Economics 1: Origins of the Financial Crisis and the Downturn

J. Bradford DeLong, Lanwei Wang, etc...

April 18, 2012
Logistics

• Friday 11 AM Wheeler Auditorium “Office Hour” this week

• Draft *Principles of Macroeconomics* textbook at Copy Central (southside on Bancroft)

• Problem Set 8 up
Caused by Fall-Offs in the Pace of Spending

The Pace of Total Spending: Pre-Depression Trend and Outcome
The Income-Expenditure Model

- $Y = (I + G + c_0)/(1 - c_y)$
  - Take the flow of “other spending”: business investment $I$ plus government purchases $G$
  - Add to that the amount of consumption spending that depends on “confidence” and like factors $c_0$
  - Divide by $1 - c_y$
  - You are done. That’s the level of spending—and incomes, and production—at which the economy is going to settle.

- The underpinnings:
  - $C = c_0 + c_y \times Y$
  - $I = I(r)$
The Underpinnings

- \( Y = (I + G + c_0)/(1 - c_y) \)
- \( C = c_0 + c_y \times Y \)
- \( I = I(r) \)
  - \( r = i - \pi + \rho \)
    - \( i \) is the short-term safe nominal interest rate the Federal Reserve controls
    - \( \pi \) is the expected inflation rate
    - \( \rho \) is the “spread”
Minskyites, “Irrational Exuberance,” Panic, Revulsion, and Discredit

• A sudden excess-demand for high-quality assets
• Assets where people can park their wealth and be sure it will still be there when they come back...
• This excess demand acts like...
  – ...the excess demand for liquid cash money in monetarist theories...
  – ...the excess demand for bonds, the excess of (planned) savings over investment in Keynesian theories...
• And generates the downturn
The Financial Accelerator

- DeLong’s reasoning in March 2008:
  - 5M houses that should not have been built in the desert between Los Angeles and Albuquerque
  - $100K in mortgage debt that will not be paid and has to be eaten by somebody
  - Hence a $500B financial loss

- But the dot-com crash was a $4T financial loss

- And that pushed the unemployment rate up by only 1½%

- The market’s reasoning:
  - There is $500B in losses that we know of
  - And all the trained professionals who assured us that these were safe
    - Lied, or
    - Don’t understand the world
  - Therefore we need to dump our risky assets—at any price—and buy safer ones—at any price

- Very limited supply of truly safe assets

- At trough, global value of financial wealth down from $80T to $60T
Why the Difference between the Bubbles?

• The dot-com bubble
  – Securities held by venture capitalists
  – By rich investors
  – As part of the portfolios of large mutual funds
  – By individuals

• Prices fall—but everybody knew these securities were risky anyway

• So the downturn was a mild Keynesian one—people cut back on spending in order to try to save more to make up their losses

• The housing bubble
  – Securities supposed to be distributed
  – But they weren’t

• The originate-and-distribute model was broken

• “But they are ‘AAA’!”
  – That you convinced Moody’s to rate them AAA does not mean that they are AAA
  – And so all the debts of all the organizations that held MBSs became suspect
Where Were the Regulators?

Determined to cut red tape and reduce regulatory burden are (l to r), OTS Director James Gilleran, Jim McLaughlin of the American Bankers Association, Harry Doherty of America’s Community Bankers, FDIC Vice Chairman John Reich and Ken Guenther of the Independent Community Bankers of America.
Consequences: Safe Asset Supply

The decline of “safe” assets

*Presenting the unwanted mutant offspring of the most important chart in the world*...

Exhibit 174: Shrinking universe of “safe” assets in the primary reserve currencies (USD and EUR)

Source: Federal Reserve, Haver Analytics®, Credit Suisse

You’ll find the above on page 143 of the Credit Suisse 2012 Global Outlook, which we’ve stuck in the usual place.

It shows how the world’s outstanding stock of safe haven assets denominated in either
Consequence: The “Spread”
The Process in a Nutshell

- **Innovation**
  - Some set of investments are profitable
  - Some set of risks can be effectively hedged and diversified

- **Credit expansion**

- **Booms and bubbles**
  - Kindleberger

- **Regulators**
  - Pessimistic regulators
  - Powerful and independent regulators

- **The departure of the “confidence fairy”**
  - Policies of “austerity”
  - The problem was too much debt, and that until the amount of debt is reduced to normal, confidence will not return.
  - Paying down debt —”deleveraging”—reduces spending now
  - Reduced spending now can also reduce confidence
Economics 1: Inflation Economics

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The Consumer Price Index

Consumer Price Index for All Urban Consumers: All Items (CPIAUCNS)

Shaded areas indicate US recessions.
2010 research.stlouisfed.org
The Inflation Rate
Inflation Economics

