```
global path "C:\Users\vcfe222\Dropbox\Research\Dissertation IRS Reporting (betting pools)\Data"

/*Importing Data*/
clear
import delimited using "$path\Original1.csv", varnames(1)

save "$path/Original.dta" , replace

/*Cleaning Data*/
use "$path/Original.dta" , clear

/*Country*/
gen Canada = 0
replace Canada = 1 if country == "CAN"
gen USA = 0
replace USA = 1 if country == "USA"

/*Date*/
gen day = substr(racedate, 4, 2)
destring day, replace
gen date = mdy(month, day, year)
format date %td
drop day

/*purse*/
replace purse=subinstr(purse,",","",.)
destring purse, replace
gen lnpurse = ln(purse)
```

```
/*Distance*/
replace distance = distance/100

save "$path/data1.dta" , replace

/*Fixing Pools*/
use "$path/data1.dta" , clear

replace p8 = l8 if p8==""
drop l8 v19 b

rename v20 racing123
rename v21 pick18
rename v22 pick3
rename v23 pick4
rename v24 pick5
rename j pick5J
rename v26 pick6
rename v27 pick6J
rename v28 pick7
rename v29 pick7J
rename v30 pick9
rename v31 pick9J
rename a triactor
rename c classix
rename d daily_double
rename e exacta
rename f perfecta
rename h head2head
```

```
rename hj high_five_jackpot

rename i Pick10

rename v41 exactor

rename k win_four

rename l place_pick_all

rename m consolatin_pick3

rename n future_wager

rename p jockey_challenge

rename p5 place_pick5

rename p6 place_pick6

rename p8 place_pick8

rename p9 place_pick9

rename q quinella

rename s superfecta

rename s5 super_high5

rename t trifecta

rename u tri_Super

rename w twin_trifecta

rename x grand_slam

rename x5 x5_super_high5

rename z consolation_daily_double

rename z5 Z5_super_high5

rename rou roulette


foreach v of varlist wpspool racing123 pick18 pick3 pick4 pick5 pick5J pick6 pick6J pick7 pick7J pick9
pick9J triactor classix daily_double exacta perfecta head2head high_five_jackpot Pick10 exactor
win_four place_pick_all consolatin_pick3 future_wager jockey_challenge place_pick5 place_pick6
place_pick8 place_pick9 quinella superfecta super_high5 trifecta tri_Super twin_trifecta grand_slam
x5_super_high5 consolation_daily_double Z5_super_high5 roulette{

replace `v'=subinstr(`v',",","",.)
```

```
destring `v', replace
}

save "$path/data2New.dta" , replace

/*Distributing bets*/
use "$path/data2New.dta" , clear

egen racedaycode=group(date trackid)

foreach var of varlist daily_double tri_Super twin_trifecta consolation_daily_double{
xtset racedaycode racenumber
gen `var'adj = `var'/2
replace `var'adj = 0 if `var'adj==.
gen lag`var' = f.`var'/2
replace lag`var' = 0 if lag`var'==.
replace `var' = `var'adj+lag`var'
drop `var'adj lag`var'
}

foreach var of varlist pick3 consolatin_pick3{
xtset racedaycode racenumber
gen `var'adj = `var'/3
replace `var'adj = 0 if `var'adj==.
gen lag`var' = f.`var'/3
replace lag`var' = 0 if lag`var'==.
gen lag2`var' = f2.`var'/3
replace lag2`var' = 0 if lag2`var'==.
replace `var' = `var'adj+lag`var'+lag2`var'
```

```
drop `var'adj lag`var' lag2`var'
}

foreach var of varlist pick4 win_four grand_slam{
xtset racedaycode racenumber
gen `var'adj = `var'/4
replace `var'adj = 0 if `var'adj==.
gen lag`var' = f.`var'/4
replace lag`var' = 0 if lag`var'==.
gen lag2`var' = f2.`var'/4
replace lag2`var' = 0 if lag2`var'==.
gen lag3`var' = f3.`var'/4
replace lag3`var' = 0 if lag3`var'==.
replace `var' = `var'adj+lag`var'+lag2`var'+lag3`var'
drop `var'adj lag`var' lag2`var' lag3`var'
}

foreach var of varlist pick5 pick5J place_pick5{
xtset racedaycode racenumber
gen `var'adj = `var'/5
replace `var'adj = 0 if `var'adj==.
gen lag`var' = f.`var'/5
replace lag`var' = 0 if lag`var'==.
gen lag2`var' = f2.`var'/5
replace lag2`var' = 0 if lag2`var'==.
gen lag3`var' = f3.`var'/5
replace lag3`var' = 0 if lag3`var'==.
gen lag4`var' = f4.`var'/5
replace lag4`var' = 0 if lag4`var'==.
