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name: <unnamed>
log: /Users/davidsheffet/Documents/S2/EC 431/Bitcoin Project/Bitcoin Pr
> oject.smcl
log type: smcl
opened on: 20 Apr 2023, 16:31:11

.
. import excel "/Users/davidsheffet/Documents/S2/EC 431/Bitcoin Project/Bitcoin
> Project.xlsx", sheet("Gemini Data") firstrow
(23 vars, 3,103 obs)

.
. import excel "/Users/davidsheffet/Documents/S2/EC 431/Bitcoin Project/Bitcoin
> Project.xlsx", sheet("Gemini Data") cellrange(A2:W3104) firstrow clear
(23 vars, 3,102 obs)

. regress AvgBlockSize Difficulty FeePerTransaction HashRate MarketCap MrktPric
> e NTransactionsperblock NVT NWalletperd NetworkControlScore TradeVol VolumeBT
> C WebSearchesPrecentile close high low open ntransactionsexcludingpopular
no observations
r(2000);

. regress MrktPrice AvgBlockSize Difficulty HashRate TradeVol VolumeBTC VolumeU
> SD WebSearchesPrecentile NVT
no observations
r(2000);

. regress MrktPrice AvgBlockSize Difficulty HashRate TradeVol VolumeBTC VolumeU
> SD WebSearchesPrecentile
no observations
r(2000);

. regress MrktPrice AvgBlockSize Difficulty HashRate TradeVol VolumeBTC VolumeU
> SD
no observations
r(2000);

. regress MrktPrice

```

Source	SS	df	MS	Number of obs	=	97
Model	0	0	.	Prob > F	=	.
Residual	1.2294e+09	96	12805888.4	R-squared	=	0.0000
Total	1.2294e+09	96	12805888.4	Adj R-squared	=	0.0000
				Root MSE	=	3578.5

```

-----
MrktPrice | Coefficient Std. err.   t   P>|t|   [95% conf. interval]
-----+-----
   _cons |   21210.8  363.3448   58.38  0.000   20489.56  21932.03
-----

```

```
. regress MrktPrice HashRate
```

```

Source |      SS      df    MS    Number of obs =    97
-----+-----
Model | 331118105      1 331118105  Prob > F      =  0.0000
Residual | 898247178     95 9455233.46  R-squared     =  0.2693
-----+-----
Total | 1.2294e+09    96 12805888.4  Root MSE     =  3074.9
-----

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-----
MrktPrice | Coefficient Std. err.   t   P>|t|   [95% conf. interval]
-----+-----
HashRate | .0000368  6.22e-06   5.92  0.000   .0000245  .0000492
   _cons | 11579.79  1657.159   6.99  0.000   8289.915  14869.67
-----

```

```
. regress MrktPrice HashRate FeePerTransaction NTransactionsperblock VolumeBTC
no observations
r(2000);
```

```
. regress MrktPrice HashRate FeePerTransaction NTransactionsperblock
no observations
r(2000);
```

```
. regress MrktPrice HashRate NTransactionsperblock
```

```

Source |      SS      df    MS    Number of obs =    97
-----+-----
Model | 422355699      2 211177849  Prob > F      =  0.0000
Residual | 807009585     94 8585208.35  R-squared     =  0.3436
-----+-----
Total | 1.2294e+09    96 12805888.4  Root MSE     =  2930.1
-----

```

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> -----
>      MrktPrice | Coefficient Std. err.   t   P>|t|   [95% conf. i
> nterval]
> -----
>      HashRate | .0000329  6.05e-06   5.45  0.000   .0000209
> .0000449

```

```
NTransactionsperblock | 3.340557 1.024725 3.26 0.002 1.305941
> 5.375173
```

```
_cons | 6334.861 2254.337 2.81 0.006 1858.822
> 10810.9
```

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> -----
```

```
. regress MrktPrice HashRate NTransactionsperblock Difficulty AvgBlockSize
no observations
r(2000);
```

```
. regress MrktPrice HashRate NTransactionsperblock AvgBlockSize
no observations
r(2000);
```

```
. regress MrktPrice HashRate NTransactionsperblock Difficulty
```

Source	SS	df	MS	Number of obs	=	97
				F(3, 93)	=	16.72
Model	430823054	3	143607685	Prob > F	=	0.0000
Residual	798542229	93	8586475.58	R-squared	=	0.3504
				Adj R-squared	=	0.3295
Total	1.2294e+09	96	12805888.4	Root MSE	=	2930.3

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```
MrktPrice | Coefficient Std. err. t P>|t| [95% conf. i
> nterval]
```

```
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> -----
```

```
HashRate | .0000459 .0000144 3.19 0.002 .0000173
> .0000744
```

```
NTransactionsperblock | 4.595136 1.626754 2.82 0.006 1.364725
> 7.825547
```

```
Difficulty | -1.50e-10 1.51e-10 -0.99 0.323 -4.51e-10
> 1.50e-10
```

```
_cons | 5982.089 2282.32 2.62 0.010 1449.854
> 10514.32
```

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> -----
```

```
. regress MrktPrice HashRate NTransactionsperblock Difficulty NVT
```

Source	SS	df	MS	Number of obs	=	97
				F(4, 92)	=	15.48
Model	494470247	4	123617562	Prob > F	=	0.0000
Residual	734895036	92	7987989.53	R-squared	=	0.4022

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-----+-----
Total | 1.2294e+09    96 12805888.4  Root MSE    = 2826.3
```

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-----
> -----
MrktPrice | Coefficient Std. err.    t  P>|t|  [95% conf. i
> nterval]
```

```
-----+-----
> -----
HashRate | .0000469 .0000139  3.39 0.001  .0000194
> .0000745
NTransactionsperblock | 5.426725 1.596455  3.40 0.001  2.256028
> 8.597421
Difficulty | -5.75e-11 1.50e-10 -0.38 0.702 -3.55e-10
> 2.40e-10
NVT | -127.8007 45.27539 -2.82 0.006 -217.7215 -
> 37.87982
_cons | 2759.212 2479.822  1.11 0.269 -2165.929
> 7684.353
```

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> -----
. regress MrktPrice HashRate NTransactionsperblock Difficulty NVT NWalletperd
```

```
Source |    SS      df    MS  Number of obs =    97
-----+-----
Model | 572300670    5 114460134  Prob>F    = 0.0000
Residual | 657064613   91 7220490.25  R-squared  = 0.4655
-----+-----
Adj R-squared = 0.4362
Total | 1.2294e+09   96 12805888.4  Root MSE   = 2687.1
```

