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LOST TRUST: The Real Cause of the Financial Meltdown

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Bruce Yandle¹

Introduction

The financial collapse of 2007–2009 is recognized as causing one of the most serious U.S. recessions since the end of World War II. But to put this economic disruption into perspective, it is not enough just to plumb the depths of lost wealth in real estate or equity investments or the near or actual collapse of banks, insurance companies, auto companies, or city governments. Powered by the high connectivity of a global economy, this disruption must also be considered by the speed with which the knowledge economy re-priced assets worldwide, by the rapid pace of bankruptcies that followed, and by the degree to which governments and central banks opened the stops and started pumping money into wounded firms and institutions in an effort to reboot the world economy. Added to this, we should consider the extent to which privately owned firms become quasi-publicly owned as once celebrated free-market captains of capitalism line up for government bailouts.²

Reaching further back in our review of history, if one could build credible charts comparing U.S. economic disruptions from the 19th century forward, the 2007–2009 collapse would not likely take the blue ribbon when measured in conventional terms

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² In addition to the obvious banks, insurance companies, brokerages, and financial institutions, the line up for bailout includes cities, counties, states, and even real estate developers and homebuilders. On the latter two, see (Timiraos, 2008, A3) and (Wei and Hilsenrath, 2008, A1).

such as unemployment, business failures and mortgage defaults.³ But there is one trait that might distinguish the 2007–2009 collapse from the rest. In this disruption, global credit markets, not just U.S. markets, suddenly came to a near stop across major financial institutions worldwide. Credit markets just stopped functioning.

The mid-September 2008 credit market deep sleep was not the result of bank runs triggered by central bank credit cutbacks, where depositors and investors sought to get their money, as in 1933. Nor was it because of a lack of liquidity as in the case of the panics of 1873, 1884, 1890, 1893, and 1907 (McDill and Sheehan, 2006). The problem this time was lost trust. Indeed, the 2008 disruption is likely to be the only one that resulted from a sudden loss of trust, not from action taken or not taken by misguided central bankers.⁴

On September 17, 2008 following (1) the public sector takeover of AIG—the world’s largest insurance company, (2) a government-arranged merger between a financially wounded Merrill Lynch and an assisted Bank of America, and (3) government refusal to save Lehman Brothers, individual agents worldwide lost trust in other economic agents and institutions (The doctor’s bill, 2008, 82). On September 18, banks began hoarding cash, corporations could no longer issue commercial paper, municipal bonds could not be issued, and interbank lending collapsed. With heavy scrutiny focused on mortgage-backed and related assets, banks worldwide, by IMF reckoning, saw the prospect of losing \$10.0 trillion in write-offs (When Fortune Frowned, 2008, 4). Of this, there was more than \$1.3 trillion in U.S. originated mortgage-backed securities of uncertain value (When Fortune Frowned, 2008, 4). Included in the count were some 2,500 mortgage-based securities backed by subprime mortgages (Steidtmann, 2008).

Along with write-downs and other financial losses, trust, a most fragile human sentiment, had taken a walk.

³ There are obviously few ways to draw empirically based comparisons across time, due to the lack of comparable unemployment and other data. Wheelock (2008) makes a comparison of the current housing market collapse and related events similar to housing-related events in the Great Depression. Wheelock (2008, 3) points out that in January 1933, some one-half of all U.S. mortgages were in default, with new defaults being added at the rate of 1,000 daily. Meanwhile, personal income fell 41 percent from the 1929 level. At this January 2009 writing, we are a long way from those depths.

⁴ A timely comment along these lines is offered by Barker (2009) who, focusing on the opportunistic behavior of Wall Street executives, said: “But beyond the power struggles, huge losses and increased regulation, there is a more fundamental threat to the industry: the destruction of trust.” For a scholarly treatment of the systematic inverse relationship between trust and regulation, see (Aghion, Algan, Cahuc, and Schleifer, 2009).

In times of financial distress, central banks can provide liquidity and lay the groundwork for creating money. Governments can increase spending, reduce taxes, and purchase sick assets. Presidents can exhort, and captains of industry can capitulate. These costly actions matter, and may indeed generate economic activity. But none of these actions alone or together can rekindle trust once the flame has flickered out.⁵

What triggered lost trust? And how does the trigger point fit into the larger explanation of the credit collapse?

This essay describes the anatomy of the credit collapse and identifies a series of necessary but not sufficient conditions for collapse to occur. Then, three elements designed to buttress trust—independently determined credit ratings, international accounting standards, and credit default swaps—become trust solvents that seriously undermine the basis for believing in the creditworthiness of individual agents and their institutions. As the solvents worked, trust was lost and markets ceased to function. This essay begins with a discussion of how trust evolves in the formation of markets. Then, the institutional skeleton that accommodated the globally expanding U.S. subprime mortgage problem is described. Finally, the enabling agents of trust that connected global investors and creditors become the focus of the story, and their demise ends the story. Brief final thoughts conclude the essay.

Trust and Market Morality

Practically all market transactions are based on some degree of trust. Consider some simple actions. I fill the tank of my car with fluid from a pump at a Seven-Eleven I have never before visited, trusting that the fluid passing through the hose is gasoline. I walk into a large TESCO superstore in Prague, a store and company I have never patronized. I buy a supply of groceries including fresh fruit, soups, and coffee. I consume the items without a second's concern about their safety.

I email my broker and tell him I want to buy a thousand shares of stock. He writes back and tells me that I must talk with him. Orders for securities are based on voice transactions. My broker trusts my voice, but not my email. Written contracts do not work effectively in this setting. My broker is employed by a firm with a wonderful name and brand; at least this seems to be the case. Quite honestly, I have never really checked on the financial strength of the firm. Indeed, the whole idea of a firm and financial strength is an abstraction. Trust is somehow rooted in individuals. Within all these examples, truth-telling and promise-keeping are typical features of ordinary commercial life. There is trust in the market place. How did this come about?

