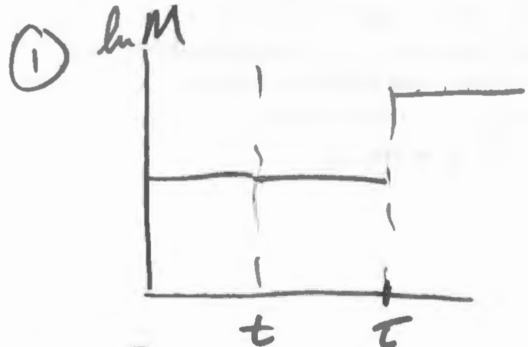
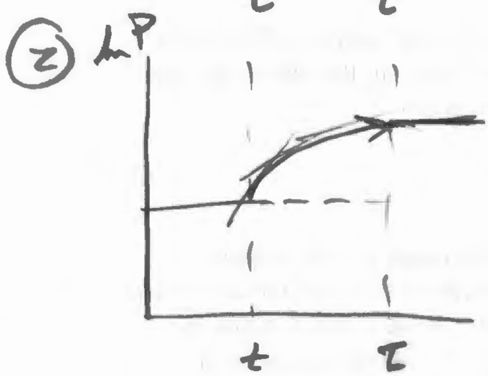
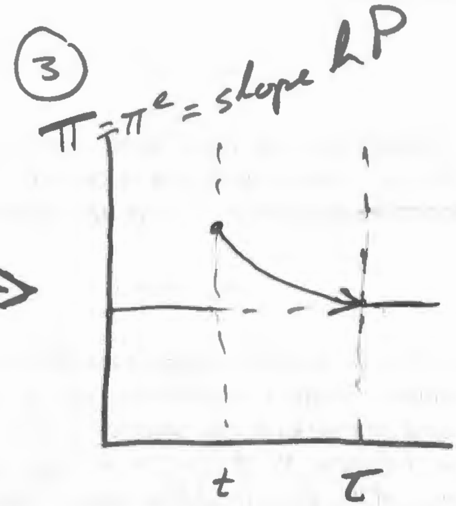
Expected Permanent $\uparrow M^s$: Done Right.

Key: (1) $i = r^* + \pi^e$ in Small Open Economy, so $r^* = r^w$

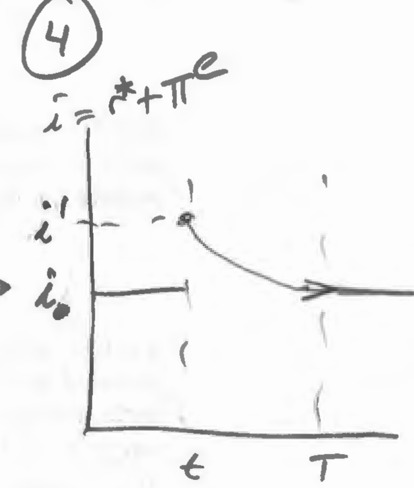
(2) m^d like any D-curve will move based on i^e, expected price of good demanded.





