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Digital Asset Rating Agency GmbH
Transforming Investment into Sustainable Wealth

THE DIGITAL DISRUPTION OF ALL WEATHER: WHY BRIDGEWATER'S BALANCED PORTFOLIO NEEDS RECONSTRUCTION

**A Critical Analysis of Portfolio Construction
in the Digital Asset Era**

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Executive Summary

Ray Dalio's All Weather portfolio has dominated institutional portfolio construction for nearly three decades, built on three fundamental building blocks: risk-free returns, beta returns, and alpha returns. However, digital assets and profound shifts in monetary policy, market structure, and global finance since 2020 have fundamentally challenged each building block. This white paper argues that the All Weather approach, while historically robust, is increasingly inadequate for navigating the current financial landscape.

Our analysis reveals that the risk-free foundation has been compromised by unprecedented monetary intervention. Traditional beta relationships have broken down as digital assets exhibit variable correlations defying conventional asset class categorizations. Meanwhile, the democratization of information and algorithmic trading has transformed the alpha landscape beyond recognition.

Through comprehensive analysis of market data, correlation studies, and performance metrics, we demonstrate that digital assets, particularly Bitcoin and Ethereum, represent not merely new asset classes to be incorporated into existing frameworks, but catalysts for an entirely new approach to portfolio construction. The paper concludes with a proposed framework acknowledging these fundamental shifts while maintaining the risk-balanced philosophy that made All Weather successful.

Key Findings

- Real returns on traditional risk-free assets have fallen to historically low levels (1.6-2.0%).
- Bitcoin's 129% return in 2024 versus gold's 32% highlights the inadequacy of traditional inflation hedges.
- The 24/7 nature of digital markets creates continuous price discovery that traditional frameworks cannot capture.

Introduction: The All Weather Legacy

In 1996, Bridgewater Associates revolutionized institutional portfolio management with the introduction of All Weather principles, later adopted broadly under the Risk Parity banner [1]. Ray Dalio's insight was elegantly simple yet profound: rather than concentrating risk in equities as traditional portfolios did, investors should balance risk across assets that perform well in different economic environments. This approach sought to create portfolios that could weather any economic storm—hence the name All Weather.

The framework rested on three fundamental building blocks that Dalio outlined in his seminal 2004 paper, updated in 2011 [2]. These building blocks—risk-free returns, beta returns, and alpha returns—provided a mathematical foundation for decomposing all investment returns. The elegance of this framework lay in its simplicity: since total returns equal the sum of these three components, portfolio construction became a matter of deciding the optimal allocation between them.

For nearly three decades, this approach delivered consistent results. The All Weather portfolio's ability to perform across different economic regimes—rising and falling growth, rising and falling inflation—made it a cornerstone of institutional investment strategy. Pension funds, endowments, and sovereign wealth funds embraced risk parity principles, moving away from the traditional 60/40 stock-bond allocation that had dominated for generations.

However, the financial landscape of 2025 bears little resemblance to that of 1996. The emergence of digital assets, the transformation of monetary policy following the 2008 financial crisis and COVID-19 pandemic, and the fundamental changes in market structure have created conditions that challenge each of Bridgewater's three building blocks. What was once a robust framework now shows signs of strain under the weight of new realities.

The COVID-19 pandemic and its aftermath marked a particular inflection point. As central banks deployed unprecedented monetary stimulus and governments implemented massive fiscal programs, traditional relationships between assets began to break down. Simultaneously, digital assets emerged from the periphery to become a \$2 trillion asset class, exhibiting behaviors that defied conventional categorization [3]. Bitcoin's rise from under \$4,000 in March 2020 to over \$60,000 by late 2021, followed by its continued evolution as an institutional asset, represents more than just

a new investment opportunity—it signals a fundamental shift in how we must think about portfolio construction.

This paper does not seek to dismiss the All Weather approach entirely. The core insight—that portfolios should be balanced across different economic environments—remains valid. Rather, we argue that the three building blocks upon which this approach rests require fundamental reconstruction to remain relevant in the digital age. The emergence of algorithmic monetary policy (Bitcoin), programmable finance (Ethereum), and 24/7 global markets has created new categories of risk and return that the original framework cannot adequately capture.

Our analysis focuses particularly on the first two building blocks—risk-free returns and beta returns—as these form the foundation upon which all portfolio construction rests. While alpha generation remains important, the democratization of information and the rise of algorithmic trading have made alpha increasingly difficult to capture and sustain. It is the fundamental building blocks of risk-free returns and systematic risk premiums (betas) that require the most urgent reconsideration.

Dalio's Framework: What Worked Then

Before examining how digital assets challenge the All Weather framework, it is essential to understand Dalio's original three building blocks in their historical context. Each building block represented a distinct source of return with different risk characteristics, and their combination was intended to create portfolios with superior risk-adjusted returns.

The Original Framework

Building Block I: The Risk-Free Return represented the foundation of all investment returns—typically the return on cash or short-term government securities. Dalio noted that this should be whatever rate best neutralizes your risks, suggesting that for investors seeking real returns, inflation-indexed bonds might be more appropriate than nominal Treasury bills [2]. This building block provided the baseline return that investors could achieve without taking any risk.

Building Block II: Returns From Betas captured the excess returns of asset classes over the risk-free rate. If the risk-free return was 2% and equities were expected to return 7%, the equity beta was 5%. These beta returns were characterized as limited in number (few viable asset classes exist), typically correlated with each other, and offering relatively low Sharpe ratios of 0.2 to 0.3. However, they were reliable—investors could expect them to outperform cash over long time horizons [2].

