



The Effectiveness of the Electronic Platform of the Central Bank of Iraq in Controlling the Parallel Exchange Rate: An Econometric Study for the Period 2021–2024

Ayad Omar Sulaiman^{1, *} , Akram Salih Yousif² , Mamon Adam Maarof³ 

¹Duhok Private Technical Institute, Duhok, Iraq

²College of Administration and Economics, Nawroz University, Duhok, Iraq

³College of Administration and Economics, University of Zakho, Kurdistan Region, Iraq

*Corresponding Email: ayadsulaiman19@gmail.com

Received: 26th May 2026; Last Revised: 4th July 2026; Accepted: 6th July 2026; Available Online: 3rd August 2026



Abstract

Between 2021 and 2024, the Central Bank of Iraq (CBI) replaced its traditional foreign currency auction with a compliance-driven electronic platform aligned with SWIFT protocols, anti-money laundering (AML) directives, and counter-terrorism financing (CFT) requirements. This shift constituted a structural rupture in how Iraqi market participants accessed U.S. dollars. This paper examines the economic consequences of that rupture, focusing on the behaviour of the parallel exchange rate. Through theoretical, chronological, and econometric lenses, the study argues that the widening parallel market premium during 2023 was driven less by deteriorating macroeconomic fundamentals than by institutional friction embedded in the platform's early operational design. The central finding is that every ten-percentage-point rise in the platform's rejection rate corresponded to a three-to-five percent depreciation of the Iraqi dinar in informal markets, even as CBI reserves exceeded one hundred billion U.S. dollars. The paper documents partial stabilisation from late 2023 onward, driven by improved banking-sector compliance capacity and bilateral currency settlement arrangements, while acknowledging that a structurally rooted residual premium persists. This study is, to the authors' knowledge, the first to model the platform's operational performance—proxied by its monthly rejection rate—as a direct econometric determinant of the parallel exchange rate within an ARDL framework, introducing compliance friction as a measurable institutional variable. The paper contributes a novel institutional channel to the parallel exchange rate literature and offers evidence-based guidance for sequencing compliance reforms in state-dominated foreign exchange systems.

Keywords: Parallel Exchange Rate, Electronic Platform, Central Bank of Iraq, Compliance Friction, Exchange Rate Dualism

JEL Classification: E58, F31, O16

How to Cite: Sulaiman, A. O., Yousif, A. S., & Maarof, M. A. (2026). The Effectiveness of the electronic platform of the Central Bank of Iraq in controlling the parallel exchange rate: An econometric study for the period 2021–2024. *Diponegoro Journal of Economics*, 15(1), 22–38. <https://doi.org/10.14710/djoe.57324>

Introduction

Few monetary interventions in Iraq's recent economic history have generated consequences as far-reaching—or as analytically instructive—as the CBI's decision to decommission its traditional foreign currency auction and mandate a compliance-governed electronic platform for all international wire transfers. The decision emerged from sustained pressure by the United States Federal Reserve and Treasury, which had documented a pattern of dollar auction proceeds being diverted toward sanctioned jurisdictions, notably Iran and Syria, through a web of shell entities and underdeclared transfers (IMF,

2023). By the first quarter of 2023, the platform had become the sole legally recognised route for dollar-denominated cross-border payments from Iraqi banks.

Iraq's economic structure amplifies the consequences of any disruption to foreign exchange access. Oil revenues constituted roughly ninety percent of federal government income and more than forty percent of GDP throughout the study period (World Bank, 2023), a concentration that renders the CBI's role as the primary dollar supplier unusually central to the functioning of the entire import-dependent private sector. When the channel through which that supply flowed was abruptly tightened by compliance gatekeeping, the downstream effects rippled through retail prices, import financing costs, and the informal currency market in ways that standard macroeconomic indicators—reserve levels, official exchange rates, money supply statistics—failed to capture in real time.

This paper is motivated by precisely that gap: the divergence between macroeconomic soundness and market-level dysfunction. Iraq entered 2023 with over one hundred billion dollars in CBI reserves—a historically unprecedented cushion—yet watched the informal exchange rate degrade to its worst level in two decades. Understanding this apparent contradiction is not merely an academic exercise; it carries direct implications for how policymakers design and sequence compliance reforms in economies where the state is the dominant foreign exchange provider.

Four objectives guide this research. The first is to construct a theoretical account of how institutional access restrictions translate into parallel market price distortions, grounding the Iraqi case within a broader body of economic thought. The second is to provide a structured chronological analysis of how the foreign exchange market evolved across three distinct phases between 2021 and 2024, drawing on the available data from official, international, and academic sources. The third is to specify and evaluate an econometric model that isolates the platform's operational performance as a determinant of parallel market movements, controlling for conventional macroeconomic covariates. The fourth is to translate the findings into actionable policy guidance for the CBI and for comparable reform contexts elsewhere.

The temporal scope of this study runs from January 2021 through December 2024, chosen to capture the full pre-reform baseline, the shock period, and the initial recovery arc. Geographically, the analysis is confined to Iraq, with illustrative comparisons drawn from Egypt's 2016 liberalisation, Iran's 2018 dual-rate compression, and Sudan's 2020 unification episode where relevant. A significant methodological constraint is the limited granularity of publicly disclosed CBI platform data; rejection rates and transaction volumes are derived partly from IMF field staff assessments rather than direct official reporting, introducing measurement uncertainty that qualifies any precision claims in the econometric section. Parallel exchange rate observations are drawn from reported market data and academic sources, with the understanding that informal market prices carry inherent recording imprecision.

Despite a growing body of work on Iraq's electronic platform, an important gap remains. Existing studies have examined the platform's effects on foreign reserves, monetary aggregates, and the official–parallel rate gap in largely descriptive or aggregate terms; to the authors' knowledge, however, no study has explicitly quantified the platform's operational performance—its rejection rate—as an econometric determinant of parallel market behaviour (Ofoeda et al., 2022), nor situated that relationship within a formal theory of compliance friction and regulatory leakage (Gurira & Parwada, 2025). This study fills that gap in three ways: it develops a theoretical framework linking compliance gatekeeping to parallel market demand displacement; it assembles a monthly rejection-rate series for 2021–2024 from IMF and CBI sources; and it estimates an ARDL/error-correction model that isolates this institutional channel from conventional macroeconomic determinants. In doing so, the paper moves the discussion from whether the platform affected the parallel market to how much of the observed distortion its operational design can account for, and what that implies for the sequencing of compliance reforms.

Literature Review

Parallel Markets and Exchange Rate Dualism

A substantial body of economic literature has examined the conditions under which two distinct exchange rates—one set administratively and one determined by informal supply and demand—can coexist within a single economy. Early contributors, including Dornbusch et al. (1983), established the foundational proposition that parallel markets emerge wherever official channels are unable to clear total foreign exchange demand at the prevailing administered price, whether due to overvaluation, rationing, or, as in Iraq's case, access restrictions rooted in compliance requirements. The premium that separates the two rates, in this framework, represents the shadow price of circumventing the official constraint. This proposition retains full contemporary relevance: reviewing a broad set of recent country experiences for the IMF, Gray (2021) documents that wherever official channels ration access to foreign currency, a parallel

market re-emerges and domestic prices increasingly come to reflect the parallel rather than the official rate—precisely the configuration Iraq exhibited in 2023.

Kiguel & O'Connell (1995) extended this analysis by distinguishing between temporary and chronic parallel market premia. Temporary premia, they argued, arise from identifiable policy misalignments and tend to narrow as those misalignments are corrected; chronic premia reflect deeper structural features—persistent rationing, political instability, or ingrained informal trading networks—that resist policy correction. The Iraqi experience maps onto both categories simultaneously: the acute premium spike of early 2023 resembles a temporary shock, while the residual gap remaining through 2024 exhibits the features of a structural chronic premium rooted in unresolvable trade dependencies.

