



BEATING THE BUBBLE

By **CARLOS F. CRESPO**, principal, NIGMA Capital and Finance LLC

How understanding fundamental prices can keep brokers afloat in deflating markets



When former Federal Reserve Board Chairman Alan Greenspan coined the phrase “irrational exuberance” in December 1996, he was attempting to alert the markets about a bubble in asset prices. Most did not heed his warnings, however, and he was criticized for not understanding the “new dot-com economy.” On March 10, 2000, the dot-com bubble effectively burst after the Federal Reserve tightened interest rates 10 times.

Similar to the dot-com industry a decade or so ago, the housing and condominium markets

in many areas across the country have exhibited bubble-pricing characteristics since 2004. Some spots have seen property appreciations of 20 percent to 40 percent per year. At times, the markets were booming, builders could not build fast enough, and financing was plentiful for developers and buyers alike. This boom resulted in an avalanche of speculators purchasing dozens of pre-construction properties, intending to flip them at a profit.

This can be positive, as real estate pricing bubbles produce exponential increases in busi-

ness activity and windfall profits for mortgage brokers. It is human nature to hope that the unusual level of business is permanent and that investment in business expansion is justified.

Expanding capacity in bubble markets carries a high level of risk, however: One thing we know about bubbles is that they eventually end.

In addition, the bigger the bubble and the longer it lasts, the longer it will take to reverse and the more severe its consequences. Today, we are left with a large inventory of unsold homes and canceled sales contracts for new condominiums and residences nationwide, the meltdown of the nonprime-mortgage market and the threat of additional industry regulations.

Although capacity expansion might represent a low risk in fundamentally priced expanding markets, brokers would be better served to diversify their operations in anticipation of

Continued ...



Carlos F. Crespo is a principal at NIGMA Capital and Finance LLC, a financial consulting and mortgage-brokerage firm specializing in risk-management consulting and brokering structured-finance solutions for real estate developers. He has more than 25 years' experience developing real estate and structuring creative-financing packages for complex development projects. Crespo has bachelor's and master's degrees from Indiana University and a master's degree in financial management from the University of London. Reach him at ccrespo@nigma.com or visit www.nigma.com.

REPRINTED FROM *SCOTSMAN GUIDE* RESIDENTIAL EDITION AND SCOTSMANGUIDE.COM, JULY 2007

All rights reserved. Third-party reproduction for redistribution is prohibited without contractual consent from Scotsman Publishing Inc.

Beating the Bubble

... Continued

drastic market changes once the bubble ends. Pricing bubbles can take a long time to resolve and can influence other economic sectors.

This makes it crucial for business leaders to recognize the formation of bubbles and to plan for their consequences. Because markets tend to be slow to recognize the formation of bubbles, having an objective model of a pricing bubble can be invaluable.

Understanding bubbles

A price bubble refers to a market where demand for assets grows beyond its rational limits. To best understand it, it helps to clarify the concepts of an asset's rational price limitations.

This concept has been defined as a fundamental price, or the price that investors would be willing to pay for an asset when using only their own funds, rather than borrowing funds. For risk-averse investors, the marginal return on a risky asset is equivalent to the net present value of that asset's expected payoff, discounted at the rate of the opportunity cost to the investor (the return expected from investing in other assets with similar risk profile).

Accordingly, any amount paid above this price creates a bubble. Essentially, an asset's fundamental price equals the expected payoff for the risky asset divided by the investor's opportunity cost.

When investors borrow from a lender to purchase a risky asset (i.e., real estate), they commit to paying a loan rate plus the principal amount. If they cannot repay, the lender reclaims the asset. If the investment is successful, investors will receive a return higher than the amount they must repay to the lender and will make a profit. If the return is less than the loan's cost and the loan cannot be repaid, however, the lender may claim the asset.

A bubble-price situation exists when there is a difference between the price of a risky asset acquired with borrowed funds and the fundamental price. For instance, let's say a risky asset's fundamental price is \$109,067. This is the amount that rational investors who are using their own funds would pay. A price that is more than \$109,067 would constitute a bubble price; a price that is less than that amount would be a bargain.

Sometimes, investors may choose to pay more than the fundamental price when financing is used to purchase the asset. This is because they can shift the risk, if necessary.

For example, assume that our investors can

borrow 100 percent of the purchase price of \$109,067 at a rate of 8.5 percent per year and that they have two investment choices. They can either invest in a Treasury bill with a certain yield of 4.5 percent or in real estate with a 60-percent probability of yielding a \$130,000 return in one year. In either case, they will owe \$118,338 at the end of the one-year period.

Because the borrowing cost of 8.5 percent is higher than an expected return of 4.5 percent, it is not profitable to purchase a T-bill with borrowed funds. It would offer a negative return.

