



# GMSI × US Monetary Policy

Full topic walk-forward study · ICE BofA US Treasury 1-3Y Total Return Index · OOS from 2019

Research date: 07 July 2026 · Sample: 2016-01-01 to 2026-07-01 · For discussion only

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**1.09**

WF SELECTED OOS  
SHARPE  
3y train / 1y test

**6.3%**

WF OOS RETURN  
stitched 2019+

**73%**

TRADE HIT RATE  
30 OOS trades

**8/8**

POSITIVE FOLDS  
test-year P&L

## EXECUTIVE SUMMARY

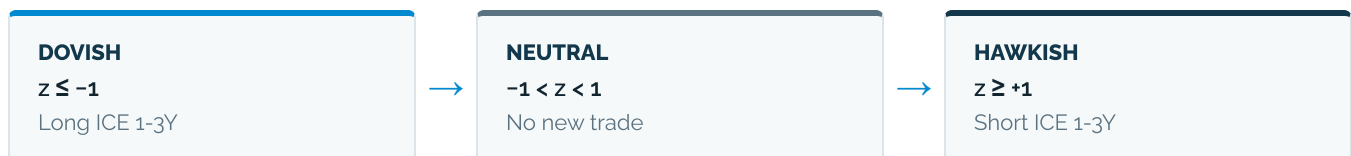
**Objective.** Test whether point-in-time US monetary policy news sentiment can be used as a systematic signal for short-end US Treasury exposure. The study focuses only on the ICE BofA US Treasury 1-3Y Total Return Index, avoiding yield proxies in both signal selection and P&L measurement.

**Main finding.** The strongest single-topic evidence is the GMSI Interest Rates signal. Fixed-rule OOS testing from 2019 shows a Sharpe of 1.14, total return of 7.2%, and 73% trade hit rate. The walk-forward selected strategy produces a similar OOS Sharpe of 1.09 with positive P&L in all eight test folds.

**Interpretation.** Granular monetary policy topics appear more informative than broad averages. This is economically intuitive: front-end Treasury returns should be most sensitive to changes in interest-rate language, policy outlook, and central-bank reaction-function narratives.

## SIGNAL CONCEPT

GMSI converts policy news into standardized topic sentiment. Extreme dovish language is mapped to long duration; extreme hawkish language is mapped to short duration.



## RESEARCH DESIGN



PARAMETER	SPECIFICATION
<b>GMSI universe</b>	US Monetary Policy topics: Interest Rates, Policy Outlook, QE/QT, Balance Sheet & Liquidity, Independence, Policy Tools (Other), plus usable composites
<b>Target</b>	ICE BofA US Treasury 1-3Y Total Return Index
<b>Signal transform</b>	252 trading-day rolling z-score of COMBINED directional sentiment
<b>Entry rule</b>	$ z  \geq 1.0$ ; dovish = long duration, hawkish = short duration
<b>Holding / lag</b>	21 trading-day rebalance, non-overlapping 21td holds, 1-day signal lag
<b>Walk-forward</b>	3-year train → 1-year test, signal selected on train Sharpe with drawdown penalty

Controls are designed to make the test closer to an implementable research process: out-of-sample testing starts in 2019, the signal is lagged by one day, and fixed-rule single-signal results are shown alongside the walk-forward selected series.



