 studies met all inclusion criteria after rigorous multi stage screening. The review synthesizes evidence on three mediating mechanisms operational flexibility, hedging activity, and firm liquidity through which exchange rate resilience influences capital expenditure (CapEx) and capital structure decisions. Findings reveal that hedging consistently reduces cash flow volatility, lowers financing costs, and supports investment continuity; firm liquidity functions as an absorptive buffer; and operational flexibility provides adaptive capacity. This study contributes a testable conceptual model and structured future research agenda for resilience oriented corporate finance.

Article history:

Received: 20 April 2026

Revised: 05 May 2026

Accepted: 18 June 2026

Published: 27 June 2026

Keyword:

Capital Expenditure; Capital Structure; Operational

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How to cite: Sebastian, S., Afifah, N., Mustaruddin, M., & Rosnani, T. (2026). Exchange Rate Resilience, Capital Expenditure, and Capital Structure: Mediating Effects of Flexibility, Hedging, Liquidity. *Jurnal Ekonomi, Manajemen, dan Bisnis*, 4(2), 618-637. <https://doi.org/10.70716/emis.v4i2.557>

INTRODUCTION

Exchange rate movements represent one of the most consequential macroeconomic forces shaping the financial decisions of non financial firms. Fluctuations in currency values affect import costs, export revenues, debt service obligations, profitability, and long term investment strategies simultaneously. For companies operating across borders, borrowing in foreign currencies, or competing in markets subject to international price pressures, the ability to manage exchange rate uncertainty is central to sustaining financial performance and organizational continuity ((Giachetti et al., 2024); (Pellegrino et al., 2024)).

The corporate finance and international business literatures have long recognized the centrality of exchange rate risk. Foundational contributions from (Mello et al., 1995) established that firms can respond to currency uncertainty through combinations of operational flexibility and financial hedging, and that these mechanisms are mutually reinforcing rather than substitutable. This theoretical insight has not been translated into an integrated empirical framework simultaneously capturing the mediating pathways through which exchange rate conditions shape capital expenditure (CapEx) and capital structure decisions. The literature remains fragmented: distinct streams focus separately on derivatives use, leverage choices, investment sensitivity, and liquidity management

without synthesizing these mechanisms under a resilience oriented framework (Chen & Sakouba, 2021) (HAYES et al., 2025)

The concept of exchange rate resilience captures the firm level capacity to absorb, adapt to, and recover from exchange rate shocks while maintaining strategic continuity (He, Liang, & Zhang, 2026; (Cao et al., 2025)). This perspective is especially relevant for firms in emerging markets, where exchange rate volatility is structurally elevated, hedging infrastructure is less developed, and balance sheet vulnerabilities are amplified by foreign currency debt ((Manopimoke et al., 2024); (Goel et al., 2025)).

Three firm level mechanisms are theoretically central: (1) operational flexibility, enabling adjustment of sourcing, production, pricing, and geographic allocation in response to currency movements (Shi et al., 2025) (Li et al., 2025); (2) hedging activity derivative instruments, natural hedging, and balance sheet management reducing cash flow volatility and enhancing investment capacity (Gillet et al., 2024) (Gupta et al., 2025); and (3) firm liquidity providing financial slack to absorb external shocks (Lee et al., 2023) (Giraldo Prieto et al., 2019).

To address the conceptual ambiguity identified in prior studies, this review operationalizes exchange rate resilience as a firm's capability to absorb, adapt to, and recover from exchange-rate shocks while maintaining investment continuity, financing capacity, and strategic flexibility. Exchange rate resilience is therefore reflected through four observable dimensions: (1) stability of operating cash flows during exchange-rate fluctuations, (2) continuity of capital expenditure under currency uncertainty, (3) maintenance of liquidity adequacy and debt-servicing capacity, and (4) the ability to implement operational and financial adjustment mechanisms such as hedging and supply-chain reconfiguration. This operationalization distinguishes resilience from mere exposure or vulnerability and provides a foundation for future empirical measurement.

This study addresses these gaps through a Systematic Literature Review (SLR) following the PRISMA 2020 protocol, implemented via the Watase Uake platform. Using Scopus as the primary database with inclusion criteria of Q1/Q2 journals, 2016–2026 publication window, and English language, the review synthesizes 46 articles from an initial pool of 601 records. Three contributions are made: consolidating fragmented research streams into a resilience oriented perspective; mapping mediating roles of operational flexibility, hedging activity, and firm liquidity; and providing a testable conceptual model with a future research agenda particularly relevant for emerging markets. The remainder of this article is structured as follows. Section 2 presents the review methodology. Section 3 reports descriptive and thematic results. Section 4 contains the thematic discussion. Section 5 identifies research gaps and proposes the conceptual framework. Section 6 presents the conclusion.

RESEARCH METHOD

The present review did not employ meta-analysis because the included studies exhibited substantial heterogeneity in research designs, measurement approaches, institutional settings, and outcome variables. Consistent with recommendations for qualitative systematic reviews, thematic synthesis was considered more appropriate for integrating diverse evidence and identifying theoretical mechanisms. Consequently, the objective of this study is theory development and conceptual integration rather than statistical estimation of pooled effect sizes.

Review Design

This study adopts an SLR design guided by PRISMA 2020 and implemented through the Watase Uake platform. Watase Uake facilitated structured keyword management, Scopus based retrieval, automated duplicate detection, abstract screening, full text retrieval tracking, and PRISMA 2020 compliant reporting, enhancing reproducibility and minimizing human error. The review is not a meta analysis; it synthesizes conceptual and empirical findings thematically without pooling effect sizes (Moher et al., 2009).

Data Source and Search Strategy

The Scopus database was selected due to its comprehensive coverage of peer reviewed finance, economics, management, and accounting journals, and its compatibility with Q1/Q2 journal tier identification via the Scimago Journal Ranking (SJR). The search strategy, executed through Watase Uake, employed 11 keyword combinations targeting intersections of exchange rate risk, corporate hedging, operational flexibility, firm liquidity, capital structure, and capital expenditure. Table 1 or Figure 1 presents the complete keyword combinations and raw record counts. Figure 4 (presented in Section 3.1) visualizes the distribution of raw records across all search strings, with "Corporate Hedging Firm Value" yielding the highest count (n = 176).

Table 1. Keyword Combinations Used in Scopus Database Search via Watase Uake Platform

No.	Keyword Combination	Raw Records	Abstracts Available
1	Exchange Rate Hedging Corporate	91	Yes
2	Exchange Rate Exposure Leverage Firms	11	Yes
3	Currency Risk Corporate Investment	54	Yes
4	Firm Liquidity Exchange Rate Risk	48	Yes
5	Operational Flexibility Exchange Rate	87	Yes
6	Foreign Currency Debt Capital Structure	39	Yes
7	Corporate Hedging Firm Value	176	Yes
8	Financial Flexibility Capital Expenditure	46	Yes
9	Foreign Exchange Exposure Capital Investment	25	Yes
10	Currency Depreciation Debt Financing	13	Yes
11	Currency Risk Firm Performance Emerging	11	Yes
	Total (before deduplication)	601	

Source: Authors' elaboration based on Watase Uake platform and Scopus database retrieval, May 2026.

