Foreign Exchange Market (FOREX)

- Most countries have their own currency that is used by people to buy and sell goods/services
- Differing currencies do not stop people from buying and selling each other goods and services
- As with any other good/service, currencies are subjected to supply and demand
- The Foreign Exchange Market is not a “real” place (physically)
- It is a composite representation of the world-wide trade of currencies between people, businesses, international financial institutions and the central banks of most countries

Foreign Exchange Market (FOREX)

Reasons for exchanging one currency for another

1. Change in preferences for a good/service
2. Change in the quality of a good/service
3. Change in relative price levels
4. Change in relative incomes (GDP)
5. **<u>Changes in relative interest rates</u>**

Foreign Exchange Market (FOREX)

When you think of currencies:

THINK DESIRABILITY

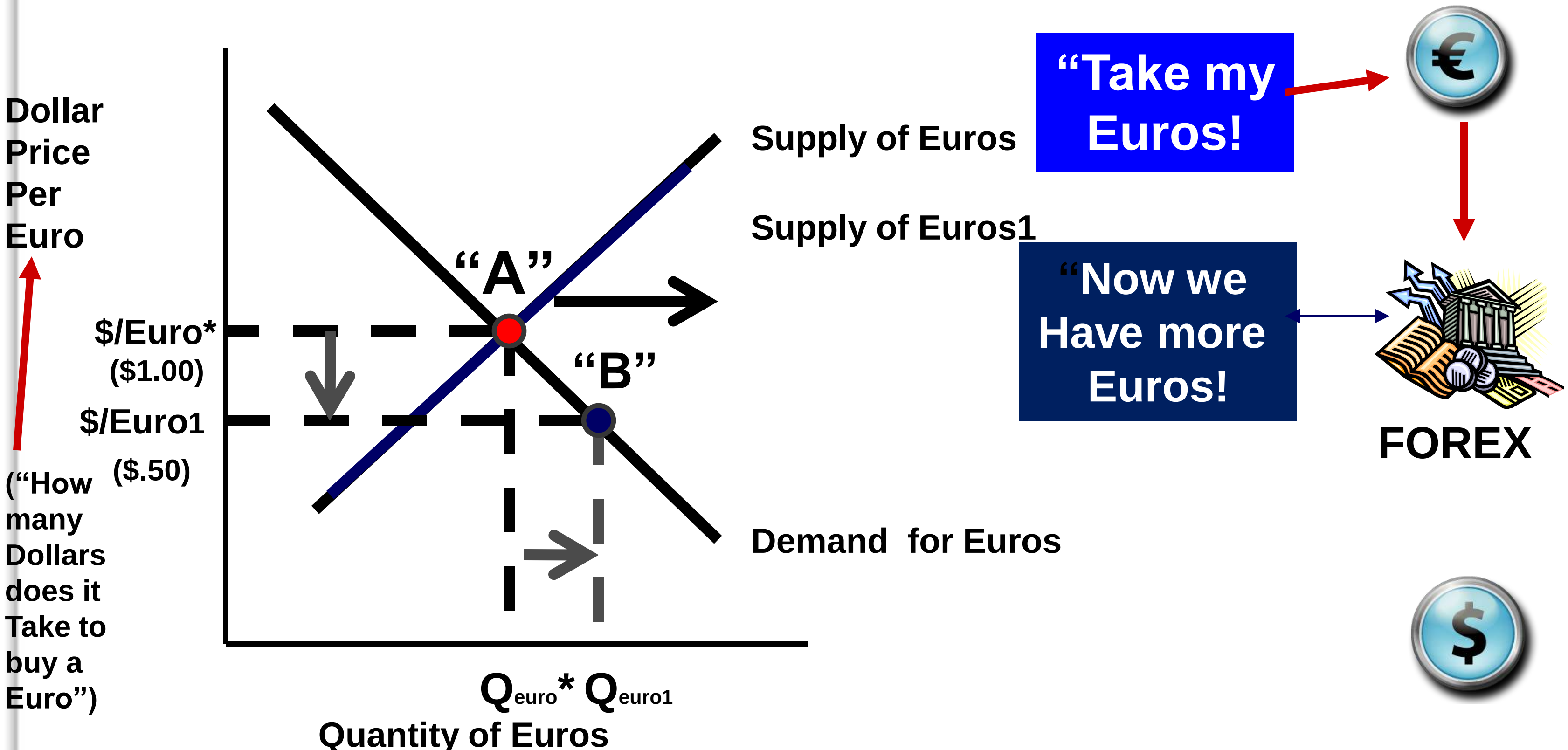
Foreign Exchange Market (FOREX)

- **Example:** Assume Europeans are impressed by the latest computers made by Dell Computers. The quality is excellent and they like the variety of colors that they come in. Also assume the Euro-area countries are in the midst of an economic recovery AND the U.S. economy is in a recession which has depressed the average price level.
  - This example hits four of the factors that affect the exchange rates between two currencies
    - **Change in preferences** (color of computers)
    - **Change in quality** (improved computers)
    - **Change in relative Price Level** (prices lower In U.S.)
    - **Change in relative incomes (GDP)**
      - The average European has more income and will tend to purchase not only more European goods/services, but imports as well. In our case from the U.S.

