



# Outlook for Home Prices

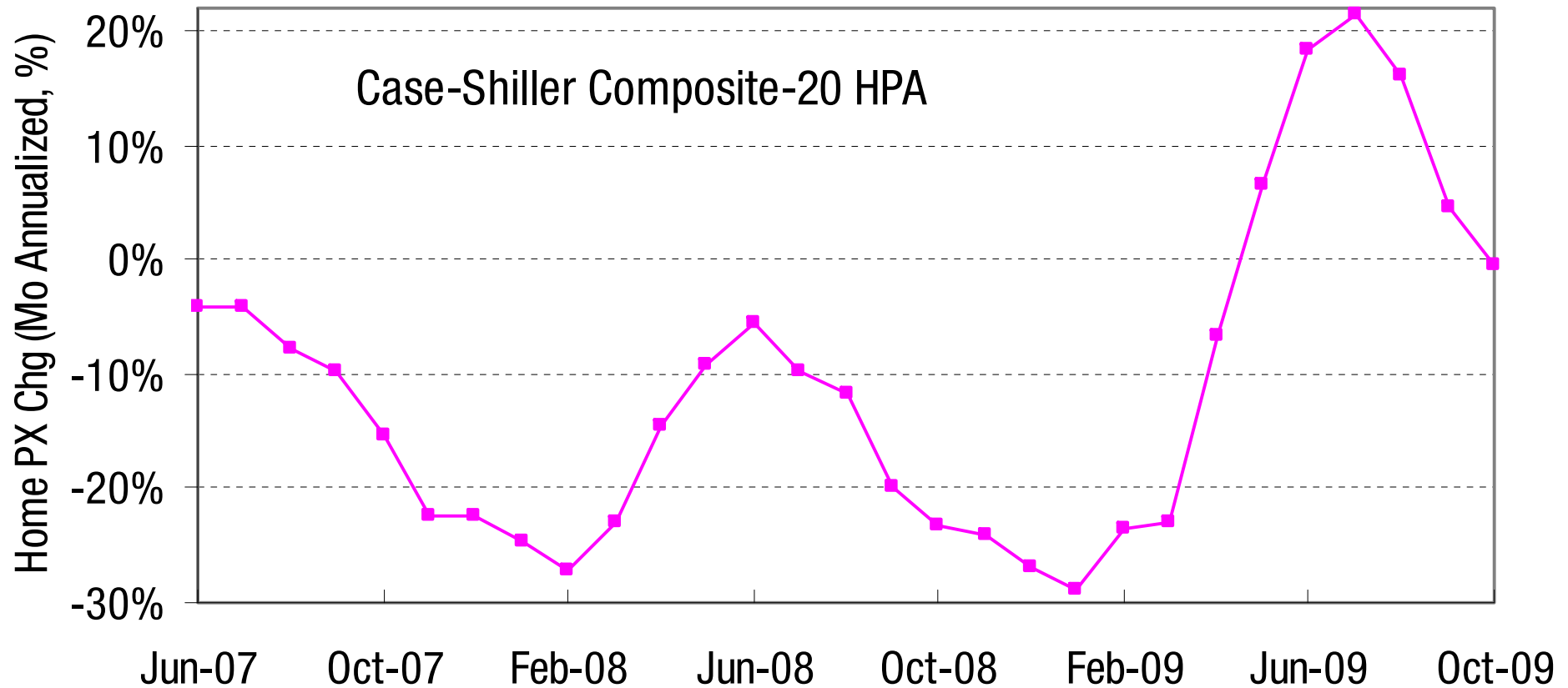
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NABE Teleconference

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# Recent Data: Home Prices Flat in October



Source: S&P/Case-Shiller, Citi.

