

**wbs**

WARWICK BUSINESS SCHOOL  
THE UNIVERSITY OF WARWICK

Gillmore Centre for  
Financial Technology

**WBS Gillmore  
Centre Academic  
Conference  
27 & 28 October  
2023**

**W** [wbs.ac.uk/go/gillmore](https://wbs.ac.uk/go/gillmore)

**in** WBS Gillmore Centre


# WBS Gillmore Centre Crypto Dashboard

Wenjia Zhang, Dr. Timothy Law, Dr. Daniel Philps

# Features and Functionalities

- **Live Crypto Information & Data**
- **Real-time Insights for Crypto & Financial Indices**
- **Advanced Analytics in Live Chat with AI Advisor**
- **Cutting-edge and User Friendly**





Gillmore Centre for Financial Technology

## Crypto Dashboard

- Home
- Cryptocurrencies
- AI Investment Analyst
- Documentation
- Contact us

## Global Crypto Stats

Total Cryptocurrencies	Total Exchanges	Total Market Cap	Total 24h Volume	Total Markets
31,035	164	1.3T	120.7B	37,915

## Correlations: Top Cryptos and Financial Indices

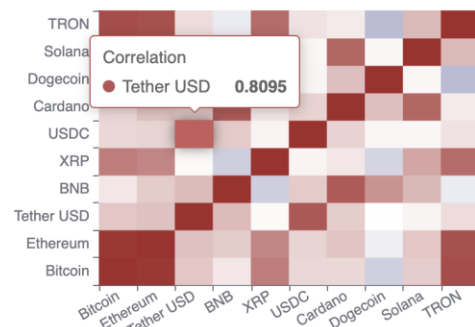
Financial Indices: M2, Gold, CPI, SOFR, IEF, VIX, S&P500.

Please select a time period:

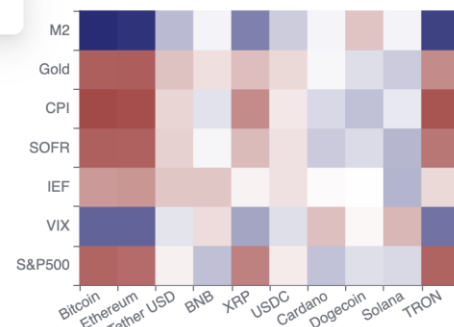
- 1y
- 3y
- 5y

Update at: 29-Sep-23 10:30:18

Top Cryptos v.s. Top Cryptos



Top Cryptos v.s. Financial Indices



Global Stats

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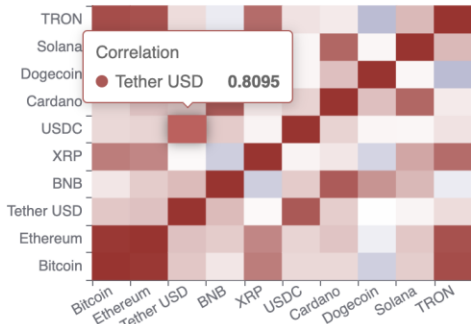
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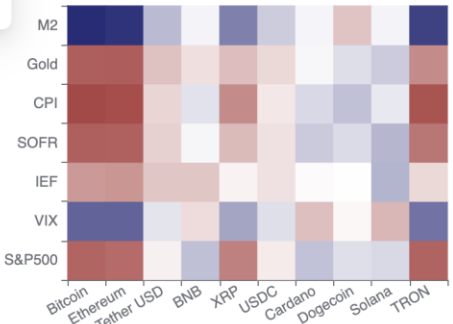
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#### Top Cryptos v.s. Top Cryptos



#### Top Cryptos v.s. Financial Indices



Global Stats

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1y

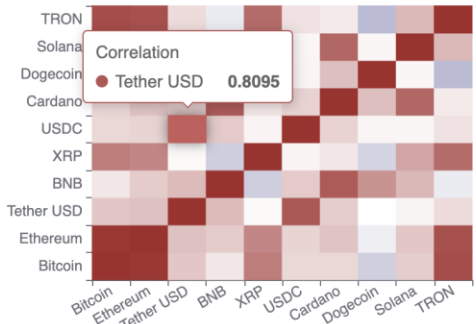
1y

3y

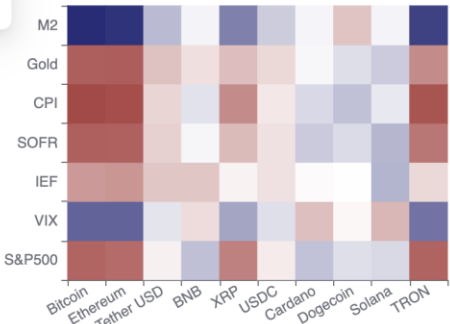
5y

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Top Cryptos v.s. Top Cryptos



Top Cryptos v.s. Financial Indices



Correlation Matrix of Top 10 Cryptos

Correlation Matrix of Top 10 Cryptos and Financial Indices

# Homepage

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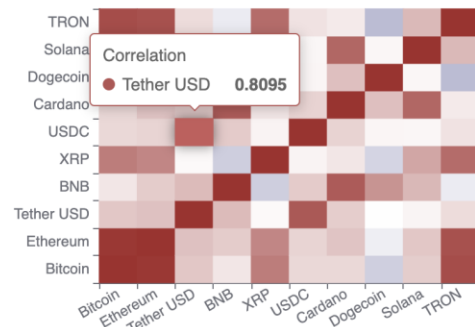
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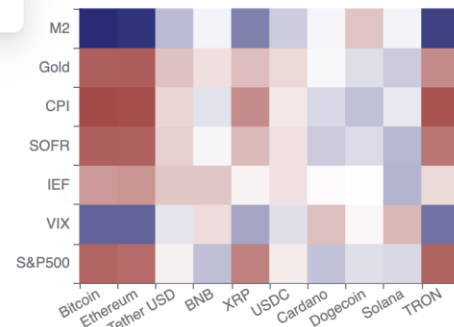
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Top Cryptos v.s. Top Cryptos



