



## The Market for Inflation Risk

CFM-DP2025-16

Saleem Bahaj<sup>1,3</sup>, Robert Czech<sup>1</sup>, Sitong Ding<sup>3</sup> and Ricardo Reis<sup>3</sup>

<sup>1</sup>Bank of England, <sup>2</sup>London School of Economics and Political Science, <sup>3</sup>University College London

This paper complements the public data on inflation swap contract prices, which are extensively used by researchers and policymakers, with valuable new non-public data on the quantities behind these prices and the institutions involved in trades in the UK market. A model that captures the extreme segmentation observed in this market suggests three new identification strategies to distinguish changes in expected inflation from shocks to the distinct demands of the types of institutions trading in the market. This provides new measures of expected inflation at different horizons for macroeconomists, as well as several features of the functioning of this large market for further study by financial economists. This analysis leads to the following lessons about inflation risk:

First, at short maturities, hedge funds and dealers alternate between negative and positive net positions that average to zero, while at long maturities, dealers consistently provide inflation protection to pension funds. The market for inflation swaps fits into a segmented-markets model, with dealers acting as arbitrageurs.

Second, given the heteroscedasticity in the revelation of inflation news at data release dates, one can utilize the time-series variation in price and quantity data to identify changes in inflation expectations. With data on individual institutions' positions over time, and granularity in the size of those positions, instrumental variables can be constructed for the frictional shocks that shift relative demand and supply in these markets. Using high-frequency data, we can exploit the spillover effects of shocks across segmented markets to identify the entire system of demand and supply. These three alternative approaches provide consistent measures of market participants' inflation expectations at different horizons.

Third, our measures of expected inflation for long horizons (10 years and above) indicate that swap prices have overstated the unanchoring of expectations in our sample. Around significant events, frictions have tended to move in the same direction as expectations, causing prices to overstate changes in inflation expectations. At short maturities, swap prices are unreliable measures of expected inflation, exhibiting large persistent differences between the two. Researchers and policymakers should use swap prices with caution and ideally apply our methods (or others) to filter them and extract accurate signals for monetary policy and macroeconomic analyses.

Fourth, prices in this market appear to fully reflect information within one to three days, and the slope of the supply function for inflation protection at long maturities by dealer banks is nearly horizontal (but not so at short maturities). Consequently, the large fluctuations in quantities traded





are almost entirely due to shocks to trading frictions, while expectations account for three-quarters of the movements in prices. At short maturities, frictions affecting hedge funds are nearly as significant as those affecting dealer banks.

Fifth, we observed significant dispersion in beliefs about inflation both within and between types of institutions, and large price impacts from a handful of traders. There is a strong correlation between the inflation expectations of banks, as indicated by their survey responses, and their trading activity in the inflation swap market.

Overall, this paper contributes data for measurement, techniques for estimation, and empirical results that present intriguing challenges to the finance literature on the mechanics and segmentation of an important financial market, the macroeconomic literature on fluctuations in expected inflation, and the behavioral literature on dispersion in beliefs.