

Political Economy of Housing Markets

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A view from the United States

Demand for Assets

US House Price Bubble

US Political Economy

Pronounced Regional Nature of Crisis

Real Estate Cycles

Panic in the Repo Market

Leverage Cycle

International Housing Price Cycle

Demand for Quality Assets

- Demand for quality assets, internationally: Ben Bernanke's original "savings glut" theory that US deficits would not affect US dollar exchange rate
- Ricardo Caballero et al. demand for quality assets: the persistent global imbalances, the subprime crisis, and the volatile oil prices that followed it are tightly interconnected.

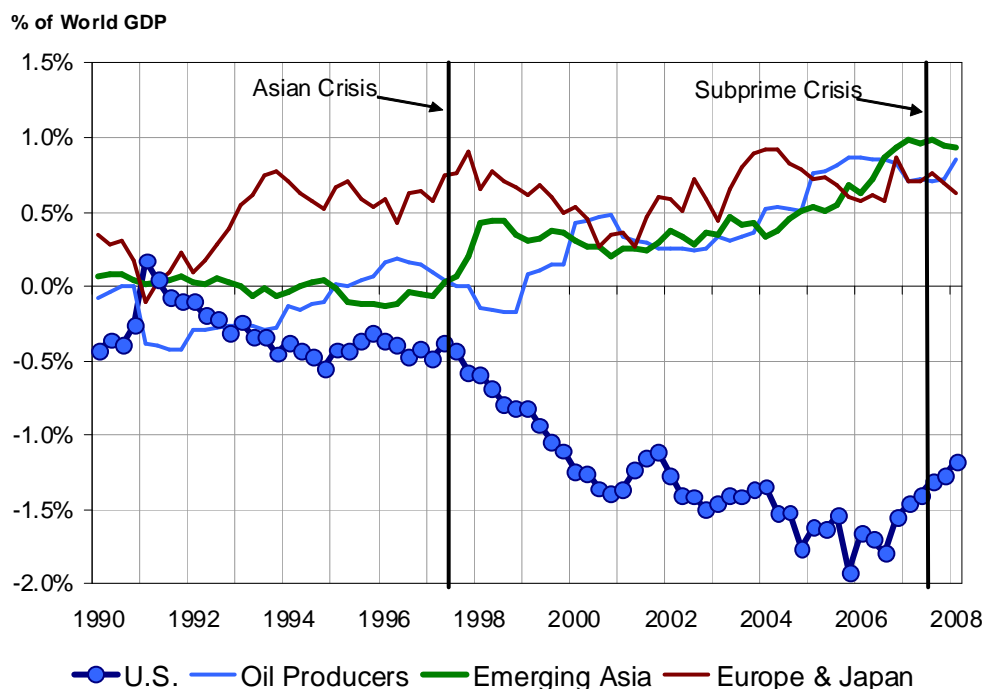


Figure 1: Global Imbalances (as a fraction of World GDP), 1990:1-2008:1. Data Sources: WDI, WEO, IFS & OECD. Author’s calculations.

of the US deficits, initially due to Japan and Europe, were bolstered by emerging Asia and commodity producing countries after 1997.