## WALK-FORWARD VALIDATION

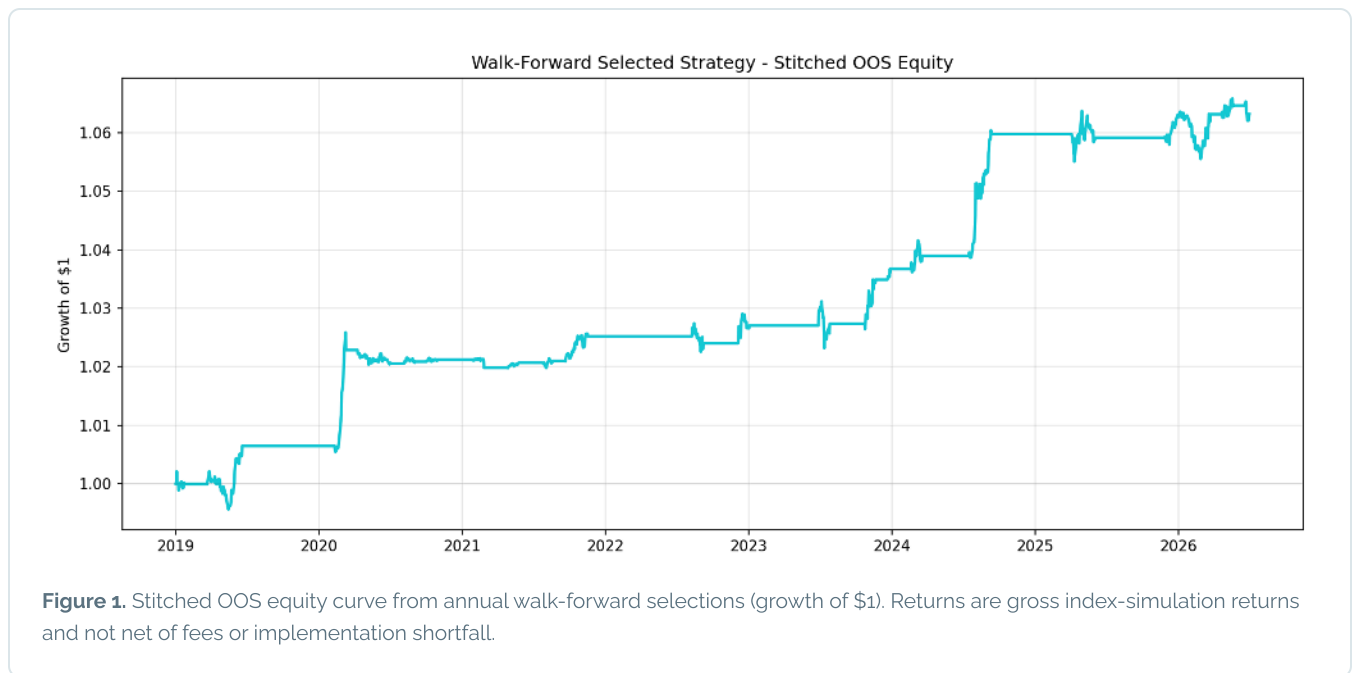
Signal selection without knowing the test year. Using only the previous three years of data, which monetary-policy topic would have been selected for the next year? The selected topic is then tested over the following calendar year – the stitched OOS series is the sequence of these annual test periods.

YEAR	SELECTED SIGNAL	TRAIN SH	TEST SH	RETURN	HIT	TRADES	+VE
2019	Average z (PO + IR)	0.89	0.97	0.6%	67%	3	Y
2020	Interest Rates	1.28	1.93	1.5%	67%	6	Y
2021	Interest Rates	1.73	0.97	0.4%	80%	5	Y
2022	Interest Rates	1.79	0.22	0.1%	50%	2	Y
2023	Interest Rates	1.08	1.10	1.0%	100%	3	Y
2024	Policy Outlook	1.13	2.40	2.2%	100%	3	Y
2025	Policy Outlook	1.69	0.37	0.3%	75%	4	Y
2026	Interest Rates	1.08	0.11	0.1%	50%	4	Y

### READ-THROUGH

- All eight OOS test years were positive.
- Interest Rates was selected in 5 of 8 folds.
- Policy Outlook was selected in 2024-25 as the market shifted from hikes to cuts.
- 2022 and 2026 were positive but low-return folds, so results are not driven by one regime.

### SELECTION FREQUENCY



## FIXED-RULE OOS COMPARISON

Topic specificity matters. Walk-forward results include a selection layer, so the cleaner cross-check is a fixed-rule test for each topic over the same 2019+ OOS window.

