

THE CRISIS OF 2008 (THE “GREAT CRISIS”)

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Steven Spielberg
“Jaws” (1975),
or how somebody admonishes
about the “dangers” of the coast
(sharks), but nobody believes him

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1. Introduction

Introduction

- The economic situation has deteriorated enormously in the second half of 2008.
- The prospects for 2009 (and 2010?) are gloomy.
- These lines offer an account on the current economic crisis and possible “solutions” for the challenges ahead.

2. Key factors

Key factors

Which are the factors behind the current crisis?

1. The deterioration of the housing market.
2. The collapse of the financial system.
3. Global energy and food crisis.

Key factors (1): Housing market deterioration

- “The *subprime crisis* is the name for what is a historic turning point in our economy and our culture. It is, at its core, the result of a speculative bubble in the housing market that began to burst in the United States in 2006 and has caused ruptures across many other countries in the form of financial failures and a global credit crunch”
(Shiller, 2008, p. 3)

Key factors (2): Financial collapse

- “Global financial intermediation is broken. That intricate and interdependent system directing the world’s saving into productive capital investment was severely weakened in August 2007. The disclosure that highly leveraged financial institutions were holding toxic securitised American subprime mortgages shocked market participants. For a year, banks struggled to respond to investor demands for larger capital cushions.

Key factors (2): Financial collapse

- But the effort fell short and in the wake of Lehman Brothers default on September 15th 2008, the system cracked. Banks, fearful of their own solvency, all but stopped lending. Issuance of corporate bonds, commercial paper and a wide variety of other financial products largely ceased. Credit-financed economic activity was brought to a virtual standstill. The world faced a major financial crisis”.
Greenspan, The Economist, December 20th 2008, p. 114.

Key factors (3): Global energy and food crisis

- The price of petrol was at its high in July 2008 (around 150\$ per barrel) and since then it has been declining, with up and downs (now around 50\$ per barrel).
- This is a structural problem, now alleviated due to the recession.



Key factors (3): Global energy and food crisis

- “World food commodities prices increased 130% from January 2002 to July 2008. Individual agricultural commodities show even more pronounced increases: corn (up 190%) (*maíz/artoa*), wheat (162%) (*trigo/gari*), rice (318%) (*arroz/arroza*), and soybeans (246%) (*soja*) rose dramatically. Food prices began to fall in July, bringing some relief, but prices are likely to stay high for the foreseeable future.”
 - Source: Nora Lustig, 22 October 2008, “Thought for food: Rising food prices, poverty, and safety nets in developing countries”, <http://www.voxeu.org/index.php?q=node/2467>

3. The crisis

- The account is mostly based on Shiller (2008), Kregel (2007), and Abadía (2008).

Funny videos as starters

- Leopoldo Abadía in Andreu Buenafuente (YouTube):
 - <http://www.youtube.com/leopoldoabadia>
 - On subprimes: <http://es.youtube.com/watch?v=IU-j2mlwOpE> (in Spanish, 7 minutes)
 - On Bernard Madoff (and Ponzi games): <http://es.youtube.com/watch?v=yUM7UYp65qc> (in Spanish, 10 minutes)

Funny videos as starters

- “The last laugh” (John Bird and John Fortune) (YouTube):
 - <http://www.youtube.com/watch?v=mzJmTCYmo9g> (in English, 9 minutes)
 - <http://www.youtube.com/watch?v=pFmYIFk5lIQ> (in English with subtitles in Spanish, 9 minutes)

3.1. A short story

- Based on Shiller (2008, p. 4-).

A short story

- “The view that the ultimate cause of the global financial crisis is the psychology of the real state bubble (with contributions from the stock market bubble before that) has certainly been expressed before. But it would appear that most people have not taken this view to heart, and the least that they do not appreciate all of its ramifications.”

A short story

- “Accounts of the crisis often seem instead to place the ultimate blame entirely on such factors as growing dishonesty among mortgage lenders; increasing greed among securitizers, hedge funds, and rating agencies; or the mistakes of former Federal Reserve chairman Alan Greenspan”.
- This is a crisis in a bubble.

A short story

- “By now the whole world has heard the story of the problems in the subprime mortgage market, which began to show up in the US in 2007 and then spread to other countries. Home prices and homeownership had been booming since the late 1990s, and investing in a house had seemed a sure route to financial security and even wealth”.
- “But the subprime dilemma in the US points up problems with over-promoting homeownership”.

A short story

- Chain of events in the subprime crisis:
 - “Overly aggressive mortgage lenders, compliant appraisers, and complacent borrowers proliferated to feed the housing boom.”
 - “Mortgage originators, who planned to sell off the mortgage to securitizers, stopped worrying about repayment risk.”
 - “They typically made only perfunctory efforts to assess borrowers’ ability to repay their loans.”

A short story

- Chain of events (cont.):
 - “**These mortgages were packed, sold, and resold in sophisticated but arcane ways to investors around the world, setting the stage for a crisis of truly global proportions.**”
 - Many investors did not know the real nature of these assets.
 - “The housing bubble, combined with the incentive system in the securitization process, amplified moral hazard, further emboldening some of the worst actors among mortgage lenders.”

A short story

- Chain of events (cont.):
 - “Higher home prices made it profitable to build homes. The huge supply of new homes began to glut the market, and US home prices began to fall in mid-2006. As prices declined at an accelerated rate, the boom in home construction collapsed.”

A short story

- Chain of events (cont.):
 - “At the same time, mortgage rates began to reset to higher levels after initial “teaser” periods ended. Borrowers, particularly subprime borrowers, began defaulting, often owing more than their homes were worth or unable to support their higher monthly payment with current incomes”. The participant institutions suffer tremendous distress.

A short story

- Chain of events (cont.)
 - Other sectors (credit card and automobile loan default) follow suit.
 - Even credit ratings of municipal bond insurers are being downgraded, creating a risk that the problem will spread to state and local government financing.
 - Other countries follow suit. Booming real estate markets have also occurred in other countries.
- In addition, please note that we find a global energy crisis, and a global food crisis.

3.2. A longer story

- Based mainly on Kregel (2007).

A longer story

- Let go through the process in some detail (USA).
- Fannie Mae (1938) is a government owned corporation that buys mortgages outright from the banks that originate them (these mortgages are “prime”).
- Government support of the housing market is restructured in 1968, so that the impact of housing support on the budget deficit is reduced. Freddie Mac is created in 1970 to “compete” with Fannie Mae. These are now known as government sponsored enterprises (GSEs).