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-----
> -----
MrktPrice | Coefficient Std. err.    t  P>|t|  [95% conf. i
> nterval]
```

```
-----+-----
> -----
HashRate | .0001166 .000025  4.67 0.000  .000067
> .0001662
NTransactionsperblock | 14.9227  3.2664  4.57 0.000  8.434394
> 21.411
Difficulty | -6.69e-10 2.34e-10 -2.85 0.005 -1.13e-09 -
> 2.03e-10
NVT | -157.1379 43.96309 -3.57 0.001 -244.4652 -
> 69.81064
NWalletperd | -.0385642 .0117461 -3.28 0.001 -.0618963
> -.015232
```

```
      _cons | 14412.36  4261.071   3.38  0.001   5948.265
> 22876.45
```

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```
. regress MrktPrice HashRate NTransactionsperblock Difficulty NVT NWalletperd N
> etworkControlScore
```

```
      Source |      SS      df      MS      Number of obs =      97
-----+-----+-----+-----+-----+-----+-----+-----
      Model | 616149867      6 102691645 Prob > F      = 0.0000
      Residual | 613215416     90 6813504.62 R-squared      = 0.5012
-----+-----+-----+-----+-----+-----+-----
      Total | 1.2294e+09     96 12805888.4 Root MSE      = 2610.3
      Adj R-squared = 0.4679
```

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> -----
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```
      MrktPrice | Coefficient Std. err.   t   P>|t|   [95% conf. i
> nterval]
```

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> -----
```

```
      HashRate |   .00009   .0000264   3.40  0.001   .0000375
> .0001425
      NTransactionsperblock | 12.92808  3.268973   3.95  0.000   6.433693
> 19.42246
      Difficulty | -3.75e-10  2.55e-10  -1.47  0.146  -8.82e-10
> 1.33e-10
      NVT | -65.18355  56.01506  -1.16  0.248  -176.4672
> 46.10014
      NWalletperd | -.0315834  .0117374  -2.69  0.008  -.0549017 -
> .0082651
      NetworkControlScore | 228.9325  90.24267   2.54  0.013   49.6497
> 408.2153
      _cons | 5170.95  5513.96   0.94  0.351  -5783.493
> 16125.39
```

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```
. regress MrktPrice HashRate NTransactionsperblock Difficulty NVT NWalletperd N
> etworkControlScore TradeVol
```

```
      Source |      SS      df      MS      Number of obs =      97
-----+-----+-----+-----+-----+-----+-----
      Model | 648051531      7 92578790.1 Prob > F      = 0.0000
      Residual | 581313752     89 6531615.19 R-squared      = 0.5271
-----+-----+-----+-----+-----+-----
      Total | 1.2294e+09     96 12805888.4 Root MSE      = 2555.7
      Adj R-squared = 0.4900
```

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> -----
      MrktPrice | Coefficient Std. err.   t   P>|t|   [95% conf. i
> nterval]
-----+-----
> -----
      HashRate | .000093 .0000259   3.59 0.001   .0000415
> .0001445
NTransactionsperblock | 13.52272 3.211926   4.21 0.000   7.140688
> 19.90474
      Difficulty | -4.21e-10 2.51e-10  -1.68 0.097  -9.20e-10
> 7.77e-11
      NVT | -27.98894 57.3683  -0.49 0.627  -141.9785
> 86.00065
      NWalletperd | -.0385103 .0119118  -3.23 0.002  -.0621786 -
> .0148419
      NetworkControlScore | 250.639 88.90042   2.82 0.006   73.9958
> 427.2823
      TradeVol | 5.92e-06 2.68e-06   2.21 0.030   5.97e-07
> .0000112
      _cons | 7642.701 5513.326   1.39 0.169  -3312.161
> 18597.56
-----

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> -----
. regress MrktPrice HashRate NTransactionsperblock Difficulty NVT NWalletperd N
> etworkControlScore TradeVol VolumeBTC

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      Source |      SS      df      MS      Number of obs =      97
-----+-----+-----+-----+-----+-----
      Model | 687607044      8 85950880.4  Prob > F      = 0.0000
      Residual | 541758240     88 6156343.63  R-squared      = 0.5593
-----+-----+-----+-----+-----+-----
                        Adj R-squared = 0.5193
      Total | 1.2294e+09    96 12805888.4  Root MSE      = 2481.2
-----

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> -----
      MrktPrice | Coefficient Std. err.   t   P>|t|   [95% conf. i
> nterval]
-----+-----
> -----
      HashRate | .0000902 .0000252   3.58 0.001   .0000401
> .0001402
NTransactionsperblock | 13.32443 3.119272   4.27 0.000   7.125535
> 19.52333
      Difficulty | -4.42e-10 2.44e-10  -1.81 0.073  -9.27e-10

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```

> 4.21e-11
      NVT | -75.8772  58.81288  -1.29  0.200  -192.7554
> 41.00103
      NWalletperd | -.032359  .0118164  -2.74  0.007  -.0558416  -
> .0088765
      NetworkControlScore | 229.2203  86.72142   2.64  0.010   56.87974
> 401.5609
      TradeVol | 7.77e-06  2.70e-06   2.88  0.005   2.40e-06
> .0000131
      VolumeBTC | -.9679169  .3818528  -2.53  0.013  -1.726769  -
> .2090647
      _cons | 7185.135  5355.643   1.34  0.183  -3458.08
> 17828.35

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```

. regress MrktPrice HashRate NTransactionsperblock Difficulty NVT NWalletperd N
> etworkControlScore TradeVol VolumeBTC VolumeUSD

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```

      Source |      SS      df    MS  Number of obs =    97
-----+-----+-----+-----+-----+-----+-----
      Model | 885865444      9 98429493.8  Prob > F      = 0.0000
      Residual | 343499839     87 3948274.02  R-squared     = 0.7206
-----+-----+-----+-----+-----+-----
      Total | 1.2294e+09    96 12805888.4  Adj R-squared = 0.6917
      Root MSE = 1987

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-----
> -----
      MrktPrice | Coefficient  Std. err.   t   P>|t|   [95% conf. i
> nterval]
-----+-----+-----+-----+-----+-----
> -----
      HashRate | .0000465  .0000211   2.21  0.030   4.62e-06
> .0000884
      NTransactionsperblock | 6.184738  2.693558   2.30  0.024   .8310004
> 11.53848
      Difficulty | -1.28e-11  2.04e-10  -0.06  0.950  -4.19e-10
> 3.94e-10
      NVT | -44.17543  47.31131  -0.93  0.353  -138.2118
> 49.86093
      NWalletperd | -.0194747  .009636  -2.02  0.046  -.0386274
> -.000322
      NetworkControlScore | 96.8363  71.91828   1.35  0.182  -46.10906
> 239.7817
      TradeVol | 6.29e-06  2.17e-06   2.90  0.005   1.98e-06
> .0000106
      VolumeBTC | -10.02822  1.314649  -7.63  0.000  -12.64123  -

