

Mr. Keynes and the ‘Classics’ a Century Later: Reviewing the IS-LM model

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- World-leading macroeconomists still use it to support their analyses in their blogs and tweets (e.g., Krugman, Simon Wren-Lewis).
- Reason for success: useful and agile tool to study the most likely implications (trade-offs) of policy shocks in the short run.

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- Its accounting structure is, at best, incomplete (e.g., [Godley and Shaikh, 2002](#); [Wray, 2019](#)), as flows impact on stocks and stocks, in turn, produce flows ([Hicks, 1981](#)).
- RQs: is the IS-LM model an acceptable (stylized) representation of a capitalist economy? What happens when we fix it? Can we develop a SFC dynamic IS-LM model? Policy implications?

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| | Households | Firms | Central bank | Government | Σ |
|-------------------|------------|-------|--------------|------------|----------|
| Money (liquidity) | $+L$ | | $-M$ | | 0 |
| Bills | $+B_h$ | | $+B_{cb}$ | $-B_s$ | 0 |
| Wealth | $-V$ | | | $+V$ | 0 |
| Σ | 0 | 0 | 0 | 0 | 0 |

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- Note: saving (as algebraic sum of incomes and expenditures) must match the total Δs in net wealth components.

THE TRANSACTIONS-FLOW MATRIX

| | Households | Firms | | Central bank | Government | Σ |
|-------------------|------------------------|----------------|----------------|---------------------------|---------------------------|----------|
| | | <i>Current</i> | <i>Capital</i> | | | |
| Consumption | $-C$ | $+C$ | | | | 0 |
| Investment | | $+I$ | $-I$ | | | 0 |
| Gov. spending | | $+G$ | | | $-G$ | 0 |
| Income | $+W$ | $-Y$ | $+A$ | | | 0 |
| Taxes | $-T$ | | | | $+T$ | 0 |
| Interest paym. | $+r_{-1} \cdot B_{-1}$ | | | $+r_{-1} \cdot B_{cb,-1}$ | $-r_{-1} \cdot B_{s,-1}$ | 0 |
| Seign. income | | | | $-r_{-1} \cdot B_{cb,-1}$ | $+r_{-1} \cdot B_{cb,-1}$ | 0 |
| Δ in money | $-\Delta L$ | | | $+\Delta M$ | | 0 |
| Δ in bills | $-\Delta B_h$ | | | $-\Delta B_{cb}$ | $+\Delta B_s$ | 0 |
| Σ | 0 | 0 | 0 | 0 | 0 | 0 |

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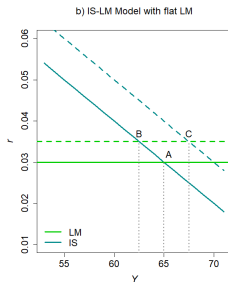
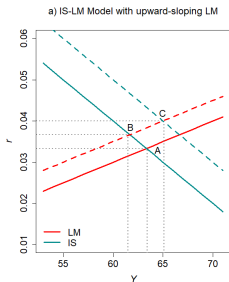
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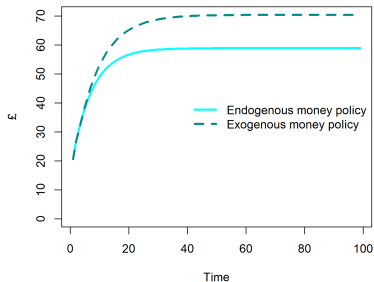
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- if $\iota_1 = B_h^* \cdot (1-\theta)/\theta$, the steady-state level of national income is unaffected by the interest rate.

MODEL PARAMETERS AND EXOGENOUS VARIABLES

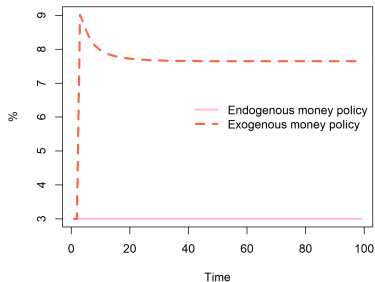
| Symbol | Description | Value |
|-------------|--|-------|
| ι_0 | Autonomous investment | 2 |
| ι_1 | Elasticity of investment to interest rate (absolute value) | 20 |
| ι_2 | Elasticity of investment to expected demand | 0.05 |
| α_1 | Marginal propensity to consume out of disposable income | 0.6 |
| α_2 | Marginal propensity to consume out of net wealth | 0.4 |
| λ_0 | Autonomous share of liquidity demand to disposable income | 0.1 |
| λ_1 | Elasticity of liquidity demand to disposable income | 0.1 |
| λ_2 | Elasticity of liquidity demand to interest rate (absolute value) | 2 |
| θ | Average tax rate on income | 0.20 |
| G_0 | Government expenditure | 10 |
| M_0 | Initial value of money supply | 1 |
| \bar{r} | Target policy rate | 0.03 |

TRAVERSE AND STEADY-STATE: BASELINE DYNAMICS

a) National income under baseline scenario

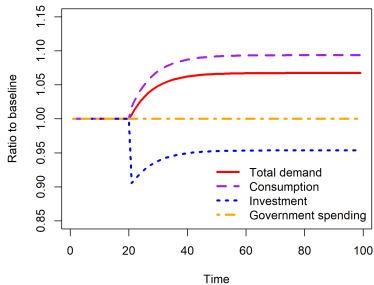


b) Interest rate under baseline scenario

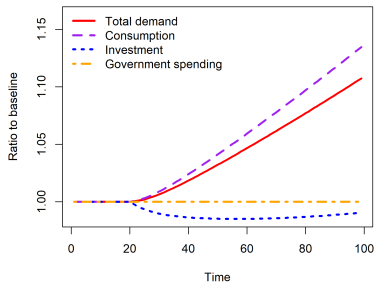


TIGHT MONETARY POLICY SHOCKS

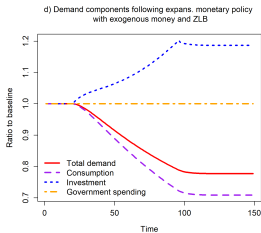
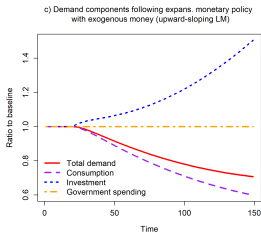
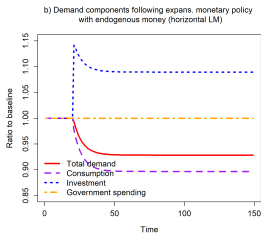
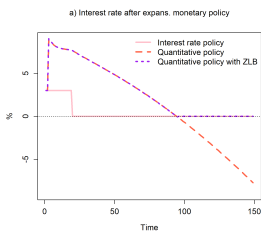
a) Demand components following tight monetary policy with endogenous money (horizontal LM)



b) Demand components following tight monetary policy with exogenous money (upward-sloping LM)



EXPANSIONARY MONETARY POLICIES



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- This raises questions about quantitative policies: their effectiveness is neither automatic nor linear.
- Geometrically, a tighter monetary policy shifts the LM curve upwards (standard story). However, it also shifts the IS upwards! The final effect is ambiguous...

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- Intersecting the two curves is not even an approximate method. It is a wrong method, generating misleading conclusions.
- Even if it were feasible, controlling monetary aggregates while letting the interest rate fluctuate makes the model unstable.
- Instability does not depend on financial markets being more volatile... ([Poole, 1970](#)), but rather on the destabilizing effect of the endogenous interest rate.

Thank you

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