

Online Appendix of “Risks and Returns of Cryptocurrency” by Yukun Liu and Aleh Tsyvinski

Figure A.1: Standard Deviation of Coin Market Returns

This figure plots the standard deviation of the coin market returns over time. The standard deviation of the coin market returns are calculated each month.

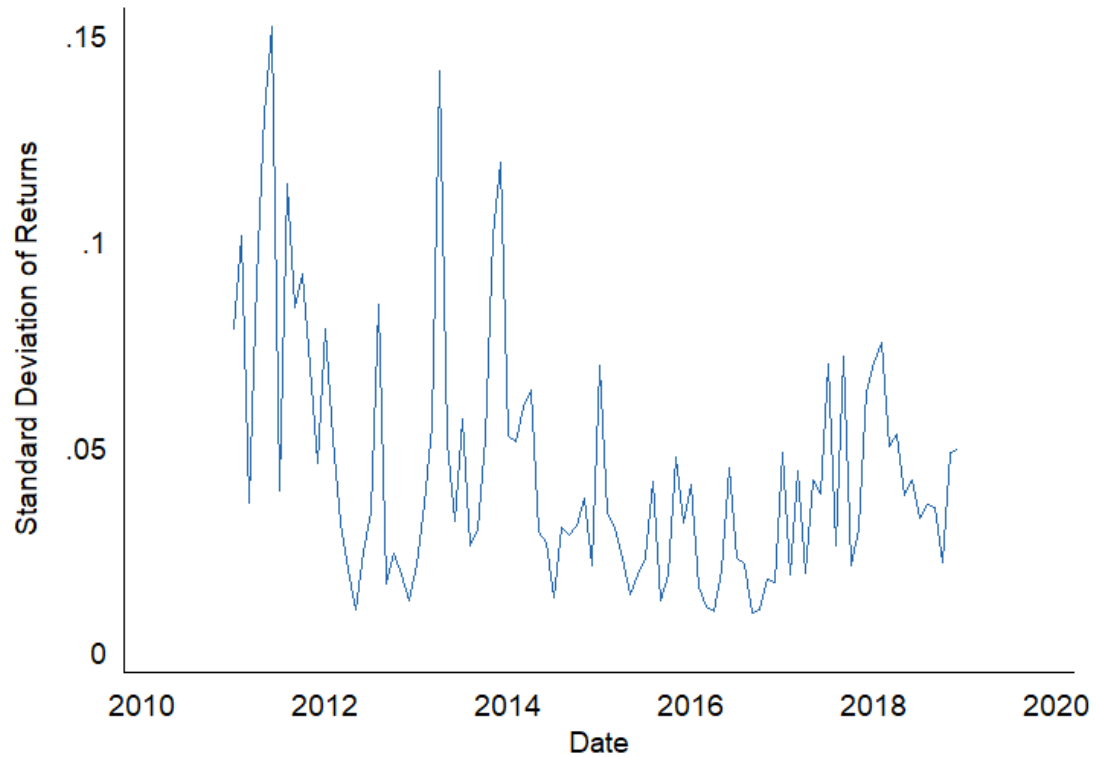


Figure A.2: Impulse Response Function

This table reports the impulse response function using coin market return and different network factors including the wallet user growth, active address growth, and transaction count growth factors. The VAR model is estimated with one lag. The models are in non-structural form. The graphs report the non-cumulative reponses. For each panel, the first row shows the effect of a one-standard-deviation impulse to the coin market return equation and the second row shows the effect of a one-standard-deviation impulse to the network growth equation. The impulse response function plots the responses up to 20 weeks.

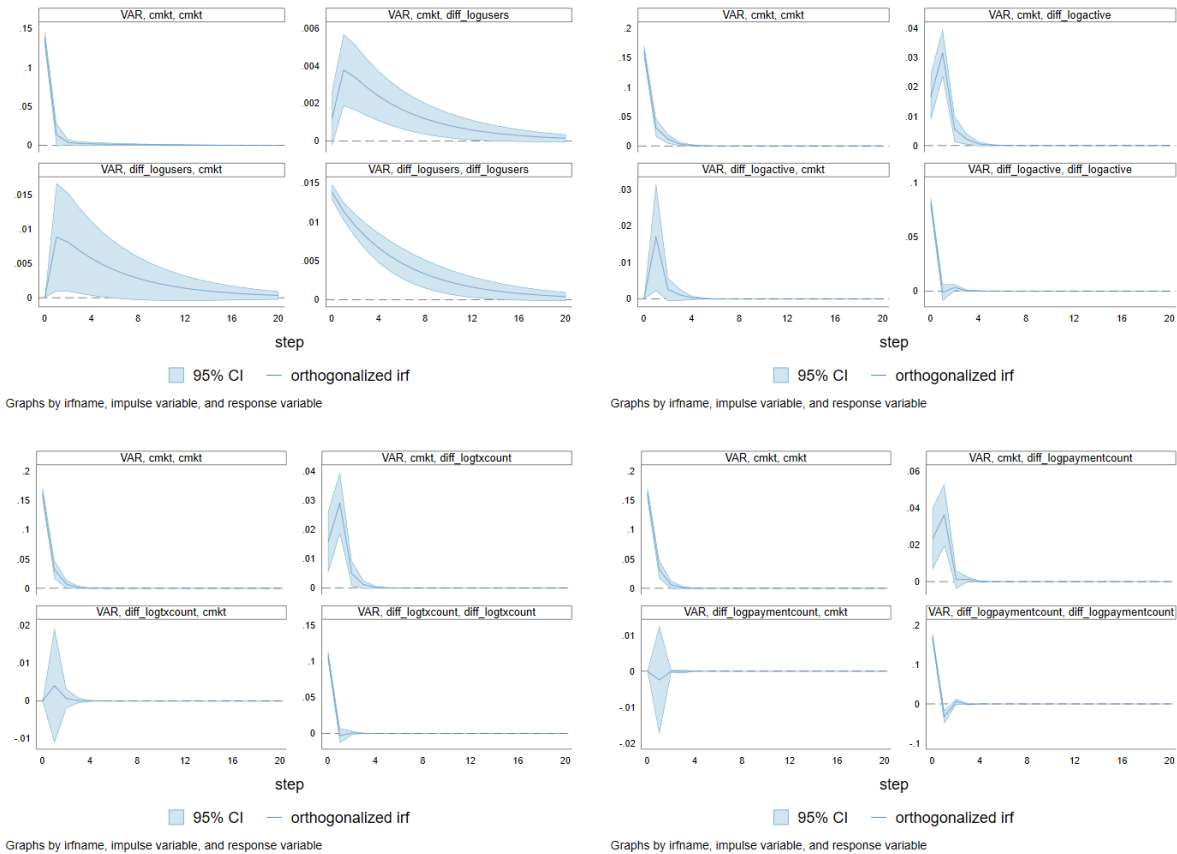


Table A.1: Return Summary Statistics by Day of the Week

This table shows the mean, standard deviation, t-statistics, and Sharpe ratio of the coin market index returns based on the day of week. The corresponding results for the stock market returns, Bitcoin returns, Ethereum returns, Ripple returns based on the day of week are also reported for comparison.

CMKT	Mean	SD	T-Statistics	Sharpe	Stock	Mean	SD	T-Statistics	Sharpe
Monday	0.53%	5.54%	1.96	0.10	Monday	-0.04%	1.00%	-0.70	-0.04
Tuesday	0.91%	6.07%	3.06	0.15	Tuesday	0.11%	0.90%	2.44	0.12
Wednesday	0.43%	5.47%	1.62	0.08	Wednesday	0.05%	0.98%	1.08	0.05
Thursday	0.47%	5.74%	1.67	0.08	Thursday	0.06%	0.96%	1.26	0.06
Friday	0.35%	5.63%	1.29	0.06	Friday	0.04%	0.88%	0.94	0.05
Saturday	0.28%	5.19%	1.08	0.05					
Sunday	0.28%	4.41%	1.29	0.06					
Bitcoin	Mean	SD	T-Statistics	Sharpe	Ethereum	Mean	SD	T-Statistics	Sharpe
Monday	0.64%	5.44%	2.42	0.12	Monday	0.09%	7.20%	0.16	0.01
Tuesday	0.92%	6.00%	3.13	0.15	Tuesday	1.13%	8.40%	1.78	0.13
Wednesday	0.41%	5.47%	1.51	0.07	Wednesday	0.49%	6.66%	0.98	0.07
Thursday	0.50%	5.78%	1.76	0.09	Thursday	1.31%	8.46%	2.06	0.15
Friday	0.30%	5.61%	1.11	0.05	Friday	0.20%	6.59%	0.41	0.03
Saturday	0.29%	5.22%	1.12	0.06	Saturday	0.25%	8.23%	0.40	0.03
Sunday	0.23%	4.39%	1.07	0.05	Sunday	0.74%	5.75%	1.71	0.13
Ripple	Mean	SD	T-Statistics	Sharpe					
Monday	0.02%	7.55%	0.05	0.00					
Tuesday	0.72%	8.78%	1.38	0.08					
Wednesday	0.30%	6.68%	0.74	0.04					
Thursday	1.31%	10.73%	2.04	0.12					
Friday	0.96%	7.72%	2.08	0.12					
Saturday	-0.15%	7.05%	-0.36	-0.02					
Sunday	0.56%	12.09%	0.77	0.05					

Table A.2: Extreme Events of Logged Daily CMKT Returns

This table reports the percentage of extreme events based on the daily coin market index returns. The coin market returns start from 01/01/2011 to 12/31/2018.

Extreme Events of Logged Daily CMKT Returns					
Disasters	Counts	Percentage	Miracles	Counts	Percentage
<-5%	254	8.70%	>5%	306	10.48%
<-10%	95	3.25%	>10%	94	3.22%
<-20%	18	0.62%	>20%	22	0.75%
<-30%	6	0.21%	>30%	3	0.10%

Table A.3: Production Cost

This table reports the factor loadings of the coin market returns on the production factors using an alternative model specification. The table reports the factor loadings of the coin returns on the production factors. The standard t-statistic is reported in parentheses. *, **, *** denote significance levels at the 10%, 5%, and 1% based on the standard t-statistics. The data frequency is monthly.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
$\Delta Gen\ Coin$	0.53 (0.87)		0.55 (0.90)	0.50 (0.79)		0.49 (0.78)	0.61 (0.98)		0.63 (1.02)	0.56 (0.87)		0.54 (0.84)
$\Delta Gen\ Coin_{+1}$		0.69 (1.13)	0.71 (1.15)		0.74 (1.14)	0.73 (1.13)		0.89 (1.43)	0.90 (1.45)		0.98 (1.52)	0.97 (1.49)
$\Delta fees$	0.36** (2.46)	0.35** (2.36)	0.34** (2.31)	0.37** (2.32)	0.35** (2.21)	0.34** (2.16)						
$fees$							0.06 (0.89)	0.06 (0.95)	0.06 (0.98)	0.12 (1.56)	0.12* (1.68)	0.12 (1.66)
$ClosePrice$	-0.00 (-0.22)	-0.00 (-0.23)	-0.00 (-0.29)	-0.00 (-0.18)	-0.00 (-0.19)	-0.00 (-0.25)	-0.00 (-0.98)	-0.00 (-1.02)	-0.00 (-1.08)	-0.00 (-1.23)	-0.00 (-1.30)	-0.00 (-1.33)
PC^{elec}				-0.02 (-0.46)	-0.01 (-0.35)	-0.01 (-0.30)				-0.00 (-0.12)	0.00 (0.00)	0.00 (0.04)
$\Delta confirm$												
$confirm$												
R^2	0.07	0.08	0.09	0.07	0.08	0.08	0.02	0.03	0.04	0.04	0.05	0.06
	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)
$\Delta Gen\ Coin$	-0.14 (-0.22)		-0.14 (-0.22)	-0.15 (-0.24)		-0.16 (-0.24)	-0.16 (-0.26)		-0.16 (-0.26)	-0.16 (-0.27)		-0.17 (-0.27)
$\Delta Gen\ Coin_{+1}$		0.29 (0.47)	0.29 (0.47)		0.26 (0.42)	0.27 (0.42)		0.43 (0.71)	0.43 (0.70)		0.42 (0.68)	0.42 (0.68)
$\Delta fees$	0.34* (1.71)	0.33* (1.67)	0.34* (1.67)	0.36* (1.77)	0.35* (1.72)	0.35* (1.73)						
$fees$							0.18** (2.39)	0.18** (2.38)	0.18** (2.38)	0.18** (2.38)	0.18** (2.37)	0.18** (2.37)
$ClosePrice$	0.00 (0.05)	0.00 (0.00)	0.00 (0.02)	0.00 (0.07)	0.00 (0.03)	0.00 (0.04)	-0.00 (-1.26)	-0.00 (-1.32)	-0.00 (-1.29)	-0.00 (-1.27)	-0.00 (-1.32)	-0.00 (-1.29)
PC^{elec}				-0.02 (-0.62)	-0.02 (-0.58)	-0.02 (-0.59)				-0.01 (-0.36)	-0.01 (-0.32)	-0.01 (-0.33)
$\Delta confirm$	0.21 (0.35)	0.21 (0.36)	0.19 (0.31)	0.22 (0.36)	0.23 (0.38)	0.20 (0.32)						
$confirm$							-0.17 (-0.51)	-0.16 (-0.49)	-0.17 (-0.51)	-0.16 (-0.47)	-0.15 (-0.45)	-0.16 (-0.47)
R^2	0.05	0.05	0.05	0.05	0.06	0.06	0.07	0.08	0.08	0.07	0.08	0.08

Table A.4: Cryptocurrency Return Loadings to Electricity Factors – Lead-Lag

This table reports the factor loadings of coin market returns on the production factors that relate to electricity costs. The table reports the factor loadings of the coin returns on the production factors. The standard t-statistic is reported in parentheses. *, **, *** denote significance levels at the 10%, 5%, and 1% based on the standard t-statistics. The data frequency is monthly.