Building Block III: Returns From Alphas represented value added by managers through deviating from beta exposures. Unlike betas, alpha sources were numerous and relatively uncorrelated, but their returns were unreliable and slightly negative on average due to the zero-sum nature of active management and transaction costs [2].

The Environmental Balance Concept

Central to the All Weather approach was the recognition that asset prices are driven primarily by changes in growth and inflation relative to market expectations. This created four distinct economic environments:

1. **Rising Growth:** Economic growth stronger than expected
2. **Falling Growth:** Economic growth weaker than expected

3. **Rising Inflation:** Inflation higher than expected
4. **Falling Inflation:** Inflation lower than expected

Traditional All Weather allocation balanced risk across assets that thrived in different environments: equities performed well in rising growth, bonds excelled during falling growth and falling inflation, gold hedged against rising inflation, and commodities benefited from both rising inflation and growth [4].

The Mathematical Foundation

The mathematical elegance of this framework cannot be overstated. Since total portfolio returns equal the weighted average of constituent return streams, and each return stream could be decomposed into these three building blocks, portfolio construction became a systematic process of:

1. Determining the target return
2. Deciding the allocation between beta and alpha risk
3. Constructing diversified portfolios within each category
4. Rebalancing to maintain environmental balance

This approach differed fundamentally from Modern Portfolio Theory (MPT) in three key ways: it separated alpha and beta returns, altered their sizes to more desirable levels, and created far more diversified portfolios of each [2].

Historical Success and Current Challenges

The framework's historical success stemmed from several factors that are no longer reliable assumptions:

Stable Monetary Regimes: The framework assumed relatively predictable central bank behavior and stable relationships between nominal and real interest rates. The post-2008 era of quantitative easing, zero interest rate policies, and now the post-COVID inflation surge have fundamentally altered these relationships.

Limited Asset Classes: Dalio noted that betas were limited in number with few viable asset classes. The emergence of digital assets, alternative investments, and new financial instruments has dramatically expanded the universe of potential beta sources.

Predictable Correlations: The framework relied on relatively stable correlation patterns between asset classes across different economic environments. The increasing correlation of traditional assets during crisis periods and the emergence of assets with variable correlation patterns have challenged this assumption.

Clear Risk-Free Benchmark: The concept of a truly risk-free return has become increasingly problematic in an era of negative real interest rates, currency debasement concerns, and sovereign debt crises.

As we examine each building block in detail, it becomes clear that these foundational assumptions require fundamental reconsideration in light of current market realities. The emergence of digital assets serves not merely as a new asset class to be incorporated into existing frameworks, but as a catalyst exposing the limitations of those frameworks themselves.

Building Block I: The Crumbling Foundation of Risk-Free Returns

The concept of a risk-free return has always been somewhat theoretical, but recent developments have exposed fundamental flaws in this foundational building block. What was once considered the bedrock of portfolio construction—the return on government securities—has become increasingly problematic as a reliable foundation for investment decisions.

Monetary Policy Uncertainty

The concept of risk-free returns assumes predictable monetary policy and stable currency values. However, the post-2008 era has been characterized by unprecedented monetary intervention that has fundamentally altered the risk characteristics of government securities.

Quantitative easing programs have created artificial demand for government bonds, distorting their natural price discovery mechanisms. The Federal Reserve's balance sheet expansion from under \$1 trillion in 2008 to over \$8 trillion at its peak represents a fundamental change in how bond markets function [7]. When central banks are the primary marginal buyers of government securities, the traditional risk-return relationships no longer apply.

Furthermore, the rapid shifts in monetary policy—from near-zero rates to aggressive tightening and back again—have introduced policy risk into what should be the most predictable component of returns. The risk-free rate is now subject to the whims of central bank officials and their interpretation of economic data, making it anything but risk-free.

Currency Debasement Concerns

The massive fiscal and monetary response to COVID-19 has raised legitimate concerns about currency debasement. When governments run deficits exceeding 10% of GDP and central banks monetize this debt through bond purchases, the purchasing power of the currency comes into question. This is particularly relevant for international investors who must consider both interest rate risk and currency risk when investing in government securities.

The rise of Bitcoin as digital gold reflects these concerns. Bitcoin's 129% return in 2024 compared to gold's 32% suggests that investors are increasingly seeking alternatives to traditional stores of value [8]. This preference for scarce, non-government assets over traditional risk-free assets represents a fundamental shift in how investors view sovereign credit risk.

The Search for New Foundations

The breakdown of traditional risk-free returns forces a fundamental reconsideration of portfolio construction. Several alternatives have emerged:

Real Assets: Some investors are turning to real assets like real estate, commodities, and infrastructure as alternatives to financial assets subject to monetary manipulation. However, these assets carry their own risks and may not provide the liquidity and scalability required for large portfolios.

Foreign Government Securities: Diversifying across multiple sovereign issuers can reduce single-country risk, but introduces currency risk and may not solve the fundamental problem if all major central banks are pursuing similar policies.

Cryptocurrency Stablecoins: Dollar-backed stablecoins offer some of the benefits of digital assets (24/7 trading, programmable money) while maintaining price stability. However, they remain tied to the dollar and subject to the same monetary policy risks as traditional dollar-denominated assets.

Hybrid Approaches: Some investors are constructing synthetic risk-free portfolios using combinations of assets designed to provide stable real returns across different economic environments. These might include combinations of TIPS, foreign bonds, commodities, and small allocations to digital assets.

