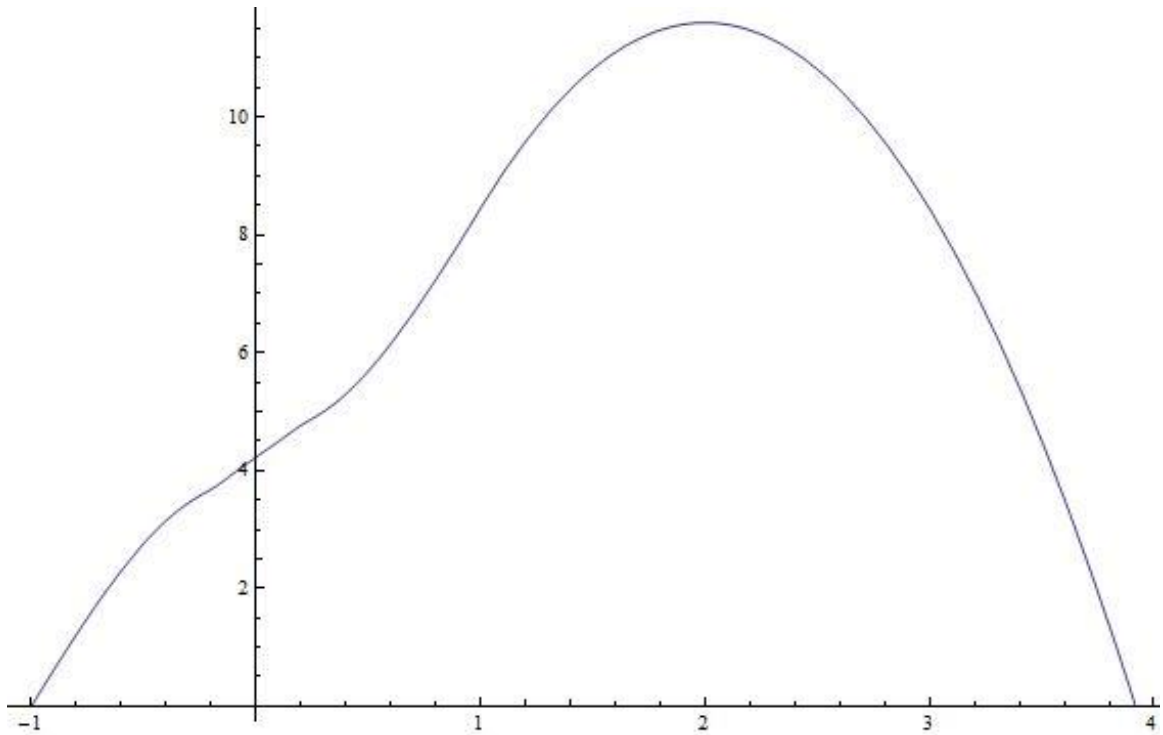


## Banking and Finance Generally

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Figure 1: **Temp diagram holder**

It all boils down to bond covenants not working.

Heres what I mean. When a company wants to borrow, and a saver wants to lend, there is a moral hazard problem. A companys owners do not have to pay back its debts if it becomes insolvent, either because it is a corporation with limited liability or because the they themselves can declare bankruptcy. Their downside risk is limited, but their upside gain is not, so they have incentive to take inefficient risks. If the risk goes sour, the lenders share in the loss. Or, they can extract the lenders funds risklessly, if they are allowed to pay enormous dividends or salaries to themselves.

The solution is the debt covenant. This is a contract under which the borrower agrees, in effect, not to take too much cash out of the firm and not to take too much risk. A contract must be based on objective, verifiable information, so in practice a debt covenant imposes such things as capital

requirements and limits on dividends and asset sales. If the company runs into financial trouble, it cannot help but violate the covenant, at which point the typical covenants terms say that the entire debt must immediately be paid off. The company cannot do that, and so must declare bankruptcy—before its value goes below the amount of its debt, if things have worked out as intended.

