MarketVector™ Crypto-Balanced Multi-Asset Index (TOPMDL)

A Modern Portfolio for a World of Fiscal Dominance

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Executive Summary

In an era defined by fiscal dominance, traditional investment paradigms such as the 60/40 equity-bond strategy face unprecedented challenges. Rising inflation, positive stock-bond correlations, and very volatile equity gains signal the end of a decades-long bond bull market.

The MarketVector™ Crypto-Balanced Multi-Asset Index (TOPMDL) reimagines the classic 60/40 framework by integrating a global equity and bond allocation with a strategic 5% allocation to cryptocurrencies—2.5% Bitcoin (BTC) and 2.5% Ethereum (ETH)—sourced from both equity and bond weights. This whitepaper outlines the rationale for this revision, leveraging historical data, risk-return dynamics, and the unique properties of crypto assets to enhance diversification and performance in a fiscally dominated regime.

Introduction: Navigating Fiscal Dominance

Fiscal dominance is an economic condition where the government's fiscal policy, particularly its budget deficits and debt management, significantly influences or constrains the central bank's ability to control inflation and maintain price stability. This concept was first formally explored by economists Thomas Sargent and Neil Wallace in their 1981 paper, "Some Unpleasant Monetarist Arithmetic" (Some unpleasant monetarist arithmetic). Their work highlighted how fiscal constraints can force the central bank to generate seigniorage revenues—profits from issuing currency—potentially sacrificing inflation control.

We are now in a world of fiscal dominance, a regime reminiscent of the 1940-1975 period, where government borrowing and spending exert outsized influence over monetary policy and asset correlations **(Figure 1)**. Since 2020, the rolling 3-year correlation between U.S. large-cap stocks and 20-year government bonds has shifted into positive territory, eroding the diversification benefits that underpinned the traditional 60/40 strategy.

Figure 1: Diversification Benefits Decline as Correlations Rise

3Y Rolling Correlation US Large Cap Stocks vs. US 20Y Government Bonds
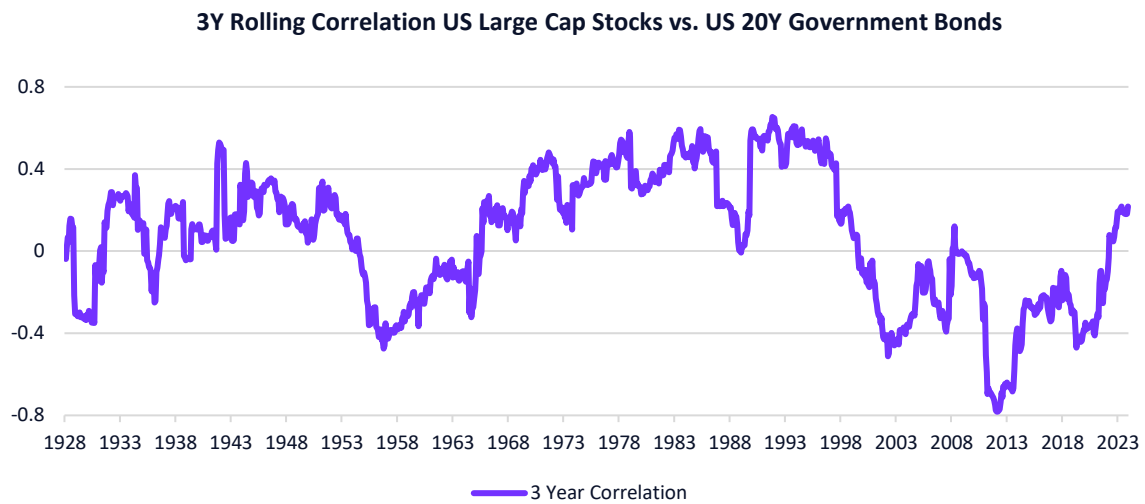
Source: MarketVector, Ibbotson SBBI Data.

Inflation concerns, global economic uncertainty, and expansive fiscal policies have further challenged the role of bonds as a safe haven, with yields struggling to keep pace with rising prices, leading to substantial real drawdowns over long time periods. (**Figure 2**).

