Interest Rates

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Interest Rates Are Market Determined

- Interest rates are “prices” that are determined by the interaction of supply and demand.
  - Demand for “early use of funds”
  - Equilibrium (observed) interest rates occur at that rate that makes the plans of fund demanders and fund suppliers compatible.
- Higher interest rates → borrowing is more expensive
- Lower interest rates → borrowing is cheaper

Patience and Interest Rates

- In the long run, interest rates tend to the values that balance the plans of borrowers and lenders.
  - “Suppliers” or lenders are “patient.” Why?
  - “Demanders” or borrowers are “impatient.” Why?
  - If there is more credit demanded than supplied, interest rates will tend to increase. The most productive projects will be funded.
  - If there is less credit demanded than supplied, interest rates will tend to decrease. The most patient savers will offer to accept a smaller interest rate.

Departures from Long-run Trend (1)

- Recap: In the long run, the saving and investment plans of market actors jointly determine interest rates. (supply and demand)
- Crowding Out: Interest rates tend to be higher than the long run trend when the government runs budget deficits because the government competes with private borrowers for scarce funds.
- Current account deficits tend to lower interest rates because the supply of credit is greater than it would be from domestic sources alone.

Departures from Long-run Trend (2)

- When the economy is in recession, interest rates tend to be lower than the long run trend because monetary policy is usually highly accommodative and the demand for credit is low.
- Federal Reserve monetary policy has a large effect on interest rates.
- Federal Reserve influences interest rates. Federal Reserve does not control interest rates perfectly.

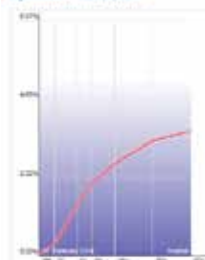
Interest Rates Moving Together (1)

- There is not just one interest rate in the economy. There are many interest rates.

Interest Rates Moving Together (2)

- Interest rates move together because they all respond to changes in inflation. Why?
- Role of the real interest rate
- Real interest rate =
  nominal interest rate – inflation rate
- Interest rates also move together because the premium the market provides to lenders to lend to riskier borrowers is approximately constant over time.
- Interest rate risk also matters. (What if interest rates change and you are locked into an investment?)

The Yield Curve (1)



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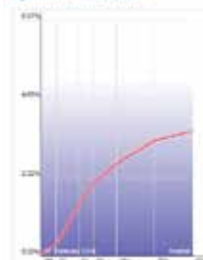
Graphical depiction of the term structure of interest rates.

The Yield Curve (2)



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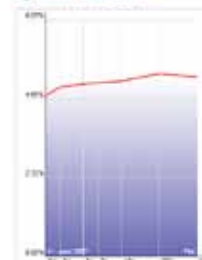

June 21, 2007

The Yield Curve (3)

- Upward sloping yield curve implies that markets expect short-term interest rates to increase.
- Horizontal yield curve implies that markets expect future short-term interest rates to be about the same as current short-term interest rates.
- Downward sloping yield curve implies that markets expect future short-term interest rates to be lower than current short-term interest rates.

QE1, QE2, and QE3

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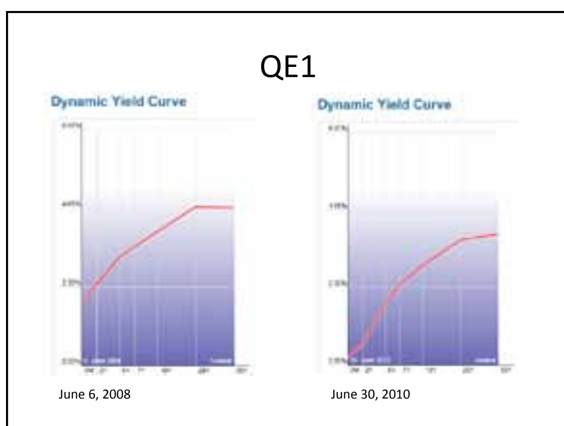
QE1, QE2, and QE3

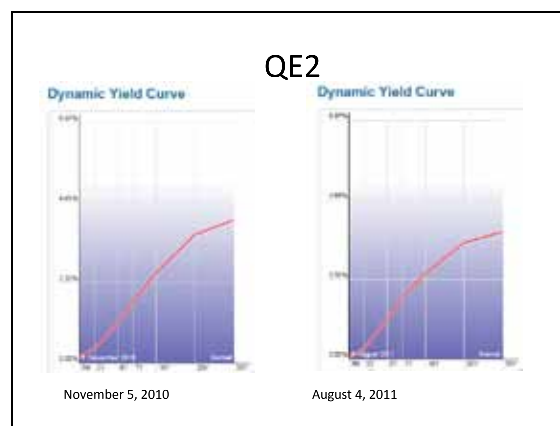
- Since the financial crisis, the Federal Reserve has carried out three batches of "large scale asset purchases," commonly called quantitative easing (QE).
- Purpose was to lower the long end of the yield curve. (Make longer term loans less expensive and therefore spur economic growth by spurring businesses and households to borrow and expand their physical capital.)

QE1



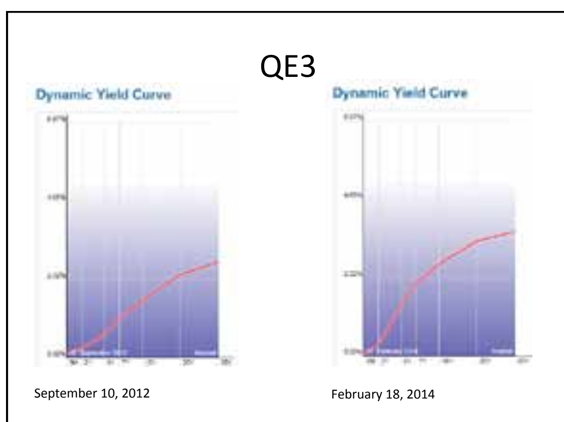
June 6, 2008   June 30, 2010

QE2



November 5, 2010   August 4, 2011

QE3



September 10, 2012   February 18, 2014

Sources

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- Salemi, Michael. *Money and Banking.* thegreatcourses.com

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