The European Debt Crisis & Its Implications for the US

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This event is made possible by a grant from the European Union
Who Uses the €

- Currently 17 EU member states use the euro
- Estonia joined Jan. 1, 2011
- Denmark (purple) exempt from the euro, but currency still pegged
- Monetary policy is controlled by the European Central Bank, headquartered in Frankfurt, Germany
Is the Eurozone an Optimal Currency Area?

<table>
<thead>
<tr>
<th></th>
<th>Eurozone</th>
<th>United States</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor mobility across the region</td>
<td>Yes (in theory)</td>
<td>YES</td>
</tr>
<tr>
<td>1) Openness with capital mobility and 2) price/wage flexibility</td>
<td>1) YES</td>
<td>YES</td>
</tr>
<tr>
<td>across the region.</td>
<td>2) Yes (in theory)</td>
<td></td>
</tr>
<tr>
<td>A risk sharing system such as an automatic fiscal transfer</td>
<td>Not really</td>
<td>YES</td>
</tr>
<tr>
<td>mechanism to redistribute money to areas/sectors which have</td>
<td></td>
<td></td>
</tr>
<tr>
<td>been adversely affected by the first two characteristics.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participant countries have similar business cycles.</td>
<td>??</td>
<td>??</td>
</tr>
</tbody>
</table>
GDP of EU Member States

![Graph showing the GDP of EU Member States in billions of Euros and as a percentage of the total EU economy. Countries such as Germany, France, United Kingdom, Italy, Spain, and others are listed with their respective GDP values and percentage contributions.]
GDP per capita across the EU

* Excludes France’s Overseas Department

Source: Eurostat
Economic Growth
(percentage of GDP, 2010)

Source: The Economist
Change in GDP

Source: BBC, Eurostat
Unemployment 2010

[Bar chart showing unemployment rates for various countries in 2010, with NL, LU, AT, MT, DE, CY, RO, CZ, SI, SE, UK, BE, FI, DK, IT, EU27, FR, EA16, PL, BG, PT, HU, EL, IE, SK, EE, LV, LT, ES represented on the x-axis and percentage on the y-axis.]
Competitiveness in the Eurozone
National Rankings, 2010

Source: World Bank, World Economic Forum
How to Join the Euro

1. **Annual Government Deficit:** No greater than 3% of GDP
2. **Government Debt:** Less than 60% of GDP
3. **Inflation Rate:** No more than 1.5% above the average of the three member states with the lowest rates
4. **Interest Rates:** No more than 2% above the interest rates of the three member states with the lowest inflation rates
5. **Exchange Rate:** Applicant country’s exchange rate with the euro must stay within a fixed band for 2 years
The Current Problem

• While EU now has common currency, does not have common fiscal policy
• Government deficits and debts in some countries are raising much faster than in others, as countries economies grow at different rates
• In 2010, only 2 countries had deficits of less than 3% and 4 had debts less than 60% (out of 16)
Government Deficit (percentage of GDP, 2010)

Source: The Economist
PIIGS Government Deficits
(percent of GDP)

Source: BBC, Eurostat
Government Debt
(percentage of GDP, 2010)

Source: The Economist
PIIGS Government Debt
(percent of GDP)

Source: BBC, Eurostat
PIIGS Bond Spread
over 10-year German Bunds

Countries with debt rated as “not prime” (aka “junk”) by Moody’s:
1. Greece (Caa1: Substantial risk, 3 above default)
2. Portugal (Ba2: Non-investment grade, 9 above default)
3. Ireland (Ba1: Non-investment grade, 10 above default)

Source: Norge Bank, Bloomberg
### Greece’s Options

#### Scylla, Charybdis and others
Options to solve Greece’s debt crisis

<table>
<thead>
<tr>
<th>Options</th>
<th>What it means</th>
<th>Pros</th>
<th>Cons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fiscal transfers</td>
<td>Euro-area members give Greece money</td>
<td>Brings down Greece’s debt burden. The ECB will not oppose it.</td>
<td>Impossible to sell openly to voters. May encourage profligacy.</td>
</tr>
<tr>
<td>Bail-out loans</td>
<td>Euro-zone members and IMF lend Greece more money</td>
<td>Buys Greece more time. The ECB will not oppose it.</td>
<td>Does not address solvency issue. New loan conditions may throttle growth. Official creditors gradually replace private creditors. Hard to sell to voters.</td>
</tr>
<tr>
<td>“Vienna initiative”</td>
<td>Banks “volunteer” to roll over holdings of Greek debts</td>
<td>Buys Greece time; does not leave taxpayers to pick up the bill; less likely to trigger ratings downgrade</td>
<td>Does not address solvency issue. Difficult to co-ordinate.</td>
</tr>
<tr>
<td>“Soft” restructuring</td>
<td>Creditors “volunteer” to extend maturities of existing debt</td>
<td>Buys Greece time; does not leave taxpayers to pick up the bill; may not be a credit event for CDSs</td>
<td>Does not fix solvency issue. Probably still means a ratings downgrade. The ECB doesn’t like it.</td>
</tr>
<tr>
<td>“Hard” restructuring</td>
<td>Serious haircut on the value of Greek debt</td>
<td>Brings down Greece’s debt burden. Imposes immediate losses on private creditors.</td>
<td>Hurts Greek banks and risks wider contagion. Reduces reform pressure on Greeks. The ECB absolutely hates it.</td>
</tr>
</tbody>
</table>

Source: *The Economist*
Likely Outcome
(as of today, might be officially announced on Friday)

• Other Eurozone countries and the ECB buy Greek debt on the open market
  – Greek debt falls:
    €340bn (160% of GDP) → €225bn (120% of GDP)
  – Cost of Greek rescue: €315 bn ($440 bn)
    • Debt buyout: €85 bn ($120 bn)
    • 2nd bailout (planned): €120 bn ($170 bn)
    • 1st bailout (May 10): €110 bn (currently $150 bn)
What would happen if Greece truly defaults?