Top Cryptos v.s. Financial Indices



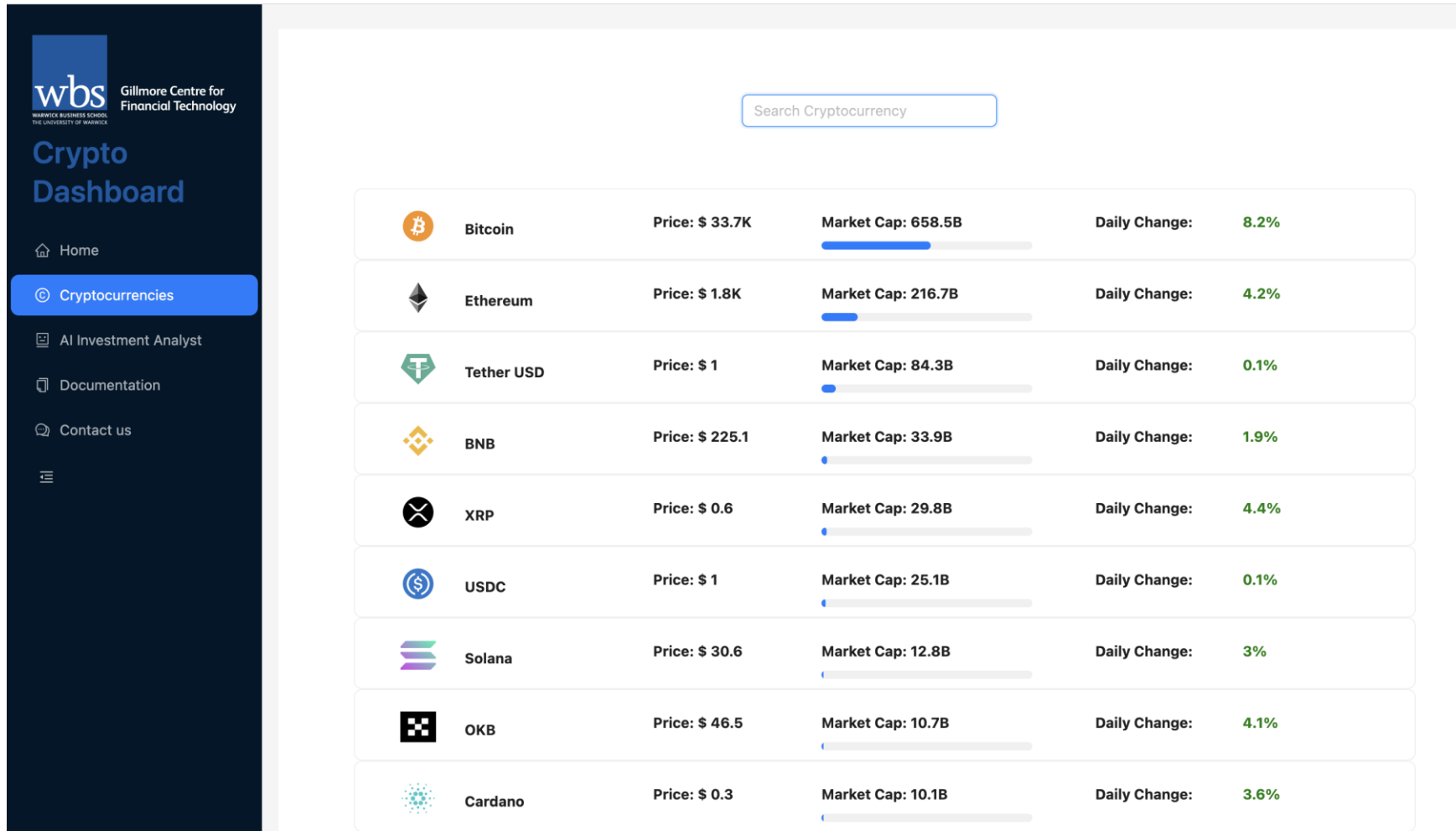
Update Every Day,  
Selectable Time Period

Correlation  
Matrix  
of Top 10  
Cryptos

Correlation  
Matrix  
of Top 10  
Cryptos and  
Financial  
Indices



# Cryptocurrencies



# Cryptocurrencies

Search by Name

The screenshot shows a 'Crypto Dashboard' with a search bar at the top right labeled 'Search Cryptocurrency'. A sidebar on the left contains navigation links: Home, Cryptocurrencies (highlighted), AI Investment Analyst, Documentation, and Contact us. The main content area displays a table of cryptocurrencies with their respective icons, names, prices, market caps, and daily percentage changes. Each row also includes a horizontal progress bar representing the market cap.

Coin	Price	Market Cap	Daily Change
Bitcoin	\$ 33.7K	658.5B	8.2%
Ethereum	\$ 1.8K	216.7B	4.2%
Tether USD	\$ 1	84.3B	0.1%
BNB	\$ 225.1	33.9B	1.9%
XRP	\$ 0.6	29.8B	4.4%
USDC	\$ 1	25.1B	0.1%
Solana	\$ 30.6	12.8B	3%
OKB	\$ 46.5	10.7B	4.1%
Cardano	\$ 0.3	10.1B	3.6%












# Cryptocurrencies

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## Crypto Dashboard

- Home
- Cryptocurrencies**
- AI Investment Analyst
- Documentation
- Contact us

Search by Name

	Bitcoin	Price: \$ 33.7K	Market Cap: 658.5B	Daily Change: 8.2%
	Ethereum	Price: \$ 1.8K	Market Cap: 216.7B	Daily Change: 4.2%
	Tether USD	Price: \$ 1	Market Cap: 84.3B	Daily Change: 0.1%
	BNB	Price: \$ 225.1	Market Cap: 33.9B	Daily Change: 1.9%
	XRP	Price: \$ 0.6	Market Cap: 29.8B	Daily Change: 4.4%
	USDC	Price: \$ 1	Market Cap: 25.1B	Daily Change: 0.1%
	Solana	Price: \$ 30.6	Market Cap: 12.8B	Daily Change: 3%
	OKB	Price: \$ 46.5	Market Cap: 10.7B	Daily Change: 4.1%
	Cardano	Price: \$ 0.3	Market Cap: 10.1B	Daily Change: 3.6%

Name, Icon,  
Current Price,  
Market Cap,  
Daily Change.

# Crypto Details

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**Crypto Dashboard**

- Home
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## Bitcoin (BTC)

Bitcoin is a digital currency with a finite supply, allowing users to send/receive money without a central bank/government, often nicknamed "Digital Gold".

Price & Return    Return & Inflation    BTC Halving

7d    **Change: 19.06%**    **Current Bitcoin Price: \$ 34K**

Select the time Period

Price and Return of Bitcoin in USD

Price of Bitcoin in USD    Return of Bitcoin (%)

[Download](#)

### Bitcoin Value Statistics

Price to USD	\$ 33.7K
Rank	1
Change	8.20 %
24h Volume	49.6B
Market Cap	\$ 658.4B
All-time-high(daily avg.)	\$ 68.8K

### Other Stats Info

Number Of Markets	3888
Number Of Exchanges	121
Approved Supply	✓
Total Supply	\$ 19.5M
Circulating Supply	\$ 19.5M

### Bitcoin Links

- Website [bitcoin.org](https://bitcoin.org)
- Website [bitcoinformagazine.com](https://bitcoinformagazine.com)
- Bitcointalk [bitcointalk.org](https://bitcointalk.org)
- Explorer [blockchain.com](https://blockchain.com)
- GitHub [bitcoin/bitcoin](https://github.com/bitcoin/bitcoin)
- Reddit [r/bitcoin](https://reddit.com/r/bitcoin)
- Telegram [Bitcoin\\_Magazine](https://t.me/Bitcoin_Magazine)
- Telegram [bitcoin](https://t.me/bitcoin)
- Whitepaper [Bitcoin Whitepaper](https://bitcoin.org/bitcoin-whitepaper)

# Crypto Details

A Brief Introduction

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**Crypto Dashboard**

Home  
Cryptocurrencies  
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Price & Return Return & Inflation BTC Halving

7d Select the time period

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Price and Return of Bitcoin in USD

Price of Bitcoin in USD Return of Bitcoin (%)