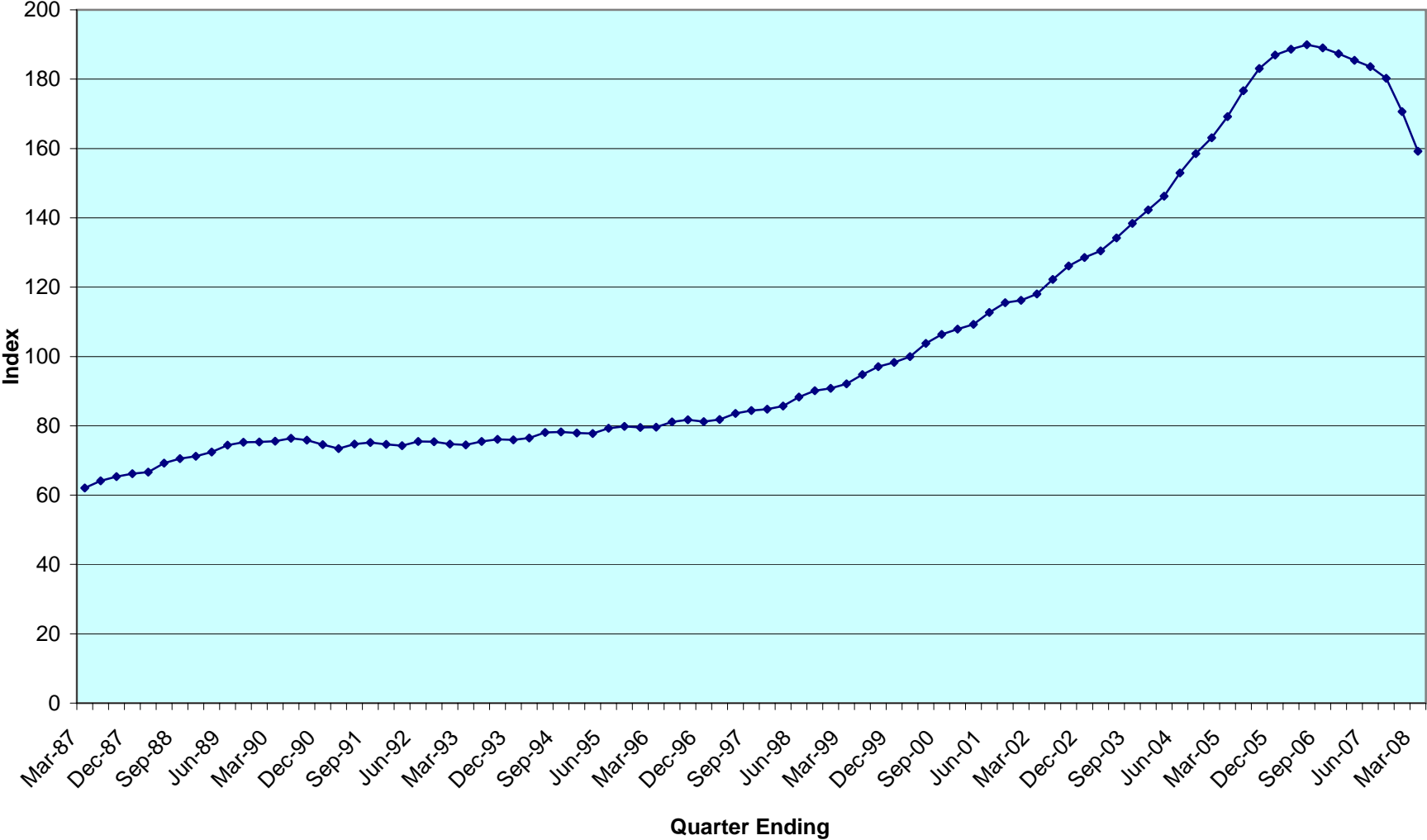
In [Caballero, Farhi and Gourinchas \(2008\)](#) we showed how this build-up in “global imbalances” could be understood as the consequence of asymmetries in financial development and growth prospects across different regions of the world. In particular, we argued that the Emerging Market (EM) crises of the end of the 1990s, the subsequent rapid growth of China and other East Asian economies, and the associated rise in commodity prices in recent years, reoriented capital flows *from* emerging markets *toward* the US. In effect, EMs and commodity producers in need of sound and liquid financial instruments to store their newfound wealth, turned to the US financial markets, perceived as uniquely positioned to provide these financial assets.

As we explained then, a by-product of this reallocation of capital flows was a necessary decline in US and world real interest rates (see figure 2) and a boom in US asset markets. As foretold by then Governor Bernanke in his influential ‘Savings Glut’ speech ([Bernanke \(2005\)](#)), it is now apparent that this boom was located in no small part in a rise in US housing markets and the related markets for structured credit instruments (see figures 3 and 4). Ex-

