BIS Project Notes

Haoyu Sheng

6/18/2019

Reading Data

We can use the `read_hc` function to read the house credit data.

```
hc <- read_hc("../data/HouseCredit_data.xlsx")
kable(head(hc[1:4]))
```

date	AU	CA	DK
1980 Q1	20837.15	40925.58	NA
1980 Q2	21964.49	41076.90	NA
1980 Q3	22760.65	41132.54	NA
1980 Q4	23646.73	40950.06	NA
1981 Q1	24475.79	38994.02	NA
1981 Q2	25196.28	38159.53	NA

There are 57 columns and 158 rows in the housing credit dataset.

We can use the `read_pp` function to read the property price data.

```
pp <- read_pp("../data/pp_long.xlsx")
kable(head(pp[13:18]))
```

Q:IE	Q:IT	Q:JP	Q:KR	Q:MY	Q:NL
NA	0.0343	NA	NA	NA	NA
NA	0.0342	NA	NA	NA	NA
NA	0.0340	NA	NA	NA	NA
NA	0.0339	NA	NA	NA	NA
NA	0.0338	NA	NA	NA	NA
NA	0.0336	NA	NA	NA	NA

There are 24 columns and 368 rows in the property dataset.

We can use the `read_mp` function to read the macroprudential policy actions.

```
# The list of all actions. We can choose from this list what actions we want to look at
indicators <- c("Housing_FX_limit", "Housing_LLprovisioning", "Housing_LTV",
                "Housing_OtherCapital", "Housing_RiskWeights", "Housing_tax", "LD_Ratio")
mp = lapply(indicators, read_mp, path = "../data/MacroprudentialIndicators.xlsx") %>%
  reduce(full_join, by = "date")
kable(head(mp[1:4]))
```

date	AE_Housing_FX_limit	AR_Housing_FX_limit	AT_Housing_FX_limit
1994 Q4	0	0	0
1995 Q1	0	0	0
1995 Q2	0	0	0
1995 Q3	0	0	0

date	AE_Housing_FX_limit	AR_Housing_FX_limit	AT_Housing_FX_limit
1995 Q4	0	0	0
1996 Q1	0	0	0

There are 400 columns and 97 rows in the macroprudential action dataset.

Finding Intersection

We want to find periods in which all data were available for a certain country. We can use `merge_dat` to merge `hc`, `pp`, and `mp` data. We use `find_intersect` to filter out country-specific information.

```
dat = list("mp" = mp, "hc" = hc, "pp" = pp)
# List of all countries
country_list <- colnames(hc)[-1]
# Merging all the
all_dat <- merge_dat(dat, all = TRUE)
inter <- sapply(country_list, find_intersect, x = all_dat, simplify = FALSE, USE.NAMES = TRUE)
kable(head(inter$AU[7:10]))
```

AU_Housing_tax	AU_LD_Ratio	AU	Q:AU
0	0	152401	99.5075
0	0	157673	100.4875
0	0	161226	99.7775
0	0	165399	99.9575
0	0	171828	99.7775
0	0	176878	99.5975

Taking a quick look at the intersection data for AU(Australia), there are 10 columns and 96 rows in this dataset, indicating 96 entries are present for all three data series.