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Slides used by Professor Tim Congdon in presentation on

"Is Inflation still Dead?"

- A debate between Roger Bootle and Tim Congdon at the Gibson's Hall, 28th February 2001

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Summary of Professor Tim Congdon's presentation to debate with Professor Roger Bootle on "Is Inflation still Dead?"

Central argument

The demand to hold real money balances is dominated by real economic variables, particularly real income. **It follows that – in the absence of big changes in the attractiveness of money compared with other things – the growth of nominal money and nominal national income are similar over the long run, and that the rate of inflation roughly approximates the excess of nominal money growth over output growth.** Only broad, all-inclusive measures of money have a causal role in the determination of national income. The growth of broad money is heavily influenced by the capital adequacy of the banks, as well as central banks' decisions on short-term interest rates and government debt management policy.

The low inflation of the mid- and late 1990s is best understood as the result, at one remove, of the low money supply growth of the early 1990s and, at a further remove, of a shortage of capital in several important countries' banking systems. But banks in the USA, the Euro-zone and elsewhere (but not Japan) now have ample capital, and are growing their balance sheets at almost double-digit annual rates. Broad money growth has revived. This revival was the principal cause of the upturn in American and later world economic activity in the late 1990s and 2000. It has already led to more inflation, with the annual increase in consumer prices in both the USA and the Euro-zone above 3%, and in producer prices almost 5% in the USA and about 6% in the Euro-zone.

Unless the annual rate of money growth declines towards the mid single digits, inflation will remain in the 2% - 6% area. But – for the time being - there is little sign of a slowdown in money growth (except, arguably, in the Euro-zone), while in early 2001 central banks in the English-speaking countries have gone soft on inflation. **Moderate inflation has returned as a medium-term reality for investment management decisions and business planning.**

Key points

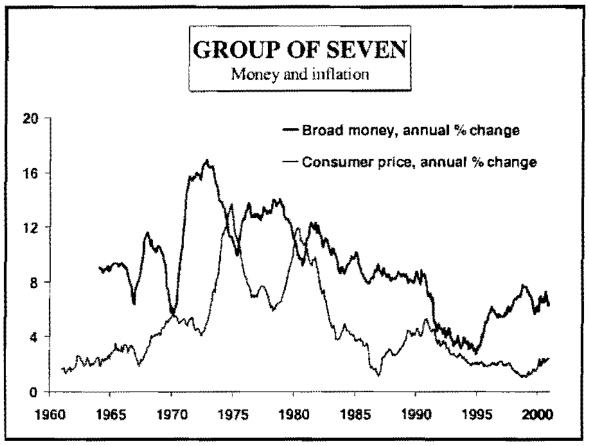
1. In the G7 as a whole, money growth has clearly increased from the post-war lows recorded in 1992, 1993 and 1994. (Slides 1 and 2.)
2. The growth of money is similar to the growth of bank credit, while banks expand their assets in order to increase their profits and are constrained – most fundamentally – by their capital. (Slides Slides 3 to 8.)

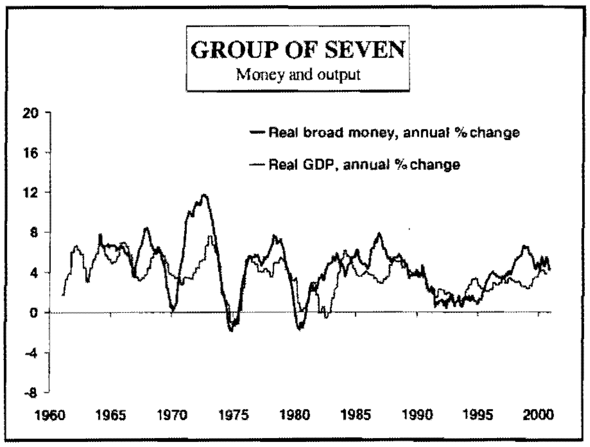
1. The upturn in money growth in the late 1990s is particularly clear in the USA – and so also is the return of upward pressures on inflation. (Slides 9 to 15.)

2. The upturn in money growth came later in the Euro-zone, perhaps because of the restrictive policies enforced because of the Maastricht convergence criteria, and it was also less pronounced. But credit to the private sector is growing at a 10% annualized rate. (Slides 16 to 19.)