A longer story

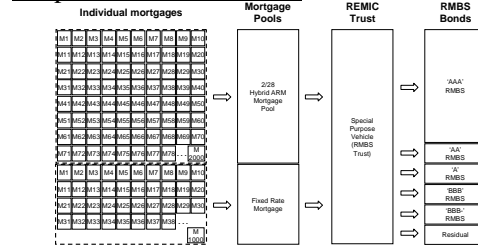
- GSEs were “obliged” to find alternative sources of funding through sales to private investors (instead of direct borrowing from the government).
- Searching good financing schemes for GSEs, *mortgage backed securities* (MBSs) were created. They sold (passed through) the income stream from a pool of mortgages to private investors (institutions, insurance companies, ...).

A longer story

- Securitization (*titulización/titulización*)=the process by which current or future loan rights of an entity, previously modifying and aggregating some of their characteristics, can be totally or partly transformed into securities that can be bought or sold in an organized market.
- Securitization=“convert into assets”

Example

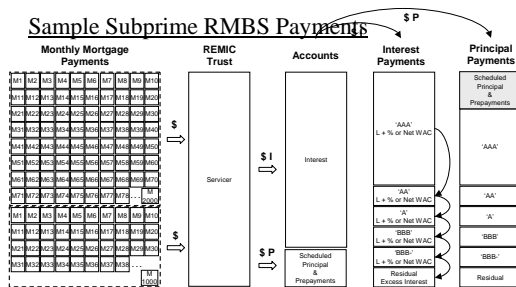
Subprime RMBS structure



Source: <http://www.fitchratings.com>

Example

Sample Subprime RMBS Payments



Source: <http://www.fitchratings.com>

Some recent examples of securitization

- Kutxa: <http://www.noticiasdegipuzkoa.com/ediciones/2009/05/21/economia/euskadi/d21eus28.1493818.php>
- CajaMadrid: http://www.cotizalia.com/cache/2009/05/21/noticias/48_madrid_primera_entidad_pagar_intereses_titulizaciones_morosidad.html#

A simple example of MBS issuance

- 1,000 mortgages, each worth \$100,000 with a 30-year maturity and a fixed interest rate of 6.50%.
- This \$100 million pool of mortgages can be used to back:
 - 10,000 bonds, each worth \$10,000 with a 30-year-term and a fixed coupon rate of 6.00%.
 - Each bond shares the same coupon rate and other features, and importantly, each has a similar claim on all payments.

Source: http://www.chicagofed.org/publications/fedletter/cflnovenber2007_244.pdf

A longer story

- The MBSs are structured so that interest payments on the mortgages are at least sufficient to cover the interest payments due on the bonds (plus the fees of the intermediaries).
- Since investors can invest in MBSs directly or indirectly, these asset-backed securities allow a broad investor base to help fund home mortgages.

A longer story

- Loans can be high quality (prime), subprime or “Alt-A”.
- Riskier loans were made at higher interest rates. These loans were “subprime”:
 - Prime: FICO score (risk of default) is between 660 or higher (up to 850), that is, the best mortgages.
 - Subprime: FICO score is below 660 (up to 300), that is, the worst mortgages.
- Please note that both prime and subprime loans coexist.

A longer story

- The structure of a typical issue is much more complicated. In part, the complications are there to more finely allocate the risks of the underlying mortgages to investors.

A longer story

- There are 3 major risks to MBS investors:
 - Interest rate risk (common to bondholders): in interest rates change, the value of a bond changes in the opposite direction.
 - Prepayment risk. Prepayment introduce timing risk, since investors do not know when their bonds will be repaid (thereby eliminating future interest payments).
 - Default risk: the risk that homeowners will default on the mortgages that back the MBS.

A longer story

- Among the tools used to distribute default and payment timing risk are:
 - Subordination: a securitization that issues multiple classes of bonds that differ in bankruptcy priority. Some bonds are senior, while others are subordinated. Senior bonds have priority in bankruptcy, meaning that as mortgages default, the first losses are taken by the subordinated classes (see sample below).

A longer story

- **Subordination is VERY IMPORTANT since from the underlying risky assets “more secure” bonds are created.**
- The higher the positive correlation between different mortgages, the higher the risk of investing in MBSs: the amount of bonds that can receive good ratings diminishes.
 - In case too many good-rated-bonds are created, the (hidden) risk an investor faces increases.

A sample six-pack structure for jumbo mortgage-backed security

Bond class	Perc. of total pool	Rating
A	94.15	AAA
B1	2.00	AA
B2	1.50	A
B3	1.00	BBB
B4	0.65	BB
B5	0.40	B
B6	0.30	Not rated

A longer story

- Tools (cont.):
 - Overcollateralization: the difference between the principal balance on the loans in the pool and the principal balance on the outstanding MBSs.
 - Excess spread: the difference between the interest payments coming in (loan payments minus servicing fees) and the weighted average payments going to bondholders.

A longer story

- The MBSs can be structured also to allocate the timing of payments. An MBS can include multiple classes of bonds that differ in the order in which they are repaid (these classes are typically referred to as “tranches”): first A bonds, then B bonds, ...

A longer story

- They redistribute prepayment risk among different classes or tranches with risk profiles ranging from extremely low, to significantly high, risk:
 - **Riskier tranches are offered higher interest rates.**
- The MBSs broken up in this fashion are called collateralized mortgage obligations (CMOs). Therefore, CMOs are more “flexible” than MBSs.

A longer story

- MBSs are not the end of the line. Pools of MBSs are sometimes collected and securitized. Bonds that are themselves backed pools of bonds are referred to as collateralized debt obligations (CDOs). The CDOs can look like MBSs, except that the assets are bonds or other assets.

A longer story

- Structured Investment Vehicles (SIV) are similar to CDOs. They differ mainly in the type of debt they issue:
 - The SIVs are structures backed by pools of assets (MBSs, CDO bonds, ...)
 - The SIVs issue short- and medium-term debt, rather than the longer-term debt of most CDOs. The short-term debt is known as asset-backed commercial paper.

A longer story

- To organize that scheme, creating a “real estate mortgage investment conduit” (REMIC) was required. REMIC holds the mortgages as collateral and distributes cash flows.

A longer story

- That transformation implied that the finance of housing passed from traditional banks and the GSEs to private investment bankers.
- Why then the system collapses after some 25 years of experience and stability?
 1. Change in the motivation behind the creation of the MBSs. From “buy and hold” (thrift institutions) to “trade” (private financial institutions).
 2. The Financial Modernization Act of 1999 deregulates financial markets. *The importance of “Shadow banking”.*

A longer story

- Why collapse (cont.)?
 3. The dot-com bubble and equity market collapse in 2001 made investors to shift towards housing market (more on this later).
 4. CMOs transferred risks from the mortgages originators to the buyers of CMOs. This was very important, since Basel Capital Adequacy requires a proportion between assets (loans) and capital: if banks hold more assets (the volume of loans increases) they are required more capital, which is costly.

