



Housing – Why We Expect A Hard Landing

Barely a day goes by without more bad news about housing. One day it's steadily declining national sales data. The next day, a homebuilder pre-announces an earnings shortfall. The following day, a lender reports recent sharp increases in "early payment defaults", where a home mortgage borrower can't make the first or second payment.

So saying that housing is weak doesn't add to the economic debate. What we do add is our view that this housing downturn will be of notably longer duration, with a lower bottom, than the consensus expects. If we're correct, this will have an important impact on GDP, job growth, and interest rates.

Why the gloomy housing outlook? Because we believe housing's current problems are only the first of three phases:

Phase 1 - today: *Low affordability* causes home sales to decline.

Phase 2 - 2007: *Job growth* slows or declines due to slowing debt growth. Weak jobs further reduce the demand for housing.

Phase 3 - 2007-2008: *Mortgage lending standards* tighten in response to sharply rising mortgage defaults. Tighter lending standards reduce housing demand even further.

Our summary housing view:

- *Existing single family home sales* should bottom at 25-30% from the mid-'05 peak of 7.2 million. At present, existing home sales are down about 12% from their peak.
- *New single family housing starts* should bottom at 40% from the late-'05 peak of 2.2 million units. At present, starts are down about 20% from their peak.
- *Existing single family home prices* should fall 5-10% from their peak of \$275,000 reached last summer. At present, home prices are about 2% lower.

Our summary GDP outlook:

- *The economy* is likely to slip into a recession in '07 that might persist into '08.
- *Jobs* will likely be flat to down in '07 and perhaps '08.
- *The Federal Reserve* will likely aggressively ease beginning in '07. Fed funds could very well fall below 4% by '08.

PHASE 1 AND TODAY'S PROBLEM: LOW HOUSING AFFORDABILITY.

Trying to estimate housing demand is a silly endeavor. The answer is easy – it is limitless. Pretty much everybody wants a house. And when we get one, we want a bigger one. Then we want a second one, and a third one would be pretty cool too.

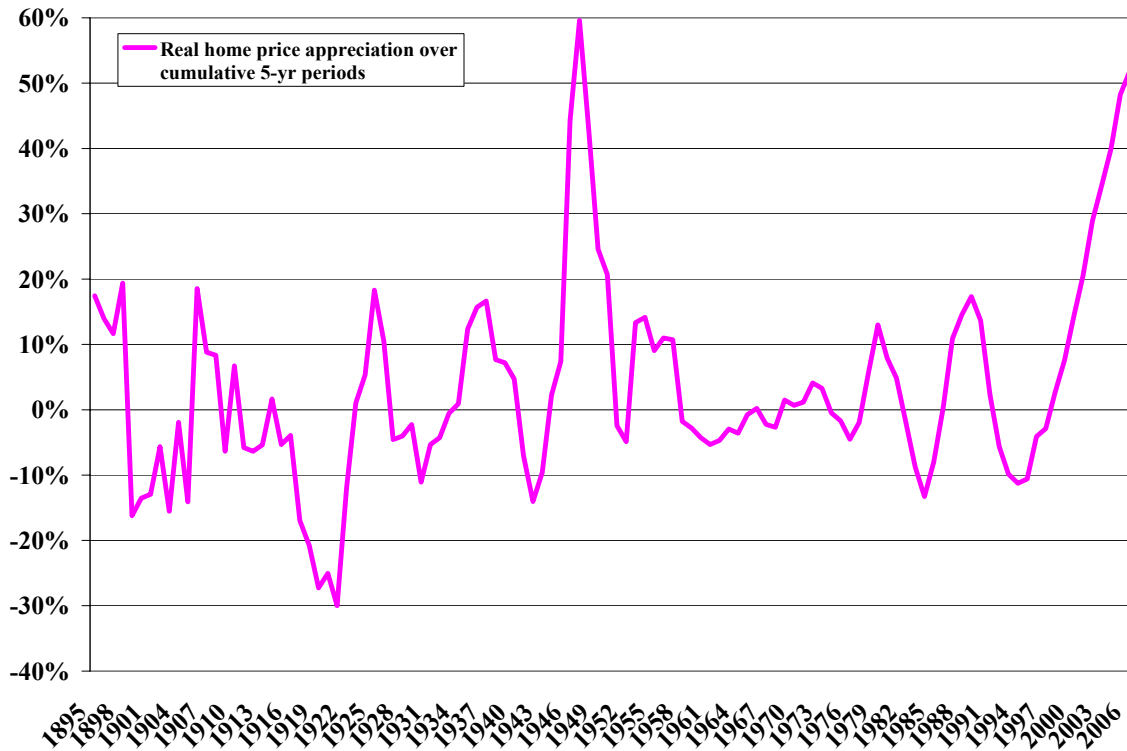
The useful area of study is really housing *affordability*. Can I finance that first house, or that bigger house, or that second one, and still afford to buy food, pay the electric bill and maybe even furnish the place?

