The Great Recession: Subprime Meltdown

Michael Ka Yiu Fung
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CUHK Business School
The Great Depression

• August 1929 – March 1933:
  1. Duration: 43 months
  2. Highest unemployment rate: 24.9%
The Great Depression

• August 1929 – March 1933:
  1. Highest unemployment rate: 24.9%
  2. Change in real GDP: -28.8%
The Great Recession

- December 2007 – June 2009:
  1. Duration: 18 months
  2. Highest unemployment rate: 10%
  3. Change in real GDP: - 5.1%
The Great Recession

“By many measures, the financial crisis of 2007 to 2009 caused the deepest recession in the U.S. and world economies in more than 50 years. … while a repeat of the Depression was avoided, the “Great Recession,” as it is coming to be called, shook the U.S. and World economies in ways that almost no one thought was possible.” (Jones 2011)
The Great Recession: Subprime Meltdown
Causes: Economic Growth

World's Real GDP & World's Annual Growth Rate (1990-2011)

Causes: Economic Growth

Causes: Economic Growth

- Information Technology
- New Growth Theory: Importance of Technology/ Innovative Ideas (Jones 2011)

1. Paul Romer: objects and ideas. Objects include most economic goods. Ideas are instructions, designs for making objects, or recipes.

1. Properties of “ideas” – Non-rivalry and Increasing returns
Causes: Globalization

Trade and Capital Flows
Causes: Globalization

- The average worldwide tariff on manufacturing goods fell from about 14 percent in the early 1960s to 4 percent by 2000. (Jones 2011)
Causes: Globalization

“The average cost of moving a ton a mile in 1890 was 18.5 cents (in 2001 dollars). Today, this cost is 2.3 cents. ... Two factors have acted to decrease the importance of transportation costs for goods. First, the technologies designed for moving goods have improved. Second, the value of goods lies increasingly in quality, rather than quantity, so that we are shipping far fewer tons of goods relative to GDP than we have in the past.” (Glaeser and Kohlhase 2003)
Causes: Globalization

- Trade and efficiency
- Efficiency and economic growth
Causes: Globalization

- Both imports and exports have risen from under 5 percent of GDP in the 1950s to as much as 17 or 12 percent of GDP before the financial crisis.
- Since 1975, the United States has experienced large trade deficits. Indeed, by 2006, the trade deficit had reached 5.7 percent of GDP.
Causes: Globalization

US Current Account Balance (1990-2010)

Causes: Globalization

US CAD/US Nominal GDP (1990-2010)

Causes: Globalization

• The United States is now a net debtor to the rest of the world. Net foreign debt reached nearly 25 percent of GDP in 2009.
Causes: Globalization

The Global Saving Glut:

“While developing countries on net borrowed $88 billion in 1996 from the rest of the world, by 2003 they were instead saving a net $205 billion into the world’s capital markets. … This demand for investments contributed to rising asset markets in the United States, including the stock market and the housing market.”

(Jones 2011)
Causes: The US Interest Rates

The U.S. FED Fund Rate - liquidity
Causes: The US Interest Rates

The U.S. Federal Fund Rate (2000-2008)

Causes: The US Interest Rate

• In the period from 1980 to 2001, the Federal Funds rate had generally tracked economic conditions. After 2001 and until July 2004, however, the Fed kept interest rates low in spite of signs of growth in output and prices. Perhaps fearing a recession that did not materialize, the Federal Funds rate was set to only 1 percent from July 2003 to July 2004. (Rotemberg 2008).
The US Housing Market

• Average house prices across the United States had risen steadily since 1975 and reached about 12 percent per annum in late 2005 and early 2006. (Rotemberg 2008).
The US Housing Market

U.S. Home Prices
INDEX VALUE: JANUARY 2000 = 100

NOTE: Sand states are Arizona, California, Florida, and Nevada.
SOURCE: CoreLogic and U.S. Census Bureau: 2007 American Community Survey, FCIC calculations

