

Freddie - Example

Datasets

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Preamble

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

Set Fred Key here:

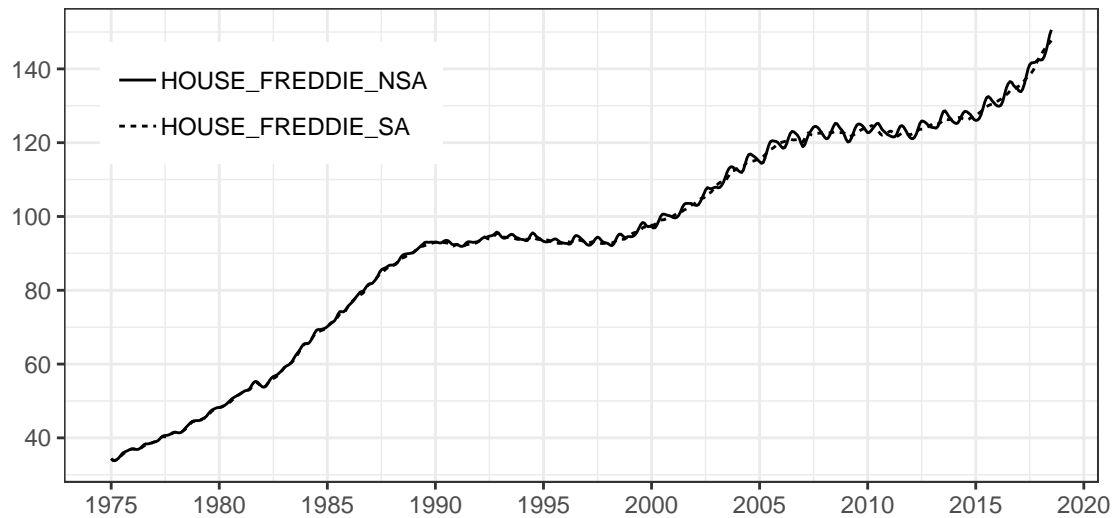
Loading

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

Plot

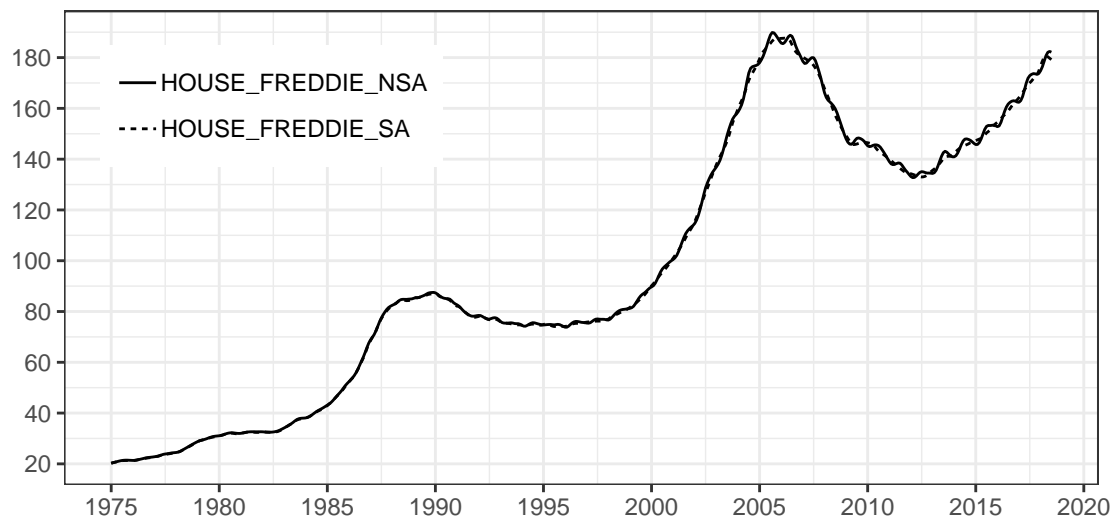
Rochester, New York

```
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

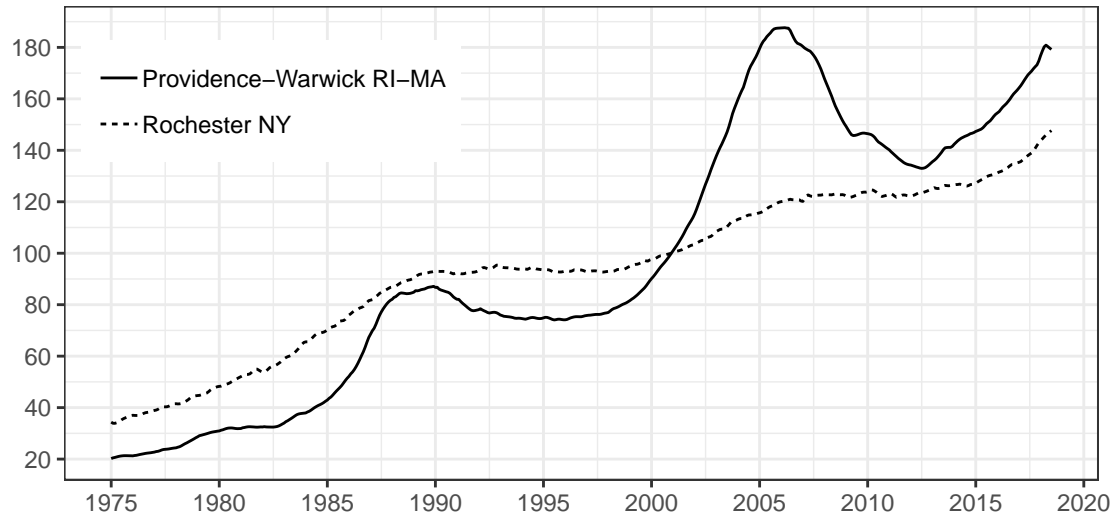
```
freddie.mac.msa %>%
  filter(cbsa.name == "Providence-Warwick RI-MA") %>%
  ggplot(aes(x = date, y = value, linetype = variable)) +
  geom_line() + theme_bw() + xlab("") + ylab("") +
  theme(legend.title = element_blank(),
        legend.position = c(0.2, 0.8)) +
  scale_x_continuous(breaks = seq(1920,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