	$CMKT_{t+1}$	$CMKT_{t+1}$	$CMKT_{t+1}$	$CMKT_{t+1}$	$CMKT_{t+1}$	$CMKT_{t+1}$	$CMKT_{t+1}$	$CMKT_{t+1}$
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\Delta Price$ US	-5.51*							
	(-1.78)							
ΔGen US		-0.59						
		(-0.75)						
$\Delta Consum$ US			-0.36					
			(-0.64)					
$\Delta Price$ CN				-0.15				
				(-0.01)				
$\Delta Price$ SC					0.01			
					(0.00)			
ΔGen CN						0.76		
						(0.83)		
ΔGen SC							-0.09	
							(-0.17)	
PC^{elec}								-0.03
								(-0.66)
Cons	0.20***	0.20***	0.20***	0.19**	0.19**	0.19**	0.20***	0.20***
	(2.83)	(2.71)	(2.69)	(2.62)	(2.61)	(2.58)	(2.64)	(2.64)
R^2	0.03	0.01	0.00	0.00	0.00	0.01	0.00	0.00

	$\Delta Price$ US	ΔGen US	$\Delta Consum$ US	$\Delta Price$ CN	$\Delta Price$ SC	ΔGen CN	ΔGen SC	PC^{elec}
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$CMKT_{t-1}$	0.01**	0.03**	0.04**	-0.00*	0.00	0.02	0.04*	0.67**
	(2.25)	(2.29)	(2.00)	(-1.67)	(0.47)	(1.47)	(1.78)	(2.59)
Cons	-0.00	-0.01	-0.01	0.00	-0.00	0.00	0.00	-0.13
	(-0.29)	(-0.72)	(-0.93)	(0.20)	(-0.88)	(0.44)	(0.05)	(-0.71)
R^2	0.05	0.05	0.04	0.03	0.00	0.02	0.03	0.07

Table A.5: Multivariate Contemporaneous Regressions

This table reports the contemporaneous regressions with network factor, production factor related to electricity, production factor related to computing, equity factors, currency factors, commodity factors, and macro factors. The standard t-statistic is reported in parentheses. *, **, *** denote significance levels at the 10%, 5%, and 1% based on the standard t-statistics. All independent variables are required for all tests, and the data frequency is monthly.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
$PC^{network}$	0.17*** (3.96)						0.17*** (3.53)
PC^{elec}		-0.01 (-0.37)					-0.01 (-0.29)
p^{comp}			-0.01 (-0.18)				-0.08 (-1.08)
MKTRF				4.16* (1.67)			3.39 (0.93)
SMB				-0.39 (-0.11)			3.41 (0.86)
HML				-2.94 (-0.66)			-5.53 (-1.15)
RMW				3.26 (0.56)			6.74 (1.13)
CMA				4.94 (0.71)			2.64 (0.34)
AUSTRALIA					-2.00 (-0.45)		-4.13 (-0.89)
CANADA					-0.89 (-0.18)		5.43 (1.02)
EURO					1.16 (0.25)		1.58 (0.32)
SINGAPORE					1.64 (0.17)		3.87 (0.37)
UK					2.09 (0.53)		-0.12 (-0.03)
GOLD						-1.85 (-0.60)	-0.41 (-0.13)
PLATINUM						1.59 (0.73)	0.89 (0.34)
SILVER						-1.03 (-0.51)	-1.74 (-0.83)
R^2	0.17	0.00	0.00	0.05	0.01	0.02	0.26

Table A.6: Multivariate Predictive Regressions

This table reports the predictive regressions with momentum, attention, and network factors. The standard t-statistic is reported in parentheses. *, **, *** denote significance levels at the 10%, 5%, and 1% based on the standard t-statistics. The data frequency is weekly.

Weekly	$R_{t,t+1}$ (1)	$R_{t,t+2}$ (2)	$R_{t,t+3}$ (3)	$R_{t,t+4}$ (4)	$R_{t,t+5}$ (5)	$R_{t,t+6}$ (6)	$R_{t,t+7}$ (7)	$R_{t,t+8}$ (8)
R_t	0.08 (0.75)	0.31 (1.55)	0.49** (2.12)	0.58** (2.01)	0.65* (1.94)	0.71* (1.91)	0.76** (1.98)	0.75* (1.93)
$Google_t$	0.00*** (3.57)	0.01*** (3.89)	0.01*** (4.05)	0.02*** (4.07)	0.02*** (3.17)	0.01* (1.91)	0.01 (1.52)	0.01 (1.23)
$\Delta user$	0.55 (1.47)	0.77 (1.28)	1.06 (1.15)	1.37 (1.30)	1.87 (1.38)	2.55 (1.41)	3.05 (1.26)	4.04 (1.22)
R^2	0.07	0.11	0.11	0.10	0.08	0.05	0.04	0.04
R_t	0.16** (2.10)	0.40** (2.34)	0.69*** (2.69)	0.94** (2.39)	1.16** (2.06)	1.42* (1.80)	1.65* (1.71)	1.44 (1.61)
$Google_t$	0.00*** (3.37)	0.01*** (3.31)	0.01*** (3.17)	0.01*** (3.20)	0.02** (2.49)	0.01 (1.39)	0.01 (0.87)	0.01 (0.77)
$\Delta address$	0.13 (1.36)	0.36 (1.51)	0.37 (1.27)	0.44 (1.43)	0.54 (1.48)	0.54 (1.21)	1.07 (1.46)	1.02* (1.73)
R^2	0.07	0.12	0.11	0.10	0.08	0.06	0.05	0.02
R_t	0.18** (2.29)	0.44** (2.46)	0.75*** (2.76)	1.02** (2.40)	1.25** (2.10)	1.52* (1.82)	1.78* (1.71)	1.57 (1.61)
$Google_t$	0.00*** (3.50)	0.01*** (3.44)	0.01*** (3.24)	0.02*** (3.23)	0.02** (2.53)	0.01 (1.45)	0.01 (1.01)	0.01 (0.87)
$\Delta trans$	-0.01 (-0.18)	0.09 (0.57)	-0.05 (-0.22)	-0.25 (-0.77)	-0.20 (-0.47)	-0.25 (-0.39)	0.05 (0.09)	0.05 (0.07)
R^2	0.07	0.11	0.11	0.10	0.07	0.06	0.05	0.02
R_t	0.19** (2.36)	0.45** (2.45)	0.74*** (2.71)	1.00** (2.39)	1.21** (2.07)	1.47* (1.81)	1.75* (1.70)	1.54 (1.63)
$Google_t$	0.00*** (3.51)	0.01*** (3.45)	0.01*** (3.27)	0.02*** (3.27)	0.02** (2.56)	0.01 (1.45)	0.01 (1.00)	0.01 (0.86)
$\Delta payment$	-0.04 (-1.05)	0.02 (0.28)	0.01 (0.16)	-0.02 (-0.17)	0.10 (0.78)	0.11 (0.69)	0.23 (0.96)	0.20 (0.88)
R^2	0.07	0.11	0.11	0.09	0.07	0.06	0.05	0.02
R_t	0.09 (0.83)	0.31 (1.57)	0.52** (2.15)	0.62** (2.02)	0.68** (1.98)	0.77* (1.92)	0.82* (1.92)	0.79* (1.80)
$Google_t$	0.01*** (3.69)	0.01*** (3.82)	0.01*** (3.89)	0.02*** (3.93)	0.02*** (3.11)	0.01* (1.90)	0.01 (1.53)	0.01 (1.26)
$PC^{network}$	0.00 (0.51)	0.01 (0.89)	0.00 (0.39)	0.00 (0.07)	0.01 (0.75)	0.01 (0.45)	0.01 (0.84)	0.04 (1.56)
R^2	0.06	0.11	0.10	0.09	0.07	0.04	0.03	0.03

Table A.7: Valuation Ratios and Past Returns

This table reports the relationships between the valuation ratio measure and past coin market returns. The standard t-statistic is reported in parentheses and the bootstrapped t-statistic is reported in brackets. *, **, *** denote significance levels at the 10%, 5%, and 1% based on the standard t-statistics. The data frequency is weekly.

Weekly	$R_{t,t+1}$ (1)	$R_{t,t+2}$ (2)	$R_{t,t+3}$ (3)	$R_{t,t+4}$ (4)	$R_{t,t+5}$ (5)	$R_{t,t+6}$ (6)	$R_{t,t+7}$ (7)	$R_{t,t+8}$ (8)
Past 100	0.00 (0.07)	0.00 (0.05)	0.00 (0.03)	-0.00 (-0.00)	0.00 (0.05)	0.01 (0.12)	0.01 (0.21)	0.02 (0.26)
R_t	0.08 (0.68)	0.32 (1.63)	0.51* (1.89)	0.57** (2.25)	0.66** (1.97)	0.64* (1.91)	0.81* (1.95)	0.86* (1.94)
R^2	0.01	0.04	0.05	0.03	0.03	0.02	0.02	0.02
User/MCAP	-0.00 (-0.60)	-0.01 (-0.43)	-0.01 (-0.35)	-0.01 (-0.29)	-0.01 (-0.22)	-0.01 (-0.15)	0.00 (0.01)	0.01 (0.12)
R_t	0.08 (0.67)	0.31 (1.62)	0.50* (1.90)	0.56** (2.28)	0.65** (2.02)	0.63* (1.94)	0.79** (1.99)	0.85** (1.99)
R^2	0.01	0.04	0.05	0.03	0.03	0.02	0.02	0.02
Address/MCAP	-0.00 (-0.60)	-0.01 (-0.43)	-0.01 (-0.35)	-0.01 (-0.29)	-0.01 (-0.22)	-0.01 (-0.15)	0.00 (0.01)	0.01 (0.12)
R_t	0.08 (0.67)	0.31 (1.62)	0.50* (1.90)	0.56** (2.28)	0.65** (2.02)	0.63* (1.94)	0.79** (1.99)	0.85** (1.99)
R^2	0.01	0.04	0.05	0.03	0.03	0.02	0.02	0.02
Trans/MCAP	-0.00 (-0.60)	-0.01 (-0.43)	-0.01 (-0.35)	-0.01 (-0.29)	-0.01 (-0.22)	-0.01 (-0.15)	0.00 (0.01)	0.01 (0.12)
R_t	0.08 (0.67)	0.31 (1.62)	0.50* (1.90)	0.56** (2.28)	0.65** (2.02)	0.63* (1.94)	0.79** (1.99)	0.85** (1.99)
R^2	0.01	0.04	0.05	0.03	0.03	0.02	0.02	0.02
Pay/MCAP	-0.01 (-1.31)	-0.03 (-1.46)	-0.04 (-1.39)	-0.07 (-1.35)	-0.09 (-1.24)	-0.12 (-1.15)	-0.14 (-1.00)	-0.17 (-0.95)
R_t	0.07 (0.72)	0.30** (2.07)	0.53** (2.21)	0.54** (2.15)	0.86*** (2.70)	0.66** (2.10)	1.00** (2.12)	1.24* (1.82)
R^2	0.01	0.04	0.06	0.05	0.06	0.04	0.05	0.05
PC	0.00 (0.82)	0.00 (0.63)	0.01 (0.52)	0.01 (0.48)	0.01 (0.55)	0.02 (0.65)	0.02 (0.78)	0.03 (0.83)
R_t	0.08 (0.67)	0.32 (1.60)	0.51* (1.85)	0.57** (2.16)	0.66* (1.93)	0.63* (1.86)	0.80* (1.91)	0.85* (1.90)
R^2	0.01	0.04	0.05	0.03	0.03	0.02	0.03	0.02

Table A.8: Time-Series Momentum for High and Low Attention Coins

This table reports the results that compare the time-series momentum results and the cross-sectional momentum results. Panel A reports the results of predicting cumulative future cross-sectional momentum with current coin market returns. Panel B reports the portfolio results. The Newey-West adjusted t-statistics with n-1 lags are reported in parentheses. *, **, *** denote significance levels at the 10%, 5%, and 1%. The data frequency is weekly.

High Attention	$R_{t,t+1}^{high}$ (1)	$R_{t,t+2}^{high}$ (2)	$R_{t,t+3}^{high}$ (3)	$R_{t,t+4}^{high}$ (4)	$R_{t,t+5}^{high}$ (5)	$R_{t,t+6}^{high}$ (6)	$R_{t,t+7}^{high}$ (7)	$R_{t,t+8}^{high}$ (8)
R_t^{high}	0.03 (0.32)	0.12 (1.04)	0.26 (1.55)	0.26 (1.17)	0.26 (1.01)	0.41 (1.36)	0.29 (0.99)	0.23 (0.83)
Cons	0.01* (1.82)	0.03** (2.02)	0.04** (2.05)	0.06** (2.04)	0.08** (2.01)	0.09** (1.99)	0.12** (1.98)	0.14* (1.97)
R^2	0.00	0.01	0.02	0.01	0.01	0.01	0.01	0.00
Low Attention	$R_{t,t+1}^{low}$ (1)	$R_{t,t+2}^{low}$ (2)	$R_{t,t+3}^{low}$ (3)	$R_{t,t+4}^{low}$ (4)	$R_{t,t+5}^{low}$ (5)	$R_{t,t+6}^{low}$ (6)	$R_{t,t+7}^{low}$ (7)	$R_{t,t+8}^{low}$ (8)
R_t^{low}	0.33*** (3.07)	0.61** (2.40)	0.77*** (2.75)	0.76*** (3.05)	1.15** (2.42)	1.68* (1.73)	2.03 (1.51)	1.96 (1.61)
Cons	0.01 (1.48)	0.04* (1.85)	0.08* (1.88)	0.13* (1.87)	0.17* (1.89)	0.22* (1.91)	0.30* (1.83)	0.39* (1.68)
R^2	0.11	0.10	0.06	0.03	0.05	0.07	0.06	0.03

Table A.9: Time-Series Momentum – Non-Cumulative Returns

This table reports the time-series momentum results using non-cumulative future returns. *, **, *** denote significance levels at the 10%, 5%, and 1%. The data frequency is weekly.

Regression Results								
Weekly	R_{t+1} (1)	R_{t+2} (2)	R_{t+3} (3)	R_{t+4} (4)	R_{t+5} (5)	R_{t+6} (6)	R_{t+7} (7)	R_{t+8} (8)
R_t	0.20*** (4.11)	0.24*** (4.92)	0.23*** (4.76)	0.09* (1.75)	0.10** (2.02)	0.04 (0.84)	0.04 (0.81)	-0.06 (-1.31)
Cons	0.03*** (3.38)	0.03*** (3.21)	0.03*** (3.19)	0.03*** (3.68)	0.03*** (3.49)	0.03*** (3.66)	0.03*** (3.73)	0.03*** (4.18)
R^2	0.04	0.06	0.05	0.01	0.01	0.00	0.00	0.00

Table A.10: Google Searches – Non-Cumulative Returns

This table reports the time-series Google search results using non-cumulative future returns. *, **, *** denote significance levels at the 10%, 5%, and 1%. The data frequency is weekly.

Regression Results								
Weekly	R_{t+1} (1)	R_{t+2} (2)	R_{t+3} (3)	R_{t+4} (4)	R_{t+5} (5)	R_{t+6} (6)	R_{t+7} (7)	R_{t+8} (8)
$Google_t$	0.03*** (3.72)	0.02*** (2.99)	0.02** (2.14)	0.02** (2.34)	0.00 (0.58)	-0.01 (-1.40)	-0.01 (-1.19)	-0.00 (-0.46)
Cons	0.03*** (4.04)	0.03*** (3.97)	0.03*** (4.01)	0.03*** (4.01)	0.03*** (3.98)	0.03*** (3.99)	0.03*** (4.04)	0.03*** (4.01)
R^2	0.03	0.02	0.01	0.01	0.00	0.00	0.00	0.00

Table A.11: Split Sample

This table shows some of the main results of the paper using the first half (01/01/2011–12/31/2014) and second half (01/01/2015–12/31/2018) of the sample. Panel A reports results on network effect. Panel B reports results on cryptocurrency momentum. Panel C reports results on investor attention. Panel A is monthly frequency. Panel B and Panel C are weekly frequency.