Source: Financial Crisis Inquiry Commission
The US Housing Market

Source: Financial Crisis Inquiry Commission
The US Housing Market

• Professor Chris Mayer of Columbia University: "There is no natural law that says U.S. housing prices have to stop here. None." (Rotemberg 2008).
The US Housing Market

• "Traditional" fixed 30-year mortgage

• 2/28 mortgages
The US Housing Market

• “Subprime” borrowers: loan applications did not meet existing standards – poor credit records or high existing debt-to-income ratios.
The US Housing Market

- One obvious difference between “subprime” and “prime” loans was that the former had higher interest rates and fees: 29% of the home loans made in 2006 had high interest rates (Rotemberg 2008).
The US Housing Market

Subprime Mortgage Originations

In 2006, $600 billion of subprime loans were originated, most of which were securitized. That year, subprime lending accounted for 23.5% of all mortgage originations.

IN BILLIONS OF DOLLARS

NOTE: Percent securitized is defined as subprime securities issued divided by originations in a given year. In 2007, securities issued exceeded originations.

Source: Inside Mortgage Finance
The US Housing Market

• As long as housing prices increased, these mortgages were secure: the borrower rapidly accumulated equity in the house that could be taken out in a refinance, allowing the mortgage to be repaid. (Rotemberg 2008)
The US Housing Market

• Between May 2004 and May 2006, the Fed raised its interest rate from 1.25 percent to 5.25 percent in part because of concerns over increases in inflation.
The US Housing Market

• According to Bernanke, by August 2007, nearly 16% of subprime mortgages with adjustable rates were in default. The problem then spiraled, as low housing prices led to defaults, which, in a vicious cycle, lowered housing prices even more. (Jones 2011)
The US Housing Market

Mortgage Delinquencies by Loan Type

Serious delinquencies started earlier and were substantially higher among subprime adjustable-rate loans, compared with other loan types.

IN PERCENT, BY TYPE

<table>
<thead>
<tr>
<th>Year</th>
<th>Subprime Adjustable Rate</th>
<th>Subprime Fixed Rate</th>
<th>Prime Adjustable Rate</th>
<th>Prime Fixed Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998</td>
<td>5%</td>
<td>2%</td>
<td>1%</td>
<td>0.5%</td>
</tr>
<tr>
<td>2000</td>
<td>10%</td>
<td>5%</td>
<td>3%</td>
<td>1%</td>
</tr>
<tr>
<td>2002</td>
<td>15%</td>
<td>8%</td>
<td>4%</td>
<td>2%</td>
</tr>
<tr>
<td>2004</td>
<td>20%</td>
<td>10%</td>
<td>6%</td>
<td>3%</td>
</tr>
<tr>
<td>2006</td>
<td>25%</td>
<td>12%</td>
<td>8%</td>
<td>4%</td>
</tr>
<tr>
<td>2008</td>
<td>30%</td>
<td>15%</td>
<td>10%</td>
<td>5%</td>
</tr>
<tr>
<td>2010</td>
<td>35%</td>
<td>18%</td>
<td>12%</td>
<td>6%</td>
</tr>
</tbody>
</table>

NOTE: Serious delinquencies include mortgages 90 days or more past due and those in foreclosure.

Source: Financial Crisis Inquiry Commission
Subprime Meltdown

Two questions:

1. Why was the shock of sub-prime mortgages in such a large scale?

2. How did the (U.S. housing sector) shock transmit to the U.S. financial sector and then other economies?
Causes: Financial Innovations

- Securitization: Like a decadent buffet at an expensive hotel, securitization involves lumping together large numbers of individual financial instruments such as mortgages and then slicing and dicing them into different pieces that appeal to different types of investors. A hedge fund may take the riskiest piece in the hope of realizing a high return. A pension fund may take a relatively safe portion, constrained by the rules under which it operates. (Jones 2011)
Causes: Financial Innovations

Residential Mortgage-Backed Securities

Financial institutions packaged subprime, Alt-A and other mortgages into securities. As long as the housing market continued to boom, these securities would perform. But when the economy faltered and the mortgages defaulted, lower-rated tranches were left worthless.

