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**Inflation Hedges: What Assets are Best?
Case of Brazil, South Africa, and Turkey**

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Abstract

This study analyzes inflation-hedging in Brazil, Turkey, and South Africa using VAR and ARDL/NARDL models. Results show no universal hedge. In Brazil, currency effects are key on the short run, while local equities provide long run hedge. In Turkey, real assets and equities excel in both short (VAR) and long (NARDL) runs. Crucially, for South Africa, VAR identifies the local FTSE/JSE stock index as the only short-run hedge, while ARDL confirms long-run protection is solely achieved through foreign-currency assets. Findings highlight profound cross-country differences, demonstrating that effective inflation hedging is contingent on local market structure and investment horizon.

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1 Introduction

Inflation, defined as a process of continuously rising prices and falling purchasing power (Hofmayr, 2022), is one of the most significant macroeconomic variables affecting investor portfolios. For both private and institutional investors, inflation represents a direct threat to the real return of their investments — that is, the nominal return adjusted for changes in the purchasing power of money. The ability of different asset classes to hedge inflation—protecting investment value against rising prices—has long been a central concern in portfolio management. While there are instruments in developed markets that can protect against inflation almost perfectly (TIPS), in developed markets not everyone has access to the complete set of such investments. Therefore, there is a strong need for both retail and institutional investors to optimize their investment portfolios with specific set of assets that will aid in hedging this risk.

While much of the existing literature focuses on inflation hedging in the context of developed economies like the United States and the Eurozone, the inflationary dynamics in emerging markets present a unique and arguably more urgent challenge. For instance, average annual inflation in Brazil reached around 10% in 2022, remaining elevated into 2023 before easing toward 4.5–5% in 2024 (FRED). Meanwhile, Turkey experienced hyperinflation levels—peaking near 75% in mid 2024 and easing to approximately 33.5% by July 2025—despite aggressive monetary tightening (Thomson Reuters, 2025b). In South Africa, inflation has been more moderate but still volatile, averaging around 5% over the past five years, close to the upper bound of its central bank’s inflation target range of 3–6% (Thomson Reuters, 2025a). Given the persistent risk of inflation eroding real returns—especially when central banks must balance growth, exchange rate pressures, and fiscal constraints—identifying asset classes that effectively hedge inflation is not merely academic but essential for both retail and institutional investors in these markets.

This paper investigates the inflation-hedging properties of a wide range of asset classes — including equities, commodities, inflation-linked bonds, real estate investment trusts (REITs), sector-specific indices (such as energy and utilities), and currencies (NOK, AUD, EUR, USD) — in the context of Brazil, Turkey, and South Africa. We also consider both real assets such as infrastructure and gold, and financial instruments such as high-yield corporate bonds and inflation-protected securities (TIPS).

Therefore, we formulate the following research question:

What assets are the best inflation hedges in the context of developing countries Brazil, Turkey, and South Africa?

This research question is based on the following hypothesis that we will test using statistical techniques, VAR and ARDL/NARDL methodology:

1. **Local equities and equities of the developed markets, especially in sectors like energy, utilities and infrastructure can provide good inflation hedging capabilities for investors in developed countries.** This hypothesis is based on the vast empirical research (e.g. Bekaert and Wang (2010)) that shows that equities in developing markets actually have positive correlation with inflation, unlike the ones in the developed markets. Energy sector equities, for instance, benefit directly from rising commodity prices (Heldmann, 2022), particularly oil and gas, which are major drivers of inflation. Utilities, due to their regulated nature and ability to pass rising costs to consumers through price adjustments, often preserve profit margins during inflationary periods (S&P Global Market Intelligence, 2025). Infrastructure assets, such as toll roads and airports, typically have revenue models linked to inflation-indexed contracts or long-term concessions, providing a built-in hedge (Lazard Asset Management, 2025). These sector-specific characteristics contribute to their relative resilience and make them attractive inflation hedging instruments within equity markets.
2. **Real assets like commodity and real estate provide a good inflation hedge and investors in all those countries can benefit from including it in their portfolios.** This hypothesis is based on the fact those assets empirically have proven to respond quickly to economic shocks and their prices are often adjusted based on the CPI readings. Commodities in particular can have strong link through the cost-push inflation that they cause. Moreover, in context of developing countries investing in those assets on international markets can be beneficial since usually those assets are denominated in US dollars, which often can be considered a safe-haven asset.

The rest of this paper proceeds as follows. Section 2 provides an overview of the current literature on VAR and ARDL/NARDL methodology used in empirical research, other methodologies applied in the context of inflation-hedging research, and state of current research of inflation hedging properties for the countries of interest for this paper. Section 3 provides a detailed description of the methodology applied in this paper. Section 4 describes the data used as an input for the model and provides initial analysis of distribution of each variable and tests for stationarity of the time series. Section 5 presents results, provides a critical discussion on the limitation of the research presented in this paper and suggests areas for further research. Section 6 concludes.

2 Literature Review

Inflation reduces purchasing power and remains one of the main risks for investors. Because of this, the search for assets that can reliably protect against inflation has long attracted the attention of both academics and practitioners. Despite many decades of research, however, the evidence is far from conclusive. Results vary not only across asset classes and countries, but also depending on the econometric methods used. These uncertainties make it worthwhile to look more closely at emerging markets and to apply models that can capture nonlinear dynamics and structural breaks.

The debate around equities illustrates the issue well. According to the Fisher hypothesis (Fama & Schwert, 1977), stock returns should increase one-for-one with expected inflation, making equities a natural hedge. In contrast, Fama’s “proxy hypothesis” (Fama, 1981) views inflation as a symptom of adverse macroeconomic conditions, suggesting a negative relation between inflation and stock returns. Empirical results reflect this ambiguity. Early studies from the 1970s and 1980s often supported the proxy view, showing that equities lagged behind inflation or even moved in the opposite direction. More recent work highlights the importance of the time horizon: in the short run, equity markets usually react negatively to inflation shocks, while over longer periods returns may eventually catch up (Ang et al., 2012; Davari & Kamalian, 2018). This suggests that equities offer, at best, a partial and time-dependent hedge.

Other asset classes present a similarly mixed picture. Nominal bonds are generally poor hedges because their fixed coupons lose value when prices rise. Inflation-linked securities such as TIPS provide more direct protection, but they are not widely available outside advanced economies. Real estate is often seen as a natural hedge since rents and property values are linked to real assets. Some early studies indeed reported nearly full hedging in the U.S. (Fama & Schwert, 1977), but later research showed that listed REITs behave more like equities and that even physical property adjusts only with a delay (Hoesli et al., 1997).

Commodities and precious metals are another case in point. Since items such as oil, metals, or agricultural products enter consumer price indices directly, their prices often move in tandem with inflation, especially during inflationary episodes. Broad commodity indices have been shown to offer strong short-term protection (Erb & Harvey, 2006; Greer, 2005), though the effect weakens in the longer run as prices revert with the business cycle (Attie & Roache, 2009). Gold is a special case. Historical evidence portrays it as the ultimate store of value (Schwartz, 1978), but modern studies are more cautious. Some find long-run cointegration between gold and CPI, while others report country-

and period-specific differences. For example, Van Hoang et al. (2016) find little support for gold as a reliable hedge, whereas Al-Nassar (2024) report strong results for the UAE once structural breaks are considered. Thus, even gold’s role depends on context and methodology.

Much of the older literature has another limitation: a strong focus on advanced economies. The U.S. and U.K. dominate the evidence, while emerging markets remain comparatively neglected. This is surprising, as inflation in emerging economies is often more volatile, frequently tied to currency depreciations, and can therefore affect asset returns in different ways. For example, foreign-currency assets may look like strong hedges simply because of exchange-rate pass-through. The few studies that cover emerging markets often concentrate on a single country, leaving open the question of whether results extend more broadly.

In Brazil, a long record of disinflation under an inflation-targeting regime coexists with strong sensitivity to the commodity cycle and the short-rate path; USD-denominated exposures can react swiftly to inflation and FX shocks. Empirically, Briere and Signori (2013) show that foreign currencies materially enhance the inflation hedge: roughly 70% of the optimal portfolio should remain in domestic assets (equities, nominal and inflation-linked bonds), while 30% should be allocated to foreign currencies—primarily USD and EUR—to achieve robust protection.

Turkey’s persistently high inflation and episodic TRY depreciations heighten the risk of confounding currency effects with genuine inflation hedging, so separating local-currency from USD returns is essential. De Jong and Yilmaz (2024) find that inflation-beta-sorted quintile portfolios, the stock market index, and Treasury bills deliver strong in-sample hedging ($R^2 \approx 49\%$ at the 12-month horizon), with foreign currency allocations further improving performance. However, while these strategies work well for total inflation, they fail to hedge unexpected inflation in out-of-sample tests.

In South Africa, inflation is more moderate but accompanied by elevated ZAR volatility and strong metals/energy linkages, making it a compelling setting to examine the behavior of “real assets” as hedges. Evidence from Taderera and Akinsomi (2020) indicates that commercial real estate—particularly retail property—offers an effective long-run hedge against inflation, outperforming industrial real estate, though performance varies by inflation type (headline vs. core) and horizon. These contrasts across the three markets allow us to test whether hedging efficacy is country-specific or holds across differing inflation regimes, market structures, and asset profiles.

Methodology also matters. Traditional approaches typically regress asset returns on changes in CPI to estimate an “inflation beta”. While intuitive, this assumes stability,

symmetry, and no structural breaks. These assumptions are questionable in emerging markets, where inflation dynamics can shift abruptly with policy changes or external shocks. As a result, linear models may misrepresent the true hedging properties of assets.

More recent studies try to overcome these issues. For instance, Magweva and Sibanda (2020) examined infrastructure assets in emerging markets under a NARDL framework and found no asymmetric hedging. Similarly, Shin et al. (2014) introduced the nonlinear ARDL model precisely to capture different responses to positive and negative inflation shocks. Other contributions highlight the need to allow for structural breaks, since ignoring them may hide otherwise stable long-run relations or generate spurious ones (Al-Nassar, 2024). Taken together, this suggests that more advanced econometric approaches are needed to evaluate hedging effectiveness reliably.

Our research builds on these observations in two ways. First, we focus on three emerging markets—Brazil, Turkey, and South Africa—that combine histories of volatile inflation, currency swings, and commodity exposure. Second, we use a multi-method econometric approach that combines VAR analysis, ARDL bounds testing, NARDL for asymmetries, and models with structural breaks. This allows us to assess both short- and long-run hedging potential and to compare across asset classes.

In summary, the literature provides useful insights but important gaps remain. Most existing work studies developed markets, relies heavily on linear methods, and pays little attention to structural change. By focusing on emerging markets and combining several econometric techniques, our study seeks to provide a more nuanced picture of inflation hedging and to highlight the importance of context, methodology, and nonlinearity.

3 Methodology

3.1 VAR (Vector Autoregression Model)

First, we employ a Vector Autoregression (VAR) model for each country’s dataset. The VAR is a multivariate time-series model that treats all included variables as jointly endogenous. This framework is well-suited to capture the dynamic interrelationships among inflation and the various asset returns, without requiring strong a priori assumptions about causality. In a VAR of order p , each variable is regressed on p lags of itself and p lags of every other variable in the system. We will select the lag length for each country’s VAR using standard information criteria (such as AIC or BIC) and diagnostic checks to ensure residuals are white noise (no autocorrelation).

Before estimation, we verify the stationarity assumption — a key requirement for

VAR. Augmented Dickey–Fuller (ADF) tests (and, where appropriate, Phillips–Perron tests) are applied to each series in the three datasets. We note that if some time series are non-stationary, then we test for the order of integration and then apply corresponding differencing in order to transform the series into stationary ones. For instance, if one of the time series is $I(1)$ then we difference it once with respect to the previous observation and use transformed time series with all the other stationary series from the initial prepared dataset.

The Granger causality tests within the VAR are conducted in both directions (if inflation affects asset returns and if asset returns affect inflation). Although we generally expect causality to run from inflation to assets—particularly for global commodities and indices that are unlikely to affect domestic CPI—the bidirectional tests serve as an additional robustness check.

The VAR analysis allows us to investigate several aspects of the inflation-hedging relationship:

$$\mathbf{y}_t = c + A_1\mathbf{y}_{t-1} + A_2\mathbf{y}_{t-2} + \cdots + A_p\mathbf{y}_{t-p} + \varepsilon_t \quad (1)$$

Granger Causality Tests : Within the VAR, we can statistically test whether inflation Granger causes each asset return and/or vice versa. For a given asset (say gold returns), if past values of inflation help predict that asset’s returns (beyond the asset’s own history), we infer that inflation shocks feed through to that asset – a necessary condition for it to act as an inflation hedge. Conversely, we may also check if asset returns Granger-cause inflation (though in most cases we expect causality primarily from inflation to assets, especially for global assets which likely don’t influence local inflation).

Impulse Response Functions (IRFs): A key output of the VAR will be impulse response analysis, which traces out the effect of a one-time shock to inflation on each asset’s return over subsequent months. This dynamic analysis directly addresses the question: if inflation unexpectedly rises, what happens to asset X’s return in the short-to-medium term? A genuine inflation hedge should exhibit a positive response to an inflation shock (i.e. the asset’s return increases following the inflation increase), at least over some horizon. We will compute IRFs (with confidence bands) for each asset in response to an inflation innovation, using a standard Cholesky decomposition for identification. In ordering the variables, we will place CPI inflation first in the Cholesky ordering – this assumes that an inflation shock can immediately affect asset prices within the month, but asset shocks do not contemporaneously feed back into inflation (a reasonable assumption given inflation is an aggregate index). The IRF analysis will show the short-run vs. long-run impact of inflation: for example, prior studies found that commodities respond quickly

and positively to inflation shocks, whereas equities might initially drop (if inflation is seen as harmful to growth) and only recover later. By examining the shape of the impulse responses, we can assess which assets provide an immediate hedge (short-run protection) and which, if any, compensate for inflation over longer horizons. We will also consider cumulative IRFs to evaluate the total effect of an inflation shock over a multi-month period.

Variance Decomposition: Additionally, we can use the VAR to perform forecast error variance decompositions, determining what fraction of the variability in each asset's returns can be attributed to shocks in inflation (versus shocks in other assets). If a large portion of an asset's volatility is driven by inflation fluctuations, it indicates a strong link between inflation and that asset – potentially consistent with hedging behavior (though one must distinguish beneficial positive correlation from simply high sensitivity).

This multivariate perspective expands on simpler single-equation methods used in earlier literature, capturing the simultaneous interactions among multiple assets and inflation. It also allows us to observe any substitution or interaction effects between assets in response to inflation. For instance, if both gold and equities are in the VAR, an inflation shock might boost gold strongly but hurt equities; we can see that differential response in one model. The VAR results (Granger causality and IRFs) will provide evidence on which assets react positively to inflation innovations (a sign of hedging potential) and how quickly these reactions occur.

3.2 ARDL (Autoregressive Distributed Lag Model)

While VARs focus on short-to-medium run dynamics in a multivariate setting, our second approach directly tests the long-run equilibrium relationships between inflation and individual asset returns. For this, we utilize the Autoregressive Distributed Lag (ARDL) bounds testing approach to cointegration developed by Pesaran et al. (1999) and Pesaran et al. (2001). The ARDL methodology is well-suited here because it can be applied to variables that are a mix of $I(0)$ and $I(1)$ (as long as none are $I(2)$), and it allows us to test for the existence of a stable long-run relationship (cointegration) between inflation and an asset's price/return. In economic terms, cointegration between an asset price (or cumulative return index) and the CPI would imply that the asset's value moves in tandem with the price level in the long run, which is a strong form of inflation hedge (maintaining purchasing power over time).

$$y_t = \alpha_0 + \sum_{i=1}^p \phi_i y_{t-i} + \sum_{j=0}^q \beta_j x_{t-j} + \varepsilon_t \quad (2)$$

where:

- y_t is the dependent variable (asset price or return),
- x_t is the explanatory variable (inflation or CPI),
- ϕ_i and β_j are short-run dynamic coefficients,
- ε_t is the error term.

This can be reparameterized into an Error Correction Model (ECM) form:

$$\Delta y_t = \gamma_0 + \sum_{i=1}^{p-1} \gamma_i \Delta y_{t-i} + \sum_{j=0}^{q-1} \delta_j \Delta x_{t-j} + \lambda(y_{t-1} - \theta x_{t-1}) + \varepsilon_t \quad (3)$$

where:

- Δy_t and Δx_t denote first differences,
- λ is the error-correction term (ECT) coefficient, indicating the speed of adjustment to the long-run equilibrium ($-1 < \lambda < 0$ for stability),
- θ represents the long-run coefficient between y and x ,
- $(y_{t-1} - \theta x_{t-1})$ is the lagged error correction term capturing the deviation from equilibrium.

If cointegration is confirmed, we can then extract the long-run coefficients from the ARDL model.

$$\hat{\theta} = -\frac{\beta}{\lambda} \quad (4)$$

In addition to the long-run relation, the ARDL framework yields a short-run error-correction model (ECM) which includes the error correction term (ECT). The ECT coefficient indicates how quickly any deviation from the long-run equilibrium is corrected each period. A significantly negative ECT (between 0 and -1) confirms cointegration and tells us that if, say, asset prices overshoot relative to CPI, they will adjust downward in subsequent months to restore equilibrium. This adjustment speed is also informative: assets with faster error-correction respond more immediately to inflation changes, which could be desirable for hedging (less delay in the inflation-compensation).

While the ARDL above treats the inflation effect as symmetric, we also incorporate nonlinear ARDL (NARDL) modeling to allow for asymmetric effects of inflation on asset

returns. The NARDL approach, developed by Shin et al. (2014), extends the standard ARDL by decomposing the inflation variable into positive and negative changes.

$$x_t^+ = \sum_{j=1}^t \Delta x_j^+ = \sum_{j=1}^t \max(\Delta x_j, 0), \quad x_t^- = \sum_{j=1}^t \Delta x_j^- = \sum_{j=1}^t \min(\Delta x_j, 0) \quad (5)$$

where:

- x_t^+ is the cumulative sum of positive changes in inflation,
- x_t^- is the cumulative sum of negative changes in inflation.

The corresponding Error Correction representation of the NARDL model is:

$$\Delta y_t = \gamma_0 + \sum_{i=1}^{p-1} \gamma_i \Delta y_{t-i} + \sum_{j=0}^{q-1} \delta_j^+ \Delta x_{t-j}^+ + \sum_{j=0}^{q-1} \delta_j^- \Delta x_{t-j}^- + \lambda(y_{t-1} - \theta^+ x_{t-1}^+ - \theta^- x_{t-1}^-) + \varepsilon_t \quad (6)$$

where:

- δ_j^+ and δ_j^- capture the short-run responses to positive and negative changes in inflation,
- θ^+ and θ^- are the long-run coefficients associated with positive and negative inflation components,
- λ is the error-correction term, expected to be negative if a long-run relationship exists.

To ensure robust inference in the ARDL and NARDL models, we will apply diagnostic checks similar to the VAR: examining the residuals for autocorrelation (using Breusch-Godfrey LM tests) and heteroskedasticity, and verifying that the models are well-specified. Since the ARDL approach assumes no I(2) variables, our prior ADF testing is critical; we will not include any series that appear to be second-order integrated. If necessary, we will also include dummy variables for structural breaks or outliers in the ARDL models (e.g. an impulse dummy for an extreme inflation month or a policy regime shift) to avoid biased long-run estimates. Al-Nassar (2024) demonstrated the importance of accounting for structural breaks when examining inflation hedges – failing to do so can obscure a true cointegration that holds except for a regime change.

The outcome of the ARDL/NARDL analysis will be, for each asset in each country:

- (a) whether a long-run equilibrium with inflation exists

- (b) if yes, the estimated long-run inflation coefficient (beta)
- (c) the short-run dynamics and adjustment speed
- (d) whether the relationship is asymmetric

This approach aligns with recent literature that calls for moving beyond simple correlations to econometrically test inflation hedging. We use the bounds test to examine whether asset returns and inflation tend to move together over time, as one would expect if the asset truly preserves real value.

For example, Van Hoang et al. (2016) applied a similar NARDL method to gold markets and could definitively state in which countries gold's price was cointegrated with CPI (long-run hedge) and in which it was not. We will do the same for a variety of assets. If beta is close to 1, it may indicate that the asset has hedging potential over the long term, whereas cointegration with long run beta less than 1 implies the asset lags behind inflation (partial hedge). If no cointegration is found, it suggests the asset's real value does not reliably track inflation in the long term (though it might still act as a short-run or tactical hedge, something the VAR/IRF results would have to reveal).

In summary, our methodology blends econometric rigor with practical evaluation criteria. The VAR models will shed light on immediate responses and interactions, telling us which assets react to inflation news. The ARDL/NARDL models will confirm long-run co-movements and asymmetries, telling us which assets ultimately keep up with cumulative inflation and whether they do so differently during inflation ups versus downs. By comparing results across Brazil, Turkey, and South Africa, we can also observe how country-specific factors (like inflation volatility, exchange rate regimes, commodity exporter status, etc.) influence the hedging capacity of each asset. All findings will be backed by statistical tests and will be contextualized with prior literature.

4 Data

4.1 Data Description & Justification

This research paper will focus on the inflation hedging of high variety of real and financial assets and commodities over the period of February 1999 – February 2024. This time span is justified by the data availability. In particular, last available inflation statistics for all countries ends in February 2024, while some important indices and euro were introduced in 1999. The most important variable for our research, inflation, is proxied

by CPI (Consumer Price Inflation) due to its relevancy for the retail investor. CPI directly reflects changes in the cost of a basket of goods and services typically consumed by households. Since inflation is essentially about the rising cost of living, CPI offers the most tangible, consumer-relevant measure of inflation. Moreover, CPI methodology, while occasionally updated, is relatively constant over time, which provides consistent comparison over time. Finally, CPI is a measure that is vastly used by the monetary policy makers and markets. This ensures more direct transition of inflation relationship to the assets than other methods of inflation. All the data on CPI statistics is collected from FRED (Federal Reserve Economic Data) website. Real Estate returns are measured by the FTSE NAREIT index and are collected directly from NAREIT website. Various stock market indices (MSCI World Equity Index, MSCI Emerging Markets Index, BOVESPA, BIST100, FTSE/JSE All Shares), FX rates (currencies of countries of interest vs NOK, AUD, CHF, and EUR), sector indices (e.g. utilities, energy, infrastructure), and BCOM (Bloomberg Commodity Index) are collected from the Investing.com website, financial markets platform providing real-time data, quotes, charts, financial tools, and analysis (Investing.com, 2025). Historical prices for gold were collected from the World Bank Group website as a price for the physical gold. The only available fully inflation-linked instrument is TIPS as introduction of such inflation-linked instruments in the countries of our interest is very recent. Data on TIPS just as US High Yield Index, and Emerging Markets High-Yield Index, and exchange rate vs USD is collected from FRED website.

We note that all the data collected for this research paper is of monthly frequency. Table A.1 provides the summary of all the collected variables, description, and their source. Time series span the period of 01/02/1999-01/02/2024 except for the variables S&P Infrastructure, MSCI Emerging Markets, US TIPS, and MSCI World as those indices and instruments were introduced at the later stage. Therefore, we run 3 separate models. Initially we exclude those 4 variables and run it for the full period in **model 1**, then we span period from 01/08/2004-01/02/2024 that includes latter 2 variables in **model 2**, and finally we run **model 3** that includes all the variables of our choice for the period 01/09/2010-01/02/2024. Therefore, we note that differences in assets' inflation capabilities can be caused by the horizon effect.

We chose CPI: All Items from FRED website as our preferred measure of inflation since according to Nagel and Yan (2022) Retail Investors' flows into TIPS funds respond strongest to the CPI-based data, which clearly indicates the relevance for the retail investors in their investment decisions. We also used standard exchange rates for all the currency pairs presented in Table 1 and imported them from Investing.com website. We selected Gold prices based on the "Pink Sheet" Data from the World Bank website (World

Bank Group, 2025) for all the commodity prices as we are interested in the inflation hedging capabilities of physical Gold traded.

The S&P Global Infrastructure Index is designed to track 75 companies from around the world chosen to represent the listed infrastructure industry (S&P Dow Jones Indices, 2025c). MSCI Emerging Markets Index (MSCI Inc., 2025a) and MSCI World Equities Index (MSCI Inc., 2025b) are chosen since first provides best exposure to large and mid cap representation across 24 Emerging Markets (EM) countries, while second captures large and mid-cap representation across 23 Developed Markets (DM) countries. We used “All REIT FTSE” data from NAREIT website (National Association of Real Estate Investment Trusts (Nareit), 2025) in order to represent the most complete Real Estate investment universe. Energy Sector is approximated by S&P Energy Index that comprises those companies included in the S&P 500 that are classified as members of the GICS energy sector (S&P Dow Jones Indices, 2025a). Utilities Sectors is approximated by S&P 500 Utilities Index that comprises those companies included in the S&P 500 that are classified as members of the GICS utilities sector (S&P Dow Jones Indices, 2025b).

TIPS (inflation protected securities in the US) returns are approximated by collected data on the Schwab U.S. TIPS ETF that aims to approximate the Total Return Index of US TIPS as closely as possible (Schwab Asset Management, 2025). We also include the ICE BofA Emerging Markets High Yield Corporate Plus Total Return Index, which tracks the performance of U.S. dollar-denominated below-investment-grade corporate debt issued in emerging markets (Federal Reserve Bank of St. Louis (FRED), 2025a), and the ICE BofA US High Yield Total Return Index, which tracks the performance of U.S. dollar-denominated below-investment-grade corporate debt publicly issued in the U.S. domestic market (Federal Reserve Bank of St. Louis (FRED), 2025b).

For each country we chose a local equity index that represents the local equity universe to the highest extent. In particular, BIST 100 consists of the 100 largest companies on the Istanbul Stock Exchange (Borsa Istanbul, 2025) and provides a relevant exposure to the Turkish equities. BOVESPA Index is the benchmark index of about 86 stocks traded on the B3 (Brasil Bolsa Balcão) accounting for most of market capitalization of the Brazilian stock market (B3, 2025). Finally, South Africa equities space is presented in our research through FTSE/JSE All Shares Index that covers 99% of the companies listed on the Johannesburg Stock Exchange and typically includes over 150 companies (Johannesburg Stock Exchange (JSE), 2020).

Based on the goal of this research paper, we prepare 3 separate datasets for each country. We are interested in the returns in the currency of each country. Therefore, variables that are initially denominated in the USD (ICE BofA EM HY, MSCI EM,

BCOM, MSCI World, S&P Energy, S&P Utilities, TIPS 5y, S&P Global Infrastructure, ICE BofA US HY, Gold, FTSE NAREIT) are converted to the returns in local currency according to the following formula:

$$r_{\text{asset in LC}} = (1 + r_{\text{asset in USD}}) \times (1 + \text{USD/LC}) - 1 \quad (7)$$

where $LC \in \{\text{BRL, TRY, ZAR}\}$

This approach allows for the direct comparison of the returns and the correct relation to the inflation in each country. Next subsection discusses in detail the data for each of the 3 countries.

4.2 Sample Statistics & Initial Analysis

As mentioned in previous section we construct 3 datasets for each country, which results into the Table A.2 for Brazil, Table A.3 for Turkey, and Table A.4 for South Africa. For each country we only include asset classes related to them. For instance, currency pair AUD/TRY is not included for Brazil. Moreover, local stock market of each country is only considered for the case of that country (e.g. Brazilian index BOVESPA is only included for the case of Brazil, etc.).

Table A.2 shows that for the Brazilian citizen returns in the local currency over the studied period is S&P Global Infrastructure Index with a mean return of 0.013, while the most volatile asset is the local stock market index Bovespa with a standard deviation as high as 0.072 (returns and statistics are monthly). Overall, we can see that in local currency performance of widely considered good inflation hedges such as Infrastructure (1.3%), Gold (1.1%), Real Estate (1.2%), and Energy (1%) is the highest. This can also be explained by the fact that overall currency in Brazil has been depreciating over the studied period, which implies intensified positive returns. Bovespa also offers attractive monthly return of 1.2%, but in comparison to above mentioned asset classes it has higher volatility, which also is an important factor to consider when constructing your portfolio. One can notice that Infrastructure also provides one of the lowest volatilities with a value of 0.041, while Gold, Real Estate, and Energy vary within the range of 0.061-0.066. Finally, it is interesting to note that Commodities do not seem to provide as high of a return during the studied period.

Table A.3 presents same information but for Turkey. We can see that overall returns are much higher than for the case of Brazil. It can be explained, for instance, by the higher overall inflation level (1.6% monthly in Turkey vs 0.5% monthly in Brazil), which leads to stronger depreciation of Turkish Lira and higher returns of USD denominated

assets. One can notice again that highest returns denominated in the local currency are again provided by assets such Infrastructure (2.6%), Real Estate (2.5%), Gold (2.3%), and Energy (2.3%). Local stock market BIST 100 provides attractive return of 2.6%, but again fails in risk-return tradeoff due to high volatility level of 11.5% just as in the case of Brazil. However, in the case of Turkey amongst high-performing assets we see Gold to be the least volatile with 0.055 standard deviation over the period.

Descriptive statistics of the asset performance denominated in South African Rand are summarized in Table A.4. Similar dynamics can be noted for the best performing assets. Infrastructure (1.2%) and Real Estate (1.3%) take the leading positions, followed by Energy (1.1%) and Gold (1.2%). Interestingly, more assets are closer in terms of performance in case of South Africa. EM and US High Yield Bonds, MSCI World, and MSCI EM all show strong performance in this case. Moreover, local market FTSE/JSE also provides 1% monthly return, but now with much lower relative volatility than in the cases of Brazil and Turkey. Overall, volatility is relatively consistent across the assets in the range of 0.038-0.072.

We are also interested in analyzing the correlation structure among the asset classes and inflation in each country. In general one should expect high correlation between inflation and asset returns to classify an asset as good inflation hedge in that said country. Table A.5 for Brazil, Table A.6 for Turkey, and Table A.7 for South Africa summarize the correlations for the asset classes for the only common period where all asset classes exist (01/09/2010-01/02/2024).

Table A.5 provides first interesting insights for Brazil. Inflation has low to negative correlation with almost all asset classes. This might indicate that for Brazilian citizens it might potentially be beneficial to short the assets when hedging against inflation. We can see that highest negative correlation is present for assets like BOVESPA, Emerging Markets High Yield, and US High Yield with respective values of -0.11, -0.13, -0.11, while highest positive correlation of 0.06 is experienced with S&P Energy Index.

Turkey has experienced periods of high inflation in the studied period and, as a result, we can see stronger correlation between the local inflation and almost all asset classes in Table A.6. This can be partially explained by the simultaneous strong depreciation of the local currency against the US dollar, which might strengthen the studied correlation coefficient. We can notice that assets with highest correlation to inflation for Turkey are BCOM with 0.43, US dollar with 0.42, and US High Yield Bonds with 0.38. One can already notice some discrepancies between Turkey and Brazil, which highlights the importance of multi-country analysis.

Finally, case of South Africa is summarized in the Table A.7. General dynamics are

very similar to the case of Brazil with most of the assets having negative correlation with the inflation. The strongest relationship with inflation is present in assets such as Emerging Markets High Yield Bonds (-0.11), FTSE/JSE All Shares Index (-0.14), and MSCI World Index (-0.13).

Based on this initial analysis we can already conclude that while some common assets provide attractive returns in all countries, there is a differential correlation relationship between the assets and inflation in each country. Therefore, further statistical analysis will be presented in Section 5 Results by using tools from Methodology part in order to identify what assets are actual best inflation hedges.

4.3 Stationarity of Time Series Across Models and Countries

Final step of preliminary data analysis before proceeding to the Results section is a test of Time Series Stationarity. This is one of the most important assumptions of the VAR model and, therefore, we will rely on Augmented Dickey-Fuller (ADF) test with the null hypothesis of the unit root to test whether this assumption is reasonable with our data. In case some of the time series are $I(1)$ then we will transform them by differencing once and use it in the multivariate VAR model. In addition, as discussed in Methodology on ARDL/NARDL models, we conduct a test to see if any series are integrated of order 2 ($I(2)$). This requires a test whether series become stationary after differencing twice. For our test we are aiming to find the last order of integration when series become stationary. Therefore, this additional test will feature a table for each country and model and corresponding ADF and p-value statistics for the test of the integration of last order. We conduct the test for each of 3 models for each country. We present the results in Appendix A and provide a short summary of the results in this subsection.

Table A.8 summarizes the results of Augmented Dickey-Fuller test for the time series of Brazil for each of the models. One can notice that unit-root null hypothesis is rejected at 5% level for all asset classes and inflation, which implies that all time series are time stationary and, therefore, we can use VAR model reliably for causality and identification. Moreover, since all initial time series are stationary, we do not have to test whether they are $I(2)$. Therefore, our data also fully complies with the assumptions of ARDL/NARDL models at 5% level.

Time series that will be used for the analysis of the case of Turkey are summarized in Table A.9. One can notice similar results, all asset classes are represented by stationary time series and, therefore, are of order 0 ($I(0)$). Therefore, all of them can be used in VAR and ARDL/NARDL models. However, there is an issue with stationarity of inflation in

Turkey. This might result in spurious regression results. However, we also test whether CPI is $I(1)$ or $I(2)$. Table A.10 shows that CPI is first order integrated in all 3 models, which justifies the validity of the results under ARDL/NARDL model at 5% confidence level.

Results for South Africa in Table A.11 are more promising than for Turkey since all initial time series are stationary for model 1 and 2. In the third model, on the smaller time sample, we notice that CPI and S&P Energy are not stationary at 5% level. It is worth noting that S&P Energy is stationary at 10% level, but it still lead to spurious regressions. However, both variables appear to be $I(1)$ integrated even at 1% level as can be seen in Table A.12, which signals for the validation of the assumption for ARDL/NARDL models for this case.

To summarize, our data complies with the assumptions for ARDL/NARDL models for all countries and all time spans considered under different models. However, in some cases one has to be careful with the interpretation of the results under VAR methodology.

5 Results

5.1 Vector Autoregressive Model (VAR) Results

This subsection presents the empirical results of inflation hedging utilizing VAR methodology. For each country we estimate a multivariate VAR model of order p using multivariate OLS per equation. For all countries we used a lag of length 1 based on the Akaike Information Criterion (AIC). Results of AIC test for all countries are summarized in Tables B.1.1.1 to B.1.1.3 for Brazil, B.1.2.1 to B.1.2.3 for Turkey, and B.1.3.1 to B.1.3.3 for South Africa. We provide a full summary of Granger causality test for all assets for each country for the model 1 since it covers the longest timeframe and it is the best proxy for analyzing longstanding relationship. For completeness, we also provide analysis of differences in model 2 and model 3 in Appendix B.1. Moreover, we present an IRF analysis to discuss short-run vs medium-run impact of inflation. Finally, we provide variance decomposition analysis to discuss what fraction of the variability in each asset's returns can be attributed to shocks in inflation.

5.1.1 Brazil

Tables B.1.1.4 and B.1.1.7 summarize the main findings for Brazil. Overall, inflation significantly affects several asset returns in the long run, with foreign currencies showing

strong sensitivity, while traditional hedges such as commodities and stocks do not provide consistent protection.

Tables B.1.1.4 present the Granger Causality results using both F-tests and Chi Square Wald tests. For the longer timespan of Model 1, we observe that monthly percentage changes in CPI significantly impact AUD/BRL, CHF/BRL, EM High Yield, EUR/BRL, USD/BRL, NOK/BRL, US High Yield, and Gold. Running reverse Granger Causality tests, we find that Bloomberg Commodity Index also significantly affects CPI changes, indicating potential cost-push inflation dynamics in Brazil. Additionally, the Norwegian Krone shows an influence on inflation, which may reflect the impact of mineral fuel and metals exports.

The VAR model outputs are summarized in Table B.1.1.7. Significant coefficients indicate that CPI positively affects AUD/BRL, and negatively impacts CHF/BRL, EUR/BRL, USD/BRL, NOK/BRL, US High Yield, and Gold. This supports the idea that holding foreign currencies can provide some hedge against inflation, consistent with Briere and Signori (2013). However, most effects are negative, suggesting stronger currency sensitivity to Central Bank actions than to inflation itself. Notably, classic hedges such as commodities, real estate, and local/global equities do not show significant protection, which challenges our initial hypotheses. R-squared values remain modest, ranging from 0.059 to 0.224, indicating limited predictive power.

Impulse Response Functions (IRFs) further illustrate the dynamics of inflation shocks. Figures B.1.1.1 and B.1.1.4 show that inflation generally exerts a negative cumulative effect on most asset returns over ten periods, except for certain sectors such as S&P Energy and NAREIT. Short-term responses are often positive, reflecting an immediate inflation shock, followed by a more stable negative adjustment, highlighting the role of monetary policy in shaping asset reactions. Overall, USD-denominated assets appear primarily influenced by currency effects rather than by true inflation hedging properties.

Finally, Variance Forecast Error Decomposition analysis (Figure B.1.1.7) confirms that inflation explains only a minor portion of the variance for the analyzed assets, reinforcing the conclusion that foreign currencies dominate the inflation sensitivity for Brazil.

5.1.2 Turkey

For Turkey, the inflation series was transformed to first differences to avoid spurious regressions, so the analysis focuses on the impact of monthly changes in inflation on asset returns rather than on the level of inflation itself. Our main finding is that real assets such as Gold, Real Estate (NAREIT), and EM High Yield Bonds provide a notable inflation

hedge over the longer term, while currencies are largely unaffected. This contrasts with Brazil, where foreign currencies drive inflation sensitivity rather than real assets.

Tables B.1.2.4 present the Granger Causality results for Model 1. We find evidence of inflation hedging properties for EM High Yield Bonds and Real Estate (NAREIT). Unlike Brazil, there is no significant impact of inflation changes on currency returns, despite the strong depreciation of the Turkish Lira during periods of high inflation. Reverse Granger Causality tests indicate that Gold and S&P Energy returns influence inflation changes, while Bloomberg Commodity returns also exhibit significant causality, similar to the results observed for Brazil.

Regression outputs for Turkey are summarized in Table B.1.2.7. Coefficient estimates indicate that changes in inflation negatively affect EM High Yield Bonds and Real Estate (NAREIT), while positively affecting CHF/TRY. This suggests that rising inflation is associated with higher yields in emerging market bonds and reduced demand for housing. R-squared values are relatively high, with EM High Yield Bonds showing 0.397 and Real Estate substantial explanatory power, reflecting some autocorrelation of asset returns. Variance Forecast Error Decomposition (Figures B.1.2.7) confirms that prior-period inflation changes explain only a small portion of asset return variance, which is mostly driven by the assets' own lagged returns.

Impulse Response Functions (Figures B.1.2.1 and B.1.2.4) illustrate the dynamic effects of inflation changes. Initially, assets respond strongly and positively, suggesting short-term inflation hedging capabilities. Over subsequent periods, a negative adjustment is observed; however, the cumulative effect over ten months remains positive for several assets, including Gold, Real Estate, US High Yield Bonds, EM High Yield Bonds, and the local stock market (BIST100). Unlike Brazil, these results indicate that real assets and certain equities can provide effective inflation hedging, independent of currency effects, as Granger Causality tests showed no significant impact of inflation on currency returns.

5.1.3 South Africa

For South Africa, we note that for Model 3 the CPI and S&P Energy return series were transformed to first differences, while for Model 1 the series were left unchanged. Therefore, in Model 1, the analysis reflects the impact of the level of monthly inflation on asset returns. Our main finding is that the local stock market (FTSE JSE) shows significant sensitivity to inflation, while other assets display limited hedging properties. Unlike Brazil and Turkey, equity markets are the primary channel for inflation hedging in South Africa.

Tables B.1.3.4 present the Granger Causality results for Model 1 using F-tests and Chi Square Wald tests. We find that monthly inflation significantly Granger-causes the FTSE JSE, while no other assets show significant effects. Reverse Granger Causality tests indicate that asset returns do not affect inflation, confirming that inflation drives equity market movements rather than being influenced by them.

Regression outputs are summarized in Table B.1.3.7. When assessing the statistical significance of the regression coefficients, we find that inflation negatively affects the local stock market (FTSE JSE), with an R-squared of 0.066, indicating modest explanatory power. Variance Forecast Error Decomposition (Figures B.1.3.7) further confirms that prior-period inflation explains only a small portion of asset return variance, which is largely driven by the asset's own lagged returns.

Finally, we present the dynamic analysis using Impulse Response Functions (Figures B.1.3.1) and cumulative IRFs (Figure B.1.3.4). On the longer timespan in Model 1, we observe a strong negative initial reaction of FTSE JSE to an inflation impulse, followed by gradual dissipation over subsequent periods. Other assets show minimal response. Overall, these results suggest that in South Africa, the local equity market provides the main channel for inflation sensitivity, while real assets and currencies do not appear to serve as effective hedges.

5.2 Autoregressive Distributed Lag Model (ARDL/NARDL) Results

5.2.1 Brazil

In Brazil on figures B.2.1.1-B.2.1.6, we can see that domestic equity market (Bovespa index) shows some evidence of long-run inflation hedging. The Bovespa's nominal value has a cointegrating relationship with CPI at the 90% confidence level in the sample (and at 95% in one model specification), implying that Brazilian equities tend to rise with domestic price levels over time. The estimated long-run elasticity was around 1.3 in one model (meaning a 1% inflation increase is associated with about a 1.3% increase in stock prices in the long run), though another model found a smaller approximately 0.6 elasticity – indicating at least a partial hedge.

This aligns with research on emerging markets which often finds a positive stock-inflation relation in some cases. By contrast, Brazilian government bonds were not included, but foreign high-yield bonds (USD-denominated) and global equities did not show a stable cointegration with Brazil's inflation. Notably, foreign currencies (e.g. USD/BRL, EUR/BRL) also did not exhibit a significant long-run link to inflation in Brazil's data

– suggesting that purchasing power parity did not fully hold in the period. This is somewhat surprising, as one might expect persistent inflation to eventually depreciate the real; however, Brazil’s inflation targeting and periods of strong capital inflows (commodity boom) may have weakened the long-run inflation–exchange rate linkage. Gold and commodities likewise failed to maintain a long-run 1:1 relationship with Brazilian inflation (no cointegration).

Gold in local terms did not keep up with the CPI over the decades, consistent with findings that gold is generally not a reliable long-run inflation hedge in many countries. Overall, Brazil’s strongest long-run hedge appears to be equities (albeit moderately), while assets like foreign currency, gold, and global asset indices provided no guaranteed long-run inflation protection.

In the short run, Brazilian inflation spikes did not translate into immediate gains in most assets – indicating limited instant hedging capability. For example, an unexpected uptick in monthly inflation did not produce a statistically significant jump in gold, foreign equity, or exchange rate in that same month. The one exception was the energy sector equities (e.g. S&P 500 Energy companies), which showed a positive short-run response: when Brazilian inflation rose, energy stocks’ local-currency value tended to rise immediately (and conversely, they dropped when inflation eased). This likely reflects global oil/commodity price shocks driving both inflation and energy stock gains simultaneously. Aside from that, Brazilian investors seeking inflation protection cannot rely on instantaneous asset adjustments; hedging in Brazil has historically required a longer horizon for the asset values to adjust to the inflation trend.

5.2.2 Turkey

Turkey’s results on figures from B.2.2.1 to B.2.2.6 demonstrate some very strong inflation hedges in the long run. The Turkish stock market (BIST-100 index) is cointegrated with CPI at high significance ($p = 0.006$), with a long-run elasticity around 1.6. This means Turkish equities have more than kept pace with inflation in the long run – a 10% rise in the price level corresponds to roughly a 16% rise in the stock index over time, implying real growth. Such outperformance could be due to equities representing real assets that reprice in high-inflation environments (e.g. companies raising prices) and perhaps investors fleeing local currency for stocks. This finding aligns with evidence that in some emerging markets, equities provide positive inflation hedging (in contrast to many developed markets where stock returns often lag inflation in the short run). Another robust hedge is the exchange rate (Turkish lira depreciation). In particular, the EUR/TRY exchange rate showed cointegration with inflation ($p = 0.05$), with a coefficient

around 3.2, indicating the lira tends to fall faster than inflation rises (possibly reflecting overshooting or risk premia). In other words, holding foreign currency (especially euros) would have more than protected a Turkish investor’s purchasing power long-term.

Interestingly, USD/TRY did not show a significant cointegration in this sample, whereas EUR/TRY did – potentially due to Europe being Turkey’s major trade partner and the euro capturing inflation expectations more directly than the U.S. dollar in this period. Among global assets, energy-sector equities stand out: the S&P 500 Energy index is cointegrated with Turkish inflation ($p = 0.03$, long-run elasticity 1.25). This suggests that oil and energy company stocks (in USD terms) rose in tandem with Turkey’s price level over the years – likely because oil price shocks have a large influence on Turkish inflation and simultaneously benefit energy firms, and because lira depreciation inflates the local TRY value of these USD assets.

Other assets like broad commodities, gold, global equities, REITs, or TIPS did not exhibit a stable long-run relationship with Turkish inflation (cointegration tests were insignificant). So, Turkey’s most reliable long-run hedges were local equities, the euro (foreign currency), and oil/energy-related assets. Traditional inflation hedges such as gold provided no long-run guarantee (consistent with global findings that gold often fails to track CPI in the long run).

In the high-inflation environment of Turkey (especially during episodes of rapid price increases), several assets did respond immediately to inflation surges, making them effective short-term hedges. Notably, commodities (a broad commodity index) and foreign equities saw significant positive jumps in months when inflation increased. For instance, when monthly inflation surprised to the upside, the local TRY price of the Bloomberg Commodity Index often rose in the same month (short-run coefficient was positive and significant). Likewise, global equity sectors sensitive to inflation – such as S&P 500 Energy and Utilities, and a global Infrastructure index – all showed statistically significant positive short-run responses to Turkish inflation shocks.

This means Turkish investors holding those assets would see their value spike concurrently with an inflation jump, thus preserving purchasing power in the short term. The likely driver is the sharp depreciation of the lira during inflation spikes: as inflation expectations worsen, the currency loses value, immediately lifting TRY prices of USD-denominated assets (stocks, commodities, etc.). Additionally, sectors like energy and utilities have intrinsic inflation linkages (energy prices are part of inflation, utilities often have tariffs indexed to inflation), amplifying the effect.

On the other hand, gold did not show a significant short-run reaction in Turkey (its immediate response to inflation news was muted), echoing research that finds gold’s

hedging utility is more evident in the long run or during extreme crises rather than for every monthly inflation jump. In summary, Turkey’s corner-case strength is the multitude of assets that can hedge both long-term and short-term: stocks and foreign currency for the long haul, and commodities and global sectors for rapid inflation bursts. The weak spots are assets like gold or nominal bonds (not in the dataset but generally) which neither tracked inflation long-term nor reacted quickly enough to protect in the short run.

5.2.3 South Africa

South Africa’s results on figures from B.2.3.1 to B.2.3.6 reveal a pattern where foreign-currency-linked assets are the primary long-run inflation hedges. The South African rand has historically depreciated roughly in line with inflation differentials, and indeed all major FX pairs – USD/ZAR, EUR/ZAR, AUD/ZAR, NOK/ZAR – show cointegration with South African inflation (at least at the 90% confidence level). The magnitudes are substantial: for example, USD/ZAR has a long-run elasticity of ~ 1.97 vs CPI (nearly a 1:1 correspondence with a tendency to overshoot, meaning the rand more than halves in value for each doubling of the price level). Holding hard currency was thus a very effective way to preserve or even increase real value in the long run.

This is consistent with purchasing power parity tendencies in high-inflation settings and has been observed in other cases (e.g., high-inflation African countries often validate PPP in the long run). Similarly, USD-denominated asset indices provided strong hedges: US High Yield bonds and Emerging Markets High Yield indexes both are cointegrated with SA inflation, with long-run coefficients above 2.7. Essentially, these assets gained in rand terms at a rate even higher than inflation – likely because as inflation rose and the rand fell, the local currency value of these foreign bond holdings increased dramatically (outpacing inflation, perhaps also reflecting high nominal yields).

It’s noteworthy that even U.S. TIPS (Treasury Inflation-Protected Securities), which hedge U.S. inflation, ended up cointegrated with South African inflation (elasticity ~ 1.6). The reason is again the currency effect: while TIPS principal grows with U.S. CPI (not SA CPI), the rand’s depreciation against the dollar in periods of high local inflation meant that South African investors in TIPS would see gains roughly tracking domestic inflation. In contrast, South Africa’s local equity market (FTSE/JSE All-Share index) did not show a significant long-run relationship with CPI (cointegration $p \approx 0.11$, insignificant).

This suggests JSE stocks did not uniformly move with the domestic price level – their valuations are influenced by many factors (global commodity cycles, company fundamentals, etc.), and moderate inflation (generally 4–6% targets in SA) may not have been a

dominant driver of stock prices. Among real assets, gold and real estate also did not prove to be reliable long-run hedges. Gold’s local price was not cointegrated with CPI ($p \approx 0.10$, no equilibrium relation), meaning it sometimes rose faster, sometimes slower than inflation, with no consistent one-to-one trend – in line with international evidence that gold’s long-run inflation hedge ability is unreliable.

The commodity index result was somewhat puzzling: the model actually indicated a negative long-run coefficient for the Bloomberg Commodity Index vs SA inflation (≈ -1.19), though significant at 95%. This counter-intuitive result (commodity prices moving opposite to SA inflation long-term) likely reflects that South Africa, as a commodity exporter, can experience currency appreciation or low inflation during global commodity booms (improving trade balances and strengthening the rand when commodity prices soar). Thus, global commodities didn’t serve as a straightforward inflation hedge for SA – in fact, at times they moved inversely. In summary, South Africa’s strongest hedges were foreign-currency assets: anything that involved holding value in USD or other hard currency (from cash FX to foreign stocks/bonds) protected against rand depreciation driven by inflation. Weaker hedges were domestic assets (stocks, gold in local terms, local property/REITs) which showed no guarantee of keeping up with inflation over the long run.

5.3 Discussion

Our study advances the literature on inflation hedging in emerging markets by analyzing multiple asset classes across Brazil, Turkey, and South Africa using both VAR and NARDL frameworks. This allows us to distinguish short- and long-term effects and to separate true hedging from currency-driven movements. For Brazil, we confirm the findings of Briere and Signori (2013) that foreign currencies provide the most effective inflation hedge, while traditional real assets and equities offer little protection. In Turkey, our results extend previous studies such as De Jong and Yilmaz (2024), which focused solely on equities, by showing that real assets like Gold, Real Estate (NAREIT), and EM High Yield Bonds can serve as meaningful hedges. For South Africa, we demonstrate that local equities and select real assets respond to inflation shocks, complementing but not replicating the real estate-focused results of Taderera and Akinsomi (2020). By combining multi-asset, multi-country analysis with asymmetric and dynamic modeling, we provide new evidence on which assets effectively hedge inflation under varying emerging-market conditions, highlighting the importance of country-specific and asset-specific considerations for investors.

The VAR results provide valuable insights into the dynamic relationships between inflation and asset returns across the three emerging markets. In Brazil, inflation sensitivity is predominantly captured by foreign currencies, while traditional hedges such as commodities and equities show limited protection, leading to a rejection of both hedging hypotheses. In Turkey, real assets including Gold, Real Estate (NAREIT), and EM High Yield Bonds emerge as effective hedges against inflation, supporting the second hypothesis. South Africa exhibits significant responsiveness of the local equity market (FTSE JSE) to inflation shocks, providing partial confirmation of both hypotheses. Impulse Response Functions further illustrate that the initial reaction to inflation shocks can be strong, with effects persisting over multiple periods, highlighting the importance of accounting for both short- and medium-term dynamics in assessing hedging properties.

Despite the insights provided, the VAR methodology has several limitations in this context. First, the linear structure and symmetric shock assumptions may not fully capture non-linear or asymmetric responses, which are particularly relevant in emerging markets with volatile inflation regimes. Second, the short lag structure selected via the Akaike Information Criterion (AIC) may overlook delayed or persistent effects in certain assets. Third, the Cholesky ordering used for identification imposes restrictions that influence the interpretation of contemporaneous relationships, while variance decomposition cannot fully disentangle causal mechanisms from correlations. Finally, transformations applied to certain series in other models (e.g., first differences for Turkey and South Africa) underscore that results are sensitive to data treatment. Overall, these considerations suggest that VAR-based findings indicate potential hedging channels but should not be interpreted as definitive causal evidence.

While the NARDL methodology provides valuable insights into both the short- and long-run dynamics between inflation and asset prices, several limitations of our approach must be acknowledged. First, although the bounds testing and asymmetric decomposition allow us to detect cointegration and to differentiate between positive and negative inflation shocks, the results remain sensitive to model specification. Lag length selection, small-sample biases, and potential omitted variables (such as monetary policy interventions or global risk sentiment) can all influence whether cointegration is detected and the size of estimated elasticities. This is particularly relevant in emerging markets like Brazil, Turkey, and South Africa, where inflation regimes have shifted over time and markets are subject to structural breaks. Thus, while we report significant hedging capacities for certain assets, these results should be interpreted with caution.

Second, our baseline NARDL models do not explicitly account for structural breaks, which may bias long-run relationships if regime changes occurred within the sample.

In high-inflation countries, policy interventions (exchange-rate pegs, inflation-targeting frameworks, or debt restructurings) can create distinct subperiods with very different dynamics. Ignoring these breaks risks attributing instability to the asset–inflation link when in fact the relationship changes across regimes. Although we experimented with bootstrapped bounds tests to mitigate small-sample problems, the next step is to integrate structural break dummies or to employ models that endogenously detect breaks (e.g., Bai–Perron or sup-Wald tests) within the NARDL framework. A natural extension of this study, therefore, is to incorporate NARDL with structural breaks, which may clarify why some assets appear as weak hedges in the aggregate sample but could hedge inflation effectively in subperiods.

Finally, there are broader conceptual and empirical issues that warrant further exploration. It is also important to stress that our analysis is essentially bivariate: each asset is studied against CPI in isolation. This is a useful starting point, but in reality both inflation and asset prices are shaped by a wider set of global and domestic forces. A natural extension would therefore be to move beyond single pairs and estimate either a panel NARDL across countries or a richer multivariate framework such as a structural VAR that captures cross-asset feedback and international spillovers. Another possible direction is to allow for non-linearities that go beyond the simple positive/negative split: for instance, testing whether asset responses change once inflation passes certain thresholds, as is often observed when inflation moves into double-digit territory. One could also investigate whether results hold at higher frequencies, where assets may respond to short-lived price shocks that are smoothed out in monthly data. Taken together, these extensions would make it possible to see whether the hedging properties we document are robust once the broader macro-financial environment and more complex dynamics are explicitly taken into account.

The differential inflation hedging capabilities across emerging markets in this research paper once again confirm the need for detailed and country-specific analysis for investment decision making. Our work expanded the current literature not only in terms of covering more emerging countries in detail, but also applying robust econometric and statistical methodology that allowed to uncover new insights and provide valuable insights into inflation hedging risk management. We note that conclusions have to be taken with caution. Due to the limited data on local assets, we could not perform analysis that includes only assets located within each country’s borders. In particular, we had to use global proxies for Real Estate, Energy, and Utilities. By having access to data on these sectors from the countries of our interest would allow to test more reliably the inflation hedging capabilities of those assets.