Panel A	First Half					Second Half				
	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
$\Delta user$	0.84 (1.27)					5.05** (2.22)				
$\Delta address$		1.11*** (4.68)					1.35*** (3.40)			
$\Delta trans$			0.47** (2.07)					0.79** (2.53)		
$\Delta payment$				0.68*** (3.35)					0.53** (2.25)	
$pC_{network}$					0.10** (2.58)					0.08*** (3.10)
Cons	-0.03 (-0.23)	0.02 (0.27)	0.09 (1.27)	0.05 (0.76)	0.07 (0.98)	-0.21* (-1.71)	0.02 (0.67)	0.03 (0.90)	0.04 (1.22)	0.08** (2.23)
R^2	0.05	0.32	0.08	0.20	0.19	0.10	0.20	0.12	0.10	0.17

Panel B								
First Half	$R_{t,t+1}$	$R_{t,t+2}$	$R_{t,t+3}$	$R_{t,t+4}$	$R_{t,t+5}$	$R_{t,t+6}$	$R_{t,t+7}$	$R_{t,t+8}$
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
R_t	0.23** (2.31)	0.55** (2.40)	0.87** (2.59)	1.22** (2.45)	1.49** (2.12)	1.75* (1.81)	2.13* (1.74)	1.84* (1.70)
Cons	0.04*** (2.95)	0.08*** (3.20)	0.14*** (3.00)	0.21*** (2.84)	0.30** (2.57)	0.40** (2.43)	0.52** (2.32)	0.69** (2.12)
R^2	0.05	0.09	0.09	0.09	0.07	0.06	0.05	0.02
Second Half	$R_{t,t+1}$	$R_{t,t+2}$	$R_{t,t+3}$	$R_{t,t+4}$	$R_{t,t+5}$	$R_{t,t+6}$	$R_{t,t+7}$	$R_{t,t+8}$
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
R_t	0.07 (0.83)	0.24* (1.69)	0.50** (2.45)	0.43 (1.47)	0.45 (1.28)	0.54 (1.29)	0.43 (1.01)	0.30 (0.89)
Cons	0.02** (2.25)	0.04** (2.55)	0.06** (2.49)	0.08** (2.53)	0.11** (2.48)	0.14** (2.42)	0.17** (2.39)	0.21** (2.32)
R^2	0.01	0.03	0.06	0.03	0.02	0.02	0.01	0.00

Panel C								
First Half	$R_{t,t+1}$	$R_{t,t+2}$	$R_{t,t+3}$	$R_{t,t+4}$	$R_{t,t+5}$	$R_{t,t+6}$	$R_{t,t+7}$	$R_{t,t+8}$
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$Google_t$	0.03** (2.07)	0.05* (1.70)	0.07 (1.31)	0.08 (1.28)	0.10 (1.48)	0.12 (1.56)	0.12 (1.43)	0.12 (1.33)
Cons	0.04*** (3.23)	0.10*** (3.04)	0.17*** (2.72)	0.25** (2.52)	0.36** (2.36)	0.48** (2.25)	0.61** (2.14)	0.77** (2.06)
R^2	0.03	0.02	0.01	0.01	0.01	0.01	0.00	0.00
Second Half	$R_{t,t+1}$	$R_{t,t+2}$	$R_{t,t+3}$	$R_{t,t+4}$	$R_{t,t+5}$	$R_{t,t+6}$	$R_{t,t+7}$	$R_{t,t+8}$
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$Google_t$	0.04*** (3.36)	0.07*** (4.72)	0.09*** (5.62)	0.12*** (4.89)	0.13*** (3.64)	0.11** (2.31)	0.09* (1.91)	0.09 (1.60)
Cons	0.02** (2.55)	0.04*** (2.90)	0.06*** (2.82)	0.09*** (2.74)	0.12*** (2.62)	0.15** (2.48)	0.18** (2.42)	0.22** (2.37)
R^2	0.09	0.15	0.15	0.15	0.12	0.06	0.03	0.02

Table A.12: Time-Series and Cross-Sectional Momentum

This table reports the results that compare the time-series momentum results and the cross-sectional momentum results. Panel A reports the results of predicting cumulative future cross-sectional momentum with current coin market returns. Panel B reports the portfolio results. The Newey-West adjusted t-statistics with n-1 lags are reported in parentheses. *, **, *** denote significance levels at the 10%, 5%, and 1%. The data frequency is weekly.

Panel A: Regression Results								
	$CMOM_{t,t+1}$	$CMOM_{t,t+2}$	$CMOM_{t,t+3}$	$CMOM_{t,t+4}$	$CMOM_{t,t+5}$	$CMOM_{t,t+6}$	$CMOM_{t,t+7}$	$CMOM_{t,t+8}$
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$CMKT_t$	-0.01 (-0.11)	0.05 (0.25)	-0.01 (-0.07)	-0.12 (-0.58)	-0.17 (-0.75)	-0.32 (-1.27)	-0.47 (-1.62)	-0.52* (-1.70)
Cons	0.04*** (3.39)	0.07*** (4.03)	0.11*** (3.93)	0.15*** (3.65)	0.19*** (3.49)	0.24*** (3.36)	0.29*** (3.25)	0.34*** (3.18)
R^2	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01

Panel B: Portfolio Results					
		Alpha	CMKT	CSMB	CMOM
Top 3	Mean	3.17*** (3.18)			
	C-1	2.95*** (2.95)	0.17* (1.95)		
	CMOM Only	2.36** (2.41)			0.23*** (4.51)
	C-3	1.91* (1.95)	0.14* (1.69)	0.13* (1.84)	0.23*** (4.53)
	Mean	4.13*** (2.89)			
Top 5	C-1	4.13*** (2.85)	-0.02 (-0.12)		
	CMOM Only	3.10** (2.19)			0.29*** (3.93)
	C-3	2.83** (.97)	-0.05 (-0.38)	0.16 (1.57)	0.29*** (3.89)
	Mean	4.62*** (3.43)			
	C-1	4.52*** (3.33)	0.05 (0.46)		
Top 10	CMOM Only	3.52*** (2.67)			0.31*** (4.50)
	C-3	3.18** (2.38)	0.03 (0.22)	0.14 (1.54)	0.31 (4.47)

Table A.13: Regulation and Cryptocurrency Returns

This table documents the responses of cryptocurrency prices to the contemporaneous regulative events. Reg is a dummy variable that equals one if there is a regulative event in the day and zero otherwise. Reg Positive is a dummy variable that equals one if there is a positive regulative event in the day and zero otherwise. Reg Negative is a dummy variable that equals one if there is a negative regulative event in the day and zero otherwise. Reg Directed equals one if there is a positive regulative event, equals negative one if there is a negative regulative event, and equals zero if there is not a regulative event in the day. T-statistics in parentheses and brackets are based on standard OLS and bootstrap, respectively. *, **, *** denote significance levels at the 10%, 5%, and 1% based on standard OLS t-statistics. The data frequency is daily.

	Return (1)	Return (2)	Return (3)	Return (4)
Reg	-0.01*** (-3.14) [-2.77]			
Reg Positive		-0.01 (-0.94) [-0.69]		
Reg Negative			-0.02*** (-3.22) [-2.72]	
Reg Directed				0.01** (2.39) [1.96]
R-squared	0.003	0.000	0.004	0.002

Table A.14: Speculative Interest and Cryptocurrency Return

This table documents the responses of cryptocurrency prices to changes in speculative shares. Panel A documents the exposures of cryptocurrency returns to changes in contemporaneous speculative shares. Panel B documents the results of predicting cumulative future speculative share growths with the coin market returns. T-statistics in Panel B are based on the Newey-West adjustment procedure. *, **, *** denote significance levels at the 10%, 5%, and 1%. The data frequency is monthly.

Panel A	Return (1)	Return (2)	Return (3)	Return (4)	Return (5)
$\Delta\text{Speculation}$	0.27 (1.18)	0.23 (1.04)	0.16 (0.76)	0.21 (1.02)	0.17 (0.81)
Δuser		4.82 (1.48)			
$\Delta\text{address}$			1.57*** (2.94)		
Δtrans				1.19*** (2.79)	
$\Delta\text{payment}$					1.09** (2.49)
R-squared	0.04	0.10	0.24	0.23	0.20

Panel B	(1)	(2)	(3)	$\Delta\text{Speculation}$				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>cmkt</i>	0.01 (0.36)	0.05 (1.00)	0.12* (1.90)	0.11 (1.51)	0.13 (1.17)	0.20 (1.39)	0.25 (1.36)	0.35** (2.47)
<i>Cons</i>	0.02 (0.60)	0.05 (1.19)	0.06 (1.04)	0.09 (1.33)	0.11 (1.23)	0.11 (1.11)	0.12 (1.03)	0.12 (0.90)
R^2	0.00	0.01	0.04	0.02	0.02	0.05	0.06	0.10

Table A.15: Sentiment and Cryptocurrency Return

This table reports the results of predicting future cryptocurrency returns with current cryptocurrency sentiment. The measure of cryptocurrency sentiment is defined as the log ratio between the count of positive and the count of negative phrases of cryptocurrencies in Google searches. Positive phrases include the following twenty words when they appear with “Bitcoin”: “up”, “long”, “buy”, “good”, “bullish”, “high”, “surge”, “strong”, “add”, “positive”, “increase”, “benefit”, “green”, “attract”, “nice”, “undervalue”, “cheap”, “bought”, “soar”, and “great”. Negative phrases include the following twenty words when they appear with “Bitcoin”: “down”, “short”, “sell”, “bad”, “bearish”, “low”, “crash”, “weak”, “minus”, “negative”, “decrease”, “loss”, “red”, “dump”, “drop”, “overvalue”, “expensive”, “sold”, “collapse”, and “worse”. The Newey-West adjusted t-statistics with n-1 lags are reported in parentheses. *, **, *** denote significance levels at the 10%, 5%, and 1%. The data frequency is weekly.

Weekly	$R_{t,t+1}$ (1)	$R_{t,t+2}$ (2)	$R_{t,t+3}$ (3)	$R_{t,t+4}$ (4)	$R_{t,t+5}$ (5)	$R_{t,t+6}$ (6)	$R_{t,t+7}$ (7)	$R_{t,t+8}$ (8)
$Sentiment_t$	0.04** (2.45)	0.06** (2.38)	0.10*** (2.92)	0.11** (2.47)	0.11** (2.24)	0.18 (1.59)	0.15 (1.51)	0.17 (1.31)
R^2	0.03	0.02	0.03	0.02	0.01	0.02	0.01	0.01
$Sentiment_t$	0.04** (2.47)	0.06** (2.42)	0.10*** (2.97)	0.11** (2.51)	0.11** (2.26)	0.18 (1.59)	0.15 (1.51)	0.17 (1.31)
$Google_t$	0.03*** (3.94)	0.05*** (4.35)	0.07*** (4.32)	0.09*** (4.17)	0.10*** (3.29)	0.09** (2.09)	0.08* (1.76)	0.07 (1.48)
R^2	0.08	0.09	0.09	0.08	0.05	0.05	0.02	0.02
$Sentiment_t$	0.04** (2.25)	0.06** (2.39)	0.10*** (3.01)	0.11** (2.59)	0.11** (2.28)	0.18 (1.62)	0.14 (1.53)	0.17 (1.32)
R_t	0.14 (1.30)	0.41* (1.95)	0.61** (2.51)	0.75** (2.39)	0.84** (2.32)	0.92** (2.29)	0.98** (2.26)	0.99** (2.12)
R^2	0.05	0.08	0.09	0.07	0.06	0.06	0.04	0.03
$Sentiment_t$	0.04** (2.30)	0.06** (2.42)	0.10*** (3.02)	0.11** (2.59)	0.11** (2.27)	0.18 (1.61)	0.14 (1.52)	0.17 (1.31)
$Google_t$	0.03*** (3.68)	0.05*** (3.65)	0.06*** (3.62)	0.09*** (3.80)	0.09*** (3.04)	0.08* (1.83)	0.07 (1.49)	0.06 (1.24)
R_t	0.11 (1.09)	0.36* (1.76)	0.56** (2.35)	0.67** (2.22)	0.76** (2.14)	0.85** (2.14)	0.91** (2.13)	0.93** (2.00)
R^2	0.10	0.14	0.14	0.12	0.09	0.07	0.05	0.04

Table A.16: Volume-Volatility Ratio and Cryptocurrency Return

This table reports the results of predicting future cryptocurrency returns with current cryptocurrency volume-volatility ratio. The volume-volatility ratio is defined as the log of the ratio between the cryptocurrency trading volume and the standard deviation of the coin market returns. The first column reports the result of regressing the coin market returns on the contemporaneous volume-volatility ratio. Columns (2)-(9) report the results of regressing one to eight week ahead cumulative coin market returns with current volume-volatility ratio. The Newey-West adjusted t-statistics with n-1 lags are reported in parentheses for the predictive regressions. *, **, *** denote significance levels at the 10%, 5%, and 1%. The data frequency is weekly.

Weekly	R_t	$R_{t,t+1}$	$R_{t,t+2}$	$R_{t,t+3}$	$R_{t,t+4}$	$R_{t,t+5}$	$R_{t,t+6}$	$R_{t,t+7}$	$R_{t,t+8}$
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
$Ratio_t$	0.01*** (2.61)	0.00 (0.29)	0.00 (0.17)	-0.00 (-0.04)	-0.00 (-0.10)	-0.01 (-0.20)	-0.02 (-0.24)	-0.02 (-0.30)	-0.03 (-0.34)
R^2	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table A.17: Twitter

This table reports the time-series Twitter posting results. Panel A shows the regression results and Panel B shows the results by grouping weekly coin market returns into terciles. Twitter posting measure is constructed as the Twitter posting data for the word “Bitcoin” minus the its average of the previous four weeks, and then normalized to have mean zero and standard deviation of one. The t-statistics are reported in parentheses and are Newey-West adjusted with n-1 lags. *, **, *** denote significance levels at the 10%, 5%, and 1%. The data frequency is weekly.