If debt covenants worked for banks, we would not need the Federal Deposit Insurance Corporation. The FDIC is in effect the monitor of a standard-issue debt covenant for bank depositors. Unlike most lenders, bank depositors are unsophisticated and lend very small amounts to highly complicated firms. In addition—though I think this is overemphasized—they can withdraw their loans on short notice. Lacking debt covenants, they are vulnerable to the banks taking on excessive risk. They will not notice that the bank is insolvent until too late, when its assets have dwindled too far to pay back all the deposits. Fearing this, savers would be reluctant to deposit funds in banks, especially without the right of instant withdrawal, and they would be nervous enough to set off the false alarms known as bank runs. If depositors had debt covenants, there would be no bank runs; a bank that came too close to insolvency would trigger the covenant and the bankruptcy court would make sure the depositors were repaid.

Before deposit insurance, banks struggled in various ways to overcome this problem. Most of the early deposits in the United States were in mutual savings banks, which as I explain in my 1987 article held only safe assets because their mutual organization encouraged their entrenched manager-controllers to minimize risk. Other palliatives included double liability—the banks shareholders agreeing to lose not just the value of their shares but to provide an extra amount equal to the par value of the shares to help pay depositors—reputation, and the capital requirements of the National Bank Act of 1863.

Deposit insurance has two parts. The obvious part, the only part important to the depositor, is that the depositor gets his money back even if the bank doesn't have enough assets. The non-obvious part is that the insurer—

the FDIC— is now the party with the money at risk, and so must try to deter the bank from extracting cash or taking on risk. Unlike depositors, the FDIC is large and sophisticated. It has the economies of scale and scope to write regulations which are the equivalent of the debt covenant, to monitor compliance, and to take action (or to use its discretion to refrain) when the regulations are violated.

Thus, banking regulations are very much like debt covenant provisions. Banks must keep enough capital to protect the FDIC. They may not hold risky assets such as common stock. They may not pay out huge dividends and then declare bankruptcy. And if they do run into trouble nonetheless, the FDIC, like a bondholders committee, will work with the bank to try to protect the value of the assets, forcing the bank out of business only as a last resort.

And so we come to the present crisis. Why did the banks end up holding so much risk? Why didnt the FDIC stop them?

I have already explained why the banks have incentive to hold risk. They earn the entire upside, but pay only part of the downside. If permitted, the best investment strategy for a bank would be to put all its deposits into a big cloth bag, fly a loan officer out to Las Vegas, and stake the entire bundle on the Black in roulette. If the ball ends up on Red, the FDIC loses. If the ball ends up on Black, the loan officer should be instructed to repeat the process, after scooping up some of the chips for salaries and dividends.

In practice, banks did something a little different. Exaggerating only a little, they put all their deposits into a big cloth bag, flew a loan officer out to Las Vegas, and staked the entire bundle on a subdivision of empty houses on the edge of the desert. The FDIC didnt permit them to buy real estate directly, so instead they made loans of 100

Or maybe it wasnt so risky. In the end, banks have been backed not just by the FDIC and the Federal Reserve, but by bailout funds such as the TARP money. The vast majority of the risk-taking by banks (I am excluding non-banks such as Merrill, Lehmann, and Bear-Stearns) has ended in the banks

remaining solvent because of government aid. If this was foreseeable, the downside risk was not only limited, but even less than it appeared on the surface. It reminds me of a business school I know which consistently ran balanced budgets while the college of arts and sciences ran deficits. As a result, the university taxed the business school extra and paid the arts-and-sciences debt. Which of their deans was the canner manager in these modern times?

The harder question is why the FDIC— and the Federal Reserve— allowed this. (That a university president would miss the point is easier to understand.) If a bank was not allowed to hold stock in Microsoft because of the risk, why was it allowed to hold securities backed by Las Vegas real estate?

Perhaps it was obtuseness. After all, rating agencies had put their stamp of approval on the securities. If you asked yourself how the rating agencies estimated the risk of such complicated securities based on bubble real estate prices, you would realize the ratings were fantasies, but we often fail to think of questions like that. And the other big culprits credit default swaps— also required asking an unusual if not profound question— Will the party insuring against default be able to pay up? There, the banks were in effect lending to investment banks and insurance companies without insisting on debt covenants, extending the incentives for risk— and the FDICs liability— beyond the directly regulated sector.