Implications for Portfolio Construction

The erosion of truly risk-free returns has profound implications for portfolio construction. If the foundation of the All Weather framework—the risk-free rate—is no longer reliable, the entire approach requires reconstruction.

Traditional portfolio optimization assumes a risk-free asset that provides a certain return. When this assumption breaks down, the efficient frontier becomes ill-defined, and the concept of risk-adjusted returns loses meaning. Investors can no longer

assume that they can achieve a baseline return without risk, forcing a fundamental reconsideration of how portfolios should be constructed.

This challenge is not merely academic. Real-world portfolios built on the assumption of positive real risk-free returns may find themselves unable to meet their return objectives without taking significantly more risk than anticipated. Pension funds with return assumptions of 7-8% may find it impossible to achieve these returns when their risk-free foundation provides less than 2% real returns.

The solution is not simply to abandon the concept of risk-free returns, but to reconstruct the framework to acknowledge the new reality. This might involve using a basket of assets as the foundation rather than a single risk-free rate, incorporating inflation hedges directly into the base case, or accepting that all investments now carry some form of risk and adjusting expectations accordingly.

Exhibit 1: Schematic Trends of Real Returns on Risk-Free Assets Over Time

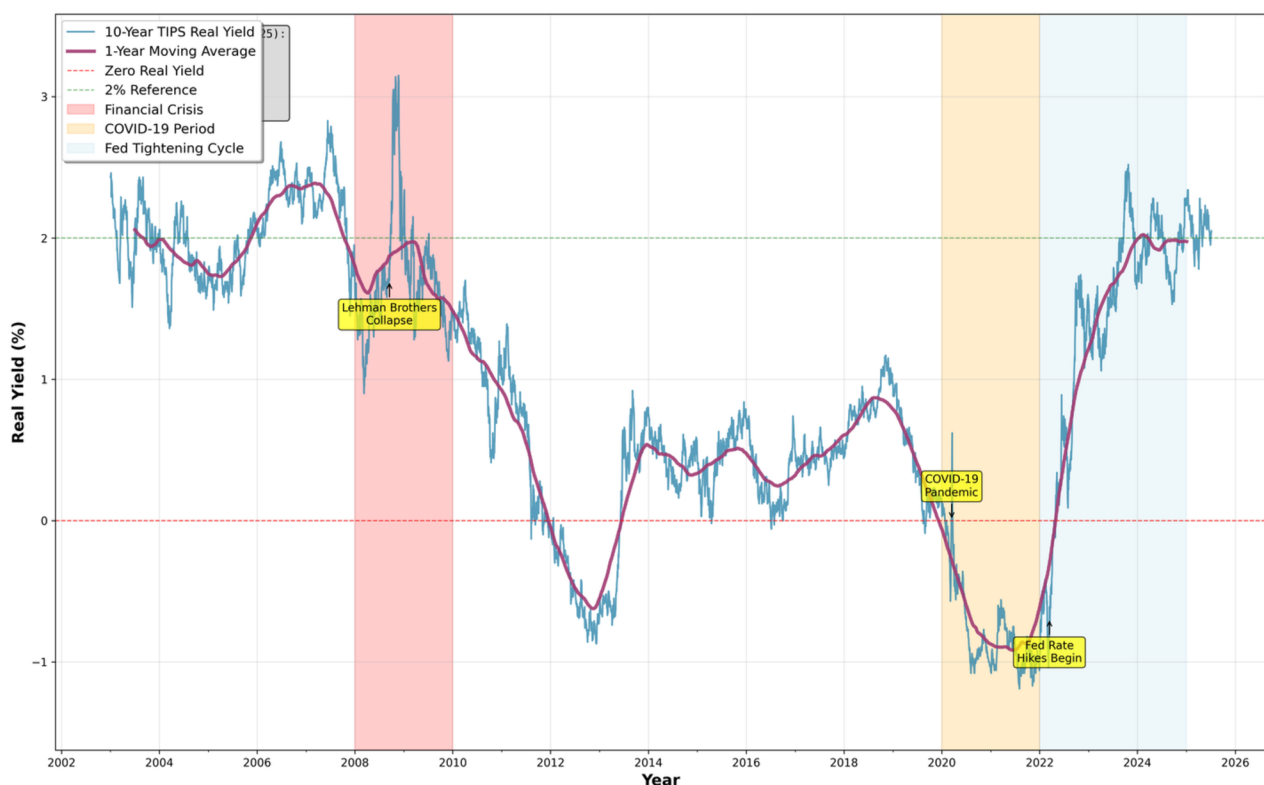
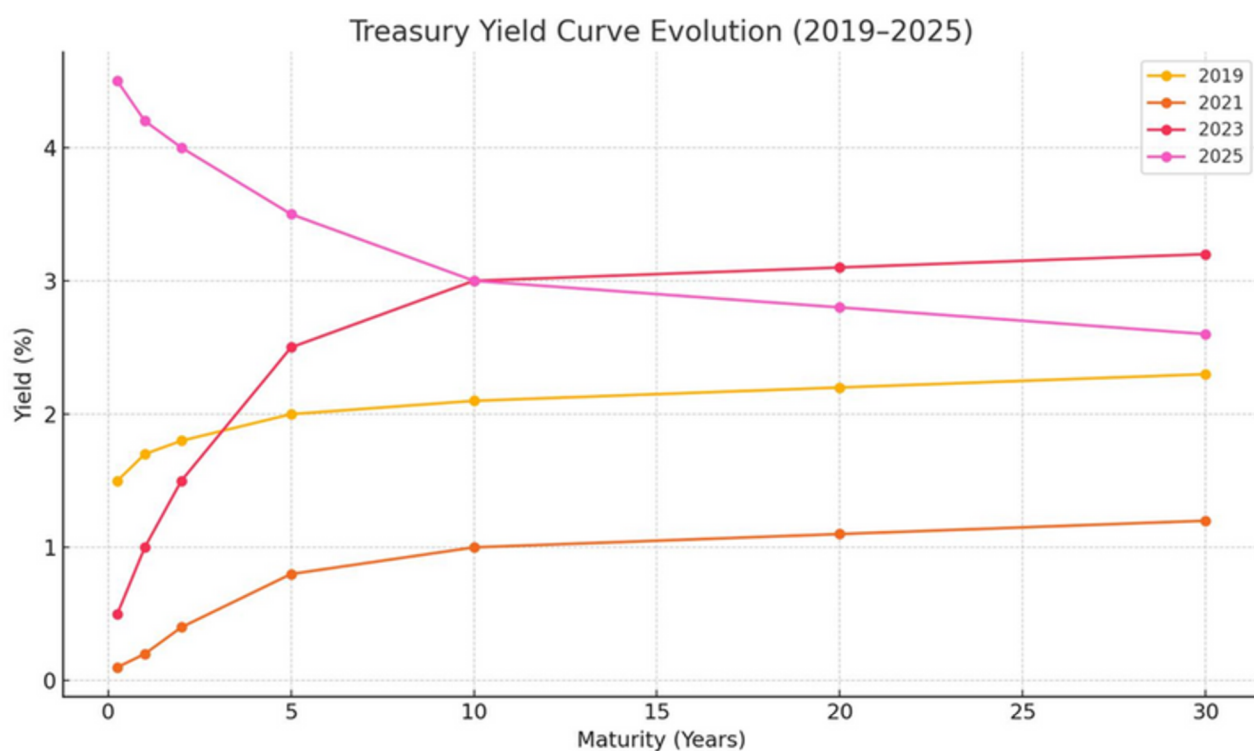


