

LECTURE 13
ASYMMETRIC INFORMATION

March 3, 2016

- I. INFORMATION
 - A. Information as an economic good
 - B. Imperfect but symmetric information does not lead to inefficiency

- II. MORAL HAZARD (EXAMPLE: FIRE INSURANCE)
 - A. Definition
 - B. Efficient outcomes
 - C. Why the market does not yield efficient outcomes
 - D. A little on the market outcome
 - E. Other examples of moral hazard
 - F. Responses to moral hazard

- III. ADVERSE SELECTION (EXAMPLE: HEALTH INSURANCE)
 - A. Definition
 - B. How adverse selection leads to inefficiency
 - C. Other examples of adverse selection
 - D. Responses to adverse selection
 - E. Adverse selection, Medicare, and the Affordable Care Act

- IV. ASYMMETRIC INFORMATION AND FINANCIAL INSTITUTIONS
 - A. Moral hazard
 - B. Adverse selection
 - C. The possibility of “rationing” in financial markets
 - D. How a financial meltdown might start
 - E. A partial solution: capital requirements.

Economics 2
Spring 2016

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LECTURE 13

Asymmetric Information



March 3, 2016

Announcements

- **Problem Set 3:**
 - Due at the ***start*** of lecture on Tuesday (March 8th).
 - Same ground rules apply.
 - There will be a problem set work session this Friday, 4–6 p.m., in 648 Evans.

Announcements (continued)

- Research reading for Tuesday (by David Card):
 - Don't stress over every word or parts you don't understand.
 - Read for approach and findings.

Announcements (continued)

Economics Undergraduate Major Advisors and Peer Advisors will be available to help you plan *for Fall 2016 enrollment*.

All workshops are open to prospective and declared economics majors.

Each workshop will provide information on:

- Pre-requisite courses for the economics major
- Application procedures and admissions policies
- Economics graduation requirements
- Course planning for remaining prerequisites/graduation requirements

| <u>Date</u> | <u>Time</u> | <u>Location</u> |
|-----------------------------|-------------|-----------------|
| Tuesday, March 15 | 5-6 pm | 648 Evans |
| *Wednesday, March 16 | 12-1 pm | 597 Evans |
| Thursday, March 17 | 5-6 pm | 648 Evans |
| Tuesday, March 29 | 4-5 pm | 648 Evans |
| Wednesday, March 30 | 3-4 pm | 597 Evans |
| Thursday, March 31 | 5-6 pm | 648 Evans |

** **Political Economy** Advisors will be present at this workshop to talk about the Political Economy major. Please attend this workshop if you are also considering their major.*

Questions? Contact us!