3. Japan does not fit the general pattern, as credit and money growth remain subdued. (Slides 20 to 23.)

4. The differences in inflation across the industrial world mirror the differences in money supply growth, confirming the validity of the basic theoretical framework. (Slides 24 to 30.)





MONEY AND CREDIT

Don't muddle up money and credit

- "Money" consists of assets which can be used to make payments, = cash and bank deposits
  - Nowadays money is almost entirely a liability of banks, where assets = liabilities, so
  - Growth of money = growth of bank credit

But deposits (i.e., banks' liabilities) are money, not loans.

TWO VIEWS ON MONEY CREATION 1

The correct view

- Banks want to maximise profits by extending credit to customers
  - Deposits roughly equal bank assets, which are dominated by bank loans
  - Bank assets = Assets/capital × capital

Growth of money depends on banks' capital.

TWO VIEWS ON MONEY CREATION 2

The wrong view

- Banks maintain a stable ratio of "cash reserves" to their liabilities
  - Banks' "cash reserves" are part of high-powered money (or "base money")
  - Deposits = Money multiplier × base money

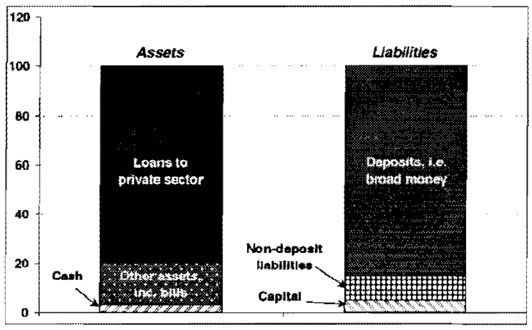
Growth of money depends on growth of base.

A SIMPLIFIED BANKING SYSTEM BALANCE SHEET

Explaining how broad money is determined

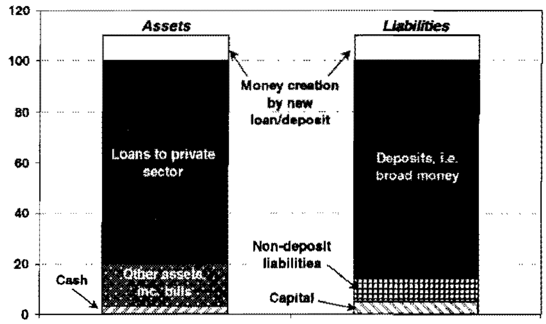
- Assets dominated by loans to the private sector
- Liabilities dominated by deposits (i.e., broad money)

A SIMPLIFIED BANKING SYSTEM BALANCE SHEET
Explaining how broad money is determined

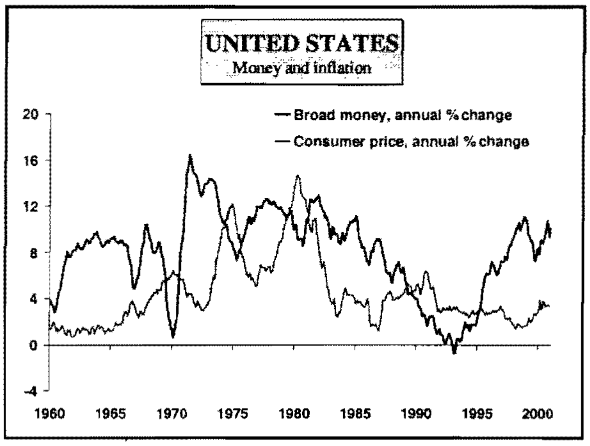


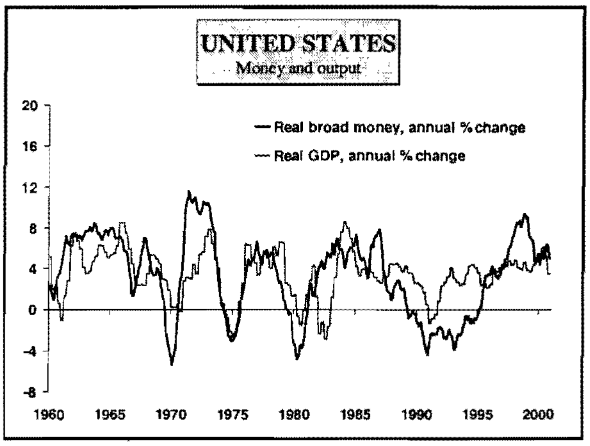
Assets dominated by loans to the private sector, liabilities by deposits (i.e. broad money)

