Vol. 26 No. 2 (2026) Jurnal al- Sirat
https://doi.org/10.64398/alsirat.v26i2.604

Vol. 26 No. 2 (2026)
ISSN: 1823-4313 / e-ISSN: 2785-9169
https://ejournal.uniqsaas.edu.my/

PERFORMANCE OF THE TURKISH LIRA DURING THE PERIOD 1994–2025: EXCHANGE RATE THEORIES, VOLATILITY AND REAL EXCHANGE RATE ANALYSIS

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Abstract

In this study, the Turkish lira is examined through the theories that explain the value of exchange rates; subsequently, its depreciation and risk against other currencies are identified, and finally, a real exchange rate analysis is conducted. Unlike the existing literature that predominantly relies on econometric modeling, this study adopts an analytical and comparative framework to evaluate the explanatory power of exchange rate theories under real-world conditions. The aim is not to estimate coefficients, but to assess the practical validity and limitations of competing theoretical approaches. The findings show that—even if not clearly for every single year—inflation (the purchasing power parity approach) plays a central role in explaining exchange rate movements in Türkiye. The Balance of Payments or the Monetary Approach is insufficient in explaining the annual changes of the Turkish lira, and it has been determined that the main main explanatory factor of the depreciation of the Turkish lira in the medium and long term is the inflation differential between the United States and Türkiye. Another finding of the study is that the least volatile exchange rate pairs are USD/TRY and EUR/TRY, whereas the most volatile pair is RUB/TRY. The real exchange rate increased until 2007 and then entered a continuous downward trend, remaining for a long period at levels that would encourage exports.

Keywords: Global markets, exchange rate theories, volatility, real exchange rate, Turkish lira

Perkembangan Artikel

Diterima: 28 Oktober 2026
Disemak: 30 September 2026
Diterbit: 30 Oktober 2026

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INTRODUCTION

The exchange rate is an economic indicator that is closely monitored by the market in open economies in terms of financial stability. From the perspective of the Turkish economy, the chronic depreciation and high volatility exhibited by the Turkish lira (TRY) for many years have become one of the main problems threatening macroeconomic stability. During the period 2004 –2024, the Turkish lira depreciated significantly against the US dollar; in this process, factors such as inflation differentials, the current account balance, and monetary policy preferences played a decisive role. Especially in the post-2018 period, accelerating inflation and the implementation of low interest rate policies increased dollarization and triggered exchange rate shocks This situation necessitates the examination of the factors influencing exchange rate movements from both theoretical and empirical

perspectives. This study analyzes the performance of the Turkish lira during the period 2004–2024 with an analytical approach. First, by evaluating the foreign exchange market within the framework of the global economy, what foreign currency represents for a country is discussed in depth. Then, the movements of the Turkish lira against the US dollar are examined within the framework of the main theories explaining exchange rate value (Purchasing Power Parity, Balance of Payments Approach, and Asset Approach). Subsequently, the depreciation and volatility level of the Turkish lira against major currencies such as the US dollar, Euro, Pound, Yuan, and Ruble are identified, and finally, a real effective exchange rate (REER) analysis is conducted.

The study consists of six sections. The first section provides information about the global foreign exchange market. The second section discusses exchange rate theories in light of the literature, the third section tests the performance of the Turkish lira against the dollar through these theories. The fourth section is devoted to the depreciation and risk analysis of the Turkish lira against other currencies, and the fifth section focuses on the behavior of the real exchange rate. The final section presents policy implications and conclusions.

GLOBAL FOREIGN EXCHANGE MARKET

The exchange rate is a cornerstone for economic growth. As a matter of fact, some countries occasionally devalue their exchange rates in order to encourage exports, almost using the exchange rate as a springboard (Gibson et al., 2014). In many cases, fund managers make use of exchange rates to diversify their portfolios, while individual investors with advanced financial literacy evaluate exchange rates as a financial instrument by borrowing in a low-interest-rate country and investing in the currency of a country that offers higher interest rates (in short, carry trade) (Fullenkamp, 2012, pp. 124–126).

In fact, some countries strengthen their reserves by purchasing US dollars from the market in order to deliberately keep their own currencies undervalued (for the purpose of maintaining export strength). Countries such as India, South Korea, and Taiwan can be given as examples (Saunders et al., 2012, p. 292). Today, foreign exchange markets have acquired an international character; they are markets that operate 24 hours a day, where prices are continuously adjusted and large volumes of transactions take place. In these markets, the buyers and sellers of foreign currencies can be listed as importers-exporters, tourists, governments, speculators, banks, and intermediary institutions (Valdez and Molyneux, 2017, p. 310).

Table 1: Average Daily Turnover in the Foreign Exchange Market (April 2025) (Million USD)

	Total	Spot	Forward	Swap	Options
Total	9.595.469	2.957.098	1.846.508	3.985.680	634.238
USD	8.560.350	2.577.236	1.648.511	3.604.332	567.348
Euro	2.773.250	837.736	488.294	1.158.742	235.638
Yen	1.609.605	576.558	235.995	660.122	101.666
Pound	981.371	268.796	189.535	472.218	33.644
Renminbi	817.479	277.207	86.680	364.991	81.571
Swiss franc	611.680	174.489	109.408	291.391	30.275
Australian dollar	582.670	205.067	109.314	215.726	43.488
Canadian dollar	560.981	162.913	107.131	240.566	26.323

Other	2.693.552	834.192	718.146	963.272	148.525

Source: https://data.bis.org/topics/DER/tables-and-dashboards/BIS,DER_D11_1,1.0

According to the data published by the Bank for International Settlements (BIS) in its 2025 Triennial Central Bank Survey, the average daily turnover in the global foreign exchange (FX) market in April 2025 was approximately 9.6 trillion US dollars. While the US dollar was the most traded currency, the volume of foreign exchange swaps exceeded spot transactions.