US House price bubble

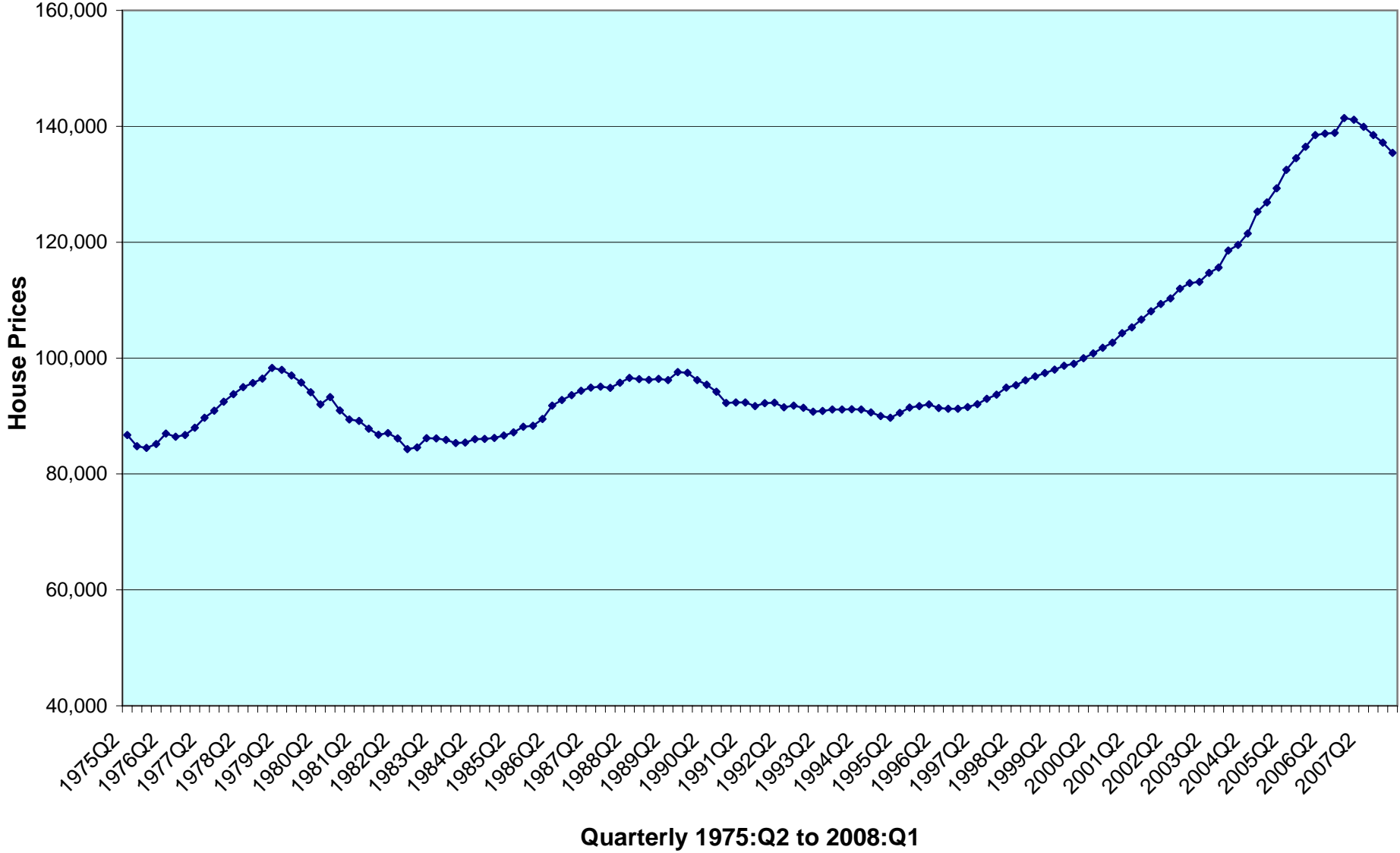
- US Housing price bubble. Facts: residential investment as a share of US GDP:
1997:III 4.2% 2005:IV 6.3% 2008:II 3.3%

Figure 1A
National Case-Shiller Home Price Index, March 1987 - March 2008



Source: S&P Case-Shiller Index

Figure 2
Real House Prices (OFHEO National Index)
House Value Equals \$100,000 House in the Year 2000



Political Economy

- “political economy” component in the form of encouragement of homeownership:

Andrew Cuomo, Housing and Urban Development Secretary, 1999: encouraged Fannie Mae and Freddie Mac to make loans

President Bush 2004: “Not enough minorities own their own homes. ... One thing I’ve done is I’ve called on private sector mortgage banks and banks to be more aggressive about lending to first-time home buyers.”