### 1.14

**INTEREST RATES OOS SHARPE**  
fixed rule 2019+

### 7.2%

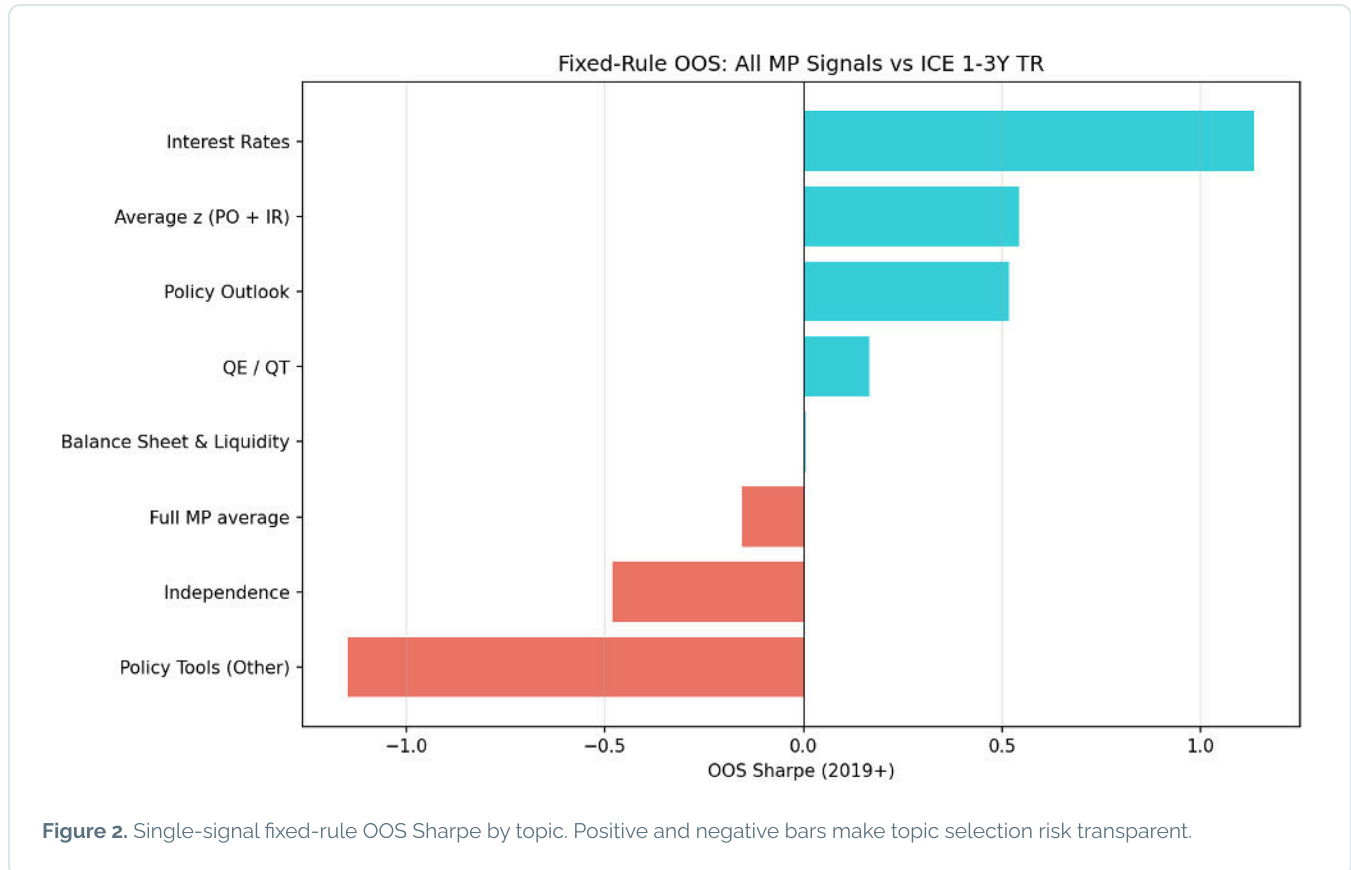
**INTEREST RATES RETURN**  
gross index return