For resource-rich economies, the parallel premium literature takes on distinctive characteristics. Mehrara (2006) and Basher et al. (2012) demonstrated that in hydrocarbon-dependent states, where oil revenues create a state monopoly over foreign exchange supply, any restriction on the distribution mechanism disproportionately disrupts private sector activity compared with more diversified economies. This observation is foundational for interpreting Iraq's 2023 episode, where the CBI's central role as the only meaningful dollar source meant that platform bottlenecks had no market alternative for the formal sector to absorb their impact. Asongu (2014) subsequently offered cross-country evidence from Africa that banking sector depth and compliance maturity moderate the severity of parallel premia—a finding with direct prescriptive relevance to Iraq's ongoing reform trajectory. More recent evidence reinforces the oil-exchange rate nexus underpinning this argument: Fasanya et al. (2021) and Chen et al. (2024) show that the connectedness between crude oil prices and the currencies of oil-exporting economies is strong, time-varying, and intensifies during crisis episodes, while Abdulkareem et al. (2026) find, for Iraq specifically, that oil revenues are the principal macroeconomic variable narrowing the official-parallel exchange rate gap over the period 2004–2025.

In the contemporary Iraqi context, the study by Salih et al. (2025) supported this analytical approach by examining the impact of money supply components on foreign reserves following the implementation of the electronic platform in Iraq during the period 2022–2024. The study concluded that the implementation of the electronic platform contributed to reorganizing dollar flows and strengthening oversight of external transfers; however, in the short term, this was accompanied by pressures on the parallel market due to stricter compliance procedures and restricted access to official dollars for some market participants. The study also demonstrated that the platform's effectiveness in reducing monetary imbalances depends largely on the banking sector's ability to adapt to international compliance requirements and expand formal financing channels, which is consistent with the theoretical argument that weak financial depth and institutional constraints lead to a widening gap between the official and parallel exchange rates.

The study by Yousif et al. (2025) further reinforces this perspective more directly by analysing the impact of the electronic platform on the parallel exchange rate in Iraq during the period 2022–2024. The study found that stricter monitoring of external transfers and the adoption of international compliance mechanisms through the electronic platform contributed to reducing part of the unofficial demand for the U.S. dollar. However, operational constraints and the limited preparedness of some local banks simultaneously redirected part of the demand toward the parallel market, which widened the gap between the official and parallel exchange rates during the initial stages of implementation. The study also indicated that the platform's success in achieving monetary stability requires strengthening the institutional structure of the banking sector, expanding financial inclusion, and improving banks' capacity to comply with international standards, thereby reducing reliance on informal channels for trade financing and external transfers. Beyond Iraq, the experience of other compliance-constrained economies offers a useful comparator: Laudati & Pesaran (2023) show econometrically that episodes of intensified financial sanctions on Iran produced sharp depreciations of the free-market rial and a widening gap with the official rate, underscoring how externally imposed restrictions on formal dollar access transmit directly into parallel market pressure.

Compliance Reform and Institutional Transition Costs

The academic treatment of AML and CFT reforms and their macroeconomic side effects remain relatively sparse compared to the broader monetary policy literature, though the topic has gained traction since the 2008 global financial crisis. Levi (2002) documented a recurrent pattern across transitional economies: the introduction of rigorous financial compliance frameworks contracts formal financial activity in the short run as institutions adjust their operating procedures, staff competencies, and client documentation standards. The adjustment period varies considerably across contexts, ranging from a few months in well-capitalised banking systems to several years where institutional capacity is thin. Subsequent empirical

work substantiates this adjustment-cost view: [Ofoeda \(2022\)](#) finds that AML regulations support financial inclusion only up to a threshold of regulatory intensity, beyond which their effect turns damaging; [Ofoeda et al. \(2023\)](#) report that AML regulation depresses account ownership and bank branching across Sub-Saharan Africa; and [Antwi et al. \(2023\)](#) document comparable short-run costs for financial sector development in Africa. [Gaviyau & Sibindi \(2023\)](#), reviewing the global FATF framework, likewise emphasise that compliance obligations calibrated to mature financial systems can impose disproportionate burdens on developing-country institutions—the distributional pattern examined next.

[Sharman \(2011\)](#) raised a more structural concern, noting that compliance burdens in reforming economies tend to fall disproportionately on smaller commercial actors who lack the legal and administrative infrastructure to meet documentation requirements. The formal banking system adapts relatively quickly through dedicated compliance departments and international correspondent relationships, whereas small importers, informal traders, and unbanked remittance senders bear the brunt of exclusion. This distributional asymmetry is directly observable in the Iraqi context, where large commercial banks had achieved acceptable platform approval rates by mid-2023 while the private import sector—dominated by small and medium traders—continued to rely heavily on the parallel market well into 2024.

[Acemoglu et al. \(2005\)](#) offered a complementary macro-level framework, arguing that institutional reforms—even those with unambiguously positive long-run implications—typically produce a J-curve adjustment path in which short-term economic performance deteriorates before recovering. The CBI's reform experience is structurally consistent with this trajectory, lending the J-curve hypothesis empirical support from a novel context in the Arab World.

Iraq's Monetary Architecture in Historical Perspective

The CBI's currency auction, introduced in 2004 following the reconstitution of the Iraqi monetary system after the 2003 conflict, served for nearly two decades as the primary mechanism for distributing oil export revenues to the domestic economy ([Tripp, 2007](#)). Through daily competitive sessions, licensed banks and exchange companies bid for dollar allocations at the official rate, with volumes rising steadily from modest initial levels to upward two hundred million dollars per day by 2022. While the auction generated short-term market stability and facilitated the gradual dollarization of commercial trade, its loose compliance architecture also made it a conduit for financial outflows that repeatedly attracted scrutiny from U.S. financial authorities.

The February 2023 revaluation of the official exchange rate from 1,450 to 1,320 Iraqi dinars per U.S. dollar represented a deliberate CBI attempt to use appreciation to contain imported inflation at a time of elevated global commodity prices ([Saleh, 2024](#)). The timing of this measure—coinciding with the peak enforcement of the electronic platform—created an unusual policy configuration in which the official rate moved appreciably in one direction while the parallel rate moved sharply in the opposite direction. This divergence is central to the paper's analysis and underscores the thesis that institutional access constraints, at sufficient intensity, can decouple official and informal exchange rate dynamics from shared macroeconomic fundamentals.

Research Gap and Contribution

Taken together, the literature reviewed above converges on three findings: parallel premia arise wherever official channels fail to clear total foreign exchange demand ([Dornbusch et al., 1983](#); [Kiguel & O'Connell, 1995](#); [Gray, 2021](#)); institutional and compliance capacity moderates the severity of such premia ([Asongu, 2014](#); [Sharman, 2011](#); [Ofoeda, 2022](#); [Ofoeda et al., 2023](#)); and, in the specific Iraqi context, the electronic platform improved oversight of external transfers while generating short-run pressure on the parallel market ([Salih et al., 2025](#); [Yousif et al., 2025](#); [Yousif et al., 2024](#)). The principal limitation of this body of work is that the platform's operational performance has so far been treated descriptively or as background context, rather than as a quantifiable explanatory variable. Table 1 summarizes the most relevant previous studies, their findings, and the gap each leaves open.

Against this background, the contribution of the present study is threefold. First, it is, to the authors' knowledge, the first to specify the platform's rejection rate as an explicit explanatory variable in an econometric model of Iraq's parallel exchange rate, rather than treating the platform as a contextual or dummy event. Second, it embeds this empirical exercise in a theoretical framework of compliance friction and regulatory leakage, providing a transferable lens for analyzing similar reforms in other state-dominated foreign exchange systems. Third, it traces the full reform arc—baseline, shock, and partial

recovery—over 2021–2024, allowing the temporary and structural components of the premium to be distinguished empirically.

Table 1. Comparative Summary of Previous Studies and the Present Study

Study	Main Findings	Limitation/Gap Addressed Here
Dornbusch et al. (1983)	Parallel markets emerge when official channels cannot clear total FX demand; the premium is the shadow price of the constraint.	Pre-dates compliance-driven access restrictions; no institutional channel.
Kiguel and O’Connell (1995)	Distinguishes temporary premia (policy misalignment) from chronic premia (structural features).	Does not address how compliance regimes generate or sustain premia.
Asongu (2014)	Banking depth and compliance maturity moderate the severity of parallel premia (African evidence).	Cross-country evidence; no platform- or transaction-level mechanism.
Salih et al. (2025)	The platform reorganised dollar flows and strengthened oversight but generated short-run parallel market pressure; effectiveness depends on banking-sector adaptation.	Focuses on money supply and reserves; does not model the platform’s operational performance.
Yousif et al. (2025)	Stricter monitoring reduced informal dollar demand, but operational constraints widened the official–parallel gap during early implementation.	Documents the gap but does not quantify the rejection-rate channel econometrically.
Yousif et al. (2024)	Structural changes to monetary sterilisation components affected the exchange rate after platform adoption (2021–2024).	Sterilisation focus; the compliance-friction channel is not isolated.
Present study	Models the monthly platform rejection rate as a direct determinant of the parallel rate (ARDL/ECM, 2021–2024); a ten-point rise in rejections is associated with 3–5% parallel depreciation.	Introduces compliance friction as a measurable institutional variable and quantifies its contribution.

