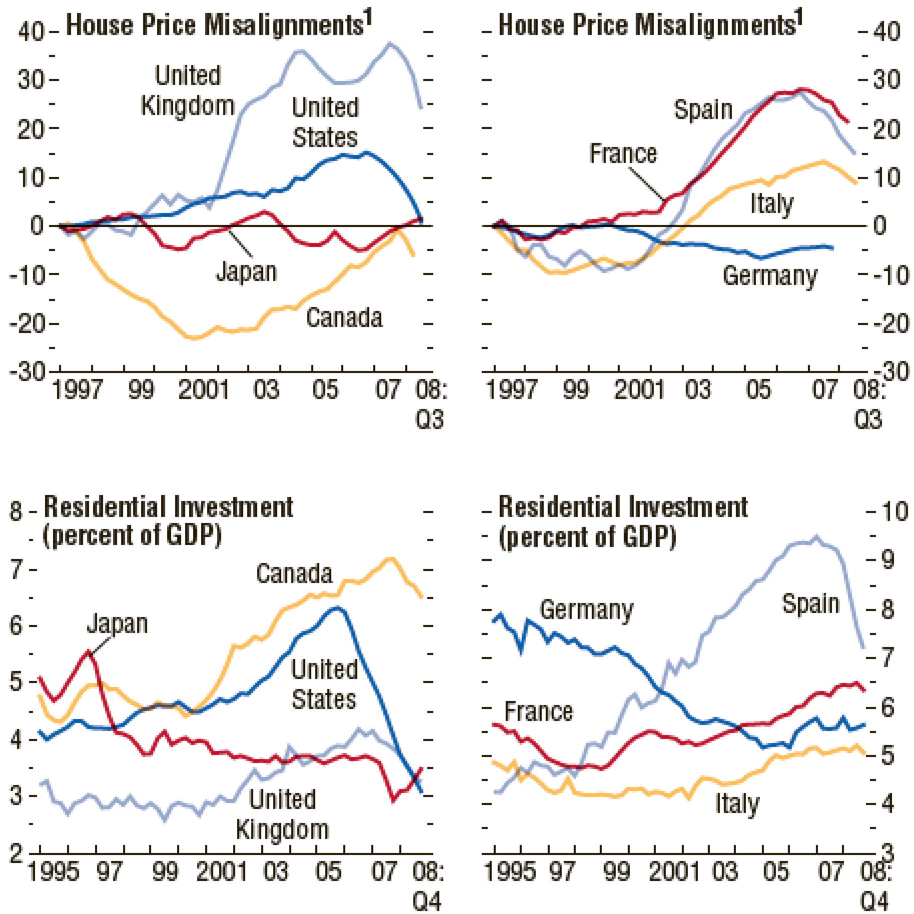
Lecture 2: The eschatology of lost decades

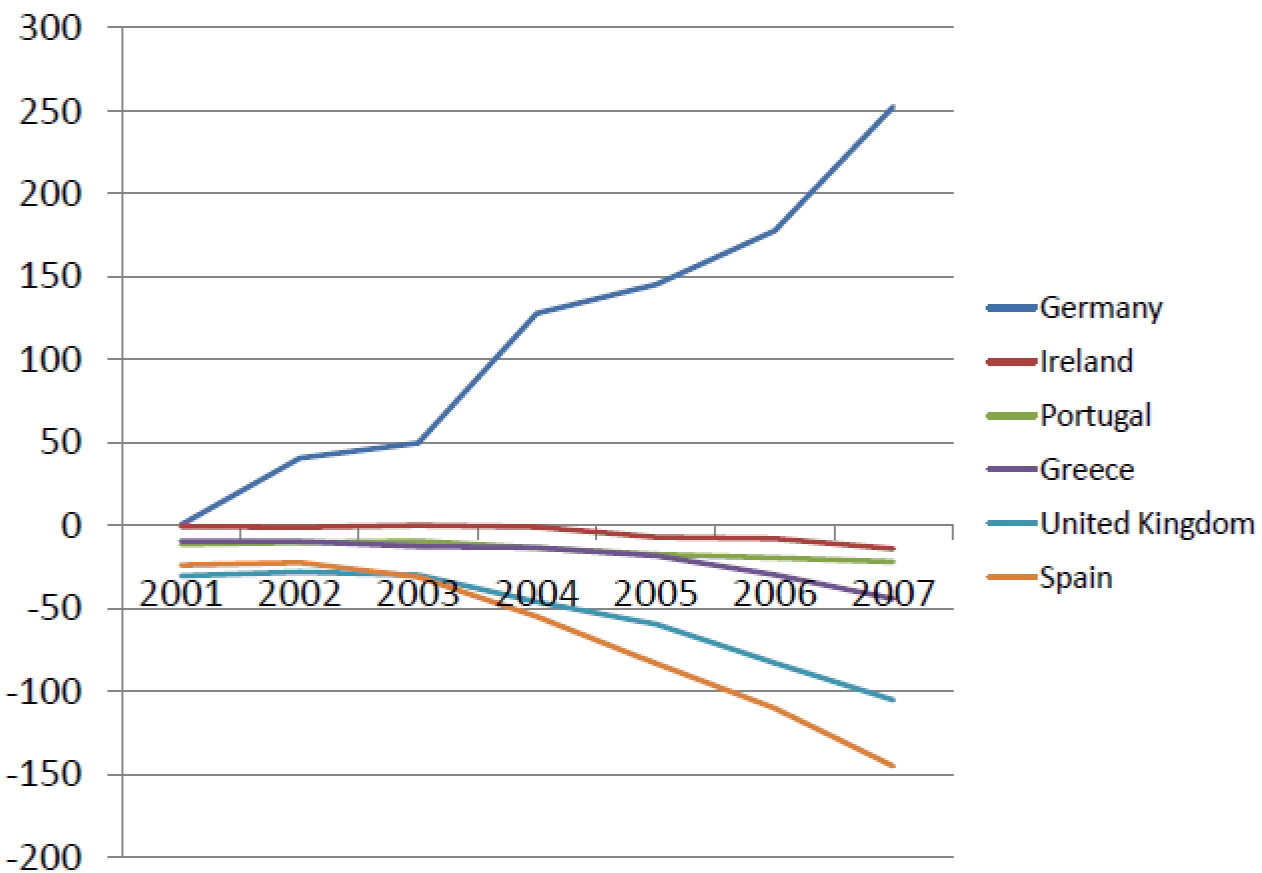
Paul Krugman

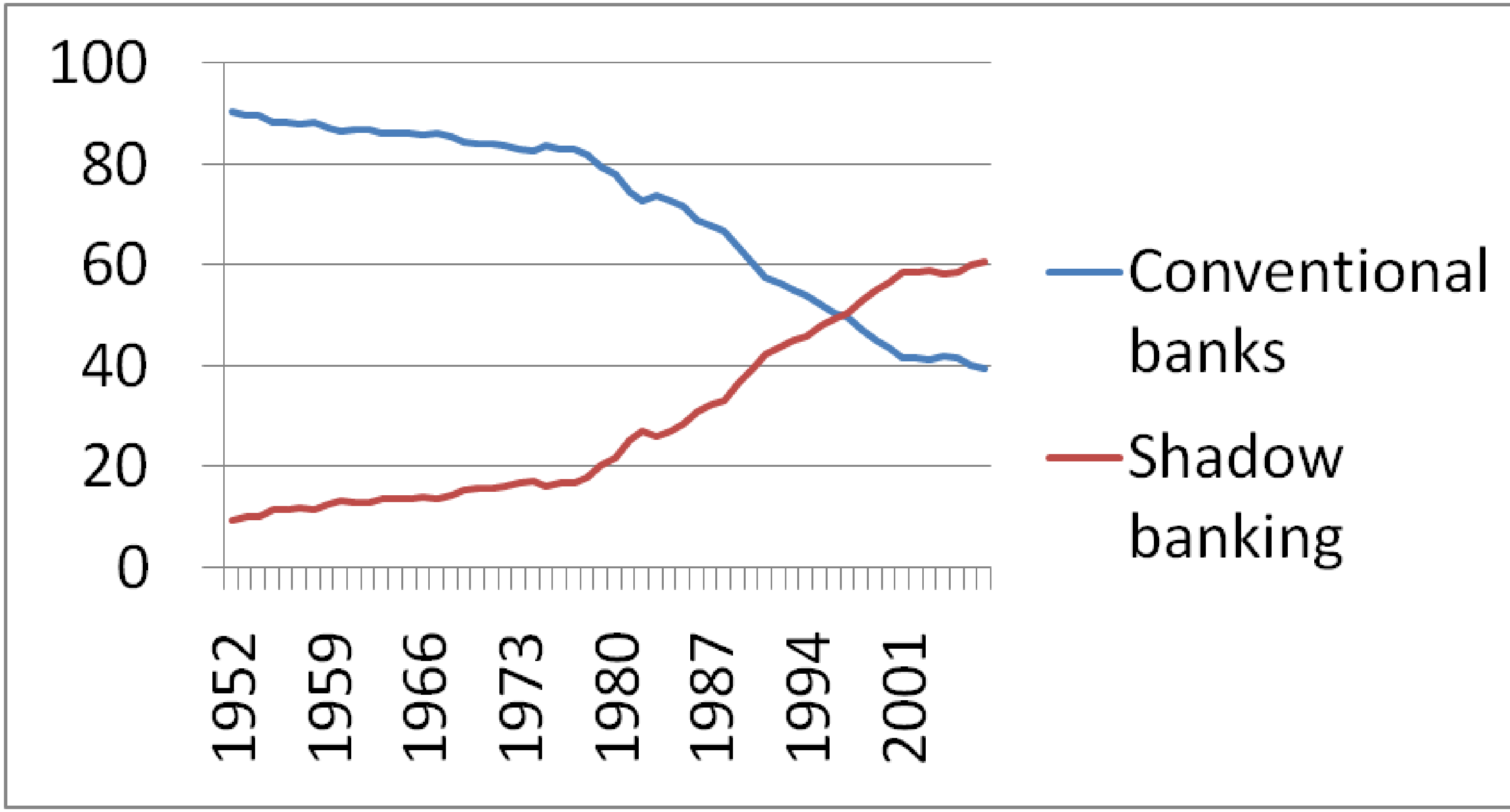

House Price Misalignments[1]
United Kingdom
United States
Japan
Canada
40
30
20
10
0
-10
-20
-30
1997
99
2001
03
05
07
08:
Q3
House Price Misalignments[1]
Spain
France
Italy
Germany
Residential Investment (percent of GDP)
Canada
Japan
United States
United Kingdom
8
7
6
5
4
3
2
1995
97
99
2001
03
05
07
08:
Q4
Residential Investment (percent of GDP)
Germany
Spain
France
Italy
10
9
8
7
6
5
4
3

Growing surpluses

	2000	2007
Developing Asia	38.6	406.5
Newly Industrialized	38.9	103.6
Middle East	71.9	254.1
Japan	119.6	211
Germany	-32.6	250.3
Total	236.4	1225.5