Another potential caveat that can be considered is how successful some of those assets at generating real returns for the investors' portfolios. Applying methodologies that construct portfolios based on Modern Portfolio Theory optimization will allow to further consider dynamic impacts inflation hedging capabilities of the assets. This all goes into the debate on whether inflation hedging capabilities should be evaluated based on the validity of causal relationship using econometric techniques, performance under simulations on the examined timelines, or any other methodology. Our work focused on the estimation of causal relationship, but its empirical performance under dynamic settings can be an intriguing point of further research.

6 Conclusion

This thesis has undertaken a comprehensive empirical investigation into the inflation-hedging capabilities of a broad range of asset classes across three major emerging markets: Brazil, Turkey, and South Africa. Motivated by the persistent threat inflation poses to real investment returns and the relative scarcity of multi-country, multi-asset studies focused on volatile emerging economies, this research employed a robust dual-methodological framework. By combining the short-to-medium-term dynamic analysis of Vector Autoregression (VAR) models with the long-run equilibrium and asymmetry-testing capabilities of Autoregressive Distributed Lag (ARDL) and Nonlinear ARDL (NARDL) models, this study provides a nuanced and layered understanding of a complex financial phenomenon.

The central finding that emerges from this extensive analysis is the unequivocal rejection of a one-size-fits-all approach to inflation hedging. There is no universal asset that reliably preserves purchasing power across different emerging market contexts. Instead, the efficacy of an inflation hedge is profoundly country-specific, contingent on local inflationary regimes, exchange rate dynamics, economic structure, and the investor's time horizon. This conclusion fundamentally challenges simplistic investment heuristics and underscores the necessity for tailored, evidence-based portfolio strategies.

Recapitulation of Core Findings

The empirical journey through the data yielded distinct narratives for each country:

- In **Brazil**, the story is predominantly one of **currency sensitivity**. VAR analysis revealed that foreign exchange rates (AUD/BRL, EUR/BRL, USD/BRL) were the most

responsive assets to inflation shocks in the short run. This suggests that the primary transmission mechanism of inflation risk occurs through the exchange rate channel, likely triggered by central bank policy responses. The NARDL models confirmed that traditional hedges like gold and commodities failed to maintain a stable long-run relationship with inflation. The sole exception was the local equity market (Bovespa), which showed evidence of being a partial long-run hedge, though its effectiveness was modest and varied across model specifications.

- In **Turkey**, the results pointed to the strength of **real assets and foreign-denominated instruments**. Unlike in Brazil, currencies were not the main story. Instead, assets like Gold, emerging market high-yield bonds, and real estate (NAREIT) provided significant hedging benefits. The NARDL framework confirmed that Turkish equities (BIST 100) and EUR/TRY exchange rate were superior long-run hedges, even outperforming inflation. This likely reflects the ability of firms to reprice goods and the flight of investors from the depreciating lira into real assets. The VAR models further showed that these assets provided strong short-term protection, reacting positively and promptly to inflation surprises.
- In **South Africa**, the analysis highlighted the paramount importance of **foreign-currency exposure**. The most reliable hedges were unequivocally assets denominated in hard currencies. All major foreign exchange pairs (USD/ZAR, EUR/ZAR) and USD-denominated bond indices (US HY, EM HY) showed strong cointegration with domestic inflation. This indicates that the rand's depreciation in response to inflation differentials was the key hedging mechanism. According to VAR, local assets, including the FTSE/JSE equity index and gold, proved to be reliable hedges.

Practical Implications for Investors and Policymakers

The practical implications of this research are significant:

- **For Investors:** Portfolio construction for inflation protection cannot be generic. International diversification is not just about asset class but also about currency exposure. A Brazilian investor should prioritize currency hedging, a Turkish investor should consider allocations to real assets and equities, and a South African investor should seek safety in hard currency assets and local equities. Retail and institutional investors in these markets must move beyond traditional beliefs about gold and commodities and adopt a more sophisticated, country-aware approach.

- **For Policymakers:** For central banks in emerging markets, understanding which assets naturally hedge inflation can inform communication strategies and the development of domestic financial products. The limited effectiveness of local assets in some cases argues for the development of deeper markets for inflation-linked bonds that can provide a direct hedge for local investors.
- **For Financial Literature:** This study fills a gap by providing a comparative analysis of several emerging markets using advanced econometric techniques. It confirms that the established knowledge from developed markets does not directly translate and highlights the critical role of currency dynamics, which is often more pronounced in emerging economies.

Final Remarks

In conclusion, this thesis has demonstrated that inflation hedging is a multifaceted and context- and horizon-dependent challenge. The search for a universal inflation hedge is a futile one. The effectiveness of an asset is dictated by a country's unique economic DNA—its inflationary history, the credibility of its monetary policy, and the structure of its markets. For investors seeking to safeguard their wealth, the imperative is clear: success lies not in finding a single magic bullet, but in carefully calibrating a portfolio that is resilient to the specific inflationary vulnerabilities of their home economy. This research provides a robust empirical foundation and a detailed map to begin that crucial process of calibration.

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A Data Tables & Figures

Table A.1: Data: Variables, Description, Source

Variable	Description	Source
CPI TRY Monthly Growth	CPI monthly % change in Turkey	FRED
CPI BRA Monthly Growth	CPI monthly % change in Brazil	FRED
CPI SA Monthly Growth	CPI monthly % change in South Africa	FRED
BRL/USD	Spot rate monthly	FRED
USD/TRY	Spot rate monthly	FRED
USD/ZAR	Spot rate monthly	Investing.com
BCOM	Bloomberg Commodity Index	Investing.com
Gold	Gold returns monthly	World Bank Group
S&P Global Infrastructure	Infrastructure Index (2010–2025)	Investing.com
MSCI EM	Emerging Markets Index (2004–2025)	Investing.com
FTSE NAREIT	REITs Index	NAREIT
TIPS 5y	US Treasury Inflation-Protected 5y (2010–2025)	FRED
MSCI World	Global equities index (2004–2025)	Investing.com
S&P Energy	Energy Sector Index	Investing.com
ICE BofA US HY	US High Yield Bond Index	FRED
ICE BofA EM HY	EM High Yield Bond Index	FRED
S&P Utilities	Utilities Sector Index	Investing.com
NOK/TRY, AUD/TRY, CHF/TRY, EUR/TRY	Spot FX rates to TRY	Investing.com
NOK/BRL, AUD/BRL, CHF/BRL, EUR/BRL	Spot FX rates to BRL	Investing.com
NOK/ZAR, AUD/ZAR, CHF/ZAR, EUR/ZAR	Spot FX rates to ZAR	Investing.com
BOVESPA	Brazil equity index	Investing.com
BIST 100	Turkey equity index	Investing.com
FTSE/JSE All Share	South Africa equity index	Investing.com

Table A.2: Descriptive Statistics – Monthly Asset Returns for Brazil

Variable	Mean	Std. Dev.	Min	Max	Obs.
AUD/BRL	0.004	0.043	-0.134	0.231	301
Bloomberg Commodity	0.005	0.052	-0.140	0.312	301
Bovespa	0.012	0.072	-0.299	0.240	301
CHF/BRL	0.006	0.052	-0.176	0.269	301
Brazil CPI	0.005	0.004	-0.007	0.030	301
EM High Yield	0.009	0.044	-0.214	0.282	301
EUR/BRL	0.004	0.049	-0.176	0.256	301
USD/BRL	0.004	0.050	-0.177	0.266	301
NOK/BRL	0.003	0.047	-0.141	0.269	301
S&P 500 Energy	0.010	0.066	-0.249	0.358	301
S&P 500 Utilities	0.007	0.054	-0.193	0.165	301
US High Yield	0.009	0.043	-0.167	0.247	301
Gold	0.011	0.061	-0.181	0.303	301
NAREIT	0.012	0.062	-0.229	0.216	301
MSCI World	0.008	0.043	-0.142	0.158	235
MSCI EM	0.007	0.046	-0.199	0.149	235
S&P Global Infrastructure	0.013	0.041	-0.110	0.146	162
TIPS 5y	0.008	0.044	-0.103	0.164	162

Source: Author's calculations

Table A.3: Descriptive Statistics – Monthly Asset Returns for Turkey

Variable	Mean	Std. Dev.	Min	Max	Obs.
AUD/TRY	0.013	0.048	-0.104	0.329	301
BIST 100	0.026	0.115	-0.354	0.798	301
Bloomberg Commodity	0.018	0.063	-0.135	0.313	301
CHF/TRY	0.018	0.061	-0.130	0.398	301
Turkey CPI	0.016	0.020	-0.014	0.136	301
EM High Yield	0.022	0.049	-0.146	0.277	301
EUR/TRY	0.016	0.057	-0.132	0.395	301
USD/TRY	0.016	0.049	-0.084	0.274	301
NOK/TRY	0.016	0.058	-0.115	0.394	301
S&P 500 Energy	0.023	0.083	-0.320	0.402	301
S&P 500 Utilities	0.020	0.066	-0.126	0.387	301
US High Yield	0.021	0.048	-0.096	0.292	301
Gold	0.023	0.055	-0.132	0.280	301
NAREIT	0.025	0.072	-0.173	0.385	301
MSCI World	0.020	0.058	-0.150	0.318	235
MSCI EM	0.019	0.064	-0.161	0.289	235
S&P Global Infrastructure	0.026	0.061	-0.195	0.352	162
TIPS 5y	0.020	0.046	-0.096	0.260	162

Source: Author's calculations

Table A.4: Descriptive Statistics – Monthly Asset Returns for South Africa

Variable	Mean	Std. Dev.	Min	Max	Obs.
AUD/ZAR	0.005	0.038	-0.079	0.165	301
Bloomberg Commodity	0.006	0.051	-0.176	0.180	301
CHF/ZAR	0.006	0.045	-0.115	0.165	301
South Africa CPI	0.004	0.004	-0.011	0.017	301
EM High Yield	0.010	0.042	-0.159	0.157	301
EUR/ZAR	0.005	0.043	-0.117	0.176	301
FTSE/JSE All Share	0.010	0.049	-0.140	0.140	301
NOK/ZAR	0.004	0.041	-0.144	0.169	301
S&P 500 Energy	0.011	0.072	-0.259	0.346	301
S&P 500 Utilities	0.008	0.058	-0.164	0.225	301
US High Yield	0.010	0.042	-0.095	0.159	301
USD/ZAR	0.005	0.047	-0.116	0.181	301
Gold	0.012	0.057	-0.148	0.241	301
NAREIT	0.013	0.058	-0.203	0.199	301
MSCI World	0.010	0.041	-0.110	0.148	235
MSCI EM	0.010	0.045	-0.144	0.154	235
S&P Global Infrastructure	0.012	0.041	-0.122	0.136	162
TIPS 5y	0.007	0.043	-0.095	0.149	162

Source: Author's calculations

Table A.5: Correlation Matrix of Returns for Brazil

	AUDBRL	BCOM	BOVESPA	CHFBRL	CPI	EM_HY	EURBRL	USDBRL	MSCI_W	MSCI_EM	NOKBRL	S&P_En	S&P_Ut	Infra	TIPS	US_HY	Gold	NAREIT
AUDBRL	1.00																	
BCOM	0.58	1.00																
BOVESPA	-0.29	-0.25	1.00															
CHFBRL	0.76	0.46	-0.59	1.00														
CPI	-0.08	0.00	-0.11	-0.08	1.00													
EM_HY	0.71	0.53	-0.32	0.67	-0.13	1.00												
EURBRL	0.78	0.50	-0.54	0.88	-0.11	0.71	1.00											
USDBRL	0.67	0.48	-0.67	0.80	-0.07	0.79	0.83	1.00										
MSCI_W	0.68	0.53	-0.07	0.52	-0.07	0.76	0.57	0.52	1.00									
MSCI_EM	0.64	0.41	0.15	0.41	-0.10	0.63	0.44	0.28	0.79	1.00								
NOKBRL	0.81	0.62	-0.29	0.73	-0.04	0.72	0.81	0.65	0.69	0.58	1.00							
S&P_En	0.27	0.51	0.16	-0.01	0.06	0.30	0.06	0.10	0.54	0.39	0.32	1.00						
S&P_Ut	0.51	0.33	-0.39	0.53	0.00	0.57	0.54	0.63	0.54	0.29	0.49	0.12	1.00					
Infra	0.61	0.49	-0.07	0.46	0.02	0.71	0.51	0.48	0.85	0.65	0.65	0.55	0.72	1.00				
TIPS	0.71	0.47	-0.61	0.79	-0.07	0.81	0.79	0.94	0.59	0.36	0.67	0.10	0.70	0.58	1.00			
US_HY	0.70	0.57	-0.42	0.71	-0.11	1.00	0.74	0.87	0.78	0.52	0.72	0.34	0.67	0.74	0.90	1.00		
Gold	0.61	0.43	-0.47	0.70	-0.08	0.61	0.71	0.76	0.39	0.30	0.57	0.01	0.49	0.39	0.78	0.65	1.00	
NAREIT	0.58	0.37	-0.15	0.45	0.01	0.64	0.41	0.46	0.77	0.54	0.50	0.37	0.71	0.82	0.59	0.70	0.32	1.00

Source: Author's calculations

Table A.6: Correlation Matrix of Returns for Turkey

	AUD/TRY	BIST100	BCOM	CHF/TRY	CPI	EM HY	EUR/TRY	USD/TRY	MSCI W	MSCI EM	NOK/TRY	S&P EN	S&P UT	Infra	TIPS	US HY	Gold	NAREIT
AUD/TRY	1.00																	
BIST100	0.11	1.00																
BCOM	0.56	0.16	1.00															
CHF/TRY	0.88	-0.02	0.44	1.00														
CPI	0.06	0.24	0.43	0.04	1.00													
EM HY	0.61	0.18	0.78	0.52	0.37	1.00												
EUR/TRY	0.89	0.01	0.45	0.94	0.05	0.53	1.00											
USD/TRY	0.62	-0.01	0.71	0.64	0.42	0.83	0.64	1.00										
MSCI W	0.63	0.26	0.78	0.48	0.31	0.89	0.50	0.71	1.00									
MSCI EM	0.59	0.34	0.74	0.42	0.28	0.85	0.43	0.59	0.90	1.00								
NOK/TRY	0.92	0.13	0.59	0.87	0.08	0.63	0.91	0.62	0.64	0.57	1.00							
S&P EN	0.48	0.31	0.73	0.27	0.36	0.65	0.31	0.47	0.75	0.67	0.51	1.00						
S&P UT	0.50	0.10	0.66	0.45	0.32	0.75	0.45	0.77	0.74	0.63	0.50	0.49	1.00					
Infra	0.56	0.26	0.77	0.42	0.35	0.87	0.44	0.70	0.93	0.84	0.58	0.76	0.85	1.00				
TIPS	0.66	0.02	0.71	0.64	0.37	0.86	0.63	0.94	0.77	0.65	0.65	0.48	0.82	0.77	1.00			
US HY	0.66	0.12	0.81	0.59	0.38	0.95	0.59	0.89	0.90	0.79	0.68	0.67	0.82	0.88	0.92	1.00		
Gold	0.55	0.04	0.63	0.56	0.35	0.67	0.54	0.76	0.58	0.55	0.55	0.35	0.62	0.59	0.78	0.70	1.00	
NAREIT	0.55	0.16	0.69	0.43	0.30	0.83	0.40	0.70	0.88	0.77	0.52	0.64	0.84	0.90	0.80	0.87	0.56	1.00

Table A.7: Correlation Matrix — South Africa

	AUD/ZAR	BCOM	CHF/ZAR	CPI	EM HY	EUR/ZAR	JSE	MSCLW	MSCLEM	NOK/ZAR	S&P EN	S&P UT	Infra	TIPS	US HY	USD/ZAR	Gold	NAREIT
AUD/ZAR	1.00																	
BCOM	0.58	1.00																
CHF/ZAR	0.70	0.45	1.00															
CPI	-0.08	-0.01	-0.08	1.00														
EM HY	0.71	0.53	0.67	-0.11	1.00													
EUR/ZAR	0.75	0.52	0.87	-0.09	0.73	1.00												
JSE	0.19	0.18	-0.07	-0.14	0.13	-0.03	1.00											
MSCLW	0.69	0.50	0.49	-0.13	0.74	0.57	0.49	1.00										
MSCLEM	0.61	0.38	0.34	-0.10	0.60	0.40	0.61	0.76	1.00									
NOK/ZAR	0.77	0.62	0.68	-0.08	0.72	0.79	0.23	0.69	0.53	1.00								
S&P EN	0.37	0.56	0.05	-0.10	0.37	0.15	0.48	0.59	0.44	0.41	1.00							
S&P UT	0.51	0.33	0.53	0.02	0.55	0.55	0.00	0.51	0.24	0.49	0.17	1.00						
Infra	0.63	0.49	0.45	-0.09	0.70	0.53	0.45	0.83	0.63	0.67	0.60	0.71	1.00					
TIPS	0.71	0.47	0.80	-0.07	0.80	0.80	-0.13	0.55	0.31	0.66	0.15	0.69	0.56	1.00				
US HY	0.73	0.58	0.73	-0.10	0.92	0.77	0.07	0.76	0.50	0.74	0.40	0.66	0.74	0.89	1.00			
USD/ZAR	0.66	0.47	0.80	-0.10	0.78	0.83	-0.26	0.48	0.21	0.63	0.15	0.61	0.46	0.93	0.86	1.00		
Gold	0.60	0.44	0.70	-0.09	0.62	0.70	-0.12	0.36	0.26	0.55	0.06	0.48	0.39	0.78	0.66	0.76	1.00	
NAREIT	0.61	0.39	0.46	-0.10	0.65	0.43	0.32	0.77	0.53	0.51	0.42	0.70	0.82	0.59	0.71	0.45	0.33	1.00

Source: Author's calculations

Table A.8: ADF Test Results for Brazil Across Three Models

Variable	First Model			Second Model			Third Model		
	ADF	P-Value	Result	ADF	P-Value	Result	ADF	P-Value	Result
AUDBRL	-11.670	0.000	Stationary	-17.371	0.000	Stationary	-13.528	0.000	Stationary
BCOM	-18.201	0.000	Stationary	-15.566	0.000	Stationary	-12.341	0.000	Stationary
BOVESPA	-15.199	0.000	Stationary	-10.993	0.000	Stationary	-7.992	0.000	Stationary
CHFBRL	-10.896	0.000	Stationary	-16.254	0.000	Stationary	-13.584	0.000	Stationary
CPI	-8.501	0.000	Stationary	-7.748	0.000	Stationary	-6.425	0.000	Stationary
EM HY	-6.087	0.000	Stationary	-4.974	0.000	Stationary	-12.318	0.000	Stationary
EURBRL	-11.013	0.000	Stationary	-15.874	0.000	Stationary	-12.624	0.000	Stationary
USDBRL	-10.559	0.000	Stationary	-9.325	0.000	Stationary	-13.366	0.000	Stationary
NOKBRL	-10.623	0.000	Stationary	-16.385	0.000	Stationary	-12.905	0.000	Stationary
S&P_En	-14.162	0.000	Stationary	-16.330	0.000	Stationary	-3.214	0.019	Stationary
S&P_Ut	-18.780	0.000	Stationary	-16.329	0.000	Stationary	-13.905	0.000	Stationary
US_HY	-11.699	0.000	Stationary	-16.019	0.000	Stationary	-12.953	0.000	Stationary
Gold	-12.045	0.000	Stationary	-17.073	0.000	Stationary	-13.794	0.000	Stationary
NAREIT	-5.115	0.000	Stationary	-4.162	0.001	Stationary	-14.017	0.000	Stationary
MSCI_W	-	-	-	-4.324	0.000	Stationary	-13.257	0.000	Stationary
MSCI_EM	-	-	-	-14.384	0.000	Stationary	-7.836	0.000	Stationary
Infra	-	-	-	-	-	-	-14.274	0.000	Stationary
TIPS	-	-	-	-	-	-	-12.869	0.000	Stationary

Table A.9: ADF Test Results for Turkey Across Three Models

Variable	First Model			Second Model			Third Model		
	ADF	P-Value	Result	ADF	P-Value	Result	ADF	P-Value	Result
AUD/TRY	-15.534	0.000	Stationary	-13.728	0.000	Stationary	-11.735	0.000	Stationary
BIST100	-17.339	0.000	Stationary	-3.318	0.014	Stationary	-7.600	0.000	Stationary
BCOM	-14.099	0.000	Stationary	-12.473	0.000	Stationary	-10.108	0.000	Stationary
CHF/TRY	-15.917	0.000	Stationary	-14.048	0.000	Stationary	-11.702	0.000	Stationary
CPI	-2.385	0.146	Non-Stationary	-1.234	0.659	Non-Stationary	-1.641	0.462	Non-Stationary
EM HY	-11.053	0.000	Stationary	-10.570	0.000	Stationary	-9.856	0.000	Stationary
EUR/TRY	-15.887	0.000	Stationary	-13.976	0.000	Stationary	-11.900	0.000	Stationary
USD/TRY	-8.485	0.000	Stationary	-7.683	0.000	Stationary	-8.883	0.000	Stationary
NOK/TRY	-15.140	0.000	Stationary	-13.513	0.000	Stationary	-11.453	0.000	Stationary
S&P EN	-16.551	0.000	Stationary	-15.119	0.000	Stationary	-12.196	0.000	Stationary
S&P UT	-4.493	0.000	Stationary	-11.991	0.000	Stationary	-10.480	0.000	Stationary
US HY	-11.076	0.000	Stationary	-10.249	0.000	Stationary	-9.137	0.000	Stationary
Gold	-11.947	0.000	Stationary	-10.728	0.000	Stationary	-8.606	0.000	Stationary
NAREIT	-4.229	0.001	Stationary	-4.211	0.001	Stationary	-10.123	0.000	Stationary
MSCI_W	-	-	-	-4.107	0.001	Stationary	-3.841	0.003	Stationary
MSCI_EM	-	-	-	-14.774	0.000	Stationary	-7.863	0.000	Stationary
Infra	-	-	-	-	-	-	-10.188	0.000	Stationary
TIPS	-	-	-	-	-	-	-9.206	0.000	Stationary

Table A.10: Test for first and second order integration of non-stationary variables for Turkey

Variable	First Model			Second Model			Third Model		
	ADF	P-Value	Result	ADF	P-Value	Result	ADF	P-Value	Result
CPI	-7.381	0.000	I(1)	-7.774	0.000	I(1)	-6.868	0.000	I(1)

Table A.11: ADF Test Results for South Africa Across Three Models

Variable	First Model			Second Model			Third Model		
	ADF	P-Value	Result	ADF	P-Value	Result	ADF	P-Value	Result
AUD/ZAR	-8.433	0.000	Stationary	-15.982	0.000	Stationary	-13.933	0.000	Stationary
BCOM	-18.673	0.000	Stationary	-16.169	0.000	Stationary	-13.818	0.000	Stationary
CHF/ZAR	-8.568	0.000	Stationary	-16.487	0.000	Stationary	-14.423	0.000	Stationary
CPI	-4.250	0.001	Stationary	-2.894	0.046	Stationary	-2.422	0.136	Non-Stationary
EM HY	-18.678	0.000	Stationary	-17.498	0.000	Stationary	-14.837	0.000	Stationary
EUR/ZAR	-18.671	0.000	Stationary	-16.381	0.000	Stationary	-14.230	0.000	Stationary
JSE	-18.066	0.000	Stationary	-16.285	0.000	Stationary	-14.242	0.000	Stationary
NOK/ZAR	-4.722	0.000	Stationary	-17.348	0.000	Stationary	-15.029	0.000	Stationary
S&P EN	-5.984	0.000	Stationary	-3.551	0.007	Stationary	-2.691	0.076	Non-Stationary
S&P UT	-17.967	0.000	Stationary	-16.336	0.000	Stationary	-13.721	0.000	Stationary
US HY	-19.178	0.000	Stationary	-12.640	0.000	Stationary	-15.330	0.000	Stationary
USD/ZAR	-17.668	0.000	Stationary	-15.883	0.000	Stationary	-14.281	0.000	Stationary
Gold	-18.178	0.000	Stationary	-15.610	0.000	Stationary	-13.351	0.000	Stationary
NAREIT	-7.452	0.000	Stationary	-6.823	0.000	Stationary	-14.458	0.000	Stationary
MSCI_W	-	-	-	-6.775	0.000	Stationary	-7.277	0.000	Stationary
MSCI_EM	-	-	-	-7.105	0.000	Stationary	-7.635	0.000	Stationary
Infra	-	-	-	-	-	-	-6.841	0.000	Stationary
TIPS	-	-	-	-	-	-	-13.985	0.000	Stationary

Table A.12: Test for first and second order integration of non-stationary variables for South Africa

Variable	First Model			Second Model			Third Model		
	ADF	P-Value	Result	ADF	P-Value	Result	ADF	P-Value	Result
CPI	-4.250	0.001	I(0)	-2.894	0.046	I(0)	-10.148	0.000	I(1)
S&P EN	-5.984	0.000	I(0)	-3.551	0.007	I(0)	-8.190	0.000	I(1)

B Results Tables & Figures

B.1 VAR Model Tables & Figures

B.1.1 Brazil Results VAR

In this appendix, we briefly discuss the results for the shorter-sample VAR specifications (Models 2 and 3) for Brazil. These models allow us to test whether the relationships observed in the longer baseline sample remain robust when the estimation period is shortened.

Tables B.1.1.5 and B.1.1.6 report the Granger causality tests for Models 2 and 3. Compared to the first model, we find much weaker evidence of CPI driving asset returns. In Model 2, inflation only Granger-causes the euro exchange rate (EUR/BRL), while in Model 3, we do not detect any statistically significant effects of CPI changes on returns. At the same time, Bloomberg Commodity Index continues to affect CPI in both shorter specifications, suggesting cost-push dynamics remain relevant. We also note that the Norwegian krone (NOK/BRL) affects inflation in both Models 2 and 3, an unexpected result given limited bilateral trade, but one that may be linked to Brazil's dependence on global commodity cycles and Norway's role as an exporter of energy and raw materials.

Regression outputs from Models 2 and 3, summarized in Tables B.1.1.21 and B.1.1.37, confirm the weaker link between inflation and asset returns in shorter samples. In Model 2, CPI only has a negative and statistically significant effect on the euro exchange rate, while in Model 3, we do not observe significant impacts on any asset. Together with the causality tests, this suggests that inflation's explanatory power diminishes when the time span is reduced, indicating that the link between inflation and asset returns in Brazil may only materialize in longer horizons. R-squared values in these regressions remain low (generally below 0.14), which further indicates limited predictive capacity of inflation for asset returns.

The impulse response analysis in Figures B.1.1.2–B.1.1.3 and cumulative IRFs in Figures B.1.1.5–B.1.1.6 provide additional insights. In both Models 2 and 3, most assets continue to show a negative cumulative effect of inflation shocks, consistent with the results from the longer baseline. However, some exceptions appear: in Model 2, S&P Energy and NAREIT exhibit positive cumulative responses, while in Model 3, Infrastructure and S&P Utilities also show inflation-hedging potential. These findings suggest that although currencies dominate the short-term transmission mechanism, certain equity sectors may still offer hedging benefits over longer horizons even in shorter samples. At the same time, the immediate dynamics confirm our earlier interpretation — a positive

short-term response to inflation shocks, likely reflecting surprise inflation, is quickly offset by monetary policy tightening, which drives subsequent negative responses, especially in exchange rates and USD-denominated assets.

Finally, the FEVD analysis in Figures B.1.1.8 and B.1.1.9 shows that inflation explains only a very small share of the forecast error variance of asset returns in Models 2 and 3. This result is consistent with the regression evidence and underscores that inflation shocks play only a marginal role in explaining asset price fluctuations in Brazil in the shorter estimation windows.

Table B.1.1.1: VAR Order Selection for the First Model for Brazil

Order	AIC	BIC	FPE	HQIC
0	-102.0	-101.9*	4.837e-45	-102.0*
1	-102.6*	-99.99	2.737e-45*	-101.6
2	-102.3	-97.28	3.621e-45	-100.3
3	-101.9	-94.42	5.604e-45	-98.92
4	-101.7	-91.71	7.580e-45	-97.68

Note: AIC = Akaike Information Criterion, BIC = Bayesian Information Criterion, FPE = Final Prediction Error, HQIC = Hannan-Quinn Information Criterion. Minimum values are highlighted with *.

Table B.1.1.2: VAR Order Selection for the Second Model for Brazil

Order	AIC	BIC	FPE	HQIC
0	-119.2	-118.9*	1.748e-52	-119.1*
1	-119.8*	-115.7	9.749e-53*	-118.1
2	-119.3	-111.4	1.583e-52	-116.1
3	-118.7	-107.0	3.040e-52	-114.0
4	-118.5	-103.0	4.426e-52	-112.2

Note: AIC = Akaike Information Criterion, BIC = Bayesian Information Criterion, FPE = Final Prediction Error, HQIC = Hannan-Quinn Information Criterion. Minimum values are highlighted with *.

Table B.1.1.3: VAR Order Selection for the Third Model for Brazil

Order	AIC	BIC	FPE	HQIC
0	-139.8*	-139.4*	1.983e-61*	-139.6*
1	-139.5	-132.9	2.541e-61	-136.8
2	-138.9	-126.0	5.415e-61	-133.7
3	-138.3	-119.0	1.505e-60	-130.5
4	-138.2	-112.7	3.725e-60	-127.8

Note: AIC = Akaike Information Criterion, BIC = Bayesian Information Criterion, FPE = Final Prediction Error, HQIC = Hannan-Quinn Information Criterion. Minimum values are highlighted with *.

Table B.1.1.4: Granger Causality Test Results for the First Model for Brazil

Granger-Cause	F-stat	df1	df2	p-value (F)	Chi2	p-value (Chi2)
CPI → AUDBRL	4.19	1	3990	0.041**	4.19	0.041**
CPI → BCOM	0.54	1	3990	0.461	0.54	0.461
CPI → BOVESPA	0.03	1	3990	0.857	0.03	0.857
CPI → CHFBRL	4.29	1	3990	0.038**	4.29	0.038**
CPI → EM HY	2.72	1	3990	0.099*	2.72	0.099*
CPI → EURBRL	5.96	1	3990	0.015**	5.96	0.015**
CPI → USDBRL	4.90	1	3990	0.027**	4.90	0.027**
CPI → NOKBRL	6.32	1	3990	0.012**	6.32	0.012**
CPI → S&P Energy	0.94	1	3990	0.333	0.94	0.333
CPI → S&P Utilities	0.57	1	3990	0.452	0.57	0.452
CPI → US HY	2.72	1	3990	0.099*	2.72	0.099*
CPI → Gold	5.18	1	3990	0.023**	5.18	0.023**
CPI → NAREIT	1.32	1	3990	0.251	1.32	0.251
AUSBRL → CPI	0.43	1	3990	0.510	0.43	0.510
BCOM → CPI	3.01	1	3990	0.083*	3.01	0.083*
BOVESPA → CPI	1.75	1	3990	0.186	1.75	0.186
CHFBRL → CPI	1.40	1	3990	0.237	1.40	0.237
EM HY → CPI	0.27	1	3990	0.606	0.27	0.606
EURBRL → CPI	0.10	1	3990	0.756	0.10	0.756
USDBRL → CPI	0.44	1	3990	0.507	0.44	0.507
NOKBRL → CPI	1.53	1	3990	0.217	1.53	0.217
S&P Energy → CPI	2.39	1	3990	0.122	2.39	0.122
S&P Utilities → CPI	14.33	1	3990	0.000***	14.33	0.000***
US HY → CPI	1.11	1	3990	0.292	1.11	0.292
Gold → CPI	0.11	1	3990	0.735	0.11	0.735
NAREIT → CPI	2.46	1	3990	0.117	2.46	0.117

Note: ***, **, * denote significance at the 1%, 5% and 10% level

Table B.1.1.5: Granger Causality Test Results for the Second Model for Brazil

Granger-Cause	F-stat	df1	df2	p-value (F)	Chi2	p-value (Chi2)
CPI → AUDBRL	2.24	1	3472	0.135	2.24	0.135
CPI → BCOM	0.11	1	3472	0.739	0.11	0.739
CPI → BOVESPA	1.33	1	3472	0.248	1.33	0.248
CPI → CHFBRL	1.48	1	3472	0.223	1.48	0.223
CPI → EM HY	0.48	1	3472	0.489	0.48	0.489
CPI → EURBRL	3.42	1	3472	0.065*	3.42	0.064*
CPI → USDBRL	1.22	1	3472	0.269	1.22	0.269
CPI → MSCI World	0.42	1	3472	0.519	0.42	0.519
CPI → MSCI EM	0.93	1	3472	0.336	0.93	0.336
CPI → NOKBRL	2.02	1	3472	0.155	2.02	0.155
CPI → S&P Energy	0.01	1	3472	0.927	0.01	0.927
CPI → S&P Utilities	0.00	1	3472	0.970	0.00	0.970
CPI → US HY	0.89	1	3472	0.345	0.89	0.345
CPI → Gold	1.88	1	3472	0.170	1.88	0.170
CPI → NAREIT	0.03	1	3472	0.862	0.03	0.862
AUDBRL → CPI	0.19	1	3472	0.665	0.19	0.665
BCOM → CPI	6.75	1	3472	0.009***	6.75	0.009***
BOVESPA → CPI	0.44	1	3472	0.505	0.44	0.505
CHFBRL → CPI	0.78	1	3472	0.377	0.78	0.377
EM HY → CPI	0.55	1	3472	0.460	0.55	0.460
EURBRL → CPI	0.01	1	3472	0.906	0.01	0.906
USDBRL → CPI	1.22	1	3472	0.269	1.22	0.269
MSCI World → CPI	2.40	1	3472	0.122	2.40	0.122
MSCI EM → CPI	0.20	1	3472	0.651	0.20	0.651
NOKBRL → CPI	4.25	1	3472	0.039**	4.25	0.039**
S&P Energy → CPI	1.52	1	3472	0.218	1.52	0.218
S&P Utilities → CPI	2.31	1	3472	0.129	2.31	0.129
US HY → CPI	0.44	1	3472	0.508	0.44	0.508
Gold → CPI	0.03	1	3472	0.872	0.03	0.872
NAREIT → CPI	0.03	1	3472	0.856	0.03	0.856

Note: ***, **, * denote significance at the 1%, 5%, and 10% level.

Table B.1.1.6: Granger Causality Test Results for the Third Model for Brazil

Granger-Cause	F-stat	df1	df2	p-value (F)	Chi2	p-value (Chi2)
CPI → AUDBRL	0.39	1	2556	0.532	0.39	0.532
CPI → BCOM	0.04	1	2556	0.850	0.04	0.850
CPI → BOVESPA	1.01	1	2556	0.314	1.01	0.314
CPI → CHFBRL	0.20	1	2556	0.658	0.20	0.658
CPI → EM HY	0.04	1	2556	0.838	0.04	0.838
CPI → EURBRL	0.77	1	2556	0.380	0.77	0.380
CPI → USDBRL	0.23	1	2556	0.631	0.23	0.631
CPI → MSCI ACWI	0.02	1	2556	0.879	0.02	0.878
CPI → MSCI EM	0.01	1	2556	0.926	0.01	0.926
CPI → NOKBRL	0.25	1	2556	0.615	0.25	0.615
CPI → S&P Energy	0.08	1	2556	0.779	0.08	0.779
CPI → S&P Utilities	0.36	1	2556	0.549	0.36	0.549
CPI → Infrastructure	0.32	1	2556	0.573	0.32	0.573
CPI → TIPS	0.00	1	2556	0.998	0.00	0.998
CPI → US HY	0.12	1	2556	0.727	0.12	0.727
CPI → Gold	0.66	1	2556	0.416	0.66	0.416
CPI → NAREIT	1.46	1	2556	0.228	1.46	0.228
AUDBRL → CPI	0.22	1	2556	0.642	0.22	0.642
BCOM → CPI	8.59	1	2556	0.003***	8.59	0.003***
BOVESPA → CPI	0.81	1	2556	0.369	0.81	0.369
CHFBRL → CPI	0.00	1	2556	0.969	0.00	0.969
EM HY → CPI	0.91	1	2556	0.340	0.91	0.340
EURBRL → CPI	0.28	1	2556	0.598	0.28	0.598
USDBRL → CPI	0.71	1	2556	0.400	0.71	0.400
MSCI ACWI → CPI	0.32	1	2556	0.570	0.32	0.570
MSCI EM → CPI	0.00	1	2556	0.960	0.00	0.960
NOKBRL → CPI	2.89	1	2556	0.089*	2.89	0.089*
S&P Energy → CPI	0.03	1	2556	0.871	0.03	0.871
S&P Utilities → CPI	4.63	1	2556	0.031**	4.63	0.031**
Infrastructure → CPI	0.83	1	2556	0.362	0.83	0.362
TIPS → CPI	0.14	1	2556	0.713	0.14	0.713
US HY → CPI	0.20	1	2556	0.659	0.20	0.659
Gold → CPI	0.04	1	2556	0.838	0.04	0.838
NAREIT → CPI	0.47	1	2556	0.492	0.47	0.492

Note: ***, **, * denote significance at the 1%, 5% and 10% level

Table B.1.1.7: Regression Results of the First Model for Brazil

Dependent Variable: CPI Brazil Monthly				
Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.002	0.000	6.045	0.000***
CPI _{t-1}	0.617	0.045	13.744	0.000***
AUDBRL _{t-1}	-0.006	0.009	-0.659	0.510
BCOM _{t-1}	0.010	0.006	1.736	0.084*
BOVESPA _{t-1}	0.005	0.004	1.323	0.187
CHFBRL _{t-1}	0.013	0.011	1.181	0.238
EM HY _{t-1}	0.005	0.010	0.516	0.607
EURBRL _{t-1}	0.004	0.014	0.311	0.756
USDBRL _{t-1}	0.007	0.011	0.663	0.508
NOKBRL _{t-1}	-0.012	0.010	-1.235	0.218
S&P Energy _{t-1}	0.006	0.004	1.546	0.123
S&P Utilities _{t-1}	-0.017	0.005	-3.786	0.000***
US HY _{t-1}	-0.014	0.013	-1.054	0.293
Gold _{t-1}	-0.002	0.005	-0.339	0.735
NAREIT _{t-1}	0.007	0.005	1.569	0.118
R-squared			0.434	
Adj. R-squared			0.406	

Dependent Variable: AUD/BRL				
Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.015	0.004	3.621	0.000***
CPI _{t-1}	-1.247	0.610	-2.046	0.042**
AUDBRL _{t-1}	-0.183	0.126	-1.451	0.148
BCOM _{t-1}	0.029	0.078	0.375	0.708
BOVESPA _{t-1}	-0.104	0.051	-2.036	0.043**
CHFBRL _{t-1}	-0.155	0.153	-1.014	0.311
EM HY _{t-1}	-0.103	0.141	-0.734	0.463
EURBRL _{t-1}	0.113	0.189	0.599	0.550
USDBRL _{t-1}	0.002	0.149	0.012	0.990
NOKBRL _{t-1}	0.329	0.135	2.438	0.015**
S&P Energy _{t-1}	-0.006	0.051	-0.112	0.911

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Dependent Variable: AUD/BRL (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
S&P Utilities _{t-1}	0.031	0.062	0.496	0.621
US HY _{t-1}	-0.023	0.182	-0.125	0.900
Gold _{t-1}	-0.091	0.070	-1.292	0.197
NAREIT _{t-1}	-0.099	0.062	-1.597	0.111
R-squared			0.099	
Adj. R-squared			0.055	

Dependent Variable: Bloomberg Commodity

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.012	0.005	2.267	0.024**
CPI _{t-1}	-0.555	0.752	-0.738	0.461
AUDBRL _{t-1}	-0.335	0.156	-2.152	0.032**
BCOM _{t-1}	0.123	0.097	1.278	0.202
BOVESPA _{t-1}	-0.052	0.063	-0.828	0.408
CHFBRL _{t-1}	-0.018	0.188	-0.093	0.926
EM HY _{t-1}	-0.301	0.174	-1.736	0.084*
EURBRL _{t-1}	-0.053	0.233	-0.226	0.822
USDBRL _{t-1}	-0.046	0.184	-0.248	0.804
NOKBRL _{t-1}	0.385	0.166	2.312	0.021**
S&P Energy _{t-1}	-0.038	0.063	-0.610	0.543
S&P Utilities _{t-1}	0.032	0.077	0.415	0.678
US HY _{t-1}	0.137	0.225	0.611	0.542
Gold _{t-1}	-0.155	0.086	-1.793	0.074*
NAREIT _{t-1}	0.051	0.077	0.666	0.506
R-squared			0.081	
Adj. R-squared			0.036	

Dependent Variable: BOVESPA

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.005	0.007	0.639	0.524
CPI _{t-1}	0.189	1.049	0.180	0.857
AUDBRL _{t-1}	0.195	0.217	0.898	0.370

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Dependent Variable: BOVESPA (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
BCOM _{t-1}	-0.080	0.135	-0.595	0.552
BOVESPA _{t-1}	0.228	0.088	2.587	0.010**
CHFBRL _{t-1}	0.499	0.263	1.900	0.058*
EM HY _{t-1}	0.217	0.242	0.897	0.371
EURBRL _{t-1}	-0.275	0.325	-0.847	0.398
USDBRL _{t-1}	-0.073	0.257	-0.286	0.775
NOKBRL _{t-1}	-0.344	0.232	-1.482	0.139
S&P Energy _{t-1}	-0.040	0.087	-0.464	0.643
S&P Utilities _{t-1}	0.055	0.107	0.511	0.610
US HY _{t-1}	0.166	0.314	0.528	0.598
Gold _{t-1}	0.041	0.121	0.342	0.733
NAREIT _{t-1}	-0.128	0.107	-1.202	0.230
R-squared			0.061	
Adj. R-squared			0.015	

Dependent Variable: CHF/BRL

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.020	0.005	4.051	0.000***
CPI _{t-1}	-1.528	0.738	-2.071	0.039**
AUDBRL _{t-1}	-0.109	0.153	-0.714	0.476
BCOM _{t-1}	0.087	0.095	0.917	0.360
BOVESPA _{t-1}	-0.158	0.062	-2.546	0.011**
CHFBRL _{t-1}	-0.361	0.185	-1.952	0.052*
EM HY _{t-1}	-0.087	0.170	-0.510	0.610
EURBRL _{t-1}	0.213	0.229	0.930	0.353
USDBRL _{t-1}	0.146	0.181	0.810	0.418
NOKBRL _{t-1}	0.359	0.163	2.201	0.029**
S&P Energy _{t-1}	-0.019	0.061	-0.309	0.758
S&P Utilities _{t-1}	0.004	0.075	0.058	0.954
US HY _{t-1}	-0.165	0.221	-0.748	0.455
Gold _{t-1}	-0.186	0.085	-2.199	0.029**
NAREIT _{t-1}	-0.041	0.075	-0.543	0.588
R-squared			0.106	

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Dependent Variable: CHF/BRL (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
Adj. R-squared			0.062	

Dependent Variable: Emerging Markets High Yield

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.018	0.004	4.246	0.000***
CPI _{t-1}	-1.042	0.632	-1.649	0.100
AUDBRL _{t-1}	-0.009	0.131	-0.069	0.945
BCOM _{t-1}	-0.060	0.081	-0.739	0.461
BOVESPA _{t-1}	-0.091	0.053	-1.720	0.087*
CHFBRL _{t-1}	-0.025	0.158	-0.156	0.876
EM HY _{t-1}	-0.098	0.146	-0.672	0.502
EURBRL _{t-1}	0.201	0.196	1.024	0.307
USDBRL _{t-1}	-0.381	0.155	-2.461	0.014**
NOKBRL _{t-1}	0.195	0.140	1.394	0.164
S&P Energy _{t-1}	-0.017	0.053	-0.332	0.740
S&P Utilities _{t-1}	0.139	0.065	2.144	0.033**
US HY _{t-1}	0.097	0.189	0.514	0.607
Gold _{t-1}	-0.115	0.073	-1.587	0.114
NAREIT _{t-1}	-0.091	0.064	-1.407	0.161
R-squared			0.097	
Adj. R-squared			0.053	

Dependent Variable: EUR/BRL

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.019	0.005	3.992	0.000***
CPI _{t-1}	-1.690	0.692	-2.442	0.015**
AUDBRL _{t-1}	-0.125	0.143	-0.872	0.384
BCOM _{t-1}	0.089	0.089	1.008	0.315
BOVESPA _{t-1}	-0.128	0.058	-2.196	0.029**
CHFBRL _{t-1}	-0.138	0.173	-0.795	0.427
EM HY _{t-1}	-0.097	0.160	-0.610	0.542
EURBRL _{t-1}	0.085	0.214	0.395	0.693

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Dependent Variable: EUR/BRL (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
USDBRL _{t-1}	0.038	0.169	0.222	0.824
NOKBRL _{t-1}	0.395	0.153	2.584	0.010**
S&P Energy _{t-1}	-0.052	0.058	-0.907	0.365
S&P Utilities _{t-1}	0.025	0.071	0.348	0.728
US HY _{t-1}	-0.065	0.207	-0.314	0.754
Gold _{t-1}	-0.214	0.080	-2.693	0.008***
NAREIT _{t-1}	-0.087	0.070	-1.233	0.218
R-squared			0.113	
Adj. R-squared			0.070	

Dependent Variable: USD/BRL

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.018	0.005	3.633	0.000***
CPI _{t-1}	-1.577	0.713	-2.213	0.028**
AUSBRL _{t-1}	-0.183	0.148	-1.241	0.216
BCOM _{t-1}	0.028	0.091	0.308	0.758
BOVESPA _{t-1}	-0.129	0.060	-2.145	0.033**
CHFBRL _{t-1}	-0.152	0.178	-0.852	0.395
EM HY _{t-1}	-0.268	0.164	-1.630	0.104
EURBRL _{t-1}	0.180	0.221	0.815	0.416
USDBRL _{t-1}	0.050	0.174	0.286	0.775
NOKBRL _{t-1}	0.302	0.158	1.918	0.056*
S&P Energy _{t-1}	0.005	0.059	0.086	0.932
S&P Utilities _{t-1}	0.017	0.073	0.236	0.813
US HY _{t-1}	-0.141	0.213	-0.663	0.508
Gold _{t-1}	-0.096	0.082	-1.175	0.241
NAREIT _{t-1}	0.043	0.073	0.599	0.550
R-squared			0.102	
Adj. R-squared			0.058	

Dependent Variable: NOK/BRL				
Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.016	0.005	3.603	0.000***
CPI _{t-1}	-1.681	0.668	-2.514	0.012**
AUDBRL _{t-1}	-0.100	0.138	-0.724	0.470
BCOM _{t-1}	0.060	0.086	0.702	0.483
BOVESPA _{t-1}	-0.126	0.056	-2.236	0.026**
CHFBRL _{t-1}	-0.024	0.167	-0.145	0.885
EM HY _{t-1}	-0.253	0.154	-1.637	0.103
EURBRL _{t-1}	0.074	0.207	0.355	0.723
USDBRL _{t-1}	-0.086	0.164	-0.522	0.602
NOKBRL _{t-1}	0.243	0.148	1.644	0.101
S&P Energy _{t-1}	-0.033	0.056	-0.588	0.557
S&P Utilities _{t-1}	-0.031	0.068	-0.457	0.648
US HY _{t-1}	0.192	0.200	0.960	0.338
Gold _{t-1}	-0.180	0.077	-2.348	0.020**
NAREIT _{t-1}	-0.030	0.068	-0.439	0.661
R-squared			0.090	
Adj. R-squared			0.045	

Dependent Variable: S&P 500 Energy				
Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.019	0.006	2.960	0.003***
CPI _{t-1}	-0.923	0.954	-0.968	0.334
AUDBRL _{t-1}	-0.177	0.197	-0.896	0.371
BCOM _{t-1}	0.073	0.122	0.595	0.552
BOVESPA _{t-1}	-0.039	0.080	-0.480	0.632
CHFBRL _{t-1}	0.098	0.239	0.412	0.680
EM HY _{t-1}	-0.445	0.220	-2.024	0.044**
EURBRL _{t-1}	0.204	0.296	0.689	0.491
USDBRL _{t-1}	0.309	0.233	1.322	0.187
NOKBRL _{t-1}	-0.039	0.211	-0.186	0.853
S&P Energy _{t-1}	-0.057	0.079	-0.717	0.474
S&P Utilities _{t-1}	0.011	0.098	0.114	0.910

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Dependent Variable: S&P 500 Energy (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
US HY _{t-1}	0.014	0.285	0.050	0.960
Gold _{t-1}	-0.231	0.110	-2.108	0.036**
NAREIT _{t-1}	0.044	0.097	0.456	0.648
R-squared			0.075	
Adj. R-squared			0.030	

Dependent Variable: S&P 500 Utilities

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.016	0.005	3.054	0.002***
CPI _{t-1}	-0.573	0.762	-0.753	0.452
AUDBRL _{t-1}	-0.002	0.158	-0.012	0.990
BCOM _{t-1}	0.082	0.098	0.840	0.402
BOVESPA _{t-1}	-0.084	0.064	-1.303	0.193
CHFBRL _{t-1}	-0.168	0.191	-0.881	0.379
EM HY _{t-1}	-0.400	0.176	-2.278	0.023**
EURBRL _{t-1}	0.239	0.236	1.011	0.313
USDBRL _{t-1}	0.212	0.187	1.136	0.257
NOKBRL _{t-1}	0.028	0.168	0.167	0.867
S&P Energy _{t-1}	0.018	0.063	0.283	0.778
S&P Utilities _{t-1}	-0.018	0.078	-0.232	0.817
US HY _{t-1}	-0.131	0.228	-0.574	0.566
Gold _{t-1}	-0.184	0.088	-2.099	0.037**
NAREIT _{t-1}	0.047	0.078	0.606	0.545
R-squared			0.099	
Adj. R-squared			0.054	

Dependent Variable: US High Yield

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.017	0.004	4.052	0.000***
CPI _{t-1}	-1.023	0.620	-1.650	0.100*
AUDBRL _{t-1}	-0.090	0.128	-0.698	0.486
BCOM _{t-1}	-0.055	0.079	-0.688	0.492

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Dependent Variable: US High Yield (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
BOVESPA _{t-1}	-0.069	0.052	-1.330	0.185
CHFBRL _{t-1}	-0.065	0.155	-0.416	0.678
EM HY _{t-1}	0.007	0.143	0.049	0.961
EURBRL _{t-1}	0.378	0.192	1.970	0.050**
USDBRL _{t-1}	-0.247	0.152	-1.625	0.105
NOKBRL _{t-1}	0.064	0.137	0.466	0.642
S&P Energy _{t-1}	-0.006	0.052	-0.121	0.904
S&P Utilities _{t-1}	0.096	0.063	1.519	0.130
US HY _{t-1}	-0.140	0.185	-0.754	0.451
Gold _{t-1}	-0.096	0.071	-1.350	0.178
NAREIT _{t-1}	-0.013	0.063	-0.210	0.834
R-squared			0.086	
Adj. R-squared			0.041	

Dependent Variable: Gold

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.027	0.006	4.579	0.000***
CPI _{t-1}	-1.939	0.852	-2.277	0.024**
AUSBRL _{t-1}	-0.276	0.176	-1.567	0.118
BCOM _{t-1}	0.235	0.109	2.151	0.032**
BOVESPA _{t-1}	-0.099	0.072	-1.376	0.170
CHFBRL _{t-1}	-0.014	0.213	-0.067	0.947
EM HY _{t-1}	-0.212	0.197	-1.077	0.282
EURBRL _{t-1}	0.135	0.264	0.511	0.610
USDBRL _{t-1}	-0.367	0.209	-1.762	0.079*
NOKBRL _{t-1}	0.439	0.188	2.333	0.020**
S&P Energy _{t-1}	-0.096	0.071	-1.352	0.177
S&P Utilities _{t-1}	0.080	0.087	0.924	0.356
US HY _{t-1}	-0.125	0.255	-0.491	0.624
Gold _{t-1}	-0.076	0.098	-0.774	0.439
NAREIT _{t-1}	-0.010	0.087	-0.117	0.907
R-squared			0.125	
Adj. R-squared			0.082	

Dependent Variable: NAREIT				
Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.024	0.006	3.964	0.000***
CPI _{t-1}	-1.019	0.888	-1.147	0.252
AUDBRL _{t-1}	0.231	0.184	1.260	0.209
BCOM _{t-1}	0.022	0.114	0.195	0.846
BOVESPA _{t-1}	-0.193	0.075	-2.586	0.010**
CHFBRL _{t-1}	-0.546	0.222	-2.458	0.015**
EM HY _{t-1}	0.104	0.205	0.508	0.612
EURBRL _{t-1}	0.591	0.275	2.148	0.033**
USDBRL _{t-1}	-0.188	0.217	-0.864	0.388
NOKBRL _{t-1}	-0.042	0.196	-0.213	0.832
S&P Energy _{t-1}	0.012	0.074	0.156	0.876
S&P Utilities _{t-1}	0.114	0.091	1.258	0.210
US HY _{t-1}	-0.188	0.266	-0.706	0.481
Gold _{t-1}	-0.207	0.102	-2.027	0.044**
NAREIT _{t-1}	-0.112	0.090	-1.237	0.217
R-squared			0.094	
Adj. R-squared			0.050	

Note: ***, **, * denote significance at the 1%, 5% and 10% level.