Housing affordability compares homebuyers' income to the cost of financing a home, which in turn is a function of the price of the home prices and of prevailing mortgage rates. We Americans have tested the limits of affordability over the past five years. Since the end of 2001, disposable personal income is up about 25% and mortgage rates are little changed. That argues for 25% higher home prices. Instead, home prices rose on average by 50% and in many major markets rose by 100% or more. In fact, **Chart 1** shows



that home price increases adjusted for inflation over the past five years were the second fastest cumulative 5-year growth rate in publicly recorded history, going all the way back to 1890! This recent boom was only surpassed by the late 1940s/early 1950s, a natural period of recovery from a Depression and a World War.

Chart 1
The recent rise in home prices wasn't just good, it was the second biggest in over a century.

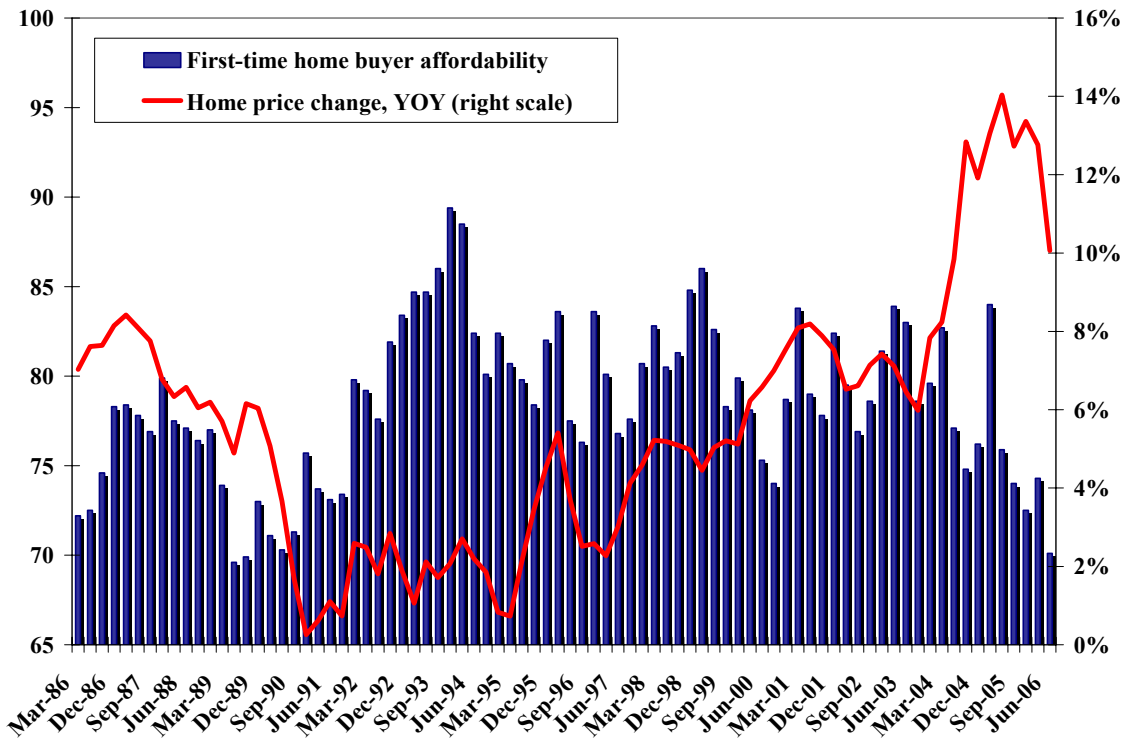


Source: Robert Shiller, *Irrational Exuberance*, 2nd edition

As a result of the '02-'05 price spike, housing affordability is at cyclical lows. **Chart 2** shows that the critical first-time homebuyer affordability recently fell below the late '80s low, when the problem was double digit mortgage rates. It is therefore no surprise that the National Association of Realtors reported that existing home sales in August fell by 13% versus the prior August, and median home prices fell by 2%. Added to this central affordability issue are other problems for home sales – fleeing housing speculators, sellers racing into the market trying to top-tick the market and building up inventory and a media publicizing all of the above.



