**Paper in a Nutshell**

We provide the first systematic asset pricing analysis of one of the main safe asset categories, the repurchase agreement (repo). A standard, no-arbitrage model with a market and a carry factor prices these near-money assets. While the market factor determines the short-term interest rate level, the carry factor accounts for the cross-sectional dispersion providing for a remunerative carry. Consistent with the safe asset literature, the carry factor reflects heterogeneity in convenience yield and increases in safety and liquidity premia, and opportunity cost. Our carry factor helps explain the cross-section of long-term bond returns after accounting for standard bond pricing factors.

**We contribute to three strands of the literature:**

(i) Short-term interest rates.
- Cross-sectional dispersion in repo rates in Europe (e.g., Mencini, Ranaldo, and Wörmann, 2014; Baisch et al., 2017) and the United States (e.g., Saxenian et al., 2011; Borden and Metrick, 2012; Capistran, Marks, and Walker, 2014; Krishnamurthy, Nagel, and Orks, 2014; infantry, 2009).

(ii) Asset pricing.
- Common risk factors in equity, fixed income (Fama and French, 1993) and foreign exchange (FX) markets (Easley, Ong, and Vermaelen, 1982; Kilian et al., 2018) on different carry-in equity, fixed income, and option markets.

(iii) Safe assets.
- On-convenience yields (e.g., Krishnamurthy, 2002; Longstaff, 2001; Krishnamurthy and Vissing-Jorgensen, 2012; Greenwood and Vayanos, 2014; Nagel, 2016). On safe and quasi-safe assets (e.g., Sten, 2012; Sunderman, 2013; Krishnamurthy, We, and Mundel, 2015).

**I. Carry Factor**

We document the cross-sectional dispersion in near-money rates. The safe asset literature offers an explanation pointing to the time-dependent safety and liquidity premia.

- Differences in the safety premia create an interest rate differential between truly (e.g., German collateral) and quasi-safe assets (e.g., Italian collateral).
- Differences in the liquidity premia refer to some collateral assets offering larger liquidity benefits (e.g., in terms of fungibility and (re-)pledgability).

By going long repos with the highest rate (via a reverse repo) while shorting repos with the lowest rate (via a repo), our carry represents a self-financing trading strategy swapping assets with higher convenience premia for those with lower convenience premia.

**II. Common Factors**

Assume a linear factor model and employ two common asset pricing estimation techniques:
- Two-stage ordinary least squares (OLS) estimation following Fama and MacBeth (1977).

**III. Safe Asset Determination**

Carry factor reflects a differential in convenience yield as truly safe assets (in the low-rate portfolio) carry higher safety and liquidity benefits than quasi-safe assets (in the high-rate portfolio).

- Carry factor orthogonal to the safety premium (i.e., difference in two-year CDS spreads between the countries in the high- and low-rate portfolio).
- Carry factor increases in the liquidity premium (i.e., difference in the short-term debt to GDP ratio between the countries in the high- and low-rate portfolio).
- Carry factor returns with the opportunity cost (i.e., main Euro-area short-term interest rate benchmark Eonia).

Control for market frictions and arbitrage deviations by accounting for the U.S. Dollar Euro covered interest parity (CIP) basis.

**IV. Convenience Premium and Asset Prices**

- Our results provide a bridge between short-term and long-term safe assets.
- Our two repo factors help explain the cross-section of bond returns after accounting for the standard bond pricing factors and measures of bond safety and liquidity.
- The unexplained yield component of long-term bonds increases with our repo carry factor, suggesting that it captures additional convenience attributes.

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**Table 1:** First Stage GMM: Factor Loadings

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The table reports the factor loadings for the eight portfolios estimated using the GMM approach. The GMM results are used to estimate the carry factor in the first stage of the two-stage procedure. The table reports the factor loadings for the eight portfolios estimated using the GMM approach. The GMM results are used to estimate the carry factor in the first stage of the two-stage procedure.