Figure 2: Drawdowns
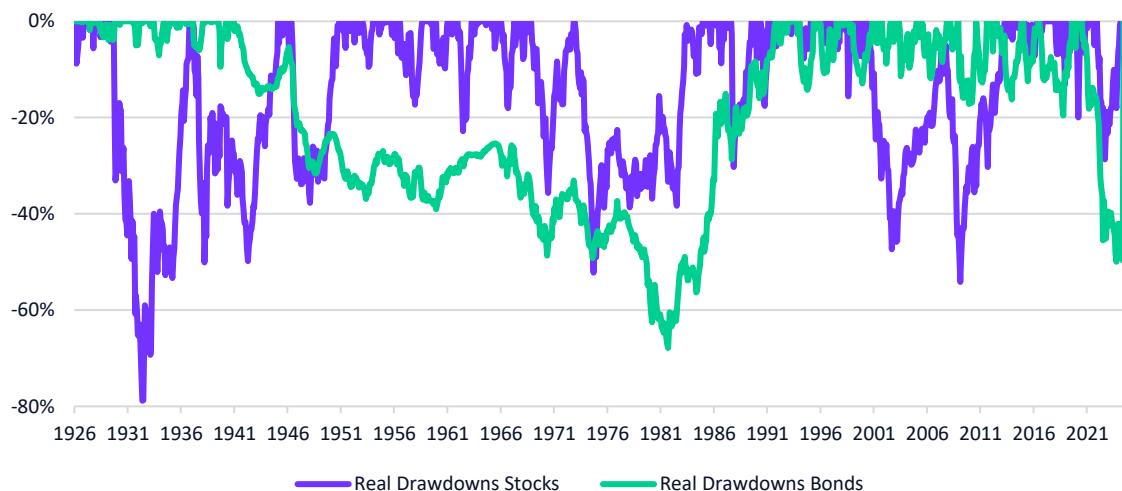
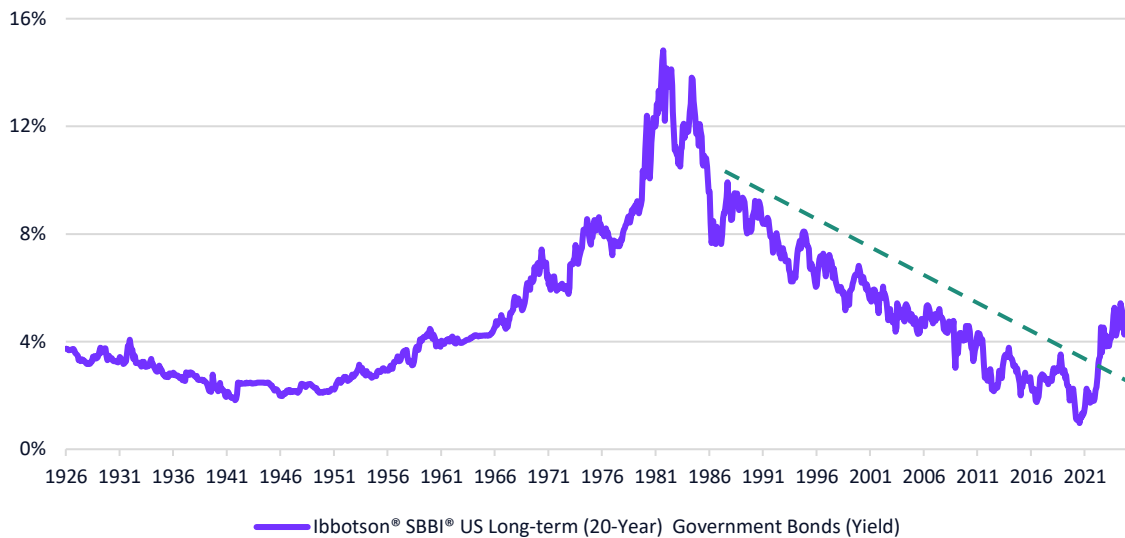Source: MarketVector, Ibbotson SBBI Data.

In this context, investors must adapt. The TOPMDL index addresses these challenges by blending a global 60/40 strategy with a modest allocation to BTC and ETH, capitalizing on their low correlation with traditional assets and their potential to enhance risk-adjusted returns.

The Evolution of Diversification

The Decline of the Traditional 60/40 Strategy

Historically, the 60/40 strategy—60% equities and 40% bonds—relied on the negative correlation between stocks and bonds to deliver balanced risk and return. From 2000 to 2020, bonds enjoyed a "golden era" of negative correlation with equities, acting as a buffer during market downturns **(Figure 1)**. However, post-2021, this relationship has flipped to a positive correlation, driven by inflation and fiscal policy shifts. **Figure 3** illustrates this "End of an Era," with bond yields peaking at 16% in the 1980s and declining to near-zero levels by 2020, leaving little room for further appreciation.

Figure 3: Long secular decline in bond yields is over

Ibbotson® SBBI® US Long-term (20-Year) Government Bonds (Yield)

Source: MarketVector, Ibbotson SBBI.

This shift necessitates a rethink of diversification strategies. Equities alone cannot shoulder the burden. It seems likely that increased market volatility and currency depreciation could affect stock performance, especially for multinational firms, while bonds offer diminished protection. Enter crypto assets.

The Case for Crypto Inclusion

Bitcoin and Ethereum, the two largest and most liquid crypto assets, offer compelling attributes for modern portfolios.