The private sector responded.

Listen to NPR, “Giant Pool of Money,” on how it was done.

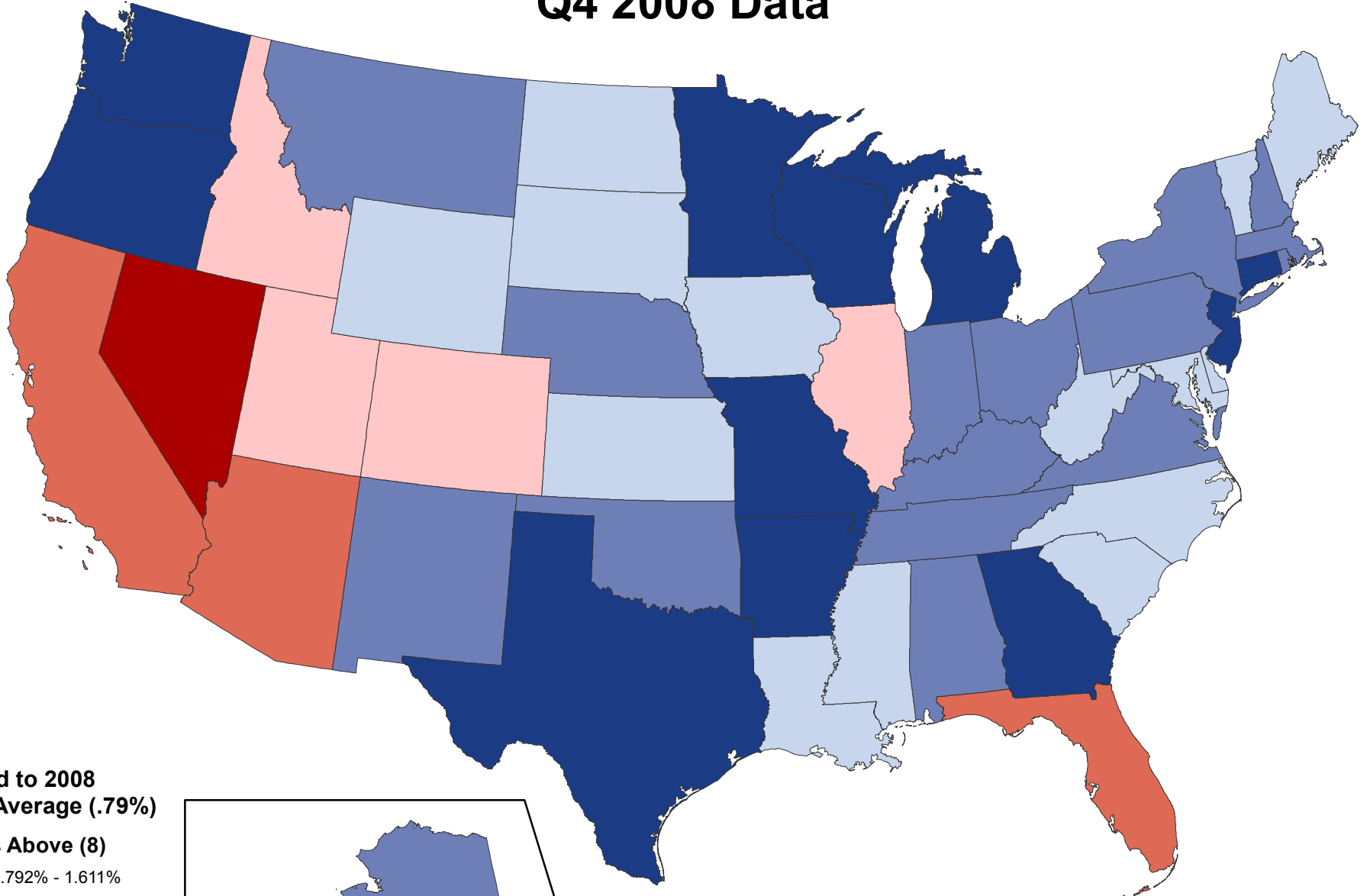
Regional Element in Crisis

- Pronounced regional element of the house price inflation.