Table B.1.1.21: Regression Results of the Second Model for Brazil

Dependent Variable: CPI Brazil Monthly				
Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.002	0.000	5.672	0.000***
CPI _{t-1}	0.584	0.054	10.844	0.000***
AUDBRL _{t-1}	-0.004	0.010	-0.433	0.665
BCOM _{t-1}	0.015	0.006	2.599	0.010***
BOVESPA _{t-1}	-0.003	0.005	-0.667	0.506
CHFBRL _{t-1}	0.009	0.010	0.883	0.378
EM HY _{t-1}	-0.008	0.011	-0.740	0.460
EURBRL _{t-1}	0.002	0.013	0.118	0.906

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Dependent Variable: CPI Brazil Monthly (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
USDBRL _{t-1}	-0.013	0.012	-1.106	0.270
MSCI World _{t-1}	0.018	0.011	1.548	0.123
MSCI EM _{t-1}	-0.003	0.008	-0.452	0.652
NOKBRL _{t-1}	-0.021	0.010	-2.061	0.040**
S&P Energy _{t-1}	0.005	0.004	1.231	0.220
S&P Utilities _{t-1}	-0.008	0.005	-1.519	0.130
US HY _{t-1}	0.011	0.017	0.662	0.509
Gold _{t-1}	0.001	0.005	0.161	0.872
NAREIT _{t-1}	-0.001	0.005	-0.182	0.856
R-squared			0.421	
Adj. R-squared			0.379	

Dependent Variable: AUD/BRL

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.010	0.004	2.192	0.029**
CPI _{t-1}	-1.079	0.722	-1.495	0.136
AUDBRL _{t-1}	-0.219	0.137	-1.592	0.113
BCOM _{t-1}	0.070	0.078	0.896	0.371
BOVESPA _{t-1}	-0.036	0.062	-0.580	0.563
CHFBRL _{t-1}	-0.001	0.137	-0.004	0.996
EM HY _{t-1}	-0.032	0.149	-0.214	0.831
EURBRL _{t-1}	-0.148	0.175	-0.846	0.398
USDBRL _{t-1}	0.257	0.156	1.643	0.102
MSCI World _{t-1}	0.060	0.152	0.396	0.693
MSCI EM _{t-1}	0.136	0.104	1.316	0.190
NOKBRL _{t-1}	0.075	0.134	0.555	0.579
S&P Energy _{t-1}	-0.051	0.052	-0.973	0.332
S&P Utilities _{t-1}	0.069	0.068	1.009	0.314
US HY _{t-1}	0.056	0.226	0.247	0.805
Gold _{t-1}	-0.137	0.070	-1.962	0.051*
NAREIT _{t-1}	-0.193	0.068	-2.825	0.005***
R-squared			0.123	
Adj. R-squared			0.059	

Dependent Variable: BCOM

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.003	0.005	0.607	0.545
CPI _{t-1}	-0.296	0.887	-0.334	0.739
AUDBRL _{t-1}	-0.249	0.169	-1.476	0.141
BCOM _{t-1}	0.123	0.096	1.278	0.203
BOVESPA _{t-1}	0.047	0.077	0.614	0.540
CHFBRL _{t-1}	0.185	0.168	1.098	0.273
EM HY _{t-1}	-0.360	0.183	-1.972	0.050**
EURBRL _{t-1}	-0.255	0.215	-1.189	0.236
USDBRL _{t-1}	0.051	0.192	0.268	0.789
MSCI World _{t-1}	0.004	0.187	0.020	0.984
MSCI EM _{t-1}	0.088	0.127	0.692	0.490
NOKBRL _{t-1}	0.081	0.165	0.489	0.626
S&P Energy _{t-1}	-0.054	0.064	-0.846	0.398
S&P Utilities _{t-1}	0.046	0.084	0.547	0.585
US HY _{t-1}	0.529	0.278	1.904	0.058*
Gold _{t-1}	-0.195	0.086	-2.271	0.024**
NAREIT _{t-1}	-0.077	0.084	-0.918	0.360
R-squared	0.094			
Adj. R-squared	0.027			

Dependent Variable: BOVESPA

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.014	0.008	1.680	0.094*
CPI _{t-1}	-1.561	1.352	-1.154	0.250
AUDBRL _{t-1}	0.298	0.257	1.157	0.248
BCOM _{t-1}	-0.168	0.147	-1.142	0.255
BOVESPA _{t-1}	0.089	0.117	0.757	0.450
CHFBRL _{t-1}	0.323	0.256	1.259	0.209
EM HY _{t-1}	-0.007	0.279	-0.026	0.980
EURBRL _{t-1}	-0.211	0.327	-0.644	0.520
USDBRL _{t-1}	-0.341	0.293	-1.166	0.245
MSCI World _{t-1}	-0.173	0.285	-0.609	0.543

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Dependent Variable: BOVESPA (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
MSCI EM _{t-1}	0.112	0.194	0.575	0.566
NOKBRL _{t-1}	-0.082	0.252	-0.326	0.744
S&P Energy _{t-1}	-0.013	0.098	-0.138	0.890
S&P Utilities _{t-1}	0.123	0.128	0.959	0.339
US HY _{t-1}	0.405	0.424	0.956	0.340
Gold _{t-1}	-0.018	0.131	-0.139	0.889
NAREIT _{t-1}	-0.133	0.128	-1.038	0.300
R-squared			0.060	
Adj. R-squared			-0.010	

Dependent Variable: CHF/BRL

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.013	0.005	2.429	0.016**
CPI _{t-1}	-1.082	0.888	-1.218	0.224
AUSBRL _{t-1}	-0.341	0.169	-2.018	0.045**
BCOM _{t-1}	0.110	0.096	1.136	0.257
BOVESPA _{t-1}	-0.027	0.077	-0.353	0.724
CHFBRL _{t-1}	-0.086	0.168	-0.513	0.608
EM HY _{t-1}	0.147	0.183	0.805	0.422
EURBRL _{t-1}	-0.089	0.215	-0.413	0.680
USDBRL _{t-1}	0.593	0.192	3.088	0.002***
MSCI World _{t-1}	0.146	0.187	0.780	0.437
MSCI EM _{t-1}	0.156	0.128	1.222	0.223
NOKBRL _{t-1}	0.081	0.165	0.490	0.625
S&P Energy _{t-1}	-0.042	0.064	-0.656	0.513
S&P Utilities _{t-1}	0.032	0.084	0.387	0.699
US HY _{t-1}	-0.510	0.278	-1.832	0.068*
Gold _{t-1}	-0.165	0.086	-1.918	0.056*
NAREIT _{t-1}	-0.092	0.084	-1.094	0.275
R-squared			0.116	
Adj. R-squared			0.051	

Dependent Variable: EM HY				
Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.010	0.005	2.184	0.030**
CPI _{t-1}	-0.540	0.779	-0.693	0.489
AUDBRL _{t-1}	0.002	0.148	0.016	0.987
BCOM _{t-1}	-0.086	0.085	-1.020	0.309
BOVESPA _{t-1}	-0.075	0.067	-1.118	0.265
CHFBRL _{t-1}	0.117	0.148	0.789	0.431
EM HY _{t-1}	-0.162	0.161	-1.007	0.315
EURBRL _{t-1}	-0.072	0.189	-0.382	0.703
USDBRL _{t-1}	-0.296	0.169	-1.754	0.081*
MSCI World _{t-1}	0.435	0.164	2.653	0.009***
MSCI EM _{t-1}	0.060	0.112	0.537	0.592
NOKBRL _{t-1}	-0.129	0.145	-0.890	0.375
S&P Energy _{t-1}	-0.082	0.056	-1.453	0.148
S&P Utilities _{t-1}	0.156	0.074	2.115	0.036**
US HY _{t-1}	0.267	0.244	1.092	0.276
Gold _{t-1}	-0.061	0.076	-0.812	0.418
NAREIT _{t-1}	-0.277	0.074	-3.754	0.000***
R-squared			0.134	
Adj. R-squared			0.070	

Dependent Variable: EUR/BRL				
Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.013	0.005	2.575	0.011**
CPI _{t-1}	-1.520	0.822	-1.849	0.066*
AUDBRL _{t-1}	-0.345	0.156	-2.209	0.028**
BCOM _{t-1}	0.120	0.089	1.339	0.182
BOVESPA _{t-1}	-0.014	0.071	-0.196	0.845
CHFBRL _{t-1}	0.130	0.156	0.836	0.404
EM HY _{t-1}	0.100	0.169	0.588	0.557
EURBRL _{t-1}	-0.230	0.199	-1.154	0.250
USDBRL _{t-1}	0.456	0.178	2.564	0.011**
MSCI World _{t-1}	0.180	0.173	1.037	0.301

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Dependent Variable: EUR/BRL (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
MSCI EM _{t-1}	0.149	0.118	1.265	0.207
NOKBRL _{t-1}	0.155	0.153	1.011	0.313
S&P Energy _{t-1}	-0.083	0.059	-1.404	0.162
S&P Utilities _{t-1}	0.053	0.078	0.688	0.492
US HY _{t-1}	-0.380	0.258	-1.473	0.142
Gold _{t-1}	-0.207	0.080	-2.597	0.010**
NAREIT _{t-1}	-0.157	0.078	-2.019	0.045**
R-squared		0.136		
Adj. R-squared		0.073		

Dependent Variable: USDBRL

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.010	0.006	1.863	0.064*
CPI _{t-1}	-1.030	0.932	-1.105	0.270
AUSBRL _{t-1}	-0.278	0.177	-1.571	0.118
BCOM _{t-1}	0.065	0.101	0.639	0.523
BOVESPA _{t-1}	-0.023	0.081	-0.282	0.778
CHFBRL _{t-1}	0.063	0.177	0.355	0.723
EM HY _{t-1}	-0.138	0.192	-0.719	0.473
EURBRL _{t-1}	-0.055	0.225	-0.246	0.806
USDBRL _{t-1}	0.332	0.202	1.647	0.101
MSCI World _{t-1}	0.200	0.196	1.022	0.308
MSCI EM _{t-1}	0.018	0.134	0.136	0.892
NOKBRL _{t-1}	0.046	0.173	0.263	0.793
S&P Energy _{t-1}	-0.031	0.067	-0.467	0.641
S&P Utilities _{t-1}	0.003	0.088	0.029	0.977
US HY _{t-1}	-0.238	0.292	-0.814	0.416
Gold _{t-1}	-0.094	0.090	-1.041	0.299
NAREIT _{t-1}	-0.030	0.088	-0.340	0.734
R-squared		0.060		
Adj. R-squared		-0.009		

Dependent Variable: MSCI World

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.012	0.005	2.198	0.029**
CPI _{t-1}	-0.571	0.886	-0.644	0.520
AUDBRL _{t-1}	-0.049	0.168	-0.288	0.774
BCOM _{t-1}	0.013	0.096	0.133	0.895
BOVESPA _{t-1}	-0.035	0.077	-0.458	0.648
CHFBRL _{t-1}	0.098	0.168	0.582	0.561
EM HY _{t-1}	-0.216	0.183	-1.183	0.238
EURBRL _{t-1}	-0.017	0.214	-0.079	0.937
USDBRL _{t-1}	0.110	0.192	0.575	0.566
MSCI World _{t-1}	0.316	0.186	1.693	0.092*
MSCI EM _{t-1}	0.128	0.127	1.005	0.316
NOKBRL _{t-1}	-0.232	0.165	-1.406	0.161
S&P Energy _{t-1}	-0.100	0.064	-1.565	0.119
S&P Utilities _{t-1}	0.023	0.084	0.275	0.783
US HY _{t-1}	0.139	0.278	0.501	0.617
Gold _{t-1}	-0.119	0.086	-1.381	0.169
NAREIT _{t-1}	-0.199	0.084	-2.373	0.019**
R-squared			0.087	
Adj. R-squared			0.020	

Dependent Variable: MSCI EM

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.011	0.006	1.898	0.059*
CPI _{t-1}	-0.916	0.952	-0.962	0.337
AUDBRL _{t-1}	0.079	0.181	0.437	0.663
BCOM _{t-1}	-0.068	0.103	-0.658	0.511
BOVESPA _{t-1}	-0.023	0.082	-0.281	0.779
CHFBRL _{t-1}	-0.047	0.180	-0.262	0.794
EM HY _{t-1}	-0.100	0.196	-0.512	0.609
EURBRL _{t-1}	0.029	0.230	0.125	0.901
USDBRL _{t-1}	-0.167	0.206	-0.813	0.417
MSCI World _{t-1}	0.301	0.200	1.504	0.134

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Dependent Variable: MSCI EM (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
MSCI EM _{t-1}	0.052	0.137	0.383	0.702
NOKBRL _{t-1}	-0.159	0.177	-0.899	0.369
S&P Energy _{t-1}	-0.117	0.069	-1.702	0.090*
S&P Utilities _{t-1}	0.088	0.090	0.975	0.331
US HY _{t-1}	0.289	0.298	0.968	0.334
Gold _{t-1}	-0.034	0.092	-0.372	0.710
NAREIT _{t-1}	-0.229	0.090	-2.537	0.012**
R-squared			0.071	
Adj. R-squared			0.003	

Dependent Variable: NOK/BRL

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.007	0.005	1.533	0.127
CPI _{t-1}	-1.094	0.770	-1.422	0.156
AUDBRL _{t-1}	-0.236	0.146	-1.613	0.108
BCOM _{t-1}	0.067	0.084	0.806	0.421
BOVESPA _{t-1}	0.012	0.067	0.177	0.860
CHFBRL _{t-1}	0.235	0.146	1.611	0.109
EM HY _{t-1}	-0.166	0.159	-1.049	0.295
EURBRL _{t-1}	-0.094	0.186	-0.506	0.613
USDBRL _{t-1}	0.205	0.167	1.233	0.219
MSCI World _{t-1}	-0.029	0.162	-0.180	0.857
MSCI EM _{t-1}	0.189	0.111	1.714	0.088*
NOKBRL _{t-1}	-0.059	0.143	-0.410	0.682
S&P Energy _{t-1}	-0.042	0.056	-0.758	0.449
S&P Utilities _{t-1}	-0.006	0.073	-0.080	0.936
US HY _{t-1}	0.187	0.241	0.776	0.439
Gold _{t-1}	-0.190	0.075	-2.551	0.011**
NAREIT _{t-1}	-0.090	0.073	-1.228	0.221
R-squared			0.091	
Adj. R-squared			0.024	

Dependent Variable: S&P 500 Energy				
Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.012	0.008	1.521	0.130
CPI _{t-1}	-0.124	1.347	-0.092	0.927
AUDBRL _{t-1}	-0.222	0.256	-0.867	0.387
BCOM _{t-1}	0.139	0.146	0.950	0.343
BOVESPA _{t-1}	-0.047	0.117	-0.405	0.686
CHFBRL _{t-1}	0.168	0.255	0.660	0.510
EM HY _{t-1}	-0.844	0.277	-3.041	0.003***
EURBRL _{t-1}	0.220	0.326	0.675	0.500
USDBRL _{t-1}	0.434	0.291	1.489	0.138
MSCI World _{t-1}	-0.152	0.283	-0.537	0.592
MSCI EM _{t-1}	0.417	0.193	2.154	0.032**
NOKBRL _{t-1}	-0.268	0.251	-1.068	0.287
S&P Energy _{t-1}	-0.086	0.097	-0.885	0.377
S&P Utilities _{t-1}	0.064	0.127	0.501	0.617
US HY _{t-1}	0.566	0.422	1.340	0.182
Gold _{t-1}	-0.325	0.131	-2.488	0.014**
NAREIT _{t-1}	-0.077	0.128	-0.602	0.547
R-squared			0.118	
Adj. R-squared			0.053	

Dependent Variable: S&P 500 Utilities				
Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.012	0.006	2.000	0.047**
CPI _{t-1}	-0.037	0.988	-0.037	0.970
AUDBRL _{t-1}	0.038	0.188	0.205	0.838
BCOM _{t-1}	0.131	0.107	1.219	0.224
BOVESPA _{t-1}	-0.118	0.085	-1.379	0.169
CHFBRL _{t-1}	-0.154	0.187	-0.821	0.413
EM HY _{t-1}	-0.517	0.204	-2.541	0.012**
EURBRL _{t-1}	0.204	0.239	0.853	0.395
USDBRL _{t-1}	0.211	0.214	0.987	0.325
MSCI World _{t-1}	0.380	0.208	1.829	0.069*

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Dependent Variable: S&P 500 Utilities (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
MSCI EM _{t-1}	-0.016	0.142	-0.111	0.912
NOKBRL _{t-1}	-0.193	0.184	-1.048	0.296
S&P Energy _{t-1}	-0.037	0.071	-0.524	0.601
S&P Utilities _{t-1}	-0.112	0.093	-1.201	0.231
US HY _{t-1}	0.002	0.310	0.008	0.994
Gold _{t-1}	-0.082	0.096	-0.855	0.393
NAREIT _{t-1}	-0.051	0.094	-0.549	0.584
R-squared			0.110	
Adj. R-squared			0.045	

Dependent Variable: US HY

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.012	0.005	2.503	0.013**
CPI _{t-1}	-0.742	0.786	-0.945	0.346
AUDBRL _{t-1}	-0.118	0.149	-0.791	0.430
BCOM _{t-1}	-0.030	0.085	-0.346	0.729
BOVESPA _{t-1}	-0.054	0.068	-0.789	0.431
CHFBRL _{t-1}	0.043	0.149	0.288	0.774
EM HY _{t-1}	0.074	0.162	0.460	0.646
EURBRL _{t-1}	0.098	0.190	0.517	0.606
USDBRL _{t-1}	-0.041	0.170	-0.242	0.809
MSCI World _{t-1}	0.261	0.165	1.581	0.115
MSCI EM _{t-1}	0.100	0.113	0.889	0.375
NOKBRL _{t-1}	-0.187	0.146	-1.278	0.203
S&P Energy _{t-1}	-0.061	0.057	-1.073	0.284
S&P Utilities _{t-1}	0.075	0.074	1.009	0.314
US HY _{t-1}	-0.138	0.246	-0.561	0.576
Gold _{t-1}	-0.052	0.076	-0.683	0.495
NAREIT _{t-1}	-0.116	0.074	-1.562	0.120
R-squared			0.072	
Adj. R-squared			0.004	

Dependent Variable: Gold				
Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.020	0.007	3.030	0.003***
CPI _{t-1}	-1.528	1.114	-1.372	0.171
AUDBRL _{t-1}	-0.468	0.212	-2.212	0.028**
BCOM _{t-1}	0.228	0.121	1.884	0.061*
BOVESPA _{t-1}	0.019	0.096	0.202	0.840
CHFBRL _{t-1}	0.217	0.211	1.029	0.305
EM HY _{t-1}	-0.001	0.229	-0.005	0.996
EURBRL _{t-1}	-0.053	0.270	-0.197	0.844
USDBRL _{t-1}	0.018	0.241	0.074	0.941
MSCI World _{t-1}	-0.193	0.234	-0.823	0.411
MSCI EM _{t-1}	0.196	0.160	1.228	0.221
NOKBRL _{t-1}	0.195	0.207	0.940	0.348
S&P Energy _{t-1}	-0.054	0.080	-0.675	0.500
S&P Utilities _{t-1}	0.098	0.105	0.933	0.352
US HY _{t-1}	-0.289	0.349	-0.828	0.408
Gold _{t-1}	-0.082	0.108	-0.760	0.448
NAREIT _{t-1}	-0.000	0.105	-0.000	1.000
R-squared		0.086		
Adj. R-squared		0.019		

Dependent Variable: NAREIT				
Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.012	0.007	1.664	0.098*
CPI _{t-1}	0.209	1.206	0.173	0.862
AUDBRL _{t-1}	0.114	0.229	0.499	0.619
BCOM _{t-1}	0.147	0.131	1.125	0.262
BOVESPA _{t-1}	-0.182	0.104	-1.747	0.082*
CHFBRL _{t-1}	-0.344	0.229	-1.507	0.133
EM HY _{t-1}	0.410	0.248	1.651	0.100
EURBRL _{t-1}	0.256	0.292	0.877	0.381
USDBRL _{t-1}	-0.003	0.261	-0.010	0.992
MSCI World _{t-1}	0.691	0.254	2.724	0.007***

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Dependent Variable: NAREIT (continued)				
Variable	Coef.	Std.Err.	t-stat	p-value
MSCI EM _{t-1}	-0.100	0.173	-0.577	0.565
NOKBRL _{t-1}	-0.408	0.224	-1.816	0.071*
S&P Energy _{t-1}	-0.111	0.087	-1.272	0.205
S&P Utilities _{t-1}	0.137	0.114	1.201	0.231
US HY _{t-1}	-0.545	0.378	-1.442	0.151
Gold _{t-1}	-0.137	0.117	-1.175	0.241
NAREIT _{t-1}	-0.260	0.114	-2.276	0.024**
R-squared			0.125	
Adj. R-squared			0.061	

Note: ***, **, * denote significance at the 1%, 5% and 10% level.

Table B.1.1.37: Regression Results of the Third Model for Brazil

Dependent Variable: CPI Brazil Monthly				
Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.002	0.000	4.645	0.000***
CPI _{t-1}	0.555	8.264	0.000***	0.000***
AUDBRL _{t-1}	-0.007	0.015	-0.465	0.643
BCOM _{t-1}	0.025	0.009	2.930	0.004***
BOVESPA _{t-1}	-0.006	0.007	-0.898	0.370
CHFBRL _{t-1}	0.001	0.014	0.039	0.969
EM HY _{t-1}	-0.018	0.019	-0.954	0.342
EURBRL _{t-1}	0.009	0.018	0.527	0.599
USDBRL _{t-1}	-0.019	0.023	-0.841	0.401
MSCI World _{t-1}	0.009	0.016	0.568	0.571
MSCI EM _{t-1}	-0.001	0.012	-0.050	0.960
NOKBRL _{t-1}	-0.025	0.014	-1.701	0.091*
S&P Energy _{t-1}	0.001	0.006	0.162	0.871
S&P Utilities _{t-1}	-0.021	0.010	-2.152	0.033**
Infrastructure _{t-1}	0.016	0.018	0.911	0.364
TIPS _{t-1}	0.008	0.022	0.368	0.714

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Dependent Variable: CPI Brazil Monthly (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
US HY _{t-1}	0.014	0.031	0.442	0.659
Gold _{t-1}	0.002	0.008	0.205	0.838
NAREIT _{t-1}	0.007	0.011	0.688	0.493
R-squared			0.455	
Adj. R-squared			0.386	

Dependent Variable: AUD/BRL

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.010	0.004	2.192	0.029**
CPI _{t-1}	-1.079	0.722	-1.495	0.136
AUDBRL _{t-1}	-0.219	0.137	-1.592	0.113
BCOM _{t-1}	0.070	0.078	0.896	0.371
BOVESPA _{t-1}	-0.036	0.062	-0.580	0.563
CHFBRL _{t-1}	-0.001	0.137	-0.004	0.996
EM HY _{t-1}	-0.032	0.149	-0.214	0.831
EURBRL _{t-1}	-0.148	0.175	-0.846	0.398
USDBRL _{t-1}	0.257	0.156	1.643	0.102
MSCI World _{t-1}	0.060	0.152	0.396	0.693
MSCI EM _{t-1}	0.136	0.104	1.316	0.190
NOKBRL _{t-1}	0.075	0.134	0.555	0.579
S&P Energy _{t-1}	-0.051	0.052	-0.973	0.332
S&P Utilities _{t-1}	0.069	0.068	1.009	0.314
Infrastructure _{t-1}	0.016	0.018	0.911	0.364
TIPS _{t-1}	0.008	0.022	0.368	0.714
US HY _{t-1}	0.056	0.226	0.247	0.805
Gold _{t-1}	-0.137	0.070	-1.962	0.051*
NAREIT _{t-1}	-0.193	0.068	-2.825	0.005***
R-squared			0.123	
Adj. R-squared			0.059	

Dependent Variable: AUD/BRL				
Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.010	0.006	1.771	0.079*
CPI _{t-1}	-0.519	0.832	-0.624	0.533
AUDBRL _{t-1}	-0.225	0.186	-1.206	0.230
BCOM _{t-1}	-0.008	0.107	-0.078	0.938
BOVESPA _{t-1}	-0.042	0.081	-0.519	0.604
CHFBRL _{t-1}	-0.153	0.175	-0.873	0.384
EM HY _{t-1}	0.061	0.239	0.256	0.799
EURBRL _{t-1}	0.155	0.220	0.706	0.481
USDBRL _{t-1}	-0.377	0.280	-1.344	0.181
MSCI World _{t-1}	0.113	0.198	0.573	0.568
MSCI EM _{t-1}	0.099	0.147	0.672	0.502
NOKBRL _{t-1}	0.045	0.178	0.251	0.802
S&P Energy _{t-1}	0.037	0.069	0.531	0.596
S&P Utilities _{t-1}	0.146	0.123	1.191	0.236
Infrastructure _{t-1}	-0.339	0.219	-1.546	0.124
TIPS _{t-1}	0.597	0.271	2.201	0.029**
US HY _{t-1}	-0.002	0.379	-0.004	0.997
Gold _{t-1}	-0.067	0.100	-0.672	0.502
NAREIT _{t-1}	-0.174	0.132	-1.311	0.192
R-squared	0.107			
Adj. R-squared	-0.006			

Dependent Variable: Bloomberg Commodity				
Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.007	0.006	1.064	0.289
CPI _{t-1}	-0.179	0.945	-0.190	0.850
AUDBRL _{t-1}	-0.409	0.212	-1.930	0.056*
BCOM _{t-1}	0.108	0.121	0.891	0.374
BOVESPA _{t-1}	0.117	0.092	1.281	0.202
CHFBRL _{t-1}	0.066	0.199	0.334	0.739
EM HY _{t-1}	-0.417	0.272	-1.533	0.127
EURBRL _{t-1}	-0.106	0.250	-0.424	0.672

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Dependent Variable: Bloomberg Commodity (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
USDBRL _{t-1}	0.093	0.319	0.291	0.771
MSCI World _{t-1}	-0.045	0.225	-0.200	0.842
MSCI EM _{t-1}	0.241	0.168	1.439	0.152
NOKBRL _{t-1}	0.250	0.203	1.236	0.219
S&P Energy _{t-1}	0.053	0.079	0.673	0.502
S&P Utilities _{t-1}	0.218	0.140	1.564	0.120
Infrastructure _{t-1}	-0.455	0.249	-1.825	0.070*
TIPS _{t-1}	0.119	0.308	0.386	0.700
US HY _{t-1}	0.353	0.431	0.820	0.414
Gold _{t-1}	-0.147	0.114	-1.291	0.199
NAREIT _{t-1}	0.073	0.151	0.486	0.628
R-squared			0.113	
Adj. R-squared			0.000	

Dependent Variable: BOVESPA

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.013	0.010	1.297	0.197
CPI _{t-1}	-1.496	1.487	-1.007	0.316
AUSBRL _{t-1}	0.319	0.333	0.957	0.340
BCOM _{t-1}	-0.140	0.191	-0.735	0.464
BOVESPA _{t-1}	0.219	0.144	1.520	0.131
CHFBRL _{t-1}	0.447	0.313	1.430	0.155
EM HY _{t-1}	-0.111	0.427	-0.260	0.795
EURBRL _{t-1}	-0.459	0.393	-1.166	0.246
USDBRL _{t-1}	0.490	0.501	0.978	0.330
MSCI World _{t-1}	-0.190	0.354	-0.538	0.591
MSCI EM _{t-1}	-0.054	0.263	-0.205	0.838
NOKBRL _{t-1}	-0.062	0.319	-0.195	0.846
S&P Energy _{t-1}	-0.013	0.124	-0.106	0.915
S&P Utilities _{t-1}	-0.076	0.220	-0.347	0.729
Infrastructure _{t-1}	0.461	0.392	1.177	0.241
TIPS _{t-1}	0.150	0.485	0.309	0.758
US HY _{t-1}	-0.482	0.677	-0.713	0.477

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Dependent Variable: BOVESPA (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
Gold _{t-1}	-0.068	0.179	-0.378	0.706
NAREIT _{t-1}	-0.102	0.237	-0.431	0.667
R-squared			0.071	
Adj. R-squared			-0.046	

Dependent Variable: CHFBRL

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.013	0.006	2.064	0.041**
CPI _{t-1}	-0.428	0.966	-0.443	0.658
AUDBRL _{t-1}	-0.323	0.216	-1.491	0.138
BCOM _{t-1}	-0.048	0.124	-0.385	0.701
BOVESPA _{t-1}	-0.087	0.093	-0.931	0.354
CHFBRL _{t-1}	-0.203	0.203	-0.998	0.320
EM HY _{t-1}	0.083	0.278	0.299	0.765
EURBRL _{t-1}	0.145	0.256	0.567	0.571
USDBRL _{t-1}	-0.243	0.326	-0.748	0.456
MSCI World _{t-1}	0.228	0.230	0.994	0.322
MSCI EM _{t-1}	0.181	0.171	1.055	0.293
NOKBRL _{t-1}	0.061	0.207	0.293	0.770
S&P Energy _{t-1}	0.013	0.081	0.161	0.872
S&P Utilities _{t-1}	0.159	0.143	1.114	0.267
Infrastructure _{t-1}	-0.264	0.254	-1.039	0.300
TIPS _{t-1}	0.462	0.315	1.466	0.145
US HY _{t-1}	-0.087	0.440	-0.199	0.843
Gold _{t-1}	-0.146	0.116	-1.259	0.210
NAREIT _{t-1}	-0.202	0.154	-1.316	0.190
R-squared			0.097	
Adj. R-squared			-0.017	

Dependent Variable: EM HY

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.011	0.006	1.898	0.060*

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Dependent Variable: EM HY (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
CPI _{t-1}	-0.174	0.851	-0.204	0.838
AUDBRL _{t-1}	-0.121	0.191	-0.636	0.526
BCOM _{t-1}	-0.073	0.109	-0.665	0.507
BOVESPA _{t-1}	0.061	0.082	0.739	0.461
CHFBRL _{t-1}	0.061	0.179	0.339	0.735
EM HY _{t-1}	0.081	0.245	0.330	0.742
EURBRL _{t-1}	0.134	0.225	0.595	0.552
USDBRL _{t-1}	-0.555	0.287	-1.934	0.055*
MSCI World _{t-1}	0.407	0.202	2.013	0.046**
MSCI EM _{t-1}	0.025	0.151	0.163	0.871
NOKBRL _{t-1}	-0.004	0.182	-0.023	0.982
S&P Energy _{t-1}	0.037	0.071	0.524	0.601
S&P Utilities _{t-1}	0.319	0.126	2.538	0.012**
Infrastructure _{t-1}	-0.468	0.224	-2.086	0.039**
TIPS _{t-1}	0.452	0.277	1.631	0.105
US HY _{t-1}	-0.020	0.387	-0.051	0.959
Gold _{t-1}	-0.060	0.102	-0.586	0.559
NAREIT _{t-1}	-0.183	0.135	-1.348	0.180
R-squared			0.118	
Adj. R-squared			0.006	

Dependent Variable: EURBRL

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.012	0.006	2.011	0.046**
CPI _{t-1}	-0.809	0.922	-0.877	0.382
AUDBRL _{t-1}	-0.373	0.207	-1.806	0.073*
BCOM _{t-1}	0.075	0.118	0.635	0.526
BOVESPA _{t-1}	-0.010	0.089	-0.107	0.915
CHFBRL _{t-1}	-0.066	0.194	-0.339	0.735
EM HY _{t-1}	0.294	0.265	1.110	0.269
EURBRL _{t-1}	0.150	0.244	0.616	0.539
USDBRL _{t-1}	-0.331	0.311	-1.066	0.288
MSCI World _{t-1}	0.224	0.219	1.020	0.310

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Dependent Variable: EURBRL (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
MSCI EM _{t-1}	0.109	0.163	0.669	0.504
NOKBRL _{t-1}	0.125	0.198	0.631	0.529
S&P Energy _{t-1}	-0.026	0.077	-0.334	0.739
S&P Utilities _{t-1}	0.153	0.136	1.126	0.262
Infrastructure _{t-1}	-0.390	0.243	-1.604	0.111
TIPS _{t-1}	0.544	0.301	1.810	0.072*
US HY _{t-1}	-0.256	0.420	-0.610	0.543
Gold _{t-1}	-0.206	0.111	-1.859	0.065*
NAREIT _{t-1}	-0.105	0.147	-0.716	0.475
R-squared			0.117	
Adj. R-squared			0.005	

Dependent Variable: USDBRL

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.012	0.007	1.640	0.103
CPI _{t-1}	-0.515	1.072	-0.481	0.631
AUSBRL _{t-1}	-0.242	0.240	-1.007	0.316
BCOM _{t-1}	0.102	0.137	0.745	0.457
BOVESPA _{t-1}	0.010	0.104	0.098	0.922
CHFBRL _{t-1}	-0.054	0.225	-0.237	0.813
EM HY _{t-1}	0.213	0.308	0.691	0.491
EURBRL _{t-1}	0.216	0.284	0.762	0.447
USDBRL _{t-1}	-0.386	0.361	-1.068	0.287
MSCI World _{t-1}	0.295	0.255	1.158	0.249
MSCI EM _{t-1}	-0.002	0.190	-0.010	0.992
NOKBRL _{t-1}	0.020	0.230	0.085	0.932
S&P Energy _{t-1}	0.032	0.089	0.354	0.724
S&P Utilities _{t-1}	0.240	0.158	1.517	0.132
Infrastructure _{t-1}	-0.497	0.282	-1.760	0.081*
TIPS _{t-1}	0.383	0.349	1.096	0.275
US HY _{t-1}	-0.265	0.488	-0.543	0.588
Gold _{t-1}	-0.078	0.129	-0.606	0.545

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Dependent Variable: USDBRL (continued)				
Variable	Coef.	Std.Err.	t-stat	p-value
NAREIT _{t-1}	-0.071	0.171	-0.413	0.680
R-squared			0.059	
Adj. R-squared			-0.060	

Dependent Variable: MSCI World				
Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.013	0.007	1.982	0.049**
CPI _{t-1}	0.156	1.017	0.153	0.879
AUDBRL _{t-1}	-0.184	0.228	-0.807	0.421
BCOM _{t-1}	-0.064	0.130	-0.491	0.624
BOVESPA _{t-1}	0.106	0.098	1.079	0.282
CHFBRL _{t-1}	0.106	0.214	0.493	0.623
EM HY _{t-1}	-0.456	0.292	-1.559	0.121
EURBRL _{t-1}	0.224	0.269	0.832	0.407
USDBRL _{t-1}	-0.082	0.343	-0.239	0.811
MSCI World _{t-1}	0.117	0.242	0.483	0.630
MSCI EM _{t-1}	0.224	0.180	1.240	0.217
NOKBRL _{t-1}	-0.187	0.218	-0.857	0.393
S&P Energy _{t-1}	0.036	0.085	0.423	0.673
S&P Utilities _{t-1}	0.107	0.150	0.711	0.478
Infrastructure _{t-1}	-0.411	0.268	-1.533	0.127
TIPS _{t-1}	0.404	0.332	1.218	0.225
US HY _{t-1}	0.370	0.463	0.798	0.426
Gold _{t-1}	-0.131	0.123	-1.069	0.287
NAREIT _{t-1}	-0.121	0.162	-0.749	0.455
R-squared			0.101	
Adj. R-squared			-0.013	

Dependent Variable: MSCI EM				
Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.007	0.007	1.089	0.278
CPI _{t-1}	-0.092	0.988	-0.093	0.926

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Dependent Variable: MSCI EM (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
AUDBRL _{t-1}	-0.047	0.221	-0.212	0.832
BCOM _{t-1}	-0.071	0.127	-0.561	0.576
BOVESPA _{t-1}	0.131	0.096	1.370	0.173
CHFBRL _{t-1}	-0.003	0.208	-0.016	0.987
EM HY _{t-1}	-0.203	0.284	-0.715	0.476
EURBRL _{t-1}	0.262	0.261	1.003	0.318
USDBRL _{t-1}	-0.369	0.333	-1.107	0.270
MSCI World _{t-1}	0.235	0.235	1.001	0.318
MSCI EM _{t-1}	-0.012	0.175	-0.070	0.944
NOKBRL _{t-1}	-0.204	0.212	-0.965	0.336
S&P Energy _{t-1}	-0.009	0.082	-0.109	0.913
S&P Utilities _{t-1}	0.088	0.146	0.605	0.546
Infrastructure _{t-1}	-0.164	0.260	-0.630	0.530
TIPS _{t-1}	0.685	0.322	2.128	0.035**
US HY _{t-1}	0.113	0.450	0.252	0.801
Gold _{t-1}	-0.120	0.119	-1.006	0.316
NAREIT _{t-1}	-0.180	0.157	-1.145	0.254
R-squared			0.087	
Adj. R-squared			-0.029	

Dependent Variable: NOKBRL

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.006	0.006	1.098	0.274
CPI _{t-1}	-0.433	0.861	-0.503	0.616
AUDBRL _{t-1}	-0.290	0.193	-1.500	0.136
BCOM _{t-1}	-0.017	0.110	-0.153	0.879
BOVESPA _{t-1}	0.083	0.083	0.992	0.323
CHFBRL _{t-1}	0.106	0.181	0.585	0.560
EM HY _{t-1}	-0.248	0.248	-1.002	0.318
EURBRL _{t-1}	0.264	0.228	1.159	0.248
USDBRL _{t-1}	-0.286	0.290	-0.984	0.327
MSCI World _{t-1}	-0.032	0.205	-0.157	0.875
MSCI EM _{t-1}	0.215	0.153	1.407	0.162

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Dependent Variable: NOKBRL (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
NOKBRL _{t-1}	-0.051	0.185	-0.275	0.783
S&P Energy _{t-1}	0.040	0.072	0.560	0.576
S&P Utilities _{t-1}	0.053	0.127	0.413	0.680
Infrastructure _{t-1}	-0.376	0.227	-1.657	0.100*
TIPS _{t-1}	0.501	0.281	1.784	0.077*
US HY _{t-1}	0.321	0.392	0.818	0.415
Gold _{t-1}	-0.202	0.104	-1.945	0.054*
NAREIT _{t-1}	0.019	0.137	0.141	0.888
R-squared			0.109	
Adj. R-squared			-0.003	

Dependent Variable: S&P Energy

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.013	0.011	1.221	0.224
CPI _{t-1}	0.447	1.595	0.280	0.780
AUDBRL _{t-1}	-0.490	0.358	-1.370	0.173
BCOM _{t-1}	0.212	0.204	1.037	0.301
BOVESPA _{t-1}	0.196	0.154	1.269	0.207
CHFBRL _{t-1}	0.203	0.336	0.605	0.546
EM HY _{t-1}	-1.397	0.459	-3.047	0.003***
EURBRL _{t-1}	0.371	0.422	0.879	0.381
USDBRL _{t-1}	1.346	0.538	2.504	0.013**
MSCI World _{t-1}	-0.384	0.379	-1.013	0.313
MSCI EM _{t-1}	0.723	0.283	2.559	0.012**
NOKBRL _{t-1}	-0.120	0.342	-0.350	0.727
S&P Energy _{t-1}	0.066	0.133	0.500	0.618
S&P Utilities _{t-1}	0.180	0.236	0.764	0.446
Infrastructure _{t-1}	-0.403	0.420	-0.960	0.339
TIPS _{t-1}	-0.250	0.520	-0.481	0.632
US HY _{t-1}	0.332	0.726	0.457	0.648
Gold _{t-1}	-0.334	0.192	-1.739	0.084*
NAREIT _{t-1}	0.162	0.254	0.636	0.526
R-squared			0.181	

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Dependent Variable: S&P Energy (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
Adj. R-squared			0.077	

Dependent Variable: S&P Utilities

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.014	0.008	1.808	0.073*
CPI _{t-1}	0.707	1.181	0.599	0.550
AUDBRL _{t-1}	0.042	0.265	0.157	0.876
BCOM _{t-1}	0.091	0.151	0.598	0.551
BOVESPA _{t-1}	-0.094	0.114	-0.821	0.413
CHFBRL _{t-1}	-0.410	0.248	-1.651	0.101
EM HY _{t-1}	-0.116	0.340	-0.343	0.732
EURBRL _{t-1}	0.239	0.313	0.765	0.445
USDBRL _{t-1}	0.063	0.398	0.157	0.875
MSCI World _{t-1}	0.429	0.281	1.528	0.129
MSCI EM _{t-1}	-0.175	0.209	-0.838	0.403
NOKBRL _{t-1}	0.046	0.253	0.181	0.857
S&P Energy _{t-1}	0.019	0.099	0.197	0.844
S&P Utilities _{t-1}	-0.073	0.174	-0.421	0.674
Infrastructure _{t-1}	-0.414	0.311	-1.329	0.186
TIPS _{t-1}	0.389	0.385	1.011	0.314
US HY _{t-1}	-0.353	0.538	-0.657	0.512
Gold _{t-1}	-0.072	0.142	-0.505	0.614
NAREIT _{t-1}	0.035	0.188	0.186	0.852
R-squared			0.108	
Adj. R-squared			-0.005	

Dependent Variable: Infrastructure

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.012	0.006	1.869	0.064*
CPI _{t-1}	0.546	0.967	0.564	0.573
AUDBRL _{t-1}	-0.129	0.217	-0.593	0.554
BCOM _{t-1}	0.082	0.124	0.664	0.508

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Dependent Variable: Infrastructure (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
BOVESPA _{t-1}	0.028	0.094	0.296	0.767
CHFBRL _{t-1}	-0.134	0.203	-0.658	0.511
EM HY _{t-1}	-0.437	0.278	-1.572	0.118
EURBRL _{t-1}	0.335	0.256	1.309	0.193
USDBRL _{t-1}	0.091	0.326	0.279	0.781
MSCI World _{t-1}	0.160	0.230	0.696	0.488
MSCI EM _{t-1}	0.185	0.171	1.082	0.281
NOKBRL _{t-1}	-0.254	0.207	-1.225	0.223
S&P Energy _{t-1}	0.041	0.081	0.509	0.611
S&P Utilities _{t-1}	0.166	0.143	1.162	0.247
Infrastructure _{t-1}	-0.347	0.255	-1.360	0.176
TIPS _{t-1}	0.212	0.315	0.672	0.503
US HY _{t-1}	0.074	0.440	0.168	0.867
Gold _{t-1}	-0.078	0.117	-0.671	0.503
NAREIT _{t-1}	-0.069	0.154	-0.447	0.656
R-squared	0.094			
Adj. R-squared	-0.021			

Dependent Variable: TIPS

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.009	0.007	1.350	0.179
CPI _{t-1}	-0.003	1.042	-0.003	0.998
AUSBRL _{t-1}	-0.113	0.234	-0.482	0.630
BCOM _{t-1}	0.012	0.134	0.090	0.929
BOVESPA _{t-1}	-0.029	0.101	-0.290	0.773
CHFBRL _{t-1}	-0.134	0.219	-0.611	0.542
EM HY _{t-1}	0.183	0.300	0.610	0.543
EURBRL _{t-1}	0.341	0.276	1.235	0.219
USDBRL _{t-1}	-0.487	0.351	-1.386	0.168
MSCI World _{t-1}	0.315	0.248	1.272	0.206
MSCI EM _{t-1}	-0.042	0.185	-0.229	0.819
NOKBRL _{t-1}	-0.008	0.224	-0.035	0.972
S&P Energy _{t-1}	0.021	0.087	0.246	0.806

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Dependent Variable: TIPS (continued)				
Variable	Coef.	Std.Err.	t-stat	p-value
S&P Utilities _{t-1}	0.227	0.154	1.474	0.143
Infrastructure _{t-1}	-0.546	0.275	-1.986	0.049**
TIPS _{t-1}	0.326	0.340	0.960	0.339
US HY _{t-1}	-0.178	0.475	-0.374	0.709
Gold _{t-1}	-0.005	0.126	-0.036	0.971
NAREIT _{t-1}	-0.035	0.166	-0.211	0.833
R-squared			0.064	
Adj. R-squared			-0.055	

Dependent Variable: US HY				
Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.014	0.006	2.275	0.024**
CPI _{t-1}	-0.316	0.906	-0.349	0.728
AUDBRL _{t-1}	-0.217	0.203	-1.067	0.288
BCOM _{t-1}	-0.029	0.116	-0.253	0.800
BOVESPA _{t-1}	0.060	0.088	0.680	0.498
CHFBRL _{t-1}	0.040	0.191	0.209	0.835
EM HY _{t-1}	0.022	0.261	0.084	0.933
EURBRL _{t-1}	0.206	0.240	0.858	0.392
USDBRL _{t-1}	-0.200	0.306	-0.654	0.514
MSCI World _{t-1}	0.267	0.216	1.237	0.218
MSCI EM _{t-1}	0.085	0.161	0.532	0.596
NOKBRL _{t-1}	-0.035	0.194	-0.181	0.857
S&P Energy _{t-1}	0.031	0.076	0.408	0.684
S&P Utilities _{t-1}	0.212	0.134	1.581	0.116
Infrastructure _{t-1}	-0.390	0.239	-1.634	0.104
TIPS _{t-1}	0.299	0.296	1.013	0.313
US HY _{t-1}	-0.200	0.413	-0.485	0.629
Gold _{t-1}	-0.036	0.109	-0.330	0.742
NAREIT _{t-1}	-0.074	0.144	-0.512	0.610
R-squared			0.063	
Adj. R-squared			-0.056	

Dependent Variable: Gold				
Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.019	0.007	2.658	0.009***
CPI _{t-1}	-0.891	1.096	-0.813	0.418
AUDBRL _{t-1}	-0.307	0.246	-1.251	0.213
BCOM _{t-1}	0.160	0.141	1.138	0.257
BOVESPA _{t-1}	0.009	0.106	0.081	0.935
CHFBRL _{t-1}	0.119	0.231	0.517	0.606
EM HY _{t-1}	0.261	0.315	0.829	0.408
EURBRL _{t-1}	0.391	0.290	1.347	0.180
USDBRL _{t-1}	-1.513	0.369	-4.094	0.000***
MSCI World _{t-1}	0.215	0.261	0.825	0.411
MSCI EM _{t-1}	-0.040	0.194	-0.207	0.836
NOKBRL _{t-1}	0.096	0.235	0.407	0.685
S&P Energy _{t-1}	0.049	0.091	0.536	0.593
S&P Utilities _{t-1}	0.327	0.162	2.023	0.045**
Infrastructure _{t-1}	-0.687	0.289	-2.379	0.019**
TIPS _{t-1}	1.247	0.357	3.490	0.001***
US HY _{t-1}	-0.377	0.499	-0.756	0.451
Gold _{t-1}	-0.050	0.132	-0.382	0.703
NAREIT _{t-1}	-0.111	0.175	-0.639	0.524
R-squared	0.224			
Adj. R-squared	0.126			

Dependent Variable: NAREIT				
Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.008	0.008	1.019	0.310
CPI _{t-1}	1.431	1.186	1.207	0.230
AUDBRL _{t-1}	0.082	0.266	0.308	0.759
BCOM _{t-1}	-0.029	0.152	-0.191	0.849
BOVESPA _{t-1}	0.003	0.115	0.028	0.978
CHFBRL _{t-1}	-0.250	0.250	-1.000	0.319
EM HY _{t-1}	-0.212	0.341	-0.621	0.536
EURBRL _{t-1}	0.366	0.314	1.167	0.245

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Dependent Variable: NAREIT (continued)				
Variable	Coef.	Std.Err.	t-stat	p-value
USDBRL _{<i>t</i>-1}	-0.045	0.400	-0.114	0.910
MSCI World _{<i>t</i>-1}	0.457	0.282	1.621	0.107
MSCI EM _{<i>t</i>-1}	-0.108	0.210	-0.514	0.608
NOKBRL _{<i>t</i>-1}	-0.307	0.254	-1.205	0.230
S&P Energy _{<i>t</i>-1}	0.030	0.099	0.301	0.764
S&P Utilities _{<i>t</i>-1}	0.260	0.175	1.486	0.140
Infrastructure _{<i>t</i>-1}	-0.439	0.313	-1.405	0.162
TIPS _{<i>t</i>-1}	0.061	0.387	0.158	0.874
US HY _{<i>t</i>-1}	0.274	0.540	0.506	0.613
Gold _{<i>t</i>-1}	-0.004	0.143	-0.026	0.979
NAREIT _{<i>t</i>-1}	-0.266	0.189	-1.406	0.162
R-squared			0.098	
Adj. R-squared			-0.017	

Note: ***, **, * denote significance at the 1%, 5% and 10% level.

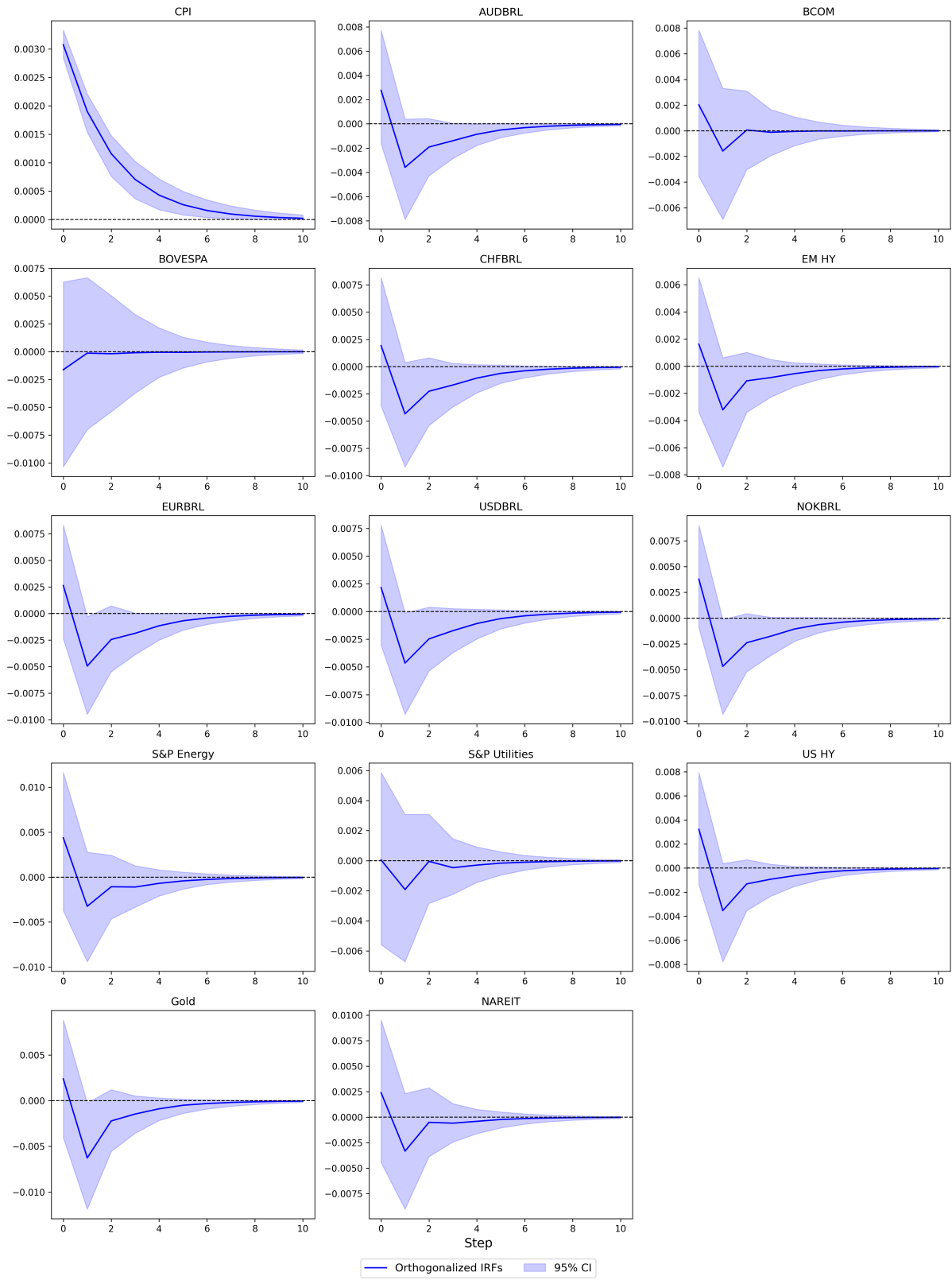


Figure B.1.1.1: Orthogonalized IRFs for Impulse Shock of Monthly Inflation for the First Model for Brazil

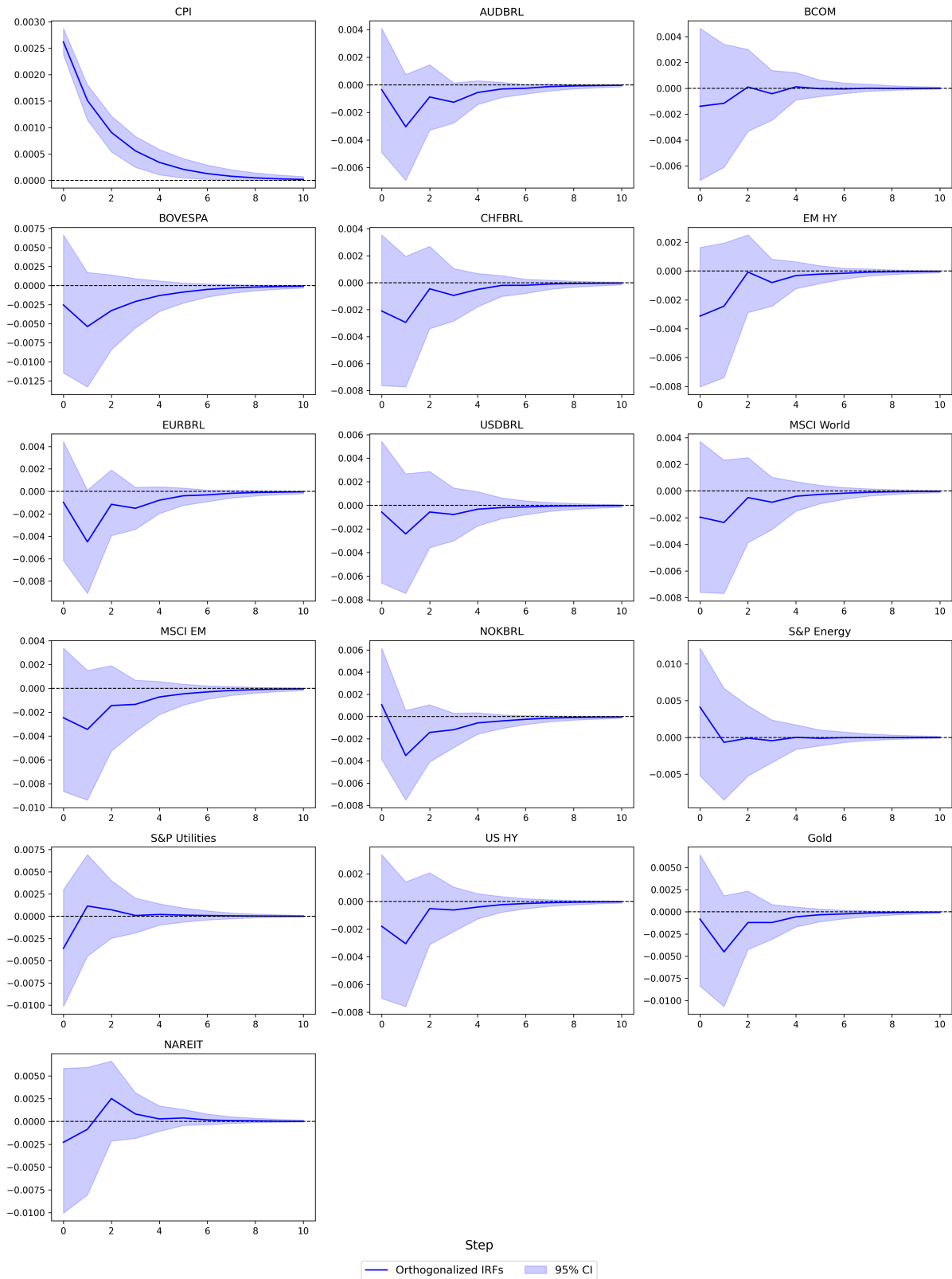


Figure B.1.1.2: Orthogonalized IRFs for Impulse Shock of Monthly Inflation for the Second Model for Brazil

