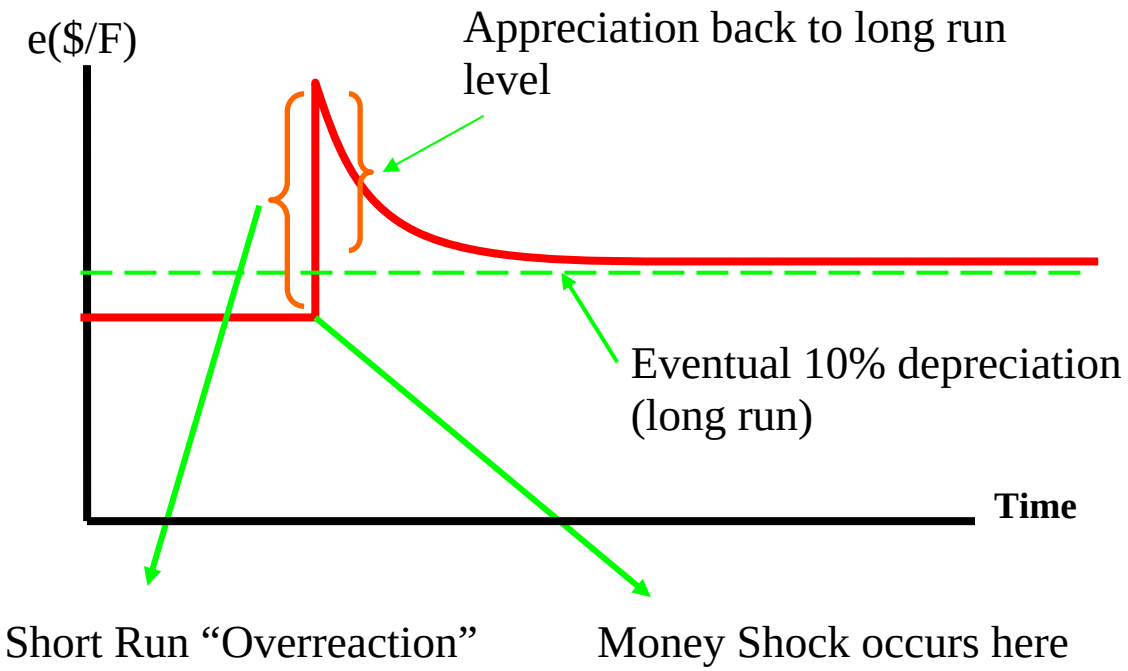
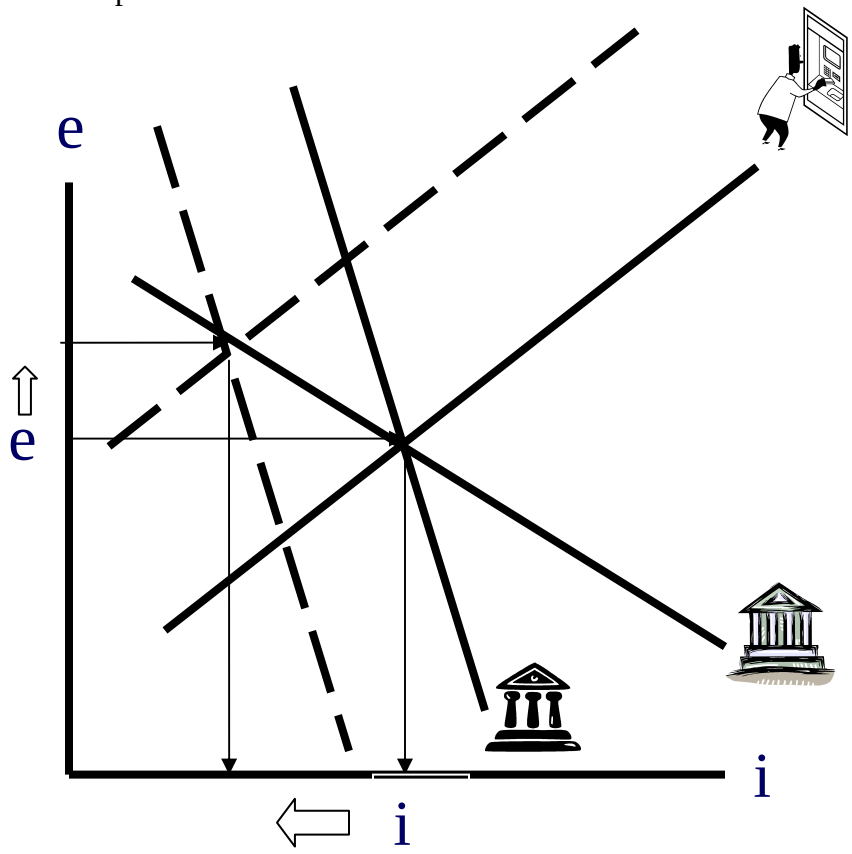
Finance 475
Solutions to Problem Set #4

Monetary Model (Flexible Prices): In the flexible price framework, all that matters are money markets and PPP to tie together the two price levels. A 10% increase in the money supply raises the domestic price level by 10%. The dollar depreciates by 10% (PPP) and everything else is constant.

Monetary Model (Fixed Prices): In the long run, commodity prices will adjust and the dollar will depreciate by 10% (prices in the US are 10% higher and PPP holds). However, in the short run, prices are fixed and an increase in the money supply works through the domestic money market to lower US interest rates (excess supply of credit). Lower interest rates promote an increasing domestic spending (both households as well as firms). The extra spending does raise income (temporarily) at home, but is also worsens the trade deficit. A large trade deficit plus low interest rates (low interest rates makes it difficult to attract foreign capital), the dollar must depreciate. Now, because US interest rates are lower than foreign rates, the dollar will need to appreciate at some point. Therefore, the immediate impact is a depreciation of MORE than 10%, and then a gradual appreciation that approaches its new long run level.



Portfolio balance approach: The Federal Reserve increases the supply of money by 10%. This is accomplished by an open market purchase of US bonds. This creates two effects. Interest rates are lowered through the money market (the money market curve shifts to the left. Further, because the supply of bonds has decreased, the domestic bond market also pushes interest rates down. Note that wealth has not changed, but the composition has (more cash, less US bonds). Now, the exchange rate must adjust to clear the foreign bond market. The exchange rate adjusts to where all three curves intersect – the nominal exchange rate depreciates. Lower interest rates domestically make foreign bonds more attractive to investors. To get investors to hold US bonds, they must become cheaper. Since prices are fixed in this framework, the real exchange rate also depreciates.



4) In the flexible price framework, volatility is a result of relative price changes that alter the real exchange rate. IN the fixed price framework, it's the interaction between currency markets and bond markets that create volatility (UIP). Lastly, the portfolio balance model shows that interactions between domestic and foreign bond markets create volatility in exchange rates.

5) The flexible price framework is a better long run explanation while the fixed price and portfolio balance frameworks are better for the short term.