```

```
replace `var' = `var'adj+lag`var'+lag2`var'+lag3`var'+lag4`var'
drop `var'adj lag`var' lag2`var' lag3`var' lag4`var'
}

foreach var of varlist pick6 racing123 pick6J classix place_pick6{
xtset racedaycode racenumber
gen `var'adj = `var'/6
replace `var'adj = 0 if `var'adj==.
gen lag`var' = f.`var'/6
replace lag`var' = 0 if lag`var'==.
gen lag2`var' = f2.`var'/6
replace lag2`var' = 0 if lag2`var'==.
gen lag3`var' = f3.`var'/6
replace lag3`var' = 0 if lag3`var'==.
gen lag4`var' = f4.`var'/6
replace lag4`var' = 0 if lag4`var'==.
gen lag5`var' = f5.`var'/6
replace lag5`var' = 0 if lag5`var'==.
replace `var' = `var'adj+lag`var'+lag2`var'+lag3`var'+lag4`var'+lag5`var'
drop `var'adj lag`var' lag2`var' lag3`var' lag4`var' lag5`var'
}

foreach var of varlist pick7 pick7J{
xtset racedaycode racenumber
gen `var'adj = `var'/7
replace `var'adj = 0 if `var'adj==.
gen lag`var' = f.`var'/7
replace lag`var' = 0 if lag`var'==.
gen lag2`var' = f2.`var'/7
```

```
replace lag2`var' = 0 if lag2`var'==.
gen lag3`var' = f3.`var'/7
replace lag3`var' = 0 if lag3`var'==.
gen lag4`var' = f4.`var'/7
replace lag4`var' = 0 if lag4`var'==.
gen lag5`var' = f5.`var'/7
replace lag5`var' = 0 if lag5`var'==.
gen lag6`var' = f6.`var'/7
replace lag6`var' = 0 if lag6`var'==.
replace `var' = `var'adj+lag`var'+lag2`var'+lag3`var'+lag4`var'+lag5`var'+lag6`var'
drop `var'adj lag`var' lag2`var' lag3`var' lag4`var' lag5`var' lag6`var'
}

foreach var of varlist place_pick8{
xtset racedaycode racenumber
gen `var'adj = `var'/8
replace `var'adj = 0 if `var'adj==.
gen lag`var' = f.`var'/8
replace lag`var' = 0 if lag`var'==.
gen lag2`var' = f2.`var'/8
replace lag2`var' = 0 if lag2`var'==.
gen lag3`var' = f3.`var'/8
replace lag3`var' = 0 if lag3`var'==.
gen lag4`var' = f4.`var'/8
replace lag4`var' = 0 if lag4`var'==.
gen lag5`var' = f5.`var'/8
replace lag5`var' = 0 if lag5`var'==.
gen lag6`var' = f6.`var'/8
replace lag6`var' = 0 if lag6`var'==.
```

```
gen lag7`var' = f7.`var'/8
replace lag7`var' = 0 if lag7`var'==.
replace `var' = `var'adj+lag`var'+lag2`var'+lag3`var'+lag4`var'+lag5`var'+lag6`var'+lag7`var'
drop `var'adj lag`var' lag2`var' lag3`var' lag4`var' lag5`var' lag6`var' lag7`var'
}

foreach var of varlist pick9 pick9J place_pick9{
xtset racedaycode racenumber
gen `var'adj = `var'/9
replace `var'adj = 0 if `var'adj==.
gen lag`var' = f.`var'/9
replace lag`var' = 0 if lag`var'==.
gen lag2`var' = f2.`var'/9
replace lag2`var' = 0 if lag2`var'==.
gen lag3`var' = f3.`var'/9
replace lag3`var' = 0 if lag3`var'==.
gen lag4`var' = f4.`var'/9
replace lag4`var' = 0 if lag4`var'==.
gen lag5`var' = f5.`var'/9
replace lag5`var' = 0 if lag5`var'==.
gen lag6`var' = f6.`var'/9
replace lag6`var' = 0 if lag6`var'==.
gen lag7`var' = f7.`var'/9
replace lag7`var' = 0 if lag7`var'==.