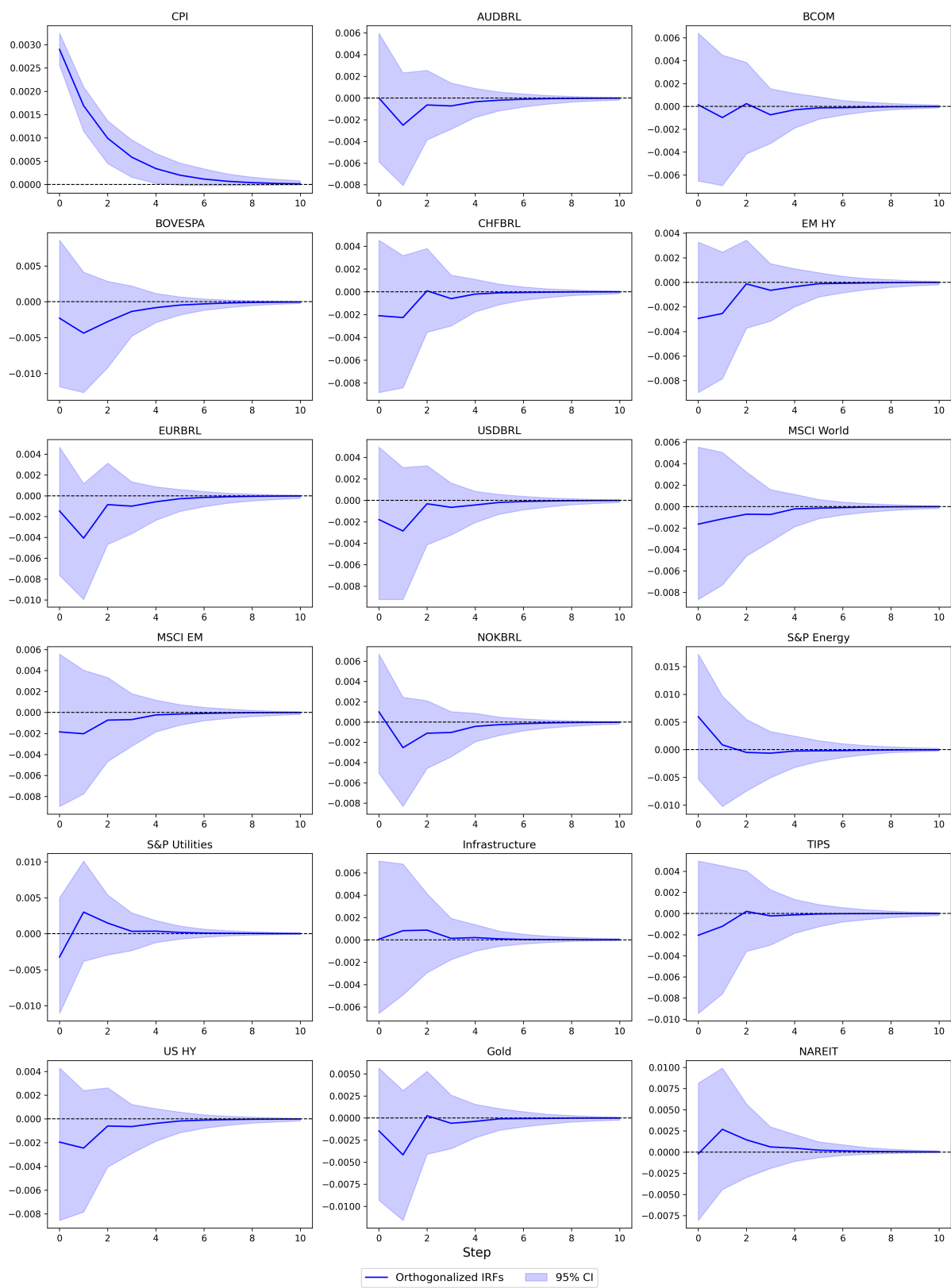


Figure B.1.1.3: Orthogonalized IRFs for Impulse Shock of Monthly Inflation for the Third Model for Brazil

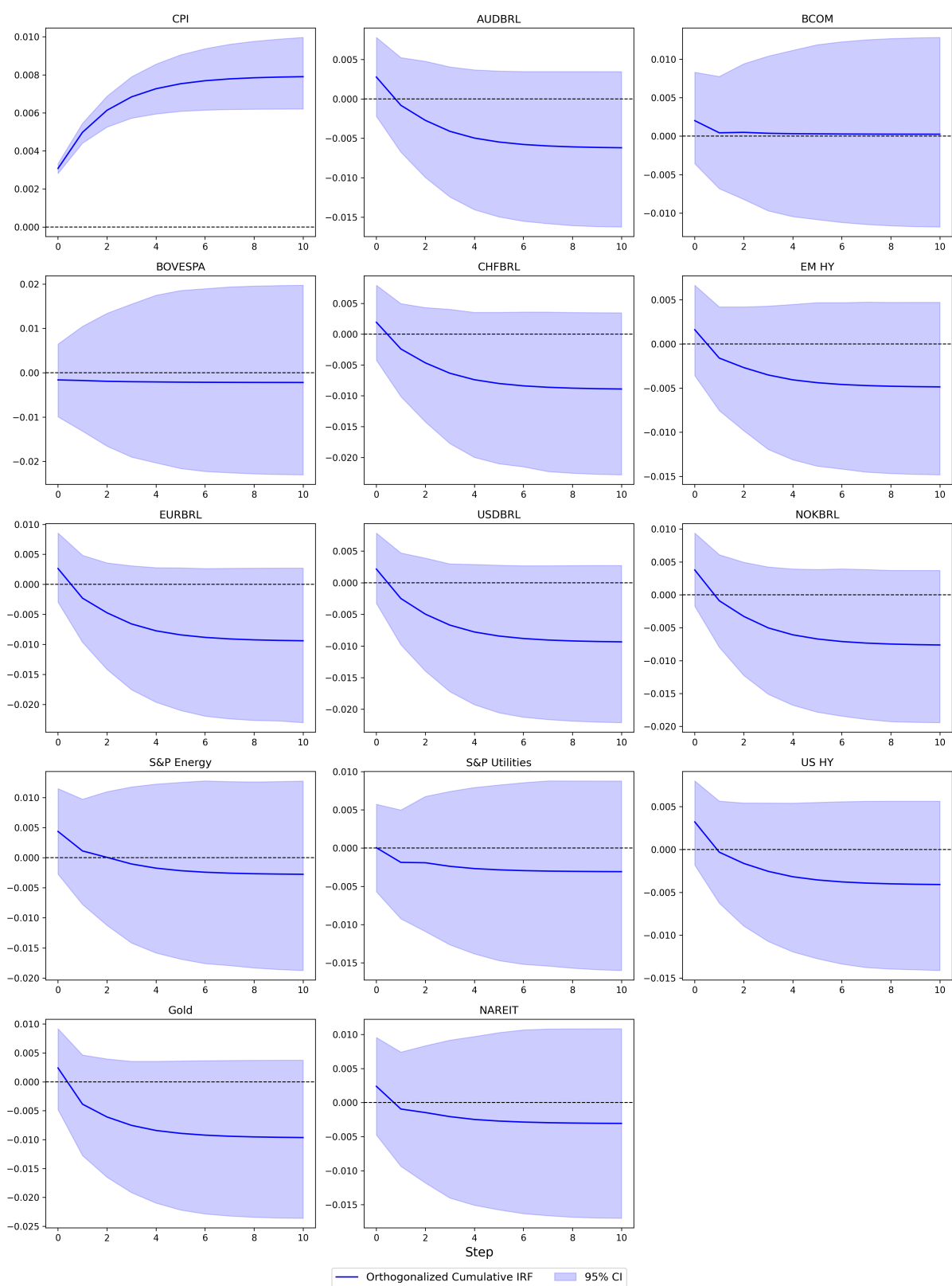


Figure B.1.1.4: Cumulative Orthogonalized IRFs for Impulse Shock of Monthly Inflation for the First Model for Brazil

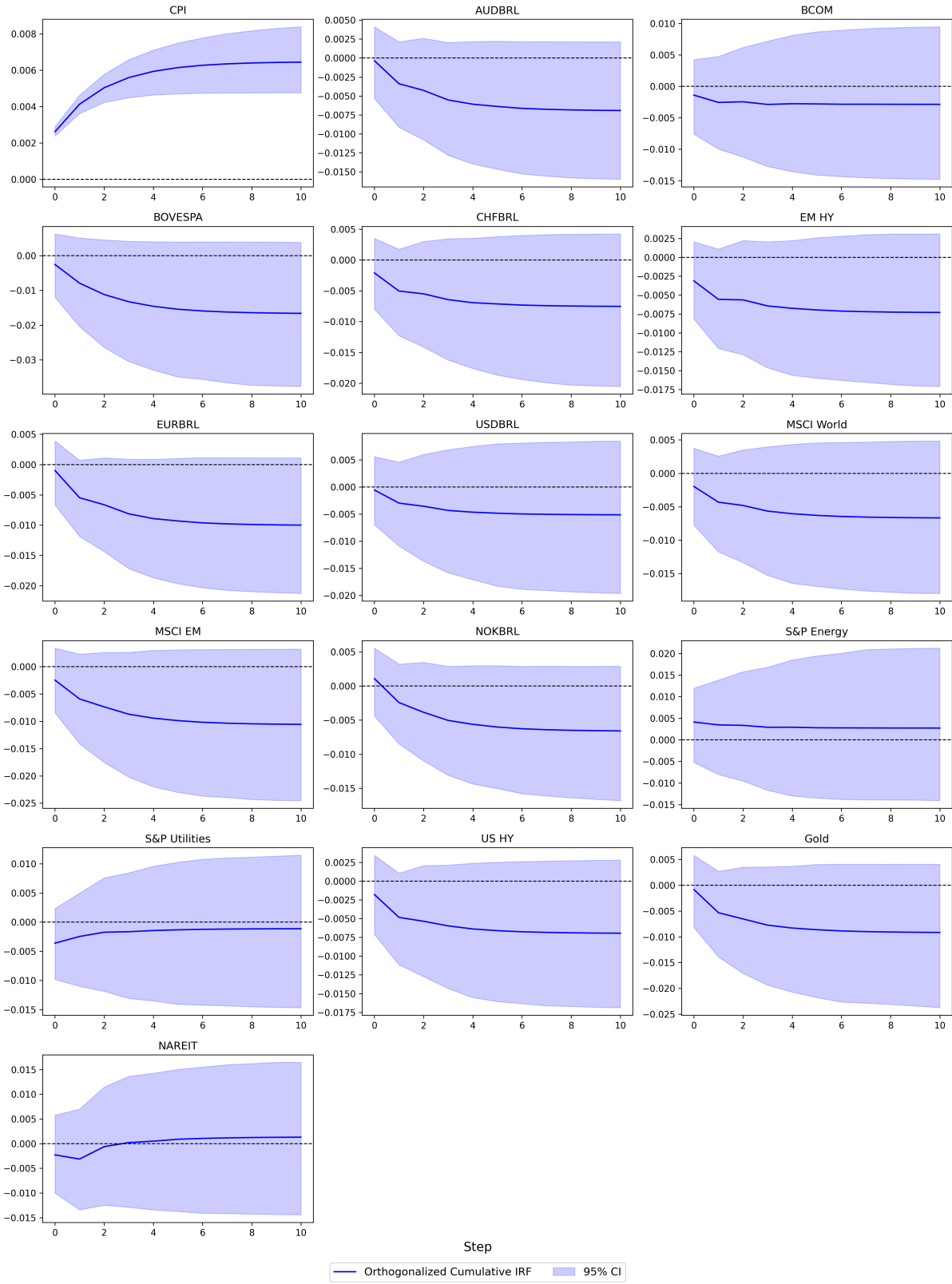


Figure B.1.1.5: Cumulative Orthogonalized IRFs for Impulse Shock of Monthly Inflation for the Second Model for Brazil

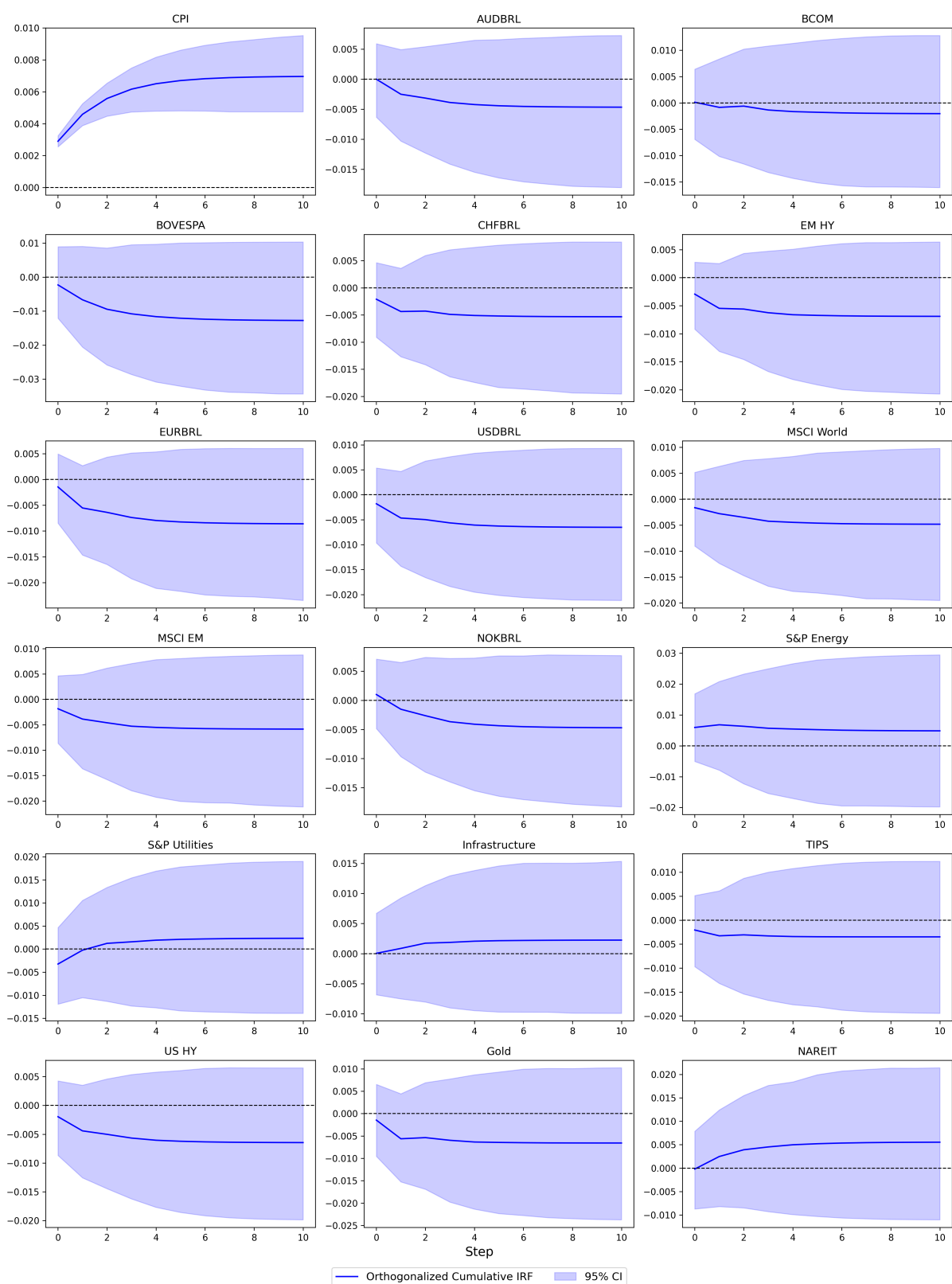


Figure B.1.1.6: Cumulative Orthogonalized IRFs for Impulse Shock of Monthly Inflation for the Third Model for Brazil

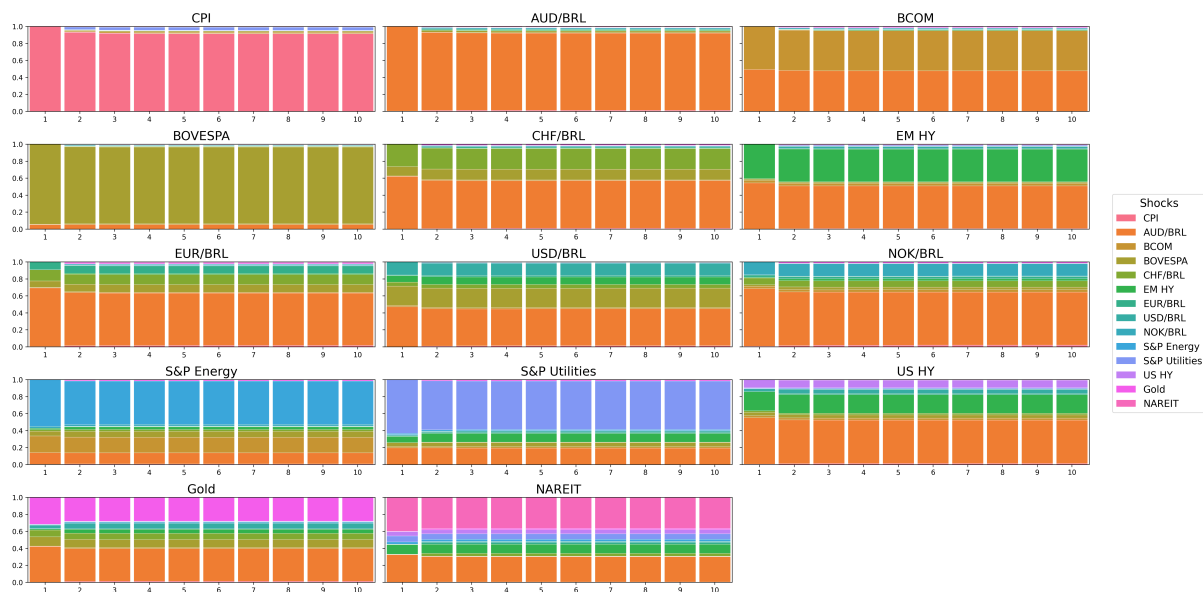


Figure B.1.1.7: Variance Decomposition Analysis for the First Model for All Assets & Inflation for Brazil



Figure B.1.1.8: Variance Decomposition Analysis for the Second Model for All Assets & Inflation for Brazil



Figure B.1.1.9: Variance Decomposition Analysis for the Third Model for All Assets & Inflation for Brazil

B.1.2 Turkey Results VAR

For Turkey, we recall that the inflation series was transformed into first differences to avoid spurious regressions. This means that all results should be interpreted as the effect of a change in monthly inflation rather than the level of inflation itself. In the main text, we focus primarily on the longer-sample specification (Model 1). Here, we briefly summarize the findings from the shorter samples (Models 2 and 3).

Tables B.1.2.5 and B.1.2.6 report the Granger causality results for Models 2 and 3. In contrast to Model 1, where emerging market high-yield bonds and real estate (NAREIT) displayed hedging potential, the shorter samples provide more limited evidence. Specifically, Gold emerges as the only consistent hedge, with statistically significant causality from inflation changes in both Models 2 and 3. On the reverse side, we find that the BIST 100 index Granger-causes inflation changes in both shorter models, pointing to a possible feedback effect between equity returns and inflationary dynamics. Additionally, Bloomberg Commodity returns also appear as a driver of inflation change in Model 3, similar to what we observed for Brazil.

Regression results in Tables B.1.2.21 and B.1.2.37 further underscore the weakening relationship between inflation and asset returns in shorter windows. In both Models 2 and 3, Gold is the only asset that responds significantly, with negative coefficients. This stands in contrast to Model 1, where both emerging market high-yield bonds and real estate showed significant sensitivity. Interestingly, R-squared values remain relatively

high for Turkey, particularly for Gold (0.279 in Model 2 and 0.410 in Model 3), which is uncommon compared to the Brazilian case. However, much of this explanatory power may be due to the persistence of asset returns themselves rather than inflation, as shown in the FEVD results.

Figures B.1.2.2–B.1.2.3 display the short-horizon impulse responses, while cumulative effects are plotted in Figures B.1.2.5–B.1.2.6. Across Models 2 and 3, we continue to observe the pattern identified in Model 1: an initial positive reaction to an inflation change shock, followed by a quick reversal into negative territory. Nevertheless, cumulative responses over a 10-month horizon remain positive for several assets, with Gold providing the most robust evidence of inflation hedging. While fewer assets show hedging potential in shorter samples compared to the baseline, the persistence of Gold as a hedge confirms its role as a safe-haven asset in the Turkish context.

Finally, FEVD analysis (Figures B.1.2.8 and B.1.2.9) indicates that inflation changes explain only a small portion of the forecast error variance of asset returns in the shorter models. Consistent with the regressions, most of the variance is explained by the autoregressive component of the assets themselves. Thus, while shorter samples highlight Gold as the main inflation hedge, they also underline the limited overall role of inflation shocks in driving Turkish asset returns in the short run.

Table B.1.2.1: VAR Order Selection for the First Model for Turkey

Order	AIC	BIC	FPE	HQIC
0	-95.69	-95.51*	2.772e-42	-95.62*
1	-96.51*	-93.89	1.217e-42*	-95.46
2	-96.40	-91.32	1.375e-42	-94.37
3	-96.00	-88.48	2.092e-42	-92.99
4	-95.89	-85.92	2.422e-42	-91.90

Note: AIC = Akaike Information Criterion, BIC = Bayesian Information Criterion, FPE = Final Prediction Error, HQIC = Hannan-Quinn Information Criterion. Minimum values are highlighted with *.

Table B.1.2.2: VAR Order Selection for the Second Model for Turkey

Order	AIC	BIC	FPE	HQIC
0	-113.1	-112.9*	7.431e-50	-113.0*
1	-114.3*	-110.2	2.302e-50*	-112.7
2	-113.9	-105.9	3.660e-50	-110.7
3	-113.3	-101.5	7.005e-50	-108.5
4	-113.1	-97.50	9.892e-50	-106.8

Note: AIC = Akaike Information Criterion, BIC = Bayesian Information Criterion, FPE = Final Prediction Error, HQIC = Hannan-Quinn Information Criterion. Minimum values are highlighted with *.

Table B.1.2.3: VAR Order Selection for the Third Model for Turkey

Order	AIC	BIC	FPE	HQIC
0	-133.2	-132.9*	1.371e-58	-133.1*
1	-133.9*	-127.2	7.427e-59*	-131.2
2	-133.4	-120.4	1.415e-58	-128.1
3	-132.8	-113.6	3.605e-58	-125.0
4	-132.6	-107.1	1.001e-57	-122.3

Note: AIC = Akaike Information Criterion, BIC = Bayesian Information Criterion, FPE = Final Prediction Error, HQIC = Hannan-Quinn Information Criterion. Minimum values are highlighted with *.

Table B.1.2.4: Granger Causality Test Results for the First Model for Turkey

Granger-Cause	F-stat	df1	df2	p-value (F)	Chi2	p-value (Chi2)
CPI → AUDTRY	0.50	1	3976	0.482	0.50	0.481
CPI → BIST100	0.18	1	3976	0.669	0.18	0.669
CPI → BCOM	1.62	1	3976	0.203	1.62	0.203
CPI → CHFTRY	2.54	1	3976	0.111	2.54	0.111
CPI → EM HY	2.98	1	3976	0.084*	2.98	0.084*
CPI → EURTRY	0.72	1	3976	0.395	0.72	0.395
CPI → USDTRY	1.72	1	3976	0.189	1.72	0.189
CPI → NOKTRY	0.37	1	3976	0.541	0.37	0.541
CPI → S&P Energy	1.19	1	3976	0.276	1.19	0.276
CPI → S&P Utilities	0.62	1	3976	0.429	0.62	0.429
CPI → US HY	1.96	1	3976	0.162	1.96	0.162
CPI → Gold	2.18	1	3976	0.140	2.18	0.140
CPI → NAREIT	5.00	1	3976	0.025**	5.00	0.025**
AUDTRY → CPI	6.89	1	3976	0.009***	6.89	0.009***
BIST100 → CPI	1.31	1	3976	0.252	1.31	0.252
BCOM → CPI	0.55	1	3976	0.458	0.55	0.458
CHFTRY → CPI	0.04	1	3976	0.834	0.04	0.834
EM HY → CPI	0.19	1	3976	0.665	0.19	0.665
EURTRY → CPI	0.62	1	3976	0.431	0.62	0.431
USDTRY → CPI	0.20	1	3976	0.659	0.20	0.659
NOKTRY → CPI	0.85	1	3976	0.357	0.85	0.357
S&P Energy → CPI	3.41	1	3976	0.065*	3.41	0.065*
S&P Utilities → CPI	0.00	1	3976	0.953	0.00	0.953
US HY → CPI	0.01	1	3976	0.913	0.01	0.913
Gold → CPI	3.60	1	3976	0.058*	3.60	0.058*
NAREIT → CPI	0.09	1	3976	0.767	0.09	0.767

Note: ***, **, * denote significance at the 1%, 5% and 10% level

Table B.1.2.5: Granger Causality Test Results for the Second Model for Turkey

Granger-Cause	F-stat	df1	df2	p-value (F)	Chi2	p-value (Chi2)
CPI → AUDTRY	1.47	1	3456	0.225	1.47	0.225
CPI → BIST100	0.10	1	3456	0.754	0.10	0.754
CPI → BCOM	0.77	1	3456	0.379	0.77	0.379
CPI → CHFTRY	1.64	1	3456	0.200	1.64	0.200
CPI → EM HY	1.72	1	3456	0.189	1.72	0.189
CPI → EURTRY	0.28	1	3456	0.597	0.28	0.597
CPI → USDTRY	0.21	1	3456	0.646	0.21	0.646
CPI → MSCI World	0.04	1	3456	0.838	0.04	0.838
CPI → MSCI EM	1.46	1	3456	0.227	1.46	0.227
CPI → NOKTRY	0.15	1	3456	0.697	0.15	0.696
CPI → S&P Energy	2.13	1	3456	0.144	2.13	0.144
CPI → S&P Utilities	0.54	1	3456	0.464	0.54	0.464
CPI → US HY	1.17	1	3456	0.280	1.17	0.280
CPI → Gold	2.94	1	3456	0.087*	2.94	0.087*
CPI → NAREIT	0.84	1	3456	0.360	0.84	0.359
AUDTRY → CPI	1.49	1	3456	0.222	1.49	0.222
BIST100 → CPI	7.78	1	3456	0.005***	7.78	0.005***
BCOM → CPI	1.43	1	3456	0.232	1.43	0.232
CHFTRY → CPI	0.00	1	3456	0.980	0.00	0.980
EM HY → CPI	0.03	1	3456	0.863	0.03	0.863
EURTRY → CPI	1.78	1	3456	0.182	1.78	0.182
USDTRY → CPI	1.12	1	3456	0.290	1.12	0.290
MSCI World → CPI	0.62	1	3456	0.430	0.62	0.430
MSCI EM → CPI	0.51	1	3456	0.474	0.51	0.474
NOKTRY → CPI	1.32	1	3456	0.250	1.32	0.250
S&P Energy → CPI	2.09	1	3456	0.148	2.09	0.148
S&P Utilities → CPI	0.19	1	3456	0.662	0.19	0.662
US HY → CPI	0.02	1	3456	0.894	0.02	0.894
Gold → CPI	1.80	1	3456	0.180	1.80	0.180
NAREIT → CPI	1.26	1	3456	0.262	1.26	0.262

Note: ***, **, * denote significance at the 1%, 5% and 10% level

Table B.1.2.6: Granger Causality Test Results for the Third Model for Turkey

Granger-Cause	F-stat	df1	df2	p-value (F)	Chi2	p-value (Chi2)
CPI → AUDTRY	0.85	1	2538	0.356	0.85	0.356
CPI → BIST100	0.83	1	2538	0.363	0.83	0.363
CPI → BCOM	0.88	1	2538	0.348	0.88	0.348
CPI → CHFTRY	1.65	1	2538	0.199	1.65	0.199
CPI → EM HY	0.00	1	2538	0.986	0.00	0.986
CPI → EURTRY	0.58	1	2538	0.444	0.58	0.444
CPI → USDTRY	0.04	1	2538	0.836	0.04	0.836
CPI → MSCI World	0.16	1	2538	0.685	0.16	0.685
CPI → MSCI EM	0.58	1	2538	0.445	0.58	0.445
CPI → NOKTRY	0.10	1	2538	0.753	0.10	0.753
CPI → S&P Energy	2.30	1	2538	0.129	2.30	0.129
CPI → S&P Utilities	0.11	1	2538	0.741	0.11	0.741
CPI → Infrastructure	0.03	1	2538	0.860	0.03	0.860
CPI → TIPS	0.00	1	2538	0.960	0.00	0.960
CPI → US HY	0.13	1	2538	0.722	0.13	0.722
CPI → Gold	2.81	1	2538	0.094*	2.81	0.094*
CPI → NAREIT	0.20	1	2538	0.655	0.20	0.655
AUDTRY → CPI	1.33	1	2538	0.248	1.33	0.248
BIST100 → CPI	3.81	1	2538	0.051*	3.81	0.051*
BCOM → CPI	3.63	1	2538	0.057*	3.63	0.057*
CHFTRY → CPI	0.01	1	2538	0.919	0.01	0.919
EM HY → CPI	0.15	1	2538	0.698	0.15	0.698
EURTRY → CPI	1.25	1	2538	0.265	1.25	0.264
USDTRY → CPI	1.73	1	2538	0.188	1.73	0.188
MSCI World → CPI	0.07	1	2538	0.798	0.07	0.798
MSCI EM → CPI	0.01	1	2538	0.922	0.01	0.922
NOKTRY → CPI	0.91	1	2538	0.341	0.91	0.341
S&P Energy → CPI	0.86	1	2538	0.353	0.86	0.353
S&P Utilities → CPI	0.49	1	2538	0.484	0.49	0.484
Infrastructure → CPI	1.09	1	2538	0.297	1.09	0.297
TIPS → CPI	5.42	1	2538	0.020**	5.42	0.020**
US HY → CPI	0.13	1	2538	0.714	0.13	0.714
Gold → CPI	0.66	1	2538	0.417	0.66	0.417
NAREIT → CPI	1.36	1	2538	0.244	1.36	0.244

Note: ***, **, * denote significance at the 1%, 5% and 10% level

Table B.1.2.7: Regression Results of the First Model for Turkey

Dependent Variable: CPI Turkey Monthly				
Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	-0.002	0.001	-1.824	0.069*
CPI _{t-1}	-0.153	0.061	-2.510	0.013**
AUDTRY _{t-1}	0.075	0.029	2.625	0.009***
BIST100 _{t-1}	0.009	0.008	1.146	0.253
BCOM _{t-1}	-0.017	0.023	-0.742	0.459
CHFTRY _{t-1}	0.010	0.048	0.210	0.834
EM HY _{t-1}	0.019	0.045	0.433	0.666
EURTRY _{t-1}	0.046	0.058	0.787	0.432
USDTRY _{t-1}	0.018	0.040	0.442	0.659
NOKTRY _{t-1}	0.038	0.042	0.920	0.358
S&P Energy _{t-1}	-0.029	0.016	-1.848	0.066*
S&P Utilities _{t-1}	0.001	0.020	0.059	0.953
US HY _{t-1}	0.006	0.058	0.109	0.913
Gold _{t-1}	-0.043	0.023	-1.896	0.059*
NAREIT _{t-1}	0.006	0.019	0.297	0.767
R-squared			0.262	
Adj. R-squared			0.226	

Dependent Variable: AUD/TRY				
Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.014	0.003	4.330	0.000***
CPI _{t-1}	-0.153	0.218	-0.704	0.482
AUDTRY _{t-1}	0.151	0.103	1.471	0.142
BIST100 _{t-1}	-0.018	0.028	-0.657	0.511
BCOM _{t-1}	0.066	0.082	0.810	0.419
CHFTRY _{t-1}	0.086	0.170	0.503	0.615
EM HY _{t-1}	-0.106	0.159	-0.668	0.505
EURTRY _{t-1}	-0.307	0.207	-1.481	0.140
USDTRY _{t-1}	0.190	0.143	1.328	0.185
NOKTRY _{t-1}	0.211	0.149	1.413	0.159
S&P Energy _{t-1}	-0.027	0.057	-0.476	0.634

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Dependent Variable: AUD/TRY (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
S&P Utilities _{t-1}	-0.111	0.070	-1.578	0.116
US HY _{t-1}	-0.010	0.208	-0.050	0.960
Gold _{t-1}	-0.039	0.081	-0.481	0.631
NAREIT _{t-1}	-0.040	0.068	-0.583	0.560
R-squared		0.060		
Adj. R-squared		0.014		

Dependent Variable: BIST 100

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.013	0.008	1.674	0.095*
CPI _{t-1}	-0.217	0.507	-0.427	0.670
AUDTRY _{t-1}	0.165	0.239	0.688	0.492
BIST100 _{t-1}	-0.012	0.064	-0.180	0.858
BCOM _{t-1}	-0.064	0.190	-0.338	0.735
CHFTRY _{t-1}	0.037	0.396	0.093	0.926
EM HY _{t-1}	0.385	0.371	1.038	0.300
EURTRY _{t-1}	-0.078	0.482	-0.162	0.871
USDTRY _{t-1}	0.220	0.334	0.658	0.511
NOKTRY _{t-1}	-0.124	0.348	-0.358	0.721
S&P Energy _{t-1}	0.058	0.132	0.439	0.661
S&P Utilities _{t-1}	-0.149	0.164	-0.910	0.364
US HY _{t-1}	-0.175	0.484	-0.362	0.718
Gold _{t-1}	0.170	0.189	0.902	0.368
NAREIT _{t-1}	0.083	0.159	0.521	0.603
R-squared		0.042		
Adj. R-squared		-0.005		

Dependent Variable: BCOM

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.009	0.004	2.239	0.026**
CPI _{t-1}	-0.319	0.250	-1.274	0.204
AUDTRY _{t-1}	0.029	0.118	0.243	0.808

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Dependent Variable: BCOM (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
BIST100 _{t-1}	-0.025	0.032	-0.771	0.441
BCOM _{t-1}	-0.058	0.094	-0.621	0.535
CHFTRY _{t-1}	0.292	0.196	1.491	0.137
EM HY _{t-1}	-0.124	0.183	-0.677	0.499
EURTRY _{t-1}	-0.277	0.238	-1.166	0.244
USDTRY _{t-1}	0.249	0.165	1.514	0.131
NOKTRY _{t-1}	0.384	0.172	2.234	0.026**
S&P Energy _{t-1}	-0.045	0.065	-0.695	0.487
S&P Utilities _{t-1}	-0.120	0.081	-1.481	0.140
US HY _{t-1}	0.374	0.239	1.563	0.119
Gold _{t-1}	-0.104	0.093	-1.115	0.266
NAREIT _{t-1}	-0.003	0.079	-0.033	0.974
R-squared			0.257	
Adj. R-squared			0.220	

Dependent Variable: CHF/TRY

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.019	0.004	4.596	0.000***
CPI _{t-1}	-0.438	0.275	-1.593	0.112
AUDTRY _{t-1}	0.082	0.130	0.634	0.527
BIST100 _{t-1}	-0.016	0.035	-0.464	0.643
BCOM _{t-1}	0.095	0.103	0.920	0.358
CHFTRY _{t-1}	-0.126	0.215	-0.587	0.558
EM HY _{t-1}	-0.076	0.201	-0.381	0.704
EURTRY _{t-1}	-0.164	0.261	-0.630	0.529
USDBRL _{t-1}	0.419	0.181	2.316	0.021**
NOKTRY _{t-1}	0.305	0.188	1.620	0.106
S&P Energy _{t-1}	-0.055	0.072	-0.773	0.440
S&P Utilities _{t-1}	-0.247	0.089	-2.787	0.006***
US HY _{t-1}	0.000	0.262	0.000	1.000
Gold _{t-1}	-0.110	0.102	-1.078	0.282
NAREIT _{t-1}	0.029	0.086	0.334	0.739
R-squared			0.070	

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Dependent Variable: CHF/TRY (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
Adj. R-squared		0.025		

Dependent Variable: EM HY

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.011	0.003	4.246	0.000***
CPI _{t-1}	-0.303	0.175	-1.728	0.085*
AUDTRY _{t-1}	0.032	0.083	0.392	0.695
BIST100 _{t-1}	-0.010	0.022	-0.470	0.639
BCOM _{t-1}	-0.148	0.066	-2.252	0.025**
CHFTRY _{t-1}	0.278	0.137	2.025	0.044**
EM HY _{t-1}	0.127	0.128	0.990	0.323
EURTRY _{t-1}	0.034	0.166	0.206	0.837
USDBRL _{t-1}	0.048	0.115	0.415	0.679
NOKTRY _{t-1}	0.127	0.120	1.055	0.292
S&P Energy _{t-1}	-0.027	0.046	-0.582	0.561
S&P Utilities _{t-1}	-0.033	0.057	-0.585	0.559
US HY _{t-1}	0.276	0.167	1.650	0.100
Gold _{t-1}	-0.032	0.065	-0.498	0.619
NAREIT _{t-1}	-0.094	0.055	-1.703	0.090*
R-squared		0.397		
Adj. R-squared		0.368		

Dependent Variable: EUR/TRY

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.017	0.004	4.481	0.000***
CPI _{t-1}	-0.216	0.254	-0.851	0.396
AUDTRY _{t-1}	0.063	0.120	0.526	0.599
BIST100 _{t-1}	-0.014	0.032	-0.425	0.671
BCOM _{t-1}	0.119	0.095	1.246	0.214
CHFTRY _{t-1}	0.059	0.199	0.296	0.768
EM HY _{t-1}	-0.083	0.186	-0.447	0.655
EURTRY _{t-1}	-0.312	0.242	-1.291	0.198

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Dependent Variable: EUR/TRY (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
USDBRL _{t-1}	0.309	0.167	1.845	0.066*
NOKTRY _{t-1}	0.292	0.174	1.675	0.095*
S&P Energy _{t-1}	-0.078	0.066	-1.169	0.243
S&P Utilities _{t-1}	-0.239	0.082	-2.907	0.004***
US HY _{t-1}	0.114	0.243	0.468	0.640
Gold _{t-1}	-0.128	0.095	-1.349	0.179
NAREIT _{t-1}	-0.008	0.080	-0.100	0.920
R-squared			0.074	
Adj. R-squared			0.029	

Dependent Variable: USDTRY

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.009	0.003	3.722	0.000***
CPI _{t-1}	-0.220	0.168	-1.313	0.190
AUDTRY _{t-1}	-0.043	0.079	-0.547	0.585
BIST100 _{t-1}	-0.035	0.021	-1.651	0.100*
BCOM _{t-1}	-0.115	0.063	-1.826	0.069*
CHFTRY _{t-1}	0.222	0.131	1.693	0.091*
EM HY _{t-1}	-0.067	0.123	-0.548	0.584
EURTRY _{t-1}	-0.010	0.159	-0.066	0.948
USDTRY _{t-1}	0.425	0.110	3.856	0.000***
NOKTRY _{t-1}	0.283	0.115	2.463	0.014**
S&P Energy _{t-1}	0.001	0.044	0.026	0.979
S&P Utilities _{t-1}	-0.133	0.054	-2.449	0.015**
US HY _{t-1}	0.006	0.160	0.036	0.972
Gold _{t-1}	-0.061	0.062	-0.984	0.326
NAREIT _{t-1}	0.007	0.053	0.133	0.894
R-squared			0.448	
Adj. R-squared			0.420	

Dependent Variable: NOKTRY

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.014	0.004	3.614	0.000***
CPI _{t-1}	-0.157	0.257	-0.611	0.542
AUDTRY _{t-1}	0.054	0.121	0.444	0.658
BIST100 _{t-1}	-0.011	0.033	-0.346	0.730
BCOM _{t-1}	0.085	0.096	0.879	0.380
CHFTRY _{t-1}	0.169	0.201	0.842	0.400
EM HY _{t-1}	-0.211	0.188	-1.120	0.264
EURTRY _{t-1}	-0.252	0.244	-1.032	0.303
USDTRY _{t-1}	0.157	0.169	0.926	0.355
NOKTRY _{t-1}	0.155	0.176	0.879	0.380
S&P Energy _{t-1}	-0.056	0.067	-0.832	0.406
S&P Utilities _{t-1}	-0.290	0.083	-3.496	0.001***
US HY _{t-1}	0.390	0.246	1.586	0.114
Gold _{t-1}	-0.102	0.096	-1.067	0.287
NAREIT _{t-1}	0.042	0.081	0.527	0.599
R-squared		0.082		
Adj. R-squared		0.037		

Dependent Variable: S&P Energy

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.016	0.005	3.000	0.003***
CPI _{t-1}	0.380	0.349	1.089	0.277
AUDTRY _{t-1}	-0.063	0.164	-0.384	0.701
BIST100 _{t-1}	-0.014	0.044	-0.315	0.753
BCOM _{t-1}	-0.070	0.131	-0.536	0.592
CHFTRY _{t-1}	0.439	0.273	1.608	0.109
EMHY _{t-1}	-0.223	0.255	-0.876	0.382
EURTRY _{t-1}	0.058	0.331	0.174	0.862
USDTRY _{t-1}	0.576	0.230	2.510	0.013**
NOKTRY _{t-1}	-0.085	0.239	-0.355	0.723
S&P Energy _{t-1}	-0.042	0.091	-0.464	0.643
S&P Utilities _{t-1}	-0.176	0.113	-1.559	0.120

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Dependent Variable: S&P Energy (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
US HY _{t-1}	0.228	0.333	0.685	0.494
Gold _{t-1}	-0.175	0.130	-1.346	0.179
NAREIT _{t-1}	0.010	0.109	0.091	0.927
R-squared			0.178	
Adj. R-squared			0.138	

Dependent Variable: S&P 500 Utilities

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.013	0.004	3.142	0.002***
CPI _{t-1}	-0.210	0.265	-0.790	0.430
AUDTRY _{t-1}	0.124	0.125	0.992	0.322
BIST100 _{t-1}	0.000	0.034	0.000	1.000
BCOM _{t-1}	-0.073	0.099	-0.733	0.464
CHFTRY _{t-1}	0.210	0.208	1.012	0.313
EM HY _{t-1}	-0.124	0.194	-0.639	0.523
EURTRY _{t-1}	0.154	0.252	0.612	0.541
USDEXTRY _{t-1}	0.528	0.175	3.024	0.003***
NOKTRY _{t-1}	0.073	0.182	0.400	0.689
S&P Energy _{t-1}	0.024	0.069	0.348	0.728
S&P Utilities _{t-1}	-0.159	0.086	-1.854	0.065*
US HY _{t-1}	0.005	0.253	0.022	0.983
Gold _{t-1}	-0.183	0.099	-1.853	0.065*
NAREIT _{t-1}	0.002	0.083	0.024	0.981
R-squared			0.265	
Adj. R-squared			0.229	

Dependent Variable: US High Yield

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.012	0.003	4.409	0.000***
CPI _{t-1}	-0.240	0.172	-1.398	0.163
AUDTRY _{t-1}	0.028	0.081	0.347	0.728
BIST100 _{t-1}	-0.014	0.022	-0.627	0.531

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Dependent Variable: US High Yield (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
BCOM _{t-1}	-0.172	0.064	-2.684	0.008***
CHFTRY _{t-1}	0.252	0.134	1.877	0.062*
EM HY _{t-1}	0.242	0.125	1.933	0.054*
EURTRY _{t-1}	0.195	0.163	1.196	0.233
USDEXTRY _{t-1}	0.123	0.113	1.090	0.277
NOKTRY _{t-1}	0.015	0.118	0.131	0.896
S&P Energy _{t-1}	-0.009	0.045	-0.192	0.848
S&P Utilities _{t-1}	-0.075	0.055	-1.353	0.177
US HY _{t-1}	0.023	0.164	0.139	0.889
Gold _{t-1}	-0.033	0.064	-0.525	0.600
NAREIT _{t-1}	-0.028	0.054	-0.527	0.599
R-squared			0.411	
Adj. R-squared			0.381	

Dependent Variable: Gold

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.015	0.003	4.670	0.000***
CPI _{t-1}	-0.320	0.216	-1.476	0.141
AUDTRY _{t-1}	-0.148	0.102	-1.446	0.149
BIST100 _{t-1}	-0.025	0.028	-0.895	0.371
BCOM _{t-1}	0.138	0.081	1.706	0.089*
CHFTRY _{t-1}	0.358	0.169	2.116	0.035**
EM HY _{t-1}	0.008	0.158	0.049	0.961
EURTRY _{t-1}	-0.181	0.206	-0.882	0.379
USDEXTRY _{t-1}	0.045	0.142	0.315	0.753
NOKTRY _{t-1}	0.354	0.148	2.384	0.018**
S&P Energy _{t-1}	-0.083	0.056	-1.466	0.144
S&P Utilities _{t-1}	-0.065	0.070	-0.927	0.355
US HY _{t-1}	0.065	0.207	0.314	0.754
Gold _{t-1}	0.005	0.081	0.065	0.948
NAREIT _{t-1}	-0.026	0.068	-0.388	0.698
R-squared			0.292	
Adj. R-squared			0.257	

Dependent Variable: NAREIT				
Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.016	0.004	3.712	0.000***
CPI _{Turkey,t-1}	-0.646	0.289	-2.235	0.026**
AUDTRY _{t-1}	0.239	0.136	1.756	0.080*
BIST100 _{t-1}	-0.025	0.037	-0.692	0.489
BloombergCom _{t-1}	-0.098	0.108	-0.906	0.366
CHFTRY _{t-1}	-0.174	0.226	-0.768	0.443
EmergMkt HY _{t-1}	0.391	0.211	1.847	0.066*
EURTRY _{t-1}	0.550	0.275	2.001	0.046**
USDTRY _{t-1}	0.293	0.190	1.540	0.125
NOKTRY _{t-1}	0.004	0.198	0.019	0.985
S&P500 Energy _{t-1}	-0.025	0.075	-0.327	0.744
S&P500 Utilities _{t-1}	-0.028	0.093	-0.299	0.765
US High Yield _{t-1}	-0.132	0.276	-0.476	0.634
Gold _{t-1}	-0.179	0.108	-1.662	0.098*
NAREIT _{t-1}	-0.124	0.091	-1.371	0.172
R-squared	0.246			
Adj. R-squared	0.209			

Note: ***, **, * denote significance at the 1%, 5% and 10% level.

Table B.1.2.21: Regression Results of the Second Model for Turkey

Dependent Variable: CPI Turkey Monthly				
Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	-0.002	0.001	-2.085	0.038**
CPI _{t-1}	-0.204	0.067	-3.024	0.003***
AUDTRY _{t-1}	0.059	0.049	1.220	0.224
BIST100 _{t-1}	0.035	0.013	2.789	0.006***
BCOM _{t-1}	-0.032	0.027	-1.196	0.233
CHFTRY _{t-1}	-0.001	0.049	-0.025	0.980
EM HY _{t-1}	0.009	0.054	0.173	0.863
EURTRY _{t-1}	0.083	0.062	1.334	0.184

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Dependent Variable: CPI Turkey Monthly (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
USDTRY _{t-1}	0.052	0.049	1.059	0.291
MSCI World _{t-1}	-0.043	0.055	-0.789	0.431
MSCI EM _{t-1}	0.025	0.035	0.716	0.475
NOKTRY _{t-1}	0.055	0.048	1.150	0.251
S&P Energy _{t-1}	-0.027	0.019	-1.445	0.150
S&P Utilities _{t-1}	-0.011	0.025	-0.438	0.662
US HY _{t-1}	-0.011	0.081	-0.134	0.894
Gold _{t-1}	-0.034	0.025	-1.341	0.181
NAREIT _{t-1}	0.028	0.025	1.123	0.263
R-squared			0.354	
Adj. R-squared			0.306	

Dependent Variable: AUD/TRY

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.016	0.004	3.898	0.000***
CPI _{Turkey,t-1}	-0.320	0.263	-1.214	0.226
AUDTRY _{t-1}	0.320	0.190	1.685	0.093*
BIST100 _{t-1}	0.002	0.050	0.043	0.966
BCOM _{t-1}	0.109	0.104	1.051	0.294
CHFTRY _{t-1}	0.091	0.191	0.476	0.635
EM HY _{t-1}	0.013	0.212	0.060	0.952
EURTRY _{t-1}	-0.381	0.244	-1.561	0.120
USDTRY _{t-1}	0.277	0.193	1.432	0.153
MSCI World _{t-1}	0.198	0.215	0.923	0.357
MSCI EM _{t-1}	-0.173	0.137	-1.268	0.206
NOKTRY _{t-1}	0.124	0.187	0.660	0.510
S&P Energy _{t-1}	-0.045	0.072	-0.621	0.536
S&P Utilities _{t-1}	-0.133	0.098	-1.357	0.176
US HY _{t-1}	-0.156	0.318	-0.489	0.625
Gold _{t-1}	-0.105	0.099	-1.061	0.290
NAREIT _{t-1}	-0.073	0.099	-0.734	0.464
R-squared			0.080	
Adj. R-squared			0.012	

Dependent Variable: BIST 100

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.011	0.007	1.689	0.093*
CPI _{Turkey,t-1}	-0.135	0.430	-0.314	0.754
AUDTRY _{t-1}	0.533	0.310	1.720	0.087*
BIST100 _{t-1}	0.080	0.081	0.991	0.323
BCOM _{t-1}	0.082	0.170	0.485	0.628
CHFTRY _{t-1}	-0.122	0.311	-0.394	0.694
EM HY _{t-1}	-0.166	0.346	-0.479	0.632
EURTRY _{t-1}	0.020	0.398	0.050	0.960
USDTRY _{t-1}	-0.153	0.315	-0.486	0.627
MSCI World _{t-1}	0.417	0.350	1.189	0.236
MSCI EM _{t-1}	-0.215	0.223	-0.964	0.336
NOKTRY _{t-1}	-0.376	0.305	-1.230	0.220
S&P Energy _{t-1}	-0.121	0.118	-1.024	0.307
S&P Utilities _{t-1}	0.006	0.159	0.041	0.968
US HY _{t-1}	0.395	0.519	0.761	0.447
Gold _{t-1}	0.115	0.162	0.711	0.478
NAREIT _{t-1}	-0.082	0.161	-0.509	0.611
R-squared			0.062	
Adj. R-squared			-0.008	

Dependent Variable: BCOM

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.004	0.004	0.951	0.343
CPI _{t-1}	-0.242	0.275	-0.880	0.380
AUDTRY _{t-1}	0.299	0.198	1.506	0.134
BIST100 _{t-1}	0.055	0.052	1.069	0.286
BCOM _{t-1}	0.021	0.109	0.198	0.844
CHFTRY _{t-1}	0.276	0.199	1.386	0.167
EM HY _{t-1}	-0.214	0.222	-0.967	0.335
EURTRY _{t-1}	-0.129	0.255	-0.507	0.612
USDTRY _{t-1}	0.137	0.202	0.679	0.498
MSCI World _{t-1}	-0.151	0.224	-0.675	0.500

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Dependent Variable: BCOM (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
MSCI EM _{t-1}	-0.170	0.143	-1.192	0.234
NOKTRY _{t-1}	0.085	0.195	0.435	0.664
S&P Energy _{t-1}	0.003	0.076	0.038	0.970
S&P Utilities _{t-1}	-0.136	0.102	-1.336	0.183
US HY _{t-1}	0.690	0.332	2.075	0.039**
Gold _{t-1}	-0.161	0.104	-1.548	0.123
NAREIT _{t-1}	0.023	0.103	0.222	0.825
R-squared			0.282	
Adj. R-squared			0.229	

Dependent Variable: CHF/TRY

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.019	0.005	4.232	0.000***
CPI _{t-1}	-0.386	0.301	-1.283	0.201
AUDTRY _{t-1}	0.279	0.217	1.284	0.200
BIST100 _{t-1}	0.021	0.057	0.369	0.713
BCOM _{t-1}	0.121	0.119	1.014	0.312
CHFTRY _{t-1}	0.013	0.218	0.058	0.954
EM HY _{t-1}	0.173	0.243	0.714	0.476
EURTRY _{t-1}	-0.303	0.279	-1.089	0.277
USDTRY _{t-1}	0.556	0.221	2.518	0.013**
MSCI World _{t-1}	0.246	0.245	1.002	0.317
MSCI EM _{t-1}	-0.181	0.156	-1.158	0.248
NOKTRY _{t-1}	0.206	0.214	0.964	0.336
S&P Energy _{t-1}	-0.037	0.083	-0.449	0.654
S&P Utilities _{t-1}	-0.152	0.112	-1.358	0.176
US HY _{t-1}	-0.710	0.363	-1.954	0.052*
Gold _{t-1}	-0.159	0.114	-1.403	0.162
NAREIT _{t-1}	0.028	0.113	0.249	0.804
R-squared			0.088	
Adj. R-squared			0.020	

Dependent Variable: EM HY				
Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.009	0.003	3.294	0.001***
CPI _{t-1}	-0.245	0.186	-1.313	0.191
AUDTRY _{t-1}	0.458	0.134	3.412	0.001***
BIST100 _{t-1}	0.064	0.035	1.811	0.071*
BCOM _{t-1}	-0.148	0.074	-2.008	0.046**
CHFTRY _{t-1}	0.259	0.135	1.918	0.056*
EM HY _{t-1}	-0.023	0.150	-0.153	0.879
EURTRY _{t-1}	-0.016	0.172	-0.094	0.926
USDTRY _{t-1}	-0.025	0.137	-0.186	0.853
MSCI World _{t-1}	0.306	0.152	2.013	0.045**
MSCI EM _{t-1}	-0.225	0.097	-2.332	0.021**
NOKTRY _{t-1}	-0.133	0.132	-1.004	0.316
S&P Energy _{t-1}	-0.055	0.051	-1.075	0.284
S&P Utilities _{t-1}	-0.008	0.069	-0.123	0.902
US HY _{t-1}	0.343	0.225	1.526	0.128
Gold _{t-1}	-0.044	0.070	-0.621	0.535
NAREIT _{t-1}	-0.169	0.070	-2.413	0.017**
R-squared			0.441	
Adj. R-squared			0.400	

Dependent Variable: EUR/TRY				
Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.017	0.004	4.177	0.000***
CPI _{t-1}	-0.143	0.271	-0.529	0.598
AUDTRY _{t-1}	0.225	0.195	1.154	0.250
BIST100 _{t-1}	0.021	0.051	0.403	0.688
BCOM _{t-1}	0.157	0.107	1.468	0.144
CHFTRY _{t-1}	0.220	0.196	1.121	0.264
EM HY _{t-1}	0.124	0.218	0.566	0.572
EURTRY _{t-1}	-0.466	0.251	-1.859	0.064*
USDTRY _{t-1}	0.437	0.199	2.201	0.029**
MSCI World _{t-1}	0.326	0.221	1.476	0.141

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Dependent Variable: EUR/TRY (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
MSCI EM _{t-1}	-0.164	0.140	-1.168	0.244
NOKTRY _{t-1}	0.204	0.192	1.058	0.291
S&P Energy _{t-1}	-0.078	0.074	-1.052	0.294
S&P Utilities _{t-1}	-0.136	0.100	-1.355	0.177
US HY _{t-1}	-0.581	0.327	-1.776	0.077*
Gold _{t-1}	-0.186	0.102	-1.821	0.070*
NAREIT _{t-1}	-0.053	0.102	-0.518	0.605
R-squared	0.093			
Adj. R-squared	0.026			