Table 2: Foreign Exchange Transactions by Financial Centers (Million USD)

	Total	Spot	Forward	Swap	Options
UK	4.745.445	1.420.033	1.081.183	1.772.909	374.001
USA	2.334.700	1.021.493	546.480	593.564	147.625
Singapore	1.485.282	370.227	207.584	756.282	135.480
Hong Kong	883.067	172.717	91.121	563.699	50.324
Japan	440.231	125.391	48.696	244.735	12.360
Germany	386.077	81.838	39.503	253.937	8.445
Switzerland	370.472	97.302	37.407	216.144	15.046
Canada	242.622	35.225	31.029	145.142	5.688
France	242.217	29.116	17.916	179.449	11.532
Other	1.439.782	389.926	165.599	821.162	42.286

Source: https://data.bis.org/topics/DER/tables-and-dashboards/BIS,DER_D11_1,1.0

According to Table 2, approximately 4.7 trillion US dollars are traded within the UK financial system, while 2.3 trillion dollars are traded in US markets and 1.4 trillion dollars in Singapore. Interestingly, the transaction volumes of developed European countries such as Germany, Switzerland, and France remain quite modest compared to their counterparts. However, this situation does not represent a weakness for the euro in the eyes of investors. Indeed, in their study, Otero-Iglesias and Steinberg (2013) conducted face-to-face interviews with 76 elite financial experts (selected from China, Gulf countries, and Brazil) and found that these individuals preferred the euro to diversify portfolio risk, attributing this preference to the independent monetary policy of the European Central Bank. Similarly, Salvatore (2002) stated that the euro eliminated excessive volatility among EU member states and provided seigniorage income due to its use as an international currency.

In the same vein, Siddiqui (2020) argued that a transition toward a multi-currency system is inevitable depending on countries' production capacities. Chiţu et al. (2014) emphasized that for a currency to become internationalized, it must be supported by liquid financial markets, a large-scale banking system, and low transaction costs. Kaikati (1999), in his evaluation of the euro, drew attention to the Maastricht criteria, stating that keeping public debt below 60% of GDP and budget deficits below 3% of GDP enhanced the credibility of the euro. A recent study by Duarte et al. (2025) on reserves shows that the ongoing process of de-dollarization in many economies necessitates multilateralism in trade.

Table 3:Currency Composition of Official Foreign Exchange Reserves (2021–2024)

	2021	2022	2023	2024
Total Reserves*	12.049.600	11.040.016	11.453.174	11.472.157
USD	7.085.004	6.460.212	6.690.613	6.629.977
Euro	2.481.340	2.248.992	2.284.366	2.275.618
Yen	665.103	611.831	651.685	667.012
Pound	579.382	540.916	557.139	542.754
Other currencies	372.470	383.743	442.920	532.892
Yuan	337.260	288.420	262.181	249.891
Canadian dollar	286.932	263.610	296.470	318.074
Australian dollar	221.321	217.083	245.535	235.463
Swiss franc	20.789	25.210	22.266	20.476
Share of Currencies in Total Reserves (%)				
USD	58,80	58,52	58,42	57,79
Euro	20,59	20,37	19,95	19,84
Yen	5,52	5,54	5,69	5,81
Pound	4,81	4,90	4,86	4,73
Other currencies	3,09	3,48	3,87	4,65
Yuan	2,80	2,61	2,29	2,18
Canadian dollar	2,38	2,39	2,59	2,77
Australian dollar	1,84	1,97	2,14	2,05
Swiss franc	0,17	0,23	0,19	0,18

Source:https://data.imf.org/en/Data-Explorer?datasetUrn=IMF.STA:COFER(7.0.0),* Million USD

Based on Table 3 prepared by the IMF, the distribution of global official foreign exchange reserves by currency between 2021–2024 is presented. Accordingly, total reserves declined from approximately 12 trillion dollars in 2021 to around 11.5 trillion dollars in 2024. According to Cohen and Benney (2014), the reason for the dollar's dominance as a reserve currency lies in the fact that central banks conduct market interventions using the dollar and countries prefer the dollar as an exchange rate anchor. Nevertheless, the authors predict that China's RMB may eventually reach a position consistent with the size of the Chinese economy, and currencies of other emerging market economies such as India and Brazil may become attractive for international use. In an ECB (2022) report, it is argued that Russia's invasion of Ukraine could accelerate the erosion of the US dollar's role as the global reserve currency. Following recent sanctions, it has been suggested that Russia and other countries may diversify their portfolios away from the US dollar and other traditional reserve currencies toward assets such as the renminbi, gold, and cryptocurrencies. Moreover, Russia has demanded that importers of Russian gas make payments in rubles rather than in dollars or euros. From an international relations perspective, Eichengreen et al. (2019), in their analysis of data from 19 countries before World War I, demonstrated that a country tends to hold approximately 30% more of the currency of another country if that country is its military ally. Based on this finding, if the United States were to cease acting as the global hegemon, the dollar could lose its dominance.

