INTERMEDIATE MACROECONOMICS

IS-LM MODEL OF BUSINESS CYCLES

12. RECESSIONS

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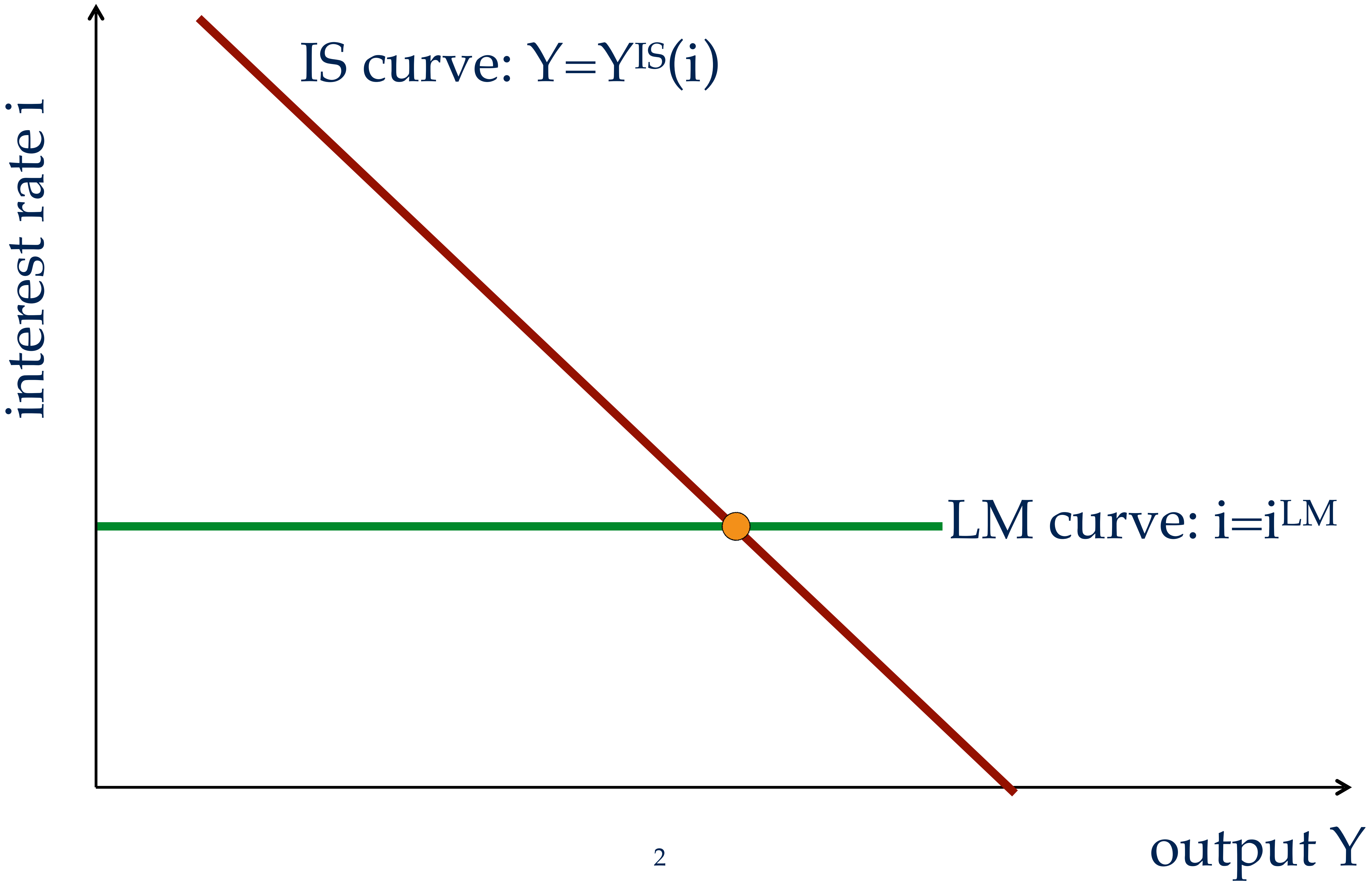
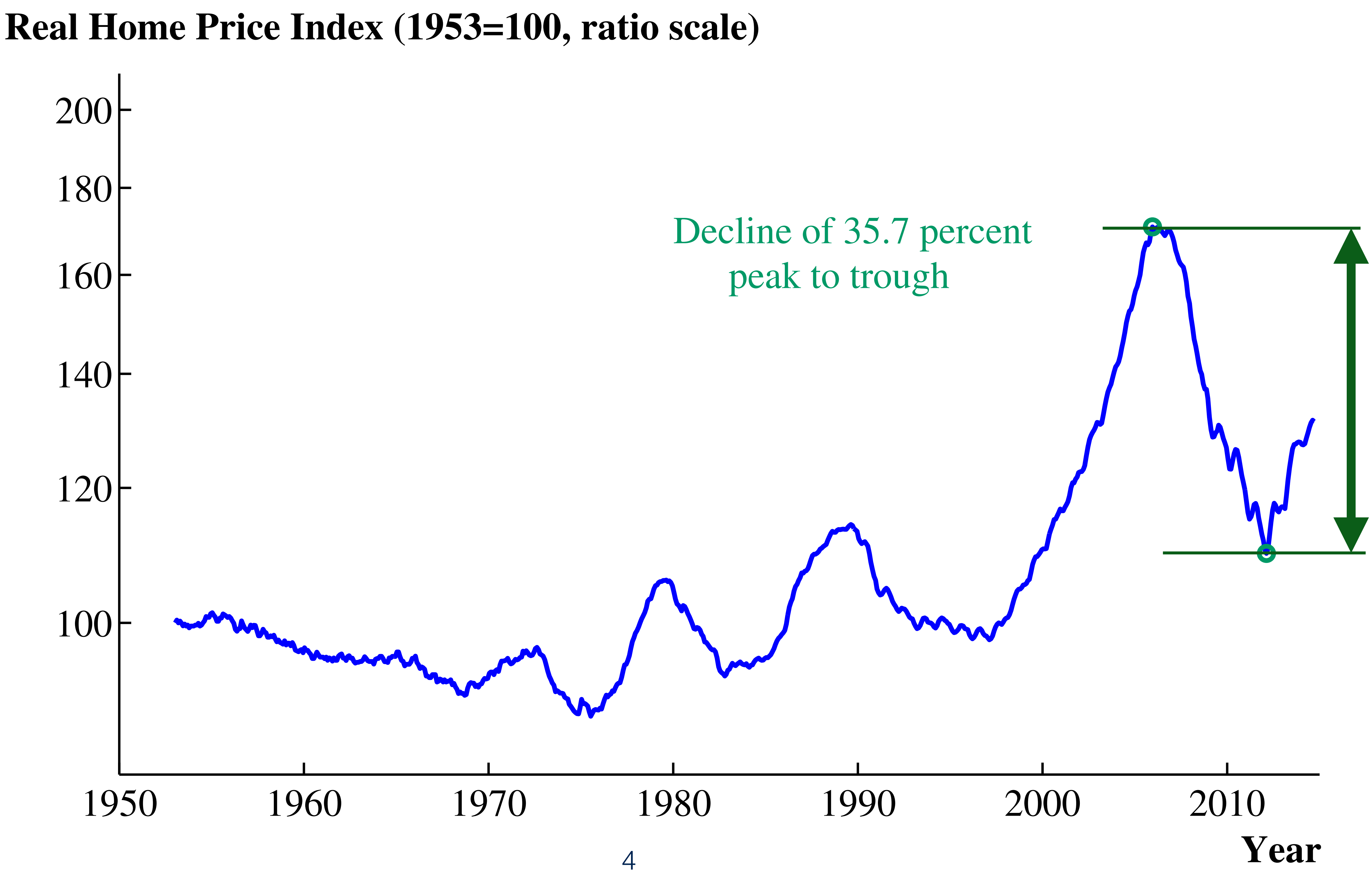
IS-LM EQUILIBRIUM DIAGRAM