### -0.9%

**MAX DRAWDOWN**  
OOS 2019+

### 73%

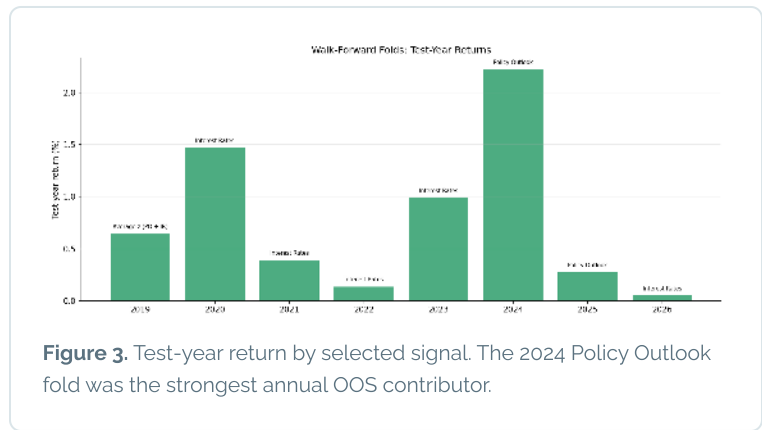
**TRADE HIT RATE**  
33 trades



SIGNAL	SH	RET.	HIT	TRADES
<b>Interest Rates</b>	<b>1.14</b>	<b>7.2%</b>	73%	33
Average z (PO + IR)	0.54	2.7%	67%	21
Policy Outlook	0.52	3.2%	67%	27
QE / QT	0.17	1.1%	39%	33
Balance Sheet & Liquidity	0.01	0.0%	45%	22
Full MP average	-0.16	-0.2%	50%	2
Independence	-0.48	-3.1%	36%	25
Policy Tools (Other)	-1.15	-9.3%	31%	32

**INTERPRETATION**

- Interest Rates is the only signal above 1.0 Sharpe OOS.
- Average z and Policy Outlook are positive but lower-conviction supporting signals.
- Negative topics are useful evidence: the relationship is not just generic macro-news beta.
- Sparse composites are not emphasized for production use.



## WHAT THIS MEANS FOR RATES INVESTORS

The study supports the concept that GMSI monetary-policy topic sentiment can act as a systematic research input for short-end rates. The most direct use case is not necessarily a standalone strategy; it is a transparent, point-in-time overlay that can help quantify the tone and persistence of policy news around front-end duration exposure.

### SIGNAL OVERLAY

Use Interest Rates z-score as a systematic tilt for 1-3Y duration exposure, subject to portfolio risk limits.

### REGIME MONITOR

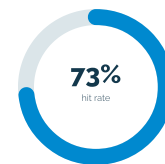
Track when policy news becomes persistently hawkish or dovish relative to its own 252td history.

### RESEARCH SCREEN

Compare topic-level signals to distinguish direct policy-rate language from broader central-bank narratives.

## VALIDATION CHECKS INCLUDED

- Target is the ICE 1-3Y Total Return Index, not a yield proxy.
- Signal positions are lagged by one trading day.
- Walk-forward selection uses only prior 3y train data.
- Fixed-rule OOS results are shown as the cleaner single-signal evidence.
- All reported results are OOS from 2019 unless labeled full sample.



**4.34\***  
profit factor  
walk-forward selected  
strategy, 30 OOS trades

**Figure 4.** Trade outcomes for the walk-forward selected strategy.

## IMPORTANT CAVEATS

- Walk-forward selection introduces meta-optimisation across topics. The fixed-rule Interest Rates result is the cleaner single-signal evidence.
- Results are gross index simulations and do not include transaction costs, financing, tax, fees, slippage, or market-impact assumptions.
- Consensus and full Monetary Policy average are too sparse to be considered standalone production signals in this configuration.
- Past backtest and walk-forward performance is not indicative of future results. Further validation should include cost assumptions, live paper trading, and portfolio-level risk constraints.

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