

Could Have, Would Have, Should Have: Deconstructing the Housing Boom/Bust in the 2000s

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The history of the great housing boom and bust between 2003 and 2006 has not been written yet. Here is a first attempt to do this. It will be done here not to show that "mistakes were made" but to reconstruct the "subjective" horizon that drove people to act in a certain way during that time period, their justifications and rationalizations, often against a multi-media show of doubt. We hope we can then honestly address the question of when we could have, would have, should have pulled back in the respective investment contexts.

If one focuses on the particular temporal and existential comportment of builders/developers towards housing market issues (not financing issues) between 2003 and 2006, one can easily recognize that virtually every **active** participant shared certain and some would say reasonable notions about the inner workings of US housing market, which propelled them forward in the fog of an uncertain future. Those were shared and clung on to despite the rising risks that a chorus of "Cassandras" mentioned repeatedly. They were warnings about hyper-inflation in home prices above economic fundamentals, concerns about the shrinkage of official affordability numbers to historical ebbs, and (if our "Cassandra" was smart) worries about a waterfall of mortgage liquidity, which promoted risky loans to consumers and repackaged them for kind strangers in the global capital markets. The following will look at the drivers of the "conventional wisdom" in the new housing business -- demographics, jobs, and inventory --, will then go from there to discuss their consequences, and then reconstruct the stages, when reality bit the new housing business.

1. Demography is destiny. Builders and developers love demography, because its steady march creates a sense of inevitability, but this can easily turn into hubris. According to a 2003 report by *The Joint Center for Housing Studies of Harvard University*, household growth was to exceed 12 million between 2000 and 2010. In

2004 that forecast was upped to 13.3 million households for the 2005 to 2015 period. Simultaneously, the housing production outlook was raised from 16.6 million units built between 2000 and 2010 to 18.5 million and possibly 19.5 million for the 2005 to 2015 period. Since, as some like to believe, *Demography is Destiny*, how could anything go wrong under this scenario? Indeed, the projection looked right up to 2005, when housing starts (including manufactured housing) peaked at 2.2 million, above the 1.95 million projected. By 2007, however, housing starts had dropped to below 1.5 million units, and by spring 2008 it had fallen below 1 million. Apparently destiny had something different in store. The forecast may not even be wrong, but what was problematic was the basic belief that the power of Demography could somehow best the power of the Cycle in a notoriously cyclical business. The *Demography is Destiny* paradigm was supported by another shared paradigm.

2. Without job losses, there will be no price depreciation. This paradigm was strengthened by the historical experience of very rare occurrences of home price depreciation, when there weren't job losses. This compartment was armored also by the experience of the job losses in the previous recession around 2001, which lingered well into 2003 with no ill effects on home price growth -- even after adjusting for inflation. Exceptions in 2002 and 2003 were a few tech places, which experienced unexpectedly mild home price depreciation in the wake of the severity dot.com et al. bust. In 2004, the respected Harvard outfit, referred to above, expressed this widely shared sentiment: *"But steep declines even at the metropolitan level are rare in the absence of concentrated job losses."* And as late as 2006, when things began to unravel, the Harvard outfit summarized a soft landing scenario: *"With building levels still in check and the economy expanding large house price declines appear unlikely now"*. Except that they were: By April 2008, national home prices had dropped from peak in the summer of 2006 by almost 18% and double-digit price drops were registered in high growth Phoenix, Miami, and Tampa, with other fast growing cities such as Las Vegas, and Washington DC close behind, according to the Case-Schiller home price index.

What is the issue of compartment here? It wasn't that notion per se that job growth normally provides price stability. It was more that its historical precedent as a fundamental stabilizer was given too much weight (actual or pretended) over the conundrum that economic fundamentals themselves couldn't justify the massive observed home price run up. Since fundamentals had not much to do with the price bubble, a little symmetrical thinking could have suggested that they may have a lesser role than usual, when the housing market goes south.

