BALL STATE UNIVERSITY BUREAU OF BUSINESS RESEARCH

Understanding the Sub-Prime Markets: A Narrative

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Introduction

The financial and economic matters that embroil the United States, and increasingly world markets are difficult to understand, even for trained economists and financiers. This primer is designed to explain some of the background to the educated reader.

The Beginnings - The Legislation

American jurisprudence, culture and economic policy have long supported home ownership. It is viewed (rightly or wrongly) as a tool for entrance into the middle class, haven against economic volatility and a source of participative democracy.

In order to support home ownership we have created a vast web of regulatory, fiscal and government sponsored enterprises. The Federal National Mortgage Association, or Fannie Mae was created in 1938 to purchase and hold mortgages on a secondary market. Among other things, this allowed banks to free up capital to finance additional home purchases. The company was privatized in 1968, into what is known as a government sponsored enterprise. Few analysts ever believed its mortgages would not receive the full protection of the U.S. government. Freddie Mac, formally the Federal Home Loan Mortgage Corporation was created in 1970 as a government sponsored enterprise as a counter balance to Fannie Mae, which until that time had a monopoly on the secondary trade of U.S. home mortgages.

Home mortgage interest payments are deductible from Federal Income

taxes for most homeowners and set the adjusted gross income from which most state and local income taxes are based.

U.S. home mortgages have been safe and secure investments since the end of the great depression. This was due in large measure to the high down payment required from traditional borrowers. The standard mortgage required a 20percent down payment. This meant the borrower typically had good credit, and considerable financial stake in their home. So few defaulted or suffered foreclosure. (As an aside, veterans could

70% Figure 1: U.S. Home Ownership Rate
Source: Census
66%
66%
62%
1960 1962 1964 1966 1968 1970 1972 1974 1976 1978 1980 1982 1984 1986 1988 1990 1992 1994 1996 1998 2000 2002 2004

usually obtain a Veteran's Administration loan with 5percent).

In 1977 Congress, at the urging of the Carter Administration passed the Community Re-Investment Act (CRA). This legislation was designed to stop the practice of "redlining" communities due to racial or ethnic characteristics. It did not change lending standards. Unhappy with the improvement in home ownership among poor Americans, Congress, at the urging of the Clinton Administration altered the CRA, specifically authorizing sub-prime loans in an effort to move more poor Americans into the middle class.

In 1999 congress passed (and a reluctant Bill Clinton signed) the repeal of the Glass-Steagall Act. This freed some commercial banks to purchase mortgage backed securities.

The Middle – The Economy

In the early to middle 1990s several south Asian countries and China began a period of rapid economic growth. In countries rife with the desperately poor, governments viewed export led economic growth favorably. In order to promote this they had to keep currencies low and have a very high savings rate. This is easy to accomplish in China, and as a result they bought huge amounts of U.S. securities – primarily Treasury bills. This promoted increased exports, kept the currencies of south east Asian countries low relative to the dollar and limited domestic consumption. It also financed consumption by U.S. consumers and lowered U.S. interest rates. This spawned increased demand for housing (as mortgage rates were low).

In the years leading up to 1999 the U.S. economy warned of an imminent threat known as the Y2K bug. This was a ubiquitous software glitch that was warned to cause collapse of several key systems. In order to prevent this we went on an IT buying spree and compressed the IT investment cycle into the months leading up to December 1999. The Federal Reserve even eased money supply in anticipation of financial system disruptions. Nothing happened, and demand for IT goods and services collapsed since we all had new systems. The Dot-com bust occurred and the economy began to slow. The Fed eased monetary policy and we struggled along until the Fall of 2001.

On September 11, 2001, as a consequence of the attack on the U.S. financial system, the Federal Reserve provided massive liquidity. This lowered real interest rates to record levels, boosting demand for housing.

The low interest rates pressured bank profits. As a consequence several financial techniques were employed to make financial institutions more profitable. These included the growing use of Collateralized Obligations (CDOs). The most common type of CDOs are financial instruments that

pay a revenue stream to a buyer from an underlying flow of revenues. For example a banking institution could create a CDO by combining several thousand mortgages and selling them to an investment firm. The revenues are paid over a fixed period to the buyer from mortgage payments by homeowners around the world. Typically the CDO is constructed not by the mortgage issuer, but more often by a financial firm operating in the secondary mortgage market.