Table 3
S & P Case-Shiller Index -- Through June 2008
Released August 26, 2008

Metro Area	Peak	% Δ Since Peak	% Δ Last Year	% Δ from May to June	% Δ from April to May	% Δ 2000 to June 2008
Phoenix	June 2006	-32.6%	-27.9%	-2.6%	-2.5%	+53.2
Las Vegas	Aug. 2006	-32.4%	-28.6%	-1.6%	-2.9%	+58.5
Miami	Dec. 2006	-32.4%	-28.3%	-1.7%	-3.6%	+89.9
San Diego	Nov. 2005	-29.9%	-24.2%	-1.5%	-1.4%	+75.4
Los Angeles	Sept. 2006	-28.5%	-25.3%	-1.4%	-1.9%	+95.7
Detroit	Dec. 2005	-27.0%	-16.3%	-0.1%	-1.1%	-7.3
San Francisco	May 2006	-26.8%	-23.7%	-1.8%	-1.2%	+59.8
Tampa	July 2006	-26.4%	-20.1%	-1.1%	-0.8%	+75.1
Washington D.C.	May 2006	-21.4%	-15.7%	-0.9%	-1.0%	+97.4
Minneapolis	Sept. 2006	-17.3%	-13.9%	+1.0%	+0.6%	+41.5
Cleveland	Aug. 2006	-11.1%	-7.3%	+0.7%	-0.6%	+9.7
Boston	Sept. 2005	-11.0%	-5.2%	+1.2%	+1.0%	+62.3
Chicago	Sept. 2006	-10.9%	-9.5%	+0.2%	-0.3%	+50.3
New York	June 2006	-9.0%	-7.3%	+0.2%	-0.4%	+94.2
Atlanta	Aug. 2006	-7.5%	-8.1%	+0.6%	+0.5%	+25.1
Seattle	July 2007	-7.3%	-7.1%	-0.2%	-0.5%	+78.3
Denver	Aug. 2006	-6.2%	-4.7%	+1.5%	+1.0%	+31.6
Portland	July 2007	-6.2%	-5.8%	-0.3%	+0.4%	+75.1
Dallas	June 2007	-3.1%	-3.2%	+0.7%	+1.0%	+22.4
Charlotte	Aug. 2007	-1.6%	-1.0%	+0.4%	+1.0%	+33.6
Composite 10	June 2006	-20.3%	-17.0%	-0.6%	-1.0%	+80.4
Composite 20	July 2006	-18.8%	-15.9%	-0.5%	-0.9%	+67.7

Percent of Housing Units Under Foreclosure or Preforeclosure Q4 2008 Data



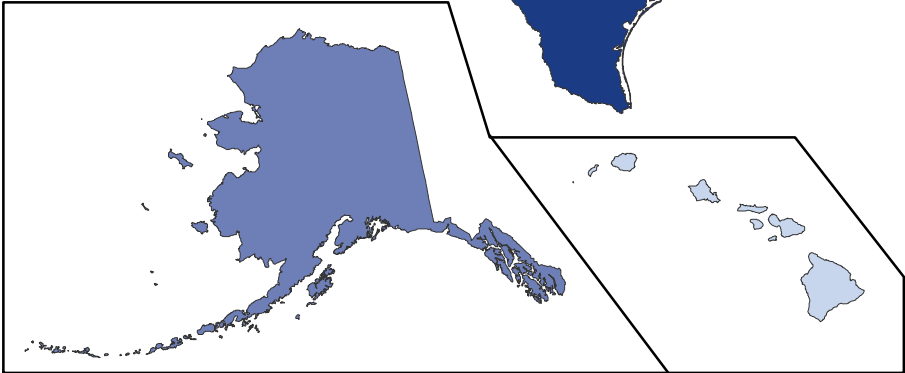
Compared to 2008
National Average (.79%)

States Above (8)

- 0.792% - 1.611%
- 1.612% - 2.573%
- 2.574% - 4.095%

States Below (42)