But part, at least, of the governments inaction was probably because the government was positively encouraging the risk-taking. Elected officials proudly proclaimed their desire to get banks to lend more to minorities, the poor, and first-time homebuyers. Banks were already lending to minorities, poor people, and first-time homebuyers who met conventional borrowing standards, so this meant relaxing the standards to allow riskier lending. That was fine with the banks, and nobody asked the FDIC or the Fed what they thought. The FDIC and Fed prudently did not volunteer comment to their political masters. Barney Frank, the Chairman of the House Banking Com-

mittee, had given them clear direction in 2003: I do think I do not want the same kind of focus on safety and soundness that we have in OCC and OTS. I want to roll the dice a little bit more in this situation towards subsidized housing. (The OCC is the Office of the Comptroller of the Currency. The OTS is the Office of Thrift Supervision.)

Notice that I havent mentioned the Feds monetary policy as a cause of the crisis. Maybe easy money made the problem worse, but it was neither a necessary nor a sufficient condition, unlike misregulation, which was both. A housing bubble does not automatically translate into a banking crisis. Constructing a crisis requires banks making risky loans, not just borrowers making risky investments.

What are the implications for banking reform? What we need is for the regulators to resume doing their jobs as debt covenant monitors. It is easy to tell them to do this, but harder to know how to give them the incentives that they clearly lacked in recent years.

We must pay careful attention to George Stigler and Bengt Holmstrom. Stigler won his Nobel Prize by pointing out that governments are composed of human beings who make the actual decisions based on personal incentives (1971— see Ramseyer [2000] for a nice exposition). Holmstrom won his job at MIT by pointing out that to get incentives right, you need to reward and punish based on what you can observe and whats relevant (1979), and that if you cant tell who to punish, punishing everyone might be the answer (1982). These are simple ideas, but extremely powerful.

How do they apply here? We need a system to punish the politicians who were too active and the regulators who were too passive. This is not a time for healing; it is the time for blame. We may not be able to tell who exactly is to blame, but the Mark quote from Mark Twains *The Innocents Abroad* that I cite in my 1987 article on massacre and scapegoat contracts for Holmstrom-style teams is apt:

”No, they have no railroad accidents to speak of in France. But why? Because when one occurs, somebody has to hang for it! Not

hang, maybe. but be punished at least with such vigor of emphasis as to make negligence a thing to be shuddered at by railroad officials for many a day thereafter. 'No blame attached to the officers'-that lying and disaster-breeding verdict so common to our soft-hearted juries, is seldom rendered in France.'

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7/26/2010 1 G406, Regulation, Eric Rasmusen, erasmuse@indiana.edu 30  
 October 2009 Corporate Governance 1 Financial Regulation 1. Background law property definitions 2. Reporting requirements information (insider trading laws too) 2 3. Regulation of risky investments- Paternalism protecting stupid and foolish people 4. Rules against market manipulation market power  
 Financial Law Corporate Law: What a corporation can do. Who runs it. 3  
 Securities Law: How you can raise capital. How to register stocks and bonds.  
 Bankruptcy Law: What happens when a company cant pay its debts. How is a public corporation different from just any company? Limited liability Board of directors has control Equal treatment of shareholders 4 If public, needs an annual report, SEC 10-Ks, other requirements Election of the board is by shareholders Organizational Forms Political. Business. Monarchy/dictatorship. Sole Proprietor. 5 Republic. Corporation. Democracy. Some partnerships. Partnerships are more customizable. So why does any company become a corporation? Simpler information: Standardized rules. Outsiders do not have to read the partnership agreement. 6 (limited liability too, but thats overrated as a reason) Outsiders include: Shareholders Bondholders Banks Suppliers 7/26/2010 2 Problems of Corporations 1. False information, making the company seem more profitable than it really is. 2. Stealing by the officers (CEO, etc.). A principal-agent problem. 7 principal (Stealing by the lower employees is not a problem special to corporations.) 3. Stealing by the majority shareholders, from the minority. If You Control the Board, How Could You Loot a Corporation? 8 If You Control the Board, How Could You Loot a Corporation? 1. Simply steal cash. 2. Sell assets to yourself personally at low prices 9 3. Issue dividends just to yourself. 4. Pay yourself a big salary as an employee 5. Pay yourself high prices as a supplier

