Freddie - Example

Datasets

François Geerolf

Contents

Preamble

```
rm(list = ls())
pklist <- c("tidyverse", "fredr", "lubridate")
source("https://fgeerolf.github.io/datasets/load-packages.R")
```
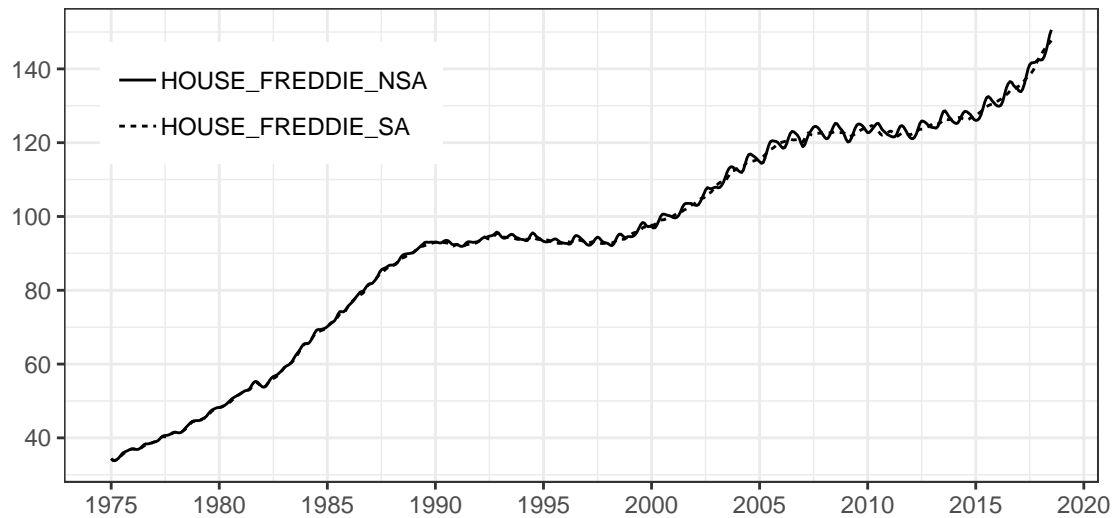
Set Fred Key here:

Downloading
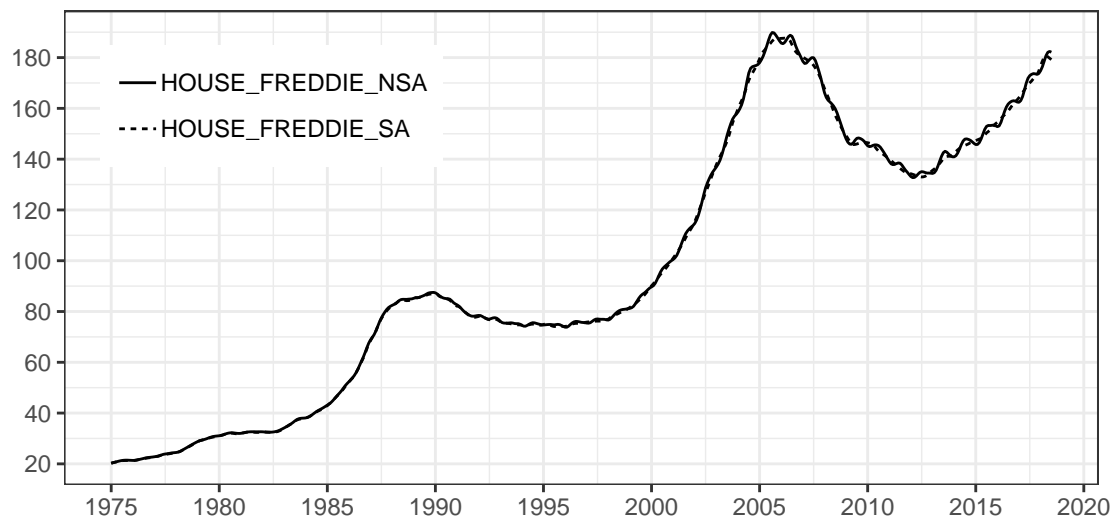
```
load("freddie.mac.msa.RData")
```