Chart 2
The boom in home prices has driven many first time home buyers out of the market.



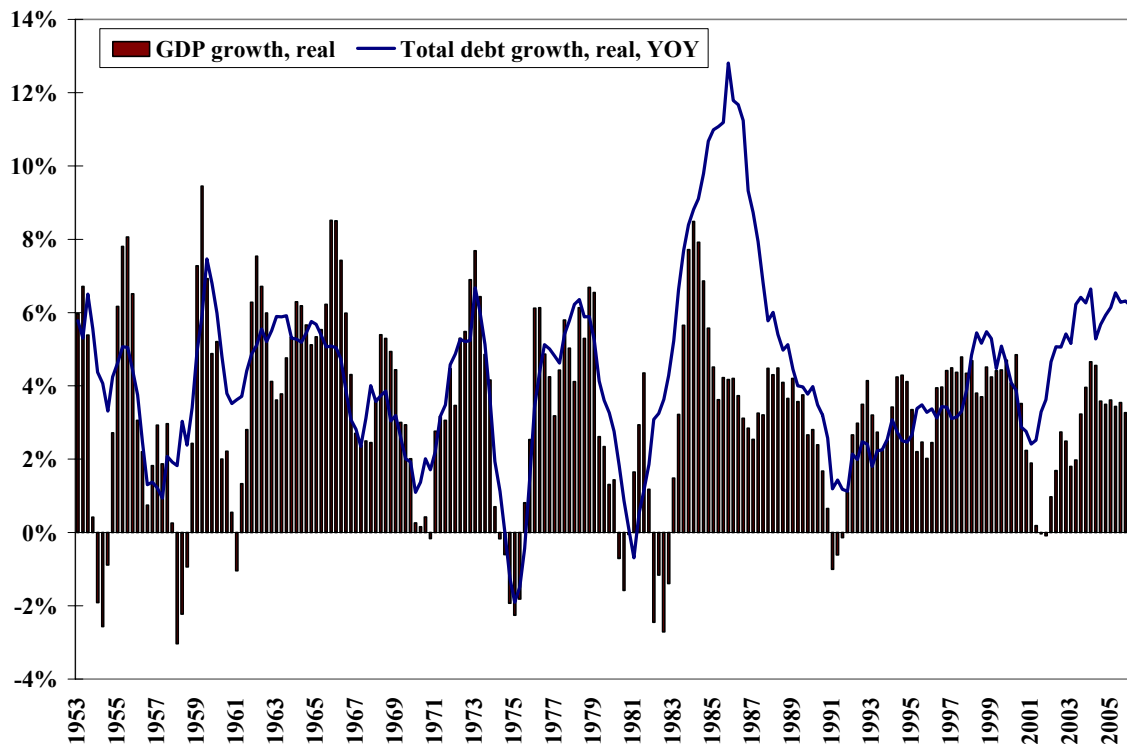
Source: OFHEO and Bloomberg

PHASE 2 AND NEXT YEAR’S PROBLEM: SLOWING/ENDING JOB GROWTH

We expect job growth to plummet over the next year as a direct result of low housing affordability. We draw this conclusion by applying our “debt growth” forecasting tool. **Chart 3** shows why this tool makes sense. The chart shows that “national” debt growth (the sum of consumer, business and government debt) is very closely correlated with GDP growth.



Chart 3
Debt growth drive GDP growth and debt growth is ready to fall sharply.