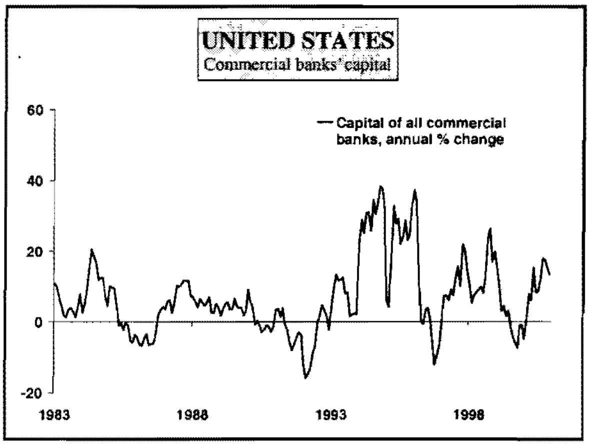
HOW EXTRA MONEY IS CREATED
Extra money created when banks expand assets by new loans

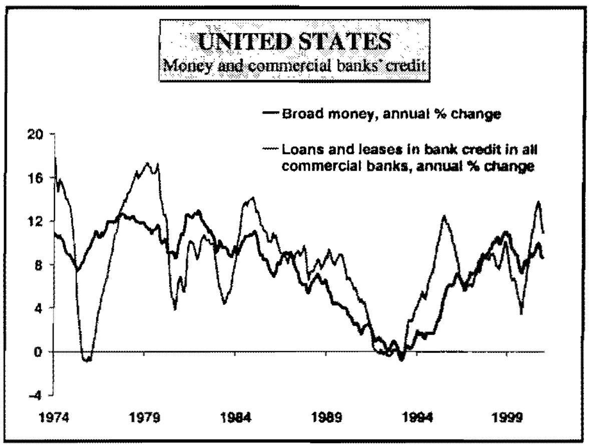


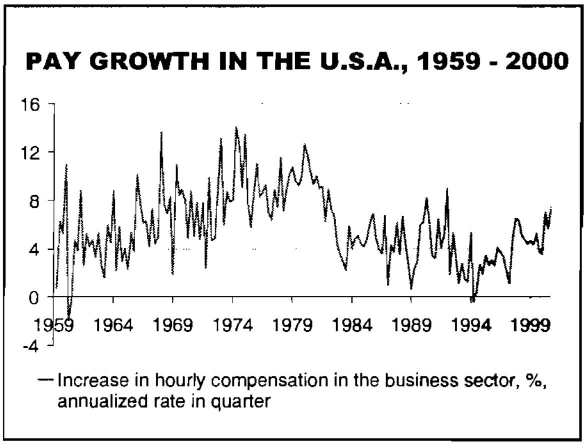
New bank lending of £10b. has increased deposits from £85b. to £95b.