- $Y = \frac{M}{P} \cdot V$
- And let us say $Y = Y^*$, the economy is at full employment
  - Or near full employment: there is some wiggle room  
    — overtime, extra vacancies, etc....
- $Y^* = \frac{M}{P} \cdot V$
- $P = \frac{M \cdot V}{Y^*}$
- So what happens when something boosts $M$ or $V$?  
  - $P$ goes up
The Phillips Curve

• $\pi$: inflation
• $\frac{(P(t)-P(t-1))}{P(t-1)} = \pi(t)$
• $E(\pi)$: expected inflation:
• $u$: unemployment rate
• $u^*$: the “natural” rate of unemployment, the NAIRU
• $\pi = E(\pi) + \beta(u^* - u)$
The Phillips Curve II

• $\pi = E(\pi) + \beta(u^* - u)$

• Usually $u^*$ will be stable (say, 5% in the U.S. today)
  – Sometimes not: varieties of “structural” unemployment

• Usually $E(\pi)$ this year will pretty much be just what inflation was last year
  – Sometimes not
  – President Mitterand of France at the start of the 1980s
The Unemployment Rate and the Change in Inflation

Change in Inflation, 1959-2009
The Phillips Curve: The 1950s

![The Phillips Curve: The 1950s](chart.png)
The Phillips Curve: The 1960s

www.econmodel.com

Courtesy of Kevin Hoover
The Phillips Curve: The 1970s
The Phillips Curve: The Early 1980s

The Early 1980s

Inflation Rate (Percent)

Unemployment Rate (Percent)

www.econmodel.com

Courtesy of Kevin Hoover
The Phillips Curve: From the Late 1980s

The Late 1980s and After

- Late 1990s, 2000s
- Through the early 1990s

www.econmodel.com

Courtesy of Kevin Hoover
Why Does It Matter?

• Should we care about inflation?
• I mean, if wages and prices rise at about the same amount, why is it a problem?
• Why would anybody ever do what Paul Volcker did in 1982—deliberately trigger a nasty episode of depression economics in order to push inflation down?
Inflation Deranges the Price System

• A market economy works by people using prices to calculate what to do

• And a market economy works well when prices reflect actual social values and scarcities
  – That is, when low-priced things are “cheap” in the sense that they use up little of our resources; and high-priced things are “valuable” and hence worth making

• Inflation makes these calculations difficult, and error-ridden
Inflation Is Unjust

• John Maynard Keynes:
  – Lenin is said to have declared that the best way to destroy the capitalist system was to debauch the currency. By a continuing process of inflation, governments can confiscate, secretly and unobserved, an important part of the wealth of their citizens. By this method they not only confiscate, but they confiscate arbitrarily; and, while the process impoverishes many, it actually enriches some.
  – The sight of this arbitrary rearrangement of riches strikes not only at security, but at confidence in the equity of the existing distribution of wealth. Those to whom the system brings windfalls, beyond their deserts and even beyond their expectations or desires, become 'profiteers,' who are the object of the hatred of the bourgeoisie, whom the inflationism has impoverished, not less than of the proletariat.
  – As the inflation proceeds and the real value of the currency fluctuates wildly from month to month, all permanent relations between debtors and creditors, which form the ultimate foundation of capitalism, become so utterly disordered as to be almost meaningless; and the process of wealth-getting degenerates into a gamble and a lottery.
  – Lenin was certainly right. There is no subtler, no surer means of overturning the existing basis of society than to debauch the currency. The process engages all the hidden forces of economic law on the side of destruction, and does it in a manner which not one man in a million is able to diagnose.
The Federal Reserve System

• The Federal Reserve Board
  – Chair (4-yr term)
  – Vice Chair (4-yr term)
  – Four members

• The FOMC
  – Chair of Fed is Chair of FOMC
  – President of FRBNY is Vice Chair of FOMC
  – Six FRB members are voting members of FOMC
  – Eleven other regional bank presidents
    • Four of whom vote in any given year
The Federal Reserve

• Moves by consensus
• Was scarred by the inflationary episode of the 1970s
• Was further scarred by the depth of the recession of the 1982 “Volcker disinflation” downturn
• Is outside of its comfort zone right now
Normal Federal Reserve Procedures

• Increase the money supply by buying short-term U.S. Treasury bonds for cash
• Decrease the money supply by selling short-term U.S. Treasury bonds for cash
• Occasionally loan via the “discount window”
• Clear checks
• Regulate banks
  – The money multiplier $\mu$: how many dollars of liquid checking account deposits are banks willing to make for each dollar of bank reserves $R$?
Hyperinflation

Mugabe vs Milosevic

Sources:
(Marks/USD) - Thomas J. Sargent, Rational Expectations and Inflation, 2nd ed. (New York: Harper Collins, 1993); (Dinar/USD) - Steve Hanke; (ZWD/USD) - Imara Asset Management Zimbabwe
$Z100,000,000,000,000,000
The National Debt

Federal Debt Truly Held by the Public/GDP

- Civil War
- WWI
- Great Depression
- WWII
- Reagan-Bush I
- Bush II
- Obama (CBO Estimate)
Federal Spending and Revenue: History and Near Future

Summary Figure 1.