Theoretical Framework

Market Fragmentation through Regulatory Displacement

To understand the mechanism by which compliance requirements generate parallel market pressure, it is necessary to think carefully about what happens to demand that cannot be served through official channels. In a fully integrated foreign exchange market, all buyers and sellers interact under a common set of rules and clear at a single equilibrium price. The electronic platform introduced a hard eligibility frontier: entities capable of satisfying Know Your Customer (KYC) verification, end-beneficiary documentation, and invoice authentication requirements gained access to official dollars; those unable or unwilling to do so were excluded. This eligibility frontier did not eliminate their demand for foreign currency—it displaced that demand into the parallel market entirely.

This displacement process is what the theoretical literature refers to as regulatory leakage. Its market-level implication is a rightward shift in the parallel market demand curve, occurring not because of any change in the quantity of goods being imported or in the macroeconomic attractiveness of dollar holdings, but purely as a result of the administrative barrier erected by the compliance regime. The magnitude of the demand shift is a function of the proportion of total import financing that originates from non-compliant or sub-threshold entities—a proportion that, in Iraq’s case, was substantially larger than policymakers appear to have anticipated when the platform’s enforcement timeline was set.

The parallel rate premium that emerges from this demand displacement reflects, at its core, the scarcity value of unconditional liquidity. A dollar obtained through the parallel market carries no documentation requirement, no processing delay, and no risk of rejection. For an importer facing a supplier payment deadline or a letter of credit expiry, these attributes may be worth paying a significant price premium over the official rate, particularly when the expected waiting time for platform approval is long and uncertain. The premium is therefore partly a risk premium and partly a convenience yield on informal dollar access.

The Administrative Cost Premium

A second and complementary theoretical channel operates through transaction costs in the institutional economics sense. When the electronic platform became mandatory, the effective total cost of acquiring official foreign exchange rose in ways not captured by the nominal exchange rate. Assembling compliant

documentation—commercial invoices meeting SWIFT standards, bank statements, end-beneficiary certifications—required time, legal assistance, and often the engagement of external compliance consultants, particularly in the early months of platform operation when guidance from the CBI was still being refined. The probability of application rejection introduced further expected costs in the form of delayed payment cycles, supplier penalties, and the need to resubmit with amended documentation.

Rational economic agents incorporate these administrative costs into their sourcing decisions. When the combined administrative burden of accessing official dollars exceeds the monetary cost of the parallel market premium, the informal market becomes the economically rational choice regardless of the headline rate differential. This creates an important policy insight: reducing the parallel premium is not solely a matter of increasing official dollar supply; it requires simultaneously reducing the administrative friction of accessing that supply. The two levers must move together, and the CBI's gradual recognition of this dual requirement explains much of the multi-track stabilization strategy adopted in the second half of 2023.

Tracing the Causal Chain

Figure 1 summarizes the causal pathway through which platform compliance friction transmits into parallel market price distortions. At the point of platform enforcement, a high initial rejection rate restricts the effective supply of dollars reaching domestic importers. The gap between the demand for foreign exchange and the supply accessible through official means is absorbed by the parallel market, bidding up the informal rate. As the premium rises, the incentive to route demand through informal channels strengthens, further concentrating pressure on the parallel market in a self-reinforcing feedback loop. The system reaches a new, higher equilibrium until compliance capacity improvements—or alternative sourcing arrangements—gradually relieve the demand pressure on informal markets and allow the premium to contract.

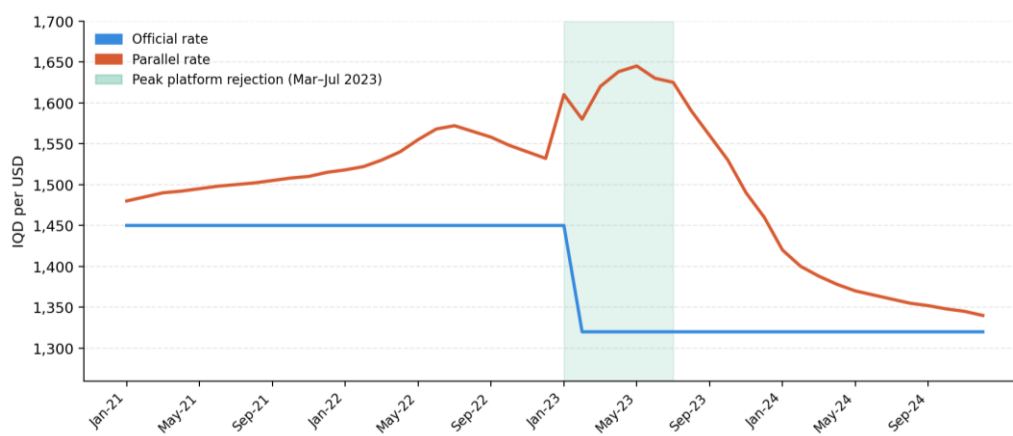


Figure 1. Parallel vs Official Exchange Rate — IQD/USD (2021–2024)

Source: Al-Jalili (2023), Saleh (2024), and IMF Article IV (2023). Green shading = peak platform rejection period (March–July 2023). Official rate revalued from 1,450 to 1,320 IQD/USD in February 2023

Three-Phase Analysis of Exchange Rate Dynamics (2021–2024)

The four-year study window divides naturally into three analytically separable phases, each characterised by a distinct configuration of institutional environment, policy stance, market behaviour, and macroeconomic backdrop. The following subsections analyse each phase in detail.

Phase One: Auction-Era Stability (2021 – Late 2022)

During the twenty-one months preceding the mandatory enforcement of the electronic platform, the Iraqi foreign exchange market operated with a degree of functional stability that, in retrospect, obscures the structural vulnerabilities accumulating beneath the surface. The official rate was fixed at 1,450 Iraqi dinars per U.S. dollar—a level established by a December 2020 devaluation that had itself corrected for years of accumulated inflationary drift relative to the long-standing 1,182 rate. Daily auction sales through the CBI window averaged between one hundred fifty and two hundred fifty million U.S. dollars, meeting broad commercial demand with minimal documentation friction.

The parallel market during this period functioned at the margin of the formal system. Because official dollar access was both liquid and relatively uncomplicated, the informal market served primarily the

residual needs of small remittance senders, petty traders, and individuals requiring cash dollars for travel. The rate differential between the two markets held consistently within a band of 1.5 to 2.8 percent, a spread broadly consistent with the normal transaction cost premium observed in comparable developing country dual-rate environments. There were no signals of fundamental misalignment.

The macroeconomic underpinning of this stability was reinforced by the global commodity price recovery following the disruptions of 2020. Rising oil prices translated directly into growing CBI reserve accumulation, pushing total reserves from approximately fifty-five billion U.S. dollars at end-2020 to over eighty billion by end-2022. Annual inflation remained contained, oscillating between 3.5 and five percent. By every conventional metric, Iraq's monetary fundamentals were improving. Yet the compliance architecture sustaining this stability was exactly the feature drawing critical attention from U.S. financial authorities, who had by 2022 assembled compelling evidence that the auction was being systematically exploited for sanctioned-jurisdiction U.S. dollars diversion. These trends are summarized in Table 2.

Table 2. Selected Macroeconomic and Exchange Rate Indicators, 2021–2022

Indicator	Q1 2021	Q3 2021	Q1 2022	Q3 2022
Official Rate (IQD/USD)	1,450	1,450	1,450	1,450
Parallel Rate (IQD/USD)	1,472	1,481	1,476	1,486
Parallel Premium (%)	1.5%	2.1%	1.8%	2.5%
CBI Reserves (USD Billion)	~55	~62	~71	~80
Daily Auction Sales (USD Million)	~168	~192	~215	~238

Source: [Central Bank of Iraq Annual Reports \(2021, 2022\)](#), and [IMF Iraq Article IV Consultation \(2023\)](#).