THEORIES EXPLAINING THE VALUE OF EXCHANGE RATES

In their book, David et al. (2019) summarize the main approaches to analysing exchange rates: the Parity Conditions Approach, the Balance of Payments Approach, and the Asset Approach. In brief, the parity conditions approach states that the long-term equilibrium exchange rate is determined by the ratio of domestic prices to foreign prices. The balance of payments approach argues that the exchange rate is determined at the point where the net inflow or outflow of foreign exchange arising from current account activities is equal to the net outflow or inflow of foreign exchange arising from financial account activities. This theory also assumes that investors will shift their assets from one country to another depending on inflation and exchange rate volatility. Finally, the asset approach claims that the value of the exchange rate is determined by capital market performance as well as the expected future levels and growth rates of the stock return (David et al., 2019, pp. 280–282).

However, finding clear empirical support for any single approach is a rare situation in the literature. The core difficulty lies in the econometric modeling of exchange rate theories. For instance, since the emergence of floating exchange rates, the theoretical literature on exchange rate determination has clearly shown that the current exchange rate depends not only on current fundamentals (such as interest rates and inflation) but also on the expected future values of these fundamentals. Therefore, new information that alters perceptions about the future path of these fundamentals affects the current exchange rate, making modeling difficult. In addition, most theories assume homogeneous expectations (for example, everyone expects future inflation to be at the same level), whereas in reality expectations are heterogeneous (some expect inflation to increase while others expect it to decrease). Indeed, forecasts of future spot exchange rates by professional businesspeople indicate a wide range of expectations; therefore, incorporating expectations into econometric equations is not very effective (Pilbeam, 2023, pp. 213–214). The weakness of parity-based models primarily stems from differences in consumption habits across countries, the lack of a clear answer regarding which goods should be included in the consumption basket, and the fact that most prices in the basket are derived from non-tradable goods and services. Additionally, factors such as tax differences, tariffs, and trade barriers between countries are assumed to be non-existent in theory, which weakens the connection between theory and real-world business practices (Valdez and Molyneux, 2017, p. 311)

ANALYSIS OF THE TURKISH LIRA AGAINST THE US DOLLAR WITHIN THE FRAMEWORK OF EXCHANGE RATE THEORIES

Identifying which theory is more closely related to the price movements of the Turkish lira will help us understand the true value of the exchange rate (to see the forest rather than the trees). As mentioned in the previous section, exchange rates are analyzed within the framework of three main theoretical approaches. In this study, in line with these approaches, annual inflation rate differentials between Türkiye and the United States ($\pi_TR-\pi_USA$) are used for the Parity Conditions Approach, the Current Account Balance / GDP ratio (CAB/GDP) is used for the Balance of Payments Approach, and annual returns of the Borsa Istanbul index (BİST-100) are used for the Asset Approach. The rate of change in the exchange rate is calculated based on the prices on the first and last trading days of each year. CAB/GDP is calculated as the ratio of the annual current account balance to gross domestic product. Borsa İstanbul's annual returns are also calculated based on the value of the exchange on the

first and last trading days of the year. Annual inflation rates were obtained from the World Bank website (https://data.worldbank.org/indicator), while other data were provided from the Central Bank of Turkey website (https://evds3.tcmb.gov.tr/). In line with the theoretical framework, the CAB/GDP ratio is used as a proxy for the Balance of Payments Approach, as it reflects a country's external financing needs and the resulting pressure on the exchange rate (David et al., 2019; Pilbeam, 2023). For the Asset Approach, annual BIST-100 returns are employed, since equity market performance captures shifts in capital flows and investor risk appetite that influence demand for the domestic currency (Reboredo et al., 2016).

Table 4: Results of Exchange Rate Theories for the Turkish Lira

Year	$\pi_{TR} - \pi_{USA}$	CAB/GDP	BİST-100	$/TL (%)
2004	5,92	-3,46	32,29	- 3,73
2005	4,79	-4,13	57,62	0,00
2006	6,37	-5,57	40,52	4,96
2007	5,90	-5,39	42,33	- 21,55
2008	6,61	-5,08	-51,12	23,18
2009	6,61	-1,74	95,62	- 0,66
2010	6,93	-5,70	27,36	3,87
2011	3,32	-8,81	-21,89	18,52
2012	6,82	-4,72	52,84	- 5,62
2013	6,03	-5,13	-14,36	16,43
2014	7,23	-3,41	27,55	8,19
2015	7,55	-2,47	-15,91	19,93
2016	6,51	-2,55	10,54	17,28
2017	9,01	-4,07	48,33	7,61
2018	13,89	-1,85	-22,34	28,33
2019	13,36	1,94	28,76	11,11
2020	11,05	-4,22	27,62	19,07
2021	14,90	-0,74	24,22	42,84
2022	64,31	-5,00	185,94	28,72
2023	49,74	-3,49	31,96	36,39
2024	55,56	-0,75	28,94	16,52