Dependent Variable: USD/TRY

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.010	0.003	3.684	0.000***
CPI _{t-1}	-0.079	0.171	-0.459	0.647
AUDTRY _{t-1}	0.284	0.123	2.300	0.022**
BIST100 _{t-1}	0.023	0.032	0.724	0.470
BCOM _{t-1}	-0.041	0.068	-0.610	0.542
CHFTRY _{t-1}	0.208	0.124	1.678	0.095*
EM HY _{t-1}	-0.042	0.138	-0.303	0.762
EURTRY _{t-1}	0.011	0.159	0.067	0.947
USDTRY _{t-1}	0.413	0.126	3.288	0.001***
MSCI World _{t-1}	0.047	0.140	0.335	0.738
MSCI EM _{t-1}	-0.233	0.089	-2.625	0.009***
NOKTRY _{t-1}	0.083	0.122	0.685	0.494
S&P Energy _{t-1}	0.020	0.047	0.421	0.674
S&P Utilities _{t-1}	-0.140	0.064	-2.196	0.029**
US HY _{t-1}	-0.106	0.207	-0.513	0.609
Gold _{t-1}	-0.113	0.065	-1.757	0.080*
NAREIT _{t-1}	0.053	0.064	0.818	0.414
R-squared	0.491			
Adj. R-squared	0.453			

Dependent Variable: MSCI World

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.013	0.004	3.318	0.001***
CPI _{t-1}	-0.053	0.261	-0.205	0.838
AUDTRY _{t-1}	0.552	0.188	2.938	0.004***
BIST100 _{t-1}	0.037	0.049	0.762	0.447
BCOM _{t-1}	-0.104	0.103	-1.010	0.314
CHFTRY _{t-1}	0.215	0.189	1.141	0.255
EM HY _{t-1}	-0.074	0.210	-0.355	0.723
EURTRY _{t-1}	0.085	0.241	0.354	0.724
USDTRY _{t-1}	0.242	0.191	1.267	0.207
MSCI World _{t-1}	0.138	0.212	0.650	0.516
MSCI EM _{t-1}	-0.152	0.135	-1.128	0.260
NOKTRY _{t-1}	-0.172	0.185	-0.932	0.353
S&P Energy _{t-1}	-0.060	0.072	-0.835	0.405
S&P Utilities _{t-1}	-0.130	0.097	-1.348	0.179
US HY _{t-1}	0.207	0.315	0.657	0.512
Gold _{t-1}	-0.158	0.098	-1.604	0.110
NAREIT _{t-1}	-0.093	0.098	-0.945	0.346
R-squared			0.325	
Adj. R-squared			0.275	

Dependent Variable: MSCI EM

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.009	0.005	2.033	0.043**
CPI _{t-1}	-0.367	0.303	-1.209	0.228
AUDTRY _{t-1}	0.570	0.219	2.609	0.010***
BIST100 _{t-1}	0.081	0.057	1.427	0.155
BCOM _{t-1}	-0.142	0.120	-1.186	0.237
CHFTRY _{t-1}	0.079	0.219	0.361	0.718
EM HY _{t-1}	0.039	0.244	0.159	0.874
EURTRY _{t-1}	0.105	0.281	0.374	0.709
USDBRL _{t-1}	0.012	0.222	0.055	0.956
MSCI World _{t-1}	0.195	0.247	0.790	0.430

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Dependent Variable: MSCI EM (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
MSCI EM _{t-1}	-0.257	0.157	-1.635	0.104
NOKTRY _{t-1}	-0.141	0.215	-0.655	0.513
S&P Energy _{t-1}	-0.093	0.083	-1.111	0.268
S&P Utilities _{t-1}	-0.079	0.112	-0.698	0.486
US HY _{t-1}	0.366	0.366	0.999	0.319
Gold _{t-1}	-0.024	0.114	-0.209	0.834
NAREIT _{t-1}	-0.118	0.114	-1.032	0.303
R-squared			0.241	
Adj. R-squared			0.185	

Dependent Variable: NOK/TRY

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.013	0.004	3.084	0.002***
CPI _{t-1}	-0.107	0.275	-0.390	0.697
AUDTRY _{t-1}	0.294	0.198	1.485	0.139
BIST100 _{t-1}	0.025	0.052	0.482	0.630
BCOM _{t-1}	0.119	0.109	1.095	0.275
CHFTRY _{t-1}	0.272	0.199	1.368	0.173
EM HY _{t-1}	-0.096	0.222	-0.435	0.664
EURTRY _{t-1}	-0.320	0.255	-1.259	0.210
USDBRL _{t-1}	0.248	0.202	1.228	0.221
MSCI World _{t-1}	0.110	0.224	0.490	0.624
MSCI EM _{t-1}	-0.084	0.143	-0.588	0.557
NOKTRY _{t-1}	-0.033	0.195	-0.168	0.867
S&P Energy _{t-1}	-0.040	0.076	-0.532	0.595
S&P Utilities _{t-1}	-0.212	0.102	-2.074	0.039**
US HY _{t-1}	-0.056	0.332	-0.169	0.866
Gold _{t-1}	-0.150	0.104	-1.442	0.151
NAREIT _{t-1}	0.030	0.103	0.287	0.774
R-squared			0.082	
Adj. R-squared			0.014	

Dependent Variable: S&P 500 Energy				
Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.016	0.006	2.555	0.011**
CPI _{t-1}	0.591	0.405	1.461	0.145
AUDTRY _{t-1}	0.298	0.292	1.023	0.308
BIST100 _{t-1}	0.115	0.076	1.503	0.134
BCOM _{t-1}	0.072	0.160	0.449	0.654
CHFTRY _{t-1}	0.320	0.293	1.094	0.275
EM HY _{t-1}	-0.683	0.326	-2.094	0.037**
EURTRY _{t-1}	0.321	0.374	0.856	0.393
USDBRL _{t-1}	0.589	0.297	1.986	0.048**
MSCI World _{t-1}	-0.216	0.330	-0.656	0.513
MSCI EM _{t-1}	-0.027	0.210	-0.128	0.898
NOKTRY _{t-1}	-0.391	0.287	-1.359	0.175
S&P Energy _{t-1}	-0.050	0.111	-0.450	0.653
S&P Utilities _{t-1}	-0.142	0.150	-0.948	0.344
US HY _{t-1}	0.619	0.489	1.268	0.206
Gold _{t-1}	-0.322	0.153	-2.109	0.036**
NAREIT _{t-1}	0.015	0.152	0.101	0.920
R-squared			0.208	
Adj. R-squared			0.150	

Dependent Variable: S&P 500 Utilities				
Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.014	0.004	3.706	0.000***
CPI _{t-1}	-0.184	0.251	-0.733	0.465
AUD/TRY _{t-1}	0.615	0.181	3.398	0.001***
BIST 100 _{t-1}	0.057	0.047	1.211	0.227
BCOM _{t-1}	0.057	0.099	0.573	0.567
CHF/TRY _{t-1}	-0.002	0.182	-0.013	0.990
EM HY _{t-1}	-0.369	0.202	-1.825	0.069*
EUR/TRY _{t-1}	0.283	0.232	1.219	0.224
USD/TRY _{t-1}	0.515	0.184	2.796	0.006***
MSCI World _{t-1}	0.160	0.205	0.783	0.434

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Dependent Variable: S&P 500 Utilities (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
MSCI EM _{t-1}	-0.289	0.130	-2.219	0.028**
NOK/TRY _{t-1}	-0.128	0.178	-0.720	0.473
S&P Energy _{t-1}	-0.009	0.069	-0.125	0.900
S&P Utilities _{t-1}	-0.246	0.093	-2.641	0.009***
US HY _{t-1}	0.008	0.303	0.025	0.980
Gold _{t-1}	-0.136	0.095	-1.436	0.152
NAREIT _{t-1}	0.075	0.094	0.799	0.425
R-squared	0.424			
Adj. R-squared	0.381			

Dependent Variable: US High Yield

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.011	0.003	3.909	0.000***
CPI _{t-1}	-0.198	0.184	-1.080	0.281
AUD/TRY _{t-1}	0.400	0.132	3.018	0.003***
BIST 100 _{t-1}	0.049	0.035	1.408	0.161
BCOM _{t-1}	-0.127	0.073	-1.752	0.081*
CHF/TRY _{t-1}	0.181	0.133	1.360	0.175
EM HY _{t-1}	0.208	0.148	1.408	0.160
EUR/TRY _{t-1}	0.184	0.170	1.084	0.280
USD/TRY _{t-1}	0.146	0.135	1.081	0.281
MSCI World _{t-1}	0.108	0.150	0.722	0.471
MSCI EM _{t-1}	-0.184	0.095	-1.932	0.055*
NOK/TRY _{t-1}	-0.163	0.131	-1.248	0.214
S&P Energy _{t-1}	-0.025	0.050	-0.491	0.624
S&P Utilities _{t-1}	-0.089	0.068	-1.304	0.194
US HY _{t-1}	-0.049	0.222	-0.219	0.827
Gold _{t-1}	-0.056	0.069	-0.811	0.419
NAREIT _{t-1}	-0.011	0.069	-0.166	0.868
R-squared	0.443			
Adj. R-squared	0.402			

Dependent Variable: Gold				
Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.016	0.004	4.365	0.000***
CPI _{t-1}	-0.413	0.241	-1.714	0.088*
AUD/TRY _{t-1}	-0.020	0.174	-0.116	0.908
BIST 100 _{t-1}	0.006	0.045	0.136	0.892
BCOM _{t-1}	0.154	0.095	1.615	0.108
CHF/TRY _{t-1}	0.350	0.174	2.008	0.046**
EM HY _{t-1}	0.094	0.194	0.483	0.630
EUR/TRY _{t-1}	-0.059	0.223	-0.262	0.793
USD/TRY _{t-1}	0.138	0.177	0.781	0.436
MSCI World _{t-1}	-0.333	0.196	-1.694	0.092*
MSCI EM _{t-1}	0.047	0.125	0.379	0.705
NOK/TRY _{t-1}	0.228	0.171	1.331	0.184
S&P Energy _{t-1}	-0.003	0.066	-0.038	0.970
S&P Utilities _{t-1}	-0.051	0.089	-0.568	0.570
US HY _{t-1}	-0.114	0.291	-0.392	0.696
Gold _{t-1}	-0.048	0.091	-0.528	0.598
NAREIT _{t-1}	0.094	0.091	1.037	0.301
R-squared			0.279	
Adj. R-squared			0.225	

Dependent Variable: NAREIT				
Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.016	0.005	3.201	0.002***
CPI _{t-1}	-0.302	0.330	-0.916	0.360
AUDTRY _{t-1}	0.815	0.238	3.430	0.001***
BIST100 _{t-1}	0.046	0.062	0.736	0.463
BCOM _{t-1}	0.005	0.130	0.039	0.969
CHFTRY _{t-1}	-0.158	0.239	-0.663	0.508
EM HY _{t-1}	0.544	0.266	2.047	0.042**
EURTRY _{t-1}	0.402	0.305	1.319	0.188
USDTRY _{t-1}	0.227	0.242	0.939	0.349
MSCI World _{t-1}	0.430	0.269	1.599	0.111

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Dependent Variable: NAREIT (continued)				
Variable	Coef.	Std.Err.	t-stat	p-value
MSCI EM _{t-1}	-0.471	0.171	-2.756	0.006***
NOKTRY _{t-1}	-0.238	0.234	-1.016	0.311
S&P Energy _{t-1}	-0.088	0.091	-0.974	0.331
S&P Utilities _{t-1}	0.012	0.122	0.095	0.924
US HY _{t-1}	-0.553	0.398	-1.390	0.166
Gold _{t-1}	-0.236	0.124	-1.903	0.058*
NAREIT _{t-1}	-0.125	0.124	-1.013	0.312
R-squared			0.290	
Adj. R-squared			0.238	

Note: ***, **, * denote significance at the 1%, 5% and 10% level.

Table B.1.2.37: Regression Results of the Third Model for Turkey

Dependent Variable: CPI Turkey Monthly				
Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	-0.004	0.001	-2.881	0.005***
CPI _{t-1}	-0.196	0.086	-2.277	0.024**
AUDTRY _{t-1}	0.079	0.068	1.154	0.250
BIST100 _{t-1}	0.031	0.016	1.953	0.053*
BCOM _{t-1}	-0.069	0.036	-1.906	0.059*
CHFTRY _{t-1}	0.006	0.063	0.101	0.920
EM HY _{t-1}	0.036	0.094	0.389	0.698
EURTRY _{t-1}	0.090	0.081	1.116	0.266
USDTRY _{t-1}	0.125	0.095	1.316	0.190
MSCI World _{t-1}	0.019	0.074	0.255	0.799
MSCI EM _{t-1}	-0.005	0.052	-0.098	0.922
NOKTRY _{t-1}	0.064	0.067	0.953	0.342
S&P Energy _{t-1}	-0.024	0.025	-0.929	0.354
S&P Utilities _{t-1}	0.032	0.046	0.699	0.486
Infrastructure _{t-1}	-0.085	0.082	-1.043	0.299
TIPS _{t-1}	-0.237	0.102	-2.328	0.021**

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Dependent Variable: CPI Turkey Monthly (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
US HY _{t-1}	0.049	0.135	0.366	0.715
Gold _{t-1}	0.031	0.038	0.813	0.418
NAREIT _{t-1}	0.060	0.052	1.164	0.246
R-squared			0.469	
Adj. R-squared			0.401	

Dependent Variable: AUD/TRY

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.022	0.006	3.821	0.000***
CPI _{t-1}	-0.323	0.350	-0.924	0.357
AUDTRY _{t-1}	0.309	0.277	1.116	0.266
BIST100 _{t-1}	-0.010	0.065	-0.152	0.880
BCOM _{t-1}	0.013	0.148	0.086	0.932
CHFTRY _{t-1}	0.101	0.255	0.395	0.693
EM HY _{t-1}	-0.260	0.380	-0.684	0.495
EURTRY _{t-1}	-0.398	0.329	-1.211	0.228
USDTRY _{t-1}	0.716	0.385	1.857	0.065*
MSCI World _{t-1}	0.259	0.302	0.860	0.392
MSCI EM _{t-1}	-0.089	0.212	-0.417	0.677
NOKTRY _{t-1}	0.116	0.272	0.427	0.670
S&P Energy _{t-1}	0.010	0.103	0.098	0.922
S&P Utilities _{t-1}	-0.074	0.186	-0.400	0.690
Infrastructure _{t-1}	0.015	0.333	0.045	0.964
TIPS _{t-1}	0.054	0.413	0.130	0.896
US HY _{t-1}	-0.551	0.549	-1.003	0.318
Gold _{t-1}	-0.147	0.153	-0.963	0.337
NAREIT _{t-1}	-0.055	0.210	-0.261	0.795
R-squared			0.104	
Adj. R-squared			-0.010	

Dependent Variable: BIST 100

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.012	0.008	1.542	0.125
CPI _{t-1}	0.441	0.485	0.909	0.365
AUDTRY _{t-1}	0.703	0.383	1.836	0.069*
BIST100 _{t-1}	0.149	0.091	1.648	0.102
BCOM _{t-1}	0.068	0.205	0.334	0.739
CHFTRY _{t-1}	-0.110	0.353	-0.312	0.756
EM HY _{t-1}	-1.112	0.526	-2.114	0.036**
EURTRY _{t-1}	-0.326	0.455	-0.716	0.475
USDTRY _{t-1}	0.795	0.534	1.489	0.139
MSCI World _{t-1}	0.144	0.418	0.345	0.731
MSCI EM _{t-1}	-0.205	0.294	-0.696	0.488
NOKTRY _{t-1}	-0.113	0.376	-0.301	0.764
S&P Energy _{t-1}	-0.125	0.143	-0.871	0.385
S&P Utilities _{t-1}	-0.227	0.257	-0.884	0.378
Infrastructure _{t-1}	0.326	0.461	0.708	0.480
TIPS _{t-1}	-0.460	0.572	-0.805	0.422
US HY _{t-1}	0.679	0.761	0.892	0.374
Gold _{t-1}	0.132	0.212	0.624	0.534
NAREIT _{t-1}	0.052	0.290	0.178	0.859
R-squared	0.127			
Adj. R-squared	0.016			

Dependent Variable: BCOM

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.007	0.005	1.242	0.216
CPI _{t-1}	-0.316	0.337	-0.938	0.350
AUDTRY _{t-1}	0.179	0.267	0.672	0.503
BIST100 _{t-1}	0.056	0.063	0.882	0.379
BCOM _{t-1}	-0.106	0.143	-0.745	0.458
CHFTRY _{t-1}	0.360	0.246	1.467	0.145
EM HY _{t-1}	-0.522	0.366	-1.426	0.156
EURTRY _{t-1}	-0.273	0.317	-0.862	0.390

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Dependent Variable: BCOM (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
USDTRY _{t-1}	0.876	0.372	2.357	0.020**
MSCI World _{t-1}	-0.187	0.291	-0.644	0.520
MSCI EM _{t-1}	0.004	0.205	0.018	0.986
NOKTRY _{t-1}	0.256	0.262	0.977	0.330
S&P Energy _{t-1}	0.071	0.100	0.715	0.476
S&P Utilities _{t-1}	-0.042	0.179	-0.233	0.816
Infrastructure _{t-1}	-0.170	0.321	-0.529	0.598
TIPS _{t-1}	-0.461	0.398	-1.159	0.249
US HY _{t-1}	0.612	0.530	1.156	0.249
Gold _{t-1}	-0.151	0.147	-1.027	0.306
NAREIT _{t-1}	0.133	0.202	0.658	0.511
R-squared			0.347	
Adj. R-squared			0.264	

Dependent Variable: CHF/TRY

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.024	0.006	3.889	0.000***
CPI _{t-1}	-0.490	0.382	-1.284	0.201
AUDTRY _{t-1}	0.235	0.302	0.780	0.437
BIST100 _{t-1}	-0.010	0.071	-0.145	0.885
BCOM _{t-1}	-0.024	0.162	-0.147	0.883
CHFTRY _{t-1}	0.069	0.278	0.247	0.805
EM HY _{t-1}	-0.233	0.415	-0.561	0.576
EURTRY _{t-1}	-0.340	0.359	-0.949	0.344
USDTRY _{t-1}	0.862	0.421	2.048	0.042**
MSCI World _{t-1}	0.361	0.329	1.097	0.274
MSCI EM _{t-1}	-0.017	0.232	-0.073	0.942
NOKTRY _{t-1}	0.155	0.297	0.523	0.602
S&P Energy _{t-1}	0.001	0.113	0.010	0.992
S&P Utilities _{t-1}	-0.027	0.203	-0.135	0.893
Infrastructure _{t-1}	0.026	0.363	0.070	0.944
TIPS _{t-1}	-0.078	0.450	-0.173	0.863
US HY _{t-1}	-0.648	0.600	-1.080	0.282

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Dependent Variable: CHF/TRY (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
Gold _{t-1}	-0.220	0.167	-1.320	0.189
NAREIT _{t-1}	-0.058	0.229	-0.252	0.802
R-squared			0.096	
Adj. R-squared			-0.019	

Dependent Variable: EM HY

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.014	0.004	3.783	0.000***
CPI _{t-1}	-0.004	0.235	-0.018	0.986
AUDTRY _{t-1}	0.396	0.186	2.131	0.035**
BIST100 _{t-1}	0.048	0.044	1.085	0.280
BCOM _{t-1}	-0.233	0.100	-2.337	0.021**
CHFTRY _{t-1}	0.335	0.171	1.958	0.052*
EM HY _{t-1}	-0.125	0.255	-0.490	0.625
EURTRY _{t-1}	-0.136	0.221	-0.616	0.539
USDTRY _{t-1}	0.324	0.259	1.253	0.212
MSCI World _{t-1}	0.413	0.203	2.037	0.044**
MSCI EM _{t-1}	-0.219	0.143	-1.531	0.128
NOKTRY _{t-1}	-0.002	0.183	-0.010	0.992
S&P Energy _{t-1}	0.024	0.069	0.346	0.730
S&P Utilities _{t-1}	0.078	0.125	0.627	0.532
Infrastructure _{t-1}	-0.167	0.224	-0.748	0.455
TIPS _{t-1}	-0.090	0.277	-0.326	0.745
US HY _{t-1}	0.049	0.369	0.133	0.895
Gold _{t-1}	-0.098	0.103	-0.950	0.344
NAREIT _{t-1}	-0.140	0.141	-0.993	0.322
R-squared			0.469	
Adj. R-squared			0.401	

Dependent Variable: EUR/TRY

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.023	0.006	3.948	0.000***

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Dependent Variable: EUR/TRY (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
CPI _{t-1}	-0.270	0.353	-0.765	0.446
AUDTRY _{t-1}	0.190	0.279	0.681	0.497
BIST100 _{t-1}	-0.001	0.066	-0.014	0.989
BCOM _{t-1}	0.093	0.149	0.621	0.535
CHFTRY _{t-1}	0.181	0.257	0.704	0.483
EM HY _{t-1}	-0.026	0.383	-0.069	0.945
EURTRY _{t-1}	-0.429	0.331	-1.294	0.198
USDTRY _{t-1}	0.730	0.389	1.877	0.063*
MSCI World _{t-1}	0.404	0.304	1.330	0.186
MSCI EM _{t-1}	-0.081	0.214	-0.376	0.707
NOKTRY _{t-1}	0.187	0.274	0.682	0.496
S&P Energy _{t-1}	-0.052	0.104	-0.504	0.615
S&P Utilities _{t-1}	-0.055	0.187	-0.294	0.769
Infrastructure _{t-1}	-0.054	0.335	-0.160	0.873
TIPS _{t-1}	-0.013	0.416	-0.031	0.975
US HY _{t-1}	-0.780	0.554	-1.409	0.161
Gold _{t-1}	-0.279	0.154	-1.812	0.072*
NAREIT _{t-1}	-0.006	0.211	-0.027	0.978
R-squared			0.093	
Adj. R-squared			-0.023	

Dependent Variable: USD/TRY

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.013	0.003	3.761	0.000***
CPI _{t-1}	-0.044	0.214	-0.206	0.837
AUDTRY _{t-1}	0.323	0.169	1.912	0.058*
BIST100 _{t-1}	-0.014	0.040	-0.349	0.728
BCOM _{t-1}	-0.055	0.090	-0.612	0.542
CHFTRY _{t-1}	0.282	0.156	1.809	0.073*
EM HY _{t-1}	0.016	0.232	0.068	0.946
EURTRY _{t-1}	-0.032	0.201	-0.159	0.874
USDTRY _{t-1}	0.505	0.236	2.146	0.034**
MSCI World _{t-1}	0.267	0.184	1.449	0.150

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Dependent Variable: USD/TRY (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
MSCI EM _{t-1}	-0.208	0.130	-1.604	0.111
NOKTRY _{t-1}	0.016	0.166	0.096	0.923
S&P Energy _{t-1}	0.050	0.063	0.785	0.433
S&P Utilities _{t-1}	0.037	0.113	0.323	0.747
Infrastructure _{t-1}	-0.187	0.203	-0.919	0.360
TIPS _{t-1}	-0.185	0.252	-0.735	0.464
US HY _{t-1}	-0.209	0.336	-0.621	0.535
Gold _{t-1}	-0.132	0.093	-1.409	0.161
NAREIT _{t-1}	-0.059	0.128	-0.461	0.646
R-squared			0.500	
Adj. R-squared			0.436	

Dependent Variable: MSCI World

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.020	0.005	3.744	0.000***
CPI _{t-1}	0.134	0.331	0.405	0.686
AUDTRY _{t-1}	0.472	0.262	1.804	0.073*
BIST100 _{t-1}	0.014	0.062	0.224	0.823
BCOM _{t-1}	-0.244	0.140	-1.738	0.084*
CHFTRY _{t-1}	0.387	0.241	1.606	0.111
EM HY _{t-1}	-0.630	0.359	-1.753	0.082*
EURTRY _{t-1}	-0.071	0.311	-0.227	0.821
USDTRY _{t-1}	0.757	0.365	2.076	0.040**
MSCI World _{t-1}	0.029	0.285	0.103	0.918
MSCI EM _{t-1}	0.005	0.201	0.025	0.980
NOKTRY _{t-1}	-0.126	0.257	-0.490	0.625
S&P Energy _{t-1}	0.033	0.098	0.342	0.733
S&P Utilities _{t-1}	-0.122	0.176	-0.695	0.488
Infrastructure _{t-1}	-0.045	0.315	-0.144	0.885
TIPS _{t-1}	-0.255	0.391	-0.652	0.515
US HY _{t-1}	0.477	0.520	0.918	0.360
Gold _{t-1}	-0.177	0.145	-1.227	0.222

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Dependent Variable: MSCI World (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
NAREIT _{t-1}	-0.093	0.198	-0.471	0.638
R-squared			0.376	
Adj. R-squared			0.296	

Dependent Variable: MSCI EM

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.010	0.006	1.738	0.084*
CPI _{t-1}	-0.272	0.357	-0.764	0.446
AUDTRY _{t-1}	0.460	0.282	1.629	0.105
BIST100 _{t-1}	0.125	0.067	1.878	0.062*
BCOM _{t-1}	-0.220	0.151	-1.458	0.147
CHFTRY _{t-1}	0.246	0.260	0.946	0.346
EM HY _{t-1}	-0.378	0.387	-0.976	0.331
EURTRY _{t-1}	0.043	0.335	0.130	0.897
USDTRY _{t-1}	0.429	0.393	1.092	0.277
MSCI World _{t-1}	0.181	0.307	0.588	0.558
MSCI EM _{t-1}	-0.250	0.217	-1.152	0.251
NOKTRY _{t-1}	-0.174	0.277	-0.627	0.531
S&P Energy _{t-1}	-0.031	0.105	-0.298	0.766
S&P Utilities _{t-1}	-0.133	0.189	-0.702	0.484
Infrastructure _{t-1}	0.065	0.339	0.191	0.849
TIPS _{t-1}	0.051	0.421	0.121	0.904
US HY _{t-1}	0.332	0.560	0.592	0.555
Gold _{t-1}	-0.136	0.156	-0.874	0.384
NAREIT _{t-1}	-0.063	0.214	-0.297	0.767
R-squared			0.307	
Adj. R-squared			0.219	

Dependent Variable: NOK/TRY

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.019	0.006	3.297	0.001***
CPI _{t-1}	-0.113	0.360	-0.315	0.754

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Dependent Variable: NOK/TRY (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
AUDTRY _{t-1}	0.310	0.284	1.090	0.278
BIST100 _{t-1}	0.001	0.067	0.022	0.982
BCOM _{t-1}	0.006	0.152	0.038	0.970
CHFTRY _{t-1}	0.222	0.262	0.847	0.398
EM HY _{t-1}	-0.562	0.391	-1.439	0.152
EURTRY _{t-1}	-0.352	0.338	-1.043	0.299
USDTRY _{t-1}	0.809	0.396	2.042	0.043**
MSCI World _{t-1}	0.132	0.310	0.427	0.670
MSCI EM _{t-1}	0.073	0.218	0.334	0.739
NOKTRY _{t-1}	0.000	0.279	0.001	0.999
S&P Energy _{t-1}	-0.021	0.106	-0.198	0.843
S&P Utilities _{t-1}	-0.217	0.191	-1.138	0.257
Infrastructure _{t-1}	0.095	0.342	0.277	0.782
TIPS _{t-1}	-0.078	0.424	-0.184	0.854
US HY _{t-1}	-0.198	0.565	-0.350	0.727
Gold _{t-1}	-0.258	0.157	-1.639	0.103
NAREIT _{t-1}	0.084	0.216	0.391	0.696
R-squared			0.109	
Adj. R-squared			-0.005	

Dependent Variable: S&P 500 Energy

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.024	0.008	2.837	0.005***
CPI _{t-1}	0.789	0.520	1.518	0.131
AUDTRY _{t-1}	0.224	0.411	0.544	0.587
BIST100 _{t-1}	0.080	0.097	0.820	0.414
BCOM _{t-1}	-0.039	0.220	-0.178	0.859
CHFTRY _{t-1}	0.503	0.379	1.327	0.186
EM HY _{t-1}	-1.775	0.565	-3.143	0.002***
EURTRY _{t-1}	-0.036	0.489	-0.074	0.941
USDTRY _{t-1}	2.084	0.573	3.638	0.000***
MSCI World _{t-1}	-0.397	0.448	-0.885	0.378
MSCI EM _{t-1}	0.408	0.316	1.293	0.198

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Dependent Variable: S&P 500 Energy (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
NOKTRY _{t-1}	-0.202	0.404	-0.500	0.618
S&P Energy _{t-1}	0.049	0.154	0.322	0.748
S&P Utilities _{t-1}	-0.176	0.276	-0.638	0.525
Infrastructure _{t-1}	0.074	0.495	0.151	0.880
TIPS _{t-1}	-0.757	0.613	-1.235	0.219
US HY _{t-1}	0.678	0.817	0.831	0.408
Gold _{t-1}	-0.386	0.227	-1.700	0.091*
NAREIT _{t-1}	0.060	0.312	0.193	0.847
R-squared	0.286			
Adj. R-squared	0.195			

Dependent Variable: S&P 500 Utilities

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.020	0.005	3.764	0.000***
CPI _{t-1}	-0.108	0.327	-0.330	0.742
AUDTRY _{t-1}	0.654	0.259	2.526	0.013**
BIST100 _{t-1}	0.009	0.061	0.142	0.888
BCOM _{t-1}	-0.010	0.139	-0.069	0.945
CHFTRY _{t-1}	-0.024	0.239	-0.099	0.921
EM HY _{t-1}	-0.214	0.355	-0.601	0.549
EURTRY _{t-1}	0.084	0.307	0.274	0.785
USDTRY _{t-1}	1.104	0.361	3.062	0.003***
MSCI World _{t-1}	0.224	0.282	0.796	0.428
MSCI EM _{t-1}	-0.403	0.199	-2.027	0.045**
NOKTRY _{t-1}	0.101	0.254	0.398	0.691
S&P Energy _{t-1}	0.028	0.097	0.287	0.774
S&P Utilities _{t-1}	-0.283	0.174	-1.627	0.106
Infrastructure _{t-1}	-0.040	0.311	-0.128	0.898
TIPS _{t-1}	-0.195	0.386	-0.505	0.614
US HY _{t-1}	-0.502	0.514	-0.977	0.330
Gold _{t-1}	-0.166	0.143	-1.159	0.248
NAREIT _{t-1}	0.145	0.196	0.742	0.460
R-squared	0.449			

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Dependent Variable: S&P 500 Utilities (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
Adj. R-squared			0.379	

Dependent Variable: Infrastructure

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.019	0.005	3.612	0.000***
CPI _{t-1}	-0.057	0.325	-0.176	0.860
AUDTRY _{t-1}	0.493	0.257	1.920	0.057*
BIST 100 _{t-1}	0.016	0.061	0.261	0.795
BCOM _{t-1}	-0.098	0.137	-0.710	0.479
CHF/TRY _{t-1}	0.232	0.237	0.981	0.328
EM HY _{t-1}	-0.589	0.352	-1.671	0.097*
EURTRY _{t-1}	0.133	0.305	0.436	0.663
USDTRY _{t-1}	0.921	0.358	2.576	0.011**
MSCI World _{t-1}	0.005	0.280	0.017	0.987
MSCI EM _{t-1}	-0.067	0.197	-0.340	0.734
NOKTRY _{t-1}	-0.200	0.252	-0.794	0.428
S&P 500 Energy _{t-1}	0.058	0.096	0.609	0.543
S&P 500 Utilities _{t-1}	-0.067	0.172	-0.392	0.696
Infrastructure _{t-1}	-0.018	0.309	-0.059	0.953
TIPS _{t-1}	-0.387	0.383	-1.010	0.314
US HY _{t-1}	0.167	0.510	0.328	0.744
Gold _{t-1}	-0.139	0.142	-0.983	0.328
NAREIT _{t-1}	0.001	0.194	0.007	0.995
R-squared			0.381	
Adj. R-squared			0.302	

Dependent Variable: TIPS

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.014	0.004	3.912	0.000***
CPI _{t-1}	0.011	0.225	0.050	0.960
AUDTRY _{t-1}	0.362	0.178	2.035	0.044**
BIST100 _{t-1}	-0.049	0.042	-1.170	0.244

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Dependent Variable: TIPS (continued)				
Variable	Coef.	Std.Err.	t-stat	p-value
BCOM _{t-1}	-0.114	0.095	-1.191	0.235
CHFTRY _{t-1}	0.207	0.164	1.264	0.208
EM HY _{t-1}	0.001	0.245	0.006	0.995
EURTRY _{t-1}	0.011	0.212	0.051	0.959
USDTRY _{t-1}	0.548	0.248	2.207	0.029**
MSCI World _{t-1}	0.298	0.194	1.535	0.127
MSCI EM _{t-1}	-0.209	0.137	-1.529	0.128
NOKTRY _{t-1}	0.013	0.175	0.072	0.943
S&P Energy _{t-1}	0.038	0.067	0.573	0.567
S&P Utilities _{t-1}	0.022	0.120	0.187	0.852
Infrastructure _{t-1}	-0.186	0.214	-0.869	0.386
TIPS _{t-1}	-0.192	0.266	-0.723	0.471
US HY _{t-1}	-0.312	0.354	-0.882	0.379
Gold _{t-1}	-0.069	0.098	-0.701	0.484
NAREIT _{t-1}	-0.017	0.135	-0.127	0.900
R-squared			0.472	
Adj. R-squared			0.404	

Dependent Variable: US HY				
Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.017	0.004	4.433	0.000***
CPI _{t-1}	0.085	0.240	0.356	0.722
AUDTRY _{t-1}	0.373	0.190	1.966	0.051*
BIST100 _{t-1}	0.011	0.045	0.246	0.806
BCOM _{t-1}	-0.205	0.101	-2.018	0.045**
CHFTRY _{t-1}	0.343	0.175	1.964	0.051*
EM HY _{t-1}	-0.165	0.260	-0.634	0.527
EURTRY _{t-1}	-0.069	0.225	-0.308	0.759
USDTRY _{t-1}	0.662	0.264	2.509	0.013**
MSCI World _{t-1}	0.233	0.207	1.129	0.261
MSCI EM _{t-1}	-0.140	0.146	-0.965	0.336
NOKTRY _{t-1}	-0.023	0.186	-0.126	0.900
S&P Energy _{t-1}	0.033	0.071	0.466	0.642

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Dependent Variable: US HY (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
S&P Utilities _{t-1}	-0.018	0.127	-0.144	0.886
Infrastructure _{t-1}	-0.062	0.228	-0.273	0.786
TIPS _{t-1}	-0.282	0.283	-0.996	0.321
US HY _{t-1}	-0.125	0.376	-0.332	0.741
Gold _{t-1}	-0.087	0.105	-0.835	0.405
NAREIT _{t-1}	-0.058	0.144	-0.405	0.686
R-squared			0.466	
Adj. R-squared			0.398	

Dependent Variable: Gold

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.015	0.004	3.457	0.001***
CPI _{t-1}	-0.446	0.266	-1.677	0.096*
AUDTRY _{t-1}	0.006	0.210	0.029	0.977
BIST100 _{t-1}	0.002	0.050	0.042	0.966
BCOM _{t-1}	0.122	0.113	1.085	0.280
CHFTRY _{t-1}	0.399	0.194	2.058	0.041**
EM HY _{t-1}	0.187	0.289	0.648	0.518
EURTRY _{t-1}	0.056	0.250	0.225	0.822
USDTRY _{t-1}	-0.399	0.293	-1.362	0.176
MSCI World _{t-1}	0.151	0.229	0.658	0.511
MSCI EM _{t-1}	-0.086	0.162	-0.535	0.594
NOKTRY _{t-1}	0.048	0.207	0.231	0.818
S&P Energy _{t-1}	0.049	0.079	0.619	0.537
S&P Utilities _{t-1}	0.128	0.141	0.903	0.368
Infrastructure _{t-1}	-0.351	0.253	-1.386	0.168
TIPS _{t-1}	0.771	0.314	2.455	0.015**
US HY _{t-1}	-0.460	0.418	-1.101	0.273
Gold _{t-1}	-0.059	0.116	-0.506	0.614
NAREIT _{t-1}	-0.044	0.159	-0.276	0.783
R-squared			0.410	
Adj. R-squared			0.334	

Dependent Variable: NAREIT				
Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.021	0.006	3.582	0.000***
CPI _{<i>t</i>-1}	0.163	0.365	0.447	0.655
AUDTRY _{<i>t</i>-1}	0.819	0.288	2.840	0.005***
BIST100 _{<i>t</i>-1}	-0.011	0.068	-0.158	0.875
BCOM _{<i>t</i>-1}	-0.193	0.154	-1.251	0.213
CHFTRY _{<i>t</i>-1}	0.103	0.266	0.389	0.698
EM HY _{<i>t</i>-1}	-0.320	0.396	-0.808	0.421
EURTRY _{<i>t</i>-1}	0.119	0.343	0.347	0.729
USDTRY _{<i>t</i>-1}	0.895	0.402	2.227	0.028**
MSCI World _{<i>t</i>-1}	0.267	0.314	0.848	0.398
MSCI EM _{<i>t</i>-1}	-0.399	0.221	-1.804	0.073*
NOKTRY _{<i>t</i>-1}	-0.149	0.283	-0.525	0.600
S&P Energy _{<i>t</i>-1}	0.024	0.108	0.226	0.821
S&P Utilities _{<i>t</i>-1}	0.030	0.194	0.156	0.876
Infrastructure _{<i>t</i>-1}	0.005	0.347	0.014	0.989
TIPS _{<i>t</i>-1}	-0.641	0.430	-1.489	0.139
US HY _{<i>t</i>-1}	0.125	0.573	0.219	0.827
Gold _{<i>t</i>-1}	-0.099	0.159	-0.620	0.536
NAREIT _{<i>t</i>-1}	-0.165	0.218	-0.754	0.452
R-squared			0.403	
Adj. R-squared			0.327	

Note: ***, **, * denote significance at the 1%, 5% and 10% level.

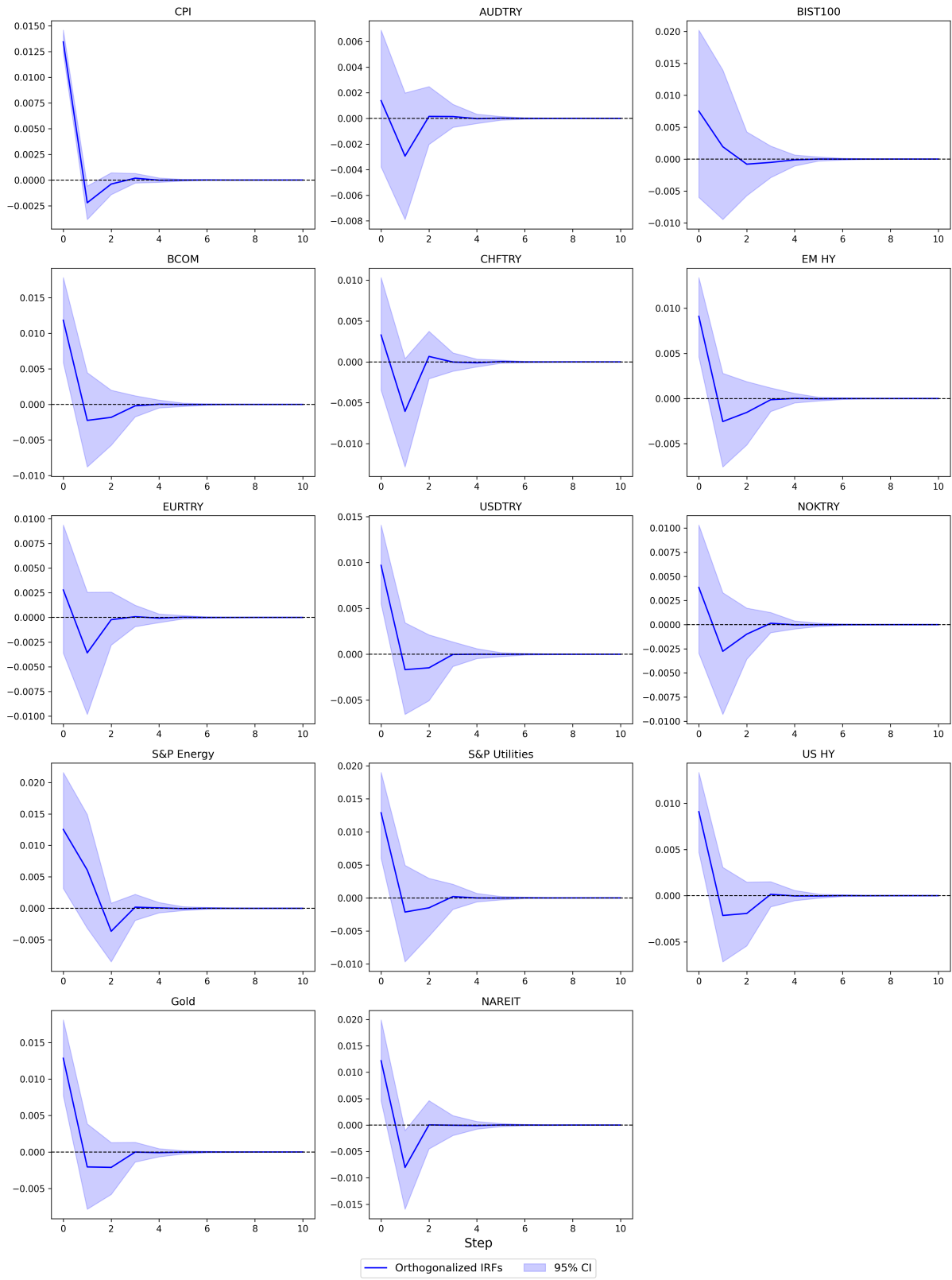


Figure B.1.2.1: Orthogonalized IRFs for Impulse Shock of Monthly Inflation for the First Model for Turkey

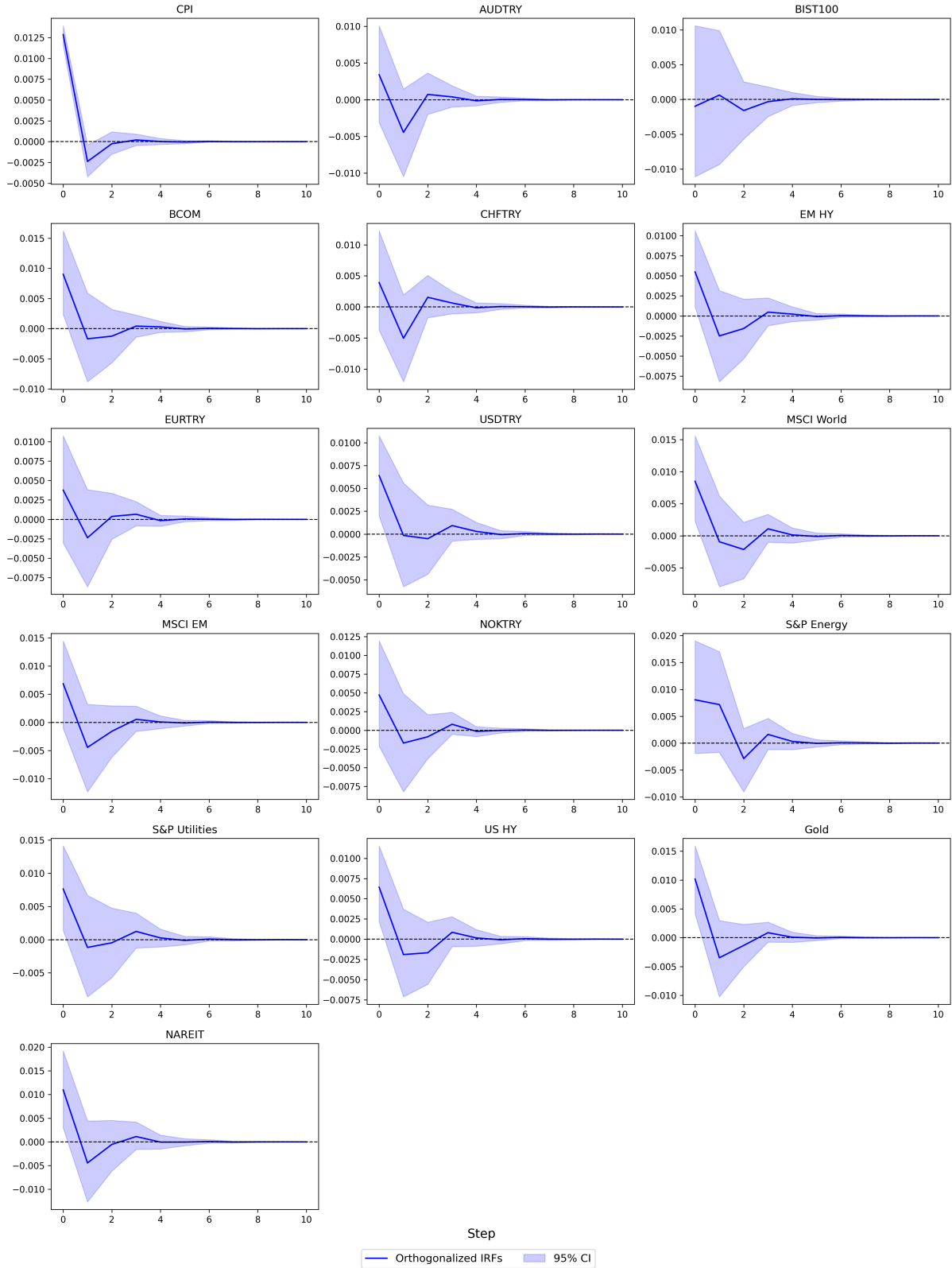


Figure B.1.2.2: Orthogonalized IRFs for Impulse Shock of Monthly Inflation for the Second Model for Turkey

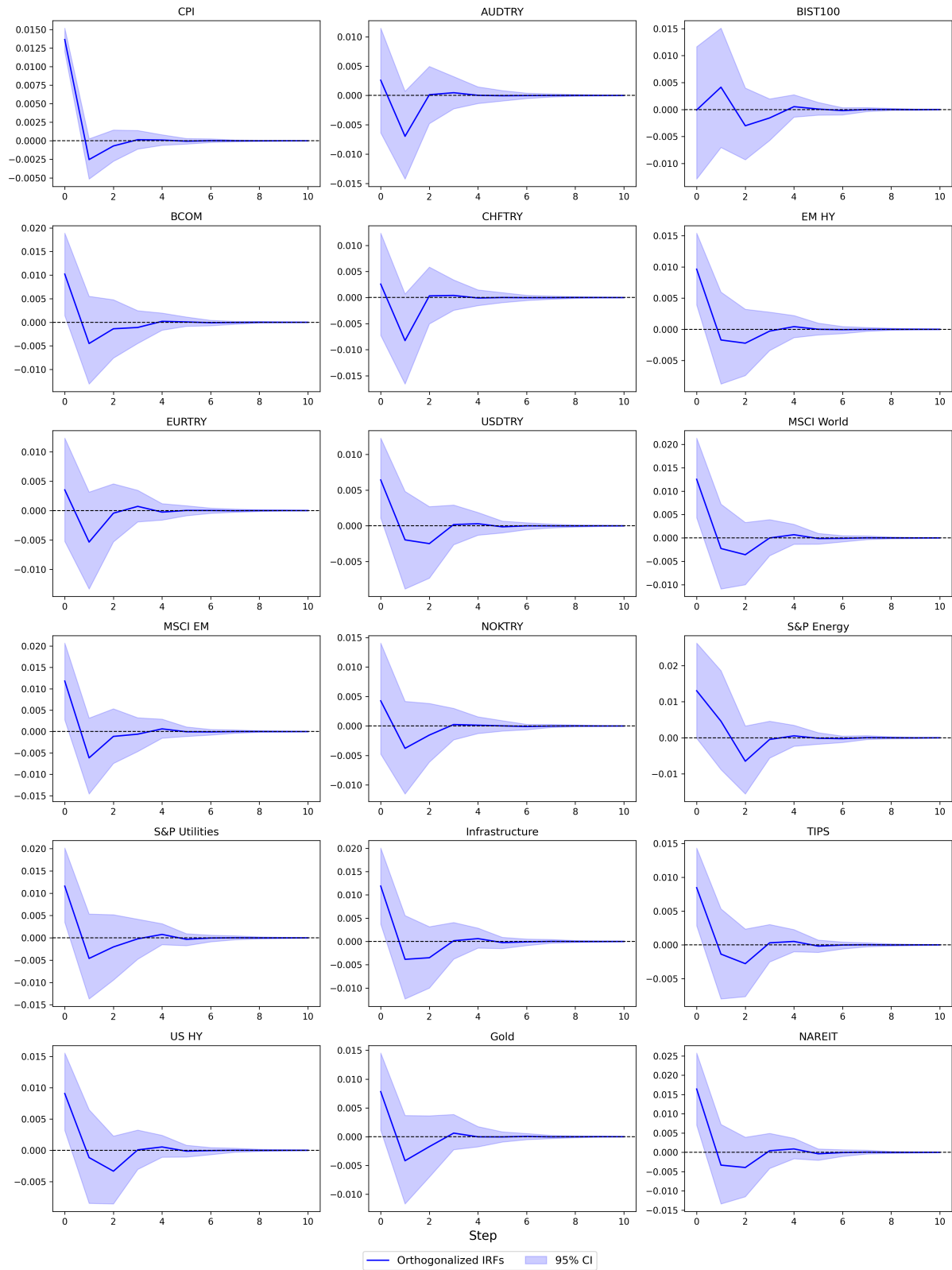


Figure B.1.2.3: Orthogonalized IRFs for Impulse Shock of Monthly Inflation for the Third Model for Turkey

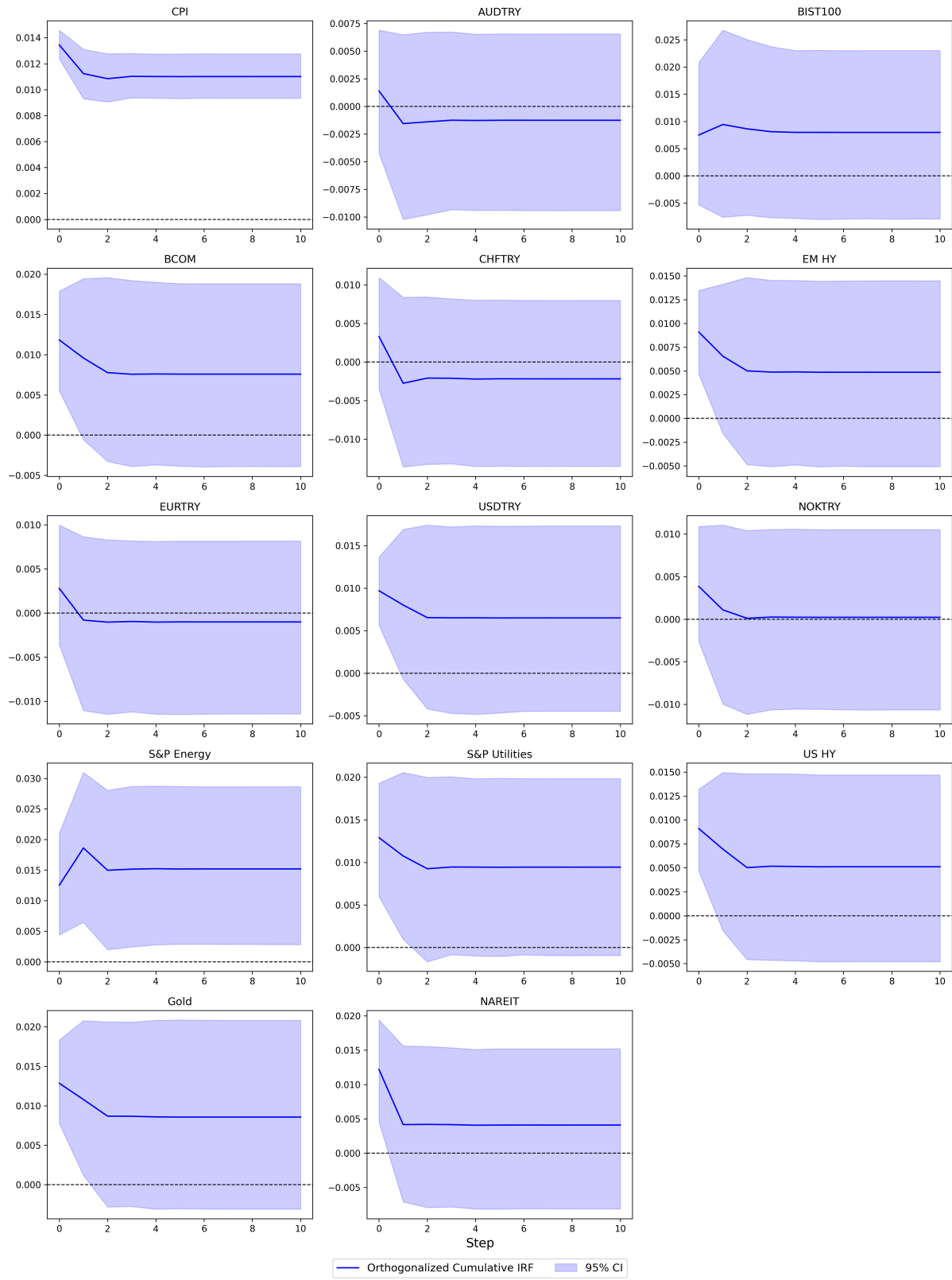


Figure B.1.2.4: Cumulative Orthogonalized IRFs for Impulse Shock of Monthly Inflation for the First Model for Turkey

