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```
name: <unnamed>
log: /Users/Pavel/Documents/GitHub/Book/Ch_Synthetic/Docs/Tables/impac
> t_regs.smcl
log type: smcl
opened on: 16 Jul 2020, 14:48:55
```

```
1 .
2 . * LPs
3 . local j = 0

4 . foreach shock in mp1 path lsap {
5 .     local ++j
6 .     if `j' == 1 local shk "Target"
7 .     if `j' == 2 local shk "Path"
8 .     if `j' == 3 local shk "LSAP"
9 .
10 .    foreach group in 1 { // 0 1 {
11 .        if `group' == 0 {
12 .            local grp "AE"
13 .            local vars nom dyp dtp
14 .        }
15 .        else {
16 .            local grp "EM"
17 .            local vars usyc // nom dyp dtp phicns // syn usyc
18 .        }
19 .    }
20 .    rho phi
21 .
22 .    foreach t in 24 120 { // 120 { // 3 6 12 24 60 120 {
23 .        foreach v in `vars' {
24 .
25 .            // variables to store the betas, standard er
26 .            > rors and confidence intervals
27 .
28 .            capture {
29 .                gen b_`v'`t'm = .
30 .                gen se_`v'`t'm = .
31 .                gen ll1_`v'`t'm = .
32 .                gen ull1_`v'`t'm = .
33 .                gen ll2_`v'`t'm = .
34 .                gen ull2_`v'`t'm = .
35 .            }
```

```

9 .                                     // controls
10 .                                local ctrl`v'`t'm l(1/`maxlag').d`v'`t'm l(1
    > /`maxlag').fx
    26.
11 .                                forvalues i = 0/`horizon' {
    27.                                    // response variables
12 .                                    capture gen `v'`t'm`i' = (f`i'.`v'`t
    > 'm - l.`v'`t'm)
    28.
13 .                                    // conditions
14 .                                    local condition em == `group' & date
    > != td(17sep2001) // & region == 3
    29.
15 . //                                // test for cross-sectional independ
    > ence
16 . //                                if inlist(`i',0,30,60,90) {
17 . //                                    quiet xtreg `v'`t'm`i' `shoc
    > k' `ctrl`v'`t'm' if `condition', fe // exclude meeting after 9/11
18 . //                                    xtcsd, pesaran abs
19 . //                                }
20 .
21 .                                    // one regression for each horizon
22 .                                    if `i' == 0 xtreg `v'`t'm`i' `shock'
    > `ctrl`v'`t'm' if `condition', fe level(95) cluster($id)
    > // report on-impact effect
    30. //                                if `i' == 0 xtscd `v'`t'm`i' `sho
    > ck' `ctrl`v'`t'm' if `condition', fe level(95) lag(4)
23 .                                quiet xtreg `v'`t'm`i' `shock' `ctrl
    > `v'`t'm' if `condition', fe level(95) cluster($id)
    31. //                                quiet xtscd `v'`t'm`i' `shock' `c
    > trl`v'`t'm' if `condition', fe level(95) lag(4)
24 .                                capture {
    32.                                    replace b_`v'`t'm = _b[`shock']
    > if _n == `i'+1
    33.                                    replace se_`v'`t'm = _se[`shock']
    > if _n == `i'+1
    34.

```

