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?

The balance-sheet matrix

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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
		Current	*Capital*			
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
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Note 2: $r \geq 0$ if $\lambda_0 \cdot V + \lambda_1 \cdot YD \geq M$.

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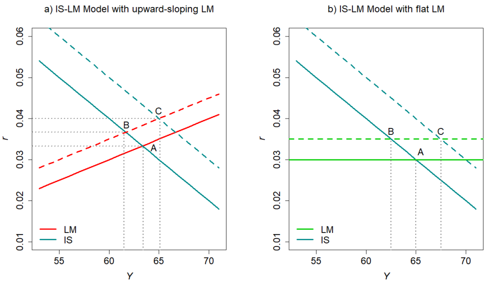

Analytical solutions

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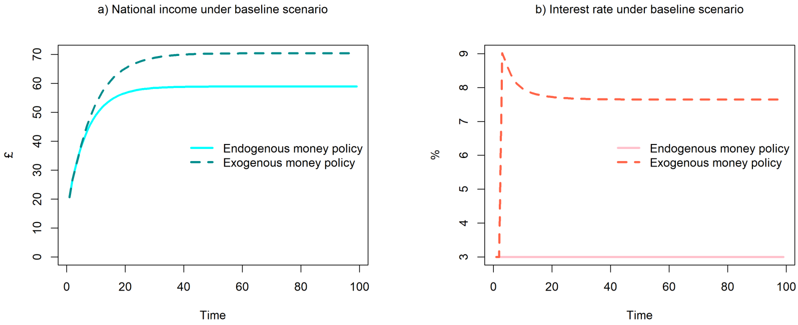
c) if $\iota_1 = B_h^* \cdot (1-\theta)/\theta$, the steady-state level of national income is unaffected by the interest rate.

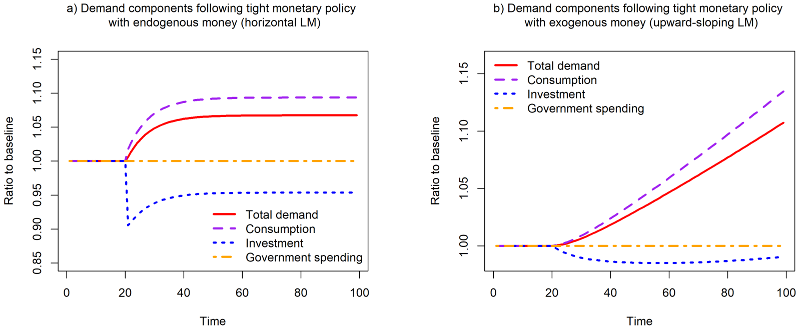
Model parameters and exogenous variables

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

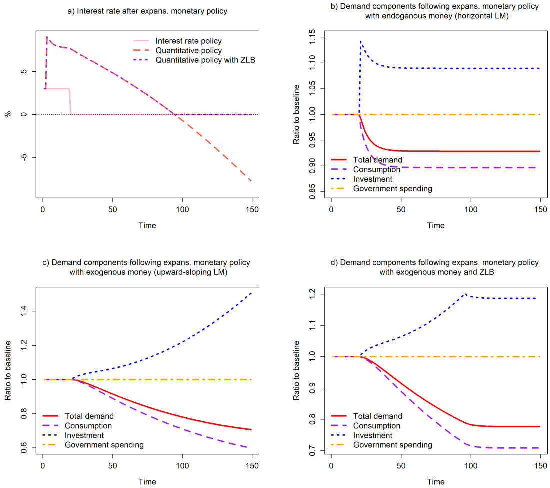
Traverse and steady-state: baseline dynamics



Tight monetary policy shocks



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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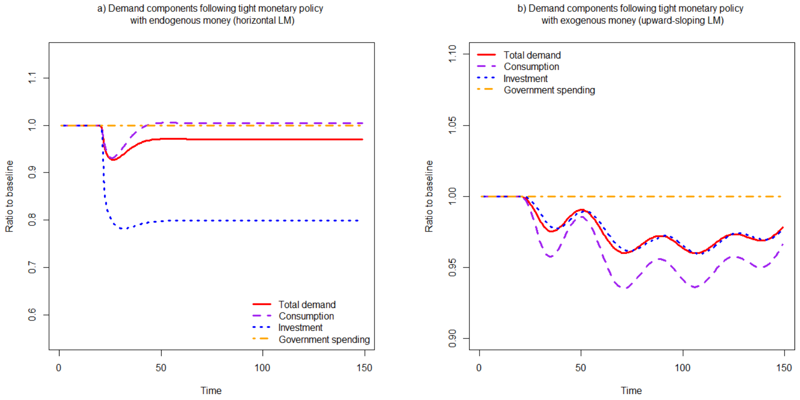
– Other equations are either adjusted accordingly or left unchanged.

Additional monetary policy schocks



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- Even if it were feasible, controlling monetary aggregates while letting the interest rate fluctuate makes the economy 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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