

A PERFECT STORM IN THE MAKING OF AN ECONOMIC CRISIS

Vincent Amanor-Boadu, PhD

Department of Agricultural Economics
Kansas State University
Manhattan, KS 66506

Summary

Well-intentioned but flawed public policy decisions that linked economic development to home ownership and used legislation and mandates to enforce it created unrealistic expectations about prosperity that became entrenched due to chronically low interest rates. Faced with thin margins and lending mandates, the financial industry developed products along its supply chain that violated basic risk management rules, suggesting an irrational confidence in its ability to control market outcomes. In the end, these seemingly unrelated activities conspired to create a perfect storm that triggered global economic crisis. Will government bailout work?

A Perfect Storm in the Making of an Economic Crisis

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When Mr. Henry Paulson, U.S. Secretary of the Treasury appealed to the American people and Congress on September 19, 2008 for help in addressing the unfolding financial crisis, he explained it as “illiquid mortgage assets” that were blocking the system, “clogging our financial markets.” His appeal to Congress was for advancing \$700 billion to the Treasury to unclog the financial system by purchasing the illiquid assets that were causing the problem. The expectation was that should the government take these toxic assets from the private sector, the economy will revert back to growing steadily.

Mr. Paulsen’s presentation seemed to suggest that what really caused the current financial meltdown were the illiquid mortgage assets. But given their relatively small size, it seemed like they were mere symptoms of the problem. This paper argues that a series of well-intentioned but flawed policy decisions, irrational confidence of finance industry personnel in their own brilliance and cheap credit that influenced unrealistic expectations about prosperity over nearly three decades created the environment for the economic crisis now at play. The paper concludes with a look at the government’s bailout plan and speculates on the factors that could contribute to its success.

Cheap Credit and Unrealistic Expectations about Prosperity

The majority of Americans—from individual citizens to governments—have been living beyond their means for decades. The national debt, for example, has been increasing steadily at about 7.9 percent per year between 1980 and 2008, growing from about \$909 billion to more than \$10 trillion, according to the Bureau of Economic Analysis. In contrast, gross domestic product (GDP) grew at about 5.7 percent annually over the same period. The federal

¹ Dr. Vincent Amanor-Boadu is an assistant professor in the Department of Agricultural Economics, Kansas State University. He may be reached by email at vincent@ksu.edu or by telephone at 785.532-3520.

government's share of the national debt is projected by the White House Budget Office to reach \$4.22 trillion by the end of 2008, up from about \$197 billion in 1980. That is equivalent to 11.6 percent per annum growth rate over the period. This rapid growth in the federal government's share of the national debt underscores the unresolved discussions about the sustainability of Social Security, Medicare and other entitlement programs.

Bureau of Public Debt (<http://www.publicdebt.treas.gov/>) data show that the share of the national debt held by foreigners has been increasing, engendering conversations about its potential effects on the nation's economic security. At the end of August 2008, total debt held by foreigners amounted to about \$2.74 trillion, or about 27.4 percent of national debt held by the public. Of this, Japan and China held 21 percent and 20 percent, respectively.

Bureau of Census data show that state and local government debt also increased, rising from \$1.28 trillion in 1997-98 to \$2.2 trillion in 2005-06. According to ThomsonReuters, total municipal borrowing more than doubled between 2000 and 2007, from \$195 billion to \$425 billion. This debt, raised typically through bond issues, is usually used for public construction projects—such as building and/or repairing roads and highways, parks, emergency service equipment, bridges and schools, as well as water and sewerage systems.

Consumer debt has also been increasing rapidly since the 1980s. Data from the Federal Reserve Board (www.federalreserve.gov) show that total U.S. consumer debt in January of 1980 was about \$350.5 billion, and it had ballooned to over \$2.54 trillion by August 2008. This was equivalent to an average annual growth rate of about 7.32 percent, just a little slower than the growth rate of the national debt. Contrarily, consumer savings have been decreasing rapidly over the same period such that, by the end of 2007, it was only 0.4 percent of personal disposable income, or 40 cents for every \$100 of disposable income. This contrasts with a savings rate of 11.2 percent 25 years earlier in 1982.