```

25 .                                // confidence intervals
26 .                                matrix R = r(table)
    35.                                replace l11_`v'`t'm = el(matrix(R
> ),rownumb(matrix(R),"l1"),colnumb(matrix(R),"`shock'")) if _n == `i'+1
    36.                                replace ul1_`v'`t'm = el(matrix(R
> ),rownumb(matrix(R),"ul"),colnumb(matrix(R),"`shock'")) if _n == `i'+1
    37.                                quiet xtreg, level(90) // to get
> 90% CI
    38. //                                quiet xtsc, level(90) // to get
> 90% CI
27 .                                matrix R = r(table)
    39.                                replace l12_`v'`t'm = el(matrix(R
> ),rownumb(matrix(R),"l1"),colnumb(matrix(R),"`shock'")) if _n == `i'+1
    40.                                replace ul2_`v'`t'm = el(matrix(R
> ),rownumb(matrix(R),"ul"),colnumb(matrix(R),"`shock'")) if _n == `i'+1
    41.
28 .                                drop `v'`t'm`i'
    42.                                }
    43.                                } // horizon
    44.
29 .                                // graph
30 .                                twoway (rarea l11_`v'`t'm ul1_`v'`t'm days,
> fcolor(gs12) lcolor(white) lpattern(solid)) ///
>                                (rarea l12_`v'`t'm ul2_`v'`t
> 'm days, fcolor(gs10) lcolor(white) lpattern(solid)) ///
>                                (line b_`v'`t'm days, lcolor
> (black) lpattern(solid) lwidth(thick)) ///
>                                (line zero days, lcolor(blac
> k)), ///
>                                title(`: variable label `v'`t'm', color(blac
> k) size(medium)) ///
>                                ytitle("Basis Points", size(medsmall)) xtitl
> e("Days", size(medsmall)) ylabel(-1(1)5) xlabel(10(20)90) ///
>                                graphregion(color(white)) plotregion(color(w
> hite)) ///
>                                legend(off) name(`v'`t'm, replace)
    45.                                graph export $pathfigs/`shk'/'grp'/'v'`t'
> m.eps, replace
    46.

```

```

31 .                                local graphs`shock'`grp'`t' `graphs`shock'`g
> rp'`t' `v'`t'm
47.                                drop *_`v'`t'm /
> / b_, se_ and confidence intervals
48.                                } // yield component
49.
32 .                                graph combine `graphs`shock'`grp'`t', rows(1) ycommon ///
>                                title("`shock' `grp' `t'm")
50.                                graph export $pathfigs/`shk'/'`grp'/'`shk'`grp'`v'`t'm.eps,
> replace
51.
33 .                                graph drop _all
52.                                } // tenor
53.                                } // AE or EM
54. } // shock

```

```

Fixed-effects (within) regression      Number of obs      =      1,835
Group variable: imf                    Number of groups   =      15

```

```

R-sq:                                Obs per group:
    within = 0.1265                      min =      100
    between = 0.0124                     avg =     122.3
    overall = 0.1080                     max =     159

```

```

corr(u_i, Xb) = -0.3745                F(3,14)            =     1779.18
                                         Prob > F          =      0.0000

```

(Std. Err. adjusted for 15 clusters in imf)

| usyc24m0 | Coef.     | Robust<br>Std. Err.               | t      | P> t  | [95% Conf. Interval] |           |
|----------|-----------|-----------------------------------|--------|-------|----------------------|-----------|
| mp1      | .3358324  | .0116244                          | 28.89  | 0.000 | .3109005             | .3607642  |
| dusyc24m |           |                                   |        |       |                      |           |
| L1.      | -.2822947 | .0084089                          | -33.57 | 0.000 | -.30033              | -.2642594 |
| fx       |           |                                   |        |       |                      |           |
| L1.      | -.0003645 | .0000919                          | -3.97  | 0.001 | -.0005615            | -.0001675 |
| _cons    | .3524679  | .0994734                          | 3.54   | 0.003 | .1391188             | .5658171  |
| sigma_u  | 1.013411  |                                   |        |       |                      |           |
| sigma_e  | 6.6305281 |                                   |        |       |                      |           |
| rho      | .02282688 | (fraction of variance due to u_i) |        |       |                      |           |

```

(file /Users/Pavel/Documents/GitHub/Book/Ch_Synthetic/Docs/Figures/LPs/Target/
> EM/usyc24m.eps written in EPS format)

```