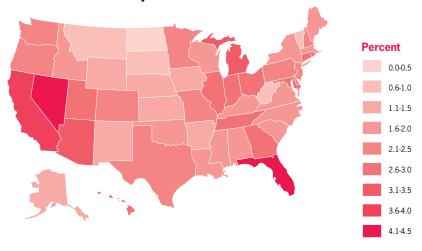
Bankers and non-bank mort-

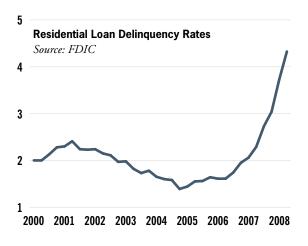
gage lenders also faced pressures to make more mortgages as rates were low. This led to new types of mortgages. In lieu of the 20 percent down payment many lenders would arrange a secondary 20 percent loan. Adjustable rate mortgages became popular options for buyers with expected income growth. Extreme adjustable rate mortgages such as interest only balloon loans. NINJA loans, to borrowers with no job, no income or assets are symptomatic of the extreme ends lenders took to offer mortgages. The Community Reinvestment Act rewarded local loans, and in many places the pool of available low risk borrowers had long since evaporated. They already had homes.

Potential home buyers saw the rapid rise in home values, especially in a few major U.S. cities as a rare chance to get into a home or reap significant capital gains. The pressure to buy a house was significant in an environment of double digit annual home price increases in several U.S. cities.

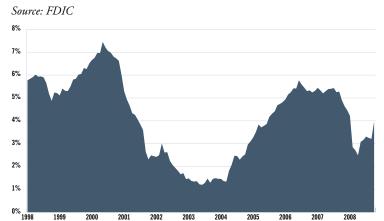
Fraud accompanied all these transactions.

Home Foreclosure Rate by State

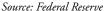


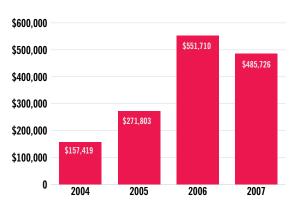


LIBOR Rates



Collateralized Debt Obligation Issuances (All Types)





The End – The Crises

The recovery from the 2001 recession was slow. As it caught steam by 2004 inflationary fears arose and the Federal Reserve slowly raised interest rates through 2006. This contracted the money supply.

Lower money supplies led to higher mortgage interest rates, and a slight easing of the demand for housing. At about the same time, Adjustable Rate Mortgages began to re-set to their new higher rate.

Homeowners who had borrowed the full amount of their mortgage, but were unable to make home payments at the higher mortgage rates were in a quandary. It costs money to sell a house (typically 6 percent or more of the sales value). With no ability to reduce prices in the face of lower demand, and no resources to pay the realtor fees many homeowners faced the inability to sell their homes. With no home equity, and little savings, bankruptcy and home foreclosures became attractive. This began the downward spiral in home values. This main street problem affected Wall Street.

The CDOs which had been sold to financial institutions received risk valuations using historical data on home mortgages – among the safest of all post war investments. Bad risk management meant that some firms held enormous sums of these CDOs. Compounding this problem was the difficulty in tracing the revenue flow from a CDO back to an original homeowner. Lending institutions sold and re-sold mortgages as a mechanism, ironically, for managing risk and enhancing cash flow. They did this to make more loans. This created huge uncertainty about the value of individual CDOs.

Firms used CDOs to back investments all around the world. Many of the investments were highly leveraged, which means that very little money, perhaps \$1 out of every \$30 invested was actually held by the investment bank. This was permitted in recent years by the Securities and Exchange Commission. Doubts about the creditworthiness of the CDO backed investment banks made it difficult for them to raise capital. Many of them held insurance on their assets, and much was held by AIG, an international insurance firm.

Concerns over creditworthiness of financial institutions plagued markets unevenly. While the U.S. Stock market fell, the price of commercial loans (Commercial Paper) rose only slightly and the LIBOR (the price London's banks charge one another for overnight loans) remained below long term averages. Mixed signals over the future of the economy remain in abundance.

The Future - Policy and Markets

Today we face great uncertainty over both future economic performance and the appropriate policies towards financial markets and the broader economy. A few of the questions are:

- What is the role for the U.S. Government in regulating financial transactions?
- What is the future of the Community Reinvestment Act?
- What type of fiscal stabilization efforts should be undertaken and what will be their effect?
- Are short run credit retrenchments appropriate? How much will this slow growth?
- Will government intervention slow future growth in the real economy?
- Is a liquidity trap imminent? Will this lead to a deep global recession?
- What policies might lead to higher levels of long term growth?