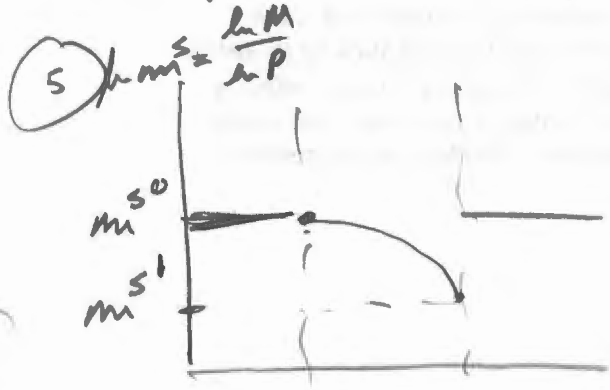


Keeps Law of Asset Price Continuity

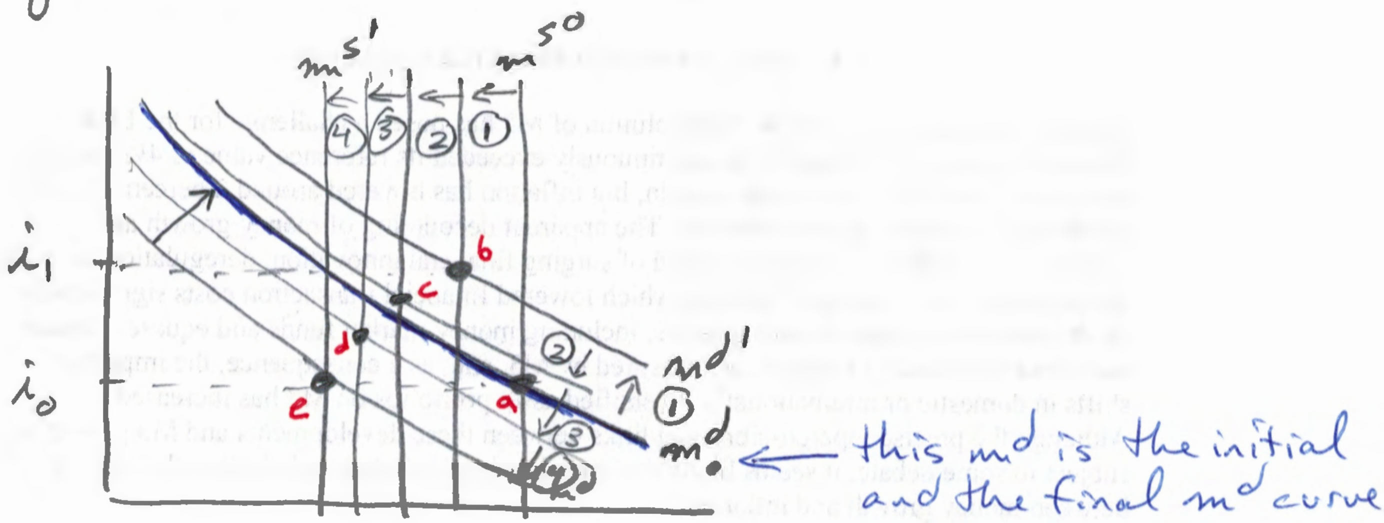


So, it must mean that m^d jumps all over to make sure this is the path of i and Asset Price Continuity isn't violated.

To figure out m^d, let's look at m^s.



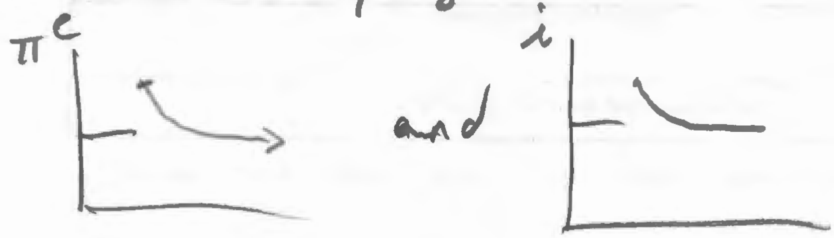
Money Diagram



From "Factors of Demand" (check principles textbook)

↑ Expected Future Price of a good Increases Demand today (while it's still relatively cheap).

So from the last page we know



This expected ↑i & π^e generated the initial ↑m^d which, interestingly enough makes ↑i happen now.