Plot

Rochester, New York

```
freddie.mac.msa %>%
  filter(cbsa.name == "Rochester NY") %>%
  ggplot(aes(x = date, y = value, linetype = variable)) +
  geom_line() + theme_bw() + xlab("") + ylab("") +
  theme(legend.title = element_blank(),
        legend.position = c(0.2, 0.8)) +
  scale_x_continuous(breaks = seq(1920, 2025, 5)) +
  scale_y_continuous(breaks = seq(20, 200, 20))
```
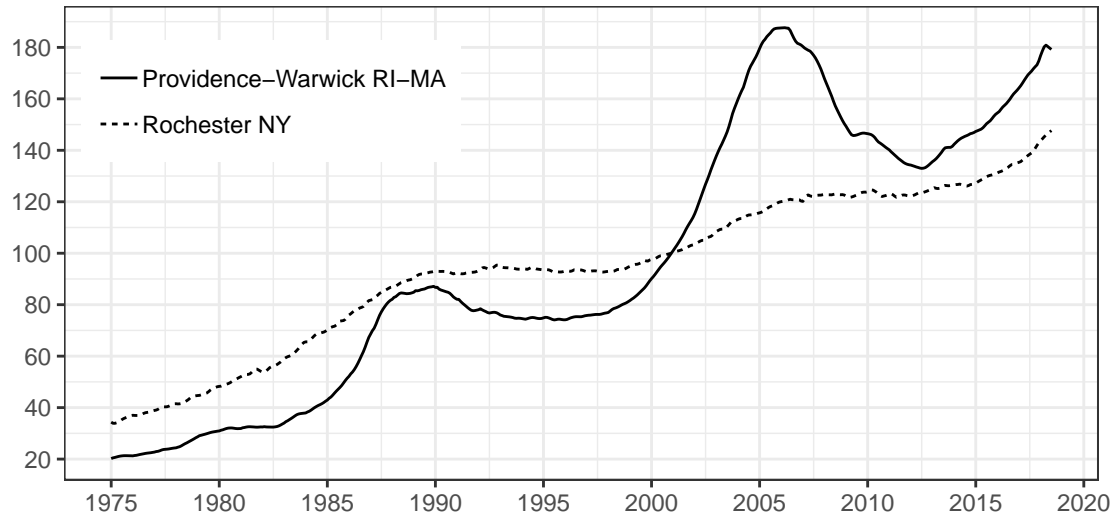
Providence-Warwick RI-MA

```
freddie.mac.msa %>%
  filter(cbsa.name == "Providence-Warwick RI-MA") %>%
  ggplot(aes(x = date, y = value, linetype = variable)) +
  geom_line() + theme_bw() + xlab("") + ylab("") +
  theme(legend.title = element_blank(),
        legend.position = c(0.2, 0.8)) +
  scale_x_continuous(breaks = seq(1920, 2025, 5)) +
  scale_y_continuous(breaks = seq(20, 200, 20))
```
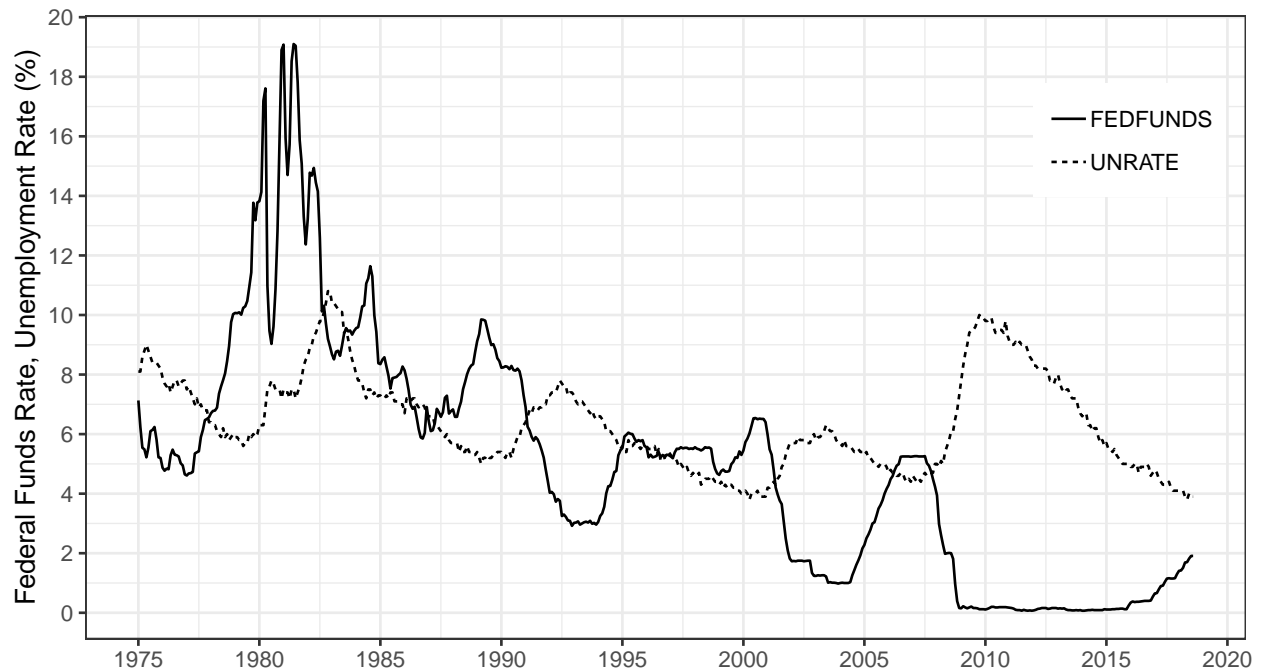