Increasing debt at all decision levels in the country may be attributed to the availability of cheap credit driven by the low interest rate policy of the Federal Reserve, and unrealistic expectations about prosperity. The prime interest rate, for example, has been trending downwards since the early 1990s, dropping from about 10 percent in January 1990 to under 5 percent in October 2008. Writing on the subject of low interest rates in the *Washington Post* on March 2, 2005, Robert Samuelson quoted Mr. Alan Greenspan, the then chair of the Federal Reserve, as saying the falling rates were a “conundrum.” But fears about a weakening economy

have spurred rate cuts for the past few years, making credit cheaper in virtually all segments of the economy. The primary effect of this cheap credit environment seems to be the replacement of the *American Dream* by an American reality of entitlement—entitlement to prosperity, that is. The general perspective around the country may be summed as follows: If the Joneses have it, then I must have it too, even if I cannot afford it.

Low interest rates encouraged consumption and discouraged savings, and evaporating savings put earnings pressure on local financial institutions, leading to the development of innovative debt instruments that fed consumers' desire to feel prosperous even if it meant doing it with other people's money. Consider, for example, the strategy credit card companies used to aggressively expand their businesses, offering consumers deferred payments on outstanding balances while encouraging them to transfer existing balances from other creditors using enticing interest rates. Consumers took advantage of these offers to increase their credit worthiness, setting them up to qualify for higher credit offerings. Additionally, companies like General Electric (GE) offered cheap credit to their customers—both business and consumer—to finance purchases of their products. The availability of credit created a euphoria of prosperity and a seeming end to Milton Friedman's view that there is no free lunch in a free economy.

The consumption-driven economic growth resulting from the cheap credit and unrealistic prosperity expectation was, for all intents and purposes, unsustainable. This is because wealth comes from investments and investments come from savings. With savings close to zero, the nation was not really creating any new wealth domestically but consuming its accumulated wealth, including home equity, and borrowing to make up the difference. This addictive consumption is reflected in the rising trade deficits resulting from unabated growth in imports even as the value of the dollar declined.² Bureau of Economic Analysis data confirm the borrowing of foreign capital to finance economic activities in the U.S. The net international investment in the U.S. (measured as the difference between American investments abroad and foreigners' investments in the U.S.) declined from a surplus of \$365.5 billion in 1980 to a deficit of \$2.5 trillion in 2007.

² For example, trade deficit averaged about \$84.6 billion between the first quarters of 1991 and 2001, and increased to an average of about \$202 billion between the second quarters of 2007 and 2008, an increase of about 138 percent in a decade.

Well-Intentioned but Flawed Policy

Home ownership is accepted, supported and promoted by public policy makers as an indication of social progress in the U.S. The driving rationale is that people would buy a house when they are young, pay off their mortgage during their working life and live off their pension and social security in retirement. To support the realization of this expectation, the federal government established two government sponsored enterprises (GSEs)—Fannie Mae and Freddie Mac—and charged them with purchasing mortgages from primary lenders to ensure liquidity in the primary mortgage market. To fund their operations, Freddie Mac and Fannie Mae pooled the mortgages they purchased and packaged them for sale as mortgage-backed securities to investors on the open market. As of September 2008, the two GSEs held or guaranteed about half of the \$12 trillion U.S. mortgage market.

The business of making mortgage loans involves securing good customers. Securing good customers requires efficient due diligence on the riskiness and good judgment on the ability to service these loans over the long run. However, the public policy to encourage home ownership and the arrangement that the GSEs would automatically purchase conforming mortgages from lenders created and nurtured conditions for moral hazard in the primary mortgage market. Under these arrangements, the lenders had no incentive to invest resources in securing *good customers* because they did not have to bear the risk of default since they have transferred that risk to the mortgage backed securities firms such as Fannie Mae and Freddie Mac. The GSEs were required by their mission regulator, U.S. Department of Housing and Urban Development, to achieve certain performance levels in their procurement of mortgage loans, and this fueled the entrenchment of the moral hazard that defined behavior in the home mortgage market in the early 2000.

Consider, for example, the operational goals the U.S. Department of Urban Development (HUD) established for Freddie and Fannie for the 2001-2003 period: at least 50 percent of homes financed by Freddie and Fannie should be for families with incomes no greater than the median incomes in their communities; at least 20 percent should be for families with very low incomes; and at least 31 percent should be in underserved areas. To achieve these goals, the GSEs needed the primary lenders to secure customers in lower income and underserved areas. Because most of these customers did not qualify for the prime lending market, the use of subprime lending tools became useful as the push to achieve the policy targets was enforced. Once again, well-

intentioned policies created an environment for poor business decisions. However, the policies and the strategies seemed to be working because home sales increased rapidly between 2000 and 2006 with almost 1.3 million new single-family houses being sold in 2005, compared with an average of 609,000 per year during 1990–1995.