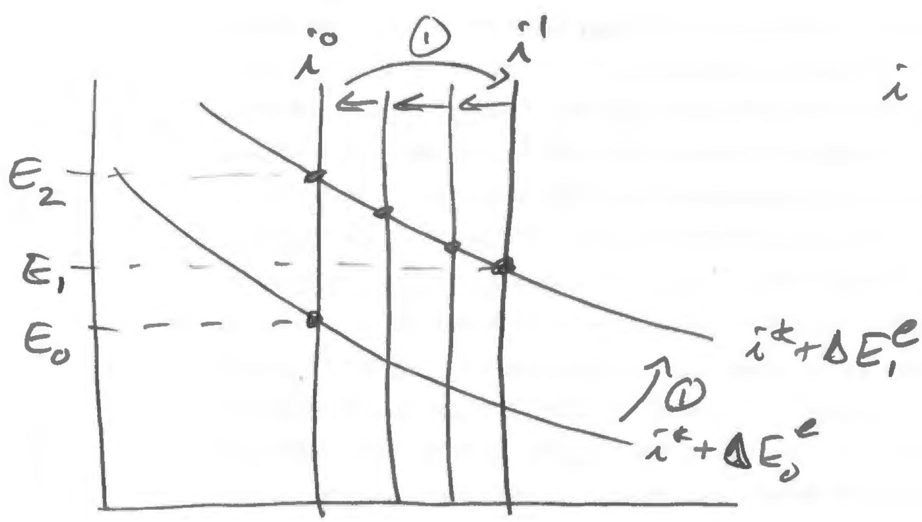
From then on i & π^e are falling everywhere and this is expected to continue until ↑M^s occurs. So, for the whole transition period m^d is declining and declining faster than m^s. This causes i to jump up and fall (points a–e).

At time T, ↑M^s occurs and m^d jumps back to its original position since no further Δ is expected.

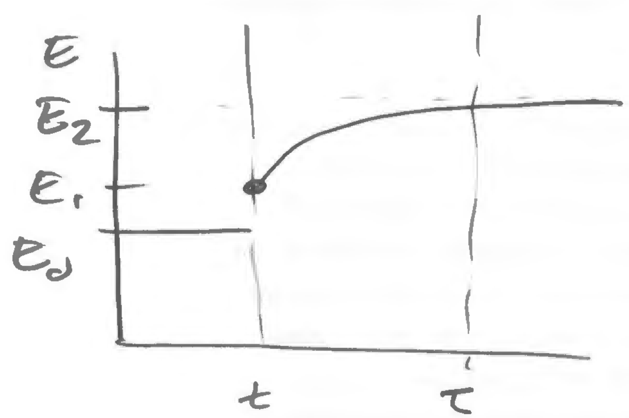
Exchange Rate

E must also obey the Asset Price Continuity Principle.

Note: because everyone knows that P ends higher, this is expected ∴ thus $i^* + \Delta E^e$ jumps immediately



i jumps from i_0 to i' and then slowly falls back to i_0.



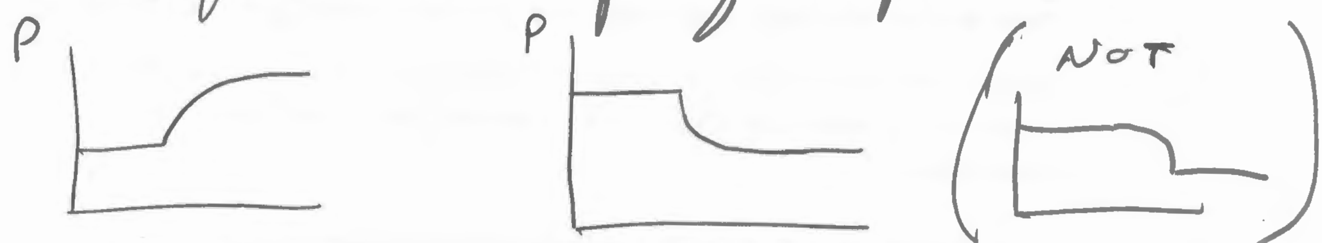
Notice:
This looks just like P but with an initial jump.

How to get this with LESS Work:

Steps for Anticipated

1. draw M time path
2. draw P time path
3. use slope of P to get π & i paths
4. E path looks like P path but add a jump at the beginning.

Just be careful with shape of P-path.



increase   decrease

This will give you the correct π path too.

Finally, avoid jumps in π except at the beginning.

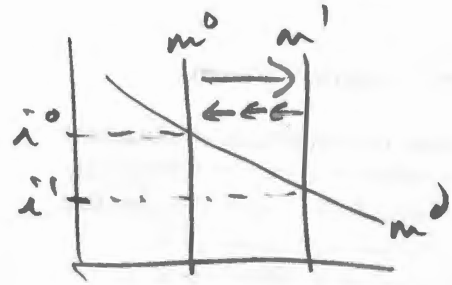
Remember, your goal is a path for i with no Anticipated jumps.