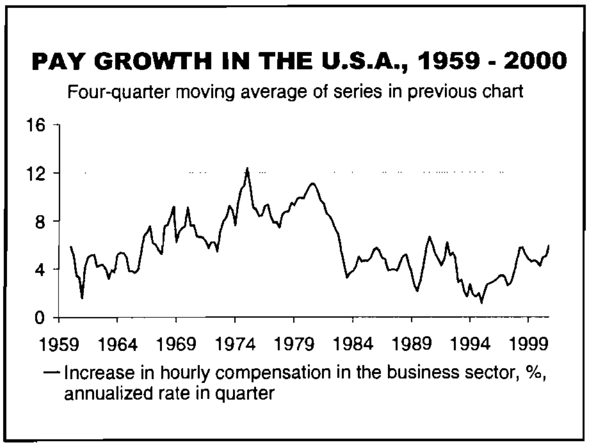


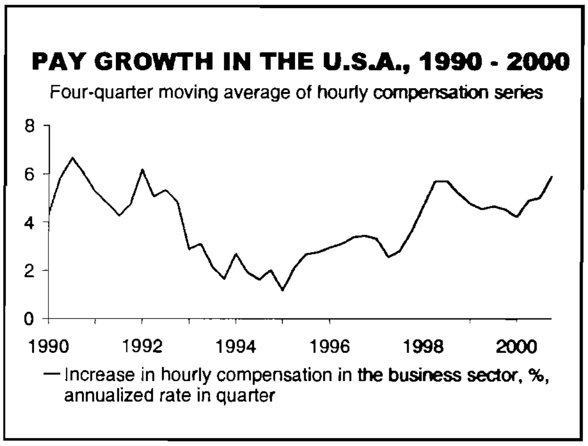


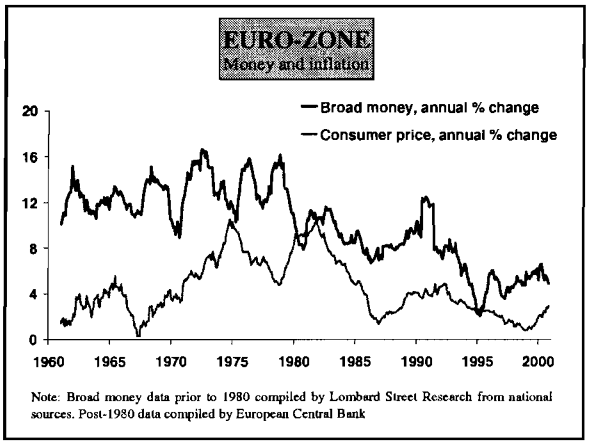


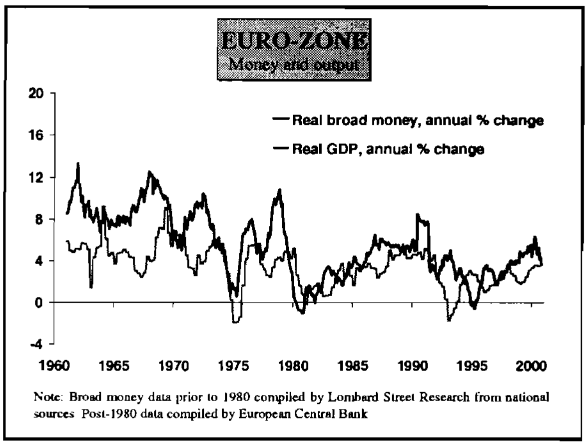


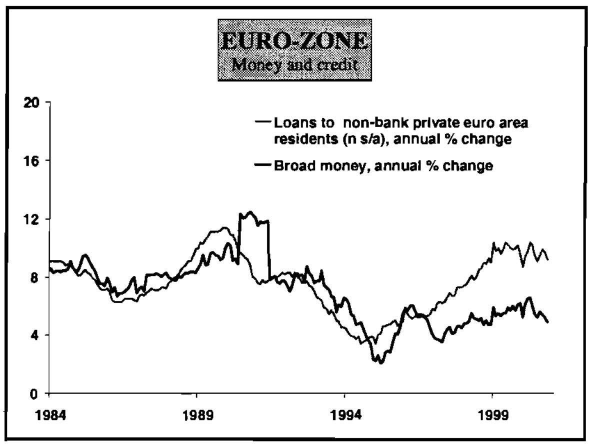

PAY GROWTH IN THE U.S.A., 1959 - 2000
16
12
8
4
0
-4
1959 1964 1969 1974 1979 1984 1989 1994 1999
— Increase in hourly compensation in the business sector, %, annualized rate in quarter

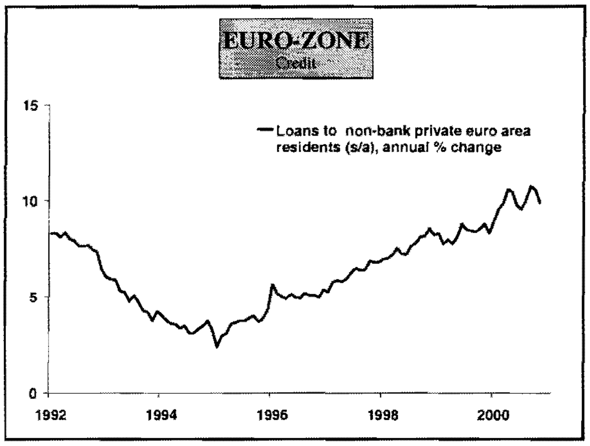

PAY GROWTH IN THE U.S.A., 1959 - 2000
Four-quarter moving average of series in previous chart
16
12
8
4
0
1959 1964 1969 1974 1979 1984 1989 1994 1999
— Increase in hourly compensation in the business sector, %, annualized rate in quarter

