5/ · Goods + financial Markets
→ IS-LM model.

Consumption spending → durable goods (tv, furniture, cars)
→ sensitive to changes in the int. rate
most bought on credit
→ higher int. rate / higher cost of goods
less affordable.

Investment spending → negatively related to int. rate.
→ what firms spent to borrow money
→ higher int. rate ⇒ higher the cost

Government Spending → part financed from borrowed funds
→ pays int on all money it borrows
→ higher int → higher cost

Investment, Sales + interest rate $I = I(Y, i)$ (+ -)

* Investment + level of output
→ increase in the level of production → increase in the level of sales
→ production increase → sales increase → invest more.
→ positive relationship between level of output + level of investment
$Y\uparrow = i\uparrow$
$Y\downarrow = i\downarrow$

aim of investment is to make a profit in the future

→ Building a factory / buying machine requires funds
→ int. rate on borrowed funds.
→ int rate → opportunity cost on own funds.
→ higher the int rate → higher the cost → lower the investment cost. → fewer profitable investment opportunities
→ negative relationship between int + investment

Determing the level of output
→ Demand for goods (C+I+G) determine the level of output.
→ Investment no longer autonomous but now influenced in the int. rate
→ $I = I(Y, i)$
→ investment is a possitive function of the level of output
↳ negative function of the interest rate.

→ increase in output leads to increase in level of consumption spending + level of investment spending.
→ goods market equilibrium exists where the demand for goods is equal to output level.
→ increase in interest rate will decrease investment spending
→ increase in investment → increase demand of goods

$$Y = Z = C_0 + c(Y - T) + I(Y, i) + G$$

OR

$$Y = Z = C(Y - T) + I(Y, i) + G$$

IS Curve → showing all the combinations of int rate / income levels where the goods market is in equilibrium.

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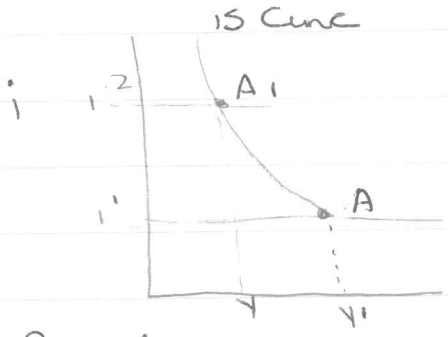
steps to draw

Deriving the IS Curve

$i\uparrow = I\downarrow \Rightarrow Z\downarrow \Rightarrow Y\downarrow$



Point A

1. Given an interest rate of i -> corresponding demand function Z2
2. Goods market equilibrium @ Point A.
3. equilibrium level is Y
4. Dotted line to Y1 -> first point on IS Curve
5. extend A -> i to equal int rate

Second A point

1. assume rate increase to i2
2. Given the higher int rate -> investment spending is lower indicating a downward shift. ↓
3. New Market equilibrium at A1

Shift of IS Curve

-> shift is caused by a change in any of the autonomous factors that change the demand for goods + the equilibrium level of income given the int rate

↳ autonomous factors are - Government spending
- taxation
- consumer confidence

→ Government spending

→ at each int rate, the demand for goods, equilibrium level of income are higher than before.

→ Rightward shift of the curve.

→ Increase in taxation → implies that each + every int rate the demand for goods + the equilibrium level of income are lower + a left wards shift occurs

IS Curve = combinations of int rates + income levels showing where the goods market is in equilibrium provided the autonomous variables remain unchanged (Government spending, Taxation, consumer confidence)

IS curve shift

to Right - increase in government spending
- decrease taxation
- increase in consumer confidence

to left → decrease in government spending
→ increase in taxation
→ decrease in consumer confidence

→ increase in money supply shifts the curve down

→ Increase in taxes shifts IS Curve → left

→ Changes in Taxes or Government Spending will shift the IS curve

→ at a given interest, the equilibrium level of output is lower than what it was ~~the~~ before the increase in taxes

→ any factor that for a given interest rate decreases the equilibrium level of output causes the IS curve to shift to the left.

→ decrease in taxes, increase in government spending → increase in consumer confidence causes IS ~~$~~ Curve to shift to the right

Δ ⇒ Increase interest rate → decrease in output → downward slaping IS curve

Δ ⇒ Changes in the factors that decrease the demand for goods, given the int. rate.