The availability of subprime loans supported the unrealistic expectation about prosperity that was already becoming entrenched. However, critics of subprime lending identify two laws—the Depository Institutions Deregulation and Monetary Control Act (DIDMCA) (1980) and the Alternative Mortgage Transaction Parity Act (AMTPA) (1982)—which made it possible for lenders to originate mortgages with prices and features previously prohibited by individual states. For example, by federalizing lending, it became possible for lenders to originate loans with higher interest rates and a broader range of loan terms than previously allowed under various state lending laws. AMTPA, for example, allowed lenders to originate mortgages with features such as variable interest rates, adjustable rates, and balloon payments. A 2002 study by Kenneth Temkin and his colleagues found that subprime borrowers are more likely to be low income, ethnic minorities and less financially knowledgeable and sophisticated.

The profit potential of subprime lending attracted many speculators to the housing industry and created a sort of euphoric feeding frenzy among mortgage brokers and mortgage companies who were the primary originators of these loans. All the stakeholders along the home mortgage supply chain—from consumers and mortgage brokers to home builders and lending institutions—benefitted from the rapid growth and solid expectations about the housing industry. For example, some of the nation’s largest homebuilders—D.R. Horton, Pulte, and Lennar, among others—saw their share prices and revenues increase significantly during the subprime mortgage heydays. The stock price of D.R. Horton, for example, went from \$3 in early 1997 to an all-time high of \$42.82 on July 20, 2005, while Pulte’s revenues grew from \$2.33 billion in 1996 to \$14.69 billion in 2005. Municipalities benefitted from this growth from increased revenues from building permits and the banks increased their revenues from origination fees. Subprime mortgage borrowers also benefitted because they were able to purchase their own homes. As such, it was hailed as facilitating the *American Dream*, but it will soon be reviled as creating the “American nightmare.” Despite this, it is important to recognize that the growth in subprime mortgage lending was fueled by well-intentioned changes in legislation coupled with

lax and irresponsible due diligence in the primary lending market that resulted from the embedded moral hazard traceable to the public policies that were implemented.

Mortgage Backed Securities and Credit Default Swaps

The mortgage market, including subprime mortgages, could grow only if the primary mortgage markets had high liquidity. Mortgage backed securities are the traditional tools for maintaining this high liquidity in primary mortgage markets. The securities are fungible, negotiable instruments representing financial value backed by mortgages. Companies like Freddie and Fannie use mortgage backed securities to fund their operations through a mortgage securitization process.

The mortgage securitization process begins with the mortgage broker, who helps the lending institution and the borrower to find each other and gets paid for that service in fees at the closing of the loan. The lending institution provides the loan proceeds or the money to the borrower in exchange for the loan owed, which is sold then to a mortgage backed security issuer, such as Freddie Mac or Fannie Mae.³ Using the services of trustees, underwriters, rating agencies and credit enhancement providers, the issuer—Freddie, Fannie or their competitors—securitizes the mortgage by transforming it into a traded asset that is sold to investors. The cash received from investors goes to pay the lending institution, which provides the necessary liquidity in the primary market. The issuer, with the help of a servicer (usually a local bank and often the institution that made the primary loan) collects monthly payments from borrowers and uses them to pay investors. The Associated Press reports that by March 2007, the mortgage backed securities market had grown to \$1.3 trillion from about \$10 billion in 1997.

Mortgage-backed securities face four principal sources of risk: interest rate; credit default; prepayment; and home prices. These risks are all interrelated and often correlated. For example, falling interest rates increase the likelihood that homeowners will refinance their loans at lower rates, thereby paying the loans off before the appointed time, and increasing the risk of prepayment. This reduces the income flow to the mortgage backed security and the issuer has to

³ These GSEs purchase only loans that are conforming to their guidelines, which are established by the Office of Federal Housing Enterprise Oversight (OFHEO). The conforming criteria include debt-to-income ratio limits, documentation requirements and maximum loan amount. The lending institution may hold some of its loans in its own portfolio, and these tend to be the ones that it has greater confidence in the borrowers' ability to pay. Thus, in addition to the moral hazard discussed earlier, the arrangements also facilitate adverse selection of loans going for securitization.

make up the difference. On the other hand, when interest rates rise and homeowners have adjustable or variable rates, their monthly payments increase, increasing the risk of defaulting. This also increases the issuer's obligation risks. Rising home prices—implying excess demand for homes—increases the equity in the homes underlying the mortgage backed securities and reduces the issuer's exposure even in case of default. On the other hand, decreasing home prices with increasing interest rate increase default risks, and hence the issuer's risks.