Compare Rochester and Providence

```
freddie.mac.msa %>%
  filter(cbsa.name %in% c("Providence-Warwick RI-MA", "Rochester NY"),
         variable == "HOUSE_FREDDIE_SA") %>%
  ggplot(aes(x = date, y = value, linetype = cbsa.name)) +
```

```
geom_line() + theme_bw() + xlab("") + ylab("") +
theme(legend.title = element_blank(),
      legend.position = c(0.2, 0.8)) +
scale_x_continuous(breaks = seq(1920, 2025, 5)) +
scale_y_continuous(breaks = seq(20, 200, 20))
```


Interest Rates and House Prices

```
map_dfr(c("UNRATE", "FEDFUNDS"), fredr) %>%
  mutate(date = year(date) + (month(date)-1)/12) %>%
  filter(date >= 1975) %>%
  ggplot(aes(x = date, y = value, linetype = series_id)) +
  geom_line() + theme_bw() +
  theme(legend.title = element_blank(),
        legend.position = c(0.9, 0.8)) +
  xlab("") + ylab("Federal Funds Rate, Unemployment Rate (%)") +
  scale_x_continuous(breaks = seq(1920, 2025, 5)) +
  scale_y_continuous(breaks = seq(0, 20, 2))
```

Computing Environment

```
Sys.time()
```

```
## [1] "2018-09-30 09:38:58 PDT"
```

```
sessionInfo()
```

```
## R version 3.5.1 (2018-07-02)
## Platform: x86_64-apple-darwin15.6.0 (64-bit)
## Running under: macOS High Sierra 10.13.6
##
## Matrix products: default
## BLAS: /Library/Frameworks/R.framework/Versions/3.5/Resources/lib/libRblas.0.dylib
## LAPACK: /Library/Frameworks/R.framework/Versions/3.5/Resources/lib/libRlapack.dylib
##
## locale:
## [1] en_US.UTF-8/en_US.UTF-8/en_US.UTF-8/C/en_US.UTF-8/en_US.UTF-8
##
## attached base packages:
## [1] stats     graphics  grDevices utils     datasets  methods   base
##
## other attached packages:
##  [1] bindrcpp_0.2.2  lubridate_1.7.4 fredr_1.0.0     forcats_0.3.0
##  [5] stringr_1.3.1   dplyr_0.7.6     purrr_0.2.5     readr_1.1.1
##  [9] tidyr_0.8.1     tibble_1.4.2    ggplot2_3.0.0   tidyverse_1.2.1
##
## loaded via a namespace (and not attached):
##  [1] Rcpp_0.12.18      cellranger_1.1.0 pillar_1.3.0     compiler_3.5.1
##  [5] plyr_1.8.4        bindr_0.1.1      tools_3.5.1      digest_0.6.15
##  [9] jsonlite_1.5      evaluate_0.11    nlme_3.1-137     gtable_0.2.0
```

```
## [13] lattice_0.20-35  pkgconfig_2.0.2  rlang_0.2.2      cli_1.0.0
## [17] rstudioapi_0.7   curl_3.2         yaml_2.2.0       haven_1.1.2
## [21] withr_2.1.2      xml2_1.2.0       httr_1.3.1       knitr_1.20
## [25] hms_0.4.2        rprojroot_1.3-2  grid_3.5.1       tidyselect_0.2.4
## [29] glue_1.3.0       R6_2.2.2         readxl_1.1.0     rmarkdown_1.10
## [33] modelr_0.1.2     magrittr_1.5     backports_1.1.2  scales_1.0.0
## [37] htmltools_0.3.6  rvest_0.3.2      assertthat_0.2.0 colorspace_1.3-2
## [41] stringi_1.2.4    lazyeval_0.2.1   munsell_0.5.0    broom_0.5.0
## [45] crayon_1.3.4
```