CFA LEVEL 1

Alternative Investments

Introduction to Digital Assets

CHARTER DOOZY

DIGITAL ASSET INVESTMENT RISK, RETURN, AND DIVERSIFICATION

Big Picture Overview

- Digital assets offer new **opportunities for return** — and new risks.

- Their **volatility** and **non-traditional behavior** make them complex investment vehicles.

- Key concepts include **risk characteristics**, **return behavior**, and **portfolio diversification potential**.

- Understanding digital asset performance helps build **more resilient portfolios**.

- The CFA exam expects you to **analyze digital assets like any other investment** — with discipline and clarity.

Risk Characteristics of Digital Assets

High Volatility and Unique Risk Factors

• Digital assets often show **extreme price volatility**, more than equities or commodities.

• Key risks: **regulatory**, **technological**, **operational**, **market manipulation**, and **custody risk**.

• Unlike traditional assets, risks can come from **software bugs**, **protocol changes**, and **hacks.**

• Regulatory uncertainty is **region-specific** and rapidly evolving.

Return Characteristics of Digital Assets

Unconventional Return Patterns

- Historically, digital assets (like Bitcoin) have delivered **exceptionally high returns**.

- Returns are **non-normal** — they exhibit **skewness**, **kurtosis**, and **sharp drawdowns**.

- Performance varies widely across tokens and time periods.

- **Momentum and narrative-driven behavior** (e.g., news, hype cycles) influence returns.

- **Price discovery** is fragmented across platforms and lacks unified oversight.

Diversification Potential

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Can Digital Assets Improve Portfolio Diversification?

- Initially, crypto had **low correlation** with traditional assets — useful for diversification.

- However, during **market stress**, correlations often **increase** (risk-on/risk-off behavior).

- Digital assets are increasingly behaving like **risk assets**, not hedges.

- Still, **small allocations** may improve **risk-adjusted returns** if managed wisely.

Correlation Heatmap: Crypto vs Traditional Assets
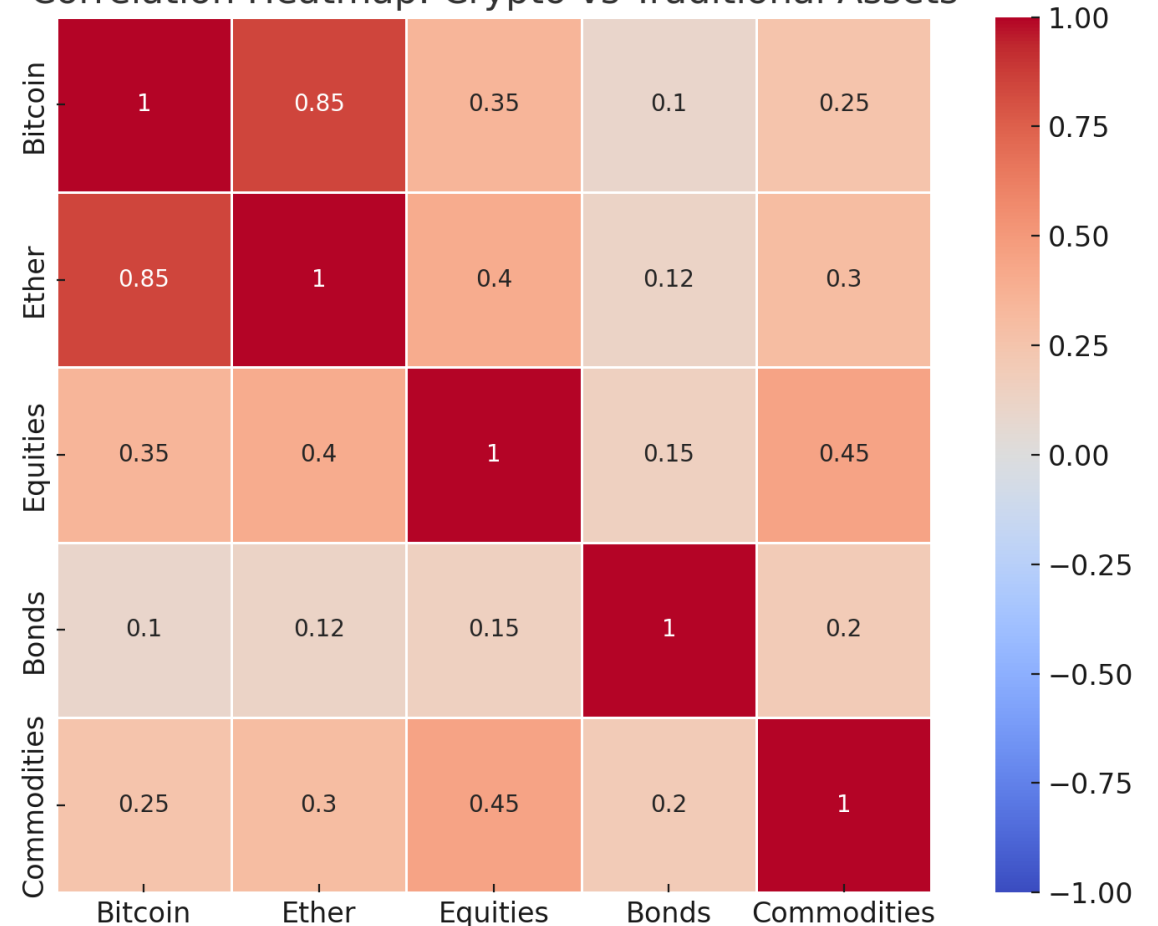
Investment Features

