

Does Consumer Confidence Matter? Reconsidering the Relationship between Interest Rates and Dollarization in Turkey

Banu Demirhan 

Afyon Kocatepe University, Afyon, Turkey. E-mail: bdemirhan@aku.edu.tr

Abstract:

This study examines deposit and credit dollarization in Turkey, with a particular focus on whether consumer confidence moderates the relationship between interest rates and dollarization. Using monthly data from January 2012 to May 2025, we estimate an autoregressive distributed lag model as the main empirical framework and assess robustness using fully modified ordinary least squares, dynamic ordinary least squares, and canonical cointegration regression. The empirical findings indicate a conditional association between interest rates and dollarization, which should be interpreted cautiously, given potential simultaneity and endogeneity concerns.

This relationship is conditional on consumer confidence: as confidence rises, the marginal (de-dollarizing) association between interest rates and dollarization weakens, whereas it strengthens when confidence is low. Additionally, exchange rate depreciation appears to amplify dollarization pressures. By contrast, the post-2022 policy-regime period (captured by the dummy variable) is negatively associated with both deposit and credit dollarization. This outcome likely reflects several simultaneous developments rather than a single, isolated policy effect. Overall, the findings suggest that in emerging economies such as Turkey, interest-rate strategies for de-dollarization are most potent during periods of low consumer confidence, as the marginal effectiveness of rate hikes diminishes as sentiment improves. Our findings suggest that in emerging economies such as Turkey, interest-rate strategies for de-dollarization are most potent during periods of low consumer confidence, as the marginal effectiveness of rate hikes diminishes as sentiment improves. This highlights the importance of decisive monetary policy in fragile confidence environments, complemented by long-term measures that reinforce macroeconomic stability and institutional credibility.

Keywords: Dollarization, Interest Rate, Consumer Confidence, Monetary Policy, ARDL Approach

JEL Classification: E44, E52, G21, E71

1. Introduction

In many developing economies, financial stability is increasingly undermined by a pervasive reliance on foreign currencies, a phenomenon widely known as financial dollarization. Dollarization occurs when foreign currencies replace domestic currencies, weakening the effectiveness of monetary policy and exacerbating macroeconomic vulnerabilities. Understanding the determinants of dollarization and providing practical policy guidance is especially important for countries such as Turkey, where foreign-currency-denominated assets and liabilities have become widespread.

Turkey has long been characterized by high inflation, exchange rate volatility, financial turbulence, and political uncertainty. A significant shift toward foreign currency deposits is often observed during economic or political distress. These structural vulnerabilities make Turkey a compelling case for analyzing the underlying drivers of dollarization. While many studies have investigated the determinants of dollarization in Turkey—such as inflation, exchange rate volatility, and interest rate differentials—there is limited research on how these economic fundamentals interact with behavioral factors, particularly consumer confidence. In this context, a notable gap in the literature is the limited attention to consumer confidence as a moderator of the relationship between interest rates and dollarization. However, consumer confidence plays a crucial role in shaping economic decision-making and currency preferences.

According to the conventional view, higher interest rates may be associated with lower dollarization by increasing the relative attractiveness of domestic-currency instruments. This association need not be uniform across confidence and expectation environments. The relationship between interest rates and dollarization can vary with consumer confidence: an increase in consumer confidence may weaken the relationship, whereas a decrease may strengthen it. Building on this possibility, this study examines the role of consumer confidence in the interest rate–dollarization relationship and offers evidence for a potentially sentiment-driven transmission channel.

This study analyzes whether the link between interest rates and dollarization in Turkey is contingent on consumer confidence. Using publicly available monthly data from January 2012 to May 2025, the analysis considers both deposit and credit dollarization. The model incorporates interest rates, exchange rates, consumer confidence index, and an interaction term between interest rates and consumer confidence to estimate short- and long-run dynamics via the autoregressive distributed lag (ARDL) approach. Additional cointegration techniques, such as fully modified ordinary least squares (FMOLS),

dynamic ordinary least squares (DOLS), and canonical cointegration regression (CCR), are also applied to ensure the robustness of the findings. Consistent with the observational nature of the data and the potential for simultaneity among macroeconomic variables, the analysis remains explicitly descriptive, focusing on empirical associations rather than structural causal claims.

The main contribution of this study is its simultaneous examination of interest rate effects and consumer sentiment in the context of dollarization, specifically in Turkey. The findings suggest the need for sentiment-aware monetary policy frameworks that enhance policy effectiveness by accounting for behavioral factors and expectations.

The remainder of this paper is organized as follows: Section 2 discusses the theoretical considerations. Section 3 reviews the relevant literature. Section 4 outlines the data, model specification, and estimation techniques. Section 5 presents the empirical findings. Section 6 presents the results, and Section 7 concludes.

2. Theoretical Considerations

Dollarization refers to the use of a foreign currency alongside or in place of the domestic currency and is particularly relevant for developing and transition economies, where macroeconomic volatility and policy uncertainty can weaken the functions of domestic money. Theoretical explanations typically emphasize (i) portfolio choice under risk, (ii) institutional credibility and policy risk, (iii) currency substitution in transactions and savings, and (iv) banking-sector balance sheet dynamics and persistence.

Portfolio choice theory is a central starting point, which holds that agents allocate wealth across domestic and foreign-currency assets based on expected returns and risk. When inflation is high and volatile, and exchange rates are unstable, shifting into foreign currency becomes a risk-management response. Savastano (1996) argues that macroeconomic instability—especially inflation surges and exchange rate volatility—is strongly associated with higher dollarization, and that the process can unfold gradually as inflation erodes money's core functions (store of value, unit of account, and medium of exchange). Importantly, Savastano (1996) also emphasizes that inflation alone is insufficient; institutional and regulatory features shape how quickly and persistently dollarization evolves, helping explain hysteresis.

Building on this logic, Ize and Yeyati (2003) formalize financial dollarization within a deposit-and-loan portfolio framework and introduce the intuition of the minimum-vari-

ance portfolio: dollarization can be rationally chosen to minimize portfolio risk as a function of the relative volatilities of inflation and the real exchange rate. A key implication is that dollarization responds not only to “levels” (first moments) but also to uncertainty (second moments). As a result, even if inflation volatility declines, dollarization may persist when other sources of risk remain salient, providing a portfolio-based interpretation of persistence and slow reversals.

Institutional and credibility-based explanations complement portfolio models by focusing on policy risk and the reliability of domestic monetary arrangements. Weak governance, limited central bank independence, and histories of policy reversals can undermine confidence in domestic-currency contracts and encourage hedging via foreign currency. Levy-Yeyati (2006) emphasizes that political instability and weak rule of law raise the likelihood of financial dollarization by increasing uncertainty about the commitment to sound monetary policy. Similarly, De Nicolo et al. (2005) stress that financial dollarization is rooted not only in macroeconomic imbalances but also in structural factors (institutional weakness and regulatory inadequacy) that raise vulnerability through balance-sheet exposures. Rennack and Nozaki (2006) characterize financial dollarization as a rational response in environments of inflation uncertainty and low confidence in monetary authorities and highlight that reversing entrenched dollarization requires credible, sustained policy efforts and institutional reforms, often involving transition costs and long adjustment horizons.