Figure 4: Rolling 90 Day Correlation

Rolling 90 Day Correlation: BTC, ETH vs. Bonds 20Y+ (TLT)

Rolling 90 Day Correlation: BTC, ETH vs. Nasdaq (QQQ)
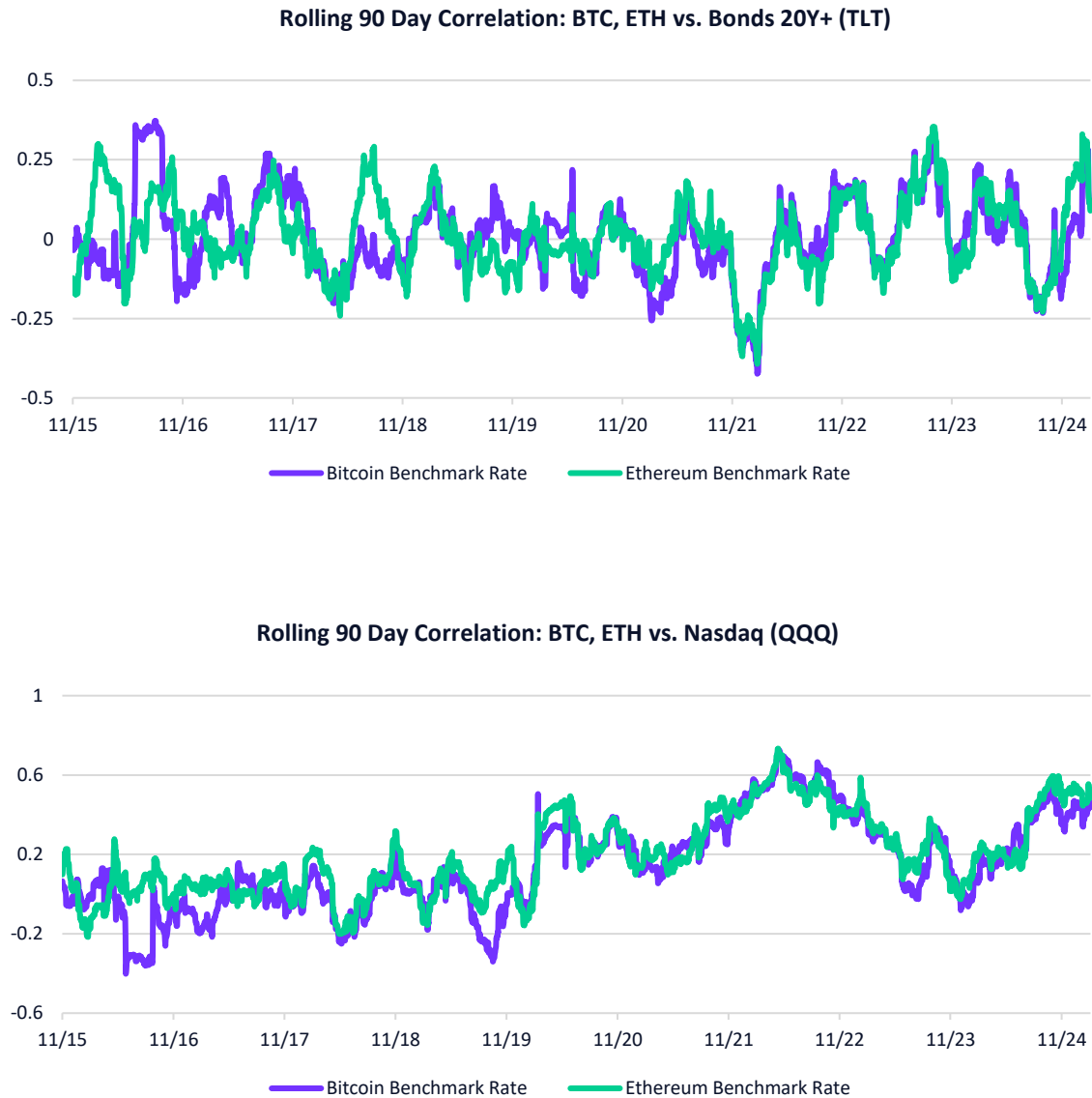
Source: MarketVector, Yahoo Finance.

- Low Correlation: Crypto assets have historically exhibited low to no correlation with equities, bonds, and other traditional asset classes **(Figure 4)**.
- High Return Potential: Annualized returns for BTC and ETH often exceed inflation and rival growth assets like equities.
- Diversification Benefits: Their unique risk-return profiles broaden the spectrum of public market opportunities. For investors with a higher risk tolerance, the crypto asset class offers the potential for greater total returns through liquid instruments that are readily accessible on exchanges. **(Figure 5)**.

