



## U.S. ECONOMIC & INTEREST RATE OUTLOOK

Northern Trust  
Global Economic Research  
50 South LaSalle  
Chicago, Illinois 60603  
northerntrust.com

Paul L. Kasriel  
Director of  
Economic Research  
312.444.4145  
312.557.2675 fax  
plk1@ntrs.com

Asha Bangalore  
Economist  
312.444.4146  
312.557.2675 fax  
agb3@ntrs.com

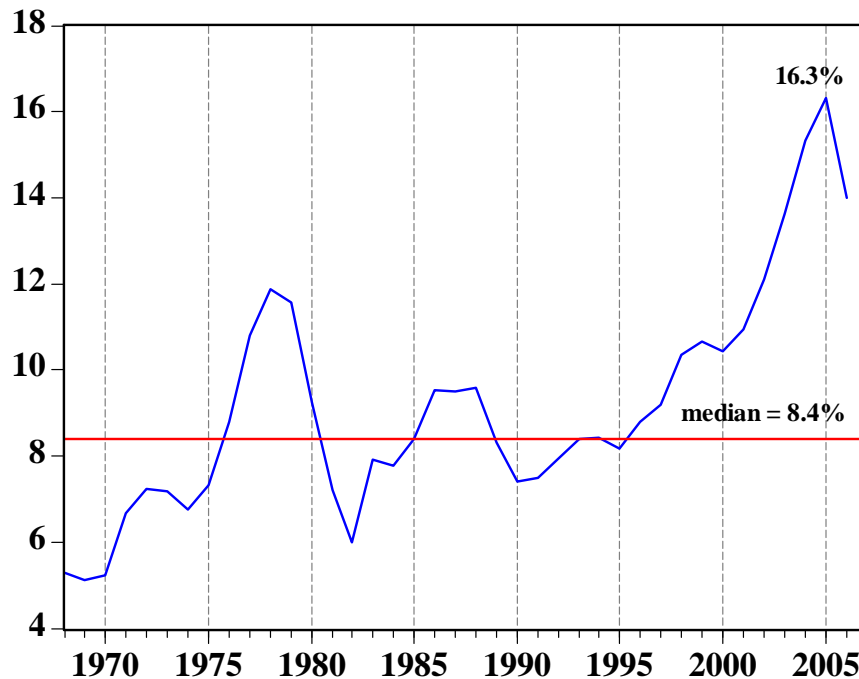
### How Housing Has Affected the Economic “Ecology”

April 18, 2008

The current housing bust followed arguably the biggest housing boom in the post-World War II era. Chart 1 shows that in 2005, the dollar volume of single-family home sales represented 16.3% of nominal GDP, the highest percentage since 1968, when the data begin. The median percentage over the 1968 through 2006 period is 8.4%. So, housing was a big deal in the last business expansion.

Chart 1

#### Dollar Volume of Single-Family Home Sales\* / Nominal GDP percent



\* combined new and existing home sales

Although employment growth was not such a big deal in the last expansion, had it not been for housing-related jobs, employment growth might have been even more muted. I have estimated that, *conservatively*, 35% of the new private sector nonfarm jobs created between the end of 2001, when the economy had just exited a recession, and the end of 2005, the peak in the housing cycle, were housing related. Housing related includes sectors such as construction,



housing materials manufacturing and sales, mortgage and real estate broking, home appraising, title insurance, and furniture and appliance manufacturing and sales. Employment in some other sectors undoubtedly benefited from the housing boom, but the employment data detail does not permit “assigning” some jobs directly to housing. Among the ancillary sectors would be transportation (the lumber has to be moved from one place to another), advertising (potential buyers needed to know about all those new housing developments) and financial services (the avalanche of mortgages had to be originated, securitized, distributed and traded in secondary markets). As Chart 2 shows, sadly a lot of those jobs are now being eliminated.

Chart 2  
**Civilians Employed: 16 Years and Over**



Not only did the recent housing boom create a lot of new jobs, but also an enormous amount of “paper” wealth for households, as shown in Chart 3. Because of “advances” in the home mortgage industry, households could get “advances” on the equity in their homes more easily and cheaply than in previous cycles. And households took advantage of this by tapping the equity in their homes sometimes to the tune of 6% of their disposable personal income (see Chart 4).

The opinions expressed herein are those of the author and do not necessarily represent the views of The Northern Trust Company. The Northern Trust Company does not warrant the accuracy or completeness of information contained herein, such information is subject to change and is not intended to influence your investment decisions.

