Unraveling Emerging Market Sovereign Yields: A Novel Three-Part Decomposition

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Abstract. This research suggests an innovative framework for fragmenting sovereign bond outputs in evolving economies by unambiguously including credit risk elements. Using intraday data to separate unanticipated adjustments in US monetary policy, the study analyzes their impact on results in developing domains. The yield components are decomposed into predicted short-term rates, expression premiums, and credit risk premiums, providing a thorough outlook on how U.S. monetary policy transmits internationally. The results show that surprises in US policy trigger modifications in expectations of policy rates and guide to the revaluation of both interest rate and credit risk in evolving sec- tors. In specific, evolving market monetary authorities regularly respond in tandem with US policy changes, unconventional U.S. metrics impact expression premium interactions abroad, and sovereign credit risk reacts to U.S. monetary policy variations.

1 Introduction

U.S. monetary policy influences global financial markets, including sovereign yields in emerging markets (EMs), which serve as benchmarks for local asset pricing. Unlike advanced economies, EM yields often reflect credit risk, making standard yield decompositions - based on default-free assumptions - inadequate [6, 12, 27].

This paper inspects how U.S. monetary policy - through rate adjustments, forward direction, and asset purchases — impacts EM sovereign results, unambiguously recording credit risk. Using intraday asset price data around Federal Reserve announcements [9, 28], I recognize monetary surprises and trace their spillovers through an original three-part yield breakdown.

EM outputs are decomposed into (1) expected brief rates, (2) expression premia, and (3) credit risk compensation. The primary two components are extracted from artificial, default-free outputs - created by swapping US results into local currency — while the third records the spread between nominal and artificial outputs [6]. Results show that U.S. easing surprises lower EM expected rates and term premia, suggesting EM central banks often follow the Fed. However, credit spreads widen after easing, likely due to increased risk taking or increased sovereign risk [2,7,10]. These spillovers imply that US monetary policy has fiscal effects in EMs, a channel often overlooked.

A. Jain and S. Gupta (eds.), *Proceedings of the International Conference on Policies, Processes and Practices for Transforming Underdeveloped Economies into Developed Economies (PPP-UD 2025)*, Advances in Economics, Business and Management Research 357,
https://doi.org/10.2991/978-94-6463-894-3_21

The findings also reveal a 'yield curve channel': U.S. term premia affect EM yields at both ends of the curve, while U.S. expected short rates primarily influence EM long-term expectations. This highlights EM central banks' limited insulation from global financial conditions, even when borrowing in local currency [3, 25].

This study contributes by (1) incorporating credit risk into the analysis of high-frequency US monetary spillovers, and (2) applying affine term structure models to synthetic yields to isolate true term premia in EMs— an approach not previously adopted in this context.

2 Related Works

The domain of music recommendation systems has attracted considerable research attention, particularly with the availability of large-scale datasets such as the Million Song Dataset. Wira [32] examined collaborative filtering techniques using this dataset, demonstrating that while probabilistic matrix factorization provided limited improvements, user-based and item-based collaborative filtering achieved superior performance. This study provides a benchmark for algorithmic comparisons in music personalization.

In addition, Wira [31] investigated the evolution of music consumption, highlighting the transition from physical ownership and live performances to digital streaming services. The paper emphasizes playlist recommendation strategies, including case-based and similarity-based methods, which align with the growing importance of recommendation systems in shaping listening habits. Similarly, Wira [33] introduced the concept of Neural Audio Sculpting, applying deep learning methods for autonomous multitrack audio transformations, expanding the application of artificial intelligence in music beyond recommendation into content production and manipulation.

Beyond music, several studies contribute insights relevant to data processing, automation, and machine learning techniques that indirectly inform recommendation systems. For instance, Thukkani [29] proposed the ioa++ framework, extending I/O automata with dynamic composition and concurrency aiming to improve distributed systems, and is applicable to large-scale computational infrastructures often required in music recommendation pipelines. Reddy [26] addressed perceptual challenges in categorical data visualization by introducing the common angle plot, offering techniques that can improve user-facing visualization in recommendation dashboards.

In the healthcare domain, Arul [1] demonstrated the utility of fuzzy-logic-driven models for predicting diabetes risk, showing the effectiveness of hybrid learning approaches that can inspire future adaptive models in recommender systems. Similarly, Idnani [11] analyzed human capital depreciation and gender-specific wage trends, providing a methodological basis for modeling longitudinal datasets, which parallels how music preferences may evolve over time.

Emerging computational paradigms also contribute to this landscape. Dhami [5] provided a comprehensive overview of quantum machine learning, which may offer efficiency gains for large-scale recommendation problems, while also studying the impact of exchange-traded funds (ETFs) on volatility, liquidity, and efficiency [4], demonstrating quantitative approaches transferable to financial modeling and recommendation contexts. Makhija's works [16, 17] further showcase automation in supply chains and phenotyping, emphasizing the potential of scalable and automated analysis—principles increasingly relevant for handling large-scale recommendation data.

Malhotra has also contributed to related methodological domains. His work on genetic algorithm-based image approximation [21], workflow execution latency prediction in distributed DAG frameworks [22], axiological assumptions in machine learning [20], student placement optimization [18], and quality assurance in web applications [19] highlight diverse applications of machine learning and optimization that collectively inform best practices in designing reliable recommendation systems.

Finally, Katkar's contributions in wireless communications [14, 15] examine scalability and real-time communication in Industry 4.0 environments. These insights are relevant in the context of music platforms, where scalable and low-latency systems are necessary for delivering recommendations to millions of users simultaneously.