or consultant. 6. Have the corporation pay to do things that benefit just you (e.g., lobbying) Takeovers as a Solution to the Agency Problem Once we have corporate law, takeovers help with milder problems such as incompetence. Takeovers don't help with stealing from the company or fraud. Tender Offers over Time 11 The Williams Act of 1968 The act requires anyone who acquires 5% of a company to release information within ten days. How does this affect target company shareholders? 12 How does this affect acquiring companies shareholders? 7/26/2010 3 Institutional Shareholding 13 If institutions owning stock monitor the company's managers that helps individual investors. The Sarbanes-Oxley Act (2002) 1. Penalties for auditors rise. 2. Auditors must be chosen by a committee of independent directors. 3. Auditors can't sell other services besides auditing to the customer 4. Corporate officers must personally sign off on the accuracy of financial statements. 5. Corporations must certify that they have good internal auditing systems. A Whistle-Blower Story Mr. Welch suspected his employer of "cookie jar" accounting: stowing cash in an account to be dipped into if earnings need a boost in a future quarter. Among things Mr. Welch said he found suspicious were a mysterious fall in the chief executive officer's company-paid expenses, which had been on the upswing, and a catch-all reserve account labeled "sundry credits." Mr. Welch refused to certify the financial statements, and wrote notes to the chief executive and the company's external auditor. They fired him. The OSHA investigator denied Mr. Welch's claim. In a "determination letter" he ruled that Cardinal had a right to fire the finance chief because he refused to meet with the bank's lawyers and auditor without counsel 16 counsel. While Mr. Welch reasonably believed he had found fraud, the investigator wrote, "the reason for the termination constitutes legitimate business reasons." Mr. Welch appealed to a Labor Department administrative-law judge. Judge Stephen Purcell did an investigation of his own, complete with hearings, and a year later issued a 72-page decision overturning the 17 72 investigator's ruling. The judge said the proximity of Mr. Welch's firing to his whistle-



blowing was "sufficient to create an inference of unlawful discrimination." He ordered that Mr. Welch be reinstated, given back pay and reimbursed for legal fees. Bankruptcy Chapter 7 federal corporation liquidation Chapter 11—federal reorganization 18 Why have bankruptcy law for individuals? Why have bankruptcy law for corporations? —the externalities from liquidation or liens 7/26/2010 4 The GM Example GM actually went into and came out of bankruptcy quickly, after the article was written. In Chapter 11, the suppliers would be given priority for cash payments In Chapter 11, one bondholders cant be a free rider, a holdout, if the rest agree to accept less than the face value of debt.

Reputation and Capital Markets

(Macey article)

Point 1. A firms desire to keep its good reputation is helpful, but only if the firm is not near bankruptcy. Then, there is an endperiod problem.

Point 2. Bond rating agencies Standard & Poors and Moodys care less about their reputations, because of artificial demand.

Point 3. Do the big accounting firms care about their reputations?

Point 2. Bond rating agencies Standard & Poors and Moodys care less about their reputations, because of artificial demand. 1. In the old days, the bond rating agencies sold information Real demand

information. demand.

2. Regulators and private players started relying on it, e.g. a pension fund could only buy AA or better bonds. Ersatz demand.

3. So the bond rating agencies stopped caring about information. They were selling ratings.

The Enron Case Neither Standard & Poors nor Moodys downgraded Enrons debt below investment grade status until November 28, 2001, four days before the firms bankruptcy, when the companys share price had plunged to a paltry sixty-one cents . . . For Enron, the corporations \$250 million in 22 sixty corporation s rated senior unsecured debt had declined in value from ninety cents to thirty-five cents on the dollar in the month preceding

its downgrade. In other words, the market rejected the investment grade rating on Enrons debt before the credit rating agencies exercised their power to downgrade it. Jonathan R. Macey, *Efficient Capital Markets, Corporate Disclosure, and Enron*, 89 CORNELL L. REV.