Chart 3

Holding Gains on Residential Real Estate as % of Disposable Personal Income

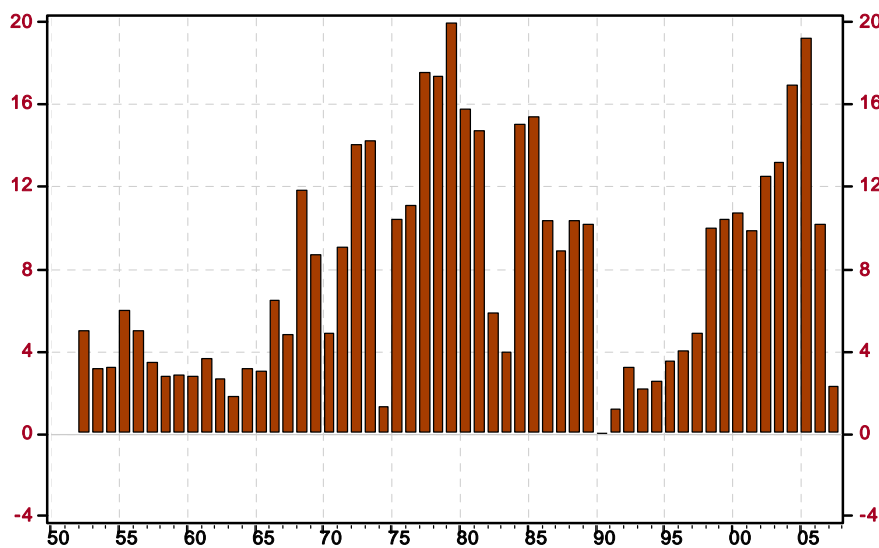
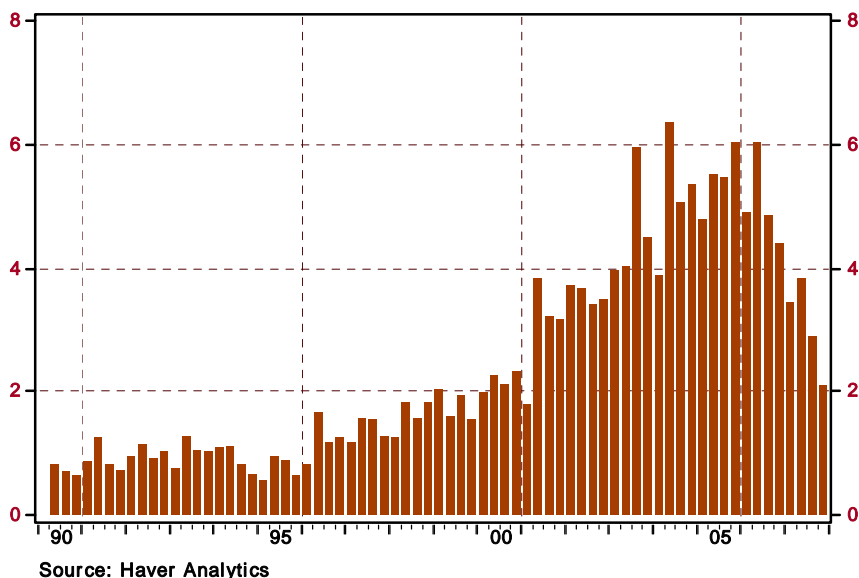


Chart 4

Active Mortgage Equity Withdrawal as % of Disposable Personal Income



The opinions expressed herein are those of the author and do not necessarily represent the views of The Northern Trust Company. The Northern Trust Company does not warrant the accuracy or completeness of information contained herein, such information is subject to change and is not intended to influence your investment decisions.

This extraction of home equity enabled households to consume relatively more of their income than they otherwise might have felt comfortable doing. In addition, in recent years, households have been huge net sellers of corporate equities back to corporations themselves (see Chart 5). Along with mortgage equity withdrawal, these net sales of corporate equities have put cash in the hands of households. These two factors go a long way in explaining why consumer spending as a percent of disposable personal income reached a post-World War II high in this past cycle (see Chart 6).

Chart 5  
**Household Net Sales of Corporate Equities**  
**as % of Disposable Personal Income**  
 4-qr. moving average

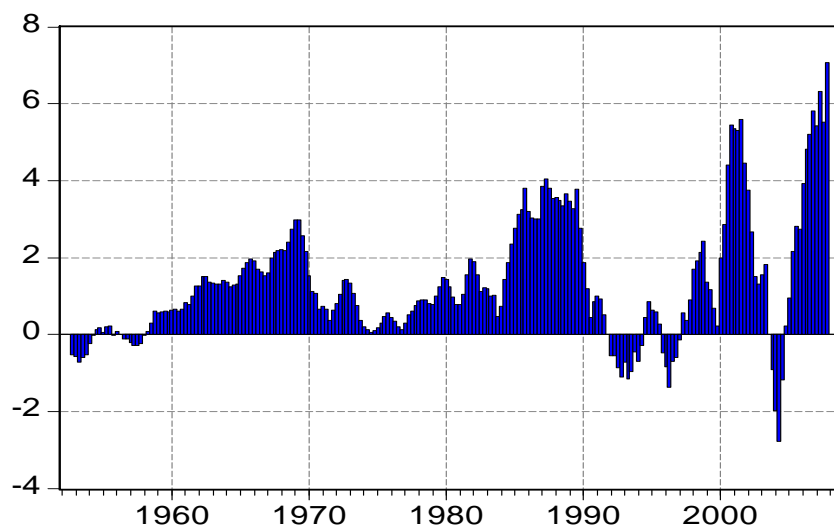
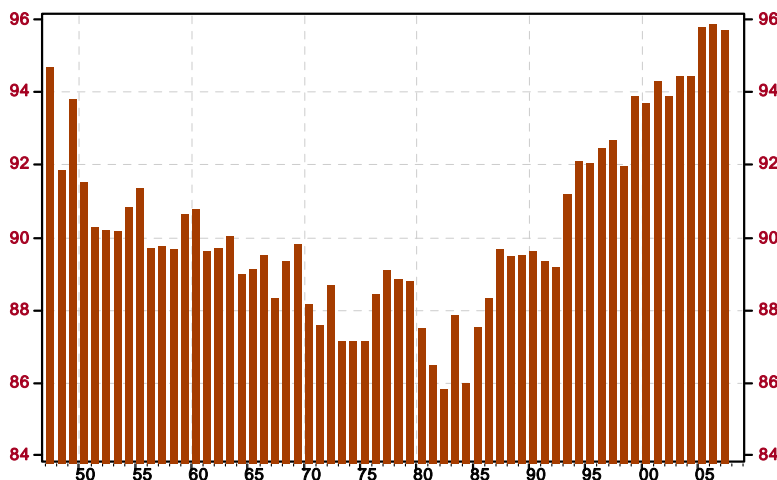


Chart 6  
**Personal Consumption Expenditures as % of Disposable Personal Income**



The opinions expressed herein are those of the author and do not necessarily represent the views of The Northern Trust Company. The Northern Trust Company does not warrant the accuracy or completeness of information contained herein, such information is subject to change and is not intended to influence your investment decisions.