A complementary perspective is the currency substitution theory, which emphasizes how inflation and expectations can shift both transaction and savings behavior toward foreign currencies. Cagan (1956) provided an early monetary foundation by showing that money demand falls sharply with rising expected inflation in hyperinflationary episodes, underscoring the role of expectations and credibility in domestic money holdings. Extending this behavioral distinction, Giovannini and Turtelboom (1992) separated asset substitution (savings/portfolio) from transaction substitution (payments), noting that both can become self-reinforcing when expectations are poorly anchored, contributing to persistence even after stabilization.

The banking dimension is captured by the concept of financial dollarization, in which bank liabilities and assets are denominated in foreign currency, thereby raising systemic risk through currency mismatches. Reinhart et al. (2003) broaden the notion of partial dollarization and document substantial cross-country variation, emphasizing both the persistence of dollarization and the limited historical success of de-dollarization episodes. They also highlight that highly dollarized economies can display more substantial

exchange-rate pass-through—consistent with “fear of floating” concerns—while cautioning that durable de-dollarization typically requires supporting conditions and time. Honig (2009) further links financial dollarization to governance quality and argues that credibility and consistent macroeconomic policies, rather than exchange rate regime choices alone, are central to reducing unofficial dollarization over time.

Finally, a large body of theory emphasizes persistence and hysteresis. Network externalities imply that once foreign currency becomes widely used, the private cost of switching back to domestic currency rises, creating “lock-in.” Uribe (1997) formalizes this idea through a currency substitution model with network effects, showing how temporary inflation shocks can have persistent effects on money demand. Calvo and Vegh (1992) similarly stress that there are no one-size-fits-all prescriptions. While domestic-currency promotion can increase policy flexibility, it may create inflation-tax temptations. In contrast, full dollarization can stabilize inflation at the expense of lender-of-last-resort capacity and financial resilience. These perspectives highlight the multidimensional nature of dollarization and the importance of credibility and expectations in shaping outcomes.

Recent studies also point to the role of financial globalization. As capital markets liberalize and foreign funding becomes more accessible, liability dollarization can intensify, reinforcing hard currency preferences and increasing vulnerability to exchange rate shocks.

The above mechanisms motivate the empirical focus on interest rates, exchange rate movements, and confidence/expectations. Portfolio and currency substitution views imply that higher domestic interest rates may be associated with lower dollarization by raising the relative attractiveness of domestic-currency assets. In contrast, exchange rate depreciation and heightened currency risk are expected to be associated with higher dollarization. Institutional and credibility-based perspectives underscore that expectations and perceived policy reliability shape currency choice; accordingly, a confidence measure can be interpreted as capturing shifts in sentiment and perceived risk, which may condition the extent to which interest rates correlate with dollarization. Such a framework offers a theoretical rationale for including consumer confidence and an interaction term that permits the interest rate–dollarization relationship to vary with sentiment.

Deposit and credit dollarization refer to different sides of the balance sheet and therefore need not share the same determinants. Deposit dollarization primarily reflects households’ and firms’ portfolio and precautionary motives, that is, a preference to store value in foreign currency when inflation risk, depreciation risk, or policy uncertainty is

perceived to be high. In this sense, expectations and confidence can shape the attractiveness of local-currency saving instruments and, in turn, influence deposit dollarization through a “store-of-value/hedging” channel. Credit dollarization, by contrast, is more closely tied to the supply and pricing of foreign-currency lending and to the institutional features of the banking sector, including banks’ access to FX funding, regulatory constraints, borrower hedging capacity (e.g., FX income), and macroprudential conditions. Hence, the transmission of interest-rate changes and confidence to dollarization may differ between the deposit and credit markets, and the empirical results should be interpreted with these market-specific mechanisms in mind.

3. Literature Review

In recent years, the empirical literature on dollarization in Turkey has grown considerably, offering a range of methodological approaches and findings that complement and challenge one another. Studies addressing household- and firm-level behavior, macroeconomic indicators, regional determinants, institutional trust, and structural shifts have enriched academic understanding of the phenomenon.

When comparing the studies methodologically, a range of models have been employed, including ARDL bounds testing, VAR analysis, Johansen cointegration, Granger and Toda-Yamamoto causality tests, as well as more advanced approaches like TAR, Fourier ADF, Markov Regime Switching, and rolling window regressions. Some studies, including Çatalçam (2022), Özbek (2024), Kaya and Kara (2022), and Bulut and Tokatlıoğlu (2022), apply ARDL techniques to identify long-run equilibrium relationships, whereas others—such as Civcir (2003) and Özer (2022)—utilize alternative econometric frameworks based on cointegration or causality testing. Moreover, nonlinear and dynamic methodologies have been used in studies such as those by Ağaslan and Gayaker (2019) and Demirel (2024), reflecting an effort to capture the complex, time-varying structures of dollarization behavior.

Regarding temporal scope, the data periods range from as early as 1986 (Civcir, 2003) to as recent as 2023 (Varol et al., 2024; Alpağut, 2024; Demirel, 2024). While some studies have focused on relatively short and turbulent periods, such as 2012–2018 (Yılmaz and Uysal, 2019), others have investigated longer historical spans, such as 1988–2009 (Dumrul, 2010). This diversity provides a wide lens through which structural shifts, policy changes, and external shocks can be evaluated, including the 2001 crisis, 2016 coup attempt, and COVID-19.

Regarding empirical findings, inflation appears to be both a central and contested determinant. Several studies (e.g., Özer 2022, Çatalçam 2022) show inflation's substantial and direct effect on dollarization, whereas others, such as Kaya and Kara (2022) and Alpağut (2024), report unexpected or even negative relationships. Similarly, Varol et al. (2024) find that while the producer price index negatively affects credit dollarization, TL interest rates and exchange rates positively influence credit dollarization. Their findings also reveal that deposit dollarization contributes to credit dollarization, whereas currency mismatches in banks' balance sheets continue to expose the sector to FX risk. However, a shared consensus is that exchange rate movements significantly shape dollarization decisions, especially during periods of volatility or perceived depreciation risk. Findings from Tufaner (2021), Ağaslan and Gayaker (2019), and Aydınlık and Aktaş (2022) reinforce this view.

Institutional trust and political dynamics are also emphasized. Studies such as those by Erkan (2022), Barbuta-Mişu et al. (2020), and Akşehirli (2024) illustrate that credibility and sentiment—whether measured via CDSs, political shocks, or confidence indices—substantially influence dollarization trends. These results align with behavioral and psychological insights, particularly those of Bulut and Tokathlıoğlu (2022), who emphasize asymmetric expectations and persistent responses to past inflation experiences.

Additionally, the direction of causality between dollarization and macroeconomic outcomes remains debated. Yılmaz and Uysal (2019), Gültepe Çorak and Aksoy (2022), and Özkul (2021) suggest that dollarization can cause inflation and instability, reversing the traditionally assumed direction of impact. This underscores the need to treat dollarization not merely as a symptom but also as a driver of macroeconomic disequilibrium.

Finally, firm-level and sectoral studies (Ayrıçay and Kılıç, 2021) emphasize the role of microeconomic fundamentals, such as leverage, export capacity, and sector size, in shaping debt dollarization. Ayrıçay and Kılıç's (2021) findings suggest that firm behavior, combined with banking sector constraints, sustains structural mismatches and FX risks in financial intermediation.