Panel A	R_{t+1} (1)	R_{t+2} (2)	R_{t+3} (3)	R_{t+4} (4)	R_{t+5} (5)	R_{t+6} (6)	R_{t+7} (7)
$Twitter_t$	0.03*** (3.46)	0.03*** (3.40)	0.01 (0.95)	0.02*** (3.63)	0.02* (1.93)	-0.00 (-0.44)	-0.00 (-0.38)
Cons	0.04*** (4.46)	0.04*** (4.08)	0.04*** (3.58)	0.03*** (3.28)	0.04*** (3.14)	0.04*** (2.99)	0.04*** (2.89)
R-Squared	0.02	0.01	0.02	0.02	0.01	0.00	0.00

Panel B					
Rank	Twitter	R_{t+1}	T-Statistics	R_{t+2}	T-Statistics
Low	-0.80	-1.39	-1.12	-1.86	-1.12
2	-0.10	1.23	0.91	3.71	0.91
3	-0.04	6.47	2.33	13.40	2.33
4	0.05	6.32	3.96	16.49	3.96
5	0.91	6.30	3.06	8.23	3.06
Difference		7.69		10.09	
Rank	Twitter	R_{t+3}	T-Statistics	R_{t+4}	T-Statistics
Low	-0.80	-3.41	-0.41	-3.71	-1.18
2	-0.10	7.03	1.93	12.45	1.33
3	-0.04	24.89	2.07	38.54	2.92
4	0.05	24.36	3.90	33.17	2.89
5	0.91	12.43	1.24	15.83	2.57
Difference		15.84		19.54	

Table A.18: Cryptocurrency Return Loadings to Electricity Factors for Three Major Coins

This table reports the factor loadings of the Bitcoin returns, Ethereum returns, and Ripple returns on the production factors that relate to electricity costs. The table reports the factor loadings of the coin returns on the production factors. The standard t-statistic is reported in parentheses. *, **, *** denote significance levels at the 10%, 5%, and 1% based on the standard t-statistics. The data frequency is monthly.

Bitcoin	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\Delta Price$ US	-1.14 (-0.39)							
ΔGen US		0.11 (0.15)						
$\Delta Consum$ US			0.07 (0.14)					
$\Delta Price$ CN				-7.54 (-0.78)				
$\Delta Price$ SC					2.41 (0.39)			
ΔGen CN						0.07 (0.08)		
ΔGen SC							-0.49 (-1.01)	
PC^{elec}								-0.00 (-0.11)
Cons	0.20*** (2.88)	0.20*** (2.87)	0.20*** (2.87)	0.19*** (2.75)	0.19*** (2.79)	0.19*** (2.65)	0.19*** (2.74)	0.19*** (2.67)
R^2	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.00

Ethereum	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\Delta Price$ US	4.07 (0.87)							
ΔGen US		0.84 (0.81)						
$\Delta Consum$ US			0.17 (0.26)					
$\Delta Price$ CN				16.38 (0.47)				
$\Delta Price$ SC					3.41 (0.57)			
ΔGen CN						0.15 (0.10)		
ΔGen SC							0.50 (0.72)	
PC^{elec}								0.04 (0.73)
Cons	0.24** (2.33)	0.24** (2.31)	0.23** (2.27)	0.24** (2.31)	0.24** (2.32)	0.23** (2.24)	0.23** (2.29)	0.23** (2.27)
R^2	0.02	0.02	0.00	0.01	0.01	0.00	0.01	0.01

Ripple	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Δ Price US	-5.71 (-0.77)							
Δ Gen US		2.59 (1.43)						
Δ Consum US			1.29 (1.07)					
Δ Price CN				19.59 (0.27)				
Δ Price SC					0.51 (0.04)			
Δ Gen CN						1.04 (0.52)		
Δ Gen SC							-1.85 (-1.65)	
PC^{elec}								0.02 (0.24)
Cons	0.32* (1.89)	0.33* (1.97)	0.33* (1.96)	0.33* (1.92)	0.33* (1.90)	0.32* (1.88)	0.33* (1.98)	0.33* (1.90)
R^2	0.01	0.03	0.02	0.00	0.00	0.00	0.04	0.00

Table A.19: Cryptocurrency Return Loadings to Computing Factors for Three Major Coins

This table reports the factor loadings of the coin market returns on the production factors that relate to computing costs. Panel A shows the correlation matrix of the production factors. Panel B reports the factor loadings of the coin market returns on the production factors. The standard t-statistic is reported in parentheses. *, **, *** denote significance levels at the 10%, 5%, and 1% based on the standard t-statistics. The data frequency is monthly.

Bitcoin	(1)	(2)	(3)	(4)	(5)	(6)
$\Delta\text{Price Antminer}$	0.27** (2.25)					
Nvidia		0.45 (0.80)				
AMD			0.02 (0.05)			
TSMC				0.22 (0.18)		
ASE					0.53 (0.59)	
PC^{comp}						0.01 (0.26)
R^2	0.12	0.01	0.00	0.00	0.00	0.00
Ethereum	(1)	(2)	(3)	(4)	(5)	(6)
$\Delta\text{Price Antminer}$	0.14 (0.42)					
Nvidia		0.76 (1.00)				
AMD			-0.64 (-1.17)			
TSMC				2.04 (1.29)		
ASE					0.87 (0.68)	
PC^{comp}						0.05 (0.69)
R^2	0.00	0.03	0.03	0.04	0.01	0.01
Ripple	(1)	(2)	(3)	(4)	(5)	(6)
$\Delta\text{Price Antminer}$	0.44 (0.58)					
Nvidia		0.41 (0.28)				
AMD			-0.83 (-0.82)			
TSMC				-1.31 (-0.45)		
ASE					-0.40 (-0.18)	
PC^{comp}						-0.05 (-0.33)
R^2	0.01	0.00	0.01	0.00	0.00	0.00

Table A.20: Time-Series Momentum for Three Major Coins

This table reports the time-series momentum results for Bitcoin, Ethereum, and Ripple. Panel A shows the regression results and Panel B shows the results by grouping weekly coin market returns into terciles. The first part of Panel B reports results for the whole sample. The second part of Panel B uses the first two years of data to determine the tercile cutoffs and examine the out-of-sample time-series momentum performance. The Newey-West adjusted t-statistics with n-1 lags are reported in parentheses. *, **, *** denote significance levels at the 10%, 5%, and 1%. The data frequency is weekly.

Panel A: Regression Results								
Bitcoin	$R_{t,t+1}$ (1)	$R_{t,t+2}$ (2)	$R_{t,t+3}$ (3)	$R_{t,t+4}$ (4)	$R_{t,t+5}$ (5)	$R_{t,t+6}$ (6)	$R_{t,t+7}$ (7)	$R_{t,t+8}$ (8)
R_t	0.18** (2.34)	0.45** (2.50)	0.75*** (2.77)	1.00** (2.44)	1.22** (2.07)	1.47* (1.80)	1.76* (1.69)	1.58* (1.68)
Cons	0.03*** (3.80)	0.06*** (4.18)	0.10*** (3.87)	0.14*** (3.68)	0.20*** (3.31)	0.26*** (3.09)	0.33*** (2.92)	0.43*** (2.60)
R^2	0.03	0.07	0.08	0.07	0.06	0.05	0.04	0.02
Ethereum								
R_t	0.10 (1.41)	0.19* (1.77)	0.50** (2.49)	0.53* (1.87)	0.47 (1.50)	0.73 (1.58)	0.85 (1.43)	0.68 (1.30)
Cons	0.04** (2.56)	0.09*** (2.82)	0.14*** (2.71)	0.22*** (2.73)	0.32*** (2.63)	0.40** (2.54)	0.51** (2.47)	0.66** (2.35)
R^2	0.01	0.02	0.06	0.03	0.02	0.02	0.02	0.01
Ripple								
R_t	0.05 (0.56)	0.11 (0.77)	0.11 (0.63)	0.02 (0.19)	0.12 (1.33)	0.22 (1.42)	0.43 (1.50)	0.27 (1.09)
Cons	0.06** (2.17)	0.12** (2.41)	0.21** (2.37)	0.31** (2.27)	0.38** (2.26)	0.49** (2.21)	0.61** (2.07)	0.80* (1.85)
R^2	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00

Panel B: Sorting Results									
Bitcoin									
Rank	Formation	$R_{t,t+1}$	t-stat	$R_{t,t+2}$	t-stat	$R_{t,t+3}$	t-stat	$R_{t,t+4}$	t-stat
Low	-10.57	1.65	(1.41)	3.66	(1.80)	5.55	(1.67)	8.89	(1.93)
Middle	1.89	0.98	(1.09)	2.98	(2.12)	5.38	(2.28)	7.34	(3.44)
High	19.18	7.71	(4.16)	15.83	(4.82)	25.95	(5.37)	37.89	(5.24)
Difference		6.06		12.17		20.40		29.00	
Ethereum									
Rank	Formation	$R_{t,t+1}$	t-stat	$R_{t,t+2}$	t-stat	$R_{t,t+3}$	t-stat	$R_{t,t+4}$	t-stat
Low	-14.50	2.42	(1.04)	4.74	(1.13)	5.35	(0.94)	12.64	(1.97)
Middle	1.18	2.56	(0.97)	8.37	(1.71)	12.00	(2.05)	18.03	(2.07)
High	29.55	8.94	(2.56)	17.76	(3.50)	32.10	(4.26)	43.63	(3.88)
Difference		6.52		13.02		26.75		30.99	
Ripple									
Rank	Formation	$R_{t,t+1}$	t-stat	$R_{t,t+2}$	t-stat	$R_{t,t+3}$	t-stat	$R_{t,t+4}$	t-stat
Low	-15.51	1.30	(0.47)	5.88	(1.03)	14.75	(1.26)	27.61	(1.50)
Middle	-0.97	0.13	(0.08)	5.28	(1.60)	19.30	(1.80)	22.81	(1.94)
High	34.00	16.15	(2.16)	28.02	(2.42)	31.16	(2.73)	42.86	(2.86)
Difference		14.85		22.14		16.41		15.25	

Table A.21: Google Searches for Three Major Coins

This table reports the time-series Google search result for each of the three major coins: Bitcoin, Ethereum, and Ripple. Panel A shows the regression results and Panel B shows the results by grouping weekly coin market returns into terciles. The first part of Panel B reports results for the whole sample. The second part of Panel B uses the first two years of data to determine the tercile cutoffs and examine the out-of-sample time-series performance. The t-statistics are reported in parentheses and are Newey-West adjusted with n-1 lags. *, **, *** denote significance levels at the 10%, 5%, and 1%. The data frequency is weekly.

Panel A: Regression Results								
Bitcoin	$R_{t,t+1}$	$R_{t,t+2}$	$R_{t,t+3}$	$R_{t,t+4}$	$R_{t,t+5}$	$R_{t,t+6}$	$R_{t,t+7}$	$R_{t,t+8}$
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$Google_t$	0.02** (2.56)	0.03* (1.73)	0.03 (1.34)	0.05 (1.35)	0.05 (1.21)	0.04 (0.86)	0.03 (0.62)	0.03 (0.50)
Cons	0.03*** (4.08)	0.07*** (3.92)	0.11*** (3.48)	0.17*** (3.19)	0.23*** (2.94)	0.31*** (2.75)	0.39*** (2.59)	0.48** (2.45)
R^2	0.02	0.01	0.01	0.01	0.00	0.00	0.00	0.00
Ethereum								
$Google_t$	0.03 (1.64)	0.08*** (3.77)	0.13*** (4.22)	0.18*** (5.15)	0.23*** (5.77)	0.20*** (3.84)	0.18*** (3.22)	0.17** (2.23)
Cons	0.05*** (2.81)	0.10*** (3.02)	0.16*** (2.88)	0.25*** (2.78)	0.34*** (2.66)	0.44** (2.53)	0.56** (2.44)	0.70** (2.35)
R^2	0.03	0.05	0.07	0.07	0.06	0.03	0.02	0.01
Ripple								
$Google_t$	0.12*** (3.12)	0.27*** (5.00)	0.48*** (3.01)	0.70** (2.55)	0.59*** (2.72)	0.42*** (3.53)	0.44*** (3.23)	0.43** (2.48)
Cons	0.06** (2.22)	0.13*** (2.61)	0.22*** (2.73)	0.31*** (2.72)	0.39*** (2.60)	0.50** (2.38)	0.64** (2.14)	0.82* (1.88)
R^2	0.07	0.13	0.20	0.23	0.14	0.05	0.03	0.02

Panel B: Sorting Results									
Bitcoin									
Rank	Google	$R_{t,t+1}$	t-stat	$R_{t,t+2}$	t-stat	$R_{t,t+3}$	t-stat	$R_{t,t+4}$	t-stat
Low	-0.45	0.83	(0.87)	1.84	(1.26)	2.51	(1.35)	2.48	(1.13)
Middle	-0.01	1.54	(1.59)	3.03	(1.97)	4.75	(2.33)	6.12	(2.45)
High	0.59	5.77	(3.32)	12.13	(4.11)	19.94	(4.35)	30.12	(4.93)
Difference		4.94		10.29		17.43		27.64	
Ethereum									
Rank	Google	$R_{t,t+1}$	t-stat	$R_{t,t+2}$	t-stat	$R_{t,t+3}$	t-stat	$R_{t,t+4}$	t-stat
Low	-0.53	1.87	(0.73)	3.55	(0.91)	7.61	(1.41)	14.52	(1.78)
Middle	-0.02	2.87	(0.99)	5.07	(1.11)	8.59	(1.50)	19.49	(2.04)
High	0.66	9.85	(3.16)	23.80	(4.31)	35.25	(4.38)	42.61	(4.54)
Difference		7.98		20.25		27.64		28.09	
Ripple									
Rank	Google	$R_{t,t+1}$	t-stat	$R_{t,t+2}$	t-stat	$R_{t,t+3}$	t-stat	$R_{t,t+4}$	t-stat
Low	-0.51	-0.07	(-0.03)	-1.32	(-0.40)	1.79	(0.33)	6.45	(0.76)
Middle	-0.03	8.61	(1.39)	10.71	(1.75)	15.24	(1.61)	18.67	(1.57)
High	0.55	8.97	(1.89)	29.49	(2.64)	47.91	(3.02)	68.24	(3.17)
Difference		9.04		30.81		46.12		61.79	

Table A.22: Currency Loadings of Coin Market Returns for Three Major Coins

This table reports the factor loadings of Bitcoin returns, Ethereum returns, and Ripple returns on different currencies and currency factors. The currencies include Australian dollar, Canadian dollar, Euro, Singapore dollar, and British pound. Returns are in percentage. Results are based on monthly returns. The standard t-statistic is reported in parentheses. *, **, *** denote significance levels at the 10%, 5%, and 1% based on the standard t-statistics. The data frequency is monthly.