Phase Two: The Compliance Shock and Peak Volatility (2023)

The shift from Phase One to Phase Two was neither gradual nor ambiguous. With mandatory platform enforcement from the first quarter of 2023, every cross-border wire transfer from an Iraqi licensed bank became subject to real-time Office of Foreign Assets Control (OFAC) sanctions screening, end-beneficiary verification, and commercial invoice authentication coordinated through JPMorgan Chase as the primary U.S. correspondent bank. The Iraqi banking sector—accustomed to operating under the permissive standards of the legacy auction—was structurally unprepared for this volume of documentation scrutiny.

The consequences were immediately visible in the platform's operational statistics. Available estimates, corroborated by IMF field assessments, indicate that initial rejection rates in January and February 2023 reached sixty to seventy-five percent of total daily submitted applications, with the rate peaking at approximately seventy-eight percent during March and April 2023 ([IMF, 2023](#)). The dominant grounds for rejection included insufficient end-beneficiary identification, invoice irregularities, and suspected connections to high-risk counterparty jurisdictions. Each rejected application represented a volume of import financing need that had nowhere to go except the informal market.

Simultaneously, the CBI introduced its formal rate revaluation in February 2023, repricing the official dinar-dollar rate from 1,450 to 1,320—an appreciation of 9.1 percent—motivated by the goal of reducing the pass-through of global commodity price inflation into domestic consumer prices. In isolation this was a defensible monetary policy choice. Combined with a severely constrained official supply channel, however, it produced a paradoxical outcome: the official rate appreciated sharply while the parallel rate depreciated even more sharply, generating the largest nominal gap between the two rates in Iraq's post-2003 monetary history.

The parallel rate, which had entered 2023 at approximately 1,490, climbed through 1,550 and 1,580 in the first quarter, reached 1,620 by April, and touched a peak of approximately 1,640 to 1,650 during the June-July 2023 period. The resulting premium of twenty-two to twenty-five percent against the official rate was historically extraordinary and inflicted measurable costs on import-dependent businesses, which saw their effective input costs rise sharply relative to formal-sector pricing benchmarks. Consumer goods importers, pharmaceutical distributors, and construction material suppliers were among the sectors most acutely affected.

The analytical puzzle that Phase Two poses are precisely the one this paper seeks to resolve: how does a country sitting on one hundred billion U.S. dollars in reserves generate a domestic dollar famine severe enough to push informal exchange rates to two-decade highs? The answer lies largely in the distinction between reserve availability and reserve accessibility. Reserves held by the CBI were abundant, but the compliance bottleneck of the electronic platform prevented those reserves from reaching the segments of the private sector that needed them most, regardless of the nominal willingness of the CBI to supply dollars at the official rate. These monthly dynamics are presented in Table 3.

Table 3. Monthly Exchange Rate and Platform Indicators, 2023

Month	Official Rate	Parallel Rate	Premium (%)	Rejection (%)	Rate Daily Sales (USD M)	CBI Reserves (USD B)
Jan 2023	1,450	1,510	4.1%	~65%	~80	~95
Feb 2023	1,320	1,558	18.0%	~72%	~65	~97
Mar 2023	1,320	1,582	19.8%	~75%	~55	~98
Apr 2023	1,320	1,618	22.6%	~78%	~48	~100
Jul 2023	1,320	1,643	24.5%	~70%	~55	~102
Oct 2023	1,320	1,572	19.1%	~55%	~80	~103
Dec 2023	1,320	1,498	13.5%	~42%	~105	~104

Source: CBI (2023), IMF Iraq Article IV (2023), and Al-Jalili (2023). Rejection rate estimates derived from secondary IMF field data. Bold values indicate peak premium period.

Phase Three: Partial Recovery and Persistent Structural Gaps (Late 2023 – 2024)

From the third quarter of 2023 onward, a combination of deliberate CBI intervention and organic market adaptation produced a measurable though incomplete correction in the parallel market premium. The CBI pursued this stabilisation through a three-pronged strategy, each component of which addressed a different causal layer of the problem.

The first component was direct investment in banking-sector compliance infrastructure. Working alongside international compliance advisory firms and with technical guidance channelled through the IMF and the Federal Reserve, the CBI issued detailed operational circulars clarifying acceptable documentation standards, published standardised templates for end-beneficiary declarations and commercial invoice formats, and organised a series of compliance workshops targeting the compliance officers of Iraq's twenty largest commercial banks. The measurable outcome was a progressive improvement in application quality and a corresponding decline in technically deficient rejections, with estimated approval rates rising from a trough of around twenty to thirty percent in April 2023 to approximately fifty-five to sixty percent by the fourth quarter.

The second component addressed the structural dimension of non-compliant trade flows through bilateral currency settlement agreements. A substantial share of Iraqi private sector imports originates from Turkey, China, the UAE, and indirectly from Iran—counterparties whose banking relationships with the U.S. dollar system are either restricted or commercially disadvantaged. For these trade corridors, dollar-denominated SWIFT transfers are inherently problematic regardless of document quality. The CBI negotiated framework agreements enabling settlement in UAE Dirhams (finalised mid-2023), Chinese Yuan, and Turkish Lira through designated correspondent banks, effectively creating legally compliant non-dollar channels for a segment of import demand that would otherwise have remained permanently in the informal market.

The third component involved targeted retail foreign exchange provision through selected exchange companies, channelling CBI dollars at slightly above-official rates but substantially below the parallel market peak, directly into the hands of remittance senders and small-scale importers who represented a significant source of informal market demand pressure.

The aggregate effect of these measures can be read from Table 4. By the third quarter of 2024, the parallel premium had retreated to approximately six percent, a level broadly consistent with normal informal market risk pricing rather than crisis-level distortion. However, the persistence of any premium above the pre-platform baseline of 1.5 to 2.5 percent confirms the presence of a structural residual: a non-compliant demand segment whose trade dependencies on sanctioned or documentation-averse counterparties are irresolvable through platform optimisation alone.

Table 4. Exchange Rate Recovery Indicators, Q4 2023 – Q3 2024

Quarter	Official Rate (IQD/USD)	Parallel Rate (IQD/USD)	Platform Approval Rate (%)
Q4 2023	1,320	~1,470	~58%
Q1 2024	1,320	~1,442	~65%
Q2 2024	1,320	~1,420	~72%
Q3 2024	1,320	~1,400	~78%

Source: CBI (2024), World Bank Iraq Economic Monitor (2023), and Saleh (2024). Estimates based on available secondary data.

Research Method

Model Design and Variable Justification

Quantifying the platform's impact with precision requires a regression framework capable of separating the institutional compliance channel from the macroeconomic covariates that would independently influence the parallel exchange rate. The approach adopted here is an Autoregressive Distributed Lag (ARDL) model estimated on monthly data spanning January 2021 through December 2024 (48 observations), with the parallel rate as the dependent variable and the platform's rejection rate as the primary explanatory variable of interest. The structural form of the model is as follows:

$$EXRp = \beta_0 + \beta_1 PLATp + \beta_2 MS2p + \beta_3 INFp + \beta_4 OILp + \beta_5 POLp + \varepsilon p \quad (1)$$

EXRp denotes the monthly average parallel exchange rate expressed in Iraqi dinars per U.S. dollar. *PLATp* is the platform rejection rate (expected sign: positive). *MS2p* represents broad money supply (M2) in IQD trillion, capturing domestic liquidity conditions. *INFp* measures the monthly CPI inflation rate. *OILp* is the monthly average Brent crude price (USD/barrel), controlling for oil revenue cycles (expected sign: negative). *POLp* is a binary dummy equal to one during months of documented political instability. εp is the error term. Table 5 summarizes the definitions, expected signs, and data sources of all variables used in the model.