Although the literature varies in methods, periods, and focus, a standard narrative emerges: dollarization in Turkey is a multi-causal, path-dependent, and institutionally embedded process. The interplay among inflation, exchange rates, policy credibility, political shocks, and behavioral rigidity calls for multidimensional and flexible policy frameworks.

International evidence also highlights the relevance of dollarization for policy transmission: in highly dollarized economies, the exchange rate channel may dominate the interest rate channel (Acosta-Ormaechea and Coble, 2011), and interest rate pass-through can vary with the degree of dollarization (Aleksic et al., 2008), implying that transmission may differ across regimes and macro-financial conditions. On the intermediation side, dollarization has been associated with wider banking spreads and lower credit supply (Honohan and Shi, 2001), and cross-country evidence points to heterogeneous links between interest rate conditions and dollarization across periods and institutional settings (Vetlov, 2001; Urosevic and Rajkovic, 2016; Bacha et al., 2009). This framework also accommodates the roles of confidence and expectations: for Turkey, consumer confidence reduces dollarization in both the short and long run (Akşehirli, 2024), and deposit dollarization has been linked to hedging motives under political uncertainty (Barbuța-Mișu et al., 2020). Accordingly, by jointly examining interest rates, exchange rate movements, and consumer confidence, the present study contributes to the broader literature that emphasizes transmission, confidence, and risk-perception channels in dollarization dynamics. In particular, we treat consumer confidence not merely as a control variable but as a conditioning factor that shapes the interest rate-dollarization relationship, thereby connecting Turkish evidence to international discussions on sentiment-dependent transmission. By comparing deposit- and credit-based dollarization measures within a unified framework, the analysis also relates to the banking/intermediation channel highlighted in cross-country research.

Recent evidence suggests that confidence/sentiment indicators are not merely auxiliary controls; instead, they may operate as state-dependent channels that shape financial behavior and policy transmission. For instance, Gric et al. (2022) demonstrate that in European nations, disturbances to household sentiment can influence consumer loan growth independent of macroeconomic fundamentals, with this impact fluctuating across the business cycle. This perspective is consistent with the view that confidence influences risk perceptions and expectations, thereby conditioning the strength of macro-financial relationships. In the same spirit, our study treats consumer confidence as a conditioning factor that shapes the association between interest rates and financial dollarization, linking Turkish evidence to the broader sentiment-dependent transmission literature.

4. Data, Model Specification, and Estimation Techniques

4.1 Data

This study's primary objective is to examine the role of consumer confidence in the relationship between interest rates and dollarization using time-series data. The empirical analysis utilizes monthly observations from January 2012 to May 2025 ($N = 161$). A monthly frequency is preferred to capture short-run movements in dollarization, interest rates, exchange rates, and consumer sentiment, and it is also consistent with the reporting frequency of the Consumer Confidence Index (CCI). Data availability constraints drive the selection of this time frame. Although data on dollarization and its key determinants are available for periods before 2004, the Turkish Statistical Institute (TURKSTAT) has published the CCI only since 2012. Consequently, the first month of 2012 is designated as the starting point of the analysis. The dataset is compiled from the Central Bank of the Republic of Turkey (CBRT, 2025) and TURKSTAT (2025). The empirical framework incorporates the dollarization ratio indicators (dol_d , dol_c , and dol_{m2}), interest rate (int), exchange rate (exc), and consumer confidence index (cci).

Motivated by evidence that deposit and credit dollarization may diverge (Basso et al., 2007), we examine deposit, credit, and broad money-based dollarization measures within a unified framework. Deposit dollarization (dol_d) is measured as the share of foreign-currency deposits in the total deposits in the banking system. FX-protected deposits are excluded from this measure because, although they are legally denominated in TRY, their payoff is FX-indexed. Thus, they do not fit the standard definition of foreign-currency deposits. Accordingly, the deposit-dollarization indicator captures the FX deposit share. Broad money-based dollarization (dol_{m2}) is measured as the ratio of foreign-currency deposits (DTH) to the broad money supply (M2). The interest rate variable (int) is calculated as the nominal annual percentage rate (% per annum) applied to Turkish lira time deposits with maturities of up to three months, observed at a monthly frequency. The CCI ranges from 0 to 200 (index points), with values above 100 indicating an optimistic assessment and those below 100 indicating a pessimistic assessment of the economic outlook. The CCI is observed monthly. Following standard practice, we use the natural logarithm of the USD/TRY buying exchange rate ($exc = \ln[\text{USD/TRY buying rate}]$).

To capture the period widely described as an “unconventional/heterodox” policy stance in Turkey, which is marked by policy rate cuts starting in 2022 and ending with the policy pivot in June 2023, we construct a dummy that equals one for 2022M01–2023M06 and zero otherwise. This variable serves as a proxy for a broad unconventional

policy regime shift, including the introduction of the FX-protected deposit scheme and various macroprudential regulations. All data are used in their raw, non-seasonally adjusted form. Detailed definitions of the variables and data sources are provided in Table 1.

Table 1: Variable Definitions and Summary Statistics

Variable	Definition	Obs.	Mean	Std. Dev.	Min.	Max.
<i>dol_d</i>	Foreign currency deposits / total deposits (%)	161	44.39	7.75	32.61	64.54
<i>dol_l</i>	Foreign currency loans / total loans (%)	161	33.44	4.58	25.27	44.20
<i>dol_{m2}</i>	FX deposits (DTH) / M2 money supply (%)	161	46.59	8.02	33.61	68.12
<i>int</i>	TL time-deposit interest rate (3-month maturity), annualized percentage rate (%), and monthly frequency.	161	19.60	15.16	6.52	67.57
<i>exc</i>	Natural logarithm of the USD exchange rate (buying rate)	161	1.77	0.97	0.56	3.65
<i>cci</i>	Consumer Confidence Index (CCI; index points, 0–200; monthly)	161	84.96	7.51	63.41	97.37

Notes: The sample consists of 161 monthly observations (2012M01–2025M05). The CCI was obtained from TURKSTAT (2025). All remaining variables were obtained from CBRT (2025).

Source: Author's calculation

The descriptive statistics of the variables used in this study reveal the structural presence of dollarization in the Turkish economy. The *dol_d* variable, averaging 44.39%, indicates the persistent nature of financial dollarization. The *dol_l* variable, averaging 33.44%, indicates a notable share of FX-denominated loans within credit markets. The *dol_{m2}* variable stands out with the highest average (46.59%), reflecting the strong dollarization of monetary aggregates. The *int* variable, measured as a nominal annual percentage rate (% p.a.) observed at a monthly frequency, exhibits substantial variability over the sample. Its mean is 19.60, with a standard deviation of 15.16, and it ranges from 6.52 to 67.57, reflecting pronounced shifts in the interest rate environment during the period. The *exc* variable, representing the natural logarithm of the exchange rate, averages 1.77, ranging from 0.56 to 3.65, highlighting periods of significant currency depreciation and appreciation. The *cci* variable, with a mean of 84.96, reflects persistently weak consumer sentiment (below the 100 threshold) throughout the sample period.