Data from the Case-Shiller home price index show that in a dozen states, including the District of Columbia and Hawaii, and seven metropolitan areas, home prices increased in excess of 80 percent between 1998 and 2006.⁴ These trends influenced the mortgage lending and borrowing decisions from the late 1990s through the middle of the 2000s. However, the price response led to excess supply and by mid 2005, the housing market was beginning to soften rapidly. Declining home prices coincided with the end of the moratorium on interest-only mortgages and the upward adjustment of adjustable rate mortgages, leading to payment shock and negative amortization and a spike in mortgage delinquency rates.⁵ This was especially drastic in the dozen or so states and seven major metropolitan areas that saw the greatest price inflations in their housing markets—the locations that also saw the greatest application of these *innovative* lending strategies.⁶

To put the foregoing in perspective, the default rate on single-family home mortgages rose rapidly from an average of about 1.4 percent in the first quarter of 2005 to 2.2 percent in second quarter of 2007 and reached 4.1 percent a year later by the end of the second quarter of 2008. By the end of the third quarter of 2008, the delinquency rate on single-family home mortgages was 5.08 percent, and had exceeded that on consumer credit card for the first time since 1991. The problem these rising delinquencies posed was not found in the home mortgage

⁴ The seven metropolitan areas experiencing the most inflation in their real estate prices were Tampa, Miami, San Diego, Los Angeles, Las Vegas, Phoenix, and Washington, D.C. The dozen states with 80 percent or more home price inflation included California, Nevada, Arizona, Florida, Maryland, New Jersey, Delaware, Rhode Island, New Hampshire, Massachusetts, Hawaii and D.C.

⁵ Payment shock often results with some of these lending terms. For example, borrowers using interest-only (I-O) mortgages may see mortgage payments double or triple after the interest-only period has expired. Similarly, payment option ARM usually begins with very low (teaser) interest rates and adjusts to the traditional rate after two years or however long the negotiated time is. They can result in negative amortization. That is, when a borrower's payments are insufficient to cover interest and the difference is added to the principal, causing the amount owned to exceed the original loan.

⁶ It is important to note that the majority of the Midwestern states experienced less than 20 percent home price inflation during 1998 to 2006 period and have consequently suffered less value retraction because home prices started falling.

market itself—after all about 95 percent of homeowners were faithfully making their monthly payments—but in the mortgage backed security market. The problem was the expectation that delinquency rates were going to continue to increase as the fragility of the subprime borrowers became increasingly clear, creating concerns about the availability of cash inflow to support the mortgage backed securities. This led to these assets becoming “toxic”—i.e., investors began abandoning them—and in the process, creating a liquidity problem in the mortgage backed securities market.

Long before the declining home values and mortgage delinquencies became national news, many issuers of mortgage backed securities had purchased credit default swaps in attempts to protect themselves from the default risk that finally started unfolding in the first quarter of 2005. Credit default swaps (CDS) are privately negotiated, over-the-counter derivative contracts in which a buyer (counterparty) makes a series of payments to a seller in exchange for the right to receive a payoff if a credit instrument goes into default. Because their value depends on the value of their underlying financial instruments, CDS may be used to hedge existing exposures to credit risk or speculate on changes in credit default spreads.⁷ Although credit default swaps behave like insurance, they are unlike insurance because (1) they are derivatives and hence unregulated; and (2) they could be used to speculate on outcomes by third parties without any ownership positions in the underlying securities.

According to the British Bankers Association’s 2006 credit derivatives report, credit default swaps are the most widely-traded credit derivative product. While no one really knows the volume of CDS trade, the Bank for International Settlements estimated the notional amount on outstanding CDS worldwide in June 2007 at \$42.6 trillion, up more than 47 percent from its December 2006 notional value of \$28.9 trillion. By the end of 2007, the International Swaps and Derivatives Association (ISDA) estimated the worldwide CDS value at between \$45 trillion and \$62.2 trillion and by mid-year 2008, its estimate of the notional CDS amount outstanding was \$54.6 trillion. The U.S. share of this market, according to the U.S. Office of the Comptroller of the Currency, was \$16.4 trillion at the end of March 2008, larger than the country’s 2007 GDP.