Foreign Exchange Market (FOREX)

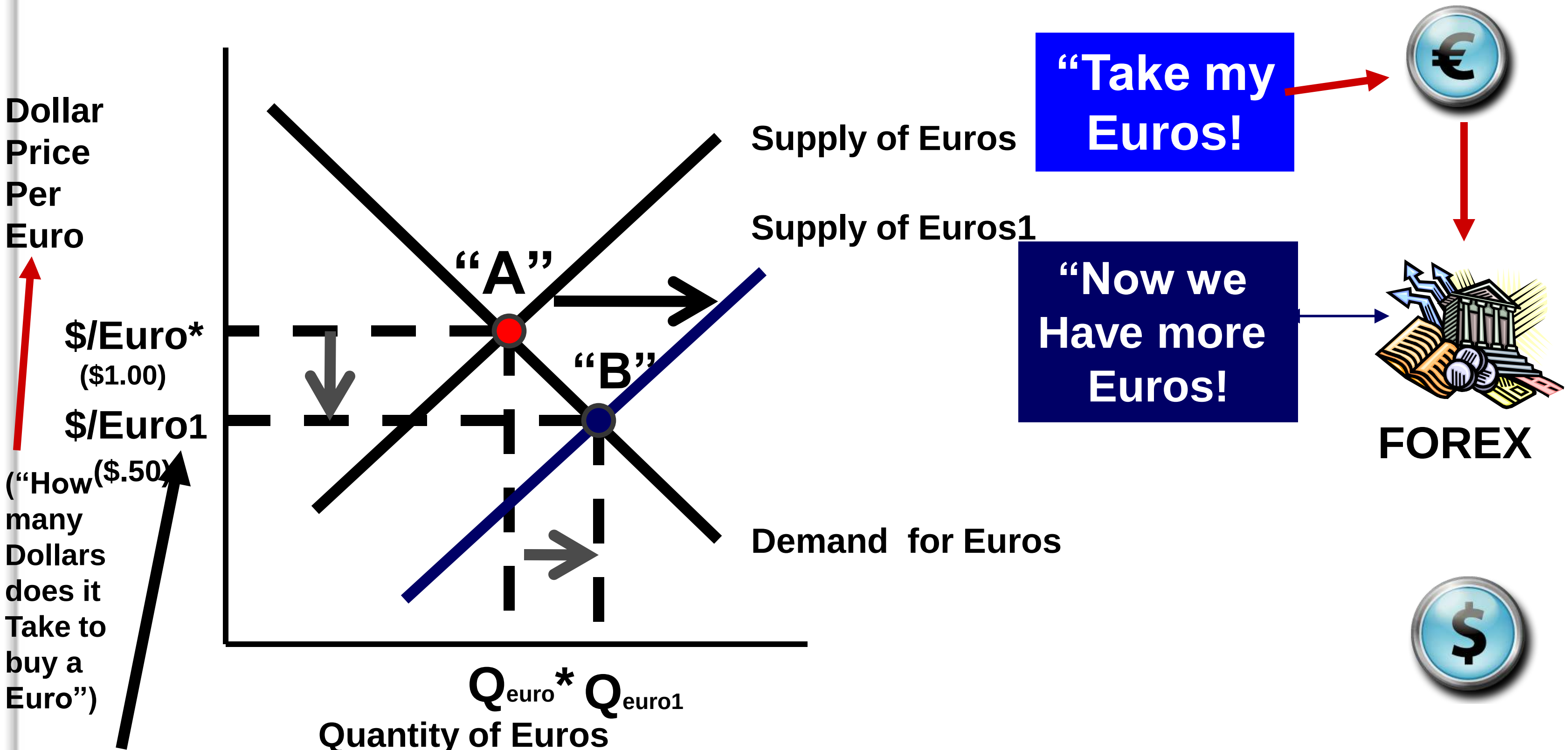
- Dell Computers have become more desirable for a variety of reasons, therefore the U.S Dollar has become more desirable as well.
- REMEMBER: ***DESIRABILITY!!!***