KEYWORD IDENTIFICATION

No	Keyword	Raw	ABS	x	Act	View	SNA	Tag
1	Exchange Rate Hedging Corporate	91	Yes	x	Get	View		Tag
2	Exchange Rate Exposure Leverage Firms	11	Yes	x	Get	View	SNA	Tag
3	Currency Risk Corporate Investment	54	Yes	x	Get	View	SNA	Tag
4	Firm Liquidity Exchange Rate Risk	48	Yes	x	Get	View	SNA	Tag
5	Operational Flexibility Exchange Rate	87	Yes	x	Get	View		Tag
6	Foreign Currency Debt Capital Structure	39	Yes	x	Get	View	SNA	Tag
7	Corporate Hedging Firm Value	176	Yes	x	Get	View		Tag
8	Financial Flexibility Capital Expenditure	46	Yes	x	Get	View	SNA	Tag
9	Foreign Exchange Exposure Capital Investment	25	Yes	x	Get	View	SNA	Tag
10	Currency Depreciation Debt Financing	13	Yes	x	Get	View	SNA	Tag
11	Currency Risk Firm Performance Emerging	11	Yes	x	Get	View	SNA	Tag

+ Keyword View Result

Figure 1. Keyword Combinations Used in Scopus Database Search via Watase Uake Pla

Source: Authors' elaboration based on Watase Uake.

Inclusion and Exclusion Criteria

Studies were included if: (1) indexed in Scopus; (2) published between 2016 and 2026; (3) appearing in Q1 or Q2 journals per Scimago; (4) written in English; (5) belonging to Economics, Business, Management, Finance, or Accounting subject areas; and (6) addressing exchange rate risk, corporate hedging, operational flexibility, firm liquidity, capital expenditure, or capital structure. The record limitation criteria Year From 2016, Year To 2026, Tier Q1/Q2 were systematically applied through Watase Uake. Studies were excluded if focused exclusively on non corporate asset classes, outside defined subject areas, retracted, or in journals below Q2 tier. Table 2 summarizes criteria applied at each PRISMA stage.

Table 2. Inclusion and Exclusion Criteria Applied at Each Screening Stage

Stage	Type	Criterion	Records Affected
Identification	Exclusion	Year outside 2016–2026	n = 208
Identification	Exclusion	Duplicate records removed	n = 54
Identification	Exclusion	Journal below Q1/Q2 tier	n = 90
Screening	Exclusion	Title/abstract off topic	n = 103
Retrieval	Exclusion	Full text not accessible	n = 57
Eligibility	Exclusion	Insufficient construct alignment	n = 43
Included	Inclusion	All criteria satisfied	n = 46

Source: Authors' elaboration following PRISMA 2020 protocol (Page et al., 2021).

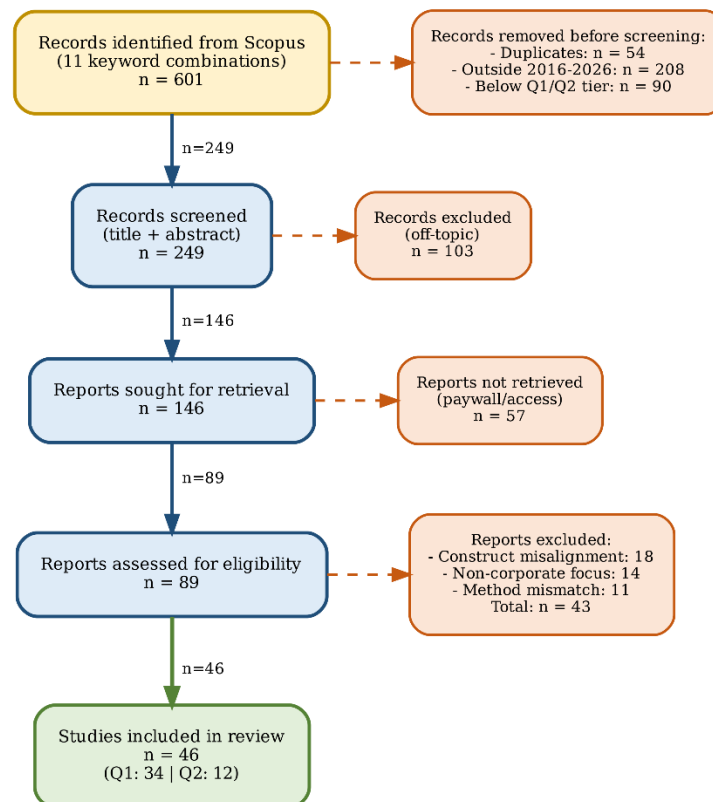
Table 3. Detailed Exclusion Reasons

Exclusion Reason	Number
Duplicate records	54
Outside publication period	208
Journal below Q2	90
Off-topic title/abstract	103
Full text unavailable	57
Construct misalignment	43
Final included studies	46

A detailed record of exclusion decisions was maintained throughout the screening process to minimize selection bias and improve transparency and reproducibility.

Screening and Retrieval Process

Following PRISMA 2020, the review proceeded in four sequential stages. Identification: 601 raw records retrieved from Scopus; after removing 54 duplicates, 208 records outside 2016–2026, and 90 below Q1/Q2, 249 records remained. Screening: 249 titles/abstracts assessed; 103 excluded as off topic, yielding 146 reports for retrieval. Retrieval: 57 of 146 inaccessible due to paywall restrictions, leaving 89 for eligibility assessment. Eligibility: 43 excluded for construct misalignment, non corporate focus, or methodological mismatch, resulting in 46 included studies. Figure 2 presents the complete PRISMA 2020 flow diagram generated through Watase Uake.