Figure 5: Risk Return
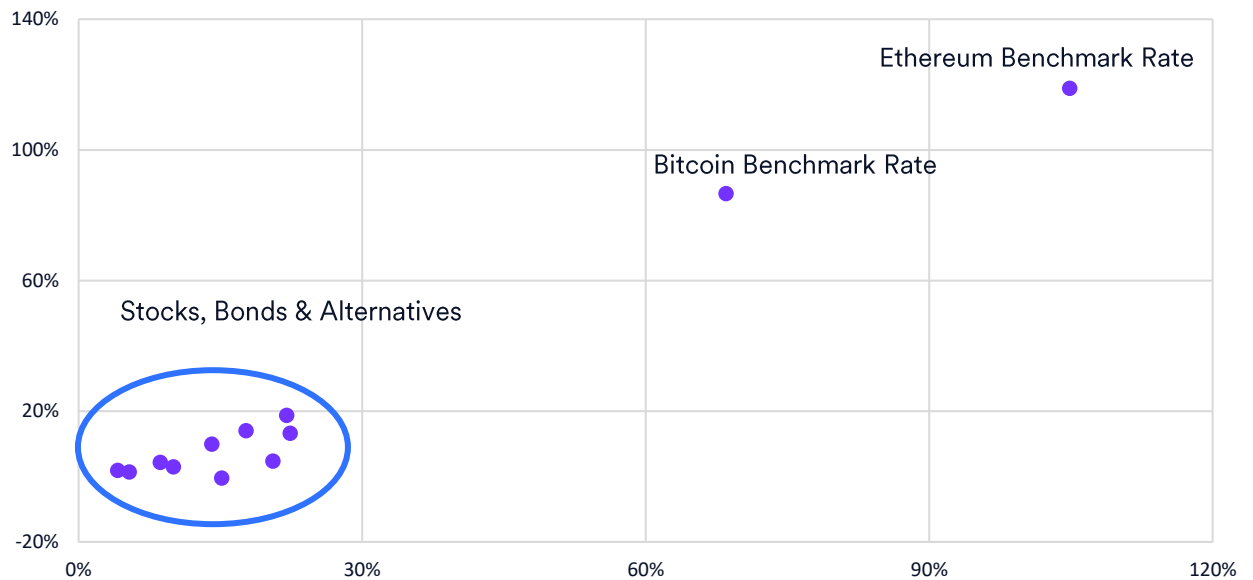
Source: MarketVector, Yahoo Finance, Daily returns for US-based investors since August 31, 2015.

As you can see from Table 1, we agree with CoinShares' definition of BTC as a "non-sovereign store of value" and ETH as a "tech stock-like growth asset," highlighting their distinct roles versus traditional investments. With medium but increasing liquidity and strictly limited BTC or deflationary ETH supply, these assets counter the limitless issuance of fiat-based securities.

Table 1:

	Digital Assets (Bitcoin)	Digital Assets (Ethereum)	Equity	Fixed Income
Represents	Ownership in a peer-to-peer monetary/ledger system	Ownership in a peer-to-peer monetary/ledger system	Ownership of a business	Lending money
Investment objective	Non-sovereign store of value/Growth/Diversification	Tech Stock/Growth /Diversification	Growth /Real Income	Nominal Income
Liquidity	Medium - increasing	Medium - increasing	Very high	High
Return Potential	At or above inflation	At or above inflation	Above Inflation	Near Inflation
Supply	Strictly limited	Deflationary or zero	limitless	limitless
Volatility in returns	High	High	High	Low
Complexity	High	Very high	Average	Low
Maturity	Perpetual	Perpetual	Perpetual	Medium/Long
Programmable	High	Very high	Low	Low
Transfer friction	Very low	Very low	High	High

Source: CoinShares, MarketVector.

TOPMDL Index Methodology

Composition

The TOPMDL index revises the 60/40 framework into a globally diversified, crypto-balanced strategy:

- Global Equities: 57.0% (reduced from 60%)
- Global Bonds: 38.0% (reduced from 40%)
- Bitcoin (BTC): 2.5%
- Ethereum (ETH): 2.5%

Parámetros

Why 5%? Balancing Reward and Risk

While the Sharpe ratio keeps climbing past 5%, institutional investors care about more than just maximizing this metric—they prioritize stability and manageable risk. Let's compare key risk metrics:

- Volatility (Annualized) for different shares of crypto:
  - 0%: 10.84%
  - 5%: 12.52% (15% increase)
  - 10%: 15.84% (46% increase)
  - 20%: 23.44% (116% increase)
- Maximum Drawdown (worst loss):
  - 0%: -22.66
  - 5%: -25.64% (13% larger)
  - 10%: -28.97% (28% larger)
  - 20%: -37.44% (65% larger)

At 5%, volatility and drawdowns rise modestly, preserving portfolio stability. Beyond 5%, these risks escalate faster—e.g., volatility nearly doubles from 10% to 20%, and drawdowns grow significantly, which could unsettle risk-averse institutions (Table 2).

