

L^AT_EX Tables for Bitcoin Mining Stock Project

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1 Summary Statistics

1.1 Nominal Returns

Table 1: Summary Statistics for the Final Monthly Dataset. Asset nominal returns and growth rates are all annualized and measured in percentage units. Table generated with the stargazer R package (Hlavac, 2022).

Statistic	N	Mean	St. Dev.	Min	Max
INF	43	4.52	3.55	−0.54	15.44
RF	43	3.48	1.02	1.28	4.80
BTC	43	19.72	206.56	−569.18	435.21
MARA	43	−19.13	456.06	−875.59	1,066.74
CLSK	43	−14.64	387.64	−774.01	877.12
RIOT	43	−35.36	371.16	−883.32	737.94
CIFR	43	−24.79	372.69	−687.70	914.57
HUT	43	−13.18	423.12	−781.10	984.05
BTDR	43	6.62	372.04	−1,136.20	987.13
SPY	43	9.89	58.06	−116.40	105.71
Hashrate	43	58.31	58.59	−64.58	227.35
Difficulty	43	57.13	54.70	−56.53	198.74

1.2 Real Returns

Table 2: Summary Statistics for the Final Monthly Dataset. Asset real returns and growth rates are all annualized and measured in percentage units. Table generated with the stargazer R package (Hlavac, 2022).

Statistic	N	Mean	St. Dev.	Min	Max
RF	43	−0.87	3.84	−10.65	4.34
BTC	43	16.18	194.39	−506.41	410.95
MARA	43	−19.57	437.31	−853.49	1, 073.04
CLSK	43	−17.48	367.56	−744.09	832.84
RIOT	43	−35.34	354.29	−848.54	686.06
CIFR	43	−24.17	355.38	−609.08	851.75
HUT	43	−13.57	403.91	−740.25	916.93
BTDR	43	2.22	363.06	−1, 125.04	954.50
SPY	43	5.59	56.08	−115.61	106.82
Hashrate	43	58.31	58.59	−64.58	227.35
Difficulty	43	57.13	54.70	−56.53	198.74