Together, these studies illustrate the interdisciplinary nature of recommendation systems research, with advancements in music, distributed computing, visualization, healthcare analytics, quantum computation, supply chains, and industrial communications providing both direct and indirect contributions to the improvement of personalized music recommendation platforms.

3 Identification of U.S. Monetary Policy Surprises

Accurately isolating the unexpected elements of US monetary policy actions is essential for understanding their true impact on financial markets and the broader economy. This study adopts a high-frequency event-study methodology, which leverages intraday asset price movements immediately surrounding Federal Reserve announcements. The approach captures market reactions directly attributable to new policy information by focusing on a specific time frame: 15 minutes before to 1 hour and 45 minutes after FOMC statements. This precise timing helps to isolate the effects of new information from the Federal Reserve, minimizing the impact of other economic factors. This precise timing helps to significantly reduce confounding effects from other simultaneous economic developments. The sample includes 163 FOMC meetings from January 2000 through March 2019, excluding the turbulent days following the September 11, 2001 attacks, which saw atypical market behavior. Employing such a high-frequency approach is widely recognized in the literature [23] as an effective way to address a common endogeneity problem in monetary policy research—namely, that policy decisions often respond to contemporaneous economic shocks—by isolating the component of policy that is truly unanticipated by market participants.

Monetary policy itself is multifaceted, comprising several tools and communication channels that influence expectations and economic outcomes in distinct ways. Reflecting this complexity, the study differentiates three categories of monetary policy surprises, based on the classification introduced by RogersScottiWright:2018. These three types capture separate dimensions of the Federal Reserve's actions: (1) surprises directly related to changes in the policy interest rate, or "target surprises," (2) surprises arising from updates in market expectations about the future path of interest rates, known as "forward guidance surprises," and (3) surprises associated with balance sheet policies, particularly large-scale asset purchases, referred to as "asset purchase surprises." This taxonomy is crucial because each type of surprise operates through different channels, influences various segments of financial markets differently, and may have heterogeneous effects on economic variables.

To quantify these surprises, the methodology employs carefully chosen financial market instruments that embed expectations about policy actions. Target surprises are proxied by changes in the yields of federal funds futures contracts maturing in the current or immediately following month. These contracts effectively summarize the market's immediate expectations of the federal funds rate, so shifts in their yields around FOMC announcements reveal unanticipated changes in the near-term policy rate. Forward guidance surprises are constructed by extracting the residual component from a regression of changes in 8-quarter-ahead Eurodollar futures yields on the target surprise measure. Eurodollar futures at this horizon represent market expectations of short-term interest rates roughly two years into the future, making them particularly informative when the policy rate is constrained at or near the zero lower bound, and the Fed relies on forward guidance as a critical communication tool to shape longer-term expectations. Lastly, asset purchase surprises are identified by isolating the residuals from a regression of changes in 10-year Treasury futures yields on both target and forward guidance surprises. This residual isolates unanticipated information related to adjustments in the Fed's quantitative easing programs, which influence longer-term interest rates through balance sheet interventions rather than direct policy rate changes.

An essential advantage of this identification strategy is the orthogonality of these three surprise components. By construction, target rate, forward guidance, and asset purchase surprises are statistically uncorrelated, allowing the independent effects of each type of monetary policy shock to be distinguished clearly. This separation is vital because these surprises convey different information and have varying implications for financial markets and the real economy. Positive surprise values correspond to unexpected monetary tightening, while negative values signal unexpected easing. Table 1 summarizes key descriptive statistics for each surprise category over the study period, revealing interesting temporal patterns. Target surprises vanish during the period from January 2009 to November 2015 when the federal funds rate was effectively at the zero lower bound and did not change. Forward guidance surprises appear both before and after the Global Financial Crisis, underscoring the Fed's evolving reliance on communication strategies to influence market expectations. Asset purchase surprises emerge only after October 2008, reflecting the Fed's adoption of unconventional balance sheet policies during and after the financial crisis. These patterns underscore the dynamic nature of monetary policy tools and the necessity of considering all three components for a comprehensive analysis.

Previous empirical research [9,28] has demonstrated that these different types of monetary policy shocks trigger distinct responses in asset prices, yields, and broader economic activity. By disentangling unexpected changes in the policy rate, future policy expectations, and balance sheet interventions, the identification strategy employed here offers a more nuanced and precise framework for analyzing the channels through which monetary policy influences financial markets and the real economy. This multidimensional approach is particularly important in recent decades, when the Federal Reserve has increasingly used a mix of conventional and unconventional tools, requiring analysts to differentiate among the various channels through which policy surprises propagate. Overall, the detailed separation of monetary policy surprises serves as a foundation for robust empirical work aimed at understanding the complex transmission mechanisms of monetary policy.

Table 1. Summary of U.S. Monetary Policy Surprises (bps)

	Mean	SD	Min	Max
Target (abs.)	2.6	6.7	0.0	46.5
Positive	3.7	3.8	0.0	14.4
Negative	-6.2	11.0	-46.5	-0.3
Forward Guidance (abs.)	6.0	6.5	0.0	54.6
Positive	5.4	4.9	0.0	24.9
Negative	-6.8	7.9	-54.6	-0.4
Asset Purchases (abs.)	2.2	3.5	0.1	29.9
Positive	2.0	2.2	0.1	10.3
Negative	-2.4	4.4	-29.9	-0.1

Surprise magnitudes from 163 FOMC meetings (2000–2019).

