The Oil Drum: Canada
DISCUSSIONS ABOUT ENERGY AND OUR FUTURE

Oil prices or subprime losses?

Posted by ilargi on December 22, 2007 - 10:57am in The Oil Drum: Canada
Topic: Demand/Consumption
Tags: oil prices, subprime [list all tags]

On Thursday, Dec 20, the Chicago Tribune published a column by Bill Barnhart that made us think: "oh, really?"
We decided to put the issue before our readers. First, here's the essence of his argument:

> Oil prices will swamp subprime as market driver
>
> Here's my fearless forecast for 2008: **The subprime mortgage mess will be far less important to investors next year than the price of oil.**
>
> The reason is simple: We don't sell our homes once a week, but that's about how often we fill up our gas tanks.
> Lower house prices, widely forecast for next year in the aftermath of the mortgage debacle, sound ominous. Wealth will be lost on paper for many homeowners and in reality for those who sacrifice home equity through sales or foreclosures.
> But as a general theme for next year, trends in personal income and spending will be more influential in determining the investment climate than will trends in personal wealth, as represented by home equity. *Note: Mr. Barnhart talks about investors, not consumers.*

As you may have noticed, TOD:Canada focuses quite a bit on finance issues lately. Many people wonder if that is appropriate on a forum/blog set up primarily to deal with energy issues. We argue that the two cannot be separated at will.

We see a three-pronged problem staring us in the face, which can be defined along the lines of Peak Oil, Peak Climate and Peak Money. And just like people interested in peak oil often also read a lot about climate issues, they increasingly read, and comment, about the credit crisis as well.

Therefore, we thought that Mr. Barnhart's statement that in 2008 oil prices will trump the credit crunch, is a good way for you to let us know how you feel about all of this. First, about the focus on finance at TOD:Canada, and second, about the statement in question:

> The subprime mortgage mess will be far less important to investors next year than the price of oil.

We don't want to lead you too much, but we did do a little digging to provide a first impression. We restrict ourselves to the US in this case, since that is Mr. Barnhart's home turf, but we might

also have taken Canada, of course. It makes little difference for the overall picture.

To start off with, oil prices. We turned to the Federal Highway Administration for data on US gasoline consumption.

> US Department of Transportation: Federal Highway Administration
>
> **Passenger cars and other 2-axle 4-tire vehicles**
>
> Motor-Vehicle Travel: (millions of vehicle-miles)
>
> - 2005: 2,749,555
> - 2004: 2,727,054
>
> Number of motor vehicles registered
>
> - 2005: 231,904,922
> - 2004: 228,275,978
>
> Average miles traveled per vehicle
>
> - 2005 11,856
> - 2004 11,946
>
> Average fuel consumption per vehicle (gallons)
>
> - 2005 601
> - 2004 608
>
> Average miles traveled per gallon of fuel consumed
>
> - 2005 19.7
> - 2004 19.6

Let's put vehicle miles for 2008 at 2.800.000 million, or 2.8 trillion.

We can then calculate:

Total fuel consumption: 240 million vehicles x 600 gallon= 144 billion gallons.
Or, alternatively, 2.8 trillion vehicle miles/19.7 mpg= 142 billion gallons.
Let's take the "high road" and make it 150 billion gallons.

Average US gasoline prices, as per the EIA, Dec.17, 2007, were pretty much right at $3 per gallon. Which means a total cost of $450 billion.

Now, let's take a few possible price increases for 2008 and do the math:

Increase %	Increase $	New price	Total extra cost
20%	$0.60	$3.60	$90 billion
33%	$1.00	$4.00	$150 billion
50%	$1.50	$4.50	$225 billion
100%	$3.00	$6.00	$450 billion

Since most Americans shiver at the thought of even a $1 price hike per gallon, let's be kind and take that as our starting point. This means an extra $150 billion will have to be forked over at the pump to keep driving the same way and distance. There will also be effects on food prices and other costs, but they are much harder to calculate, so for the sake of simplicity we have left them out.

The question then is: how does that $150 billion relate to the potential losses in what Mr. Barnhart calls the subprime mortgage mess? *NB: we assume he means the overall credit crunch when he says subprime, since it's becoming clear that subprime mortgages are but a part of the credit problem.*

The price of a home a year from now is as hard to foresee as the price of a gallon of oil, and there are many different voices, as expected. So we go to the top, the Fed, and to a few "graphic graphs".

For data on housing in the US, we turn to the Federal Reserve Economic Symposium in Jackson Hole, Wyoming, Aug-Sep 2007.

Robert Shiller, Yale University Professor of Economics, said in his speech at the symposium:

> The examples we have of past cycles indicate that major declines in real home prices — even 50 percent declines in some places — are entirely possible going forward from today or from the not too distant future...