```

(file /Users/Pavel/Documents/GitHub/Book/Ch_Synthetic/Docs/Figures/LPs/Target/

```

> EM/TargetEM24m.eps written in EPS format)

Fixed-effects (within) regression  
Group variable: **imf**

Number of obs = **1,835**  
Number of groups = **15**

R-sq:

within = **0.0098**  
between = **0.0061**  
overall = **0.0020**

Obs per group:

min = **100**  
avg = **122.3**  
max = **159**

corr(u\_i, Xb) = **-0.8925**

F(3,14) = **457.59**  
Prob > F = **0.0000**

(Std. Err. adjusted for **15** clusters in imf)

| usyc120m0        | Coef.            | Robust<br>Std. Err.               | t             | P> t         | [95% Conf. Interval] |                  |
|------------------|------------------|-----------------------------------|---------------|--------------|----------------------|------------------|
| mp1              | <b>.0488242</b>  | <b>.015298</b>                    | <b>3.19</b>   | <b>0.007</b> | <b>.0160132</b>      | <b>.0816352</b>  |
| dusyc120m<br>L1. | <b>-.1253557</b> | <b>.0120529</b>                   | <b>-10.40</b> | <b>0.000</b> | <b>-.1512067</b>     | <b>-.0995048</b> |
| fx<br>L1.        | <b>-.0006076</b> | <b>.0001313</b>                   | <b>-4.63</b>  | <b>0.000</b> | <b>-.0008892</b>     | <b>-.0003261</b> |
| _cons            | <b>.344408</b>   | <b>.1377067</b>                   | <b>2.50</b>   | <b>0.025</b> | <b>.0490564</b>      | <b>.6397596</b>  |
| sigma_u          | <b>1.6546119</b> |                                   |               |              |                      |                  |
| sigma_e          | <b>8.6591601</b> |                                   |               |              |                      |                  |
| rho              | <b>.03522624</b> | (fraction of variance due to u_i) |               |              |                      |                  |

(file /Users/Pavel/Documents/GitHub/Book/Ch\_Synthetic/Docs/Figures/LPs/Target/  
> EM/usyc120m.eps written in EPS format)

(file /Users/Pavel/Documents/GitHub/Book/Ch\_Synthetic/Docs/Figures/LPs/Target/  
> EM/TargetEM120m.eps written in EPS format)

Fixed-effects (within) regression  
Group variable: **imf**

Number of obs = **1,835**  
Number of groups = **15**

R-sq:

within = **0.5409**  
between = **0.0002**  
overall = **0.5343**

Obs per group:

min = **100**  
avg = **122.3**  
max = **159**

corr(u\_i, Xb) = **-0.1058**

F(3,14) = **814.71**  
Prob > F = **0.0000**

(Std. Err. adjusted for **15** clusters in imf)

| usyc24m0        | Coef.     | Robust<br>Std. Err.               | t      | P> t  | [95% Conf. Interval] |           |
|-----------------|-----------|-----------------------------------|--------|-------|----------------------|-----------|
| path            | .5849111  | .0158038                          | 37.01  | 0.000 | .5510153             | .618807   |
| dusyc24m<br>L1. | -.2768993 | .0064189                          | -43.14 | 0.000 | -.2906665            | -.263132  |
| fx<br>L1.       | -.0001958 | .000038                           | -5.15  | 0.000 | -.0002773            | -.0001143 |
| _cons           | .1064302  | .0418934                          | 2.54   | 0.024 | .0165777             | .1962827  |
| sigma_u         | .56371997 |                                   |        |       |                      |           |
| sigma_e         | 4.8070323 |                                   |        |       |                      |           |
| rho             | .01356566 | (fraction of variance due to u_i) |        |       |                      |           |

```
(note: file /Users/Pavel/Documents/GitHub/Book/Ch_Synthetic/Docs/Figures/LPs/P
> ath/EM/usyc24m.eps not found)
(file /Users/Pavel/Documents/GitHub/Book/Ch_Synthetic/Docs/Figures/LPs/Path/EM
> /usyc24m.eps written in EPS format)
(note: file /Users/Pavel/Documents/GitHub/Book/Ch_Synthetic/Docs/Figures/LPs/P
> ath/EM/PathEM24m.eps not found)
(file /Users/Pavel/Documents/GitHub/Book/Ch_Synthetic/Docs/Figures/LPs/Path/EM
> /PathEM24m.eps written in EPS format)
```