Now that the housing bust has set in, however, homeowners' equity is declining (see Chart 7). Moreover, lenders are tightening their mortgage underwriting standards (see Chart 8). So, there is less home equity for households to withdraw and it is tougher to qualify for a mortgage or home equity loan in order to tap the remaining equity. Put this together with a rising unemployment rate (Chart 9), and you have the ingredients for a *contraction* in price-adjusted retail sales (see Chart 10).

Chart 7  
Households & Nonprofit Organizations: Owners Equity in Real Estate

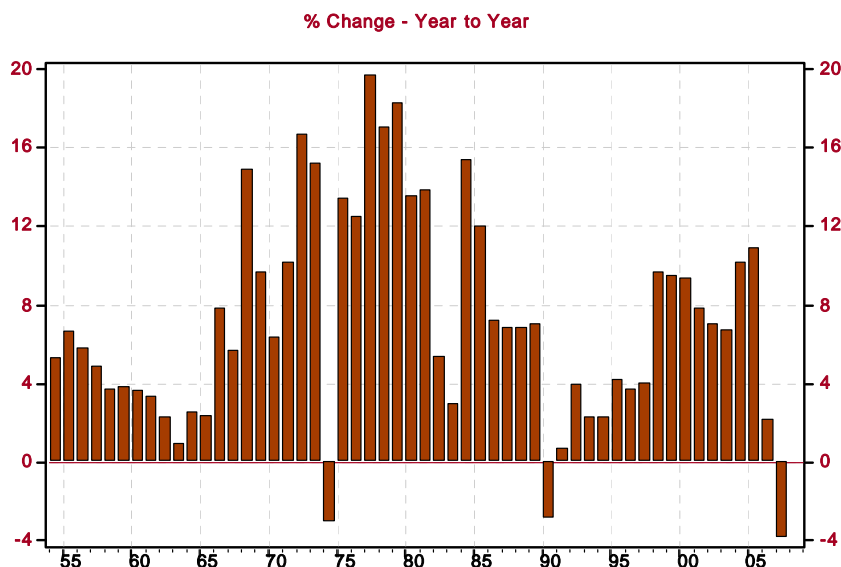
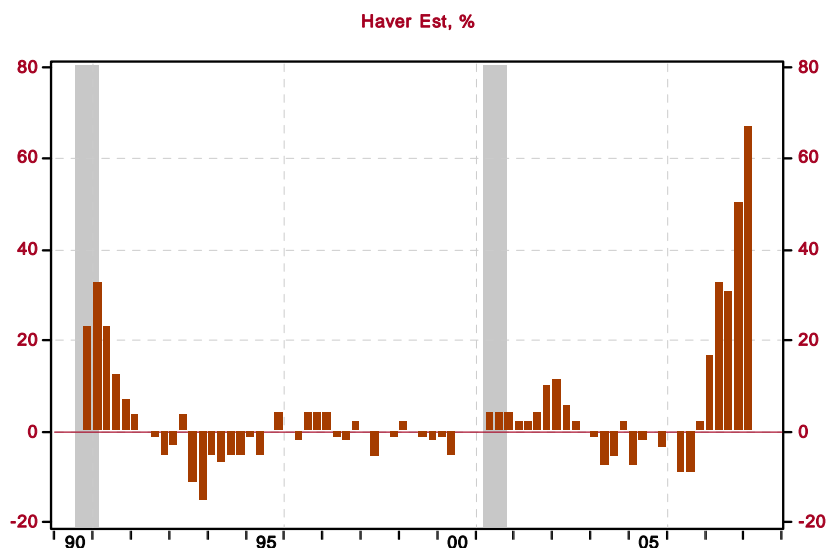


Chart 8  
FRB Sr Loan Survey: Res Mortgages: Net Share, Banks Tightening



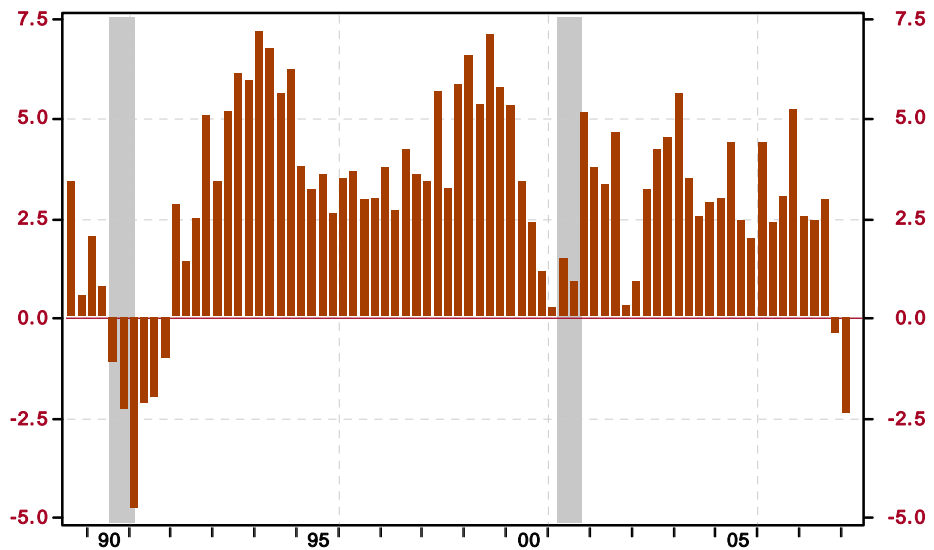
Source: Federal Reserve Board /Haver Analytics

The opinions expressed herein are those of the author and do not necessarily represent the views of The Northern Trust Company. The Northern Trust Company does not warrant the accuracy or completeness of information contained herein, such information is subject to change and is not intended to influence your investment decisions.