Feature	Digital Assets	Equities	Bonds	Real Estate	Commodities
Return Potential	Very high (but speculative)	High (linked to earnings growth)	Low to moderate (yield-based)	Moderate (rental + value)	Moderate (price fluctuation)
Volatility	Very high	Moderate to high	Low	Low to moderate	High
Correlation	Historically low (but increasing)	High with economic cycle	Often negatively correlated	Low to moderate	Variable
Intrinsic Value	Largely speculative	Cash flows from business	Fixed interest payments	Income + tangible value	Use-case driven
Liquidity	High for major tokens; low for rest	High (public markets)	High (govt bonds); moderate (corp)	Low to moderate	Moderate to high
Regulatory Framework	Emerging and inconsistent	Well-established	Highly regulated	Heavily regulated	Regulated (spot/futures)
Operational Risk	High (hacks, key loss, exchange risk)	Low (custodians, brokers)	Low	Medium (maintenance, tenants)	Low to medium
Access	Global and 24/7	Public market hours	Market hours; regulated access	Geographically limited	Market-dependent

Key Takeaways

- Digital assets come with **distinct risk factors** unfamiliar in traditional finance.

- They can offer **high returns** but are **highly volatile and non-normal**.

- Diversification benefits are **real but conditional** — especially during market crises.

- Portfolio inclusion requires careful **quantitative analysis and qualitative judgment**.

Which of the following is most likely a unique risk associated with digital assets?

A. Interest rate risk

B. Software protocol failure

C. Currency risk

D. Market liquidity risk

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Correct Answer: B

Software bugs and protocol failures are unique risks to digital assets.

Digital assets are least likely to show which of the following characteristics?

A. Momentum-driven price movements

B. Low volatility

C. Regulatory uncertainty

D. Fragmented price discovery

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A. Momentum-driven price movements

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D. Fragmented price discovery

Correct Answer: B

Digital assets are typically very volatile.

Which statement best describes the correlation of digital assets with traditional asset classes?

A. Always uncorrelated

B. Highly correlated in all markets

C. Low correlation, but rising in times of market stress

D. Perfectly inversely correlated with bonds

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Correct Answer: C

Correlation can rise during systemic market events.

Adding a small allocation of digital assets to a traditional portfolio is most likely to:

A. Decrease expected returns and increase volatility

B. Reduce diversification due to high correlation

C. Improve risk-adjusted returns, if carefully managed

D. Eliminate market risk altogether

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Correct Answer: C

Small allocations may boost Sharpe ratio despite high volatility..

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A. A secure offline storage for digital assets

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Correct Answer: A

Cold wallets are disconnected from the internet for security.

You Mastered

- Digital asset risk characteristics: volatility, regulatory and tech risk

- Return patterns: high potential, non-normal distribution

- Diversification potential: conditional, needs evaluation

- Portfolio application: theory and caution needed