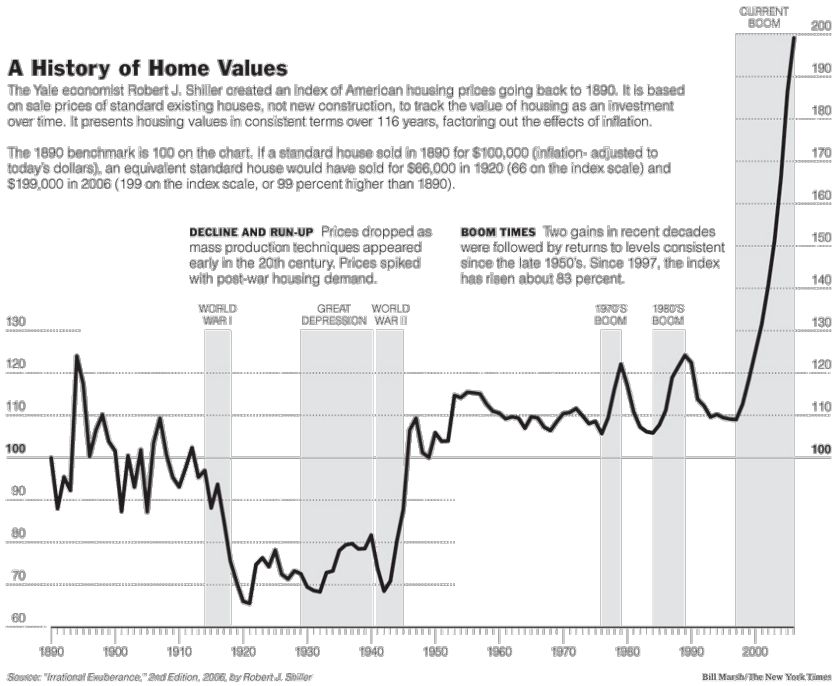
Martin Feldstein, Professor of Economics at Harvard University, referred to Shiller in his speech:

> Bob Shiller's analysis began with the striking fact that national indexes of real house prices and real rents moved together until 2000 and that real house prices then surged to a level 80 percent higher than equivalent rents, driven in part by a widespread popular belief that houses were an irresistible investment opportunity. How else could an average American family buy an asset appreciating at 9 percent a year , with 80 percent of that investment financed by a mortgage with a tax deductible interest rate of 6 percent, implying an annual rate of return on the initial equity of more than 25 percent?
>
> But at a certain point home owners recognized that house prices – really the price of land – wouldn't keep rising and may decline. That fall has now begun, with a 3.4 percent decline in the past 12 months and an estimated **9 percent annual rate of decline in the most recent month** for which data are available. The decline in house prices accelerates sales and slows home buying, causing a rise in the inventory of unsold homes and a decision by home builders to slow the rate of construction. Home building has now collapsed, down 20 percent from a year ago, to the lowest level in a decade.
> [..]
>
> If house prices now decline enough to reestablish the traditional price-rent relation – recall Shiller's comment that a 50 percent decline in real house prices is "entirely possible" – there will be serious losses of household wealth and resulting declines in consumer spending. Since housing wealth is now about $21 trillion, even **a 20 percent nominal decline would cut wealth by some $4 trillion and might cut consumer spending by $200 billion** or about 1.5 percent of GDP. The multiplier

consequences of this could easily push the economy into recession."

A 20 percent national decline would mean smaller declines in some places and larger declines in others. A homeowner with a loan to value ratio today of 80 percent could find himself with a loan that exceeds the value of his house by 20 percent or more.

Robert Shiller is known also for his index of US housing prices, which produced this graph:

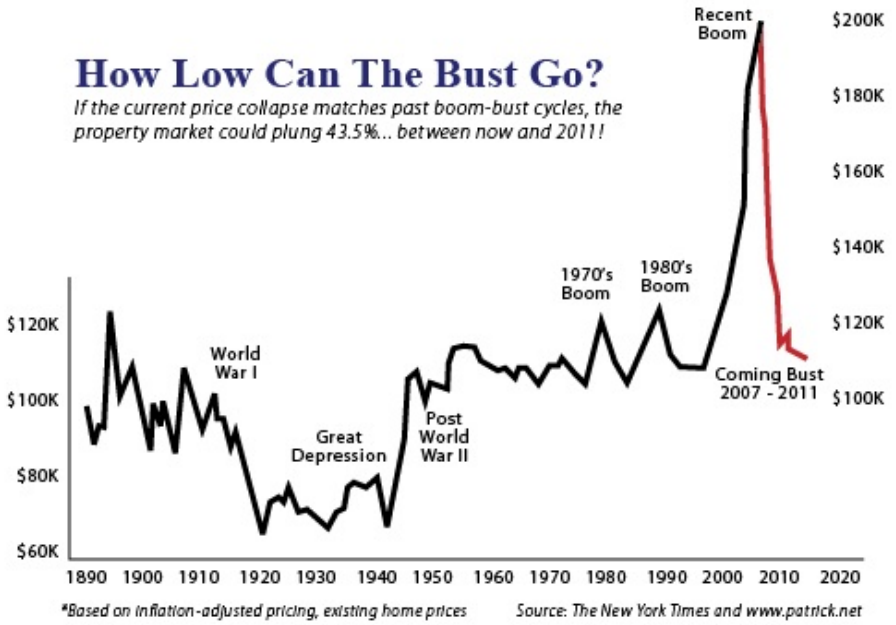


click to enlarge

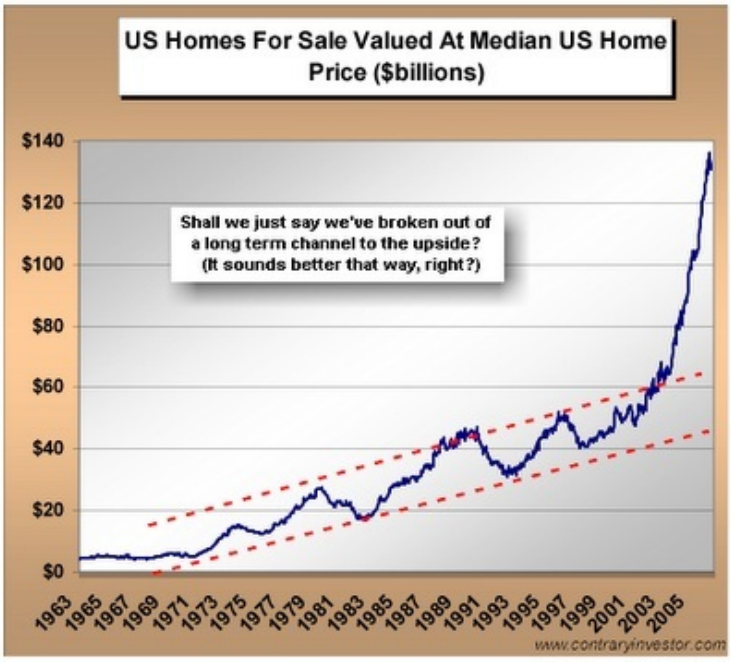
There are more graphs on the same topic, and with similar trends:

This one from Patrick.net, based on New York Times data:

"Why Your House Could be Worth 43% Less by 2011"



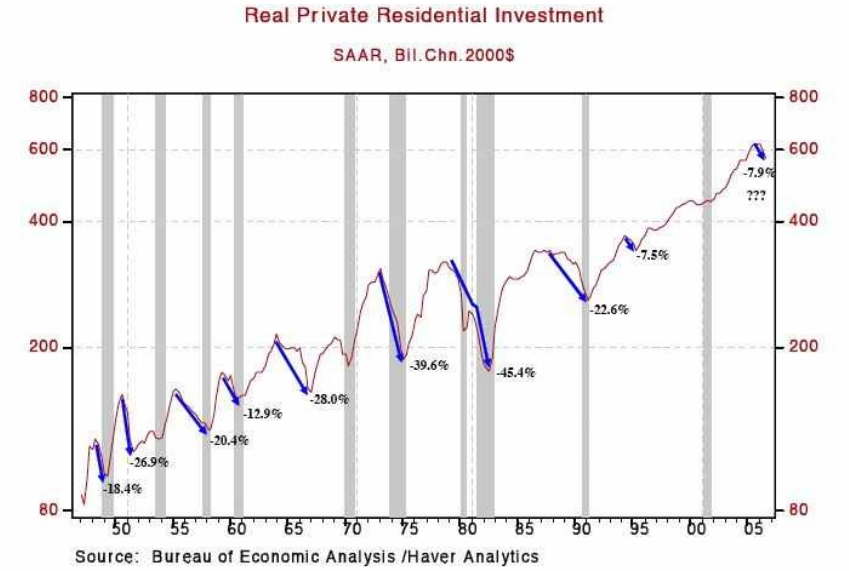
And the starkest of them all, from ContraryInvestor, 2006:



Ed: That is one strong trendline.

And last, Paul Kasriel, Senior Vice President and Chief Economist for Northern Trust, who produced this graph in Dec 2006:

The "Carry" Trade in U.S. Housing Looks to be Over (PDF)



Click to enlarge

Chart 3 shows the peak-to-trough percentage declines in the GDP line item, real residential investment. In the prior nine housing cycles, the average peak-to-trough decline is 24.6%; the median is 22.6%. The peak-to-trough decline to date in the current housing recession is 7.9%. Unless this turns out to be a more moderate than usual housing recession, unlikely given the amount of speculation and leverage involved in the boom, then we have "miles to go" before we can put this housing recession "to sleep."

To summarize, we know that IF gas prices at the pump rise by $1 per gallon, the public will have $150 billion less to spend on other purchases. Following Mr. Feldstein's speech, we see that home prices would have to fall by 15% to cut consumer spending by the same $150 billion. Which of the two is more likely to happen?

That's what we would like you to respond to.

A tricky side-note: Mr. Barnhart in his column talks about investors. We know that for home prices to cut consumer spending by $150 billion, $3 trillion in "wealth" will disappear. There doesn't seem to be an equivalent wealth effect from oil prices.