4 Construction of Local Currency Yield Curves

This part details the extensive approach utilized to construct both nominal and artificial local currency(LC) yield curves for a comprehensive sample of developing market economies. These yield curves are essential inputs for the following practical assessments, incorporating yield analysis and examination of the transmission processes through which U.S. monetary policy shocks propagate to developing market bond domains. By correctly modeling the expression structure of interest rates in local currencies, the analysis aims to detach sovereign credit risk premia and to better comprehend how currency and credit risks are priced by market members.

4.1 Nominal Yield Curves

The nominal yield curves, marked as , record the recorded market outputs on sovereign debt devices denominated in local currency. These curves are assembled as repeatedly compounded zero-coupon yield curves across a vast range of maturities, commonly from short-term(3 months) to long-term(up to 10 years). The zero-coupon outputs are obtained from market data mainly including of government bond results and interest rate swaps, which indicate the pure time value of money absent of reinvestment risk.

For the main portion of countries incorporated in the dataset, nominal yield curves are created applying Bloomberg Fair Value(BFV) par yield data. The BFV data symbolize interpolated and adjusted par results that account for liquidity and credit risks and are commonly used in monetary market analysis. These par results are then transformed into zero-coupon results applying standard bootstrapping and interpolation techniques uniform with the technique implemented by GSW:2007. The bootstrapping process repeatedly resolves for discount aspects that accurately price a set of benchmark bonds, guaranteeing an arbitrage-free yield curve. The interpolation between maturities uses cubic splines or Nelson – Siegel – Svensson parametric models to smooth the yield curve, facilitating assessment of outputs at any maturity within the noted range. In particular cases, such as Brazil and Israel, Bloomberg BFV par outputs are either unavailable or considered less reliable due to market idiosyncrasies or data limitations. For these countries, nominal yield curves are rather assembled from zero-coupon results supplied by the International Yield Curve(IYC) service. The IYC results are generated employing sophisticated curve-fitting techniques that are well-regarded for accuracy and stability. These other yield curves exhibit adjacent coordination with curves obtained from the Nelson – Siegel parametric models, which are generally used in academic and policy assessments for acquiring the level, slope, and curvature of yield curves [24].

4.2 Synthetic Yield Curves

To isolate sovereign credit risk from local currency yields, it is necessary to construct a synthetic yield curve, denoted y^{synt}_{LC} which reflects the hypotheti- cal risk-free borrowing cost in local currency absent credit risk. This synthetic curve serves as a benchmark for measuring credit risk premia and understanding currency risk components embedded in local yields.

The construction of the synthetic yield curve relies on the principle of covered interest parity (CIP), which relates local currency interest rates, U.S. interest rates, and expected exchange rate movements. Specifically, the synthetic yield is formed by adding the U.S. Treasury yield curve, y_{US}, to the forward premium, f_{wd}, that represents the expected change in the exchange rate from the perspective of covered interest rate parity. Formally, for each maturity,

$$y_{LC}^{synt} = y_{US} + f_{wd} \tag{1}$$

where f_{wd} is the forward premium expressed as the difference between the forward exchange rate and the spot exchange rate, measured in local currency units per U.S. dollar.

For short-term maturities, typically less than one year, the forward premium is directly calculated using observed spot and forward foreign exchange rates from liquid currency markets. This direct calculation leverages highly reliable and frequently updated FX data, minimizing estimation errors. For longer maturities, forward premiums are constructed using cross-currency basis swaps and interest rate swaps. These derivatives are collateralized contracts that embed the market's expectations about interest rate differentials, liquidity conditions, and credit risks across currencies and maturities. Because these instruments are among the most liquid and transparent in emerging market financial markets, they provide a robust basis for estimating longer-term forward premiums.

This two-pronged approach ensures that the synthetic yield curve accurately reflects a hypothetical risk-free borrowing cost in local currency, adjusted for expected currency movements but stripped of sovereign credit risk. The difference between the nominal yield curve and the synthetic yield curve, measures deviations from covered interest parity and serves as a proxy for the local currency sovereign credit risk premium. This spread reflects the additional yield investors require to compensate for credit risk, liquidity constraints, regulatory factors, and other market frictions.

Unlike sovereign credit default swap (CDS) spreads, which may not fully capture risks related to local currency sovereign bonds—especially when the bonds are governed by domestic law and the CDS contracts have different triggers—the yield spread between nominal and synthetic yields offers a market-based, model-free measure of credit risk premia. This approach has been validated and extensively used in recent empirical studies [6, 8], demonstrating its effectiveness in disentangling credit and currency risk components in emerging markets.

4.3 Data Sources and Sample Coverage

As shown in table 2, the empirical analysis utilizes an extensive dataset that includes 15 emerging market economies as well as 10 advanced economies for comparative purposes. The data span from January 2000 to July 2021, offering a broad temporal coverage that encompasses multiple global financial cycles, crises, and periods of monetary policy normalization. The inclusion of both emerging and advanced economies allows for robust cross-country comparisons and helps isolate global versus local factors influencing yield curves.