Point 3. Do the big accounting firms care about their reputations?

Changes in the industry:

A . Limited liability partnerships now mean accounting partners are insulated from risk.

B. 1994 Central Bank of Denver decision, 1998 PSLRA statute, reduced liability.

C. Accounting firms started providing lots of consulting services. Sarbanes-Oxley increased the amount of nonreputational business too.

D. Mergers meant that by 2005, just 4 firms audited 97% of large American companies.

E. SEC regulations prevent entry by banning auditing by a firm that gets too much of its business from just one client.

Corporate Governance Mechanisms (Maceys opinion in his book) Mechanism Effective? Encouraged? SEC and Exchanges No Yes Boards of Directors No Yes The Takeover Market Yes No Initial Public Offerings Yes No 24 Accounting Rules, Firms No Yes Lawsuits No Yes Insider trading, short sales Yes No Whistleblowing No Yes Credit rating agencies No Yes Stock market analysts No Yes Hedge funds Yes No Banks, bondholders, etc. Yes No

The Dissident Director important in my opinion A dissident director is one who is apt to disagree with the other directors. He will lose whenever there is a vote, but he can manipulate information.

1. He has access to inside info, and can leak it to the public.
2. He has access to inside info, and can put other directors under legal liability for knowing something and failing to act.
3. He can break the ice by criticizing the CEO in board meetings.
4. He can break the ice by asking for information from the CEO and pushing aggressively to get it.

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THE HOUSING BUBBLE AND MORTGAGE FRENZY WERE LOCALIZED (Sailer)

More than half of the nation's foreclosures last year took place in 35 counties.

A few are in already-distressed areas around Detroit and Cleveland. But most are clustered in places such as Southern California, Las Vegas, Phoenix, South Florida and Washington. (from Sailer)

The worst-hit counties are home to about 20% of U.S. households, but accounted for just over 50year.

Eight counties in Arizona, California, Florida and Nevada were the source of about a quarter of the nation's foreclosures last year. In more than 650 other counties about a fifth of the nation the number of foreclosure actions actually dropped since 2006.

Eight counties in Arizona, California, Florida and Nevada were the source of about a quarter of the nation's foreclosures last year. Median prices were so high and median incomes so low in those eight counties that they probably accounted for half or more of the dollars defaulted.

Lucy and Herlitz estimate that 87% of the home appreciation between 2000 and 2006 in America happened in the four Sand States. Nevada had the worst 2008 foreclosure rate at 7.3%,

Arizona 4.5Florida 4.5California 4.0Colorado 2.4Michigan 2.4Ohio 2.4Georgia 2.2Illinois 1.9

USING LEVERAGE: Riskless Arbitrage

I have \$10M in capital. I can borrow at 4% and buy AAA securities that yield 10%.

Plan 1, no leverage: Borrow \$0 Profit:  $.10 * 10 - 0 = 1 - 0 = \$1M, 10\%$

, Plan 2: Borrow \$100M Profit:  $.10 * 110 - .04(100) = 11 - 4 = 7, 70\%$  Plan

3: Borrow \$1000M Profit:  $.10 * 1010 - .04(1000) = 101 - 40 = 61, 610\%$

USING LEVERAGE: Risky Arbitrage

I have \$10M in capital. I can borrow at 4% and buy AA securities that

yield 10% with prob. .8 and 0% with prob. .2.

Plan 1, no leverage: Borrow \$0 Profit: good:  $.1 \cdot 10 - 0 = .8 - 0 = \$0.8M$ , 10% or bad:  $0 - 0 = 0 - 0 = \$0$ , 0% Avg. return:  $.8(10) + .2(0) = 8\%$

Plan 2: Borrow \$100M Profit: good:  $.1 \cdot 110 - .04(100) = 11 - 4 = 7$ , 70% or bad:  $0 - .04 \cdot 100 = 0 - 4 = -\$4M$ , -40% Avg. return:  $.8(70) + .2(-40) = 48\%$

Plan 3: Borrow \$1000M Profit: good:  $.1 \cdot 1010 - .04(1000) = 101 - 40 = 61$ , 610% or bad:  $0 - .04(1000) = 0 - 40 = -\$40M$ , -400% — except that I default on the interest, so I only lose 100%.