⁵ Robert J. Shiller (2009) discusses lost trust and what it will take to rekindle the flame in terms of massive government action. His very helpful analysis seems to focus more on the U.S. economy.

F.A. Hayek (1991) tells a compelling story about rational thought, the extended order, and market morality. In his story, market morality—truth telling and promise keeping and other behavioral norms or rules—evolved over the millennia through market interaction. Hayek sees trust-forming rules as resting between instinct and reason in the spectrum of bases for human action. In Hayek’s story, trust plays a vital role in small group settings where informal rules and traditions form a basis for trust. Trust generated by other devices then delimits the reach of an extended order that enables resource-conserving transactions and specialization to extend across space and time. Simply put, in the absence of market-generated trust-forming devices transacting parties could never afford enough police and regulators to induce honest behavior among ordinary people. Trust and trust-forming mechanisms can be a low-cost substitute for police, regulators and court actions.⁶

James Buchanan (1994, 66–71) develops another explanation of ethical behavior in a small numbers setting. He describes a social process where interacting individuals signal a willingness to assist each other, to share resources in the absence of having formal or informal contracts. The process Buchanan describes fits into Hayek’s story about trust and how it evolves. Sam Fleischacher’s (2004) makes a somewhat similar interpretation of Adam Smith’s famous quotation about the baker, brewer, and butcher providing the evening meal. Fleischacher suggests that more attention be paid to the sentences just ahead of the more famous ones: “Man has almost constant occasion for the help of his brethren, and it is in vain for him to expect it from their benevolence only. He will be more likely to prevail if he can interest their self-love in his favor, and shew them that it is for their own advantage to do for him what he requires of them.” Fleischacher emphasizes the importance of being able to “interest” and “shew” them. This may be an example of Buchanan’s signaling.

Frank Fukuyama (1995) also emphasizes trust as the mechanism or social norm that enables economic growth to occur beyond the bounds of small groups. Holding trust constant, his analysis (24–25) suggests that an expanding knowledge economy could eliminate the need for large organizations and hierarchical firms, since in his view hierarchies exist for quality assurances purposes. He indicates that firms and other

⁶ The formation of the law merchant in the early Middle Ages, a private law process that extends to modern times, is a case in point. The law merchant, a body of evolving judge-made law that formed in merchant-organized courts, was developed by adventurer merchants who traveled extensively from their home countries. As noted in one commentary (Hamowy, 2008, 286), “[G]eographic distances often prevented direct communication, let alone the building of strong personal bonds that would facilitate trust . . . Internationally recognized commercial law arose as a substitute for personal trust.” The law merchant was a private, market-driven phenomenon that did not emerge from or depend on government action. For more on this, also see Matt Ridley (1996, 202–204). The demise of the medieval form of law merchant and merger into common and code law is described by Trakman (1983, 24–27).

organizations become larger through vertical integration partly because of the cost of assessing trustworthiness when dealing beyond the walls of the firm. Following this logic, we might forecast the current financial collapse to be a force leading to trust-forming mergers and consolidations, aside from those that might be based strictly on financial ratios and reserve requirements.

Brink Lindsey (2002) also argues that “formal institutions are not enough.” These must be buttressed by “invisible bonds of reciprocity that restrain members of society from taking advantage of each other to the maximum extent the law allows.” He identifies “hard” institutions, such as police and courts, and “soft” institutions of cultural values that “allow agreements to be enforced between total strangers across the span of years and continents.” As the extended order reaches to the limits of social space, cutting across diverse cultures and norms, trust reliance itself becomes costly. Brands, insurance, hostages, credentials, certification, and common and code law rules become increasingly valuable.

Certified financial statements that use globally recognized and understood accounting standards form one of the key building blocks for trust formation in financial markets. When the standards evolve from market transactions, they may be viewed as part of the trust-forming technology that forms Hayek’s market morality. When standards are distorted politically or on the basis of regulatory expediency, they lose their market-generated moral bearings, since the standards no longer reflect market-based knowledge. Credit ratings form another part of trust technology. The competitive determination of ratings by such firms as Standard & Poor’s, Moody’s, and Fitch helps agents to make trust-forming evaluations across the otherwise more opaque records of market participants. When ratings no longer reflect competitive market forces, then their moral worth is diminished and trust is eroded. Certified statements and credit ratings can be buttressed with specialized insurance that spreads risk and reduces the cost of investing in risky bonds and other securities. Insurance such as credit default swaps that became a significant component of global financial markets in 2001–2008, facilitated the purchase of homes nationwide. These, along with audited statements and credit ratings, formed part of a complex bundle of market-generated trust-forming devices that energized the expansion of the extended order.

How a Regional Subprime Mortgage Problem became a Financial Nightmare

According to economic historian Lawrence H. White (2008), the 2008 financial collapse originated with a political effort to expand mortgage lending to consumers who could not meet normal credit-worthiness standards. What was later to be called the subprime problem began as an affordable home effort that shoved aside market-based constraints. As White documents the story, the impetus came with congressional strengthening of the Community Reinvestment Act, the Federal Housing Administration’s loosening of down-payment standards, and with pressure exerted on mortgage lenders by the Department of Housing and Urban Development to lend to the

unqualified. As might be expected, the most politically responsive mortgage lenders were the two government enterprises, Freddie Mac and Fannie Mae, which had been organized politically to expand U.S. homeownership opportunities.

White explains how federal efforts to make home ownership more affordable began seriously in 1934 when the Federal Housing Administration was formed for the purpose of insuring mortgages made by private lenders to qualified borrowers. This action, taken in the depths of the Great Depression, was intended to shore up housing markets while other federal action was underway to acquire defaulted mortgages and properties affected by the general hard times. But one could go back even further, to the Homestead Act of 1862, to find an earlier time when politicians sought to help Americans achieve the Jeffersonian dream of land and home ownership. While some two million homesteaders took a chance on settling in the new west, some 60 percent of those failed, or in a more modern sense, defaulted on their mortgages (Warren, 2008).