Source: Author's calculations

At first glance, according to the table, the variable that most strongly explains the value of the Turkish lira against the US dollar is the inflation differential between the two countries. While the current account deficit constitutes a secondary pressure factor on the exchange rate, stock market returns emerge not as a cause of exchange rate changes but rather as a result of investment preferences. This is because when the BIST-100 index rises, foreign currency flows into the country and is converted into Turkish lira, causing the exchange rate to either decline or remain stable, thereby producing a negative relationship between the stock market and the exchange rate. Additionally, this negative relationship can also be explained by residents preferring the stock market for investment, thus abandoning the dollar or converting their foreign currency holdings into Turkish lira. When we examine the table in detail to make more meaningful interpretations, it is observed that between 2004 and 2017, the annual inflation differential between Türkiye and the United States consistently remained in single digits. However, in 2008, 2011, 2015, and 2016, the Turkish lira

depreciated annually by approximately 23%, 18%, 20%, and 17%, respectively. The deviation from parity in 2008 may perhaps be explained by the global crisis. We say "perhaps" because, while one would expect the currency of a country in crisis to depreciate, in this case the Turkish lira indeed lost value. As a result of the entire world conducting trade in US dollars and countries being indebted to each other in dollars, expectations that it would become difficult to obtain dollars in the future led both banks and companies to rapidly close their open positions, thereby increasing demand for the dollar. In addition, due to investors' risk perceptions, capital outflows from emerging markets such as Türkiye fueled demand for the dollar. Indeed, the BIST-100 index lost 51% of its value in 2008. A similar decline occurred in 2011, with the index falling by approximately 22%. However, while the inflation differential between the US and Türkiye was around 3.5%, the exchange rate increased by 18.5%.

Furthermore, the same dynamics persisted in 2015 and 2016; despite negligible inflation differentials, the Turkish lira depreciated at double-digit rates. Since exchange rate movements affect firms' international competitiveness and cash flows, these changes are reflected in stock prices. Similarly, stock prices also affect exchange rates. As rising stock markets attract foreign investors and increase demand for domestic assets, capital inflows accelerate, ultimately leading to an appreciation of the domestic currency (Reboredo et al., 2016). As of 2018, the sharp increase in double-digit inflation was accompanied by rapid depreciation of the Turkish lira, making the determining role of inflation on the exchange rate more visible. Looking at other approaches, for instance, although the BIST-100 index generated consistently positive annual returns during the 2019–2024 period, the exchange rate continued to rise. Therefore, the monetary approach fails to explain the value of the Turkish lira during this period. Similarly, despite the presence of a current account surplus in 2019, the 11% depreciation of the exchange rate does not align with the theoretical explanation of the balance of payments approach. According to Karamenderes (2008, p. 75), increases in exports that are not accompanied by productivity gains are not reflected in stock prices by the markets. In general, summarizing the above findings, it becomes clear that exchange rate stability must be achieved through macroeconomic policies that prioritize price stability. Some studies provide insights into why such findings emerge. For instance, Ulusoy (2022, pp. 230–232) states that when exchange rates cannot be explained by inflation or interest rates, risk premium becomes a key factor. In this framework, if investors exhibit risk-averse behavior, exchange rates may rise even in the absence of changes in interest rates or inflation outlook, simply due to the perception of the economy as risky.

When a country's CDS premiums increase, investors become concerned about the possibility of default, leading to a decline in confidence and demand for that country's assets. According to Akçay (2024, pp. 162, 217, 221), in the early 2000s, under the leadership of the Derviş program, the appreciation of the Turkish lira was driven by high interest rates that made capital inflows attractive. As long as capital inflows continued, even interest rate cuts did not lead to severe depreciation of the exchange rate. However, with the reduction of the policy interest rate from 19% in September 2021 to 14% in December 2021, a new policy framework was implemented, aiming to reduce the current account deficit through a competitive (depreciated) exchange rate. This process also led households to shift toward foreign currency, resulting in a resurgence of dollarization. Measures such as exchange rate-protected deposits, requiring exporters to transfer a portion of their foreign currency revenues to the Central Bank, and regulations limiting foreign currency loans were implemented to curb exchange rate increases. However, as of August 23, 2025, the exchange rate-protected deposit scheme has been terminated. This process suggests that relying primarily on the exchange rate as a policy tool may have produced unintended macroeconomic imbalance. Akçay (2023) emphasizes that interest rate policy is not merely a technical tool but rather a political economy instrument shaped by the interaction between government priorities and the interests of different capital groups. Although the low interest rate policy implemented after 2021 may be seen as a deliberate choice to achieve export-led growth, it has not been successful in transitioning to a sustainable growth model.

DEPRECIATION AND RISK OF THE TURKISH LIRA AGAINST OTHER CURRENCIES

In the graph below, the performance of the Turkish lira against the US dollar, euro, pound, yuan, and ruble is examined at a weekly frequency over the period from 03/01/2020 to 26/12/2025. Both price and return series are presented in the graphs.