Bitcoin	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
APLHA	20.19*** (2.94)	20.58*** (2.97)	20.08*** (2.95)	19.91*** (2.92)	20.33*** (2.99)	20.40*** (2.87)	21.95*** (3.03)	19.98*** (2.70)	20.67*** (2.77)
AUSTRALIA	1.62 (0.73)					-0.84 (-0.20)			
CANADA		3.07 (0.79)				0.95 (0.21)			
EURO			3.04 (1.07)			0.81 (0.19)			
SINGAPORE				4.04 (1.00)		2.14 (0.25)			
UK					3.68 (1.30)	2.59 (0.69)			
DOLLAR							3.69 (0.90)		3.14 (0.75)
CARRY								3.67 (0.89)	3.11 (0.74)
R^2	0.01	0.01	0.01	0.01	0.02	0.02	0.01	0.01	0.02
Ethereum	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
APLHA	22.26** (2.21)	22.33** (2.21)	21.84** (2.25)	22.41** (2.32)	22.68** (2.22)	20.36** (2.06)	30.13** (2.70)	29.25** (2.34)	28.55** (2.35)
AUSTRALIA	1.65 (0.43)					-9.27 (-1.52)			
CANADA		1.19 (0.23)				-1.14 (-0.19)			
EURO			8.65* (1.78)			6.12 (0.93)			
SINGAPORE				12.49* (1.89)		23.10* (1.91)			
UK					1.13 (0.29)	-3.04 (-0.68)			
DOLLAR							12.02 (1.68)		12.31 (1.69)
CARRY								1.09 (0.16)	2.36 (0.36)
R^2	0.00	0.00	0.07	0.08	0.00	0.17	0.08	0.00	0.08

Ripple	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
APLHA	32.25*	30.43*	34.75**	32.50*	33.05*	31.74*	38.10**	39.50*	41.13**
	(1.89)	(1.76)	(2.07)	(1.92)	(1.95)	(1.82)	(2.02)	(1.96)	(2.03)
AUSTRALIA	0.91					-2.87			
	(0.15)					(-0.27)			
CANADA		-3.83				-8.28			
		(-0.43)				(-0.75)			
EURO			11.30			17.25			
			(1.45)			(1.46)			
SINGAPORE				4.61		-2.48			
				(0.38)		(-0.11)			
UK					4.66	0.16			
					(0.68)	(0.02)			
DOLLAR							10.05		9.68
							(0.83)		(0.79)
CARRY								-5.81	-5.15
								(-0.49)	(-0.43)
R^2	0.00	0.00	0.03	0.00	0.01	0.05	0.01	0.00	0.02

Table A.23: Commodity Loadings of Coin Market Returns for Three Major Coins

This table reports the factor loadings of Bitcoin returns, Ethereum returns, and Ripple returns on the returns of different precious metal commodities. The commodities include gold, platinum, and silver. Returns are in percentage. The standard t-statistic is reported in parentheses. *, **, *** denote significance levels at the 10%, 5%, and 1% based on the standard t-statistics. The data frequency is monthly.

Bitcoin	(1)	(2)	(3)	(4)
APLHA	19.60*** (2.87)	19.08*** (2.75)	19.74*** (2.89)	19.52*** (2.78)
GOLD	-0.51 (-0.35)			-2.72 (-1.03)
PLATINUM		0.05 (0.04)		-0.06 (-0.03)
SILVER			0.39 (0.50)	1.63 (1.23)
R^2	0.00	0.00	0.00	0.02
Ethereum	(1)	(2)	(3)	(4)
APLHA	19.87** (2.03)	23.77** (2.32)	22.94** (2.24)	20.01* (1.96)
GOLD	4.83* (1.80)			9.08** (2.08)
PLATINUM		1.36 (0.76)		-0.34 (-0.13)
SILVER			1.12 (0.62)	-3.08 (-1.04)
R^2	0.07	0.01	0.01	0.12
Ripple	(1)	(2)	(3)	(4)
APLHA	32.00* (1.90)	30.16* (1.75)	32.08* (1.88)	29.93* (1.69)
GOLD	-2.60 (-0.58)			2.45 (0.31)
PLATINUM		-3.03 (-0.92)		-2.88 (-0.57)
SILVER			-2.22 (-0.79)	-1.67 (-0.34)
R^2	0.01	0.01	0.01	0.02

Table A.24: Coin Market Returns Loadings to Equity Factors

This table reports the factor loadings of the coin market returns on different equity factor models. The factor models include the CAPM, the Fama-French 3-factor model, the Carhart 4-factor model, the Fama-French 5-factor model, and the Fama-French 6-factor model. The standard t-statistic is reported in parentheses and the bootstrapped t-statistic is reported in brackets. *, **, *** denote significance levels at the 10%, 5%, and 1% based on the standard t-statistics. The data frequency is monthly.

(Percentage)	CAPM	3-Fac	4-Fac	5-Fac	6-Fac
ALPHA	17.53** (2.36) [2.44]	16.54** (2.18) [2.28]	16.32** (2.12) [2.30]	15.32** (2.00) [2.24]	15.00* (1.93) [2.22]
MKTRF	3.15 (1.50) [1.49]	3.64 (1.61) [1.93]	3.73 (1.61) [1.83]	4.32* (1.85) [1.78]	4.46* (1.85) [1.74]
SMB		-1.79 (-0.53) [-1.08]	-1.81 (-0.53) [-1.07]	-0.19 (-0.05) [-0.08]	-0.19 (-0.05) [-0.08]
HML		-2.38 (-0.68) [-1.02]	-2.06 (-0.53) [-0.70]	-3.78 (-0.82) [-1.30]	-3.36 (-0.68) [-1.00]
MOM			0.53 (0.19) [0.28]		0.75 (0.27) [0.39]
RMW				5.61 (1.00) [1.20]	5.68 (1.01) [1.23]
CMA				3.57 (0.51) [0.87]	3.64 (0.52) [0.87]
R^2	0.02	0.03	0.03	0.05	0.05

Table A.25: Coin Market Returns Loadings to Equity Factors for Three Major Coins

This table reports the factor loadings of Bitcoin returns, Ethereum returns, and Ripple returns on different equity factor models. The factor models include the CAPM, the Fama-French 3-factor model, the Carhart 4-factor model, the Fama-French 5-factor model, and the Fama-French 6-factor model. The standard t-statistic is reported in parentheses. *, **, *** denote significance levels at the 10%, 5%, and 1% based on the standard t-statistics. The data frequency is monthly.

Bitcoin	CAPM	3-Fac	4-Fac	5-Fac	6-Fac
ALPHA	16.78** (2.40)	15.89** (2.23)	15.41** (2.13)	14.80** (2.05)	14.23* (1.94)
MKTRF	3.11 (1.57)	3.59* (1.68)	3.78* (1.73)	4.14* (1.88)	4.39* (1.93)
SMB		-1.83 (-0.57)	-1.87 (-0.58)	-0.28 (-0.08)	-0.28 (-0.08)
HML		-1.69 (-0.52)	-0.99 (-0.27)	-2.20 (-0.51)	-1.45 (-0.31)
MOM			1.16 (0.44)		1.34 (0.51)
RMW				5.66 (1.08)	5.78 (1.09)
CMA				1.50 (0.23)	1.63 (0.25)
R^2	0.03	0.03	0.04	0.05	0.05
Ethereum	CAPM	3-Fac	4-Fac	5-Fac	6-Fac
ALPHA	21.78** (2.11)	20.46** (2.05)	20.35** (2.06)	18.21* (1.87)	18.31* (1.88)
MKTRF	0.51 (0.18)	1.30 (0.45)	-0.09 (-0.03)	1.81 (0.62)	0.54 (0.17)
SMB		-4.69 (-1.12)	-5.51 (-1.31)	-1.50 (-0.33)	-2.15 (-0.47)
HML		-6.47 (-1.58)	-9.14** (-2.03)	-10.16* (-2.01)	-10.94** (-2.13)
MOM			-5.03 (-1.36)		-3.57 (-0.91)
RMW				12.35* (1.69)	12.02 (1.64)
CMA				7.77 (0.98)	5.02 (0.59)
R^2	0.00	0.12	0.16	0.21	0.23
Ripple	CAPM	3-Fac	4-Fac	5-Fac	6-Fac
ALPHA	30.87* (1.76)	29.03 (1.62)	30.10* (1.67)	30.17* (1.69)	30.53* (1.69)
MKTRF	1.22 (0.24)	1.22 (0.23)	0.08 (0.01)	3.00 (0.55)	2.50 (0.43)
SMB		-0.91 (-0.13)	-0.97 (-0.14)	1.24 (0.16)	1.13 (0.14)
HML		-6.32 (-0.84)	-9.45 (-1.08)	-17.99* (-1.78)	-18.69* (-1.78)
MOM			-4.48 (-0.71)		-1.69 (-0.26)
RMW				5.00 (0.38)	4.79 (0.36)
CMA				26.14 (1.61)	25.07 (1.49)
R^2	0.00	0.01	0.02	0.06	0.06

Table A.26: Macro Factor Loadings of Coin Market Returns and Three Major Coins

This table reports the factor loadings of the coin market returns, Bitcoin returns, Ethereum returns, and Ripple returns on different macroeconomic factors. The macroeconomic factors include log non-durable consumption growth, log durable consumption growth, log industrial production growth, and log personal income growth. The standard t-statistic is reported in parentheses and the bootstrapped t-statistic is reported in brackets. *, **, *** denote significance levels at the 10%, 5%, and 1% based on the standard t-statistics. The data frequency is monthly.

CMKT	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ALPHA	13.38 (1.07) [1.57]	23.26*** (3.04) [2.46]	20.83*** (2.75) [2.32]	22.46*** (2.73) [2.64]	13.40 (1.07) [1.55]	20.63*** (2.67) [2.51]	17.76** (2.27) [2.32]	19.08** (2.24) [2.60]
Δc^{nd}	21.75 (0.69) [0.74]				13.26 (0.41) [0.44]			
Δc^d		-8.74 (-1.12) [-1.19]				-10.71 (-1.37) [-1.43]		
$\Delta indpro$			-3.05 (-0.20) [-0.28]				-1.54 (-0.10) [-0.13]	
Δpi				-5.90 (-0.53) [-0.75]				-4.22 (-0.38) [-0.54]
MKTRF					2.98 (1.38) [1.44]	3.59* (1.69) [1.73]	3.14 (1.48) [1.43]	3.07 (1.44) [1.42]
R-Squared	0.00	0.01	0.00	0.00	0.03	0.04	0.02	0.02
Bitcoin	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ALPHA	12.82 (1.09)	22.22*** (3.08)	20.05*** (2.81)	21.62*** (2.79)	12.85 (1.09)	19.65*** (2.70)	17.03** (2.32)	18.29** (2.29)
Δc^{nd}	21.02 (0.70)				12.64 (0.42)			
Δc^d		-7.99 (-1.09)				-9.92 (-1.35)		
$\Delta indpro$			-3.12 (-0.21)				-1.64 (-0.11)	
Δpi				-5.76 (-0.55)				-4.11 (-0.39)
MKTRF					2.95 (1.45)	3.51* (1.76)	3.09 (1.55)	3.03 (1.51)
R-Squared	0.01	0.01	0.00	0.00	0.03	0.04	0.03	0.03

Ethereum	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ALPHA	26.47 (1.40)	24.66** (2.30)	23.92** (2.26)	35.33* (1.78)	27.20 (1.42)	24.01** (2.20)	23.14** (2.12)	33.91 (1.64)
Δc^{nd}	-9.57 (-0.21)				-14.08 (-0.29)			
Δc^d		-5.19 (-0.48)				-5.81 (-0.53)		
$\Delta indpro$			-5.57 (-0.29)				-4.54 (-0.23)	
Δpi				-38.04 (-0.71)				-35.18 (-0.64)
MKTRF					1.39 (0.46)	1.40 (0.47)	1.12 (0.38)	0.87 (0.29)
R-Squared	0.00	0.01	0.00	0.01	0.01	0.01	0.01	0.02
Ripple	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ALPHA	25.21 (0.76)	34.65* (1.91)	27.58 (1.58)	32.73 (0.91)	26.38 (0.78)	33.33* (1.80)	25.89 (1.43)	30.32 (0.83)
Δc^{nd}	21.13 (0.26)				14.40 (0.17)			
Δc^d		-6.10 (-0.35)				-7.07 (-0.39)		
$\Delta indpro$			40.91 (1.22)				41.44 (1.23)	
Δpi				-0.24 (-0.00)				2.42 (0.03)
MKTRF					1.55 (0.28)	2.12 (0.39)	2.09 (0.39)	1.84 (0.34)
R-Squared	0.00	0.00	0.02	0.00	0.00	0.00	0.03	0.00

Table A.27: Coin Market Return Exposures to the Factor Zoo

This table reports results of exposures of the coin market returns to factors in the factor zoo. Each column reports the coefficient estimates of regressing the coin market returns to contemporaneous stock market returns and one of the factors in the factor zoo. *, **, *** denote significance levels at the 10%, 5%, and 1%. The data frequency is monthly.