Table 2: Risk Metrics, Impact of crypto on a global 60/40 strategy

	Sharpe Ratio	Sortino Ratio	Calmar Ratio	Gain-Pain Ratio	Pain-Ratio	Max Drawdown	Annualized Volatility
0% Crypto	0.22	0.30	0.31	0.14	0.53	-22.66%	10.84%
1% Crypto	0.37	0.51	0.38	0.17	0.88	-22.99%	10.95%
2% Crypto	0.51	0.71	0.45	0.19	1.17	-23.64%	11.19%
3% Crypto	0.64	0.90	0.51	0.21	1.41	-24.33%	11.56%
4% Crypto	0.75	1.07	0.57	0.23	1.62	-24.94%	11.99%
5% Crypto	0.85	1.22	0.62	0.24	1.78	-25.64%	12.52%
6% Crypto	0.93	1.35	0.67	0.25	1.91	-26.35%	13.12%
8% Crypto	1.05	1.56	0.76	0.27	2.13	-27.62%	14.41%
10% Crypto	1.14	1.72	0.84	0.28	2.28	-28.97%	15.84%
12% Crypto	1.20	1.84	0.91	0.29	2.37	-30.30%	17.34%
14% Crypto	1.25	1.94	0.98	0.29	2.44	-31.53%	18.84%
16% Crypto	1.29	2.01	1.04	0.30	2.50	-32.78%	20.38%
18% Crypto	1.32	2.06	1.06	0.30	2.53	-34.90%	21.92%
20% Crypto	1.34	2.10	1.07	0.30	2.56	-37.44%	23.44%

Source: MarketVector, backtested daily returns for US-based investors since August 31, 2015.

The Sweet Spot at 5%

The 5% allocation delivers a substantial Sharpe ratio increase (0.22 to 0.85, a 0.63 gain) with moderate risk increases. Compare this to 10%, where the Sharpe ratio rises to 1.14 (an additional 0.29 from 5%), but volatility and drawdowns jump more sharply. The first 5% captures most of the risk-adjusted return benefit (68% of the gain from 0% to 10%), making it efficient.

Beyond Numbers: Practical Considerations

Institutional investors face constraints like liquidity, regulatory limits, and internal policies. A 5% allocation is small enough to fit within these boundaries while diversifying the strategy. Our research highlights 5% as optimal—simulations suggest it maximizes risk-adjusted returns before volatility becomes excessive.

Supporting Metrics

- Sortino Ratio (downside risk-adjusted return): 0.30 at 0% vs. 1.22 at 5%—a huge improvement.
- Calmar Ratio (return over max drawdown): 0.31 at 0% vs. 0.62 at 5%—better resilience.

The 5% crypto allocation is sourced proportionally from equities (3.0%) and bonds (2.0%), preserving the strategy's balanced structure while introducing diversification. The global 60/40 strategy incorporates international equity and bond indexes (e.g., EFA, EEM, BNDX), ensuring exposure beyond U.S.-centric assets. The crypto part is represented by HODL and VETH.

Figure 6: Component Weights

Component	Weight
SPY	34.00%
EFA	19.00%
BND	19.00%
BNDX	13.00%
EMB	6.00%
EEM	4.00%
HODL	2.50%
VETH	2.50%
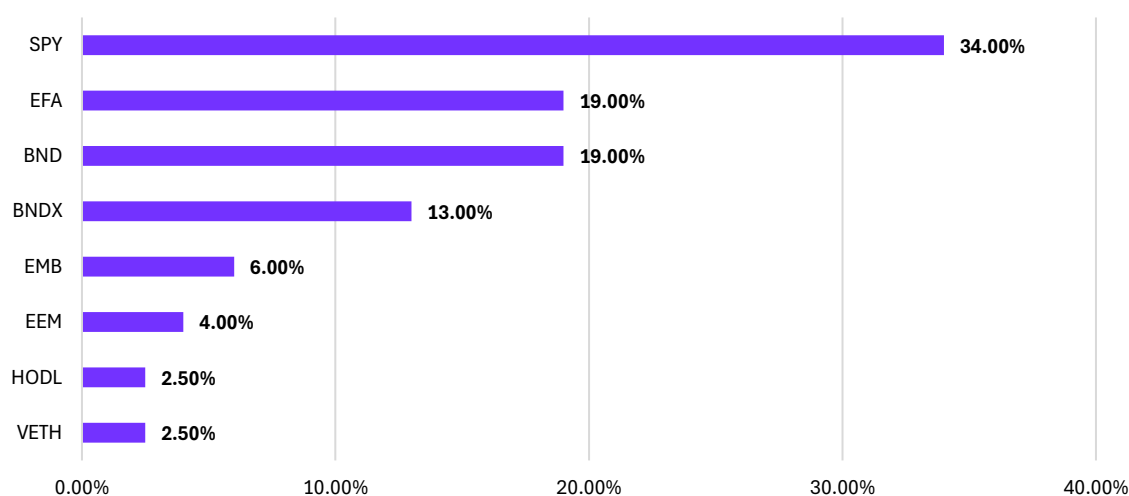
Source: MarketVector, ETF weights at rebalancing.