- **Oct Case Shiller essentially flat at -0.6% annualized, down from +4.5% in Sept and +16% in Aug**
- **Below expectations for second month in a row, follows 5 months of above expectations data**
- **Nationally, peak to current -27.8%, prices up about +6% during spring/summer 2009**
- **Seasonally adjusted +4.5% in October, but magnitude of seasonal adjustments very uncertain**

# Regions – California Stabilizing?

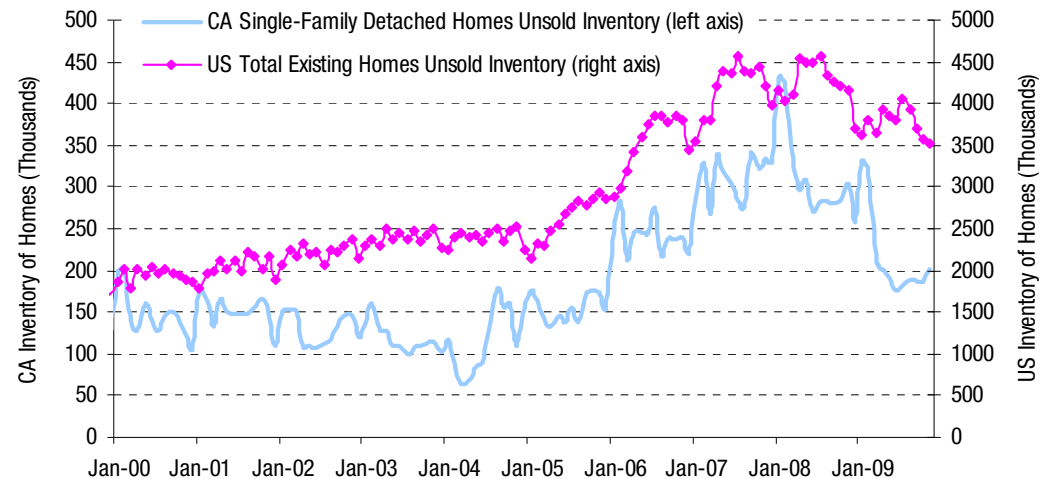


	Phoenix	Los Angeles	San Diego	San Francisco	Miami	Tampa	Chicago	Boston	Detroit	Minneapolis	Las Vegas	New York	Composite-20
Peak to Current	-51.3%	-38.5%	-37.9%	-37.8%	-46.9%	-41.1%	-22.4%	-15.2%	-42.5%	-27.2%	-55.4%	-18.9%	-29.0%
12-Mo	-18.1%	-6.3%	-2.4%	-2.6%	-14.0%	-15.2%	-10.1%	-2.8%	-15.1%	-8.4%	-26.6%	-7.7%	-7.3%
Aug 2009	21.6%	21.3%	20.4%	39.3%	14.2%	5.1%	23.0%	11.5%	25.5%	43.9%	-3.3%	10.0%	16.2%
Sep 2009	9.8%	10.6%	11.7%	16.4%	6.5%	-7.0%	15.5%	-2.4%	24.3%	25.4%	-10.4%	-1.4%	4.5%
Oct 2009	17.1%	3.6%	4.8%	15.8%	-4.7%	-17.7%	-11.6%	-6.9%	2.8%	-5.3%	-1.4%	-0.3%	-0.6%
Aug-Sep Chg	-11.7%	-10.7%	-8.7%	-22.9%	-7.7%	-12.0%	-7.4%	-14.0%	-1.1%	-18.5%	-7.0%	-11.4%	-11.7%
Sep-Oct Chg	7.3%	-7.0%	-6.9%	-0.6%	-11.2%	-10.8%	-27.1%	-4.4%	-21.5%	-30.8%	9.0%	1.0%	-5.1%
Nonagency D60+++%	33%	26%	24%	17%	49%	42%	33%	22%	31%	23%	44%	25%	26%

Source: First American LoanPerformance, CPR&CDR Technologies, S&P/Case-Shiller, Citi.

- **CA continued to outperform as LA, San Diego, and especially San Fran at +16% annualized all positive in Oct.**
- **In contrast, high distressed inventory FL underperformed with Miami and especially Tampa at -18% negative.**
- **Encouraging sign for New York – roughly flat, in line with overall Index.**

## CA Realtor Inventory Down About 50%



Source: California Association of Realtors, National Association of Realtors, Moody's Economy.com, and Citi.