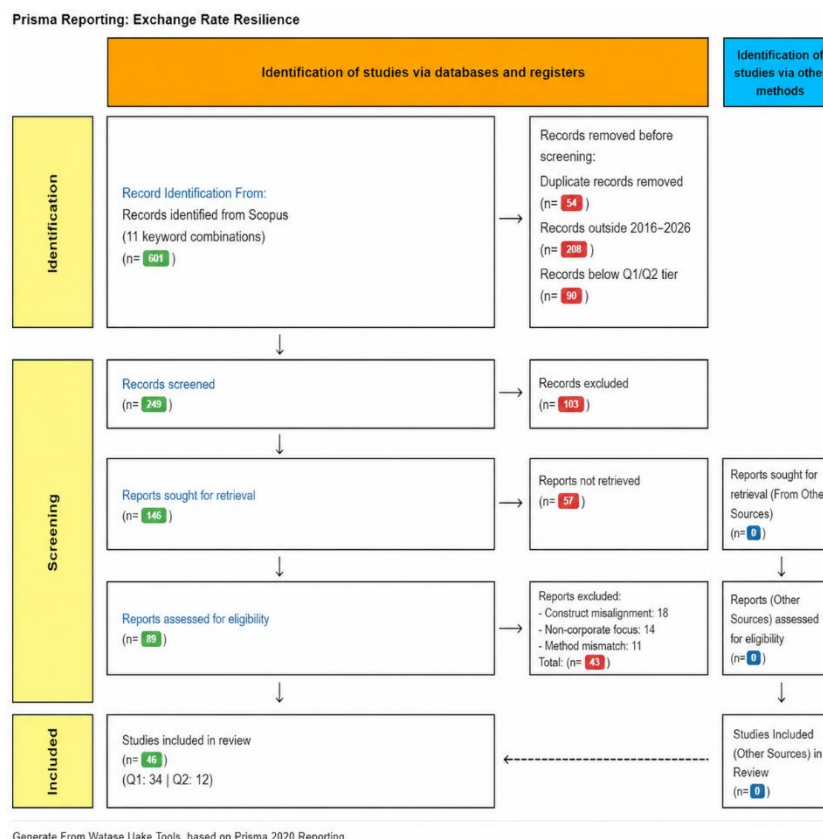


Figure 2. PRISMA 2020 Flow Diagram for the Systematic Literature Review

Source: Authors' elaboration based on PRISMA 2020 protocol (Page et al., 2021), generated via Watase Uake platform.

Quality Assessment

To enhance the validity and reliability of the review, all eligible studies underwent a quality assessment procedure adapted from established systematic review guidelines. Each article was evaluated using four criteria: (1) clarity of research objectives, (2) methodological rigor, (3) adequacy of data and analysis, and (4) relevance to exchange-rate resilience, hedging, liquidity, operational flexibility, capital expenditure, or capital structure. Each criterion was scored on a scale from 1 (low) to 3 (high), generating a maximum score of 12. Studies scoring below 8 were excluded from the final synthesis. The quality assessment process ensured that only methodologically robust and conceptually relevant studies were included in the review.

Table 4. Score Category

Score	Category
10–12	High Quality
8–9	Moderate Quality
<8	Excluded

Data Extraction and Synthesis

Data extraction used a standardized template capturing: authors, year, journal, tier, country context, research design, key variables, theoretical frameworks, and principal findings relevant to the

review constructs. Thematic synthesis grouped studies by mediating mechanism (operational flexibility, hedging, liquidity) and corporate outcome (CapEx, capital structure, profitability, risk exposure). No statistical pooling of effect sizes was performed, consistent with the qualitative thematic synthesis approach.

RESULTS AND DISCUSSION

Descriptive Overview of Included Literature

The 46 included studies span 2016 to 2026, with a pronounced upward trajectory in publication volume. Figure 3 illustrates annual publication counts across the broader keyword domain, showing acceleration from 2021 onward: from 32 articles in 2021, rising through 34 (2022), 40 (2023), and 38 (2024), before reaching a peak of 68 records in 2025. The year 2026 already records 48 publications despite being partially concluded, confirming sustained acceleration of scholarly output. The inflection point around 2020–2021 reflects intensified academic attention following the COVID 19 pandemic and the global currency disruptions it precipitated.

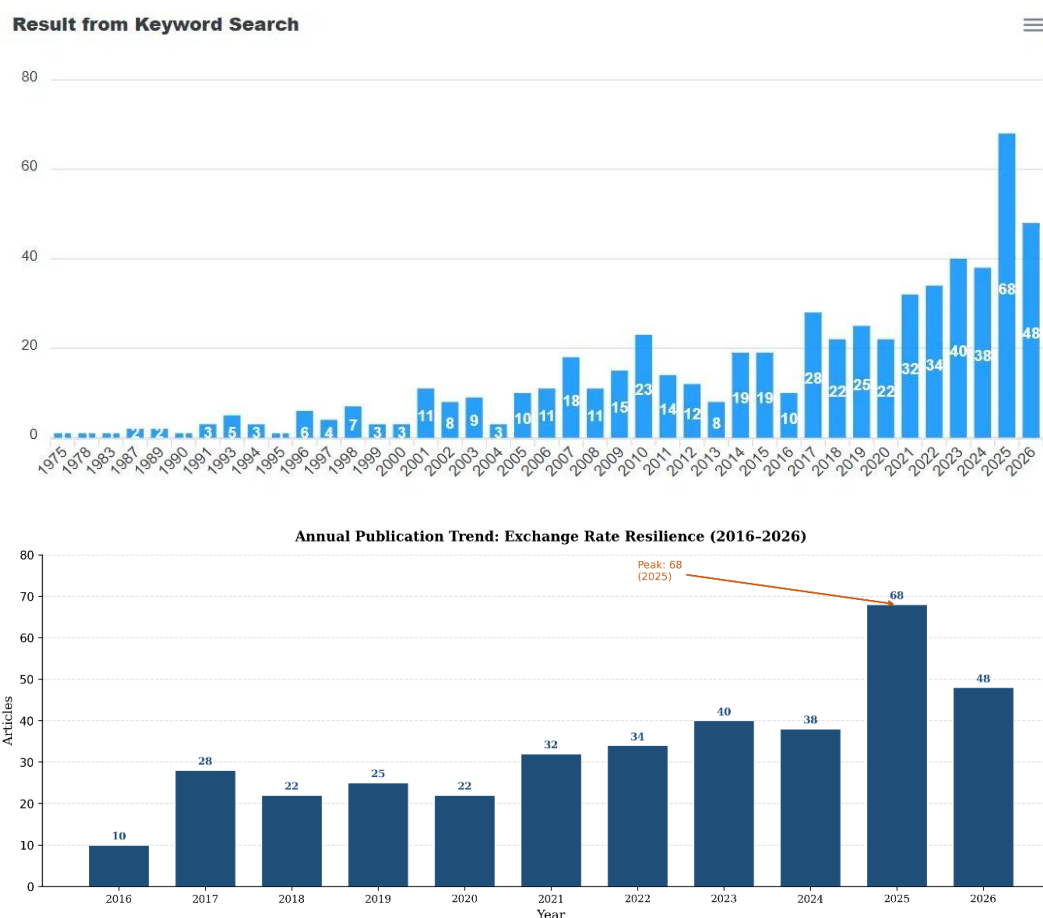


Figure 3. Annual Publication Trend in Exchange Rate Resilience Literature

Source: Authors' elaboration based on Watase Uake keyword search results from Scopus database.