Total Revenues and Outlays
(Percentage of gross domestic product)

Source: Congressional Budget Office.
Federal Spending and Revenue: Longer-Term Outlook

Alternative Fiscal Scenario

Actual vs. Projected Total Primary Spending

Revenues

Other Noninterest Spending

Medicare, Medicaid, CHIP, and Exchange Subsidies

Social Security

Source: Congressional Budget Office.

Notes: Primary spending refers to all spending other than interest payments on federal debt.

The extended-baseline scenario adheres closely to current law, following CBO’s 10-year baseline budget projections through 2020 (with adjustments for the recently enacted health care legislation) and then extending the baseline concept for the rest of the long-term projection period. The alternative fiscal scenario incorporates several changes to current law that are widely expected to occur or that would modify some provisions that might be difficult to sustain for a long period. (For details, see Table 1-1 on page 3.)

CHIP = Children’s Health Insurance Program.
The “Current-Law Baseline” Is Close to Balanced

• Primary fiscal gap of 1.2% of GDP over the next 25 years
• But the CBO does not believe congress and the president will stick to the current-law baseline
  – “Middle class” tax cuts (0.7%)
  – High bracket tax cuts, estate tax, etc. (0.6%)
  – “AMT fix” (0.3%)
  – “doc fix” (0.2%)
  – R&D credit (0.1%)
  – Special tax on high-cost health plans (0.8%)
  – iPAB (0.9%)
• Alternative fiscal scenario: primary fiscal gap of 4.8% of GDP
What Happens If a Government Loses the Confidence of Its Creditors?

• Zimbabwe
• Four lesser examples:
  – Mexico 1995
  – East Asia 1997-1998
  – Argentina 2001-2002
  – Greece 2010
• Are we close to the edge now?
  – No
• Will we be someday?
  – Perhaps
• When?
  – We don’t know...
Suppose That We Are Not in a “Depression Economics” Situation...

- $Y = Y^*$
- $Y = C + I + G$
- $C = c_0 + c_y Y$
- $Y^* = c_0 + c_y Y^* + I + G$
- $(I + G + NX + c_0) = Y^*/(1-c_y)$
  - If $G$ goes up—and if nothing happens to $c_0$—then $I$ will go down
  - Do we like having $I$ go down? Probably not...
How Doe and I Fall?

• I:
  – Government issues more bonds
  – Bond prices fall
  – Interest rates rise
  – Businesses that were planning to borrow more and invest and expand their capacity decide not to do so
  – I falls

• Unless we really want to shrink I...
  – Expansions of G should be accompanied by steps to diminish $c_0$
  – What are those measures?
  – Generally tax increases...
Nobody Likes Tax Increases...

• But we have to do them eventually
  – Or else debt crises and hyperinflation...

• What if we postpone them?
  – A good reason to postpone them: depression economics—a cyclical deficit is a good thing
  – But if we are not in depression economics, postponing deficits lowers NX and lowers I

• Hence two rules
  – Balance over the business cycle
  – Milton Friedman’s PAYGO
Are These Rules Sustainable?

• James Buchanan’s critique:
  – “cyclical deficit in downturns good, permanent structural deficit bad” is just too complicated for the political system to process
  – Hence tolerate and approve of cyclical deficits to fight downturns
  – And you are setting the political stage for permanent structural deficits
  – That will slow growth
  – And possibly lead to financial crises and hyperinflation
Is Buchanan Right?

• The possibility seems distressingly likely
• The number of excuses to avoid tax increases is infinite...
• The number of ways since 1980 that people—usually Republicans—have found to try to permanently unbalance the government budget in the long run is truly astonishing...
  – The “Laffer Curve”: cut taxes and actually raise tax revenues:
    • Works in some “depression economics” situations
    • Works with tariffs
    • Works when the taxes are just the levers for corrupt extortion
    • In the North Atlantic? Not so much...
      – A Laffer coefficient of 1/10 is what you should keep in the back of your mind
Never Trust the Wall Street Journal

WSJ Forecasts
06: no housing bubble
07: subprime crisis will not spread
08: we aren’t in recession
09: high inflation is coming
10: high interest rates are coming