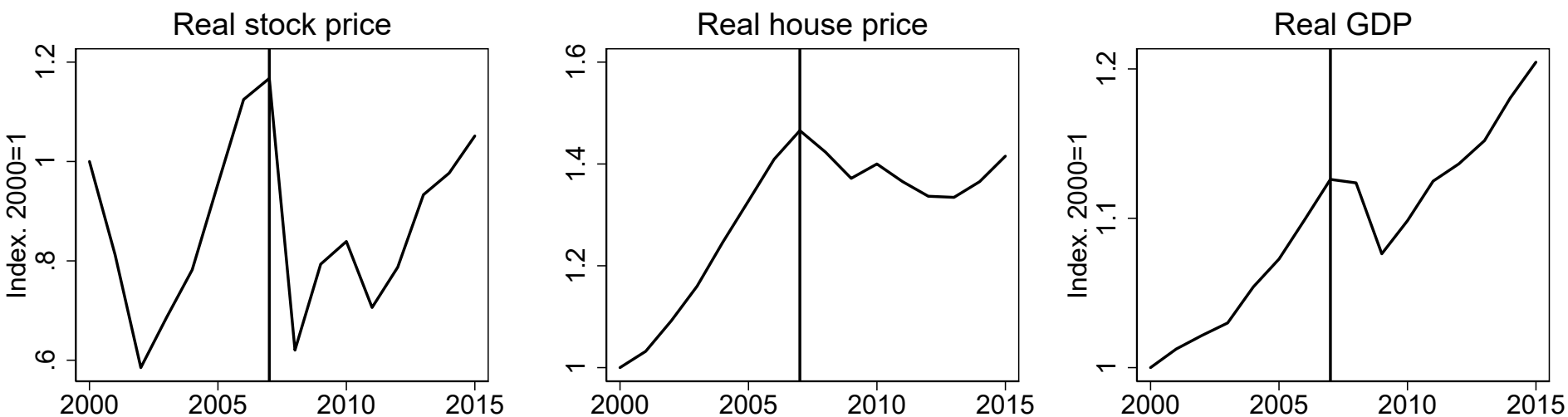
Homework for next class

- Download the asset returns data from macrohistory.net/data
- Load it into R
- Create this figure for 1 crisis (your choice) which happened before 2000:



Homework – Specifics 1

Raw ingredients:

- Nominal capital gains: eq_capgain, housing_capgain
- Inflation: $\pi_t = (\text{cpi}_t - \text{cpi}_{t-1})/\text{cpi}_{t-1}$
- GDP: $\text{gdp}_\text{g}\text{rowth}_t = (\text{rgdpmad}_t - \text{rgdpmad}_{t-1})/\text{rgdpmad}_{t-1}$
- Banking crises: crisisJST $= 1$

Calculations:

- Real capital gain: $\text{cg}_{t,\text{real}} = \dfrac{1 + \text{cg}_{t,\text{nominal}}}{1 + \pi_t} - 1$
- Index = 1 at 5 years before the crisis $(t - 5)$
- For $t \in \{t - 4, t + 5\}$, $\text{index}_t = \text{index}_{t-1} * (1 + \text{cg}_{t,\text{real}})$
- Ditto for the GDP index (use GDP growth)

Homework – Specifics 2

Graph:

- Real equity index, real housing index, and real GDP index during the 10-year window around the crisis ($t-5$ to $t+5$)
- You can put the two lines in one graph, create separate graphs, or combine two panels
- Graphs should be in .pdf format
- Try to make the graphs look nice, but they do not need to look exactly like my graph
- You can use another data source / another country if you like

Homework – Submission

- You can post questions on Google Classroom or discuss among yourselves
- We will discuss any issues briefly at the start of next lecture (Wednesday)
- Deadline: submit via Google Classroom by **15:00 on 15 April**