1. Originate
Lenders extend mortgages, including subprime and Alt-A loans.

2. Pool
Securities firms purchase these loans and pool them.

3. Tranche
Residential mortgage-backed securities are sold to investors, giving them the right to the principal and interest from the mortgages. These securities are sold in tranches, or slices. The flow of cash determines the rating of the securities, with AAA tranches getting the first cut of principal and interest payments, then AA, then A, and so on.

Source: Financial Crisis Inquiry Commission
Causes: Financial Innovations

• According to a Lehman Brothers report, a substantial fraction of subordinate MBS (Mortgage-backed Securities) securities (those rated below AAA) were held by collateralized debt obligation (CDO) entities in 2007. It was common for CDOs to hold assets of other CDOs. CDOs were also heavily involved in markets for derivatives securities (CDS). (Rotemberg 2008)
Causes: Financial Innovations

Collateralized Debt Obligations
Collateralized debt obligations (CDOs) are structured financial instruments that purchase and pool financial assets such as the riskier tranches of various mortgage-backed securities.

1. Purchase
The CDO manager and securities firm select and purchase assets, such as some of the lower-rated tranches of mortgage-backed securities.

2. Pool
The CDO manager and securities firm pool various assets in an attempt to get diversification benefits.

3. CDO tranches
Similar to mortgage-backed securities, the CDO issues securities in tranches that vary based on their place in the cash flow waterfall.

Source: Financial Crisis Inquiry Commission
Causes: Financial Innovations

Subprime Mortgage Originations
In 2006, $600 billion of subprime loans were originated, most of which were securitized. That year, subprime lending accounted for 23.5% of all mortgage originations.

IN BILLIONS OF DOLLARS

NOTE: Percent securitized is defined as subprime securities issued divided by originations in a given year. In 2007, securities issued exceeded originations.
SOURCE: Inside Mortgage Finance

Source: Financial Crisis Inquiry Commission
Causes: Financial Innovations

• Rating agencies generously applied favorable ratings to wide variety of assets. Since agencies profited at the issuance of an asset grade and were not paid based on the asset’s actual performance, the incentives of rating agencies were in question. Under criticism as well was their methodology for rating assets. One argument rating agencies, and also government regulators, was that they did not offer the compensation or prestige to attract top quality talent and so would always be a step behind financial innovation. (Segel and Creo 2010)
Causes: Financial Deregulation

• 1996 - Federal Reserve reinterprets the Glass-Steagall Act several times, eventually allowing bank holding companies to earn up to 25 percent of their revenues in investment banking.

• 1998, Citicorp-Travelers Merger – Citigroup, Inc. merges a commercial bank with an insurance company that owns an investment bank to form the world’s largest financial services company.
Causes: Financial Deregulation

• 2000 - Commodity Futures Modernization Act – The bill prevented the Commodity Futures Trading Commission from regulating most over-the-counter derivative contracts, including credit default swaps.
Causes: Financial Deregulation

• 2004 - Voluntary Regulation – The SEC proposes a system of voluntary regulation, allowing investment banks to hold less capital in reserve and increase leverage.
Subprime Meltdown

• The investors who were holding these mortgage-backed securities often turned out to be the large commercial and investment banks themselves.
Subprime Meltdown

- Liquidity crisis – a situation in which the volume of transactions in some financial markets falls sharply, making it difficult to value certain financial assets and thereby raising questions about the overall value of the firms holding those assets.
Subprime Meltdown

• Another important feature of the financial crisis is that it was global in scope. In 2009, real GDP declined for the world as a whole, the first time this has happened in many decades.
Balance-sheet Crisis