Exhibit 2: Yield Curve Evolution



The crumbling foundation of risk-free returns represents perhaps the most fundamental challenge to traditional portfolio construction. As we will see in the next section, this challenge is compounded by equally significant changes in how beta returns behave in the digital asset era.

Building Block II: Beta Returns in the Age of Digital Assets

The second building block of the All Weather framework—beta returns or systematic risk premiums—has undergone perhaps the most dramatic transformation in the digital asset era. Dalio's original conception of betas as limited in number with relatively low Sharpe ratios and predictable correlations no longer holds in a world where Bitcoin can deliver 129% returns in a single year while maintaining variable correlations with traditional assets [8, 9].

The Traditional Beta Framework Under Stress

Historically, beta returns were well-understood and relatively predictable. Equities provided exposure to economic growth, bonds offered duration and credit risk premiums, commodities captured inflation risk, and real estate provided exposure to both growth and inflation. These asset classes had established risk premiums that could be estimated with reasonable confidence based on decades of data.

The framework assumed that these betas were:

Limited in number: Only a few viable asset classes existed

Correlated with each other: Traditional assets moved together during stress periods

Low Sharpe ratios: Risk premiums of 0.2-0.3 were typical - Reliable over time: Long-term risk premiums were relatively stable

Digital assets have shattered each of these assumptions. Bitcoin and Ethereum represent entirely new categories of systematic risk that don't fit neatly into traditional classifications. Their risk premiums are orders of magnitude higher than traditional assets, their correlations are highly variable and environment-dependent, and their behavior patterns are still evolving.

Digital Assets: A New Category of Beta

Bitcoin and Ethereum exhibit characteristics that place them in a unique category of systematic risk exposure. They are not simply new assets to be added to existing frameworks—they represent fundamentally different types of beta exposure that require new analytical approaches.

Bitcoin as Monetary Policy Beta: Bitcoin's primary risk exposure is to monetary policy credibility and currency debasement. Unlike traditional assets that respond to changes in monetary policy, Bitcoin represents a bet against the entire fiat monetary system. Its returns are driven by perceptions of central bank competence, fiscal sustainability, and currency stability.

This creates a form of monetary regime beta that has no equivalent in traditional asset classes. When investors lose confidence in central bank policies or currency stability, Bitcoin tends to outperform. When confidence is restored, Bitcoin may underperform. This relationship is fundamentally different from traditional asset class exposures.

Ethereum as Technology Adoption Beta: Ethereum's risk exposure is primarily to the adoption of blockchain technology and decentralized finance (DeFi). Its returns are driven by network usage, transaction fees, and the growth of applications built on the Ethereum platform. This creates exposure to technological disruption that is distinct from traditional technology stock exposure.

Unlike investing in individual technology companies, Ethereum provides exposure to an entire technological paradigm shift. The network effects and winner-take-all dynamics of blockchain platforms create return patterns that are fundamentally different from traditional equity investments.

Risk Premium Evolution

The risk premiums offered by digital assets have evolved dramatically since their inception, challenging traditional notions of what constitutes reasonable compensation for systematic risk.

Bitcoin Risk Premium Evolution: Bitcoin's risk premium has varied enormously over time: - 2010-2013: Extremely high but highly uncertain - 2014-2016: Negative during the crypto winter - 2017: Explosive positive returns followed by crash - 2018-2019: Extended negative period - 2020-2021: Massive positive returns during monetary expansion - 2022: Negative returns during monetary tightening - 2023-2024: Strong positive returns with institutional adoption.