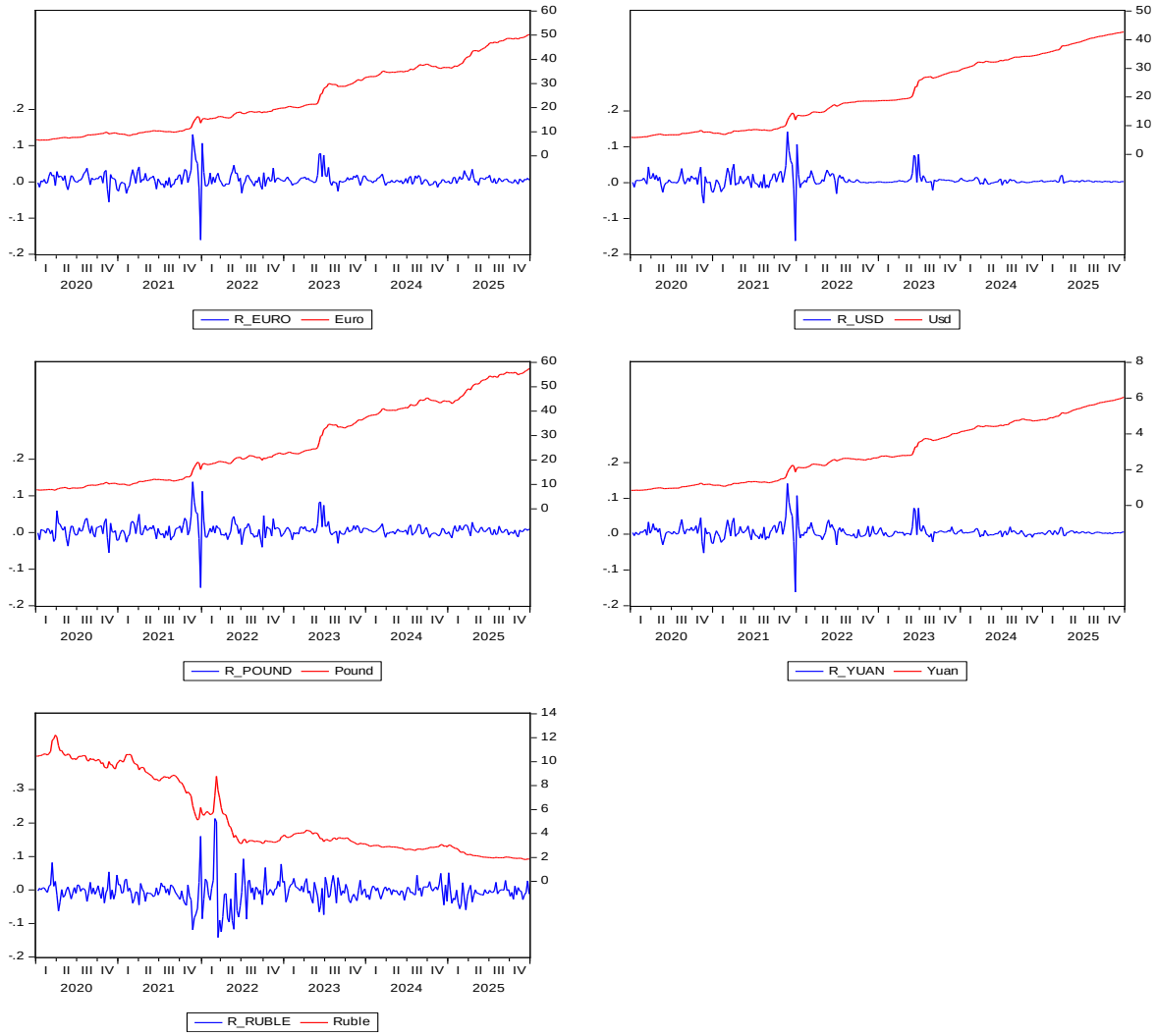

Figure 1: Weekly Prices and Returns of the Turkish Lira and Other Exchange Rates (2020–2025)
Source: EVDS and author's calculations

The graphs show that while the Turkish lira appreciates against the ruble, it depreciates against other currencies. In the first week of the relevant period, the exchange rates for USD, euro, and pound were approximately 5.94, 6.65, and 7.79, respectively, whereas in the last week of 2025, these rates reached approximately 42.73, 50.26, and 57.45. In other words, over five years, the Turkish lira depreciated nearly sevenfold against the US dollar, euro, and pound. Frankly speaking, the graphs indicate that the continuous depreciation of the Turkish lira against these currencies is not temporary but has taken on a structural character. Indeed, it is observed that exchange rates abandoned their previous fluctuation band and jumped to a higher level in the last quarter of 2021 (following the Central Bank of the Republic of Türkiye's monetary policy decision on October 21, 2021, to reduce

the policy rate from 18% to 16%, and subsequently the Monetary Policy Committee's decision on November 18, 2021, to lower the policy rate from 16% to 15%). The sudden and persistent increase in exchange rate levels during this period points to a clear exchange rate shock for the Turkish lira. At the same time, the abrupt volatility observed in return series indicates that this level shift is not a temporary fluctuation but a lasting change in the exchange rate regime. Against the ruble, however, the Turkish lira has shown a relatively consistent appreciation, particularly after the Russia–Ukraine war in 2022.

Table 5:Analysis of Return Series of Exchange Rates

	Dolar	**Euro**	**Pound**	**Yuan**	**Ruble**
Mean	0.006	0.006	0.006	0.006	-0.005
Std.Dev	0.020	0.020	0.021	0.020	0.036
Ann. Mean	0.312	0.312	0.312	0.312	0.260
Ann. Std.Dev	0.144	0.144	0.151	0.144	0.260

Source: Author's calculations. Annualized averages are calculated by multiplying weekly averages by the number of weeks in a year (approximately 52), while annualized standard deviations are calculated by multiplying the square root of the number of weeks in a year (√52).