gen lag8`var' = f8.`var'/9
replace lag8`var' = 0 if lag8`var'==.
replace `var' = `var'adj+lag`var'+lag2`var'+lag3`var'+lag4`var'+lag5`var'+lag6`var'+lag7`var'+lag8`var'
drop `var'adj lag`var' lag2`var' lag3`var' lag4`var' lag5`var' lag6`var' lag7`var' lag8`var'
}
```

```
foreach var of varlist Pick10 place_pick_all{
xtset racedaycode racenumber
gen `var'adj = `var'/10
replace `var'adj = 0 if `var'adj==.
gen lag`var' = f.`var'/10
replace lag`var' = 0 if lag`var'==.
gen lag2`var' = f2.`var'/10
replace lag2`var' = 0 if lag2`var'==.
gen lag3`var' = f3.`var'/10
replace lag3`var' = 0 if lag3`var'==.
gen lag4`var' = f4.`var'/10
replace lag4`var' = 0 if lag4`var'==.
gen lag5`var' = f5.`var'/10
replace lag5`var' = 0 if lag5`var'==.
gen lag6`var' = f6.`var'/10
replace lag6`var' = 0 if lag6`var'==.
gen lag7`var' = f7.`var'/10
replace lag7`var' = 0 if lag7`var'==.
gen lag8`var' = f8.`var'/10
replace lag8`var' = 0 if lag8`var'==.
gen lag9`var' = f9.`var'/10
replace lag9`var' = 0 if lag9`var'==.
replace `var' =
`var'adj+lag`var'+lag2`var'+lag3`var'+lag4`var'+lag5`var'+lag6`var'+lag7`var'+lag8`var'+lag9`var'
drop `var'adj lag`var' lag2`var' lag3`var' lag4`var' lag5`var' lag6`var' lag7`var' lag8`var' lag9`var'
}

replace pick18 = 345.72 if trackid == "FG" & racedate == "03/30/12"
```

```
foreach var of varlist wpspool racing123 pick18 pick3 pick4 pick5 pick5J pick6 pick6J pick7 pick7J pick9 pick9J triactor classix daily_double exacta perfecta head2head high_five_jackpot Pick10 exactor win_four place_pick_all consolatin_pick3 future_wager jockey_challenge place_pick5 place_pick6 place_pick8 place_pick9 quinella superfecta super_high5 trifecta tri_Super twin_trifecta grand_slam x5_super_high5 consolation_daily_double Z5_super_high5 roulette{

replace `var' = . if `var' == 0

}


egen tpool_total = rowtotal(wpspool racing123 pick18 pick3 pick4 pick5 pick5J pick6 pick6J pick7 pick7J pick9 pick9J triactor classix daily_double exacta perfecta head2head high_five_jackpot Pick10 exactor win_four place_pick_all consolatin_pick3 future_wager jockey_challenge place_pick5 place_pick6 place_pick8 place_pick9 quinella superfecta super_high5 trifecta tri_Super twin_trifecta grand_slam x5_super_high5 consolation_daily_double Z5_super_high5 roulette)


egen bets_available = rownonmiss(wpspool racing123 pick18 pick3 pick4 pick5 pick5J pick6 pick6J pick7 pick7J pick9 pick9J triactor classix daily_double exacta perfecta head2head high_five_jackpot Pick10 exactor win_four place_pick_all consolatin_pick3 future_wager jockey_challenge place_pick5 place_pick6 place_pick8 place_pick9 quinella superfecta super_high5 trifecta tri_Super twin_trifecta grand_slam x5_super_high5 consolation_daily_double Z5_super_high5 roulette)


save "$path/data3NEW.dta" , replace


/*Final touchup*/

use "$path/data3NEW.dta" , clear


gen dayofweek = dow(date)


egen highreturnX = rowtotal(racing123 pick18 pick4 pick5 pick5J pick6 pick6J pick7 pick7J pick9 pick9J classix high_five_jackpot Pick10 win_four place_pick_all place_pick6 place_pick8 place_pick9 super_high5 tri_Super twin_trifecta grand_slam x5_super_high5 Z5_super_high5)


gen lowreturnX = tpool_total - highreturnX
```

```
gen betratioX = highreturnX/tpool_total

gen post_date = mdy(9, 27, 2017)
gen post_change = 0
replace post_change = 1 if date > post_date

gen interaction = USA*post_change

egen racetypenum=group(racetype)
egen trackidnum=group(trackid)
egen weathernum=group(weather)
egen dayofweeknum=group(dayofweek)
gen distancenum = round(distance*10)

gen surface1 = 0
replace surface1 = 1 if surface == "D"

drop if betratioX == 0 | betratioX == .
drop if lnpurse == .