Creating Safe Assets out of Risky Ones

Cash flows:  $E(x) = \text{Boom} (.5) + \text{Bust} (.5)$  Rating Market Price Basic Asset 100 =  $140(.5) + 60(.5)$  B 80 1st Tranche 50 =  $50 (.5) + 50(.5)$  AAA 50

$8 (.5) + 10(.5)$  Bottom Tranche 50 =  $90 (.5) + 10 (.5)$  unrated (F) 35

The market prices adjust for what the market will pay depending on risk and rating. This process increases value from 80 to 85, a genuine increase in social welfare. But what happens if the bust cash flow is 40, not 60? Then the supposed AAA security is actually risky, not safe. Think back to what happens when you are leveraged and your AAA securities turn out to be AA instead. Bankruptcy! Pricing Mortgage-Backed Securities Suppose I bundle together two mortgages to make a \$1,000,000 security, (a) a 30-year 9% mortgage with 20% down from a \$200,000 house in Bloomington and (b) a 20-year 5% mortgage with 5% down from a \$200,000 house in Bloomington. Each mortgage is hard to price. Consider mortgage (a). If interest rates fall, the borrower might pay the mortgage early and refinance. If housing prices fall or he loses his job or gets divorced, he might default and not pay, in which case the bank will foreclose and sell the house for whatever it can get (call it X). We have to figure out those probabilities and the value of X. Note that X and the probability of default are related— if housing prices fall, X is lower, and the probability of default is higher. So this is a tough problem. All the probabilities and X will be different for mortgage (b). Then, when we bundle (a) and (b) together, we add a new complication: correlations between all the probabilities and the

two Xs. They aren't perfectly correlated, so there is some diversification from owning the bundle— but how much? The Li Formula is a quick-and-dirty approach to valuing the bundle. "Recipe for Disaster: The Formula That Killed Wall Street

The Li formula is a quick-and-dirty approach. Problems:

1. It uses just one number for the correlation between returns on two assets. That ignores subtleties such as that maybe the up-sides of the two assets are highly correlated but the down-sides are not.
2. The correlation was estimated from market beliefs about the correlation. If the market was wrong, so was the correlation.
3. The correlation was estimated from market beliefs during a particular small period of time the housing boom post-2001. A housing bust might behave differently.
4. Small mistakes in the correlation estimate could result in giant mistakes in the valuation.

Why Was the Formula Misused?

Investment banks would regularly phone Stanford's Duffie and ask him to come in and talk to them about exactly what Li's copula was. Every time, he would warn them that it was not suitable for use in risk management or valuation. "The outputs came from "black box" computer models and were hard to subject to a commonsense smell test. 11 The quants, who should have been more aware of the copula's weaknesses, weren't the ones making the big asset-allocation decisions. Their managers, who made the actual calls, lacked the math skills to understand what the models were doing or how they worked. They could, however, understand something as simple as a single correlation number. That was the problem.

The Bond Rating Companies

The bond rating companies such as Moodys grossly overrated the safety of mortgage-backed securities. Why?

1. Conflict of interest in getting rating fees?
2. The same reason as the banks and investment companies— in experi-

ence and folly?

3. Lack of incentive to maintain their reputations? Would a government agency have rated them better?

Probably not. Fannie Mae and Freddie Mac were under political pressure to issue more mortgages to poor people, which gave them incentive to overrate the safety of such loans.

PENNY MAC (from article) PennyMac, whose full legal name is the Private National Mortgage Acceptance Company, also received backing from BlackRock and Highfields Capital, a hedge fund based in Boston.

