Frankel-replicate

Table 4a in JIMF 2014

```
#install.packages("foreign")
#install.packages("stargazer")
#install.packages("tidyverse")
#install.packages("broom")

library(foreign)
library(stargazer)
```

```
##
## Please cite as:

##  Hlavac, Marek (2018). stargazer: Well-Formatted Regression and Summary Statistics Tables.

##  R package version 5.2.2. https://CRAN.R-project.org/package=stargazer
```

```
library(tidyverse)
```

```
## -- Attaching packages ---------------------------------------------------------- tidyverse 1.3.0 --

## v ggplot2 3.2.1     v purrr   0.3.3
## v tibble  2.1.3     v dplyr   0.8.3
## v tidyr   1.0.0     v stringr 1.4.0
## v readr   1.3.1     v forcats 0.4.0

## -- Conflicts ------------------------------------------------------------ tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()    masks stats::lag()
```

```
library(broom)


mydata <- read.dta("data-frankel/Appendix NoCE/Individual Commodities Dataset.dta")

mydata %>%
  group_by(commodity) %>%
  mutate(trend = year - 1983) %>%
  do(tidy(lm(log(sp) ~ real_int_gdpcpi + lnrgdp_world + linvent + spread + sdsp_lag + trend, data = ., r
 print.data.frame()
```

```
##      commodity            term        estimate     std.error   statistic
## 1       Copper     (Intercept)   -7.9247165574  20.244045443 -0.39145914
## 2       Copper real_int_gdpcpi   -0.0271662434   0.016140381 -1.68312282
## 3       Copper    lnrgdp_world    0.4794166829   0.651689611  0.73565187
## 4       Copper         linvent   -0.2002902155   0.054123391 -3.70062206
## 5       Copper          spread   -0.0012290218   0.001932537 -0.63596276
## 6       Copper        sdsp_lag    2.9299189992   0.593643396  4.93548655
## 7       Copper           trend    0.0065737959   0.021471744  0.30616032
## 8         Corn     (Intercept)  -42.8664125430  22.434768294 -1.91071341
## 9         Corn real_int_gdpcpi   -0.0372789235   0.026449580 -1.40943348
## 10        Corn    lnrgdp_world    1.3528825808   0.747332430  1.81028218
## 11        Corn         linvent    0.1977599437   0.173387249  1.14056798
## 12        Corn          spread   -0.0065905983   0.003555215 -1.85378359
## 13        Corn        sdsp_lag    0.9808791907   0.748528170  1.31041052
## 14        Corn           trend   -0.0332277536   0.023986913 -1.38524508
## 15      Cotton     (Intercept)  -24.2456476618  24.817481365 -0.97695843
## 16      Cotton real_int_gdpcpi    0.0477347028   0.018598332  2.56661207
## 17      Cotton    lnrgdp_world    1.0341376102   0.780405511  1.32512853
## 18      Cotton         linvent   -0.3455512810   0.200145642 -1.72649915
## 19      Cotton          spread   -0.0003863823   0.001339555 -0.28844084
## 20      Cotton        sdsp_lag    0.6142935629   0.608295097  1.00986111
## 21      Cotton           trend   -0.0092424143   0.028059665 -0.32938435
## 22 Live_cattle     (Intercept)  -55.6563865659  48.541566404 -1.14657171
## 23 Live_cattle real_int_gdpcpi   -0.0371736846   0.016260224 -2.28617295
## 24 Live_cattle    lnrgdp_world    1.7972753002   1.394742846  1.28860693
## 25 Live_cattle         linvent    0.4280445919   0.684516480  0.62532401
## 26 Live_cattle          spread   -0.0057879825   0.001977622 -2.92673871
## 27 Live_cattle        sdsp_lag   -0.1263091212   0.818900321 -0.15424236
## 28 Live_cattle           trend   -0.0399885435   0.039871198 -1.00294311
## 29    Live_hog     (Intercept)   68.4316318115  38.181820157  1.79225693
## 30    Live_hog real_int_gdpcpi   -0.0068642500   0.010603291 -0.64736974
## 31    Live_hog    lnrgdp_world   -2.0924509192   1.263499786 -1.65607540
## 32    Live_hog         linvent   -0.0424401690   0.333377529 -0.12730363
## 33    Live_hog          spread   -0.0042574727   0.001064712 -3.99870958
## 34    Live_hog        sdsp_lag   -1.2239415388   0.507277892 -2.41276341
## 35    Live_hog           trend    0.0744119290   0.037406192  1.98929443
## 36        Oats     (Intercept)  -78.0291077783  21.764594373 -3.58513954
## 37        Oats real_int_gdpcpi   -0.0030249214   0.018849304 -0.16047921
## 38        Oats    lnrgdp_world    2.7141588466   0.733817146  3.69868551
## 39        Oats         linvent   -0.3922472669   0.146936407 -2.66950360
## 40        Oats          spread   -0.0034983692   0.002680980 -1.30488451
## 41        Oats        sdsp_lag    1.2283849601   0.699156146  1.75695368
## 42        Oats           trend   -0.0868890979   0.027617615 -3.14614774
## 43   Petroleum     (Intercept)  144.5822471164 147.545109433  0.97991894