But purchasing real estate with borrowed funds can offer a favorable expected marginal return. In this case, the expected loss is zero. This is because our investors borrowed 100 percent of the funds, and because in the event of default, the asset likely will reverse to the lender without further liability.

Using these figures, the expected marginal return on the real estate would be \$6,997. The investors therefore are enjoying an advantageous arbitrage opportunity with a high expected marginal profit and no risk.

Because the expected-marginal-return value is high and given that the supply of properties is limited, investors may benefit from paying more than the fundamental price to take advantage of this opportunity. Bubble prices exist because borrowers do not bear the full cost of borrowing in the event of default. When the return on investment is sufficiently high, borrowers can pay the lender and keep the difference. In the opposite case, they may default and shift the risk of a shortfall to the lender or, in the case of flippers, forfeit their deposit and shift the default risk to the developer.

Creating the recent bubble

Bubbles are usually created because of financial liberalization or expansion of credit. Specifically, the expansion of credit leads to excessive risk-taking by investors and an increase in asset prices above their fundamental value.

The economic shock created by Sept. 11 led the Federal Reserve to lower interest rates and to expand credit to avoid an economic collapse. The federal discount rate dropped to 1.25 percent on Dec. 13, 2001 — the lowest rate since 1948.

In early 2002, talk in financial circles revolved around the potential for an economic depression. The Fed's bold expansionary monetary policy followed by tax-reduction legislation in 2003 stimulated aggressive investing in assets, including real estate, which promised a significantly higher return than that offered on the 10-year Treasury bill. It accomplished its main objective of stabilizing the economy

and promoting economic growth, but it set the conditions for the creation of price bubbles.

For example, by 2004, investors in the South Florida condominium market were purchasing dozens of new condominiums with the intention of selling them before construction was completed. This excessive demand led to an exponential increase in real property values that far exceeded the fundamental price.

In this case, it was more difficult to identify the bubble formation because of three factors:

- **Large increases in construction costs** resulting from changes in building codes;
- **Escalating costs for construction materials** because of increased international demand for concrete and steel; and
- **Supply disruption caused by hurricane damages.**

But analysis of the fundamental-asset price would indicate that a bubble was brewing.

In fact, Yale University economist Robert Shiller reported that median home prices from 2004 to 2005 were six- to nine-times greater than the median income in some bubble markets. Yet, as Shiller points out, when adjusted for inflation, home prices historically produce a modest return of less than 1 percent per year. Incorporating this data into the fundamental-price equation would produce a clear indication of a bubble market.

Surviving the consequences

Contrary to news reports, pricing bubbles do not burst; they slowly deflate to reach new, lower price equilibriums. The good news is that the "irrational exuberance" exhibited in certain real estate markets has not spread nationwide or across market segments. Although the economy's growth rate has slowed, this offers the prospect of sustained long-term economic expansion with low inflation and low interest rates.

Although the residential market suffers from as much as an eight-month inventory backlog, and an entire year's inventory of new homes and condos could exist, other market segments such as commercial and industrial real estate have been expanding.

In addition, although housing and condo bubbles are evident in markets such as Florida and California, other markets such as New York City have more recently experienced high levels of condominium development. Plus, prices for agricultural properties may increase in the Mountain States as well as in the Midwest in expectation of larger demand for corn to use for alternative fuels.

There continue to be plenty of opportunities

Continued ...

Beating the Bubble

... Continued

in different states and different market segments to keep enterprising mortgage brokers busy and to keep their businesses growing. When reviewing their existing and prospective markets, mortgage brokers should be vigilant of conditions that signal potential bubbles, such as:

- **Overabundance of credit;**
- **Availability of easy credit;**
- **Narrowing credit spreads** between good-credit and poor-credit borrowers;
- **Overly optimistic expectations** in terms of high returns and probabilities of success; and
- **Explosive growth in asset prices.**

In addition, after identifying pricing-bubble conditions, brokers can prepare for the bubble's consequences. Steps to doing so include:

- **Taking advantage from the opportunities** that "irrational-exuberance land" delivers and closing all the leads possible during the bubble period;
- **Planning a market-diversification strategy** to assure the business' survival post-bubble;
- **Avoiding expansion strategies** based on operational leverage; and
- **Building capital reserves for the future.**

Over time, the effects of inflation, demographic changes and growth in personal income will reduce the gap between the fundamental price and the bubble price, and expansion will resume. In market-driven economies, bubbles will sometimes surface, but markets eventually force corrections to fundamental values. Understanding and applying the concept of fundamental prices will therefore help mortgage professionals recognize the creation of bubbles and survive their consequences. **!!**