Example of selling mortgages to conduits (REMICs)

Bank of Kansas: typical bank balance sheet	
Assets	Liabilities
10 Cash	Deposits and loans from other banks: 80
100 Credit	Capital (+Res.): 30
Total: 110	Total: 110

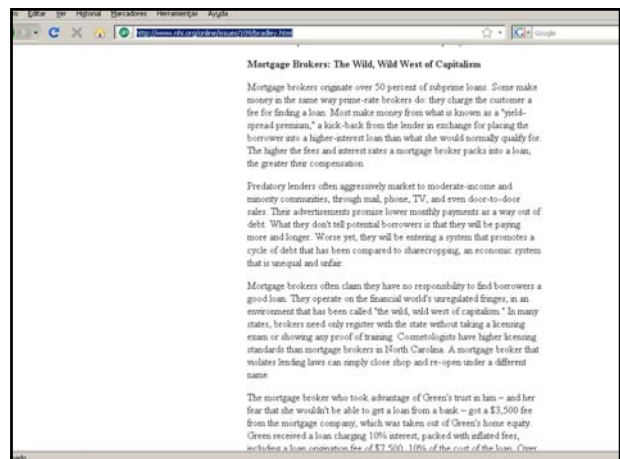
Example of selling mortgages to conduits (REMICs)

Bank of Kansas: once mortgages are “sold” to REMIC Trusts (Kansas Trust)	
Assets	Liabilities
110 Cash	Deposits and loans from other banks: 80
Total: 110	Capital (+Res.): 30
	Total: 110

Kansas Trust: Bank of Kansas’s Subsidiary. Balance sheet does not need to be consolidated. Kansas Trust does need to satisfy Basel Capital Adequacy.	
Assets	Liabilities
100 Mortgages	Capital (+Res.): 100
Total: 100	Total: 100

A longer story

- Additionally since international interest rates were low (after the dot-com bubble in 2001), financial institutions:
 1. Made riskier loans to *NINJA (No Income, No Job, no Assets) customers (NINJA loans)*, in addition to usual customers, and
 2. Increased the volume of operations to compensate for the lower interest rates.



A longer story

- Given that subprimes were so risky, who was going to buy them? Credit assessment becomes crucial.
- Lack of experience (and data) of CMOs and choosing the agency that produces the less conservative assessments made possible the proliferation of CMOs.

A longer story

- As the market expanded and the number of qualified borrowers declined, originators of CMOs started to experience a decline in demand of good mortgages.
- Additionally, good ratings were given because the less riskiest tranches receive their income stream even though the riskiest ones may not receive the whole amount.

A longer story

- To solve that problem, two types of measures were taken:
 - Creation of another set of special entities (known as Structured Investment Vehicles, SIVs), so that they can buy those CMOs.
 - **Guarantee** was available from a monoline insurer or a CDS (*credit default swap*) written by an insurance company or the bank itself.

A longer story

- The subprime market was stable as long as an increasing number of new mortgages could be originated, and the prices of houses was increasing steadily, in a favorable environment (falling interest rates).
- **The underlying assumption was that some mortgages could fall into default, but the vast majority would still continue paying. (Now) It seems a bit odd that experts diversifying risk did not anticipate the full amount of defaults.**

A longer story

- Interest rates started to increase by mid-2006 in the USA and one year later in the eurozone.
- House prices started to decline in 2006 in the USA, due to the increase in delinquency rates in 2005.

A longer story

- Mortgages used to collateralize the CMOs started to be returned to banks (thus reporting exposures and capital losses were not communicated before). This implied a drastic change in bank capitalization ratios. As the market for CMOs collapsed, credit rating agencies downgraded securities, and insurers were unable to meet their obligations, the whole system fell.
 - The role of “Mark-to-market” valuations.

A longer story

- Please note that this story created a problem for the whole financial system (prime mortgages, with reckless credit, opaqueness creating MBSs, then CMOs, then ...), not only for the subprime industry.

A longer story

- Please note that there is an intrinsic maturity mismatch in the banking system (long run lending, but short run borrowing). Therefore, bank runs can occur. Can they be avoided? Yes.
 - Deposit insurance has been instituted (minimum limit was recommended to increase in the EU to 100.000 euros per account and holder; Spain had a limit in 20.000 euros before).
 - Central banks act as a lender of last resort.
 - These two tools are key differences with respect to the situation faced in the Great Depression.

Spreading all over the world

- The events in the USA quickly affected directly (due to investments made in the USA) and indirectly (international financial intermediation is broken: credit crunch).
- As credit crunch is extending all over the world, it has created tremendous consequences on financial institutions.

Spreading all over the world

- Today the situation is characterized by UNCERTAINTY and FEAR.
- “Real” companies are finding that:
 - Sales are deteriorating, and that
 - It is much more difficult to get loans, if needed.

Some key data

- 2007/8 (first days): there has been a continued fall in the value of certain MBSs. Exposure of big banks and hedge funds (BNP Paribas, Bank of China) is “discovered”.
- 2007/9/14: *Northern Rock* bank runs (United Kingdom).
- 2008/3/16: *JPMorgan Chase* buys *Bear Stearns*.
- 2008/9/7: Federal Government in the USA buys *Fannie Mae* and *Freddie Mac*.
- 2008/9/14: *Bank of America* buys *Merrill Lynch*.

Some key data

- **2008/9/15: *Lehman Brothers* bankrupts.** This leads to a tremendous impact on other financial entities.
- 2008/9/17: *American International Group* (AIG), an important insurer, is severely damaged. It receives support from the Fed.
- 2008/10/3: US President Bush approves “toxic” assets´ purchase (Troubled Asset Relief Program, TARP).
- 2008/10/6-10: worst week for the stock market in 75 years (USA).

Some key data

- 2008/10/15: The European Central Bank, Fed, and others (England, Japan, ...) reduce interest rates by 0.5% in a coordinated way.
- 2008/11/12: Paulson abandons TARP (and money is directed towards banks' capitalization).
- 2008/11/15: G-20 (plus Spain and others) meeting.
 - 5 principles: strengthening transparency and accountability, improving regulation, promoting market integrity, reinforcing cooperation and reforming international institutions.