## 44   Petroleum real_int_gdpcpi   -0.0163455705   0.067274394 -0.24296868
## 45   Petroleum    lnrgdp_world   -4.0000350299   5.104242054 -0.78366876
## 46   Petroleum         linvent   -2.3821157767   3.932544049 -0.60574421
## 47   Petroleum          spread   -0.0017282299   0.004287015 -0.40313128
## 48   Petroleum        sdsp_lag   -0.0791145928   1.144689884 -0.06911443
## 49   Petroleum           trend    0.1792610252   0.145678995  1.23052075
## 50    Platinum     (Intercept) -127.2911678914  32.190843805 -3.95426627
## 51    Platinum real_int_gdpcpi    0.1043364935   0.020562589  5.07409314
## 52    Platinum    lnrgdp_world    4.3678031249   1.055907131  4.13654099
## 53    Platinum         linvent   -0.2003329487   0.039494665 -5.07240538
```

```
## 54    Platinum          spread   -0.0010066317   0.001385244 -0.72668211
## 55    Platinum        sdsp_lag    1.2081074011   0.589170245  2.05052345
## 56    Platinum           trend   -0.1112474231   0.036278100 -3.06651738
## 57      Silver     (Intercept) -171.0938787477  62.856599172 -2.72197161
## 58      Silver real_int_gdpcpi    0.0143684562   0.028312259  0.50749946
## 59      Silver    lnrgdp_world    5.6368791494   2.048979415  2.75106675
## 60      Silver         linvent   -0.0367812116   0.113701948 -0.32348796
## 61      Silver          spread   -0.0095671885   0.003894777 -2.45641470
## 62      Silver        sdsp_lag    5.2679800906   0.746540479  7.05652304
## 63      Silver           trend   -0.1443871669   0.062401406 -2.31384479
## 64    Soybeans     (Intercept)  -64.6711932796  31.286131550 -2.06708820
## 65    Soybeans real_int_gdpcpi   -0.0071973555   0.019446496 -0.37011066
## 66    Soybeans    lnrgdp_world    2.1476263446   1.037624714  2.06975250
## 67    Soybeans         linvent    0.0544985863   0.113329959  0.48088420
## 68    Soybeans          spread   -0.0053699735   0.003171630 -1.69312749
## 69    Soybeans        sdsp_lag    1.8516995459   0.699691619  2.64645094
## 70    Soybeans           trend   -0.0541420821   0.031098007 -1.74101455
## 71       Wheat     (Intercept)  -34.2789903719  22.323043569 -1.53558767
## 72       Wheat real_int_gdpcpi    0.0269351053   0.023119530  1.16503690
## 73       Wheat    lnrgdp_world    1.2737903517   0.761574658  1.67257450
## 74       Wheat         linvent   -0.3238222077   0.261668487 -1.23752849
## 75       Wheat          spread   -0.0006354718   0.003081851 -0.20619805
## 76       Wheat        sdsp_lag    1.7392716858   0.694710516  2.50359199
## 77       Wheat           trend   -0.0200621144   0.023875753 -0.84027150
##            p.value
## 1  0.6973910892199
## 2  0.0995993723491
## 3  0.4659365834723
## 4  0.0006070127386
## 5  0.5281712885740
## 6  0.0000125006826
## 7  0.7609600772714
## 8  0.0625709732990
## 9  0.1657360913518
## 10 0.0770845193656
## 11 0.2602201029097
## 12 0.0704817176260
## 13 0.1968564781361
## 14 0.1729605880531
## 15 0.3339307790861
## 16 0.0137488685827
## 17 0.1919689344723
## 18 0.0912737164581
## 19 0.7743638023689
## 20 0.3180832588060
## 21 0.7434280817393
## 22 0.2624145933554
## 23 0.0309867619370
## 24 0.2093327994830
## 25 0.5374252794505
## 26 0.0071951608157
## 27 0.8786570650677
## 28 0.3254976908800
## 29 0.0825517532647
```

```
## 30 0.5220101407120
## 31 0.1074818457018
## 32 0.8994967060579
## 33 0.0003515063148
## 34 0.0217367761523
## 35 0.0552739406148
## 36 0.0008546996877
## 37 0.8732551475207
## 38 0.0006105286709
## 39 0.0106753227273
## 40 0.1988724755770
## 41 0.0860446938463
## 42 0.0030005674215
## 43 0.3377800296064
## 44 0.8102806870418
## 45 0.4415904259761
## 46 0.5508835175651
## 47 0.6907426658194
## 48 0.9455228955991
## 49 0.2314973537406
## 50 0.0003051043121
## 51 0.0000093471847
## 52 0.0001758487699
## 53 0.0000093977145
## 54 0.4716521858398
## 55 0.0469054996441
## 56 0.0038725103577
## 57 0.0098365884011
## 58 0.6148163247089
## 59 0.0091415324060
## 60 0.7481470790530
## 61 0.0188476708298
## 62 0.0000000238371
## 63 0.0263346892505
## 64 0.0450783984594
## 65 0.7132051423568
## 66 0.0448155944793
## 67 0.6331551569218
## 68 0.0980174147224
## 69 0.0114854392726
## 70 0.0891813649620
## 71 0.1317998807904
## 72 0.2502815356154
## 73 0.1015081514859
## 74 0.2224544776478
## 75 0.8375873727579
## 76 0.0160774219864
## 77 0.4052991476684
```

```
mydata_PriceEquation <- read.dta("data-frankel/Appendix NoCE/Price Equation Dataset.dta")
mydata_InventoryEquation <- read.dta("data-frankel/Appendix NoCE/Price Equation Dataset.dta")
```