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Real Estate Capital Markets

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In 2010, an estimated \$4.1 trillion of debt and equity capital had been put to work in the commercial real estate sector. Private debt accounted for 53%, while public debt and private equity each had a share of about 20%. Public equity made up the 7% balance. Within the debt capital segment, banks, S&Ls, and savings banks accounted for the vast majority (58%), while CMBS took the next largest share at 21%. Among the equity players, private investors had a 40% share, followed by REITs (26%) and pension funds (17%).

Ten years ago, the heady dot-com boom was starting to spiral into the Tech Wreck, 9/11 was still unimaginable, and few anticipated that in just six years, giddy heights for asset prices would prevail. Who would have thought that an African American would be elected (by a landslide) as President of the United States in 2008, only to be followed by a massive electoral reversal in 2010? All of this is to remind you that when creating your beautiful spreadsheets, full of rows and columns of confident looking numbers, you should maintain some humility about your inability to forecast accurately. Stunningly unexpected events take place regularly, and once a decade we seem to experience capital market stress and a recession. Yet pro formas rarely, if ever, build in these uncertainties and downturns (though they always incorporate recoveries). In fact, each new generation of analysts fails to understand that unimaginable micro and macro events will undermine their carefully prepared financial analyses. If only reality were as predictable as our pro formas, what a wonderful world it would be.

Examining the past 5 years, we are reminded how volatile the real world actually is. From December 2006 to March 2009, pricing plummeted and REIT implied cap rates rose 69% for offices, 68% in the industrial sector, 67% for shopping centers, 62% for apartments, and 58% for malls. Then between March 2009 and June 2011, REIT implied cap rates fell across the board for apartments (31%), industrial (36%), office (34%), regional malls (31%), and shopping centers (26%). The net result was that overall REIT implied cap rates were 78 bps higher in June 2011 than in December 2006, with only the multifamily (-31 bps) sector experiencing cap rate compression during that period.

Evaluating pricing for real estate today is extremely difficult, because, when you buy today, you are buying in a period of relatively high risk, high expected cash flow growth, and distorted risk-free rates. The Gordon model of cap rates, where the cap rate equals the discount rate

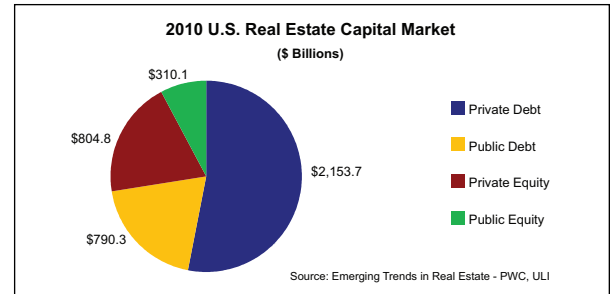


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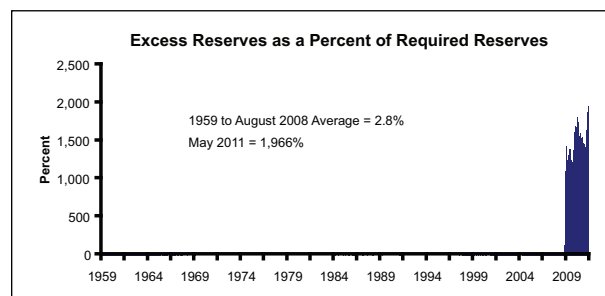
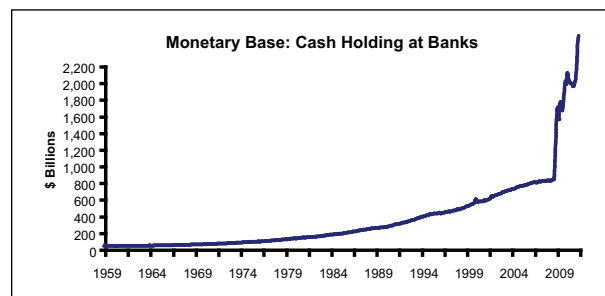
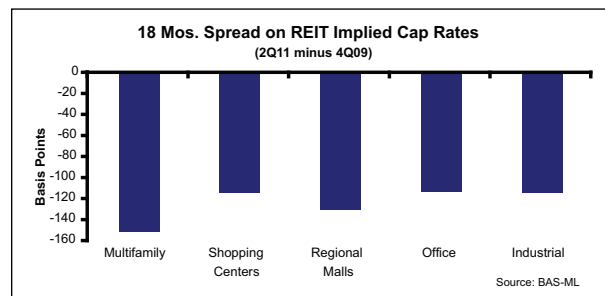
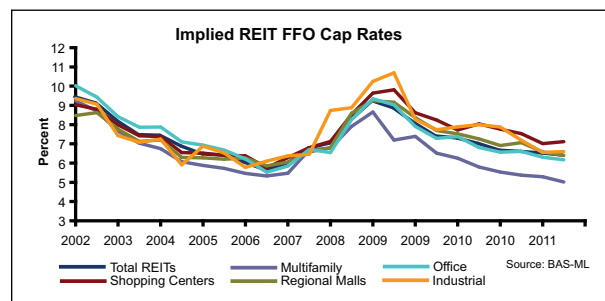
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minus the perpetuity cash flow growth rate, underscores this tension. Because of uncertainties in the economy associated with the strength and timing of the cyclical recovery, the federal budget deficit, the Fed's interest rate, and global capital markets, discount rates are deservedly high, while cash flows are expected to rebound from cyclical lows. Thus as (if) economic growth occurs, much of the risk of cash flow growth diminishes, meaning the discount rate will fall, reducing cap rates. However, after this growth, the perpetuity cash flow growth rate will also fall, increasing cap rates. We believe the net effect will be an increase in cap rates as cash flow growth occurs, even for constant long-term interest rates.