Some key data

- 2008/12/16: Fed's federal funds rate is reduced close to 0%: 0-0.25% (ZIRP).
- 2009/1/21: ECB reduces official interest rate to 2%.
- 2009/3/11: ECB reduces official interest rate to 1.5%.
- 2009/3/29 (Sunday): (Spain) Caja Castilla-La Mancha falls under the supervision of Banco de Spain.

Others

- Interesting speeches on the role of the Fed in the crisis:
 - <http://www.federalreserve.gov/newsevents/speech/bernanke20090113a.htm> (Bernanke)
 - <http://www.federalreserve.gov/newsevents/speech/kohn20090418a.htm> (Kohn)

Others

- On the role of the ECB:
 - <http://www.ecb.int/press/key/date/2009/html/sp090427.en.html> (Trichet)
 - <http://www.ecb.int/press/key/date/2009/html/sp090514.en.html> (Papademos)

A personal view: "caught by the crisis"

- http://www.nytimes.com/2009/05/17/magazine/17foreclosure-t.html?_r=1

Digression on Freddie Mac and Fannie Mae (USA)

"Fannie Mae is a government-sponsored enterprise (GSE) chartered by Congress with a mission to provide liquidity and stability to the U.S. housing and mortgage markets.

Fannie Mae operates in the U.S. secondary mortgage market. Rather than making home loans directly with consumers, we work with mortgage bankers, brokers, and other primary mortgage market partners to help ensure they have funds to lend to home buyers at affordable rates. We fund our mortgage investments primarily by issuing debt securities in the domestic and international capital markets."

Source: <http://www.fanniemae.com>

Digression on Freddie Mac and Fannie Mae (USA)

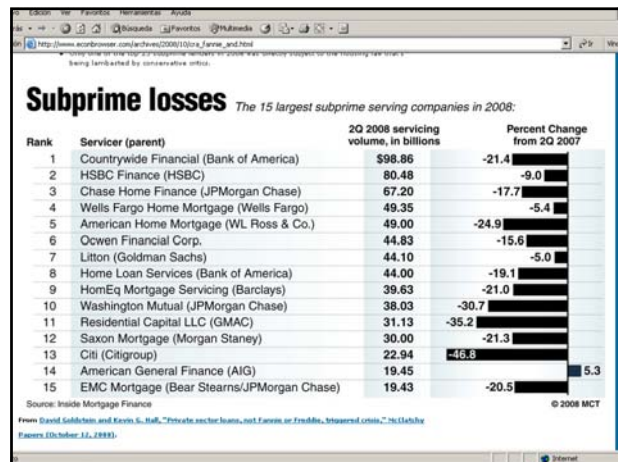
- Freddie Mac is Fannie Mae's "brother/sister". Both have the same charters, but different strategies.
 - The behavior of Freddie Mac and Fannie Mae did not cause the subprime crisis:
 - Source: <http://www.mcclatchydc.com/251/story/53802.html>
- "Only one of the top 25 subprime lenders in 2006 was directly subject to the housing law that's being lambasted by conservative critics."

Digression on Freddie Mac and Fannie Mae (USA)

- "Between 2004 and 2006, when subprime lending was exploding, Fannie and Freddie went from holding a high of 48 percent of the subprime loans that were sold into the secondary market to holding about 24 percent, according to data from Inside Mortgage Finance, a specialty publication. One reason is that Fannie and Freddie were subject to tougher standards than many of the unregulated players in the private sector who weakened lending standards, most of whom have gone bankrupt or are now in deep trouble."

Digression on Freddie Mac and Fannie Mae (USA)

- During those same explosive three years, private investment banks — not Fannie and Freddie — dominated the mortgage loans that were packaged and sold into the secondary mortgage market. In 2005 and 2006, the private sector securitized almost two thirds of all U.S. mortgages, supplanting Fannie and Freddie, according to a number of specialty publications that track this data."



Digression on Freddie Mac and Fannie Mae (USA)

- Sources on this digression:
- Econbrowser blog: http://www.econbrowser.com/archives/2008/10/cra-fannie_and.html
 - The New York Times: http://www.nytimes.com/2007/12/18/business/18subprime.html?_r=1&oref=slogin
 - Mark Thoma's blog: <http://economistsview.typepad.com/economistsview/2008/09/it-wasnt-fannie.html>

The global energy and food crisis

- The price of petrol reached almost 150\$ per barrel in July 2008.
- Now, facing a severe recession, pressures of high prices have somewhat gone for a while. However, the structural problem persists.
- What price can petrol achieve in the foreseeable future? It seems it will be a high one. Alternatives are crucially needed.

The global energy and food crisis

- Biofuels seem to be a key factor behind the food price increase, even though growth in China and India, and speculation have also helped. “In the future, food prices will be high but not this high” (as July 2008).
 - See Tangermann, 2008, “What’s causing global food price inflation?”
<http://www.voxeu.org/index.php?q=node/1437>

Risk of deflation?

- It may occur in some countries and in some moments, but it does not seem to be a global risk.
 - A review on Fisher’s classical article (Enrique G. Mendoza, “Hire Irving Fisher!”, 12 February 2009):
<http://www.voxeu.org/index.php?q=node/3046>
 - Bernanke, some years ago:
<http://www.federalreserve.gov/BOARDDOCS/SPEECHES/2002/20021121/default.htm>).
- Spain’s inflation rate is -0.8% in a year-to-year basis right now.

Overall assessment of current situation

- The current state of affairs is characterized by a lack of aggregate demand: too little spending.
- Additionally, it is a complex situation because there are other (very important) factors at stake:
 - Financial collapse.
 - “U-shaped” crisis, as opposed to V-shaped crisis (“L-shaped” crisis?).
 - Delays in the measures against the crisis. In addition, they do not seem to be sufficient.

3.3. Some interesting views

Nouriel Roubini (Dr. Doom)

<http://www.rgemonitor.com/blog/roubini/>

- His view is nicely summed up in http://www.rgemonitor.com/roubini-monitor/254919/latest_project_syndicate_column_will_banks_and_financial_markets_recover_in_2009
- Financial collapse: major financial institutions going bust, falling global stocks, turbulence in interest rates, severe liquidity and credit crunch, some emerging economies asking IMF for help, ...
- Two-year recession for the USA through the end of 2009 (L-shaped crisis, as opposed to U- or V-shaped). Similar prospects for other advanced and emerging economies.