```

```

> 7.415214
      VolumeUSD | .0005365 .0000757  7.09 0.000  .000386
> .0006869
      _cons | 8019.294 4290.594  1.87 0.065  -508.7255
> 16547.31
-----
> -----

. regress MrktPrice HashRate NTransactionsperblock Difficulty NVT NWalletperd N
> etworkControlScore TradeVol VolumeBTC VolumeUSD WebSearchesPrecentile

```

```

      Source |      SS      df    MS  Number of obs =    97
-----+-----+-----+-----+-----+-----+-----+-----
      Model | 885874088      10 88587408.8  Prob > F      = 0.0000
      Residual | 343491195      86 3994083.67  R-squared     = 0.7206
-----+-----+-----+-----+-----+-----+-----
      Total | 1.2294e+09     96 12805888.4  Adj R-squared = 0.6881
      Root MSE = 1998.5

```

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> -----
      MrktPrice | Coefficient Std. err.   t  P>|t|  [95% conf. i
> nterval]
-----+-----+-----+-----+-----+-----+-----
> -----
      HashRate | .0000466 .0000212   2.19 0.031  4.36e-06
> .0000888
NTransactionsperblock | 6.191521 2.71306   2.28 0.025  .7981371
> 11.58491
      Difficulty | -1.34e-11 2.06e-10  -0.06 0.948  -4.23e-10
> 3.96e-10
      NVT | -45.29286 53.30382  -0.85 0.398  -151.2573
> 60.67162
      NWalletperd | -.0195181 .0097366  -2.00 0.048  -.0388738 -
> .0001624
      NetworkControlScore | 95.53766 77.53392   1.23 0.221  -58.59468
> 249.67
      TradeVol | 6.31e-06 2.20e-06   2.86 0.005  1.93e-06
> .0000107
      VolumeBTC | -10.03979 1.345449  -7.46 0.000  -12.71446 -
> 7.365129
      VolumeUSD | .0005372 .0000778   6.90 0.000  .0003825
> .000692
      WebSearchesPrecentile | -5.662639 121.7226  -0.05 0.963  -247.6392
> 236.3139
      _cons | 8148.435 5131.167   1.59 0.116  -2051.987
> 18348.86
-----

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> -----

```
. regress MrktPrice HashRate NTransactionsperblock Difficulty NVT NWalletperd N
> etworkControlScore TradeVol VolumeBTC VolumeUSD ntransactionsexcludingpopular
> WebSearchesPrecentile
```

```
Source | SS      df    MS      Number of obs =   97
-----+----- F(11, 85)   =  20.49
Model | 892668436   11  81151676 Prob > F   =  0.0000
Residual | 336696847   85  3961139.38 R-squared  =  0.7261
-----+----- Adj R-squared =  0.6907
Total | 1.2294e+09   96 12805888.4 Root MSE   = 1990.3
```

> -----

```
MrktPrice | Coefficient Std. err.   t   P>|t|   [95%
> con
> f. interval]
-----+-----
> -----
HashRate | -.0000197   .0000549   -0.36  0.720   -.000
> 1289
> .0000894
NTransactionsperblock | -2.804197   7.380953   -0.38  0.705   -17.4
> 7951
> 11.87112
Difficulty | 4.63e-10   4.18e-10    1.11  0.271   -3.67
> e-10
> 1.29e-09
NVT | -51.15276   53.27176   -0.96  0.340   -157.
> 0713
> 54.76577
NWalletperd | -.0222656   .0099207   -2.24  0.027   -.041
> 9905
> -.0025406
NetworkControlScore | 85.73058   77.57575    1.11  0.272   -68.
> 5108
> 239.972
TradeVol | 6.77e-06   2.22e-06    3.05  0.003    2.35
> e-06
> .0000112
VolumeBTC | -10.14919   1.34249   -7.56  0.000   -12.8
> 1842
> -7.479961
VolumeUSD | .0005426   .0000776    6.99  0.000    .000
> 3882
> .0006969
```

```

ntransactionsexcludingpopular | .0648906 .0495471 1.31 0.194 -.033
> 6222
> .1634034
WebSearchesPrecentile | -20.89204 121.7761 -0.17 0.864 -263.
> 0155
> 221.2314
_cons | 9775.307 5258.779 1.86 0.067 -680.
> 5539
> 20231.17

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> -----

```

```

. regress MrktPrice HashRate NTransactionsperblock Difficulty NVT NWalletperd N
> etworkControlScore TradeVol VolumeBTC VolumeUSD WebSearchesPrecentile
ntransa
> ctionsexcludingpopular open

```

```

Source | SS df MS Number of obs = 97
-----+----- F(12, 84) = 61599.59
Model | 1.2292e+09 12 102435466 Prob > F = 0.0000
Residual | 139685.662 84 1662.92455 R-squared = 0.9999
-----+----- Adj R-squared = 0.9999
Total | 1.2294e+09 96 12805888.4 Root MSE = 40.779

```

```

-----
> -----
MrktPrice | Coefficient Std. err. t P>|t| [95%
> con
> f. interval]