• A balance sheet consists of two columns. On the left are the assets of the institution – items of value that the institution owns. On the right are the liabilities – items of value that the institution owes to others.
## A Hypothetical Bank’s Balance Sheet
(billions of dollars)

<table>
<thead>
<tr>
<th>Assets</th>
<th>Liabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loans</td>
<td>Deposits</td>
</tr>
<tr>
<td>1,000</td>
<td>1,000</td>
</tr>
<tr>
<td>Investments</td>
<td>Short-term debt</td>
</tr>
<tr>
<td>900</td>
<td>400</td>
</tr>
<tr>
<td>Cash and reserves</td>
<td>Long-term debt</td>
</tr>
<tr>
<td>100</td>
<td>400</td>
</tr>
</tbody>
</table>

**Total assets** 2,000  **Total liabilities** 1,800

**Equity (net worth)** 200

*Source: Jones (2011)*
Balance-sheet Crisis

• Banks are subject to various financial regulations:
  1. Reserve requirement mandates that banks keep a certain percentage of their deposits in a special account ("on reserve") with the central bank.

  2. Capital requirement mandates that the capital (net worth) of the bank be at least a certain fraction of the bank’s total assets.
Balance-sheet Crisis

- Leverage is the ratio of total liabilities to net worth.
- If the leverage ratio is 9, for every $10 of assets the bank holds, $9 is essentially financed by borrowing. Leverage magnifies both the gains and losses on investments.
- Before the financial crisis, major investment banks had high leverage ratios. For example, when Bear Stearns collapsed, its leverage was 35 to 1. Roughly speaking, the major investment banks owned complex investment portfolios, including significant quantities of soon-to-be toxic assets, that were financed with $3 of their own equity and $97 of borrowing. Given this extraordinary leverage, major investment banks were in such a precarious position that a relatively small aggregate shock could send them over the insolvency edge. (Jones 2011)
Balance-sheet Crisis

• The bank is insolvent or bankrupt when the assets owned by the bank would be no longer be large enough to cover the liabilities that the bank owes to others.
Balance-sheet Crisis

- Financial institutions often have relatively large amounts of short-term debt (commercial papers), in part to provide liquidity as they manage their deposits, loans, and investments.
- In the last months of 2008 following the collapse of Lehman Brothers, interest rates on commercial paper rose sharply by more than 5 percentage points, and access to this form of liquidity was sharply curtailed. To fund their daily operations, banks might then have been forced to sell some of their less liquid assets at “fire sale” prices, reducing their net worth – potentially all the way to insolvency. (Jones 2011)
Bank B’s Balance Sheet

<table>
<thead>
<tr>
<th>Assets</th>
<th>Liabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>Deposits</td>
</tr>
<tr>
<td>1,000</td>
<td>1,400</td>
</tr>
<tr>
<td>Loan to bank C</td>
<td></td>
</tr>
<tr>
<td>500</td>
<td></td>
</tr>
<tr>
<td><strong>Total assets</strong></td>
<td><strong>Total liabilities</strong></td>
</tr>
<tr>
<td>1,500</td>
<td>1,400</td>
</tr>
<tr>
<td><strong>Equity (net worth)</strong></td>
<td></td>
</tr>
<tr>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

Bank C’s Balance Sheet

<table>
<thead>
<tr>
<th>Assets</th>
<th>Liabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mortgage-backed securities</td>
<td>Deposits</td>
</tr>
<tr>
<td>800</td>
<td>200</td>
</tr>
<tr>
<td>Loan from bank B</td>
<td>500</td>
</tr>
<tr>
<td><strong>Total assets</strong></td>
<td><strong>Total liabilities</strong></td>
</tr>
<tr>
<td>800</td>
<td>700</td>
</tr>
<tr>
<td><strong>Equity (net worth)</strong></td>
<td></td>
</tr>
<tr>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

Source: Jones (2011)
Balance-sheet Crisis

Bear Stearns Liquidity

In the four days before Bear Stearns collapsed, the company’s liquidity dropped by $16 billion.