Foreign Exchange Market
The Market for **EUROS**



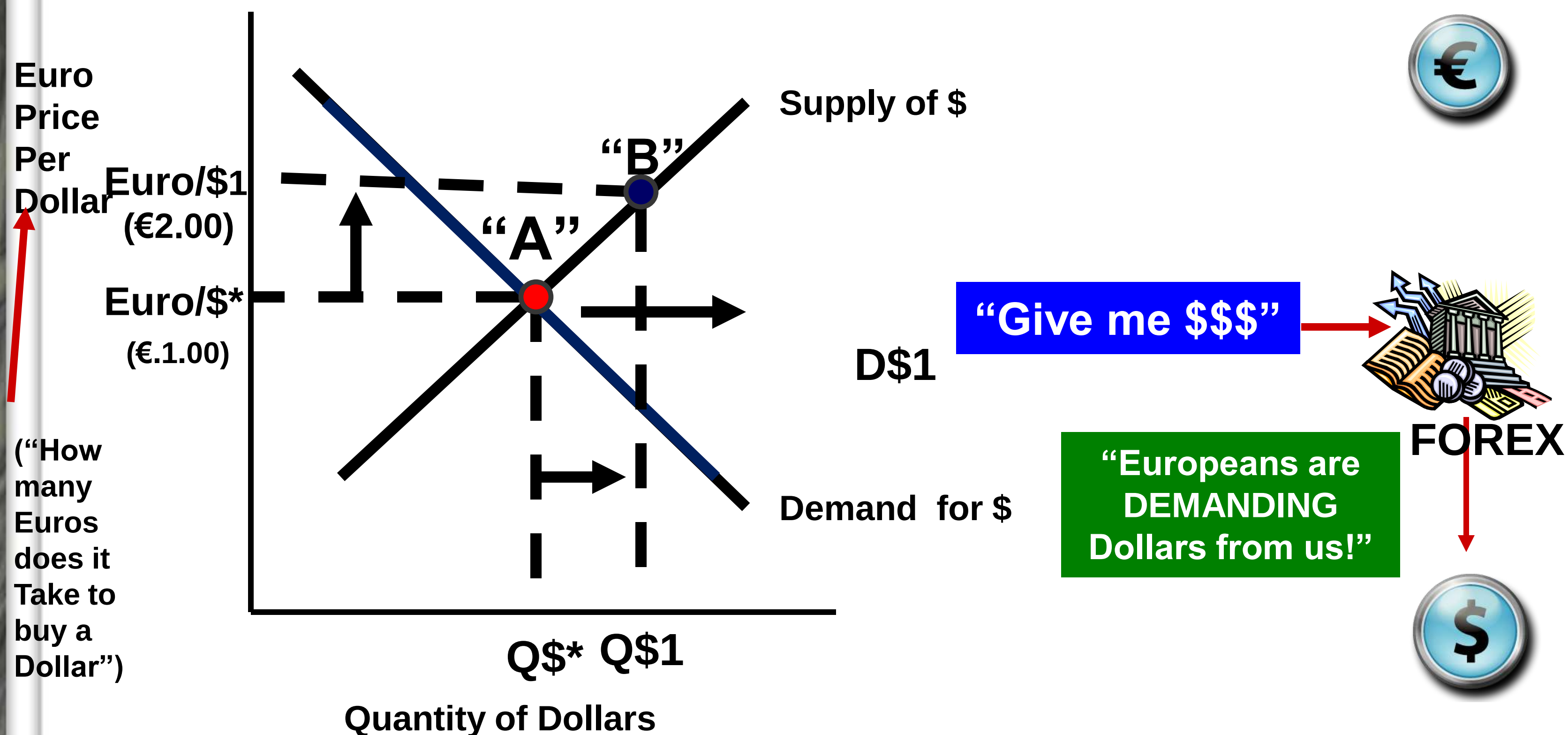
If Europeans want to buy U.S. Goods/Services they must give up their Euros in order to obtain Dollars. Initially the SUPPLY of Euros is going to INCREASE in the Market for Euros.