(Percentage)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
mktrf	4.22	4.35	3.81	3.64	4.22	3.54	3.62	3.79	3.58	3.60	3.60	3.81	3.80	3.28	3.62
	(1.55)	(1.56)	(1.39)	(1.34)	(1.33)	(1.28)	(1.33)	(1.39)	(1.31)	(1.33)	(1.33)	(1.40)	(0.93)	(1.16)	(1.33)
abnormalaccruals	9.48														
	(1.27)														
accruals		9.83													
		(1.02)													
accrualsbm			1.35												
			(0.47)												
adexp				-0.13											
				(-0.02)											
announcementreturn					-0.89										
					(-0.22)										
assetgrowth						1.02									
						(0.22)									
assetturnover							-0.21								
							(-0.05)								
bm								-1.68							
								(-0.60)							
bpebm									1.76						
									(0.30)						
beta										1.04					
										(0.49)					
betasquared											1.03				
											(0.49)				
betatailrisk												2.00			
												(0.80)			
bidaskspread													2.11		
													(0.65)		
cboperprof														-1.59	
														(-0.47)	
cf															0.41
															(0.11)

(Percentage)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)
mktrf	3.53	3.65	3.62	3.89	3.64	4.03	4.12	3.65	3.66	3.58	3.57	3.65	3.71	3.59	3.91
	(1.30)	(1.32)	(1.32)	(1.44)	(1.34)	(1.48)	(1.53)	(1.34)	(1.33)	(1.31)	(1.31)	(1.34)	(1.36)	(1.33)	(1.44)
cash	1.79														
	(0.58)														
chassetturnover		0.22													
		(0.03)													
cheq			0.26												
			(0.05)												
chforecastaccrual				-7.13											
				(-1.03)											
chinv					1.43										
					(0.18)										
chinvia						-6.61									
						(-1.03)									
chnanalyst							-15.20								
							(-1.45)								
chncoa								2.05							
								(0.22)							
chnwc									0.57						
									(0.06)						
chpm										-2.11					
										(-0.26)					
chtax											-2.79				
											(-0.48)				
changeinrec												-2.50			
												(-0.41)			
compositedebtissue													-1.50		
													(-0.24)		
consrecomm														-2.88	
														(-0.83)	
convdebt															-4.74
															(-0.84)

(Percentage)	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)	(40)	(41)	(42)	(43)	(44)	(45)
mktrf	3.68 (1.30)	3.63 (1.33)	4.28 (1.33)	3.65 (1.34)	3.98 (1.44)	3.77 (1.38)	3.50 (1.26)	3.77 (1.40)	3.69 (1.36)	3.17 (1.16)	3.67 (1.35)	2.62 (0.94)	3.35 (1.23)	4.14 (1.45)	3.80 (1.39)
credratdg	-0.48 (-0.28)														
debtissuance		-0.89 (-0.10)													
delbreadth			-2.02 (-0.40)												
delcoa				-1.01 (-0.15)											
delcol					-3.63 (-0.60)										
deldrc						2.53 (0.46)									
delequ							1.52 (0.27)								
delfnl								-12.77 (-1.36)							
dellti									9.63 (0.84)						
divind										-6.48 (-1.15)					
divinit											2.46 (0.48)				
divomit												-7.48 (-1.39)			
divyield													-3.43 (-0.96)		
dolvol														-1.94 (-0.57)	
downforecast															-3.71 (-0.55)

(Percentage)	(46)	(47)	(48)	(49)	(50)	(51)	(52)	(53)	(54)	(55)	(56)	(57)	(58)	(59)	(60)
mktrf	3.64	3.67	3.52	3.53	3.54	3.60	3.53	3.50	4.14	4.23	3.63	3.28	3.67	4.52	3.86
	(1.34)	(1.35)	(1.29)	(1.29)	(1.30)	(1.33)	(1.30)	(1.27)	(1.49)	(1.33)	(1.30)	(1.19)	(1.35)	(1.65)	(1.45)
ebm	-4.75														
	(-0.68)														
ep		-1.57													
		(-0.31)													
earnsupbig			2.14												
			(0.48)												
earningsconsistency				-2.58											
				(-0.49)											
earnings surprise					2.12										
					(0.34)										
entmult						-3.65									
						(-0.81)									
exchswitch							1.59								
							(0.69)								
exclexp								1.75							
								(0.28)							
fr									-5.42						
									(-0.85)						
failureprobability										0.61					
										(0.12)					
firmagemom											0.03				
											(0.01)				
forecastdispersion												-2.15			
												(-0.70)			
frontier													-0.45		
													(-0.16)		
gp														6.50	
														(1.47)	
gradexp															-16.07*
															(-1.80)

(Percentage)	(61)	(62)	(63)	(64)	(65)	(66)	(67)	(68)	(69)	(70)	(71)	(72)	(73)	(74)	(75)
mktrf	3.73	3.59	3.96	3.90	4.12	3.64	4.12	3.65	4.64	3.04	3.44	3.68	3.78	3.80	3.65
	(1.37)	(1.32)	(1.43)	(1.43)	(1.47)	(1.34)	(1.30)	(1.14)	(1.42)	(1.08)	(1.25)	(1.35)	(1.38)	(1.40)	(1.35)
grgmtogrsales	-3.22														
	(-0.57)														
grltnoa		3.10													
		(0.37)													
grsaletogrinv			4.83												
			(0.63)												
grsaletogroverhead				4.07											
				(0.81)											
herf					-4.07										
					(-0.72)										
high52						-0.02									
						(-0.01)									
io_shortinterest							-11.65								
							(-1.48)								
idiorisk								-2.70							
								(-1.02)							
illiquidity									-3.42						
									(-0.55)						
indipo										-2.90					
										(-0.78)					
indmom											1.67				
											(0.52)				
indretbig												0.94			
												(0.33)			
intmom													1.08		
													(0.39)		
intanbm														-2.00	
														(-0.69)	
intancfp															-3.59
															(-0.81)

(Percentage)	(76)	(77)	(78)	(79)	(80)	(81)	(82)	(83)	(84)	(85)	(86)	(87)	(88)	(89)	(90)
mktrf	3.54 (1.32)	3.64 (1.33)	3.79 (1.37)	3.17 (1.19)	3.95 (1.45)	3.35 (1.20)	3.88 (1.22)	3.61 (1.33)	3.62 (1.33)	3.67 (1.34)	3.58 (1.31)	3.51 (1.29)	3.80 (1.39)	3.98 (1.38)	3.54 (1.31)
intanep	-7.06 (-1.35)														
intansp		0.01 (0.00)													
investment			-2.63 (-0.30)												
kz				-9.99* (-1.71)											
leverage					-3.00 (-0.95)										
ms						1.77 (0.49)									
maxret							-2.42 (-0.83)								
meanrankrevgrowth								1.19 (0.23)							
mom12m									0.84 (0.40)						
mom18m13m										-0.37 (-0.11)					
mom1m											-0.62 (-0.22)				
mom36m												1.20 (0.45)			
mom6m													-1.42 (-0.46)		
mom6mjunk														-0.79 (-0.28)	
momrev															-1.35 (-0.70)

(Percentage)	(91)	(92)	(93)	(94)	(95)	(96)	(97)	(98)	(99)	(100)	(101)	(102)	(103)	(104)	(105)
mktrf	3.88	3.66	3.79	3.63	3.85	3.39	3.42	3.58	4.63*	3.10	3.42	4.21	3.91	2.96	3.67
	(1.36)	(1.35)	(1.38)	(1.34)	(1.40)	(1.24)	(1.25)	(1.31)	(1.72)	(1.12)	(1.26)	(1.44)	(1.34)	(1.08)	(1.37)
momseas	-1.34														
	(-0.29)														
momvol		-0.61													
		(-0.35)													
noa			-1.65												
			(-0.40)												
netdebtfinance				-1.94											
				(-0.21)											
netdebtprice					-1.49										
					(-0.53)										
netequityfinance						-2.08									
						(-0.59)									
netpayoutyield							-1.79								
							(-0.62)								
numearnincrease								-1.63							
								(-0.24)							
opleverage									9.50*						
									(1.96)						
oscore										-3.79					
										(-0.92)					
operprof											-2.70				
											(-0.69)				
optionvolume1												-5.41			
												(-0.93)			
optionvolume2													0.39		
													(0.04)		
orderbacklog														-7.32	
														(-1.29)	
orgcap															3.21
															(1.60)

(Percentage)	(106)	(107)	(108)	(109)	(110)	(111)	(112)	(113)	(114)	(115)	(116)	(117)	(118)	(119)	(120)
mktrf	3.27	3.65	3.69	3.57	3.70	3.58	4.24	3.28	3.65	3.16	3.29	3.71	3.55	3.56	4.51
	(1.20)	(1.34)	(1.36)	(1.31)	(1.39)	(1.30)	(1.36)	(1.19)	(1.35)	(1.15)	(1.20)	(1.36)	(1.31)	(1.30)	(1.41)
pm	-3.39														
	(-0.93)														
ps		-0.67													
		(-0.25)													
payoutyield			-3.41												
			(-0.65)												
pctacc				2.40											
				(0.31)											
pettotacc					14.71*										
					(1.90)										
price						0.37									
						(0.17)									
pricedelay							-0.90								
							(-0.07)								
profitability								-2.05							
								(-0.76)							
rd									2.95						
									(0.89)						
rdipo										-5.42					
										(-1.03)					
rds											2.77				
											(0.74)				
rev6												-1.91			
												(-0.37)			
rio_bm													3.72		
													(0.93)		
rio_disp														1.48	
														(0.41)	
rio_idiorisk															-3.33
															(-0.72)

(Percentage)	(121)	(122)	(123)	(124)	(125)	(126)	(127)	(128)	(129)	(130)	(131)	(132)	(133)	(134)	(135)
mktrf	3.67 (1.34)	3.65 (1.34)	3.61 (1.28)	3.43 (1.28)	3.64 (1.34)	3.42 (1.25)	3.69 (1.36)	3.31 (1.20)	3.47 (1.29)	3.99 (1.44)	3.56 (1.26)	3.78 (1.30)	3.64 (1.25)	3.60 (1.32)	3.66 (1.35)
rio_turnover	-0.25 (-0.10)														
revenuesurprise		0.65 (0.09)													
roe			-0.13 (-0.03)												
seo				-5.47 (-1.38)											
sp					-0.08 (-0.03)										
shareiss1y						-2.31 (-0.58)									
shareiss5y							4.21 (0.63)								
sharerepurchase								-3.73 (-0.62)							
sharevol									-3.47 (-1.22)						
shortinterest										-1.66 (-0.61)					
size											0.30 (0.10)				
skew1												-8.19 (-0.84)			
smileslope													-4.34 (-1.04)		
spinoff														0.53 (0.15)	
surpriserd															3.11 (0.52)

(Percentage)	(136)	(137)	(138)	(139)	(140)	(141)	(142)	(143)	(144)	(145)	(146)	(147)	(148)	(149)	(150)
mktrf	3.58	3.33	3.27	3.86	3.62	3.46	3.45	3.58	3.48	3.65	3.78	3.59	3.60	3.71	3.55
	(1.29)	(1.23)	(1.19)	(1.41)	(1.33)	(1.26)	(1.26)	(1.31)	(1.29)	(1.32)	(1.39)	(1.32)	(1.32)	(1.34)	(1.31)
tax	-0.59														
	(-0.10)														
upforecast		-11.79													
		(-1.09)													
varcf			2.21												
			(0.86)												
volmkt				-1.88											
				(-0.72)											
volsd					-1.21										
					(-0.34)										
volumetrend						-3.12									
						(-0.54)									
xfin							-1.63								
							(-0.52)								
zscore								1.11							
								(0.34)							
cfp									-3.47						
									(-1.05)						
fgr5yrlag										0.11					
										(0.02)					
grcapx											-6.34				
											(-0.85)				
hire												-3.07			
												(-0.54)			
pchdepr													-2.88		
													(-0.35)		
realestate														1.15	
														(0.13)	
retconglomerate															1.58
															(0.47)

(Percentage)	(151)	(152)	(153)	(154)	(155)
mktrf	2.78	3.60	3.69	3.51	4.43
	(1.02)	(1.32)	(1.36)	(1.29)	(1.38)
sfe	4.26				
	(1.64)				
sinalgo		1.49			
		(0.43)			
std_turn			-2.20		
			(-0.91)		
tang				0.96	
				(0.70)	
zerotrade					-1.55
					(-0.51)

Table A.28: Other Predictors

This table reports results of predicting next month coin market returns with the existing equity risk premium predictors. pd is the price-dividend ratio. pe is the price-earning ratio. credit is the credit spread. term is the term spread. tbill is the relative bill rate. *, **, *** denote significance levels at the 10%, 5%, and 1%. The data frequency is monthly.

CMKT	(1)	(2)	(3)	(4)	(5)	(6)	Ethereum	(1)	(2)	(3)	(4)	(5)	(6)
pd	0.01 (0.52)					-0.00 (-0.16)	pd	-0.04 (-1.43)					-0.01 (-0.20)
pe		-0.03 (-1.16)				-0.01 (-0.49)	pe		0.08 (0.84)				-0.03 (-0.28)
credit			-0.16 (-0.55)			-0.13 (-0.34)	credit			0.20 (0.51)			-0.60 (-0.94)
term				0.24** (2.12)		0.19 (1.28)	term				0.45** (2.13)		0.69* (1.82)
tbill					0.28 (1.05)	0.28 (0.97)	tbill					-0.13 (-0.31)	-0.44 (-0.78)
R-squared	0.00	0.01	0.00	0.05	0.01	0.06	R-squared	0.05	0.02	0.01	0.10	0.00	0.16
Bitcoin	(1)	(2)	(3)	(4)	(5)	(6)	Ripple	(1)	(2)	(3)	(4)	(5)	(6)
pd	0.01 (0.54)					-0.00 (-0.08)	pd	0.03 (0.52)					-0.04 (-0.42)
pe		-0.03 (-1.36)				-0.02 (-0.58)	pe		0.03 (0.37)				0.07 (0.60)
credit			-0.12 (-0.43)			-0.08 (-0.22)	credit			-0.97 (-1.32)			-1.51 (-1.37)
term				0.24** (2.29)		0.19 (1.35)	term				-0.04 (-0.14)		0.02 (0.04)
tbill					0.27 (1.08)	0.28 (1.03)	tbill					0.09 (0.12)	-0.25 (-0.30)
R-squared	0.00	0.02	0.00	0.05	0.01	0.07	R-squared	0.00	0.00	0.03	0.00	0.00	0.04

Table A.29: Detailed U.S. SIC 3-digit Industry Exposures to Coin Market Returns

This table reports the results of regressing industry returns on the contemporaneous coin market returns and the stock market returns. The industry returns are calculated at the SIC three digit level. *, **, *** denote significance levels at the 10%, 5%, and 1%. The data frequency is monthly.