- 0.014% - 0.147%
- 0.148% - 0.350%
- 0.351% - 0.680%



Map created by Jeff Herlitz
Sources: Foreclosure.com; U.S. Census Bureau 2000



Real Estate Cycles

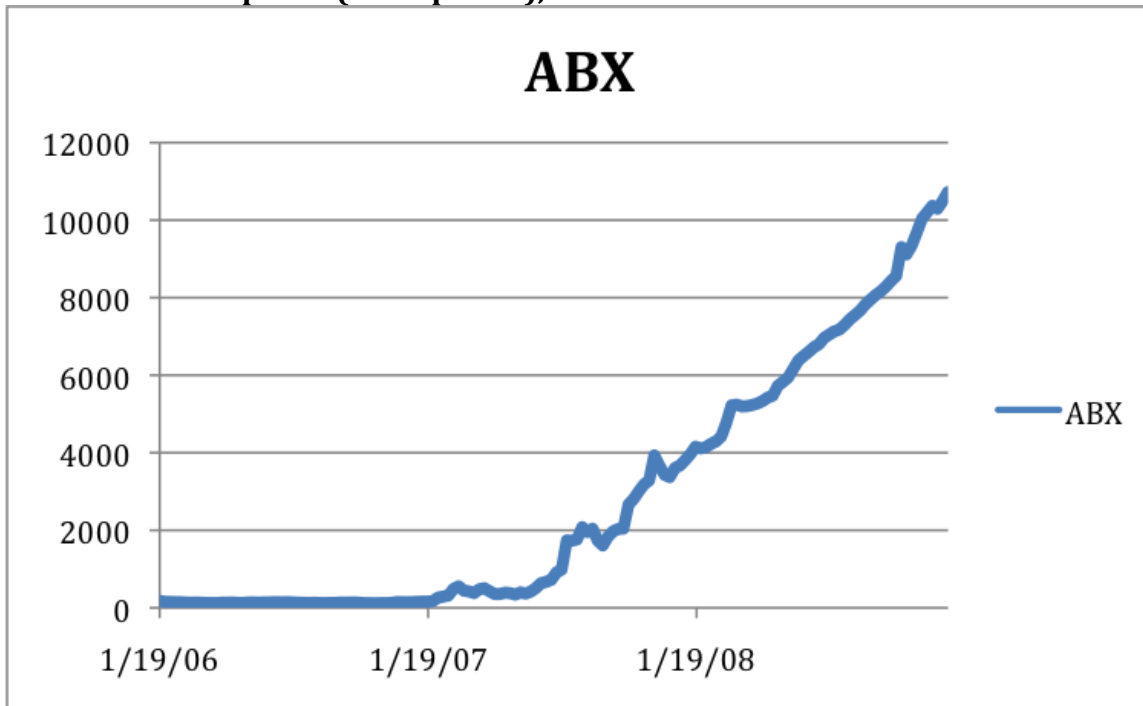
- “Natural” Cycles in real estate markets, with institutional, cultural and psychological correlates (Akerlof and Shiller, *Animal Spirits*).
Belief that houses dont lose value, “safe as houses,” TV Program *Flip that House*.

Starting in January 2007

- Financial technicalities, in increasing spread in ABX, “Panic in the Repo Market” beginning in January 2007 (Gary Gorton)
The ABX Index is a credit derivative that references 20 equally-weighted subprime RMBS tranches.
LIBOIS = LIBOR - Overnight Interest Swap.

from inception in January 2006 until the end of 2008. Appendix A briefly discusses the data and explains how these spreads can be calculated from underlying transaction prices. For our purposes in the body of the paper, we will just think of all spreads as a risk premiums and abstract from the details.

FIGURE 1: ABX Spread (basis points), 2006-2008



As Figure 1 shows, the ABX spread grew steadily throughout 2007 and 2008. The early growth is somewhat hidden by the scaling, a veil that we will remove in the next section by showing subperiods. Overall, the subprime securitization market demonstrated steady deterioration, with few interruptions, since the beginning of 2007. In contrast, during its first year of existence, this spread held steady near 150 basis points (bps).

We now know that the steadily increasing ABX spread reflected the decline in subprime housing prices, but this information was not directly available at the time because house price indices are computed with a lag. The ABX was the only market where this information was revealed.