Foreign Exchange Market
The Market for **EUROS**



Notice that the Dollar Price Per Euro is now lower than it was at the previous equilibrium point. It NOW takes <u>FEWER</u> dollars to buy a Euro than it did before. The Dollar has <u>APPRECIATED</u> in value relative to the Euro

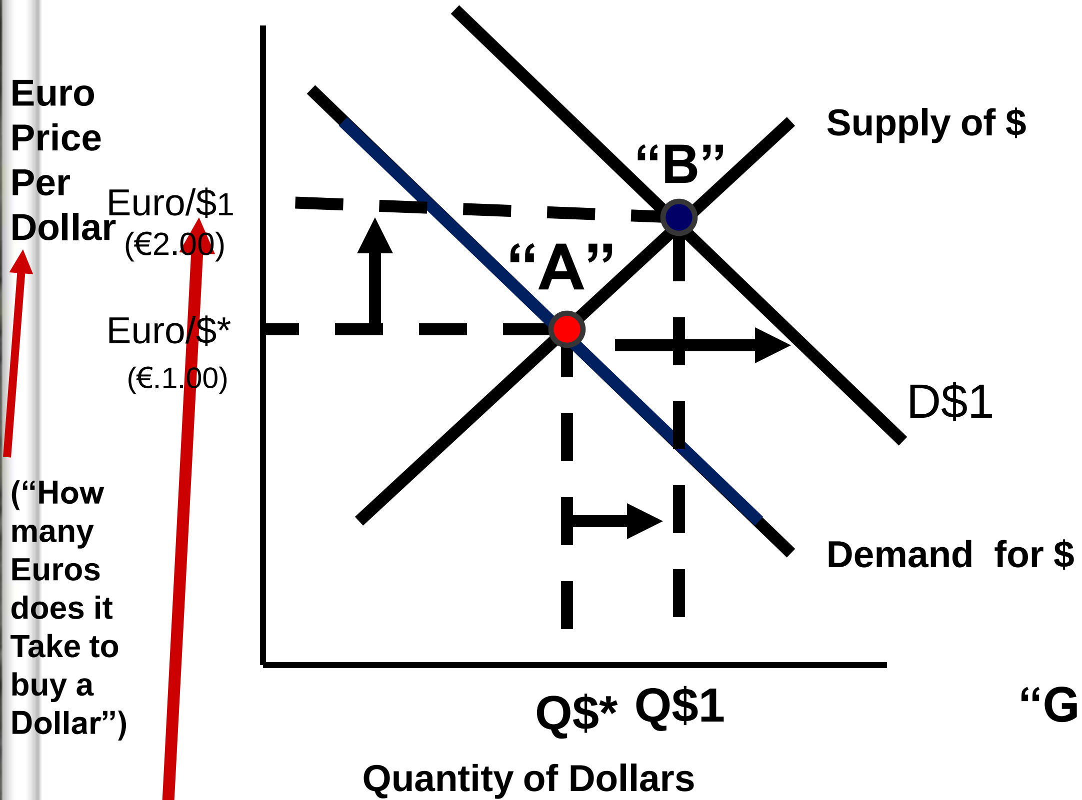
Foreign Exchange Market
The Market for **Dollars**



After the Europeans have given up their Euros, they are going to want (DEMAND) Dollars for those Euros.

The <u>DEMAND</u> for the Dollar will <u>INCREASE</u>

Foreign Exchange Market
The Market for **Dollars**



"Europeans are DEMANDING Dollars from us!"

"Give me $$$"

Notice that the Euro Price Per Dollar is now higher than it was at the previous equilibrium point. It NOW takes more Euros to buy a dollar than it did before. The Euro has DEPRECIATED in value relative to the Dollar.

Foreign Exchange Market Effect **NOW** on Exports and Imports

The Dollar has **APPRECIATED** in value relative to the Euro. This means now it takes **FEWER** Dollars to buy a Euro than it did before (Americans have to give up fewer Dollars to buy the same amount of Euros than before). This means Europeans goods/service will be relatively **LESS** expensive for Americans to buy (like a sale) and **IMPORTS** from Europe will tend to **INCREASE**.

Foreign Exchange Market Effect **NOW** on Exports and Imports

The Euro has **DEPRECIATED** in value relative to the Dollar. This means now it takes **MORE** Euros to by a Dollar than it did before (Europeans have to give up more Euros to buy the same amount of Dollars than before). This means American goods and services will be relatively **MORE** expensive for Europeans to buy and **EXPORTS** to Europe will tend to **DECREASE**.

The Foreign Exchange Market
Effect **NOW** on Exports and Imports

The NET EXPORT N(x) Effect:

Exports <u>Decreasing</u> and Imports <u>Increasing</u>

Net Exports are **DECREASING**

Therefore GDP is <u>Decreasing</u>

AD Shifts to the Left

AD <u>DECREASES!!!!</u>

The Foreign Exchange Market
Effect **NOW** on Exports and Imports

- Foreigners BUY more U.S. made Computers (which is an export) but in the process they APPRECIATE the currency which makes the everything else (including Dell computers) eventually more expensive….