Rebalancing

The strategy is rebalanced quarterly to maintain target weights, harnessing the power of systematic rebalancing to capture gains and manage volatility. This disciplined approach mitigates the risk of overexposure to crypto's high volatility while locking in returns.

Supporting Evidence: Crypto's Impact on Risk and Return

Historical Performance

Figure 7 demonstrates the impact of adding BTC and ETH to a 60/40 strategy: Total Return Comparison
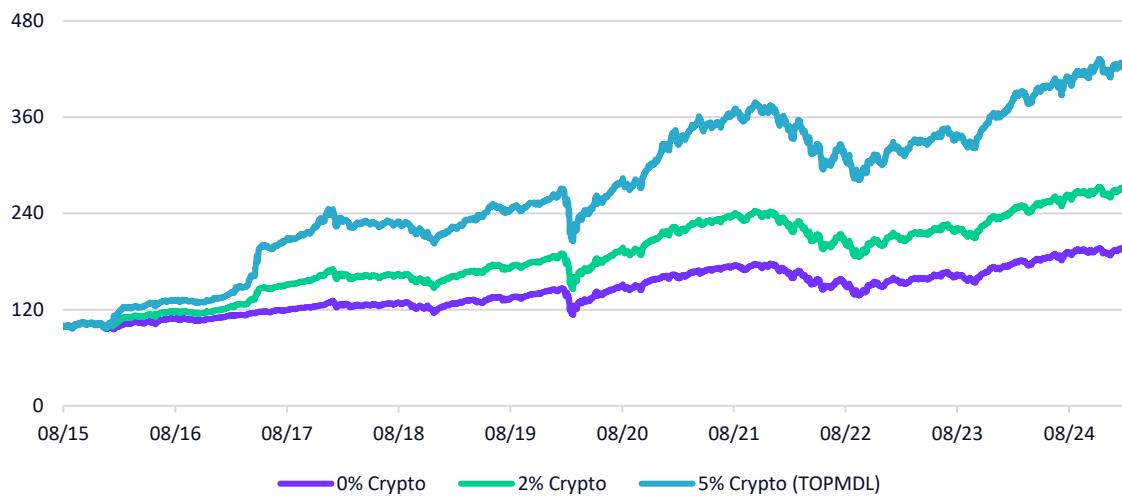
Source: MarketVector, backtested daily returns for US-based investors since August 31, 2015.

Table 3:

	Annualized Return	Sharpe Ratio	Annualized Volatility	Max Drawdown
0% Crypto	7.00%	0.22	10.84%	-22.66%
2% Crypto	10.65%	0.51	11.19%	-23.64%
5% Crypto	15.97%	0.85	12.52%	-25.64%

Source: MarketVector, backtested daily returns for US-based investors since August 31, 2015.

A 5% Crypto allocation more than doubles the annualized return while maintaining manageable volatility. While TOPMDL opts for BTC and ETH specifically, these results underscore crypto's potential to enhance risk-adjusted returns.

Drawdowns and Resilience

Bitcoin's history includes significant drawdowns, yet its bull market cycles show diminishing returns over time suggesting maturing stability. ETH, with its programmable blockchain, complements BTC's store-of-value narrative, diversifying within the crypto allocation.