The more recent political urge to expand homeownership beyond the limits of real capability received a major stimulus from President Bill Clinton in 2000 when he pushed an “affirmative action” program for housing and set quotas for Fannie Mae and Freddie Mac to buy mortgages of poor quality made to low income families (The Subprime Lending Bias, 2008). By 2000, these mortgages, many of which were subprime, made up half of the two government enterprise lenders’ portfolios. George W. Bush followed the Clinton path in December 2003 when he signed a new law with the wonderful name: The American Dream Downpayment Act (White House Philosophy Stoked Mortgage Bonfire, 2008, A1). The accompanying HUD press release described the logic of the law this way (HUD Press Release, 2003):

There is a reason why many American families can't buy their first home—they can't afford the downpayment and other upfront closing costs required to qualify for a mortgage. For as many as 40,000 low-income families, that will change as President Bush today signed *The American Dream Downpayment Act* into law.

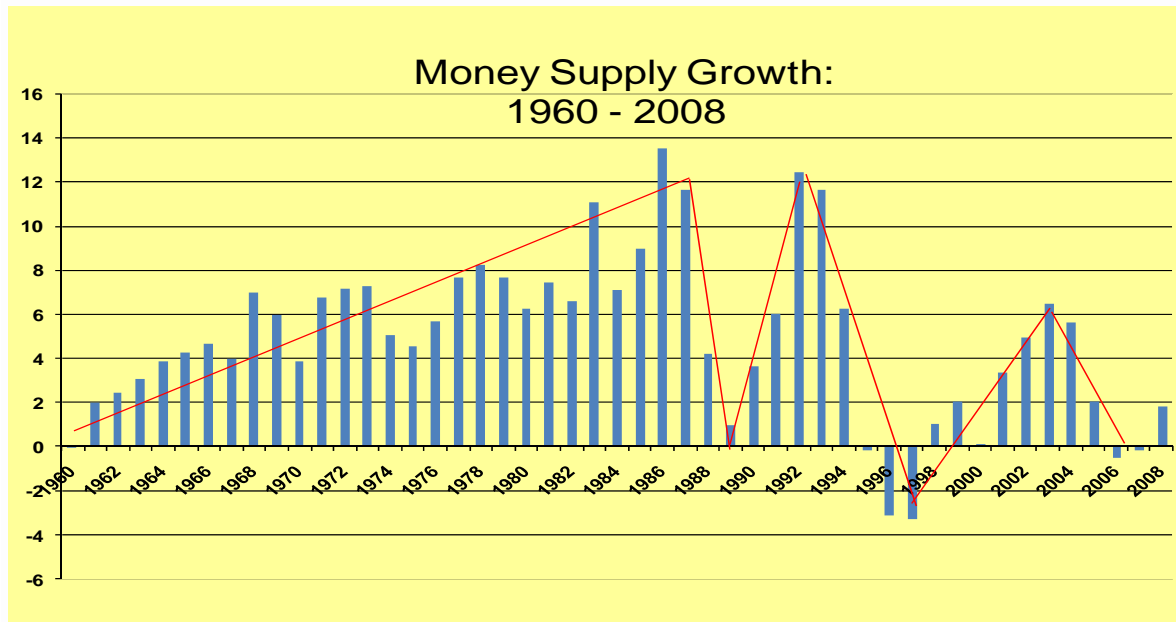
The law was backed by Congress with an authorized \$200 million to bring assistance to some 5.5 million families by the end of the decade. This brought the above-mentioned HUD pressure on Fannie Mae and Freddie Mac to open the money valves. The effect of the larger flow of credit can be seen in terms of subprime lending. From 1993 through 2003, new subprime loans accounted for 10 percent of all mortgages (Hall and Woodward, 9). In 2004, subprime’s share rose to 26 percent. In 2005, the share was 28 percent, and in 2006, the share was 40 percent. From 2005 to 2005 to 2007, Fannie Mae and Freddie Mac purchased some \$1 trillion in subprime and low quality (Alt-A) mortgages, which amounted to 40 percent of the total mortgages purchased in those two years (Wallin, 2008, 5). Later, *Washington Post* writer Caroline Leonnig (2008) would explain the situation that followed this way:

In 2004, as regulators warned that subprime lenders were saddling borrowers with mortgages they could not afford, the U.S. Department of Housing and Urban

Development helped fuel more of that risky lending. Eager to put more low-income and minority families into their own homes, the agency required that two government-chartered mortgage finance firms purchase far more "affordable" loans made to these borrowers. HUD stuck with an outdated policy that allowed Freddie Mac and Fannie Mae to count billions of dollars they invested in subprime loans as a public good that would foster affordable housing.

Pressure on the two government enterprises to enrich an aftermarket for subprime mortgages, action that would ultimately force them into bankruptcy, was a necessary element in the story, but not sufficient. Pressure alone could not bring cash to the store. The political dream had to be accommodated with expanded credit and, as White (2008) shows, that is what the Federal Reserve Board chose to provide.

Evidence of the Fed's accommodating stance is shown in the next figure, which provides data on the growth of the M-1 money supply across the years 1960–2008. In the most recent credit expansion, money supply growth peaks in 2003, but the effects of the expansion show up in subnormal interest rates from 2003 to 2006 (White, 2008, 4). The attractive rates were bundled into adjustable rate mortgages (ARMs) that, as White (White, 2008, 4) put it, "shifted the risk of refinancing at higher rates from the lender to the borrower." Many borrowers accepted a bet that the Fed would keep rates low for a much longer time. As the more recent part of the money supply growth chart indicates, those who made that bet were wrong. Just as surely as the Fed eased in an effort to foster a faster growth economy, they later hit the monetary brakes to slow the great American bread machine before it overheated. Meanwhile, the ARMs adjusted upward and what had looked like affordable housing to families that borrowed when rates were low began to look more like the subprime problem when the same families found their mortgage payments no longer fit the family budget.