Nouriel Roubini

- Stagflation is present already (remember what stagflation meant in Chapter 12 of textbook please). Even stag-deflation? Please note that deflation is very dangerous.
- As traditional monetary policy becomes ineffective, other unorthodox policy measures are being taken: bail out policies, massive provision of liquidity, radical actions to reduce long term interest rates, and so on.

Nouriel Roubini

- “Today's global crisis was triggered by the collapse of the US housing bubble, but it was not caused by it. America's credit excesses were in residential mortgages, commercial mortgages, credit cards, auto loans, and student loans. There was also excess in the securitized products that converted these debts into toxic financial derivatives; in borrowing by local governments; in financing for leveraged buyouts that should never have occurred; in corporate bonds that will now suffer massive losses in a surge of defaults; in the dangerous and unregulated credit default swap market. [...]”

Nouriel Roubini

- “[...] But the worst is still ahead of us. In the next few months, the macroeconomic news and earnings/profits reports from around the world will be much worse than expected, putting further downward pressure on prices of risky assets, because equity analysts are still deluding themselves that the economic contraction will be mild and short [...]”.

Nouriel Roubini

- “[...] While the risk of a total systemic financial meltdown has been reduced by the actions of the G-7 and other economies to backstop their financial systems, severe vulnerabilities remain. The credit crunch will get worse; deleveraging will continue, as hedge funds and other leveraged players are forced to sell assets into illiquid and distressed markets, thus causing more price falls and driving more insolvent financial institutions out of business. A few emerging-market economies will certainly enter a full-blown financial crisis. [...]”

Nouriel Roubini

- “[...] So 2009 will be a painful year of global recession and further financial stresses, losses, and bankruptcies. Only aggressive, coordinated, and effective policy actions by advanced and emerging-market countries can ensure that the global economy recovers in 2010, rather than entering a more protracted period of economic stagnation.[...]”
 - More on his views at http://www.rgeconomist.com/roubini-monitor/253933/revisiting_my_february_paper_the_risk_of_a_systemic_financial_meltdown_the_12_steps_to_financial_disaster_and_some_new_policy_recommendations_to_avoid_the_meltdown

3.4. Spain, the Basque Country, and Navarre

Spain

- Negative elements of current situation:
 - The situation in the housing sector:
 - Increase in the number of unemployed (600.000).
 - Prices falling: -0,5% (08); -5% (09); -10% (10).
 - New houses unsold: 0.8-1.4 millions.
 - Examples: Riberas, Aldunaene, Miramón, Loidi-Barren, ...
 - The situation in the financial sector:
 - Even though financial institutions have obtained profits, delinquency rates have increased substantially.
 - Now the banking system is deleveraging trying to reduce the volume of credits (or growing not too much): it grew too much. Thus financial institutions are tougher making loans today (and companies borrow less).

Spain

- Negative elements of the current situation (cont.):
 - The situation of the real economy:
 - GDP in Spain is falling, as in the rest of the world (worst figures for the world since the Great Depression: between -1% and -2%, according to the World Bank); -3/-4% this year. It seems so for next year (-0.5/-1%).
 - Latest data (2009, q1): -3.0% growth rate, compared to the same quarter in 2008 (q1), and -1.9% growth rate, compared to previous quarter (2008, q4).
 - Unemployment is increasing rapidly: it can even reach 18% this year (13.91% at 2008-4Q: more than 4 million of unemployed), that is, around 4.5 million of unemployed. It may be around 20% in 2010.

Spain

- Positive elements of the current situation:
 - Interest rates are in the downward direction (will they reach at 0,5%?).
 - Low inflation (deflation?),
 - Fiscal policy is expansive, but not too much.

Spain

- Therefore, the future is not very bright in the short run.
- Is the worst still to come? It seems that the deterioration of economic activity is slowing down (have we reached the bottom?). This is “good” news.
- Recovery is expected around mid-2010 or the end of 2010, but there is too much uncertainty.
- However, unemployment rate can reach 20% and GDP will even fall (-0.5/-1.0%) in 2010.

The Basque Country and Navarre

- The dependence from the building sector (as regards to employment) is somewhat lower in the Basque Country (9%) than in Spain (12%) or Navarre (11%). In the EU the dependence is half of that of Spain.

The Basque Country and Navarre

- Economic performance is better (and more diversified) in the Basque Country than in Spain:
 - Unemployment rates: 10.33% (7.7% Eustat) in the Basque Country (Gipuzkoa 8.91%; 6.5% Eustat), 10.41% in Navarre, much lower than in Spain, 17.36% (2009, 1 q).
 - GDP growth rates 2008: 2.1% in the Basque Country, 1.9% in Navarre, much higher than in Spain (1.2%).
- However, recent data shows a worse than expected scenario:
 - Latest data (2009, q1): -2.5% growth rate, compared to the same quarter in 2008 (q1), and -1.7% growth rate, compared to previous quarter (2008, q4).

3.5.: About the banking system

The banking system

- The banking system in Spain is expected to suffer less than in the USA. Why? The key lies in the differences between both financial systems:
 - Spanish banks did much traditional banking (receive deposits and make loans), as opposed to the business in the USA (make loans, pack and sell them). Good.
 - Assets:
 - There were no subprimes and not much mortgage repackaging. Additionally, banks were more cautious (sometimes, following the “advice” of Banco de España). Good.
 - However, things were different with developers. They asked for loans to purchase land, and its price has fallen dramatically. Bad.
 - Liabilities. Not much short term financing in financial markets. High credit-deposits ratio. Good.

Some data (in euro-billions of euros)

- Spanish GDP: 1
- Amount of loans
 - 0.65 to households (home purchasing).
 - 1 to companies: 0.3 to developers (land, ...); 0.15 to companies of the housing sector
 - Housing is a little bit above 1 (0.65+0.3+.15)
 - Delinquency rates may imply big losses in the banking sector, even if they sell the houses and land involved.
- Liabilities:
 - Profits 5 big “banks” 2008: 0.0175 (0.0085 Santander)
 - Capital plus reserves (banks): 0.17 (0.035 Santander).
 - Long-term financing: 0.05. Good.

Some data (in euro-billions of euros)

- http://www.cotizalia.com/cache/2009/04/02/opinion_64_analisis_solvenca_sistema_bancario_espagnol.html

Solvency: a key issue

Bank of San Sebastian: typical bank balance sheet	
Assets	Liabilities
100 Credit	Deposits and loans from other banks: 90
Total: 100	Capital (+Res.): 10
	Total: 100

- Solvency (or capital adequacy) ratio, which is defined as the ratio of capital over (risk weighted) assets, should be above 8%. This bank has a ratio of 10%.
 - Please note that leverage ratio is the inverse: the ratio of assets over capital. In the example it is equal to 10.

