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CAUSES AND IMPLICATIONS OF THE U.S. HOUSING CRISIS

Nick Kenaga

I. INTRODUCTION

The British sometimes use the phrase "safe as houses" to describe a sure bet or an investment that carries little to no risk. Until a few years ago, this expression held true in America as well, where housing prices had done nothing but steadily rise since the Great Depression, and the general public considered a home to be one of the best investments possible. As the nation headed into a new Millennium, mortgage loans were easy to come by and housing prices soared while the economy appeared to thrive. The government strongly encouraged Americans to own their own home, and with banks devising creative methods to make money off mortgage loans, everyone appeared to win. However, the seemingly stable economy was belied by the underlying fundamentals, leading to a global financial shakeup that has changed the way we perceive the economy. This paper will trace the housing crisis to its roots and examine how it impacted the broader American economy, bringing us to our current financial situation of a depressed housing market and lingering unemployment.

II. BACKGROUND/CAUSES

The catalyst for the housing bust was the vast increase in subprime mortgage loans, which are loans given to borrowers with less than stellar credit history. Originally considered an anomaly within the real estate market, a multitude of factors caused the market for subprime mortgages to grow rapidly. The first innovation that helped spur the market's development was the vast technological improvement of the 1980s, which changed the mortgage underwriting process. Originally, the home mortgage lending business was the responsibility of community banks. Cut-and-dried formulas involving debt-to-income ratio, amount of savings in the bank, and size of the down payment were used to determine whether a mortgage applicant qualified for a loan. After the computer arrived on the business scene, statisticians could analyze the vast amounts of data on borrowers and lenders to come up with models for determining default risk for individual buyers, which became known as automated underwriting (AU). Now, rather than waiting a week to get a loan approved, prospective borrowers could find out whether they qualified in a matter of seconds. Furthermore, AU software reduced underwriting costs, on average, by $916 per loan (Engel, McCoy, 2011). The decrease in costs gave banks incentive to expand lending. It did not yet matter to them that the AU model was only meant to be applied to the prime mortgage market.

In addition to the technology that was revolutionizing the financial world, some developments were happening in the United States to set the stage for the rise and fall of the housing market. After the September 11 attacks and the burst of the dot-com bubble, the U.S. entered a recession. Alan Greenspan, then Chairman of the Federal Reserve Board, brought the target federal funds rate, the rate at which banks lend to each other on the overnight market, down to one percent in June 2003, a record low (New York Fed). Meanwhile, trade surpluses in China and other commodity-producing nations created an excess of dollars in foreign countries. Much of this excess returned to the U.S. as foreign investors bought Treasury bonds, which are considered to be one of the safest investments available (Zandi, 2009). This healthy demand helped to push down yields, delivering a low return on government bonds. Combined with abundance of cheap credit, investors' appetite for risk increased. Seeking to develop new types of marketable securities, financial firms increasingly began securitizing subprime mortgage loans, and the market took off. Sub or near-prime loans swelled from 9 percent of newly originated mortgage-backed securities (MBS) in 2001 to 40 percent in 2006 (DiMartino, Duca, 2007). As housing prices continued to rise while inflation was kept in check, Greenspan was lauded as a genius.

The idea to securitize mortgage loans was hardly new. A lender would bundle their mort-

gage loans, then repackage them as bonds that could be rated by credit rating agencies. Then the lender would sell the bonds—which were backed by the mortgages as collateral—to investors. Borrowers' mortgage payments became the investors' interest payments. This had been done since the 1970s by Fannie Mae and Freddie Mac, government-sponsored entities (GSEs) that later became private corporations. Turning mortgage loans into bonds solved the long-time problem that banks had of "lending long and borrowing short"; in other words, needing to finance long-term mortgage loans with short-term demand deposits. If interest rates rose, banks would need to pay clients a higher rate on deposits than borrowers were paying on their fixed-rate mortgage loans. If interest rates fell, borrowers would simply refinance at a lower rate. With securitization, banks were less subject to interest rate fluctuations because the mortgages were sold and passed off to other parties. Fannie and Freddie were successful in securitizing mortgages that were originated by the lenders, but eventually, investment banks sought to become involved in the underwriting process as well. By then, nearly everyone who qualified for a mortgage already had one, so the banks began securitizing subprime loans, thus linking Wall Street with Main Street. Some of them even began to originate their own loans, and by 2006, up to 80 percent of all subprime loans were being securitized (Engel, McCoy, 2011). The financial intermediaries who securitized the loans often repackaged them into collateralized debt obligations (CDOs), which separated mortgages into separate "tranches" that allowed investors different rates of risk and return, from AAA down to junk status.