```

```

-----+-----
> -----
HashRate | -8.85e-07 1.13e-06 -0.79 0.434 -3.12
> e-06
> 1.35e-06
NTransactionsperblock | -.0812223 .1513513 -0.54 0.593 -.38
> 2201
> .2197564
Difficulty | 2.23e-12 8.62e-12 0.26 0.797 -1.49
> e-11
> 1.94e-11
NVT | -.3484483 1.097325 -0.32 0.752 -2.
> 5306
> 1.833703
NWalletperd | .0002416 .0002093 1.15 0.252 -.000
> 1747
> .0006579
NetworkControlScore | .800033 1.600642 0.50 0.619 -2.38

```

```

> 3018
> 3.983085
      TradeVol | -5.29e-08  4.80e-08  -1.10  0.274  -1.48
> e-07
> 4.26e-08
      VolumeBTC | .1052328  .0357236   2.95  0.004   .034
> 1925
> .176273
      VolumeUSD | -6.48e-06  2.00e-06  -3.23  0.002  -.000
> 0105
> -2.49e-06
      WebSearchesPrecentile | .6309367  2.495559   0.25  0.801  -4.33
> 1757
> 5.59363
ntransactionsexcludingpopular | .0006411  .0010252   0.63  0.533  -.001
> 3975
> .0026798
      open | 1.005125  .0022342  449.88  0.000   1.00
> 0682
> 1.009568
      _cons | -120.6115  109.9709  -1.10  0.276  -339.
> 3006
> 98.07773

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> -----

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```

. regress MrktPrice HashRate NTransactionsperblock Difficulty NVT NWalletperd N
> etworkControlScore TradeVol VolumeBTC VolumeUSD date

```

```

      Source |      SS      df    MS    Number of obs =    97
-----+-----+-----+-----+-----+-----+-----+-----
      Model | 885870810      10  88587081  Prob > F      =  0.0000
      Residual | 343494473      86 3994121.78  R-squared    =  0.7206
-----+-----+-----+-----+-----+-----+-----
      Total | 1.2294e+09      96 12805888.4  Adj R-squared =  0.6881
      Root MSE      = 1998.5

```

```

-----
> -----
      MrktPrice | Coefficient  Std. err.   t   P>|t|   [95% conf. i
> nterval]
-----+-----+-----+-----+-----+-----+-----
> -----
      HashRate | .0000463  .0000224   2.07  0.042   1.75e-06
> .0000908
NTransactionsperblock | 6.17356  2.726262   2.26  0.026   .7539304
> 11.59319
      Difficulty | -1.49e-11  2.14e-10  -0.07  0.945  -4.39e-10

```

```

> 4.10e-10
      NVT | -45.10269  53.8919  -0.84  0.405  -152.2363
> 62.03087
      NWalletperd | -.0194391  .0097403  -2.00  0.049  -.0388022
> -.000076
      NetworkControlScore | 98.49052  85.25887  1.16  0.251  -70.9985
> 267.9795
      TradeVol | 6.29e-06  2.19e-06  2.87  0.005  1.93e-06
> .0000106
      VolumeBTC | -10.02896  1.322413  -7.58  0.000  -12.65783  -
> 7.400088
      VolumeUSD | .0005367  .0000763  7.03  0.000  .0003849
> .0006884
      date | .4724786  12.89027  0.04  0.971  -25.15252
> 26.09748
      _cons | -2705.709  292633.7  -0.01  0.993  -584442.3
> 579030.9

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> -----

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```

. regress MrktPrice HashRate NTransactionsperblock Difficulty NVT NWalletperd N
> etworkControlScore TradeVol VolumeBTC VolumeUSD WebSearchesPrecentile
ntransa
> ctionsexcludingpopular low

```

```

      Source |      SS      df      MS      Number of obs =      97
-----+----- F(12, 84) = 543.85
      Model | 1.2137e+09      12 101145243 Prob > F      = 0.0000
      Residual | 15622372.7      84 185980.628 R-squared      = 0.9873
-----+----- Adj R-squared = 0.9855
      Total | 1.2294e+09      96 12805888.4 Root MSE      = 431.25

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-----
> -----
      MrktPrice | Coefficient Std. err.   t   P>|t|   [95%
> con
> f. interval]

```

```

-----+-----
> -----
      HashRate | 7.80e-06 .0000119  0.65  0.514  -.000
> 0159
> .0000315
      NTransactionsperblock | 1.041509  1.601999  0.65  0.517  -2.14
> 4242
> 4.22726
      Difficulty | -2.60e-11  9.13e-11  -0.28  0.777  -2.08
> e-10

```

```

> 1.56e-10
      NVT | 8.553969 11.63216 0.74 0.464 -14.5
> 7785
> 31.68579
      NWalletperd | .0010805 .0022219 0.49 0.628 -.003
> 3379
> .0054989
      NetworkControlScore | 9.566396 16.90896 0.57 0.573 -24.0
> 5893
> 43.19172
      TradeVol | 5.64e-08 5.08e-07 0.11 0.912 -9.54
> e-07
> 1.07e-06
      VolumeBTC | .4824923 .3874182 1.25 0.216 -.287
> 9312
> 1.252916
      VolumeUSD | -5.08e-06 .0000214 -0.24 0.813 -.000
> 0476
> .0000374
      WebSearchesPrecentile | -1.616291 26.39081 -0.06 0.951 -54.0
> 9732
> 50.86474
ntransactionsexcludingpopular | -.0090268 .0108824 -0.83 0.409 -.030
> 6676
> .012614
      low | 1.018551 .024514 41.55 0.000 .969
> 8025
> 1.0673
      _cons | -1893.975 1173.586 -1.61 0.110 -4227
> .778
> 439.8292
-----
> -----

```

```

. regress MrktPrice HashRate NTransactionsperblock Difficulty NVT NWalletperd N
> etworkControlScore TradeVol VolumeBTC VolumeUSD WebSearchesPrecentile
ntransa
> ctionsexcludingpopular close

```

```

      Source |      SS      df    MS  Number of obs =      97
-----+-----+-----+-----+-----+-----+-----+-----
      Model | 1.1966e+09    12 99715538.1  Prob > F      = 0.0000
      Residual | 32778826.2    84 390224.122  R-squared     = 0.9733
-----+-----+-----+-----+-----+-----+-----
      Total | 1.2294e+09    96 12805888.4  Adj R-squared = 0.9695
      Root MSE = 624.68