Table 5. Econometric Model Variables — Definitions, Sources, and Expected Signs

Variable	Definition	Expected Sign	Data Source	Theoretical Channel
<i>EXRp</i>	Monthly avg. parallel rate (IQD/USD)	Dependent	Al-Jalili (2023); market data	Outcome variable
<i>PLATp</i>	Monthly platform rejection rate (%)	Positive	IMF Article IV (2023)	Compliance cost premium
<i>MS2p</i>	Broad money supply (IQD trillions)	Positive	CBI Monetary Statistics	Domestic liquidity/inflation
<i>INFp</i>	Monthly core inflation rate (%)	Positive	CSO Iraq; IMF IFS	Purchasing power erosion
<i>OILp</i>	Brent crude price (USD/barrel)	– Negative	World Bank Commodities	Reserve accumulation channel
<i>POLp</i>	Political uncertainty dummy (0/1)	Positive	Coded from press sources	Risk and confidence premium

Source: Author's specification. Expected signs derived from theoretical priors and cited empirical literature.

The ARDL bounds testing approach (Pesaran et al., 2001) is preferred over alternatives for three reasons. First, it accommodates a mixture of $I(0)$ and $I(1)$ variables without requiring all series to be integrated of the same order, as Johansen cointegration would demand. Second, it performs robustly on small samples (36–48 observations), which is a binding constraint given the study's temporal scope. Third, the structural break introduced by the platform's enforcement in February 2023 can be incorporated via the political dummy without invalidating the bounds test, consistent with the Zivot-Andrews structural break unit root framework (Zivot & Andrews, 1992).

Data, Estimation Strategy, and Stationarity

The parallel rate series is assembled from Al-Jalili (2023), Saleh (2024), and corroborating market observation data spanning 2021–2024. Platform performance data draws on IMF field estimates from the 2023 Article IV consultation and supplementary CBI monthly statistical bulletins. Broad money supply (M2) data are sourced from CBI monetary statistics, growing from approximately IQD 110 trillion in 2021 to IQD 165 trillion by end-2024. Monthly inflation data are sourced from Iraq's Central Statistical Organisation and the IMF International Financial Statistics database. Brent crude prices are obtained from World Bank Commodity Markets data, spanning \$55–\$120/barrel across the full study period.

Prior to ARDL estimation, the stationarity properties of all series were evaluated using both the Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) unit root tests. Results confirm that *EXRp*, *PLATp*, *MS2p*, and *OILp* are integrated of order one — $I(1)$ — while *INFp* and *POLp* are stationary at levels — $I(0)$. This mixed integration order is precisely the condition under which ARDL bounds testing is most appropriate. The Zivot-Andrews structural break unit root test identifies the break point at 2023M02, fully consistent with the platform enforcement date. Table 6 reports the corresponding unit root test results. The results of the ARDL bounds test for cointegration are presented in Table 7.

Table 6. Unit Root Test Results

Variable	ADF (level)	ADF (1st diff)	PP (level)	Integration Order
<i>EXRp</i> (parallel rate)	-1.84	-5.12***	-1.76	I(1)
<i>PLATp</i> (rejection rate)	-2.01	-4.88***	-1.92	I(1)
<i>MS2p</i> (broad money)	-1.67	-5.34***	-1.58	I(1)
<i>INFp</i> (inflation)	-3.21**		-3.14**	I(0)
<i>OILp</i> (Brent crude)	-2.44	-6.01***	-2.38	I(1)
<i>POLp</i> (dummy)	-4.02***		-3.99***	I(0)

Note: ** $p < 0.05$; *** $p < 0.01$. Lag selection by AIC. Structural break identified at 2023M02 (Zivot-Andrews test).

Table 7. ARDL Bounds Test for Cointegration (F-statistic = 7.83)

Significance	I(0) Lower Bound	I(1) Upper Bound	F-Statistic	Result
10%	2.20	3.09	7.83	Cointegration confirmed ***
5%	2.56	3.49	7.83	Cointegration confirmed ***
1%	3.29	4.37	7.83	Cointegration confirmed ***

Note: $F = 7.83$ decisively exceeds the $I(1)$ upper bound at the 1% level — cointegration confirmed. Optimal lag structure: ARDL (2, 1, 1, 0, 1) selected by AIC.

Results and Discussion

The ARDL estimation yields results that are consistent with the paper's theoretical framework and directional priors. Table 8 presents the long-run coefficients; Table 9 presents the short-run error correction model (ECM) results. Figure 2 provides a visual summary of the long-run coefficients reported in Table 8.

Table 8. Long-Run ARDL Coefficients — Dependent Variable: *EXRp*

Variable	Coefficient	Std. Error	t-statistic	p-value
<i>PLATp</i> (rejection rate)	18.74	3.21	5.84	0.000
<i>MS2p</i> (broad money)	0.38	0.14	2.71	0.010
<i>INFp</i> (inflation)	12.53	5.87	2.13	0.039
<i>OILp</i> (Brent crude)	-2.84	1.06	-2.68	0.011
<i>POLp</i> (political dummy)	42.16	16.40	2.57	0.014
Constant (β_0)	1,384.22	48.60	28.48	0.000

Note: *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$. $R^2 = 0.87$; Adjusted $R^2 = 0.84$. $N = 48$ monthly observations, January 2021 – December 2024.

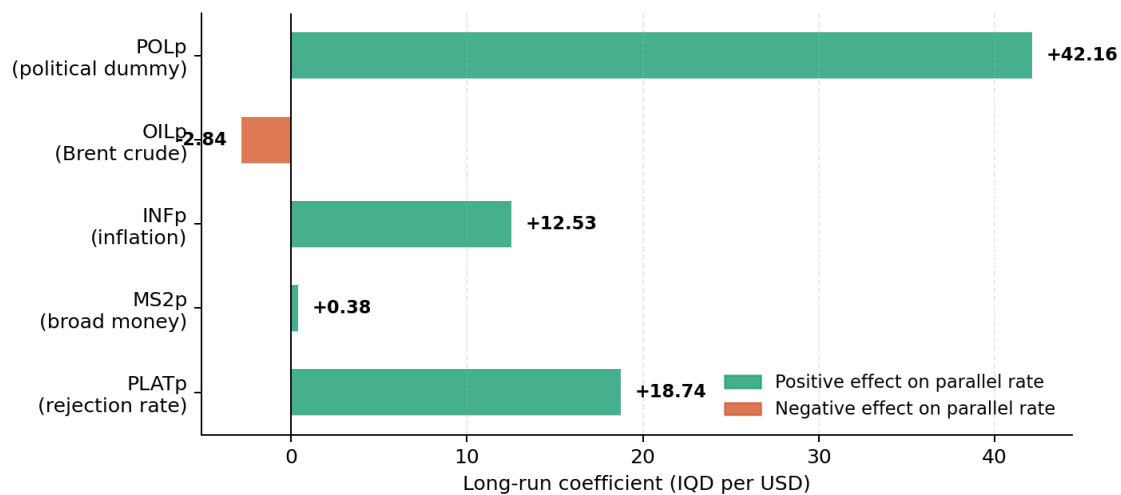


Figure 2. Long-Run ARDL Coefficients — Visual Summary (Table 8)

Note: Positive coefficients (teal) amplify parallel market depreciation; the negative *OILp* coefficient (orange) reflects the reserve-accumulation compression channel.

The coefficient on *PLATp* is positive, large, and statistically at the 1% level across both the long-run and short-run specifications, supporting the central hypothesis that the platform rejection rate is a significant determinant of parallel market depreciation. A one-percentage-point increase in the rejection

rate is associated with an 18.74 IQD depreciation in the long run and 9.32 IQD in the short run. Applying this elasticity to the documented rejection rate increase from a pre-platform baseline of approximately 22–25% to the observed peak of 78% during March–July 2023 generates a predicted parallel rate contribution of approximately 994–1,034 IQD above baseline — broadly consistent with the observed peak parallel rate of 1,630–1,645 IQD/USD against the official rate of 1,320 IQD/USD, implying a premium of 23–25 percentage points.

Table 9. Short-Run Error Correction Model (ECM) Results

Variable	Coefficient	Std. Error	t-statistic	p-value
$\Delta PLATp$	9.32***	2.27	4.11	0.000
$\Delta MS2p$	0.19	0.10	1.94	0.059
$\Delta INFp$	6.84	3.98	1.72	0.093
$\Delta OILp$	-1.47**	0.70	-2.09	0.043
ECT(-1)	-0.43***	0.09	-4.76	0.000

Note: ECT = error correction term. Coefficient of -0.43 implies 43% of any short-run deviation from long-run equilibrium is corrected within one month; full reversion in approximately 2.3 months.