Solvency: a key issue

Bank of San Sebastian: typical bank balance sheet	
Assets	Liabilities
95 Credit	Deposits and loans from other banks: 90
Total: 95	Capital (+Res.): 5
	Total: 95

- Now, the bank realizes that the part of the credits are “bad” (5%): capital falls below required solvency ratio. Solutions?

Solvency: a key issue

- Solutions?
 - Use “past” provisions, and current profits (but they will decline as new provisions are made).
 - Recapitalize.
 - Another bank buys this bank.
 - Nationalize.
 - Others (Bank of Spain’s take-over, ...).

The first victim of the crisis: Caja Castilla La Mancha

- It was taken over by Banco de España on Sunday (2009 March 30).
- Some basic data:
 - Assets: 20.000 millions.
 - Deposits: 17.000 millions.
 - Profits: 30 millions in 2008.
 - But there seems to be a BIG “HOLE” in the balance sheet: 3.000 millions (or much less?). Great weaknesses: great exposition to the housing sector, high (and increasing) delinquency rates, low capital adequacy ratio, ...
 - Amount at the Fondo de Garantía de Depósitos de Cajas de Ahorros: around 4.100 million euros.

The first victim of the crisis: Caja Castilla La Mancha

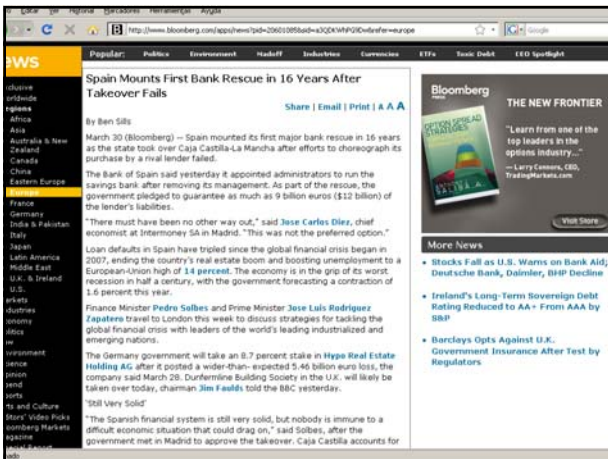
- There was suspicion about Caja Castilla La Mancha some time ago (2008 January 31):
 - http://www.cotizalia.com/cache/2008/01/31/83_banco_espasa_sigue_fiarse_intensifica_inspecciones.html

A new victim? CajaSur (Cordoba)

- http://www.cotizalia.com/cache/2009/05/21/noticias_4_ultimatum_banco_espasa_cajasur_cumple_coeficiente_solvencia.html#



Fuente: Enrique Casanueva (JP Morgan). “El sistema financiero español ante la crisis financiera internacional”.
http://www.seopan.es/ficheros/e5089a2b845dce240da6b694e8395b3e.pdf?PHPS_ESSID=32da32db863d5497e95f307297feb9c5



3.6. What about other areas?

What about other areas?

– Mostly based on Roubini Global Economonitor, <http://www.rgemonitor.com>

“The global financial system in 2008 experienced its worst crisis since the Great Depression of the 1930s. Major financial institutions went bust. Others were bought up on the cheap or survived only after major bailouts. Global stock markets fell by more than 50 percent from their 2007 peaks. Interest-rate spreads spiked. A severe liquidity and credit crunch appeared. Many emerging-market economies on the verge of a crisis had to ask for help from the International Monetary Fund.”

What about other areas?

- “Navigating the First Global Economic Recession. With the industrial world already in outright recession and the emerging world navigating towards a hard landing (growth well below potential) we [RGE] expect global growth to be flat (around -0.5%) in 2009. This will be the worst global recession in decades as the fallout of the most severe financial crisis since the Great Depression took a toll first on the U.S. and then – via a variety of channels of recoupling – on the rest of the global economy.”
- This will be the first global recession, according to the World Bank (March 2009): world GDP contraction will be around 1-2%.

What about other areas?

- Eurozone:
 - Fall of GDP will be around 4%.
 - “The latest cyclical upswing in the Eurozone (incl. large four Germany, France, Italy, Spain) was largely driven by a temporary but powerful boost to domestic investment from disappearing risk premia in the aftermath of the adoption of the single currency, and by external demand from a buoyant world economy. Both demand sources fizzled out by the second half of 2008, leaving the Eurozone as a whole and its largest members exposed to diverging deleveraging patterns in the face of suboptimal EMU-wide automatic fiscal stabilizer mechanisms. The latest record low readings of leading and sentiment indicators point to a severe recession ahead in 2009 that shapes up to be worse than the 1992/93 crisis. For the Eurozone we [RGE] expect a below consensus y/y contraction in real GDP of around -2.5%, with negative growth in each of the four quarters of the year.”

What about other areas?

- Eastern European economies.
 - Similar situation to the rest of Europe, but aggravated by their own weaknesses (widespread foreign currency lending -and **currency mismatch**-, high current-account deficits, impact of slump in Eurozone on exports, banks’ heavy dependence on foreign borrowing). Hungary Latvia, and Ukraine have even asked for help to IMF.
 - Most vulnerable: Baltic States, Bulgaria, Romania, Hungary, and Ukraine.
 - Least vulnerable: Czech Republic, Slovakia.

What about other areas?

- USA:
 - The prospects are gloomy. The recession may last 2 years (end of 2009).
 - “We forecast that the United States economy is only half way through a recession that started in December 2007 and will be the longest and most severe in the post war period. U.S. GDP will continue to contract throughout all of 2009 for a cumulative output loss of 5%.”
 - Dow Jones closed at (-33,8% increase). Has it reached to the bottom? Experts say that it may have not ... It may even fall an additional 20%.

What about other areas?

- Japan.
 - It is officially in recession.
 - Deflation may happen again. Why? Strength of yen, falling global prices, domestic recession, loss of export growth, ...
 - Stock market fall from 15.307,78 to 8.859,56 in 2008 (-42%).

What about other areas?

- China.
 - It is growing at a lower pace, but it will grow more than the rest, thus remaining the most resilient economy in Asia. It seems that it will not save Asia from global recession.
 - Forecasts for GDP growth are now in the range 5% (expected: 9%).
 - Experts say China has to grow at least 8% to absorb 10-15 million people going from rural areas to work in factories.