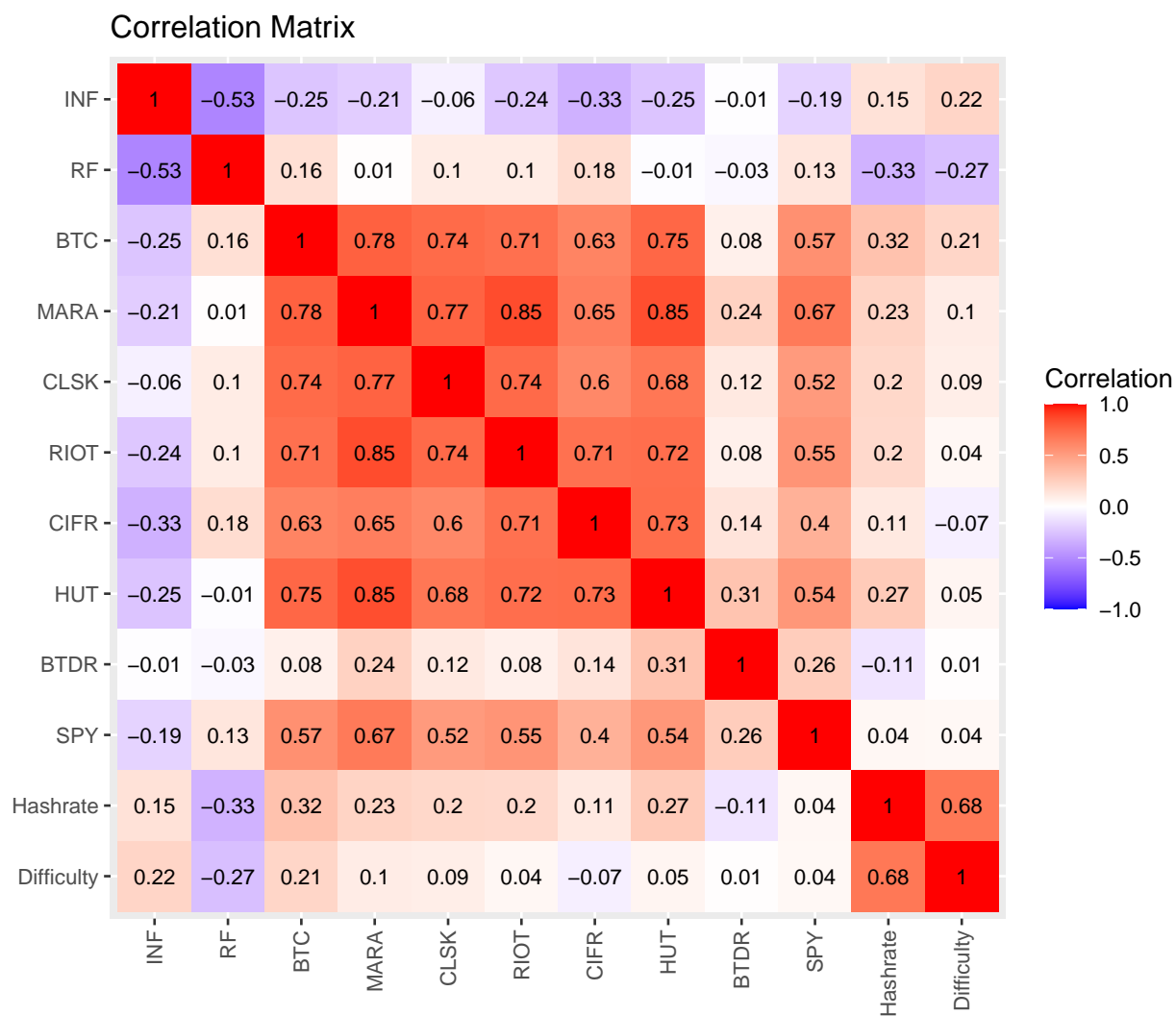
1.3 Excess Returns

Table 3: Summary Statistics for the Final Monthly Dataset. Asset excess returns and growth rates are all annualized and measured in percentage units. Table generated with the stargazer R package (Hlavac, 2022).

Statistic	N	Mean	St. Dev.	Min	Max
BTC	43	17.05	193.46	−495.76	411.47
MARA	43	−18.70	436.63	−854.42	1, 069.59
CLSK	43	−16.61	367.25	−742.28	833.35
RIOT	43	−34.48	353.42	−846.73	688.93
CIFR	43	−23.30	354.16	−598.43	854.63
HUT	43	−12.70	403.12	−741.19	919.81
BTDR	43	3.09	363.05	−1, 128.71	953.87
SPY	43	6.46	55.25	−114.09	103.37
Hashrate	43	58.31	58.59	−64.58	227.35
Difficulty	43	57.13	54.70	−56.53	198.74

1.4 Nominal Return Correlations

Figure 1: Correlation Matrix Heatmap for Nominal Monthly Returns



2 Model Results

2.1 Marathon Digital Holdings (MARA)

Table 4: Factor Model Results for Marathon Digital Holdings (MARA). Table generated with the stargazer R package (Hlavac, 2022).

	<i>Dependent variable:</i>				
	MARA				
	(1)	(2)	(3)	(4)	(5)
SPY	5.26*** (0.91)	2.64*** (0.85)	2.69*** (0.88)	2.60*** (0.87)	2.70*** (0.88)
BTC		1.29*** (0.24)	1.26*** (0.26)	1.32*** (0.25)	1.26*** (0.26)
Hashrate			0.23 (0.75)		0.80 (1.00)
Difficulty				-0.35 (0.77)	-0.89 (1.03)
Constant	-71.16 (53.04)	-70.78* (40.87)	-84.14 (60.12)	-51.05 (60.33)	-66.59 (63.69)
Observations	43	43	43	43	43
R ²	0.45	0.68	0.68	0.68	0.69
Adjusted R ²	0.44	0.66	0.66	0.66	0.65

Note:

*p<0.1; **p<0.05; ***p<0.01

2.2 Cleanspark (CLSK)

Table 5: Factor Model Results for Cleanspark (CLSK). Table generated with the stargazer R package (Hlavac, 2022).

	<i>Dependent variable:</i>				
	CLSK				
	(1)	(2)	(3)	(4)	(5)
SPY	3.46*** (0.89)	0.99 (0.85)	0.97 (0.88)	0.94 (0.87)	0.98 (0.89)
BTC		1.22*** (0.24)	1.23*** (0.26)	1.25*** (0.25)	1.23*** (0.26)
Hashrate			-0.08 (0.76)		0.33 (1.01)
Difficulty				-0.42 (0.77)	-0.64 (1.04)
Constant	-48.88 (51.91)	-48.52 (40.93)	-44.12 (60.28)	-24.91 (60.35)	-31.42 (64.16)
Observations	43	43	43	43	43
R ²	0.27	0.56	0.56	0.56	0.56
Adjusted R ²	0.25	0.53	0.52	0.53	0.51

Note:

*p<0.1; **p<0.05; ***p<0.01

2.3 Riot Blockchain (RIOT)

Table 6: Factor Model Results for Riot Blockchain (RIOT). Table generated with the stargazer R package (Hlavac, 2022).