Yield data are available at daily frequency, covering a range of maturities from 3 months up to 10 years. U.S. Treasury yields are obtained primarily from the

Table 2. Mean and SD of Nominal and Synthetic Yields (%, 2000 – 2021)

	3M	6M	1Y	2Y	5Y	10Y
Emerging Markets						
Nominal Mean	4.9	5.0	5.2	5.5	6.1	6.6
Nominal SD	3.4	3.4	3.4	3.3	3.2	3.0
Synthetic Mean	5.1	5.1	5.2	5.2	5.6	6.2
Synthetic SD	4.5	4.3	4.1	3.9	3.5	3.3
Developed Economies						
Nominal Mean	1.8	1.9	1.9	2.0	2.4	2.9
Nominal SD	2.1	2.1	2.1	2.1	2.1	1.9
Synthetic Mean	1.4	1.5	1.6	1.7	2.2	2.9
Synthetic SD	2.1	2.1	2.1	2.1	2.1	2.0

well-established dataset compiled by GSW:2007, supplemented by the Federal Reserve's H.15 statistical release to ensure up-to-date and accurate information on U.S. risk-free rates. Local currency government bond yields, exchange rates, forward rates, and swap prices are sourced from Bloomberg and Datastream, which provide comprehensive coverage of financial market instruments and are widely used in academic and practitioner research.

Forward premiums are constructed following the methodology outlined in DuSchreger:2016JoF, integrating spot and forward foreign exchange rates with cross-currency basis swap and interest rate swap data. This integrated approach leverages multiple market instruments to accurately capture market expectations of exchange rate movements and interest rate differentials, thereby enhancing the precision of synthetic yield curve construction.

Together, the rich data environment and rigorous construction methods enable detailed characterization of local currency yield curves and their components, laying the foundation for subsequent empirical analyses of sovereign risk premia and the spillover effects of U.S. monetary policy shocks on emerging market debt markets.

5 Decomposition of Emerging Market Yields

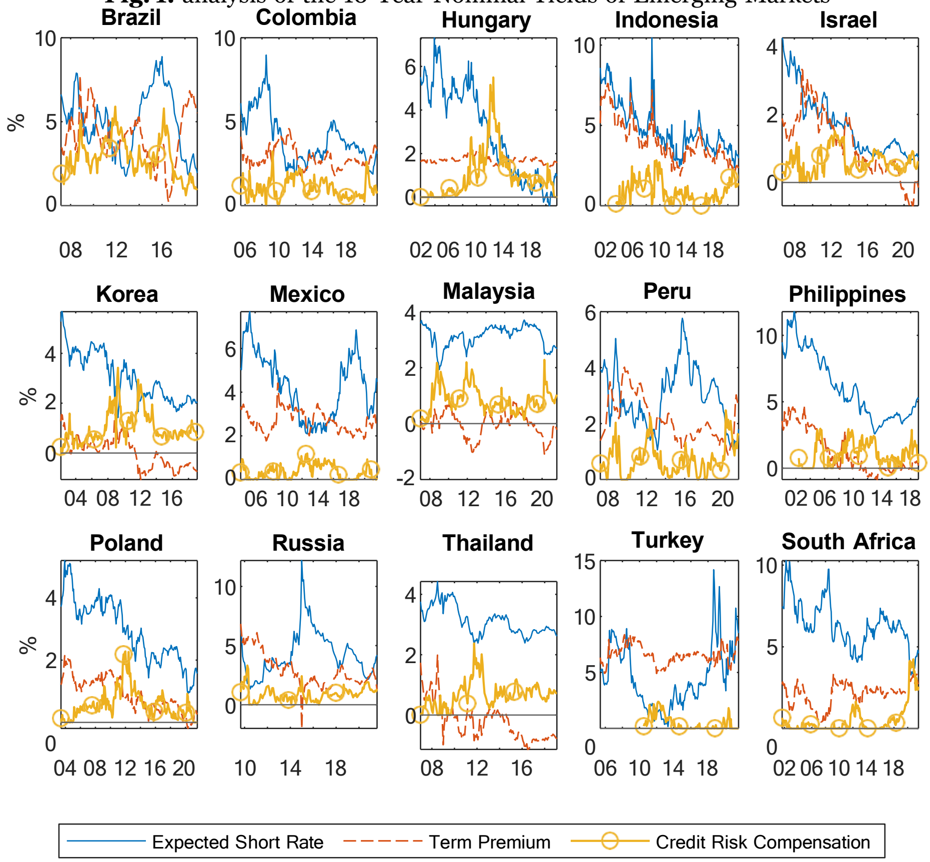
We break down evolving market local currency outputs into three primary components: the expected standard short-term interest rates, the expression premium demonstrating compensation for interest rate risk, and the credit risk premium as shown in figure 1. To approximate the first two components, we employ a survey-augmented affine term structure model (ATSM) applied to synthetic yield curves, which serve as proxies for default-free rates. The residual spread between observed nominal yields and the synthetic curve is interpreted as compensation for sovereign credit risk.

The ATSM models the growth of outputs through a set of underlying state elements that adhere a vector autoregression under the risk-neutral assessment.

Bond results are communicated as affine functions of these state elements, with the short-term rate hinging linearly on them. To discern expected upcoming concise rates under the real-world(material) assessment from the risk-neutral ones, we integrate a market price of risk detail, which modifies the behaviors hence. The distinction between results computed under the tangible and risk-neutral indicators records the phrase premium, while the residual spread between nominal and artificial results records credit risk.

Because yield data independently do not fully identify all model parameters, notably under the material evaluation, we improve identification by incorporating survey projections of long-term inflation and GDP increase from Consensus Economics. These projections offer further facts on market expectations, anchoring the model and refining evaluation stability, notably for developing sectors with fewer liquid bond domains and noisier data.

