

Recession

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Introduction



- The Recession!
 - An analysis of the current recession in the context of macroeconomic theory as presented in Abel, Bernanke, and Croushore, *Macroeconomics*, 6th edition

Recession News



- The Facts
 - Recession began in December 2007
 - GDP was stagnant for much of 2008
 - 4th quarter 2008 growth rate was -6.2%; growth turned positive in mid-2009
 - Unemployment topped 10%
 - Sales of consumer durables and investment expenditures fell dramatically
 - Productivity growth stagnated before a recent recovery
 - Inflation has been subdued
 - Money growth has been explosive; this indicates a counter-cyclical policy stance by the Federal Reserve

Overview of Theory



- Basics of the Textbook Theory
 - We employ the IS-LM AD-AS framework
 - Our theory includes three sectors:
 - Supply side: Labor market equilibrium and production
 - Goods market: Desired expenditure and output
 - Money market: Money supply and money demand
 - We distinguish two theoretical perspectives:
 - Keynesian
 - Classical

Classical Theory



- How the model works:
 - The labor market demand-supply equilibrium determines the real wage and employment; employment determines output via the production function
 - Given output, the goods market equilibrium condition determines the expected real rate of interest
 - Given output and the expected real rate of interest, the money market equilibrium condition determines the price level.

Keynesian Theory



- How the model works:
 - Price and wage rigidity keeps the labor market from quickly equilibrating
 - Given a fixed price, aggregated demand determines output
 - Workers and firms "passively" supply extra labor and output when demand fluctuates
 - The production function determines employment

Classical vs. Keynesian Theories

- In the Classical view, business cycle fluctuations arise on the supply side
 - Productivity shocks are the source of most cyclical movements
- In the Keynesian view cycles can result from:
 - Changes in monetary and fiscal policies
 - Instability of private sector spending
 - "Animal spirits"

Classical vs. Keynesian Policy Prescriptions

- The classical model is a "full-employment equilibrium" model
 - Policy interventions to influence the economy are normally seen as unnecessary or harmful
- Activism is more desirable in the Keynesian view
 - Countercyclical monetary and fiscal policies are seen as having the potential to reduce and shorten business cycle fluctuations

Shocks Causing Cycles

- A list of possible shocks:
 - Technology shocks and related expectations
 - Oil prices
 - Institutional change
 - Government spending
 - Taxation
 - Money growth and interest rates
 - Money demand shocks
 - Animal spirits

The Housing Story: Boom

- The Housing Boom
 - From the mid-1990s to the mid-2000s, housing prices rose rapidly
 - The growth of housing prices was an historical aberration
 - Higher wealth spurred higher spending
 - Homeowners borrowed with home equity lines
 - Lenders relaxed standards and made more subprime mortgages
 - Even in the event of default, a subprime mortgage could be profitable when housing prices are rising
 - Easy monetary policy encouraged the expansion of lending

The Housing Story: Bust

- The Housing Bust
 - Housing prices peaked and leveled off in 2006
 - Prices remained stable through mid-2007
 - But stability was not good enough for some subprime borrowers
 - Defaults increased, lenders took losses, home prices fell, housing wealth declined
 - Animal spirits and spending went into reverse
 - As profit expectations fell, so did stock prices

Housing and Mortgages: the Past

- Back in the day ...
 - To get a mortgage, you might have borrowed from a local Savings and Loan (S&L)
 - Your mortgage would be funded by savings deposits of local S&L customers
 - Each month you would make a mortgage payment, with the spread between lending rates and rates on deposits providing the S&L with profit

Housing and Mortgages: More Recently



- Today a mortgage may involve:
 - A mortgage originator
 - An entity that buys the mortgage, bundles it, and resells it as a mortgage-backed security
 - Firms who service your mortgage account
 - Agencies who rate the riskiness of the bundled securities

Slicing and Dicing



- Mortgage backed securities have become more complex:
 - Securities might be “sliced” and repackaged as “collateralized debt obligations (CDOs)” with multiple “tranches.”
 - Securities may also be insured by other parties by way of “credit default swaps.”

From Subprime Mortgage to AAA Security



- Bundling mortgages reduces risk:
 - By pooling mortgages, the risk of default is reduced
 - Senior tranches of CDOs backed by subprime mortgages were viewed as safe

Crash



- As house prices fall ...
 - Foreclosures mount
 - The advantages of risk pooling evaporate
 - Those who insured securities encountered huge losses
 - Institutions who owned MBSs approached insolvency
 - Short-term financing withdrawn for firms holding risky assets
 - All effects were magnified by leverage

Moral Hazard



- Specialization can be efficient but ...
 - With many steps in the mortgage process and many individuals involved with providing associated services, incentives were not always well aligned with the interests of investors
 - Many gain when a deal goes through; most lose nothing if default occurs.
 - Moral hazard has been present before the current crash, but other circumstances may have led to increased importance of the problem in the current crisis

Moral Hazard and Bailouts



- Moral hazard is important in another aspect of the banking crisis:
 - The basic problem is that individuals may take inordinate risks when they do not bear the full brunt of the loss in the event of a bad outcome
 - If the government is expected to bail out banks who take on too much risk and lose, then they have an incentive to take on too much risk
 - As Paul Krugman says, this appears to be a situation of “heads I win, tails you lose.”