D. Short-term Financing and the Repo Market

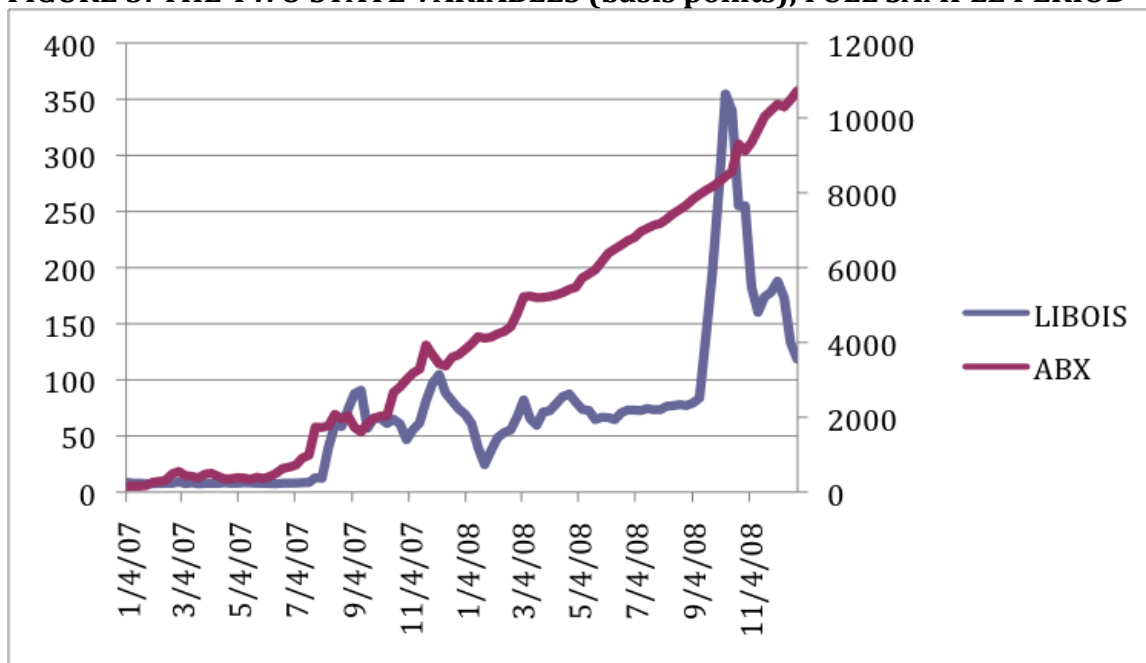
A demand deposit is a contract under which money is placed in a bank, with the right to ask for cash to be returned on demand. In principle, there is no maturity. Depositors “roll” their deposits as long as they do not need the cash and as long as they view the bank as being solvent. In a 19th century banking panic in the U.S., depositors ran to their banks en masse and demanded cash in exchange for their demand deposits. The current crisis is a banking panic and, as such, the banking

If there is no credit risk and no transactions costs, then the interest rate on an interbank loan should equal the overnight index swap (the expected fed funds cost of the loan). To see this consider an example: Bank 1 loans Bank 2 \$10 million for three months. Bank 1 funds the loan by borrowing \$10 million each day in the overnight fed funds market. Further, Bank 1 hedges the interest rate risk by entering into an overnight index swap under which Bank 1 agrees to pay a counterparty the difference between the contracted fixed rate and the overnight fed funds rate over the next three months. In the past arbitrage has kept this difference below 10 bps.

If the spread between LIBOR and the OIS widens, there is an apparent arbitrage opportunity. But, banks are not taking advantage of it. Why? The answer is that there is counterparty risk: that is, Bank 1 worries that Bank 2 will default and so there is a premium between the expected interest rates over the period, the OIS rate, and the rate on the loan, LIBOR. This is equivalent to a “currency premium,” referred to by observers of 19th century panics. We refer to the spread between LIBOR and the OIS as the “LIBOIS”, which is our second state variable.

In the following graphs, we place the two state variables together over different periods. Beginning with the next figure, our “full period” is from January 1, 2007 through December 25, 2008. In some figures of Section III, we also add some data from January 2009. In these pictures, it is easy to see why these two variables represent two distinct forces. Figure 3 shows both variables over the full 2007-8 period. For the ABX, we use the 2006-1 BBB tranche in all cases.