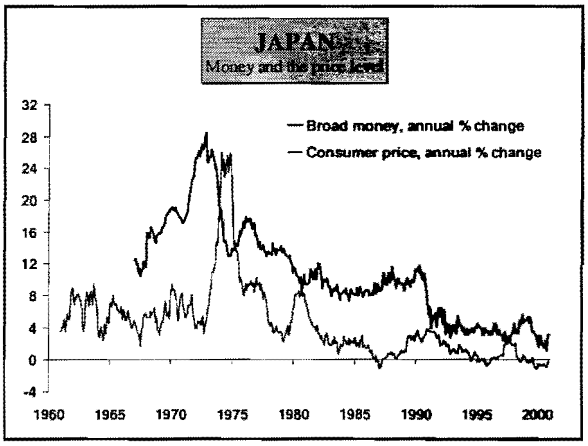

PAY GROWTH IN THE U.S.A., 1990 - 2000
Four-quarter moving average of hourly compensation series
8
6
4
2
0
1990 1992 1994 1996 1998 2000
— Increase in hourly compensation in the business sector, %, annualized rate in quarter

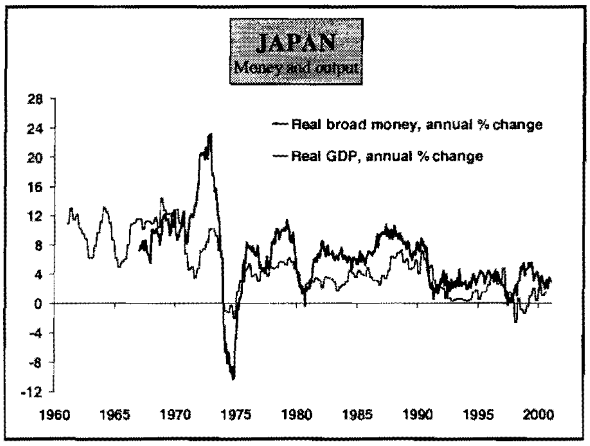

EURO-ZONE
Money and inflation
— Broad money, annual % change
— Consumer price, annual % change
20
16
12
8
4
0
1960 1965 1970 1975 1980 1985 1990 1995 2000
Note: Broad money data prior to 1980 compiled by Lombard Street Research from national sources. Post-1980 data compiled by European Central Bank

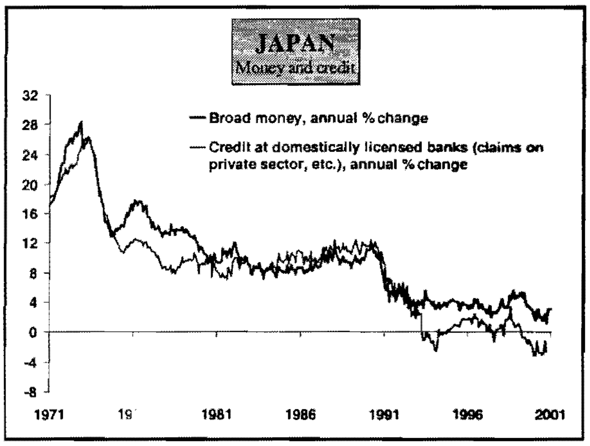

EURO-ZONE
Money and output
— Real broad money, annual % change
— Real GDP, annual % change
20
16
12
8
4
0
-4
1960 1965 1970 1975 1980 1985 1990 1995 2000
Note: Broad money data prior to 1980 compiled by Lombard Street Research from national sources Post-1980 data compiled by European Central Bank

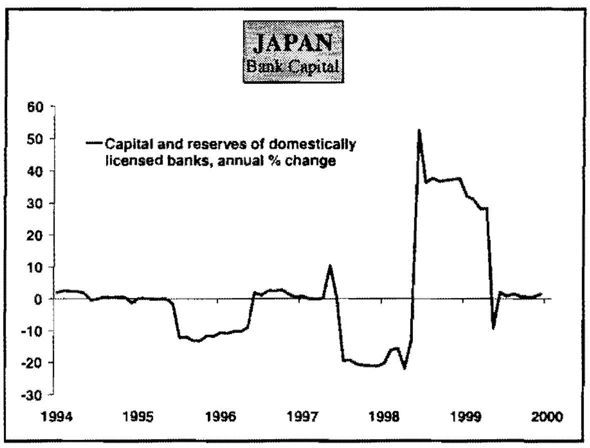

EURO-ZONE
Money and credit
— Loans to non-bank private euro area residents (n s/a), annual % change
— Broad money, annual % change
20
16
12
8
4
0
1984 1989 1994 1999