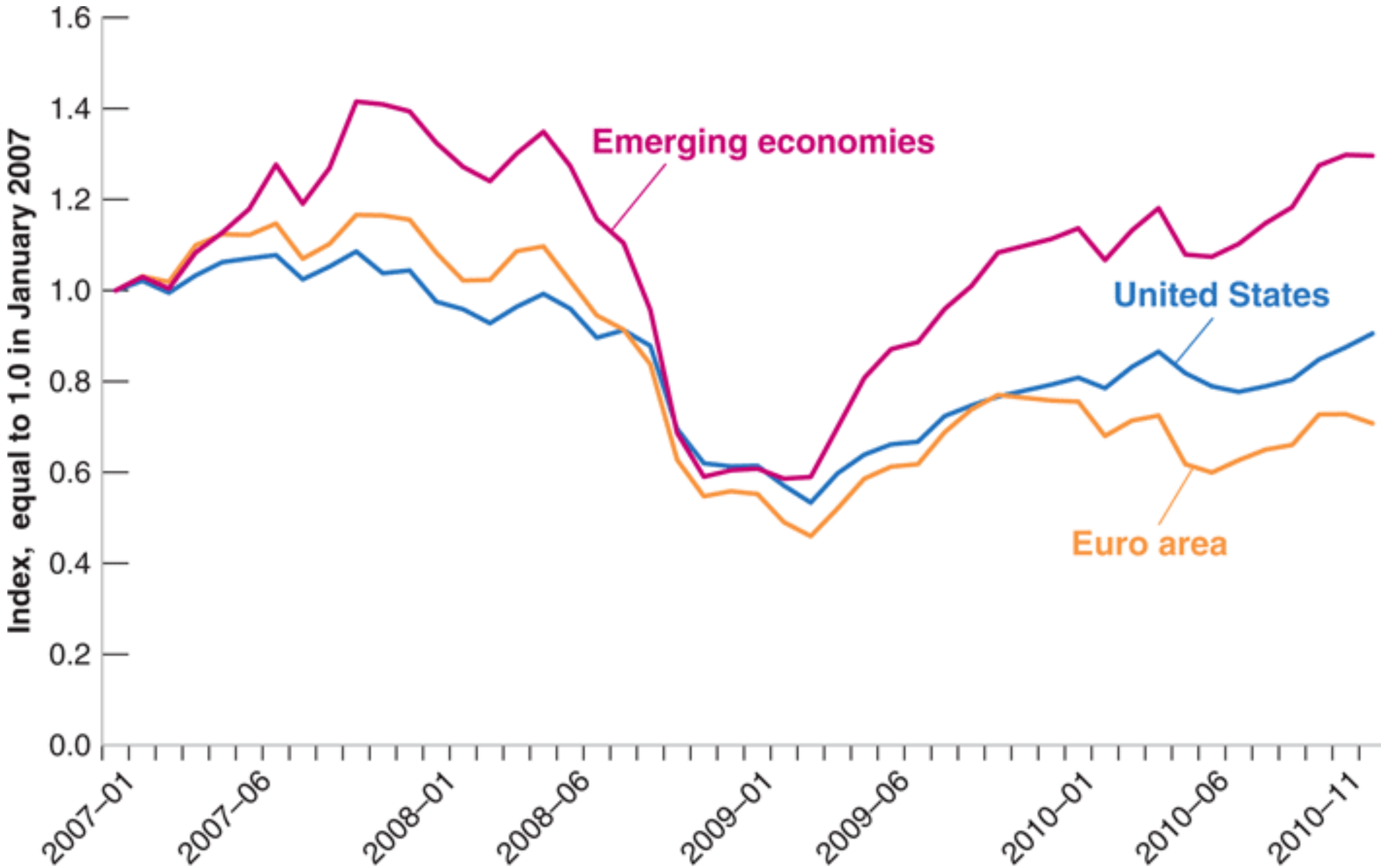
THE GREAT RECESSION, 2007–2009

- 2001–2007: the world economy had a sustained expansion
- US housing prices started declining in 2007, leading to a financial crisis and a major economic crisis: US unemployment rate increased from 4.4% in 2007 to 9.9% in 2009
- through trade & finance, US crisis became a world crisis
- one possible (partial) explanation for the recession
  - house and stock prices collapsed in 2007–2008
  - people lost confidence and cut consumption
  - and people's wealth collapsed so they cut consumption
  - the drop in willingness to consume = negative AD shock —> recession

SOURCE OF GREAT RECESSION: HOUSING?