Fig. 1. analysis of the 10-Year Nominal Yields of Emerging Markets



The response of the yield curve to the target surprise is shown in fig 2 and with 10-year yield in figure 3. Response of the yield curve to a forward guidance surprise is shown in different graph for different period. Figure 4 denotes it for 2000 to 2008 and its 10-year yield is depicted in figure 5. The same for period 2008 to 2019 is shown in figure 6- and 10-year yield is shown in figure 7. Response of the yield curve to an asset purchase surprise is shown in figure 8 and its 10-year yield is shown in figure 9.

Fig. 2. Response of the Yield Curve to a Target Surprise

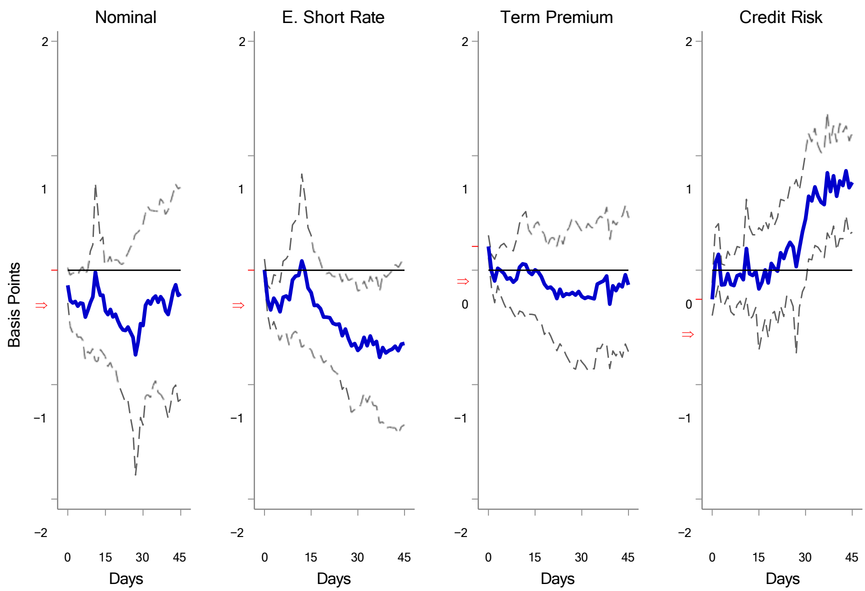


Fig. 3. 10-Year Yield

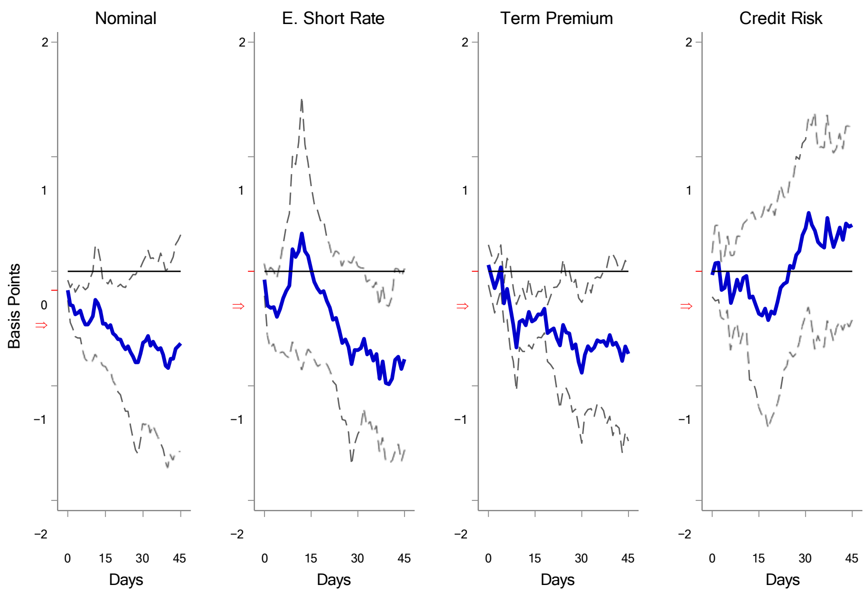


Fig. 4. Response of the Yield Curve to a Forward Guidance Surprise: 2000–2008

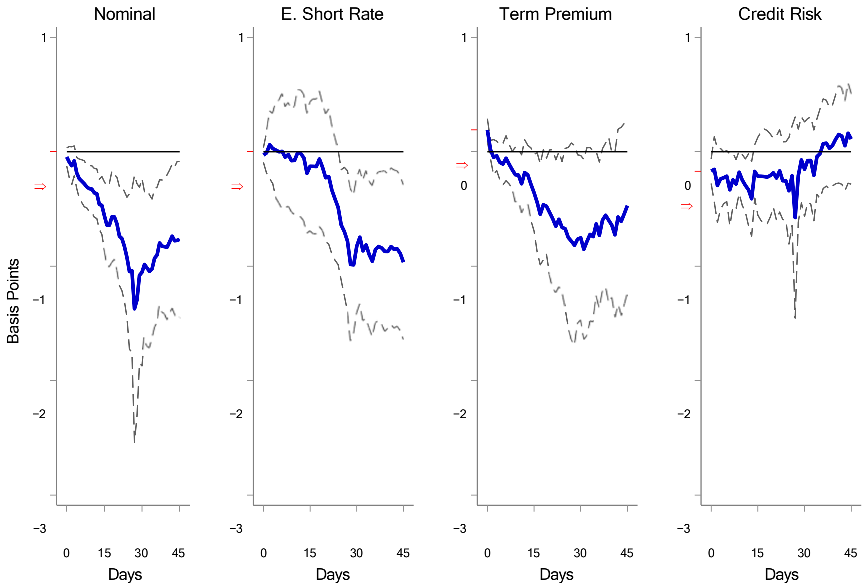


Fig. 5. 10-Year Yield

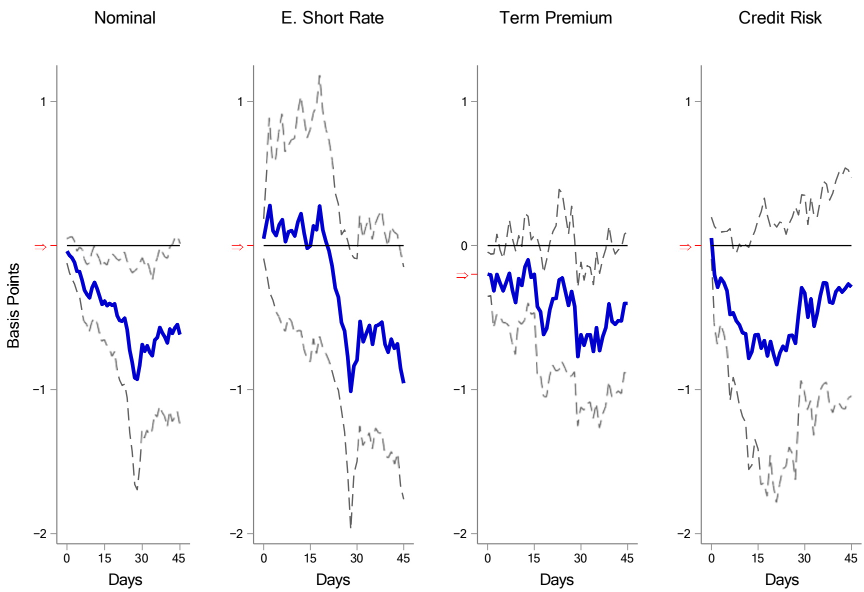


