ECON 404: Lecture on Deflation

Define and compare to disinflation

Experience:
- Common under pre-WWII gold standard – prices fluctuated along a zero trend
- Great Depression: U.S., Germany (U.K. and Sweden left gold standard first)
- In postwar fixed exchange rate regime, no significant deflation -- money was linked to the dollar and the U.S. ran balance of payments surpluses to increase international holdings of dollars.
- Small economies heavily dependent on trade (e.g., a single export) with fixed exchange rates against major trading partner (Saudi Arabia and others).
- Japan since mid-1990s, China 1997-2002, Hong Kong since 1997.
- U.S. is worried about it.

Using the Aggregate Demand & Supply Model, show:
- Demand-led deflation: AD decreases, both real GDP and P decrease —> recession + disinflation or deflation
- Supply-led deflation: LRAS increases, real GDP increases but P decreases. Depending on slope of SRAS, P may not fall much, and SRAS shifts down when expectations adjust.

Inflation:
- Inflation is primarily a monetary phenomenon, especially in the long-run: monetary authorities create new money by buying either domestic government bonds (i.e., print money to pay for lend to government), foreign currency assets, or (in the old days) gold.
- Perfectly expected inflation has menu and shoe leather costs, but otherwise economists expect that it would be “neutral” since nominal wages and nominal interest rates would rise to offset it (tax rates are now indexed), and real investment and consumption would be unaffected.
- Imperfectly expected inflation creates instability (show on AS/AS model): investors and consumers enter a game with the monetary authorities.
- Hyperinflation makes investment very risky, and undermines financial system.
- Cagan’s hypothesis that money demand would decrease with hyperinflation: use quantity equation (MV=PQ, V=1/k, k=GDP/M) to show that inflation would be higher than money growth.
Deflation:

- Deflation in some ways is like inflation, but in other ways very different.
- Similarities: menu costs, shoe leather costs are low if deflation rates are small.
- Keynesian prediction of downwardly-sticky price levels (due to implicit contracts).
- Nominal interest rates have a zero lower bound (ZLB): Fisher equation \((ni=ri+\text{expinf})\) when expinf is negative makes \(ri\) rise if \(ni\) is low enough.

Supply-led versus Demand-led distinction is important because of:

- Nominal interest rates – supply-led deflation is likely to have higher nominal rates.
- Firm insolvency – supply-led deflation is less likely to create financial distress for firms.

Demand-led Deflation:

- Fisher’s debt-deflation problem: firms default on loans, banks are troubled (money supply shrinks).
- Cagan’s hypothesis in reverse: money demand increases.
- Expected deflation makes consumption fall (and money demand rises more).
- Depositors prefer to hold more cash, and fewer deposits.
- Banks lend less and buy more bonds.

So deflation can make the money supply fall, the deposit expansion multiplier fall, and money demand rise – which means that deflationary expectations can become self-fulfilling, and that the monetary authorities cannot respond to it in small measures.

Keynesian “liquidity trap” – caused by non-monetary events, but monetary policy would become useless with deflation as economy hit ZLB.

- This was used by Keynesians to justify preference for fiscal policy.
- But nobody seriously thinks that if the money supply were to double that prices would continue to fall. Meltzner calls it “liquidity claptrap.”
- We call this a monetary policy discontinuity.

Current consensus is that a low and stable inflation rate of 2-3% is optimal, since there is a measurement error in inflation rates and future shocks are hard to predict and avoid. The Fed has sent strong signals that it is aware of the problem and will not let deflation occur, in order to correct the expectations problem.
So what went wrong with Japan?

1) *Unbalanced Financial Liberalization* in late 1970s and 1980s:
   - Removed government oversight and bank regulation but did not fix weaknesses of the old financial regime, including non-transparency, pervasive deposit guarantees, “no failure” policies regarding banks and limited failure in real sector (esp. large firms), public intermediation through postal savings and the FILP, and a feedback between bank lending and both land and equity prices.
   - Regulatory and market innovations designed to increase *portfolio diversification* generated a fundamental flaw: increased portfolio diversification increased the opportunity to assume and manage risk, and the key characteristics of the old regime provided incentives to assume risk.

2) *Accommodative monetary policy* in the second half of the 1980s, after the Louvre Accord, as the Bank of Japan focused on limiting yen appreciation in the context of high rates of real economic growth and low inflation. Fast money growth did not immediately impact the price level because of rapid real growth and increased productivity.
   - This led to asset inflation (the “bubble economy”) in the late 1980s. Increased monetary growth led to increased bank lending, which in turn increased the demand for land, real estate, and equities. The resulting high prices for land, real estate, and equities fed back into the banking system to support additional lending.

3) *The Bank of Japan* raised the discount rate in May 1989, and continued with tight monetary policy through 1994. The resulting decline in asset prices weakened bank balance sheets, reduced investment and consumption spending, and generated a nonperforming loan and borrower problem. In hindsight, the Bank of Japan continued too long with tight monetary policy and did not shift aggressively to easy policy.

4) *The unwillingness of regulatory authorities to allow bankruptcy* to remove inefficient capital from the market, especially in the financial sector, and the willingness to adopt forgiveness and forbearance as the preferred policy response, seriously interfered with financial intermediation and credit allocation. Insolvent banks kept lending to insolvent firms and hoped for the best.

5) *When the Bank of Japan changed policy, it did not provide sufficiently stimulative policy* to prevent a gradual but define downward movement in the price level. When they acted, policymakers focused on decreasing nominal interest rates (the zero interest rate policy) but failed to recognize the effects of deflation.
   - Reasons for this are largely political, i.e., an unwillingness to admit their errors, an effort to pressure a cleanup in banking, and a fear that rising nominal interest rates would
seriously hurt their balance sheet (government bond values would decline) and the Ministry of Finance would not come to their rescue.