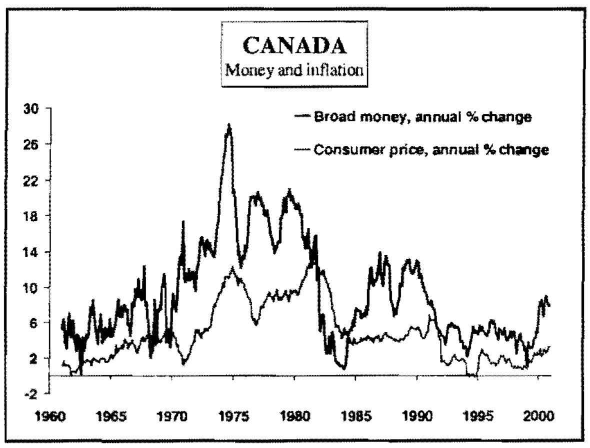

EURO-ZONE
Credit
—Loans to non-bank private euro area residents (s/a), annual % change

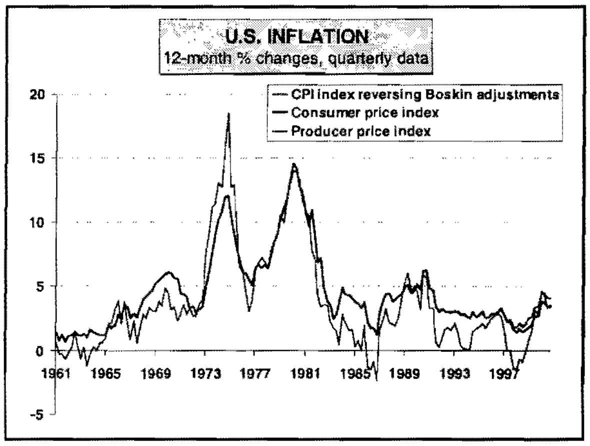

JAPAN
Money and the price level
—Broad money, annual % change
—Consumer price, annual % change

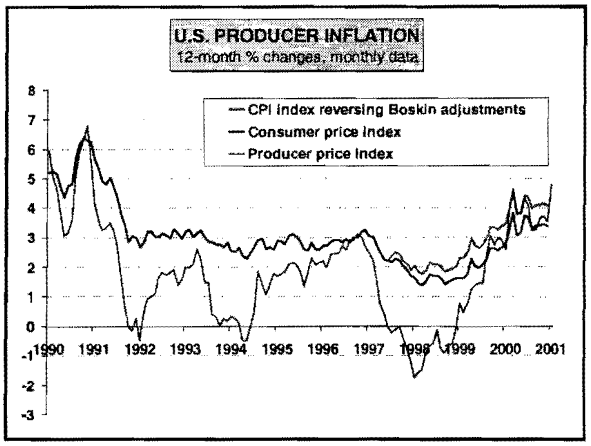

JAPAN
Money and output
—Real broad money, annual % change
—Real GDP, annual % change

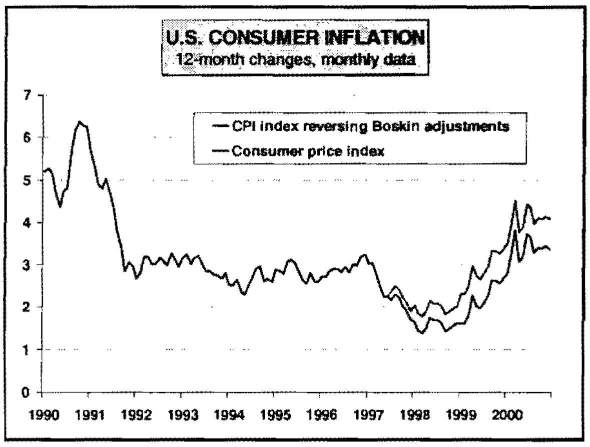

JAPAN
Money and credit
—Broad money, annual % change
—Credit at domestically licensed banks (claims on private sector, etc.), annual % change