Download

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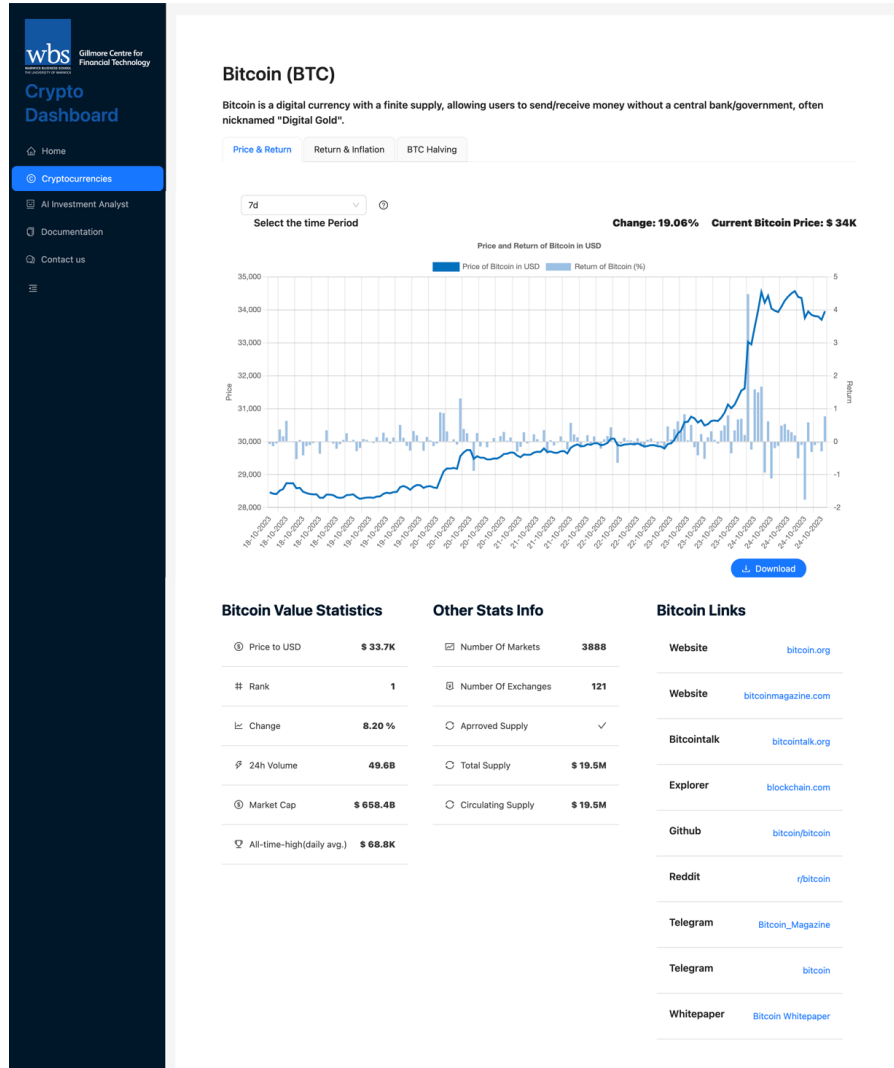
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Website	<a href="https://bitcoin.org">bitcoin.org</a>
Website	<a href="https://bitcoinformagazine.com">bitcoinformagazine.com</a>
Bitcointalk	<a href="https://bitcointalk.org">bitcointalk.org</a>
Explorer	<a href="https://blockchain.com">blockchain.com</a>
GitHub	<a href="https://github.com/bitcoin/bitcoin">bitcoin/bitcoin</a>
Reddit	<a href="https://reddit.com/r/bitcoin">r/bitcoin</a>
Telegram	<a href="https://t.me/Bitcoin_Magazine">Bitcoin_Magazine</a>
Telegram	<a href="https://t.me/bitcoin">bitcoin</a>
Whitepaper	<a href="https://bitcoin.org/bitcoin-whitepaper">Bitcoin Whitepaper</a>