⁷ Credit Default Swaps was invented by a team at JP Morgan Chase in 1997. Its growth as an unregulated risk management and speculation instrument may be attributed to the Gramm-Leach-Bliley Act (1999) which allowed commercial, merchant and investment banks to engage in complementary activities that included underwriting and selling insurance and securities.

Most of the issuers of mortgage backed securities purchased credit default swaps to protect themselves from potential risks of default by mortgage holders. But the sellers of these contracts—American International Group (AIG), Lehman Brothers, Bear Stearns, and a host of other investment banks—also sold similar contracts to others who were only speculating on the potential risks of default by the mortgage holders. In other words, the sellers leveraged the underlying value of the contract numerous times by selling it to speculators.

This is how CDS transactions operate. Assume Company A is the issuer of \$10 billion worth of mortgage backed securities and Company B is a seller of credit default swaps. Company A may purchase a contract from Company B, and these contracts are priced as a percentage of the asset value for the duration of the contract. Thus, Company A's contract may be for five years at 2 percent per annum. In exchange, Company B agrees to indemnify Company A should its debtors default on their mortgage payments. Assume that nine other companies decide to speculate on Company A's debtors defaulting and contracts from Company B under similar terms as Company A. This means that if there is no default within the contract period, Company B receives revenues of \$10 billion from the ten companies and the companies lose \$1 billion each, except Company A who principally paid for the protection of its assets from the risk of default. However, if a default occurs within the contract period, then Company B has to come up with \$100 billion to pay Company A and the other nine counterparties even though the equity underlying the contract is only \$10 billion. Leveraging the assets in this manner significantly increases Company B's risk exposure since a default results in having to pay all the counterparties without having the asset base to support the liability.⁸ This leveraging explains the high notional values of the credit default swaps market.

Table 1 shows the leverage ratio of some of the largest U.S. commercial and investment banks that have received significant press during the unfolding financial crisis. The table shows that all the banks with leverage ratios in excess of 30X have been purchased, gone out of business or declared bankruptcy.⁹ For example, Bear Stearns, one of the largest investment

⁸ Leveraging is the degree to which an investor or business is utilizing borrowed money to achieve investment or business objectives. Highly leveraged companies risk bankruptcy if they are unable to fulfill their debt obligations and they may be unable to find new lenders in the future. Leverage ratio is the company's total assets divided by its net equity.

⁹ The situation with bank leverage in Europe seems much worse than in the U.S., with Deutsche Bank spotting leverage ratio in excess of 50 percent as of its last annual financial report in 2007. With European and Asian banks participating in the mortgage backed securities credit default swap markets in the United States, it is not surprising that the current financial crisis is a global problem.

banks in the world until its demise in March 2008, had a leverage ratio of 33.5X at the end of 2007, the highest of the largest banks. The company's financial derivatives contracts had a notional value of about \$13.4 trillion as of November 30, 2007. It was also one of the first companies to establish a hedge fund based on the subprime mortgage backed securities market in 1997. Merrill Lynch, another highly leveraged company, was purchased by Bank of America, the least leveraged of the large banks. These observations support a 2000 Federal Reserve of New York's study that indicated that leverage ratios are a good predictor of bank failure.¹⁰

Table 1: Sample Leverage for Selected U.S. Banks (Year-Ending 2007)

Bank	Assets	Equity	Leverage
Bank of America	\$1,715B	\$146.8B	11.7X
Wells Fargo	\$575B	\$47.6B	12.0X
JPMorgan	\$1,562B	\$123.2B	12.7X
Citigroup	\$2,187B	\$113.6B	19.2X
Fannie Mae	\$882.5B	\$44.0B	20.1X
Goldman Sachs	\$1,120B	\$42.8B	26.2X
Freddie Mac	\$794.4B	\$26.7B	29.8X
Lehman Brothers	\$691.1B	\$22.5B	30.7X
Merrill Lynch	\$1,020B	\$31.9B	31.9X
Bear Stearns	\$395B	\$11.1B	33.5X

Sources: Company financial reports (<http://finance.yahoo.com>).