Chart 9  
**Civilian Unemployment Rate: 16 yr +**  
 SA, %

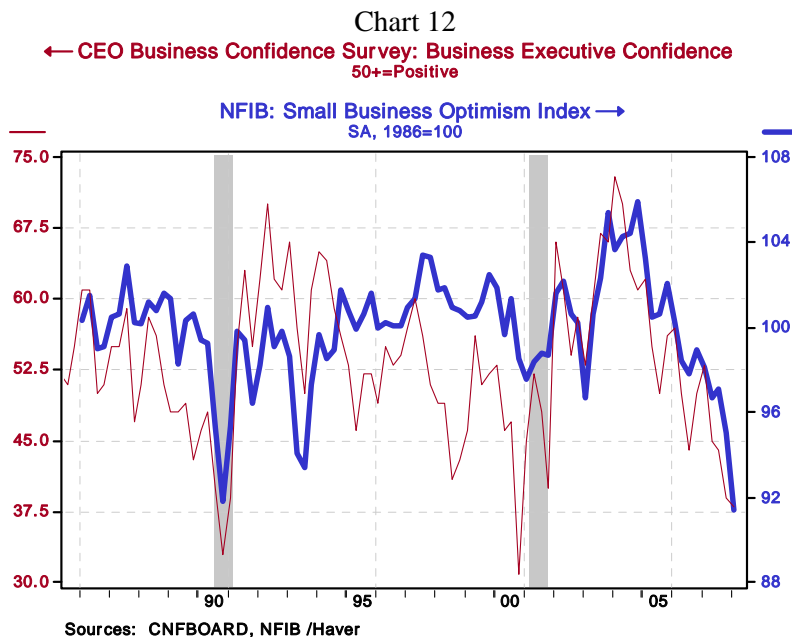


Chart 10  
**CPI-Adjusted Retail Sales**  
 % Change - Year to Year

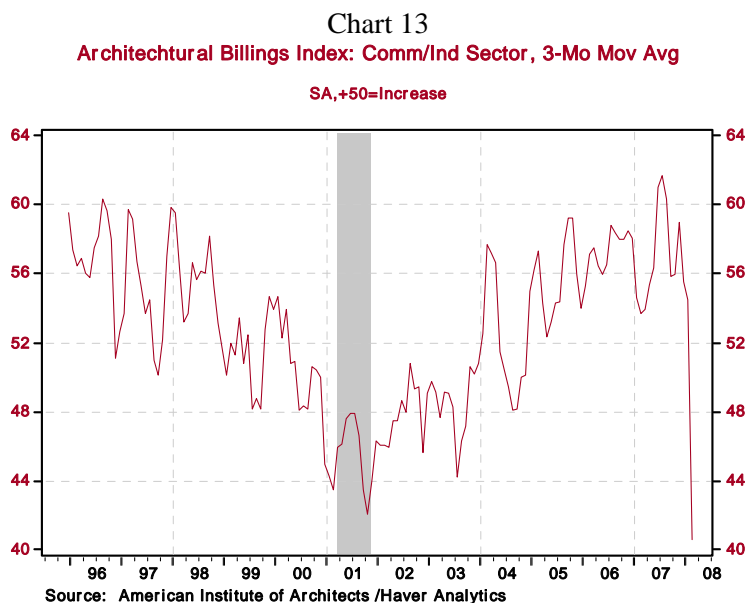


The opinions expressed herein are those of the author and do not necessarily represent the views of The Northern Trust Company. The Northern Trust Company does not warrant the accuracy or completeness of information contained herein, such information is subject to change and is not intended to influence your investment decisions.

With the housing sector still contracting and the consumer sector beginning to, the pace of economic activity in other sectors also will slow. Both large and small business sentiment has soured (see Chart 11), which will likely dull “animal spirits” with regard to capital spending.



With the unemployment rate rising and retail spending slowing, office and retail space vacancy rates are beginning to rise. This explains why billings of architectural firms appear to be cliff-diving (see Chart 13). So, activity in the non-residential construction sector is likely to slow in the coming quarters.



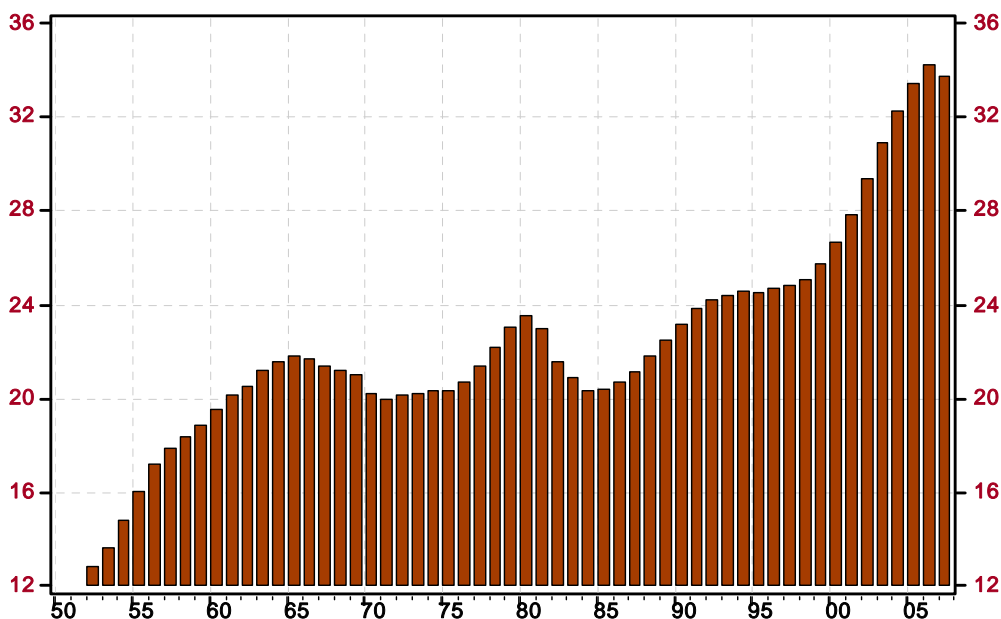
The opinions expressed herein are those of the author and do not necessarily represent the views of The Northern Trust Company. The Northern Trust Company does not warrant the accuracy or completeness of information contained herein, such information is subject to change and is not intended to influence your investment decisions.