Source: Federal Reserve

Chart 4 clearly shows that debt growth is a good leading indicator of job growth. Why is that? Because debt growth and job growth are linked by several commonsensical steps:

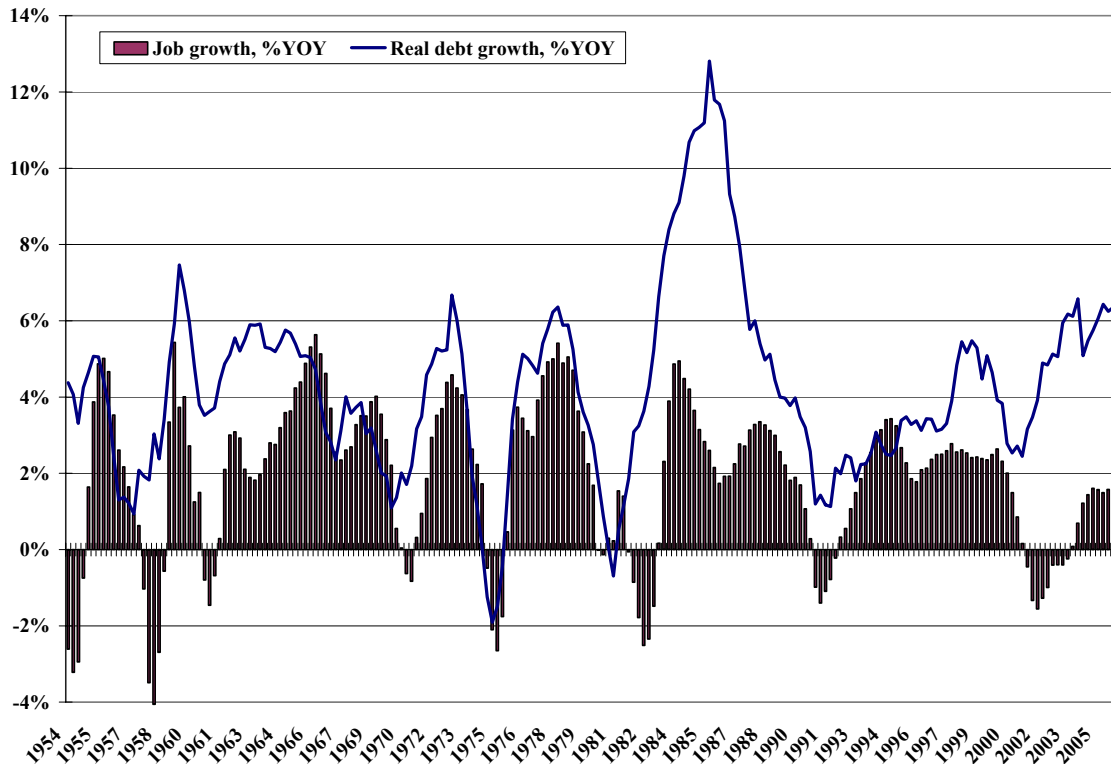
- Entities (households, businesses, governments) borrow money, encouraged by monetary, fiscal and/or lending policies.
- The great bulk of the borrowed money is then spent. Hence the link between debt growth and GDP.
- Companies (and some government agencies) are the recipients of that spending, so the demand for their products and services increases as borrowing increases.
- The increase in demand requires an increase in capacity to meet that demand, so companies need to hire more people.

And very importantly, *vice versa*.



Chart 4

Debt growth is a leading indicator for job growth. And debt growth is about to slow materially.