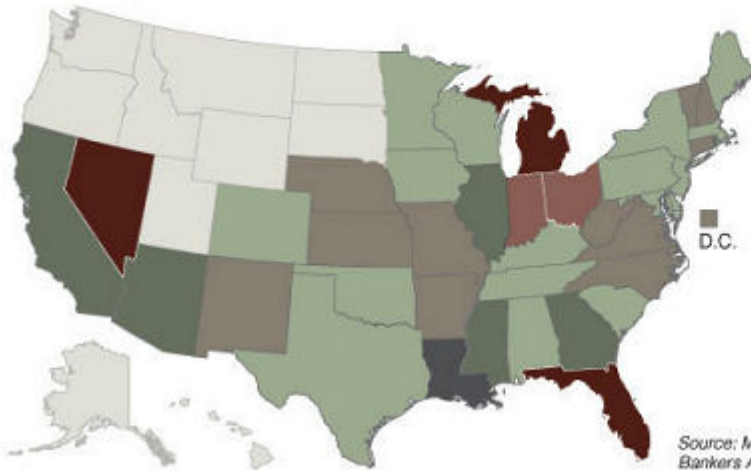
Annualized growth of M-1. Data provided by economy.com. 2008 is an estimate.

Rising interest rates associated with Fed tightening generated severe default effects across the United States in three regions. These were the industrial north central states where the older auto industry (long in decline) was centered; the far west, with California, Arizona, and Nevada bearing the brunt; and Florida, where rapid construction of condominiums and houses now created a large inventory of unsold homes. The next chart shows the frequency of defaults across the United States in the first quarter of 2008. As indicated the default problem was most severe with subprime ARM-funded mortgages.

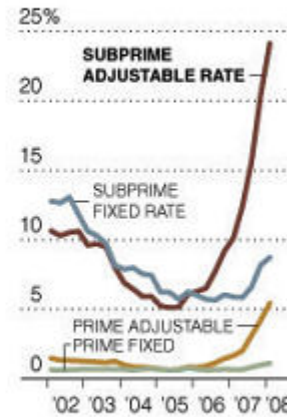
An accommodating Federal Reserve, which put money on the table, later to take it away, was a necessary part of the financial collapse story. But putting money on the table was not sufficient cause to generate a global financial collapse. For the U.S. subprime problem to reach the limits of the global economy required something else, and that something else was trust.

PERCENT OF MORTGAGES SERIOUSLY DELINQUENT

MONTANA 1.23% 2% 3% 4% 5% 6% 6.71% FLORIDA



SERIOUSLY DELINQUENT MORTGAGES BY TYPE



THE NEW YORK TIMES

Transmitting Trust in Mortgage Markets

To see how misplaced trust, a necessary and sufficient cause of global credit collapse, was transmitted globally, we must first describe the transmission itself. We begin with a highly stylized description of the market that had evolved in the early 20th century. In a rudimentary way, the mortgage market begins when an individual seeks to borrow for the purpose of acquiring real property—a home or commercial real estate. Lending institutions represent savers and investors who put their money at risk in the hopes of earning a return. Lending intermediaries such as local savings and loan associations and banks consider mortgage applications and make decisions based on the credit worthiness of the borrower and the likelihood of maintaining a pool of savings to fund the debt. Through time, savers and investors identify intermediaries they can trust; these institutions are the ones that can maintain a more stable supply of lendable funds. Intermediaries maintain that trust by enforcing standards of creditworthiness on borrowers. This rudimentary system has a tolerance for error that is determined by the competitive marketplace. In a close-knit community with common ethical norms, trust identification comes easier than where borrowers and investors are far removed from one another. In the more distance cases—the extended order—market-generated trust substitutes become critical.

In the 21st century, mortgage markets reached the limits of the extended order. The borrower/lenders described above were still an integral part of a closed system, which is to say the system relied on resources contained in it and generated by it. There was no exogenous source of bailout money. But additional components had been added to system, components that globally expanded the availability of lendable funds. The direct lender, who previously made a mortgage and kept it on the books until it was paid, had been largely displaced by lenders who originated a mortgage that was then sold to another intermediary who bundled a large number of mortgages, or pieces of them, to be securitized. The bundle of mortgages became the collateral for bonds that could be sold globally. As the system expanded to global limits, trust substitutes became more critical to the continued working of the global system. It was costly for investors in Asia who might be interested in U.S. originated mortgage-backed securities to assess the creditworthiness of an original borrower in Atlanta, Georgia, or of the first lending institution that made the loan. At the same time that global investors were buying U.S. mortgage backed securities containing subprime components, those same securities also looked good to U.S. financial institutions and investors. As a result, U.S. and other financial institutions began to borrow short and invest long, much the way the savings & loan industry had done prior to the 1980s collapse.⁷ All along, market-derived trust substitutes evolved to reduce the cost of trust transmission.

Credible market-tested international accounting standards and credit ratings buttressed or replaced trust between known individuals that might have been otherwise required. Instead of trusting in individuals or their firms, global investors placed their trusts in credible symbols and rules. With reliance based on accounting standards and credit ratings, the closed system functioned to provide mortgage access to individuals with different levels of creditworthiness. The supply of different quality mortgages responded to market demand. As the appetite for risk increased globally, the quantity of low quality mortgage-backed bonds increased. Quality assurance could be held constant within the closed system, so long as trust and trust substitutes functioned effectively.

⁷ Kashyap, Rajan, and Stein (2008) argue that the debt and investment imbalance was the main contributor to the financial mischief banks brought upon themselves. Once defaults began, an affected bank had to sell mortgage-backed securities to cover losses. The sale reduced market prices for those securities, which, given mark-to-market accounting rules forced other banks to write down their mortgage backed assets. This in turn led to more sales and a continued downward spiral. In other words, the composition of balance sheet assets coupled with mark-to-market accounting rules was a major source of instability. Also see Meiners and Yandle (1991) where they argue that the combination of government required deposit insurance and partial deregulation encouraged taking excessive risk and destroyed the industry's asset base.