Figure 4 presents the distribution of raw records across all 11 keyword search strings applied through Watase Uake. The combination “Corporate Hedging Firm Value” yielded the highest raw count (n = 176), substantially exceeding the second ranked “Exchange Rate Hedging Corporate” (n =

91) and “Operational Flexibility Exchange Rate” (n = 87). At the lower end, “Exchange Rate Exposure Leverage Firms” and “Currency Risk Firm Performance Emerging” each returned 11 records, reflecting the narrower intersection of these specific construct combinations within the Scopus index.

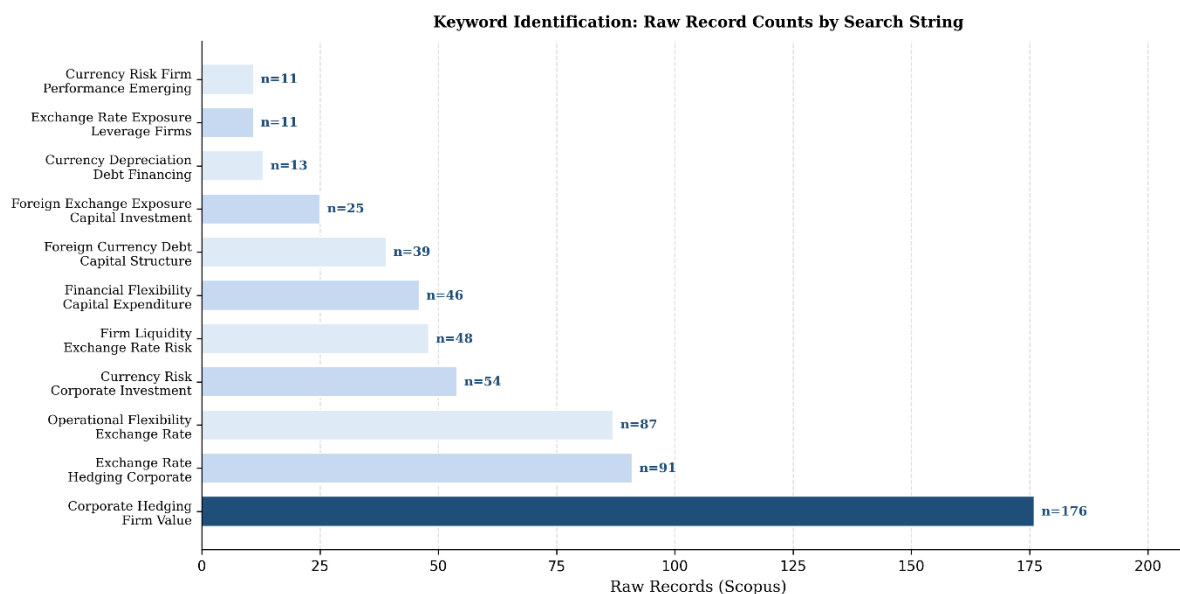


Figure 4. Keyword Identification: Raw Record Counts by Search String (Watase Uake, Scopus 2016–2026)

Source: Authors' elaboration based on Watase Uake keyword identification output.

Figures 5, 6, and 7 present the bibliometric classification of included studies generated through the Watase Uake visualization module. Figure 5 shows the geographic distribution, with the United States (15.2%), India (13.0%), and China (11.8%) contributing the largest country level shares, followed by Multi Country studies (10.0%) and Turkey (8.5%). The study context distribution reveals a strong predominance of non financial corporate studies (87.0%) relative to financial/banking sector studies (13.0%), consistent with the review's focus on corporate level mechanisms. Figure 6 documents the methodological composition: panel data econometrics and survey based designs account for the majority of studies, with experiment based approaches (14.0%) and qualitative methods (12.0%) representing notable secondary streams. Regarding hedging instrument coverage, derivatives and forwards constitute the largest category (28.0%), followed by natural hedging strategies (18.5%) and currency options (15.0%). Figure 7 presents the country distribution in treemap format, visually confirming the concentration of studies in the USA, India, and China, with meaningful secondary contributions from Germany, Australia, and Turkey. Table 3 provides a structured summary of the included corpus.

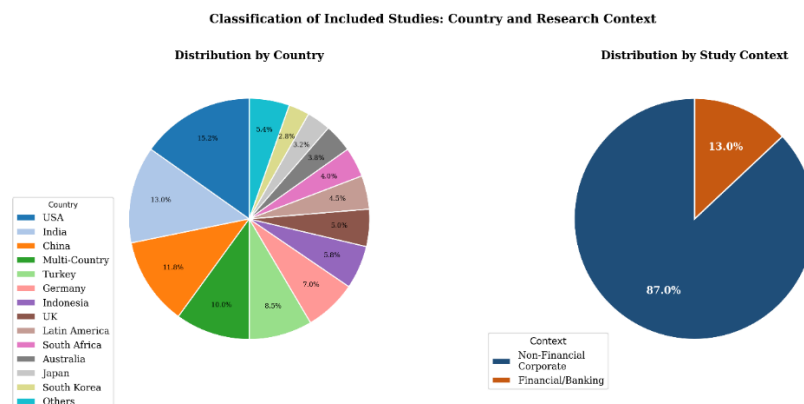


Figure 5. Classification of Included Studies: Country and Research Context Distribution

Source: Authors' elaboration based on Watase Uake visualization output for included studies.

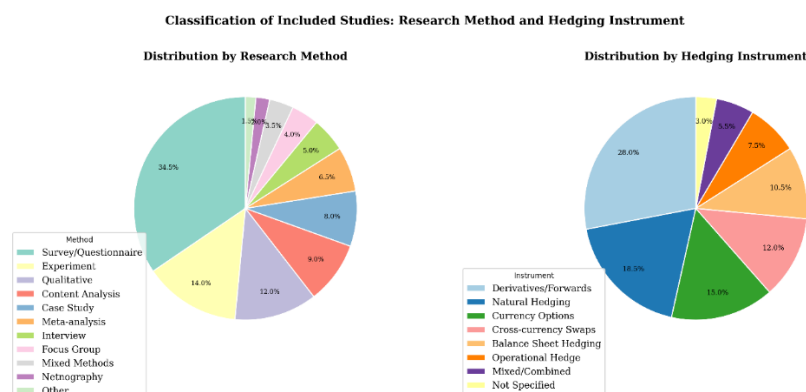


Figure 6. Classification of Included Studies: Research Method and Hedging Instrument Category

Source: Authors' elaboration based on Watase Uake visualization output for included studies.