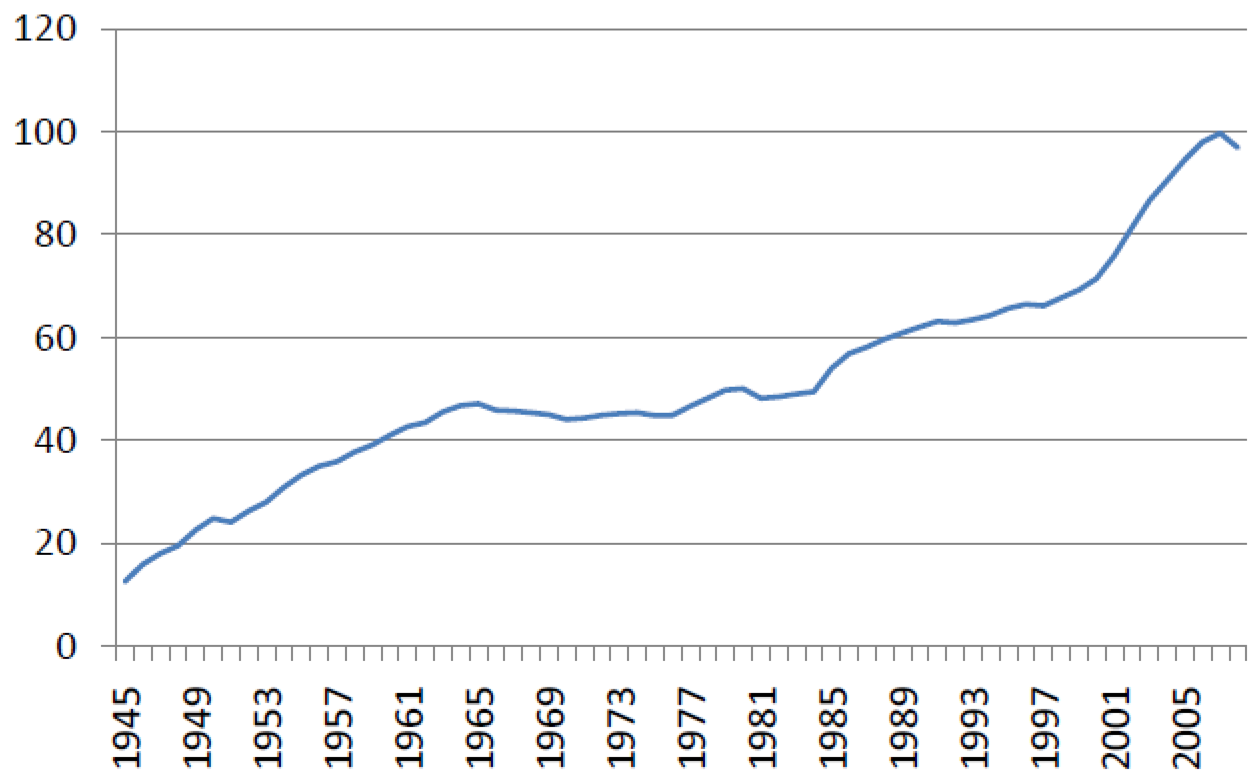
European current accounts ($billion)

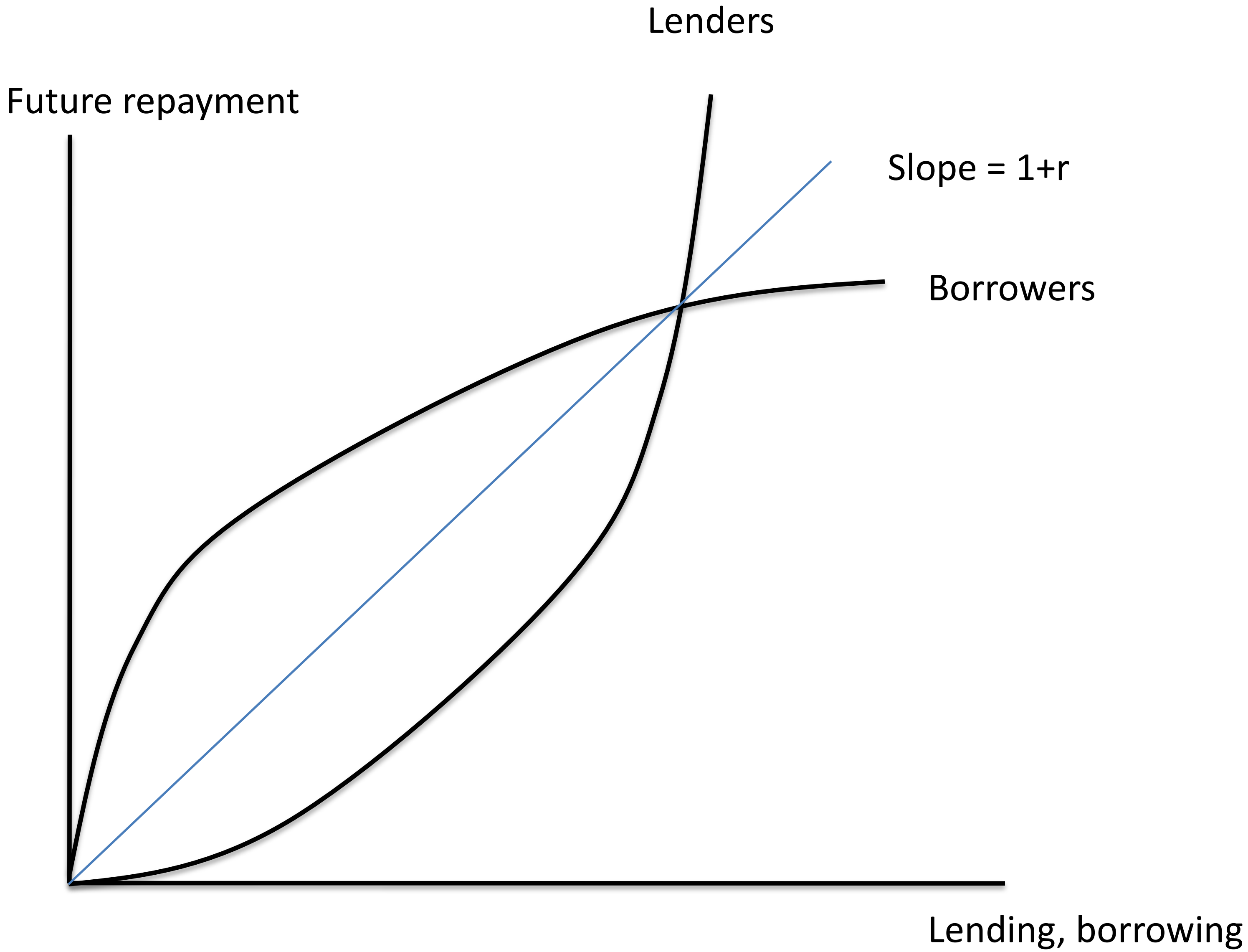




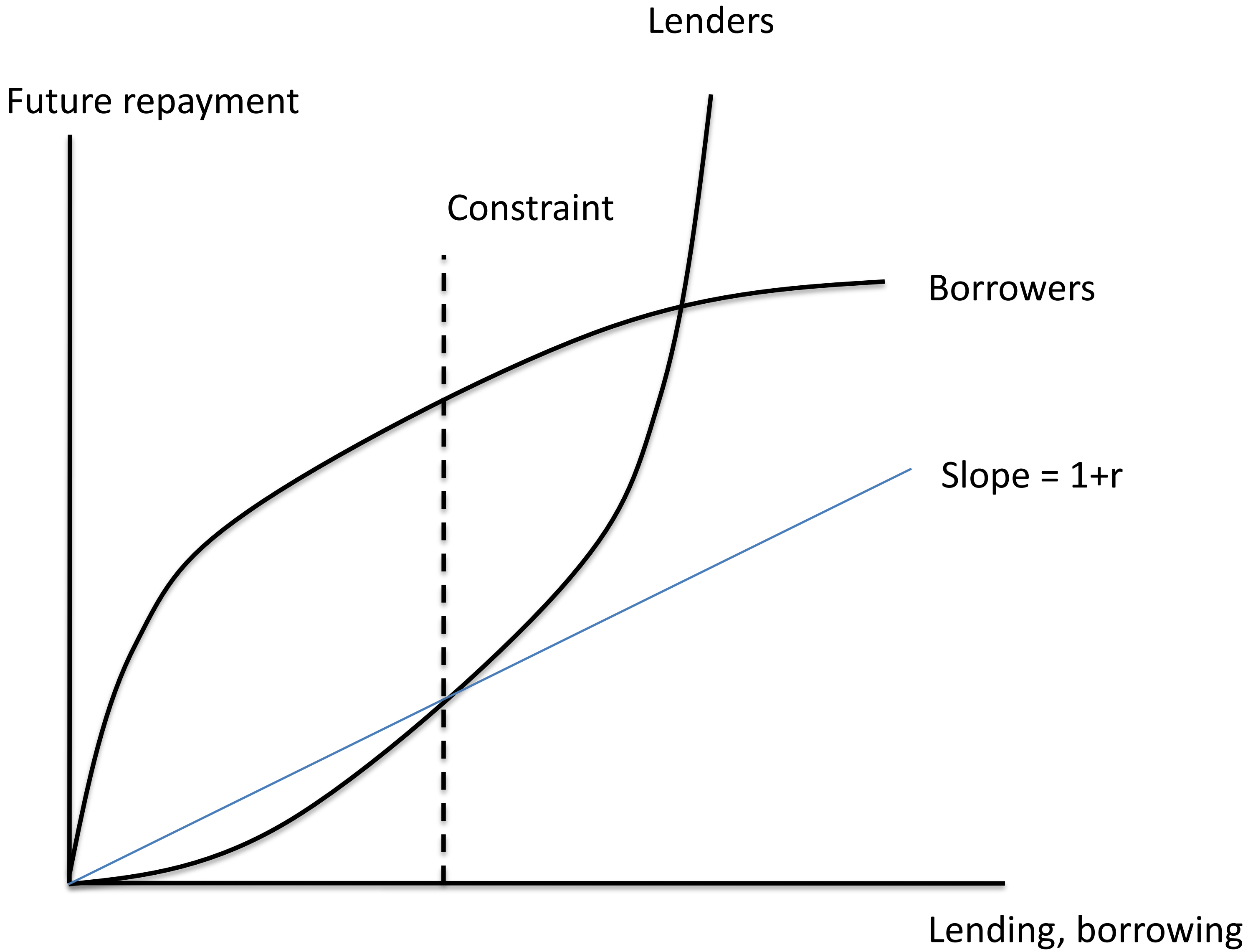
100
80
60
40
20
0
1952
1959
1966
1973
1980
1987
1994
2001
Conventional banks
Shadow banking