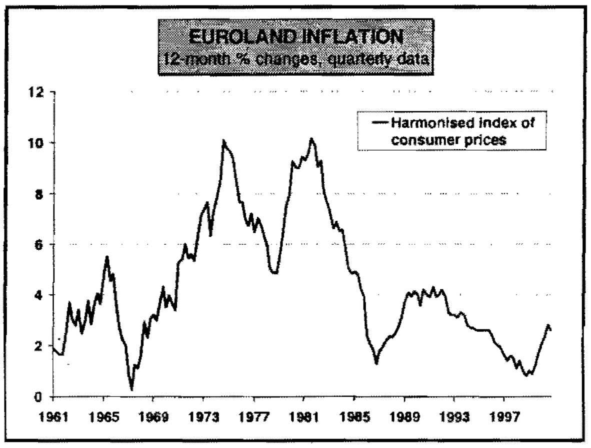

JAPAN
Bank Capital
—Capital and reserves of domestically licensed banks, annual % change

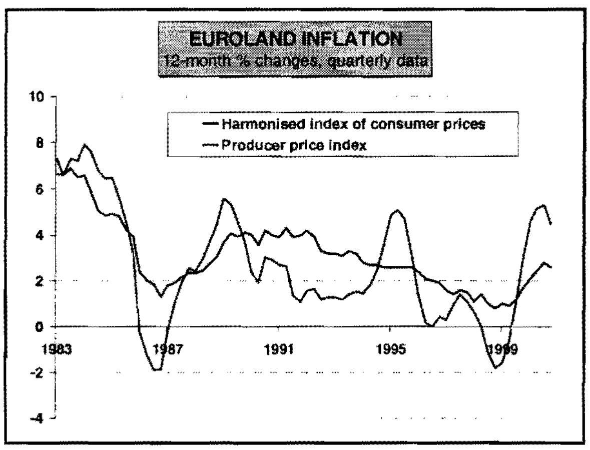

CANADA
Money and inflation
—Broad money, annual % change
—Consumer price, annual % change

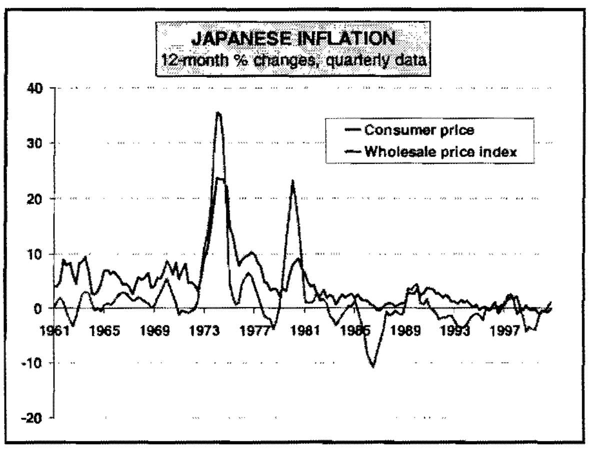

U.S. INFLATION
12-month % changes, quarterly data
CPI index reversing Boskin adjustments
Consumer price index
Producer price index
20
15
10
5
0
-5
1961 1965 1969 1973 1977 1981 1985 1989 1993 1997


U.S. PRODUCER INFLATION
12-month % changes, monthly data
CPI index reversing Boskin adjustments
Consumer price index
Producer price index
8
7
6
5
4
3
2
1
0
-1
-2
-3
1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001


U.S. CONSUMER INFLATION
12-month changes, monthly data
CPI index reversing Boskin adjustments
Consumer price index
7
6
5
4
3
2
1
0
1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000


EUROLAND INFLATION
12-month % changes, quarterly data
Harmonised index of consumer prices
12
10
8
6
4
2
0
1961 1965 1969 1973 1977 1981 1985 1989 1993 1997


EUROLAND INFLATION
12-month % changes, quarterly data
Harmonised index of consumer prices
Producer price index
10
8
6
4
2
0
-2
-4
1983 1987 1991 1995 1999


JAPANESE INFLATION
12-month % changes, quarterly data
Consumer price
Wholesale price index
40
30
20
10
0
-10
-20
1961 1965 1969 1973 1977 1981 1985 1989 1993 1997