The process by which subprime mortgages were originated, then securitized, and finally sold in international markets contains critical trust-communicating intersections. The first intersection occurs when the mortgages were originated, which is when a potential borrower works with the agent of a lender to write a mortgage contract. Both parties initially have an incentive to understate risk. The borrower hopes to get a mortgage with attractive terms; the originator/agent hopes to earn a commission for closing the deal. But the originator/agent must deal with a hierarchy that imposes quality control. An officer of the lending firm must approve the deal. There is a bankruptcy constraint, a closed system. Market-driven constraints affect the standards used when mortgage paper is approved and sold to be bundled and securitized in a mortgage-backed security. More stringent standards will be imposed by the bundling financial institution when the securitizing agency imposes stricter standards. When the securitizing agency relaxes standards, the gate is open wider for originators to make lower quality loans. There is also evidence that standards are relaxed with higher volume and prospects of enlarged profits (Keys, Murkherjee, Seru, and Vig, 2008).

The entry of government-sponsored enterprises—such as Fannie Mae and Freddie Mac—stretched the constraints on the closed system. Viewed as being backed by the full faith and security of the federal government, these two mammoth lenders were able to expand the limits of an otherwise closed system. Bankruptcy was no longer seen as a viable threat. When Fannie and Freddie were instructed by their political masters to expand their subprime portfolios, standards tended to be relaxed all the way to the origination process. All else equal, commission-paid originators would expand the hunt for otherwise less quailed borrowers. Subprime lending increased.

The Washington Mutual experience shows how subprime lending expanded to the point that the firm became one of the largest mortgage lenders in the United States and later one of the largest failed banks (Goodman and Morgenson, 2008). Beginning with a major effort in 2003 when interest rates were low, the firm expanded lending at such a pace that by mid-2007 their subprime lending reached \$4.2 billion. One year later, the amount stood at \$11.5 billion, and the firm was bankrupt (Goodman and Morgenson, 2008, 1). During the 2003-2008 interval, Washington Mutual built offices nationwide, paid originators a commission for loans approved, and reduced standards when approving loans. All of this was possible because a) the firm could sell its subprime paper to Wall Street bundlers who b) then securitized the debt, which c) was sold in global markets.

Two prominent and inter-related trust-forming devices facilitated the globalization of U.S. mortgage-backed securities. The first device are highly visible credit ratings assigned by the three credit rating firms, Moody's, Standard & Poor's, and Fitch; these, in turn, relied on the second device, the uniform application of international accounting

standards.⁸ By statute, these three rating agencies have the rating market to themselves. Even though competition may be lacking, if Moody's, for example, assigned an AAA rating to a GS Mortgage Securities Corporation bond backed partly by subprime mortgages, investors worldwide could be assured that they were not assuming undue risk when buying the paper. Of course, Moody's and the other rating firms relied on the audited records of the underlying firms as well as their own assessment of the predicted payoff record of the mortgages themselves. As Wall Street perfected the production of consolidated debt obligations, which consisted of a mixture of mortgages of differing qualities, the rating agencies became more like chefs in the kitchen than purveyors of quality control. In effect, those constructing the obligations would tell the rating agency the outcome they desired as they mixed together mortgage instruments of differing quality. The agency, in turn, would specify the appropriate mix. Ultimately, 85 percent of the subprime mortgages issued were folded into structured debt obligations with an AAA rating (Hoenig, 2007, 10–13).⁹

The *New York Times* reported that Moody's revenue from rating structured financial instruments, which include mortgage-backed securities, rose from around \$400 million in 2003 to more than \$800 million in 2007 (Morgenson, 2008, 32). Along the way, debt carrying high ratings began to look more like junk. As a result, the rating credibility fell, and financial institutions could no longer rely on the ratings when deciding whether or not to lend to another financial institution. The term "toxic assets" entered the vocabulary. A Moody's managing director is reported to have put the situation this way in a September 2007 internal management survey: "These errors make us look either incompetent at credit analysis or like we sold our soul to the devil for revenue, or a little bit of both" (Morgenson, 2008, 1). Put another way, a key trust-forming device was biased and no longer reliable. Credit markets tightened.

⁸ The function play by credit rating agencies became increasingly critical as financial intermediation shifted from banks, which had internal controls, to markets that were inherently more impersonal and more reliant to credible third-party evaluations. The revenue incentives faced by rating agencies that are paid to classify debt instruments by financial intermediaries worked against the incentive to give strictly interpreted ratings. (On this and the changing nature of financial intermediation, see Hoenig (2007, 10–13).)

⁹ As Martin Weiss put it, the rating agencies were too closely involved in constructing the product they were rating, had incentives to give higher ratings (and earn higher fees from volume), were giving AAA ratings to municipal bond insurance companies, which in turn were passing their AAA rating to bond issuers who bought their insurance. (Weiss, 2007A)

Biased credit ratings do more than mislead investors; they can also bias the amount of capital required by financial institutions. Rosenkranz (2008) points out that: “For every dollar of equity that insurance companies are required to hold for bonds rated AAA, \$3 is needed for bonds rated BBB, and \$11 is needed for bonds rated just below investment grade (BB). For banks, the sensitivity of capital requirements to ratings is generally even more extreme.” He goes on to indicate that “regulatory reliance on ratings makes the rating agencies the de facto allocators of capital in our system.”