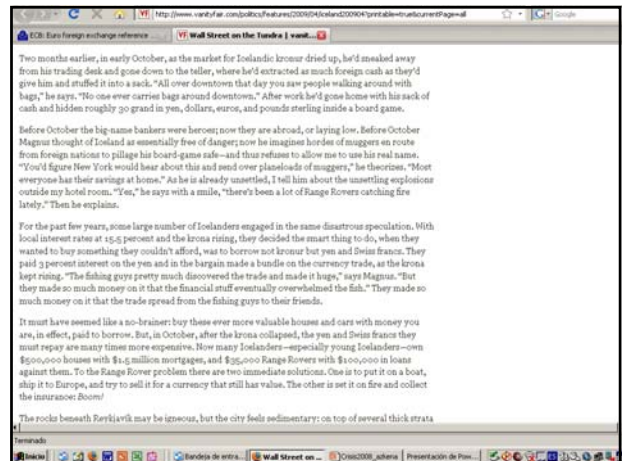
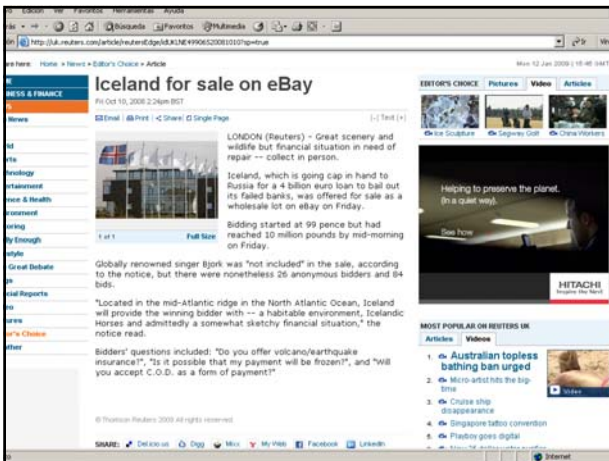
3.7. Some interesting case studies

Iceland, “from heaven to hell”

- Iceland is the first country in the Human Development Index in 2006. Now it is suffering a tremendous financial distress:
 - Buiter and Sibert, 30 October 2008, “The collapse of Iceland’s banks: the predictable end of a non-viable business model”: <http://www.voxeu.org/index.php?q=node/2498>
 - Danielsson, 12 November 2008, “The first casualty of the crisis: Iceland” <http://www.voxeu.org/index.php?q=node/2549>
 - A view before the bust, Gylfason, 7 April 2008, “Events in Iceland: Skating on thin ice?” <http://www.voxeu.org/index.php?q=node/1033>
 - “For Sale” on eBay (10 October 2008).
 - Michael Lewis, “Wall Street on the Tundra”: <http://www.vanityfair.com/politics/features/2009/04/iceland200904?printable=true¤tPage=all>

Iceland, “from heaven to hell”

- Key information:
 - Inflation targeting went wrong:
 - Inflation was above the target and this “forced” the central bank to increase interest rates.
 - That encourage households and firms to borrow abroad (in foreign currency, and short maturity): strong currency inflow. This appreciated Icelandic krona.
 - Sequence: high domestic interest rates, currency appreciation and capital inflows.
 - Size of the banking sector: enormous since foreign assets worth around 10 times domestic GDP, even though solvent. Banks were “too big to save”.
 - Others: its own currency, small country, and limited fiscal capacity.



4. What should be done now?

What should be done now?

- This is mostly based on IMF (2008). Baldwin (2009) provides a concise summary.
 - The IMF Note offers lessons from five of the most relevant crises: the Great Depression, the Japanese 1990s banking crisis, the 1997 Asian crisis, the 1980s Savings & Loans crisis in the USA, and the 1990s Nordic crisis.

What should be done now?

- The current crisis calls for two main sets of policy measures:
 - Measures to repair the financial system: recapitalization, assets purchases, quantitative easing (direct intervention of central banks), ...
 - Measures to increase demand and restore confidence: public spending, tax reductions, ...
- While some of these measures overlap, the focus of the note is on the second set of policies, and more specifically, given the limited room for monetary policy, on fiscal policy.

What should be done now?

- This recession could be deeper than any since the Great Depression.
- Aggregate demand has declined due to:
 - Fall in real and financial wealth.
 - Increase of precautionary saving.
 - Consumers' and firms' "wait and see" attitude.
 - Credit is much difficult to get.

What should be done now?

- Two standard anti-crisis macro tools are ineffective:
 - Export-led recovery strategy (e.g. through devaluation), since recession is global.
 - Monetary policy. The monetary transmission mechanism is weakened due to the collapse of the financial system, and the room to reduce interest rate even more is severely limited.
- Therefore, **fiscal policy is the best policy option.**

What should be done now?

- **Fiscal stimulus** should be:
 - Timely (as there is an urgent need for action),
 - Large (because the drop in demand is large),
 - Lasting (as the recession will likely last for some time),
 - Diversified (as there is uncertainty regarding which measures will be most effective),
 - Contingent (to indicate that further action will be taken, if needed),
 - Collective (all countries that have the fiscal space should use it given the severity and global nature of the downturn), and
 - Sustainable (to avoid debt explosion in the long run and adverse effects in the short run).

What should be done now?

- The **key lessons to manage fiscal policy** in a crisis are:
 - Successful resolution of the financial crisis is a precondition for achieving sustained growth. The archetypal example is Japan where fiscal policy failed because financial sector problems were allowed to fester. By contrast, prompt and sizeable support to the financial sector by the Korean authorities limited the duration of the macroeconomic consequences thus limiting the need for other fiscal action.
 - The solution to the financial crisis always precedes the solution to the macroeconomic crisis.
 - A fiscal stimulus is highly useful (almost necessary) when the financial crisis spills over to the corporate and household sectors with a resulting worsening of the balance sheets.
 - The fiscal response can have a larger effect on aggregate demand if its composition takes into account the specific features of the crisis. In this regard, some of the tax and transfer policies implemented early in the Nordic crises did little to stimulate output.

What should be done now?

- **Composition of a fiscal stimulus.** Two important features:
 - First, this crisis is here for some time, so slow-acting fiscal spending can be part of the picture. (In the usual recession, spending often kicks in after the recession is past and thus becomes part of the problem rather than part of the solution). Moreover, expenditure measures have the advantage of directly stimulating demand rather than giving money to consumers and companies who might not spend it (more uncertainty).
 - Second, the unusual macroeconomic conditions mean that existing estimates of fiscal multipliers are less reliable guides to the relative effectiveness of various fiscal policies. Therefore, fiscal policy should be diversified.

What should be done now?