It makes its money by buying loans from struggling or failed financial institutions at such a huge discount that it stands to profit enormously even if it offers to slash interest rates or make other loan modifications to entice borrowers into resuming payments.

#### A LARGE DEAL

Its biggest deal has been with the Federal Deposit Insurance Corporation, which it paid \$43.2 million for \$560 million worth of mostly delinquent residential loans left over after the failure last year of the First National Bank of Nevada. Under the initial terms of the F.D.I.C. deal, PennyMac is entitled to keep 20 cents on every dollar it can collect, with the government receiving the rest. Eventually that will rise to 40 cents. Phone operators for PennyMac working in shifts spend 15 hours a day trying to reach borrowers whose loans the company now controls.

In dozens of cases, after it has control of loans, it moves to initiate foreclosure proceedings, or to urge the owners to sell the house if they do not respond to calls, are not willing to start paying or cannot afford the house. In many other cases, operators offer drastic cuts in the interest rate or other deals, which PennyMac can afford, given that it paid so little for the loans.

#### A TYPICAL Little DEAL

The Laverdes, of Porter Ranch, Calif., had fallen three months behind on their mortgage after sales at a furniture store owned by the family dipped in the economic crisis. Margarita Laverde and her husband were fearful that

they might need to move their four children, three dogs and giant saltwater aquarium into a cramped apartment, leaving behind their dream home a five-bedroom ranch on a suburban street overlooking the San Fernando Valley. 15 But a PennyMac representative instead offered to cut the interest rate on their \$590,000 loan to 3 percent, from 7.25 percent, cutting their monthly payments nearly in half, Ms. Laverde said.

I kept on asking, Are you sure this is correct? Are you sure? Ms. Laverde said. Even with this reduction, PennyMac stands to make a profit of at least 50 percent, a company official said.

#### Housing Policy

Why should people be able to deduct their mortgage payments from their income for tax purposes? This amounts to a government subsidy for housing, but just if people own the housing, not if they rent. If I earn \$100,000 per year and pay \$20,000 in mortgage interest, I only have to pay income tax on \$80,000.

Where is the market failure? Or is this government failure?

The civic-involvement rationale: if Smith becomes an owner instead of a renter, he becomes a better citizen. Housing Policy Poor people pay essentially no income tax in America, so giving them a tax break hardly helps them. Instead, the subsidy is going to middle- and high-income people. We are really trying to *\*reduce\** the quality of housing. Suppose a couple can afford to either rent a 2 000 square foot

2,000 house or buy an 1,800 square foot house. Because we want them to become better citizens, an externality, we prefer it if they live in the smaller house— as owners. Without a tax break, theyd choose to rent and have more room and less responsibility. We give them a tax break so they will accept living in a smaller house and spend more time on civic affairs.

#### Foreclosures

Is it a tragedy when someone loses ownership of their home? There is an opportunity cost to having Smith live in the house at 2810 Linden Court. It means that Jones cant live there. If Smith would only pay \$2 000 per month

to live there and 2,000 there, Jones would pay \$2,500, we want Jones to live there instead. If the mortgage payment is \$2,300, and we prevent foreclosure, we are preventing Jones from living in the house.

#### Subprime Mortgages

"The Rise in Mortgage Defaults," Risky Mortgages Grew Hugely

Subprime (risky) 20 The Origins of the Financial Crisis Conforming (normal) Jumbo (big houses) Alt-A (risky) Home equity loans (not at purchase) FHA/VA (govt.subsidized) Subprime Mortgages 21 "The Rise in Mortgage Defaults," Subprime Mortgages California, etc. 22 "The Rise in Mortgage Defaults," Michigan,etc . Rest of USA. The Crash— The fall in mortgage security prices AAA: 35% 23 "Deciphering the Liquidity and Credit Crunch 20072008," AA-BBB- 8% The Crash Short term bank borrowing

Note the far bigger fall in bank paper (ABCP) than in industrial paper.

