Introduction

- Some cross-country evidence on money growth and inflation
The World

Money versus Inflation per year

Inflation in Percent per year

Money growth in Percent

0 10 20 30 40 50 60 70 80

0 10 20 30 40 50 60 70 80
Inflation and Interest Rates: secular decline

Interest rates vs inflation

Inflation (Percent)

Interest rate (Percent)
Money Market Rates and Money Growth
(Long run averages, 1961 to 1998)

Correlations:
Overall 0.63
Developed 0.81
Developing 0.53

Money Market Rate

Money Growth Rate

19 Developing countries
20 Developed countries
Government Bond Yields and Money Growth (Long run averages, 1961 to 1998)

Correlations:
- Overall: 0.79
- Developed: 0.70
- Developing: 0.66

Graph showing the relationship between government bond yields and money growth rate with data points for 12 developing countries and 18 developed countries.
Money Market Rates and Money Growth
20 Developed Countries

Correlations:
- 5 year: 0.52
- Long run: 0.81
Government Bond Yields and Inflation (Long run averages, 1961 to 1998)

Correlations:
Overall 0.78
Developed 0.79
Developing 0.62

12 Developing countries
21 Developed countries
Sample Averages from Sixteen Latin American Countries, 1950-69

(\checkmark) denotes grand mean
Now some time-series evidence on money growth and inflation

... and interest rates and inflation
**Figure 4**

Annual Rate of CPI Inflation

Annual Rate of MI Growth

Smoothed Data for 2nd Quarters, 1955-75

**Figure 5**

Treasury Bill Rate

Annual Rate of MI Growth

Smoothed Data for 2nd Quarters, 1955-75
Figure 8

Figure 9
\( \beta = 0.9 \)

**Figure 8**

Annual Rate of MI Growth
Smoothed Data for 2nd Quarters, 1955-75

**Figure 9**

Annual Rate of MI Growth
Smoothed Data for 2nd Quarters, 1955-75
Inflation and money growth in the United Kingdom, raw data

(a) Composite price index\((a)\) and MO (annual rates of change)

(a) See O'Donoghue, Goulding and Allen (2004).
Components beyond 30 years

(a) Composite price index and MO (annual changes)

- Gold standard is reintroduced
- Gold standard is abandoned
- Beginning of Bretton Woods
- Floating of the pound
- Introduction of inflation targeting

Base money growth

Inflation

1871 86 1901 16 31 46 61 76 91
Introduction to Monetary Economics

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[Graphs showing the relationship between base money growth, GNP deflator inflation, CPI inflation, M1 and M2 growth, and the rate of growth of money stock over time, with key economic events and periods marked.]
Figure 1 Low-frequency components of inflation and money growth since the Gold Standard era for Norway, the United Kingdom, Sweden, and Switzerland
Figure 2  Low-frequency components of inflation and money growth since the Gold Standard era for the United States.
Figure 3  Low-frequency components of inflation and money growth over the post-WWII era for the Euro area, the United Kingdom, Canada, Australia, Sweden, and Japan.
Various Monthly Yields: Low frequency only

Source: Hwagyun Kim
SUNY-Buffalo

- FF rates
- Autoloan rates
- Tbill 3m
- CD 1m
- Fixed mortgage 30yr
- Baa yield
- Discount rate
Figure 2. Filtered Treasury-Bill Rate and M1 Growth Rate, 12-Week-to-Infinity Window.
Figure 3. Filtered M1 Growth Rate and Interest Rates, 26–52-Week Window.
Figure 3. Filtered M1 Growth Rate and Interest Rates, 26–52-Week Window.
Interest and Inflation Rates, U.S. 1948-2000

Source: Samuel Reynard
Swiss National Bank

3-Month Treasury Bill Rate
CPI 1yr inflation rate + 2%