Household debt as % of GDP

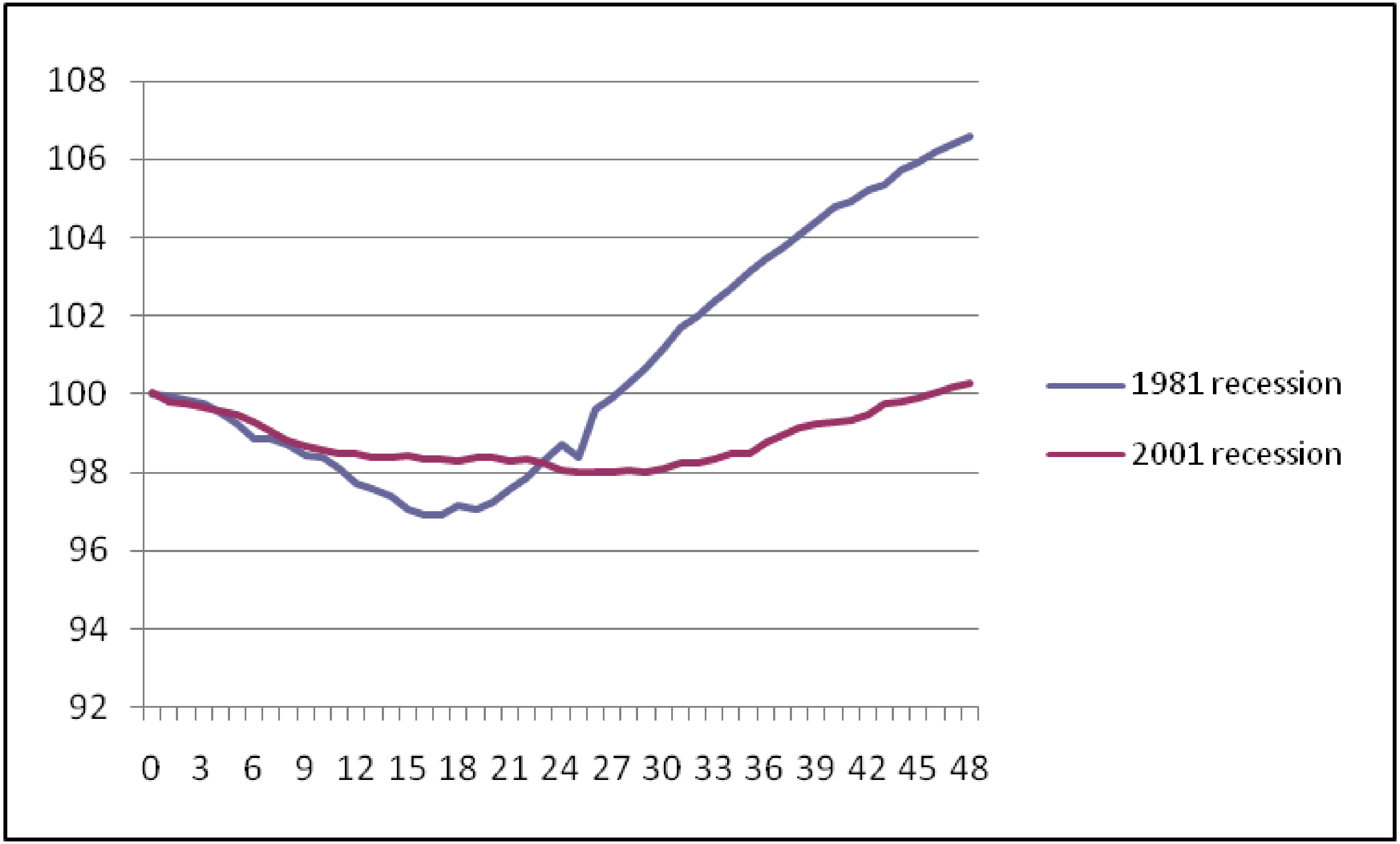


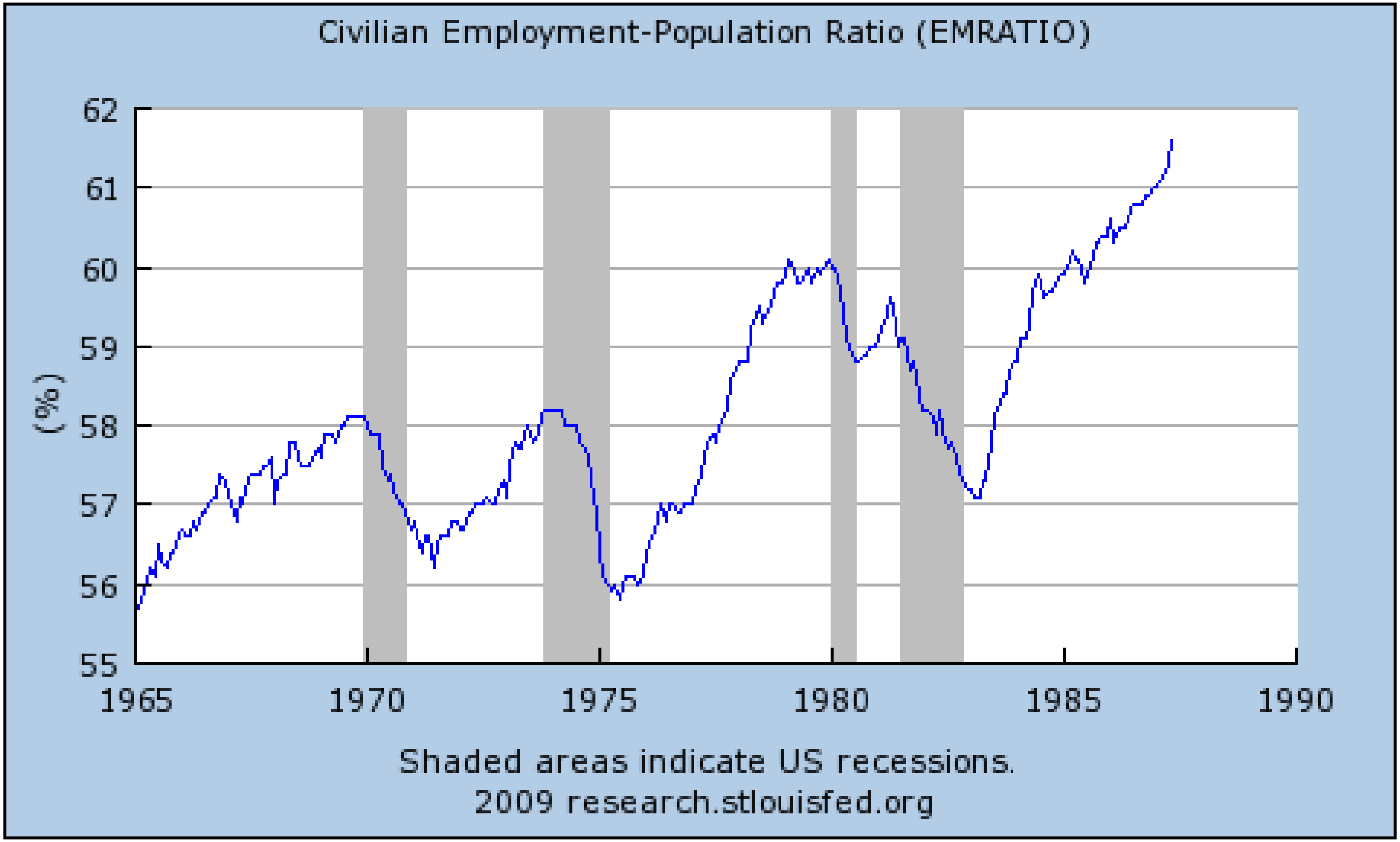


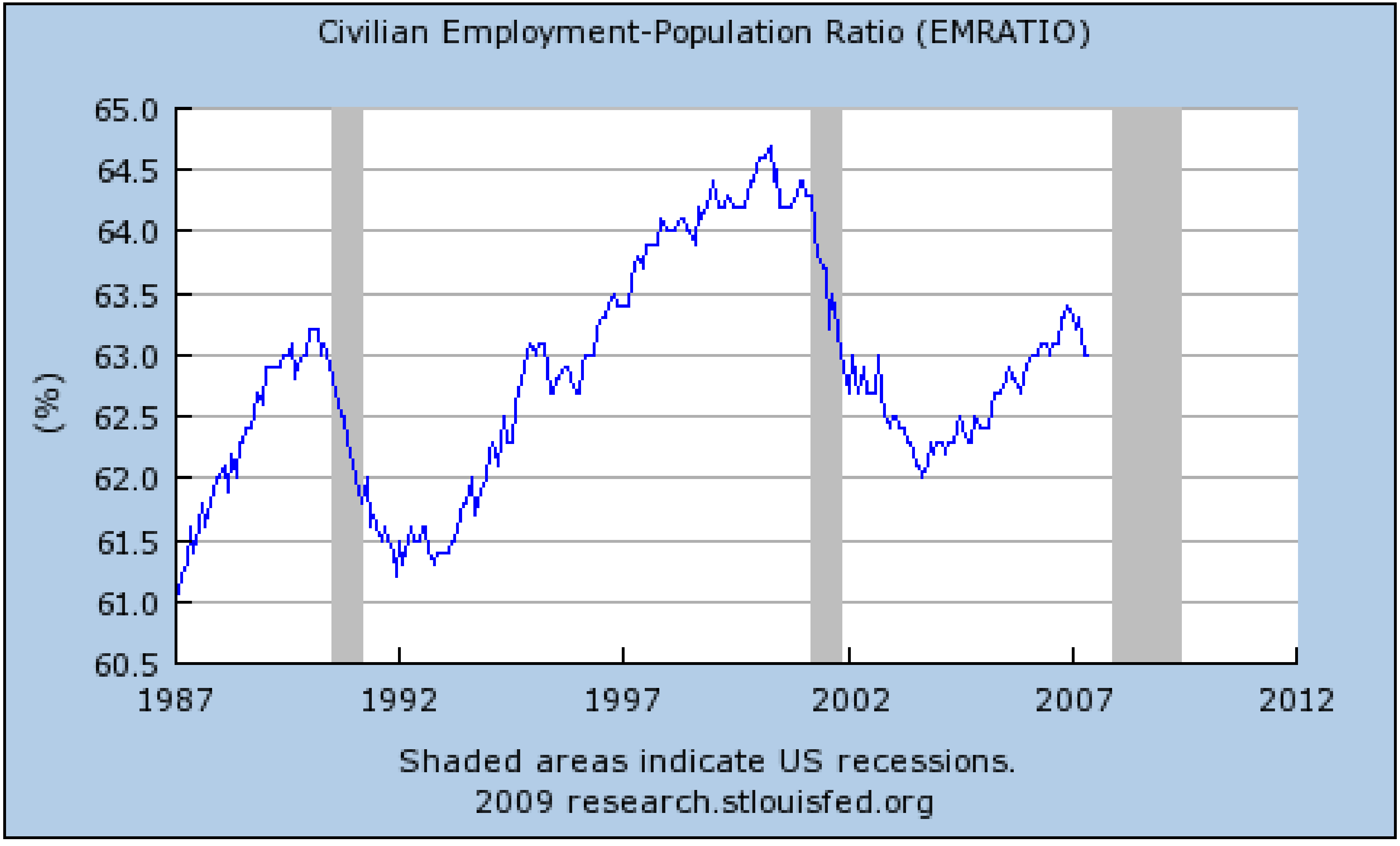
Lenders
Future repayment
Slope = 1+r
Borrowers
Lending, borrowing


