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Asymmetric Information and the Financial Crisis

In describing the $13 billion settlement reached between JPMorgan and the Department of Justice last November, Attorney General Eric Holder said,

> Without a doubt, the conduct uncovered in this investigation helped sow the seeds of the mortgage meltdown. JPMorgan was not the only financial institution during this period to knowingly bundle toxic loans and sell them to unsuspecting investors, but that is no excuse for the firm's behavior.

What Holder describes sounds like a textbook example of what economists call asymmetric information: JPMorgan knew something about the loans it was selling (that they were toxic) that they didn't reveal to investors. Specifically, the government alleged that JPMorgan reported facts to the investors that turned out to be wrong. For example, JPMorgan may have said that it made only 10 percent of the loans in a pool to investors (as opposed to owner-occupants) when the actual percentage was 20 percent. So it would seem as if economic theory, which has a lot to say about asymmetric information, should help us understand the crisis. Indeed, to many, asymmetric information and "bad incentives" are the leading explanations of the financial crisis. For example, a *Reuters* article that described the settlement made the following claim:

> The behavior that the largest U.S. bank admitted to, authorities said, is at the heart of what inflated the housing bubble: lenders making bad mortgages and selling them to investors who thought they were relatively safe. When the loans started turning bad, investors lost faith in the banking system, and a housing crisis turned into a financial crisis.

In future posts, we will consider this seemingly intuitive idea, and argue that the economic theory of asymmetric information, in fact, provides very little aid in understanding the central questions of the crisis.

Let's focus on Holder's quote. The standard theory of asymmetric information implies that JPMorgan's misrepresentations could not cause significant losses to investors. That may seem surprising. Many may think that either we don't understand the economics of asymmetric information or it's just another example of the naïveté of economists regarding how the real world actually works. While there is certainly no shortage of examples of economists holding naïve opinions about the real world, in this case, we will argue that we are correctly characterizing the economist's view and that it is based on a common-sense argument.

Let's start with the economics. Let's assume that JPMorgan is selling a pool of loans, about which it knows the true quality, to a group of buyers who can't observe the true quality. What does economic theory say will happen?

A. Investors will overpay for the assets and lose money.
B. Investors will underpay for the assets and make money.
C. Investors will infer the true quality of the loans and pay accordingly.

The answer is C. To many, that may sound shocking, but the basic logic is simple: investors *know* that they cannot observe the true quality of the loans and they know that JPMorgan has an incentive to dump bad loans in the pool. Thus, they correctly infer that JPMorgan will dump bad loans in the pool. In other words, investors form correct beliefs about the quality of a loan,[1] despite not being able to observe quality directly.[2]

"Knowingly bundl[ing] toxic loans" may be unethical or even illegal, but according to the economic theory of asymmetric information, it shouldn't cause unexpected financial losses to investors. The key to understanding the gap between Holder and economics is the word "unsuspecting." Economists assume that all market participants are inherently suspicious. Market participants understand that the people with whom they are doing business have an incentive to cheat them if those people know more about the products that they are selling.

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Are economists naïve to think that market participants can figure out the incentives of their adversaries? We would argue that common sense says people are pretty suspicious. Take, for example, real estate agents. A cursory search on the internet yields the following table of "translations" of real estate listings:

> **Loaded with Potential**: means loaded with problems the seller didn't want to tackle.
> **Cute**: means they couldn't think of any other possible way to describe it.
> **Great Bones**: means you're going to have to gut it and rebuild.
> **Wooded/Shaded Lot**: means surrounded by trees and leaves on the ground.
> **Charming**: means they couldn't think of a more appropriate word.
> **Needs a Little TLC**: means it needs about $45,000 dollars or more in renovations and repairs.
> **Won't Last Long at This Price**: means the price is so low it will compel you to see it but it will take a miracle for you to want to buy it.
> **No Disclosures**: means you're going to have to find out all the problems with the home on your own.

Most people read this and chuckle, but no one is surprised that real estate agents stretch the truth. After all, it's their job to convince you to buy. And, in general, people view salespeople as among the least ethical of all occupations, only slightly above members of Congress. Perhaps the most egregious example of this, and in fact the example that motivated the seminal paper on the economics of asymmetric information, is used-car salespeople. Do used-car salespeople try to misrepresent the quality of the cars that they are trying to sell? Most people would likely answer this question with a resounding "Yes, of course." Does this cause injury to most used-car buyers? Not so much. Since the general public recognizes that "used-car salesman" is basically American slang for a fraudster, nobody really believes what they say.

In subsequent posts, we will answer questions about the crisis that turn on asymmetric information problems:

1. Theory says investors should have guessed the quality of the loans. Did they?
2. If investors knew the quality of the loans they were buying, why did JPMorgan pay $13 billion to settle accusations that it misrepresented the quality of the loans it was selling?
3. Can't policymakers fix some of these incentive problems? Doesn't forcing issuers such as JPMorgan to retain a portion of the securities they issue align incentives and mitigate the asymmetric information problem?
4. If asymmetric information didn't cause investor losses, does that mean it doesn't affect economic outcomes? (Spoiler: The answer is an emphatic no.)
5. What about rating agencies? Didn't they know that deals were bad but lie to investors and say they were good?

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[1] In some situations, investors will hold beliefs that may be wrong on an individual asset-by-asset basis, but that are right on average. For example, they might not know which loans are the most likely to default, but their beliefs about the performance of the pool of loans will be, on average, right.

[2] More generally, the revelation principle says that in any equilibrium of an asymmetric information game, we can confine our attention to equilibria in which all private information is fully revealed. For example, in Akerlof's (1970) example of equilibrium in the used car market, the seller knows whether the car is a peach or a lemon but only the lemons trade. Everyone knows which car is good (the one that the dealer doesn't sell), but the buyer doesn't buy it because he knows that the dealer would have an incentive to substitute a bad car.

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