Figure 8: Maximum Drawdowns
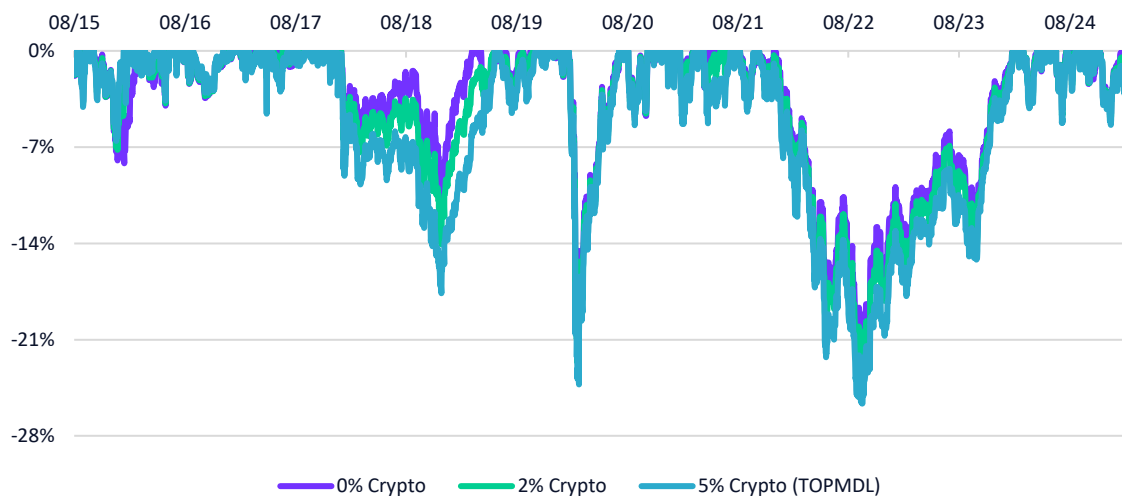
Source: MarketVector, backtested daily returns for US-based investors since August 31, 2015.

Bitcoin and Ethereum have historically experienced significant drawdowns, often exceeding 50%, highlighting their inherent volatility. However, these sharp declines have typically been followed by rapid and pronounced recoveries compared to traditional asset classes. The speed and magnitude of these recoveries are critical for investors, as they underline crypto assets' resilience and their capacity for strong performance rebounds. Due to their low and sometimes negative correlations with equities and bonds, crypto assets effectively diversify the TOPMDL strategy's overall drawdown risk, particularly during periods of heightened market volatility or economic uncertainty. The disciplined quarterly rebalancing within TOPMDL further enhances this diversification benefit by systematically capturing gains during crypto recovery phases, effectively managing volatility and maintaining target allocations.

Figure 9: Delta Rolling 3M Sharpe annualized
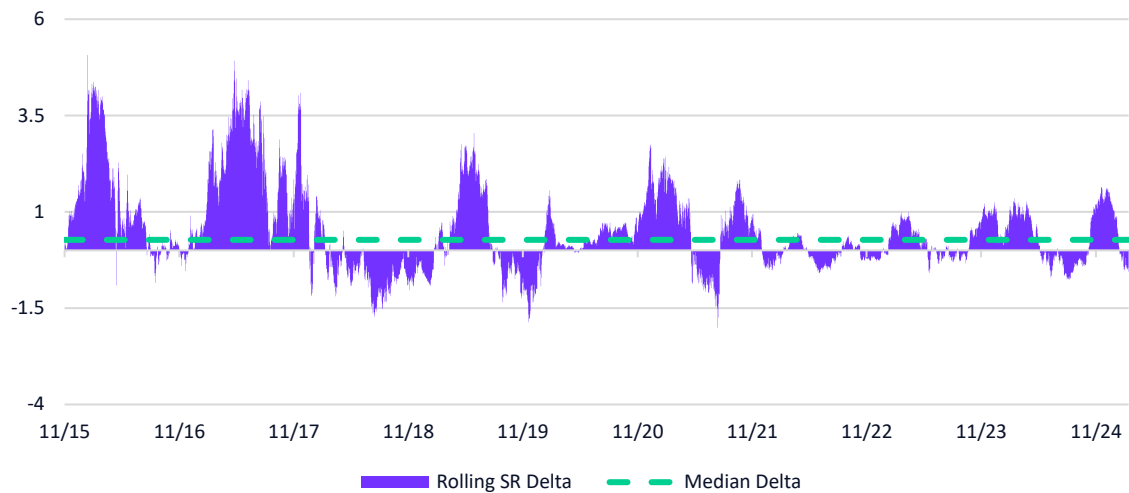
Source: MarketVector, backtested daily returns for US-based investors since August 31, 2015.

Figure 9 provides further insight by displaying the delta of the rolling 3-month annualized Sharpe ratio over time, measured as the difference between a global 60/40 strategy without crypto and one with a 5% crypto allocation. The graph reveals that this relationship is asymmetric, with increases in the Sharpe ratio occurring more frequently and at a greater magnitude than decreases. Additionally, as the crypto market matures, both the upside and downside variations in the ratio are stabilizing. This trend highlights the growing integration of crypto into traditional portfolios, reinforcing its role not only as a diversification tool but also as a means of enhancing risk-adjusted returns while contributing to overall portfolio resilience and long-term stability.