winsor2 runners bets_available lnpurse,  replace cuts(1 99)

save "$path/testdataNEW.dta" , replace

/*Descriptive Stats*/
use "$path/testdataNEW.dta" , clear

reghdfe betratioX post_change USA interaction, noabsorb vce(cluster trackid)
sum betratioX if USA == 0 & post_change == 0
```

```
sum betratioX if USA == 0 & post_change == 1

sum betratioX if USA == 1 & post_change == 0

sum betratioX if USA == 1 & post_change == 1


tabstat betratioX purse runners bets_available surface1, columns(statistics) statistics(n mean sd p25
median p75), if USA == 1 & post_change == 0


tabstat betratioX purse runners bets_available surface1, columns(statistics) statistics(n mean sd p25
median p75), if USA == 1 & post_change == 1


tabstat betratioX purse runners bets_available surface1, columns(statistics) statistics(n mean sd p25
median p75), if USA == 0 & post_change == 0


tabstat betratioX purse runners bets_available surface1, columns(statistics) statistics(n mean sd p25
median p75), if USA == 0 & post_change == 1


replace racenumber = 12 if racenumber > 12

replace distance = 4 if distance < 4

replace distance = 12 if distance > 12

replace distance = distance - .1

replace distance = round(distance, 1)


tab USA year

tab USA month

tab USA racenumber

tab USA weather

tab USA dayofweek

tab USA distance
```

```
/*T1 MAIN TEST*/

use "$path/testdataNEW.dta" , clear


reghdfe betratioX post_change interaction i.year, absorb(trackidnum) vce(cluster trackid)


reghdfe betratioX post_change interaction lnpurse runners bets_available surface1 i.year,
absorb(trackidnum) vce(cluster trackid)


reghdfe betratioX post_change interaction lnpurse runners bets_available surface1 i.year i.month
i.racenumber i.racetypenum i.weathernum i.dayofweeknum i.distancenum, absorb(trackidnum)
vce(cluster trackid)


/*T3 STATE TESTS*/

use "$path/testdataNEW.dta" , clear


gen AR = 0

replace AR = 1 if trackid == "OP"


gen AZ = 0

replace AZ = 1 if trackid == "AZD" | trackid == "RIL" | trackid == "TUP" | trackid == "YAV"


gen CA = 0

replace CA = 1 if trackid == "DMR" | trackid == "GG" | trackid == "LA" | trackid == "SA" | trackid == "SAC"
| trackid == "BHP" | trackid == "BSR" | trackid == "FER" | trackid == "FNO" | trackid == "FPX" | trackid ==
"GG" | trackid == "HOL" | trackid == "LRC" | trackid == "OSA" | trackid == "OTH" | trackid == "OTP" |
trackid == "PLN" | trackid == "SOL" | trackid == "SR" | trackid == "STK"


gen DE = 0

replace DE = 1 if trackid == "DEL"


gen FL = 0
```

```
replace FL = 1 if trackid == "GP" | trackid == "GPW" | trackid == "TAM" | trackid == "CRC"

gen IA = 0
replace IA = 1 if trackid == "PRM"

gen ID = 0
replace ID = 1 if trackid == "BOI" | trackid == "SDY"

gen IL = 0
replace IL = 1 if trackid == "AP" | trackid == "FP" | trackid == "HAW"

gen IN = 0
replace IN = 1 if trackid == "BTP" | trackid == "HOO" | trackid == "IND"

gen KS = 0
replace KS = 1 if trackid == "EUR"

gen KY = 0
replace KY = 1 if trackid == "CD" | trackid == "KD" | trackid == "KEE" | trackid == "TP" | trackid == "ELP"

gen LA = 0
replace LA = 1 if trackid == "DED" | trackid == "EVD" | trackid == "FG" | trackid == "LAD"

gen MA = 0
replace MA = 1 if trackid == "SUF"

gen MD = 0
replace MD = 1 if trackid == "LRL" | trackid == "PIM" | trackid == "TIM"
```

```
gen MI = 0

replace MI = 1 if trackid == "HP" | trackid == "PNL"


gen MN = 0

replace MN = 1 if trackid == "CBY"


gen ND = 0

replace ND = 1 if trackid == "FAR"


gen NE = 0

replace NE = 1 if trackid == "ATO" | trackid == "CLS" | trackid == "FON" | trackid == "HPO" | trackid == "LNN"


gen NM = 0

replace NM = 1 if trackid == "ALB" | trackid == "RUI" | trackid == "SRP" | trackid == "SUN" | trackid == "ZIA"