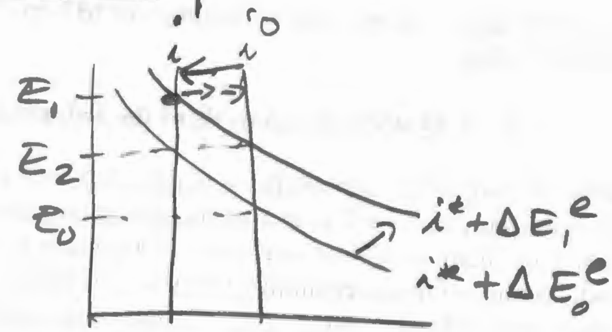
Next Examples

I. Unanticipated, Permanent $\uparrow M^s$
II. Anticipated, Permanent $\uparrow M^s$
III. Unanticipated temporary $\uparrow M^s$
IV Anticipated Temporary $\uparrow M^s$

Examples

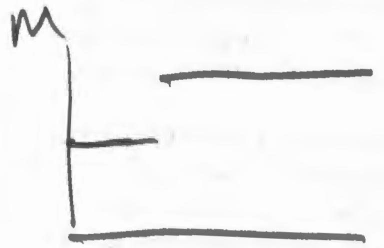
I Unanticipated PERM $\uparrow M^s$

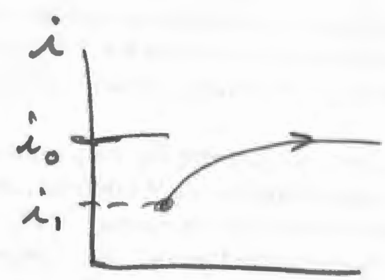


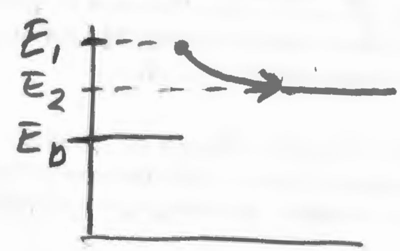


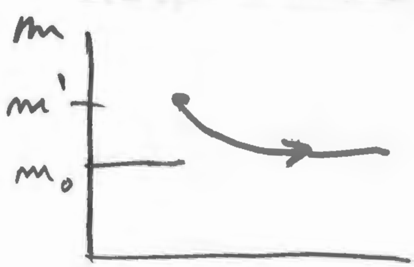
what happened?

1. $\uparrow M^s \to \uparrow m$ ⁝ $\downarrow i$ to i' (all jump)
   At the same time, Jump $\uparrow (i^* + \Delta E^e)$ ⁝ $\uparrow E$ to E'
2. $\uparrow P$ slowly $\to \downarrow m$ slowly ⁝ $\uparrow i$ slowly to i_o
   At the same time slow $\uparrow i \to$ slow $\downarrow E$.





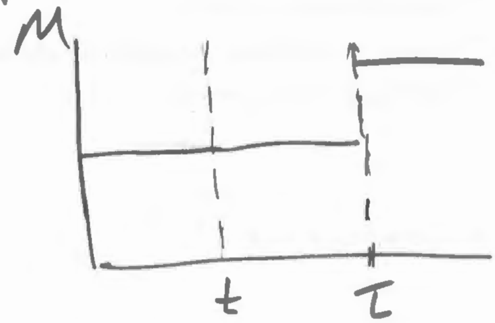




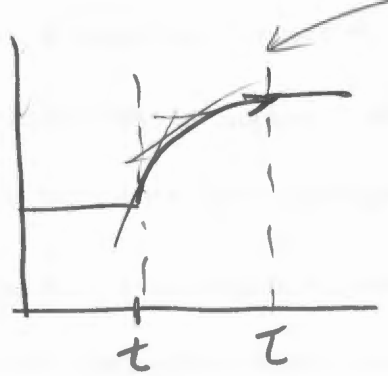
II ⟹ Anticipated, Permanent $\uparrow M^s$