With the regulatory recipe for capital specified by ratings provided by the three rating agencies, mortgage bundlers had powerful incentives to mix and blend subprime mortgages with enough AAA paper to yield an AA or, even better, an AAA outcome. Quite possibly, the raters’ regulatory role increased the demand for subprime mortgages that could be bundled, mixed and matched in consolidated debt obligations, a new Wall Street product that could be sold in global markets with AAA ratings (Rosenkranz, 2008). Of course, when mortgage default rates went through the roof, AAA took on a new meaning, or no meaning at all.¹⁰

There was also a challenge to be met when dealing with international accounting standards. These standards were supplemented by SEC rules as interpreted by the Federal Accounting Standards Board (All’s fair, 2008, 92). Among the rules was the Fair Value Accounting Standard, which specified mark-to-market methods of evaluation for bank assets. Mark-to-market evaluations are intended to provide transparency to investors and are more meaningful in the normal course of doing business when markets for securities under scrutiny are functioning than are historic cost or cash-flow evaluations. But when market lock up, trade ceases and asset evaluations can only occur when a financial institution goes through bankruptcy, then the beneficial aspects of mark-to-market become more questionable.¹¹

To make things more complicated for those who place their trust in financial statements, mark-to-market rules are not required across the board for all assets (All’s fair, 2008, 93). Whether they are to be applied depends on the intentions of the asset owner. If the intention of the bank that owns the asset is actively to trade the asset, then market

¹⁰ On January 25, the Obama team indicated that initiatives are in the works to develop federal rules governing rating agencies (Labaton, 2009). At this writing, nothing final had been revealed.

¹¹ Ryan (2008) provides a rigorous description and evaluation of mark-to-market rules in the context of the financial collapse. On theoretical grounds, he is not persuaded that the rules contributed significantly to what I term as lost trust. He does offer suggestions for empirical research that might partly resolve the question.

value must be used at all times when statements are issued. If the intention is not to trade, but to hold the asset for later sale, then slightly different rules apply. And if the intention is to hold a security to maturity, then the asset can be listed at cost.

The upshot of all this is that what might appear to the untrained eye to be comparable financial statements are not comparable at all. For example, the *Economist* points out that at the end of 2007, more than 75 percent of Goldman Sachs assets were carried at fair value (mark-to-market), while less than 50 percent of Morgan Stanley's assets were so measured and slightly more than 25 percent of Bank of America's assets were stated at fair value (All's fair, 2008, 93). It is theoretically possible for two banks to have identical assets but for one bank to have significantly different evaluations assigned to its assets. Of course, a sudden re-evaluation of assets following another institution's distress sale, as when Lehman Brothers failed unexpectedly, could eliminate critically important reserves, and that could lead to a reduction in the credit rating of the bank in question. Loss of prime credit rating could lead to loss of access to credit markets, and then to bankruptcy.

A December 2008 Securities and Exchange Commission review of mark-to-market rules ended with a recommendation that the rule be maintained; the report also indicated that based on a review of multiple episodes no evidence was found that fair value accounting by itself was the proximate cause of a financial institution failure (Crittenden, 2008, C6). The conclusion leaves open the possibility that the accounting rule, coupled with faulty credit ratings, may have reduced a bank's access to credit. This then led to reduced ratings and a rush to sell mortgage backed securities to obtain cash. As weak assets hit the market and depressed prices, mark-to-market rules would then put other institutions in jeopardy. The result could be a cascading collapse of credit worthiness. In this sense, fair value accounting rules worked to the financial institution's advantage in rising or stable markets, but did not work quite so well when markets for entire asset categories were collapsing.

Because of the trust complications associated with credit ratings and accounting rules and the explosive growth of mortgage-backed securities in 2003–2007, the market delivered another trust-forming device. These were credit default swaps (CDSs), a name that hid the fact that CDSs were insurance contracts sold by one investor to another to cover the risk of default on the debt of a particular firm covered by the contract. For example, there might be CDSs for Morgan Stanley bonds. If the bonds covered became shaky, the price of the CDSs would rise, signaling the presence of a problem. CDS prices could be a far more effective monitor of creditworthiness than the infrequently changed ratings given by the rating agencies. When the price of CDSs rose due to perceptions that risk had risen for the insured bond, the credit rating of the original issuer of the mortgage-backed bond could be reduced. In fact, movement of CDS prices could predict later changes in credit ratings (Pressure gauge, 2008, 61).

The volume of CDSs grew rapidly during the subprime hay days, rising in gross value from \$4 trillion in 2003 to over \$62 trillion in August 2008.¹² A high volume market developed where CDSs were traded (Pressure gauge, 2008, 61). While volumes were excessive, CDSs were a trust-forming innovation. They and their prices supplemented credit ratings and accounting information, at least until the bottom fell out, which happened in September 2008 when AIG got in trouble. But even after that, while newly inspired regulatory threats were forming, CDSs continue to serve an effective purpose. (Credit Default Swamp, 2009).

For insurance of any form to be viable, the contract writer—the underwriter—must be able to forecast expected losses and set prices or premiums so that revenues generated will cover operating costs and expected losses. When based on actuarial experience and the large numbers principle, insurance works, except when there are catastrophic losses encountered simultaneously by many exposure units. Insurance for payment of subprime mortgages would work, so long as just some of the mortgage borrowers defaulted. But when large numbers default in an undiversified portfolio, the insurer can be in a lot of trouble.

The September 15, 2008 failure of Lehman Brothers generated chaos in the CDS and other markets. One key player, AIG, the world's largest insurance company, was brought to its knees when rating agencies downgraded its debt, forcing the firm to pass \$14 billion in collateral to debt holders. The problem did not stem from the firm's financially strong traditional insurance business; it was the CDS business. Later in the day, the federal government seized AIG, lent the firm \$85 billion, and claimed an 80 percent equity stake in the firm. AIG was nationalized. Within 24 hours, the shares of Morgan Stanley and Goldman Sachs were hammered as they scurried to find new financial partners who might take a position with them large enough to avoid bankruptcy. Ultimately, Morgan Stanley and Goldman survived, but not without the assistance of the U.S. Treasury and a transformation from investment bankers to universal banks with access to government insurance. By then, Wall Street's big five dealer/investment bankers—Bear Stearns, Goldman Sachs, Lehman Brothers, Merrill Lynch, and Morgan Stanley had either disappeared through bankruptcy, been acquired by a commercial bank, or were transformed to banks with new access to deposit insurance and the Fed's loan window.