```

```

-----
> -----
                MrktPrice | Coefficient Std. err.   t   P>|t|   [95%
> con
>   f. interval]
-----+-----
> -----
                HashRate | 9.14e-06 .0000173   0.53 0.598  -.000
> 0252
>   .0000435
                NTransactionsperblock | 1.217647 2.321123   0.52 0.601  -3.39
> 8161
>   5.833454
                Difficulty | -3.89e-11 1.32e-10  -0.29 0.769  -3.02
> e-10
>   2.24e-10
                NVT | 16.96411 16.89751   1.00 0.318  -16.6
> 3845
>   50.56666
                NWalletperd | .0038561 .0032514   1.19 0.239  -.002
> 6097
>   .0103219
                NetworkControlScore | 30.59234 24.42857   1.25 0.214  -17.9
> 8656
>   79.17124
                TradeVol | -1.21e-07 7.40e-07  -0.16 0.870  -1.59
> e-06
>   1.35e-06
                VolumeBTC | 1.735227 .5990795   2.90 0.005   .543
> 8918
>   2.926562
                VolumeUSD | -.0000858 .0000332  -2.59 0.011  -.000
> 1517
>   -.0000198
                WebSearchesPrecentile | 16.51026 38.24509   0.43 0.667  -59.5
> 4429
>   92.56482
ntransactionsexcludingpopular | -.0140695 .0158065  -0.89 0.376  -.045
> 5025
>   .0173635
                close | 1.042279 .0373476  27.91 0.000   .968
> 0094
>   1.116549
                _cons | -3779.568 1720.543  -2.20 0.031  -7201
> .056
>   -358.0805
-----

```

> -----

```
. regress MrktPrice HashRate NTransactionsperblock Difficulty NVT NWalletperd N
> etworkControlScore TradeVol VolumeBTC VolumeUSD WebSearchesPrecentile
ntransa
> ctionsexcludingpopular MarketCap
```

```
Source | SS      df    MS      Number of obs =   97
-----+----- F(12, 84)    = 421.70
Model | 1.2093e+09    12 100774304 Prob > F    = 0.0000
Residual | 20073633.6    84 238971.828 R-squared   = 0.9837
-----+----- Adj R-squared = 0.9813
Total | 1.2294e+09    96 12805888.4 Root MSE   = 488.85
```

> -----

```
MrktPrice | Coefficient Std. err.   t   P>|t|   [95%
> con
> f. interval]
-----+-----
> -----
HashRate | 9.31e-06 .0000135   0.69 0.492  -.000
> 0175
> .0000362
NTransactionsperblock | 1.356959 1.816509   0.75 0.457  -2.25
> 5368
> 4.969286
Difficulty | -5.82e-11 1.04e-10  -0.56 0.576  -2.64
> e-10
> 1.48e-10
NVT | 6.796965 13.18109   0.52 0.607  -19.4
> 1509
> 33.00902
NWalletperd | .0038715 .0025403   1.52 0.131  -.001
> 1801
> .0089232
NetworkControlScore | 15.95437 19.15032   0.83 0.407  -22.1
> 2815
> 54.03688
TradeVol | -4.54e-07 5.81e-07  -0.78 0.437  -1.61
> e-06
> 7.01e-07
VolumeBTC | 1.496471 .4594455   3.26 0.002   .582
> 8136
> 2.410129
VolumeUSD | -.0000714 .0000255  -2.80 0.006  -.00
> 0122
```

```

> -.0000208
WebSearchesPrecentile | 5.123605 29.91914 0.17 0.864 -54.3
> 7389
> 64.6211
ntransactionsexcludingpopular | -.0146202 .0123642 -1.18 0.240 -.039
> 2079
> .0099674
MarketCap | 5.44e-08 1.49e-09 36.40 0.000 5.14
> e-08
> 5.73e-08
_cons | -2756.433 1336.755 -2.06 0.042 -5414
> .718
> -98.14854

```

```

-----
> -----

```

```

. regress MrktPrice VolumeUSD VolumeBTC NWalletperd TradeVol HashRate
NTransact
> ionsperblock

```

```

Source | SS df MS Number of obs = 97
-----+----- F(6, 90) = 34.95
Model | 860185601 6 143364267 Prob > F = 0.0000
Residual | 369179683 90 4101996.47 R-squared = 0.6997
-----+----- Adj R-squared = 0.6797
Total | 1.2294e+09 96 12805888.4 Root MSE = 2025.3

```

```

-----
> -----
MrktPrice | Coefficient Std. err. t P>|t| [95% conf. i
> nterval]
-----+-----
> -----
VolumeUSD | .0006209 .0000646 9.62 0.000 .0004927
> .0007492
VolumeBTC | -11.28164 1.151493 -9.80 0.000 -13.56928 -
> 8.993995
NWalletperd | -.0170661 .0060905 -2.80 0.006 -.029166 -
> .0049661
TradeVol | 6.53e-06 2.15e-06 3.04 0.003 2.26e-06
> .0000108
HashRate | .0000395 5.33e-06 7.41 0.000 .0000289
> .0000501
NTransactionsperblock | 4.193618 .9436021 4.44 0.000 2.318988
> 6.068249
_cons | 11839.41 2542.307 4.66 0.000 6788.677
> 16890.15

```


> -----

```
. regress MrktPrice VolumeUSD VolumeBTC NWalletperd TradeVol HashRate  
NTransact  
> ionsperblock HashRate WebSearchesPrecentile  
note: HashRate omitted because of collinearity.
```

```
Source | SS      df    MS      Number of obs = 97  
-----+----- F(7, 89) = 29.63  
Model | 860245745    7 122892249 Prob > F   = 0.0000  
Residual | 369119538   89 4147410.54 R-squared = 0.6997  
-----+----- Adj R-squared = 0.6761  
Total | 1.2294e+09   96 12805888.4 Root MSE   = 2036.5
```