Economics Advisors: ugrad@econ.berkeley.edu

Peer Advisors: peers-econ@berkeley.edu

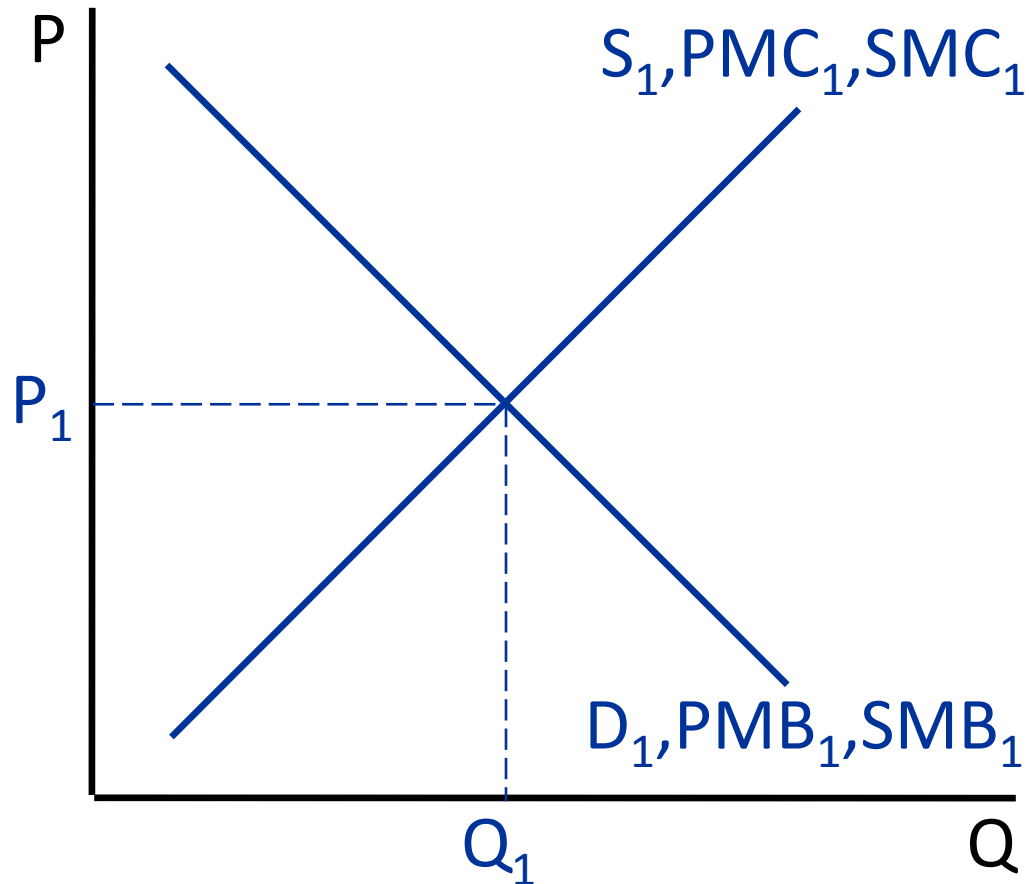
I. INFORMATION

Two General Points

- Just like other goods and services, information adds value.
- If participants in a market have imperfect information, but everyone is equally uninformed, imperfect information does not lead to market failure.

Market for Insurance

(concerning an event that the parties have no control over and are equally informed about)



Asymmetric Information

- One side of the market has more information than the other side.

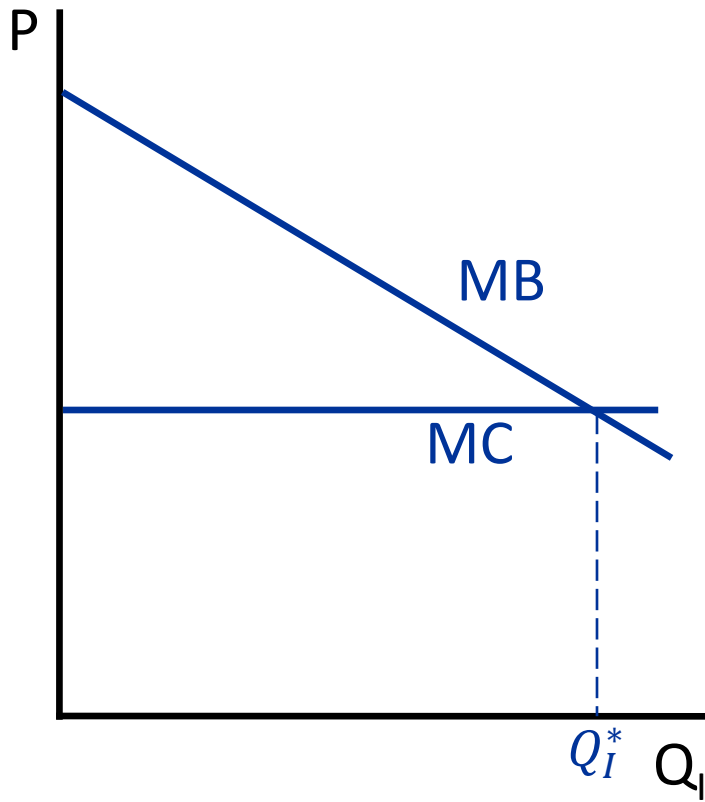
II. MORAL HAZARD

Moral Hazard

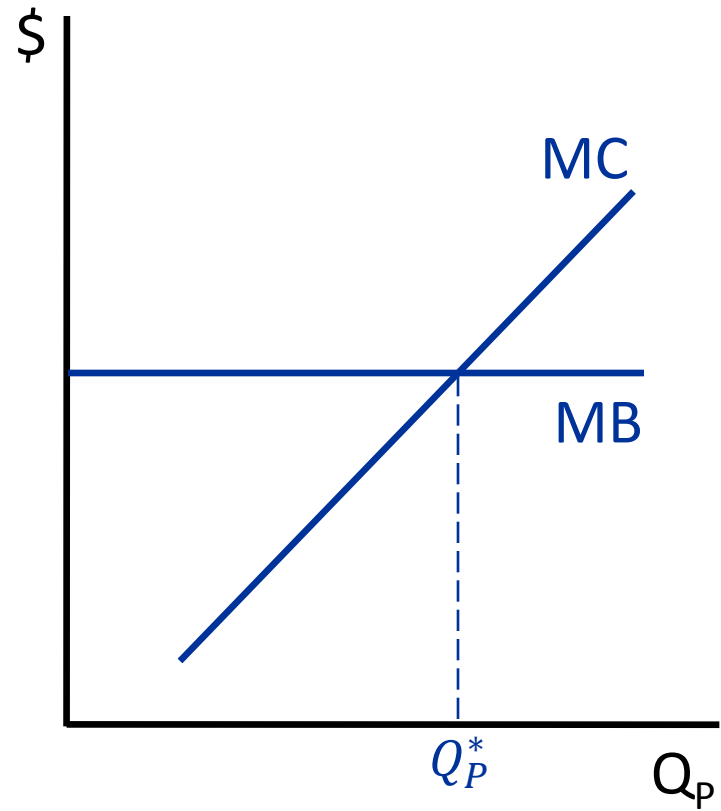
- The potential for one party to a transaction to take actions that the other party cannot observe and that harm the other party.

