Syllabus Econ 414:
Global Econ Crisis and Recovery Fall 2013

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These slides will be distributed via Laulima
Objective: To educate the student so she/he can succeed in a global business environment, in particular,
- Econ departments (of financial institutions)
- Risk Management (tons of jobs there!)
- Compliance departments (Risk Management applied to Basel III, Dodd-Frank)
- Academia
Specific Objective:
To educate the student so she/he
- Understands nature and triggers of previous crises
- Knows policy responses to the crises and can evaluate the efficiency of them
- Is able to predict the next coming crisis!
- Is able to predict recoveries
Syllabus cont.

Literature:

- Slides on Laulima

No textbook is required, but you should read, read, read, watch, watch, watch, especially recent econ and financial news on

Overview of the Crisis


Specific Literature on the ‘Great Recession’ 2007 – 2009 (courtesy Byron Gangnes)

Origins of the crisis
A. Regulatory Failure? The role of financial innovation and (de)regulation


Specific Literature on the ‘Great Recession’ 2007 – 2009 (courtesy Byron Gangnes)

Global transmission

Financial transmission


Trade transmission


Macro policy responses. Monetary policy


Specific Literature on the ‘Great Recession’ 2007 – 2009 (courtesy Byron Gangnes)

Macro policy responses. Fiscal policy & developing country policies


### Syllabus

Grading: Participation/Homework 10%
- Two Projects 30%
- Presentation of the Projects 10%
- Mid term 25%
- Final 25%

### Point System

<table>
<thead>
<tr>
<th>Grade</th>
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<tbody>
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<tr>
<td>A</td>
<td>93.33</td>
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<tr>
<td>A-</td>
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<tr>
<td>B+</td>
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<tr>
<td>D+</td>
<td>65.00</td>
</tr>
<tr>
<td>D</td>
<td>60.00</td>
</tr>
<tr>
<td>F</td>
<td>&lt; 60.00</td>
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</tbody>
</table>
Student Projects

There will be two student projects:

1) Each student will ‘adopt’ a recession and become an expert on the causes, severity and remedies of his/her recession and share his research with the class. See slide 40 for an overview of recessions.

2) Each student will pick a topic from the following list and research it and present it to the class.

Students can also suggest a research topic to the Prof.

Timing: Students will present in October and December.
1) Are all economic crises the result of financial irrational exuberance or are they the result of a natural expansion – recession cycle?

2) Basel III – Can it prevent the next global financial and economic crisis?

3) Dodd-Frank – Can it prevent the next global financial and economic crisis?

4) Credit Risk – The most dangerous risk of all (?)

5) Basel III’s Credit risk approach

6) Market risk: It caused the great depression and the dot.com crisis. How can we measure when it will cause the next crisis?

7) Operational Risk: What are the threats? How can we prevent it?

8) Basel III’s liquidity risk framework: Sufficient?

9) Correlation Risk – What’s that all about?

10) Basel III’s approach to Correlation Risk

11) China owns $1.1 trillion = 22.5% of US Treasury debt – The next crisis in the making?
12) Legal Risk: In the US everyone is suing everyone. A threat? How can we fix this?

13) How can Japan revive its economic crisis of 20 year stagnation?

14) Will Europe and its debt cause the next big crisis?

15) Is the World debt including the US debt a crisis in the making?

16) Political Risk: John Kerry: “The biggest problem for the US is not North Korea or the Middle East, but the gridlock in the US Congress and Senate”. Correct?!? How can we fix this?

Come up with your own topic and discuss it with the Professor!
17) The outstanding Derivatives OTC contracts are about $630 trillion, which is 10 times the world GDP. Are Derivatives ‘Weapons of Mass Destruction” (Warren Buffet), which will cause the next big crisis?

18) LTCM lost 4 billion in 1997, Amaranth lost 6 billion in 2006. Both had to be bailed out by Governments and private institutions. Can this happen tomorrow on a bigger scale?

19) Hedge fund strategies : Which are the most dangerous?

20) Algorithmic and High Frequency Trading (HFT): A potential threat?

21) Does Algo and HFT trading increase or decrease volatility?

22) Big data – Can it prevent the next crisis?
23) What are the main reasons for the 2007 – 2009 global financial and economic crisis? What can we do that it does not happen again?

24) Should we care more about the demand side (Keynesianism, Fiscal policy) of the economy or the supply side (Neo-Classics, Monetarism) to fight a crisis? Or should we not fight a crisis at all and let it take its natural course? http://www.economics.hawaii.edu/research/workingpapers/WP_10-26.pdf

25) When is the next terrorist attack and will it shock financial markets and economies?

26) What is the Fed’s Taper all about? Will it lead to the next crisis?

27) The US is experiencing European-style ‘job-less’ growth. Does this make the economy more vulnerable to an exogenous shock?
28) Is low vol an indicator for a future crisis?