At the peak of the housing market in 2006-07, the CDOs were immensely popular, and investment banks issued over $200 billion of risky MBS and made huge profits. Investors holding the safest tranches of CDOs could have their securities guaranteed by a company like insurance giant AIG, which calculated a 0.15 percent risk of loss and insured massive quantities of CDOs by selling what were known as credit default swaps (CDS) (Engel, McCoy, 2011). Even after paying an insurance fee, CDO investors (mostly banks) still got a return that easily beat that of Treasury bonds on an investment that was thought to be equally safe. Financial institutions that packaged the loans reaped huge service fees that were unrelated to the performance of the loans, so they cared little about how risky they were. This also illustrates the rise of the "shadow banking" industry, which is the blending of commercial and investment banking (Ghosh, 2011). By allowing commercial banks to participate in underwriting and issuing of securities, they could engage in risky activities with the funds of their depositors because they knew that they would be backed by the FDIC, the government's deposit insurance program. The gross lack of checks and balances in this model began to be exposed in 2007 as housing prices started to go down.

III. MARKET COLLAPSE

As interest rates began to rise, the housing market finally began to cool off. When home prices declined, many homeowners who had put little to no money down, now had negative equity in their homes (owing more money on their mortgage than what their homes were worth) so they had incentive to walk away from their homes. In addition to this, a growing number of subprime borrowers could no longer afford their mortgage payments, and default rates skyrocketed. The result was for prices to fall even further, along with the value of MBS, which were derived from home values. The new Fed Chairman, Ben Bernanke, seemed unconcerned at first, stating in June 2007 that "the troubles in the subprime section seem unlikely to seriously spill over to the broader economy or the financial sector" (Bernanke, 2007). By March 2008, however, the U.S. was in financial turmoil as Bear Stearns, an investment bank that was heavily invested in the residential mortgage market, was brought to the brink of collapse. Financial institutions that did business with it began withdrawing their funds, and the Federal Reserve had to arrange for J.P. Morgan Chase to acquire Bear Stearns for pennies on the dollar. The balance sheets of financial firms began to deteriorate with the collapse of the housing and mortgage market. Financial firms started deleveraging because they were afraid to lend to each other, households, or businesses and thus economic activity slowed down. By September, the government announced that it was putting Fannie Mae and Freddie Mac into conservatorship, officially taking them over. Fannie and Freddie originally had dealt mostly in prime loans, but during the boom of the subprime market, they lost market share to competitors that were taking on greater risks. Also, they had been pressured by Congress to increase their mortgage purchases

from low-income borrowers as part of the government initiative to boost home ownership (Engel, McCoy, 2011). When outside auditors examined the books, they found the GSEs used accounting tricks to hide the fact they had virtually no capital cushion, and the government was forced to take them over.