Lastly, spending by state and local governments will be constrained by weak revenue growth resulting from the slowdown in economic growth in general, and the recession in housing in particular. To put it into perspective, last year, real state and local government spending accounted for 11% of real GDP – about one percentage point less than real exports – and was 1.7 times as large as real federal government expenditures in the GDP accounts.

Not surprisingly, the housing boom was accompanied by a home mortgage boom. Home mortgage debt as a percent of total U.S. nonfinancial debt reached a post-World War II record high in this past cycle (see Chart 14.) Home mortgage debt now is twice as much as outstanding U.S. Treasury debt held by the public (see Chart 15). And in this past cycle, home mortgage borrowing (i.e., the change in debt outstanding) rose to a record high in relation to nominal GDP (see Chart 16). In short, home mortgage debt is the single largest debt class outstanding in the U.S. economy.

Chart 14

**Home Mortgages as % of Total Domestic Nonfinancial Debt**



The opinions expressed herein are those of the author and do not necessarily represent the views of The Northern Trust Company. The Northern Trust Company does not warrant the accuracy or completeness of information contained herein, such information is subject to change and is not intended to influence your investment decisions.

Chart 15

Home Mortgages as % of U.S. Treasury Debt

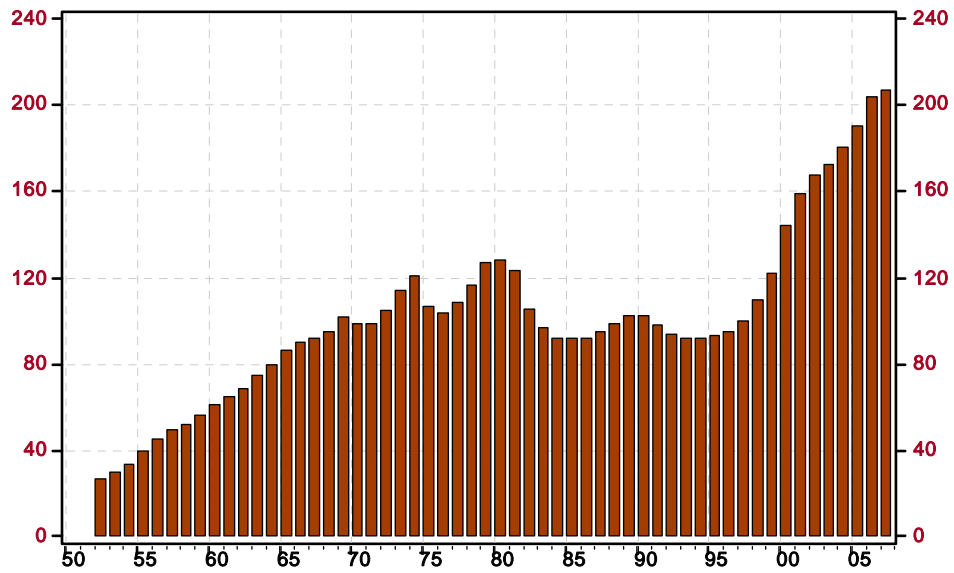
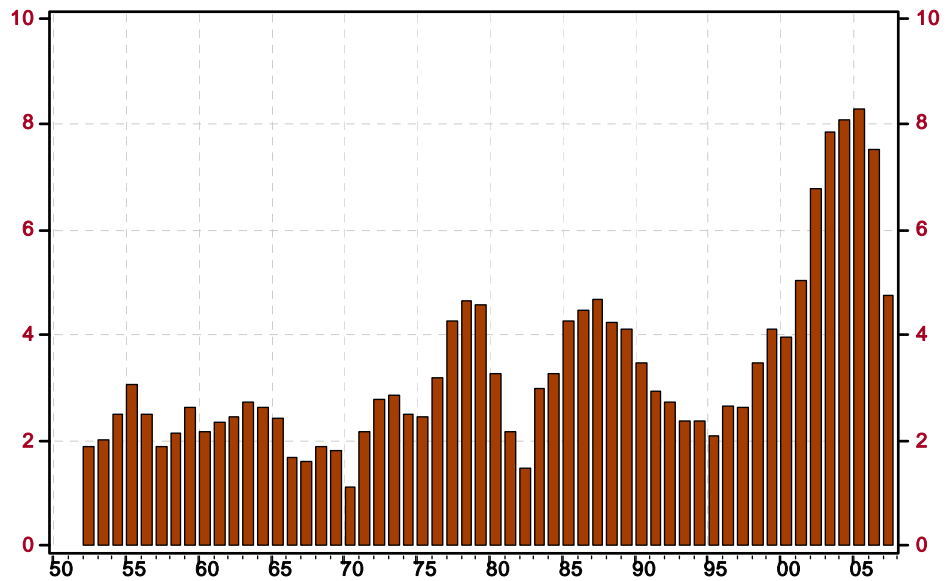