3. Inventory is tight; let's chase "strategic land plays". If there was an overstretched paradigm it was that land use restrictions and entitlement constraints such as fees and development conditions are causing a general, chronic undersupply situation and that this virtually guarantees land and home price appreciation ad infinitum. Just like in the two compartments above, there was actual experience behind this, the experience of entitlement constraints, notably in the attractive communities on both coasts of the United States, which served as a launching pad for this tricky notion. In this context, one had to move to the fringes, which were

typically not more than 60 minutes from older historical job centers. Everyone went there and for each individual land ag guy/gal their job looked strangely tough to them, because they were all competing with each other. Not surprisingly, there was soon plenty in a sea of scarcity and developable land popped up like mushrooms after a nice summer rain. This was particularly the case in some of the largest markets, where public builder control of the “top-five market share” jumped to 88% in 2005 from 47% in 1997. As a result of the land rush, for example in Sacramento, the total developable land climbed to over 160,000 lots by 2006. Similarly, in a set of four cities in Florida, -- Jacksonville, Orlando, Tampa, and Fort Meyers -- total developable land shot up from 500,000 lots to 1.5 million between 2002 and 2006, according to Metrostudy research. Feverish entitlement activity was also extant in Phoenix, where over 400,000 developable lots could be counted in 2006 in West Valley alone. Similar trends happened in fringe after fringe from Stockton to the Antelope Valley to Loudon County. Simultaneously, older cities eying fees and retail taxes opened up the development spigot also.

Something funny happened on the way to the fringes and smart growth. As Ivy Zelman has shown in her *Wonder-Land*, published in October 3, 2006 (we will come back to that date), public builders and with them their financiers, changed their land inventory strategy around 2002. Until that date, they were happy to control three to five years of land supply much of it through option contracts. By the end of 2006/early 2007, land under their control jumped to 7.8 years supply, almost double the previous and more prudent goal. Ivy Zelman noticed also that looking at the universe of public builder control of land and assuming a target scenario of 4-year supply, implicit demand growth expectations must be a compounded annual rate of 20% plus between 2004 and 2006. This is way above the historical average growth path of new home sales of a little over 2% per year up to that point. The exaggerated growth expectations among builders and their peers were the nexus, where the “inventory is tight” paradigm, “demographics is destiny”, and the “no job losses no price drops” met. In its strong version, tight inventory would support price uplift virtually ad infinitum. In its weak form, it would at least hinder price depreciation. There were consequences of what looked at first plush like perfectly decent compartments towards the market place.

4. Paradigms have consequences: The price is right? To begin with builders (and everybody else) did not only buy more lots, they also paid more for it. Average lot values in the public builder universe started to accelerate from \$68,100 to \$106,800, a compounded annual growth rate of 16.2%, according to Ivy Zelman in *Wonder-Land*. Furthermore, compounded annual percent changes in land prices by region shows that builders may have added an expectations premium here and there. In Arizona, for example, average annual growth rates in land prices between 2002 and 2005 was 53% versus 19% home price appreciation, in California it was 32% land versus 20% home prices gains, in Florida it was 37% land versus 20% home price growth, and in Nevada it was 50% land versus 22% home price appreciation. (Unfortunately, it is not clear from Zelman’s text if these numbers refer to finished lot prices). A quick survey of finished lot values in California submarkets, using the

old Delphi method (ask), shows that finished land price appreciation here was similar as shown by the table below.

Finished Lot Prices in California

	San Diego	Menifee	Southwest Riverside	Northwest Riverside	Stockton *
2000	\$145,000	\$55,000	\$75,000		
2001					
2002	\$185,000	\$75,000	\$90,000		
2003	\$215,000	\$105,000	\$122,500	\$175,000	\$85,000
2004	\$245,000	\$135,000	\$155,000	\$245,000	\$107,000
2005	\$360,000	\$180,000	\$220,000	\$285,000	\$130,000
2006	\$325,000	\$170,000	\$210,000		\$170,000
2007	\$205,000	\$70,000	\$90,000		\$60,000
Compounded					
% Changes					
2003-2005	29%	31%	34%	28%	24%
2005-2007	-25%	-38%	-36%		-32%

