A Regime-Switching Analysis of the Relationship Between the Stock and FX Markets

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Extended Abstract

This study employs a two-state regime-switching model to re-examine the portfolio balance model of exchange rate determination, using investor heterogeneity as a base for the econometric specification. From a macroeconomic perspective, the portfolio balance model has demonstrated limited empirical success (Black, 2015), leading to a new direction for research that incorporates FX order flow —a price-relevant microstructural element (Evans and Lyons, 2002)— into the model. However, the existing literature presents two critical issues: 1) the underlying portfolio rebalancing dynamics are unclear, as per mixed evidence and two competing hypotheses; and 2) the integration of other micro-level insights beyond order flow has been ignored in the models. This study addresses the ongoing debate regarding the FX-stock markets' interplay by taking a new position from a methodological aspect: a regime-switching model in which regimes are defined by the predominant investment strategies adopted by heterogeneous investors.

Utilizing weekly data spanning January 2024 to June 2025 on stock returns, risk appetites, and six major exchange rates, this study aims to first identify the presence of two distinct regimes and, subsequently, which portfolio balancing effect, if any, characterizes each regime.

Our findings reveal regime-dependent behaviors in exchange rates, with at least one regime consistently showing a significant stock-FX markets connection. Such regime is predominantly driven by a risk rebalancing strategy, aligning with the Uncovered Equity Parity theory. We find that two opposing investment strategies can coexist across or within regimes, conditional on market location and whether it is a risk appetite or return-driven strategy. The results highlight the function of each currency (speculative, safe-haven, etc.) in shaping the FX-stock market relationship. Significantly, we observe that regimes with significant FX-stock market relationships (against a no relationship scenario) tend to be transitory but occur frequently suggesting that the poor empirical performance of earlier portfolio balance models stems partly from aggregation bias.

These findings highlight the importance of microstructural elements in resolving the exchange rate determination puzzle, enhancing our understanding of financial market interactions through investor heterogeneity. The results are valuable for future research modeling and for policymakers addressing risk transmission and policy impacts across financial markets.

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