Chart 16

Home Mortgage Borrowing as % of Nominal GDP

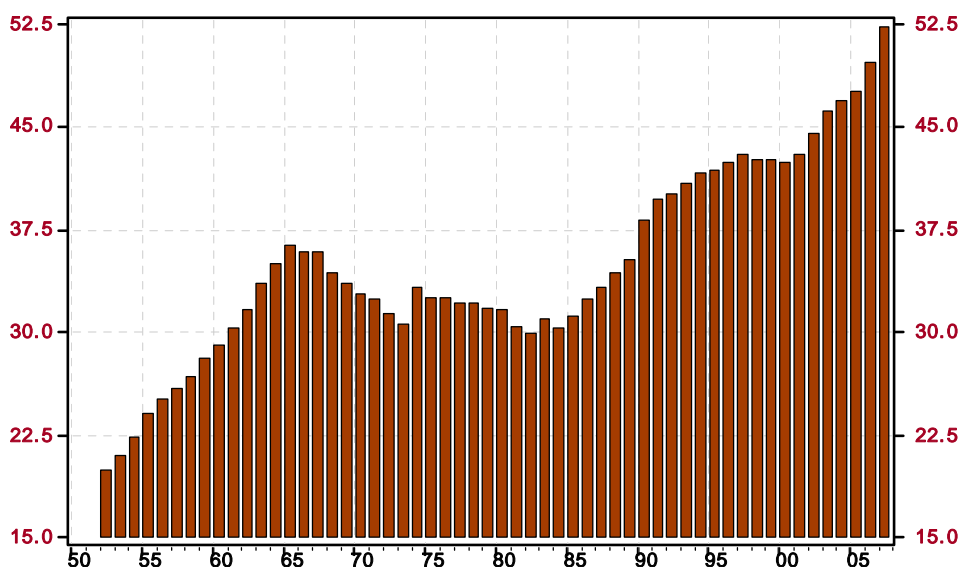


The opinions expressed herein are those of the author and do not necessarily represent the views of The Northern Trust Company. The Northern Trust Company does not warrant the accuracy or completeness of information contained herein, such information is subject to change and is not intended to influence your investment decisions.

Despite outsized increases in property values, leverage in residential real estate reached a record high in the past cycle (see Chart 17). So, homeowners (renters with options to buy?) have never had less “skin in the game” than they do now.

Chart 17

**Home Mortgage Debt as % of Market Value of Residential Real Estate**



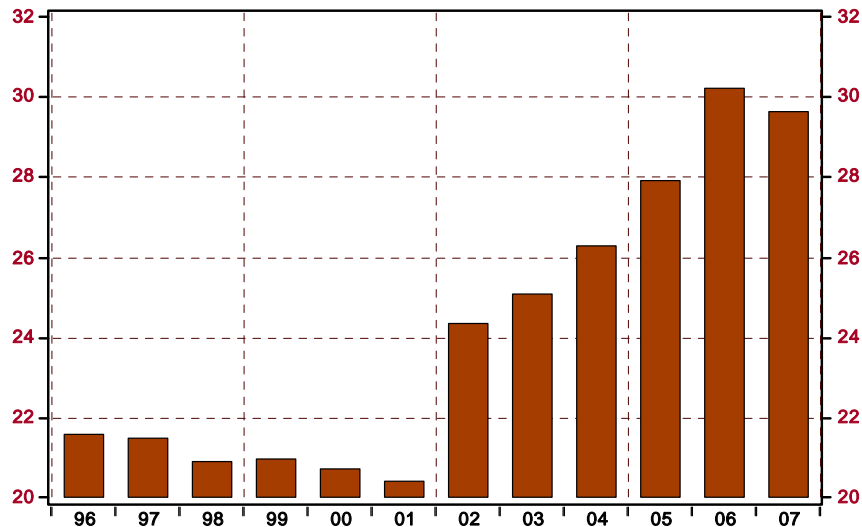
In this past cycle, the conventional wisdom was that commercial banks were in the originate-and-distribute business rather than the originate-and-retain business. Like a lot of conventional wisdom, this one is not supported by the facts. Chart 18 shows that in this past housing/mortgage boom cycle, large commercial banks significantly increased their holdings of home mortgages and home equity loans. These are the mortgages themselves, not mortgage-backed products. Chart 19 shows that in this past housing/mortgage boom all U.S. commercial banks increased their total mortgage-related assets to over 60% of their total earning assets – a post World War II record high. Mortgage-related assets include whole loans, as in Chart 18, mortgage-backed securities and the direct liabilities of the government sponsored enterprises, largely Fannie Mae and Freddie Mac. These mortgage-related assets also include commercial mortgage products. If commercial banks were originating and distributing mortgages, they must have been buying back a lot of the mortgages they had originated in some securitized form.

The opinions expressed herein are those of the author and do not necessarily represent the views of The Northern Trust Company. The Northern Trust Company does not warrant the accuracy or completeness of information contained herein, such information is subject to change and is not intended to influence your investment decisions.

Chart 18

**Large U.S. Commercial Banks: Home Mortgage Loans / Total Bank Credit**

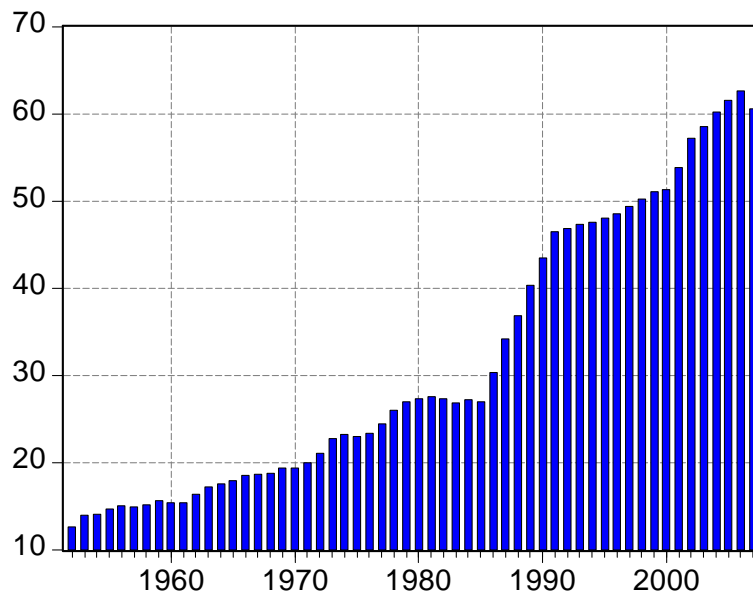
%



Source: Haver Analytics

Chart 19

**U.S. Commercial Banks: Total Mortgage-Related Assets / Total Earning Assets**  
percent



The opinions expressed herein are those of the author and do not necessarily represent the views of The Northern Trust Company. The Northern Trust Company does not warrant the accuracy or completeness of information contained herein, such information is subject to change and is not intended to influence your investment decisions.