Efficient Outcomes

Fire Insurance

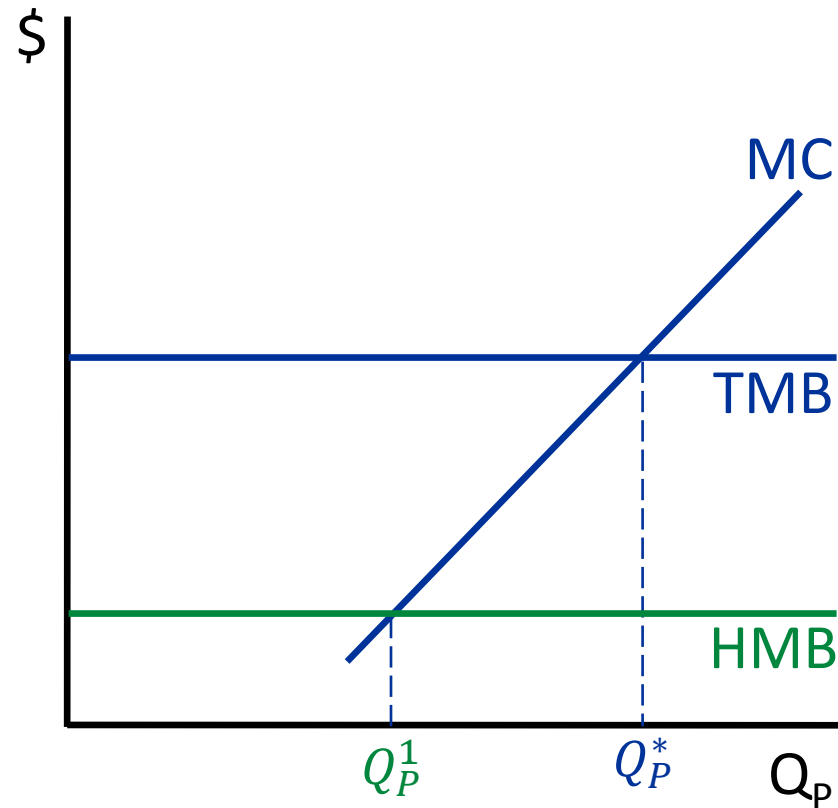


Homeowner Fire Prevention



Why the Market Doesn't Lead to Efficient Outcomes: Suppose Fire Insurance Were Q_I^*

Homeowner Fire Prevention



(Here, “TMB” is “true” MB, “HMB” is homeowner’s MB.)

The Market Outcome

- Insurance companies realize that homeowners will exert less effort when they're more insured, and so they charge higher prices (per dollar of coverage) for more insurance.
- As a result, homeowners will choose to not be fully insured.
- With partial insurance, the benefit to homeowners from fire prevention efforts is less than the true benefit.
- So: Both the amount of insurance and fire prevention efforts are less than their efficient levels.

Other Settings Where There Is Moral Hazard

- Other types of insurance.
- Rental cars.
- Household contractors.
- Firm managers.
- ...

Private Responses to Moral Hazard

- Contractual requirements.
- Monitoring.
- Third party evaluation or certification.
- Reputation.

Government Responses to Moral Hazard

- Improving information: Labeling requirements, disclosure laws, laws against false advertising, penalties for noncompliance.
- But: The government doesn't have tools that, even in principle, can fully eliminate the market failure.

III. ADVERSE SELECTION

Adverse Selection

- Self-selection into the market of buyers who are of lower quality along dimensions sellers cannot observe. (Or self-selection into the market of sellers who are of lower quality along dimensions buyers cannot observe.)