STOCK PRICES DURING THE GREAT RECESSION



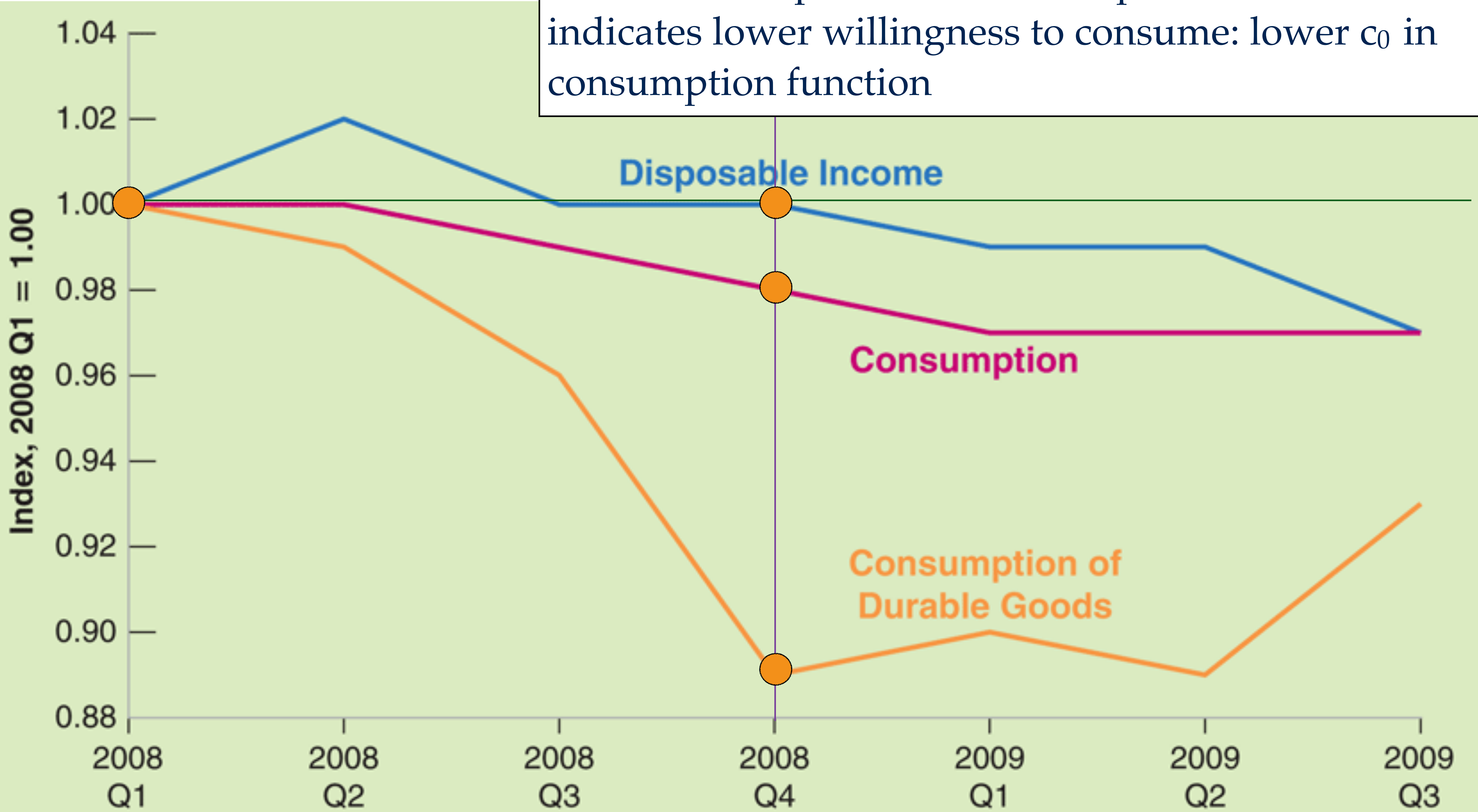
GOOGLE SEARCH FOR “GREAT DEPRESSION” DURING GREAT RECESSION

- bankruptcy of Lehman Brothers in 09/2008
- fear of a new Great Depression spread rapidly

Source: Google Trends, “Great Depression.”

