On the Value of Price Stability

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Annual Inflation in the US

(Percent)

Source: FRED
Annual Inflation in Japan

(Percent)

Source: FRED
Annual Inflation in Turkey

(Percent)

Source: FRED
The Cost of Inflation: A Counterfactual for Turkey*

Per Capita Income with Respect to the US
(Percent)

*Average inflation in Turkey between 1973 and 2003 is 54.5 percent. According to growth regressions every 10 percentage points higher inflation leads to a reduction in GDP growth rate by 0.25 percentage points on average.

Source: UN, CBRT.
What’s wrong with a deflation?

- Complications in using nominal interest rates.
- Zero lower bound?
- Negative nominal interest rates?
- How negative?
- Will it be enough to raise inflation expectations?
- Channels of transmission?
Requirements for Price Stability

\[ M \ast V = P \ast Y \]

- Stable Money Growth
- Stable Velocity (change)
- Stable Output Growth
Stable Money Growth

\[ M \times V = P \times Y \]

- Stable Money Growth
- Stable Velocity (change)
- Stable Output Growth
Stable Money Growth

Inflation and M2 Money Growth
(Pooled Data, 1980-2013, 131 Countries)

Slope is close to 1

Source: IMF.
Control of Money and Credit Growth

1. Macroprudential Measures (especially to tighten)
2. Quantitative Easing
3. Interest Rates
Stable Output Growth

\[ M \times V = P \times Y \]

- Stable Money Growth
- Stable Velocity (change)
- Stable Output Growth
\[ M \times V = P \times Y \]

Stable Money Growth

Stable Velocity (change)

Stable Output Growth
Downward Trend in Velocity of Money

Velocity of M2 Money Stock in Japan
Downward Trend in Velocity of Money

Velocity of M2 Money Stock in the US
Stable Velocity

Velocity Function

\[ V_t = \beta i_t^\alpha \varepsilon_t \]

Long Term Government Bond Yield (percent)
Requirements for Price Stability

- Stability of long term government bond yields is another condition for the stability of velocity, and hence for price stability.

- Negative nominal deposit rates may have a potential to increase velocity, by sharply reducing the real money demand. But this is unchartered territory.
Interest Rates in US

Annual Change in Long Term Interest Rate*
(10 Year Government Bond Yield, Difference of Natural Logarithm)

Source: FRED, Bloomberg.

* Monthly averages of daily interest rate data
Last Observation: January 26, 2014.
Interest Rates in Japan

Annual Change in Long Term Interest Rate*
(10 Year Government Bond Yield, Difference of Natural Logarithm)

Source: FRED, Bloomberg.

* Monthly averages of daily interest rate data
Last Observation: January 26, 2014.
Interest Rates in Germany

Annual Change in Long Term Interest Rate*
(10 Year Government Bond Yield, Difference of Natural Logarithm)

Source: FRED, Bloomberg.

* Monthly averages of daily interest rate data
Last Observation: January 26, 2014.
The Benefits of Price Stability

- High inflation is costly in terms of allocational efficiency.

- Deflation seems like a disequilibrium phenomenon (i.e. liquidity trap).

- Maintaining low and stable inflation would be the best contribution to growth from a central bank.
Real Pillars of Growth Strategy in Turkey

i. Human Capital and Labor Market

ii. Technology and Innovation

iii. Physical Infrastructure
Both high inflation and deflation are detrimental to growth.

The best contribution to growth from a central bank would be to maintain price stability.

Reforms in human capital, labor market, technology, innovation and physical infrastructure are going to boost the growth potential in Turkey.
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