The Basic Idea of Adverse Selection

- The people willing to pay the most for health insurance are those who know they're most likely to have high healthcare costs.
- So: The people who buy insurance at a given price are on average less healthy than the population as a whole.
- This raises costs for insurance companies, leading to higher prices.
- This worsens the pool of buyers further, raising costs further,
- One result is that some people for who'd be willing to pay more than the cost of insuring them don't buy insurance.

Other Settings Where There Is Adverse Selection

- Other types of insurance.
- Used cars.
- Many labor markets.
- ...

Private Responses to Adverse Selection

- Reputation.
- Third party evaluation or certification.
- Group purchases.
- Warranties.
- “Signaling” and “screening.”

Signaling

- Taking costly actions to indicate quality.

Government Responses to Adverse Selection

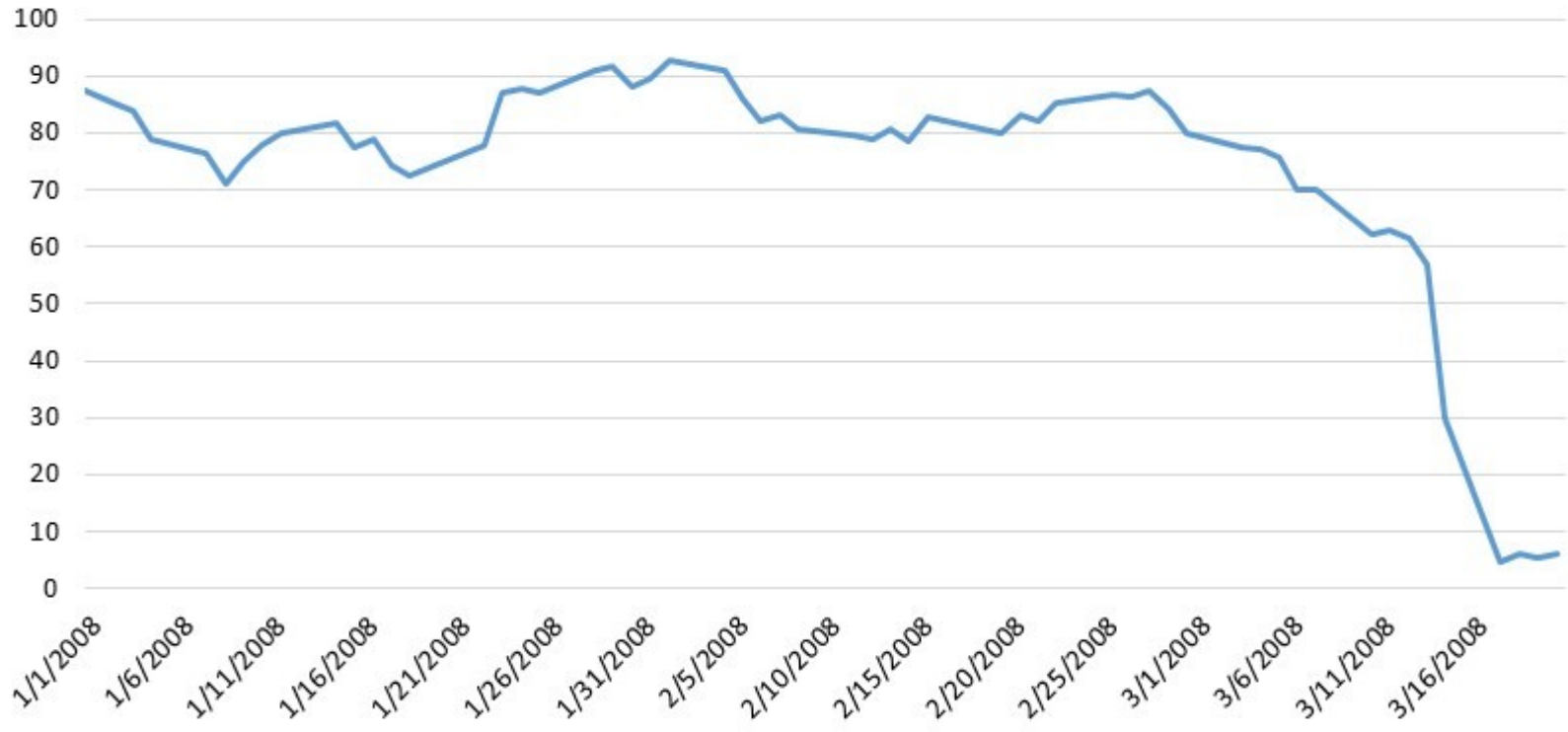
- Improving information: Labeling requirements, disclosure laws, laws against false advertising, penalties for noncompliance.
- * Mandates, subsidies for participation, and/or penalties for nonparticipation. *

IV. ASYMMETRIC INFORMATION AND FINANCIAL INSTITUTIONS

Moral Hazard and Financial Institutions

- Private: leverage and the possibility of bankruptcy.
- Public: explicit or implicit promises of bailouts.