Lenders
Future repayment
Constraint
Borrowers
Slope = 1+r
Lending, borrowing

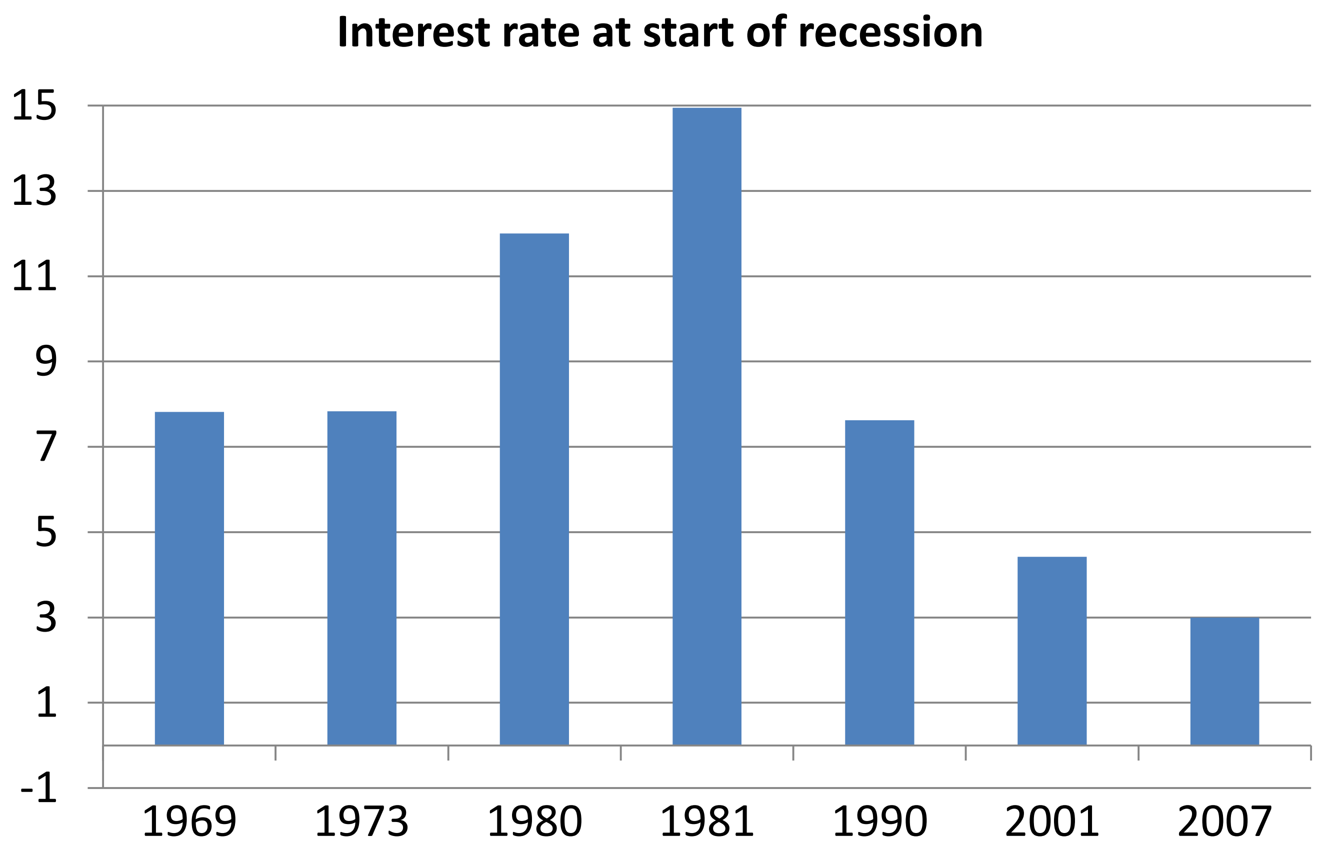
Employment cycles

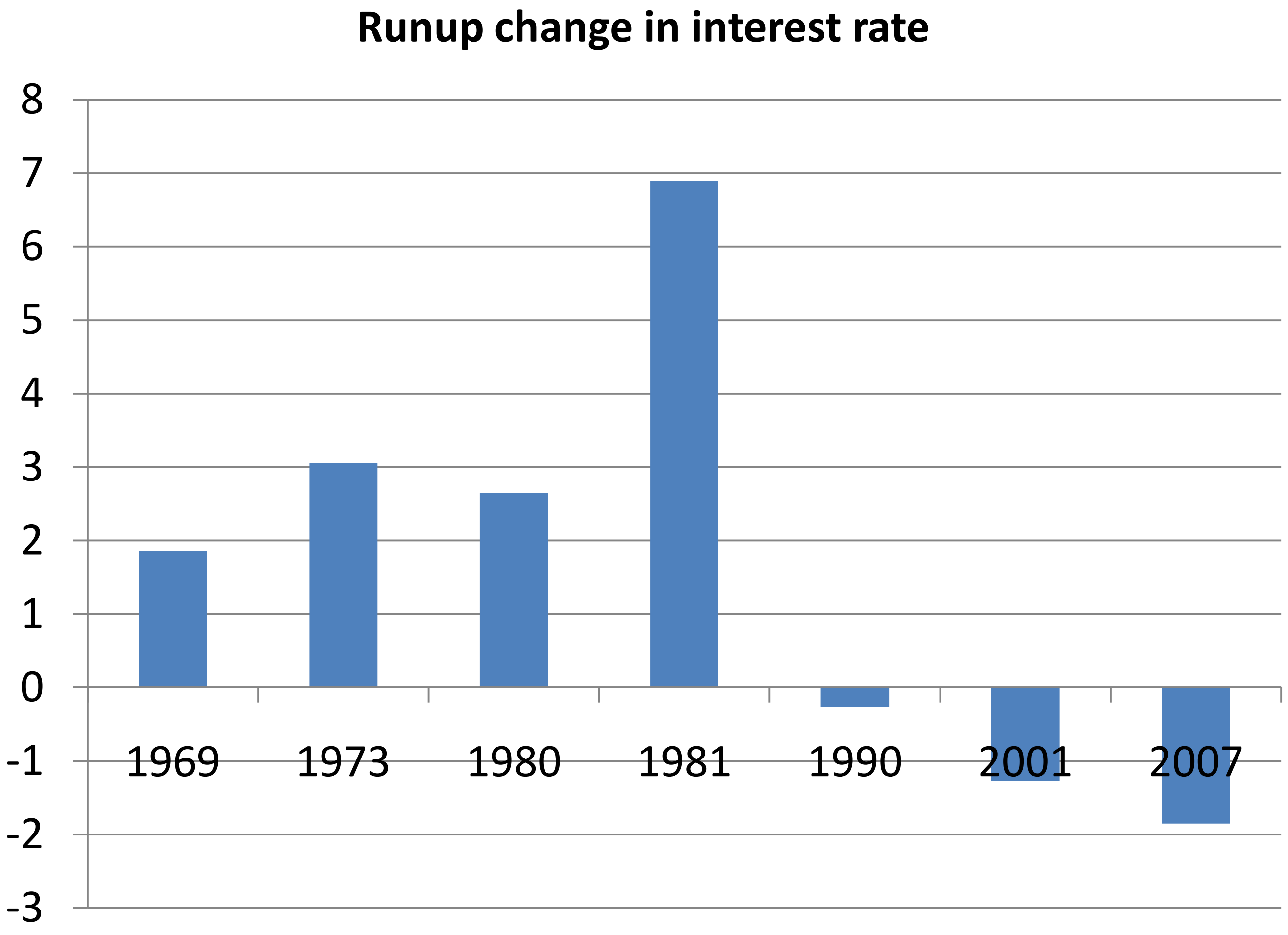


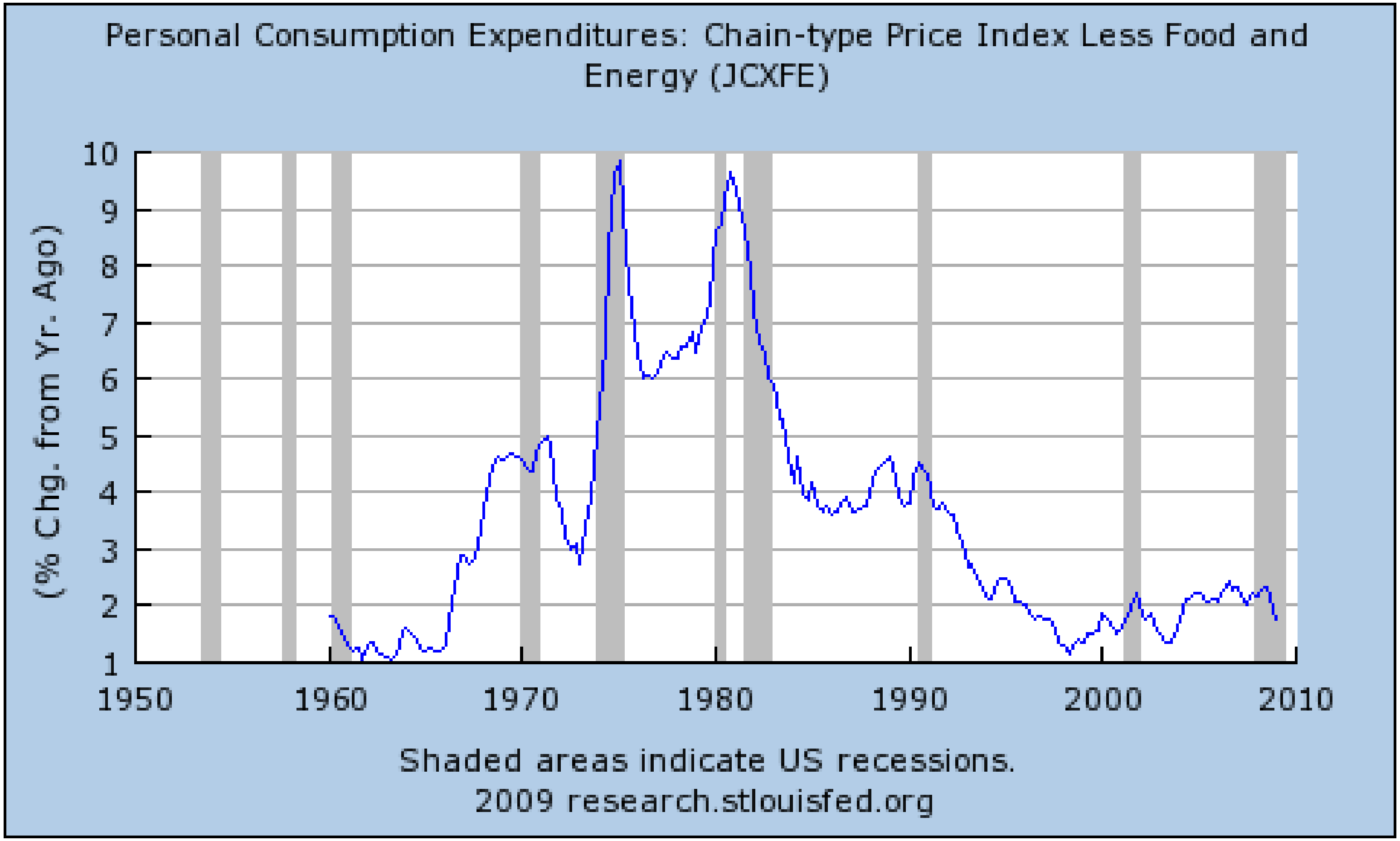

Civilian Employment-Population Ratio (EMRATIO)
(%)
62
61
60
59
58
57
56
55
1965
1970
1975
1980
1985
1990
Shaded areas indicate US recessions.
2009 research.stlouisfed.org