* Before Fees

Sources: "Buck" Bennett, Kirk Gooding, Shane Hart

The table also shows that since land prices peaked in 2005, most (and some) of the gains have been taken back, according to many practitioners. In any event, the evidence about post bubble land markets that is coming in, suggests that the "inventory is tight paradigm" had collapsed by the time land prices started to ease in 2006 even in places that one might still consider as latently supply constrained as San Diego. This is corroborated also by the almost 140,000 buildable lots in open merchant builders' projects in California, a number reminiscent of the first half of the 1990s, when massive job losses were the reason for a previous severe housing market correction. Apparently, now inventory stopped being tight, demographic destiny turned out to be a cyclical paper tiger, and job losses did not factor in the downturn. Why did the three compartments mentioned above continue to have such a hold beyond its usefulness on how builders, developers, and practitioners viewed their investment horizon?

5. The waterfall of liquidity, "virtuous" mortgage/ housing cycle, and the failure of the bubble Cassandras. By the accounting of one housing cycle theory, which gives great import to affordability, the housing market - sales and values - should have peaked in 2004, because home prices got quite high and interest rates were rising after the Fed started to tighten in June 2004. A severe affordability crisis emerged in all the "hot" markets, Florida, Phoenix, Virginia, California, Nevada, New York etc. In California, for example, traditional affordability measures, the percentage of households that can afford the median priced home, were falling to the low teens in Southern and Northern California by early 2005, way below the troughs recorded in the early 1990s. Indeed, low housing affordability gave the earliest warning signal that something was not quite right at the beginning of the housing market's end run. However, this warning signal, which if followed would have avoided a lot of grief, remained mostly unheeded. Only a very few (some financiers) drew any conclusions mostly by pulling their horns in with respect to housing deals with a relatively short investment horizon.

Residential Mortgage-Backed Security (RMBS) Issuance

	Total MBS (\$million)	% of Total							Private Label	HOR*
		Agency	Alt-A	Subprime	Total "Edgy"	Jumbo	Other			
1995	\$318,058	84.6	0.2	5.6	5.8	8.1	1.5		15.4	64.7
1996	\$440,541	84.1	0.4	7	7.4	7.1	1.3		15.9	65.4
1997	\$487,016	75.5	1.3	11.7	13	10.3	1.2		24.5	65.7
1998	\$929,163	78.1	2.3	8.2	10.5	10.5	0.9		21.9	66.3
1999	\$832,977	82.2	1.4	6.7	8.1	9	0.6		17.8	66.8
2000	\$614,970	77.9	2.7	8.5	11.2	8.7	2.2		22.1	67.4
2001	\$1,354,819	80.3	0.8	6.4	7.2	10.5	2		19.7	67.8
2002	\$1,858,381	77.7	2.9	6.6	9.5	9.2	3.6		22.3	67.9
2003	\$2,718,170	78.4	2.7	7.2	9.9	8.7	2.9		21.6	68.3
2004	\$1,882,836	54.1	8.4	19.3	27.7	12.4	5.8		45.9	69
2005	\$2,156,007	44.7	15.4	21.6	37.0	13	5.3		55.3	68.9
2006	\$2,070,089	44.7	17.7	21.7	39.4	10.6	5.4		55.3	68.8
2007 Q1	\$537,116	49.4	18	16.5	34.5	11.2	4.9		50.6	68.4
2007 Q2	\$545,207	53	18.5	13.6	32.1	11.1	3.5		46.7	68.2
Jul-07	\$150,475	66.5	13.3	9	22.3	10.3	1		33.5	68.2
Aug-07	\$131,699	76.4	7.4	4.2	11.6	11.3	0.7		23.6	68.2