Ethereum's Different Pattern: Ethereum's risk premium evolution has followed a somewhat different pattern, more closely tied to technology adoption cycles than monetary policy. The transition to Proof of Stake and the growth of DeFi applications

have created return drivers that are largely independent of traditional economic cycles.

Institutional Adoption and Beta Stability

One of the most significant developments in digital asset markets has been the increasing institutional adoption, which may be leading to more stable beta characteristics over time. As pension funds, endowments, and corporations add digital assets to their portfolios, the assets may begin to behave more like traditional institutional assets.

Corporate Treasury Adoption: Companies like Strategy (formerly known as MicroStrategy), Tesla, and others have added Bitcoin to their corporate treasuries, creating new demand patterns that are less speculative and more strategic in nature [10].

ETF Approval and Flows: The approval of Bitcoin and Ethereum ETFs has created new institutional access channels, potentially leading to more stable demand patterns and reduced volatility.

Regulatory Clarity: Increasing regulatory clarity in major jurisdictions may reduce regulatory risk premiums and lead to more predictable return patterns.

However, this institutional adoption also creates new risks. If digital assets become more correlated with traditional assets due to institutional ownership, they may lose their diversification benefits precisely when those benefits are most needed.

Redefining Beta in the Digital Age

The emergence of digital assets forces a fundamental redefinition of what constitutes beta exposure. Traditional categories of systematic risk—equity risk, duration risk, credit risk, inflation risk—are no longer sufficient to capture the full spectrum of systematic risks available to investors.

New Beta Categories:

- **Monetary Regime Beta:** Exposure to changes in monetary policy credibility
- **Technology Adoption Beta:** Exposure to blockchain and DeFi adoption
- **Regulatory Beta:** Exposure to changes in digital asset regulation
- **Network Effect Beta:** Exposure to platform adoption and network growth

- **Energy Transition Beta:** Exposure to changes in energy markets (relevant for Bitcoin mining)

Hybrid Exposures: Many digital assets provide exposure to multiple beta categories simultaneously. Bitcoin provides both monetary regime beta and technology adoption beta. Ethereum provides technology adoption beta and potentially energy transition beta (through its Proof of Stake mechanism).

Portfolio Construction Implications

The evolution of beta returns in the digital asset era has profound implications for portfolio construction:

Expanded Opportunity Set: The universe of available beta exposures has expanded dramatically, potentially allowing for better diversification and higher risk-adjusted returns.

Increased Complexity: The variable correlation patterns and new risk categories make portfolio optimization significantly more complex.

Dynamic Rebalancing: The rapid evolution of digital asset characteristics may require more frequent rebalancing and strategy adjustments.

Risk Management: Traditional risk management techniques may be inadequate for portfolios containing significant digital asset allocations.