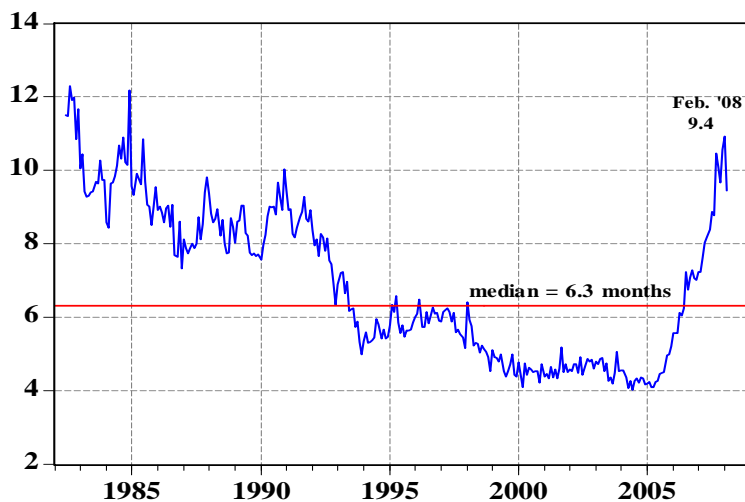
Herein lies the problem. The collateral of the single largest debt class in the U.S. is experiencing perhaps its most severe decline in value in the post-World War II era, as shown in Chart 20. And with still large excess inventories of homes (see Chart 21), there is no relief in sight for home prices.

Chart 20  
**Weighted-Median 1-Family Home Sale Price\***  
**year-over-year percent change**



\* Weighted by proportions of new and existing 1-family homes sold

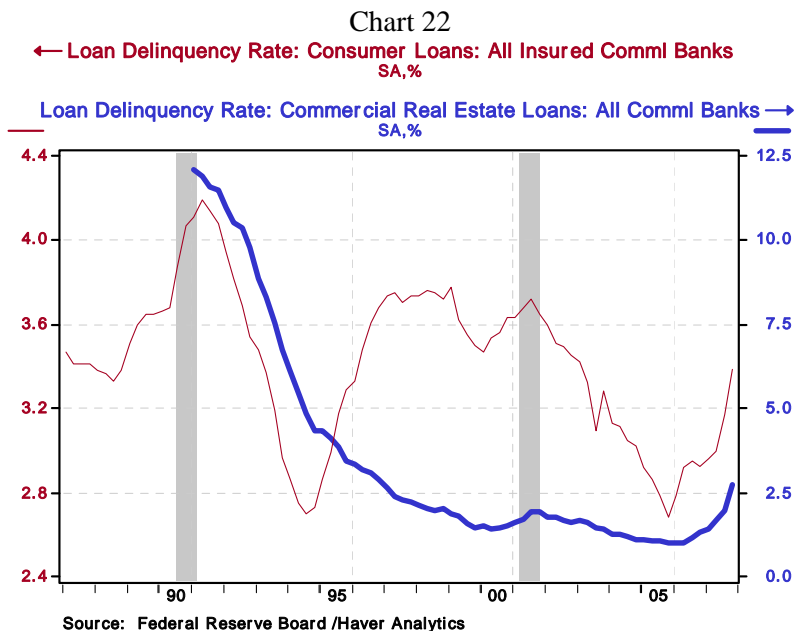
Chart 21  
**Total Single-Family Homes\*: Inventory/Sales Ratio**  
**months' supply**



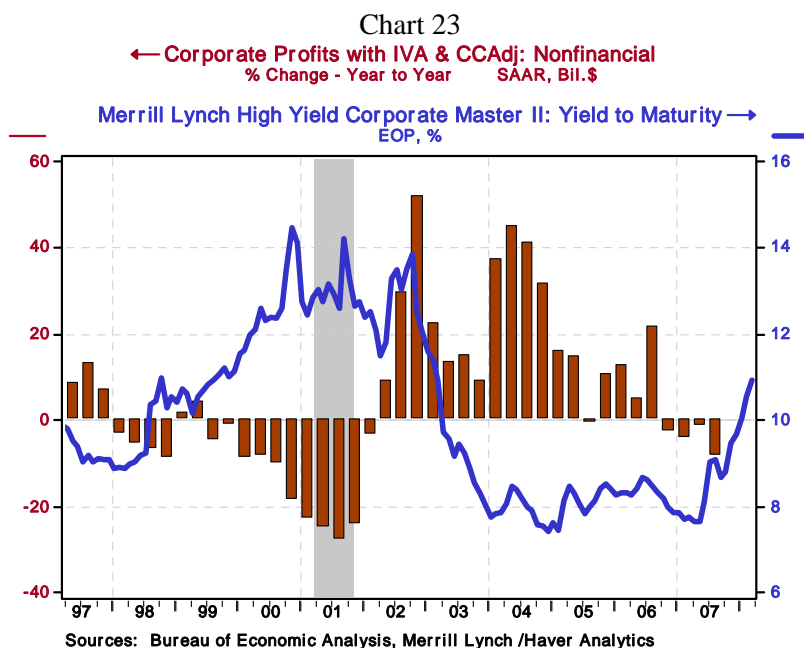
\*Combined new and existing

The opinions expressed herein are those of the author and do not necessarily represent the views of The Northern Trust Company. The Northern Trust Company does not warrant the accuracy or completeness of information contained herein, such information is subject to change and is not intended to influence your investment decisions.