*HOR=Homeownership Rate
Sources: UBS; Census

What kept most market participants going (builders, developers, financiers) was manifold. The housing market remained hot, undermining the affordability argument. Further, the investment incentive favored the continuous feeding of the housing machine. Finally, and most importantly, new mortgage product, one knew anecdotally, apparently overcame the latent affordability constraints. Although few clearly understood it, an alphabet soup of mortgages from interest only, to hybrid arms, teaser rates, 2/28s, 3/27s, to NINA's and NIMAS's, kept mortgage payments low. Later, this mortgage balkanization would be prominently gathered and displayed as Agency Share (Fannie and Freddie), Alt-A, Jumbo and Subprime etc. Interestingly, the market share of edgy mortgage financing in the form of Alt-A and Subprime loans rose during 2004, 2005, and 2006 to unprecedented heights (see table above). Simultaneously, the US homeownership rate, which had been on a steep upward trend rising from 64% in 1994 to 69% in 2004, stopped improving altogether in 2005, 2006, and 2007. All this "edgy" financing did nothing to increase homeownership and even stopped boosting total sales by 2006. The new financing just enabled home price appreciation, which displayed an annual compounded growth rate of 15% in the Nation between mid-2003 and mid-2006, according to Case-Schiller home price index. During the same time period, home prices rose 23% annually in Phoenix, 15% in San Diego, 21% in Los Angeles, 23% in Miami, 18% in the DC area, for example.

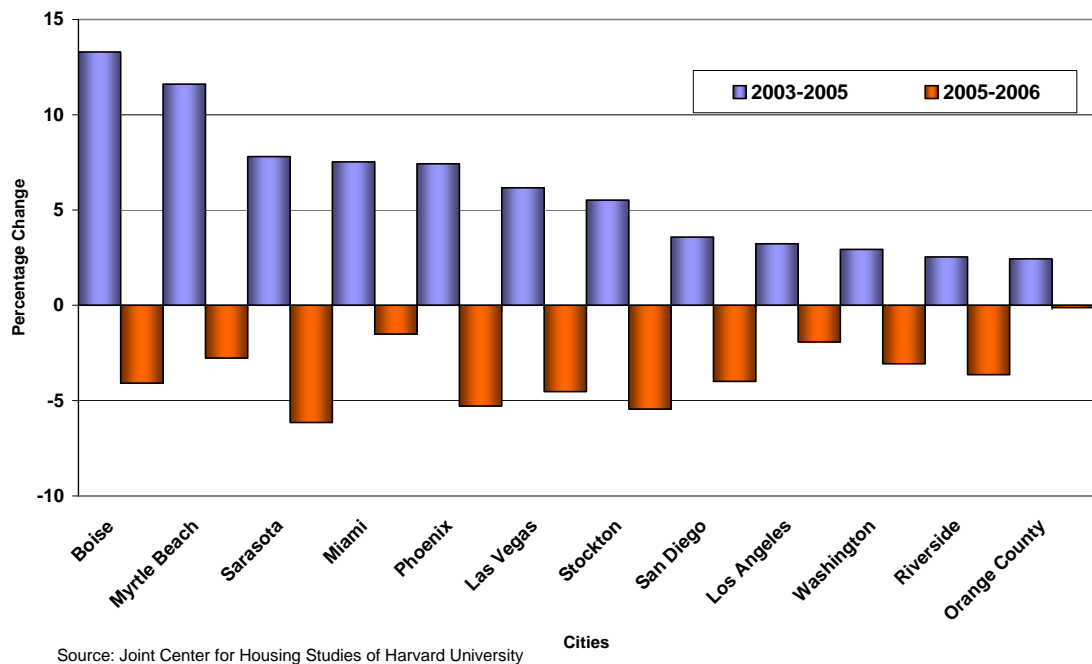
It is hard to blame people for repressing the issue of the sustainability of these trends. A "virtuous" mortgage/housing cycle seemed to have been in place, which was propelled by rising prices and where new "affordability" products helped buyers who would have been priced out of the market otherwise, which then drove up prices to start the cycle over again. What could ever stop that cycle given the astonishing capacity of the financial system to innovate, its vast worldwide networks, and the global savings glut? And aren't low interest rates, rising wealth for the masses, and all the money in the world a sign that the "possibilitas" of economic theory has

become an economic “actualitas” of inter-temporal wealth creation? The horizon looked wide.