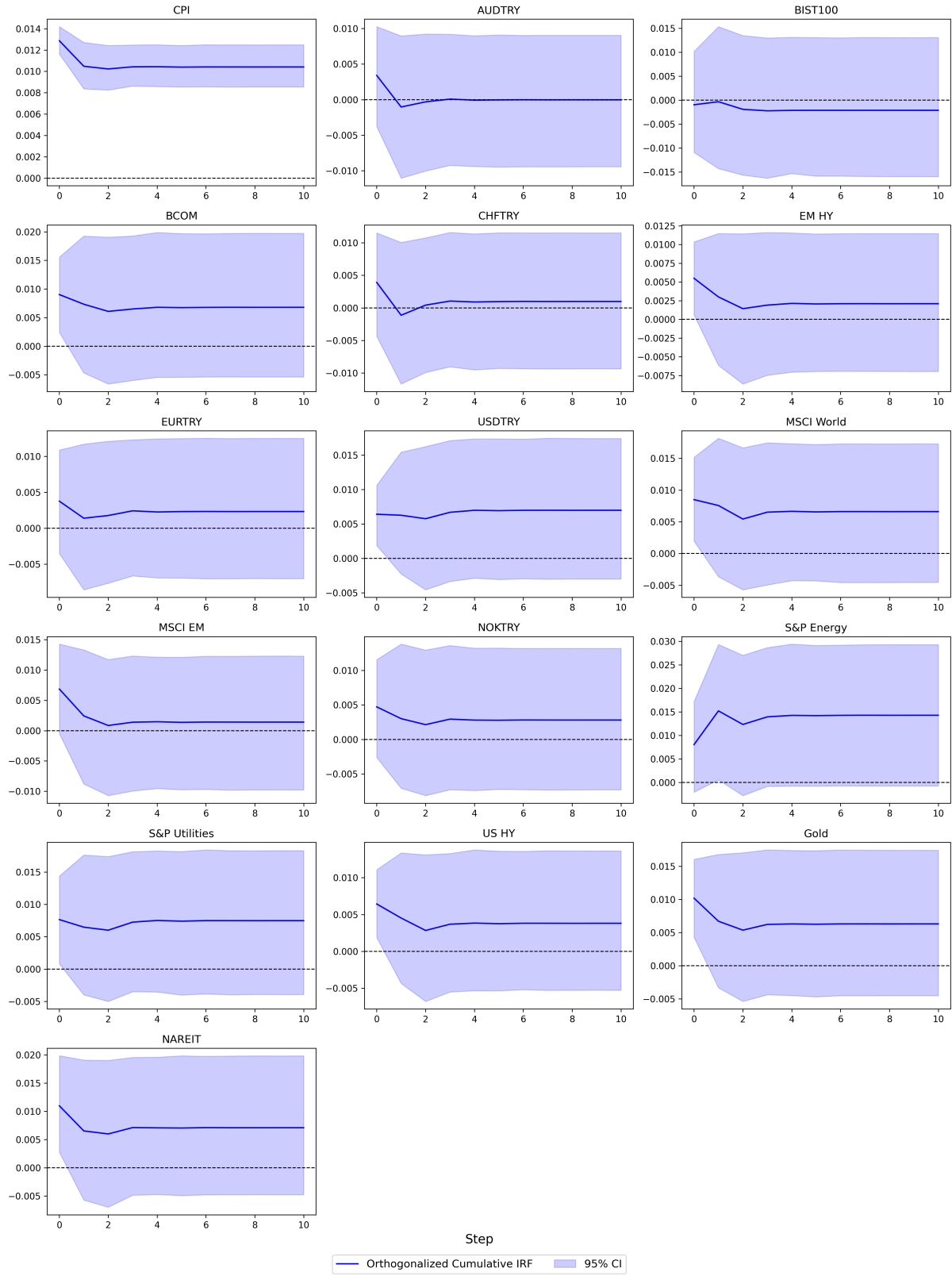


Figure B.1.2.5: Cumulative Orthogonalized IRFs for Impulse Shock of Monthly Inflation for the Second Model for Turkey

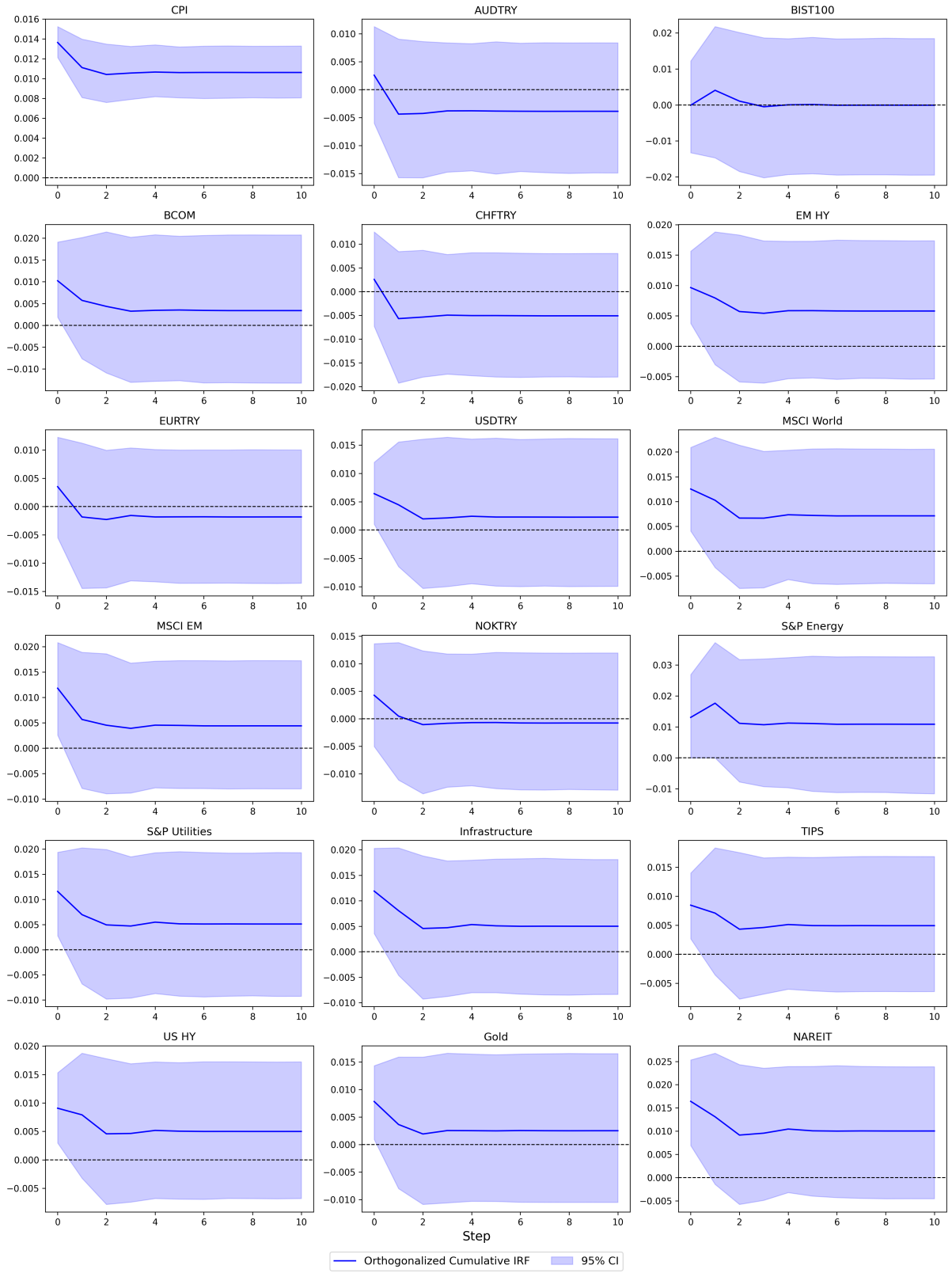


Figure B.1.2.6: Cumulative Orthogonalized IRFs for Impulse Shock of Monthly Inflation for the Third Model for Turkey

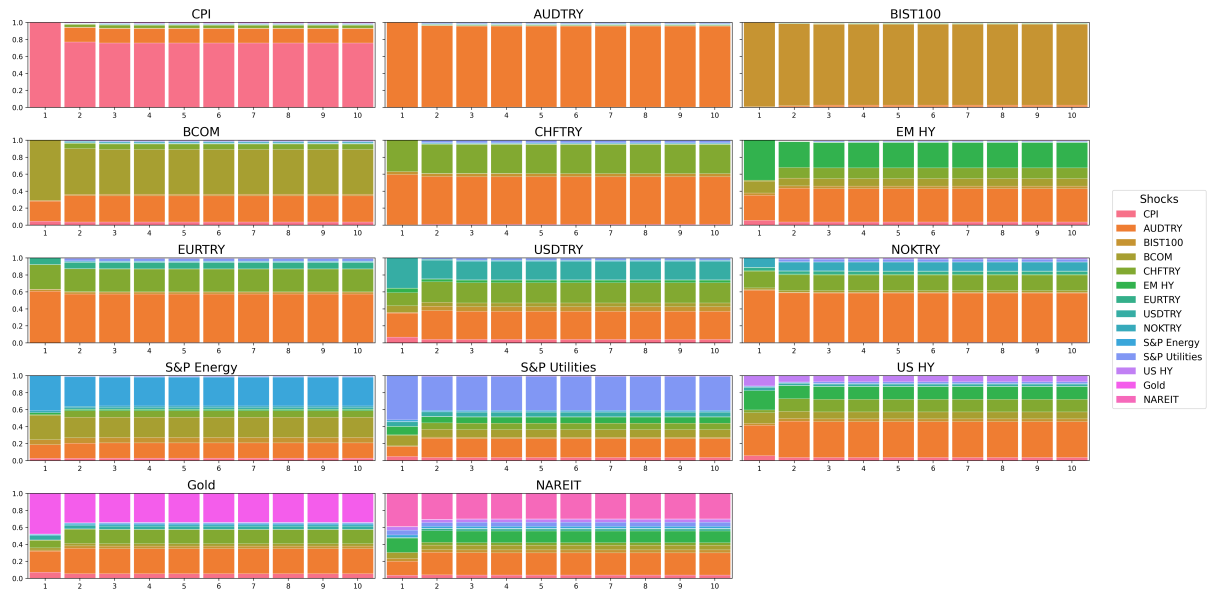


Figure B.1.2.7: Variance Decomposition Analysis for the First Model for All Assets & Inflation for Turkey

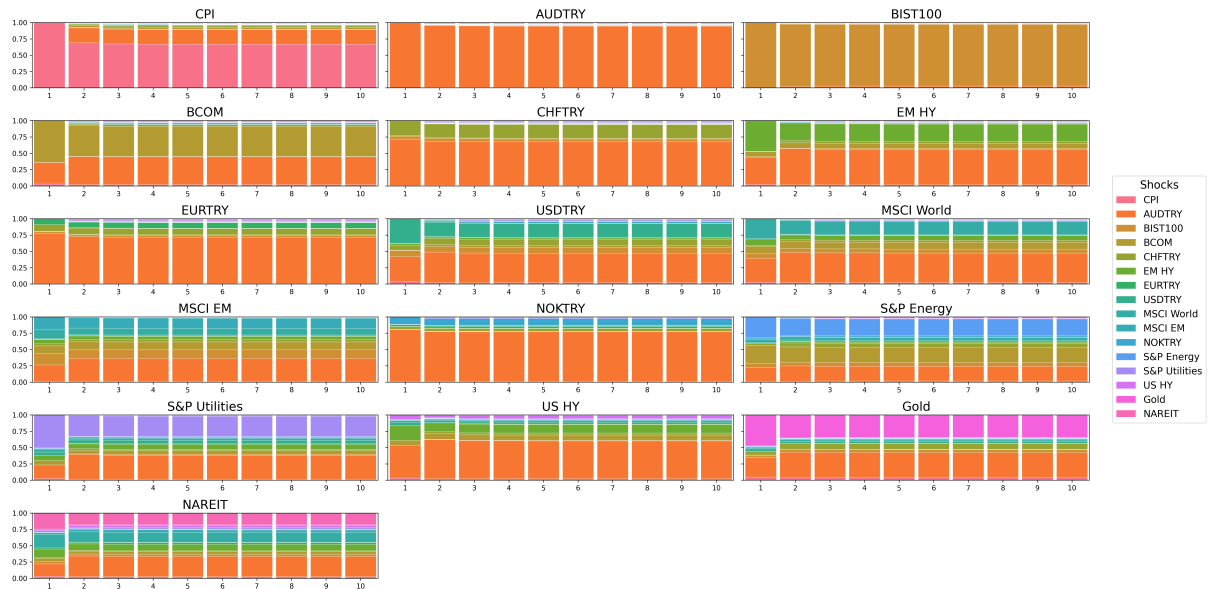


Figure B.1.2.8: Variance Decomposition Analysis for the Second Model for All Assets & Inflation for Turkey



Figure B.1.2.9: Variance Decomposition Analysis for the Third Model for All Assets & Inflation for Turkey

B.1.3 South Africa Results VAR

For South Africa, we recall that in Model 3 both CPI and S&P Energy return series were transformed into first differences, while in Model 2 the original series were retained. Accordingly, results in Model 3 should be interpreted as the effects of changes in monthly inflation and changes in S&P Energy returns. In the main text, we focus primarily on the longer-sample specification (Model 1). Here, we briefly summarize the findings from the shorter samples (Models 2 and 3).

Tables B.1.3.5 and B.1.3.6 present the causality results. In Model 2, we find evidence of causality only from inflation to the FTSE JSE index, with no feedback from asset returns to inflation. In contrast, Model 3 uncovers broader dynamics: monthly changes in CPI Granger-cause AUD/ZAR, MSCI Emerging Markets, and S&P Utilities, while reverse causality is observed from S&P Energy, S&P Utilities, Real Estate, and the USD/ZAR exchange rate. Compared with other emerging markets, this indicates a stronger role of both equities and sectoral indices in transmitting inflation shocks.

Regression results in Tables B.1.3.21 and B.1.3.37 confirm the negative relationship between inflation and FTSE JSE returns in Model 2, though explanatory power is low (R-squared of 0.066). In Model 3, by contrast, inflation changes show significant positive coefficients for AUD/ZAR, MSCI Emerging Markets, and S&P Utilities. Still, the overall R-squared values remain modest at around 0.1, suggesting that while certain assets are responsive to inflation dynamics, their explanatory linkage is not strong.

Figures B.1.3.2–B.1.3.6 report the impulse responses. In Model 2, asset returns display a sharp negative reaction to inflation shocks, followed by quick dissipation. Cumulative responses nevertheless point to some hedging potential in AUD/ZAR, Bloomberg Commodities, CHF/ZAR, EUR/ZAR, NOK/ZAR, and S&P Utilities. In Model 3, the short-run dynamics resemble those of Model 2, but the set of assets with positive long-run cumulative responses is broader, including AUD/ZAR, EM High Yield Bonds, MSCI World and Emerging Markets indices, S&P Utilities, TIPS, and Gold. This suggests that once inflation is modeled in changes, a wider range of assets display hedging properties in the South African context.

FEVD results in Figures B.1.3.8 and B.1.3.9 indicate that inflation explains only a limited share of the forecast error variance of asset returns across both Models 2 and 3. The majority of the variance remains attributable to the autoregressive component of each asset. Nonetheless, the modest but wider set of links uncovered in Model 3 suggests that accounting for changes in inflation highlights additional channels of transmission, even if the overall explanatory power of inflation remains limited.

Table B.1.3.1: VAR Order Selection for the First Model for South Africa

Order	AIC	BIC	FPE	HQIC
0	-102.8	-102.6*	2.342e-45	-102.7*
1	-102.9*	-100.3	2.056e-45*	-101.8
2	-102.5	-97.39	3.220e-45	-100.4
3	-102.2	-94.65	4.451e-45	-99.15
4	-101.8	-91.82	6.763e-45	-97.79

Note: AIC = Akaike Information Criterion, BIC = Bayesian Information Criterion, FPE = Final Prediction Error, HQIC = Hannan-Quinn Information Criterion. Minimum values are highlighted with *.

Table B.1.3.2: VAR Order Selection for the Second Model for South Africa

Order	AIC	BIC	FPE	HQIC
0	-119.8	-119.6*	9.119e-53	-119.7*
1	-120.2*	-116.1	6.612e-53*	-118.5
2	-119.4	-111.5	1.425e-52	-116.2
3	-118.9	-107.2	2.531e-52	-114.2
4	-118.4	-102.9	4.657e-52	-112.2

Note: AIC = Akaike Information Criterion, BIC = Bayesian Information Criterion, FPE = Final Prediction Error, HQIC = Hannan-Quinn Information Criterion. Minimum values are highlighted with *.

Table B.1.3.3: VAR Order Selection for the Third Model for South Africa

Order	AIC	BIC	FPE	HQIC
0	-139.1	-138.8*	3.789e-61	-139.0*
1	-139.7*	-133.0	2.288e-61*	-136.9
2	-138.9	-126.0	5.380e-61	-133.7
3	-138.6	-119.3	1.129e-60	-130.8
4	-138.5	-112.9	2.811e-60	-128.1

Note: AIC = Akaike Information Criterion, BIC = Bayesian Information Criterion, FPE = Final Prediction Error, HQIC = Hannan-Quinn Information Criterion. Minimum values are highlighted with *.

Table B.1.3.4: Granger Causality Test Results for the First Model for South Africa

Granger-Cause	F-stat	df1	df2	p-value (F)	Chi2	p-value (Chi2)
CPI → AUDZAR	0.54	1	3990	0.462	0.54	0.462
CPI → BCOM	0.43	1	3990	0.514	0.43	0.514
CPI → CHFZAR	0.29	1	3990	0.592	0.29	0.592
CPI → EM HY	0.90	1	3990	0.344	0.90	0.344
CPI → EURZAR	0.32	1	3990	0.572	0.32	0.572
CPI → JSE	5.13	1	3990	0.024**	5.13	0.024**
CPI → NOKZAR	0.14	1	3990	0.706	0.14	0.706
CPI → S&P Energy	1.43	1	3990	0.232	1.43	0.231
CPI → S&P Utilities	0.06	1	3990	0.813	0.06	0.813
CPI → US HY	0.30	1	3990	0.581	0.30	0.581
CPI → USDZAR	0.21	1	3990	0.645	0.21	0.645
CPI → Gold	0.37	1	3990	0.542	0.37	0.542
CPI → NAREIT	0.04	1	3990	0.836	0.04	0.836
AUDZAR → CPI	0.77	1	3990	0.380	0.77	0.380
BCOM → CPI	1.57	1	3990	0.210	1.57	0.210
CHFZAR → CPI	1.09	1	3990	0.296	1.09	0.296
EM HY → CPI	0.39	1	3990	0.532	0.39	0.531
EURZAR → CPI	0.87	1	3990	0.351	0.87	0.351
JSE → CPI	0.72	1	3990	0.395	0.72	0.395
NOKZAR → CPI	2.43	1	3990	0.119	2.43	0.119
S&P Energy → CPI	1.38	1	3990	0.239	1.38	0.239
S&P Utilities → CPI	0.84	1	3990	0.361	0.84	0.361
US HY → CPI	0.60	1	3990	0.440	0.60	0.440
USDZAR → CPI	0.05	1	3990	0.825	0.05	0.825
Gold → CPI	0.06	1	3990	0.807	0.06	0.807
NAREIT → CPI	0.15	1	3990	0.698	0.15	0.698

Note: ***, **, * denote significance at the 1%, 5% and 10% level

Table B.1.3.5: Granger Causality Test Results for the Second Model for South Africa

Granger-Cause	F-stat	df1	df2	p-value (F)	Chi2	p-value (Chi2)
CPI → AUDZAR	1.04	1	3472	0.309	1.04	0.309
CPI → BCOM	0.04	1	3472	0.844	0.04	0.844
CPI → CHFZAR	0.40	1	3472	0.529	0.40	0.529
CPI → EM HY	0.00	1	3472	0.964	0.00	0.964
CPI → EURZAR	0.41	1	3472	0.522	0.41	0.522
CPI → JSE	2.92	1	3472	0.088*	2.92	0.087*
CPI → MSCI World	0.09	1	3472	0.759	0.09	0.759
CPI → MSCI EM	0.25	1	3472	0.614	0.25	0.614
CPI → NOKZAR	0.16	1	3472	0.687	0.16	0.687
CPI → S&P Energy	0.13	1	3472	0.722	0.13	0.722
CPI → S&P Utilities	0.04	1	3472	0.841	0.04	0.841
CPI → US HY	0.00	1	3472	0.978	0.00	0.978
CPI → USDZAR	0.05	1	3472	0.817	0.05	0.817
CPI → Gold	0.03	1	3472	0.874	0.03	0.874
CPI → NAREIT	0.54	1	3472	0.463	0.54	0.463
AUDZAR → CPI	0.39	1	3472	0.533	0.39	0.533
BCOM → CPI	1.93	1	3472	0.165	1.93	0.165
CHFZAR → CPI	0.26	1	3472	0.609	0.26	0.609
EM HY → CPI	0.35	1	3472	0.553	0.35	0.553
EURZAR → CPI	0.26	1	3472	0.614	0.26	0.613
JSE → CPI	0.32	1	3472	0.570	0.32	0.570
MSCI World → CPI	2.03	1	3472	0.154	2.03	0.154
MSCI EM → CPI	0.02	1	3472	0.894	0.02	0.894
NOKZAR → CPI	0.88	1	3472	0.350	0.88	0.350
S&P Energy → CPI	1.62	1	3472	0.204	1.62	0.204
S&P Utilities → CPI	0.26	1	3472	0.611	0.26	0.611
US HY → CPI	0.42	1	3472	0.517	0.42	0.517
USDZAR → CPI	0.89	1	3472	0.347	0.89	0.347
Gold → CPI	0.09	1	3472	0.765	0.09	0.765
NAREIT → CPI	0.26	1	3472	0.608	0.26	0.608

Note: ***, **, * denote significance at the 1%, 5% and 10% level

Table B.1.3.6: Granger Causality Test Results for the Third Model for South Africa

Granger-Cause	F-stat	df1	df2	p-value (F)	Chi2	p-value (Chi2)
CPI → AUDZAR	4.40	1	2538	0.036**	4.40	0.036**
CPI → BCOM	2.37	1	2538	0.124	2.37	0.124
CPI → CHFZAR	0.71	1	2538	0.400	0.71	0.400
CPI → EM HY	0.09	1	2538	0.759	0.09	0.759
CPI → EURZAR	0.59	1	2538	0.441	0.59	0.441
CPI → JSE	0.52	1	2538	0.472	0.52	0.472
CPI → MSCI World	2.00	1	2538	0.158	2.00	0.157
CPI → MSCI EM	3.57	1	2538	0.059*	3.57	0.059*
CPI → NOKZAR	0.66	1	2538	0.416	0.66	0.416
CPI → S&P Energy	0.05	1	2538	0.822	0.05	0.822
CPI → S&P Utilities	4.27	1	2538	0.039**	4.27	0.039**
CPI → Infrastructure	1.67	1	2538	0.197	1.67	0.197
CPI → TIPS	0.59	1	2538	0.444	0.59	0.443
CPI → US HY	0.00	1	2538	0.983	0.00	0.983
CPI → USDZAR	0.07	1	2538	0.788	0.07	0.788
CPI → Gold	1.61	1	2538	0.204	1.61	0.204
CPI → NAREIT	1.85	1	2538	0.174	1.85	0.174
AUDZAR → CPI	2.09	1	2538	0.149	2.09	0.149
BCOM → CPI	0.01	1	2538	0.912	0.01	0.912
CHFZAR → CPI	0.13	1	2538	0.718	0.13	0.718
EM HY → CPI	0.01	1	2538	0.931	0.01	0.931
EURZAR → CPI	0.63	1	2538	0.426	0.63	0.426
JSE → CPI	1.48	1	2538	0.224	1.48	0.224
MSCI World → CPI	0.46	1	2538	0.498	0.46	0.498
MSCI EM → CPI	0.38	1	2538	0.537	0.38	0.537
NOKZAR → CPI	2.08	1	2538	0.149	2.08	0.149
S&P Energy → CPI	4.66	1	2538	0.031**	4.66	0.031**
S&P Utilities → CPI	8.02	1	2538	0.005***	8.02	0.005***
Infrastructure → CPI	2.07	1	2538	0.150	2.07	0.150
TIPS → CPI	1.24	1	2538	0.266	1.24	0.266
US HY → CPI	0.15	1	2538	0.698	0.15	0.698
USDZAR → CPI	5.28	1	2538	0.022**	5.28	0.022**
Gold → CPI	1.61	1	2538	0.205	1.61	0.205
NAREIT → CPI	3.71	1	2538	0.054*	3.71	0.054*

Note: ***, **, * denote significance at the 1%, 5% and 10% level

Table B.1.3.7: Regression Results of the First Model for South Africa

Dependent Variable: CPI South Africa Monthly				
Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.003	0.000	7.743	0.000***
CPI _{t-1}	0.341	0.056	6.130	0.000***
AUDZAR _{t-1}	-0.011	0.013	-0.877	0.381
BCOM _{t-1}	0.010	0.008	1.254	0.211
CHFZAR _{t-1}	0.016	0.015	1.046	0.296
EM HY _{t-1}	0.009	0.014	0.626	0.532
EURZAR _{t-1}	-0.017	0.018	-0.932	0.352
FTSE JSE _{t-1}	-0.006	0.007	-0.851	0.396
NOKZAR _{t-1}	0.021	0.013	1.560	0.120
S&P Energy _{t-1}	0.006	0.005	1.177	0.240
S&P Utilities _{t-1}	-0.006	0.006	-0.914	0.361
US HY _{t-1}	-0.014	0.018	-0.772	0.441
USDZAR _{t-1}	-0.003	0.014	-0.221	0.825
Gold _{t-1}	0.002	0.007	0.245	0.807
NAREIT _{t-1}	-0.002	0.006	-0.389	0.698
R-squared				0.167
Adj. R-squared				0.126

Dependent Variable: AUD/ZAR				
Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.008	0.003	2.276	0.024**
CPI _{t-1}	-0.376	0.511	-0.736	0.463
AUDZAR _{t-1}	0.205	0.119	1.724	0.086*
BCOM _{t-1}	-0.109	0.070	-1.552	0.122
CHFZAR _{t-1}	0.049	0.137	0.355	0.723
EM HY _{t-1}	0.035	0.126	0.280	0.780
EURZAR _{t-1}	-0.199	0.170	-1.174	0.241
FTSE JSE _{t-1}	-0.163	0.064	-2.568	0.011**
NOKZAR _{t-1}	0.145	0.123	1.174	0.241
S&P Energy _{t-1}	-0.001	0.047	-0.017	0.987
S&P Utilities _{t-1}	0.005	0.055	0.093	0.926

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Dependent Variable: AUD/ZAR (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
US HY _{t-1}	0.021	0.162	0.130	0.897
USDZAR _{t-1}	-0.117	0.128	-0.915	0.361
Gold _{t-1}	0.043	0.063	0.676	0.500
NAREIT _{t-1}	-0.040	0.056	-0.721	0.472
R-squared			0.053	
Adj. R-squared			0.007	

Dependent Variable: BCOM

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.009	0.004	1.960	0.051*
CPI _{t-1}	-0.450	0.689	-0.653	0.515
AUDZAR _{t-1}	0.017	0.160	0.105	0.916
BCOM _{t-1}	0.030	0.095	0.311	0.756
CHFZAR _{t-1}	0.066	0.185	0.357	0.722
EM HY _{t-1}	-0.135	0.170	-0.793	0.428
EURZAR _{t-1}	-0.361	0.229	-1.574	0.117
FTSE JSE _{t-1}	-0.157	0.086	-1.829	0.069*
NOKZAR _{t-1}	0.226	0.166	1.364	0.173
S&P Energy _{t-1}	-0.039	0.063	-0.621	0.535
S&P Utilities _{t-1}	0.002	0.075	0.025	0.980
US HY _{t-1}	0.253	0.219	1.159	0.248
USDZAR _{t-1}	-0.209	0.172	-1.212	0.226
Gold _{t-1}	-0.010	0.085	-0.113	0.910
NAREIT _{t-1}	0.096	0.075	1.272	0.204
R-squared			0.051	
Adj. R-squared			0.004	

Dependent Variable: CHF/ZAR

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.011	0.004	2.794	0.006***
CPI _{t-1}	-0.327	0.610	-0.536	0.592
AUDZAR _{t-1}	0.177	0.142	1.247	0.213

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Dependent Variable: CHF/ZAR (continued)				
Variable	Coef.	Std.Err.	t-stat	p-value
BCOM _{t-1}	-0.035	0.084	-0.414	0.679
CHFZAR _{t-1}	-0.133	0.163	-0.814	0.417
EM HY _{t-1}	0.016	0.151	0.106	0.915
EURZAR _{t-1}	-0.093	0.203	-0.459	0.646
FTSE JSE _{t-1}	-0.138	0.076	-1.815	0.071*
NOKZAR _{t-1}	0.148	0.147	1.010	0.313
S&P Energy _{t-1}	-0.036	0.056	-0.644	0.520
S&P Utilities _{t-1}	-0.020	0.066	-0.305	0.760
US HY _{t-1}	-0.162	0.193	-0.835	0.404
USDZAR _{t-1}	0.107	0.152	0.703	0.483
Gold _{t-1}	-0.048	0.076	-0.631	0.529
NAREIT _{t-1}	0.012	0.067	0.187	0.852
R-squared			0.042	
Adj. R-squared			-0.005	

Dependent Variable: Emerging Markets High Yield				
Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.012	0.004	3.377	0.001***
CPI _{t-1}	-0.535	0.565	-0.946	0.345
AUDZAR _{t-1}	0.236	0.131	1.796	0.074*
BCOM _{t-1}	-0.156	0.078	-1.997	0.047**
CHFZAR _{t-1}	0.106	0.151	0.703	0.483
EM HY _{t-1}	0.019	0.140	0.138	0.891
EURZAR _{t-1}	-0.108	0.188	-0.574	0.566
FTSE JSE _{t-1}	-0.028	0.070	-0.403	0.687
NOKZAR _{t-1}	0.016	0.136	0.120	0.904
S&P Energy _{t-1}	-0.056	0.052	-1.083	0.280
S&P Utilities _{t-1}	0.093	0.061	1.519	0.130
US HY _{t-1}	0.150	0.179	0.835	0.405
USDZAR _{t-1}	-0.372	0.141	-2.635	0.009***
Gold _{t-1}	0.037	0.070	0.531	0.596
NAREIT _{t-1}	-0.042	0.062	-0.685	0.494
R-squared			0.077	

Continued on next page

Dependent Variable: Emerging Markets High Yield (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
Adj. R-squared			0.031	

Dependent Variable: EUR/ZAR

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.009	0.004	2.390	0.017**
CPI _{t-1}	-0.329	0.583	-0.565	0.573
AUDZAR _{t-1}	0.177	0.135	1.309	0.192
BCOM _{t-1}	-0.037	0.080	-0.464	0.643
CHFZAR _{t-1}	0.075	0.156	0.479	0.632
EM HY _{t-1}	0.007	0.144	0.050	0.960
EURZAR _{t-1}	-0.215	0.194	-1.111	0.268
FTSE JSE _{t-1}	-0.128	0.072	-1.768	0.078*
NOKZAR _{t-1}	0.187	0.140	1.330	0.184
S&P Energy _{t-1}	-0.065	0.053	-1.212	0.226
S&P Utilities _{t-1}	-0.004	0.063	-0.063	0.950
US HY _{t-1}	-0.052	0.185	-0.281	0.779
USDZAR _{t-1}	-0.025	0.146	-0.169	0.866
Gold _{t-1}	-0.075	0.072	-1.043	0.298
NAREIT _{t-1}	-0.033	0.064	-0.514	0.608
R-squared			0.051	
Adj. R-squared			0.005	

Dependent Variable: FTSE JSE All Share

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.017	0.004	3.997	0.000***
CPI _{t-1}	-1.484	0.655	-2.265	0.024**
AUDZAR _{t-1}	0.397	0.152	2.603	0.010***
BCOM _{t-1}	-0.128	0.090	-1.417	0.158
CHFZAR _{t-1}	-0.011	0.176	-0.062	0.951
EM HY _{t-1}	-0.289	0.162	-1.780	0.076*
EURZAR _{t-1}	-0.111	0.218	-0.508	0.612
FTSE JSE _{t-1}	-0.112	0.082	-1.379	0.169

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Dependent Variable: FTSE JSE All Share (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
NOKZAR _{t-1}	-0.079	0.158	-0.500	0.617
S&P Energy _{t-1}	-0.013	0.060	-0.216	0.829
S&P Utilities _{t-1}	0.006	0.071	0.081	0.935
US HY _{t-1}	0.411	0.208	1.975	0.049**
USDZAR _{t-1}	-0.196	0.164	-1.198	0.232
Gold _{t-1}	0.024	0.081	0.300	0.764
NAREIT _{t-1}	-0.037	0.072	-0.515	0.607
R-squared			0.066	
Adj. R-squared			0.020	

Dependent Variable: NOK/ZAR

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.006	0.004	1.651	0.100*
CPI _{t-1}	-0.211	0.558	-0.378	0.706
AUDZAR _{t-1}	0.181	0.130	1.395	0.164
BCOM _{t-1}	-0.067	0.077	-0.865	0.387
CHFZAR _{t-1}	0.189	0.149	1.264	0.207
EM HY _{t-1}	-0.124	0.138	-0.903	0.368
EURZAR _{t-1}	-0.231	0.185	-1.247	0.214
FTSE JSE _{t-1}	-0.103	0.069	-1.482	0.140
NOKZAR _{t-1}	0.028	0.134	0.205	0.838
S&P Energy _{t-1}	-0.047	0.051	-0.924	0.356
S&P Utilities _{t-1}	-0.057	0.060	-0.937	0.350
US HY _{t-1}	0.194	0.177	1.097	0.274
USDZAR _{t-1}	-0.124	0.139	-0.892	0.373
Gold _{t-1}	-0.040	0.069	-0.576	0.565
NAREIT _{t-1}	0.019	0.061	0.313	0.755
R-squared			0.060	
Adj. R-squared			0.014	

Dependent Variable: S&P 500 Energy				
Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.017	0.006	2.720	0.007***
CPI _{t-1}	-1.168	0.976	-1.197	0.232
AUDZAR _{t-1}	0.045	0.227	0.197	0.844
BCOM _{t-1}	0.004	0.135	0.029	0.977
CHFZAR _{t-1}	0.160	0.262	0.610	0.542
EM HY _{t-1}	-0.267	0.241	-1.106	0.270
EURZAR _{t-1}	-0.126	0.324	-0.388	0.698
FTSE JSE _{t-1}	0.020	0.121	0.161	0.872
NOKZAR _{t-1}	-0.195	0.235	-0.830	0.407
S&P Energy _{t-1}	-0.106	0.089	-1.188	0.236
S&P Utilities _{t-1}	-0.042	0.106	-0.399	0.690
US HY _{t-1}	0.045	0.310	0.146	0.884
USDZAR _{t-1}	0.327	0.244	1.339	0.182
Gold _{t-1}	-0.073	0.121	-0.604	0.546
NAREIT _{t-1}	0.101	0.107	0.945	0.346
R-squared	0.042			
Adj. R-squared	-0.005			

Dependent Variable: S&P 500 Utilities				
Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.010	0.005	1.973	0.050**
CPI _{t-1}	-0.189	0.796	-0.237	0.813
AUDZAR _{t-1}	0.276	0.185	1.490	0.137
BCOM _{t-1}	0.005	0.110	0.045	0.964
CHFZAR _{t-1}	-0.047	0.213	-0.219	0.827
EM HY _{t-1}	-0.229	0.197	-1.160	0.247
EURZAR _{t-1}	-0.102	0.265	-0.387	0.699
FTSE JSE _{t-1}	-0.004	0.099	-0.044	0.965
NOKZAR _{t-1}	-0.130	0.192	-0.678	0.498
S&P Energy _{t-1}	-0.016	0.073	-0.220	0.826
S&P Utilities _{t-1}	-0.051	0.086	-0.591	0.555
US HY _{t-1}	-0.070	0.253	-0.278	0.782

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Dependent Variable: S&P 500 Utilities (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
USDZAR _{t-1}	0.246	0.199	1.235	0.218
Gold _{t-1}	-0.034	0.099	-0.346	0.729
NAREIT _{t-1}	0.098	0.087	1.126	0.261
R-squared			0.026	
Adj. R-squared			-0.021	

Dependent Variable: US HY

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.011	0.004	2.940	0.004***
CPI _{t-1}	-0.312	0.565	-0.552	0.582
AUDZAR _{t-1}	0.184	0.131	1.401	0.162
BCOM _{t-1}	-0.160	0.078	-2.057	0.041**
CHFZAR _{t-1}	0.054	0.152	0.359	0.720
EM HY _{t-1}	0.130	0.140	0.927	0.355
EURZAR _{t-1}	0.082	0.188	0.436	0.663
FTSE JSE _{t-1}	-0.056	0.070	-0.794	0.428
NOKZAR _{t-1}	-0.110	0.136	-0.805	0.421
S&P Energy _{t-1}	-0.031	0.052	-0.609	0.543
S&P Utilities _{t-1}	0.045	0.061	0.740	0.460
US HY _{t-1}	-0.061	0.179	-0.340	0.734
USDZAR _{t-1}	-0.302	0.141	-2.138	0.033**
Gold _{t-1}	0.059	0.070	0.843	0.400
NAREIT _{t-1}	0.036	0.062	0.576	0.565
R-squared			0.072	
Adj. R-squared			0.026	

Dependent Variable: USD/ZAR

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.008	0.004	1.849	0.065*
CPI _{t-1}	-0.296	0.642	-0.461	0.645
AUDZAR _{t-1}	0.125	0.149	0.839	0.402
BCOM _{t-1}	-0.065	0.089	-0.731	0.465

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Dependent Variable: USD/ZAR (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
CHFZAR _{t-1}	-0.004	0.172	-0.024	0.981
EM HY _{t-1}	-0.107	0.159	-0.676	0.500
EURZAR _{t-1}	-0.120	0.213	-0.564	0.574
FTSE JSE _{t-1}	-0.118	0.080	-1.476	0.141
NOKZAR _{t-1}	0.116	0.155	0.754	0.452
S&P Energy _{t-1}	-0.016	0.059	-0.272	0.786
S&P Utilities _{t-1}	-0.016	0.069	-0.233	0.816
US HY _{t-1}	-0.100	0.204	-0.491	0.624
USDZAR _{t-1}	0.024	0.161	0.151	0.880
Gold _{t-1}	0.045	0.080	0.562	0.575
NAREIT _{t-1}	0.095	0.070	1.348	0.179
R-squared		0.033		
Adj. R-squared		-0.015		

Dependent Variable: Gold

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.015	0.005	3.070	0.002***
CPI _{t-1}	-0.472	0.773	-0.610	0.542
AUDZAR _{t-1}	0.021	0.180	0.115	0.909
BCOM _{t-1}	0.133	0.107	1.247	0.213
CHFZAR _{t-1}	0.142	0.207	0.684	0.494
EM HY _{t-1}	-0.070	0.191	-0.368	0.713
EURZAR _{t-1}	-0.184	0.257	-0.715	0.475
FTSE JSE _{t-1}	-0.038	0.096	-0.399	0.690
NOKZAR _{t-1}	0.277	0.186	1.489	0.138
S&P Energy _{t-1}	-0.123	0.071	-1.743	0.082*
S&P Utilities _{t-1}	0.058	0.084	0.691	0.490
US HY _{t-1}	-0.060	0.245	-0.246	0.806
USDZAR _{t-1}	-0.377	0.193	-1.950	0.052*
Gold _{t-1}	0.057	0.096	0.590	0.556
NAREIT _{t-1}	0.017	0.085	0.196	0.845
R-squared		0.060		
Adj. R-squared		0.013		

Dependent Variable: NAREIT				
Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.014	0.005	2.797	0.006***
CPI _{t-1}	-0.163	0.788	-0.207	0.836
AUDZAR _{t-1}	0.432	0.183	2.355	0.019**
BCOM _{t-1}	-0.061	0.109	-0.558	0.577
CHFZAR _{t-1}	-0.329	0.211	-1.559	0.120
EM HY _{t-1}	0.222	0.195	1.137	0.256
EURZAR _{t-1}	0.235	0.262	0.895	0.371
FTSE JSE _{t-1}	0.036	0.098	0.368	0.713
NOKZAR _{t-1}	-0.197	0.190	-1.039	0.300
S&P Energy _{t-1}	-0.062	0.072	-0.859	0.391
S&P Utilities _{t-1}	0.074	0.085	0.862	0.389
US HY _{t-1}	-0.196	0.250	-0.782	0.435
USDZAR _{t-1}	0.018	0.197	0.093	0.926
Gold _{t-1}	-0.066	0.098	-0.672	0.502
NAREIT _{t-1}	-0.058	0.086	-0.675	0.500
R-squared	0.052			
Adj. R-squared	0.006			

Note: ***, **, * denote significance at the 1%, 5% and 10% level.

Table B.1.3.21: Regression Results of the Second Model for South Africa

Dependent Variable: CPI South Africa Monthly				
Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.003	0.000	8.023	0.000***
CPI _{t-1}	0.256	0.065	3.943	0.000***
AUDZAR _{t-1}	-0.009	0.015	-0.623	0.534
BCOM _{t-1}	0.012	0.008	1.389	0.166
CHFZAR _{t-1}	0.007	0.014	0.511	0.610
EM HY _{t-1}	0.009	0.016	0.593	0.554
EURZAR _{t-1}	-0.009	0.019	-0.505	0.614
FTSE JSE _{t-1}	-0.006	0.010	-0.568	0.571

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Dependent Variable: CPI South Africa Monthly (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
MSCI World _{t-1}	-0.023	0.016	-1.425	0.156
MSCI EM _{t-1}	-0.002	0.012	-0.133	0.894
NOKZAR _{t-1}	0.013	0.014	0.936	0.351
S&P Energy _{t-1}	0.007	0.006	1.271	0.205
S&P Utilities _{t-1}	-0.004	0.007	-0.508	0.612
US HY _{t-1}	0.016	0.024	0.649	0.517
USDZAR _{t-1}	-0.015	0.016	-0.941	0.348
Gold _{t-1}	0.002	0.007	0.299	0.765
NAREIT _{t-1}	-0.004	0.007	-0.513	0.608
R-squared			0.152	
Adj. R-squared			0.090	

Dependent Variable: AUD/ZAR

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.003	0.004	0.736	0.462
CPI _{t-1}	0.598	0.587	1.018	0.310
AUDZAR _{t-1}	0.107	0.136	0.788	0.431
BCOM _{t-1}	-0.070	0.075	-0.936	0.350
CHFZAR _{t-1}	0.053	0.130	0.411	0.682
EM HY _{t-1}	0.017	0.142	0.117	0.907
EURZAR _{t-1}	-0.090	0.168	-0.538	0.591
FTSE JSE _{t-1}	-0.160	0.094	-1.707	0.089*
MSCI World _{t-1}	0.052	0.148	0.353	0.724
MSCI EM _{t-1}	-0.017	0.105	-0.162	0.872
NOKZAR _{t-1}	-0.007	0.129	-0.053	0.957
S&P Energy _{t-1}	0.017	0.051	0.334	0.739
S&P Utilities _{t-1}	0.066	0.066	1.001	0.318
US HY _{t-1}	0.042	0.218	0.191	0.849
USDZAR _{t-1}	-0.172	0.143	-1.197	0.233
Gold _{t-1}	0.071	0.066	1.076	0.283
NAREIT _{t-1}	-0.080	0.066	-1.219	0.224
R-squared			0.063	
Adj. R-squared			-0.007	

Dependent Variable: BCOM				
Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.004	0.005	0.790	0.430
CPI _{t-1}	0.162	0.822	0.197	0.844
AUDZAR _{t-1}	-0.018	0.191	-0.092	0.927
BCOM _{t-1}	0.060	0.106	0.566	0.572
CHFZAR _{t-1}	0.103	0.182	0.569	0.570
EM HY _{t-1}	-0.327	0.200	-1.638	0.103
EURZAR _{t-1}	-0.191	0.235	-0.815	0.416
FTSE JSE _{t-1}	-0.245	0.131	-1.866	0.063*
MSCI World _{t-1}	-0.002	0.208	-0.007	0.994
MSCI EM _{t-1}	0.038	0.147	0.259	0.796
NOKZAR _{t-1}	0.061	0.180	0.338	0.736
S&P Energy _{t-1}	0.002	0.071	0.024	0.981
S&P Utilities _{t-1}	0.031	0.092	0.336	0.737
US HY _{t-1}	0.531	0.305	1.740	0.083*
USDZAR _{t-1}	-0.436	0.201	-2.171	0.031**
Gold _{t-1}	0.020	0.092	0.214	0.831
NAREIT _{t-1}	0.049	0.092	0.537	0.592
R-squared			0.076	
Adj. R-squared			0.008	

Dependent Variable: CHF/ZAR				
Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.008	0.005	1.705	0.090*
CPI _{t-1}	0.457	0.725	0.630	0.530
AUDZAR _{t-1}	-0.032	0.168	-0.189	0.850
BCOM _{t-1}	-0.023	0.093	-0.242	0.809
CHFZAR _{t-1}	-0.046	0.160	-0.284	0.776
EM HY _{t-1}	0.180	0.176	1.024	0.307
EURZAR _{t-1}	-0.009	0.207	-0.041	0.967
FTSE JSE _{t-1}	-0.261	0.116	-2.255	0.025**
MSCI World _{t-1}	0.180	0.183	0.981	0.328
MSCI EM _{t-1}	0.022	0.130	0.170	0.865

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Dependent Variable: CHF/ZAR (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
NOKZAR _{t-1}	-0.003	0.159	-0.020	0.984
S&P Energy _{t-1}	0.036	0.062	0.576	0.565
S&P Utilities _{t-1}	0.033	0.081	0.407	0.684
US HY _{t-1}	-0.510	0.269	-1.894	0.060*
USDZAR _{t-1}	0.063	0.177	0.353	0.724
Gold _{t-1}	0.046	0.082	0.566	0.572
NAREIT _{t-1}	0.008	0.081	0.103	0.918
R-squared	0.067			
Adj. R-squared	-0.002			

Dependent Variable: EM HY

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.009	0.004	2.050	0.042**
CPI _{t-1}	0.030	0.675	0.045	0.964
AUDZAR _{t-1}	0.261	0.157	1.668	0.097*
BCOM _{t-1}	-0.159	0.087	-1.830	0.069*
CHFZAR _{t-1}	0.103	0.149	0.689	0.492
EM HY _{t-1}	-0.139	0.164	-0.848	0.397
EURZAR _{t-1}	-0.015	0.193	-0.077	0.939
FTSE JSE _{t-1}	-0.091	0.108	-0.842	0.401
MSCI World _{t-1}	0.362	0.171	2.123	0.035**
MSCI EM _{t-1}	-0.113	0.121	-0.940	0.348
NOKZAR _{t-1}	-0.158	0.148	-1.070	0.286
S&P Energy _{t-1}	-0.059	0.058	-1.006	0.315
S&P Utilities _{t-1}	0.142	0.076	1.872	0.063*
US HY _{t-1}	0.292	0.251	1.166	0.245
USDZAR _{t-1}	-0.603	0.165	-3.653	0.000***
Gold _{t-1}	0.132	0.076	1.732	0.085*
NAREIT _{t-1}	-0.151	0.076	-2.002	0.047**
R-squared	0.136			
Adj. R-squared	0.072			

Dependent Variable: EURZAR

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.005	0.004	1.246	0.214
CPI _{t-1}	0.439	0.686	0.641	0.522
AUDZAR _{t-1}	-0.034	0.159	-0.215	0.830
BCOM _{t-1}	-0.014	0.088	-0.154	0.877
CHFZAR _{t-1}	0.168	0.151	1.111	0.268
EM HY _{t-1}	0.130	0.166	0.781	0.435
EURZAR _{t-1}	-0.151	0.196	-0.772	0.441
FTSE JSE _{t-1}	-0.240	0.109	-2.200	0.029**
MSCI World _{t-1}	0.212	0.173	1.222	0.223
MSCI EM _{t-1}	0.033	0.122	0.268	0.789
NOKZAR _{t-1}	0.062	0.150	0.412	0.681
S&P Energy _{t-1}	-0.008	0.059	-0.142	0.887
S&P Utilities _{t-1}	0.052	0.077	0.681	0.497
US HY _{t-1}	-0.370	0.254	-1.453	0.148
USDZAR _{t-1}	-0.059	0.168	-0.354	0.723
Gold _{t-1}	0.009	0.077	0.116	0.908
NAREIT _{t-1}	-0.061	0.077	-0.797	0.427
R-squared			0.067	
Adj. R-squared			-0.001	

Dependent Variable: FTSE JSE

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.016	0.005	3.244	0.001***
CPI _{t-1}	-1.331	0.779	-1.709	0.089*
AUDZAR _{t-1}	0.342	0.180	1.895	0.059*
BCOM _{t-1}	-0.090	0.100	-0.901	0.368
CHFZAR _{t-1}	-0.048	0.172	-0.281	0.779
EM HY _{t-1}	-0.339	0.189	-1.791	0.075*
EURZAR _{t-1}	0.094	0.222	0.423	0.672
FTSE JSE _{t-1}	-0.126	0.124	-1.013	0.312
MSCI World _{t-1}	-0.142	0.197	-0.724	0.470
MSCI EM _{t-1}	0.072	0.139	0.518	0.605

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Dependent Variable: FTSE JSE (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
NOKZAR _{t-1}	-0.143	0.171	-0.839	0.402
S&P Energy _{t-1}	-0.004	0.067	-0.055	0.956
S&P Utilities _{t-1}	0.018	0.087	0.211	0.833
US HY _{t-1}	0.400	0.289	1.383	0.168
USDZAR _{t-1}	-0.249	0.190	-1.308	0.192
Gold _{t-1}	0.013	0.088	0.150	0.881
NAREIT _{t-1}	0.017	0.087	0.191	0.849
R-squared		0.066		
Adj. R-squared		-0.003		

Dependent Variable: MSCI World

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.012	0.004	2.655	0.009***
CPI _{t-1}	-0.217	0.709	-0.306	0.760
AUDZAR _{t-1}	0.213	0.164	1.295	0.197
BCOM _{t-1}	-0.078	0.091	-0.859	0.391
CHFZAR _{t-1}	0.051	0.157	0.328	0.743
EM HY _{t-1}	-0.186	0.172	-1.081	0.281
EURZAR _{t-1}	0.068	0.203	0.336	0.737
FTSE JSE _{t-1}	-0.119	0.113	-1.050	0.295
MSCI World _{t-1}	0.265	0.179	1.479	0.141
MSCI EM _{t-1}	-0.051	0.127	-0.399	0.690
NOKZAR _{t-1}	-0.255	0.155	-1.640	0.102
S&P Energy _{t-1}	-0.071	0.061	-1.164	0.246
S&P Utilities _{t-1}	0.004	0.080	0.044	0.965
US HY _{t-1}	0.182	0.263	0.692	0.490
USDZAR _{t-1}	-0.289	0.173	-1.668	0.097*
Gold _{t-1}	0.074	0.080	0.927	0.355
NAREIT _{t-1}	-0.080	0.079	-1.013	0.312
R-squared		0.091		
Adj. R-squared		0.024		

Dependent Variable: MSCI EM				
Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.010	0.005	2.189	0.030**
CPI _{t-1}	-0.374	0.742	-0.504	0.615
AUDZAR _{t-1}	0.355	0.172	2.063	0.040**
BCOM _{t-1}	-0.175	0.095	-1.842	0.067*
CHFZAR _{t-1}	-0.106	0.164	-0.647	0.518
EM HY _{t-1}	-0.088	0.180	-0.489	0.626
EURZAR _{t-1}	0.109	0.212	0.512	0.609
FTSE JSE _{t-1}	-0.005	0.118	-0.039	0.969
MSCI World _{t-1}	0.217	0.188	1.159	0.248
MSCI EM _{t-1}	-0.215	0.133	-1.624	0.106
NOKZAR _{t-1}	-0.183	0.163	-1.128	0.260
S&P Energy _{t-1}	-0.102	0.064	-1.602	0.111
S&P Utilities _{t-1}	0.050	0.083	0.600	0.549
US HY _{t-1}	0.387	0.275	1.405	0.162
USDZAR _{t-1}	-0.555	0.181	-3.061	0.002***
Gold _{t-1}	0.160	0.083	1.912	0.057*
NAREIT _{t-1}	-0.112	0.083	-1.348	0.179
R-squared			0.136	
Adj. R-squared			0.072	

Dependent Variable: NOKZAR				
Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.003	0.004	0.615	0.539
CPI _{t-1}	0.260	0.646	0.403	0.688
AUDZAR _{t-1}	0.079	0.150	0.528	0.598
BCOM _{t-1}	-0.067	0.083	-0.812	0.418
CHFZAR _{t-1}	0.257	0.143	1.802	0.073*
EM HY _{t-1}	-0.124	0.157	-0.791	0.430
EURZAR _{t-1}	-0.031	0.184	-0.168	0.867
FTSE JSE _{t-1}	-0.158	0.103	-1.539	0.125
MSCI World _{t-1}	-0.031	0.163	-0.193	0.847
MSCI EM _{t-1}	0.045	0.115	0.388	0.698

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Dependent Variable: NOKZAR (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
NOKZAR _{t-1}	-0.143	0.141	-1.013	0.312
S&P Energy _{t-1}	0.022	0.056	0.398	0.691
S&P Utilities _{t-1}	-0.017	0.073	-0.236	0.814
US HY _{t-1}	0.194	0.240	0.811	0.418
USDZAR _{t-1}	-0.283	0.158	-1.793	0.074*
Gold _{t-1}	0.031	0.073	0.424	0.672
NAREIT _{t-1}	0.014	0.072	0.199	0.842
R-squared			0.072	
Adj. R-squared			0.003	

Dependent Variable: S&P Energy

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.015	0.008	1.960	0.051*
CPI _{t-1}	-0.435	1.222	-0.356	0.722
AUDZAR _{t-1}	0.015	0.283	0.054	0.957
BCOM _{t-1}	0.076	0.157	0.482	0.630
CHFZAR _{t-1}	0.107	0.270	0.397	0.692
EM HY _{t-1}	-0.775	0.297	-2.612	0.010***
EURZAR _{t-1}	0.239	0.349	0.686	0.494
FTSE JSE _{t-1}	-0.076	0.195	-0.390	0.697
MSCI World _{t-1}	-0.163	0.309	-0.527	0.599
MSCI EM _{t-1}	0.205	0.218	0.940	0.348
NOKZAR _{t-1}	-0.310	0.268	-1.159	0.248
S&P Energy _{t-1}	-0.083	0.105	-0.790	0.431
S&P Utilities _{t-1}	0.031	0.137	0.224	0.823
US HY _{t-1}	0.521	0.453	1.149	0.252
USDZAR _{t-1}	0.131	0.299	0.439	0.661
Gold _{t-1}	-0.110	0.137	-0.797	0.426
NAREIT _{t-1}	0.065	0.137	0.473	0.636
R-squared			0.072	
Adj. R-squared			0.004	

Dependent Variable: S&P Utilities

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.011	0.005	2.066	0.040**
CPI _{t-1}	0.170	0.846	0.201	0.841
AUDZAR _{t-1}	0.330	0.196	1.683	0.094*
BCOM _{t-1}	0.059	0.108	0.540	0.590
CHFZAR _{t-1}	-0.125	0.187	-0.671	0.503
EM HY _{t-1}	-0.470	0.205	-2.291	0.023**
EURZAR _{t-1}	0.206	0.241	0.854	0.394
FTSE JSE _{t-1}	-0.032	0.135	-0.239	0.812
MSCI World _{t-1}	0.254	0.214	1.188	0.236
MSCI EM _{t-1}	-0.195	0.151	-1.289	0.199
NOKZAR _{t-1}	-0.200	0.185	-1.078	0.282
S&P Energy _{t-1}	-0.019	0.073	-0.264	0.792
S&P Utilities _{t-1}	-0.116	0.095	-1.218	0.225
US HY _{t-1}	0.011	0.314	0.035	0.972
USDZAR _{t-1}	0.012	0.207	0.057	0.955
Gold _{t-1}	0.095	0.095	0.998	0.320
NAREIT _{t-1}	0.079	0.095	0.839	0.402
R-squared			0.099	
Adj. R-squared			0.032	

Dependent Variable: US HY

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.010	0.004	2.401	0.017**
CPI _{t-1}	0.019	0.675	0.028	0.978
AUDZAR _{t-1}	0.126	0.156	0.808	0.420
BCOM _{t-1}	-0.120	0.087	-1.388	0.167
CHFZAR _{t-1}	0.014	0.149	0.092	0.927
EM HY _{t-1}	0.083	0.164	0.509	0.611
EURZAR _{t-1}	0.189	0.193	0.984	0.326
FTSE JSE _{t-1}	-0.132	0.108	-1.223	0.223
MSCI World _{t-1}	0.214	0.170	1.254	0.211
MSCI EM _{t-1}	-0.074	0.120	-0.611	0.542

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Dependent Variable: US HY (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
NOKZAR _{t-1}	-0.228	0.148	-1.543	0.124
S&P Energy _{t-1}	-0.028	0.058	-0.484	0.629
S&P Utilities _{t-1}	0.054	0.076	0.718	0.474
US HY _{t-1}	-0.088	0.250	-0.350	0.727
USDZAR _{t-1}	-0.431	0.165	-2.615	0.010***
Gold _{t-1}	0.143	0.076	1.890	0.060*
NAREIT _{t-1}	0.001	0.076	0.018	0.986
R-squared			0.110	
Adj. R-squared			0.045	

Dependent Variable: USD/ZAR

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.007	0.005	1.421	0.157
CPI _{t-1}	0.185	0.800	0.232	0.817
AUDZAR _{t-1}	-0.024	0.185	-0.129	0.897
BCOM _{t-1}	-0.014	0.103	-0.138	0.891
CHFZAR _{t-1}	0.035	0.177	0.199	0.843
EM HY _{t-1}	-0.110	0.194	-0.566	0.572
EURZAR _{t-1}	0.047	0.228	0.208	0.836
FTSE JSE _{t-1}	-0.300	0.128	-2.355	0.019**
MSCI World _{t-1}	0.194	0.202	0.959	0.339
MSCI EM _{t-1}	-0.021	0.143	-0.146	0.884
NOKZAR _{t-1}	0.004	0.175	0.025	0.980
S&P Energy _{t-1}	0.032	0.069	0.461	0.645
S&P Utilities _{t-1}	0.006	0.090	0.068	0.946
US HY _{t-1}	-0.230	0.297	-0.775	0.439
USDZAR _{t-1}	-0.154	0.196	-0.785	0.433
Gold _{t-1}	0.107	0.090	1.194	0.234
NAREIT _{t-1}	0.082	0.090	0.911	0.363
R-squared			0.072	
Adj. R-squared			0.003	

Dependent Variable: Gold				
Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.016	0.006	2.605	0.010***
CPI _{t-1}	-0.152	0.956	-0.159	0.874
AUDZAR _{t-1}	-0.132	0.222	-0.598	0.551
BCOM _{t-1}	0.131	0.123	1.065	0.288
CHFZAR _{t-1}	0.192	0.211	0.906	0.366
EM HY _{t-1}	-0.018	0.232	-0.076	0.940
EURZAR _{t-1}	0.040	0.273	0.146	0.884
FTSE JSE _{t-1}	-0.136	0.152	-0.895	0.372
MSCI World _{t-1}	-0.310	0.242	-1.284	0.201
MSCI EM _{t-1}	0.127	0.171	0.741	0.459
NOKZAR _{t-1}	0.199	0.210	0.949	0.344
S&P Energy _{t-1}	-0.004	0.082	-0.049	0.961
S&P Utilities _{t-1}	0.091	0.107	0.847	0.398
US HY _{t-1}	-0.149	0.355	-0.420	0.675
USDZAR _{t-1}	-0.462	0.234	-1.977	0.049**
Gold _{t-1}	0.100	0.108	0.926	0.356
NAREIT _{t-1}	0.100	0.107	0.936	0.350
R-squared			0.084	
Adj. R-squared			0.017	

Dependent Variable: NAREIT				
Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.009	0.006	1.411	0.160
CPI _{t-1}	0.723	0.986	0.734	0.464
AUDZAR _{t-1}	0.427	0.228	1.871	0.063*
BCOM _{t-1}	0.039	0.126	0.306	0.760
CHFZAR _{t-1}	-0.297	0.218	-1.362	0.174
EM HY _{t-1}	0.443	0.239	1.851	0.066*
EURZAR _{t-1}	0.250	0.281	0.889	0.375
FTSE JSE _{t-1}	0.160	0.157	1.018	0.310
MSCI World _{t-1}	0.528	0.249	2.119	0.035**
MSCI EM _{t-1}	-0.450	0.176	-2.555	0.011**

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Dependent Variable: NAREIT (continued)				
Variable	Coef.	Std.Err.	t-stat	p-value
NOKZAR _{t-1}	-0.382	0.216	-1.770	0.078*
S&P Energy _{t-1}	-0.119	0.085	-1.406	0.161
S&P Utilities _{t-1}	0.113	0.111	1.017	0.311
US HY _{t-1}	-0.511	0.366	-1.396	0.164
USDZAR _{t-1}	-0.084	0.241	-0.349	0.728
Gold _{t-1}	0.027	0.111	0.244	0.808
NAREIT _{t-1}	-0.125	0.110	-1.134	0.258
R-squared			0.096	
Adj. R-squared			0.030	

Note: ***, **, * denote significance at the 1%, 5% and 10% level.