Compare Rochester and Providence

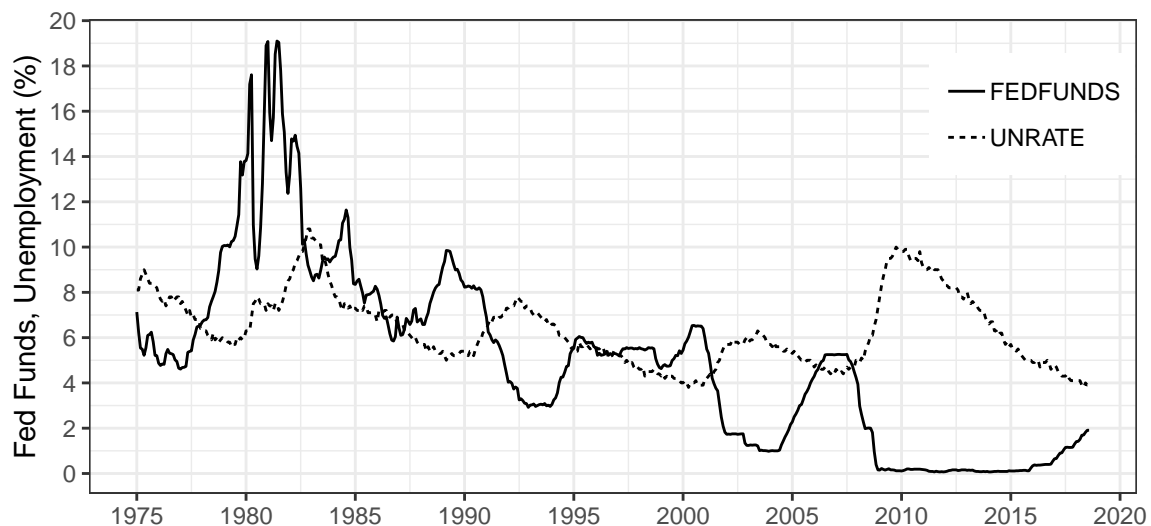
```
freddie.mac.msa %>%
  filter(cbsa.name %in% c("Providence-Warwick RI-MA", "Rochester NY"),
         variable == "HOUSE_FREDDIE_SA") %>%
  ggplot(aes(x = date, y = value, linetype = cbsa.name)) +
```

```
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("Fed Funds, Unemployment (%)") +
scale_x_continuous(breaks = seq(1920, 2025, 5)) +
scale_y_continuous(breaks = seq(0, 20, 2))
```



Computing Environment

```
Sys.time()
```

```
## [1] "2018-09-30 09:47:07 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
```