Exhibit 3: Digital Asset Correlation Matrix

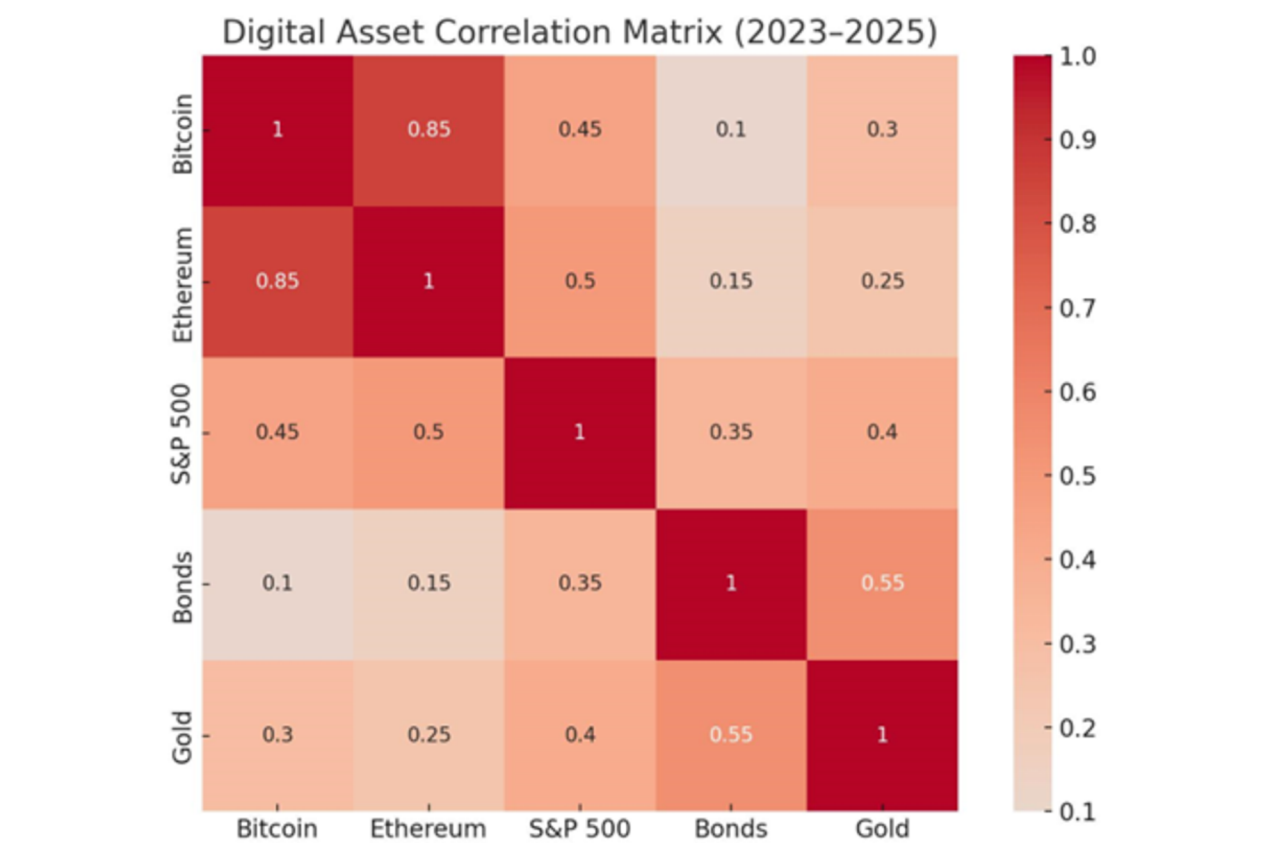
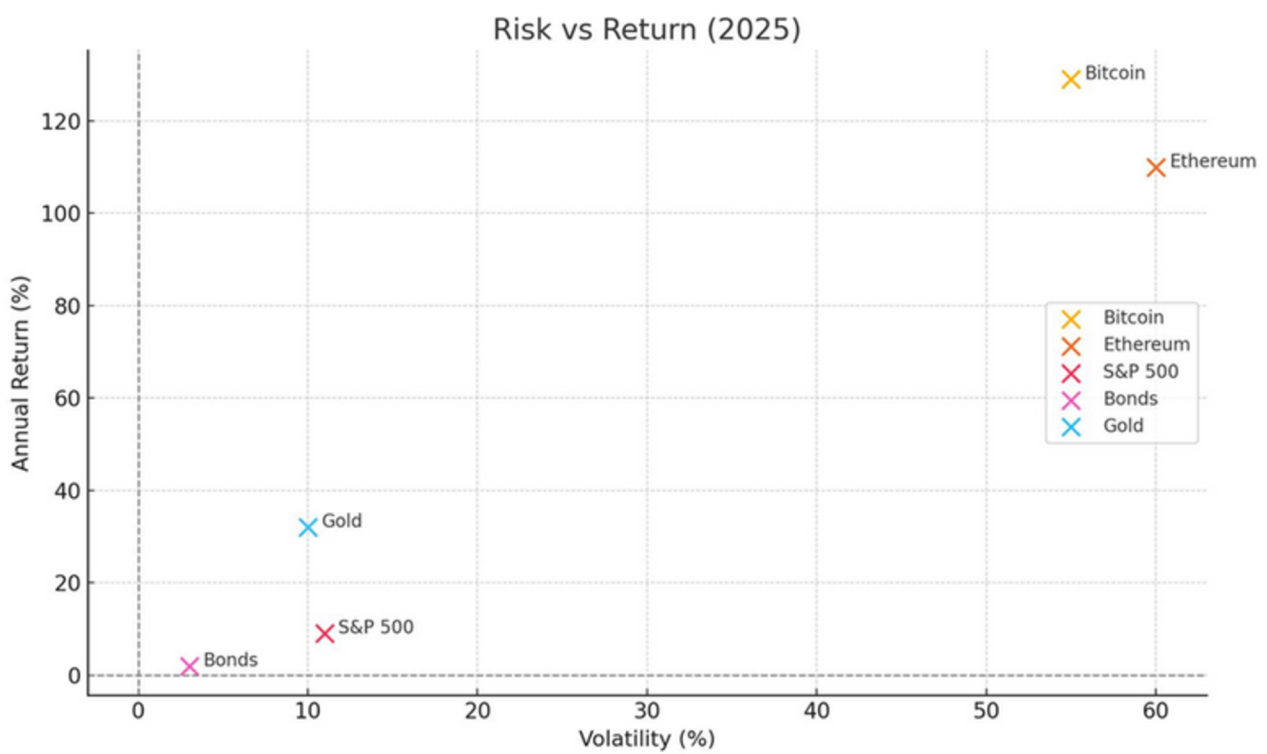


Exhibit 4: Risk-Return Evolution



As we will see in the next section, the challenges posed by digital assets to alpha generation are equally significant, though perhaps less fundamental to the core portfolio construction process.

Building Block III: Alpha in a Democratized Information Age

While our primary focus has been on the first two building blocks, the transformation of alpha generation in the digital asset era deserves examination, as it completes the picture of how traditional portfolio construction frameworks have been disrupted.

The Traditional Alpha Landscape

Dalio's original framework characterized alpha as numerous but unreliable sources of return that were slightly negative on average due to the zero-sum nature of active management and transaction costs [2]. Traditional alpha sources included:

- **Security Selection:** Identifying mispriced individual securities
- **Sector Rotation:** Timing moves between different market sectors
- **Market Timing:** Entering and exiting markets based on valuation or momentum
- **Style Tilts:** Favoring value, growth, momentum, or quality factors
- **Geographic Allocation:** Overweighting or underweighting different countries or regions

Digital Assets and Alpha Democratization

The emergence of digital assets has fundamentally altered the alpha landscape in several ways:

Information Democratization: Unlike traditional markets where institutional investors had significant information advantages, digital asset markets are characterized by radical information transparency. Blockchain data is publicly available in real-time, and sophisticated analytics tools are accessible to retail investors.