Market-generated trust-forming devices distorted by the subprime hay days lost their quality assurance capabilities. As had been forecast by Fukuyama, hierarchies

¹² For comparison purposes, there was \$16 trillion in life insurance in force in the U.S. in 2002. World GDP is approximately \$56 trillion. But CDSs are more like life insurance than GDP, unless there is systemic default, a similar outcome to a plague.

replaced trust as the federal government became the owner of AIG, a dominant lender and equity owner of General Motors, Chrysler and GMAC, and 20 percent owner of the equities in the U.S. commercial banking system.¹³ But the demise of trust devices did not end with those directly associated with mortgages, mortgage lending, and the world market for mortgage-backed securities. The failing financial markets also brought down every major insurer of municipal bonds. Started in the 1970s, bond insurance enables an issuer of municipal bonds to enjoy the AAA credit ratings of the insurers and thus pay lower interest rates by buying insurance from one of the major bond insurers. The credit rating enhancement afforded to municipalities by bond insurers reduces the scrutiny rating agencies might otherwise apply when rating insured bonds. The rating agencies can merely report the insurers credit rating. In recent years, municipalities have paid something like \$2.5 billion annually in insurance premiums to firms with names like MBIA, AMBAC, and Fidelity Guarantee Insurance (Richard and Preston, 2006). Presumably, bond issuers save at least that much in interest costs. Yet in the \$2.26 trillion municipal bond market, hardly any bond issuer ever goes belly up, at least until recently.

The insurance idea is straightforward; the insurance companies review the financial strength of cities, counties, states, and other bond issuers and charge a premium for their services. They, in turn, guarantee that the principle will be paid in event of bankruptcy. With AAA ratings obtained through insurance, investors worldwide have no reason to check to see if Richland County Georgia Hospital Bonds are okay. Trust is transmitted by insurance. But the bottom began to fall out in early 2008. This was when defaults on subprime mortgages affected a new line of business offered by the municipal bond insurance companies. They were insuring mortgage-backed securities. The value of the subprime mortgage-backed assets held by the insurance companies were crumbling, which in turn caused rating agencies to take away their AAA ratings or worse, which was to rate their debt as junk (Weiss, 2008).

Suddenly, municipalities that had enjoyed the AAA ratings through purchase of insurance found themselves facing substantial increases in interest costs. For example, Bloomberg reports that Park Nicollet Health Services in Minneapolis might pay as extra

¹³ The FDIC publishes its Quarterly Banking Profile and posts to its website. The November 25, 2008 data indicate total equity capital and reserves for all FDIC insured commercial banks and savings institutions of slightly less than one trillion dollars. SNL Financial in Charlottesville, VA, reports that as of November 12, 2008, TARP commitments of \$212.7 million has been made to various institutions across the nation (<http://www.snl.com/bank>). The amount committed is approximately 20 percent of total equity.

\$5 million in 2008 because interest doubled on their floating-rate debt (Braun, 2008). The interest rates on the bonds, insured by AMBAC, rose from 3.06 percent to 6 percent. The hospital had anticipated enjoying AAA interest rates for 30 years. In a matter of days, another 100 hospitals experienced the same thing as Park Nicollet Health Services. A few weeks later, the municipal bond auction market froze solid. The market, where floating rate bonds are frequently sold and short term interest rates are determined, simply ceased to function. As Selway (2008) put it:

The auction-rate market came unhinged as losses tied to subprime mortgage bonds and related securities threatened bond insurers' AAA ratings, causing investors to shun the securities they backed. These bond insurance companies guaranteed about half of the \$2.6 trillion of outstanding state and local government debt.

With the collapse of municipal bond insurance, yet another trust device bit the dust.

Final Thoughts

The great financial collapse of 2007–2009 is a watershed in the development and destruction of market-based morality. The seeds for the collapse were planted when politicians pressured markets through politics and subsidies to make housing affordable, even for individuals who could not afford housing. But government programs that mandated expansion of housing opportunity were not enough to generate a later subprime crisis. Money had to enter the picture. The Federal Reserve accommodated the politically engineered increase in demand for housing by expanding the availability of credit. Interest rates dropped and remained low for several years. But while necessary, expanded credit was not sufficient alone to generate a global market for mortgage-backed bonds that would keep funds flowing to subprime borrowers. For that to happen, trust instruments had to be invented to extend the market.

Markets expanded with trust, and they collapsed when the instruments of trust failed to function. In the process, government, the lender of last resort, became the lender and owner of last resort. Market-based morality has taken a backseat to political expediency. Wealth creation has moved to the back row. Once again, a crisis has generated a government response that leads predictably to permanent expansion of regulation. Regulation will predictably take the place of market-driven trust devices.

References

Aghion, Phillippe, Yann Algan, Pierre Cahuc, and Andrei Schleifer. 2009. Regulation and Distrust. <http://ssrn.com>, abstract=1324264, January 7.

Barker, Thorold. 2009. Wall Street's trust Busters. *The Wall Street Journal*, February 23, C10.

Braun, Martin Z. 2008. Bond Insurance Turns Toxic for Munis as Rates Soar. Bloomberg.com, February 11.

Buchanan, James M. 1994. *Ethics and Economic Progress*. Norman, OK: University of Oklahoma Press.

Credit Default Swamp. 2009. *The Wall Street Journal*. January 3-4, A8.

Crittenden, Michael R. 2008. SEC Advises No Break in 'Mark' Rules. *The Wall Street Journal*, December 31, C6.

Fleischacker, Samuel. 2004. Economics and the Ordinary Person: Re-reading Adam Smith. October 4. Library of Economics and Liberty. <http://www.econlib.org/library/Columns/y2004/FleischackerSmith.html>. Visited December 25, 2008.

Fukuyama, Francis. 1995. *Trust*. New York: The Free Press.