Follow your steps

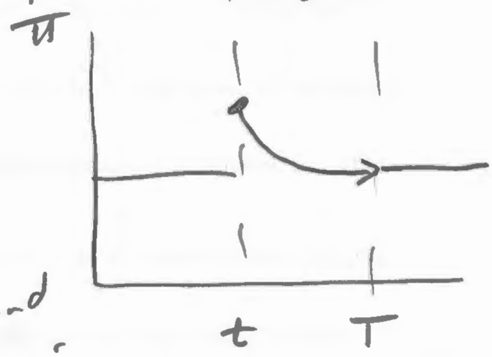
Step 1 M



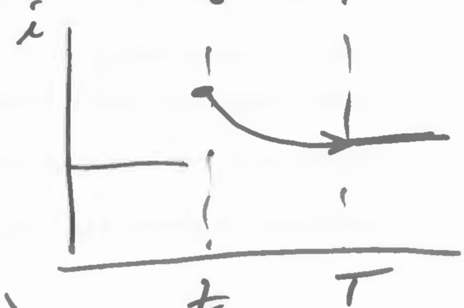
Step 2 P



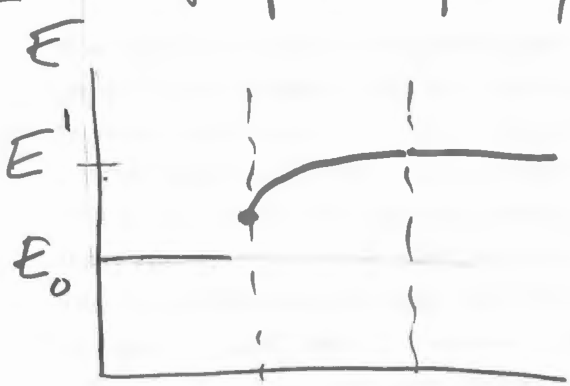
Step 3 Slope of P



and

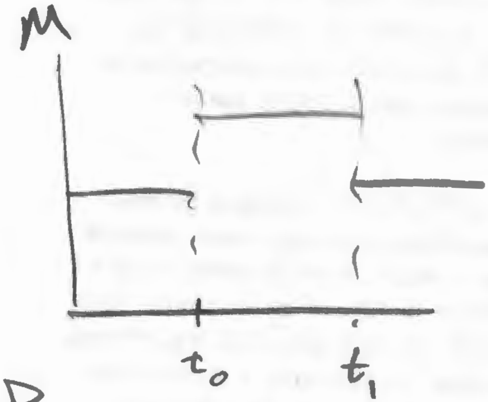


Step 4 (add jump to beginning of P)



TEMP Combines

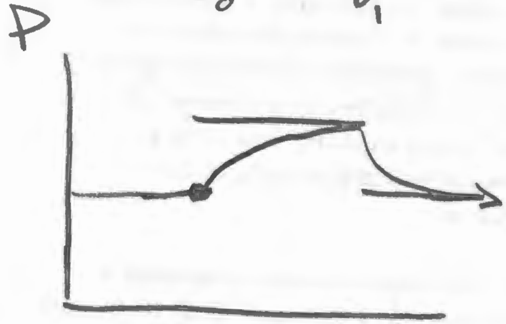
(1) Unanticipated TEMP = Unanticipated $\uparrow M^s$ & $\downarrow M^s$



