Calculating with our Money Demand Function

Part 1

$$r_N = r_R + \eta^e + r_R \eta^e$$

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Lectures in Macroeconomics- Charles W. Upton

The Basic Model

$$m_{i,t} = \xi \frac{1 + r_N}{r_N} c_{i,t}$$

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The Consumption Fraction

$$c_{i,i} = \frac{1}{(n-i+1) + \xi(n-i)} z_i$$

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Period 1

$$m_1 = \xi \frac{1 + r_N}{r_N} c_1$$

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Period 1

$$m_{1} = \xi \frac{1 + r_{N}}{r_{N}} c_{1}$$

$$c_{1} = \frac{1}{4 + 3\xi} z_{1}$$

$$c_1 = \frac{1}{4+3\xi} z_1$$

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Period 2

$$c_{1} = \frac{1}{4+3\xi} z_{1} \qquad m_{1} = \xi \frac{1+r_{N}}{r_{N}} c_{1}$$

$$c_{2} = \frac{1}{3+2\xi} z_{2} \qquad m_{2} = \xi \frac{1+r_{N}}{r_{N}} c_{2}$$

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Demand Function

Period 3

$$c_{1} = \frac{1}{4+3\xi} z_{1} \qquad m_{1} = \xi \frac{1+r_{N}}{r_{N}} c_{1}$$

$$c_{2} = \frac{1}{3+2\xi} z_{2} \qquad m_{2} = \xi \frac{1+r_{N}}{r_{N}} c_{2}$$

$$c_{3} = \frac{1}{2+\xi} z_{3} \qquad m_{3} = \xi \frac{1+r_{N}}{r_{N}} c_{3}$$

Demand Function

Period 4

$$c_{1} = \frac{1}{4+3\xi} z_{1} \qquad m_{1} = \xi \frac{1+r_{N}}{r_{N}} c_{1}$$

$$c_{2} = \frac{1}{3+2\xi} z_{2} \qquad m_{2} = \xi \frac{1+r_{N}}{r_{N}} c_{2}$$

$$c_{3} = \frac{1}{2+\xi} z_{3} \qquad m_{3} = \xi \frac{1+r_{N}}{r_{N}} c_{3}$$

$$c_{4} = z_{4} \qquad m_{4} = 0$$

An Illustration

- y₂=\$300,000, y₃=\$630,000,
 y₁=y₄=0
- $r_R = 50\%$, $\eta^e = 50\%$
- $\xi = 1/3$

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Calculating with our Money Demand Function

An Illustration

- y₂=\$300,000, y₃=\$630,000,
 y₁=y₄=0
- $r_R = 50\%$, $\eta^e = 50\%$
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Calculating with our Money Demand Function

An Illustration

- y₂=\$300,000, y₃=\$630,000, y₁=y₄=0
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Real and Nominal Rates

- y₂=\$300,000, y₃=\$630,000, y₁=y₄=0
- $r_R = 50\%$, $\eta^e = 50\%$
- E = 1/3

$$r_N = r_R + \eta^e + r_R \eta^e$$

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Calculating with our Money Demand Function

Fisher's Law

- y₂=\$300,000, y₃=\$630,000, y₁=y₄=0
- $r_R = 50\%$, $\eta^e = 50\%$
- $\xi = 1/3$

$$r_N = r_R + \eta^e + r_R \eta^e$$

(Irving) Fisher's Law

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Calculating with our Money Demand Function

Fisher's Law

$$r_N = r_R + \eta^e + r_R \eta^e$$

$$r_N = (0.50) + (0.50) + (0.50)(0.50)$$

= 1.25

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Calculating with our Money Demand Function

End

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