Source: Susan Globokar
29) Is low correlation vol an indicator for a future crisis?

<table>
<thead>
<tr>
<th>Year</th>
<th>% Change in Correlation Volatility before Recession</th>
<th>Severity of Recession (% change of GDP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1973/74</td>
<td>-7.22%</td>
<td>-11.93%</td>
</tr>
<tr>
<td>1980</td>
<td>-10.12%</td>
<td>-6.53%</td>
</tr>
<tr>
<td>1981/82</td>
<td>-4.65%</td>
<td>-12.00%</td>
</tr>
<tr>
<td>1990/91</td>
<td>0.06%</td>
<td>-4.05%</td>
</tr>
<tr>
<td>2001</td>
<td>-5.55%</td>
<td>-1.80%</td>
</tr>
<tr>
<td>2007-09</td>
<td>-2.64%</td>
<td>-14.75%</td>
</tr>
</tbody>
</table>

Decrease in correlation volatility, preceding a recession. The decrease in correlation volatility is measured as a 6 months change of 6 months moving average correlation volatility. The severity of the recession is measured as the total GDP decline during the recession.

Source: Book “Correlation Risk” Chapter 2, Table 2.2
30) Analyze one type of Risk and its potential to cause the next crisis

a) **Economic risks** (recession with high unemployment, decreasing GDP, national and private debt, budget deficit, balance of payments deficit, etc.); Inflation, Currency misvaluations, Erroneous monetary and fiscal policy, ‘Currency wars’

b) **Financial risks** as highlighted by the global financial crisis 2007 to 2009, i.e. equity-, bond-, real estate-, commodity price risk, liquidity risk, debt risk, confidence risk (frozen credit markets). In addition, Product risk as in MBSs or leveraged risk in CDOs and Derivatives risk exists. Financial tech risk as Algorithmic trading and High Frequency Trading (HFT) has to be considered. In addition financial risks include accounting risk, funding risk, correlation risk (wrong-way risk), speculation risk (LTSM 1998, Amaranth 2006, AIG 2008 etc.)

c) **Political risks** (national risks such as incompetence, grid-lock in Washington; International risks such as in the Middle East or North Korea).

d) **Social risks** (unrest due to perceived injustice in income distribution and lack of opportunity (Occupy Wall Street movement, Native Hawaiians))
30) Analyze one type of Risk and its potential to cause the next crisis

e) **Cyber risk** (Snowden!) i.e. the risk of misuse (identity theft), dissemination, or destruction of sensitive data.

f) **Technology risk** (the risk of failure of technologies as networks, servers, computers, software, and programs, externally (by hackers) or by internal failures.

g) **Nature related risks** (Tsunami, Flood, Earthquake, Hurricane, Tornado, Volcano), Global warming risk, Pollution risk with resulting health issues

h) **Terrorism**, including nuclear- chemical- and biological risk

i) **Natural resource risk** as the contamination of water or air as a result of a nature catastrophe or a nuclear- chemical- or biological catastrophe

j) **Energy risk**, i.e. the risk of reduction or loss of energy sources due to political tensions or violent conflicts in energy exporting nations.
30) Analyze one type of Risk and its potential to cause the next crisis

k) Epidemic risks (SARS, Bird flu, AIDS, etc.)

l) Longevity risk (Increase in live expectancy burdens working employees and firms)
31) Is US debt a crisis in the making or improving?
32) Is international debt a crisis in the making or improving?

Debt

Private Debt
(Mortgages, Loans, Credit Cards, etc.)

Public or Government Debt
= Sum of annual Budget Deficits
  = G - Taxes

Sovereign Debt
(in % of GDP)

Which debt is most dangerous??

The Maastricht Criteria for a country to join the EU are (were):

Budget Deficit ≤ 3%
Sovereign Debt ≤ 60% of GDP
32) Is international debt a crisis in the making or improving?

<table>
<thead>
<tr>
<th>Country</th>
<th>% of GDP</th>
<th>per capita (USD)</th>
<th>% of World Public Debt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>214.30%</td>
<td>77,577</td>
<td>17.53%</td>
</tr>
<tr>
<td>Greece</td>
<td>161.30%</td>
<td>40,486</td>
<td>0.77%</td>
</tr>
<tr>
<td>Italy</td>
<td>126.10%</td>
<td>37,956</td>
<td>4.14%</td>
</tr>
<tr>
<td>Portugal</td>
<td>119.70%</td>
<td>27,531</td>
<td>0.53%</td>
</tr>
<tr>
<td>Singapore</td>
<td>111.40%</td>
<td>67,843</td>
<td>0.66%</td>
</tr>
<tr>
<td>Belgium</td>
<td>99.60%</td>
<td>37,948</td>
<td>0.70%</td>
</tr>
<tr>
<td>France</td>
<td>89.90%</td>
<td>31,915</td>
<td>3.74%</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>88.70%</td>
<td>32,553</td>
<td>3.67%</td>
</tr>
<tr>
<td>Spain</td>
<td>85.30%</td>
<td>25,931</td>
<td>2.18%</td>
</tr>
<tr>
<td>Egypt</td>
<td>85%</td>
<td>5,610</td>
<td>0.85%</td>
</tr>
<tr>
<td>Canada</td>
<td>84.10%</td>
<td>34,902</td>
<td>2.14%</td>
</tr>
<tr>
<td>Germany</td>
<td>81.70%</td>
<td>31,945</td>
<td>4.60%</td>
</tr>
<tr>
<td>United States</td>
<td>73.60%</td>
<td>36,653</td>
<td>20.61%</td>
</tr>
<tr>
<td>Netherlands</td>
<td>68.70%</td>
<td>29,060</td>
<td>0.87%</td>
</tr>
<tr>
<td>World</td>
<td>64%</td>
<td>7,936</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