4.2 Model Specification and Estimation Technique

This study employs a quantitative research design and econometric techniques to address the research question and achieve the stated objectives. Owing to Türkiye's macroeconomic structure, key variables, such as interest rates, exchange rates, and dollarization, are determined simultaneously within a policy reaction function framework. Because of this structural interconnectedness, the ARDL and complementary dynamic analyses used in our study do not make a strict claim of causality. Instead, our analysis aims to reveal the empirical associations and temporal priorities between these variables through a descriptive approach. Specifically, the following empirical model is utilized to examine the mediating role of consumer confidence in the relationship between interest rates and dollarization:

$$dol_t = \alpha_1 + \beta_1 int_t + \beta_2 exc_t + \beta_3 cci_t + \beta_4 int_t \times cci_t + \beta_5 D2022_t + \varepsilon_t \quad (1)$$

where *dol* represents the dollarization ratio, measured by *dol_d*, *dol_c*, or *dol_{m2}*; *int* is the interest rate on TL deposits (up to three months); *exc* is the natural logarithm of the USD exchange rate (buying rate); *cci* is the consumer confidence index; *int_t × cci* is the interaction term between interest rates and consumer confidence; and ε_t is the error term. Malovana et al. (2021) suggest that consumer confidence largely reflects households' perceptions and expectations formed from current or very recent macro-financial conditions. Building on this insight, we include the interaction (*int × cci*) term to examine whether the relationship between interest rates and dollarization differs across confidence/expectations environments.

Furthermore, to control for a policy-regime episode and concurrent macro-financial/regulatory developments since 2022, a dummy variable, *D2022*, is included in the model. This variable equals 1 for 2022M01–2023M06 and 0 otherwise, allowing the model to capture the distinctive effects of the post-2022 period.

The coefficient of the interest rate (β_1) is expected to be negative, consistent with the view that higher domestic yields may be associated with a lower propensity to hold foreign-currency assets. The exchange rate coefficient (β_2) is expected to be positive, as depreciation episodes can coincide with stronger hedging incentives and a higher foreign currency share. A negative sign is expected for the consumer confidence index (β_3), suggesting that higher confidence may be associated with weaker dollarization pressures. The sign of the interaction term (β_4) is theoretically ambiguous because the interest

rate-dollarization relationship may vary with the confidence environment; therefore, its sign and magnitude are left to empirical verification. β_5 captures the conditional association of the policy-regime episode with dollarization. Because the post-2022 period coincided with a broad set of policy and regulatory developments, along with heightened macro-financial volatility, the dummy should be interpreted as capturing the composite (net) association of this regime environment rather than the effect of any single measure. Accordingly, a negative coefficient would be consistent with lower dollarization pressures in that episode, conditional on the model specification, while the data ultimately determine the sign and statistical significance. This study employs the ARDL approach developed by Pesaran et al. (2001). This methodology is particularly suitable for datasets with relatively small sample sizes. This is applicable when the variables are either stationary at the level $I(0)$ or at the first difference $I(1)$.

The ARDL framework allows for the estimation of both short- and long-run dynamics within a unified model. The initial step of the ARDL procedure involves conducting a bounds test to assess the long-term relationship among the variables. The Unrestricted Error Correction Model (UECM) was estimated for this purpose. The primary objective at this stage is to test for a stable long-run equilibrium relationship. The functional form of the UECM employed in the analysis is presented below.

$$\begin{aligned} \Delta dol_t = & \alpha_0 + \sum_{i=1}^p \alpha_{1i} \Delta dol_{t-i} + \sum_{j=0}^{q1} \alpha_{2j} \Delta int_{t-j} + \sum_{k=0}^{q2} \alpha_{3k} \Delta exc_{t-k} + \sum_{l=0}^{q3} \alpha_{4l} \Delta cci_{t-l} \\ & + \sum_{m=0}^{q4} \alpha_{5m} \Delta(intxcci)_{t-m} + \sum_{n=0}^{q5} \alpha_{6n} \Delta D2022_{t-n} + \beta_1 dol_{t-1} + \beta_2 int_{t-1} \\ & + \beta_3 exc_{t-1} + \beta_4 cci_{t-1} + \beta_5 (intxcci)_{t-1} \\ & + \beta_6 D2022_{t-1} + e_t \end{aligned} \quad (2)$$

where Δ represents the first-difference operator, and α_0 represents the constant term. The coefficients $\alpha_1, \alpha_2, \alpha_3, \alpha_4, \alpha_5$, and α_6 capture the short-run dynamics. $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$, and β_6 reflect the long-run relationships. The parameters p and $q1-q5$ denote the optimal lag lengths for the dependent variable and each explanatory variable, respectively, and ε_t represents the error term. To determine the presence of a long-run relationship among the variables, the null hypothesis of no cointegration ($H_0: \beta_1 = \beta_2 = \beta_3 = \beta_4 = \beta_5 = \beta_6 = 0$) is tested against the alternative hypothesis (H_1 : at least one $\beta \neq 0$) utilizing the F-statistic. The calculated F-value is compared against the critical bounds established by Pesaran et al. (2001). If the F-statistic exceeds the upper critical bound, the null hypothe-

sis of no cointegration is rejected, indicating a long-term relationship among the variables. If it falls below the lower bound, cointegration is not established. Values between the bounds render the result inconclusive. When cointegration exists, both short-term and long-term coefficients are estimated. None of the variables should be integrated of order two [I(2)] to ensure validity. According to the Granger Representation Theorem, cointegration allows for the estimation of an Error Correction Model (ECM), formulated as follows:

$$\Delta dol_t = \alpha_0 + \sum_{i=1}^p \gamma_{1i} \Delta dol_{t-i} + \sum_{j=0}^q \gamma_{2j} \Delta X_{t-j} + \lambda ECT_{t-1} + \varepsilon_t \quad (3)$$

The ECM provides a practical framework for analyzing how short-term fluctuations adjust to a long-term equilibrium relationship. In this structure, the short-run coefficients (γ_{2i}) capture the immediate effects of changes in explanatory variables on the dependent variable. The error correction term (ECT_{t-1}) reflects the speed at which deviations from the long-run equilibrium are corrected following a shock. A negative and statistically significant adjustment coefficient (λ) indicates that any short-term disequilibrium gradually converges to the long-term path. This model allows for the simultaneous estimation of both short-term dynamics and long-term stability, making it particularly useful in empirical research, where both short- and long-run effects are of interest.

Finally, it should be noted that the ARDL approach assumes that the regressors are not determined simultaneously with the dependent variable. Given the structural interconnectedness among interest rates, exchange rates, and dollarization within Turkey's policy reaction function, this assumption of independence may not fully hold. We address these potential endogeneity and simultaneity concerns in two ways: first, by incorporating the variables in their lagged forms within the ARDL framework to mitigate instantaneous feedback effects, and second, by employing FMOLS, DOLS, and CCR estimators, which are specifically designed to yield consistent coefficients in the presence of endogeneity and serial correlation. Therefore, while our results are best interpreted as conditional associations rather than structural causal effects, the use of these robust estimators ensures the reliability of the empirical linkages.

5. Empirical Findings

We used the variance inflation factor (VIF) test to assess multicollinearity among the explanatory variables, including the interaction term. To ensure the reliability of the estimates, we employed mean-centered variables for the analysis. Table 2 presents the centered VIF values. Following Gujarati and Porter (2009), VIF values above 10 may indicate potential multicollinearity. As reported in Table 2, the VIF for the interaction term is notably low (2.26). While the VIF for the exchange rate (10.28) is slightly above the conservative threshold of 10, this marginal value reflects the inherent structural linkages between interest rates and exchange rates in the Turkish economy rather than a statistical deficiency. Given that the interaction term is well within the limits and the coefficient stability is confirmed through further checks, these results indicate that multicollinearity does not pose a threat to the reliability of our estimates.