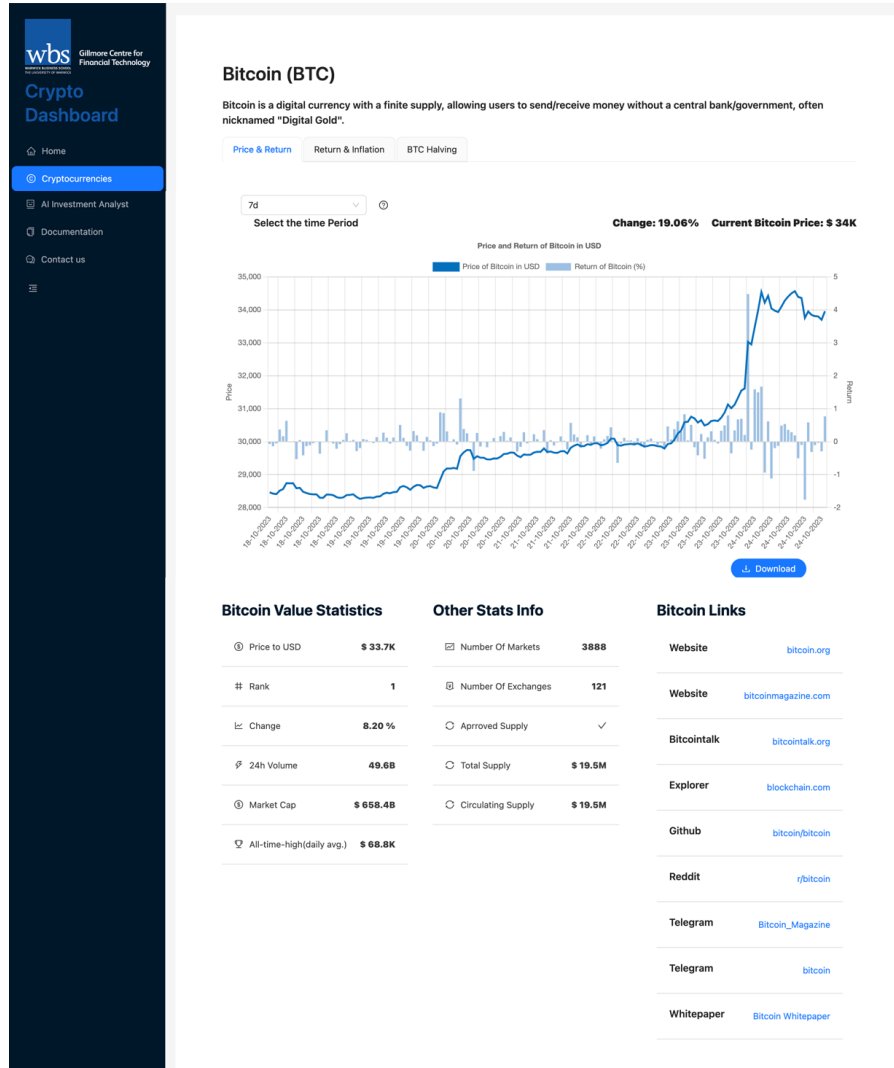
# Crypto Details



A Brief Introduction

Price & Return Plot, Return & Inflation Plot, BTC Halving Index Plot

# Crypto Details

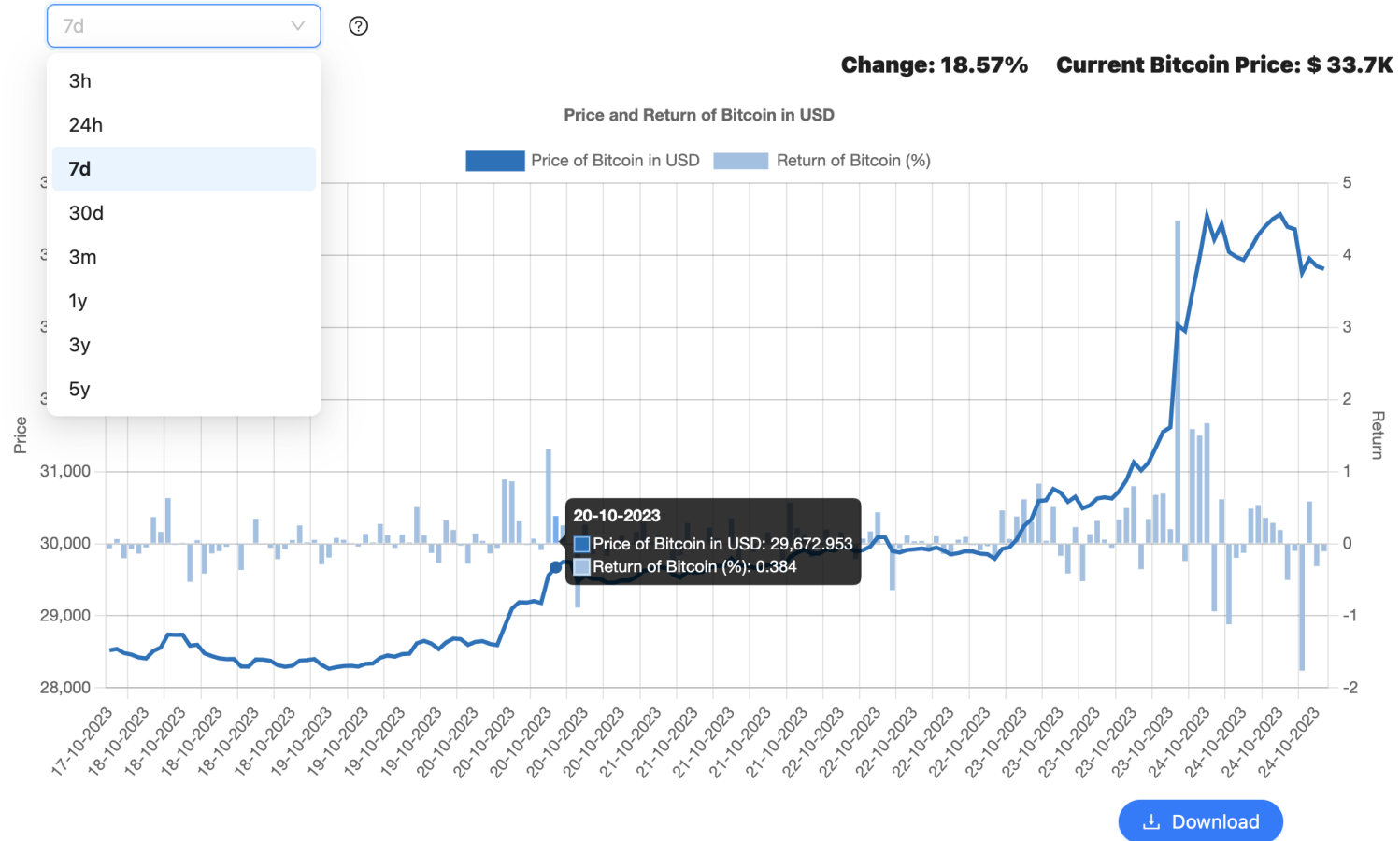


A Brief Introduction

Price & Return Plot, Return & Inflation Plot, BTC Halving Index Plot

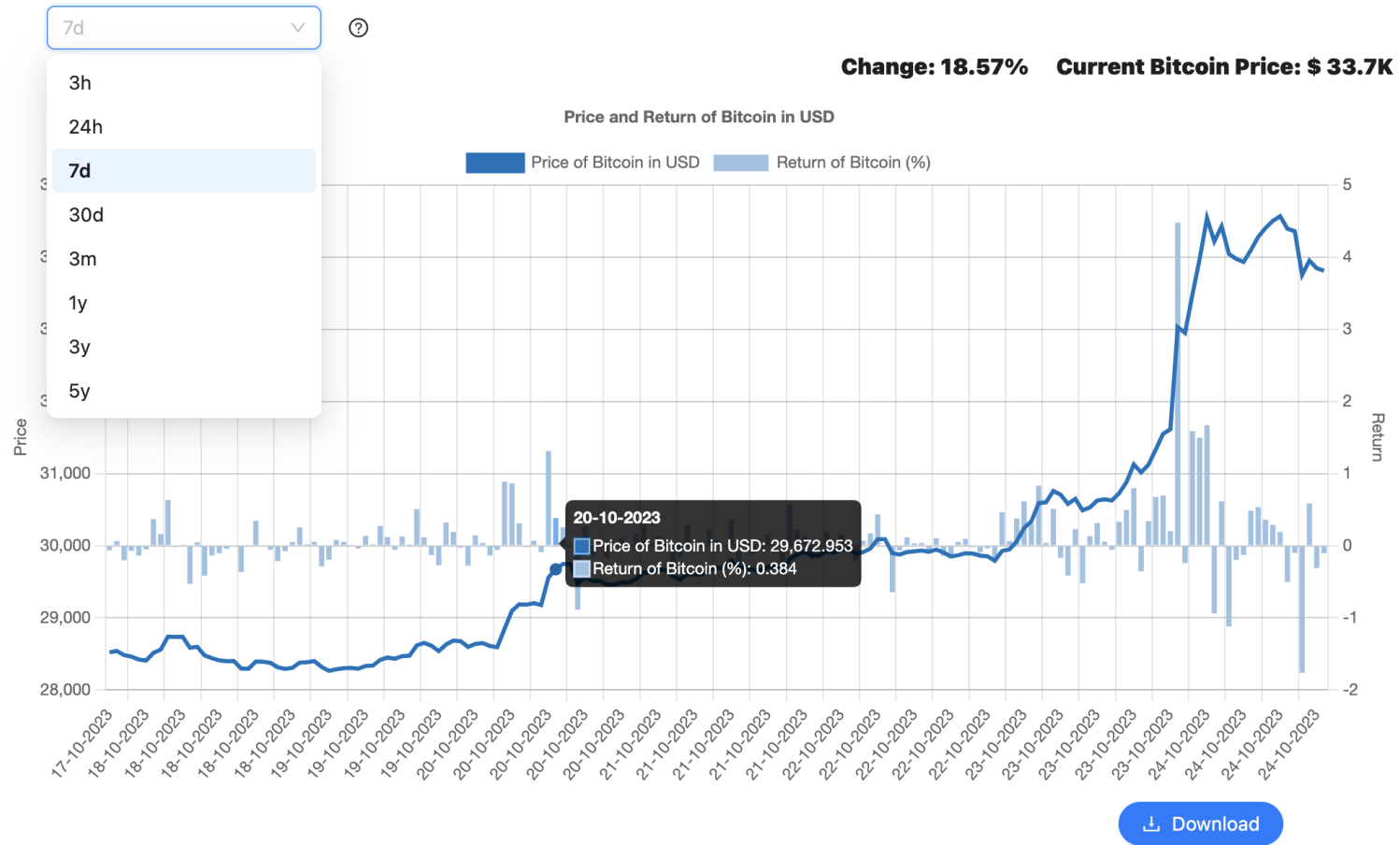
Other information and Links