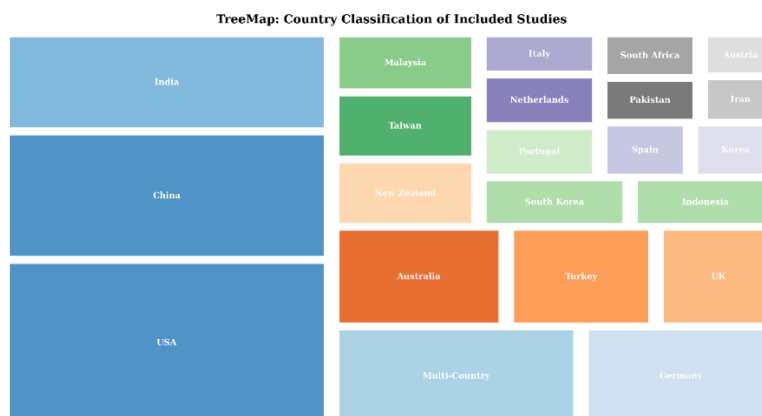


Figure 7. TreeMap: Country Classification of Included Studies

Source: Authors' elaboration based on Watase Uake country classification output.

Table 4. Descriptive Summary of Included Studies by Period, Tier, and Geographic Focus

Period	Q1 Studies	Q2 Studies	Total	Dominant Context	Geographic Focus
2016–2018	12	4	16	Multi country,	USA,

				Germany, Turkey
2019–2021	14	5	19	India, South Africa, Latin America, China
2022–2024	6	3	9	India, China, Turkey, Multi country
2025–2026	2	0	2	India, China, USA
Total	34	12	46	

Source: Authors' elaboration based on Scopus indexed screening corpus, 2016–2026.

Synthesis by Mediating Mechanism

The included literature converges around three mediating mechanisms through which exchange rate resilience influences corporate financial outcomes. Figure 8 maps the distribution of studies across six thematic domains and three mediating mechanisms. Hedging activity consistently registers the highest study counts across all domains, reaching a peak of 18 studies in the “Hedging Behavior” domain and 14 in “Exchange Rate Exposure,” confirming it as the most extensively documented mediating channel in the reviewed corpus. Firm liquidity follows, with its strongest representation in the “Liquidity & Risk” domain (n = 11) and “Firm Performance” (n = 9). Operational flexibility, while theoretically central, records more modest study counts across all domains ranging from 4 to 8 reflecting the relative empirical immaturity of this mechanism.

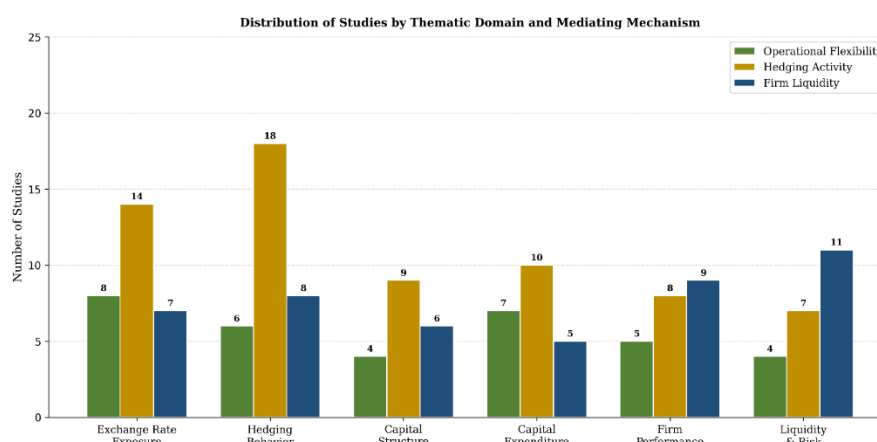


Figure 8. Distribution of Included Studies by Thematic Domain and Mediating Mechanism

Source: Authors' elaboration based on thematic coding of 46 included studies.

Figure 9 presents the Social Network Analysis (SNA) of the hypothesis network, mapping directional relationships between exchange rate resilience, its three mediating mechanisms, and corporate outcome variables across the 46 included studies. Thick dark blue edges connect the core variables Exchange Rate Resilience (independent), Operational Flexibility, Hedging Activity, and Firm Liquidity (mediators), and Capital Expenditure and Capital Structure (outcomes) reflecting the strongest and most frequently hypothesized relationships in the literature. Thinner grey edges capture secondary relationships involving control and related variables including FX Exposure, Cash Flow Volatility, Currency Mismatch, Risk Premium, Derivative Usage, Leverage, Financial Distress, Growth Opportunity, Investment Sensitivity, Profitability, Debt Capacity, Cost of Equity, and Firm Size. These peripheral nodes represent the broader theoretical context within which the core mediation pathways operate.

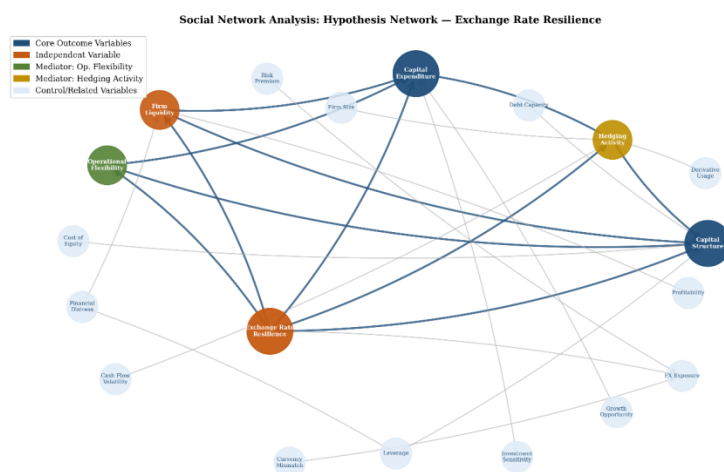


Figure 9. Social Network Analysis: Hypothesis Network Exchange Rate Resilience Research Landscape

Source: Authors' elaboration using SNA approach on hypothesis relationships from 46 included studies.

Figure 10 provides the focused variable relationship network for the Capital Expenditure cluster. Capital Expenditure is positioned as the focal node (center, dark blue), with antecedent variables arrayed to the left including Exchange Rate Resilience, Operational Flexibility, Hedging Activity, Firm Liquidity, Investment Sensitivity, Growth Opportunity, Supply Chain Flexibility, and Cash Flow Stability. Two intermediate variables Financing Capacity and FX Risk Reduction are identified as sequential links through which Hedging Activity and Firm Liquidity channel their effects on Capital Expenditure, respectively. Asset Growth and Firm Value appear as downstream outcome variables to the right of the focal node, indicating that capital expenditure decisions ultimately feed into broader measures of firm performance and value creation.