Table 2: Multicollinearity Test Results

Variables	Centered VIF
<i>int</i>	8.71
<i>exc</i>	10.28
<i>cci</i>	3.04
<i>intxcci</i>	2.26

Source: Author's calculation

Subsequently, the augmented Dickey–Fuller (ADF) and Phillips–Perron (PP) unit-root tests were conducted to determine the integration order of the variables, as reported in Table 3. The results indicate that the dollarization measures (dol_d , dol_c , and dol_{m2}), together with *int*, *exc*, and *cci*, are non-stationary in levels but become stationary after first differencing, implying that these series are integrated of order one [I(1)]. Because the ARDL bounds-testing framework cannot accommodate I(2) regressors, we also tested the interaction term (*intxcci*) for unit roots. The ADF and PP results (reported in Table 3) indicate that the interaction term is not I(2), thereby satisfying the integration-order requirement for the ARDL approach.

Table 3: Unit Root Test Results

Variable	ADF	PP	Results
dol_d	−1.67 (1)	−1.57 (4)	
Δdol_d	−9.88 (0)***	−9.77 (11)***	I (1)
dol_c	−1.60 (0)	−1.60 (0)	
Δdol_c	−11.27 (0)***	−11.25 (3)***	I (1)
dol_{m2}	−1.65 (0)	−1.66 (8)	
Δdol_{m2}	−10.83 (0)***	−10.70 (12)***	I (1)
int	0.40 (3)	0.74 (5)	
Δint	−5.65 (2)***	−10.19 (4)***	I (1)
exc	1.51 (2)	1.63 (5)	
Δexc	−8.90 (1)***	−8.01 (10)***	I (1)
cci	−2.59 (0)	−2.37 (11)	
Δcci	−12.54 (0)***	−15.53 (24)***	I (1)
$intxcci$	0.76 (3)	0.74 (1)	
$\Delta intxcci$	−6.42 (2)***	−9.75 (3)***	I (1)

Notes: ADF is the augmented Dickey-Fuller test. Level of significance: *** $p < 0.01$. The optimal lag order for the ADF test was selected based on the Schwarz Information Criterion, as shown in parentheses. The critical values for the ADF at 1 %, 5 %, and 10% are −3.47, −2.88, and −2.58, respectively.

Source: Author's calculation

To examine whether a long-run relationship exists among the variables, we employed the ARDL bounds-testing approach to cointegration. As reported in Table 4, the computed F-statistics for the alternative dollarization specifications exceed the 1% upper-bound critical values. Hence, the null hypothesis of no cointegration is rejected, indicating the presence of a long-run relationship among dollarization, the interest rate, the exchange rate, and consumer confidence over the sample period.

Table 4: ARDL- Bound Cointegration Test Results

Dependent Variable	Model	F Statistics Value	k	
$dol_d, int, exc, cci, (intxcci), D2022$	(2, 0, 1, 1, 0, 0)	10.50	5	
$dol_c, int, exc, cci, (intxcci), D2022$	(2, 0, 1, 0, 1, 2)	21.85	5	
$dol_{m2}, int, exc, cci, (intxcci), D2022$	(2, 0, 1, 1, 0, 0)	8.60	5	
Critical Value Bounds				
Significance			I0 Bound	I1 Bound
10 %			2.30	3.15
5 %			2.55	3.60
1 %			3.35	4.59

Notes: Level of significance: *** $p < 0.01$, ** $p < 0.05$. Based on the Schwarz information criterion, the UECM models were estimated with a maximum lag of four. The critical values were obtained from Pesaran et al. (2001). Coefficient estimates are reported with heteroscedasticity-robust standard errors (White) to account for heteroscedasticity in the model.

Source: Author's calculation

Given this evidence of cointegration, Table 5 presents the ARDL long-run coefficient estimates. These estimates should be interpreted as conditional associations implied by the chosen specification, acknowledging potential simultaneity/endogeneity, policy reaction functions, measurement issues, and omitted factors. The diagnostic tests reported in Appendix Table A1 indicate departures from normality (Jarque-Bera) and the presence of heteroscedasticity (Breusch-Pagan). Although these issues are present, they do not invalidate the consistency of the ARDL point estimates. To ensure valid statistical inference and reliable t-statistics for our long-run parameters, we employ the HAC (Newey-West) robust standard errors, which remain consistent in the presence of both heteroscedasticity and autocorrelation.

Table 5: Long-Run Coefficient Estimates and Error Correction Term

Variables	dol_d	dol_c	dol_{m2}
<i>int</i>	-2.28**	1.33	-2.06**
<i>exc</i>	8.30***	-4.00	9.69***
<i>cci</i>	-0.92***	0.51	-0.86***
<i>intxcci</i>	0.03**	0.01	0.02**
<i>D2022</i>	-27.34***	-41.77*	-24.65***
<i>ECT</i>	-0.12***	-0.04***	-0.16***

Notes: The table reports long-run coefficient estimates along with the error correction term (ECM), which reflects the speed of adjustment towards long-run equilibrium. Robust standard errors are used in the estimation.

The model diagnostics (serial correlation LM, ARCH, RESET, normality, etc.) are reported in Appendix Table A1.