Why doesn’t any country meet the Maastricht criteria of ≤ 60% public debt???

http://en.wikipedia.org/wiki/Public_debt
32) Is international debt a crisis in the making or improving?

<table>
<thead>
<tr>
<th>Country</th>
<th>Revenues (million USD)</th>
<th>Expenditures (million USD)</th>
<th>Deficit/surplus (million USD)</th>
<th>Deficit/surplus (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pakistan</td>
<td>35,000</td>
<td>51,500</td>
<td>-16,500</td>
<td>-32.10%</td>
</tr>
<tr>
<td>United States</td>
<td>2,902,000</td>
<td>3,803,000</td>
<td>-901,000</td>
<td>-31.00%</td>
</tr>
<tr>
<td>India</td>
<td>210,000</td>
<td>302,000</td>
<td>-92,000</td>
<td>-30.50%</td>
</tr>
<tr>
<td>Japan</td>
<td>1,971,000</td>
<td>2,495,000</td>
<td>-524,000</td>
<td>-21%</td>
</tr>
<tr>
<td>Spain</td>
<td>545,200</td>
<td>672,100</td>
<td>-126,900</td>
<td>-18.88%</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>986,500</td>
<td>1,188,000</td>
<td>-201,500</td>
<td>-16.96%</td>
</tr>
<tr>
<td>Canada</td>
<td>660,200</td>
<td>747,800</td>
<td>-87,600</td>
<td>-11.71%</td>
</tr>
<tr>
<td>France</td>
<td>1,386,000</td>
<td>1,535,000</td>
<td>-149,000</td>
<td>-9.71%</td>
</tr>
<tr>
<td>Australia</td>
<td>473,200</td>
<td>521,800</td>
<td>-48,600</td>
<td>-9.31%</td>
</tr>
<tr>
<td>Italy</td>
<td>1,025,100</td>
<td>1,112,000</td>
<td>-86,900</td>
<td>-7.81%</td>
</tr>
<tr>
<td>China</td>
<td>1,646,000</td>
<td>1,729,000</td>
<td>-83,000</td>
<td>-4.80%</td>
</tr>
<tr>
<td>Germany</td>
<td>1,551,000</td>
<td>1,588,000</td>
<td>-37,000</td>
<td>-2.33%</td>
</tr>
<tr>
<td>Russia</td>
<td>382,800</td>
<td>376,200</td>
<td>6,600</td>
<td>1.75%</td>
</tr>
<tr>
<td>Brazil</td>
<td>978,300</td>
<td>901,000</td>
<td>77,300</td>
<td>8.60%</td>
</tr>
<tr>
<td>Norway</td>
<td>280,500</td>
<td>209,500</td>
<td>71,000</td>
<td>25.30%</td>
</tr>
</tbody>
</table>

32) Is international debt a crisis in the making or improving?

Facts on Debt

From 2008-2010 sovereigns worldwide engaged in fiscal stimulus to save their faltering economies. This has resulted in enormous debt levels, especially in Europe (Ireland, Greece, Spain etc.).

Additionally, the US has a trade deficit and therefore a continuing debt problem. This is why the US $ is so weak. Is it weak enough?

Why do we have a high debt problem in the US and not in Asia???
32) Is international debt a crisis in the making or improving?

Challenges with Debt

After big international fiscal stimulus to avoid an economic meltdown in 2008/2009, sovereigns still have very high debt levels, except ??

Due their mentality, the US has high debt levels compared to other countries. In 2007, the total US debt ratio was 470% of national income! In addition, the US has a continuing trade balance problem, which causes debt to rise.

Critical Questions: Can these debt levels be the origin of the next crisis, or has the threat declined? What is the best way to decrease the debt? Austerity or Growth??
The Spirit of this class

• Let’s have a dialogue, not a Professor monologue!

• Let’s apply the principle of science!

This goes back to Rene Descartes and his

Principle of Radical Doubt...