```
Fixed-effects (within) regression      Number of obs   =      1,835
Group variable: imf                  Number of groups =       15
```

|         |          |                |         |
|---------|----------|----------------|---------|
| R-sq:   |          | Obs per group: |         |
| within  | = 0.3887 | min            | = 100   |
| between | = 0.0201 | avg            | = 122.3 |
| overall | = 0.3796 | max            | = 159   |

|               |           |          |   |        |
|---------------|-----------|----------|---|--------|
|               |           | F(3,14)  | = | 194.13 |
| corr(u_i, Xb) | = -0.1539 | Prob > F | = | 0.0000 |

(Std. Err. adjusted for 15 clusters in imf)

| usyc120m0 | Coef.     | Robust Std. Err.                  | t      | P> t  | [95% Conf. Interval] |           |
|-----------|-----------|-----------------------------------|--------|-------|----------------------|-----------|
| path      | .6627966  | .0350904                          | 18.89  | 0.000 | .5875351             | .738058   |
| dusyc120m |           |                                   |        |       |                      |           |
| L1.       | -.252621  | .0148936                          | -16.96 | 0.000 | -.2845647            | -.2206774 |
| fx        |           |                                   |        |       |                      |           |
| L1.       | -.000296  | .0000455                          | -6.51  | 0.000 | -.0003936            | -.0001985 |
| _cons     | -.0743449 | .0514997                          | -1.44  | 0.171 | -.1848008            | .0361109  |
| sigma_u   | .81451846 |                                   |        |       |                      |           |
| sigma_e   | 6.8036    |                                   |        |       |                      |           |
| rho       | .01413006 | (fraction of variance due to u_i) |        |       |                      |           |

(note: file /Users/Pavel/Documents/GitHub/Book/Ch\_Synthetic/Docs/Figures/LPs/P  
> ath/EM/usyc120m.eps not found)

(file /Users/Pavel/Documents/GitHub/Book/Ch\_Synthetic/Docs/Figures/LPs/Path/EM  
> /usyc120m.eps written in EPS format)

(file /Users/Pavel/Documents/GitHub/Book/Ch\_Synthetic/Docs/Figures/LPs/Path/EM  
> /PathEM120m.eps written in EPS format)

Fixed-effects (within) regression

Number of obs = 1,835

Group variable: imf

Number of groups = 15

R-sq:

Obs per group:

  within = 0.1535

  min = 100

  between = 0.0267

  avg = 122.3

  overall = 0.1432

  max = 159

corr(u\_i, Xb) = -0.2477

F(3,14) = 743.84

Prob > F = 0.0000

(Std. Err. adjusted for 15 clusters in imf)

| usyc24m0 | Coef.     | Robust Std. Err. | t      | P> t  | [95% Conf. Interval] |           |
|----------|-----------|------------------|--------|-------|----------------------|-----------|
| lsap     | .4508511  | .0417907         | 10.79  | 0.000 | .361219              | .5404833  |
| dusyc24m |           |                  |        |       |                      |           |
| L1.      | -.3198279 | .0070055         | -45.65 | 0.000 | -.3348531            | -.3048027 |
| fx       |           |                  |        |       |                      |           |
| L1.      | -.000254  | .0000859         | -2.96  | 0.010 | -.0004384            | -.0000697 |





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> /usyc120m.eps written in EPS format)
(file /Users/Pavel/Documents/GitHub/Book/Ch_Synthetic/Docs/Figures/LPs/LSAP/EM
> /LSAPEM120m.eps written in EPS format)

34 .
35 . log close
      name: <unnamed>
      log: /Users/Pavel/Documents/GitHub/Book/Ch_Synthetic/Docs/Tables/impac
> t_regs.smcl
      log type: smcl
      closed on: 16 Jul 2020, 14:55:47
```

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