# Different Home Price Perspectives

# Unlike Refinancing, Buying a House is Like Buying a Car or Clothes

Reason for Move (Owner-Occupied)	2007-2008	1997-1998	Change
Change in marital status	6.5%	7.4%	-0.9%
To establish own household	9.0%	5.8%	3.2%
Other family reason	15.3%	13.0%	2.3%
New job or job transfer	7.6%	10.4%	-2.8%
To look for work or lost job	2.0%	1.1%	0.8%
To be closer to work/easier commute	3.5%	1.7%	1.8%
Retired	0.9%	1.2%	-0.3%
Other job related reason	2.7%	1.5%	1.3%
Wanted own home, not rent	15.9%	22.7%	-6.8%
Wanted new or better home/ apartment	14.2%	18.1%	-3.9%
Wanted better neighborhood /less crime	3.5%	3.7%	-0.1%
Wanted cheaper housing	4.1%	0.4%	3.8%
Other housing reason	5.1%	5.8%	-0.7%
To attend or leave college	1.3%	0.8%	0.5%
Change of climate	0.9%	0.8%	0.1%
Health reasons	1.9%	0.8%	1.1%
Natural disaster	0.2%	0.0%	0.2%
Other reasons	5.2%	4.7%	0.5%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	

- 2000-2009 period notable for how difficult-to-quantify-factors, such as investor psychology and government support of housing, can more than offset traditional underlying economic effects like unemployment and income changes – in particular, seems difficult to come up with economic data based explanation for giant run-up in home prices from late 1990s to 2006
- Why do people buy houses? Refinancing involves psychology (media effect), but ultimately is a financial decision at its core. Many more variables go into home purchase decision.

References: *Irrational Exuberance*, 2nd edition, by Robert Shiller, Princeton University Press, Princeton, NJ, 2005 and *Animal Spirits*, by George Akerlof and Robert Shiller, Princeton University Press, Princeton, NJ, 2009 explain importance of investor psychology driving housing booms and busts.

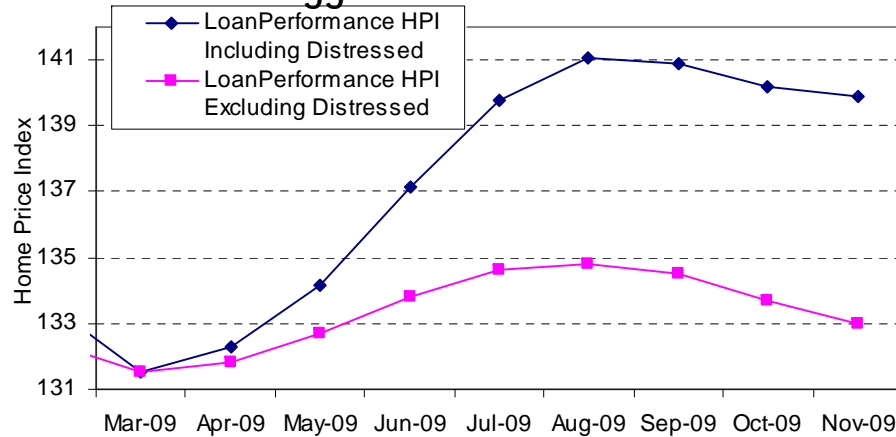
Notes: Occupancy classified based on ending status. Source: US Census Bureau, Citi.