SIC CODE	0	11	17	18	19	20	25	70	72	74	76	78	83	91	99
CMKT	-1.99 (-1.49)	-0.76 (-0.62)	-0.94 (-0.73)	-0.81 (-0.75)	1.34 (0.89)	0.72 (0.11)	-1.65 (-1.55)	-0.18 (-0.17)	-0.56 (-0.61)	-1.08 (-1.15)	0.71 (0.34)	-2.93 (-0.68)	-3.82* (-2.01)	-0.03 (-0.01)	-2.51 (-1.25)
MKTRF	1.88*** (5.67)	1.05*** (3.75)	1.38*** (4.66)	1.00*** (4.03)	1.47*** (4.24)	2.31** (2.11)	0.64** (2.63)	0.76*** (3.09)	1.16*** (5.45)	1.40*** (6.54)	2.09*** (4.33)	1.00** (2.26)	1.21 (1.64)	0.21 (0.54)	2.32*** (4.11)
SIC CODE	100	101	102	103	104	106	107	108	109	122	124	131	132	138	140
CMKT	-0.65 (-0.47)	-1.20 (-0.82)	-2.42* (-1.83)	-3.13** (-2.55)	-1.31 (-0.82)	-6.16** (-2.16)	-0.16 (-0.06)	1.87 (0.88)	-0.68 (-0.56)	-1.12 (-0.82)	1.93 (0.43)	-1.03 (-1.35)	-0.84 (-0.72)	-1.39 (-1.61)	1.66 (0.70)
MKTRF	1.57*** (4.90)	1.61*** (4.76)	1.72*** (5.64)	1.67*** (5.93)	0.53 (1.44)	2.33*** (3.55)	2.81*** (3.96)	1.55*** (3.17)	2.05*** (7.34)	1.58*** (5.02)	2.87*** (3.04)	1.50*** (8.59)	1.71*** (6.40)	1.61*** (8.11)	0.97* (1.77)
SIC CODE	141	142	144	147	148	149	152	153	154	160	161	162	170	171	173
CMKT	2.30 (1.28)	-2.28 (-1.34)	-0.53 (-0.54)	-0.20 (-0.20)	0.13 (0.02)	-1.02 (-0.70)	-0.91 (-0.84)	-0.06 (-0.08)	-1.04 (-0.82)	-0.68 (-0.50)	-1.93 (-0.46)	-1.20* (-1.75)	-3.77 (-0.89)	-1.24 (-1.08)	-0.73 (-1.33)
MKTRF	1.05** (2.53)	1.44*** (4.04)	1.13*** (5.90)	0.88*** (3.81)	1.54* (1.94)	1.13*** (3.35)	1.73*** (6.96)	1.42*** (8.21)	2.46*** (8.42)	1.35*** (4.34)	4.00*** (4.17)	1.71*** (10.87)	1.74* (1.78)	1.58*** (6.00)	0.92*** (7.24)
SIC CODE	174	175	178	179	200	201	202	203	204	205	206	207	208	209	210
CMKT	-0.04 (-0.01)	-1.79 (-0.40)	-3.42** (-1.99)	1.32 (0.79)	0.34 (0.37)	0.60 (0.90)	0.82 (1.00)	-0.41 (-0.75)	0.25 (0.54)	-0.24 (-0.35)	1.02 (1.47)	-0.15 (-0.27)	0.42 (0.96)	1.36 (1.04)	296.69* (1.84)
MKTRF	0.78 (1.60)	4.72*** (4.64)	0.82** (2.08)	1.67*** (4.22)	0.56*** (2.67)	0.50*** (3.26)	0.95*** (4.98)	0.41*** (3.34)	0.50*** (4.75)	0.64*** (4.07)	0.41** (2.59)	0.78*** (6.07)	0.54*** (5.38)	0.47 (1.57)	-14.00* (-1.98)
SIC CODE	211	213	220	221	222	225	227	228	229	230	231	232	233	234	238
CMKT	-0.09 (-0.14)	0.48 (0.19)	2.97 (0.27)	0.12 (0.13)	-0.82 (-1.04)	0.16 (0.17)	-0.22 (-0.31)	1.18 (0.90)	0.46 (0.28)	0.56 (0.37)	11.45** (2.19)	0.27 (0.47)	1.81* (1.92)	-0.42 (-0.45)	1.57 (0.91)
MKTRF	0.54*** (3.81)	0.21 (0.18)	-0.53 (-0.21)	0.62*** (3.06)	1.82*** (10.07)	1.07*** (5.05)	1.38*** (8.44)	1.01*** (3.32)	1.28*** (3.37)	0.20 (0.56)	2.36** (2.29)	0.76*** (5.83)	1.12*** (5.16)	0.65*** (3.07)	1.23*** (3.08)

SIC CODE	241	242	243	245	249	250	251	252	253	254	261	262	263	265	267
CMKT	-1.91	-1.91**	0.23	0.33	-0.10	-1.68	1.85*	-0.47	0.57	-0.09	-0.58	-0.34	-0.21	-1.01	0.27
	(-0.77)	(-2.06)	(0.24)	(0.10)	(-0.13)	(-1.04)	(1.85)	(-0.51)	(0.78)	(-0.08)	(-0.32)	(-0.69)	(-0.34)	(-1.58)	(0.46)
MKTRF	1.24**	0.97***	1.77***	1.51**	1.71***	0.97**	1.35***	1.45***	1.42***	1.70***	1.43***	1.41***	1.32***	1.34***	0.43***
	(2.37)	(4.57)	(7.91)	(2.06)	(9.59)	(2.61)	(5.82)	(6.81)	(8.50)	(5.87)	(3.98)	(12.42)	(9.49)	(9.05)	(3.15)
SIC CODE	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285
CMKT	-0.49	-0.03	0.39	0.15	-0.47	-0.32	2.15**	-0.34	-1.06	1.05	-0.33	-0.44	0.81**	0.77*	-1.15**
	(-0.67)	(-0.03)	(0.66)	(0.29)	(-0.70)	(-0.33)	(2.28)	(-0.45)	(-1.03)	(1.26)	(-0.96)	(-0.79)	(2.15)	(1.94)	(-2.32)
MKTRF	1.28***	1.60***	0.93***	0.94***	1.37***	1.08***	0.76***	1.45***	1.03***	1.06***	1.20***	1.66***	0.76***	0.44***	1.44***
	(7.61)	(7.15)	(6.70)	(8.13)	(8.82)	(4.83)	(3.50)	(8.25)	(4.34)	(5.51)	(15.11)	(12.95)	(8.73)	(4.77)	(12.65)
SIC CODE	286	287	289	291	295	299	301	302	305	306	308	310	311	314	316
CMKT	-0.43	-0.46	0.41	0.13	0.03	-0.40	-0.60	0.99	1.59	-0.38	-0.52	-0.13	-2.96	1.05	0.13
	(-0.78)	(-0.75)	(0.47)	(0.29)	(0.03)	(-0.48)	(-0.55)	(1.24)	(0.74)	(-0.56)	(-1.20)	(-0.17)	(-0.39)	(1.11)	(0.07)
MKTRF	1.52***	1.37***	1.22***	1.06***	1.58***	0.74***	1.77***	0.56***	1.12**	1.27***	1.15***	0.77***	1.60	0.75***	1.47***
	(12.04)	(9.55)	(6.15)	(9.96)	(6.37)	(3.88)	(7.09)	(3.04)	(2.48)	(8.09)	(11.51)	(4.39)	(0.85)	(3.45)	(3.74)
SIC CODE	317	319	322	323	324	325	326	327	329	331	332	333	334	335	336
CMKT	-3.18	5.64	-0.32	0.63	-0.33	-3.36	2.10	-2.29**	-0.37	-0.88	0.28	-0.81	-0.82	-0.46	-0.21
	(-1.00)	(1.49)	(-0.35)	(0.55)	(-0.33)	(-1.18)	(0.26)	(-2.12)	(-0.41)	(-0.94)	(0.41)	(-0.72)	(-0.43)	(-0.71)	(-0.27)
MKTRF	1.64*	0.07	1.87***	1.66***	1.91***	2.17***	0.52	2.00***	1.43***	2.01***	0.68***	1.44***	2.07***	1.52***	1.08***
	(1.83)	(0.18)	(8.83)	(6.24)	(8.32)	(3.29)	(0.63)	(8.07)	(6.92)	(9.37)	(4.38)	(5.55)	(4.55)	(10.29)	(6.11)
SIC CODE	339	341	342	343	344	345	346	347	348	349	351	352	353	354	355
CMKT	1.71	0.16	-1.01*	0.40	-0.01	0.74	1.64	0.46	0.84	-1.40**	-0.35	-0.94	-0.76	-0.31	-1.81***
	(0.32)	(0.34)	(-1.71)	(0.25)	(-0.04)	(0.65)	(1.23)	(0.45)	(0.84)	(-2.38)	(-0.59)	(-1.32)	(-0.99)	(-0.56)	(-2.93)
MKTRF	0.91	1.14***	1.46***	0.68*	1.29***	0.85***	2.15***	1.19***	0.60**	1.62***	1.11***	1.18***	1.44***	1.43***	1.53***
	(0.78)	(10.37)	(10.74)	(1.84)	(13.69)	(3.24)	(6.98)	(4.99)	(2.63)	(11.95)	(8.21)	(7.19)	(8.10)	(11.43)	(10.76)

SIC CODE	356	357	358	359	360	361	362	363	364	365	366	367	369	371	372
CMKT	-0.58	0.12	-0.41	-1.13	0.83	1.01*	-0.73	-0.51	-0.65	-1.24	0.65	-0.61	0.37	-0.65	0.31
	(-1.26)	(0.19)	(-0.73)	(-1.45)	(0.77)	(1.76)	(-1.51)	(-0.62)	(-1.14)	(-1.45)	(1.00)	(-1.37)	(0.99)	(-1.22)	(0.85)
MKTRF	1.40***	1.05***	1.32***	1.70***	1.56***	1.23***	1.39***	1.49***	1.20***	1.75***	1.19***	1.22***	1.13***	1.50***	1.06***
	(13.02)	(7.21)	(10.16)	(9.47)	(6.24)	(9.34)	(12.48)	(7.88)	(9.13)	(8.94)	(7.93)	(11.88)	(13.05)	(12.31)	(12.53)
SIC CODE	373	374	375	376	379	381	382	384	385	386	387	391	393	394	395
CMKT	-0.35	-0.68	-0.96	0.69	0.03	0.10	0.01	0.28	0.49	0.27	-0.92	2.69*	1.61	0.34	0.55
	(-0.42)	(-0.77)	(-1.01)	(0.87)	(0.03)	(0.25)	(0.03)	(0.82)	(0.69)	(0.38)	(-0.53)	(1.69)	(1.32)	(0.52)	(0.32)
MKTRF	0.97***	1.71***	1.00***	0.36*	1.37***	0.86***	1.18***	0.90***	0.35**	0.99***	1.68***	0.82**	1.43***	0.87***	0.59
	(4.98)	(8.40)	(4.58)	(1.98)	(5.30)	(8.99)	(13.38)	(11.47)	(2.15)	(5.87)	(4.17)	(2.23)	(5.08)	(5.79)	(1.21)
SIC CODE	396	397	399	401	421	422	440	441	442	444	448	449	451	452	458
CMKT	0.44	0.03	-0.09	0.41	0.02	-1.10	-0.91	-0.80	1.80	-0.07	-0.36	-1.42	0.55	0.03	0.45
	(0.12)	(0.02)	(-0.14)	(0.78)	(0.04)	(-0.59)	(-0.49)	(-1.19)	(0.45)	(-0.08)	(-0.46)	(-1.04)	(0.86)	(0.03)	(0.55)
MKTRF	-0.49	1.87***	1.45***	1.11***	0.98***	0.92	1.76***	1.53***	2.68***	1.08***	0.74***	1.92***	0.99***	1.61***	0.63***
	(-0.59)	(4.33)	(10.64)	(9.12)	(8.57)	(1.20)	(4.09)	(9.90)	(4.05)	(5.26)	(4.12)	(6.11)	(6.63)	(7.52)	(3.33)
SIC CODE	461	472	473	474	478	481	482	483	484	489	491	492	493	494	495
CMKT	0.14	-3.51	-0.10	-0.64	-4.58**	0.01	-1.85*	0.12	0.60	0.50	0.18	-0.08	-0.12	-0.37	0.43
	(0.24)	(-1.51)	(-0.16)	(-0.64)	(-2.29)	(0.01)	(-1.95)	(0.28)	(1.44)	(1.12)	(0.36)	(-0.15)	(-0.23)	(-0.69)	(1.10)
MKTRF	0.80***	0.44	0.88***	1.19***	1.68***	0.56***	0.92***	1.33***	1.05***	0.63***	0.25**	0.88***	0.22*	0.40***	0.47***
	(5.86)	(0.74)	(6.23)	(4.15)	(4.15)	(5.66)	(4.21)	(13.10)	(10.95)	(6.08)	(2.19)	(7.29)	(1.87)	(3.22)	(5.21)
SIC CODE	501	502	503	504	505	506	507	508	509	511	512	513	514	515	516
CMKT	-0.14	-1.42	-0.69	0.20	-1.13	-0.41	-0.63	-0.58	0.71	-0.92	0.98	-0.18	0.63	-0.62	-0.33
	(-0.32)	(-0.78)	(-1.04)	(0.48)	(-1.53)	(-1.05)	(-0.87)	(-0.91)	(1.07)	(-0.67)	(1.57)	(-0.17)	(1.44)	(-0.81)	(-0.50)
MKTRF	1.05***	1.35***	1.49***	1.01***	1.70***	1.23***	1.00***	0.92***	1.08***	1.32***	0.88***	1.03***	0.63***	1.21***	1.48***
	(10.49)	(3.20)	(9.85)	(10.46)	(10.02)	(13.87)	(5.95)	(6.22)	(7.02)	(4.20)	(6.06)	(4.15)	(6.20)	(6.80)	(9.75)

SIC CODE	517	518	519	520	521	523	531	533	539	541	544	546	549	551	552
CMKT	-0.46	0.50	-1.30	-1.29	-1.21**	-0.98	0.39	0.47	-1.12	-0.71	0.20	-0.01	3.24***	-0.30	0.16
	(-0.73)	(0.80)	(-1.31)	(-1.47)	(-2.27)	(-1.23)	(0.46)	(0.94)	(-0.42)	(-0.92)	(0.33)	(-0.01)	(2.65)	(-0.33)	(0.14)
MKTRF	1.21***	0.58***	1.41***	0.99***	1.07***	0.91***	0.83***	0.46***	0.97	0.79***	0.67***	0.83*	0.86***	1.38***	1.55***
	(8.28)	(3.21)	(6.16)	(4.86)	(8.72)	(4.75)	(4.19)	(3.96)	(1.33)	(4.44)	(4.73)	(1.76)	(3.05)	(6.57)	(6.09)
SIC CODE	553	554	555	560	561	562	563	564	565	566	569	570	571	572	573
CMKT	-0.52	0.31	-0.30	-0.05	0.50	0.97	0.67	-0.55	0.26	-0.69	-1.59	1.06	0.48	3.08	0.53
	(-0.73)	(0.47)	(-0.24)	(-0.03)	(0.33)	(0.92)	(0.38)	(-0.39)	(0.36)	(-0.67)	(-1.02)	(1.04)	(0.51)	(0.85)	(0.41)
MKTRF	0.58***	0.68***	1.31***	0.86**	0.90**	0.96***	1.42***	1.09***	0.94***	0.92***	0.43	0.68***	1.31***	1.40*	1.09***
	(3.51)	(4.48)	(4.52)	(2.61)	(2.58)	(3.95)	(3.44)	(3.34)	(5.67)	(3.90)	(1.32)	(2.90)	(6.05)	(1.67)	(3.60)
SIC CODE	581	590	591	593	594	596	598	599	600	601	602	603	608	609	611
CMKT	0.41	1.74	0.80	0.20	-0.16	-0.24	0.28	-0.08	-1.24	-0.06	-0.37	-0.40	-1.62	-0.95	-2.32*
	(1.10)	(1.48)	(1.31)	(0.21)	(-0.26)	(-0.28)	(0.15)	(-0.15)	(-1.33)	(-0.06)	(-0.90)	(-0.90)	(-1.35)	(-1.36)	(-1.68)
MKTRF	0.57***	0.87***	0.88***	0.72***	1.48***	0.87***	1.76***	0.76***	1.04***	0.28	1.29***	0.98***	1.18***	1.09***	1.22***
	(6.66)	(3.20)	(6.21)	(3.25)	(10.14)	(4.40)	(4.16)	(5.79)	(4.83)	(1.21)	(13.73)	(9.62)	(3.77)	(6.75)	(3.83)
SIC CODE	614	615	616	619	620	621	622	623	628	630	631	632	633	635	636
CMKT	0.41	0.78	0.22	-1.16	0.21	-0.76	0.33	1.29	0.18	-0.44	0.12	0.72	-0.51*	0.11	0.19
	(0.69)	(1.53)	(0.16)	(-1.08)	(0.32)	(-1.26)	(0.36)	(1.30)	(0.66)	(-0.46)	(0.23)	(1.45)	(-1.83)	(0.20)	(0.34)
MKTRF	1.11***	0.96***	1.15***	0.99***	0.87***	1.69***	0.80***	1.08***	1.60***	0.85***	1.65***	0.88***	0.88***	1.48***	0.67***
	(8.17)	(8.21)	(3.55)	(3.82)	(5.83)	(12.02)	(3.82)	(4.74)	(25.25)	(3.87)	(13.28)	(7.75)	(13.51)	(11.85)	(5.30)
SIC CODE	637	639	641	650	651	653	655	670	671	672	673	677	679	701	720
CMKT	-0.20	1.17	-0.04	-0.37	0.05	-0.18	-0.61	-0.21	-0.44	-0.12	-2.69**	-0.83	-0.30	-0.14	-0.12
	(-0.26)	(1.33)	(-0.10)	(-0.33)	(0.09)	(-0.42)	(-0.79)	(-0.07)	(-0.87)	(-0.83)	(-2.34)	(-0.52)	(-0.67)	(-0.26)	(-0.09)
MKTRF	0.82***	0.98***	0.95***	0.49*	1.08***	1.45***	0.94***	0.95	1.33***	0.76***	1.65***	1.24***	0.81***	1.58***	0.86***
	(3.66)	(4.84)	(11.88)	(1.90)	(9.11)	(14.75)	(5.22)	(1.30)	(11.53)	(23.04)	(6.17)	(3.37)	(7.86)	(12.82)	(2.98)

