Research Note: Market Timing with Volatility Indexes

RESEARCH GOAL

The aim of this research note is to provide an example of a diversified equity and bond portfolio that uses a dynamic allocation rule to promote capital preservation and favor assets that are likely to perform well given the volatility environment.

Diversified Equities	Investment Grade Bonds	Medium Term Treasuries	Cash
S&P 500® Index	Barclays US Aggregate Bond Index	Barclays U.S. 7–10 Year Treasury Bond Index	

VOLATILITY-BASED ASSET ALLOCATION

Option-implied volatility conveys market expectations regarding the level of impending uncertainty in the underlying security returns, and an uptrend in implied volatility may herald a period of heightened risk and downside potential. The key concept underpinning the strategy is that the interplay between benchmark indexes of interest rate and equity volatilities—TYVIX℠ Index[1] and VIX® Index[2], respectively—has historically predicted the relative performance of diversified equities, bonds, and cash.

FOUR REGIMES

We define the current state of volatility as a combination of two indicators:

- TYVIX High/Low
- VIX High/Low.

Each of the four regimes lead to a different allocation based on our market intuition.

Regime 1: *Broad Market Calm*

TYVIX ↘
VIX ↘

SPY	AGG	IEF
20%	70%	10%

Regime 2: *Isolated Anxiety in Bond Markets*

TYVIX ↗
VIX ↘

SPY	IEF	CASH
20%	10%	70%

Regime 3: *Isolated Anxiety in Equity Markets*

TYVIX ↘
VIX ↗

SPY	AGG	IEF
10%	70%	20%

Regime 4: *Broad Market Panic*

TYVIX ↗
VIX ↗

SPY	AGG	IEF
10%	20%	70%

SIMULATED HISTORICAL PERFORMANCE

Simulated performance is below with a 60% Equity (SPY) and 40% Fixed Income (AGG) benchmark for comparison.

PERFORMANCE STATISTICS

	Strategy	60/40
Sharpe Ratio	1.41	0.58
Ann. Return	6.25%	6.81%
Volatility	4.41%	11.56%
Max Drawdown	10.98%	34.70%
Max Recovery	46 days	418 days

Note: stats for gross returns