Table B.1.3.37: Regression Results of the Third Model for South Africa

Dependent Variable: CPI South Africa Monthly				
Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	-0.000	0.000	-0.464	0.644
CPI _{t-1}	-0.201	0.082	-2.459	0.015**
AUDZAR _{t-1}	-0.035	0.024	-1.445	0.151
BCOM _{t-1}	0.001	0.012	0.110	0.912
CHFZAR _{t-1}	-0.008	0.022	-0.361	0.719
EM HY _{t-1}	-0.003	0.031	-0.086	0.931
EURZAR _{t-1}	-0.022	0.028	-0.796	0.427
FTSE JSE _{t-1}	0.019	0.015	1.217	0.226
MSCI World _{t-1}	-0.017	0.025	-0.678	0.499
MSCI EM _{t-1}	-0.012	0.019	-0.617	0.538
NOKZAR _{t-1}	0.032	0.022	1.442	0.152
S&P Energy _{t-1}	-0.009	0.004	-2.158	0.033**
S&P Utilities _{t-1}	-0.043	0.015	-2.831	0.005***
S&P Global Infra _{t-1}	0.037	0.026	1.440	0.152
TIPS _{t-1}	-0.038	0.034	-1.113	0.268
US HY _{t-1}	-0.018	0.047	-0.387	0.699

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Dependent Variable: CPI South Africa Monthly (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
USDZAR _{t-1}	0.079	0.034	2.297	0.023**
Gold _{t-1}	0.016	0.012	1.268	0.207
NAREIT _{t-1}	0.032	0.017	1.926	0.056*
R-squared			0.184	
Adj. R-squared			0.080	

Dependent Variable: AUD/ZAR

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.006	0.003	1.937	0.055*
CPI _{t-1}	1.191	0.568	2.098	0.038**
AUDZAR _{t-1}	0.147	0.168	0.877	0.382
BCOM _{t-1}	-0.110	0.086	-1.277	0.204
CHFZAR _{t-1}	0.011	0.154	0.073	0.942
EM HY _{t-1}	0.073	0.215	0.337	0.736
EURZAR _{t-1}	0.008	0.193	0.044	0.965
FTSE JSE _{t-1}	-0.155	0.108	-1.445	0.151
MSCI World _{t-1}	0.166	0.172	0.962	0.337
MSCI EM _{t-1}	-0.109	0.135	-0.805	0.422
NOKZAR _{t-1}	-0.045	0.156	-0.288	0.774
S&P Energy _{t-1}	0.009	0.030	0.304	0.762
S&P Utilities _{t-1}	0.081	0.105	0.772	0.442
Infrastructure _{t-1}	-0.094	0.178	-0.527	0.599
TIPS _{t-1}	0.111	0.235	0.472	0.638
US HY _{t-1}	-0.037	0.330	-0.112	0.911
USDZAR _{t-1}	-0.240	0.238	-1.006	0.316
Gold _{t-1}	0.091	0.087	1.051	0.295
NAREIT _{t-1}	-0.142	0.116	-1.223	0.224
R-squared			0.143	
Adj. R-squared			0.033	

Dependent Variable: BCOM

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.006	0.004	1.709	0.090*
CPI _{t-1}	1.132	0.735	1.539	0.126
AUDZAR _{t-1}	-0.186	0.217	-0.855	0.394
BCOM _{t-1}	0.020	0.111	0.180	0.858
CHFZAR _{t-1}	0.079	0.199	0.396	0.692
EM HY _{t-1}	-0.429	0.279	-1.540	0.126
EURZAR _{t-1}	-0.323	0.251	-1.291	0.199
FTSE JSE _{t-1}	-0.143	0.139	-1.029	0.305
MSCI World _{t-1}	0.013	0.223	0.057	0.955
MSCI EM _{t-1}	0.099	0.175	0.563	0.574
NOKZAR _{t-1}	0.261	0.202	1.296	0.197
S&P Energy _{t-1}	0.015	0.038	0.389	0.698
S&P Utilities _{t-1}	0.113	0.135	0.835	0.405
Infrastructure _{t-1}	-0.184	0.231	-0.799	0.426
TIPS _{t-1}	-0.265	0.304	-0.872	0.384
US HY _{t-1}	0.390	0.427	0.914	0.362
USDZAR _{t-1}	0.101	0.309	0.327	0.744
Gold _{t-1}	0.017	0.112	0.151	0.881
NAREIT _{t-1}	0.093	0.150	0.616	0.539
R-squared			0.128	
Adj. R-squared			0.017	

Dependent Variable: CHF/ZAR

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.009	0.003	2.731	0.007***
CPI _{t-1}	0.569	0.677	0.842	0.401
AUDZAR _{t-1}	-0.014	0.200	-0.068	0.946
BCOM _{t-1}	-0.126	0.102	-1.233	0.220
CHFZAR _{t-1}	-0.041	0.183	-0.222	0.825
EM HY _{t-1}	0.019	0.257	0.074	0.941
EURZAR _{t-1}	0.056	0.230	0.242	0.809
FTSE JSE _{t-1}	-0.292	0.128	-2.278	0.024**

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Dependent Variable: CHF/ZAR (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
MSCI World _{t-1}	0.318	0.205	1.546	0.124
MSCI EM _{t-1}	0.014	0.161	0.085	0.932
NOKZAR _{t-1}	-0.035	0.185	-0.186	0.852
S&P Energy _{t-1}	-0.009	0.035	-0.268	0.789
S&P Utilities _{t-1}	0.083	0.125	0.663	0.508
Infrastructure _{t-1}	-0.012	0.212	-0.058	0.954
TIPS _{t-1}	0.059	0.280	0.212	0.832
US HY _{t-1}	-0.066	0.393	-0.169	0.866
USDZAR _{t-1}	-0.229	0.284	-0.807	0.421
Gold _{t-1}	0.014	0.103	0.137	0.891
NAREIT _{t-1}	-0.161	0.138	-1.167	0.245
R-squared			0.115	
Adj. R-squared			0.002	

Dependent Variable: EM HY

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.011	0.003	3.210	0.002***
CPI _{t-1}	0.200	0.653	0.306	0.760
AUDZAR _{t-1}	0.131	0.193	0.679	0.498
BCOM _{t-1}	-0.186	0.099	-1.884	0.062*
CHFZAR _{t-1}	0.090	0.177	0.509	0.612
EM HY _{t-1}	0.043	0.248	0.172	0.863
EURZAR _{t-1}	-0.001	0.222	-0.004	0.997
FTSE JSE _{t-1}	-0.089	0.124	-0.717	0.474
MSCI World _{t-1}	0.471	0.198	2.376	0.019**
MSCI EM _{t-1}	-0.164	0.156	-1.053	0.294
NOKZAR _{t-1}	0.011	0.179	0.062	0.951
S&P Energy _{t-1}	0.014	0.034	0.422	0.673
S&P Utilities _{t-1}	0.259	0.120	2.152	0.033**
Infrastructure _{t-1}	-0.313	0.205	-1.529	0.129
TIPS _{t-1}	0.064	0.270	0.237	0.813
US HY _{t-1}	0.029	0.379	0.077	0.938
USDZAR _{t-1}	-0.547	0.274	-1.997	0.048**

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Dependent Variable: EM HY (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
Gold _{t-1}	0.100	0.100	0.999	0.320
NAREIT _{t-1}	-0.161	0.133	-1.204	0.231
R-squared			0.132	
Adj. R-squared			0.022	

Dependent Variable: EURZAR

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.007	0.003	2.084	0.039**
CPI _{t-1}	0.530	0.687	0.771	0.442
AUDZAR _{t-1}	-0.031	0.203	-0.155	0.877
BCOM _{t-1}	-0.073	0.104	-0.697	0.487
CHFZAR _{t-1}	0.085	0.186	0.456	0.649
EM HY _{t-1}	0.275	0.261	1.057	0.292
EURZAR _{t-1}	0.060	0.234	0.257	0.797
FTSE JSE _{t-1}	-0.254	0.130	-1.953	0.053*
MSCI World _{t-1}	0.300	0.209	1.438	0.153
MSCI EM _{t-1}	-0.064	0.164	-0.389	0.698
NOKZAR _{t-1}	0.031	0.188	0.167	0.868
S&P Energy _{t-1}	-0.010	0.036	-0.268	0.789
S&P Utilities _{t-1}	0.099	0.127	0.781	0.436
Infrastructure _{t-1}	-0.218	0.216	-1.010	0.314
TIPS _{t-1}	0.098	0.284	0.343	0.732
US HY _{t-1}	-0.178	0.399	-0.445	0.657
USDZAR _{t-1}	-0.401	0.288	-1.391	0.166
Gold _{t-1}	-0.030	0.105	-0.288	0.773
NAREIT _{t-1}	-0.073	0.140	-0.521	0.603
R-squared			0.116	
Adj. R-squared			0.003	

Dependent Variable: FTSE JSE

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.009	0.004	2.528	0.013**

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Dependent Variable: FTSE JSE (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
CPI _{t-1}	0.520	0.722	0.720	0.473
AUDZAR _{t-1}	0.093	0.213	0.438	0.662
BCOM _{t-1}	-0.095	0.109	-0.867	0.388
CHFZAR _{t-1}	-0.033	0.196	-0.170	0.865
EM HY _{t-1}	-0.662	0.274	-2.417	0.017**
EURZAR _{t-1}	0.172	0.246	0.700	0.485
FTSE JSE _{t-1}	-0.056	0.137	-0.412	0.681
MSCI World _{t-1}	-0.198	0.219	-0.901	0.369
MSCI EM _{t-1}	0.160	0.172	0.930	0.354
NOKZAR _{t-1}	-0.175	0.198	-0.882	0.379
S&P Energy _{t-1}	0.035	0.038	0.935	0.352
S&P Utilities _{t-1}	-0.088	0.133	-0.664	0.508
Infrastructure _{t-1}	0.068	0.227	0.299	0.766
TIPS _{t-1}	0.059	0.298	0.198	0.843
US HY _{t-1}	0.258	0.419	0.616	0.539
USDZAR _{t-1}	0.271	0.303	0.894	0.373
Gold _{t-1}	-0.108	0.110	-0.983	0.327
NAREIT _{t-1}	0.121	0.148	0.821	0.413
R-squared			0.106	
Adj. R-squared			-0.008	

Dependent Variable: MSCI World

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.014	0.004	3.786	0.000***
CPI _{t-1}	1.060	0.750	1.414	0.160
AUDZAR _{t-1}	0.074	0.221	0.335	0.738
BCOM _{t-1}	-0.182	0.114	-1.602	0.111
CHFZAR _{t-1}	0.105	0.203	0.517	0.606
EM HY _{t-1}	-0.462	0.284	-1.626	0.106
EURZAR _{t-1}	0.096	0.255	0.376	0.707
FTSE JSE _{t-1}	-0.055	0.142	-0.389	0.698
MSCI World _{t-1}	0.118	0.228	0.518	0.606
MSCI EM _{t-1}	0.052	0.179	0.289	0.773

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Dependent Variable: MSCI World (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
NOKZAR _{t-1}	-0.195	0.205	-0.949	0.344
S&P Energy _{t-1}	0.018	0.039	0.458	0.647
S&P Utilities _{t-1}	0.027	0.138	0.199	0.843
Infrastructure _{t-1}	-0.202	0.235	-0.861	0.391
TIPS _{t-1}	-0.013	0.310	-0.042	0.966
US HY _{t-1}	0.441	0.435	1.013	0.313
USDZAR _{t-1}	-0.068	0.314	-0.216	0.829
Gold _{t-1}	0.046	0.114	0.400	0.690
NAREIT _{t-1}	-0.089	0.153	-0.582	0.562
R-squared			0.128	
Adj. R-squared			0.016	

Dependent Variable: MSCI EM

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.008	0.004	2.174	0.031**
CPI _{t-1}	1.323	0.700	1.891	0.061*
AUDZAR _{t-1}	0.144	0.207	0.696	0.487
BCOM _{t-1}	-0.245	0.106	-2.313	0.022**
CHFZAR _{t-1}	-0.073	0.190	-0.387	0.700
EM HY _{t-1}	-0.227	0.265	-0.856	0.394
EURZAR _{t-1}	0.195	0.238	0.819	0.414
FTSE JSE _{t-1}	-0.050	0.133	-0.378	0.706
MSCI World _{t-1}	0.259	0.213	1.219	0.225
MSCI EM _{t-1}	-0.197	0.167	-1.182	0.239
NOKZAR _{t-1}	-0.225	0.192	-1.175	0.242
S&P Energy _{t-1}	0.012	0.037	0.333	0.740
S&P Utilities _{t-1}	0.015	0.129	0.119	0.906
Infrastructure _{t-1}	-0.043	0.219	-0.194	0.847
TIPS _{t-1}	0.311	0.289	1.075	0.284
US HY _{t-1}	0.207	0.406	0.509	0.611
USDZAR _{t-1}	-0.430	0.294	-1.463	0.146
Gold _{t-1}	0.092	0.107	0.860	0.391

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Dependent Variable: MSCI EM (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
NAREIT _{t-1}	-0.129	0.143	-0.900	0.370
R-squared			0.166	
Adj. R-squared			0.059	

Dependent Variable: NOK/ZAR

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.004	0.003	1.339	0.183
CPI _{t-1}	0.509	0.626	0.813	0.418
AUDZAR _{t-1}	0.118	0.185	0.640	0.523
BCOM _{t-1}	-0.161	0.095	-1.696	0.092*
CHFZAR _{t-1}	0.172	0.170	1.015	0.312
EM HY _{t-1}	-0.277	0.237	-1.168	0.245
EURZAR _{t-1}	0.115	0.213	0.539	0.591
FTSE JSE _{t-1}	-0.139	0.119	-1.170	0.244
MSCI World _{t-1}	0.036	0.190	0.187	0.852
MSCI EM _{t-1}	0.012	0.149	0.080	0.936
NOKZAR _{t-1}	-0.128	0.172	-0.746	0.457
S&P Energy _{t-1}	0.008	0.033	0.256	0.799
S&P Utilities _{t-1}	-0.018	0.115	-0.156	0.877
Infrastructure _{t-1}	-0.162	0.196	-0.823	0.412
TIPS _{t-1}	-0.052	0.259	-0.200	0.842
US HY _{t-1}	0.451	0.363	1.240	0.217
USDZAR _{t-1}	-0.302	0.263	-1.150	0.252
Gold _{t-1}	-0.011	0.096	-0.115	0.908
NAREIT _{t-1}	0.040	0.128	0.313	0.755
R-squared			0.118	
Adj. R-squared			0.005	

Dependent Variable: S&P 500 Energy

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.014	0.008	1.792	0.075*
CPI _{t-1}	0.336	1.494	0.225	0.822

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Dependent Variable: S&P 500 Energy (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
AUDZAR _{t-1}	-0.563	0.441	-1.277	0.204
BCOM _{t-1}	-0.462	0.226	-2.039	0.043**
CHFZAR _{t-1}	0.341	0.405	0.841	0.402
EM HY _{t-1}	-1.366	0.566	-2.411	0.017**
EURZAR _{t-1}	0.816	0.509	1.604	0.111
FTSE JSE _{t-1}	-0.235	0.283	-0.829	0.409
MSCI ACWI _{t-1}	-0.604	0.454	-1.331	0.185
MSCI EM _{t-1}	0.905	0.356	2.540	0.012**
NOKZAR _{t-1}	-0.225	0.409	-0.550	0.583
S&P Energy _{t-1}	-0.228	0.078	-2.912	0.004***
S&P Utilities _{t-1}	0.446	0.275	1.622	0.107
Infrastructure _{t-1}	-1.197	0.469	-2.554	0.012**
TIPS _{t-1}	-0.068	0.617	-0.109	0.913
US HY _{t-1}	0.441	0.867	0.509	0.612
USDZAR _{t-1}	0.447	0.627	0.713	0.477
Gold _{t-1}	0.014	0.228	0.059	0.953
NAREIT _{t-1}	0.275	0.305	0.900	0.370
R-squared			0.508	
Adj. R-squared			0.445	

Dependent Variable: S&P 500 Utilities

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.015	0.005	3.285	0.001***
CPI _{t-1}	1.851	0.896	2.067	0.041**
AUDZAR _{t-1}	0.346	0.265	1.309	0.193
BCOM _{t-1}	0.068	0.136	0.503	0.616
CHFZAR _{t-1}	-0.218	0.243	-0.897	0.371
EM HY _{t-1}	-0.088	0.340	-0.258	0.796
EURZAR _{t-1}	0.136	0.305	0.447	0.656
FTSE JSE _{t-1}	0.040	0.170	0.238	0.812
MSCI World _{t-1}	0.347	0.272	1.277	0.204
MSCI EM _{t-1}	-0.383	0.213	-1.794	0.075*
NOKZAR _{t-1}	0.016	0.245	0.064	0.949

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Dependent Variable: S&P 500 Utilities (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
S&P Energy _{t-1}	0.009	0.047	0.195	0.846
S&P Utilities _{t-1}	-0.106	0.165	-0.644	0.521
Infrastructure _{t-1}	-0.229	0.281	-0.817	0.415
TIPS _{t-1}	0.010	0.370	0.027	0.978
US HY _{t-1}	-0.497	0.520	-0.957	0.340
USDZAR _{t-1}	0.338	0.376	0.900	0.370
Gold _{t-1}	0.062	0.137	0.451	0.653
NAREIT _{t-1}	0.090	0.183	0.491	0.624
R-squared	0.128			
Adj. R-squared	0.016			

Dependent Variable: Infrastructure

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.014	0.004	3.760	0.000***
CPI _{t-1}	0.955	0.739	1.291	0.199
AUDZAR _{t-1}	0.128	0.218	0.584	0.560
BCOM _{t-1}	-0.004	0.112	-0.040	0.968
CHFZAR _{t-1}	-0.020	0.200	-0.099	0.921
EM HY _{t-1}	-0.394	0.280	-1.404	0.162
EURZAR _{t-1}	0.149	0.252	0.593	0.554
FTSE JSE _{t-1}	0.042	0.140	0.299	0.766
MSCI World _{t-1}	0.095	0.224	0.422	0.674
MSCI EM _{t-1}	-0.030	0.176	-0.169	0.866
NOKZAR _{t-1}	-0.254	0.203	-1.255	0.212
S&P Energy _{t-1}	0.044	0.039	1.134	0.259
S&P Utilities _{t-1}	0.131	0.136	0.965	0.336
Infrastructure _{t-1}	-0.179	0.232	-0.774	0.440
TIPS _{t-1}	-0.193	0.305	-0.630	0.530
US HY _{t-1}	0.028	0.429	0.066	0.947
USDZAR _{t-1}	0.276	0.310	0.889	0.375
Gold _{t-1}	0.059	0.113	0.522	0.603
NAREIT _{t-1}	-0.032	0.151	-0.211	0.833
R-squared	0.113			

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Dependent Variable: Infrastructure (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
Adj. R-squared			-0.001	

Dependent Variable: TIPS

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.009	0.004	2.274	0.024**
CPI _{t-1}	0.593	0.773	0.766	0.445
AUDZAR _{t-1}	0.140	0.228	0.612	0.542
BCOM _{t-1}	-0.064	0.117	-0.550	0.584
CHFZAR _{t-1}	-0.006	0.210	-0.030	0.976
EM HY _{t-1}	0.165	0.293	0.564	0.574
EURZAR _{t-1}	0.252	0.263	0.958	0.340
FTSE JSE _{t-1}	-0.199	0.147	-1.356	0.177
MSCI World _{t-1}	0.360	0.235	1.533	0.128
MSCI EM _{t-1}	-0.211	0.184	-1.146	0.254
NOKZAR _{t-1}	-0.007	0.212	-0.033	0.974
S&P Energy _{t-1}	0.012	0.040	0.303	0.763
S&P Utilities _{t-1}	0.159	0.142	1.115	0.267
Infrastructure _{t-1}	-0.351	0.243	-1.447	0.150
TIPS _{t-1}	-0.021	0.320	-0.067	0.947
US HY _{t-1}	-0.232	0.449	-0.517	0.606
USDZAR _{t-1}	-0.479	0.324	-1.477	0.142
Gold _{t-1}	0.144	0.118	1.219	0.225
NAREIT _{t-1}	0.013	0.158	0.080	0.936
R-squared			0.108	
Adj. R-squared			-0.006	

Dependent Variable: US HY

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.013	0.004	3.529	0.001***
CPI _{t-1}	0.015	0.704	0.021	0.983
AUDZAR _{t-1}	0.021	0.208	0.101	0.920
BCOM _{t-1}	-0.145	0.107	-1.361	0.176

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Dependent Variable: US HY (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
CHFZAR _{t-1}	0.066	0.191	0.344	0.731
EM HY _{t-1}	-0.025	0.267	-0.092	0.927
EURZAR _{t-1}	0.092	0.240	0.383	0.702
FTSE JSE _{t-1}	-0.087	0.133	-0.656	0.513
MSCI World _{t-1}	0.313	0.214	1.465	0.145
MSCI EM _{t-1}	-0.102	0.168	-0.609	0.543
NOKZAR _{t-1}	-0.044	0.193	-0.226	0.821
S&P Energy _{t-1}	0.011	0.037	0.301	0.764
S&P Utilities _{t-1}	0.151	0.130	1.164	0.247
Infrastructure _{t-1}	-0.250	0.221	-1.133	0.259
TIPS _{t-1}	-0.085	0.291	-0.293	0.770
US HY _{t-1}	-0.076	0.409	-0.187	0.852
USDZAR _{t-1}	-0.232	0.296	-0.785	0.434
Gold _{t-1}	0.125	0.108	1.165	0.246
NAREIT _{t-1}	-0.049	0.144	-0.339	0.735
R-squared			0.094	
Adj. R-squared			-0.022	

Dependent Variable: USD/ZAR

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.009	0.004	2.239	0.027**
CPI _{t-1}	-0.215	0.799	-0.269	0.789
AUDZAR _{t-1}	0.037	0.236	0.155	0.877
BCOM _{t-1}	0.019	0.121	0.158	0.875
CHFZAR _{t-1}	0.034	0.217	0.157	0.875
EM HY _{t-1}	0.156	0.303	0.514	0.608
EURZAR _{t-1}	0.123	0.272	0.451	0.653
FTSE JSE _{t-1}	-0.214	0.151	-1.412	0.160
MSCI World _{t-1}	0.371	0.243	1.529	0.129
MSCI EM _{t-1}	-0.156	0.190	-0.818	0.415
NOKZAR _{t-1}	0.022	0.219	0.099	0.921
S&P Energy _{t-1}	0.009	0.042	0.207	0.836
S&P Utilities _{t-1}	0.181	0.147	1.233	0.220

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Dependent Variable: USD/ZAR (continued)

Variable	Coef.	Std.Err.	t-stat	p-value
Infrastructure _{t-1}	-0.321	0.251	-1.282	0.202
TIPS _{t-1}	0.011	0.330	0.034	0.973
US HY _{t-1}	-0.157	0.464	-0.338	0.736
USDZAR _{t-1}	-0.482	0.335	-1.439	0.152
Gold _{t-1}	0.070	0.122	0.573	0.567
NAREIT _{t-1}	-0.054	0.163	-0.331	0.741
R-squared			0.078	
Adj. R-squared			-0.039	

Dependent Variable: Gold

Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.014	0.004	3.300	0.001***
CPI _{t-1}	1.083	0.853	1.270	0.206
AUDZAR _{t-1}	0.060	0.252	0.237	0.813
BCOM _{t-1}	0.081	0.129	0.623	0.534
CHFZAR _{t-1}	0.291	0.231	1.261	0.209
EM HY _{t-1}	0.357	0.323	1.105	0.271
EURZAR _{t-1}	0.334	0.290	1.151	0.252
FTSE JSE _{t-1}	-0.179	0.162	-1.111	0.268
MSCI World _{t-1}	0.183	0.259	0.706	0.481
MSCI EM _{t-1}	-0.237	0.203	-1.169	0.245
NOKZAR _{t-1}	0.105	0.234	0.450	0.653
S&P Energy _{t-1}	0.047	0.045	1.061	0.291
S&P Utilities _{t-1}	0.283	0.157	1.802	0.074*
Infrastructure _{t-1}	-0.517	0.267	-1.932	0.055*
TIPS _{t-1}	0.748	0.352	2.122	0.036**
US HY _{t-1}	-0.349	0.495	-0.705	0.482
USDZAR _{t-1}	-1.579	0.358	-4.415	0.000***
Gold _{t-1}	0.111	0.130	0.854	0.394
NAREIT _{t-1}	-0.060	0.174	-0.342	0.733
R-squared			0.237	
Adj. R-squared			0.140	

Dependent Variable: NAREIT				
Variable	Coef.	Std.Err.	t-stat	p-value
Intercept	0.013	0.005	2.862	0.005***
CPI _{t-1}	1.255	0.923	1.360	0.176
AUDZAR _{t-1}	0.401	0.273	1.470	0.144
BCOM _{t-1}	-0.126	0.140	-0.900	0.370
CHFZAR _{t-1}	-0.143	0.250	-0.570	0.570
EM HY _{t-1}	-0.225	0.350	-0.643	0.521
EURZAR _{t-1}	0.204	0.314	0.650	0.516
FTSE JSE _{t-1}	0.179	0.175	1.022	0.308
MSCI World _{t-1}	0.351	0.280	1.251	0.213
MSCI EM _{t-1}	-0.386	0.220	-1.757	0.081*
NOKZAR _{t-1}	-0.289	0.253	-1.145	0.254
S&P Energy _{t-1}	-0.002	0.048	-0.042	0.967
S&P Utilities _{t-1}	0.210	0.170	1.235	0.219
Infrastructure _{t-1}	-0.268	0.289	-0.925	0.356
TIPS _{t-1}	-0.380	0.381	-0.997	0.321
US HY _{t-1}	0.286	0.535	0.533	0.595
USDZAR _{t-1}	0.224	0.387	0.578	0.564
Gold _{t-1}	0.136	0.141	0.965	0.336
NAREIT _{t-1}	-0.216	0.189	-1.144	0.254
R-squared			0.122	
Adj. R-squared			0.010	

Note: ***, **, * denote significance at the 1%, 5% and 10% level.

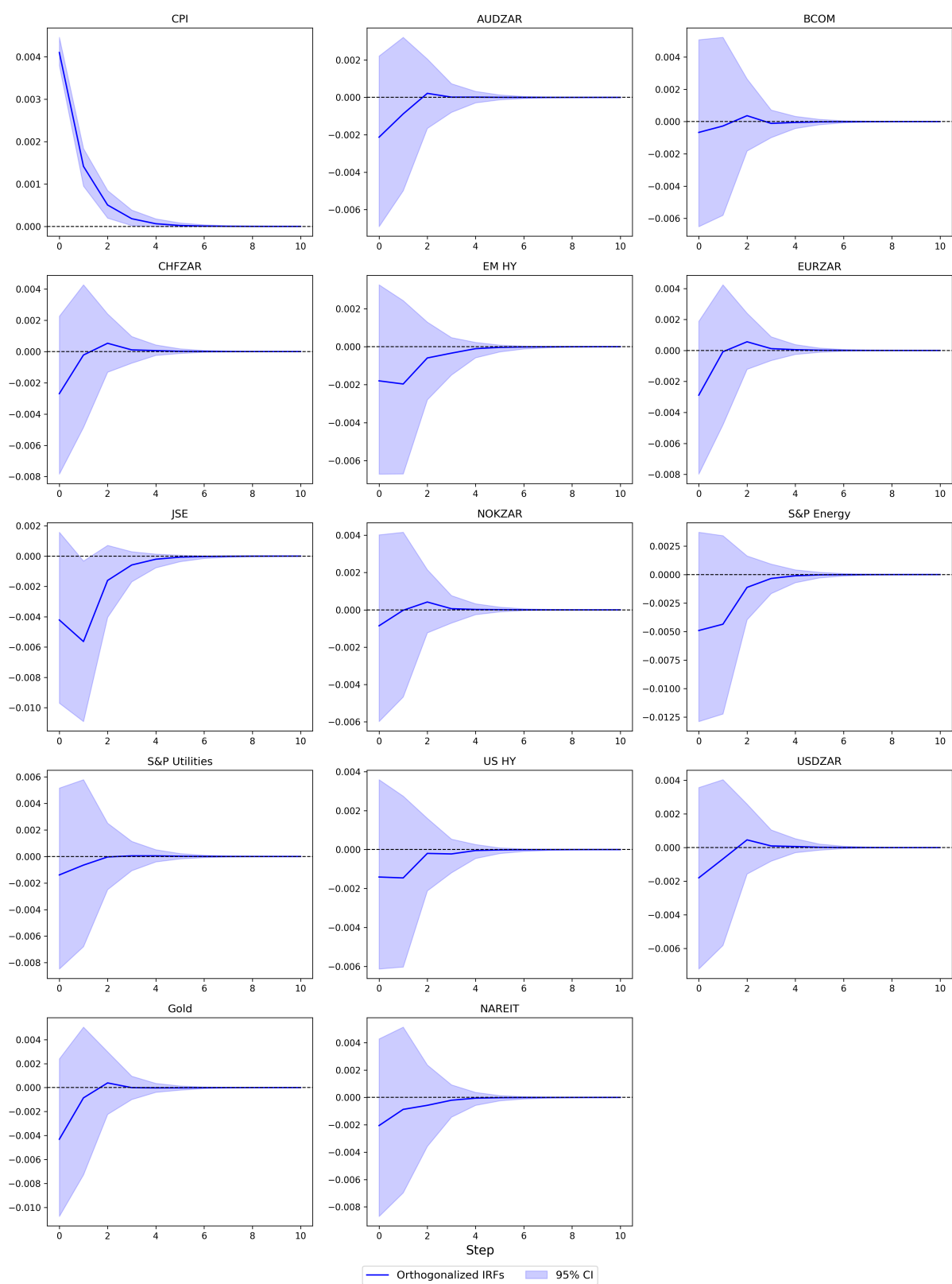


Figure B.1.3.1: Orthogonalized IRFs for Impulse Shock of Monthly Inflation for the First Model for South Africa

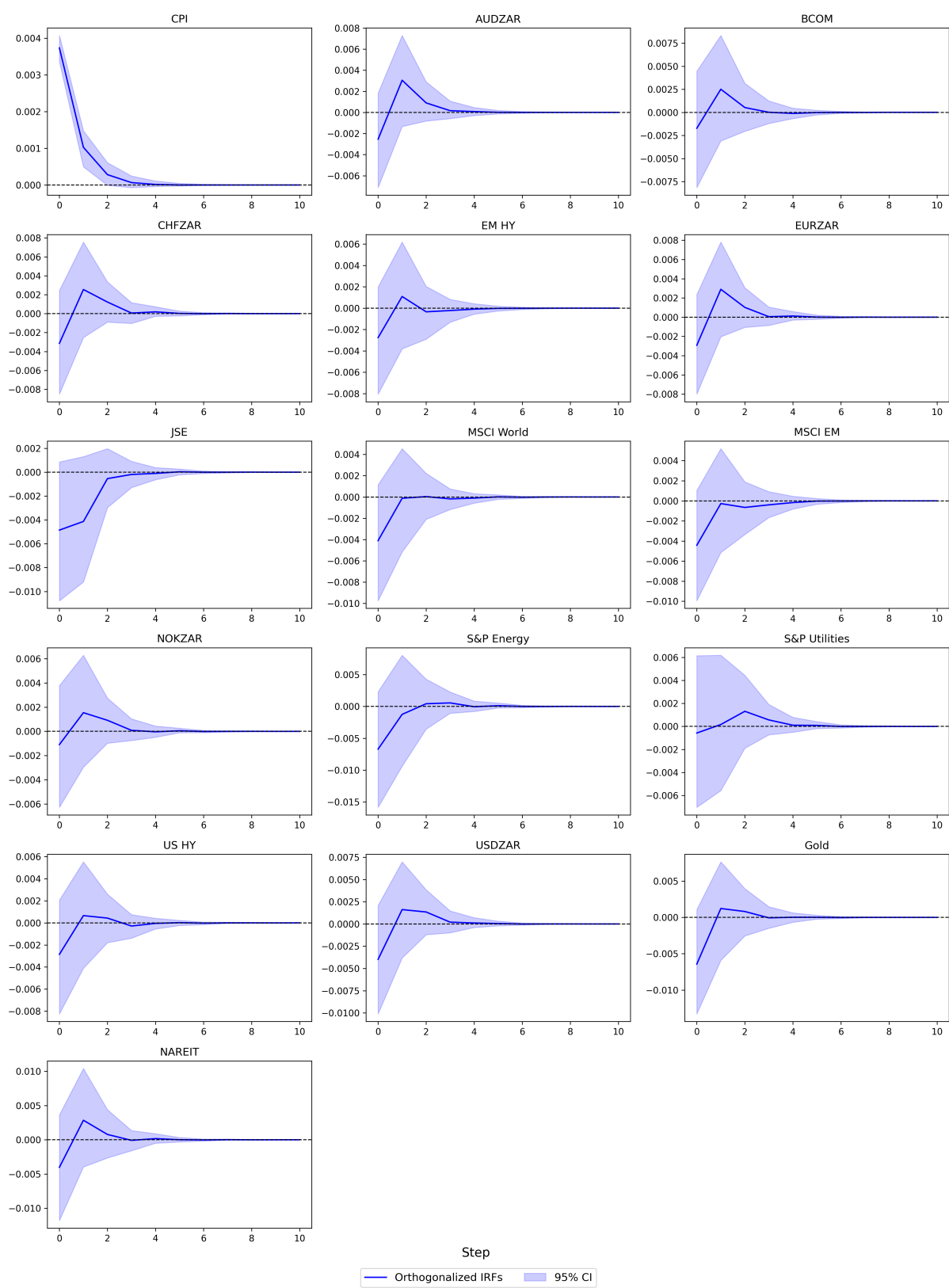


Figure B.1.3.2: Orthogonalized IRFs for Impulse Shock of Monthly Inflation for the Second Model for South Africa

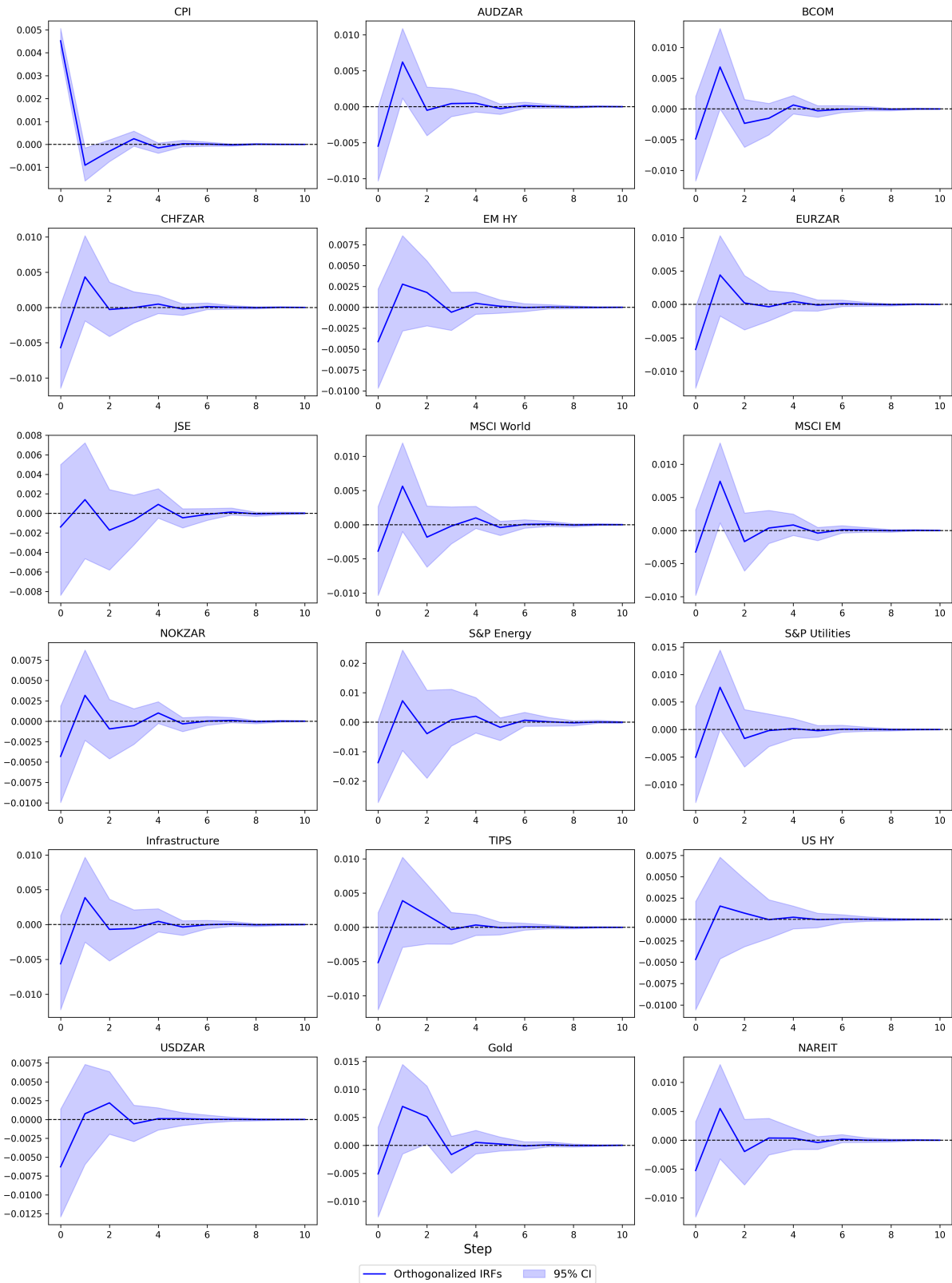


Figure B.1.3.3: Orthogonalized IRFs for Impulse Shock of Monthly Inflation for the Third Model for South Africa

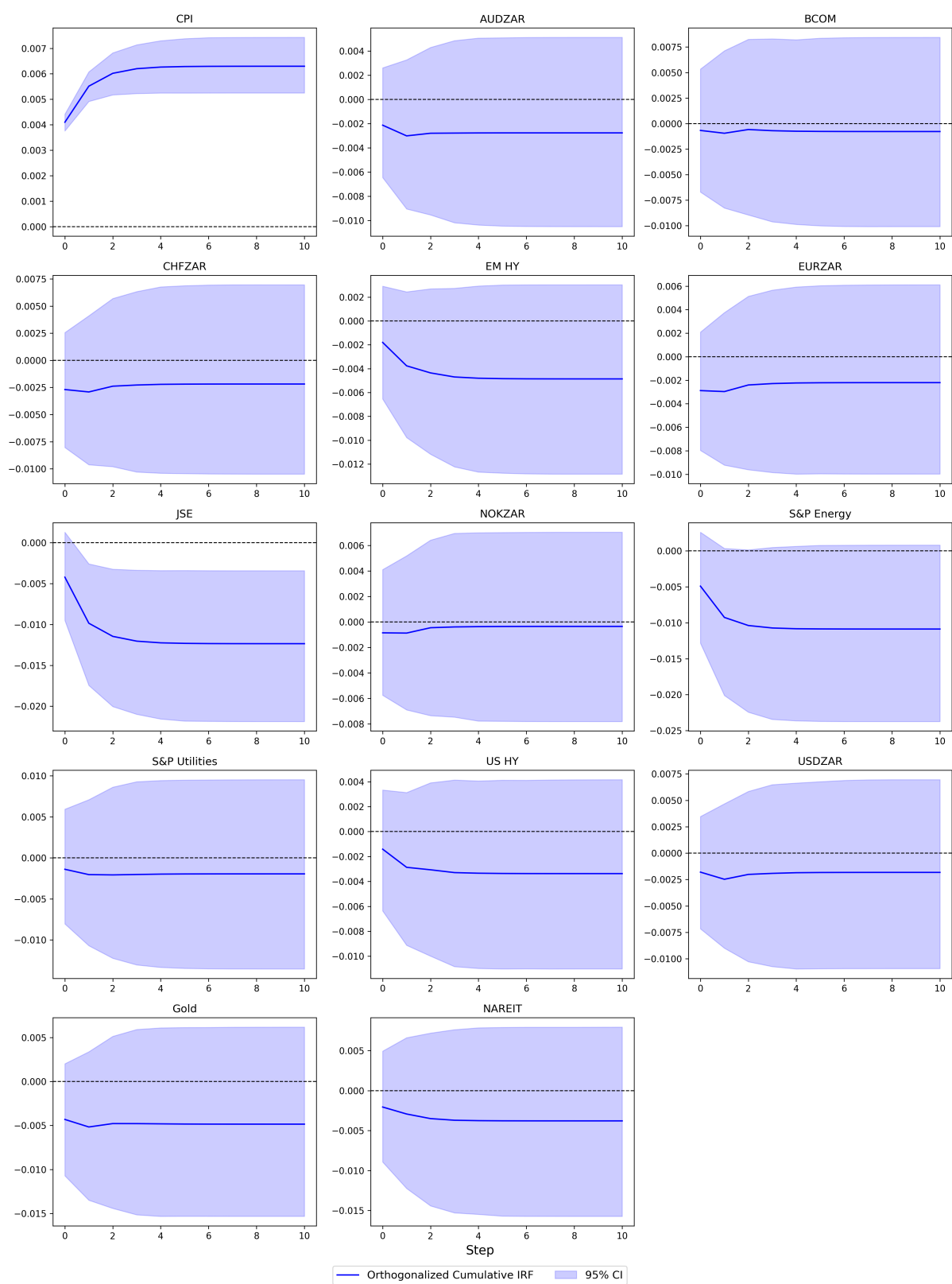


Figure B.1.3.4: Cumulative Orthogonalized IRFs for Impulse Shock of Monthly Inflation for the First Model for South Africa

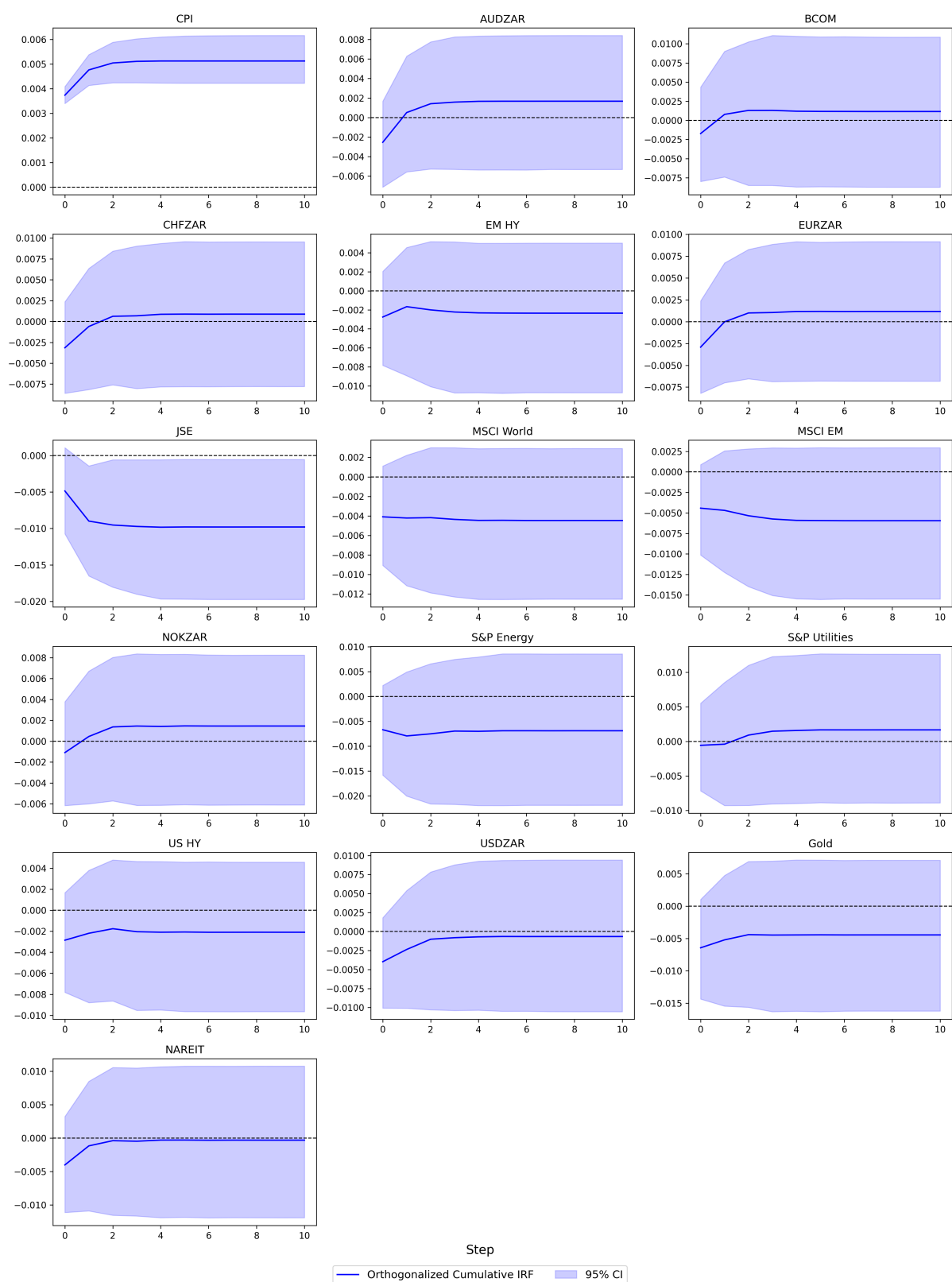


Figure B.1.3.5: Cumulative Orthogonalized IRFs for Impulse Shock of Monthly Inflation for the Second Model for South Africa

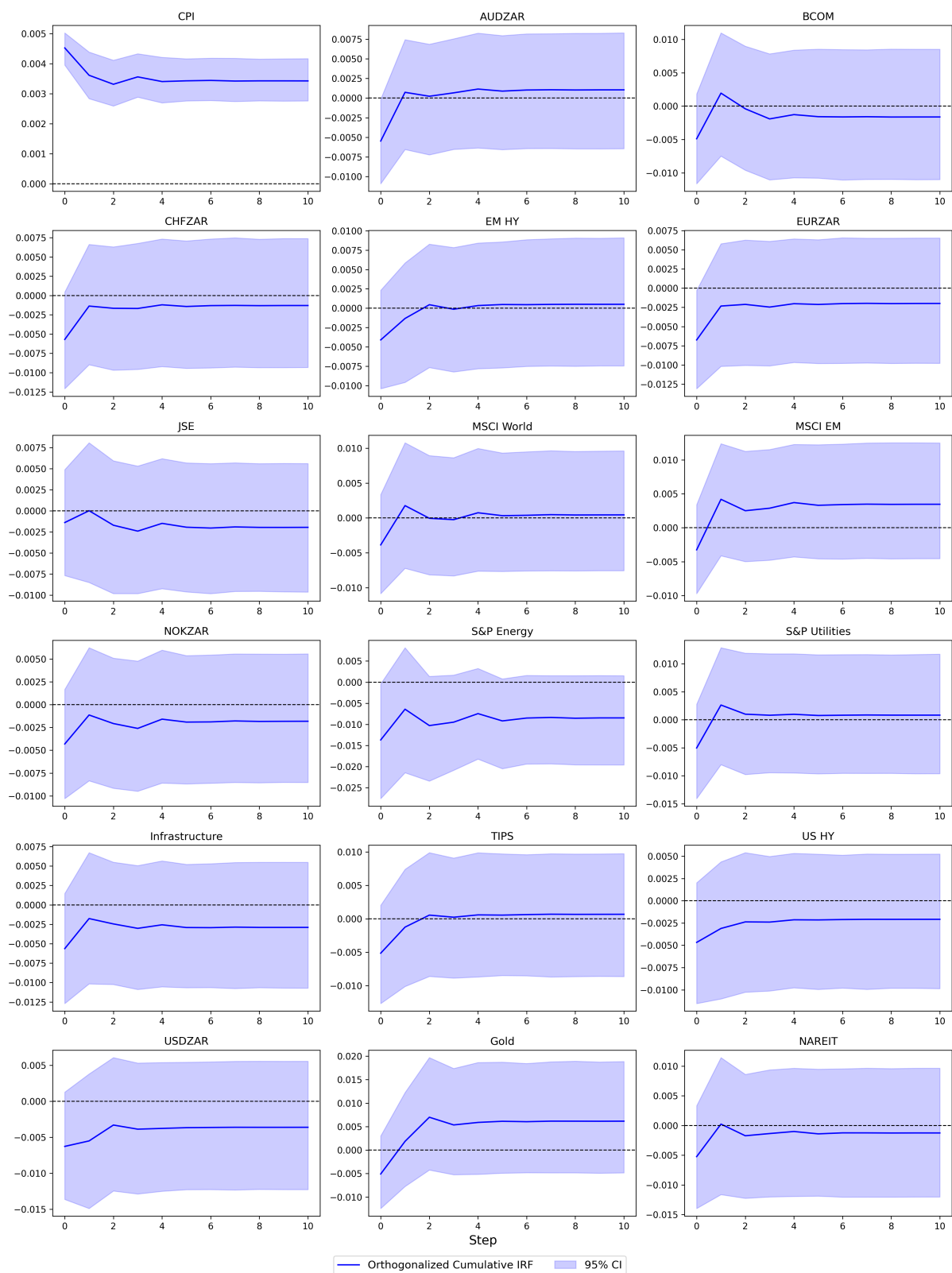


Figure B.1.3.6: Cumulative Orthogonalized IRFs for Impulse Shock of Monthly Inflation for the Third Model for South Africa