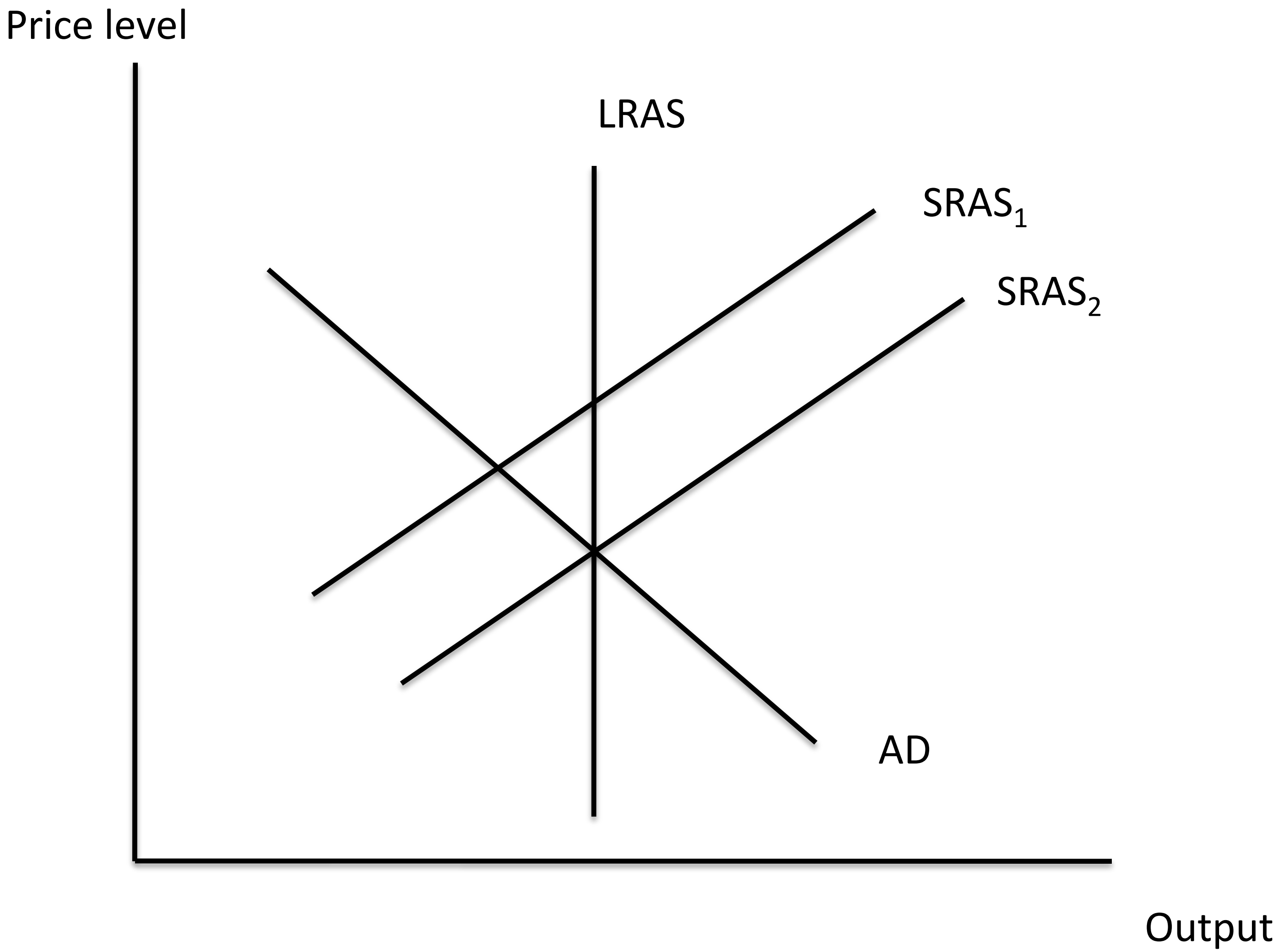
Civilian Employment-Population Ratio (EMRATIO)
(%)
65.0
64.5
64.0
63.5
63.0
62.5
62.0
61.5
61.0
60.5
1987
1992
1997
2002
2007
2012
Shaded areas indicate US recessions.
2009 research.stlouisfed.org


Interest rate at start of recession
15
13
11
9
7
5
3
1
-1
1969
1973
1980
1981
1990
2001
2007

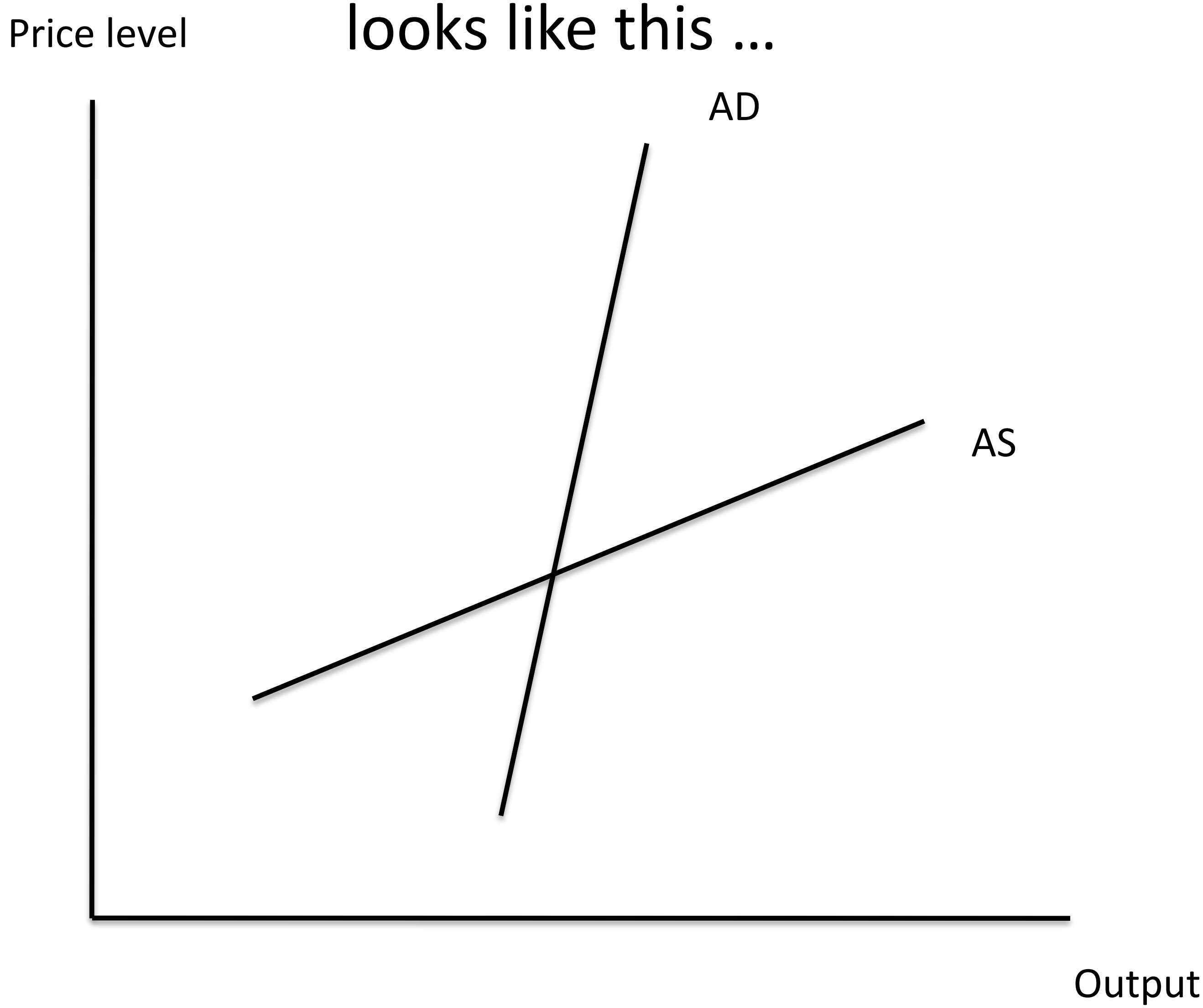

Runup change in interest rate
8
7
6
5
4
3
2
1
0
-1
-2
-3
1969
1973
1980
1981
1990
2001
2007


Personal Consumption Expenditures: Chain-type Price Index Less Food and Energy (JCXFE)
(% Chg. from Yr. Ago)
10
9
8
7
6
5
4
3
2
1
1950
1960
1970
1980
1990
2000
2010
Shaded areas indicate US recessions.
2009 research.stlouisfed.org