# Perspective #1: Tax Credit, Distressed Sales, Seasonals



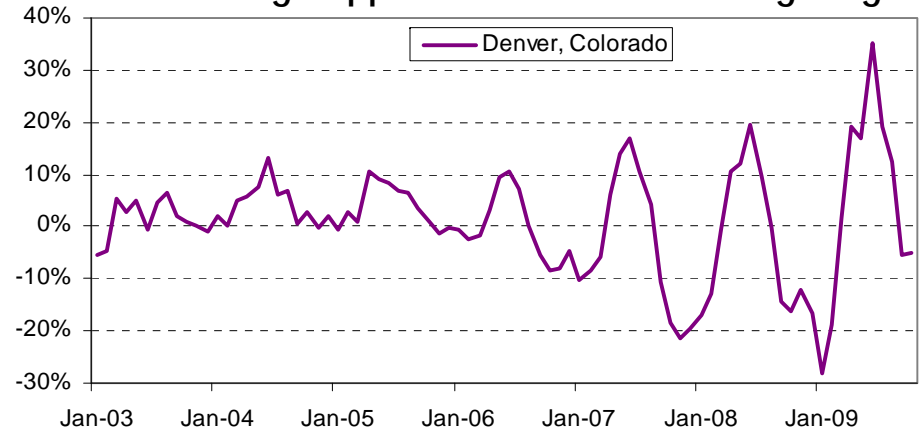
- Original first-time homebuyer tax credit worth up to \$8000, about 5% of median home price - first-time homebuyers about 40% of homebuyers implies about +2% boost to home prices
- Distressed inventory share of sales drop from 50% to 30% suggests +4% home price boost due to smaller “foreclosure discount” (-20%) – confirmed by LoanPerformance HPI excluding distressed
- Normal seasonals might contribute another +1% to +2%
- Denver illustrates plausibility that entire +6% spring/summer price increase due to transient factors

### Distressed Exaggerate Home Price Rebound?



Source: LoanPerformance, Citi.

### Seasonal Swings Appear to Continue Growing Larger



Source: S&P/Case-Shiller, Citi.

### Estimates of Distressed Share of Home Sales (%) – Stable in Recent Months

Month	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09
Distressed %	45.0	45.0	42.5	50.0	45.0	33.0	31.0	31.0	31.0	29.0	30.0	33.0

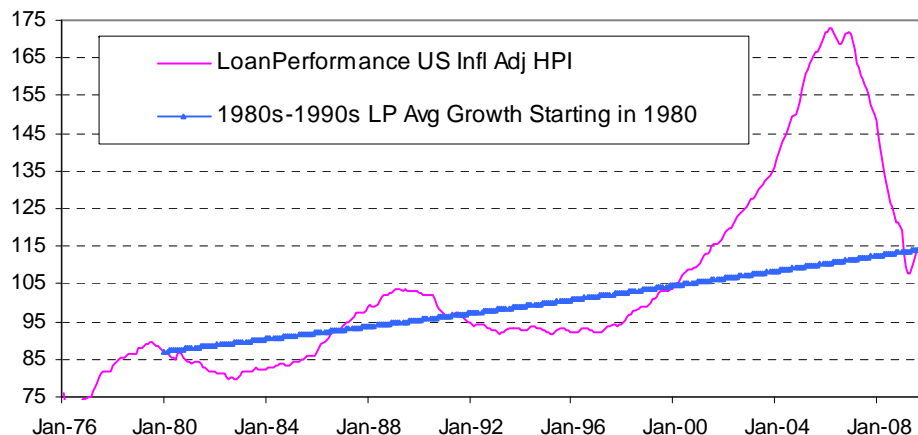
Notes: Includes foreclosures and short sales.

Source: National Association of Realtors, Citi.