gen NJ = 0

replace NJ = 1 if trackid == "MED" | trackid == "MTH"


gen NY = 0

replace NY = 1 if trackid == "SAR" | trackid == "BEL" | trackid == "AQU" | trackid == "FL" | trackid == "FLG"


gen OH = 0

replace OH = 1 if trackid == "BEU" | trackid == "MVR" | trackid == "RD" | trackid == "TDN"


gen OK = 0

replace OK = 1 if trackid == "FMT" | trackid == "RP" | trackid == "WRD"
```

```
gen OR = 0

replace OR = 1 if trackid == "PM"


gen PA = 0

replace PA = 1 if trackid == "PEN" | trackid == "PHA" | trackid == "PID" | trackid == "PRX"


gen TX = 0

replace TX = 1 if trackid == "HOU" | trackid == "LS" | trackid == "MAN" | trackid == "RET" | trackid ==
"GIL"


gen VA = 0

replace VA = 1 if trackid == "CNL"


gen WA = 0

replace WA = 1 if trackid == "EMD"


gen WV = 0

replace WV = 1 if trackid == "CT" | trackid == "MNR"


gen WY = 0

replace WY = 1 if trackid == "CWF" | trackid == "ED" | trackid == "SWF"


gen StateName = ""

replace StateName = "Arkansas" if AR == 1

replace StateName = "Arizona" if AZ == 1

replace StateName = "California" if CA == 1

replace StateName = "Delaware" if DE == 1

replace StateName = "Florida" if FL == 1

replace StateName = "Iowa" if IA == 1
```

```
replace StateName = "Idaho" if ID == 1
replace StateName = "Illinois" if IL == 1
replace StateName = "Indiana" if IN == 1
replace StateName = "Kansas" if KS == 1
replace StateName = "Kentucky" if KY == 1
replace StateName = "Louisiana" if LA == 1
replace StateName = "Massachusetts" if MA == 1
replace StateName = "Maryland" if MD == 1
replace StateName = "Michigan" if MI == 1
replace StateName = "Minnesota" if MN == 1
replace StateName = "Nebraska" if NE == 1
replace StateName = "North Dakota" if ND == 1
replace StateName = "New Mexico" if NM == 1
replace StateName = "New Jersey" if NJ == 1
replace StateName = "New York" if NY == 1
replace StateName = "Ohio" if OH == 1
replace StateName = "Oklahoma" if OK == 1
replace StateName = "Oregon" if OR == 1
replace StateName = "Pennsylvania" if PA == 1
replace StateName = "Texas" if TX == 1
replace StateName = "Virginia" if VA == 1
replace StateName = "Washington" if WA == 1
replace StateName = "West Virginia" if WV == 1
replace StateName = "Wyoming" if WY == 1

gen topstate = 0
replace topstate = 1 if FL == 1 | KY == 1 | NY == 1 | CA == 1

gen bigstate = 0
```

```
replace bigstate = 1 if FL == 1 | KY == 1 | NY == 1 | CA == 1 | WV == 1 | PA == 1 | LA == 1


gen richstate = 0

replace richstate = 1 if AR == 1 | CA == 1 | FL == 1 | KY == 1 | MD == 1 | NJ == 1 | NY == 1 | VA == 1


gen interactiontop = post_change*topstate

gen interactionbig = post_change*bigstate

gen interactionrich = post_change*richstate


reghdfe betratioX post_change interaction interactionrich lnpurse runners bets_available surface1 i.year
i.month i.racenumber i.racetypenum i.weathernum i.dayofweeknum i.distancenum, absorb(trackidnum)
vce(cluster trackid)


reghdfe betratioX post_change interaction interactionbig lnpurse runners bets_available surface1 i.year
i.month i.racenumber i.racetypenum i.weathernum i.dayofweeknum i.distancenum, absorb(trackidnum)
vce(cluster trackid)


reghdfe betratioX post_change interaction interactiontop lnpurse runners bets_available surface1 i.year
i.month i.racenumber i.racetypenum i.weathernum i.dayofweeknum i.distancenum, absorb(trackidnum)
vce(cluster trackid)


/*T4 IRS LOSS TEST*/


clear

import excel using "$path/Statetottests/states1.xlsx", firstrow

expand 4, gen(dupindicator)

gen rank = _n

bys State: egen countrank = rank(rank)

gen year = 2020 - countrank

drop countrank rank dupindicator

sort State year
```

```
gen numoftotalreturns = .