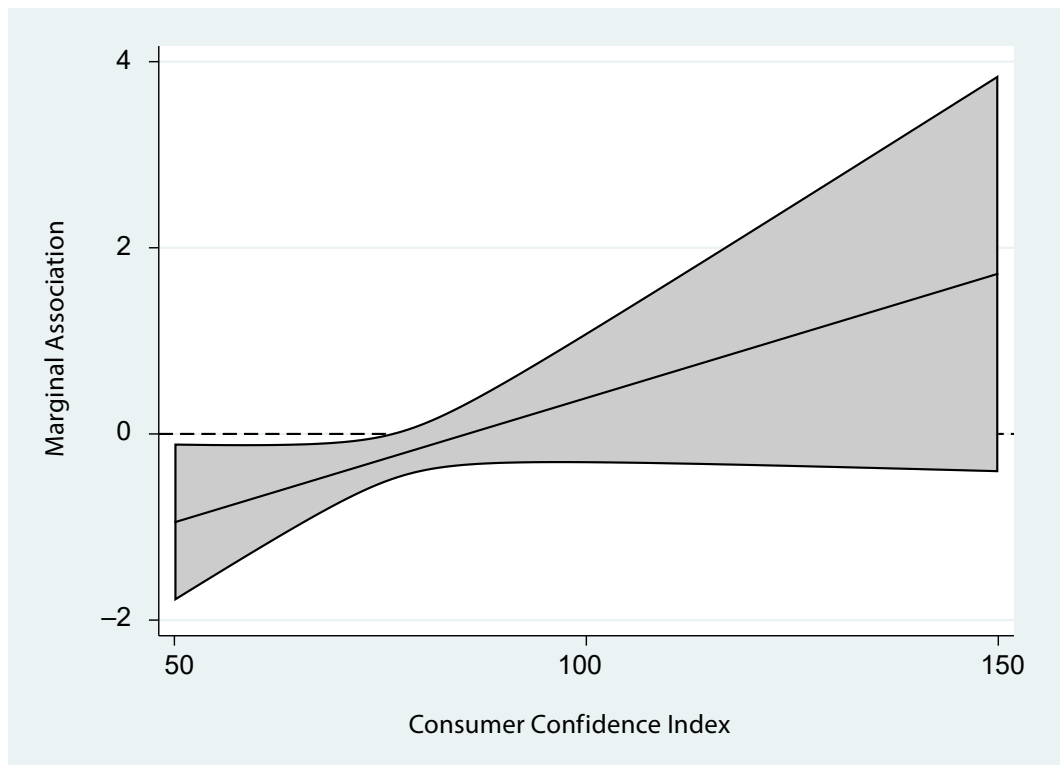
Source: Author's calculation

Long-run dynamics were estimated using the ARDL approach based on the evidence of cointegration among the variables. Table 5 presents the implied long-run coefficients. The results indicate that the specifications based on foreign-exchange deposits— dol_d and dol_{m2} —deliver statistically significant estimates for the complete set of regressors. In the dol_d equation, a one percentage-point increase in the interest rate (e.g., from 10% to 11%) is associated with a 2.28 percentage-point decrease in the deposit dollarization ratio. Moreover, a 1% increase in the exchange rate is associated with approximately a 0.08 percentage-point rise in deposit dollarization, suggesting a positive comovement between deposit dollarization and currency depreciation. Finally, a one-unit increase in the consumer confidence index is associated with a 0.92 percentage-point decrease in the deposit dollarization ratio, consistent with the view that sentiment is linked to currency preferences. Similarly, the estimations for broad money-based dollarization (dol_{m2}) yield qualitatively consistent results, with all coefficients maintaining the same signs and statistical significance as in the deposit dollarization model. Specifically, the negative associations with interest rates (-2.06) and consumer confidence (-0.86), alongside the positive linkage with the exchange rate (9.69), reinforce the robustness of the sentiment-contingent de-dollarization framework across different monetary aggregates. The slightly larger coefficient for the exchange rate in the dol_{m2} specification suggests that broader

monetary measures may be even more sensitive to currency depreciation than narrow deposit measures, further highlighting the pervasive nature of dollarization in the Turkish financial system. Notably, the coefficients for credit dollarization (dol_c) are statistically insignificant, reflecting structural rigidities and FX lending constraints in the Turkish banking sector. This distinguishes credit dynamics from both deposit (dol_d) and broad money-based (dol_{m2}) dollarization, which appear significantly more sensitive to interest rate adjustments and consumer sentiment. While the latter two measures reflect the flexible portfolio choices of economic agents, credit dollarization is primarily constrained by regulatory frameworks and FX-income requirements for borrowing. These estimates reflect conditional associations within the chosen model and should not be interpreted as definitive causal effects, given potential simultaneity and policy endogeneity.

To facilitate the interpretation of the interaction term reported in Table 5, Figure 1 plots the marginal association between interest rates and dollarization across observed levels of consumer confidence. Consistent with the interaction specification, the conditional long-run association between the interest rate and dollarization is given by the long-run coefficient on the interest rate plus the long-run coefficient on the interaction term multiplied by the level of consumer confidence. Because the coefficient on the interest rate is negative, whereas the coefficient on the interaction term is positive, the negative association between interest rates and dollarization becomes progressively weaker as consumer confidence increases. As shown in Figure 1, this conditional association is negative at low levels of consumer confidence and gradually approaches zero as confidence rises, with the sign-switching point of the point estimate occurring at approximately CCI = 85.5. The confidence bands further indicate that this negative association is statistically significant (at the 5% level) only over the low-to-moderate range of consumer confidence. As the confidence index improves and the confidence interval begins to overlap with the zero line, the de-dollarizing association of interest rates becomes statistically indistinguishable from zero. This loss of statistical significance occurs even before the point estimate itself crosses into positive territory. Overall, the figure indicates that the long-run interest rate–dollarization relationship is not constant across confidence levels but systematically varies with consumer confidence within the reduced-form framework.

Figure 1: Conditional Relationship between Interest Rates and Dollarization by Consumer Confidence



Source: Author's calculation

The dummy variable representing the post-2022 period is negative and statistically significant, indicating that dollarization is lower during this episode (conditional on the specification). This dummy captures multiple simultaneous developments and should not be interpreted as a single-policy causal effect. These patterns are similarly observed in the dol_{m2} equation, with comparable coefficient magnitudes and significance levels. In contrast, the dol_c equation (FX loans over total loans) reveals that only the post-2022 dummy variable is statistically significant, whereas the other explanatory variables do not exhibit statistically meaningful effects. This confirms that credit dollarization is governed by distinct structural dynamics—specifically, banking-sector constraints and FX lending regulations—making it less responsive to interest rates and sentiment than deposit dollarization.

Finally, the error correction terms derived from the short-run dynamics are negative and highly significant across all models (-0.12 for dol_d , -0.04 for dol_c , and -0.16 for dol_{m2}),

indicating the presence of a long-run equilibrium. These coefficients imply that 12%, 4%, and 16% of the disequilibrium from the previous month is corrected in the current month. These statistically significant adjustment speeds validate the long-run cointegrating relationships established through the ARDL estimations.

In addition to standard residual diagnostics, we assessed structural change by applying the Quandt–Andrews unknown-breakpoint test to the ordinary least-squares (OLS) representation of the selected ARDL level equation, while preserving the ARDL lag structure. The break-test results are reported in Appendix Table A1. Under 15% trimming, the null of “no breakpoints” is firmly rejected. The most likely breakpoint is 2020M07, with maximum LR-F and Wald-F statistics of 5.99 ($p < 0.001$) and 53.87 ($p < 0.001$), respectively, computed using Hansen’s (1997) method. This evidence suggests that regime shifts and macroeconomic volatility over the sample may affect parameter stability. Accordingly, we interpret the estimates as conditional associations implied by the model specification rather than definitive causal policy effects. Moreover, to ensure the reliability of the estimated parameters and address potential structural breaks associated with macroeconomic shifts (e.g., the 2022 policy pivot), we performed the cumulative sum (CUSUM) and CUSUM of squares (CUSUMSQ) tests. The results, provided in Appendix Figure A1, demonstrate that the cumulative sums remain well within the 5% significance bounds. Notably, the inclusion of the post-2022 dummy variable helps to account for the structural shift in the monetary environment, thereby supporting the overall parameter stability and structural integrity of the ARDL framework throughout the sample period. These diagnostic checks confirm that our long-run coefficient estimates are robust and not compromised by repeated regime changes.

This section presents sensitivity analyses assessing whether the baseline long-run associations reported in Table 5 under the ARDL framework are robust to alternative estimators. To this end, we re-estimated the long-run relationship using three widely used reduced-form cointegration estimators: fully modified ordinary least squares (FMOLS; Phillips and Hansen, 1990), dynamic ordinary least squares (DOLS; Stock and Watson, 1993), and canonical cointegration regression (CCR). These estimators are designed to provide consistent long-run estimates in cointegrated settings, even with alternative corrections for serial correlation and endogeneity in the regressors. However, while these estimators mitigate bias from endogeneity and serial correlation, they remain reduced-form techniques and do not constitute a structural causal identification strategy. Therefore, the results are interpreted as conditional long-run associations.