	<i>Dependent variable:</i>				
	RIOT				
	(1)	(2)	(3)	(4)	(5)
SPY	3.49*** (0.84)	1.32 (0.83)	1.32 (0.86)	1.25 (0.84)	1.34 (0.86)
BTC		1.07*** (0.23)	1.07*** (0.25)	1.12*** (0.24)	1.07*** (0.25)
Hashrate			-0.01 (0.74)		0.72 (0.98)
Difficulty				-0.66 (0.75)	-1.15 (1.00)
Constant	-69.90 (48.69)	-69.58* (39.96)	-68.86 (58.86)	-32.16 (58.57)	-46.18 (61.91)
Observations	43	43	43	43	43
R ²	0.30	0.54	0.54	0.55	0.55
Adjusted R ²	0.28	0.52	0.50	0.51	0.51

Note:

*p<0.1; **p<0.05; ***p<0.01

2.4 Cipher Mining (CIFR)

Table 7: Factor Model Results for Cipher Mining (CIFR). Table generated with the stargazer R package (Hlavac, 2022).

	<i>Dependent variable:</i>				
	CIFR				
	(1)	(2)	(3)	(4)	(5)
SPY	2.60*** (0.92)	0.46 (0.96)	0.34 (0.98)	0.29 (0.94)	0.37 (0.96)
BTC		1.06*** (0.27)	1.12*** (0.29)	1.16*** (0.27)	1.12*** (0.29)
Hashrate			-0.55 (0.84)		0.60 (1.10)
Difficulty				-1.39 (0.84)	-1.80 (1.13)
Constant	-50.46 (53.39)	-50.15 (45.95)	-18.30 (67.31)	29.05 (65.74)	17.34 (69.71)
Observations	43	43	43	43	43
R ²	0.16	0.40	0.40	0.44	0.44
Adjusted R ²	0.14	0.37	0.36	0.39	0.38

Note:

*p<0.1; **p<0.05; ***p<0.01

2.5 Hut 8 Mining (HUT)

Table 8: Factor Model Results for Hut 8 Mining (HUT). Table generated with the stargazer R package (Hlavac, 2022).

	<i>Dependent variable:</i>				
	HUT				
	(1)	(2)	(3)	(4)	(5)
SPY	3.90*** (0.96)	1.16 (0.91)	1.26 (0.93)	1.07 (0.91)	1.28 (0.90)
BTC		1.35*** (0.25)	1.30*** (0.27)	1.41*** (0.26)	1.29*** (0.27)
Hashrate			0.45 (0.80)		1.67 (1.03)
Difficulty				-0.78 (0.81)	-1.91* (1.06)
Constant	-51.77 (55.97)	-51.37 (43.37)	-77.32 (63.63)	-7.02 (63.45)	-39.54 (65.32)
Observations	43	43	43	43	43
R ²	0.29	0.58	0.59	0.59	0.62
Adjusted R ²	0.27	0.56	0.55	0.56	0.58

Note:

*p<0.1; **p<0.05; ***p<0.01

2.6 Bitdeer (BTDR)

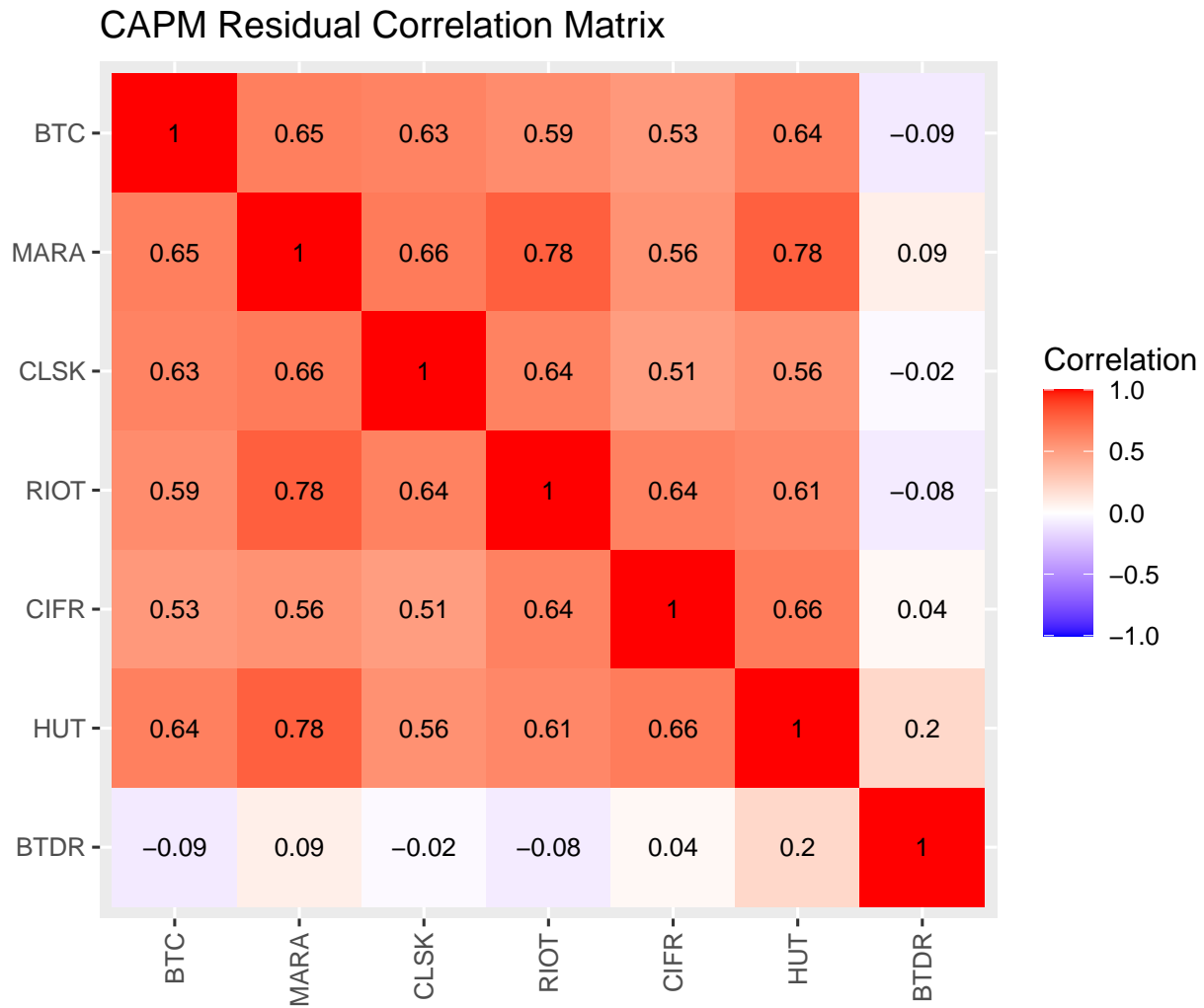
Table 9: Factor Model Results for Bitdeer (BTDR). Table generated with the stargazer R package (Hlavac, 2022).

	<i>Dependent variable:</i>				
	BTDR				
	(1)	(2)	(3)	(4)	(5)
SPY	1.68* (0.97)	2.07* (1.18)	1.93 (1.21)	2.09* (1.20)	1.92 (1.22)
BTC		-0.19 (0.33)	-0.11 (0.36)	-0.20 (0.35)	-0.11 (0.36)
Hashrate			-0.68 (1.04)		-1.34 (1.39)
Difficulty				0.14 (1.08)	1.04 (1.43)
Constant	-10.02 (56.22)	-10.08 (56.69)	29.04 (83.04)	-17.79 (83.87)	8.38 (88.21)
Observations	43	43	43	43	43
R ²	0.07	0.08	0.09	0.08	0.10
Adjusted R ²	0.05	0.03	0.02	0.01	0.004
<i>Note:</i>			*p<0.1; **p<0.05; ***p<0.01		

3 Model Residual Correlations

3.1 Model (1): CAPM

Figure 2: Correlation Matrix Heatmap for CAPM Residuals



3.2 Model (2): CAPM + BTC

Figure 3: Correlation Matrix Heatmap for CAPM+BTC Residuals

BTC-Factor Model Residual Correlation Matrix