American Insurance Group (AIG) is a special case in the financial crisis that is still unfolding. First, it is not a commercial or investment bank, but an insurance company. Its leverage ratio was only 11X, much lower than the banks that got into trouble. However, compared to its competitors in the insurance industry, its leverage ratio was out of line: Montpelier Reinsurance and Berkshire Hathaway had leverage ratios of 2X and Chubb, White Mountains Insurance and Travelers' had 4X. Despite being an insurance company, AIG participated aggressively in the mortgage backed CDS market through its London-based subsidiary, AIG Financial Products. All told, the company underwrote more than \$500 billion in super-senior CDS, including about \$78 billion in collateralized debt obligations (CDOs). Like the banks, when the mortgage defaults started, AIG's counterparties started demanding payments

¹⁰ Although Fannie's leverage ratio is only about 20X and Freddie's almost 30X, the Federal Housing Finance Agency put them into conservatorship on September 7, 2008 soon after Moody's reduced their preferred stock credit rating from A1 to Baa3, the lowest investment grade rating, on August 22, 2008. The downgrade increased their risk of failure because it meant difficulty raising capital or selling their mortgage backed securities. This defensive move was made to avoid potentially adverse effects on mortgage backed securities since they held or guaranteed about half of all mortgages in the country.

and the company found itself unable to meet its obligations from its assets. It teetered on the verge of collapse until the Federal Government stepped in to rescue it.¹¹ Many commentators argue that AIG was saved a couple of days after Lehman Brothers was turned down by the Federal Government for a similar rescue because it was “too big” and that allowing it to fail would have caused a domino effect in the demise of many of the commercial and investment banks that were holding CDS contracts sold by AIG.¹²

A Perfect Storm for an Economic Crisis

The foregoing events had set up the perfect storm for the making of an economic crisis. First, policy makers, in their desire to create a prosperous society, created an expectation that economic progress could be measured by home ownership and they worked hard to make sure that the number of Americans, regardless of their economic conditions, living in their own homes was increasing.¹³ They did this through legislation, mandates and monetary policies that created cheap credit. As economic growth slowed, lenders had to become ingenious in their lending practices, leading to the aggressive application of subprime mortgages and the use of such devices as adjustable rate mortgages. The reduction in credit standards that accompanied these practices would ordinarily trigger concerns about riskiness, however, because the mortgage lenders sold their subprime loans to investment banks that packaged and repackaged them into multi-tiered collateralized debt obligations, these normal concerns were overlooked or ignored. The dual problem of moral hazard and adverse selection in the selection of customers and loan sale into the secondary market was established.

To protect themselves from potential default risks, issuers of mortgage backed securities entered into credit default swaps contracts with other banks, financing these obligations with leveraged assets. When the home values started plunging and mortgage defaults started increasing, the parties to the credit default swaps started making claims which had swollen

¹¹ State insurance commissioners noted that AIG’s consumer insurance subsidiaries were in good shape, and there was no risk to policyholders even if the parent company had sunk.

¹² When companies leverage themselves beyond their capability to meet their obligations, and they do this against the same or highly correlated assets (as in the mortgage backed securities CDS market), a small increase in the default rate (as was seen in the home mortgage market) creates a contagion effect that can become catastrophic for the party selling the CDS as well as the counterparties because of their mutual liquidity challenges.

¹³ Joseph Mason and Joshua Rosner estimate that by 2005, nearly 40 percent of all homes purchased did not serve as the primary residence of the buyers but as investments or as second homes.

tremendously because of the leverage activities of the banks. As investors and lenders became aware of the financial challenges of the participants in CDS and other hedge funds, they stopped buying their securities, and as the banks became conscious of the uncertainty of their own exposures, they stopped lending to each other. This created the liquidity freeze that Mr. Paulsen fingered as the reason for his bailout plan. Thus, a series of well-intentioned policies, irrational expectations about prosperity and financial market agents' overconfidence in their creativity in manipulating the market acted in concert to unfurl this economic crisis.¹⁴

The Success of the Bailout Plan

The credit freeze on Wall Street started spilling over to Main Street with the increasing nervousness by banks in financing everything—from new homes to business lines of credit. The potential effect of this on the whole economy caused government—from the U.S. through Europe to Japan—to intervene in the markets with various policies that have not been seen for many decades. For example, the UK nationalized failing banks to prevent runs on those banks whereas Germany and Japan provided loans to struggling banks. In the U.S., the government created a 24-month credit-liquidity facility from which one company, AIG, could draw up to \$85 billion. The loan is collateralized by AIG's assets at a rate of 8.5 percentage points over the three-month London Interbank Offered Rate (LIBOR). In exchange for this credit facility, the U.S. government received warrants for a 79.9 percent equity stake in AIG and the right to suspend dividend payment to AIG common and preferred shareholders.¹⁵ Similarly, the Federal Housing Finance Agency's conservatorship of Freddie and Fannie caused the issuance of new senior preferred stock and warrants for common stock amounting to 79.9 percent of each of them to the U.S. Treasury. Additionally, the U.S. Department of the Treasury received legal authority to establish and manage the \$700 billion Troubled Assets Relief Program (TARP) under its newly created Office of Financial Stability on October 3, 2008 from the U.S. Congress. Although the Treasury had initially argued that it will use most of the money to purchase

¹⁴ The stock markets were brought into the unfolding crisis because most of the investment banks that were short on cash started selling assets—principally stock holdings.