As is well known in finance literature, standard deviation represents risk. Accordingly, the least risky exchange rates are the dollar, euro, yuan, and pound, whereas the most risky is the ruble. Although the Turkish lira is stronger only against the ruble, the volatility in this parity does not provide empirical support for conducting trade with Russia in domestic currency. Moreover, considering that investors tend to shift their preferences from risky currencies to stable ones, the dollar, euro, and instruments denominated in these currencies will continue to maintain their attractiveness. Of course, the strength of the dollar (or euro) is due to investors still perceiving the United States and the European Union as safe havens. As a result, the increase in the volatility of the Turkish lira implies high uncertainty, placing a greater burden on the Central Bank of the Republic of Türkiye to accumulate higher levels of international reserves in order to hedge against exchange rate risks, finance imports, meet foreign currency liabilities, and stabilize the value of the lira. In fact, since many countries cannot directly use their own currencies in foreign trade transactions, they are required to hold reserves in order to fulfill their foreign currency obligations. Increasing reserves to high levels becomes a primary choice, as it guarantees the repayment of external debt and may reduce borrowing costs in foreign currency terms (Karamenderes, 2008, p. 65). Furthermore, the ultimate impact of the depreciation of the Turkish lira extends to public finances. A decline in firms' revenues due to exchange rate movements leads to a decrease in tax revenues. In a worse scenario, investors may demand higher returns to hold government bonds. Thus, the increase in financing costs may ultimately manifest itself in the form of higher tax rates.

REAL EXCHANGE RATE ANALYSIS

The real exchange rate determines a country's international competitiveness; when it is low, exports are expected to increase, whereas when it is high, imports become more attractive. Since it directly affects inflation and the balance of trade, it is also closely monitored as an indicator of economic stability. In their study, Atasoy and Saxena (2006) found that the Turkish lira was overvalued before the crises of 1994 and 2001 (and that this overvaluation contributed to the crises), but that the real exchange rate moved close to its equilibrium level (calculated according to the VECM model) after these crises. Therefore, they argued that the claim frequently expressed by Turkish exporters—that the overvaluation of the lira harms export competitiveness—was not valid, particularly for the 2001–2003 period. According to the authors, the overvaluation of the real exchange rate stems from

expansionary fiscal policies, as excessive government borrowing from the market raises interest rates and leads to an appreciation of the lira.

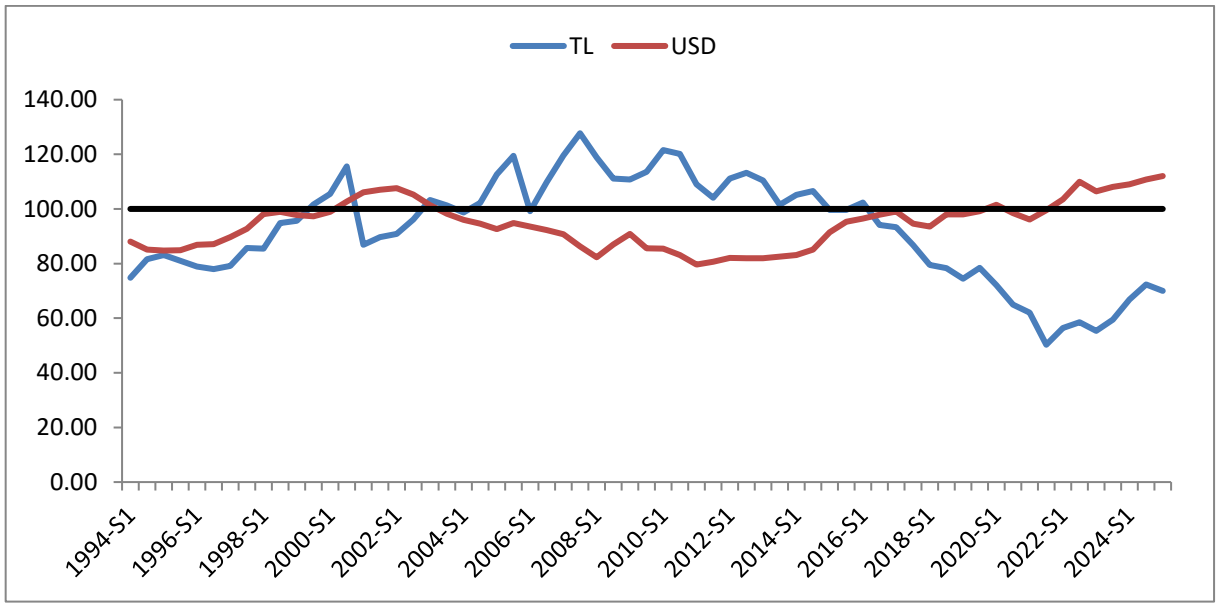

Figure 2:Real Exchange Rate Comparison for Türkiye and the United States (1994–2025)
(Note: CPI-based Real Effective Exchange Rate, 2003=100; US Real Exchange Rate, 2020=100)
Source: EVDS, FRED