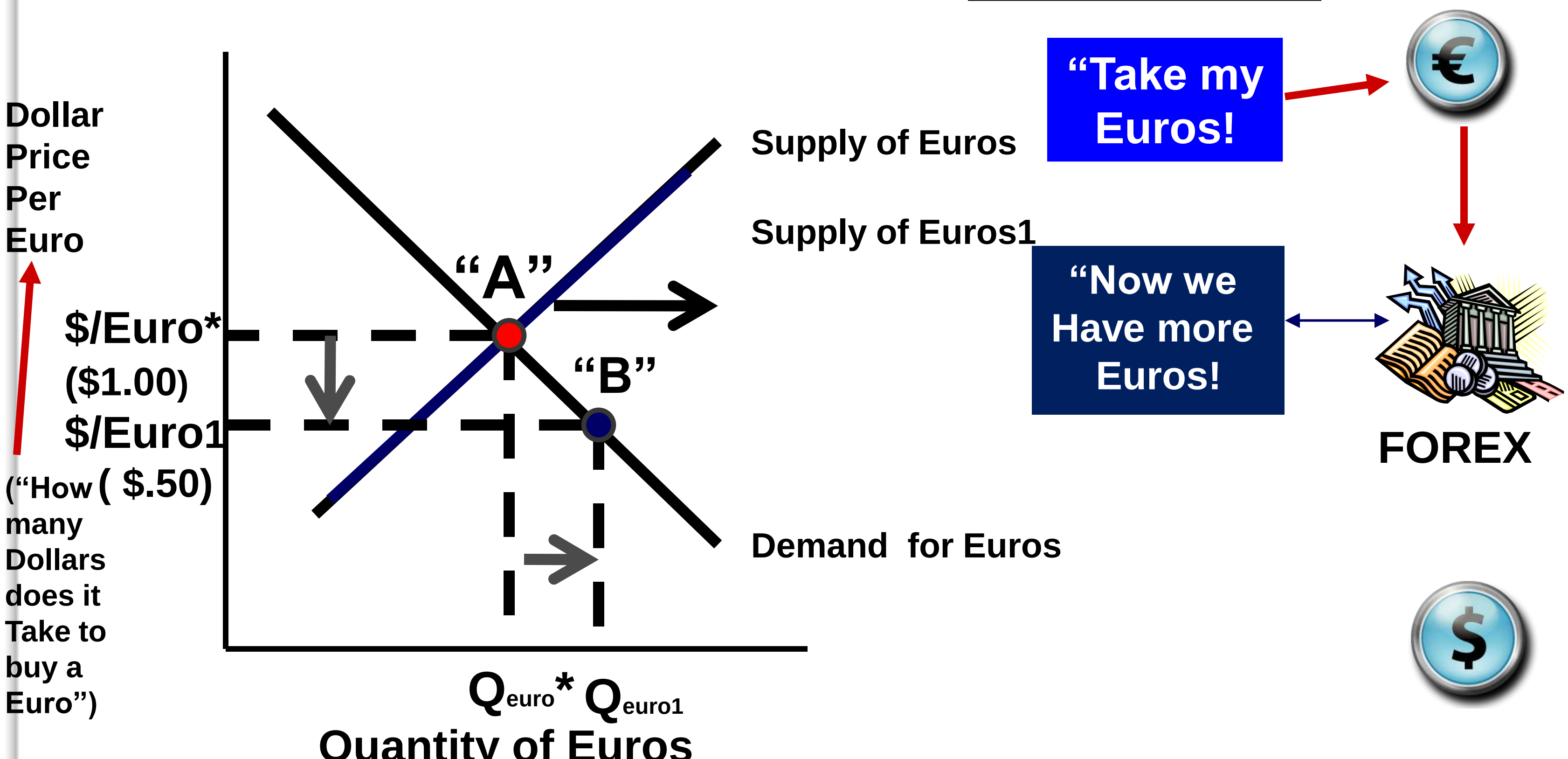
Foreign Exchange Market
The Interest Rate Effect

- Interest rates affect the value of a currency in the Foreign Exchange Market.
- In the FOREX, we think of interest rates in terms of SAVING and/or INVESTING.
- Money (financial capital) does not care about national boundaries.
- It wants to go where it can grow the biggest (in terms of Rate of Return)
- It will seek the place with the highest interest rate, regardless of the currency that the interest rate is available.