- **Direct government spending:**
 - In theory, public spending has large multiplier effects, and its effects are much more certain than those of transfers or tax cuts.
 - Governments should make sure that existing programs are not cut for lack of resources.
 - Look for spending programs which can be started or restarted quickly. For example, the state could take its share in private-public partnerships for projects that would otherwise be suspended for lack of private capital.
 - Public sector wage increases should be avoided as they are not well targeted, difficult to reverse, and similar to transfers in their effectiveness. Nevertheless, a temporary increase in public sector employment associated with some of new programs and policies may be needed.

What should be done now?

- **Stimulus aimed at consumers.** Consumers face three crisis-specific factors:
 - Wealth reductions are a key cause of reduced consumption;
 - Credit constraints are forcing consumption reductions; and
 - Uncertainty has spawned a wait-and-see attitude that results in the delay of planned purchases.
- These factors suggest two broad recommendations:
 - Tax cuts should target consumers who are most likely to be credit constrained (greater provision of unemployment benefits, expansion of safety nets, support for homeowners, ...), and
 - Clarity of policy and a strong commitment to “take whatever action may be needed to avoid the tail risk of a depression”.
- The goal is to reduce uncertainty and to overcome the wait-and-see attitudes.
 - No tax cuts.

What should be done now?

- **Fiscal stimulus aimed at firms.** The high degree of uncertainty surrounding this crisis fosters a wait-and-see attitude when it comes to firms' investments.
 - Giving subsidies or lowering tax adjusted cost of capital are unlikely to have much effect.
 - The key challenge for policy-makers is to avoid that firms have to cut down their current operations for lack of financing, including reasonably-priced credit. This is, of course, primarily the job of monetary, not fiscal, policy. However, there is some scope for governments in supporting firms that are facing particularly difficult problems, and could survive through restructuring, but find it difficult or impossible to receive the necessary financing from dysfunctional credit markets. Sector-wide policies like the US auto bailout are bad idea, for example.

What should be done now?

- **Sustainability concerns.** The call for deficit spending by IMF staff is unusual. However, they add that fiscal stimulus should not undermine fiscal sustainability, due to the adverse effects on financial markets, interest rates, and consumer spending. A fiscally unsustainable path can eventually lead to sharp adjustments in real interest rates, and these in turn can destabilize financial markets and undercut recovery prospects.

What should be done now?

- The IMF suggests a number of things that could help **sustainability**:
 - Measures should be reversible or have clear sunset clauses contingent on the economic situation;
 - Measures that increase the scope of automatic stabilizers are useful;
 - Pre-commitments to future policies that help shore up fiscal accounts are useful.
 - Pre-commitment to unwinding stimulus measures either at a specific date (like lowering VAT for just two years as the U.K. recently did) or on a contingent basis (reversing the VAT cut once GDP growth has risen above a certain level) are a good idea;
 - Strengthening fiscal governance by, for example, setting up an independent fiscal council;

What should be done now?

- **Coordination:** There is a need for a collective approach to providing fiscal stimulus. Nonetheless, there are several important spillovers that could limit the effectiveness of actions taken by individual countries, or even create adverse externalities across borders:
 - More open countries may be discouraged from fiscal stimulus, since the impact is lower. However, if all countries stimulate, the collective effort needed is lower.

What should be done now?

- Sources:
 - Baldwin: "The IMF on fiscal policy on the crisis", 2 January 2009, <http://www.voxeu.org/index.php?q=node/2743>
 - IMF (Blanchard and others), "Fiscal policy for the crisis" (2008), <http://www.imf.org/external/pp/longres.aspx?id=4307>

What should be done now?

- In Spain it took too much time to the government to recognize that Spain was entering into a deep recession (elections in March 2008).
- Financial crisis is in the way of "a solution" (?). But it will not solve the crisis in the real economy:
 - Demand is quite rigid to variations in interest rates.
 - The root of the crisis is in the lack of sufficient aggregate demand, even though additional financing programmes may help SMEs.
 - FAAF has been useful. Enough?

What should be done now?

- Channels to increase demand (Remember)?
 - Export growth. Difficult.
 - More expansive monetary policy. Difficult.
 - Please note that using monetary policy can be like “pushing on a string” (*empujar con un hilo o una soga*).
 - Fiscal policy is the only remaining choice. There is some margin to manoeuvre:
 - Reducing taxes. Something can be done, but it will not do much for the recovery.
 - Increasing spending in infrastructures:
 - Beware of **deficits**. Not for consumption financing.

What should be done now?

- Recent measures taken by the government seem to be insufficient.
- Other measures proposed:
 - Price and wage freezes (-15% according to Krugman), since real exchange rate has appreciated around 10-15% vs. Eurozone partners in the last 10 years.
 - New measures in the labor market (simplify contracts, ...).
 - Productivity boosting measures?

Digression: Some thoughts on fiscal stimulus (wonkish)

- Salt water (Keynesian) vs. Fresh water economists (“Classical”) debate.
- Look at <http://krugman.blogs.nytimes.com/2009/01/27/a-dark-age-of-macroeconomics-wonkish/>
- It points out to several interesting links on this issue.

Digression: Some thoughts on fiscal stimulus (wonkish)

- The great multiplier debate (based on the blog by Mark Thoma):
 - <http://economistsview.typepad.com/economistsview/2009/02/the-great-multiplier-debate.html>

Digression: The Ricardian Equivalence debate

- <http://krugman.blogs.nytimes.com/2009/04/06/one-more-time/>

Digression: Liquidity preference and loanable funds

- <http://krugman.blogs.nytimes.com/2009/05/02/liquidity-preference-loanable-funds-and-niall-ferguson-wonkish/>
- <http://www.scribd.com/doc/10073267/HICKSMr-Keynes-and-the-Classicsa-Suggested-Interpretation>
- <http://krugman.blogs.nytimes.com/2009/02/23/liquidity-preference-versus-loanable-funds-televised-wonkish-with-video/?scp=1&sq=keynes%20diagram&st=cse>

5. Concluding remarks

Concluding remarks

- This will be a long lasting recession, probably the worst since the Great Depression.
- Fear and uncertainty, and an unusually complexity of the crisis do not offer good prospects in the short run (specially for 2009).
- Recovery seems to take place by mid-2010 or the end of 2010. 2010 will be a “better” year than 2009.

Concluding remarks

- The specific and unusual nature of the crisis asks mainly for a worldwide fiscal stimulus in an appropriate (and diversified) direction, in addition to measures to repair the international financial system.

Frank Capra and James Stewart
“What a wonderful life!” (1946),
or how a bank run can be solved
with much sense

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