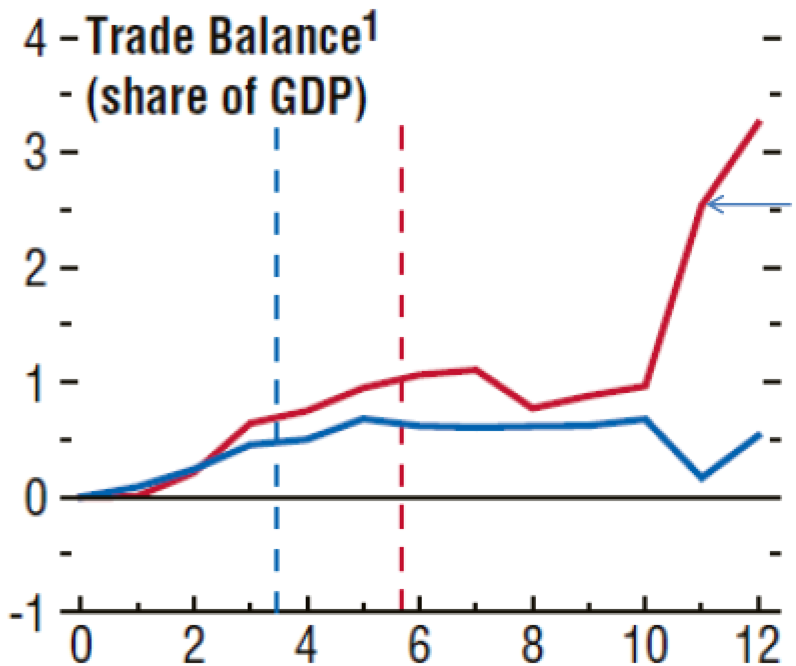
The textbook adjustment process



But in the liquidity trap, it probably looks like this …

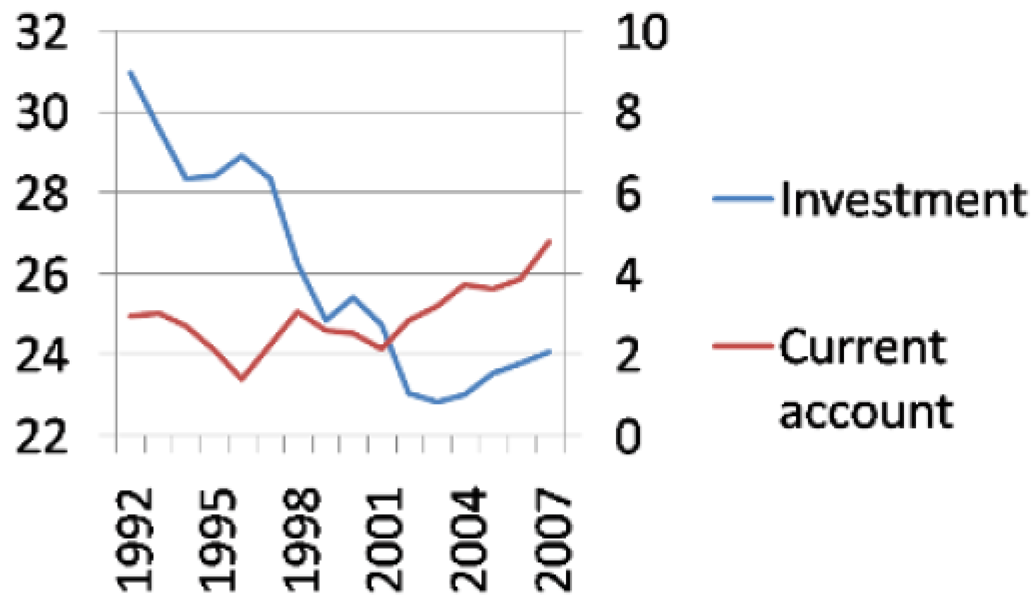


Historically, recovery from financial-crisis-led recessions has been export-led



Financial-crisis recessions

Japan's recovery: export-driven



THE RECOVERY FROM THE GREAT PANIC OF 1873

Roger W. Babson, the Well-known Statistician, Tells of the Business Epochs That Followed That Period of Depression.

Our Nation's Four Great Business Epochs After the Recovery from the Panic of 1873.

BY ROGER W. BABSON
of Wellesley Hills, Mass.

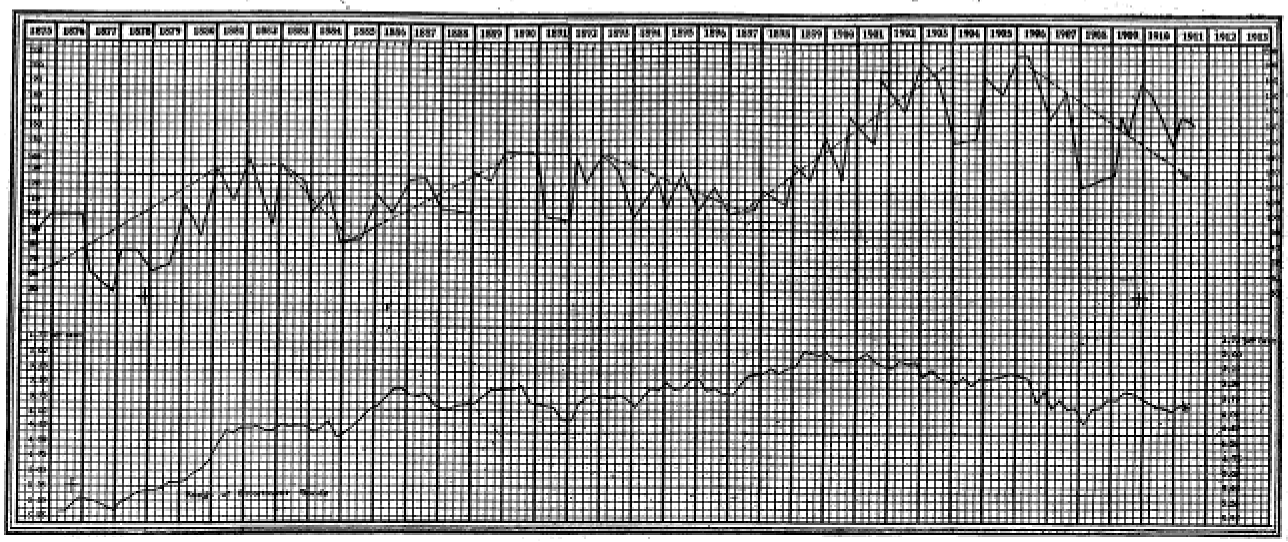
AT the close of the last article we left our Nation in the throes of the severe depression of 1873. It will be remembered that the real panic began with Black Friday in the Fall of 1869, and continued into 1870; but this was so sharp and sudden that there came a quick rebound in 1871, which lasted into 1872.

As stated in the previous article, all of our severe crises have consisted of two sharp movements about three years apart, followed by about three years of depressed business. Therefore, although the first and in many ways the severest blow of the "Panic of 1873" came in 1869 and 1870, the second and final blow did not come until 1873, which completed the forced liquidation begun three years previous.

Although the second blow is often not as severe as the first, yet the business is less able to withstand the second pressure, and the apparent disaster is much greater. Therefore the year 1873 was one of great financial and industrial hardship.

In the Fall of 1872 the trouble really began, but it was first brought to an acute stage on April 26, 1873, when the Atlantic Bank failed. A flood of stocks was sold on the New York Stock Exchange, prices fell with great rapidity, and the market showed an almost continual decline until the Fall of the year. In the late Summer there was a slight rally, but this was simply the lull before a storm, and in September, 1873, the New York Warehouse Company, a large and apparently prosperous concern, went to the wall. The New York Midland failed on the 13th of September, and Jay Cooke & Co., a great banking house of that day, closed on the following day.

The entire financial community was then in a state of great excitement, and confidence seemed to vanish. The New York Stock Exchange closed its doors on the 20th and did not open them until the 30th, while about 20 per cent. interest was charged for time money for a short period during the worst of the trouble.



Prices of Investment Stocks and Bonds from 1875 to 1911.

This is a plot of relative price movement of ten representative high-grade stocks and five representative high-grade bonds. The basic law that action and reaction are equal, when areas are considered, is well illustrated here. Especially does it show that while the stock market sometimes discounts conditions, it does not always do so. The dotted line shows the major cycles. On account of the maturing feature of bonds the bond line shown is the plot of bond yields inverted, which indicates the varying cost to the investor. Note that the bond market does not rise and fall simultaneously with the stock market except in rare instances.

of gradual recovery. It is true that Stock Exchange transactions were very small, failures large, and clearings continued to decline; but the setback in business was comparatively short, and by 1886 everything was going again at full speed. As is usual, after even a semi-panic, money is cheap, which condition eventually prepares a foundation for a general uplift. Although Mr. Vanderbilt did all he could to stay the break of prices during 1884 and 1885, yet he saw that it was unprofitable and decided to let go and sell the market short, so as to win, whatever happened. Moreover, he made the best of his opportunities in 1884 and 1885 by purchasing the securities of several competitive roads, which resulted in the absorption by the New York Central of the West Shore and allied lines.

As is always the case following a semi-panic, labor troubles again crept out, and 1886 stands out in the memory of us all as the year of the fierce strikes in New York, Chicago, and other cities. It was on May 4, 1886, that the bomb-throwing outrage was perpetrated in Chicago, which serves as another illustration of the unintelligent means which the public use to withstand the laws of nature. However, labor was not long out of work, as the wheels of industry again began to turn, and all the country was blessed with splendid crops, which resulted in gold imports and a general revival of building of all kinds. Moreover, although our noble legislators in Washington at this time again attempted to tinker with the tariff, "in order to bring back good times," yet there was enough latent sense and conservatism to prevent this move, and the various bills aiming at a lower tariff and railway-rate regulation were defeated. Under the stimulus of cheap money and favorable legislation, there were nearly 13,000 miles of new railroad constructed in 1887, which, according to my figures, is the greatest number of miles ever constructed in any one year. Eighteen hundred and eighty-eight was another year of good business, and although St. Paul passed its dividend yet earnings continued to increase, and on Jan. 10, 1889, J. P. Morgan came to the front through the enactment of the famous "gentlemen's agreement" between the trunk line officials. In fact, fundamental conditions continued to

So how does it end?