¹⁵ At the time of this writing, the total cash infusion made by the federal government in AIG is in excess of \$150 billion. This underlies the uncertainty of the exposure of the parties in the current financial crisis. For example, as recently as November 23, 2008, the government rescued Citibank, providing aid of \$25 billion, and investing another \$25 billion in the corporation together with guaranteeing its risky assets valued at \$306 billion in equities and loans.

mortgage-backed securities to unclog the mortgage liquidity markets, it has since turned its attention to purchase credit card, automobile and student loans.

Daniel Gross, writing on *Slate* (www.slate.com), argues that the government's bailout plan is structured like a hedge fund, because like a hedge fund, it uses borrowed money to bet on outcomes that are inherently risky. Therefore, the bailout plan's success depends on the accuracy of the performance assumptions about the underlying assets being purchased and insured. The expectation is that companies benefiting from the bailout will correct their twisted balance sheets and, it is hoped, buy back the government's equity positions and pay back the loans they have received. There is some optimism about this outcome. For example, veteran investor Warren Buffet, is quoted by Erik Holm on Bloomberg.com (www.bloomberg.com) as saying, "I think the Treasury will pay back the \$700 billion and make a considerable amount of money." There are also many who believe the plan is going to leave taxpayers holding the bag for terrible business decisions of private individuals.

The success of the bailout plan also depends on what happens in the rest of the economy as it hovers on the brink of a recession.¹⁶ For example, automobile sales are down and General Motors, Chrysler and Ford are closing plants.¹⁷ The final inability of Citibank to raise enough capital in the private markets to meet its liabilities caused the Federal Government to backstop about \$300 billion of its toxic assets with a convoluted loss-sharing arrangement that leaves Citibank at risk for a maximum of \$40 billion while receiving a \$20 billion equity injection. These terms are better than what Goldman Sachs got from Warren Buffet's investment. While the government argues a case-by-case approach to the problem, the variability in the solutions makes it difficult to assess the success potential of the bailout strategy being pursued.

We know that with increasing foreclosures, the trouble confronting credit card and automobile financing companies is going to escalate. For example, there are indications that GE Capital Services' positions in the CDS market may have exposed its parent, GE, to the financial market crisis.¹⁸ The problem was confirmed recently when GE sold \$3 billion of new equity in

¹⁶ The economy is deemed to be in a recession when it experiences two consecutive quarters of negative GDP growth. The first negative growth occurred in the second quarter of 2008. If the third quarter numbers come in negative, the economy will be officially in a recession.

¹⁷ They are currently negotiating with the government for loans and warning of dire consequences to their industry if such support does not materialize.

¹⁸ GE Financial contributed about 42 percent of GE's \$172 billion profits in 2007 and its inability to make its numbers in second quarter 2008 caused GE to miss its estimates. A recent *Fortune Magazine* cover story

special preferred shares to Warren Buffet at 10 percent and another \$2 billion in public sales of common stock after two consecutive years of buying back shares. The hanging question is this: If this is happening at GE, who else is vulnerable?

Should the risks spread and deepen beyond these known industries and should they cause a contagion effect because of the interconnections among the different segments of the economy, unemployment will increase and amplify the home mortgage default risk. Signs are already visible with layoff announcements: American Express announced it is laying off about 10 percent of its workforce at the end of October 2008, citing increasing default risk of some of its *wealthiest customers*; Hewlett Packard, Whirlpool, Yahoo, Goldman Sachs and a host of other companies in diverse industries have all recently announced between 5 to 10 percent layoffs.

Conclusion

This economic crisis has its roots in a number of inter-related events: well-intentioned but flawed government policies that focused economic growth on home ownership; cheap credit and an encroaching culture of unrealistic expectations about prosperity; and incentives that encouraged the development of products that increasingly exposed financial companies to untold risks. In the end, the moral hazard environment that emerged created the perfect situation for the players to take advantage of the situation with the risks being passed on to the rest of the economy. The uncertainty of the extent of the problem clouds our ability to truly know whether the government's bailout plan will succeed in stemming the financial crisis.