# Perspective #2: Simple Trend Lines

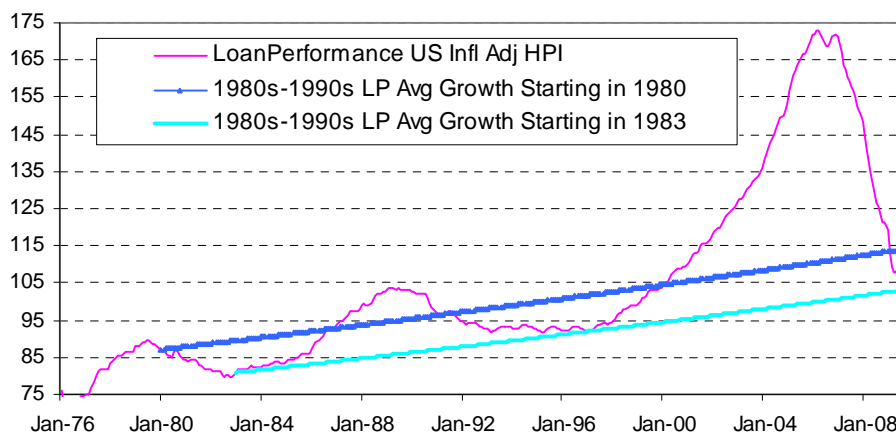


Trend Line Starting in 1980



Source: First American LoanPerformance, Bureau of Labor Statistics, and Citi.

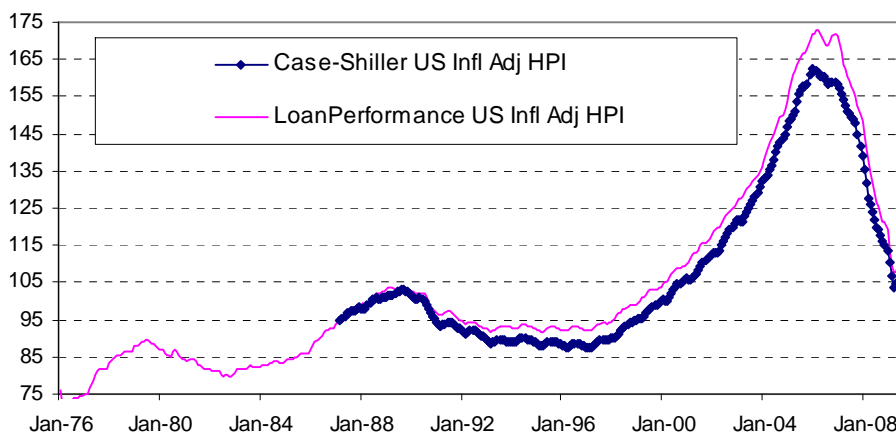
Trend Line Starting in 1983 Added



Source: First American LoanPerformance, Bureau of Labor Statistics, and Citi.

- **Average 1980s-1990s growth rate after inflation suggests current price levels may be at fair value**
- **But unemployment higher than average now – if we begin in 1983 when unemployment was similarly high, then trend line hits lows of 1990s and home prices 10% lower**
- **Lower right chart just shows Case-Shiller Index not very different from LoanPerformance**