Foreign Exchange Market
The Interest Rate Effect

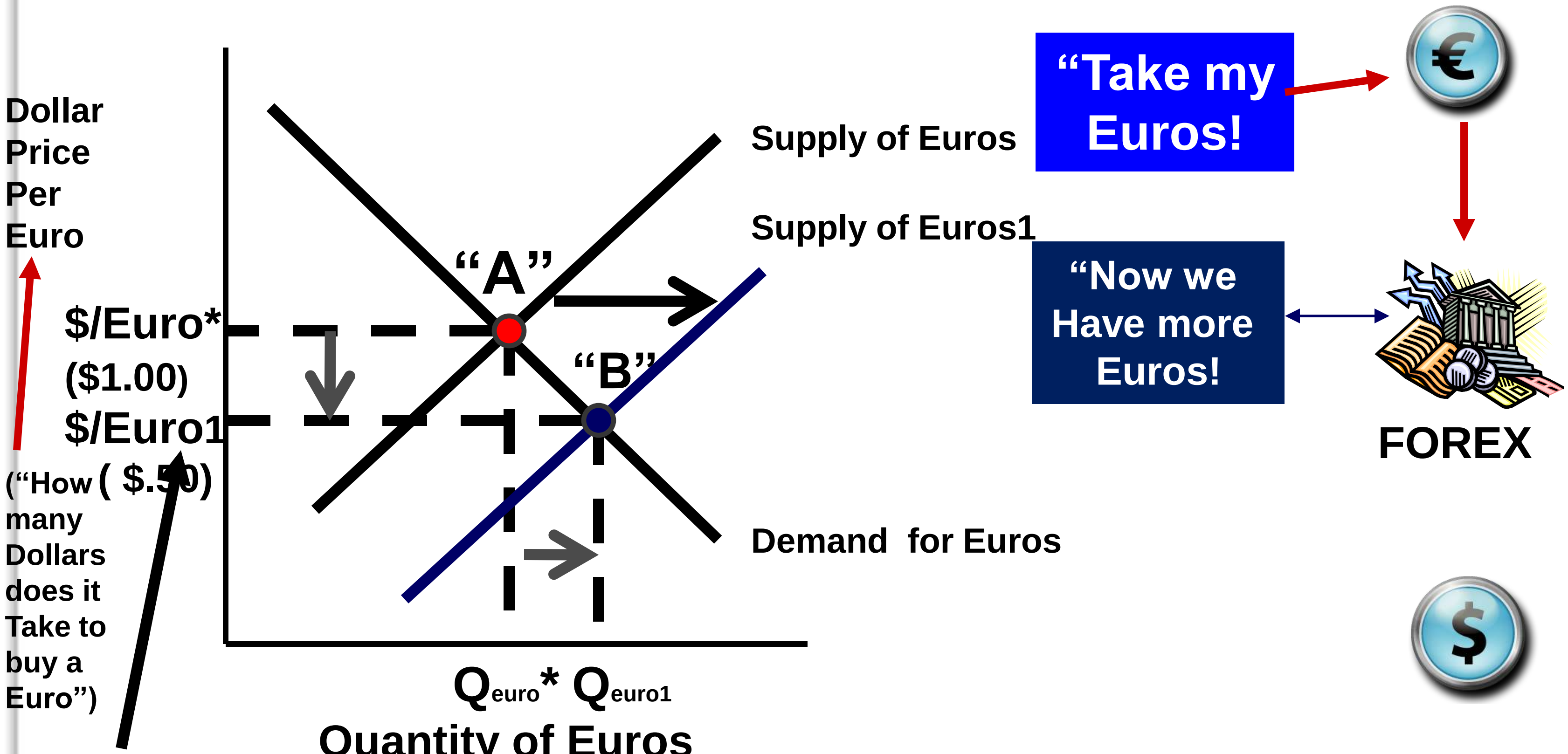
- Example: Assume the Interest Rates on savings/investing in the U.S. is higher than the Interest Rates in Europe.
- Europeans want to put their money where it can grow the biggest.
- But they have Euros?? What to do??
- They exchange their Euros for Dollars in the FOREX