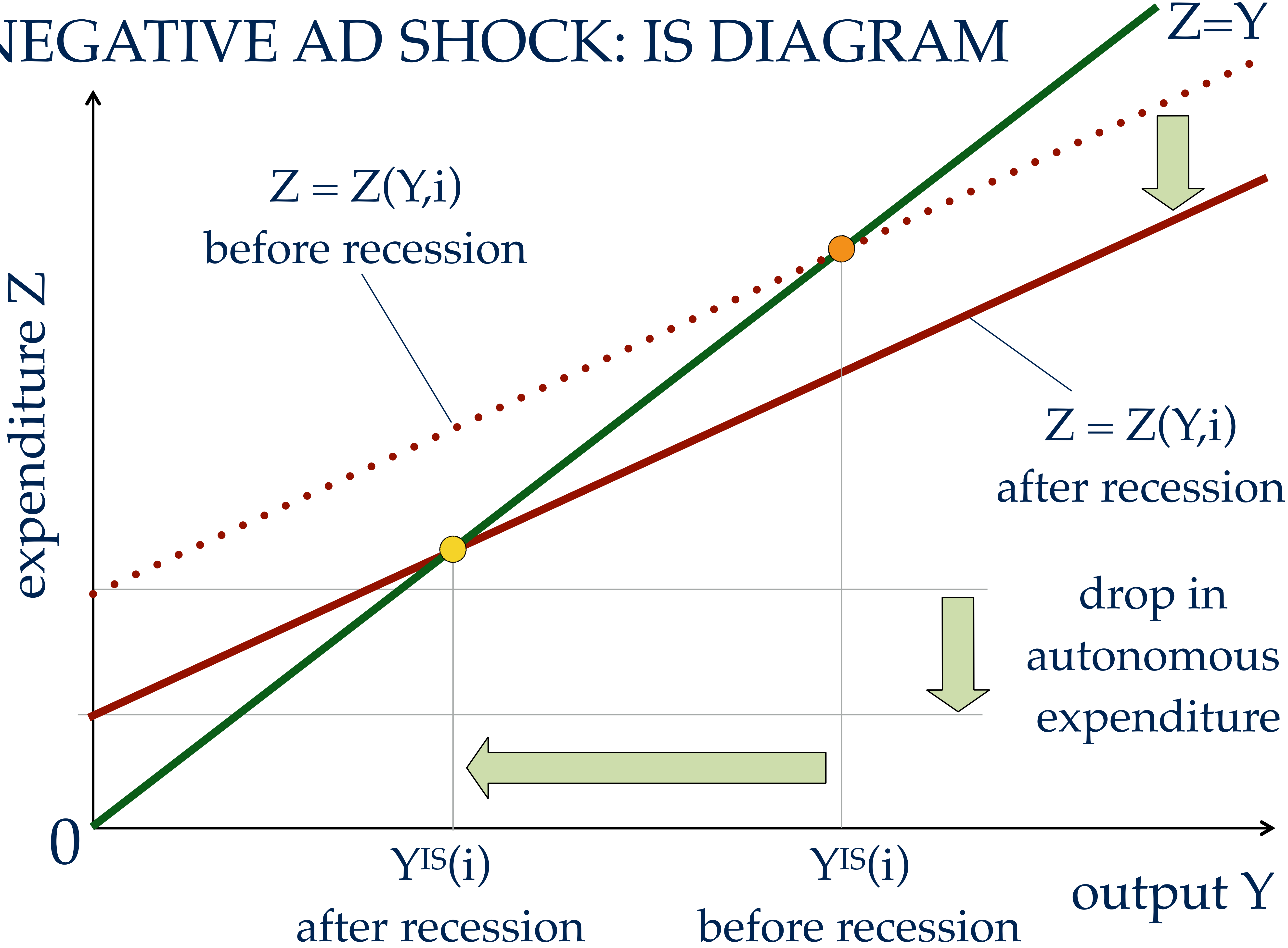
DECLINE IN WILLINGNESS TO CONSUME

lower consumption but same disposable income indicates lower willingness to consume: lower c_0 in consumption function