Case-Shiller Not Very Different From LoanPerformance

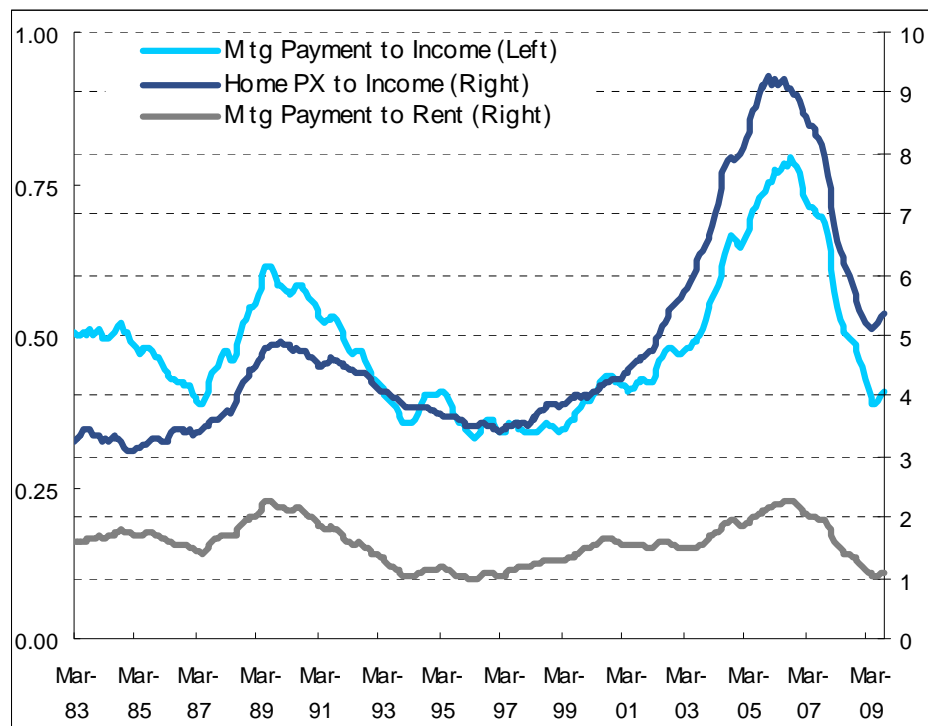


Source: S&P/Case-Shiller, First American LoanPerformance, Bureau of Labor Statistics, and Citi.

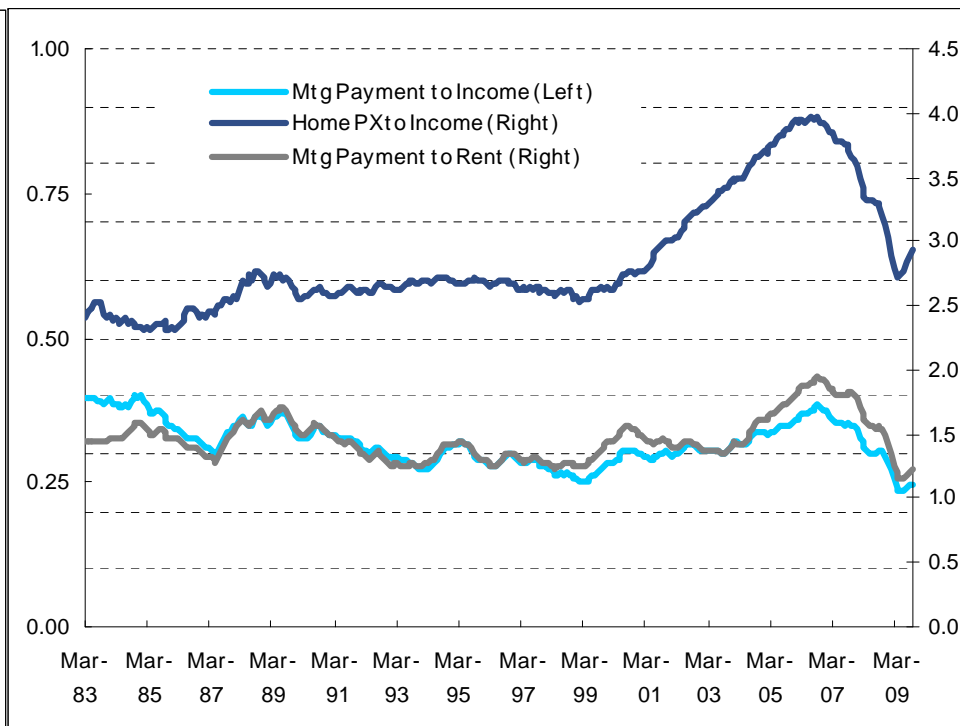
# Perspective #3: Affordability Measures