Foreign Exchange Market
The Market for **EUROS**



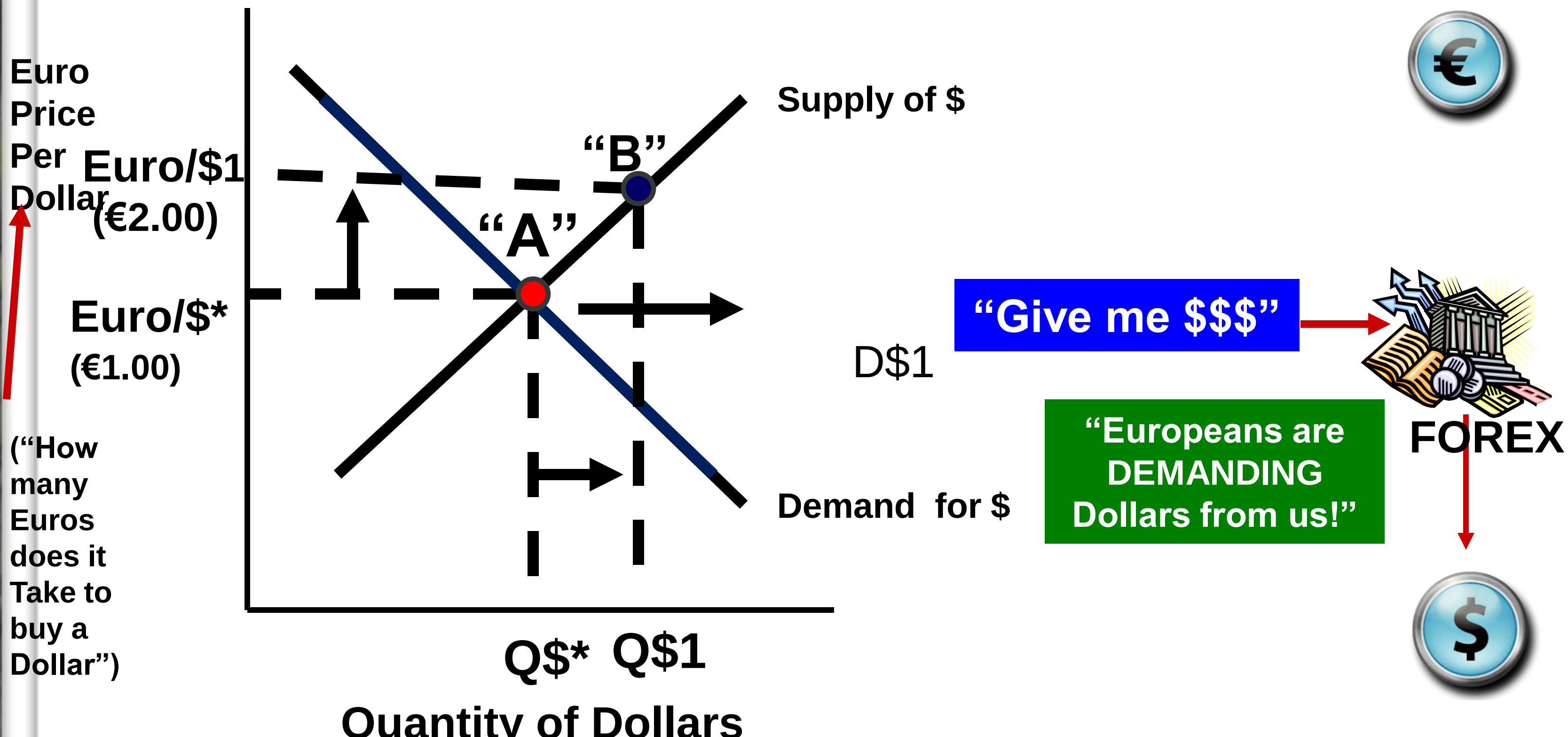
If Europeans want to invest in U.S. FINANCIAL ASSETS which are now more DESIRABLE! They must give up their Euros in order to obtain Dollars. Initially the SUPPLY of Euros is going to INCREASE in the Market for Euros.