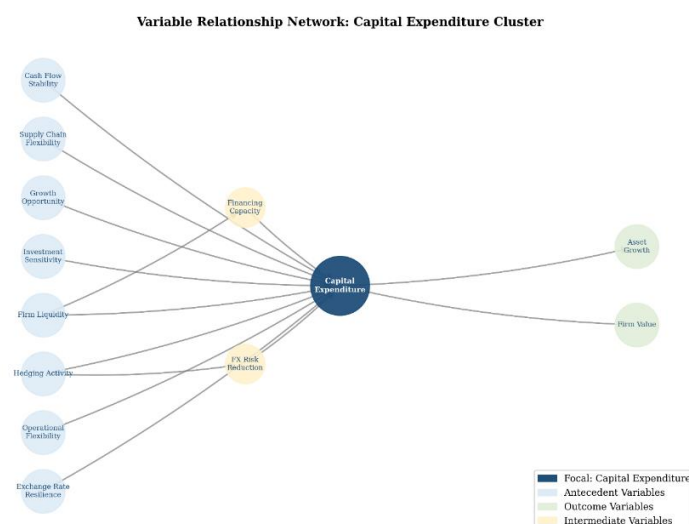


Figure 10. Variable Relationship Network: Capital Expenditure Cluster

Source: Authors' elaboration based on variable relationship extraction from included studies.

(Mello et al., 1995) established that operational flexibility and financial hedging function as mutually reinforcing corporate responses to exchange rate uncertainty. (HAYES et al., 2025), exploiting the ASU 2017 12 accounting standard change as a quasi natural experiment in the United States, find that improved hedge accounting significantly enhances hedging effectiveness, which reduces firm risk, increases debt capacity, and sustains capital expenditure (Gupta et al., 2025), using matched sample panel analysis in India, demonstrate that derivative use generates firm value through volatility reduction and leverage related financing benefits, with effects concentrated among financially constrained firms.

(Gillet et al., 2024) show that regime switching hedging models significantly outperform static strategies, indicating that dynamic calibration of hedging is central to its effectiveness. (Lee et al., 2023) establish that higher liquidity ratios among Indonesian firms predict formal hedging program adoption. (Giachetti et al., 2024) provide multi country evidence that multinational corporations with higher operational flexibility achieve superior exchange rate risk management outcomes. (Pellegrino et al., 2024) apply a real options framework to quantify the value of supply chain flexibility as an exchange rate risk mitigation instrument.

Table 5. Summary of Key Studies by Mediating Mechanism and Corporate Outcome

Study	Year	Mechanism	Corporate Outcome	Method	Context
(HAYES et al., 2025)	2025	Hedging	CapEx, Debt Capacity	Quasi experiment	USA
(Gupta et al., 2025)	2025	Hedging	Firm Value	Panel Matching	+ India
(Cao et al., 2025)	2025	Hedging	Corporate Resilience	Panel	China
(Giachetti et al., 2024)	2022	Op. Flexibility	CapEx, Capital Structure	Firm Panel	level Multi country
(Gillet et al., 2024)	2024	Hedging	Cost Reduction	Regime switching	UK/Multi country
(Pellegrino et al., 2024)	2024	Op. Flexibility	FX Exposure Reduction	Real Options	Multi sector
(Lee et al., 2023)	2023	Liquidity	Hedge Adoption	Logit/Panel	Indonesia
(Giraldo Prieto et al., 2019)	2019	Liquidity	FX Risk Management	Regression	Latin America
(Chen & Sakouba, 2021)	2021	Hedging	Firm Value	Meta analysis	Multi country
(Goel et al., 2025)	2025	Liquidity	FX Vulnerability	Panel	India

Source: Authors' elaboration from systematic review of 46 included studies.

Synthesis by Corporate Outcome

Figure 11 presents the theory hypothesis path diagram illustrating theoretical pathways from exchange rate resilience through mediating mechanisms to capital structure. The numbers on each arrow indicate the count of supporting studies per relationship. Hedging Activity receives the

strongest support, with nine studies linking it directly to Capital Structure and six linking it to Financing Cost Reduction as an intermediate step. Firm Liquidity is supported by six studies connecting it to Exchange Rate Resilience and five connecting it directly to Capital Structure. Operational Flexibility, while present in the network, is supported by only two studies per pathway, consistent with its status as the least empirically developed mechanism in the reviewed corpus. Two intermediate nodes Leverage Optimization and Financing Cost Reduction are identified as sequential channels through which Hedging Activity affects Capital Structure, each supported by three to four studies.

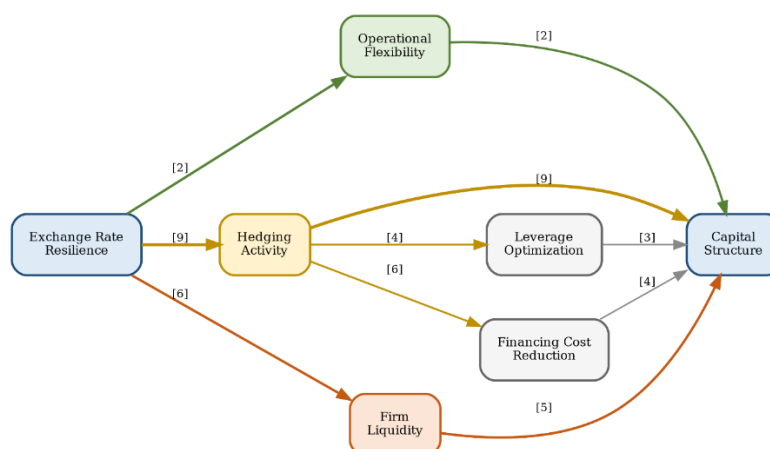


Figure 11. Theory Hypothesis Path Diagram: Exchange Rate Resilience to Capital Structure Pathways
 Source: Authors' elaboration based on theory path mapping of hypothesis relationships across included studies.

For capital expenditure, evidence consistently indicates that firms with effective hedging programs and sufficient liquidity maintain higher investment rates under exchange rate uncertainty. (HAYES et al., 2025) provide direct causal evidence; (Giachetti et al., 2024) demonstrate that operational flexibility reduces CapEx sensitivity to exchange rate movements; and (Pellegrino et al., 2024) show that supply chain flexibility preserves the option value of future capital commitments.

For capital structure, two competing forces are documented. Hedging reduces financing costs, improves investor perceptions, and enhances debt capacity: (Mateut & Chevapatrakul, 2018) show that derivative users experience a lower cost of equity. Conversely, foreign currency debt amplifies balance sheet vulnerability: (Goel et al., 2025) document that leverage and export intensity jointly intensify balance sheet risk during depreciation episodes. Table 5 maps key empirical findings by outcome domain.