FIGURE 3: THE TWO STATE VARIABLES (basis points), FULL SAMPLE PERIOD

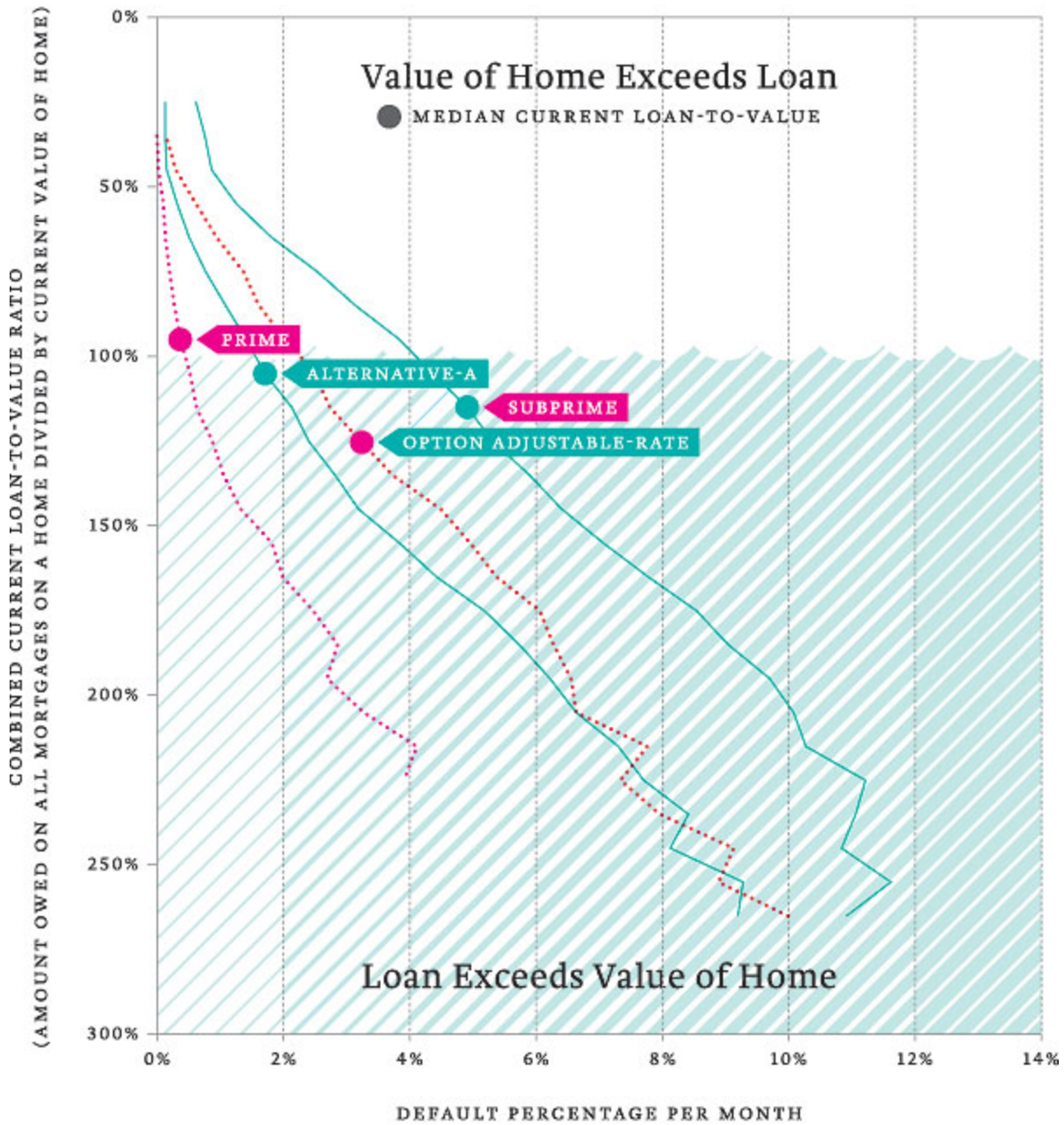


Leverage Cycle

- The Leverage cycle, that magnifies spillovers of movements in housing prices (Geanakoplos).

Monthly Mortgage Default Rate

(BASED ON PERFORMANCE OF ALL LOANS PACKAGED INTO SECURITIES IN 2006)



International Housing Price Cycle