> -----

```
MrktPrice | Coefficient Std. err.   t   P>|t|   [95% conf. i  
> nterval]  
-----+-----  
> -----  
VolumeUSD | .0006195 .0000661   9.38 0.000   .0004882  
> .0007507  
VolumeBTC | -11.26456 1.166505  -9.66 0.000  -13.58237 -  
> 8.946735  
NWalletperd | -.0169541 .0061943  -2.74 0.007  -.029262 -  
> .0046462  
TradeVol | 6.47e-06 2.21e-06   2.93 0.004   2.08e-06  
> .0000109  
HashRate | .0000395 5.38e-06   7.36 0.000   .0000289  
> .0000502  
NTransactionsperblock | 4.191206 .9490227   4.42 0.000   2.305518  
> 6.076894  
HashRate | 0 (omitted)  
WebSearchesPrecentile | 13.21233 109.7156   0.12 0.904  -204.7902  
> 231.2149  
_cons | 11601.78 3229.363   3.59 0.001   5185.107  
> 18018.46
```

> -----

```
. regress MrktPrice VolumeUSD VolumeBTC NWalletperd TradeVol HashRate  
NTransact  
> ionsperblock
```

```
Source | SS      df    MS      Number of obs = 97  
-----+----- F(6, 90) = 34.95
```

```

Model | 860185601      6 143364267 Prob > F    = 0.0000
Residual | 369179683     90 4101996.47 R-squared  = 0.6997
-----+-----
Total | 1.2294e+09    96 12805888.4 Root MSE   = 2025.3

```

```

-----
> -----
      MrktPrice | Coefficient Std. err.   t   P>|t|   [95% conf. i
> nterval]
-----+-----
> -----
      VolumeUSD | .0006209 .0000646   9.62 0.000   .0004927
> .0007492
      VolumeBTC | -11.28164 1.151493  -9.80 0.000  -13.56928 -
> 8.993995
      NWalletperd | -.0170661 .0060905  -2.80 0.006  -.029166 -
> .0049661
      TradeVol | 6.53e-06 2.15e-06   3.04 0.003   2.26e-06
> .0000108
      HashRate | .0000395 5.33e-06   7.41 0.000   .0000289
> .0000501
NTransactionsperblock | 4.193618 .9436021   4.44 0.000   2.318988
> 6.068249
      _cons | 11839.41 2542.307   4.66 0.000  6788.677
> 16890.15

```

```

-----
> -----
.
. import excel "/Users/davidsheffet/Documents/S2/EC 431/Bitcoin Project/Bitcoin
> Project.xlsx", sheet("Gemini Data") cellrange(A2:W3104) firstrow clear
(23 vars, 3,102 obs)

```

```

. regress MrktPrice VolumeUSD VolumeBTC NWalletperd TradeVol HashRate
NTransact
> ionsperblock VIX

```

```

Source |   SS      df    MS      Number of obs =   95
-----+-----
Model | 843577240     7 120511034 Prob > F    = 0.0000
Residual | 319519726    87 3672640.53 R-squared  = 0.7253
-----+-----
Total | 1.1631e+09   94 12373372 Root MSE   = 1916.4

```

```

-----
> -----
      MrktPrice | Coefficient Std. err.   t   P>|t|   [95% conf. i

```

```

> nterval]
-----+-----
> -----
      VolumeUSD | .0006131 .0000612 10.01 0.000 .0004914
> .0007348
      VolumeBTC | -10.9058 1.098498 -9.93 0.000 -13.08919 -
> 8.722419
      NWalletperd | -.0181458 .0058632 -3.09 0.003 -.0297996 -
> .0064921
      TradeVol | 7.21e-06 2.05e-06 3.52 0.001 3.14e-06
> .0000113
      HashRate | .000037 5.18e-06 7.14 0.000 .0000267
> .0000473
NTransactionsperblock | 3.134449 .9399647 3.33 0.001 1.266168
> 5.002731
      VIX | -186.0041 63.96913 -2.91 0.005 -313.1496
> -58.8585
      _cons | 19161.2 3399.591 5.64 0.000 12404.15
> 25918.26
-----+-----
> -----

```

```

. import excel "/Users/davidsheffet/Documents/S2/EC 431/Bitcoin Project/Bitcoin
> Project.xlsx", sheet("Gemini Data") cellrange(A2:X3104) firstrow clear
(24 vars, 3,102 obs)

```

```

. regress MrktPrice VolumeUSD VolumeBTC NWalletperd TradeVol HashRate
NTransact
> ionsperblock VIX FFR

```

```

      Source |      SS      df      MS      Number of obs =      95
-----+-----+-----+-----+-----+-----
      Model | 899544713      8 112443089      Prob > F      = 0.0000
      Residual | 263552254      86 3064561.09      R-squared      = 0.7734
-----+-----+-----+-----+-----+-----
                        Adj R-squared = 0.7523
      Total | 1.1631e+09      94 12373372      Root MSE      = 1750.6

```

```

> -----
      MrktPrice | Coefficient Std. err.      t      P>|t | [95% conf. i
> nterval]
-----+-----+-----+-----+-----+-----
> -----
      VolumeUSD | .0004025 .0000745 5.40 0.000 .0002543
> .0005507
      VolumeBTC | -7.531505 1.276853 -5.90 0.000 -10.0698 -

```

```

> 4.993206
      NWalletperd | -.0215044 .0054132 -3.97 0.000 -.0322654 -
> .0107433
      TradeVol | 6.86e-06 1.87e-06 3.66 0.000 3.13e-06
> .0000106
      HashRate | .000062 7.53e-06 8.24 0.000 .000047
> .000077
NTransactionsperblock | 5.865124 1.070299 5.48 0.000 3.737439
> 7.992808
      VIX | -271.2442 61.74447 -4.39 0.000 -393.9882 -
> 148.5003
      FFR | -2014.362 471.3613 -4.27 0.000 -2951.397 -
> 1077.327
      _cons | 19742.04 3108.402 6.35 0.000 13562.74
> 25921.34

```

```

-----
> -----

```

```

. nl (MrktPrice = {b0} + {b1}*VolumeUSD + {b2}*VolumeBTC + {b3}*NWalletperd^2 +
> {b4}*TradeVol + {b5}*HashRate + {b6}*NTransactionsperblock + {b7}*VIX + {b8}
> *FFR), params({b0} 1) ({b1} 1) ({b2} 1) ({b3} 1) ({b4} 1) ({b5} 1) ({b6} 1) (
> {b7} 1) ({b8} 1)
params({b0} 1) ( { b1 } 1 )({b2} 1) ( { b3 } 1 )({b4} 1) ( { b5 } 1 )({b6} 1) (
> { b7 } 1 )({b8} 1) not allowed
r(198);