Imagine a property bought today at a 5 cap in anticipation that cash flows will rise 25% over the next four years. If this cash flow growth occurs, the value of the property will rise because of higher realized (as opposed to anticipated) cash flows, and because the uncertainty risk has been reduced. But at the same time, the cash flow growth rate for the remaining years after the cyclical recovery will drop to 2% (approximately inflation). Exactly how this balancing act of risk versus growth plays out will vary with assets, with secondary properties and markets experiencing smaller cap rate increases than AAA properties in AAA markets. This is because of the more substantial decline in assumed growth in non-AAA properties and markets. That is, as more growth is realized, significantly lower growth assumptions (and therefore downward pressure on cap rates) will be priced into secondary markets. However, even in secondary markets, declining growth assumptions will still overshadow declining discount rates, resulting in net increases in cap rates. For the trophy properties in the top-tier markets, the risk factor has already been substantially reduced, so as cash flow growth occurs, cap rates will rise more notably. It is a fool's game to think that you will buy and sell an asset at the same cap rate in conditions of high cash flow growth expectations.

Projections are further complicated by the inevitability of substantial inflation increasing both cash flows and long-term interest rates. However, inflation is not only inevitable — it is here! The Fed is pumping close to \$1 trillion in high-powered money into the system. Their claim is that this will not cause inflation, even though it is equal to approximately 8% of the economy, because the marginal money multiplier has been zero over the past three years. But if they really believe that the marginal money multiplier is effectively zero, why not have the Fed print \$13 trillion in high-powered money and repurchase all outstanding federal and GSE debt? The Fed's answer is, "Well, of course that's a lot of money, and if you print that much money there would be a positive money multiplier, and a lot of inflation." Our question is, "Since when is \$1 trillion not a lot of money?"

When there is substantial inflation, cap rates will rise, but so too will cash flows. In the long run, it will be neutral for real estate. However,



substantial short-term distortions will occur, depending on whether cap rates move up faster in the face of inflation than cash flows. In general, we believe that cap rates will move faster, especially for publicly traded real estate, as these reflect future capital market sentiments, while the adjustments in cash flow only move on the expiration of leases.

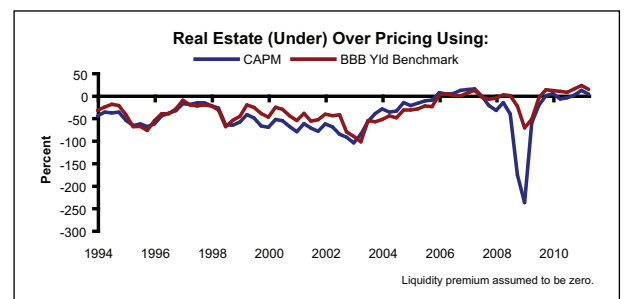
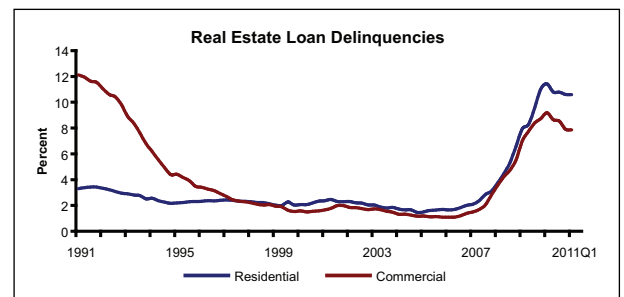
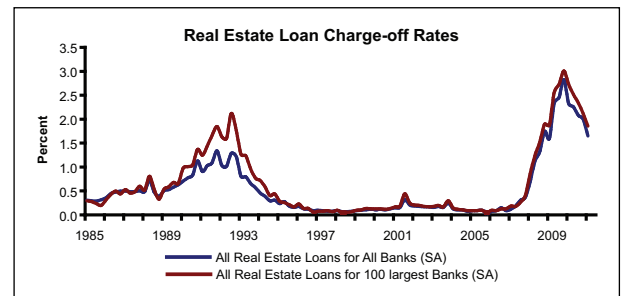
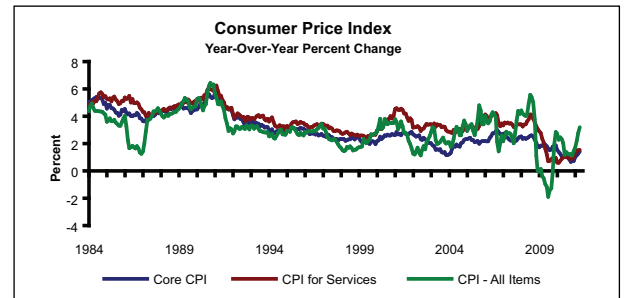
One thing we have learned is that both inflation and interest rates can move quite rapidly. A problem today is that the Fed's interest rate policy has not only kept short-term interest rates artificially low, but has also spilled over to hold long-term Treasury rates artificially low. This is due to the combination of the Fed buying billions of dollars of long-term Treasury bonds, creating an artificial demand, and the fact that these long-term bonds compete with the artificially priced short-term paper. The result is that 10-year Treasury yields could easily move 100-150 bps upward without any movement in underlying inflation when the Fed stops distorting these markets. Such a movement will increase cap rates by 50-100 bps.