Keynesian business cycle theory:

“use, decay, and obsolescence”

Koosian theory: rebuilding the balance sheets

Use, decay, and obsolescence:

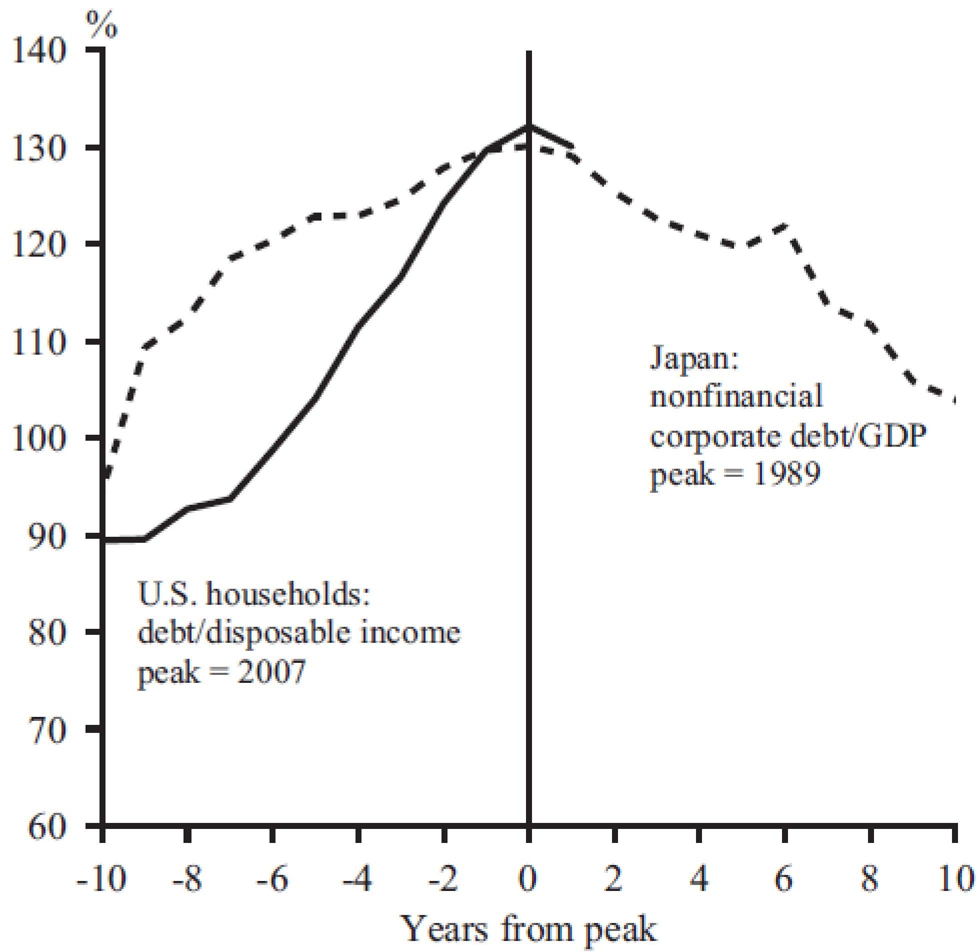
US stock of autos: 135 million

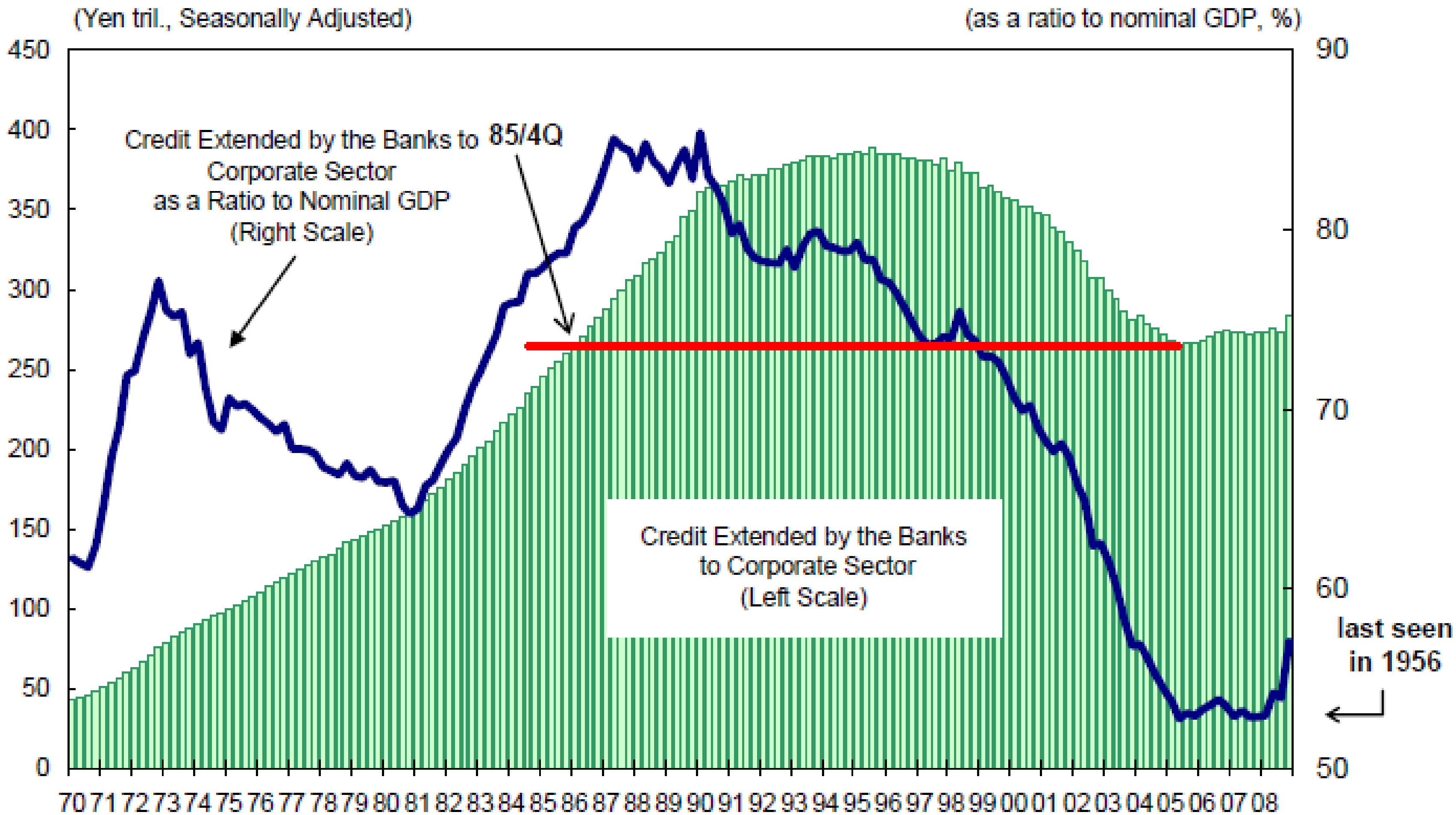
May 2009 auto sales: 484,000

Annual rate of 6 million?

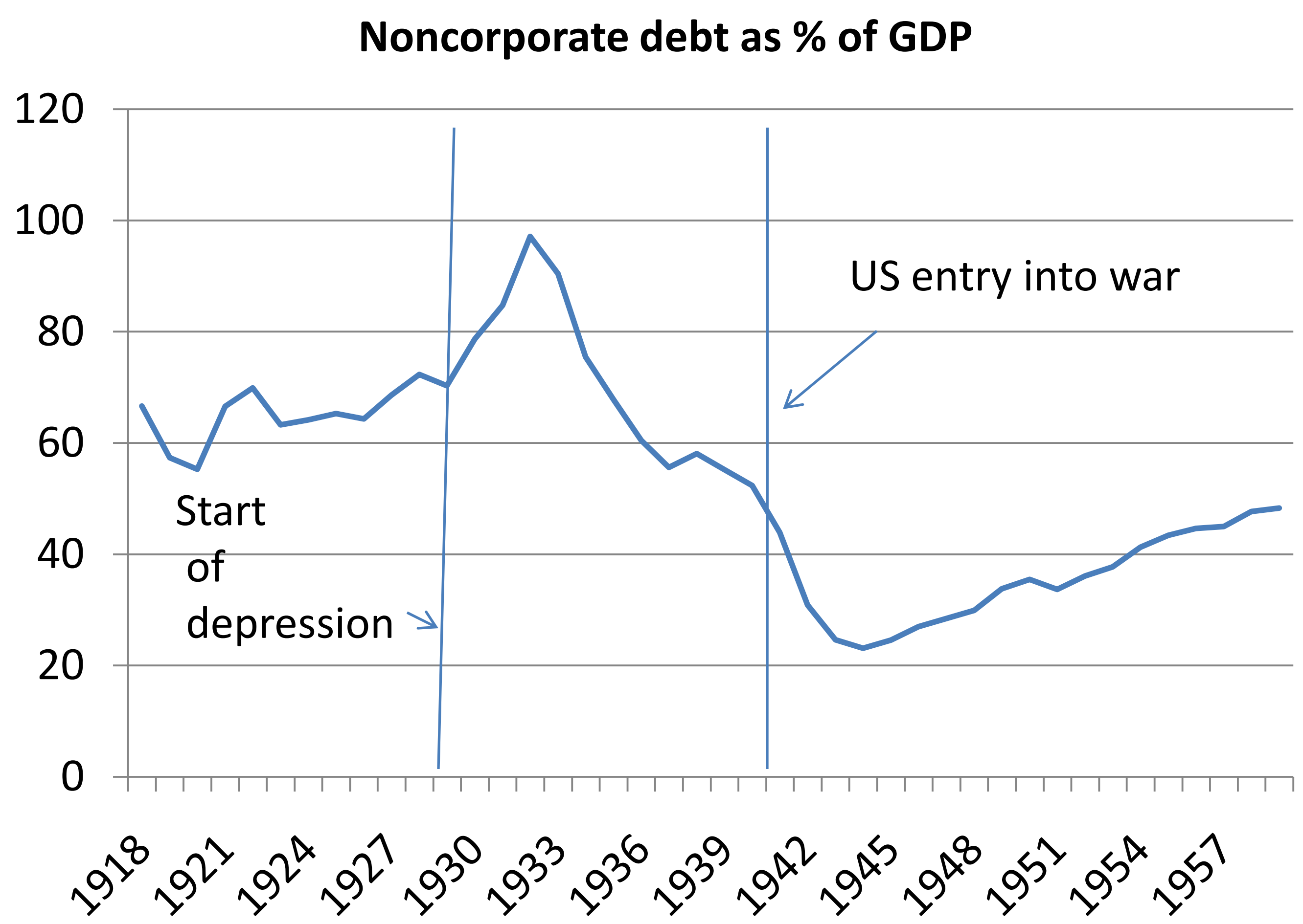
If so, more than 20 years to replace stock …