Greed

- Is greed the root cause of the current crisis?
 - Self-interest almost always plays a role in economic activity
 - Has there really been an increase in greed, to explain what has happened?
 - In an appropriate setting where parties have appropriate incentives, including incentives to play by the rules, greed can facilitate good outcomes

Credit Crunch

- We have heard a great deal about a “credit crunch.” What is that?
 - This phenomenon refers to the inability or unwillingness of banks to extend credit to businesses and consumers in “normal” ways
 - Monetary policy is not currently tight, but banks’ increased caution and efforts to rebuild capital lead to similar consequences

The Bottom Line

- So, what caused the recession?
 - Declining animal spirits, as a consequence of wealth losses originating in the housing crash?
 - Decreased demand for money, as a consequence of increased riskiness of non-money assets?
 - A supply-side shock resulting from reduced trust and poorly functioning financial intermediation?
 - An oil price shock
 - All of the above

Animal Spirits?

- Individuals perceive that wealth has declined
 - Housing wealth
 - Stock market wealth
 - Wealth reductions cause reduced spending
- Expected future marginal product of capital
 - The expected profitability of investment has probably declined and so has investment spending itself

Financial Market Institutions: A Real Shock?

- A Supply Shock?
 - Increased risk in financial market transactions
 - Risk associated with “broken promises” may have increased
 - With poorly functioning financial markets, we could get less output from given inputs

Macroeconomic Policy Responses

- What should be done?
 - Keynesians: Manipulate government spending, taxes, and the money supply to increase aggregate demand
 - Classical: No radical changes in existing fiscal or monetary policy strategies.
 - I will later discuss bailouts of financial institutions and possible changes in regulatory policies

Policy Responses

- What is being done?
 - The fiscal stimulus bill passed by Congress
 - About \$700 billion total in added spending and tax cuts
 - Most tax cuts are targeted rather than broad-based
 - Considerable spending on infrastructure and aid to states
 - Monetary ease by the Fed
 - Federal funds rate target is near zero
 - Fed balance sheet expansion – unconventional asset purchases and loans
 - Bailouts
 - Primarily for financial institutions

Government Spending: Pro and Con

- Pro:
 - Government spending directly affects spending and AD
 - Government spending is needed to replace deficient private spending
- Con:
 - Spending may take time
 - Spending may not be worthwhile
 - Spending may be difficult to reverse
 - Spending is political (pork)
 - Government spending may crowd out private spending
 - Are we over-reacting?

Tax Cuts: Pro and Con

- Pro:
 - Tax cuts let households choose what to spend on
 - Tax cuts may become effective quickly
- Con:
 - Households may save rather than spend
 - Ricardian equivalence
 - Permanent income hypothesis

Fiscal Stimulus and Debt

- Both tax cuts and spending increase the national debt
 - In the US, the debt-to-GDP ratio is not currently huge in relation to other countries or our own past
- There is no free lunch
 - Taxes will be higher in the future, or
 - The debt will be repudiated via inflation

Monetary Policy: Pro and Con

- Pro:
 - Monetary policy can shift quickly
 - Monetary policy is less sector-specific and more politically neutral
- Con:
 - Long and variable lags in affecting outcomes
 - History does not show consistently wise choices by the Fed
 - Taylor Rules?
 - Ineffective in a liquidity trap?

A Liquidity Trap?

- What is a liquidity trap?
 - In a liquidity trap, the nominal rate of interest approaches its lower bound of zero
 - Individuals are willing to hold additions to the money stock, since the opportunity cost is low
 - This implies little stimulative impact of money growth
 - Bonds become a near perfect substitute for money
 - In our model:
 - The money demand curve is flat
 - LM is flat
 - Fiscal policy may be more effective than monetary policy

Bernanke on Liquidity Traps

- In a liquidity trap, a central bank should:
 - Influence expectations of low future interest rates
 - Influence the yield curve by purchasing intermediate and longer term securities
 - Expand its balance sheet, and the quantity of money, rather than focus on interest rates
- The Fed has adopted these policies
 - Communication via FOMC minutes
 - TAF
 - TALF

Financial Market Crisis?

- The financial market crisis is an important feature of the current business cycle
- Features of the problem:
 - Institutions are threatened by insolvency
 - Institutions are wary of lending to one another
 - Institutions are wary of lending to other customers and wish to rebuild financial capital
- The bank run analogy
 - Many institutions used short-term borrowing to finance long-term lending, much as banks have used deposits to fund longer term lending

Should Financial Institutions be Allowed to Fail?

- The rationale for a government action:
 - Before the current crisis, it was recognized that government (central banks) should play a role in preventing bank runs
 - Lender of last resort
 - Deposit insurance
 - Failure of large/important institutions could lead to a wave of collapses
 - Even "well-behaved" financial institutions would be at risk
 - Working through a total collapse could be more costly than a bailout

Arguments Against Bailouts

- Cons:
 - Bailouts are "unfair"
 - Bailouts protect inefficient firms
 - Bailouts increasingly politicize economic activity
 - Bailouts encourage future actions like those that required the bailout
 - Moral hazard is a problem: If I anticipate bailout in a crisis, what is my incentive to carefully judge risk in the future?
 - Are we over-reacting?

Bailouts for Auto Companies

- Bankruptcy may be a better alternative
 - While the auto companies are large, the threat of systemic collapse is not an issue
 - Auto companies will not disappear under bankruptcy; they will be reorganized

Nationalization?

- Should banks be nationalized?
 - A temporary nationalization might be reasonable for very large banks that approach insolvency
 - If a bank is nationalized, the government could temporarily manage the bank while selling off good assets
 - Sweden as an example
 - Nationalization would create great policy uncertainty for other firm

Regulatory Reform?



- Beyond the crisis:
 - Many of the companies involved in the financial collapse were not banks and were only lightly regulated
 - Firms judged to be “too large to fail” probably require more regulation
 - Higher capital requirements, or countercyclical capital requirements?
 - Extend bank-like regulation to non-banks?

Conclusions



- Among economists, considerable disagreement remains over both theory and appropriate macroeconomic policy response.

The End