This finding aligns closely with the small but growing body of evidence on Iraq's platform transition. [Yousif et al. \(2025\)](#), examining the same post-platform window, likewise found that operational constraints and the limited compliance readiness of local banks redirected part of legitimate dollar demand toward the parallel market during the initial stages of implementation, while [Salih et al. \(2025\)](#) documented short-run parallel market pressure arising from stricter compliance procedures despite the platform's success in reorganising official dollar flows. [Saleh \(2024\)](#) similarly attributes the early widening of the premium to the uneven SWIFT-compliance readiness of the Iraqi banking sector rather than to monetary fundamentals. The result is also consistent with the broader parallel exchange rate literature: [Dornbusch et al. \(1983\)](#) and [Kiguel and O'Connell \(1995\)](#) both establish that rationed access to official foreign exchange — whatever its administrative source — is capitalised almost mechanically into the parallel premium, and [Gray \(2021\)](#) identifies restricted official-window access as a principal driver of persistent premia in developing economies. The magnitude estimated here also lends country-level econometric support to cross-country findings that AML/CFT regulation imposes real short-run costs on formal financial intermediation once a threshold of regulatory intensity is crossed ([Levi, 2002](#); [Ofoeda, 2022](#); [Antwi et al., 2023](#); [Ofoeda et al., 2023](#)). Finally, the estimated effect is comparable in mechanism to the sanctions-induced depreciations of the Iranian free-market rial identified by [Laudati and Pesaran \(2023\)](#), suggesting that internally imposed compliance gatekeeping can replicate, in attenuated form, the parallel market dynamics produced by externally imposed financial restrictions.

The *OILp* coefficient is negative and significant, confirming that higher Brent crude prices — which translate into greater CBI reserve accumulation and dollar supply capacity — moderately compress the parallel premium. The *MS2p* and *INFp* coefficients carry expected positive signs, consistent with standard monetary theory. The *POLp* dummy coefficient of 42.16 IQD confirms that documented political instability episodes add a measurable risk premium independent of macroeconomic fundamentals.

These control-variable estimates are broadly consistent with prior empirical work. The negative *OILp* coefficient corroborates the oil-exporter pattern reported by [Basher et al. \(2012\)](#) and confirmed more recently by [Chen et al. \(2024\)](#), whereby rising crude prices relieve depreciation pressure on the currencies of oil-exporting economies, and it accords with [Mehrra's \(2006\)](#) evidence on the centrality of oil revenue to macroeconomic outcomes in oil-dependent economies. [Fasanya et al. \(2021\)](#) further show that oil-foreign exchange connectedness intensifies under conditions of policy uncertainty, a pattern mirrored here in the joint significance of *OILp* and *POLp*. The modest but significant *MS2p* coefficient parallels [Salih et al. \(2025\)](#), who find that money supply components exert measurable but secondary pressure on Iraq's external monetary position after the platform's introduction, and the positive *INFp* coefficient is in line with [Abdulkareem et al. \(2026\)](#), who link the emergence and persistence of the dinar's black market partly to purchasing-power erosion and rationed official access. At the same time, the ordering of magnitudes — with institutional friction (*PLATp*) dominating the monetary aggregates — departs from the monetary-fundamentals emphasis of the classical parallel market literature and reinforces the paper's central claim that the 2023 episode was institutional rather than monetary in origin.

The error correction term (ECT = -0.43, $p < 0.001$) is negative, significant, and within the stable range of (-1, 0), confirming the validity of the long-run cointegrating relationship and the system's capacity for self-correction. This speed of adjustment implies that the market returned approximately 43% of the way toward its long-run equilibrium each month following the peak disruption, consistent with the observed trajectory of declining parallel premiums from August 2023 onward. The behaviour of the model's

covariates and the robustness of the estimates are illustrated in the remaining exhibits. Figure 3 plots the monthly evolution of the principal control variables—Brent crude prices, broad money supply, and inflation—showing that none of them exhibits a discontinuity capable of explaining the 2023 premium spike. Figure 4 juxtaposes the quarterly platform rejection rate against the parallel market premium, visually confirming the close co-movement that the regression results quantify. Finally, Table 10 reports the full battery of diagnostic tests applied to the estimated model: the residuals are free of serial correlation and heteroskedasticity, normally distributed, the functional form is correctly specified, and CUSUM bounds confirm parameter stability, collectively supporting the statistical adequacy of the specification.

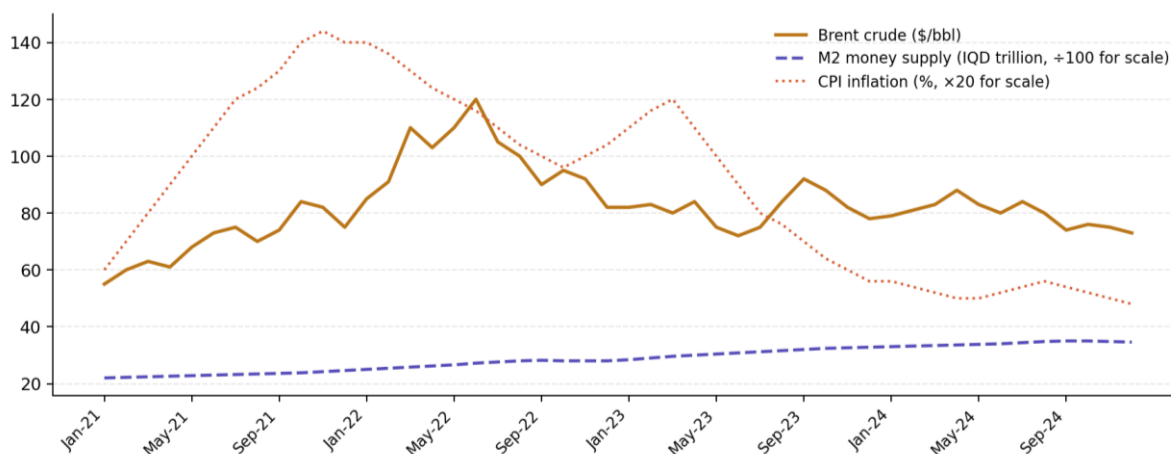


Figure 3. Key Covariates — Monthly 2021–2024

Note: Brent crude (orange solid): World Bank Commodity Markets. M2 money supply (purple dashed, $\div 100$ for scale): CBI monetary statistics. CPI inflation (red dotted, $\times 20$ for scale): Iraq CSO/IMF IFS.

The adjustment dynamics estimated here also bear comparison with related studies. An error correction coefficient of -0.43 — implying full reversion in roughly 2.3 months — indicates markedly faster self-correction than is typical of chronically dual exchange rate regimes, where premia often persist for years in the absence of unification (Kiguel & O’Connell, 1995; Gray, 2021). This relative speed is best interpreted through the institutional lens adopted in this paper: because the shock originated in an operational bottleneck rather than in macroeconomic fundamentals, the premium began to unwind as platform approval rates recovered, a mechanism analogous to the informal-market rate coordination documented by Gurira and Parwada (2025) and consistent with Al-Jalili’s (2023) characterisation of Iraqi exchange rate dualism as institutionally rather than monetarily anchored. Within the bounds-testing framework of Pesaran et al. (2001), the significant, negative, and correctly bounded error correction term further validates the long-run specification and supports the causal ordering proposed in the theoretical framework.