```

```

. nl mymodel (MrktPrice =
b1*VolumeUSD^b2*VolumeBTC^b3*NWalletperd^b4*TradeVol^
> b5*HashRate^b6*NTransactionsperblock^b7*VIX^b8*FFR^b9),constraints(b2>0, b3>0
> , b4>0, b5>0, b6>0, b7>0, b8>0, b9<0)
invalid syntax
r(198);

```

```

. nl (MrktPrice) = ({b0} + {b1}*VolumeUSD + {b2}*VolumeBTC + {b3}*NWalletperd^2
> + {b4}*TradeVol + {b5}*HashRate + {b6}*NTransactionsperblock + {b7}*VIX + {b8
> }*FFR)
{b0} invalid name
r(198);

```

```

. nl (MrktPrice0 = {b0} + {b1}*VolumeUSD + {b2}*VolumeBTC + {b3}*NWalletperd^2
> + {b4}*TradeVol + {b5}*HashRate + {b6}*NTransactionsperblock + {b7}*VIX + {b8
> }*FFR), params({b0} 1) ({b1} 1) ({b2} 1) ({b3} 1) ({b4} 1) ({b5} 1) ({b6} 1)
> ({b7} 1) ({b8} 1)
params({b0} 1) ( { b1 } 1 )({b2} 1) ( { b3 } 1 )({b4} 1) ( { b5 } 1 )({b6} 1) (
> { b7 } 1 )({b8} 1) not allowed

```

```
r(198);
```

```
. nl (MrktPrice) = (VolumeUSD + VolumeBTC + NWalletperd + TradeVol + HashRate +  
> NTransactionsperblock + VIX + FFR)
```

```
invalid syntax
```

```
r(198);
```

```
. nl (MrktPrice) = VolumeUSD VolumeBTC NWalletperd TradeVol HashRate NTransacti  
> onsperblock VIX FFR
```

```
invalid 'VolumeBTC'
```

```
r(198);
```

```
. nl (MrktPrice) = VolumeUSD NWalletperd TradeVol HashRate NTransactionsperbloc  
> k VIX FFR
```

```
invalid 'NWalletperd'
```

```
r(198);
```

```
. nl (MrktPrice) = VolumeUSD TradeVol HashRate NTransactionsperblock VIX FFR
```

```
invalid 'TradeVol'
```

```
r(198);
```

```
. nl (MrktPrice) = TradeVol HashRate NTransactionsperblock VIX FFR
```

```
invalid 'HashRate'
```

```
r(198);
```

```
. . nl (dependent variable) = (function of independent variables)
```

```
functionofindependentvariables not found
```

```
r(111);
```

```
. nl y = b1 + b2*x1 + b3*x2 + b4*x1^2 + b5*x2^2 + b6*x1*x2
```

```
b1 not found
```

```
r(111);
```

```
. import excel "/Users/davidsheffet/Documents/S2/EC 431/Bitcoin Project/Bitcoin  
> Project.xlsx", sheet("Sheet2") firstrow clear
```

```
(5 vars, 1,500 obs)
```

```
. regress Price Valueonexchanges ofBTCs
```

```
Source | SS df MS Number of obs = 1,500  
-----+----- F(2, 1497) > 99999.00  
Model | 2.9357e+11 2 1.4679e+11 Prob > F = 0.0000  
Residual | 130609933 1,497 87247.7843 R-squared = 0.9996  
-----+----- Adj R-squared = 0.9996
```

Total | 2.9370e+11 1,499 195932058 Root MSE = 295.38

> ---
Price | Coefficient Std. err. t P>|t| [95% conf. interv
> al]

-----+-----
> ---
Valueonexchanges | 5.28e-08 3.42e-11 1543.59 0.000 5.27e-08 5.28e
> -08
ofBTCs | .0000211 1.63e-06 12.98 0.000 .0000179 .0000
> 243
_cons | -93.0753 20.78255 -4.48 0.000 -133.8413 -52.30
> 928

> ---
. regress Price Valueonexchanges ofBTCs MarktCap
note: MarktCap omitted because of collinearity.

Source | SS df MS Number of obs = 1,500
-----+----- F(2, 1497) > 99999.00
Model | 2.9357e+11 2 1.4679e+11 Prob > F = 0.0000
Residual | 130609933 1,497 87247.7843 R-squared = 0.9996
-----+----- Adj R-squared = 0.9996
Total | 2.9370e+11 1,499 195932058 Root MSE = 295.38

> ---
Price | Coefficient Std. err. t P>|t| [95% conf. interv
> al]

-----+-----
> ---
Valueonexchanges | 5.28e-08 3.42e-11 1543.59 0.000 5.27e-08 5.28e
> -08
ofBTCs | .0000211 1.63e-06 12.98 0.000 .0000179 .0000
> 243
MarktCap | 0 (omitted)
_cons | -93.0753 20.78255 -4.48 0.000 -133.8413 -52.30
> 928

> ---
. predict u, resid

. scatter u Valueonexchanges ofBTCs

```
. estat ovtest, rhs
```

Ramsey RESET test for omitted variables
Omitted: Powers of independent variables

H0: Model has no omitted variables

F(6, 1491) = 1804.85
Prob > F = 0.0000

```
. import excel "/Users/davidsheffet/Documents/S2/EC 431/Bitcoin Project/Bitcoin  
> Project.xlsx", sheet("Gemini Data") cellrange(A2:X3104) firstrow clear  
(24 vars, 3,102 obs)
```

```
. regress MrktPrice VolumeUSD VolumeBTC NWalletperd TradeVol HashRate  
NTransact  
> ionsperblock VIX FFR
```