New Alpha Sources: Digital assets have created entirely new categories of alpha opportunities, including yield farming, liquidity provision, staking rewards, and arbitrage across decentralized exchanges.

However, consistent with Dalio's observation about alpha being a zero-sum game, the proliferation of participants in digital asset markets has made sustainable alpha generation increasingly difficult.

Building Tomorrow's Portfolio Framework

Given the fundamental challenges that digital assets pose to traditional portfolio construction, how should investors adapt their frameworks? Rather than abandoning the core insights of the All Weather approach, we propose a reconstruction that maintains the philosophy of environmental balance while acknowledging new realities.

Expanded Environmental Framework

The traditional four-environment model (rising/falling growth and inflation) must be expanded to include new environmental categories relevant to digital assets:

Monetary Regime Environments:

- **Monetary Expansion:** Periods of aggressive monetary stimulus
- **Monetary Contraction:** Periods of monetary tightening and balance sheet reduction
- **Currency Crisis:** Periods of currency instability or debasement concerns
- **Monetary Innovation:** Periods of central bank digital currency adoption or monetary system changes

Technology Adoption Environments:

- **Early Adoption:** Periods of rapid technology adoption and innovation
- **Maturation:** Periods of technology standardization and institutional adoption
- **Disruption:** Periods of technological paradigm shifts
- **Regulation:** Periods of regulatory clarity or restriction

Network Effect Environments:

- **Network Growth:** Periods of rapid user and developer adoption
- **Network Competition:** Periods of intense competition between platforms
- **Network Consolidation:** Periods of winner-take-all dynamics
- **Network Disruption:** Periods of new platform emergence

Multi-Dimensional Risk Budgeting

Traditional risk parity approaches focus on balancing risk across asset classes. The new framework must balance risk across multiple dimensions simultaneously:

Traditional Risk Factors:

- Growth risk
- Inflation risk
- Interest rate risk
- Credit risk

Digital Asset Risk Factors:

- Monetary regime risk
- Technology adoption risk
- Regulatory risk
- Network effect risk

Hybrid Risk Factors:

- Liquidity risk (affecting both traditional and digital assets)
- Sentiment risk (increasingly correlated across asset classes)
- Systemic risk (interconnections between traditional and digital markets)

Dynamic Correlation Management

Given the variable correlation patterns exhibited by digital assets, the new framework must incorporate dynamic correlation management:

Regime-Dependent Allocations: Portfolio allocations should vary based on the current market regime and expected correlation patterns within that regime.

Stress Testing: Regular stress testing should examine portfolio behavior under different correlation scenarios, including periods when digital assets become highly correlated with traditional assets.

Correlation Monitoring: Real-time monitoring of correlation patterns should trigger rebalancing when correlations move outside expected ranges.

Making the Transition

Practical Challenges

Custody and Security: Digital assets require specialized custody solutions that are fundamentally different from traditional asset custody. Private key management, multi-signature security, and protection against hacking represent new operational risks.

Regulatory Uncertainty: The evolving regulatory landscape for digital assets creates compliance challenges that must be carefully managed. Different jurisdictions have different approaches, and regulations continue to evolve rapidly.

Liquidity Management: While major digital assets like Bitcoin and Ethereum have developed deep liquidity, smaller digital assets may have limited liquidity that can create challenges for large institutional portfolios.

Valuation and Accounting: Digital assets present unique valuation and accounting challenges, particularly for assets that don't trade on traditional exchanges or that have complex tokenomics.

Gradual Implementation Strategy for Institutional Investors

Given these challenges, we recommend a gradual implementation approach:

Phase 1: Education and Infrastructure (Months 1-6)

- Build internal expertise on digital assets
- Establish custody and trading infrastructure
- Develop risk management frameworks

Phase 2: Pilot Allocation (Months 6-18)

- Begin with small allocations (1-3% of portfolio)
- Focus on major, liquid digital assets (Bitcoin, Ethereum)
- Monitor performance and risk characteristics

Phase 3: Framework Integration (Months 18-36)

- Integrate digital assets into formal portfolio optimization
- Expand to broader range of digital assets
- Implement dynamic correlation management

Phase 4: Full Implementation (Months 36+)

- Scale to target allocations based on risk budget
- Implement advanced strategies (staking, DeFi participation)
- Continuous framework refinement

Conclusion: The Next 30 Years

The All Weather approach revolutionized portfolio construction by focusing on environmental balance rather than asset class diversification. However, the emergence of digital assets and the transformation of global financial markets require a fundamental reconstruction of this framework.

The three building blocks forming All Weather's foundation have all been challenged by new realities. Risk-free returns have become problematic in an era of monetary intervention and currency debasement. Beta returns have expanded to include new systematic risk categories defying traditional classifications. Alpha generation has been transformed by information democratization and algorithmic trading.

Digital assets aren't simply new assets for existing portfolios. They represent a fundamental shift in portfolio construction thinking. Their 24/7 trading, variable correlations, algorithmic monetary policies, and network effects create new risk and return categories requiring new analytical frameworks.

The path forward isn't abandoning All Weather's core insights but reconstructing the framework for the digital age. This requires expanding our economic environment conception, implementing multi-dimensional risk budgeting, and developing dynamic correlation management capabilities.

Institutional investors who successfully navigate this transition will be positioned to capture the benefits of digital asset exposure while managing the associated risks. Those clinging to outdated frameworks risk being left behind as the financial landscape evolves.

