



Why is your trip abroad cheaper this year?

Exchange rates as prices, the market for euros, what moves it, who wins and loses, and the balance of payments.

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Exchange rate

a price of money

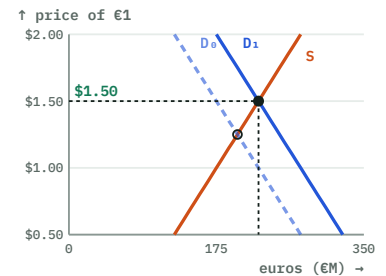
- **Exchange rate** = price of one currency in another · $\text{€}1 = \$1.25$
- Dollars = euros $\times$ rate · $\text{€}100 \text{ hotel} = 100 \times \$1.25 = \textbf{\$125}$ · euros = dollars $\div$ rate · $\$150 \text{ dive} \div \$1.25 = \textbf{€120}$
- **Appreciation** = a currency buys more of another · **depreciation** = buys less · one appreciates $\Leftrightarrow$ the other depreciates
- $\text{€}1 = \$1.25 \rightarrow \textbf{\$1.00}$: $\$1 \text{ buys } \text{€}0.80 \rightarrow \text{€}1.00 \Rightarrow \textbf{dollar appreciates}$, euro depreciates

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Market for euros

D and S again

- **D for €** = Coralians buying European goods, trips, assets · slopes down (cheaper €, more wanted)
- **S of €** = Europeans buying Coralian goods, dives, bonds $\Rightarrow$ they sell € for \$ · slopes up
- Price = **dollars per €1** · start **\$1.25, €200M**
- $D + \text{€}50\text{M} \Rightarrow \textbf{\$1.50}$, $\text{€}225\text{M} \Rightarrow$ dollar depreciates · $S + \text{€}50\text{M} \Rightarrow \textbf{\$1.00}$, $\text{€}225\text{M} \Rightarrow$ dollar appreciates
- $D - 50 \Rightarrow \textbf{\$1.00}$, $\text{€}175\text{M}$ · $S - 50 \Rightarrow \textbf{\$1.50}$, $\text{€}175\text{M}$



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What shifts them

four big reasons

SHOCK	CURVE	DOLLAR
Coralians love European goods (tastes)	D right	↓ depreciates
Europe's incomes boom (incomes)	S right	↑ appreciates
Coralian prices rise faster (prices)	S left, D right	↓ depreciates
Coralian rate up 5% $\rightarrow$ 6% (interest)	S right	↑ appreciates
Coralian rate cut / Europe's rate up	S left / D right	↓ depreciates

- Rule: more € **offered** $\Rightarrow$ euro cheaper · more € **wanted** $\Rightarrow$ euro dearer

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Winners and losers

NX and AD

STRONGER DOLLAR

Gain: importers, travelers (hotel \$125 $\rightarrow$ \$100)
Lose: exporters, dive schools (\$100 dive €80 $\rightarrow$ €100)

WEAKER DOLLAR

Gain: exporters (board \$75: €60 $\rightarrow$ €50)
Lose: importers, travelers (jacket €40: \$50 $\rightarrow$ \$60)

- **NX = exports – imports** · stronger dollar $\Rightarrow X \downarrow, M \uparrow \Rightarrow \text{NX} \downarrow \Rightarrow \textbf{AD left}$ · weaker $\Rightarrow \text{NX} \uparrow \Rightarrow \textbf{AD right}$
- Chain: rate $\uparrow \Rightarrow$ capital inflow $\Rightarrow$ dollar appreciates $\Rightarrow \text{NX} \downarrow \Rightarrow \text{AD} - \$40\text{M} \Rightarrow \textbf{GDP \$980M}$, price level 95 (Lessons 4, 7)
- Trade-off: lower rate $\Rightarrow$ weaker dollar helps exporters, but pushes prices up

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Balance of payments

always zero

- **Current account** = exports – imports of goods and services + income from abroad
- **Financial account** = buying and selling assets (bonds, shares, firms)
- **current + financial = 0** · surplus in one $\Leftrightarrow$ deficit in the other
- $\$250\text{M} - \$200\text{M} = \textbf{+$50M} \Rightarrow$ financial **–\$50M** (Coralians buy foreign assets)
- $\$260\text{M} - \$290\text{M} + \$10\text{M} = \textbf{–$20M} \Rightarrow$ financial **+\$20M** (foreigners lend Coralina the gap)

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Real case

Switzerland 2015

- 15 Jan 2015: Swiss bank drops floor of **1.20 francs per €1** $\Rightarrow$ flexible rate $\Rightarrow \text{€}1 \approx \textbf{1.04 francs}$ by evening $\Rightarrow$ franc **appreciates** ~15%
- 1,200-franc watch: $\text{€}1,000 \rightarrow$ about **€1,150** ($1,200 \div 1.04$) $\Rightarrow$ exporters sell less
- Watch out: a **stronger** currency is not simply "better" · it helps importers, hurts exporters · rate is dollars **per €1**, not euros per \$1 · appreciation of one = depreciation of the other