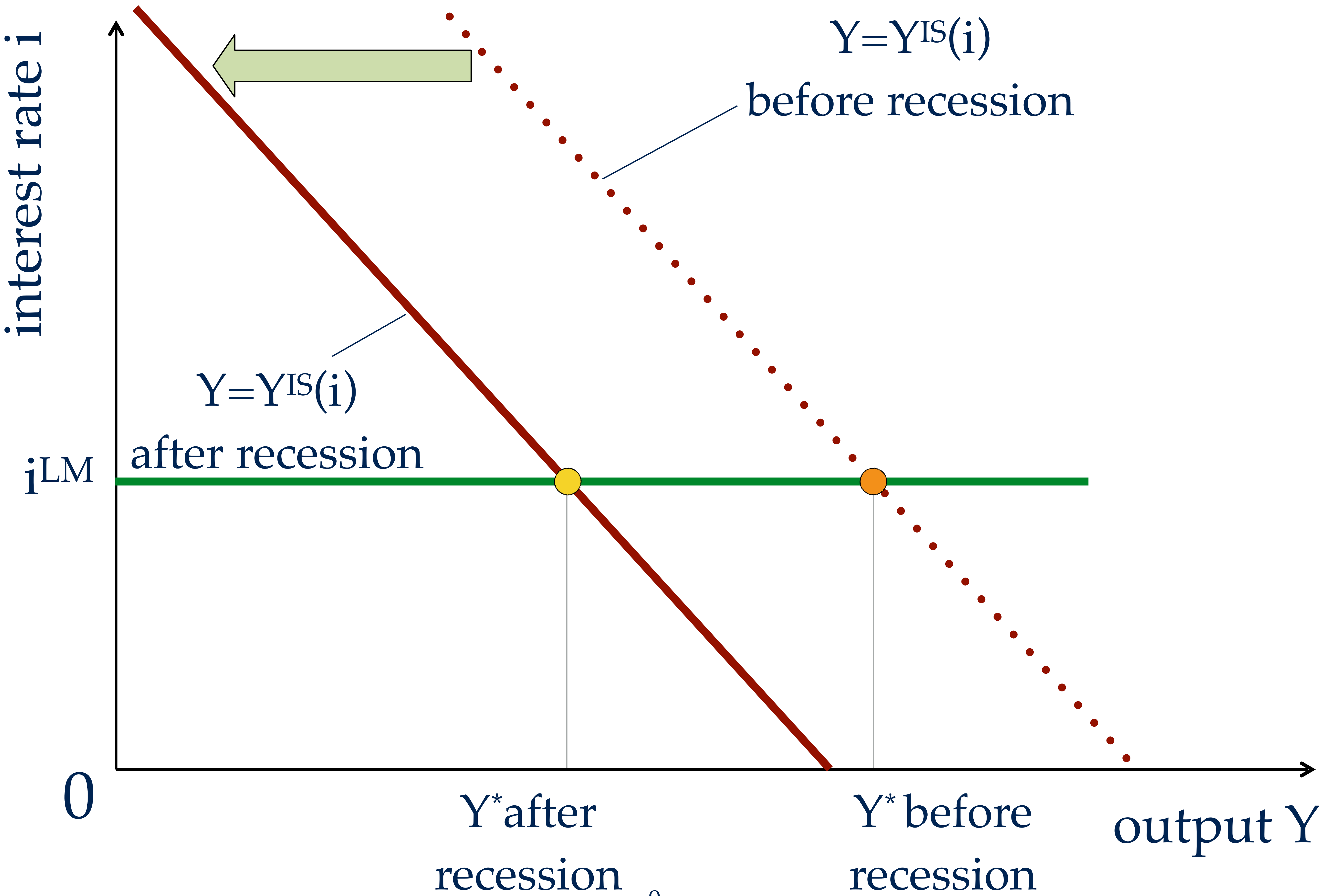


Source: Calculated using series DPIC96, PCECC96, PCDGCC96: Federal Reserve Economic Data (FRED) http://research.stlouisfed.org/fred2/

NEGATIVE AD SHOCK: IS DIAGRAM



NEGATIVE AD SHOCK: IS-LM DIAGRAM



MANIFESTATION OF THE PARADOX OF THRIFT

- at the onset of Great Recession, consumers decided to save more, so c_0 decreased
  - private saving is $S = -c_0 + (1 - c_1) \times D$
- autonomous expenditure decreased
- so equilibrium income in IS submodel decreased
  - equilibrium income = autonomous expenditure × spending multiplier
- hence, at the onset of Great Recession, the IS curve shifted inward, while the LM curve stayed the same

MANIFESTATION OF THE PARADOX OF THRIFT

- IS-LM equilibrium: same interest rate i^*, but lower GDP Y^*
- hence investment $I^* = I(Y^*, i^*)$ fell
  - the investment function $I(Y,i)$ is increasing in Y but decreasing in i
- in equilibrium: private saving = investment – public saving
  - public saving $= T - G$ remained the same
- so paradoxically, since investment fell, private saving fell!

THE DOT-COM-BUBBLE RECESSION, 2001

- the US stock market boomed in 1995–2000, driven by the increase in the valuation of Internet-based firms (dot-com firms)
- the US stock market crashed in March 2000 and continued to fall until 2002
- this crash triggered a mild recession: US unemployment increased from 3.8% to 5.7% in 2001
- one possible explanation for the recession:
  - stock prices collapsed in 2000–2002
  - people lost confidence and cut consumption
  - and people's wealth collapsed so they cut consumption
  - the drop in willingness to consume = negative AD shock —> recession

DOT-COM BUBBLE: NASDAQ