Table 7: DOLS, FMOLS, and CCR Results

Dependent variable	Variables	DOLS	FMOLS	CCR
<i>dol_d</i>	<i>int</i>	−1.66**	−1.59**	−1.58**
	<i>exc</i>	8.20***	9.93***	9.88***
	<i>cci</i>	−0.94***	−0.81***	−0.82***
	<i>int x cci</i>	0.02*	0.02*	0.01
	<i>D2022</i>	−14.10***	−15.66***	−15.72***
	<i>constant</i>	119.39***	106.90***	107.53***
	<i>R</i> ² <i>Adj. R</i> ²	0.87 0.86	0.83 0.82	0.83 0.82
<i>dol_c</i>	<i>int</i>	−1.16*	−1.68***	−1.70***
	<i>exc</i>	2.65	2.79*	2.73*
	<i>cci</i>	−0.62***	−0.73***	−0.74***
	<i>intxcci</i>	0.01*	0.02***	0.02***
	<i>D2022</i>	−7.88***	−7.71***	−7.75***
	<i>constant</i>	81.52***	91.17***	91.87***
	<i>R</i> ² <i>Adj. R</i> ²	0.76 0.74	0.72 0.71	0.72 0.71
<i>dol_{m2}</i>	<i>int</i>	−1.78**	−1.70**	−1.70**
	<i>exc</i>	8.41***	10.39***	10.35***
	<i>cci</i>	−0.98***	−0.83***	−0.84***
	<i>intxcci</i>	0.02*	0.02*	0.02*
	<i>D2022</i>	−13.94***	−15.38***	−15.45***
	<i>constant</i>	124.62***	109.85***	110.57***
	<i>R</i> ² <i>Adj. R</i> ²	0.87 0.86	0.83 0.82	0.83 0.82

Source: Author's calculation

Table 7 reports the FMOLS, DOLS, and CCR estimates for the three dollarization measures: dol_d , dol_c , and dol_{m2} . Although these estimators mitigate potential bias from endogeneity and serial correlation, they remain reduced-form techniques and do not constitute a structural causal identification strategy. Therefore, the results are interpreted as conditional long-run associations. For dol_d and dol_{m2} , the coefficient signs and statistical significance patterns are broadly aligned with the ARDL long-run estimates in Table 5: the interest rate is negatively associated with dollarization, exchange rate depreciation is positively associated with dollarization, consumer confidence is negatively associated with dollarization, and the post-2022 policy-regime dummy (D2022) is negative and statistically significant. The interaction term ($int \times cci$) remains positive across all specifications, suggesting that the negative association between interest rates and dollarization weakens at higher levels of consumer confidence. Although its statistical significance is somewhat more sensitive in the CCR model for deposit dollarization, the broad alignment of signs across different estimators reinforces our core finding that the interest rate-dollarization linkage is moderated by consumer sentiment.

In contrast, the dol_c estimates exhibit greater sensitivity than the ARDL long-run results. Across FMOLS, DOLS, and CCR, higher interest rates and stronger consumer confidence are associated with lower credit dollarization, whereas exchange rate depreciation is associated with higher credit dollarization. The interaction term remains positive and statistically significant, indicating that the negative association between interest rates and credit dollarization is attenuated as confidence increases—an interpretation qualitatively similar to the deposit dollarization models. However, the discrepancy between the ARDL and FMOLS/DOLS/CCR results for credit dollarization suggests that credit dynamics are more sensitive to the choice of estimator and the treatment of long-run correlations. This sensitivity further supports the need for a cautious interpretation of credit dollarization, likely due to the structural rigidities and institutional constraints mentioned previously. Taken together, Table 7 assures that the main long-run patterns are not driven solely by the ARDL estimator, particularly for deposit- and broad-money-based measures.

Furthermore, to ensure the stability of the estimated coefficients and address potential multicollinearity concerns associated with the interaction terms, we re-estimated the model using mean-centered variables. The results from this alternative specification remained highly consistent with our primary ARDL, DOLS, and FMOLS findings in terms of both coefficient signs and statistical significance. This additional robustness check confirms that the reported interaction effects are stable and not driven by multicollinearity bias.

6. Discussions

This study documents the short- and long-run associations among dollarization indicators, interest rates, exchange rates, and consumer confidence in Turkey using an ARDL framework. Given the structural interconnectedness of these variables within a policy reaction function, the estimated coefficients are interpreted as empirical linkages rather than definitive causal effects. As the analysis remains explicitly descriptive, the results provide a robust characterization of confidence-contingent patterns of association.

Interest Rate Dynamics and the Moderating Role of Sentiment

The findings suggest a significant conditional association between higher domestic interest rates and lower financial dollarization, consistent with an asset substitution mechanism. This result aligns with Varol et al. (2024), who emphasize the sensitivity of Turkish dollarization to interest-rate adjustments. However, our study extends this view by demonstrating that the relationship is non-homogeneous; the negative association is most pronounced during periods of low consumer confidence, whereas its marginal effectiveness diminishes as sentiment improves. This confidence-contingent pattern is consistent with behavioral insights from Akşehirli (2024) and Barbuta-Mișu et al. (2020), reinforcing the view that sentiment acts as a “filter” for monetary signals. In a fragile sentiment environment, price signals carry more weight in shifting portfolio preferences. In contrast, in a stable expectations environment, the incremental de-dollarizing effect of monetary tightening appears more limited.

Currency Substitution and Institutional Constraints

Exchange rate depreciation is positively associated with dollarization, consistent with a currency substitution framework in which actors turn to foreign currencies to preserve wealth amid domestic currency instability. This behavior reflects a path-dependent dynamic in which past experiences of instability generate behavioral inertia, a phenomenon particularly evident in the Turkish case. A key distinction emerges between deposit and credit dollarization; while deposit and broad money measures are highly sensitive to sentiment, the results for credit dollarization appear weaker. This divergence reflects the structural constraints of the Turkish banking sector, such as the stringent FX lending regulations introduced in 2018 and further tightened in the post-2021 period. Unlike deposits, which reflect flexible household portfolio choices, credit dollarization is primarily governed by supply-side factors and macroprudential ceilings. Specifically, regulations in Turkey restrict FX borrowing to firms with verifiable foreign currency revenues, ef-

fectively decoupling credit dynamics from domestic sentiment and simple interest rate differentials. Furthermore, bank funding structures play a decisive role; banks' reliance on external FX-denominated syndicated loans requires cautious management of FX exposure and maturity mismatches on their balance sheets. Consequently, credit dollarization remains more rigid and less responsive to short-term sentiment shifts, as it is constrained by these institutional layers and the banking sector's risk-mitigation framework rather than purely agent-driven incentives.

Evaluating the Post-2022 Policy Regime and Structural Stability

The negative and significant coefficient for the post-2022 dummy variable indicates a fundamental structural shift in the macro-policy framework. This period was characterized by a suite of unconventional interventions, most notably the exchange-protected deposit scheme, which effectively transferred exchange-rate risk from private agents to the public balance sheet. Rather than a purely market-driven de-dollarization, this downward trend likely reflects a regulatory-induced portfolio shift facilitated by these administrative measures. The inclusion of this dummy helps to maintain parameter stability by capturing the period-specific shift. As evidenced by the CUSUM of Squares tests (see Appendix A, Figure A1), incorporating the dummy variable addresses this structural shift, aiding the model to remain statistically reliable despite repeated policy changes and macroeconomic shocks. This suggests that the model's structural integrity is maintained through the control of this specific episode, even in the presence of unconventional interventions.