Fig. 6. Response of the Yield Curve to a Forward Guidance Surprise: 2008–2019

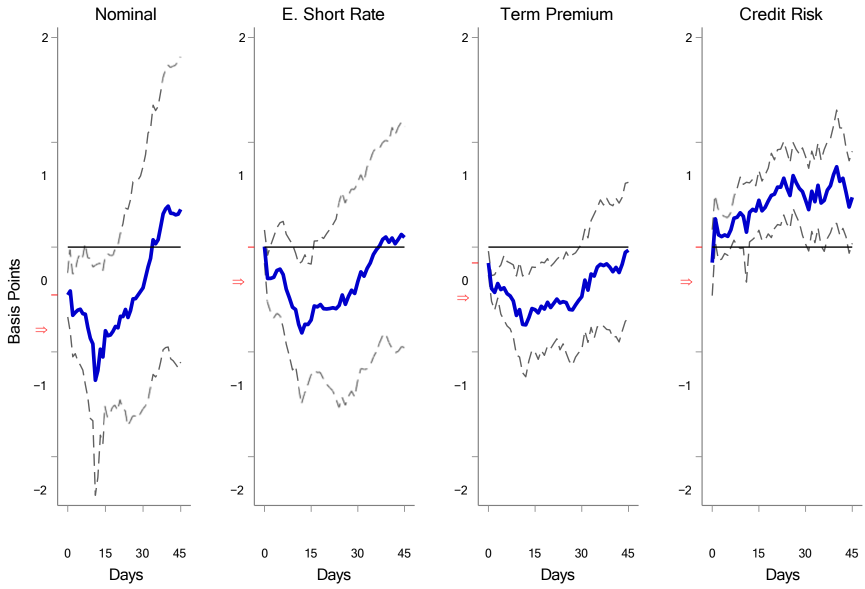


Fig. 7. 10-Year Yield

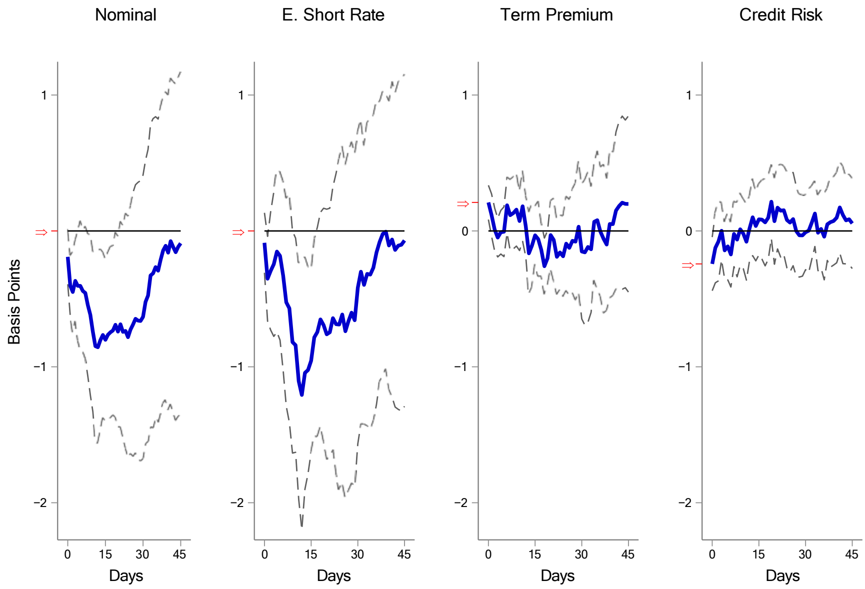


Fig. 8. Response of the Yield Curve to an Asset Purchase Surprise

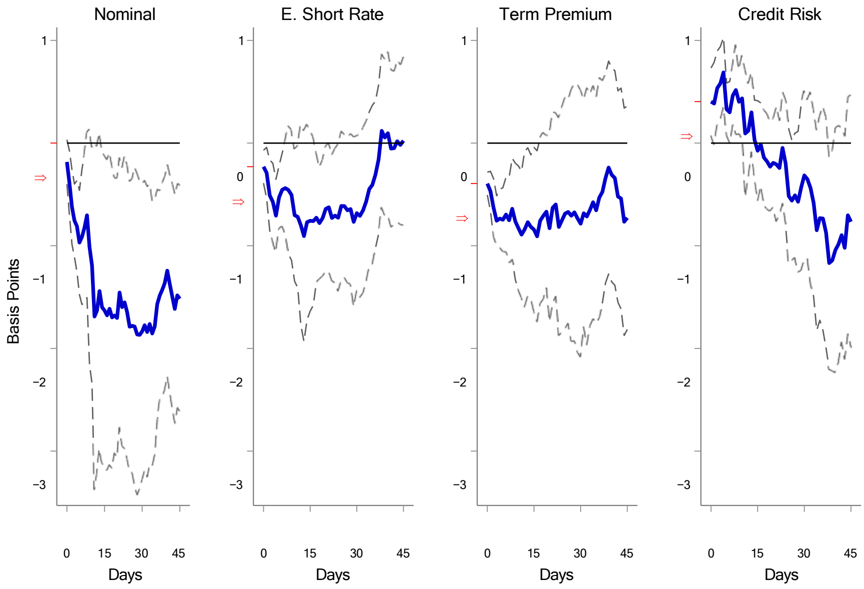
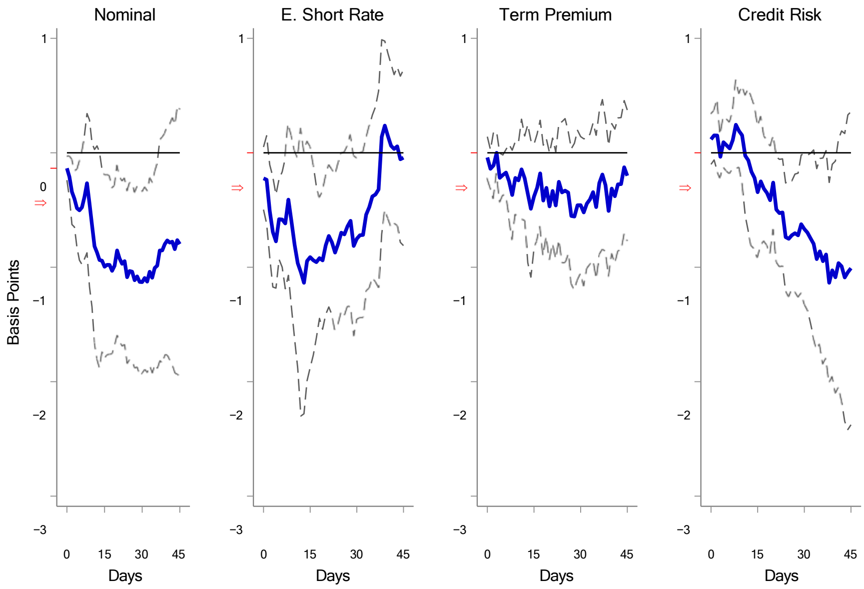


Fig. 9. 10-Year Yield



6 Monetary Policy Transmission Mechanisms

Monetary policy affects emerging markets through various channels, transmitting changes in global financial conditions and expectations. Understanding these mechanisms is crucial to interpreting yield dynamics and the interaction between local and global economic factors.

6.1 The Yield Curve Channel

US monetary policy influences emerging market yields via the yield curve channel, reflecting inter dependencies among yield components. Short-term yields are mainly controlled by emerging market central banks, while long-term yields are more affected by global factors [25]. Fluctuations in US expected short rates and term premia transmit to emerging markets through risk channels [13, 30].

To quantify these spillovers, we estimate panel regressions of the form:

$$y_{i,t} = \alpha_i + \beta_1 z^1_t + \beta_2 z^2_{i,t} + \epsilon_{i,t} \tag{2}$$

where $y_{i,t}$ denotes emerging market yields or components at maturity horizons, z^1_t are U.S. yield components, and $z^2_{i,t}$ includes local and global macroeconomic controls. Standard errors are Driscoll–Kraay to correct for heteroskedasticity and cross-sectional dependence.

Tables 3 and 4 report results for 10-year and 2-year maturities, respectively. We find that emerging market expected short rates strongly correlate with local policy rates at short maturities, while U.S. expected short rates mainly affect longer maturities. Term and credit risk premia also respond to both local and global factors, confirming the role of the yield curve channel and the greater autonomy of emerging market monetary policy at the short end.