Table 6. Key Empirical Findings by Corporate Outcome Domain

Outcome Domain	Key Finding	Supporting Study	Direction
Capital Expenditure	Hedging effectiveness sustains CapEx under uncertainty	(HAYES et al., 2025)	Positive
Capital Expenditure	Operational flexibility reduces CapEx sensitivity to FX	(Giachetti et al., 2024)	Buffering
Capital Expenditure	Supply chain flexibility preserves investment	(Pellegrino et al., 2024)	Positive

	option value		
Capital Structure	Hedging lowers cost of equity and debt constraints	(Mateut & Chevapatrakul, 2018)	Positive
Capital Structure	Foreign currency debt amplifies balance sheet vulnerability	(Goel et al., 2025)	Negative
Capital Structure	Liquidity enables leverage maintenance under FX shock	(Lee et al., 2023)	Positive
Firm Value	Derivative use improves value via volatility reduction	(Gupta et al., 2025)	Positive
Risk Exposure	FX exposure is priced in stock returns in emerging markets	(Goel et al., 2025)	Material

Source: Authors' elaboration from thematic synthesis of 46 included studies.

Thematic Discussion

Exchange Rate Risk and Corporate Financial Performance

A persistent theme across the reviewed literature is the material impact of exchange rate volatility on corporate financial performance. Evidence from multiple contexts consistently shows that exchange rate fluctuations reduce profitability, increase risk premiums, and generate financing pressures particularly for firms with significant foreign currency exposures. (Cao et al., 2025) document that Chinese exchange rate policy uncertainty materially affects corporate resilience, measured by the capacity to maintain investment and financial stability under policy driven currency shifts(Manopimoke et al., 2024) demonstrate that in emerging markets, exchange rate movements often amplify rather than absorb external shocks, challenging the textbook role of floating exchange rates as automatic stabilizers. (He et al., 2026), using a large sample of Chinese listed firms, find that economic policy uncertainty significantly increases exchange rate exposure, mediated through firms' capacity to implement proactive hedging strategies. (Goel et al., 2025) extend this to the firm level in India, documenting that leverage and export intensity jointly determine the severity of balance sheet effects during currency depreciations. These contributions establish that exchange rate resilience is a strategically significant corporate capability not reducible to a single instrument or policy choice.

Hedging as the Central Mediating Mechanism

Hedging activity emerges as the most robustly documented mechanism, as confirmed quantitatively in Figure 8, where hedging related studies dominate all six thematic domains most prominently in the "Hedging Behavior" domain with 18 studies, and in "Exchange Rate Exposure" with 14 studies. Hang, Geyer Klingeberg, Rathgeber, and Stöckl (2021) confirm through meta analysis that financial hedging and capital structure choices are complementary, with firm value maximized when both are jointly optimized. (Gillet et al., 2024) demonstrate that regime switching hedging strategies calibrated to currency volatility regimes significantly outperform static approaches, establishing that dynamic responsiveness is critical to hedging value.

The conditionality of hedging effectiveness is a notable finding. (Gupta et al., 2025) show that derivative use generates value primarily for financially constrained firms, suggesting that the hedging

outcome relationship is moderated by financial slack. These findings collectively indicate that hedging effectiveness rather than mere participation is the appropriate mediating variable in future empirical models of exchange rate resilience.

Operational Flexibility as Strategic Adaptation

Operational flexibility represents the theoretically richest but empirically least developed mechanism, as reflected in Figure 8 where its study counts (ranging from 4 to 8 across domains) consistently fall below those of hedging and liquidity. Rooted in the real options approach (Mello et al., 1995), the argument holds that firms with capacity to relocate production, switch sourcing, adjust pricing, or reallocate across markets are inherently more resilient to exchange rate movements. (Giachetti et al., 2024) provide the most direct empirical support, demonstrating that multinational corporations with higher operational flexibility achieve superior exchange rate risk management outcomes relative to those relying solely on financial hedging. Shi, Prajogo, Fan, and Oke (2025) demonstrate that operational flexibility is a viable strategy during major supply chain disruptions, with dynamically adjusting firms maintaining higher performance. (Li et al., 2025) find that operational flexibility moderates the negative impact of economic downturns on firm value, implying that markets reward strategic adaptability. In the CapEx variable network (Figure 10), Supply Chain Flexibility appears as a distinct antecedent node feeding into Capital Expenditure, affirming that operational adaptability constitutes an independent pathway through which exchange rate resilience shapes investment decisions.

Firm Liquidity as Absorptive Buffer

Firm liquidity enables firms to maintain strategic continuity under exchange rate shocks by reducing financial distress likelihood, facilitating hedging adoption, and providing slack to defer or restructure capital commitments. As shown in Figure 10, Firm Liquidity connects to Capital Expenditure both directly and through the intermediate node of Financing Capacity, indicating that liquidity's effect on investment operates partly through improving the firm's access to and cost of external financing. (Lee et al., 2023) establish that Indonesian firms with higher liquidity ratios are more likely to maintain formal hedging programs, confirming that liquidity and hedging are complementary rather than alternative risk management tools.

(Goel et al., 2025) document that liquidity is a critical moderating factor in the foreign currency debt–financial distress relationship among Indian non financial firms. (Giraldo Prieto et al., 2019)) identify liquidity, financial distress risk, and growth opportunities as joint determinants of foreign exchange risk management adoption in Latin American firms. In Figure 8, firm liquidity reaches its highest study count in the “Liquidity & Risk” domain ($n = 11$), confirming that the liquidity–risk management nexus is the most thoroughly examined dimension of this mechanism.

Emerging Market Dimensions

Currency mismatches arising from borrowing in hard currencies while generating revenues in local currency expose emerging market firms to severe balance sheet effects during depreciation episodes. (Goel et al., 2025) document this in India; He et al. (2026) in China; and (Manopimoke et al., 2024) across a multi country emerging market panel. As illustrated in Figure 5, the geographic distribution of included studies shows that emerging markets (India 13.0%, China 11.8%, Turkey 8.5%, Indonesia 5.8%, Latin America 4.5%, South Africa 4.0%) collectively account for nearly half of

the reviewed corpus, underscoring their centrality to the research domain. However, the treemap in Figure 7 also reveals that the USA remains the single largest country contributor, indicating a persistent developed market bias in empirical coverage. (Giraldo Prieto et al., 2019) demonstrate that Latin American firms' risk management decisions are shaped by country level institutional factors including financial market depth, legal protection, and regulatory frameworks, reinforcing that future empirical work must account for cross country heterogeneity.

Research Gaps, Conceptual Framework, and Future Research Agenda

Identified Research Gaps

Five critical gaps are identified. First, exchange rate resilience is not operationalized as a distinct, measurable firm level construct: most studies measure exposure, sensitivity, or vulnerability rather than adaptive capacity, conflating the absence of negative outcomes with the presence of resilience building mechanisms. Second, the mediating pathways from exchange rate resilience to CapEx and capital structure have not been examined within a unified mediation framework. As shown in Figure 9, the SNA hypothesis network reveals that while individual relationships are well documented, no study in the reviewed corpus simultaneously tests the full mediation chain from Exchange Rate Resilience through Operational Flexibility, Hedging Activity, and Firm Liquidity to both Capital Expenditure and Capital Structure.