In the graph above, the real effective exchange rate (REER) is presented at a six-month frequency over the period 1994–2025. The index is calculated with 2003 as the base year (100). If the index increases, it indicates that the Turkish lira appreciates in real terms (the lira strengthens, imports become cheaper, and export competitiveness declines). Conversely, a decrease in the index indicates that the lira depreciates in real terms (the lira weakens, imports become more expensive, and export competitiveness increases). Examining the trajectory of the index, an upward trend (appreciation of the lira) is observed from 1994 until the second quarter of 2007, while a clear downward trend (depreciation of the lira) is evident from this peak until the second quarter of 2021. Afterward, another upward trend is noticeable until the second quarter of 2025. In broad terms, the REER can be evaluated within a framework of two upward trends and one downward trend. According to the findings of Alper and Civcir (2012), in Türkiye, growth rates above 7% and three consecutive years of real overvaluation of the lira may serve as early warning indicators of financial crisis risk. Therefore, the real exchange rate should be closely monitored. Although exporters' complaints about the exchange rate, as reflected in the media in recent periods, do not fully align with the data, it should be noted that high inflation and exchange rate-driven cost increases prevent exporters from benefiting from a low REER. This is because expenses such as energy, raw materials, and transportation are priced in foreign currency, and increases in exchange rates negatively affect profitability. As demonstrated by Dell'Ariccia (1999) and Chit et al. (2010), exchange rate volatility also adversely affects pricing behavior, causing difficulties for the export sector. According to Uğurlu (2021), during the period 2002–2015 in Türkiye, a policy of maintaining an overvalued lira was deliberately pursued in order to sustain high import dependency, foreign currency borrowing, rapid

growth in the construction sector (as home ownership was widely encouraged; the construction sector generates employment and is labor-intensive), and to keep consumption alive. Indeed, the fact that the real exchange rate remained above 100 during the period 2002–2015 clearly demonstrates the overvalued lira policy. The subsequent depreciation of the lira and the decline of the index below 100 can be attributed to the Federal Reserve's gradual withdrawal in 2013 from its expansionary monetary policy (reducing monthly asset purchases), which had been implemented in response to the 2008 global crisis. Martin et al. (2017) introduced a new perspective to the debate on exchange rates by examining invoicing practices. According to the authors, if exports are invoiced in US dollars, an appreciation of the dollar against another country's currency may not lead to gains in competitiveness. Indeed, they demonstrate that a 10% appreciation of the US dollar reduces real output growth in emerging economies by approximately 1.5 percentage points. Akçay (2024, pp. 58, 61) argues that in Türkiye, firms that do not export and rely solely on bank credit tend to support low interest rate–depreciated currency policies, whereas exporting firms that borrow in foreign currency prefer high interest rate–appreciated currency policies. The underlying reason is that one group competes through prices, while the other competes through productivity.

CONCLUSIONS

The central findings of the study is that inflation differentials between Türkiye and its major trading partners—particularly the United States—constitute the most powerful and consistent primary factor of exchange rate movements. The results demonstrate a moderate but a consistent and observable relationship between inflation gaps and the depreciation of the Turkish lira, lending support to the relative purchasing power parity (PPP) hypothesis. This implies that in an environment where domestic inflation persistently exceeds that of trading partners, the domestic currency is structurally predisposed to lose value over time. For firm managers, this finding has direct practical relevance: exchange rate increases should not be interpreted as temporary shocks alone but as part of a broader, predictable macroeconomic trend. Consequently, long-term financial planning, pricing strategies, and contract design must incorporate expectations of gradual currency depreciation. If inflation in a country consistently remains higher than in the rest of the world, market expectations will be that the country's currency will depreciate. The question of how to persuade investors to hold such a currency (the Turkish lira) must, for now, be answered by offering higher interest rates than those available in their home countries. According to Habib and Stracca (2012), a currency's status as a "safe haven" depends not on carry trade opportunities but on the country's net foreign asset position and financial openness. Countries with positive net foreign asset positions—that is, countries whose external financial assets exceed foreigners' holdings in their domestic economy—tend to have more reputable currencies. Switzerland and Japan are examples of this situation. On the other hand, in economies with high financial openness, currencies become more sensitive to changes in global risk appetite.

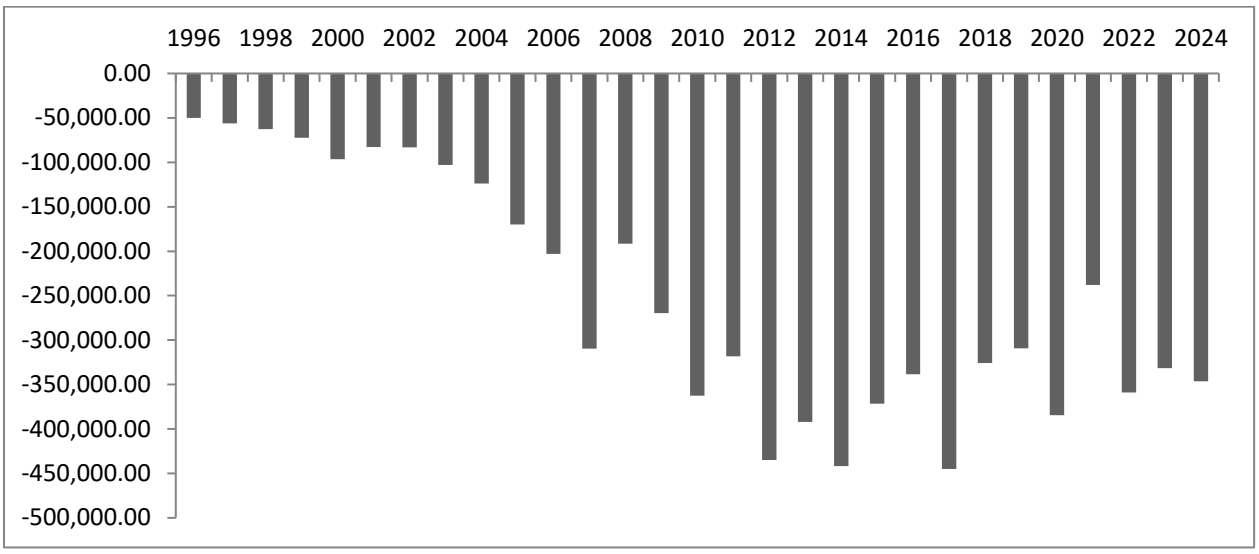

Figure 3:Türkiye's International Investment Position (1996–2024, Annual), Net (Million USD), EVDS

