

THE FEDERAL RESERVE INTEREST RATE MANIPULATIONS FROM 2000-2007 AND THE HOUSING MORTGAGE CRISIS OF 2008

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ABSTRACT

The study looks at the period between 2000-2008, with regard to the financial housing mortgage crisis of 2008. The study demonstrates the correlation between the Federal Reserve System's manipulation of interest rates and the rise of oil prices starting in 2004. The confluence of interest rates fluctuations, recessionary pressures, and the rise in the price of oil have been three of the major factors causing the decline of the housing sector and the mortgage market crisis in 2008.

In a correlative movement with the rise in the price of oil, the Federal Reserve moved from a low accommodative interest rate policy to a steady and consistent increase in interest rates between 2004 and 2007. The switch in policy, combined with the corrosive effects of low initial variable interest rates, became a prime cause of the financial mortgage crisis of 2008. The study suggests sustained manipulation of interest rates had a deleterious effect on financial lenders and individual borrowers. The study also indicates that the price per barrel of oil, over which a country has no control, can be a major influence in the direction of interest rates and a product that can affect financial institutions' lending and consumer borrowing ability.

INTRODUCTION

The confluence of Federal Reserve interest rate fluctuations, recessionary pressures, and the rise in the price of oil, between 2000-2008, have been three of the major factors causing the decline of the housing sector and the mortgage market

crisis of 2008. The effect of interest rates has affected other areas such as student loans (Nealy, 2008). The impact of the rise in the price of oil on developed economies has also been inflationary (Lindstrom, 2006; McPherson & Weltzin, 2008).

It has been shown that the relationship between oil and inflation has weakened. In the 1970s there was a strong correlation between the price of oil and the inflation rate as measured by the Consumer Price Index (Investopedia, n.d.). Although the correlation between the rise in the price of oil and the rise in inflation has weakened, the relationship still exists and greatly affects investor and financial expectations (Blas & Mackenzie, 2008; Uren, 2008).

It has been generally accepted that the Federal Reserve has attempted to control inflation. Federal Reserve Chairman Ben S. Bernanke (2003) has, in the past, acknowledged this by stating

“the Federal Reserve, though rejecting the inflation-targeting label, has greatly increased its credibility for maintaining low and stable inflation, has become more proactive in heading off inflationary pressures, and has worked hard to improve the transparency of its policymaking process--all hallmarks of the inflation-targeting approach.”

In the same speech the Chairman also drew the connection between the rise in oil price shocks in 1973 and the inability to control inflation leading to the disinflationary recessions of 1973-75 and 1980-82. It is this role of fighting the inflationary effects of rising oil prices and fighting the recession of 2000-2003 that caused the Federal Reserve to manipulate interest rates that lead to the housing mortgage crisis of 2008.

STUDY LIMITATIONS

The study focus is on interest rate fluctuations, oil per barrel prices, CPI inflation rates, and recessionary pressures over time as the major stimulators affecting the Federal Reserve interest rate decisions. The study does not attempt to quantify the exchange rate effects of the U.S. dollar on the per barrel price of oil. The study does not take into account other external variables that may have also affected Federal Reserve decision-making on interest rates. In addition, the study does not quantify the effects of bank lending practices. The study does question the

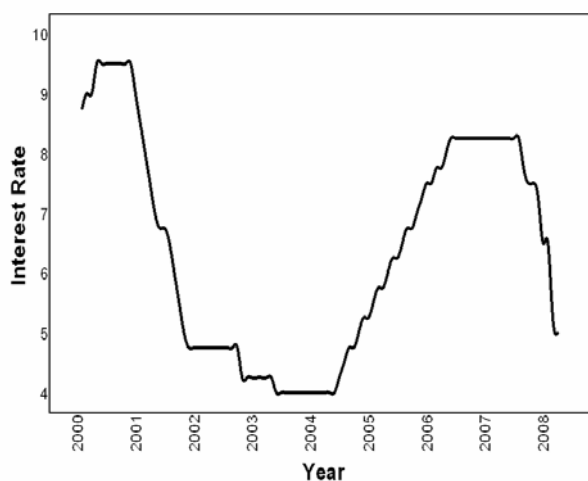
wisdom of using variable rate interest loans versus more stable fixed interest rate loans, especially to low-income borrowers, but the study does not address legal versus ethical lending practices of financial institutions.

The manipulation of interest rates is regarded as a legitimate and necessary function of the Federal Reserve System to fight recessionary and inflationary pressures. The study does not attempt to provide alternative approaches of Federal Reserve action to control these pressures. It is also beyond the scope of this study to determine what anticipatory actions are necessary in timing the raising or lowering interest rates. The study does not address the leveling effect the Federal Reserve interest rate actions have on market cycles of inflation and recessions.