# Price & Return Chart



# Price & Return Chart

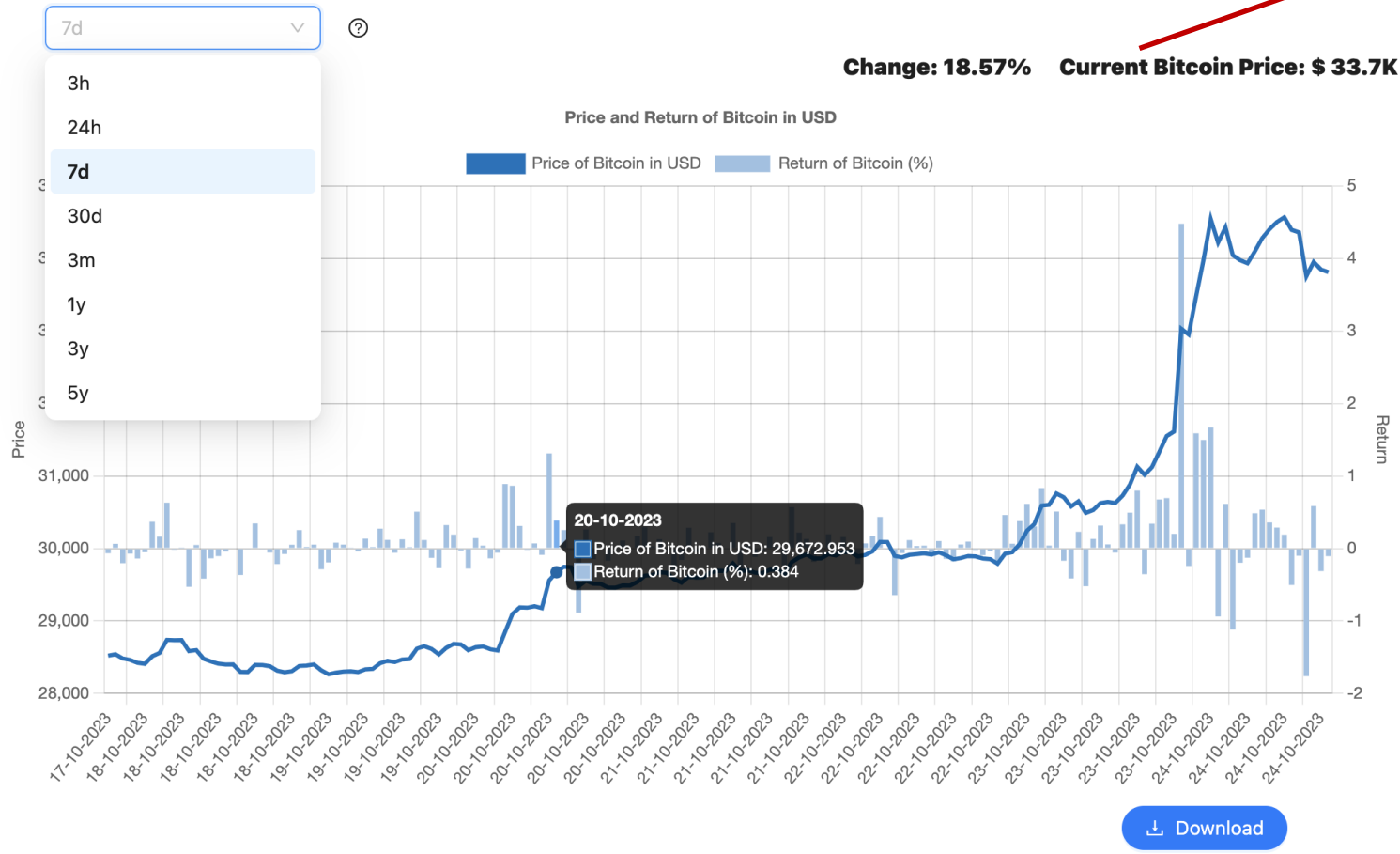
Selectable Time Period





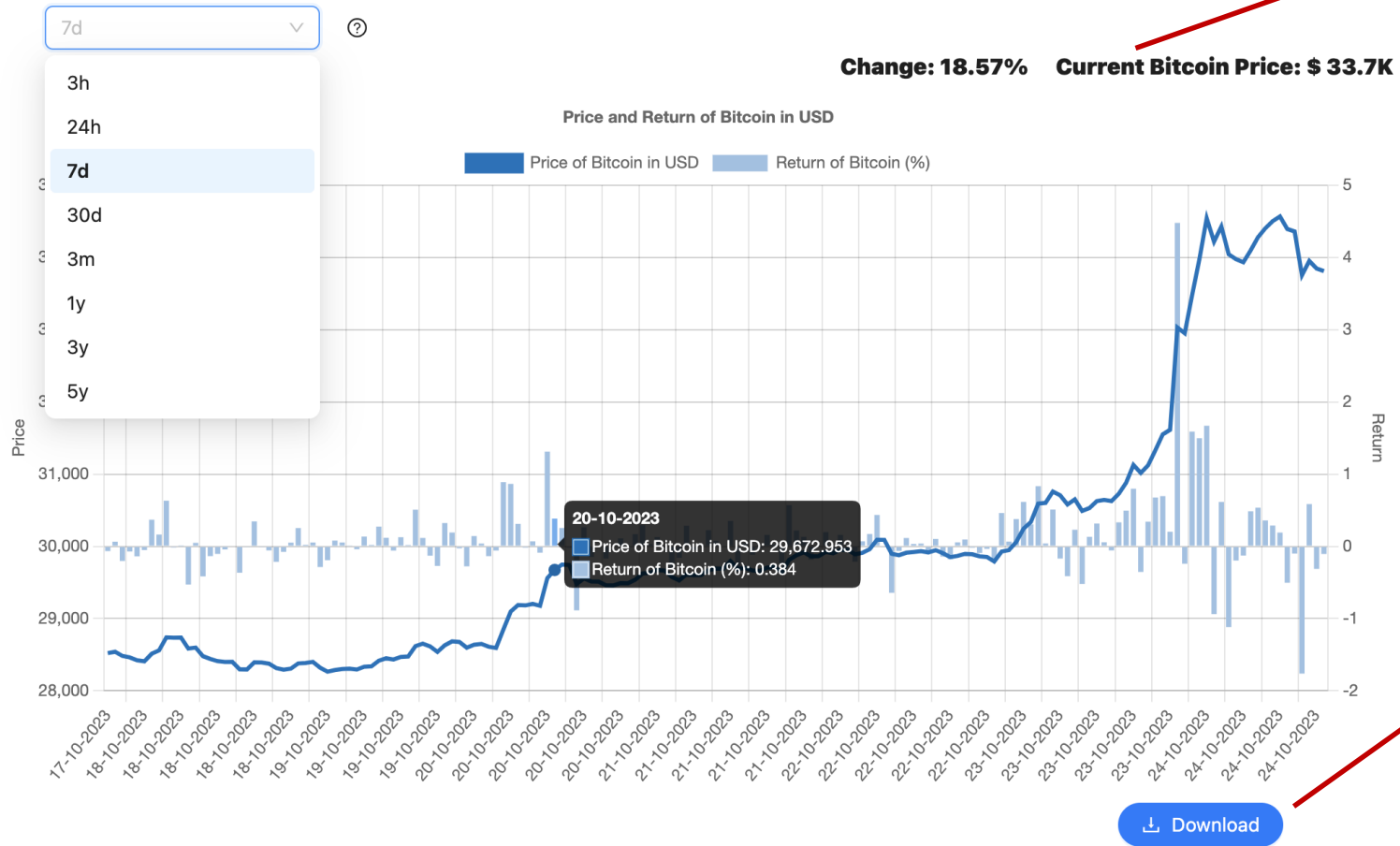
# Price & Return Chart

Selectable Time Period



Current Price, and Percentage of Change Over the Given Time Frame

# Price & Return Chart



Selectable Time Period

Current Price, and Percentage of Change Over the Given Time Frame

Download Data

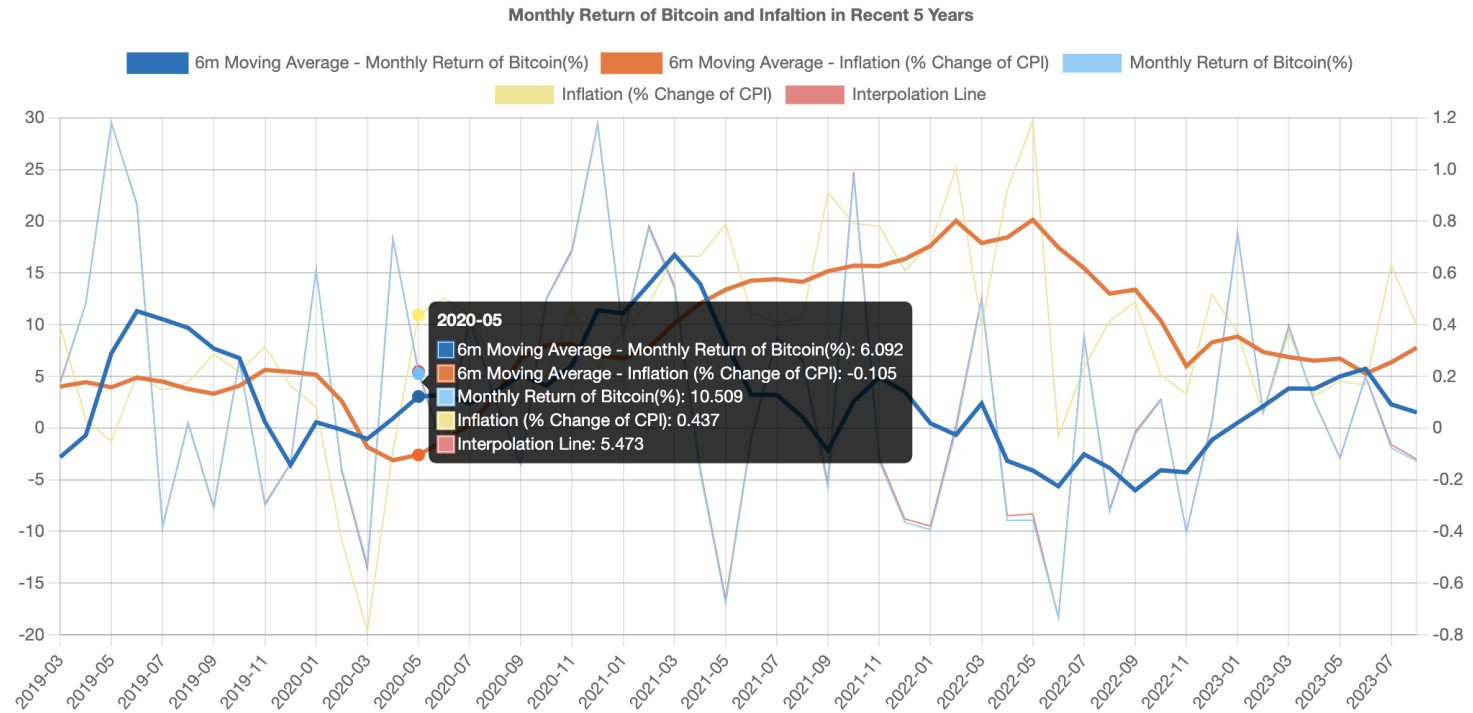