Third, empirical evidence on operational flexibility as an exchange rate risk management mechanism remains sparse. Figure 8 quantifies this gap: operational flexibility study counts (4–8 per domain) consistently trail hedging (7–18) and liquidity (4–11) across all six thematic domains. Fourth, the literature lacks integrated models jointly examining CapEx and capital structure as co determined outcomes of exchange rate resilience, even though investment and financing decisions are theoretically and empirically interrelated. Fifth, emerging market contexts are underrepresented relative to their economic significance. While Figures 5 and 7 confirm meaningful emerging market representation in the reviewed corpus, the USA's dominant position in Figure 7 and the 87% non financial corporate concentration in Figure 5 indicate that cross country, cross sector comparisons remain limited.

Proposed Conceptual Framework

Figure 12 presents the proposed conceptual framework based on synthesis of the 46 reviewed studies. The framework positions exchange rate resilience (X) as the focal independent construct, mediated by operational flexibility (M1), hedging activity (M2), and firm liquidity (M3), with capital expenditure (Y1) and capital structure (Y2) as primary outcome variables. Solid arrows represent hypothesized direct effects; dashed arrows represent the direct effects of exchange rate resilience on outcomes independent of the three mediating pathways (H4a–H4b).

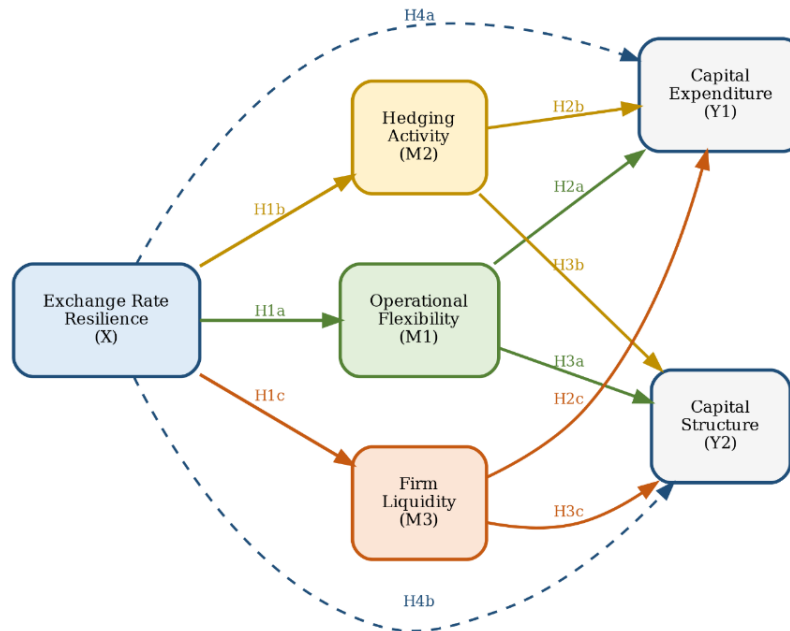


Figure 12. Proposed Conceptual Framework: Exchange Rate Resilience, Mediating Mechanisms, and Corporate Outcomes

Source: Authors' synthesis based on systematic review findings. Solid arrows = direct effects; dashed = direct effects bypassing mediators.

The framework posits eight hypothesized relationships: exchange rate resilience positively influences each mediator (H1a–H1c); each mediator positively influences CapEx (H2a–H2c) and capital structure optimization (H3a–H3c); and exchange rate resilience exerts direct effects on both outcomes independent of the mediation pathways (H4a–H4b). The hypothesis counts visible in Figure 11 particularly the dominance of hedging pathways (nine supporting studies) provide empirical grounding for the proposed framework hierarchy, with hedging activity representing the most evidence supported mediation channel and operational flexibility the most theoretically motivated but least empirically validated.

Future Research Agenda

Five specific directions are identified. First, develop and validate a composite measure of exchange rate resilience at the firm level, drawing on indicators of hedging sophistication, liquidity adequacy, operational adaptability, and earnings stability across currency cycles (Davtyan & Elkaraksy, 2026). Second, empirically test the proposed mediation framework using longitudinal panel data from firms in multiple emerging markets, enabling cross country comparison of mediation pathways and institutional moderators addressing the geographic concentration evident in Figures 5 and 7. Third, examine dynamic sequencing of resilience mechanisms testing whether firms first develop liquidity buffers (consistent with Figure 8's liquidity dominance in the "Liquidity & Risk" domain), subsequently invest in hedging programs, and whether hedging experience facilitates operational flexibility investments. Fourth, investigate industry level heterogeneity in mechanism importance, as the relative value of operational flexibility versus financial hedging likely varies across capital intensive, export oriented, and import dependent industries. Fifth, explore the relationship between resilience mechanisms and firm survival during currency crises (Falcone & Ridge, 2024).

CONCLUSION

This study contributes a theoretically grounded conceptual framework derived from systematic evidence synthesis. The proposed framework should be regarded as a foundation for future empirical validation rather than a confirmed causal model. This systematic literature review synthesizes 46 Scopus indexed Q1/Q2 studies published between 2016 and 2026 on exchange rate resilience and its relationship to corporate capital expenditure and capital structure, implemented through the Watase Uake platform following PRISMA 2020. Three mediating mechanisms are identified: operational flexibility, hedging activity, and firm liquidity. As quantified in Figure 8, hedging activity dominates the empirical literature across all thematic domains, reaching a peak of 18 studies in the “Hedging Behavior” domain; liquidity follows as the second most documented mechanism; while operational flexibility, though theoretically important, records the lowest study counts and offers the greatest potential for future research contributions.

The central contribution is the construction of a unified, resilience oriented conceptual framework (Figure 12) integrating previously fragmented research streams. The SNA hypothesis network (Figure 9) and theory path diagram (Figure 11) together demonstrate that hedging activity constitutes the best evidenced mediation pathway, supported by nine studies connecting it to capital structure, while the intermediate roles of Financing Cost Reduction and Leverage Optimization visible in Figure 11 provide further granularity on the mechanisms through which hedging shapes corporate financing decisions. Five critical gaps are identified and a future research agenda delineated, with particular emphasis on emerging markets whose geographic importance is confirmed by Figures 5 and 7 but whose empirical coverage remains dominated by individual country studies rather than integrated cross country frameworks.

This study is subject to several limitations. The review is restricted to Scopus indexed Q1/Q2 publications, which ensures quality but may exclude relevant practitioner oriented evidence. The synthesis is thematic rather than quantitative, so conclusions about effect sizes cannot be drawn. The proposed framework has not been empirically tested. Future research should address these limitations through broader database coverage, systematic replication analyses, and rigorous primary data collection in diverse geographic contexts.

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