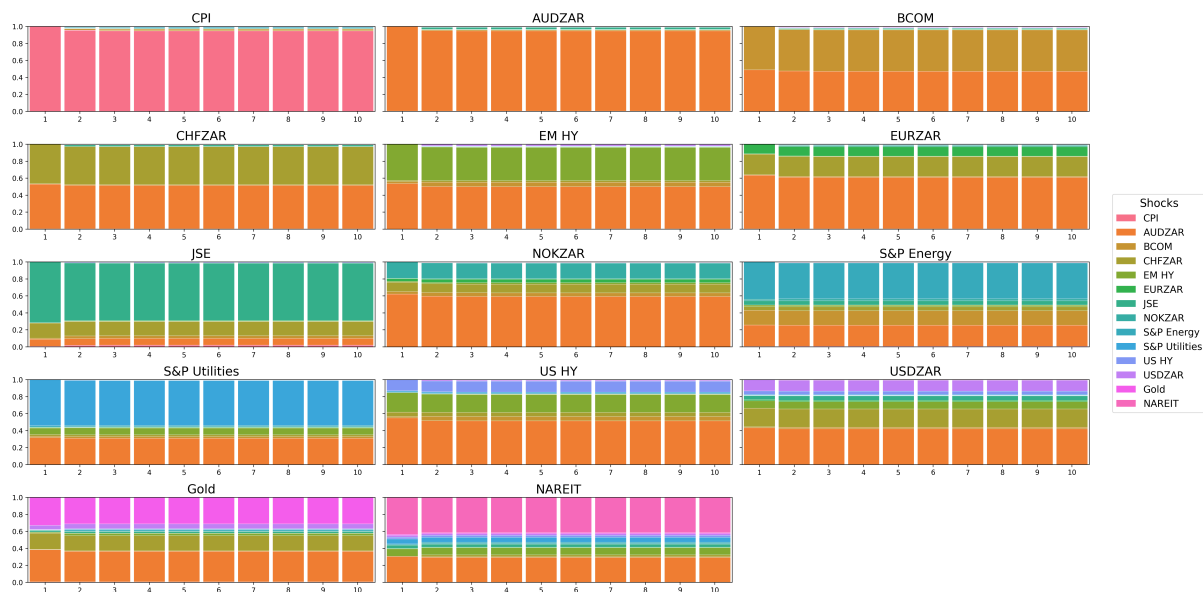


Figure B.1.3.7: Variance Decomposition Analysis for the First Model for All Assets & Inflation for South Africa



Figure B.1.3.8: Variance Decomposition Analysis for the Second Model for All Assets & Inflation for South Africa

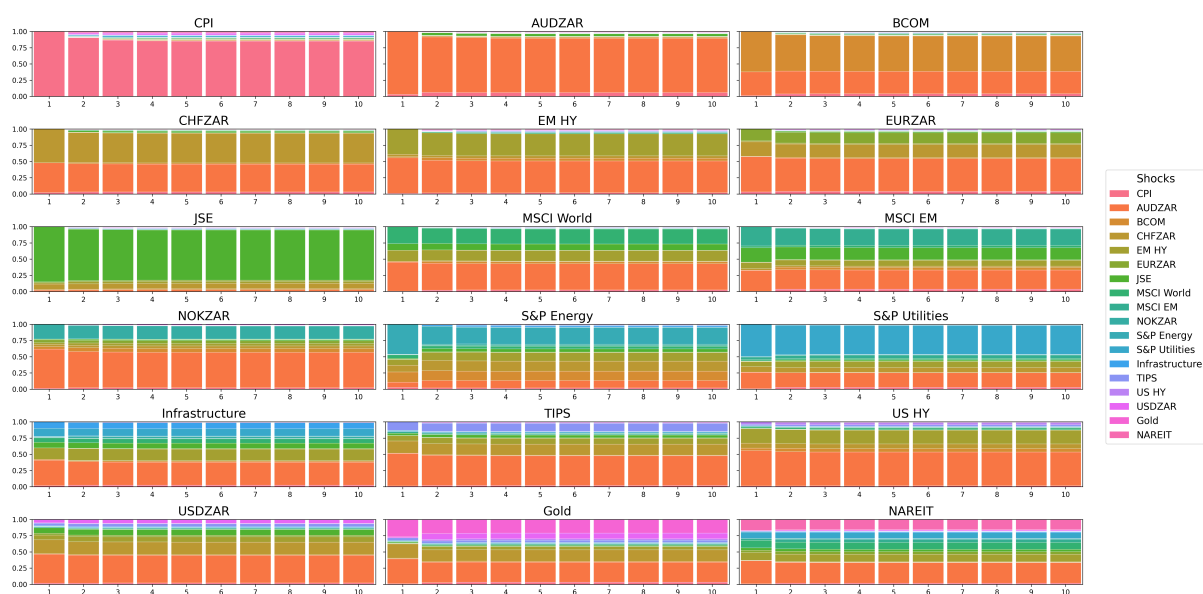


Figure B.1.3.9: Variance Decomposition Analysis for the Third Model for All Assets & Inflation for South Africa

B.2 ARDL/NARDL Model Tables & Figures

B.2.1 Brazil Results ARDL/NARDL

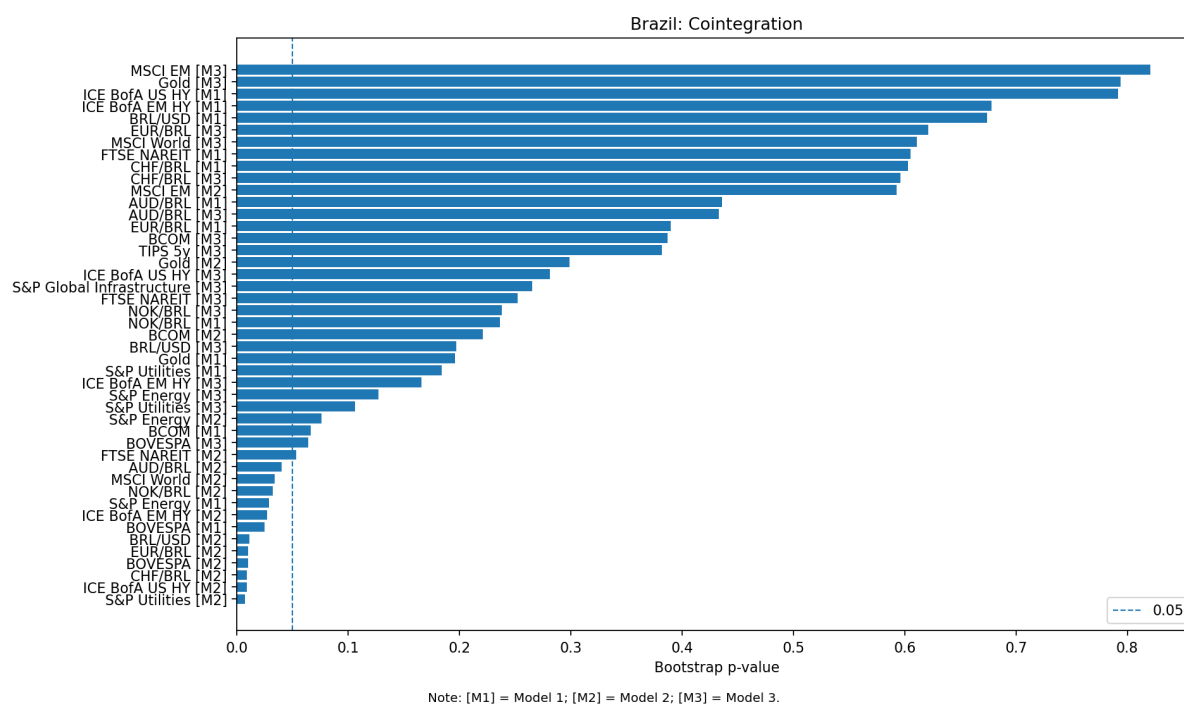


Figure B.2.1.1: Bootstrap p-values for Cointegration Tests of Brazilian Asset Classes

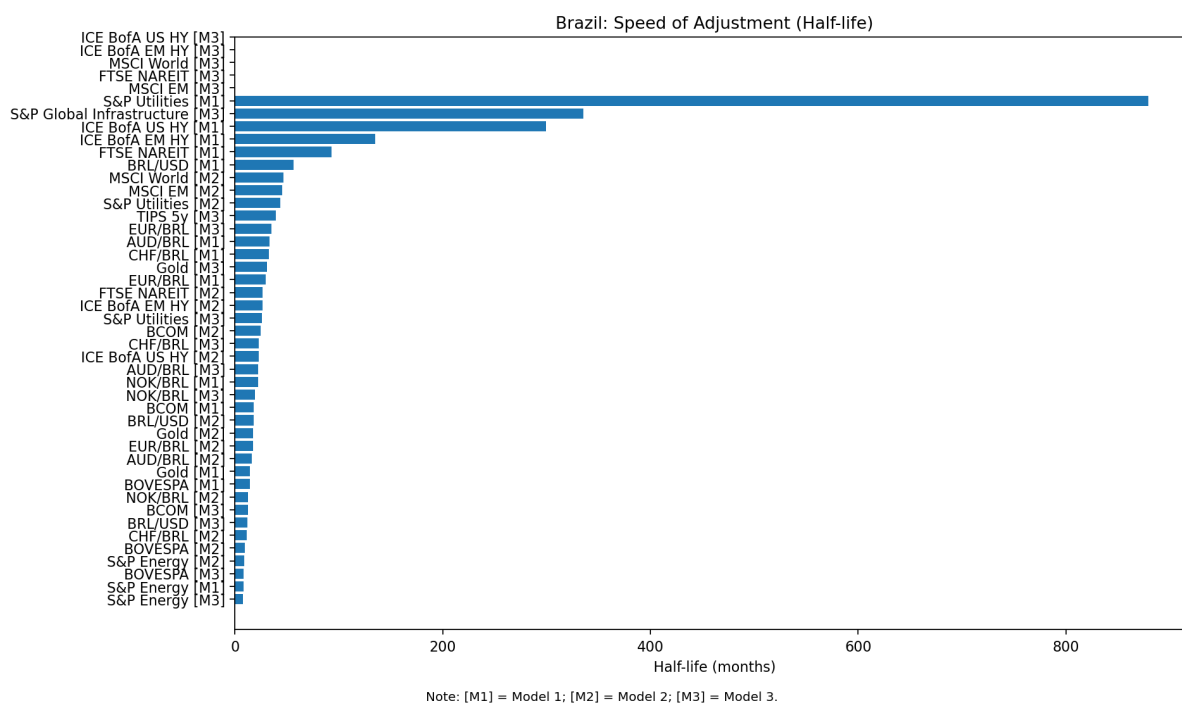


Figure B.2.1.2: Estimated Speed of Adjustment for Brazilian Assets (Half-life in Months)

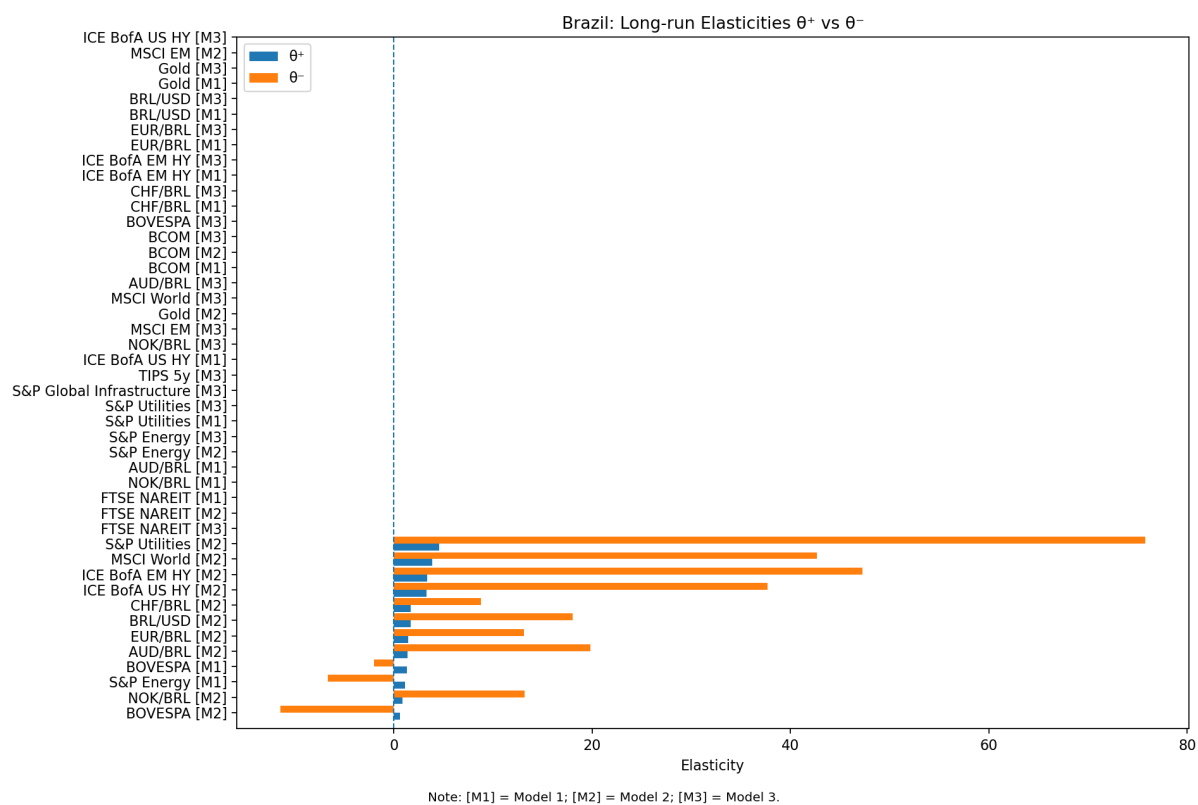


Figure B.2.1.3: Long-run Elasticities of Brazilian Assets: Positive vs Negative Shocks (NARDL Estimates)

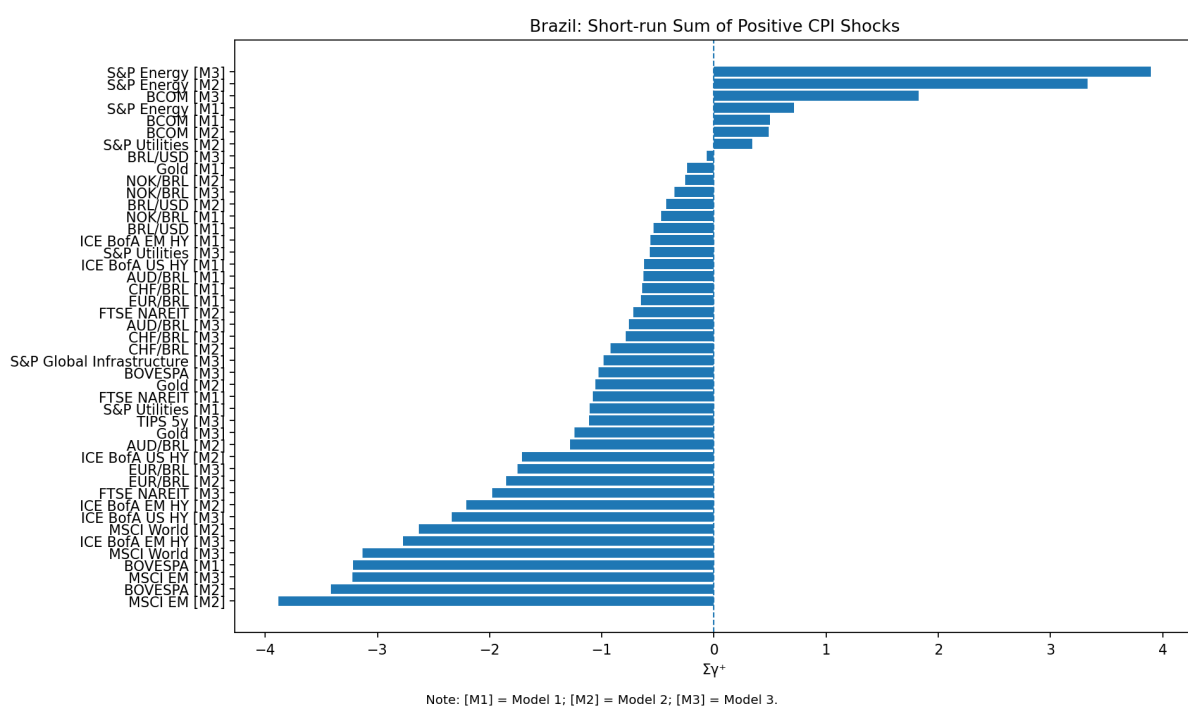


Figure B.2.1.4: Short-run Impact of Positive Inflation Shocks on Brazilian Assets (Cumulative Response)

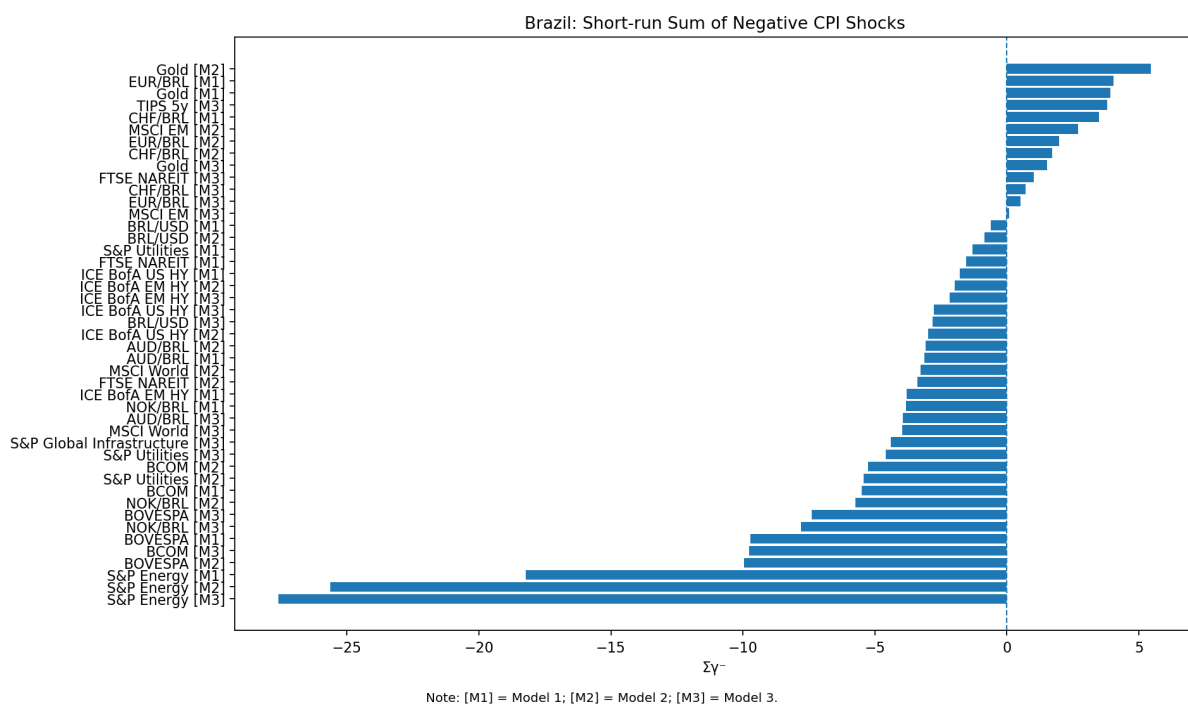


Figure B.2.1.5: Short-run Impact of Negative Inflation Shocks on Brazilian Assets (Cumulative Response)

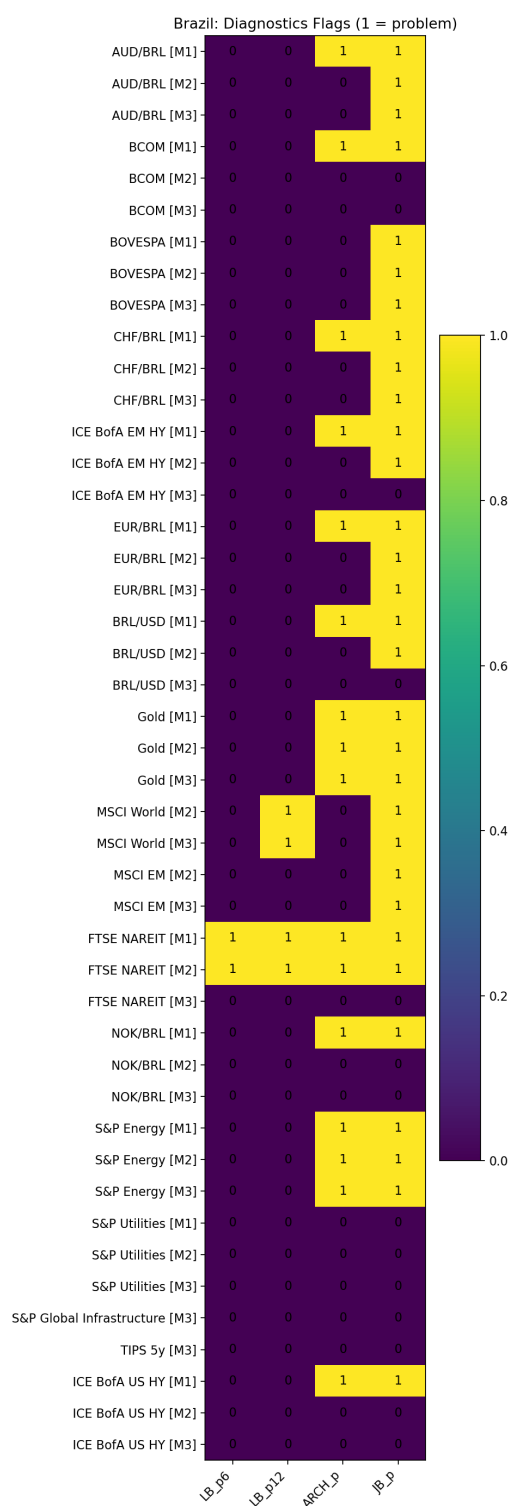


Figure B.2.1.6: Diagnostic Flags for Brazilian Asset Models (1 = Problem Detected)

B.2.2 Turkey Results ARDL/NARDL

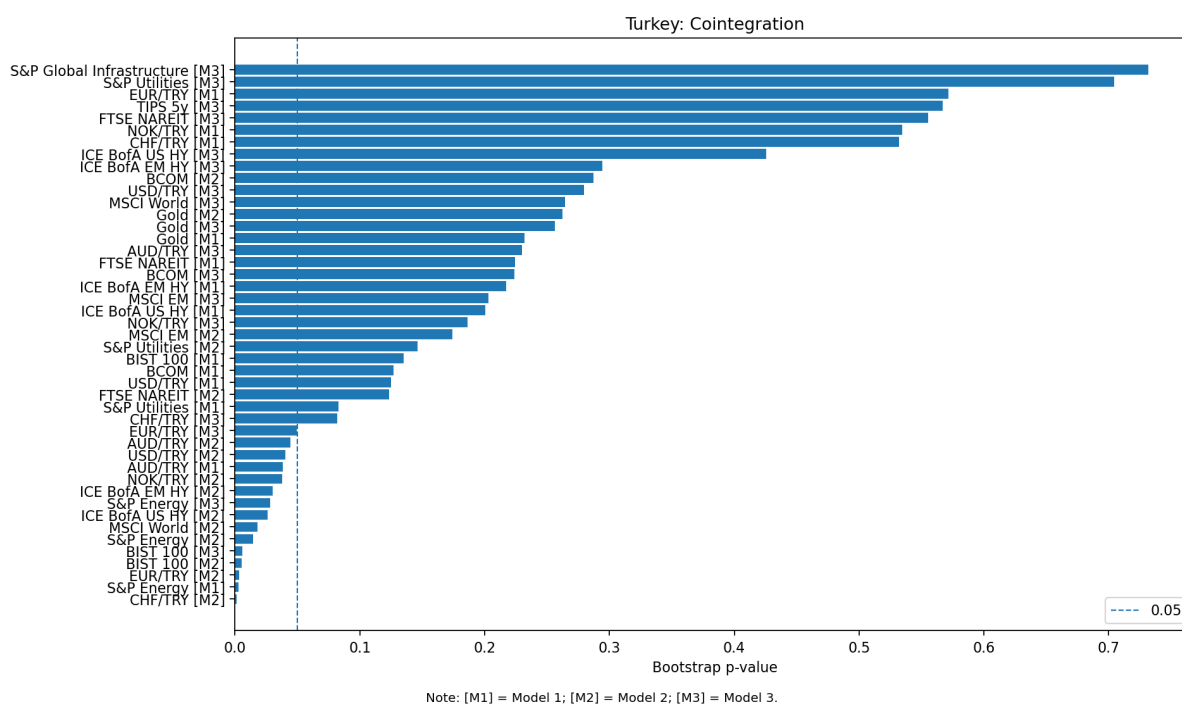


Figure B.2.2.1: Bootstrap p-values for Cointegration Tests of Turkish Asset Classes

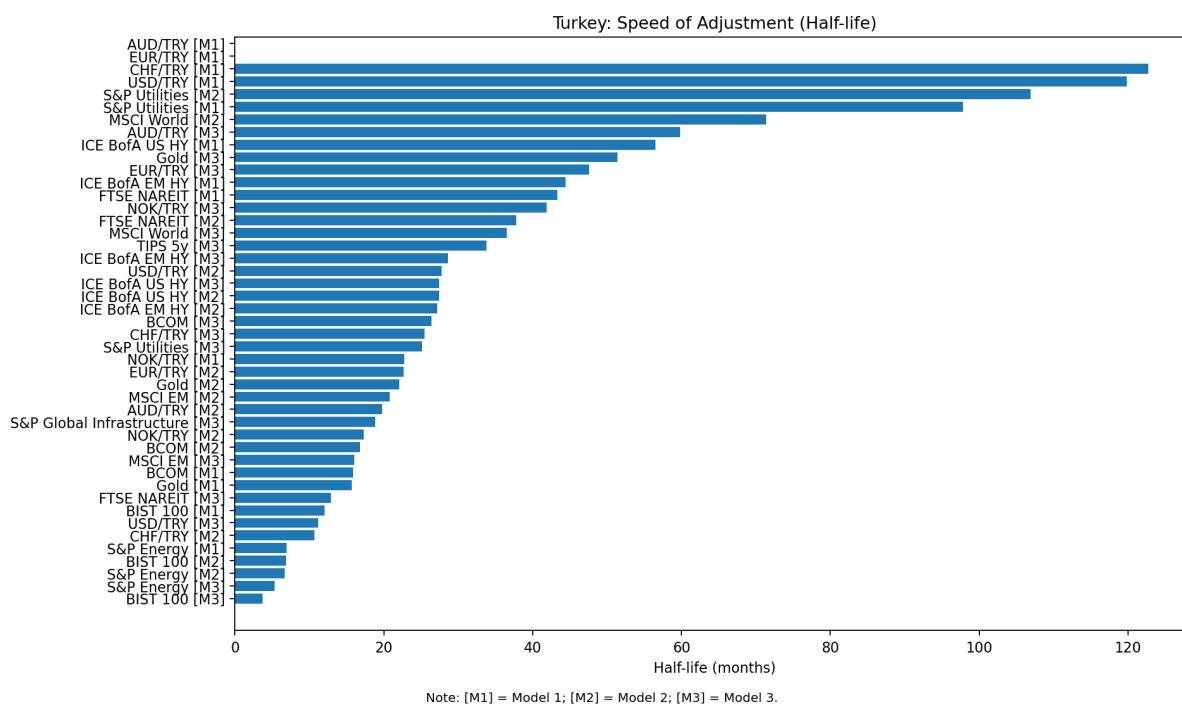


Figure B.2.2.2: Estimated Speed of Adjustment for Turkish Assets (Half-life in Months)

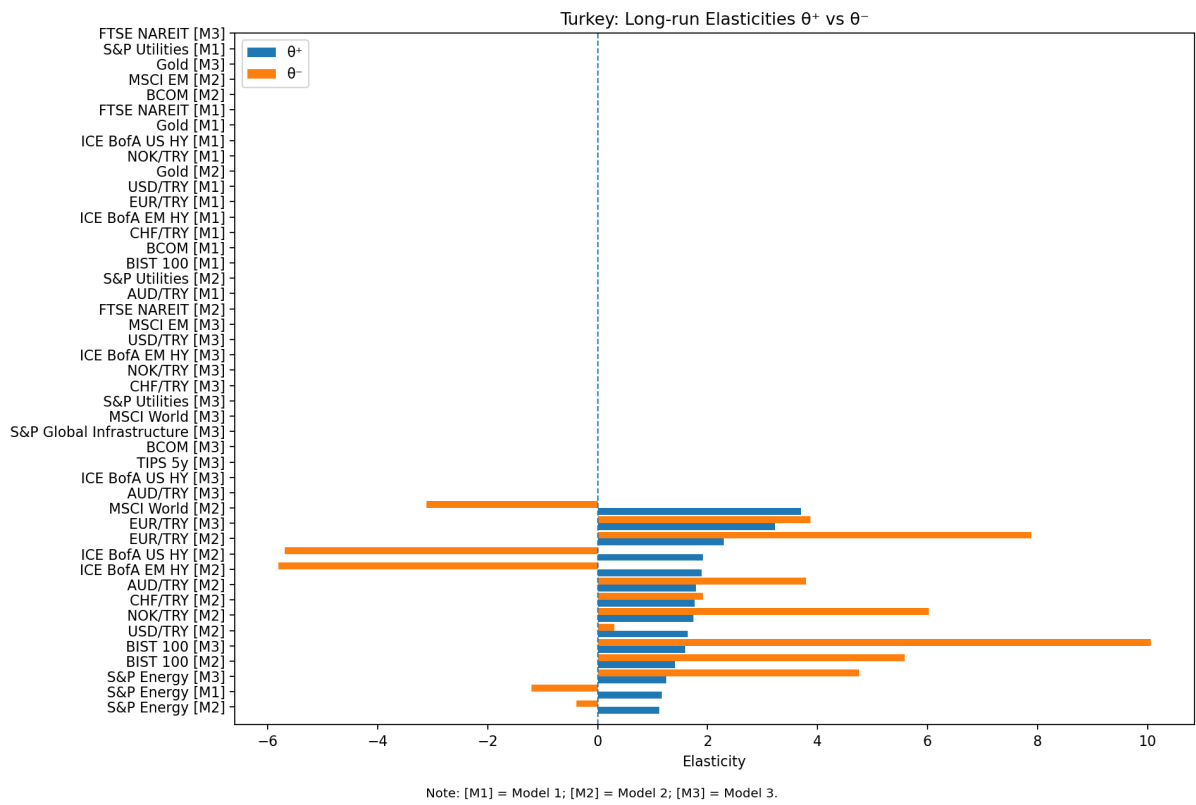


Figure B.2.2.3: Long-run Elasticities of Turkish Assets: Positive vs Negative Shocks (NARDL Estimates)

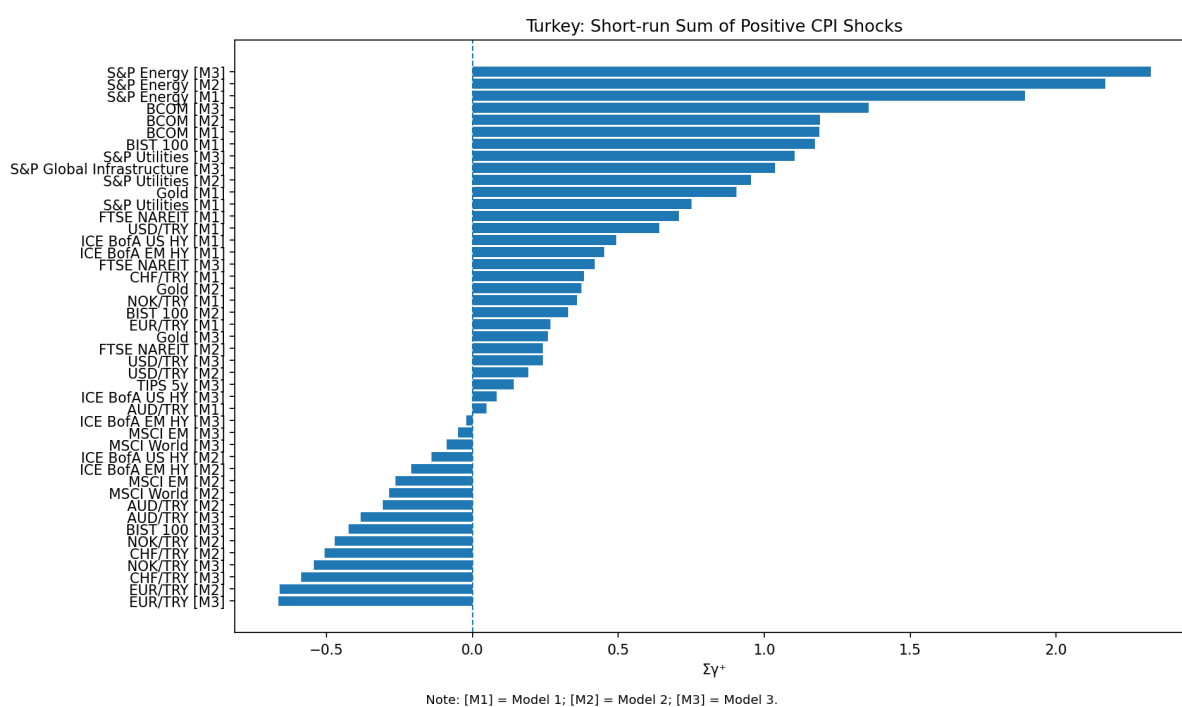


Figure B.2.2.4: Short-run Impact of Positive Inflation Shocks on Turkish Assets (Cumulative Response)

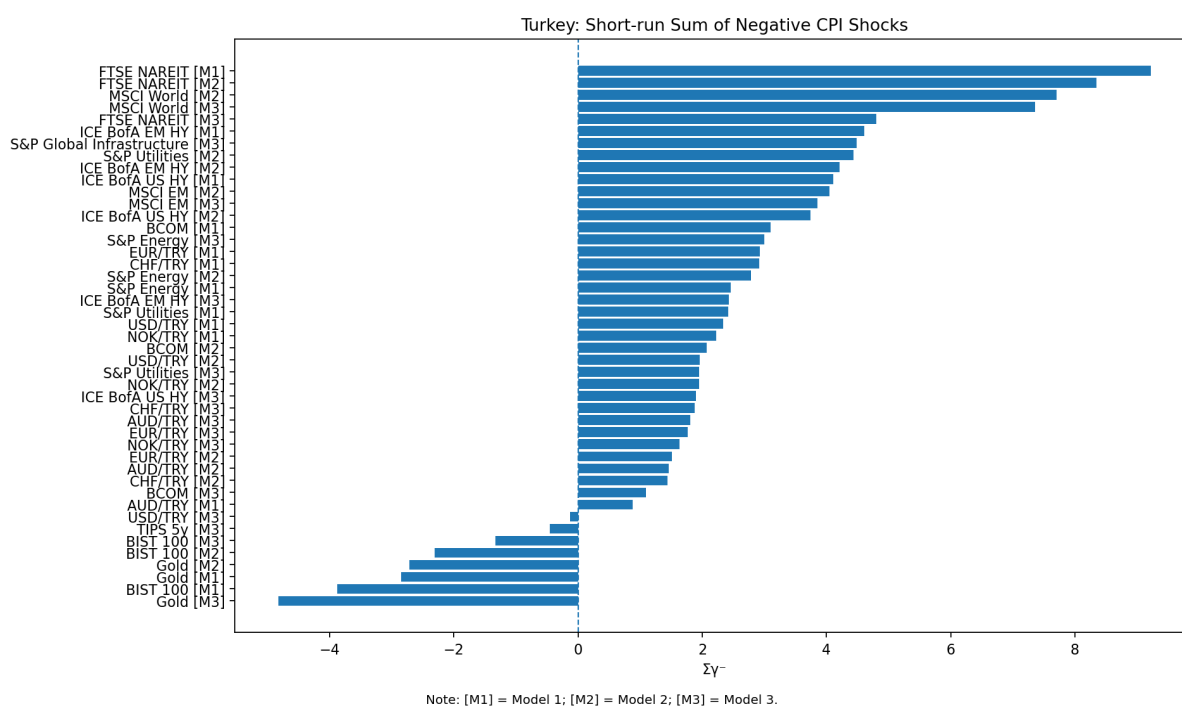


Figure B.2.2.5: Short-run Impact of Negative Inflation Shocks on Turkish Assets (Cumulative Response)

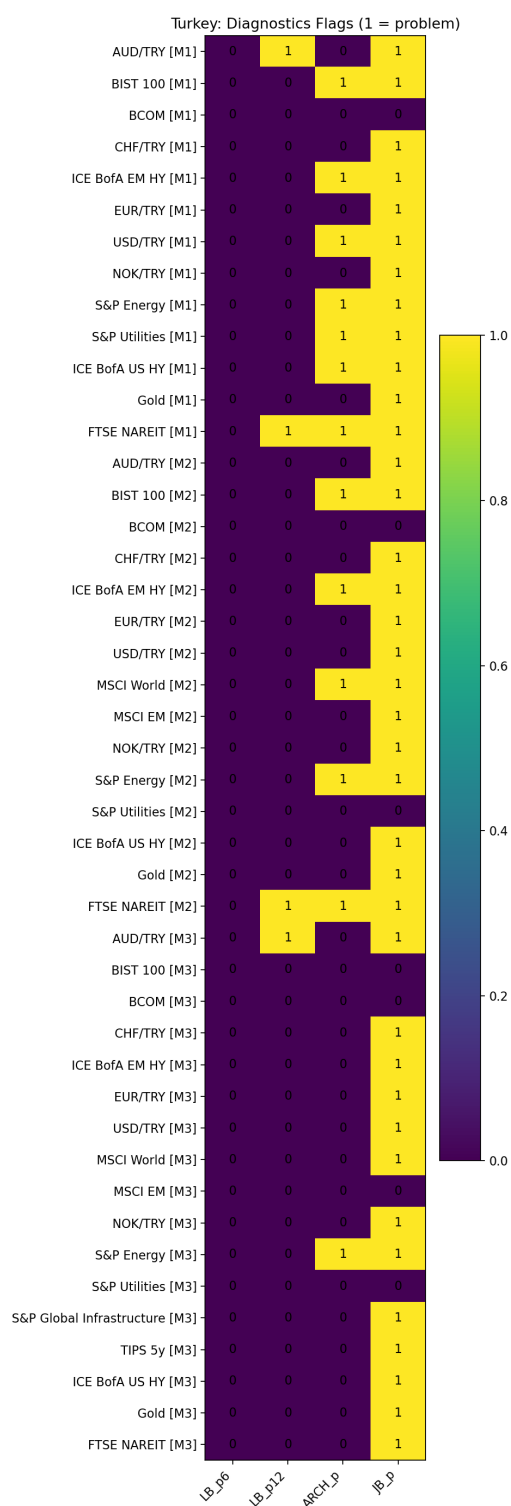


Figure B.2.2.6: Diagnostic Flags for Turkish Asset Models (1 = Problem Detected)

B.2.3 South Africa Results ARDL/NARDL

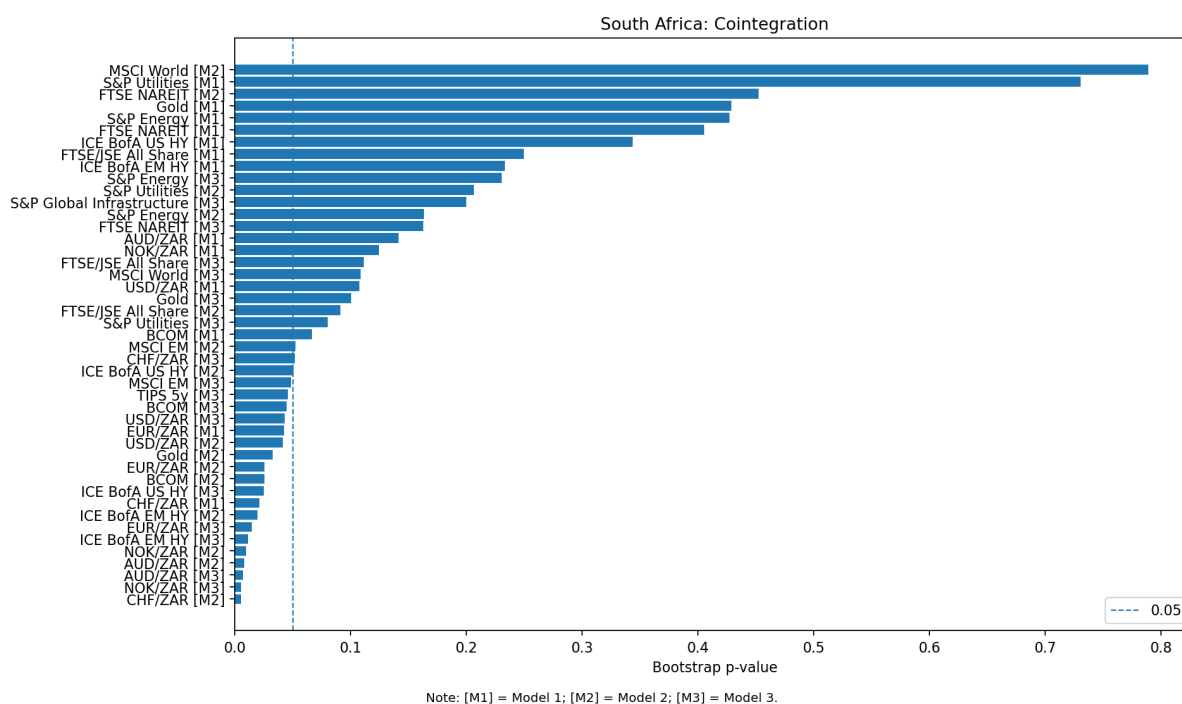


Figure B.2.3.1: Bootstrap p-values for Cointegration Tests of SA Asset Classes

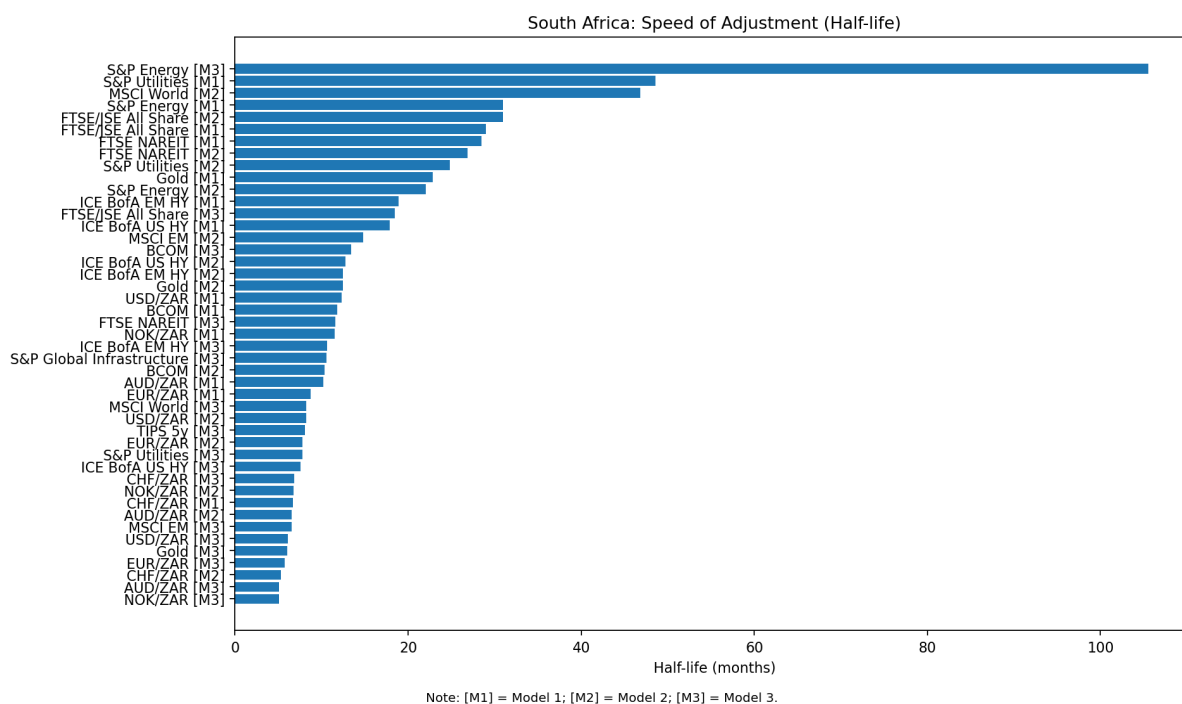


Figure B.2.3.2: Estimated Speed of Adjustment for SA Assets (Half-life in Months)

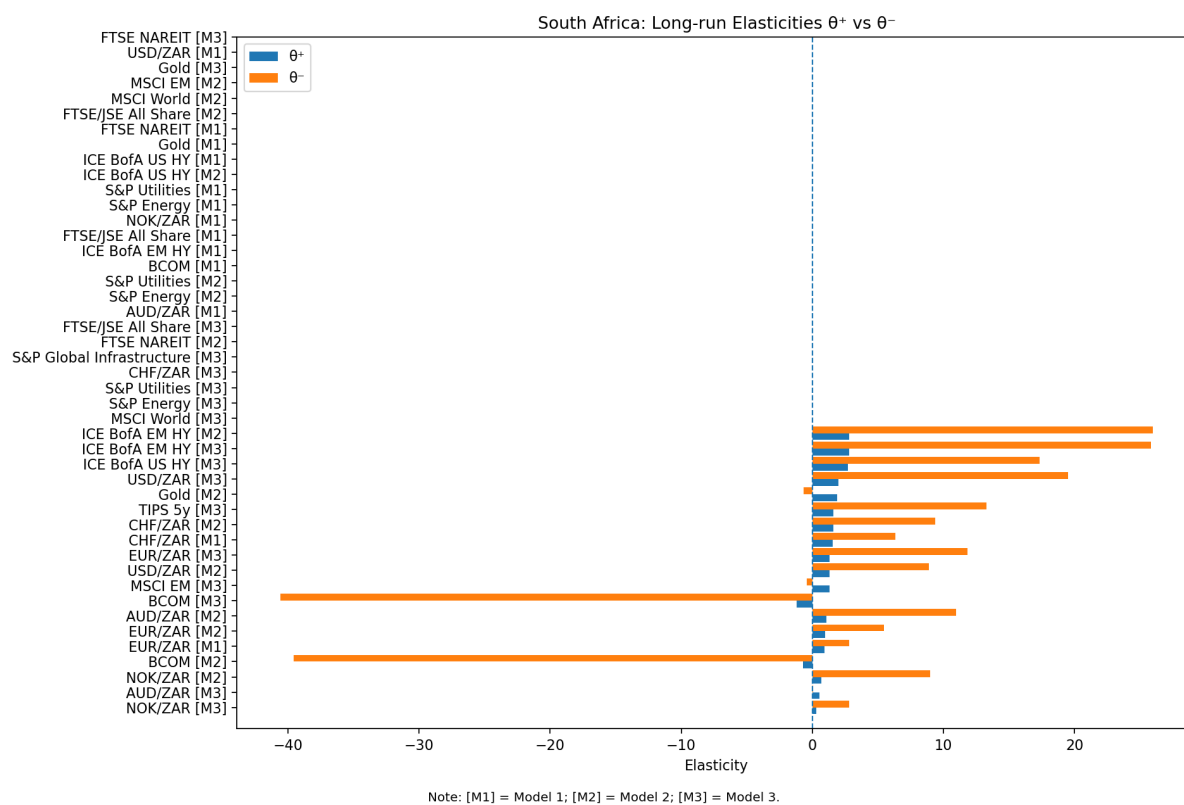


Figure B.2.3.3: Long-run Elasticities of SA Assets: Positive vs Negative Shocks (NARDL Estimates)

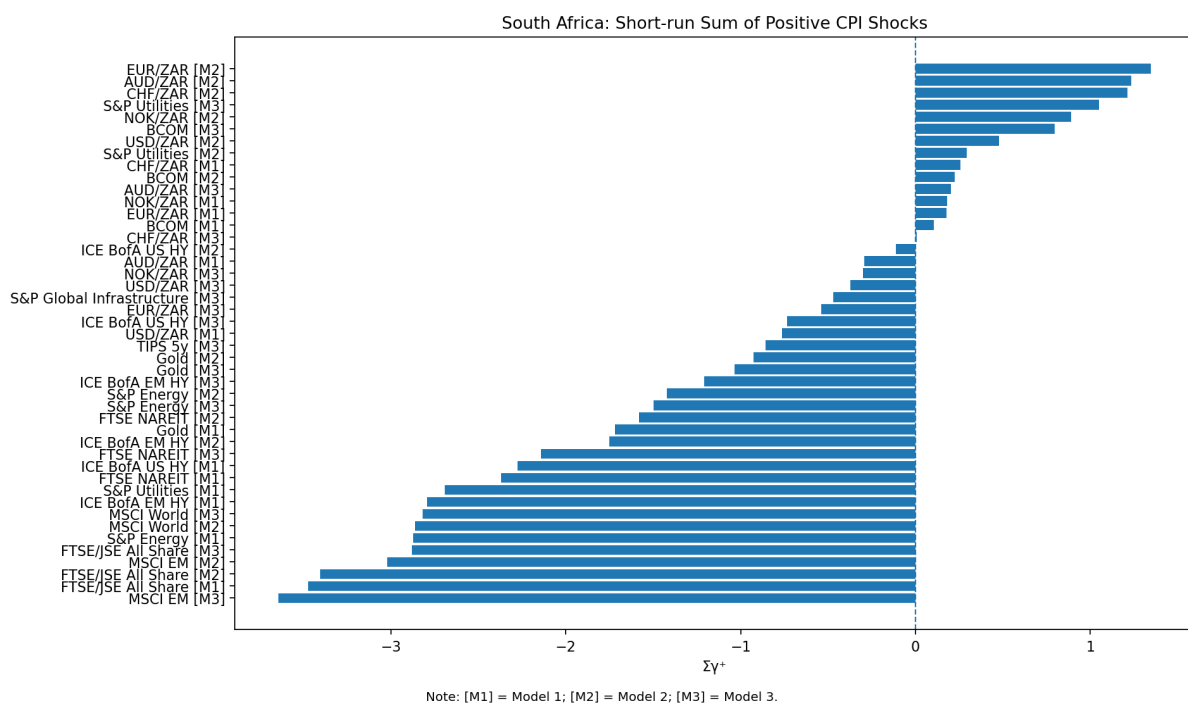


Figure B.2.3.4: Short-run Impact of Positive Inflation Shocks on SA Assets (Cumulative Response)

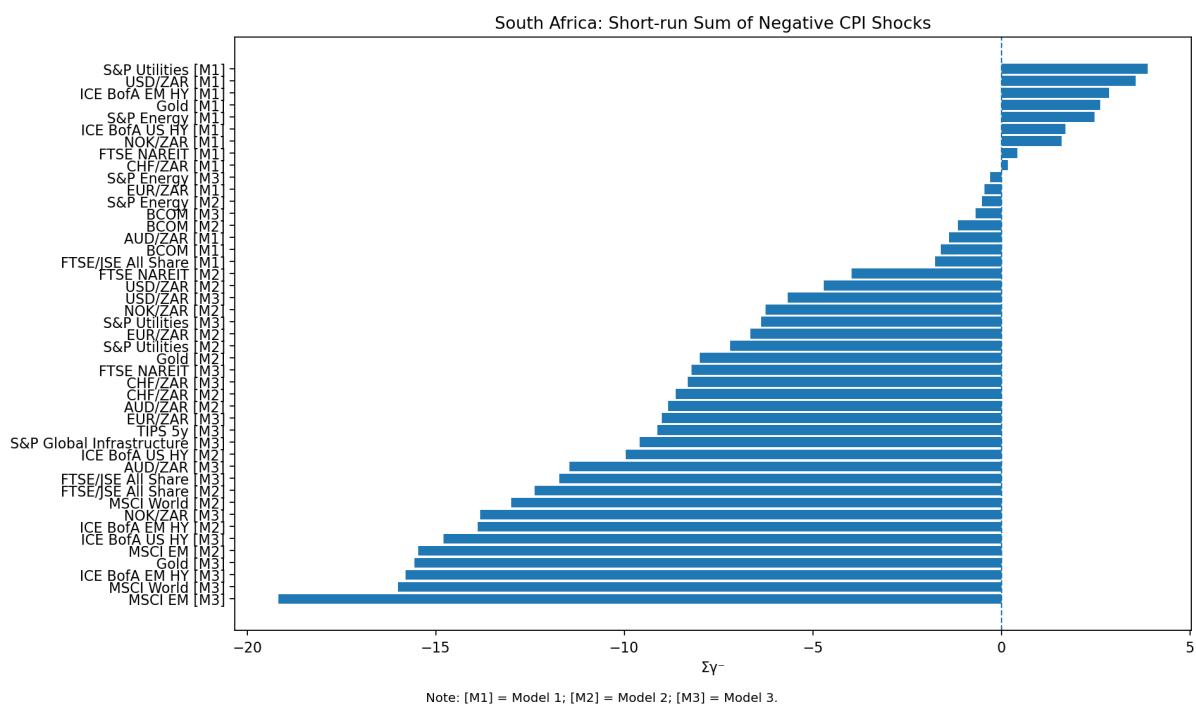


Figure B.2.3.5: Short-run Impact of Negative Inflation Shocks on SA Assets (Cumulative Response)

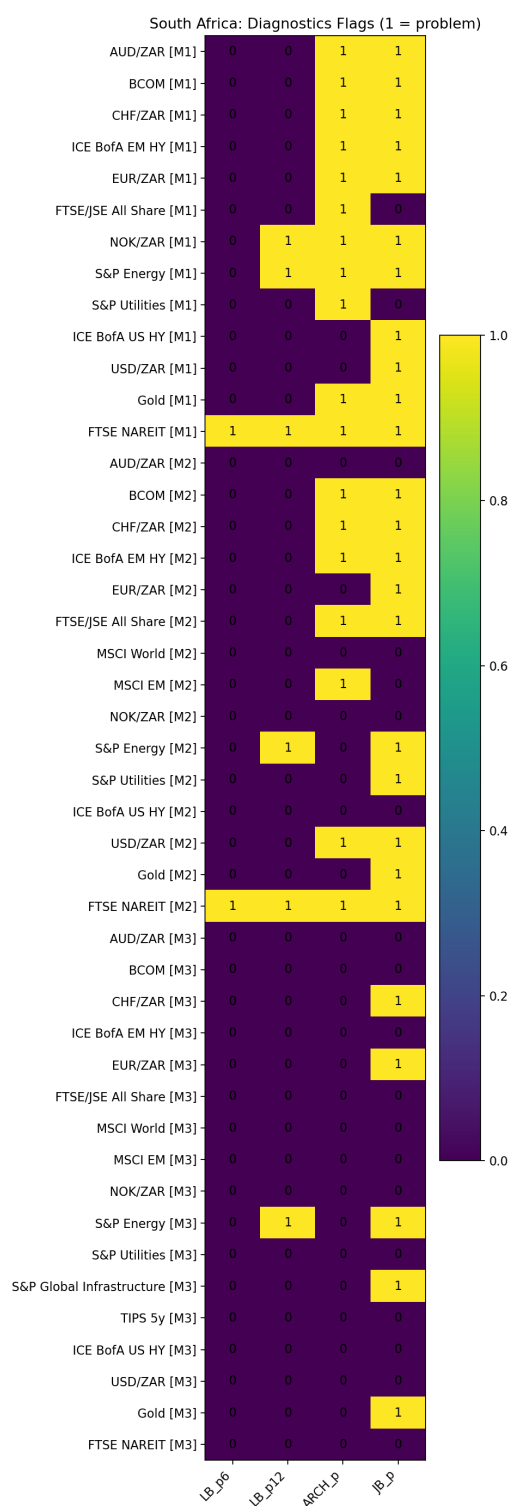


Figure B.2.3.6: Diagnostic Flags for SA Asset Models (1 = Problem Detected)