→ Changes in factors that increase the demand for goods, given the int. rate shifts the IS Curve to right

→ Shift left → decrease demand for goods

Shift Right → increase demand for goods

	IS Curve
↑ interest RATE	upward
↑ Government Spending	Right
↓ taxation	Right
↓ interest rate	down

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5/ Financial Market $M = \$Y L(i)$

→ possitive relationship → demand for money
→ level of output
→ increase in output → increase demand for money
→ equilbeum of financial market supply of money = demand for money.
→ increase in demand for money → increase int rate

Real money, real income + int. rate

→ real money supply → money stock (supply) expressed in terms of its purchasing power.
→ nominal demand is the demand for a given number of Rands
→ while real demand → demand for money expressed in terms of the numer of units it will purchase.

Deriving the LM Curve. $Y\uparrow \Rightarrow Md\uparrow = i\uparrow$
→ equilbeum = demand for money = supply of money.
→ financial market represented by LM Curve.

Follow Steps 1 - 13 SG 100 - 101
for how to draw the LM Curve.

→ increase in income leads at a given interest rate → increase in demand for money
→ this increase in demand for money leads to an increase in equilibeum int. rate.

→ implies an increase in income leads to an increase in int. rate

∴ the LM curve slopes upwards

Shifts of the LM Curve

→ increase in money ↓ curve down

↳ increase in money supply leads to decrease in interest rate

→ increase in money causes LM curve to shift down.

→ decrease in money shifts the curve upwards

			LM Curve
increase	↑	output level	upward movement
	↑	money supply	↓ downward shift.
	↓	decrease level of output	downward movement
	↓	money supply	upward shift

$Y \uparrow = M_d \uparrow = i \uparrow$

$Y \downarrow = M_d \downarrow = i \downarrow$.

5/ Putting the IS + LM relations together

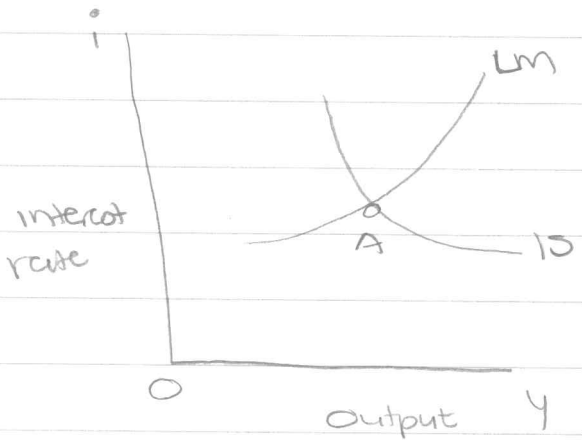
→ any point on IS curve indicates a goods market equilibrium

→ change in exogenous variables shifts the IS curve

→ decrease in int. rate is a downward movement along the curve.

→ any point on the LM curve corresponds to equilibrium in the financial Market

→ increase in money supply shifts LM curve downwards



only at point A both the goods + financial market is in equilibrium

Goods Market IS → increase in int rate → decrease in output

Financial Market LM → increase in output → increase int. rates.

→ int. rate declines + investment spending increases → movement on IS curve.

→ Change in the goods market eventually influence the financial market.

→ initial impact of change in money supply is on the financial market after which it impacts the goods market

→ initial impact of a change of taxation impacts the goods market + then the financial market

Exogenous variables

Goods Markets →
shifts IS curve

* G - Government Spending
* T - Taxes
  - ↑ T shifts left
  - ↓ T shifts right.

Financial Market
shifts LM curve
* M_S → money supply

Fiscal Policy, output + interest rate

↓ budget deficit ↑ taxes ⇒ fiscal contraction or fiscal consolidation.

↑ budget deficit ↓ Taxes / ↑ Government spending ⇒ fiscal expansion

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→ 121./122

Monetary Policy, output + interest rate

↑ money supply → monetary expansion
↓ money supply → monetary contraction / monetary tightening

increase in Money → shifts curve down.
decrease in money → shifts curve up.

→ monetary expansion → higher output
→ lower int. rate.

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Policy Mix

→ decrease in Government spending shifts IS Curve to left.

→ Increase in money supply causes downward shift of LM Curve

→ decrease Money supply increases int rate + decreases equilibrium ~~of~~ level of income

→ decrease of tax → decrease int. rate. + increase level of output

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