

## OUTLINE — October 31, 2018

- International Trade
  - Determinants of EX & IM
- International Finance: Exchange Rates
  - Demand & Supply of Foreign Currency
- Interest Rates in an Open Economy

*Happy Halloween!!*

*PS 3 due 10/31-11/1 in section*

*Midterm 2 on Tues., Nov 6, 8-9:30 pm*

*Rooms & Review Sessions posted on Piazza*

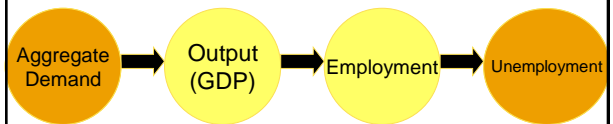
*Same rules as MT1*

## Review

**Question:** Unemployment depends on?

**Answer:** Ultimately, aggregate demand

- $AD = C + I + G + (EX - IM)$



Review      Determinants of EX & IM      Exchange Rates      Interest Rates, Exchange Rates, & NX

## Determinants of Aggregate Demand

- **Consumption spending by households (C)**
  - YD, wealth, credit availability, ? i ?, expectations
  - YD changes when TA or TR change
- **Investment spending by businesses (I)**
  - Interest rates, expected rates of return, credit availability
- **Government spending (G, Nov. 5)**
  - Direct fiscal policy (G)
- **Net exports (EX & IM) – today!**
  - Exchange rates, health of world economy

Review      Determinants of EX & IM      Exchange Rates      Interest Rates, Exchange Rates, & NX

## Organizing today's info

- Three take-aways
  1. Using model of D&S to understand exchange rates
  2. Interest rates affect exchange rates
  3. Exchange rates affect IM & EX
- And of course remember . . . And then there are multiplier effects

Review      Determinants of EX & IM      Exchange Rates      Interest Rates, Exchange Rates, & NX

## International Trade

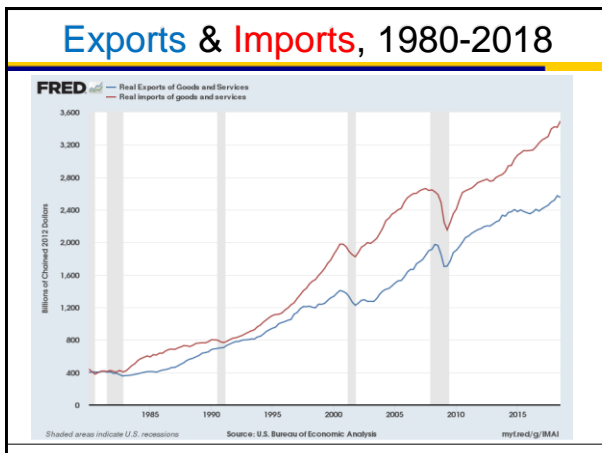
<ul style="list-style-type: none"> <li>▪ Exports (EX)</li>   <li>▪ EX depends on</li> </ul>	<ul style="list-style-type: none"> <li>▪ Imports (IM)</li>   <li>▪ IM depends on</li> </ul>
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Review   **Determinants of EX & IM**   Exchange Rates   Interest Rates, Exchange Rates, & NX

## Determinants of EX & IM

<ul style="list-style-type: none"> <li>▪ EX depends on             <ul style="list-style-type: none"> <li>▪ Foreign Y</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>▪ IM depends on             <ul style="list-style-type: none"> <li>▪ Domestic Y</li> </ul> </li> </ul>
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Review   **Determinants of EX & IM**   Exchange Rates   Interest Rates, Exchange Rates, & NX



## Determinants of EX & IM

<ul style="list-style-type: none"> <li>▪ EX depends on             <ul style="list-style-type: none"> <li>▪ Foreign Y</li> <li>▪ Exchange rates                 <ul style="list-style-type: none"> <li>• <math>P_{FX}</math></li> </ul> </li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>▪ IM depends on             <ul style="list-style-type: none"> <li>▪ Domestic Y</li> <li>▪ Exchange rates                 <ul style="list-style-type: none"> <li>• <math>P_{FX}</math></li> </ul> </li> </ul> </li> </ul>
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Review   **Determinants of EX & IM**   Exchange Rates   Interest Rates, Exchange Rates, & NX

## Price of foreign currency ( $P_{FX}$ ) is a price

$P_{FX}$  = U.S. \$ price of 1 unit of foreign currency

- 111.9 Japanese ¥ for 1 \$      so  $P_{¥} =$
- 0.88 € for 1 \$                      so  $P_{€} =$
- 19.36 Mexican peso for 1 \$      so  $P_{\text{peso}} =$

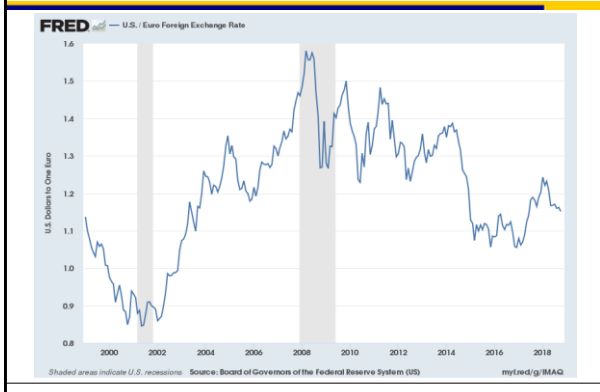
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## International Finance

- Exchange Rates (price of foreign currency) affect EX & IM
- Cost of Imported Good to U.S. Buyer ?  
Cost of Good = 20 €  
Exchange rate = \$1.16 for each €

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## Exchange rates change over time



## # Pounds per Euro: Find the Brexit vote



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## Determining exchange rates

- Demand and Supply

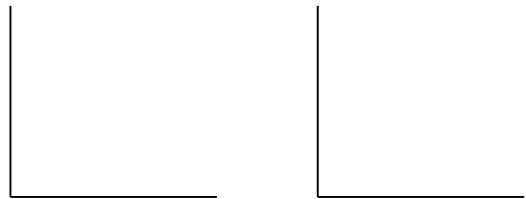


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## Effect of Changing D or S

↑ Demand of FX

↑ Supply of FX



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## Terminology

↑  $P_{FX}$

↓  $P_{FX}$

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## Demand & Supply of Foreign Currency (FX)

▪  $D_{FX}$

▪  $S_{FX}$

▪  $D_{FX}$  depends on

▪  $S_{FX}$  depends on

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## Interest Rates & Wealth Allocation

- Put yourself in shoes of **lenders** (wealth-holders) when thinking about interest rates & exchange rates
- Interest rates
  - For **borrower**: cost of borrowing
  - For **lender**: return from lending
- Higher interest rates
  - Deter **borrowers** (more costly borrowing)
  - Entice **lenders** (higher return from lending)

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## Interest rates affect $P_{FX}$

- Suppose interest rates rise in the U.S. (but not in Europe)



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## . . .and $P_{FX}$ affect EX & IM

- $\downarrow P_{FX} \Rightarrow$

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## Interest Rates in Open Economy

Suppose  $\downarrow$  interest rates in U.S.

[Closed economy]:  $\uparrow I$

[Open economy]: Also  $\uparrow NX$

*You should be able to answer "Why?"*

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