Source	SS	df	MS	Number of obs	=	95
				F(8, 86)	=	36.69
Model	899544713	8	112443089	Prob > F	=	0.0000
Residual	263552254	86	3064561.09	R-squared	=	0.7734
				Adj R-squared	=	0.7523
Total	1.1631e+09	94	12373372	Root MSE	=	1750.6

```
> -----  
MrktPrice | Coefficient Std. err. t P>|t| [95% conf. i  
> nterval]  
-----+-----  
> -----  
VolumeUSD | .0004025 .0000745 5.40 0.000 .0002543  
> .0005507  
VolumeBTC | -7.531505 1.276853 -5.90 0.000 -10.0698 -  
> 4.993206  
NWalletperd | -.0215044 .0054132 -3.97 0.000 -.0322654 -  
> .0107433  
TradeVol | 6.86e-06 1.87e-06 3.66 0.000 3.13e-06  
> .0000106  
HashRate | .000062 7.53e-06 8.24 0.000 .000047  
> .000077  
NTransactionsperblock | 5.865124 1.070299 5.48 0.000 3.737439  
> 7.992808  
VIX | -271.2442 61.74447 -4.39 0.000 -393.9882 -
```

```

> 148.5003
      FFR | -2014.362  471.3613  -4.27  0.000  -2951.397  -
> 1077.327
      _cons | 19742.04  3108.402   6.35  0.000   13562.74
> 25921.34

```

```

-----
> -----

```

```

. predict u, resid
(3,007 missing values generated)

```

```

. scatter u VolumeUSD VolumeBTC NWalletperd TradeVol HashRate
NTransactionsperb
> lock VIX FFR

```

```

. estat ovtest, rhs

```

Ramsey RESET test for omitted variables
Omitted: Powers of independent variables

H0: Model has no omitted variables

F(24, 62) = 15.00
Prob > F = 0.0000

```

. estat hettest

```

Breusch–Pagan/Cook–Weisberg test for heteroskedasticity
Assumption: Normal error terms
Variable: Fitted values of MrktPrice

H0: Constant variance

chi2(1) = 0.19
Prob > chi2 = 0.6667

```

. import excel "/Users/davidsheffet/Documents/S2/EC 431/Bitcoin Project/Bitcoin
> Project.xlsx", sheet("Sheet2") firstrow clear
(5 vars, 1,500 obs)

```

```

. regress Price Valueonexchanges ofBTCs

```

Source	SS	df	MS	Number of obs =	1,500
				F(2, 1497)	> 99999.00
Model	2.9357e+11	2	1.4679e+11	Prob > F	= 0.0000
Residual	130609933	1,497	87247.7843	R-squared	= 0.9996


```
-----+----- Adj R-squared = 0.9996
Total | 2.9370e+11 1,499 195932058 Root MSE = 295.38
```

```
-----
> ---
Price | Coefficient Std. err. t P>|t| [95% conf. interv
> al]
```

```
-----+-----
> ---
Valueonexchanges | 5.28e-08 3.42e-11 1543.59 0.000 5.27e-08 5.28e
> -08
ofBTCs | .0000211 1.63e-06 12.98 0.000 .0000179 .0000
> 243
_cons | -93.0753 20.78255 -4.48 0.000 -133.8413 -52.30
> 928
```

```
-----
> ---

. estat ovtest, rhs
```

Ramsey RESET test for omitted variables
Omitted: Powers of independent variables

H0: Model has no omitted variables

F(6, 1491) = 1804.85
Prob > F = 0.0000

```
. estat hettest
```

Breusch–Pagan/Cook–Weisberg test for heteroskedasticity
Assumption: Normal error terms
Variable: Fitted values of Price

H0: Constant variance

chi2(1) = 376.61
Prob > chi2 = 0.0000

```
. regress Price Valueonexchanges ofBTCs,robust
```

```
Linear regression                Number of obs   =   1,500
F(1, 1497)                       =   .
Prob > F                           =   .
R-squared                          =  0.9996
Root MSE                            =  295.38
```

```

-----
> ---
           |           Robust
      Price | Coefficient std. err.   t   P>|t|   [95% conf. interv
> al]
-----+-----
> ---
Valueonexchanges | 5.28e-08  3.65e-11 1445.29 0.000  5.27e-08  5.28e
> -08
      ofBTCs | .0000211  1.09e-06  19.34 0.000  .000019  .0000
> 233
      _cons | -93.0753  7.962193 -11.69 0.000  -108.6935 -77.45
> 706
-----

```

```

> ---
.
. import excel "/Users/davidsheffet/Documents/S2/EC 431/Bitcoin Project/Bitcoin
> Project.xlsx", sheet("Gemini Data") cellrange(A2:X3104) firstrow clear
(24 vars, 3,102 obs)

. regress MrktPrice VolumeUSD VolumeBTC NWalletperd TradeVol HashRate
NTransact
> ionsperblock VIX FFR, robust

```

```

Linear regression              Number of obs   =    95
                             F(8, 86)       =   53.08
                             Prob > F        =   0.0000
                             R-squared        =   0.7734
                             Root MSE      =  1750.6

```

```

-----
> -----
           |           Robust
      MrktPrice | Coefficient std. err.   t   P>|t|   [95% conf. i
> nterval]
-----+-----
> -----
      VolumeUSD | .0004025  .0001124   3.58 0.001  .0001791
> .0006258
      VolumeBTC | -7.531505  1.981866  -3.80 0.000  -11.47132 -
> 3.591687
      NWalletperd | -.0215044  .0058873  -3.65 0.000  -.033208 -
> .0098008
      TradeVol | 6.86e-06  1.97e-06   3.48 0.001  2.94e-06
> .0000108
      HashRate | .000062  6.05e-06  10.25 0.000  .00005

```

```
> .000074
NTransactionsperblock | 5.865124 .9046942 6.48 0.000 4.066651
> 7.663596
VIX | -271.2442 63.73292 -4.26 0.000 -397.9411 -
> 144.5474
FFR | -2014.362 463.9073 -4.34 0.000 -2936.58 -
> 1092.145
_cons | 19742.04 3442.08 5.74 0.000 12899.41
> 26584.67
```

```
-----
> -----
```

```
. log close
  name: <unnamed>
  log: /Users/davidsheffet/Documents/S2/EC 431/Bitcoin Project/Bitcoin Pr
> oject.smcl
  log type: smcl
  closed on: 20 Apr 2023, 20:07:40
-----
```