It is here, where the Cassandras may have failed. They repeated their bubble story year in year out. Their arguments and ratios looked quaintly old-fashioned. Debt seemed to be either bad or not extant at all. Most striking, in this context, was the myriad of housing price/earnings ratios ex interest rates and finance terms, which obviously looked terrible for it. They could be easily neutralized by introducing financing and the reduction in tax rates in user cost equations (Laffer, New York Fed). The failure of the Cassandras was that they never managed to advance a plausible scenario, which would include the mechanism of a disruption of the “virtuous” mortgage/housing cycle. So all people got out of their chorus was a sense of all-pervasive dread, which was recognized by none other than John Maynard Keynes’ imperative that it needs be overcome by “animal spirits”. In a sense, it was tragic but inevitable that the Cassandras were ignored, quite like the curse put on the Cassandra of myth that she would know the future, but that nobody would believe her.

6. Speculation and the switch to a “vicious” mortgage/housing cycle. Speculators/investors put the “virtuous” cycle into overdrive and may have contributed to its downfall, at least during the first phase of the housing market correction at the end of 2005 early 2006. Speculators descended onto certain cities with more or less gusto during the time of easy and “edgy” financing between 2003 and 2005, pumping up demand. And then, they exited as the dread parade of bubble talk was getting to them and price appreciation appeared to slow (see table below). By the time they exited, some large markets lost thousands of speculators. The mentioned Harvard outfit notes that in Las Vegas, Washington, DC, and Riverside speculator retrenchment meant 4,000 fewer loans per year and in Phoenix it meant 10,000 fewer loans. The decline in demand was also caused by higher mortgage rates, a sharp drop in the spread of fixed versus ARMs spreads and “edgy” financing losing its punch against the headwinds of increasingly difficult affordability.

Speculators "Pump It Up" And Bring It Down Change In Investor Share Of Loan Originations



Meanwhile, increasingly loose underwriting and a desperate attempt to keep loan volume up, shifted the action to the margins of the credit risk spectrum. By 2006, a sharp deterioration of already weak collateral characteristics of mortgage loans intensified. The pressure for yield in global markets was on also. While relatively stable looking FICO scores created the illusion of default risks being well managed, the percent of Low Doc loans in the ALT- A space skyrocketed to over 76% and in the subprime space they reached a staggering 50% of all loans in 2006. Low Docs were 88% for Option ARMs. Furthermore, the share of silent seconds shot up throughout the “edgy” mortgage universe, most likely in response to elevated home prices and high LTVs. Soon it became apparent that subprime delinquencies of the 2006 vintage were the worst ever and the 2005 vintage was not too far behind quickly catching up with the recessionary vintages of 2000 and 2001. By February 2007, subprime mortgage default rates were eye catching and default insurance swaps for BBB- HELOC tranches (ABX index) were deteriorating fast. The end was in sight as the media obsessed on the subprime malaise, and congress pummeled bank regulators in early 2007. In June, the pummeling resulted in new guidance for subprime mortgage products and in July 2007 the subprime market shut down. By August, the subprime malaise had spread into global financial markets and the fallout from nuclear mortgages entered the Alt-A and even the Jumbo space as few financial investors in secondary markets wanted to even touch mortgage instruments. A full-fledged credit crunch was in the works by August 2007, which is still unfolding and threatens now to go beyond the mortgage universe.

The “vicious” mortgage/housing cycle, in other word begins genealogically with falling home prices, which increase defaults, which tightens lenders’ standards, which prices buyers out of the market, which causes home sales to fall, which brings down prices even more, especially as foreclosures are becoming a new supply element. Only few had an inkling what was going on, but actionable business was probably limited to going short on ABX indices.

7. Reconstructing the different stages of the unraveling of the biggest home price boom in the US since the roaring twenties. We can now address the question when investors could, would, or should have shifted down or have stepped on the breaks:

Stage 1 (Mid-2004 to 2005): The height of the home price appreciation and volume boom. Given the horizon open to builders, developers and financiers, only the dourest would have stopped here. Volume was still up; the waterfall of liquidity apparently solved all affordability woes. What people could have done was pull back on housing deals with some retrenchment into supposedly “safer” long term strategic land plays. The coming of a severe home price correction was not visible. Bubble Cassandras lost their novelty. What can one do with mere dread? It’s too weird.