STUDY DATA

After a year of historical prime interest rate fluctuations, 1980 ended the year with a historical prime interest rate high of 21.5%. In June 2003, the prime rate had lowered to 4%. The last time the prime rate was recorded at 4% was in January of 1958. Chart 1 shows the prime interest rate fluctuated from 2000 to 2008, as determined by the Bank Prime Loan Rate over select years recorded by Board of Governors of the Federal Reserve System.

Chart 1: Interest Rates



(Board of Governors of the Federal Reserve System, 2008)

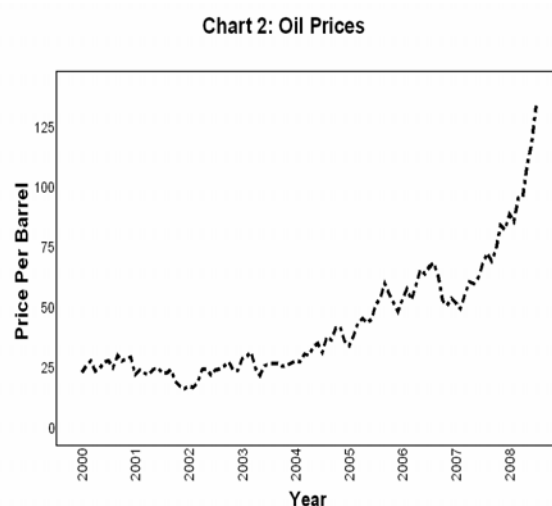
It is reasonable to conclude the Federal Reserve lowered interest rates in 2000-2001, in response to a perceived recession as determined by National Bureau of Economic Research and other Federal Reserve data (Business Cycle Dating Committee, 2001).

Chart 1 shows a 9.5% rate in May of 2000, and the subsequent decline to 4% in June of 2003. At that time, there was reversal of rates and an increase from the June 2004, 4% level to a high of 8.25 % in June of 2006. The rise in interest rates started in July 2004. Prior to the increase in interest rates there existed a trough in which low interest rates existed from 2001 to 2004. The law of demand stipulates the less charge for something, the greater the demand. The low interest rates, as might be expected, attracted a wide range of borrowers and allowed access to credit markets for individuals who, under higher interest rates, would not have sought financing.

Following prime interest rates, Mortgage X historical data show that one-year adjustable rate mortgages (ARM): Initial Interest Rate declined from the 7.25 % in 2001 to below 3.5% in 2004. The decline in ARM rates made mortgages more accessible to borrowers who in higher ARM rate years would not have qualified for a loan. The one-year ARM: Fully Indexed Rate (based on the 1 year Constant Maturity Treasury Index [CMT] plus an assumed 2.75% margin) rose from below 4% in 2003, to 8% in 2006 (Mortgage X-Mortgage Information Services, 2008). Between 2001 and 2004, ARM: initial interest rate borrowers thus found themselves in the situation of increasingly costly loans once their ARM interest rates became ARM index adjusted rate loans. Using example numbers, individuals, who borrowed during the low interest rate trough, within the years 2001-2004, with an initial interest rate ARM of 4-5%, found themselves at the conversion rate, between 2005-2007, of 6-7% plus the 2.75% margin, using the CMT index. Thus, the new fully indexed rate became 8.75-9.75%. It can be assumed that the borrowers who were marginally qualified to obtain their loans found themselves in increasing financial trouble. It would also be valid to assume that these individuals, who could qualify for a loan at a higher fixed rate mortgage, could have avoided such financial trouble by choosing a fixed income mortgage loan. The extent of this financial trouble is still evolving, but the authors look at the interest rate manipulations as the primary cause of the problems when combined with ARM loan conditions. The reason for the interest rate changes will now be explored.

As interest rates and the value of the dollar fell from 2000-2004, the price of oil per barrel increased (Newman, 2008; Yahoo!@Finance, 2008). Chart 2 (Energy Information Administration, 2008) illustrates the price of a barrel of oil for the years

2000-2008, from selective data points provided by the Energy Information Administration. The price of oil per barrel went from under 25 dollars in 2000, to levels exceeding 125 dollars in 2008.