# Crypto Return & Inflation Chart

Price & Return

**Return & Inflation**

BTC Halving

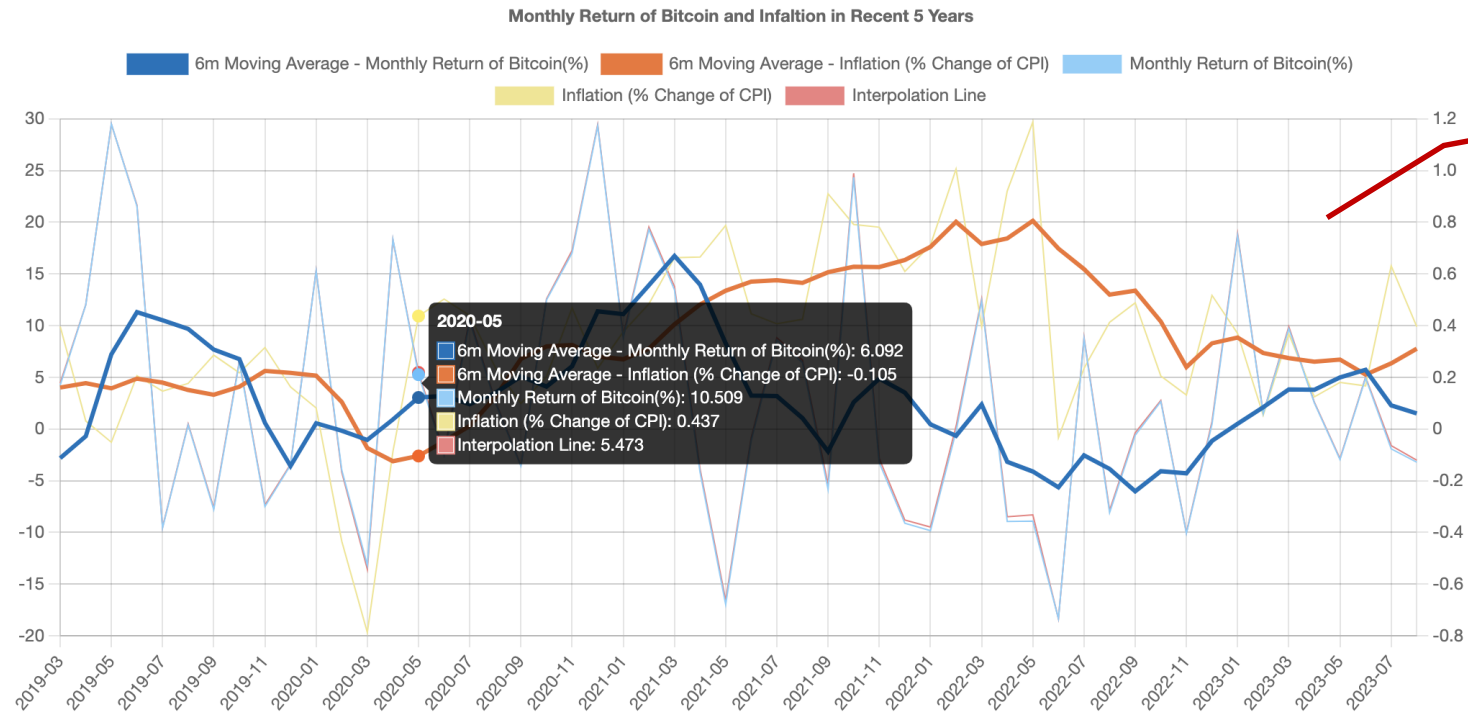
The inflation data is from the [Consumer Price Index for All Urban Consumers: All Items in U.S. City Average](#).



# Crypto Return & Inflation Chart



The inflation data is from the [Consumer Price Index for All Urban Consumers: All Items in U.S. City Average](#).