Bear Stearns Stock Price - 2008

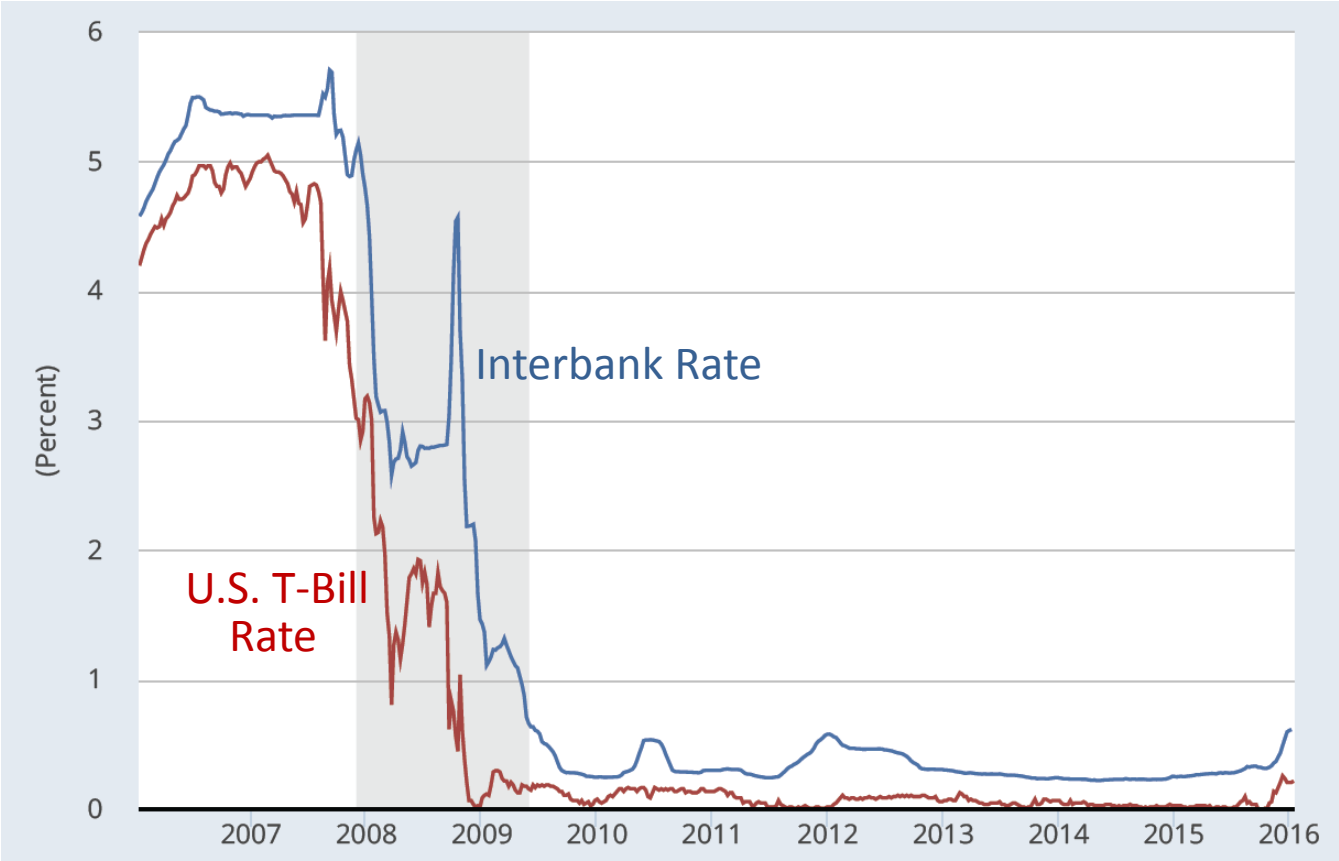


Source: rctom.hbs.org.

Adverse Selection and Financial Institutions

- If a provider of funds raises the interest rate that it charges to financial institutions that it's lending to, what's likely to be true of the riskiness of the firms that still want to borrow?
- In financial markets, asymmetric information sometimes causes some borrowers to be unable to borrow on ***any*** terms.

Interest Rates on U.S. Debt and Interbank Loans



Source: FRED, Federal Reserve Bank of St. Louis.

A Way to Mitigate the Effects of Asymmetric Information Involving Financial Institutions: Capital Requirements