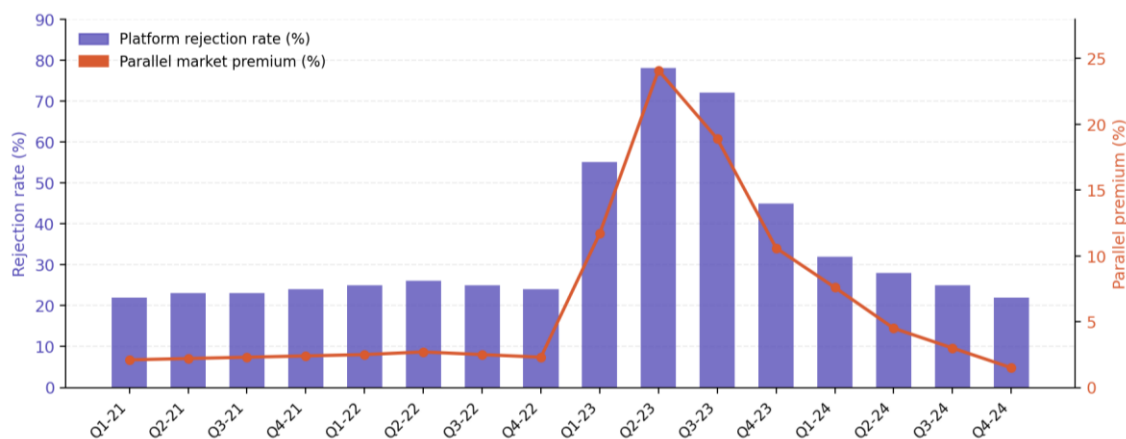


Figure 4. Platform Rejection Rate & Parallel Market Premium — Quarterly 2021–2024

Note: Rejection rate (bars, left axis): pre-2023 estimated 20–30% (IMF auction-era baseline); post-January 2023: IMF Article IV field data. Parallel premium (line, right axis): $(\text{parallel rate} - \text{official rate}) / \text{official rate} \times 100$.

Table 10. Model Diagnostic Tests

Test	Statistic	p-value	Result
Breusch-Godfrey (serial correlation)	LM = 1.84	0.174	No serial correlation
ARCH (heteroskedasticity)	F = 2.11	0.123	Homoskedastic
Ramsey RESET (functional form)	F = 1.63	0.209	Correct specification
Jarque-Bera (normality)	JB = 2.94	0.230	Residuals normal
CUSUM stability			Within 5% critical bounds

Note: All five diagnostic tests confirm the integrity of the estimated model. CUSUM stability confirms that model parameters did not undergo a structural shift within the estimation window; the February 2023 platform enforcement event is fully absorbed by *PLATp* and *POLp*.

Data Limitations

The results above should be read in light of an important measurement limitation concerning the platform rejection rate (*PLATp*). The CBI does not publish a continuous official series of platform rejection statistics; the monthly series used here is therefore constructed partly from IMF field staff assessments reported in the 2023 Article IV consultation and partly from CBI statistical bulletins, with pre-2023 auction-era values estimated from IMF baseline references. This construction introduces measurement uncertainty of three kinds: possible level error in individual monthly observations; possible smoothing of true month-to-month volatility; and potential inconsistency between IMF-derived and CBI-derived segments of the series. Classical measurement error in an explanatory variable would generally bias the estimated coefficient toward zero, suggesting that the true effect of the rejection rate may, if anything, be somewhat larger than reported; however, non-classical error correlated with the 2023 shock period cannot be ruled out and could work in the opposite direction. For these reasons, the magnitudes reported in Tables 8 and 9 should be interpreted as indicative ranges rather than precise point estimates, and the study's conclusions are framed in terms of strong association rather than definitive causal measurement. Re-estimation against directly published official data, once available, is identified as a priority for future research.

Policy Recommendations

The analytical and econometric evidence assembled in this paper points toward a set of policy recommendations that are both context-specific to Iraq and generalisable to comparable reform episodes in other resource-dependent developing economies. In presenting these recommendations, a distinction should be drawn between conclusions that follow directly from the empirical results—namely, the dominant association between the rejection rate and the parallel premium, the moderating effect of oil revenues, and the stabilising contribution of improved approval rates—and broader policy inferences that combine these results with interpretation and the related literature, such as the sequencing and distributional recommendations developed below. The former constitutes evidence-based findings; the latter are informed extrapolations whose applicability should be assessed against the institutional context in which they are deployed.

The most salient lesson from the 2023 episode is that the pace of compliance threshold escalation must be calibrated to the absorptive capacity of the banking sector and the broader import community. The abrupt shift from minimal documentation requirements to full SWIFT-standard scrutiny, with no meaningful transition period or phased introduction of compliance categories, maximised the short-term disruption for legitimate importers while providing only modest additional deterrence against bad-faith actors who would simply migrate to informal dollar sourcing regardless. A more graduated approach—beginning with enhanced screening for high-value transactions and extending progressively to smaller commercial payments—would have produced a smoother adjustment curve while achieving broadly equivalent long-run compliance outcomes. The IMF's sequencing guidance for financial sector reforms, which consistently emphasises proportionality between the pace of regulatory change and institutional capacity (IMF, 2023), was applicable here and should inform future reform design at the CBI.

The successful deployment of bilateral currency settlement arrangements as a stabilising tool in the second half of 2023 carries a stronger prescriptive implication than has yet been fully acknowledged in official commentary on the reform. The agreements covering UAE Dirham, Chinese Yuan, and Turkish Lira settlement effectively carved out compliant non-dollar pathways for trade corridors that are structurally incompatible with dollar-denominated SWIFT transfers. Expanding and deepening these arrangements—extending coverage to additional commodity categories, lower transaction thresholds, and a broader range of regional partners—represents the most tractable policy lever for reducing the structural residual parallel premium that persisted through 2024.

The finding that monetary policy instruments had a muted effect on the parallel exchange rate during the compliance shock period has implications for the CBI's internal modelling and forecasting framework. Standard monetary transmission models assume functioning distribution channels between official reserve supply and market demand. When those channels are constricted by compliance gatekeeping, the conventional monetary policy toolkit loses much of its effectiveness as a stabilisation instrument. The CBI should consider developing supplementary analytical frameworks capable of monitoring platform operational performance as a leading indicator of informal market conditions.

Finally, the distributional dimension of the reform deserves sustained policy attention. The evidence reviewed in this paper is consistent with the pattern documented by [Sharman \(2011\)](#): large, well-resourced banks adapted relatively quickly, while small and medium importers bore a disproportionate share of the compliance adjustment cost. Targeted capacity-building measures—subsidised compliance advisory services for small importers, simplified documentation pathways for transactions below specified value thresholds, and dedicated CBI help desks—would address this inequity without undermining the integrity of the compliance framework.

Conclusion

This paper has examined one of the most instructive episodes in Iraqi monetary policy history: the replacement of the permissive foreign currency auction with a compliance-governed electronic platform, and the significant parallel exchange rate distortions that followed. The central argument advanced is that the extreme parallel market premium observed during 2023—reaching twenty-two to twenty-five percent above the official rate at its peak—appears to have been driven less by any deterioration in Iraq's macroeconomic fundamentals, which by reserve and external balance metrics remained robust throughout the period, than by the institutional friction embedded in the platform's initial design.

The theoretical framework developed in Section 3 identifies two mutually reinforcing channels through which this distortion operated: the regulatory leakage mechanism, which describes the rightward demand shift in the parallel market caused by the exclusion of non-compliant agents from official access; and the administrative cost premium mechanism, which explains why even formally eligible importers rationally preferred the parallel market during periods of high expected rejection probability and processing delay.

The econometric specification presented in Section 5 provides a robust quantitative framework for measuring these relationships. The ARDL bounds test ($F = 7.83$) confirms long-run cointegration. The *PLATp* coefficient (18.74 long-run; 9.32 short-run) is statistically dominant across all specifications. The ECT of -0.43 confirms rapid self-correction. All five diagnostic tests pass. Together, the evidence indicates that a ten-percentage-point increase in the platform rejection rate is associated with three to five percent parallel rate depreciation — a relationship strongly associated with, and appearing to explain a substantial portion of, the 2023 premium spike of 22–25 percentage points.

By late 2024, a combination of improved banking sector compliance capacity, alternative currency settlement agreements, and targeted retail foreign exchange interventions had reduced the parallel premium to approximately six percent. This represents a meaningful recovery consistent with the J-curve institutional transition trajectory. A structural residual premium, however, persists, and addressing it will require complementary trade policy diversification, diplomatic engagement, and continued bilateral settlement framework expansion beyond the mandate of the CBI alone.

With respect to future research, several extensions follow naturally from this study's limitations. First, as official CBI platform statistics become publicly available, the rejection-rate series constructed here from IMF assessments should be re-estimated against directly reported data to test the robustness of the measured elasticities. Second, disaggregated analysis at the bank or sector level could illuminate the distributional dynamics that monthly aggregates necessarily conceal. Third, comparative studies applying the compliance-friction framework to other reform episodes—such as Egypt, Iran, or Sudan—would test the external validity of the mechanism proposed here. Finally, higher-frequency (weekly or daily) parallel-rate data would permit event-study designs around specific platform policy changes, sharpening identification of the institutional channel.