foreach num of numlist 2016 2017 2018 2019{
	replace numoftotalreturns = numbertotal`num' if year == `num'
}

gen numberofitemizedreturns = .
foreach num of numlist 2016 2017 2018 2019{
	replace numberofitemizedreturns = numberitemize`num' if year == `num'
}

gen dollarsitemized = .
foreach num of numlist 2016 2017 2018 2019{
	replace dollarsitemized = amountitemize`num' if year == `num'
}

gen numberofnonlimreturns = .
foreach num of numlist 2016 2017 2018 2019{
	replace numberofnonlimreturns = numbernonlim`num' if year == `num'
}

gen dollarsnonlimited = .
foreach num of numlist 2016 2017 2018 2019{
	replace dollarsnonlimited = amountnonlim`num' if year == `num'
}

keep Sports Horses State numoftotalreturns numberofitemizedreturns dollarsitemized
numberofnonlimreturns dollarsnonlimited year
```

```
gen sportsgamlegalyear = 0
replace sportsgamlegalyear = 1 if Sports == year
replace sportsgamlegalyear = 1 if Sports < year
keep if sportsgamlegalyear == 0
gen postch = 0
replace postch = 1 if year > 2017

gen interaction = postch*Horses

egen Statenum=group(State)

gen peritemizedloss = dollarsnonlimited/numberofitemizedreturns

gen lnperitemizedloss = ln(peritemizedloss)

save "$path/statesdata.dta" , replace

use "$path/statesdata.dta" , clear

reghdfe lnperitemizedloss interaction i.year, absorb(Statenum) vce(cluster State)

gen drop1 = 0
replace drop1 = 1 if State == "District of Columbia"
replace drop1 = 1 if State == "New Hampshire"
replace drop1 = 1 if State == "North Carolina"
replace drop1 = 1 if State == "South Carolina"
foreach x in Vermont Maine Montana Virginia Alaska Idaho Oregon Georgia Utah Nebraska Hawaii
Massachusetts{
        replace drop1 = 1 if State == "`x'"
```

```
}
drop if drop1 == 1

reghdfe lnperitemizedloss interaction i.year, absorb(Statenum) vce(cluster State)




/*T5 Pick 4 TEST*/
use "$path/testdataNEW.dta" , clear

egen burn = rowtotal(pick4 win_four grand_slam)
gen betratioP4 = burn/lowreturnX
replace betratioP4 = . if betratioP4 == 0

reghdfe betratioP4 post_change interaction lnpurse runners bets_available surface1 i.year i.month
i.racenumber i.racetypenum i.weathernum i.dayofweeknum i.distancenum, absorb(trackidnum)
vce(cluster trackid)



/*T6 FIRST DIFFERENCE*/
use "$path/testdataNEW.dta" , clear

keep if USA == 1

bys year trackid: egen yeartpool_total = sum(tpool_total)
bys year trackid: egen yearhighreturnX = sum(highreturnX)
bys year trackid: egen yearbets_available = sum(bets_available)
bys year trackid: egen yearrunners = sum(runners)
bys year trackid: egen yearpurse = sum(purse)
```

```
gen yearlnpurse = ln(yearpurse)

duplicates drop year trackid, force

gen yearbetratioX = yearhighreturnX/yeartpool_total

xtset trackidnum year

gen lagbetr = l.yearbetratioX
gen DV = yearbetratioX - lagbetr

drop if DV == 0 | DV == .