Real estate loan charge-off and delinquency rates continued to fall in the first quarter of 2011. Charge-off rates for all real estate loans by all banks and at the largest 100 banks peaked in the fourth quarter of 2009 at 2.8% and 3.0%, respectively, but stood at 1.6% and 1.8% in the latest quarter. Residential and commercial delinquencies both peaked in the first quarter of 2010, at 11.4% and 9.1%, respectively. First-quarter 2011 delinquency rates were 10.5% and 7.8%, respectively, both representing the fourth consecutive quarter of declines.

Over the last four quarters through the first quarter of 2011, real estate transactions picked up dramatically. According to Real Capital Analytics, the number of office properties sold over the last 12 months increased by 104.8% over the prior 12-month period, to 1,354 transactions. Similarly, industrial and multifamily sales transaction activity jumped 84.0% and 69.1%, respectively year-over-year, while the hotel sector skyrocketed to more than five times the sales volume from the previous year. Although the retail sector saw a year-over-year decline of 1.8% in transaction volume through the first quarter of 2010, year-over-year retail transaction activity increased by 8.2% through the first quarter of 2011.

Average trailing 12-month unit prices increased across the board for all five sectors, as compared to the same period one year earlier. Hotel sale prices grew by 64.4%, while industrial pricing edged up by only 8.3%. It follows that cap rates declined for all sectors during the same period: office (-77 bps), industrial (-41 bps), multifamily (-33 bps), retail (-41 bps), and hotel (115 bps).

As we predicted in April 2009, the bottoming of private pricing (peaking of cap rates) occurred about 15 months after REIT pricing bottomed in March 2009. This pricing is consistent with the historic



U.S. Sales Transaction Activity – LTM Through March 2010 vs. LTM Through March 2011

	Office			Industrial			Multifamily			Retail			Hotel		
	2010	2011	Change	2010	2011	Change	2010	2011	Change	2010	2011	Change	2010	2011	Change
# Properties Sold	661	1,354	104.8%	763	1,404	84.0%	1,042	1,762	69.1%	1,221	1,321	8.2%	169	1,044	517.8%
Total Price (\$ billions)	\$16.5	\$48.4	193.0%	\$9.1	\$17.7	93.8%	\$17.1	\$34.6	101.7%	\$14.2	\$22.2	55.7%	\$3.1	\$15.4	388.6%
Total Units*	100.5	225.7	124.7%	164	319	94.4%	198,944	344,222	73.0%	90	136	50.6%	31,807	148,315	366.3%
Avg PSF/PPU	\$162	\$220	35.5%	\$57	\$61	8.3%	\$92,110	\$106,033	15.1%	\$144	\$157	9.2%	\$100,471	\$165,138	64.4%
Avg Cap Rate	8.3%	7.5%	-77 bps	8.6%	8.2%	-41 bps	7.0%	6.6%	-33 bps	8.1%	7.7%	-41 bps	8.2%	7.0%	-115 bps

Source: Real Capital Analytics, Linneman Associates

*Units = millions of square feet for office, industrial, & retail; apartment units for multifamily; rooms for hotel.

patterns of a 12-18-month lag in private pricing. Since peaking in the first quarter of 2009, total REIT implied cap rates have fallen by approximately 280 bps, from 9.2% to 6.4%, representing an FFO multiple increase from 10.9x to 15.7x through mid-June 2011. In fact, our analysis suggests that as of June 17, 2011, REITs were approximately 13% over-valued relative to BBB bonds, and just 3% over-valued based on the Capital Asset Pricing Model.

As pricing has improved, more owners (including financial owners of foreclosed assets) believe that prices have peaked and that future growth will be substantially below what is being priced into the market. Only time will tell who is right, but as bullish bidders have appeared, it is not surprising that sales have recovered.