SIC CODE	721	723	726	728	729	731	732	733	734	735	736	737	738	751	753
CMKT	-0.86	0.08	-0.52	-0.98	1.44	-0.39	-0.22	-1.63	-0.45	-0.65	-0.75	0.01	0.09	0.53	0.71
	(-1.35)	(0.09)	(-0.86)	(-0.72)	(1.07)	(-0.80)	(-0.48)	(-1.28)	(-1.03)	(-0.97)	(-1.45)	(0.02)	(0.26)	(0.54)	(0.66)
MKTRF	1.06***	0.86***	1.05***	1.22***	1.67***	1.56***	1.10***	1.56***	0.71***	1.77***	1.61***	1.04***	1.05***	1.85***	0.75***
	(7.25)	(4.12)	(7.56)	(3.37)	(5.42)	(13.94)	(10.40)	(5.32)	(7.01)	(11.53)	(13.57)	(13.48)	(12.47)	(8.26)	(3.00)
SIC CODE	781	782	783	784	790	792	793	794	799	800	801	802	805	806	807
CMKT	-0.46	0.30	-0.48	1.99	-0.51	-0.21	0.03	0.79	0.25	-5.18*	0.34	1.34	-0.28	-0.43	0.13
	(-0.56)	(0.17)	(-0.58)	(0.73)	(-0.24)	(-0.22)	(0.07)	(1.61)	(0.39)	(-1.76)	(0.40)	(0.77)	(-0.34)	(-0.47)	(0.21)
MKTRF	1.13***	0.92**	1.06***	1.45**	0.58	1.18***	0.24**	0.89***	1.21***	0.58	0.62***	-0.06	1.61***	1.11***	0.82***
	(6.07)	(2.28)	(5.57)	(2.32)	(1.14)	(5.23)	(2.08)	(7.91)	(8.24)	(0.77)	(3.21)	(-0.15)	(8.40)	(5.29)	(6.06)
SIC CODE	808	809	820	821	822	823	824	829	830	832	835	836	869	870	871
CMKT	1.60*	0.67	-1.02	1.58	-0.28	7.84	-0.04	1.28	-2.17	-1.64	-0.12	1.06	-1.31	0.39	-0.82*
	(1.94)	(1.12)	(-0.63)	(0.90)	(-0.22)	(1.57)	(-0.03)	(0.93)	(-0.42)	(-1.04)	(-0.14)	(0.71)	(-0.65)	(0.78)	(-1.68)
MKTRF	0.79***	1.22***	1.38***	1.34***	1.31***	1.82***	1.29***	1.30***	0.39	1.14***	0.16	1.44***	1.57***	0.88***	1.39***
	(4.16)	(8.79)	(3.68)	(3.33)	(4.46)	(3.41)	(4.00)	(4.11)	(0.39)	(3.12)	(0.69)	(4.21)	(3.81)	(7.62)	(12.43)
SIC CODE	872	873	874	891	899	943	951	961	999						
CMKT	0.41	0.80	-0.10	-0.14	0.45	0.83	-2.92	-2.47	-0.39						
	(0.44)	(1.01)	(-0.27)	(-0.09)	(0.31)	(0.41)	(-0.55)	(-1.62)	(-0.90)						
MKTRF	1.10***	1.18***	0.97***	0.82**	1.22***	1.11**	2.83**	1.33***	1.16***						
	(5.07)	(6.49)	(12.10)	(2.34)	(3.69)	(2.26)	(2.61)	(4.42)	(11.53)						

Table A.30: Industry Exposure to Coin Market Returns

This table reports the results of regressing industry returns on the contemporaneous coin market returns and the stock market returns. The industry returns are calculated at Fama-French 30 industry level. *, **, *** denote significance levels at the 10%, 5%, and 1%. The data frequency is monthly.

x100	food	beer	smoke	games	books	hshld	clths	hlth	chems	txtls
CMKT	0.47	0.48	0.06	0.03	-0.44	0.59	0.65	0.51	-0.37	0.27
	(1.37)	(1.16)	(0.08)	(0.05)	(-0.97)	(1.64)	(1.18)	(1.52)	(-1.02)	(0.45)
	[0.99]	[1.07]	[0.08]	[0.11]	[-0.82]	[2.12]	[1.09]	[1.77]	[-1.10]	[0.52]
MKTRF	0.58***	0.44***	0.54***	1.34***	1.22***	0.54***	0.78***	0.88***	1.34***	1.35***
	(8.33)	(5.21)	(3.74)	(11.12)	(12.91)	(7.24)	(6.84)	(12.84)	(17.80)	(10.81)
	[6.65]	[4.15]	[3.05]	[7.40]	[12.52]	[7.00]	[6.40]	[10.13]	[13.62]	[6.93]
ALPHA	0.12	0.46	0.46	0.03	-0.59*	0.08	0.21	0.28	-0.30	-0.29
	(0.48)	(1.51)	(0.88)	(0.06)	(-1.74)	(0.29)	(0.52)	(1.14)	(-1.12)	(-0.64)
	[0.32]	[1.39]	[0.78]	[-0.02]	[-2.10]	[0.15]	[0.49]	[1.24]	[-1.07]	[-0.64]
R-Squared	0.4512	0.2504	0.1345	0.5768	0.6432	0.3928	0.3579	0.6560	0.7747	0.5662
x100	cnstr	steel	fabpr	elceq	autos	carry	mines	coal	oil	util
CMKT	-0.50	-0.40	-0.83*	-0.64	-0.63	0.31	-1.33	-1.32	-0.30	0.07
	(-1.21)	(-0.59)	(-1.81)	(-1.58)	(-1.15)	(0.84)	(-1.45)	(-0.78)	(-0.52)	(0.15)
	[-1.17]	[-0.77]	[-1.76]	[-1.15]	[-1.60]	[1.01]	[-1.97]	[-1.28]	[-1.02]	[0.12]
MKTRF	1.44***	1.57***	1.43***	1.34***	1.34***	1.05***	1.17***	1.41***	1.22***	0.32***
	(16.78)	(11.19)	(15.14)	(15.90)	(11.73)	(13.75)	(6.13)	(4.03)	(10.10)	(3.59)
	[11.84]	[11.63]	[11.25]	[17.69]	[8.21]	[15.22]	[5.77]	[3.20]	[9.57]	[2.89]
ALPHA	-0.47	-1.26**	-0.38	-0.59*	-0.61	0.27	-1.21*	-2.67**	-0.90**	0.50
	(-1.52)	(-2.51)	(-1.13)	(-1.95)	(-1.49)	(0.98)	(-1.76)	(-2.13)	(-2.08)	(1.53)
	[-1.32]	[-2.80]	[-1.14]	[-1.84]	[-1.65]	[0.82]	[-1.75]	[-2.13]	[-2.25]	[1.57]
R-Squared	0.7530	0.5765	0.7115	0.7316	0.5974	0.6803	0.2892	0.1489	0.5254	0.1257
x100	telcm	servs	buseq	paper	trans	whsl	rtail	meals	fin	other
CMKT	0.15	-0.17	-0.09	0.18	0.31	0.20	0.17	0.41	-0.07	-0.15
	(0.40)	(-0.63)	(-0.22)	(0.64)	(0.76)	(0.73)	(0.52)	(1.23)	(-0.23)	(-0.52)
	[0.31]	[-0.69]	[-0.24]	[0.53]	[1.27]	[0.81]	[0.62]	[0.89]	[-0.18]	[-0.57]
MKTRF	0.81***	1.02***	1.11***	1.07***	1.08***	1.03***	0.91***	0.66***	1.20***	0.85***
	(10.84)	(18.10)	(13.74)	(18.96)	(12.88)	(18.36)	(13.64)	(9.72)	(18.91)	(13.84)
	[9.36]	[18.34]	[15.96]	[22.29]	[11.66]	[16.69]	[16.36]	[10.62]	[20.92]	[15.57]
ALPHA	0.15	0.28	0.09	-0.15	-0.07	-0.22	0.34	0.45*	-0.07	0.12
	(0.54)	(1.37)	(0.31)	(-0.74)	(-0.23)	(-1.11)	(1.43)	(1.83)	(-0.29)	(0.54)
	[0.33]	[1.43]	[0.19]	[-0.92]	[-0.33]	[-1.18]	[1.42]	[1.80]	[-0.45]	[0.41]
R-Squared	0.5672	0.7813	0.6743	0.8001	0.6512	0.7899	0.6749	0.5233	0.7969	0.6761

Table A.31: Country Exposure to Coin Market Returns

This table reports the results of regressing stock returns of different geographic areas on the contemporaneous coin market returns and the stock market returns. *, **, *** denote significance levels at the 10%, 5%, and 1%. The data frequency is monthly.

x100	U.S.A	Europe	Japan	AsiaExJapan	North America
CMKT	0.74 (1.50) [1.29]	1.14* (1.82) [1.68]	0.87 (1.65) [1.18]	0.43 (0.64) [0.55]	0.71 (1.42) [1.20]
ALPHA	0.76** (2.10) [2.45]	0.17 (0.38) [0.40]	0.31 (0.80) [0.84]	0.16 (0.33) [0.30]	0.68* (1.86) [2.10]
R-squared	0.02	0.03	0.03	0.00	0.02

Table A.32: Regulative Events

This table documents the date and direction of the cryptocurrency regulative events until the end of 2018.

Date	Direction	Date	Direction	Date	Direction	Date	Direction
11/03/2017	Negative	03/01/2018	Negative	28/02/2018	Positive	12/07/2018	Positive
01/06/2017	Positive	05/01/2018	Negative	01/03/2018	Positive	19/07/2018	Positive
06/06/2017	Positive	09/01/2018	Negative	02/03/2018	Negative	26/07/2018	Positive
26/07/2017	Negative	11/01/2018	Negative	07/03/2018	Negative	27/07/2018	Negative
01/08/2017	Positive	15/01/2018	Negative	07/03/2018	Negative	15/08/2018	Negative
08/08/2017	Positive	15/01/2018	Positive	08/03/2018	Negative	22/08/2018	Negative
17/08/2017	Negative	16/01/2018	Positive	13/03/2018	Negative	23/08/2018	Negative
22/08/2017	Positive	19/01/2018	Positive	13/03/2018	Negative	05/09/2018	Negative
04/09/2017	Negative	22/01/2018	Negative	14/03/2018	Negative	11/09/2018	Negative
07/09/2017	Negative	25/01/2018	Negative	16/03/2018	Negative	11/09/2018	Negative
08/09/2017	Negative	25/01/2018	Negative	19/03/2018	Negative	18/09/2018	Negative
14/09/2017	Negative	29/01/2018	Negative	20/03/2018	Negative	19/09/2018	Negative
15/09/2017	Negative	30/01/2018	Negative	22/03/2018	Negative	25/09/2018	Positive
29/09/2017	Negative	30/01/2018	Negative	22/03/2018	Negative	26/09/2018	Positive
29/09/2017	Positive	31/01/2018	Positive	26/03/2018	Negative	15/10/2018	Negative
10/10/2017	Negative	31/01/2018	Negative	27/03/2018	Negative	19/10/2018	Negative
15/10/2017	Negative	01/02/2018	Negative	05/04/2018	Negative	24/10/2018	Positive
24/10/2017	Positive	05/02/2018	Negative	05/04/2018	Negative	25/10/2018	Negative
04/12/2017	Negative	05/02/2018	Negative	05/04/2018	Negative	29/10/2018	Negative
04/12/2017	Negative	06/02/2018	Negative	17/04/2018	Negative	05/11/2018	Negative
11/12/2017	Positive	08/02/2018	Negative	22/04/2018	Negative	07/11/2018	Positive
12/12/2017	Negative	13/02/2018	Negative	23/04/2018	Negative	14/11/2018	Positive
13/12/2017	Negative	13/02/2018	Positive	27/04/2018	Negative	15/11/2018	Negative
14/12/2017	Positive	16/02/2018	Negative	28/04/2018	Positive	17/11/2018	Positive
16/12/2017	Negative	20/02/2018	Positive	24/05/2018	Negative	19/11/2018	Negative
18/12/2017	Negative	21/02/2018	Negative	01/06/2018	Negative	14/12/2018	Positive
20/12/2017	Positive	21/02/2018	Positive	14/06/2018	Positive	07/01/2019	Negative
22/12/2017	Positive	22/02/2018	Negative	18/06/2018	Positive	14/02/2019	Positive
28/12/2017	Negative	27/02/2018	Negative	22/06/2018	Negative	20/02/2019	Negative
02/01/2018	Positive	28/02/2018	Negative	26/06/2018	Positive	26/02/2019	Negative