Limitations and Future Research Directions

The current analysis faces certain methodological and data-related constraints that provide avenues for future inquiry. The use of macro-level data may overlook agent-level heterogeneity; therefore, future research using micro-level or panel data could offer more granular evidence on currency choices across households and firms. Additionally, identifying purely exogenous shocks is challenging in a context where policy rates and exchange rates are jointly determined. Future work could employ high-frequency identification (HFI) or instrumental variable (IV) approaches to better isolate causal effects from endogenous policy reaction functions. Incorporating external factors, such as global risk appetite (VIX) or external interest rate cycles, would also provide a more comprehensive assessment for emerging markets. Finally, investigating the long-term persistence of de-dollarization achieved through administrative measures versus market-based credibility remains a crucial area for further investigation, especially regarding the interaction between geopolitical tensions and institutional trust.

7. Conclusion

This study examines the contingent relationship between interest rates and financial dollarization in Turkey by focusing on the moderating role of consumer confidence. By utilizing an ARDL framework and several robustness checks, the analysis provides a comprehensive descriptive characterization of how behavioral factors shape the effectiveness of monetary signals.

The primary conclusion of this research is that the association between domestic interest rates and de-dollarization is not uniform; rather, it is deeply embedded in the prevailing sentiment environment. Our findings reveal that interest-rate adjustments are most potent as a deterrent to dollarization during periods of low consumer confidence. However, as sentiment improves, the marginal effectiveness of rate hikes diminishes, suggesting that price incentives alone may be insufficient to steer currency preferences when the broader macroeconomic outlook is already stable. Furthermore, the divergence between deposit and credit dollarization highlights the role of structural banking constraints, long-term funding requirements, and regulatory frameworks, which render the credit market less responsive to behavioral shifts than the deposit market.

From a policy perspective, these results suggest that a “sentiment-aware” monetary policy framework could enhance the effectiveness of de-dollarization strategies in emerging markets. Central banks should recognize that in fragile confidence environments, decisive interest rate signals are crucial for anchoring expectations and deterring currency substitution. However, long-term and sustainable de-dollarization cannot rely solely on nominal rate adjustments. It requires a holistic approach that reinforces institutional credibility, ensures policy consistency, and maintains macroeconomic stability to improve consumer trust in the domestic currency permanently.

In summary, this study underscores that financial dollarization is as much a behavioral phenomenon as it is a monetary phenomenon. Future efforts to strengthen the local currency should integrate behavioral insights into traditional macroeconomic models to better navigate the complex expectations of emerging economies.

Acknowledgment

The author would like to thank the anonymous reviewers and the editorial board for their insightful comments and constructive suggestions, which have significantly contributed to the improvement of this paper.

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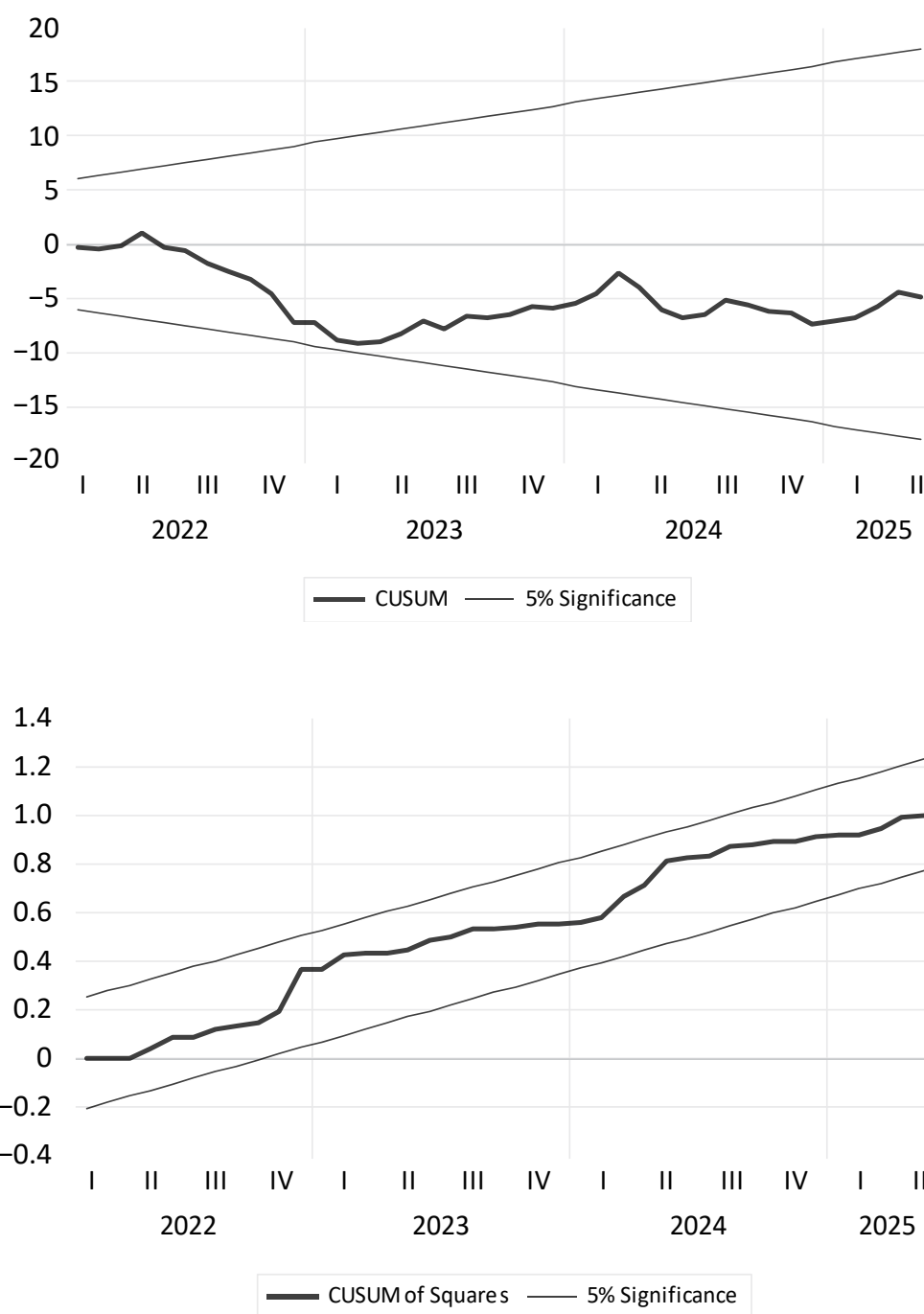
Appendix

Table A1: Diagnostic Tests for ARDL Models (Baseline Specifications)

	<i>dol_d</i>		<i>dol_c</i>		<i>dol_{m2}</i>	
Test	Statistics	p-value	Statistics	p-value	Statistics	p-value
Serial correlation LM (Breusch–Godfrey)	0.38	0.68	0.28	0.76	1.78	0.31
Heteroskedasticity test (Breusch–Pagan–Godfrey)	4.50	0.00	7.48	0.00	5.67	0.00
ARCH LM	1.69	0.19	23.87	0.00	6.27	0.00
Ramsey RESET (functional form)	0.94	0.33	3.73	0.06	4.77	0.03
Normality (Jarque–Bera)	17.37	0.00	296.42	0.00	160.68	0.00

Source: Author's calculation

Figure A1: CUSUM and CUSUM of Squares Tests for Parameter Stability



Source: Author's calculation