Module 29
The Loanable Funds Market

Mr. Hess
AP Macroeconomics

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The Loanable Funds Market

- The market where savers and borrowers exchange funds (Q_{LF}) at the real rate of interest (r%).
- The demand for loanable funds, or borrowing, comes from the households, firms, government and the foreign sector.
- The supply for loanable funds, or savings, comes from households, firms, government, and the foreign sector.

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The Loanable Funds Market

- People/businesses/government WITH money supply it to others. In return they receive interest of the money loaned to others.
- People/businesses/government WITHOUT money borrow it to others at an interest rate that is to be paid back at a later time.

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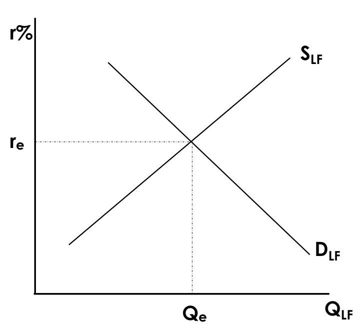
Loanable Funds Market In Equilibirium



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What is a Bond?

- A bond is a certificate of debt issued by a government or corporation guaranteeing payment of the original investment <u>plus</u> interest by a specified future date.
- The demand for loanable funds is in fact the supply of bonds.
- The supply of loanable funds is also the demand for bonds.

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Changes in the Demand for Loanable Funds

- Remember that demand for loanable funds = borrowing (i.e. Supplying bonds)
- More borrowing = more demand for loanable funds

  ($D_{LF} \rightarrow$)
- Less borrowing = less demand for loanable funds

  ($D_{LF} \leftarrow$)
- Examples:
  - **Government deficit spending = more borrowing**
    = more demand for loanable funds
    .: $D_{LF} \rightarrow$.: r%↑
  - **Less investment demand = less borrowing**
    = less demand for loanable funds
    .: $D_{LF} \leftarrow$.: r%↓

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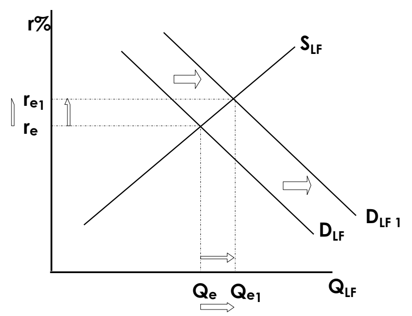
Increase in the Demand for Loanable Funds



$D_{LF} \rightarrow$.: r% ↑ & Q_{LF} ↑

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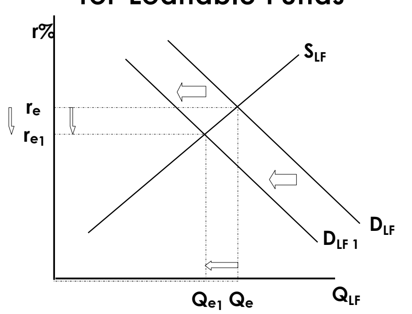
Decrease in the Demand for Loanable Funds



$D_{LF} \leftarrow$.: r% ↓ & Q_{LF} ↓

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Changes in the Supply for Loanable Funds

- Remember that supply for loanable funds = savings (i.e. Demand for bonds)
- More savings = more supply of loanable funds

  (S_{LF} →)
- Less savings = less supply of loanable funds

  (S_{LF} ←)
- Examples:
  - **Government budget surplus = more saving = more supply of loanable funds .: S_{LF} → .: r% ↓**
  - **Decrease in consumers' MPS = less saving = less supply of loanable funds .: S_{LF} ← .: r% ↑**

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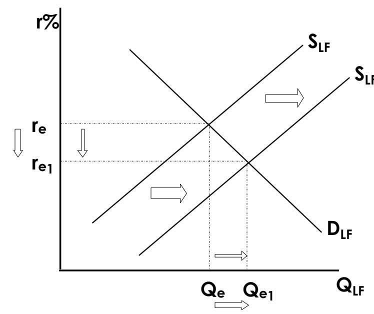
Increase in the Supply for Loanable Funds



S_{LF} → .: r% ↓ & Q_{LF} ↑

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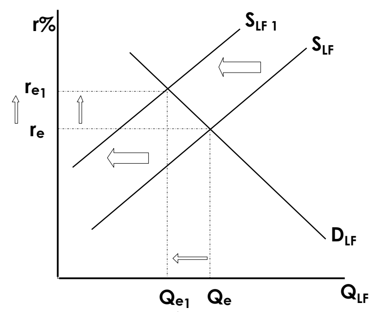
Decrease in the Supply for Loanable Funds



S_{LF} ← .: r% ↑ & Q_{LF} ↓

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Summary

- The loanable funds market determines the real interest rate (r%).
- The loanable funds market relates saving and borrowing.
- Changes in saving and borrowing will create changes in loanable funds and therefore the r% changes.
- When the government enacts <u>fiscal policy</u> it will affect the loanable funds market.
- Any changes in the real interest rate (r%) will in turn affect levels of Gross Private Investment (I_G)

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Module 29
Interest Rates & Inv. Demand

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What is investment?