IN BILLIONS OF DOLLARS, DAILY

Source: Financial Crisis Inquiry Commission
Balance-sheet Crisis

- Systemic risk: The declines in housing prices and the stock market combined with leverage to threaten the solvency of many financial institutions. Because the financial system is so integrated – financial institutions borrow and lend large sums with each other every day in normal times – problems in a few banks can create a systemic risk for the global financial system as a whole. (Jones 2011)
Balance-sheet Crisis

Asset-Backed Commercial Paper Outstanding

At the onset of the crisis in summer 2007, asset-backed commercial paper outstanding dropped as concerns about asset quality quickly spread. By the end of 2007, the amount outstanding had dropped nearly $400 billion.

IN BILLIONS OF DOLLARS

Source: Federal Reserve Board of Governors

Source: Financial Crisis Inquiry Commission
Balance-sheet Crisis

Cost of Interbank Lending

As concerns about the health of bank counterparties spread, lending banks demanded higher interest rates to compensate for the risk. The one-month LIBOR-OIS spread measures the part of the interest rates banks paid other banks that is due to this credit risk. Strains in the interbank lending markets appeared just after the crisis began in 2007 and then peaked during the fall of 2008.

IN PERCENT, DAILY

4%

NOTE: Chart shows the spread between the one-month London Interbank Offered Rate (LIBOR) and the overnight index swap rate (OIS), both closely watched interest rates.

SOURCE: Bloomberg

Source: Financial Crisis Inquiry Commission
Balance-sheet Crisis

Cost of Short-Term Borrowing
During the crisis, the cost of borrowing for lower-rated nonfinancial firms spiked.

IN PERCENT, DAILY

7%

NOTE: Shown is the spread between the rate paid by second-tier rated nonfinancial companies (A2/P2) that borrowed by issuing 30-day commercial paper and the rate paid on similar paper by the best-rated companies.
SOURCE: Federal Reserve Board of Governors

Source: Financial Crisis Inquiry Commission
Subprime Meltdown

- December 2007 – June 2009:
  1. Duration: 18 months
  2. Highest unemployment rate: 10%
  3. Change in real GDP: - 5.1%
Subprime Meltdown

Dow Jones Industrial Average
Peak 9 October 2007

- Oct 2007
- Jan 2008
- Apr 2008
- Jul 2008
- Oct 2008
- Jan 2009
Subprime Meltdown

• September 29, 2008: The biggest single-day loss ever in the history of the Dow occurred on, when it dropped 777.68 points, or approximately $1.2 trillion in market value.
Subprime Meltdown

Household Net Worth

The crisis wiped out much more wealth than other recent events such as the bursting of the dot-com bubble in 2000.

IN TRILLIONS OF DOLLARS

$70

$60

$50

$40

$30

$20

$10

$0


$54.9

NOTE: Net worth is assets minus liabilities for U.S. households.
SOURCE: Federal Reserve Flow of Funds Report

Source: Financial Crisis Inquiry Commission
Subprime Meltdown

• In 2008, 25 banks failed and were taken over by the FDIC. In 2009, 140 failed. - “Failed Bank List” FDIC
Subprime Meltdown

World's Real GDP & World's Annual Growth Rate (1990-2011)

Policy

• In the course of two weeks in September 2008, the government took over the mortgage companies Fannie Mae and Freddie Mac, Lehman Brothers collapsed into bankruptcy, Merrill Lynch was sold to Bank of America, and the Federal Reserve organized an $85 billion bailout of AIG. (Jones 2011)
Policy

- Treasury Secretary Henry Paulson and Fed Chair Ben Bernanke met with congressional leaders to outline the $700 billion Troubled Asset Relief Program (TARP), with Bernanke warning, “If we don’t do this, we may not have an economy on Monday.” (Jones 2011)
Monetary Policy