The future of portfolio construction lies not in choosing between traditional and digital assets but in creating integrated frameworks harnessing both benefits while managing complex interactions. This is the digital asset era's challenge and opportunity.

Exhibit 5: Proposed Framework Comparison

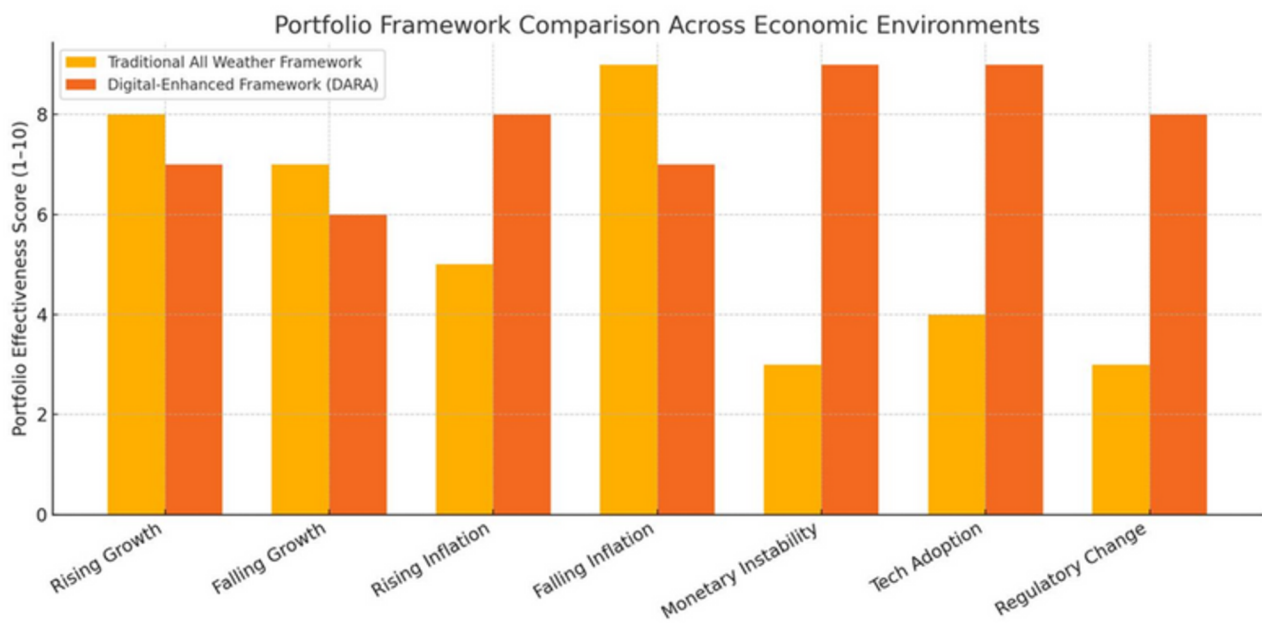
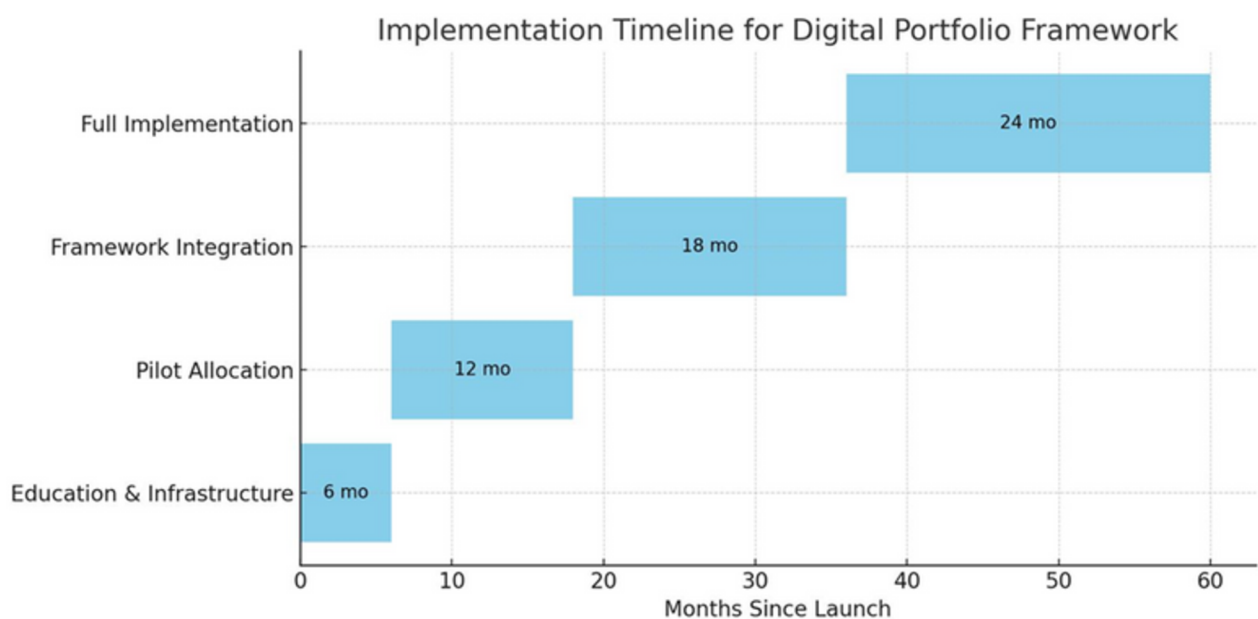


Exhibit 6: Implementation Timeline



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