- *Money spent or expenditures on:*
  - *New plants (factories)*
  - *Capital equipment (machinery)*
  - *Technology (hardware & software)*
  - *New houses*
  - *Inventories (goods sold by producers)*

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Expected Rates of Return

- *How do businesses make investment decisions?*
  - ***Cost/benefit analysis***
- *How do businesses determine the benefits?*
  - ***Expected rate of return***
- *How do businesses count the cost?*
  - ***Interest costs***
- *How do businesses determine the amount of investment they undertake?*
  - ***Compare expected rate of return to interest cost***
    - ***If expected return > interest cost, then invest***
    - ***If expected return < interest cost, then do not invest***

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Real (r%) v. Nominal (*i*%) Interest Rates

- *What's the difference?*
  - *Nominal is the observable rate of interest. Real subtracts out inflation (π%) and is only known ex post facto.*
- *How do you compute the real interest rate (r%)?*
  - $r\% = i\% - \pi\%$
- *What then, determines the cost of an investment decision?*
  - *The real interest rate (r%)*

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The Investment Demand Curve (ID)

- *What is the shape of the Investment demand curve?*
  - *Downward sloping*
- *Why?*
  - *When interest rates are high, fewer investments are profitable; when interest rates are low, more investments are profitable*
  - *Conversely, there are few investments that yield high rates of return, and many that yield low rates of return*

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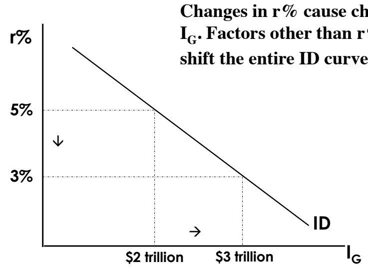
The Investment Demand Curve

Changes in r% cause changes in I_G. Factors other than r% may shift the entire ID curve



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Shifts in Investment Demand (ID)

- *Cost of Production*
  - *Lower costs shift ID →*
  - *Higher costs shift ID ←*
- *Business Taxes*
  - *Lower business taxes shift ID →*
  - *High business taxes shift ID ←*
- *Technological Change*
  - *New technology shifts ID →*
  - *Lack of technological change shifts ID ←*
- *Stock of Capital*
  - *If an economy is low on capital, then ID →*
  - *If an economy has much capital, then ID ←*
- *Expectations*
  - *Positive expectations shift ID →*
  - *Negative expectations shift ID ←*

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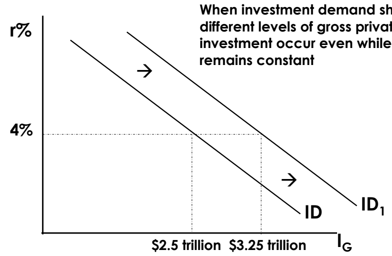
Shifts in Investment Demand

When investment demand shifts, different levels of gross private investment occur even while r% remains constant



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Instability of Investment

- *Durability*
  - *Capital has a long life-span, therefore once it is built there is no immediate need for further investment*
- *Variability of Profits*
  - *Profitability is subject to the forces of competition, cyclical changes in the economy, and human management decisions*
- *Irregularity of Innovation*
  - *Innovation does not proceed in a smooth linear fashion, instead there are bursts of innovation followed by periods of relative stability*
- *Variability of Expectations*
  - *Political, social and natural phenomenon shape our positive and negative expectations of the future*

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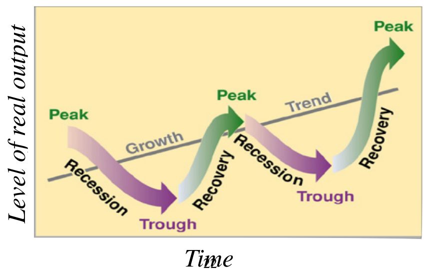
Instability of Investment

- *Many economists believe that investment instability is the chief cause of the business cycle.*



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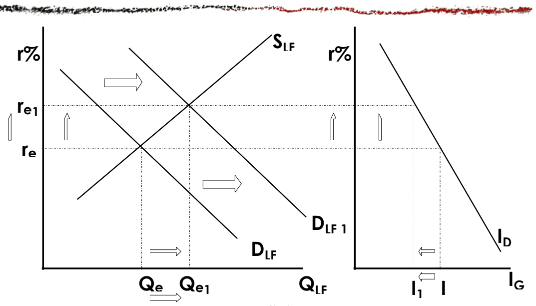
Loanable Funds/Investment Demand



G↑ and/or T↓ .: Government deficit spends .: D_{LF} → .: r%↑ .: I_G↓

(Crowding-Out Effect)