Source: Federal Reserve, Commerce Department

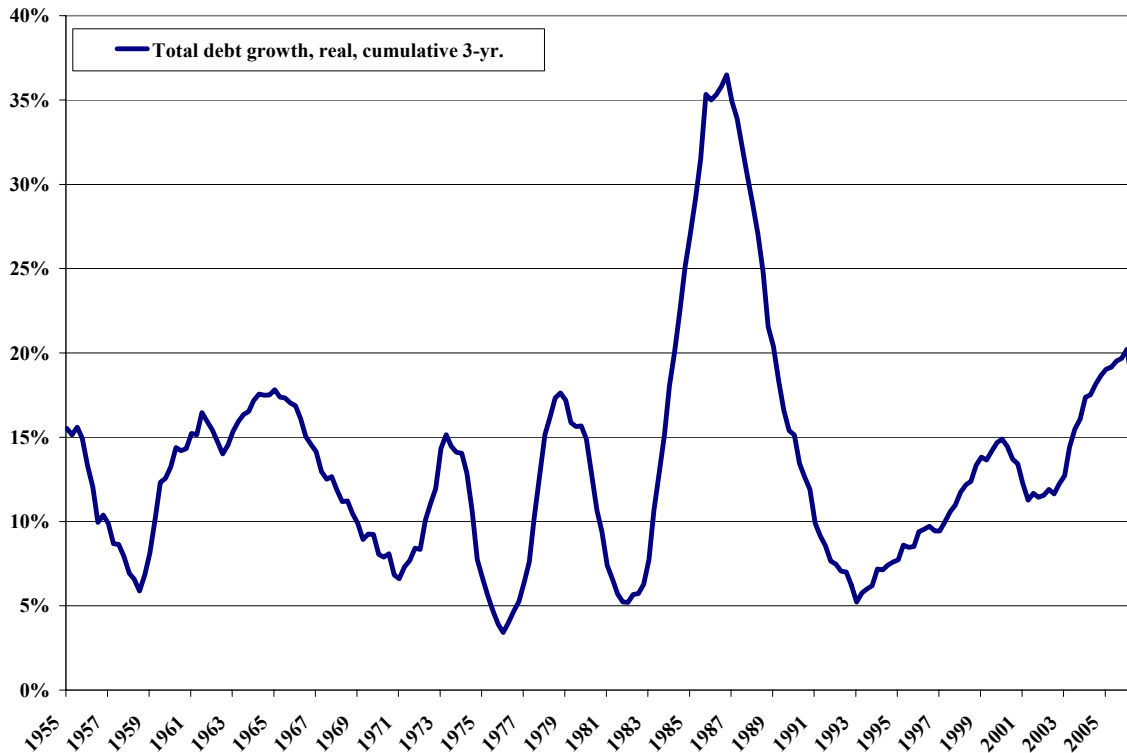
A quick practical example:

- My home has appreciated in value from \$200,000 to \$225,000, so my mortgage lender decides I can refinance my mortgage and increase its size while still keeping my loan to value at the 80% limit.
- I take advantage of this friendly offer and thus increase the size of my mortgage by \$20,000.
- I spend that \$20,000 at both Home Depot (a new den) and at Best Buy (the new den cries out for a flat panel TV).
- Home Depot, Best Buy and their suppliers all have higher sales.
- Home Depot, Best Buy, etc. then need to hire more people to fulfill those sales.

Let's apply this debt growth theory to today's situation. **Chart 5** shows that the U.S. is in the midst of the second biggest debt boom in modern economic history. The centerpiece of this debt boom has been home mortgages. Of the record \$2.3 trillion we Americans borrowed in 2005, an also-record \$1.2 trillion was home mortgage debt.



Chart 5
The recent debt boom is the America's second highest in modern history.



Source: Federal Reserve

We estimate that average nominal GDP growth over the long term is 5-6%. Logically, "normal" debt growth should be roughly the same rate. After all, we should be able to grow debt much faster than the rate at which our income grows. History shows that debt growth has in fact averaged about one percentage point faster than GDP growth, so we'll round up to 7%. But nominal debt growth last year was 9.5%, not 7.0%, or an excess of about \$600 billion. That's a lot of extra juice to the economy. In fact, the extra borrowing represented nearly 5% of GDP.

We expect the borrowing growth rate to revert to normal by 2007 and to go below normal in '08 and perhaps '09. The driver behind slowing debt growth is ultimately the housing affordability problem, in three ways:

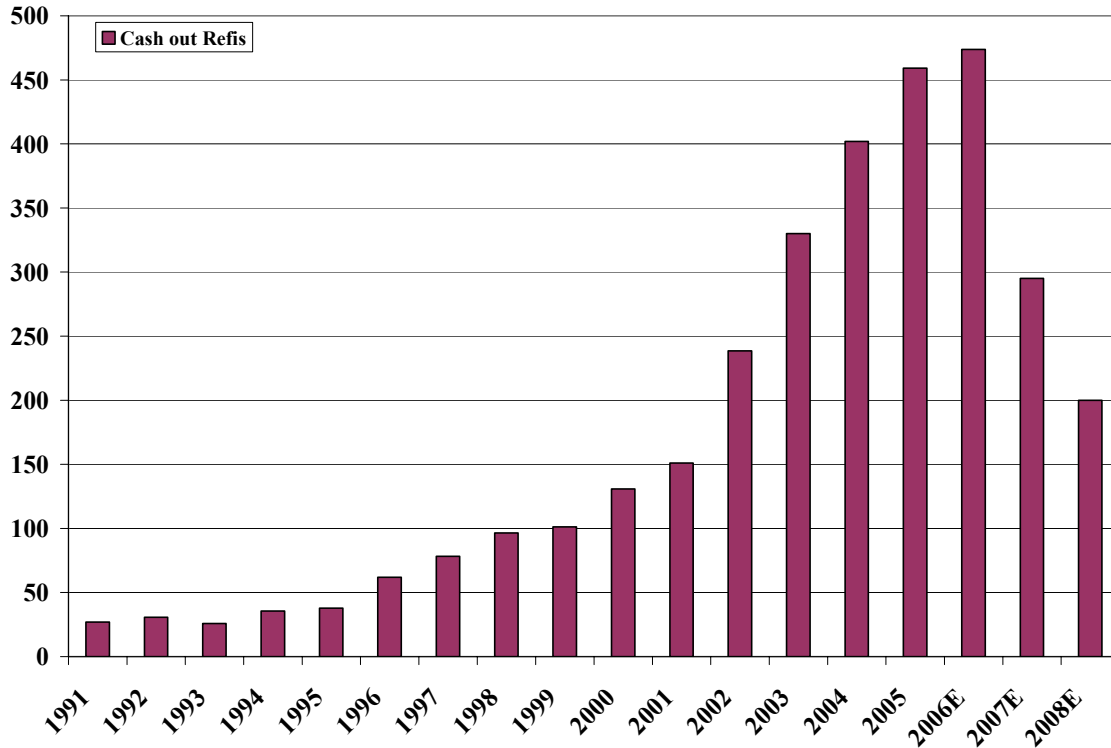
1. *Slower home sales.* We estimate that Americans borrowed about \$600 billion in 2005 in order to buy 7.1 million existing single-family homes and construct 1.8 million new ones. Existing home sales are already down by 13% this year and new home sales are down by 23%. Our forecast of a 30% decline in existing and new home sales suggests a similar fall in mortgage debt growth, or \$150-200 billion.
2. *Far less cash-out refinancing.* Americans pulled out nearly \$500 billion of equity in their homes last year in order to buy other stuff, as Chart 6 shows. That number shot up from about \$100 billion in 2001. Why the by-far record growth? Because the over \$2 trillion (12%) appreciation in the appraised value of the U.S. housing stock last year served as excellent collateral against which to borrow. The \$2 trillion in appreciation was double the rate of 2002.

However, the housing affordability crunch should greatly limit home price appreciation over the next few years. Americans therefore will have less and less new collateral against which to borrow. So we



expect cash-out borrowing to drop from \$500 billion to about \$200 billion by '08. That is a loss of \$300 billion in consumer spending power.

Chart 6
Cash out refinancing soared like a rocket ship the past few years, but should be heading back to earth because home prices have stopped rising.



Source: Freddie Mac, Federal Reserve, Inside Mortgage Finance, Annaly Capital estimates

Bizarrely, many economists argue that little cash-out borrowing is spent. They base their view on a survey of second mortgage borrowers taken several years ago by the Federal Reserve. The respondents said they used the money as follows:

Table 1
How mortgage cash-out borrowers say they used the money

| | |
|------------------------------------|------------|
| Consumer expenditures | 16% |
| Taxes | 2% |
| Home improvement | 35% |
| Repayment of other debts | <u>26%</u> |
| Spending | 79% |
| Real estate or business investment | 10% |
| Financial investment | 11% |

Source: Federal Reserve

Some economists argue that the only real spending is the 16% declared as “consumption”. But while “home improvement” may be technically investing rather than consuming, tell that to the hardware store you bought the materials from, and the plumber who installed it. Sales are sales. And debt



repayment is just spending once removed. I spend on my credit card and then move the credit card debt to home mortgage debt. So we are confident that almost 80% is spent.