The U.S. Federal Fund Rate (2000-2008)

Monetary Policy

- Quantitative Easing (QE) : Expansion of balance sheet.
- Changes in assets/liabilities structure
Monetary Policy

The Fed’s balance sheet (May 2007):

• Total assets and total liabilities were $906 billion.
• The bulk of the assets were U.S. Treasury securities, and the bulk of the liabilities consisted of currency held by the public.
• This situation reflects the mechanics of monetary policy whereby the Fed essentially buys and sells U.S. government bonds in exchange for currency in order to set the Fed fund rate.
## The Federal Reserve’s Balance Sheet
(billions of dollars)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Assets</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>U.S. Treasuries</td>
<td>790</td>
<td>569</td>
<td>Currency</td>
<td>814</td>
<td>905</td>
</tr>
<tr>
<td>Loans</td>
<td>0</td>
<td>553</td>
<td>Treasury accounts</td>
<td>5</td>
<td>276</td>
</tr>
<tr>
<td>Other</td>
<td>116</td>
<td>1,050</td>
<td>Reserves</td>
<td>7</td>
<td>858</td>
</tr>
<tr>
<td><strong>Total assets</strong></td>
<td>906</td>
<td>2,172</td>
<td><strong>Total liabilities</strong></td>
<td>906</td>
<td>2,172</td>
</tr>
</tbody>
</table>

**Source:** Jones (2011)
Monetary Policy

The Fed’s balance sheet (May 2009):

• Total assets and total liabilities were $2,172 billion.

• The Fed expanded its lending to the rest of the economy, not only to financial institutions but also to non-financial corporations. This lending came either in the form of loans or through the purchase of securities like commercial paper.
Monetary Policy

The Fed’s balance sheet (May 2009):

• The Fed did not finance this additional lending by printing money.

• These funds came from two sources: borrowing from the U.S. Treasury and excess reserves from the banks.

• Banks kept the funds as reserves with the Fed rather than lending them out to the private sector.
Fiscal Policy

October 2008 - Troubled Asset Relief Program (TARP)

• This program established a $700 billion fund to be used by the Treasury to purchase and insure assets held by financial institutions in an effort to strengthen the financial system and encourage lending.

• AIG, Citigroup, Bank of America, JP Morgan, Goldman Sachs, Morgan Stanley, General Motors, Chrysler, …
Fiscal Policy

• February 2009 American Recovery and Reinvestment Act
• $787 billion package designed to stimulate aggregate demand in the economy.
• Tax cuts and new government spending on unemployment benefits, infrastructure, education, health care, and aid to state and local governments.
Financial Reform

• What changes to the financial system will minimize the likelihood of another financial crisis?
Financial Reform

• The economic cost of financial crisis was mainly borne by people outside the finance industry.
Financial Reform

• “Too big to fail”
• “Heads, I win; tails, the economy loses”
• Moral hazard
Financial Reform

**Compensation in Financial and Nonfinancial Sectors**

*Compensation in the financial sector outstripped pay elsewhere, a pattern not seen since the years before the Great Depression.*

ANNUAL AVERAGE, IN 2009 DOLLARS

<table>
<thead>
<tr>
<th>Year</th>
<th>Financial</th>
<th>Nonfinancial</th>
</tr>
</thead>
<tbody>
<tr>
<td>1929</td>
<td>20,000</td>
<td>20,000</td>
</tr>
<tr>
<td>1940</td>
<td>20,000</td>
<td>20,000</td>
</tr>
<tr>
<td>1950</td>
<td>20,000</td>
<td>20,000</td>
</tr>
<tr>
<td>1960</td>
<td>20,000</td>
<td>20,000</td>
</tr>
<tr>
<td>1970</td>
<td>20,000</td>
<td>20,000</td>
</tr>
<tr>
<td>1980</td>
<td>20,000</td>
<td>20,000</td>
</tr>
<tr>
<td>1990</td>
<td>20,000</td>
<td>20,000</td>
</tr>
<tr>
<td>2000</td>
<td>20,000</td>
<td>20,000</td>
</tr>
<tr>
<td>2009</td>
<td>102,069</td>
<td>58,666</td>
</tr>
</tbody>
</table>

**NOTE:** Average compensation includes wages, salaries, commissions, tips, bonuses, and payments for government insurance and pension programs. Nonfinancial sector is all domestic employees except those in finance and insurance.