Table 3. Impact of U.S. Yield Components on Emerging Market Yields (10-Year Maturity)

Dependent Variable	Expected Short Rate	Term Premium	Credit Risk Compensation	Nominal Yield
U.S. Expected Short Rate	0.12*** (0.03)	0.02 (0.01)	-0.01 (0.01)	0.13*** (0.04)
U.S. Term Premium	0.01 (0.01)	0.15*** (0.02)	0.03** (0.01)	0.19*** (0.03)
Local Policy Rate	0.85*** (0.04)	-0.05 (0.03)	0.02 (0.02)	0.83*** (0.05)
Inflation	0.03 (0.02)	0.01 (0.01)	0.01 (0.01)	0.05* (0.03)
Unemployment	-0.04* (0.02)	0.00 (0.01)	0.02 (0.01)	-0.02 (0.03)
VIX	0.00 (0.00)	0.03*** (0.01)	0.04*** (0.01)	0.07*** (0.02)
US Economic Policy Uncertainty	0.01 (0.01)	0.01* (0.01)	0.01 (0.01)	0.02* (0.01)
Global Economic Activity	-0.03* (0.02)	-0.01 (0.01)	-0.01 (0.01)	-0.04 (0.02)

7 Conclusion

The novelty of this study lies in extending yield curve decomposition to emerging markets by explicitly incorporating sovereign credit risk and showing that U.S.

Table 4. Impact of U.S. Yield Components on Emerging Market Yields (2-Year Maturity)

Dependent Variable	Expected Short Rate	Term Premium	Credit Risk Compensation	Nominal Yield
U.S. Expected Short Rate	0.06** (0.03)	0.00 (0.01)	0.00 (0.01)	0.07** (0.03)
U.S. Term Premium	0.01 (0.01)	0.05** (0.02)	0.01 (0.01)	0.06** (0.02)
Local Policy Rate	0.90*** (0.02)	-0.01 (0.01)	-0.02 (0.01)	0.87*** (0.03)
Inflation	0.05* (0.03)	0.00 (0.01)	0.01 (0.01)	0.06* (0.03)
Unemployment	-0.05* (0.02)	0.00 (0.01)	0.00 (0.01)	-0.04 (0.03)
VIX	0.00 (0.00)	0.01 (0.01)	0.02* (0.01)	0.03* (0.02)
US Economic Policy Uncertainty	0.00 (0.01)	0.00 (0.01)	0.00 (0.01)	0.01 (0.01)
Global Economic Activity	-0.01 (0.01)	-0.01 (0.01)	-0.01 (0.01)	-0.02 (0.01)

monetary policy spillovers operate not only through expectations but also via term premia and credit spreads.

This paper presents a comprehensive framework for decomposing sovereign yields of 15 emerging market (EM) economies into three distinct components: the average expected future short-term interest rate, the term premium, and compensation for sovereign credit risk. This tripartite decomposition enables a detailed understanding of the transmission channels through which U.S. monetary policy affects EM bond markets. By separating these components, we provide a refined lens to analyze how monetary policy surprises propagate internationally, shaping market expectations, risk premia, and credit spreads in emerging economies.

Our empirical results highlight several important dimensions of this transmission mechanism. First, U.S. monetary policy surprises induce rapid and significant revisions in market participants' expectations of future short-term interest rates in EMs. This finding challenges the notion that EM central banks typically respond countercyclically to U.S. policy changes. Instead, the evidence points to a tendency among EM monetary authorities to align their policy stance with the Federal Reserve, effectively mirroring rather than offsetting U.S. monetary policy. Such synchronization reflects the high degree of financial globalization and capital market interconnectedness, which constrain the policy autonomy of EM economies.

Second, the behavior of the term premium in EMs in response to unconventional monetary policy measures—such as quantitative easing and forward guidance—resembles patterns observed in U.S. Treasury markets. This similarity underscores the global reach of U.S. monetary policy and suggests that global investors reassess term premia in a coordinated fashion, reflecting shifts in risk aversion and liquidity conditions across borders. The implication is that term premia are not purely domestic phenomena but are significantly influenced by external policy shocks, amplifying their effect on EM bond yields.

Third, our analysis shows that U.S. monetary policy also materially affects the compensation investors demand for sovereign credit risk in EMs. This result indicates that spillovers extend beyond interest rate expectations and term premia to shape perceptions of sovereign default risk. Mechanisms driving this effect include changes in global risk appetite, shifts in capital flows, and evolving external financing conditions. Recognizing this channel is crucial for assessing the broader financial stability implications of U.S. monetary policy.

The methodological framework and empirical findings of this study open several avenues for future research and policy application. The decomposition approach can be adapted to examine the domestic transmission of monetary policy in both EMs and advanced economies, providing policymakers with deeper insights into the drivers of yield curve movements and financial conditions. It can also be applied to spillovers from other major central banks—such as the European Central Bank or the Bank of Japan—enabling comparative analyses of international monetary interdependence.

Furthermore, the role of credit risk compensation uncovered here offers valuable input for structural models that price sovereign default risk. Incorporating the influence of global monetary policy into sovereign risk models could improve predictive accuracy and policy relevance in volatile financial environments. From a policy standpoint, understanding how U.S. monetary policy affects EM yields and credit spreads can guide the design of macroprudential tools and strategies aimed at mitigating adverse spillovers and safeguarding financial stability.

Future research could extend this work by incorporating higher-frequency data to capture intraday market dynamics and by analyzing heterogeneity across countries with differing financial fundamentals, institutional frameworks, and degrees of market integration. Integrating additional macroeconomic variables—such as exchange rates and domestic policy measures—would further enrich the analysis. Finally, investigating the interaction between monetary policy spillovers and other global shocks, including geopolitical risks or commodity price fluctuations, represents a promising direction for comprehensive risk assessment in an increasingly interconnected global economy.

In conclusion, this study provides a detailed and multifaceted decomposition of EM sovereign yields, elucidating the diverse channels through which US monetary policy influences these markets. By shedding light on expectations, term premia, and credit risk components, the paper advances our understanding of global financial linkages and offers actionable insights for policymakers, investors, and researchers navigating the challenges posed by international monetary policy spillovers.

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