Stage 2 (Mid-2005 to Mid-2006): Price correction begins in the new housing sector. Resale volume drops, listings rise. The retrenchment of speculators, who had a larger market share in the new housing market than in the resale market, hurts demand for new homes in the Nation. New home sales nationally drop 29% between July 2005 and July 2006. Some regional new housing markets, such as Sacramento, San Diego, Orange County, North Virginia, South Florida condos start seeing single to low double-digit price depreciation after incentives. Cancellations rise. **The whole builder universe would undoubtedly admit that at least by the summer of 2006, it was put on red alert.** Additional anxieties should have been raised by a national resale volume retrenchment of over 11% between July 2005 and mid-2006 and a slow downward trend in resale pricing since fall 2005 in the Nation and many formerly hot regional markets. The end of the “virtuous” mortgage/housing cycle became visible. That the cycle would actually get vicious later was not. Demographics, the lack of “bad” fundamentals, and residual “inventory is tight” sentiments still raised hopes that the cycle would be short and that there could be a “soft landing” albeit a bumpy one. Nevertheless, cut backs in housing production should have been done and cycle peak land deals should have been avoided. Land should have been eyed with extreme caution after the “Wonderland” paper by Ivy Zelman in early fall of 2006. There was little reason for doing aggressive land deals after that. Her findings were widely discussed and hardly or badly challenged.

Stage 3 (Mid-2006 – February 2007): False hope arises. The markets appear to be bottoming out, new home inventory drops a bit, and inventory eases off. This is particularly the case in California, but also in some Florida markets. The improvement is too short and too weak to substantially change investment behavior towards a more aggressive stance in the land and housing investment horizon.

Stage 4 (March-2006 to Now): Intensifying credit crunch, sharp increases in foreclosures, and resale listings. The resale market becomes the object of the down

cycle. Price declines are accelerating sharply as foreclosures get recycled through the MLS and fire sale auctions. Resales drop and listings jump sharply in summer 2007. Cancellations re-emerge in new housing. 2008 looks like it will be under the spell of the credit crunch and the foreclosure crisis. Emergency actions by the Fed, the Bush administration, and Congress highlight the crisis. Asset management, leverage, preparation for builder and asset distress is the order of the day. Vultures are waiting for a major resetting of land values. Old-fashioned home building may make a come back once the cycle turns. Massive retrenchments and restructurings are and should be taking place as a bottom to the home depreciation will be invisible for some time to come. Building virtually stops in regions formerly known as “hot”.

8. General lessons and forward look. A few general lessons can be gleaned from what has been investigated. The first one is that history does not necessarily repeat itself. By all historical standards that we obsessed on, jobs, demographics, latent supply constraints, this downside correction should not have happened, but it did. What we should have done is pay more attention to financial mortgage innovations never seen before in such intensity and we should have questioned their sustainability. The high market share of “edgy financing” should have raised more eyebrows and scrutiny by all. The second lesson is to question shared paradigms more and think more out of the box. Looking forward, this also means to go beyond the immediate current shared compartment towards the future. For example, now, in the middle of the darkest hour of the housing industry, when horizons have shrunk, it might be worthwhile to focus on the conditions of the possibility of recovery, which could be different than what has been in the past. Once, just having jobs back was good enough to be optimistic again. It is probably going to be different now and the categories of recovery may be harder (or easier). Foreclosures must and will burn off, a new home supply response is already under way, and policies to reliquify the mortgage markets and to mitigate foreclosure losses -- even if they don't sound like much, are better than nothing and more will undoubtedly come. There a few ironies here in the light of what has been said. Housing still has its ups and downs, but each cycle is unique and some of the old paradigms will come into play again, although they have disappointed us. It is good that jobs are still growing in many places and those demographics are still strong. The latent tightness in coastal urban housing markets is still valid and even the large number of developable land may not be as detrimental as it sounds. Much of it may go into a state of abeyance some would say, others would call it oblivion. There is no doubt that in the recovery story of the future, all of these things will play a role again just as resurgence in affordability will be, or the “burn off” of foreclosure supply. We know some things to look for. We also know there will be things we don't know yet, have overlooked, or may be right in front of our noses.