foreach num in 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019{
gen year`num' = 0
replace year`num' = 1 if year == `num'
gen USAxyear`num' = USA*year`num'
}

reghdfe DV USAxyear2019 USAxyear2018 USAxyear2017 USAxyear2016 USAxyear2015 USAxyear2014
USAxyear2013 USAxyear2012 USAxyear2011 yearbets_available yearrunners yearlnpurse,
absorb(trackidnum) vce(cluster trackid)

reghdfe DV USAxyear2019 USAxyear2017 USAxyear2016 USAxyear2015 USAxyear2014 USAxyear2013
USAxyear2012 USAxyear2011 USAxyear2010 yearbets_available yearrunners yearlnpurse,
absorb(trackidnum) vce(cluster trackid)

/*T7 MATCHING TESTS*/
```

```
use "$path/testdataNEW.dta" , clear

keep if trackid == "HPO" | trackid == "CTD" | trackid == "RET" | trackid == "MD" | trackid == "KEE"
|trackid == "ASD" | trackid == "RP" | trackid == "FE" | trackid == "LS" | trackid == "HST" | trackid ==
"CBY" | trackid == "NP" | trackid == "AQU" | trackid == "WO"


reghdfe betratioX post_change interaction lnpurse runners bets_available surface1 i.year i.month
i.racenumber i.racetypenum i.weathernum i.dayofweeknum i.distancenum, absorb(trackidnum)
vce(cluster trackid)


use "$path/testdataNEW.dta" , clear

keep if Canada == 1

save "$path/Canadasample.dta" , replace

use "$path/testdataNEW.dta" , clear

drop if Canada == 1

gen random = runiform()

sort random

gen insample = _n

drop if insample > 27146

append using "$path/Canadasample.dta"


reghdfe betratioX post_change interaction lnpurse runners bets_available surface1 i.year i.month
i.racenumber i.racetypenum i.weathernum i.dayofweeknum i.distancenum, absorb(trackidnum)
vce(cluster trackid)

/*T8 DAY TESTS*/

use "$path/testdataNEW.dta" , clear
```

```
*MUST RUN TOUCHUP WITHOUT FINAL MISSING/0 DROP

bys date trackid: egen daytpool_total = sum(tpool_total)
bys date trackid: egen dayhighreturnX = sum(highreturnX)
bys date trackid: egen daybets_available = sum(bets_available)
bys date trackid: egen dayrunners = sum(runners)
bys date trackid: egen dayraces = max(racenumber)
bys date trackid: egen daypurse = sum(purse)

gen daylnpurse = ln(daypurse)

duplicates drop date trackid, force

gen daybetratioX = dayhighreturnX/daytpool_total

drop if daybetratioX == 0 | daybetratioX == .

reghdfe daybetratioX post_change interaction i.year, absorb(trackidnum) vce(cluster trackid)

reghdfe daybetratioX post_change interaction daylnpurse dayrunners daybets_available dayraces i.year
i.month i.dayofweeknum, absorb(trackidnum) vce(cluster trackid)

/*T9 TCJA TEST*/
use "$path/testdataNEW.dta" , clear

keep if year < 2018
```

```
reghdfe betratioX post_change interaction lnpurse runners bets_available surface1 i.year i.month
i.racenumber i.racetypenum i.weathernum i.dayofweeknum i.distancenum, absorb(trackidnum)
vce(cluster trackid)



/*T10 POOL SIZE TEST*/

use "$path/testdataNEW.dta" , clear

gen lnhighreturnX = ln(highreturnX)

gen lntpool_total = ln(tpool_total)

winsor2 lnhighreturnX lntpool_total, replace cuts(1 99)


reghdfe lntpool_total post_change interaction lnpurse runners bets_available surface1 i.year i.month
i.racenumber i.racetypenum i.weathernum i.dayofweeknum i.distancenum, absorb(trackidnum)
vce(cluster trackid)


reghdfe lnhighreturnX post_change interaction lnpurse runners bets_available surface1 i.year i.month
i.racenumber i.racetypenum i.weathernum i.dayofweeknum i.distancenum, absorb(trackidnum)
vce(cluster trackid)


/*Fig 1 Para Trend Assumption*/


use "$path/testdataNEW.dta" , clear


foreach num of numlist 2009/2019{

        gen year`num' = 0

        replace year`num' = 1 if year == `num'

        gen USAxyear`num' = USA*year`num'

}


reghdfe betratioX USAxyear2009 USAxyear2010 USAxyear2011 USAxyear2012 USAxyear2013
USAxyear2014 USAxyear2015 USAxyear2017 USAxyear2018 USAxyear2019 lnpurse runners
```

```
bets_available surface1 i.year i.month i.racenumber i.racetypenum i.weathernum i.dayofweeknum
i.distancenum, absorb(trackidnum) vce(cluster trackid)
```