Although the largest credit problems are in the home mortgage market, distress is beginning to be signaled in the consumer and commercial real estate loan markets, too, as evidenced by the recent rise in delinquency rates for these loans (see Chart 22).



With nonfinancial corporate profits contracting, not to mention contracting financial corporate profits, and interest rates on high-yield corporate bonds rising in *absolute* terms (see Chart 23), increased corporate bond defaults also are likely in 2008.



The opinions expressed herein are those of the author and do not necessarily represent the views of The Northern Trust Company. The Northern Trust Company does not warrant the accuracy or completeness of information contained herein, such information is subject to change and is not intended to influence your investment decisions.

In sum, the economic “ecology” has been disturbed first by the recent boom in housing and now by the current bust in housing. As a result, the current recession is likely to be more severe than the last one because it will be concentrated in the household sector, which accounts for about 75% of real GDP. Because financial institutions will experience large losses across a wide spectrum of credit classes and because there is the likelihood of increased regulation, the financial system will be capital “impaired,” probably through 2009. Even though the Federal Reserve is and will continue to offer “cheap” credit to the financial system throughout 2008 and into early 2009, financial institutions will have diminished demand for the Fed’s offer because they will not have the capital to support lending to the private sector. Thus, the economic recovery, which is likely to emerge late in 2008, will be muted due to the lack of credit creation from financial institutions. So, don’t expect a V-shaped recovery, but rather a U-shaped or even L-shaped one.

*\*Paul Kasriel is the recipient of the Lawrence R. Klein Award for Blue Chip Forecasting Accuracy*

**THE NORTHERN TRUST COMPANY  
ECONOMIC RESEARCH DEPARTMENT  
April 2008  
SELECTED BUSINESS INDICATORS**

**Table 1 US GDP, Inflation, and Unemployment Rate**

	2007				2008				Q4-t-Q4 change			Annual change		
	07:1a	07:2a	07:3a	07:4a	08:1f	08:2f	08:3f	08:4f	2006a	2007a	2008f	2006a	2007a	2008f
<b>REAL GROSS DOMESTIC PRODUCT</b> (% change from prior quarter )	0.6	3.8	4.9	0.6	-0.1	-0.7	0.3	0.1	2.6	2.5	-0.1	2.9	2.2	0.8
<b>CONSUMPTION EXPENDITURES</b>	3.7	1.4	2.8	2.3	0.5	-0.4	0.3	-0.2	3.4	2.6	0.0	3.1	2.9	0.9
<b>BUSINESS INVESTMENT</b>	2.1	11.0	9.3	6.0	-0.2	-1.2	-1.5	0.5	5.2	7.1	-0.6	6.6	4.7	2.4
<b>RESIDENTIAL INVESTMENT</b>	-16.3	-11.8	-20.5	-25.2	-22.0	-12.0	-6.0	-3.0	-12.8	-18.6	-11.1	-4.6	-17.0	-17.2
<b>CHANGE IN INVENTORIES ('00 dlrs, bill)</b>	0.1	5.8	30.6	-18.3	-16.1	-23.1	-18.1	-14.1				40.3*	4.5*	-17.9*
<b>GOVERNMENT</b>	-0.5	4.1	3.8	2.0	1.9	1.4	1.5	1.5	2.5	2.3	1.5	1.8	2.0	2.1
<b>NET EXPORTS ('00 dlrs, bill.)</b>	-612.1	-573.9	-533.1	-503.2	-490.1	-478.6	-473.7	-472.9				-624.5*	-555.6*	-478.8*
<b>FINAL SALES</b>	1.3	3.6	4.0	2.4	-0.2	-0.5	0.1	0.0	3.0	2.8	0.0	2.8	2.5	1.0
<b>NOMINAL GROSS DOMESTIC PRODUCT</b>	4.9	6.6	6.0	3.0	4.0	1.4	1.8	1.5	5.4	5.1	2.2	6.1	4.9	3.3
<b>GDP DEFLATOR - IMPLICIT (% change)</b>	4.2	2.6	1.0	2.4	4.0	2.1	1.6	1.4	2.7	2.6	2.3	3.2	2.7	2.4
<b>CPI (% Change, 1982-84 = 100)</b>	3.7	4.6	2.8	5.0	4.3	2.4	1.9	1.7	2.0	4.0	2.6	3.2	2.9	3.4
<b>CIVILIAN UNEMPLOYMENT RATE (avg.)</b>	4.5	4.5	4.7	4.8	4.9	5.3	5.8	6.1				4.6*	4.6*	5.5*

a=actual  
f=forecast  
\*=annual average

**Table 2 Outlook for Interest Rates**

SPECIFIC INTEREST RATES	Quarterly Average										Annual Average		
	06:3a	06:4a	07:1a	07:2a	07:3a	07:4a	08:1a	08:2f	08:3f	08:4f	2006a	2007a	2008f
<b>Federal Funds</b>	5.25	5.25	5.26	5.25	5.07	4.50	3.18	2.10	2.00	2.00	4.96	5.02	2.32
<b>3-mo.LIBOR</b>	5.43	5.37	5.36	5.36	5.45	5.03	3.26	2.45	2.15	2.10	5.19	5.30	2.49
<b>2-yr. Treasury Note</b>	4.93	4.74	4.77	4.81	4.38	3.48	2.02	1.85	1.90	2.05	4.82	4.36	1.96
<b>10-yr. Treasury Note</b>	4.90	4.63	4.68	4.85	4.73	4.26	3.66	3.50	3.40	3.40	4.79	4.63	3.49

a = actual  
f = forecast

The opinions expressed herein are those of the author and do not necessarily represent the views of The Northern Trust Company. The Northern Trust Company does not warrant the accuracy or completeness of information contained herein, such information is subject to change and is not intended to influence your investment decisions.