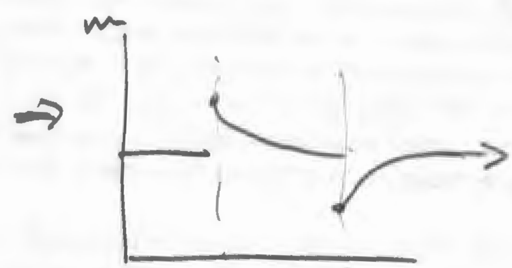
Unanticipated $\uparrow M^s$ at t_0

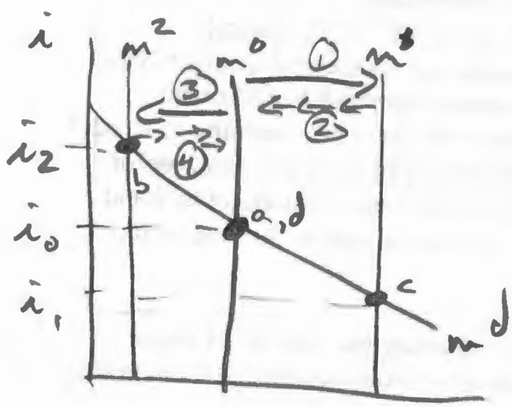
Unanticipated $\downarrow M^s$ at t_1

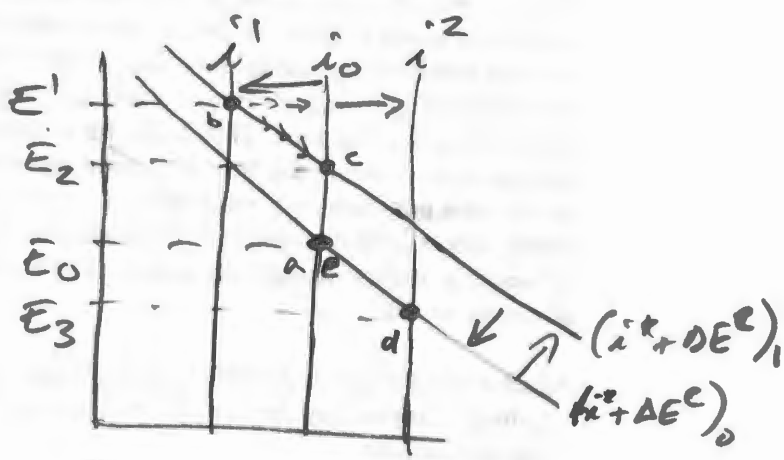
This means we can have 2 jumps in Asset prices i & E.

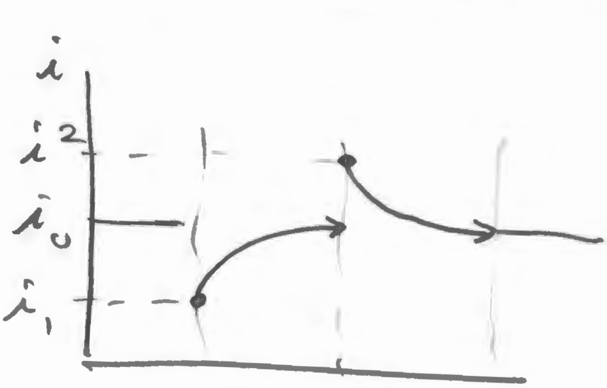


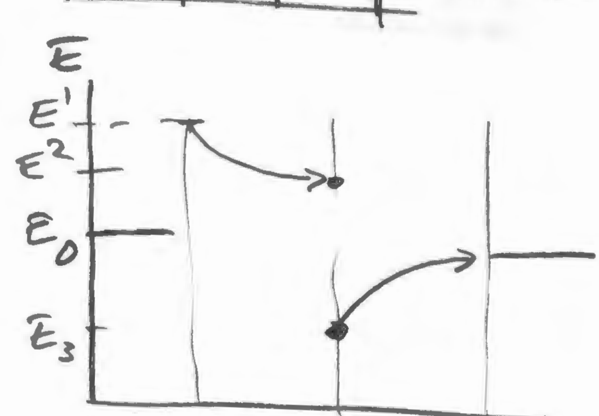
$\Rightarrow$











VI Anticipated TEMP: 100% Anticipated

Approach: Do anticipated PERM $\uparrow m^s$
then Do anticipated PERM $\downarrow m^s$
then Combine & smooth π

Anti PERM $\uparrow m^s$ + Ant. PERM $\downarrow m^s$ = Ant. TEMP $\uparrow m^s$