An examination of Figure 3 shows that Türkiye's International Investment Position has deteriorated from approximately –50 billion USD in 1996 to around –350 billion USD by 2024. This indicates that Türkiye's status as a net debtor to the global financial system has significantly strengthened. In simple terms, Türkiye's external financial assets (foreign exchange, bonds, equities, direct investments, etc.) are lower than foreigners' financial assets in Türkiye. Evaluated within the framework of Habib and Stracca (2012), this development suggests that the Turkish lira has moved further away from being a safe haven currency and has become more sensitive to external financing conditions. In this context, Itskhoki and Mukhin (2025) demonstrate that exchange rate movements are driven not primarily by real economic shocks but by changes in foreign investors' risk appetite toward domestic currency-denominated assets. In economies like Türkiye, which are net debtors and dependent on external financing, fluctuations in global risk appetite significantly affect capital flows, thereby exerting depreciation pressure on the domestic currency. In Türkiye, the level of the exchange rate is closely monitored as part of the fight against inflation. According to Gürkaynak and Kısacıkoğlu (2021), based on analyses of Chile and Peru, controlling budget deficits and achieving fiscal surpluses during expansionary periods contribute to a permanent reduction in inflation. In this context, reducing budget deficits in Türkiye would facilitate a decline in inflation to single-digit levels and pave the way for the appreciation of the Turkish lira.

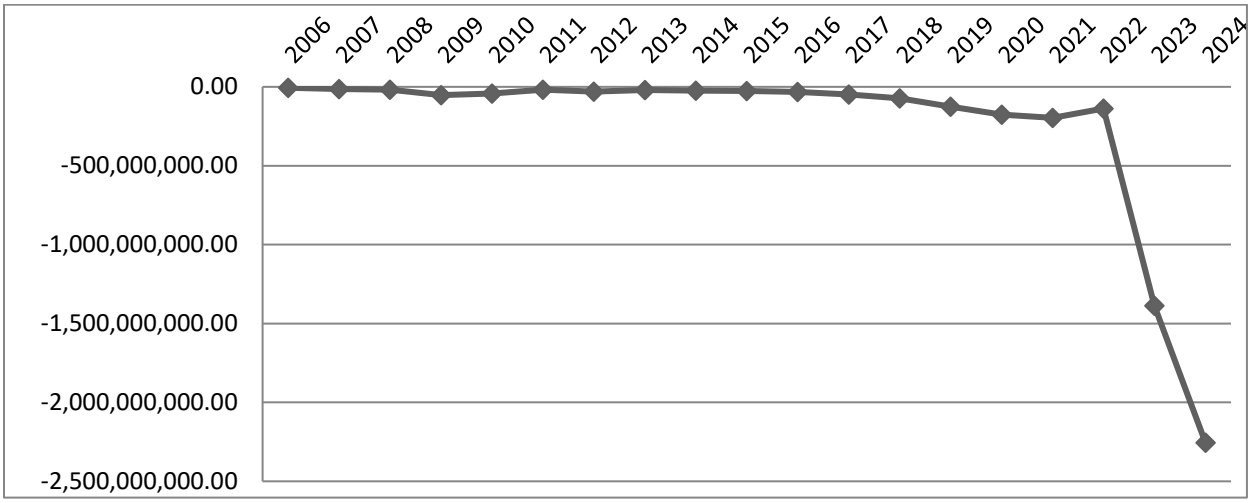

Figure 4: General Government Budget Balance (2006–2024)

In 2024, the budget deficit reached a peak of 2.3 trillion TRY. Earthquake-related expenditures undoubtedly played a role in this increase. However, in general, the budget balance remained in negative territory throughout the analyzed period, indicating that budget deficits have become chronic in Türkiye.

Based on the findings of Martin et al. (2017), one way to strengthen the Turkish lira would be to denominate foreign trade transactions—at least with neighboring countries—in Turkish lira. Just as the widespread use of the US dollar as an invoicing currency strengthens its role as a store of value, a similar strategy could be attempted for the Turkish lira. Finally, the Turkish lira exhibits the lowest volatility against the US dollar and the euro. Therefore, conducting trade in these currencies would be beneficial for both importers and exporters. Achieving stability in pricing behavior with different currencies does not appear to be feasible.

CONFLICT OF INTEREST

The authors declare no conflicts of interest.

AUTHOR CONTRIBUTIONS STATEMENT

Mercan Hatipoğlu (Conceptualisation, Validation; Formal analysis; Writing-review & editing; Supervision).

AVAILABILITY OF DATA AND MATERIALS

The data supporting this study’s findings are available on request from the corresponding author.

ETHICS STATEMENT

Not applicable.

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