As the magnitude of the impending crisis became evident, the rest of the financial institutions began to fall like dominoes. Lehman Brothers, another bank that was loaded with "toxic assets," securitized loans that went sour, was brought to the brink of failure. When it was clear that Lehman was not getting federal help, Merrill Lynch realized it too would collapse and arranged for Bank of America to take it over. After Lehman filed for bankruptcy on September 15, 2008, markets everywhere crashed and global financial Armageddon seemed likely. Then the Federal Reserve spent $85 billion on a bailout of AIG, in response to the failure of its recklessly issued credit default swaps. Had AIG gone under, the repercussions would have been many times worse than that of Lehman, due to the countless banks and mutual funds that did business with AIG and would have instantly defaulted. In essence, it helped ameliorate financial "contagion," in which the failure of an important institution triggers a mass panic. In a chaotic flight to quality, investors snapped up Treasury securities, and the spread between Treasury and BAA-rated corporate bonds spiked. Shown in Figure 1, the higher the spread between their yields, the more risk-averse investors are at a given time. The wide yield spread illustrated the fear that permeated the market at the time. Then came the Congressional legislation: a $700 billion emergency bank bailout package to stabilize the financial sector. The bailout, known as the Troubled Asset Relief Program (TARP), was the first of many financial reforms that Congress has passed since the crisis. In 2010, for example, the Dodd-Frank Wall Street Reform Act was passed to promote stability and increase oversight in the financial services industry, along with protecting the rights of consumers.

IV. AFTERMATH/POLICY MEASURES

The crisis is a reminder of the role that asymmetric information plays in financial markets, and in that regard can be examined for its effect on individuals. For example, the glut of subprime mortgages that originated during the housing bubble is an example of adverse selection because risks that were not creditworthy were improperly screened. The result of this is that after the financial crisis, banks see too much risk to provide many loans, even to individuals with excellent credit. The lack of funds available to finance economic activity explains the credit freeze, and contributes to the difficult job market.

The behavior of the U.S. consumer also changed greatly; before the crisis, Americans had taken on excessive debt, as the personal savings rate fell to all-time lows (Figure 2). This leveraged consumption helped drive gross domestic product (GDP) when the economy thrived, but when deleveraging finally began, the lack of demand rippled through the economy. Households also saw significant deterioration in their balance sheets as the value of their homes, probably their most valuable asset, plummeted. The evaporation of wealth on the housing side can be seen in Figure 3, which indexes consumer prices (CPI), a measure of inflation, along with housing prices over the past decade. While the spread between the two was significant during the peak of the bubble, after the precipitous decline in home values the two lines converge such that the increase in housing prices over the past decade is merely commensurate with the rate of inflation.

Meanwhile, the Fed is still trying to exercise its monetary policy options to help the economy. The target federal funds rate has essentially been zero since the end of 2008, and the Fed has conducted open market operations of buying short-term U.S. Treasury bills to increase the money supply, both measures intended to spur economic activity. With traditional methods seemingly exhausted, the Fed then turned to buying toxic assets off of banks' balance sheets, hoping to recapitalize them and encourage lending. It also has engaged in a $600 billion round of "quantitative easing," a policy where the central bank purchases bonds of longer maturities in order to bring down their yields. More recently, they have announced "Operation Twist," a plan to sell some of their bonds of short- or medium-term maturities in order to buy bonds of longer maturities. With interest rates on shorter-term bonds near zero, the intuition is for the Fed to try to affect mortgage rates, which are tied to the rates on longer-term bonds, such as the 10-year Treasury. However, the interest rate on a 30-year fixed mortgage dipped below four percent in October 2011, a record low,

so it is unclear if the plan will achieve its intended effect to lower rates further.

V. CONCLUSION

Unfortunately, signs of a recovery in housing are largely absent in today's market. One of the provisions of the Dodd-Frank bill was to give federal bank regulators the responsibility of defining a "Qualified Residential Mortgage" or QRM. According to the Center for Responsible Lending, the current proposal calls for a down payment of up to 20% on QRM loans, which would become the standard for a "safe" mortgage. An analyst for the Pacific Investment Management Company (PIMCO) mentions this as an obstacle to the housing market's recovery, because fewer people will be able to save up for a mortgage down payment, which has tempered demand. The lack of qualified buyers in the current housing market, along with the excess supply, means that the housing market appears to be depressed for the foreseeable future.

For the broader jobs market, unemployment will be a lingering problem. Despite a corporate rebound since the financial crisis, profit margins have been helped most by streamlining and cost cutting rather than new hiring. Another issue figures to be the labor force participation rate, which is the percent of the adult population that includes itself in the labor force, that has fallen because of discouraged workers leaving the labor force. Figure 4 illustrates the decline of this rate, which is at its lowest level since the early 1980s. As workers eventually reenter the work force when aggregate economic confidence picks up, they will put upward pressure on the unemployment rate (Tasci, Zaman, 2010). Therefore, while the unemployment rate is off its highs from 2009 (Figure 5), it is unlikely to return to pre-crisis levels in the foreseeable future.