CPI,  
Monthly Return of  
the Coin, Their  
Moving Average  
and Interpolation

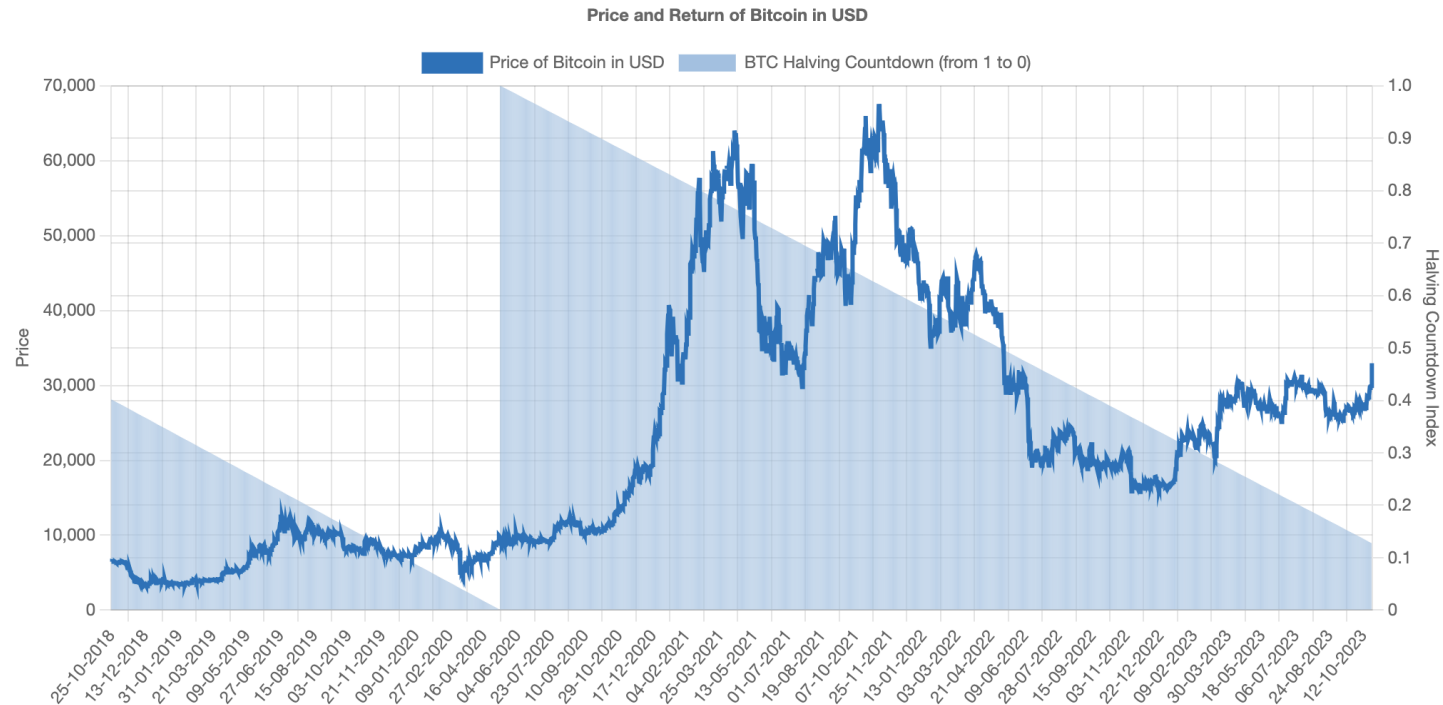
# BTC Halving Chart

Price & Return

Return & Inflation

**BTC Halving**

Historical Bitcoin Halvings: Nov. 28, 2012, to 25 bitcoins; July 9, 2016, to 12.5 bitcoins; May 11, 2020, to 6.25 bitcoins.  
The current block reward is 6.25 bitcoins. And the next halving will be in April 2024.



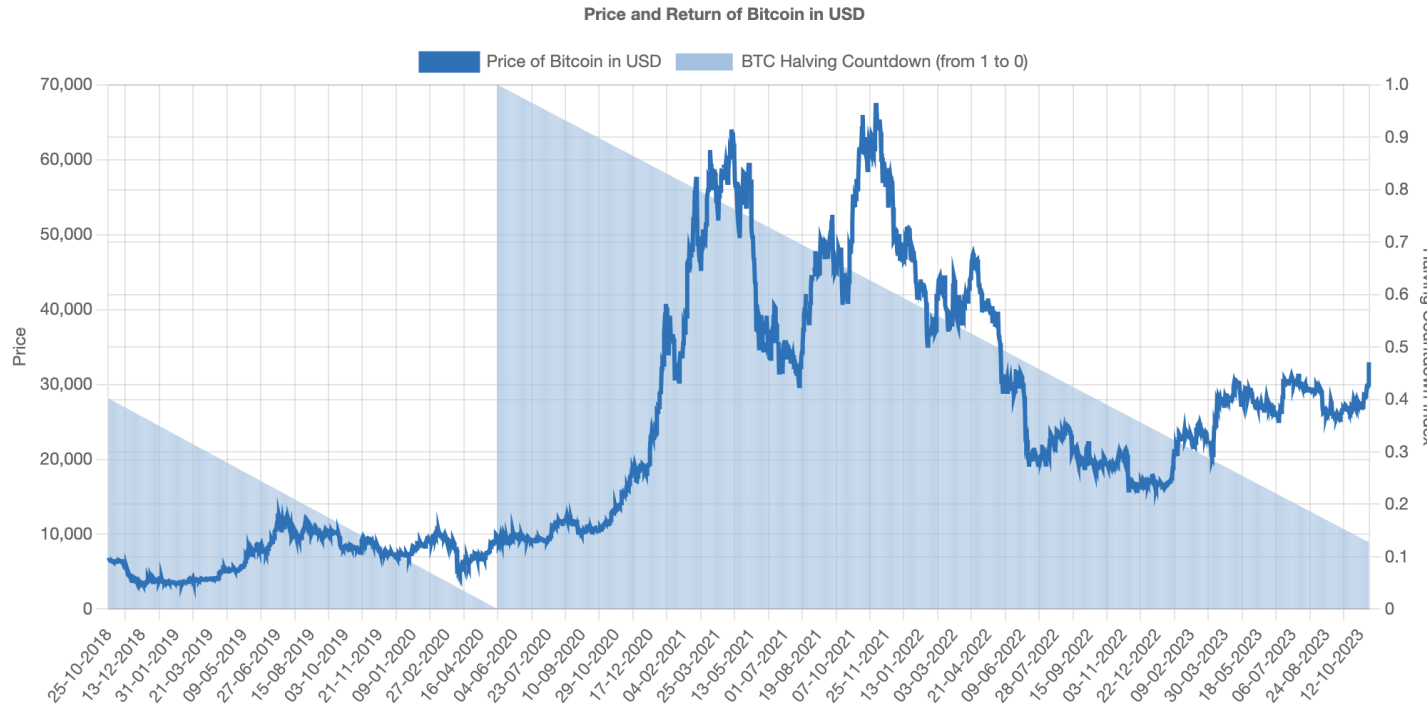
# BTC Halving Chart

After the network mines 210,000 blocks—roughly every 4 years—the block reward given to Bitcoin miners for processing transactions is cut in half.

Price & Return    Return & Inflation    **BTC Halving**

Historical Bitcoin Halvings: Nov. 28, 2012, to 25 bitcoins; July 9, 2016, to 12.5 bitcoins; May 11, 2020, to 6.25 bitcoins. The current block reward is 6.25 bitcoins. And the next halving will be in April 2024.

BTC Halving Countdown, from 1 to 0.



# The AI Investment Analyst – Optimise Portfolios in Chat

The screenshot displays the 'AI Investment Analyst' dashboard. On the left is a dark blue sidebar with the 'wbs' logo and 'Gillmore Centre for Financial Technology'. The sidebar menu includes 'Crypto Dashboard', 'Home', 'Cryptocurrencies', 'AI Investment Analyst' (highlighted), 'Documentation', and 'Contact us'. The main content area is titled 'AI Investment Analyst' and features an 'AI Advisor' icon with a chat bubble saying 'Hi, Can I help you?'. A 'Restart' button is in the top right. Below the chat is a yellow button that says 'Let's formulate a portfolio.'. Under 'Your Selections:', a light grey box shows 'ETFs', 'Cryptos', 'Security Level' (40%), 'Risk Tolerance', and 'Time Period' (1y). At the bottom, a disclaimer states: 'This dashboard uses the Coinranking API. This product uses the FRED® API but is not endorsed or certified by the Federal Reserve Bank of St. Louis.'