3. *Business borrowing.* Imagine the head of a company telling you “Our sales are down, but we’re borrowing a lot of money to expand the factory.” Doesn’t make a lot of sense. And because you’ve got to be pretty smart to run a company, it doesn’t happen often either. Companies build factories – or office space, or IT systems, or stores – when sales *increase*, not *decrease*. The large \$450-500 billion decline in consumer spending power we expect from slowing housing activity/prices (\$150-200 billion from slower home sales and \$300 billion from less cash-out refinancing) means real pressure on business sales and profits, and therefore plenty of incentive for businesses to borrow and spend less for expansion.

Business borrowing is currently running at about \$700 billion. As recently as 2004 – a healthy year for the economy – business borrowing was \$426 billion. At least a \$200 billion plus decline in business borrowing seems likely by 2008. Again, most business borrowing is for spending (some goes to buying the stock of other companies or one’s own company).

PHASE 3 DURING 2006 THROUGH 2008: TIGHTENING LOAN UNDERWRITING STANDARDS.

Table 2 illustrates the substantial easing of home mortgage credit standards over the last few years, through “innovations” like interest-only loans, negative amortization loans, no/low documentation of income and 100% financing of investor loans. All of these “innovations” added greatly to households’ ability to borrow, and therefore to spend. We expect a significant tightening of these standards over the next few years in response to sharply rising loan defaults, caused by the convergence of:

- (1) *Weak or no job growth.* Employment changes are the primary driver of the frequency of mortgage defaults.
- (2) *The flat to declining home prices we forecasted above.* Home price weakness increases the *severity* of losses; the less the price appreciation after the loan is made, the greater the loss at default. It also plays a role in the *frequency* of losses because many homeowners have little or no equity to defend.
- (3) *Weak lending standards.* More leverage than in the past makes borrowers more susceptible to financial stress in response to job loss, divorce, etc.

Table 2
The dramatic weakening of home mortgage lending standards this decade
For “Private Label” (non-agency loans)

| | <u>Debt to Income</u> | <u>Combined (1st and 2nd) loan to value ratio</u> | <u>Low/no income/asset verification</u> | <u>No/negative loan amortization</u> |
|------|-----------------------|---|---|--------------------------------------|
| 1998 | 31% | 74% | 24% | 0% |
| 2002 | 36% | 72% | 35% | 13% |
| 2006 | 40% | 81% | 62% | 52% |

Source: UBS

Conclusion

We believe that our scenario will mean challenging times ahead for the US economy and that it would also affect equity and fixed income securities exposed to the housing market, mortgage credit risk, mortgage origination trends and interest rates. Some securities will benefit while others will suffer. For example homebuilder stocks have collapsed in the housing market slowdown, while portfolios of high credit quality



mortgage-backed securities are designed to be protected from rising mortgage defaults because they only buy highly rated bonds that perform well in credit downturns and securities insured by Ginnie Mae, Fannie Mae and Freddie Mac. Ginnie Maes are obligations of the federal government, while Fannie Mae and Freddie Mac in turn limit their credit risk by both above-average credit standards and by mortgage default insurance protection from AA or AAA rated mortgage insurance companies and bond structures.

The scenario we have described will also likely lead the Federal Reserve to begin easing interest rates as the hard landing for housing begins to spill over into the broader economy. We expect there to be lower rates of growth in consumer and business borrowing, therefore less spending and job growth.

October 4, 2006

Gary Gordon

Executive Vice President

• • •

This commentary is neither an offer to sell, nor a solicitation of an offer to buy, any securities of Annaly Capital Management, Inc. (“Annaly”), FIDAC or any other company.

All information contained herein is obtained by Annaly from sources believed by it to be accurate and reliable. However, such information is presented “as is,” without warranty of any kind, and Annaly, in particular, makes no representation or warranty, express or implied, as to the accuracy, timeliness, or completeness of any such information or with regard to the results to be obtained from its use. While Annaly has attempted to make the information current at the time of its posting on the site, it may well be or become outdated, stale or otherwise subject to a variety of legal qualifications by the time you actually read it. ©2006 by Annaly Capital Management, Inc./FIDAC. All rights reserved. No part of this commentary may be reproduced in any form and/or any medium, without express written permission.