Amid all of the financial reform and consumer protection legislation, along with newfound public skepticism toward many financial institutions, the joblessness in our economy is the largest reminder of the crisis. With jobs—and industries—being shipped overseas, it will be difficult to find the capital needed to stimulate housing demand from its current depressed state. And while increasing employment has been the key focus of the policies of the Fed and Congress, prolonged expansionary fiscal and monetary policy can have worrying implications in the long-term. With all of the liquidity that has been added to the economy, the M1 money stock (currency plus demand deposits) has doubled in the last decade (Figure 6), suggesting that inflation might be a future concern for the economy along with unemployment. These systemic problems in our economy today can largely be traced to the housing crisis and subprime mortgage bust

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APPENDIX

Fig. 1. Corporate BAA vs. 10-year Treasury Yield Spread

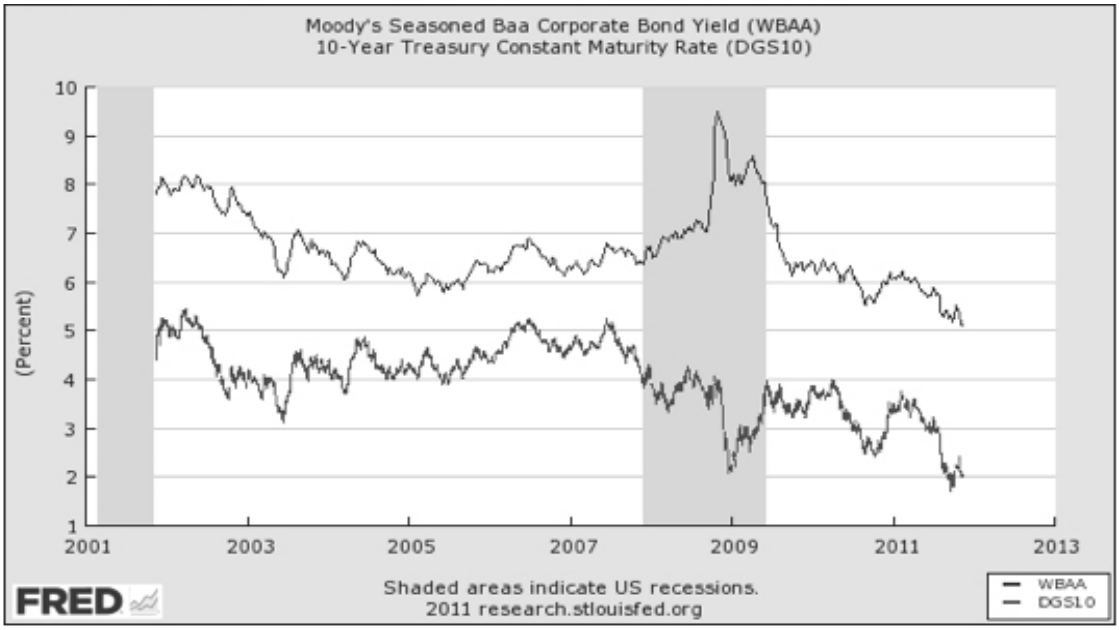

Fig. 2. Personal Saving Rate

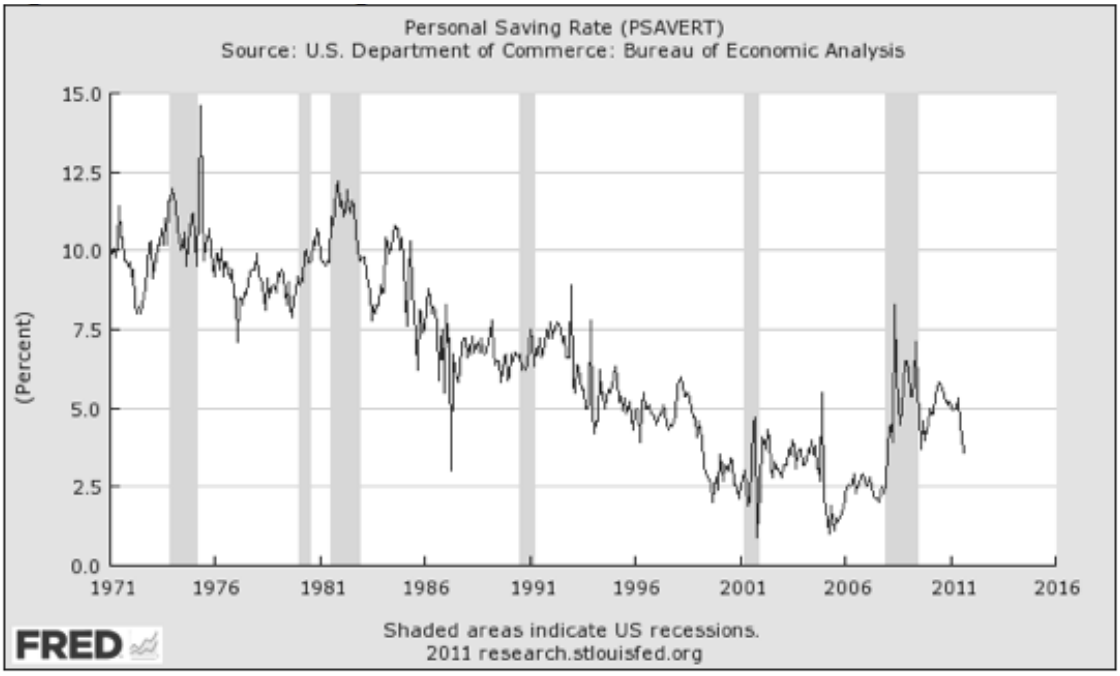

Fig. 3. Consumer Prices vs. Housing Prices

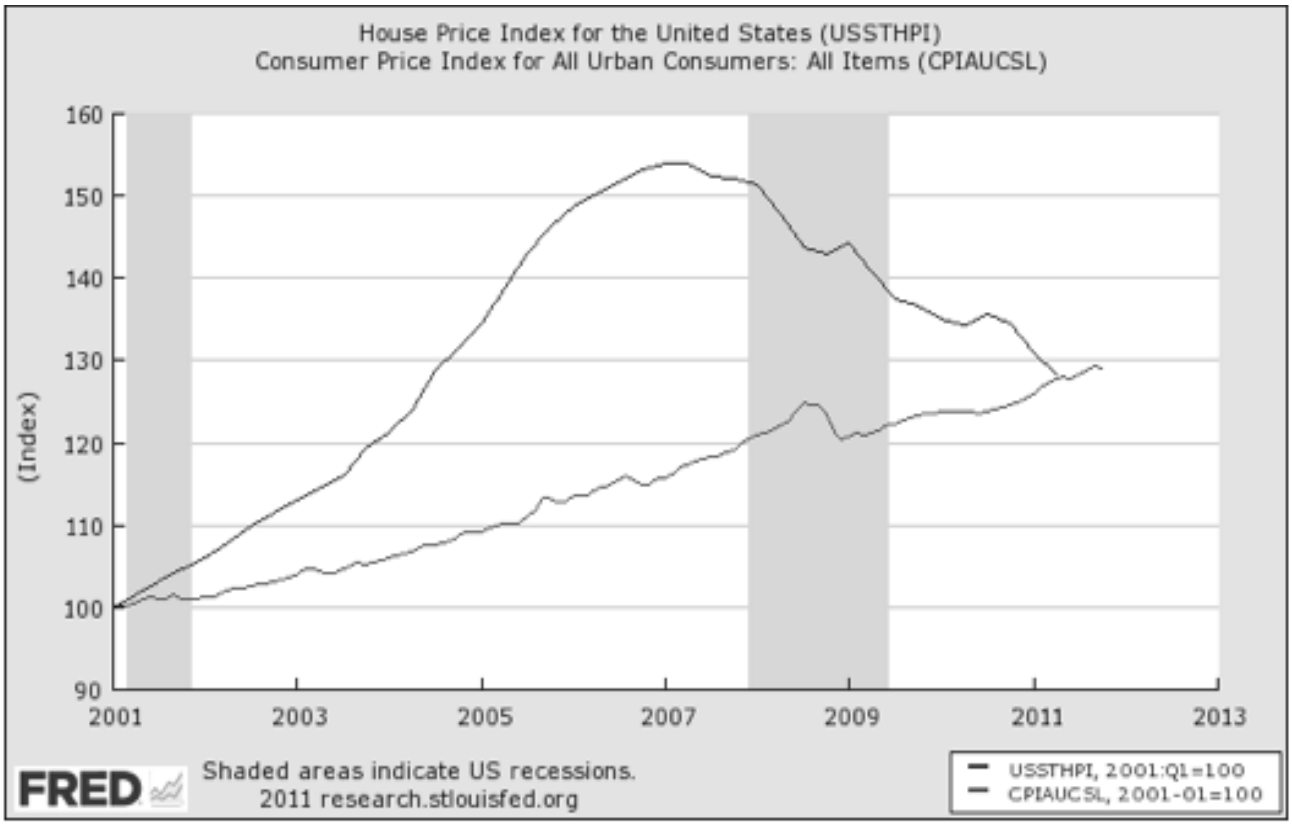

Fig. 4. Labor Force Participation Rate

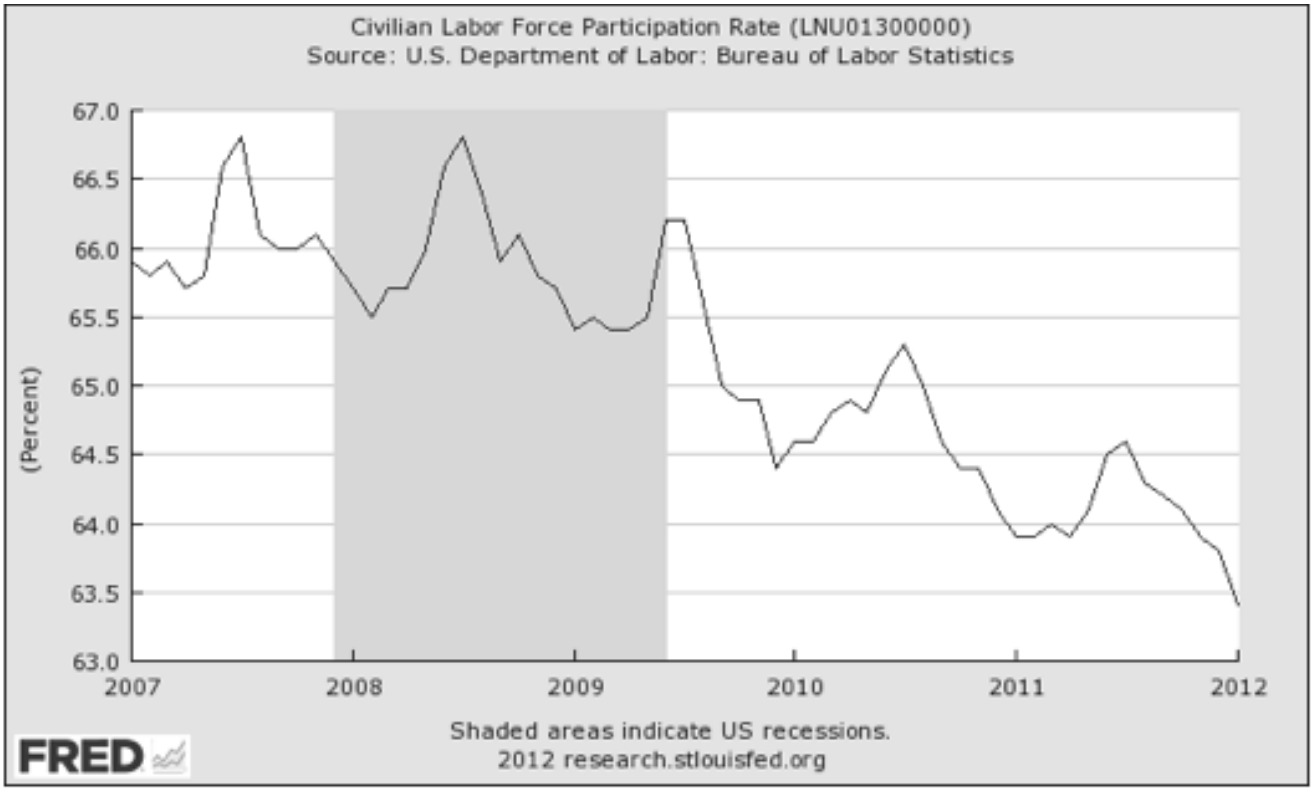

Fig. 5. U.S. Civilian Unemployment Rate (Seasonally Adjusted)