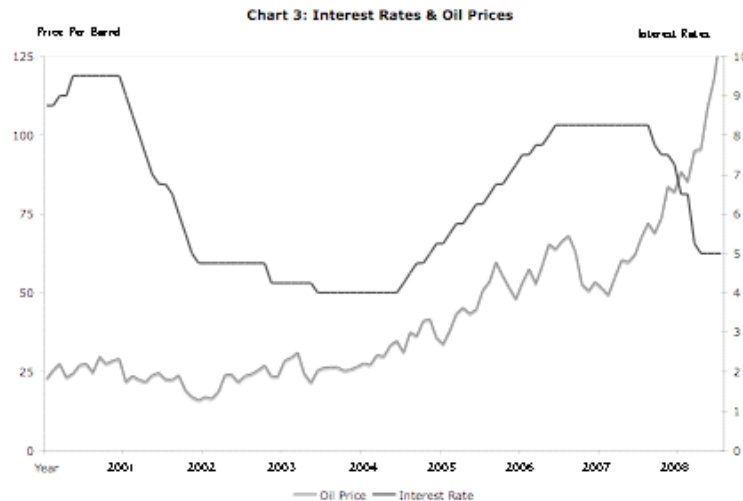


(Energy Information Administration, 2008)

From 2004, the price of a barrel of oil started to climb along with the rise in the prime rate and the one year ARM: Fully Indexed Rate and the prime rate. Chart 3 (Board of Governors of the Federal Reserve System, 2008) depicts the simultaneous rise of the price of oil per barrel and change in the prime rate.

The low interest rate “trough” can be seen in Chart 3, starting in 2001, and continuing into 2004. The Federal Reserve begins the rise in interest rates that correlates with the rise in the price of oil per barrel. This correlative effect continues into 2007.

A Pearson product-moment Correlation was conducted to determine the relationship between price of oil and interest rates. A p value of less than .05 was required for statistical significance. The results of the correlation analysis are presented in Table 1.



(Board of Governors of the Federal Reserve System, 2008; Energy Information Administration, 2008)

Table 1: Correlations between the Price of Oil and Interest Rates		
	<i>Pearson Correlation Coefficient</i>	<i>Significance (two-tailed)</i>
Price of Oil versus Interest Rate	.316	.001**
* $p < .05$ ** $p < .01$		

The correlation between the price of oil and interest rates was significant, $r(101, 97) = .316$ at $p < .001$. This signifies a moderate relationship between the price of oil and interest rates. As interest rates increase so does the price of oil.

CONCLUSIONS

The Federal Reserve System lowered interest rates in a proactive effort to be responsive to a slowing economy and the expectation of a possible recession in 2000-2001. The promise of home ownership was extended to an increasing number of borrowers between 2000 and 2004, due to a steady and continual drop in interest rates. The low interest rates signaled, to financial institutions and individual borrowers, that credit was inexpensive and readily available. Low variable initial borrowing rates allowed lower income individuals to obtain a mortgage loan, allowed current home owners to trade up to more expensive homes and allowed individuals the opportunity to purchase a second home. The advent of increasing oil prices, starting in 2004, raised the expectation of inflationary pressures. While correlation is not necessarily causation, in a correlative reaction, to raising oil prices and possible economic inflation, the Federal Reserve moved from a low accommodative interest rate policy to one of a steady and consistent increasing of interest rates between 2004 and 2007. The switch in policy, to higher interest rates, combined with the financially corrosive effects of low initial variable interest rates, between 2001 to 2004, converted to much higher indexed variable interest rates, between 2005-2008 and became a prime cause of the financial services mortgage crisis of 2008.

While the Federal Reserve System has maintained a consistent policy to protect the economy of the country, this study would tend to indicate that a “V” style interest rate change, especially one with a attractive “trough” of low interest rates over a period of years, can have a deleterious economic impact, especially on borrowers and financial institutions, as variable interest rates rise and mature to variable indexed interest rates. The effect of the “V” movement in interest rates, in essence, pulled the “rug” out from under financial institutional lenders and individual borrowers. The study suggests that the Federal Reserve sustained manipulation of interest rates between 2000-2008 had a deleterious effect on financial lenders and individual borrowers.

The study also indicates that the price per barrel of oil, over which a country has no control, by design or choice, can be a major dictator in the direction of interest rates and, therefore, a product that can effect financial institutions lending and consumer borrowing ability. It is possible future studies will show that low income individuals lost an opportunity to experience a long held dream of home ownership or move to a more desirable home due to the rise in oil prices between 2004-2008.

Many other factors should also be considered in addition to fully explain the 2008, mortgage crisis. Variable rate mortgage conversion conditions appear to have contributed to the crisis, however, to what extent has yet to be determined. The variable rate mortgage became a gamble, on the part of those least able to afford the gamble, that their initial variable rate would be maintained over time, even though the possibility of a higher indexed variable rate plus the additional margin existed. This, in fact, became the case for many low-income borrowers as a result of being caught over a number of years by the rise in interest rates between 2005-2008. Variable interest rates, subject to sustained interest rate rises, are in the end a bad gamble on the part of borrowers and financial institutions regardless of how attractive the initial terms.

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