"Deciphering the Liquidity and Credit Crunch 20072008,"

The Crashbank borrowing interest rates This is what scared people in September 2008. Its over now. 25 "Deciphering the Liquidity and Credit Crunch 20072008," Bank Regulation 1. To prevent bank runs, we have deposit insurance. The FDIC promises to repay depositors (but not shareholders) if a bank fails. 2. Since banks have deposit insurance, they have an incentive to take big risks in their investments. (The depositors wont pull out their money, since theyre safe.) So the government has to regulate bank investments to make sure they arent too risky. Banks have to have a big enough capital/liability ratio. They cant invest in risky assets such as common stock. 26 3. The Federal Reserve also helps with bank runs, by providing emergency loans (lender of last resort). They regulate by requiring the reserve/loan ratio to be big enough. 4. Politicians cant resist pressuring banks to make loans to favored groups. Thus, we have the Community Reinvestment Act, requiring banks to make loans in poor neighborhoods and to relax credit standards. Banks were not reluctant to do this see point 2. Banks like to use the FDIC guarantee to gamble, because the government bears the downside risk. (See "Does the financial crisis discredit libertarianism?" "The



True Origins of This Financial Crisis)

What Does It Mean to Say a Bank Is Insolvent? Definition 1: Regulatory Solvency. Does the bank have adequate capital to meet the solvency tests imposed by regulators? Definition 2: Positive net worth under GAAP. Does the bank have positive net worth under GAAP accounting (ie yield to maturity with appropriate provisions when YTM is required or mark to market otherwise)? Definition 3: Positive economic value of an operating entity If the bank is allowed

entity. to continue to operate it will be able to pay all its debt and replace its capital? Definition 4: Positive liquidation value. If you liquidated it today at current market prices it would have positive value. Definition 5: Liquidity. Does the bank have adequate liquidity to operate on a day to day basis? From: "Bank solvency and the "Geithner Plan POSSIBLE CRISIS POLICIES 1. Liquidate insolvent banks (sell them off) 2. Nationalize insolvent banks (the US govt. runs them) 29 3. Fed lends money to banks, lender of last resort 4. Treasury or Fed buys preferred stock in banks (TARP I), injecting capital

5. Treasury or Fed buys toxic assets (TARP II) Extortion in Chicago One of the casualties of the faltering housing market is Chicago's Republic Windows and Doors. Bank of America cut off the company's line of credit in response to falling demand. "If the bank saw some light at the end of the tunnel, maybe the bank would have extended a line of credit," admitted Republic's vice president of sales and marketing. "Banks are in the business to make money and at some point they have to make a 30 business decision and that's what this is." In the first week of December Republic laid off its workers and closed its doors. Under state law the company was supposed to give two months notice, with continued pay and benefits. But there was a handy scapegoat: Bank of America. Since the institution collected \$15 billion (with perhaps \$10 billion more to come) from the taxpayers, Republic's employees argued that BoA had an obligation to bail out Republic.

The Political Response The sit-in: Gov. "Appointments for Sale" Blago-

jevich showed up before his indictment, as did both the "Rev." Jesse Jackson and Rep. Jesse Jackson, Jr., "Senate Candidate No. 5" in the Blagojevich case. Rep. Luis Gutierrez, another Senate contender, also visited, and demanded that the U.S. Departments of Justice and Labor investigate. Another senator-wannabe, Rep. Jan Schakowsky, made an appearance. President-elect Obama said of the workers, "I think they're absolutely right," adding that "these companies need to follow through on those commitments." Fifteen Chicago aldermen proposed an ordinance cutting off business with the bank 31 and limiting any zoning changes for its properties. Gov. Blagojevich announced that the state would withhold its business from the bank: "We hope that this kind of leverage and pressure will encourage Bank of America to do the right thing for this business." Cook County Commissioner Michael Quigley promised to introduce similar legislation. Bank of America surrendered and gave Republic \$1.35 million in the form of a "loan" that will never be repaid. Shortly after announcing its pay-off to Republic, the bank announced plans to cut 35,000 jobs over the next three years, roughly a tenth of its entire workforce.

**Questions You Should Be Able to Answer**

**Terms to Know**

**Homework Questions**

HERE PUT EXAMPLES WITH DIFFERENT NUMBERS THAN IN THE TEXT