Foreign Exchange Market
The Market for **EUROS**



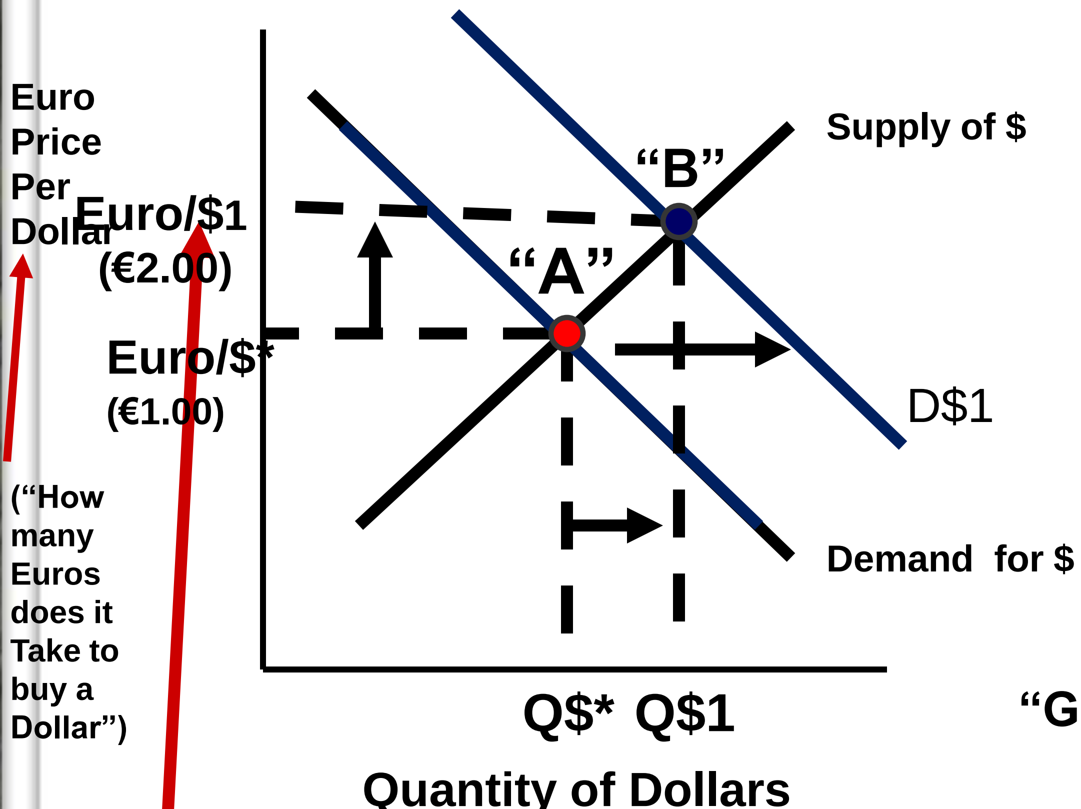
Notice that the Dollar Price Per Euro is now lower than it was at the previous equilibrium point. It NOW takes <u>FEWER</u> dollars to buy a Euro than it did before. The Dollar has <u>APPRECIATED</u> in value relative to the Euro

Foreign Exchange Market
The Market for **Dollars**



After the Europeans have given up their Euros, they are going to want (DEMAND) Dollars for those Euros.
The DEMAND for the Dollar will INCREASE

Foreign Exchange Market
The Market for **Dollars**



"Europeans are DEMANDING Dollars from us!"

"Give me $$$"

Notice that the Euro Price Per Dollar is now <u>higher</u> than it was at the previous equilibrium point. It NOW takes more Euros to buy a dollar than it did before. The Euro has DEPRECIATED in value relative to the Dollar.

Foreign Exchange Market Effect **NOW** on Exports and Imports

The Dollar has **APPRECIATED** in value relative to the Euro. This means now it takes **FEWER** Dollars to buy a Euro than it did before (Americans have to give up fewer Dollars to buy the same amount of Euros than before). This means Europeans goods/service will be relatively **LESS** expensive for Americans to buy (like a sale) and **IMPORTS** from Europe will tend to **INCREASE**.

Foreign Exchange Market Effect **NOW** on Exports and Imports

The Euro has **DEPRECIATED** in value relative to the Dollar. This means now it takes **MORE** Euros to by a Dollar than it did before (Europeans have to give up more Euros to buy the same amount of Dollars than before). This means American goods and services will be relatively **MORE** expensive for Europeans to buy and **EXPORTS** to Europe will tend to **DECREASE**.

Foreign Exchange Market
Effect **NOW** on Exports and Imports

The NET EXPORT N(x) Effect:
Exports <u>Decreasing</u> and Imports <u>Increasing</u>
Net Exports are **DECREASING**

Therefore GDP is Decreasing

AD Shifts to the Left

AD DECREASES

Foreign Exchange Market Bottom Line

- **What causes the Dollar to Appreciate (INCREASE the DEMAND for $’s)**
  - **Preferences** for U.S. made Goods/Services
  - Improved **Quality** of Goods/Services
  - **Lower Price Level in U.S** relative to other countries
  - <u>**Foreign Incomes increase**</u> (GDP increases)
  - <u>**Higher Interest Rates**</u> in U.S. relative to other countries <u>(U.S. Financial Assets more desirable)</u>

Foreign Exchange Market Bottom Line

- **What causes the Dollar to Depreciate (INCREASE the SUPPLY of $'s)**
  - <u>Preferences for Foreign</u> Made Goods/Services
  - Improved <u>Quality of Foreign</u> Made Goods/Services
  - <u>Lower Price Level in Foreign</u> Countries relative to U.S.
  - <u>U.S. incomes increase</u> (U.S. GDP Increases)
  - <u>Higher Interest Rates</u> in Foreign Countries relative to the U.S. <u>(Foreign Financial Assets more desirable)</u>