Those who support the bailout plan do not point to its gains but its averted losses. It is very difficult to be confident about these averted losses since they never happened. Those who are against the bailout point to its rising cost and its long-term effect on the nation's economic health. But regardless of what anyone feels about the bailout plan, it is important to revisit how the U.S. economy works and the effect these interventions will have on long-term business policy and strategy development.

In the end, this is what we know. Private individuals made decisions that they believed were good for them in a free market environment. Some of these decisions were risky and even irresponsible, but promised payouts that made them acceptable to those who made them. It

"Is GE Okay?" (October 27, 2008) suggests that GE Capital Services may have exposed GE to unprecedented risks.

could have been hoped that the *invisible hand* that caused these economic agents to make these risky deals would have been left to deal with their outcomes. Yet, that option eluded us when panicked policy makers and politicians chose to intervene to avoid a contagion. The only option left now, then, is to hope that the worse is over so that the bailout plan works. Should any major failures in the magnitude of AIG's or Citibank's, or worse, should many *small failures* that add up to a gigantic failure occur, we may be faced with a deeper crisis that cannot be contained via administrative fiat such as a bailout plan.

Further Reading

- Colvin, G. and K. Benner. "GE under Siege," *Fortune*, Oct. 27, 2008: 84-94.
- Estrella, A., S. Park and S. Peristiani. "Capital Ratios as Predictors of Bank Failure," *Economic Policy Review*, New York, NY: Federal Reserve Bank of New York, July 2000.
- Gross, D. "How the Bailout Is Like a Hedge Fund," *Slate* (www.slate.com), Oct. 1, 2008.
- Holt, E. "Buffett Buys Goldman Stake in 'Economic Pearl Harbor' (Update2)," *Bloomberg.com* http://www.bloomberg.com/apps/news?pid=20601087&sid=aRef_DUx6AcU&refer=worldwide, Sept. 24, 2008.
- Ist, H.C. "Ignorance of the Extent of U.S. Crisis May Fail Bailout," *Economic Times*, Oct. 15, 2008. (http://economictimes.indiatimes.com/News/International_Business/Ignorance_of_the_extent_of_US_crisis_may_fail_bailout/articleshow/3596658.cms).
- Mansfield, C.L. "The Road to Subprime 'HEL' was Paved with Good Congressional Intentions: Usury Deregulation and the Subprime Home Equity Market." *South Carolina Law Review*, Spring, 2000.
- Mason, J.R. and J. Rosner. "How Resilient are Mortgage Backed Securities to Collateralized Debt Obligation Market Disruption?" Paper presented at the Hudson Institute, Washington, D.C., February 15, 2007. : Hudson Institute
- Paulson, H. Transcript of the Troubled Assets Rescued Program Speech, Sept. 19, 2008. Available at <http://calculatedrisk.blogspot.com/2008/09/paulson-transcript-troubled-asset.html>.
- Smick, D.M. *The World is Curved: Hidden Dangers to the Global Economy*, New York, NY: Penguin Group (Portfolio Hardcover), 2008.
- Soros, G. *The New Paradigm for Financial Markets: The Credit Crisis of 2008 and What It Means*, New York, NY: Public Affairs, 2008.

Temkin, K., J.E.H. Johnson and D. Levy. *Subprime Markets, the Role of GSEs, and Risk-Based Pricing*. Washington, D.C.: U.S. Department of Housing and Urban Development, Office of Policy Development and Research, 2002.

Podcasts and Vodcasts

Kroft, S. 60 Minutes, *CBS Television*. Oct. 5, 2008.

<http://www.cbsnews.com/stories/2008/10/05/60minutes/main4502454.shtml>

Sorkin, A.R. The Weekend That Changed Wall Street, *New York Times*, September 15, 2008,

<http://video.nytimes.com/video/2008/09/15/business/1194817477150/the-weekend-that-changed-wall-street.html>.

This American Life. “Another Frightening Show about the Economy,” *Chicago Public Radio*.

http://audio.thisamericanlife.org/player/CPRadio_player.php?podcast=http://www.thisamericanlife.org/xmlfeeds/365.xml&proxyloc=http://audio.thisamericanlife.org/player/customproxy.php, October 3, 2008.