**For Greece**
- Shut out of international bond markets for a while (probably happen anyway)
- Greek banks, citizens lose money
- Forced to leave euro and reintroduce the drachma??

**For Europe**
- Damages the pride of the euro, value of euro declines
- National governments, the ECB, banks, pension funds, et al lose money
- Could cause a “chain of contagion” across the Eurozone
Exposure to Greek Debt

Source: The Economist

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**Greece total debt**

$485bn

(€340bn)

Source: BIS Quarterly Review

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**Countries most exposed to Greek debt**

<table>
<thead>
<tr>
<th>Country</th>
<th>Bank and private lending</th>
<th>Government debt exposure</th>
<th>$bn</th>
</tr>
</thead>
<tbody>
<tr>
<td>France</td>
<td>14.6</td>
<td>56.7</td>
<td>60</td>
</tr>
<tr>
<td>Germany</td>
<td>7.3</td>
<td>33.9</td>
<td>50</td>
</tr>
<tr>
<td>UK</td>
<td>4.0</td>
<td>14.6</td>
<td>40</td>
</tr>
<tr>
<td>US</td>
<td>2.8</td>
<td>7.3</td>
<td>30</td>
</tr>
<tr>
<td>Italy</td>
<td>1.6</td>
<td>4.0</td>
<td>20</td>
</tr>
<tr>
<td>Switzerland</td>
<td>2.8</td>
<td>1.6</td>
<td>10</td>
</tr>
<tr>
<td>Japan</td>
<td>0.9</td>
<td>0.9</td>
<td>0</td>
</tr>
</tbody>
</table>

Source: BBC
Web of Debt

Banks and governments in these five shaky economies owe each other many billions of euros — converted here to dollars — and have even larger debts to Britain, France and Germany. Arrow widths are proportional to debt amounts.

Source: The New York Times
U.S. Exports to the EU

Source: Wisertrade.org
US exports to the Eurozone versus the Exchange Rate

Source: Wisertrade, European Central Bank
# How Euro Depreciation Affects Trade

## An example:

**Costs to produce one widget:**
- **European Firm** = €10
- **American Firm** = $10

<table>
<thead>
<tr>
<th>Exchange Rate</th>
<th>Price in the Euro Area</th>
<th>Price in the US</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>European Firm</td>
<td>American Firm</td>
</tr>
<tr>
<td>€1 = $0.50</td>
<td>€10</td>
<td>$20</td>
</tr>
<tr>
<td>($10 x €1/$0.50)</td>
<td></td>
<td>($10 x €1/$1)</td>
</tr>
<tr>
<td>€1 = $1</td>
<td>€10</td>
<td>$10</td>
</tr>
<tr>
<td>($10 x €1/$1)</td>
<td></td>
<td>($10 x €1/$1.50)</td>
</tr>
<tr>
<td>€1 = $1.50</td>
<td>€6.67</td>
<td>$15</td>
</tr>
<tr>
<td>($10 x €1/$1.50)</td>
<td></td>
<td>($10 x €1/$1.50)</td>
</tr>
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</table>

Value of the euro | Value of the dollar
Midwest Exports to the EU

<table>
<thead>
<tr>
<th>State</th>
<th>Percent of Total Exports</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>19%</td>
</tr>
<tr>
<td>Indiana</td>
<td>27%</td>
</tr>
<tr>
<td>Ohio</td>
<td>18%</td>
</tr>
<tr>
<td>Kentucky</td>
<td>25%</td>
</tr>
<tr>
<td>Illinois</td>
<td>18%</td>
</tr>
</tbody>
</table>

Source: WISERtrade, U.S. Bureau of Economic Analysis
Changes in Exports to the Eurozone

Source: Wisertrade.org
Exports to the EU in 2010, Percentage

Source: Wisertrade.org
Exports to the EU 2010, destination

<table>
<thead>
<tr>
<th></th>
<th>Billions</th>
<th>EU</th>
<th>World</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>$33.79</td>
<td>14%</td>
<td>2.6%</td>
</tr>
<tr>
<td>Indiana</td>
<td>$1.79</td>
<td>23%</td>
<td>6.2%</td>
</tr>
<tr>
<td>Ohio</td>
<td>$1.06</td>
<td>15%</td>
<td>2.6%</td>
</tr>
<tr>
<td>Kentucky</td>
<td>$0.30</td>
<td>6%</td>
<td>0.2%</td>
</tr>
<tr>
<td>Illinois</td>
<td>$0.82</td>
<td>9%</td>
<td>2.2%</td>
</tr>
</tbody>
</table>

Source: Wisertrade.org
US Exports to PIIGS

Source: Wisertrade.org
Indiana Exports to the PIIGS

Source: Wisertrade.org
And now, everything you just learned in two minutes:

http://www.bbc.co.uk/news/business-13991135
Thank you!

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