Goodman, Peter S. and Gretchen Morgenson. 2008. Saying Yes, WaMu Built Empire on Shaky Loans, *The New York Times*, December 27, A1, 3.

Hall, Robert E. and Susan E. Woodward. 2008. The Financial Crisis and its Causes: What is Happening and What the Government Should Do. November 29. <http://www.http://sites.google.com/site/woodwardhall>. Visited December 11, 2008.

Hamowy, Ronald, ed. 2008. *The Encyclopedia of Libertarianism*. Los Angeles: Sage Publications, Inc.

Hoening, Thomas M. 2007. Maintaining Stability in a Changing Financial System: Some Lessons Relearned Again. High Level Meeting on Regulatory Capital and Issues in Maintaining Stability, Sydney, Australia, November 6.

HUD Press Release. 2003. BUSH SIGNS AMERICAN DREAM DOWNPAYMENT ACT \$200 million program will help tens of thousands of low-income families to become homeowners. Washington: HUD, December 16.

Kashyap, Anil K., Rajan, Raghuram G., Jeremy C. Stein. 2008. Rethinking Capital Regulation. Federal Reserve Bank of Kansas City Symposium on Maintaining Stability in a Changing Financial System, Jackson Hole, Wyoming, August 21-23, 2008.

Keys, Benjamin J., Amit Seru, Vikrant Vig, Tanmoy Mukherjee, 2008. Did Securitization Lead to Lax Screening: Evidence from the Subprime Loans, <http://ssrn.com/abstract=1093137>, December.

Labaton, Stephen. Obama Plans Fast Action to Tighten Financial Rules. 2009. *The New York Times*. January 25, A1, A22.

Leonnig, Caroline. 2008. How HUD Mortgage Policy Fed the Crisis. *The Washington Post*. June 10, 01.

Lindsey, Brink. 2002. Terrorism & Trust. Washington: Cato Institute, November 20. http://www.cato.org/pub_display.php?pub_id=4142. Visited December 25, 2008.

McDill, Kathleen M.I and Kevin P. Sheehan. 2006. Sources of Historical Banking Panics: A Markov Switching Approach. Working Paper 2006-01. Washington: FDIC, 2006.

Meiners, Roger E. and Bruce Yandle. 1991. Deposit Insurance, Liability and the U.S. Savings and Loan Debacle, *Insurance Law Journal*, 4(Dec.):181-199.

Morgenson, Gretchen. 2008. Debt Watchdogs, Caught Napping, *The New York Times*, December 7, A1, 32.

Pressure gauge. 2008. *The Economist*, August 23, 61.

Richard, Christine and Darrell Preston. 2006. The Insurance Charade. Bloomberg.com. November 17. www.bloomberg.com.

Ridley, Matt. 1996. *The Origins of Virtue*. New York: Penguin Books.

Rosenkranz, Robert. 2009. Let's Write the Rating Agencies out of our Law. *The Wall Street Journal*, January 2.
<http://sec.online.wsj.com/article/SB123086073738348053.html> Visited January 3, 2009.

Ryan, Stephen G. 2008. Accounting in and for the Subprime Crisis. New York: Stern School of Business, New York University, March.

Selway, William. 2008. California Dumps Auction Debt; States Push on Ratings. *Bloomberg.com*, March 10.

Shiller, Robert J. 2009. Animal Spirits Depend on Trust. *The Wall Street Journal*, January 27, A15.

Smith, Adam. 1904. *An Inquiry into the Nature and Causes of the Wealth of Nations*. Edwin Cannan, ed. Library of Economics and Liberty.
<http://www.econlib.org/library/Smith/smWN1.html> Visited December 29, 2008.

Steidtmann, Carol. 2008. The Sub Prime Problem: Where Are We Headed? *Economic & Market Review*. Deloitte & Touche Investment Advisors.

The Subprime Lending Bias. 2008. *Investor's Business Daily*, Posted 12/19/2008.
<http://www.investors.com/editorial/editorialcontent.asp?secid=1501&status=article&id=314582096700459>, Visited December 21, 2008.

Timiraos, Nick. 2008. Builders Make Plea for Federal Aid. *The Wall Street Journal*, November 24, A3.

Trakman, Leon E. 1983. *The Law Merchant: The Evolution of Commercial Law*. Littleton, Colorado: Fred B. Rothman & Co.

Wallin, Peter. 2008. Cause and Effect: Government Policies and the Financial Crisis. Washington: American Enterprise Institute, November.

Warren, Louis. 2008. The Homestead Act, with Notes on Faith in Private Property and Private Money, May 20. <http://edgeofthewest.wordpress.com/2008/05/20/the-homestead-act-with-notes-on-faith-in-private-property-and-private-money/> Visited December 30, 2008.

Wei, Lingling and Jon Hilsenrath. 2008. Developers Ask U.S. For Bailout As Massive Debt Looms, *The Wall Street Journal*, December 22, A1, A12.

Weiss, Martin D. 2007. Next Wave of the Crisis: Great Rating Debacle. *Money and Markets*, November 12. <http://www.moneyandmarkets.com/next-phase-of-the-crisis-the-great-ratings-debacle-9241>. Visited January 25, 2009.

Weiss, Martin D. 2008. U.S. Credit Markets Collapsing. *Money and Markets*, February 18. <http://www.moneyandmarkets.com/us-credit-markets-collapsing-9505>. Visited January 25, 2009.

Wheelock, David. C. 2008. Government Response to Mortgage Distress: Lessons from the Great Depression. Working Paper 2008-038A. St. Louis: St. Louis Federal Reserve Bank, October.

When fortune frowned. 2008. *The Economist*. October 11-17, 3-4, 6.

White House Philosophy Stoked Mortgage Bonfire. 2008. *The New York Times*, December 21, A1, 30.

White, Lawrence H. 2008. How Did We Get into This Financial Mess. Cato Briefing Paper No. 110. Washington: Cato Institute, November 2008.