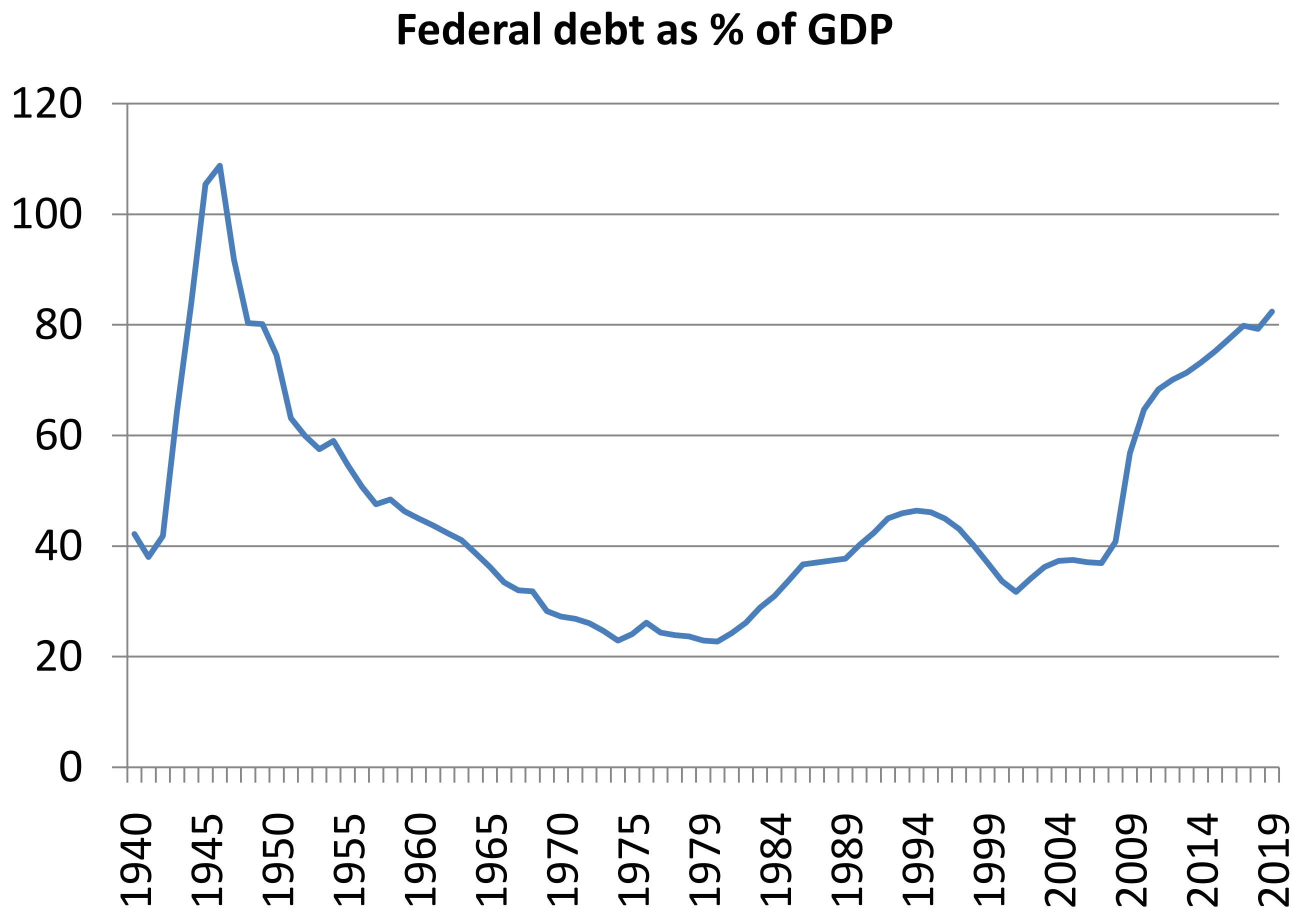
Leverage ratios



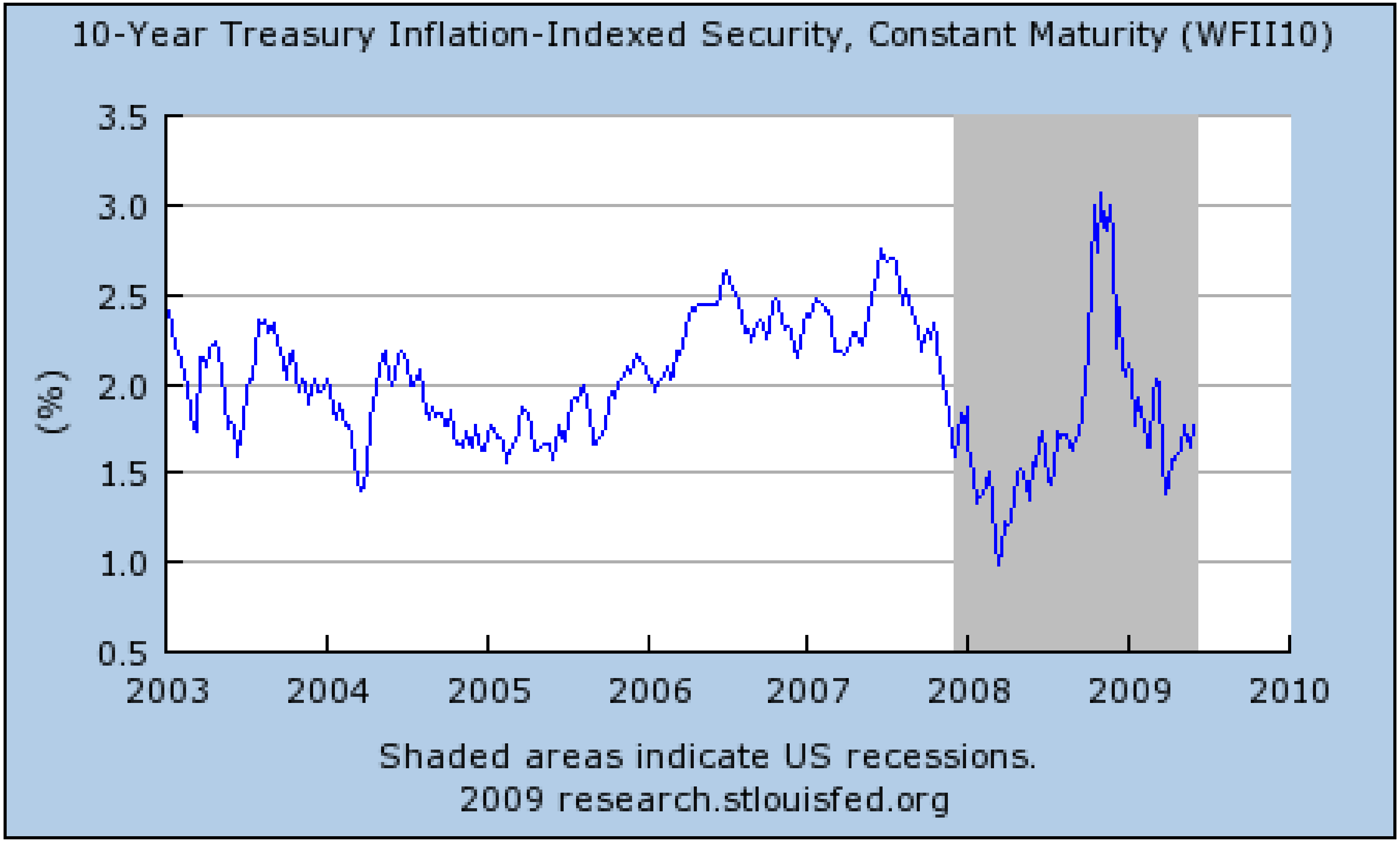


Source: Richard Koo

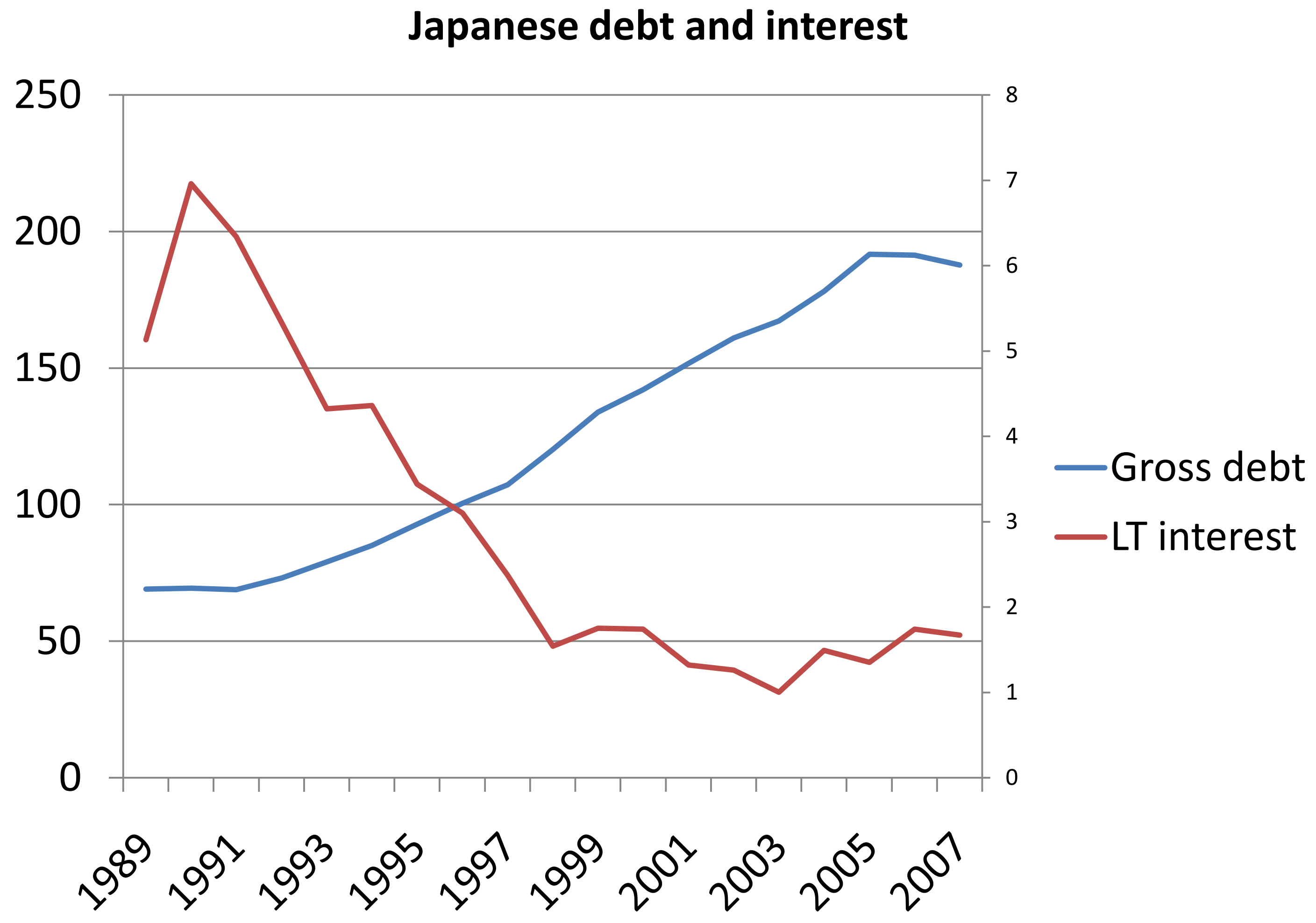

Noncorporate debt as % of GDP
120
100
80
60
40
20
0
US entry into war
Start
of
depression
1918
1921
1924
1927
1930
1933
1936
1939
1942
1945
1948
1951
1954
1957



Federal debt as % of GDP
120
100
80
60
40
20
0
1940
1945
1950
1955
1960
1965
1970
1975
1979
1984
1989
1994
1999
2004
2009
2014
2019



10-Year Treasury Inflation-Indexed Security, Constant Maturity (WFII10)
3.5
3.0
2.5
2.0
1.5
1.0
0.5
(%)
2003
2004
2005
2006
2007
2008
2009
2010
Shaded areas indicate US recessions.
2009 research.stlouisfed.org



Japanese debt and interest
250
200
150
100
50
0
8
7
6
5
4
3
2
1
0
1989
1991
1993
1995
1997
1999
2001
2003
2005
2007
Gross debt
LT interest

Source: OECD