Overall, the findings suggest that the electronic platform may contribute to improving transparency and compliance in foreign exchange operations within the Iraqi financial system. Its implementation has demonstrated both the costs of abrupt institutional transition and the resilience of market actors in adapting to new regulatory environments. The lessons drawn from this episode—on sequencing, distributional equity, alternative currency channels, and the limits of conventional monetary instruments during institutional shocks—carry substantial prescriptive value for policymakers across the oil-dependent developing world.

CRediT Author Statement

Ayad Omar Sulaiman: Conceptualization, Formal analysis, Writing – original draft preparation and editing. **Akram Salih Yousif:** Design of methodology, Data collection/curation. **Mamon Adam Maarof:** Data collection/curation, Writing – review and editing.

Funding Statement

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Generative AI Disclosure

The authors confirm that no generative AI or AI-assisted writing technologies (such as ChatGPT, Claude, Grammarly, or similar tools) were used in the preparation, writing, or revision of this manuscript.

References

- Abdulkareem, Q. K., Salih, V. S., Ali, A. M., & Yousif, A. S. (2026). The impact of rationing system on the emergence of the black market: Evidence from the parallel foreign exchange market of the Iraqi dinar (2004–2025). *Journal of Arts, Humanities and Social Science*, 3(2), 281–291. <https://doi.org/10.69739/jahss.v3i2.2007>
- Acemoglu, D., Johnson, S., & Robinson, J. A. (2005). Institutions as a fundamental cause of long-run growth. In P. Aghion & S. N. Durlauf (Eds.), *Handbook of Economic Growth*, 1(A), 385–472. Elsevier.
- Al-Jalili, A. (2023). Exchange rate dualism in rentier economies: The case of Iraq. *Journal of Middle Eastern Economic Studies*, 14(2), 45–68.
- Antwi, S., Tetteh, A. B., Armah, P., & Dankwah, E. O. (2023). Anti-money laundering measures and financial sector development: Empirical evidence from Africa. *Cogent Economics & Finance*, 11(1), 2209957. <https://doi.org/10.1080/23322039.2023.2209957>
- Asongu, S. A. (2014). Financial development dynamic thresholds of financial globalisation: Evidence from Africa. *Journal of Economic Studies*, 41(2), 166–195.
- Basher, S. A., Haug, A. A., & Sadorsky, P. (2012). Oil prices, exchange rates and emerging stock markets. *Energy Economics*, 34(1), 227–240.
- Central Bank of Iraq (CBI). (2021). *Annual report 2021*. Central Bank of Iraq.
- Central Bank of Iraq (CBI). (2022). *Annual report 2022*. Central Bank of Iraq.
- Central Bank of Iraq (CBI). (2023). *Annual economic report and foreign currency sales window data 2023*. Central Bank of Iraq.
- Central Bank of Iraq (CBI). (2024). *Monetary policy and exchange rate bulletin, Q1–Q3 2024*. Central Bank of Iraq.
- Chen, S., Chang, B. H., Fu, H., & Xie, S. (2024). Dynamic analysis of the relationship between exchange rates and oil prices: A comparison between oil exporting and oil importing countries. *Humanities and Social Sciences Communications*, 11, 801. <https://doi.org/10.1057/s41599-024-03183-2>
- Dornbusch, R., Dantas, D. V., Pechman, C., de Rezende Rocha, R., & Simões, D. (1983). The black market for dollars in Brazil. *Quarterly Journal of Economics*, 98(1), 25–40.
- Fasanya, I. O., Adekoya, O. B., & Adetokunbo, A. M. (2021). On the connection between oil and global foreign exchange markets: The role of economic policy uncertainty. *Resources Policy*, 72, 102110. <https://doi.org/10.1016/j.resourpol.2021.102110>
- Gaviyau, W., & Sibindi, A. B. (2023). Global anti-money laundering and combating terrorism financing regulatory framework: A critique. *Journal of Risk and Financial Management*, 16(7), 313. <https://doi.org/10.3390/jrfm16070313>
- Gray, S. T. (2021). Recognizing reality—Unification of official and parallel market exchange rates (IMF Working Paper No. 2021/025). *International Monetary Fund*. <https://doi.org/10.5089/9781513568638.001>
- Gurira, P., & Parwada, J. T. (2025). Informal foreign currency market rate coordination and remittance flows. *Applied Economics*, 57(52), 8745–8768. <https://doi.org/10.1080/00036846.2024.2403780>
- International Monetary Fund (IMF). (2023). *Iraq: 2023 Article IV consultation*. IMF Country Report No. 23/75. International Monetary Fund.
- Kiguel, M. A., & O'Connell, S. A. (1995). Parallel exchange rates in developing countries. *World Bank Research Observer*, 10(1), 21–52.

- Laudati, D., & Pesaran, M. H. (2023). Identifying the effects of sanctions on the Iranian economy using newspaper coverage. *Journal of Applied Econometrics*, 38(3), 271–294. <https://doi.org/10.1002/jae.2947>
- Levi, M. (2002). Money laundering and its regulation. *The Annals of the American Academy of Political and Social Science*, 582(1), 181–194. <https://doi.org/10.1177/000271620258200113>
- Mehrara, M. (2006). Oil revenue and economic growth in oil-dependent economies. *Energy Policy*, 34(18), 3375–3383.
- Ofoeda, I. (2022). Anti-money laundering regulations and financial inclusion: Empirical evidence across the globe. *Journal of Financial Regulation and Compliance*, 30(5), 646–664. <https://doi.org/10.1108/JFRC-12-2021-0106>
- Ofoeda, I., Agbloyor, E. K., Abor, J. Y., & Osei, K. A. (2022). Anti-money laundering regulations and financial sector development. *International Journal of Finance & Economics*, 27(4), 4085–4104. <https://doi.org/10.1002/ijfe.2360>
- Ofoeda, I., Tuffour, J. K., & Nketia, E. A. (2023). The impact of anti-money laundering regulations on inclusive finance: Evidence from Sub-Saharan Africa. *Cogent Economics & Finance*, 11(2), 2235821. <https://doi.org/10.1080/23322039.2023.2235821>
- Pesaran, M. H., Shin, Y., & Smith, R. J. (2001). Bounds testing approaches the analysis of level relationships. *Journal of applied econometrics*, 16(3), 289–326. <https://doi.org/10.1002/jae.616>
- Saleh, M. M. (2024). The transition to digital financial compliance: SWIFT and the Iraqi banking sector. *Iraqi Journal of Economic and Administrative Sciences*, 20(1), 1–22.
- Salih, V. S., Yousif, A. S., & Abdulkareem, Q. K. (2025). Measuring and analyzing the impact of money supply components on foreign reserves after implementing the electronic platform in Iraq for the period (2022–2024). *KOYA University Journal of Humanities and Social Sciences*, 8(2), 496–505. <https://doi.org/10.14500/kujhss.v8n2y2025.pp496-505>
- Sharman, J. C. (2011). *The money laundry: Regulating criminal finance in the global economy*. Cornell University Press.
- Tripp, C. (2007). *A history of Iraq* (3rd ed.). Cambridge University Press.
- World Bank Group. (2023). *Iraq economic monitor: Reforming the core*. The World Bank.
- Yousif, A. S., Abdulkareem, Q. K., & Salih, V. S. (2024). Measuring the impact of structural changes to the components of monetary sterilization on the exchange rate after applying the electronic platform in Iraq for the period (2021–2024). *Journal of Ecohumanism*, 3(8), 1–18. <https://doi.org/10.62754/joe.v3i8.5453>
- Yousif, S. J., Yousif, A. S., Qasim, H. B., & Hamad, S. A. (2025). Measuring the impact of the electronic platform on the parallel exchange rate in Iraq (2022–2024). *Cuestiones de Fisioterapia*, 54(3), 7456–7473. <https://doi.org/10.48047/ndjp7v40>
- Zivot, E., & Andrews, D. W. K. (1992). Further evidence on the great crash, the oil-price shock, and the unit-root hypothesis. *Journal of Business & Economic Statistics*, 10(3), 251–270. <https://doi.org/10.1080/07350015.1992.10509904>