# The AI Investment Analyst – Optimise Portfolios in Chat

**wbs**  
Gillmore Centre for  
Financial Technology

**Crypto  
Dashboard**

- Home
- Cryptocurrencies
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## AI Investment Analyst



AI Advisor

No problem, we can start from selecting ETFs.

Restart

IQQ0  
 IS3R  
 UFSD  
 TIP5

IWQU  
 IUQF  
 AGBP  
 ERND

IS3S  
 ISVUF  
 CBUX  
 SPGP

IFSW  
 IQQ2  
 EUN  
 UEDA

I've got my pick.

**Your Selections:**

ETFs				Cryptos	Security Level	Risk Tolerance
IQQ0	IS3R	UFSD	TIP5		40%	
IWQU	IUQF	AGBP	ERND			
IS3S	ISVUF	CBUX	SPGP			
IFSW	IQQ2	EUN	UEDA			
					<b>Time Period</b>	
					1y	


# The AI Investment Analyst – Optimise Portfolios in Chat

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Dashboard**

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## AI Investment Analyst



AI Advisor

Got it. Do you want to invest in Crypto as well? If so, please select the Cryptos you want.

Restart

Bitcoin

Ethereum

Tether USD

BNB

XRP

I've got my pick.

**Your Selections:**

ETFs				Cryptos			Security Level	Risk Tolerance
IQQ0	IS3R	UFSD	TIP5	Bitcoin	BNB	Ethereum	40%	
IWQU	IUQF	AGBP	ERND			Tether USD		
IS3S	ISVUF	CBUX	SPGP					
IFSW	IQQ2	EUN	UEDA					
							Time Period	
								1y

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## AI Investment Analyst



I see, how long of historical data do you want the report to be based on?

Restart

1 years

I've got my pick.

1 years

3 year

5 years

**Your Selections:**

ETFs				Bitcoin	BNB	Ethereum	XRP	Security Level	Risk Tolerance
IQQ0	IS3R	UFSD	TIP5					40%	
IWQU	IUQF	AGBP	ERND			Tether USD			
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**AI Investment Analyst**

AI Advisor

Great, now let us select the maximum position size (%).

Restart

0% 100% 40

I've got my pick.

**Your Selections:**

ETFs				Cryptos				Security Level	Risk Tolerance
IQQ0	IS3R	UFSD	TIP5	Bitcoin	BNB	Ethereum	XRP	40%	
IWQU	IUQF	AGBP	ERND			Tether USD			
IS3S	ISVUF	CBUX	SPGP						
IFSW	IQQ2	EUN	UEDA						

Time Period  
1y

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- Home
- Cryptocurrencies
- AI Investment Analyst**
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- Contact us

### AI Investment Analyst

AI Advisor

Well, finally, please tell me which option better describes your risk tolerance?

Restart

Aggressive Moderate Conservative

**Your Selections:**

ETFs				Cryptos			Security Level	Risk Tolerance
IQQ0	IS3R	UFSD	TIP5	Bitcoin	BNB	Ethereum	XRP	40%
IWQU	IUQF	AGBP	ERND			Tether USD		
IS3S	ISVUF	CBUX	SPGP					
IFSW	IQQ2	EUN	UEDA					

Time Period  
1y

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The screenshot shows a web application interface for an AI investment analyst. On the left is a dark blue sidebar with the Warwick Business School (WBS) logo and 'Gillmore Centre for Financial Technology' text. Below this is the 'Crypto Dashboard' with navigation links for Home, Cryptocurrencies, AI Investment Analyst (highlighted), Documentation, and Contact us. The main content area is titled 'AI Investment Analyst' and features a 'Thank you! Let's go!' message with a 'Get Result' button and a 'Restart' button. Below the message, under 'Your Selections:', there is a table of selected assets and parameters.

ETFs				Bitcoin	BNB	Ethereum	XRP	Security Level	Risk Tolerance
IQQ0	IS3R	UFSD	TIP5					40%	Moderate
IWQU	IUQF	AGBP	ERND			Tether USD			
IS3S	ISVUF	CBUX	SPGP						
IFSW	IQQ2	EUN	UEDA						

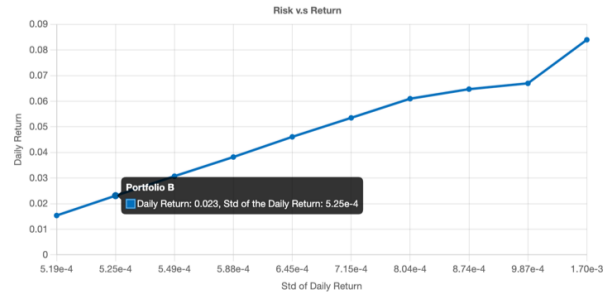
Time Period: 1y

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# The AI Investment Analyst – Optimise Portfolios in Chat

## Solution

After analyzing 1-year of historical data and chosen parameters, we have determined the following 10 portfolios along with their performances.



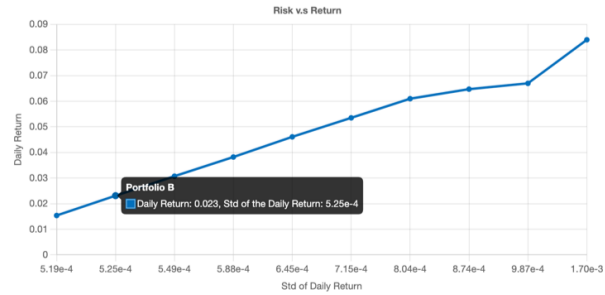
Id	Daily Return	Yearly Return	Std of Daily Return	Maximum Draw Down	Crypto Allocation	Weights
A	0.02 %	5.61 %	5.192e-4	-6.65 %	9.80 %	
B	0.02 %	8.44 %	5.248e-4	-6.25 %	10.00 %	
C	0.03 %	11.21 %	5.489e-4	-6.29 %	10.40 %	
D	0.04 %	13.95 %	5.875e-4	-6.34 %	10.60 %	



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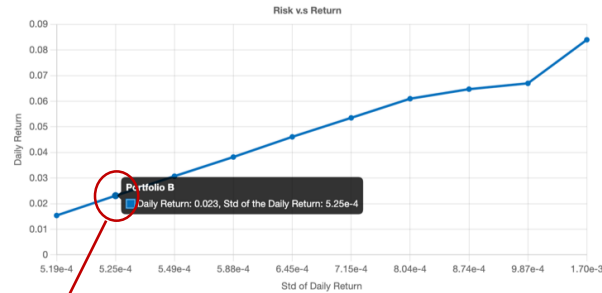
Return 10 Portfolio Solutions  
Each Point in the Risk-Return Plot  
Represents One Portfolio (A-J)

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Return 10 Portfolio Solutions  
Each Point in the Risk-Return Plot  
Represents One Portfolio (A-J)

Along with A Table Showing Their:  
Daily Return, Std of Daily Return,  
Yearly Return, Maximum Drawdown,  
Crypto Allocation and Weights

# Contact Us



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## Crypto Dashboard

- Home
- Cryptocurrencies
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### Contact us

Name

Email

Message

[Send](#)

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# Upcoming Feature

- **Crypto/ Financial Index Replication**
- **More Crypto & Financial Index Charts**
- **More Halving/Crypto-related Indices**
- **More Analysis Functions by AI Analyst**





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**Thank You!**

**WBS Gillmore Centre  
Crypto Dashboard  
Beta Version:**

**<https://cryptodbtest.int.wbs.ac.uk>**