

Japan's Liquidity Sump:

A New Interpretation of the Great Stagnation

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Stagnation Facts

- Low nominal interest rates.
- **Strong demand for liquid assets.**
- Reduction in money multipliers.
- Decline in monetary velocity.
- **Large decline in tangible asset prices** (land, equities, etc).

Trap versus Sump

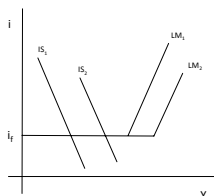
- A **liquidity trap** results when the nominal interest rate reaches an irreducible low and the demand for money becomes infinitely elastic with respect to the interest rate.
- A **liquidity sump** occurs when fundamental uncertainty reduces the present value of tangible wealth below a critical level and the demand for liquid assets becomes infinitely elastic with respect to income.

Standard IS-LM Model

$$(1) \quad L(y, i, \dots) = m(\dots)$$

$$(2) \quad E_d(y, i, \dots) = y$$

Liquidity Trap ($L_i \rightarrow -\infty$)

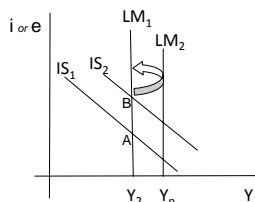


Problems with Naive Trap Theory

- Assumes money holding is the only alternative to low interest rate bonds.
- Assumes recovery depends on a 'Keynes effect' and interest rate channel.
- Fiscal policy is a 'foolproof' way out of the trap.
- Japan's monetary and fiscal policies were expansionary by conventional standards.
- Cannot explain length of Japan's stagnation.

Liquidity Sump

$$\{(L_y - m_y) \rightarrow \infty\}$$



Wealth Effects

- Total Real Wealth: $\Omega/P = F/P + V/P$
- Wealth Gap: $\omega = (\Omega/P - \Omega^*/P) = \omega_f + \omega_v$
- Liquidity Sump Condition: $\omega_v \leq \delta < 0$
- Expenditure Function: $E(y, i, \omega_f, \omega_v, \dots) = y$

Generalized Model

- (10) $L(y, i, \dots) = m(y, i, \dots)$
- (12) $F(y, i, \dots) = M(y, i, \dots) + B(y, i, \dots)$
- (15) $E(y, i, e, 1/P, \omega_f, \omega_v, \dots) = y$
- (9) $X(e) + CAP(i, \dots) = 0$

Extensions and Elaborations

- Endogenous money supply
 - Sump Condition: $(L_y - m_y) \rightarrow \infty$
- Generalized liquidity ($F = M+B$)
 - Sump: Condition: $F_y \rightarrow \infty$
- Helicopter money
- Deflation effect

Policy Implications (tentative)

- Conventional macroeconomic policies are ineffectual at best.
- A mild deflation is not worrisome and is likely desirable.
- A commitment to *responsible* (i.e. stable and predictable) monetary and fiscal policies is desirable.

Policy Implications (cont.)

- Policymakers should focus on wealth effects rather than unobservable intertemporal price effects.
- Emphasis should be placed on policies that restore confidence in the future.
- Particular attention should be given to structural policies that enhance the future productivity of tangible assets.