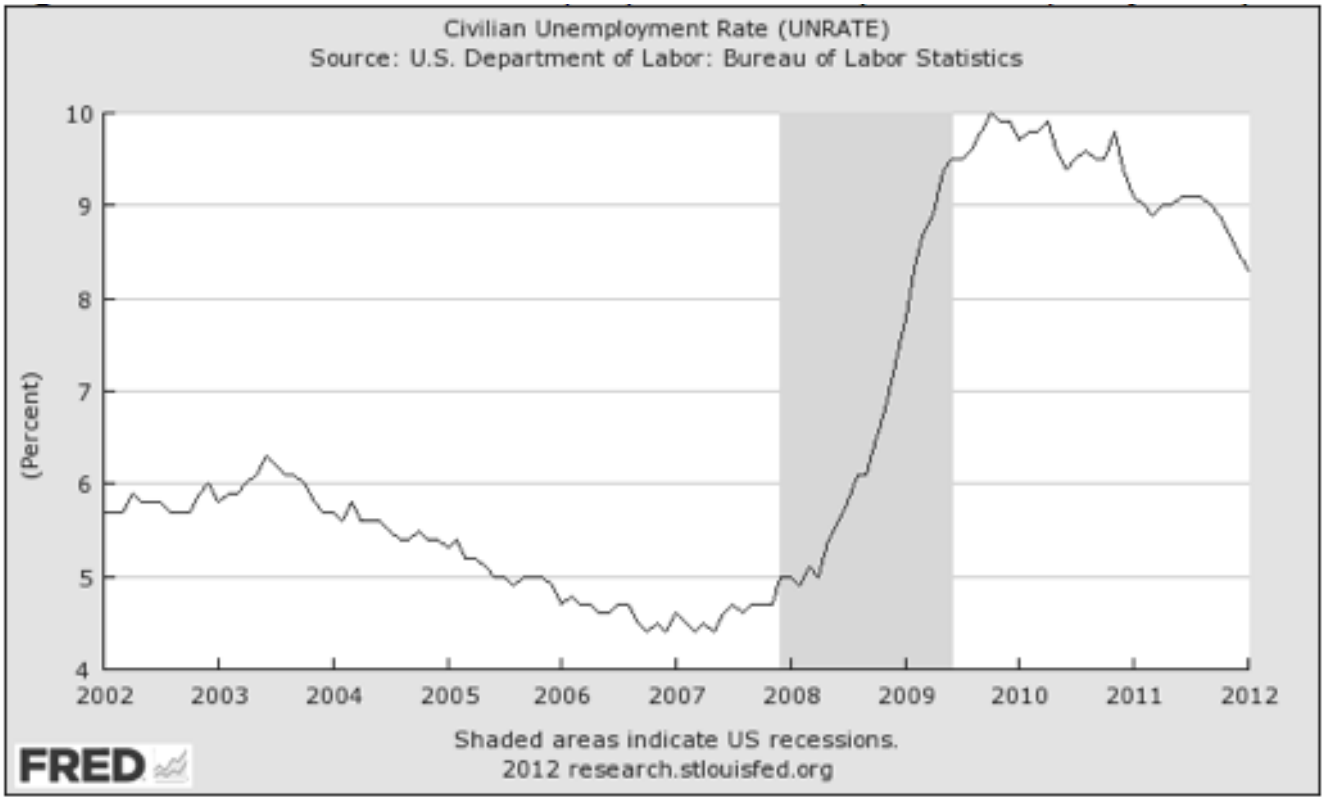