**SOURCES:** Bureau of Economic Analysis, Bureau of Labor Statistics, CPI-Urban, FCIC calculations

Source: Financial Crisis Inquiry Commission
Financial Reform

• Link executive compensations to long-term performance.
Financial Reform

- Volcker Rule to restrict United States banks from making certain kinds of speculative investments that do not benefit their customers
Teaching Macro Principles 
*after* the Financial Crisis

Alan Blinder
Teaching Macroeconomics

• Interest in economics has grown, and our students will want, expect, and deserve explanations of these events for years to come. This is truly a teaching moment, and that moment is going to be a long one.
Teaching Macroeconomics

• The bad news is that the current curriculum fails to give students even imperfect answers. This means that the macro principles course will have to be changed.
Four Basic Pedagogical Decisions

• The first major pedagogical choice is the *relative* degree of emphasis on growth versus business cycles.
Four Basic Pedagogical Decisions

• A second and related decision that both textbook authors and instructors must make is how Keynesian to make their books or courses: the Keynesian multiplier model and consumption function.
Four Basic Pedagogical Decisions

• A third decision that textbook authors really must rethink is the one-interest-rate model.
Four Basic Pedagogical Decisions

• The fourth and final major pedagogical decision is how complex the model must be, especially in the financial domain, in order to convey the appropriate story to our students.
New Topics for Macro Principles

• Risk premiums in interest rates
New Topics for Macro Principles

TED Spread & Components - 2008

The "TED Spread" is a measure of credit risk for inter-bank lending. It is the difference between 1) the three-month U.S. treasury bill rate, and 2) the three-month LIBOR rate, which represents the rate at which banks typically lend to each other. A higher spread indicates banks perceive each other as riskier counterparties.
New Topics for Macro Principles

• Asset-market bubbles
New Topics for Macro Principles
New Topics for Macro Principles

• Leverage
A Hypothetical Bank’s Balance Sheet (billions of dollars)

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**Total assets**  2,000  **Total liabilities**  1,800

**Equity (net worth)**  200

Source: Jones (2011)
New Topics for Macro Principles

• Insolvency and illiquidity
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</tr>
<tr>
<td>100</td>
<td>400</td>
</tr>
</tbody>
</table>

Total assets: 2,000

Total liabilities: 1,800

Equity (net worth): 200

Source: Jones (2011)
New Topics for Macro Principles

• Too big to fail: systemic risk and moral hazard
References


Suggested Reading

The Journal of Economic Education
- Publication details, including instructions for authors and subscription information:
- http://www.tandfonline.com/loi/vece20

Teaching Macro Principles after the Financial Crisis
- Alan Blinder a
- a Princeton University
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• http://dx.doi.org/10.1080/00220485.2010.510394
Teaching Macro Principles *after* the Financial Crisis

**Abstract**

Recent events should force everyone who teaches macroeconomics (or finance, for that matter) to reconsider their curriculums. In this short article, the author shares his thoughts about what should and should not be changed in the way economists teach macro principles to beginning students. Two tradeoffs are paramount and must be faced by every instructor: (1) how much additional complexity *must* be and can be introduced in a principles course in which the students are relatively unsophisticated; and (2) although it is easy to think of new topics that recent events "demand" instructors add, it is much harder to think of topics to delete. Yet economists should understand the necessity of choice forced by (time) budget constraints.