F1igure 10: Return Distribution Shows Positive Skewness
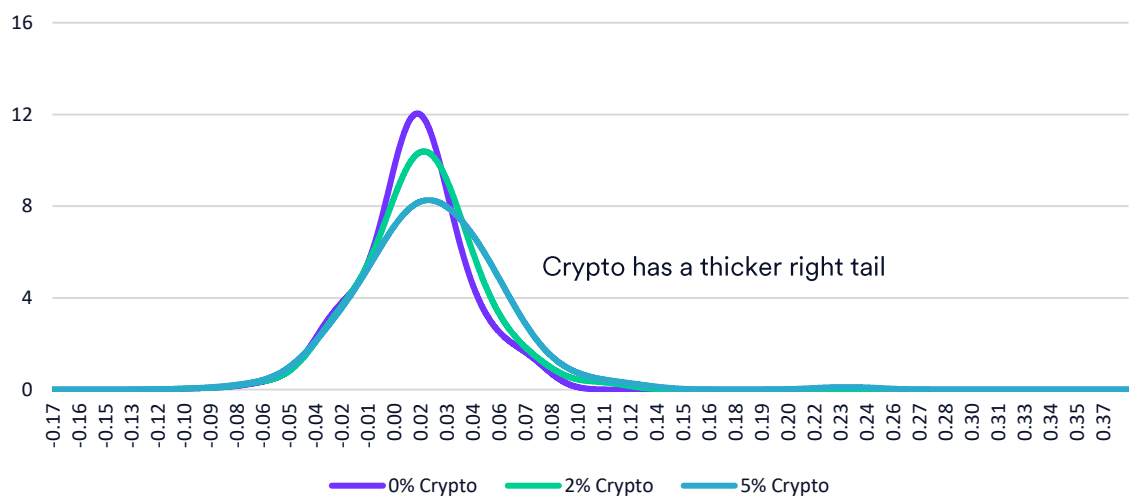
Source: MarketVector, backtested daily returns for US-based investors since August 31, 2015.

Figure 10 presents the return distributions for strategies with different crypto allocations, clearly illustrating the tangible impact crypto inclusion has on overall performance. Specifically, adding a modest 5% crypto allocation shifts the distribution curve, increasing the likelihood of higher returns without significantly affecting the frequency or severity of negative returns. This shift has important implications for portfolio construction, as it indicates that crypto allocations, even modest ones, can enhance the asymmetric return profile—minimizing downside exposure while simultaneously capturing upside potential.

Fiscal Dominance and Crypto's Role

In a fiscally dominated world, traditional assets face structural headwinds:

- **Bonds:** Positive correlations with equities reduce their hedging power
- **Equities:** Face increased volatility
- **Inflation:** Erodes real returns across both asset classes.

BTC and ETH counter these trends. BTC's fixed supply positions it as an inflation hedge, while ETH's deflationary mechanics (post-Ethereum 2.0) enhance its scarcity. Their decentralized nature insulates them from fiscal policy distortions, offering a non-sovereign alternative in a regime where government debt dominates.

Conclusion

The TOPMDL index represents a forward-looking evolution of the 60/40 strategy, tailored for a world of fiscal dominance. By integrating 2.5% BTC and 2.5% ETH into a global equity-bond framework, it leverages crypto's low correlation, high return potential, and resilience to enhance diversification and performance. Historical data confirms that small crypto allocations can boost risk-adjusted returns without undue volatility, making TOPMDL a compelling solution for modern investors. As fiscal dominance reshapes markets, this crypto-balanced approach offers a path to navigate uncertainty and seize opportunity.

Please see our index website for the specific methodology of our indexes here.

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Martin Leinweber works as the Director of Digital Asset Research and Strategy at MarketVector providing thought leadership in an emerging asset class. His role encompasses product development, research, and communication with the client base of MarketVector. Before joining MarketVector, he worked as a Portfolio Manager for equities, fixed-income, and alternative investments for almost 20 years. Martin was responsible for the management of active funds for institutional investors such as insurance companies, pension funds, and sovereign wealth funds at the leading German quantitative asset manager Quoniam. Previously, he held various positions at one of Germany's largest asset managers, MEAG, the asset manager of Munich Re and ERGO. Among other things, he contributed his expertise and international experience to the establishment of a joint venture with the largest Chinese insurance company PICC in Shanghai and Beijing. Martin is co-author of "Asset-Allokation mit Kryptoassets. Das Handbuch "(Wiley Finance, 2021). It's the first handbook about integrating digital assets into traditional portfolios. He has a Master of Economics from the University of Hohenheim and is a CFA Charter holder.

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Jonas Weber is an emerging expert in digital assets and investment strategies. As a Digital Asset Analyst at MarketVector, he excels in generating innovative index ideas, conducting in-depth research, and supporting client communications. Before joining MarketVector, Jonas honed his skills as a working student in Investment Consulting. At Lurse AG, a pension consultancy firm, he was instrumental in developing new investment strategies and analyzing the risk and performance of model portfolios. His collaboration with Lurse AG also extended to his master's thesis, which he completed summa cum laude, focusing on various investment strategies and deriving optimal guarantee levels.

IMPORTANT DEFINITIONS AND DISCLOSURES