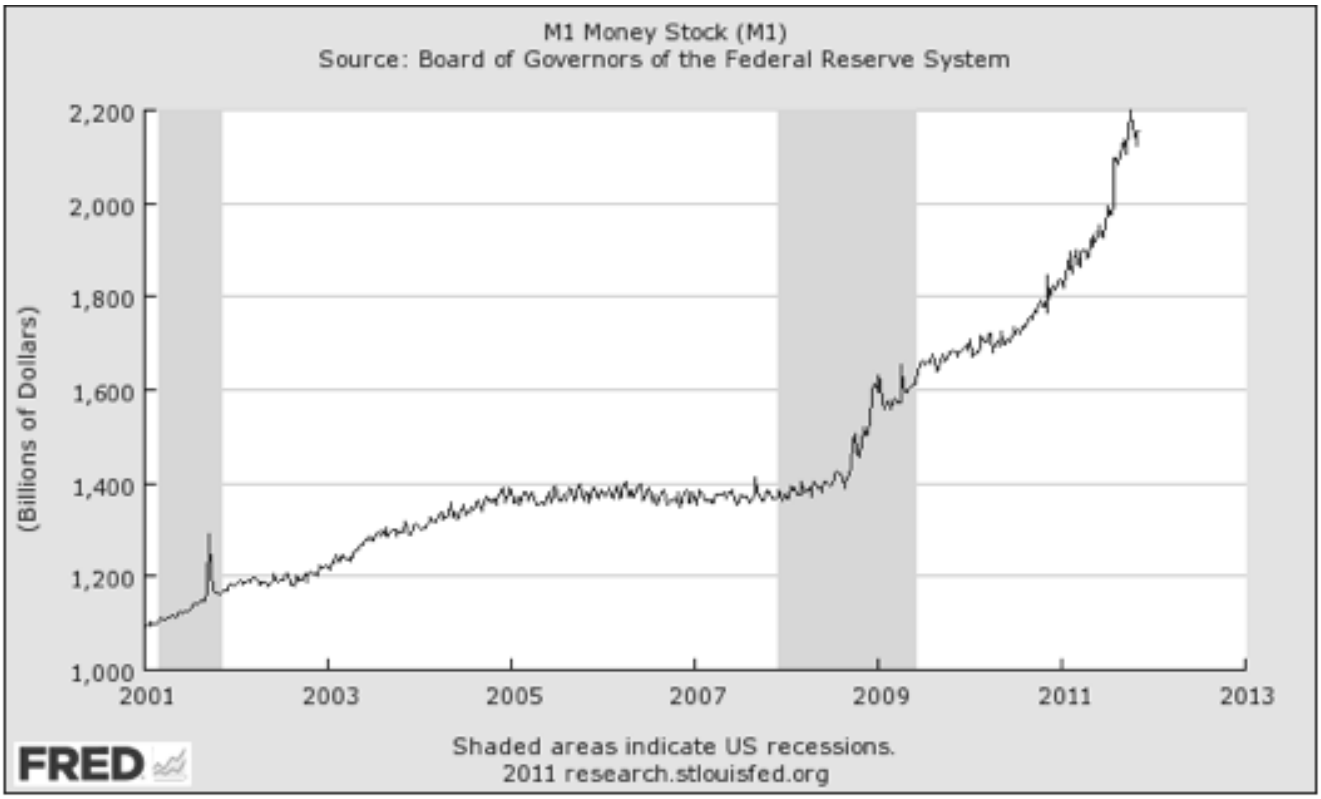
Fig. 6. M1 Money Stock