## Los Angeles, CA



## Chicago, IL



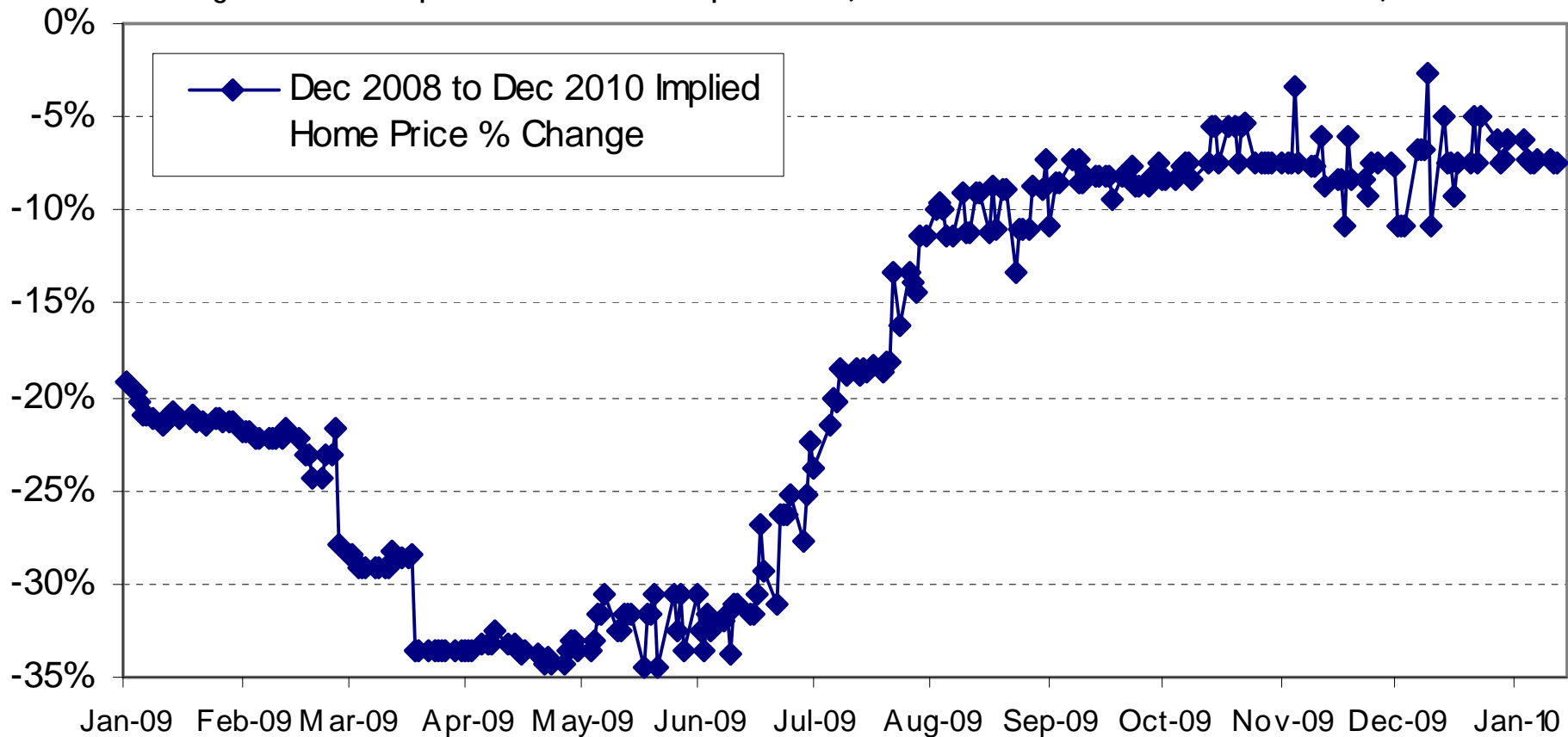
Source: S&P Case Shiller, Moody's Economy.com, Bureau of Labor Statistics, HUD, Freddie Mac, National Association of Realtors, NAIC, NAHB, Citi.

Source: S&P Case Shiller, Moody's Economy.com, Bureau of Labor Statistics, HUD, Freddie Mac, National Association of Realtors, NAIC, NAHB, Citi.

- **Affordability at or close to multi-decade highs in many cases based on mortgage payment to rent and income – suggesting home prices might be close to “fair value”**
- **Home price to income has not come down as much suggesting prices may have further to fall to reach “fair value”**

# Perspective #4: What Do Forward Markets Tell Us?

RPX/Radar Logic 25 MSA Composite Fwd Contract Implied HPA (Cumulative from YE 2008 Reference Value) To YE 2010



Source: RPX/Radar Logic and Citi.

Implied HPA (Cumulative from 12/31/09)				
10-Dec	11-Dec	12-Dec	13-Dec	14-Dec
-1.0%	-0.5%	0.0%	0.5%	1.0%

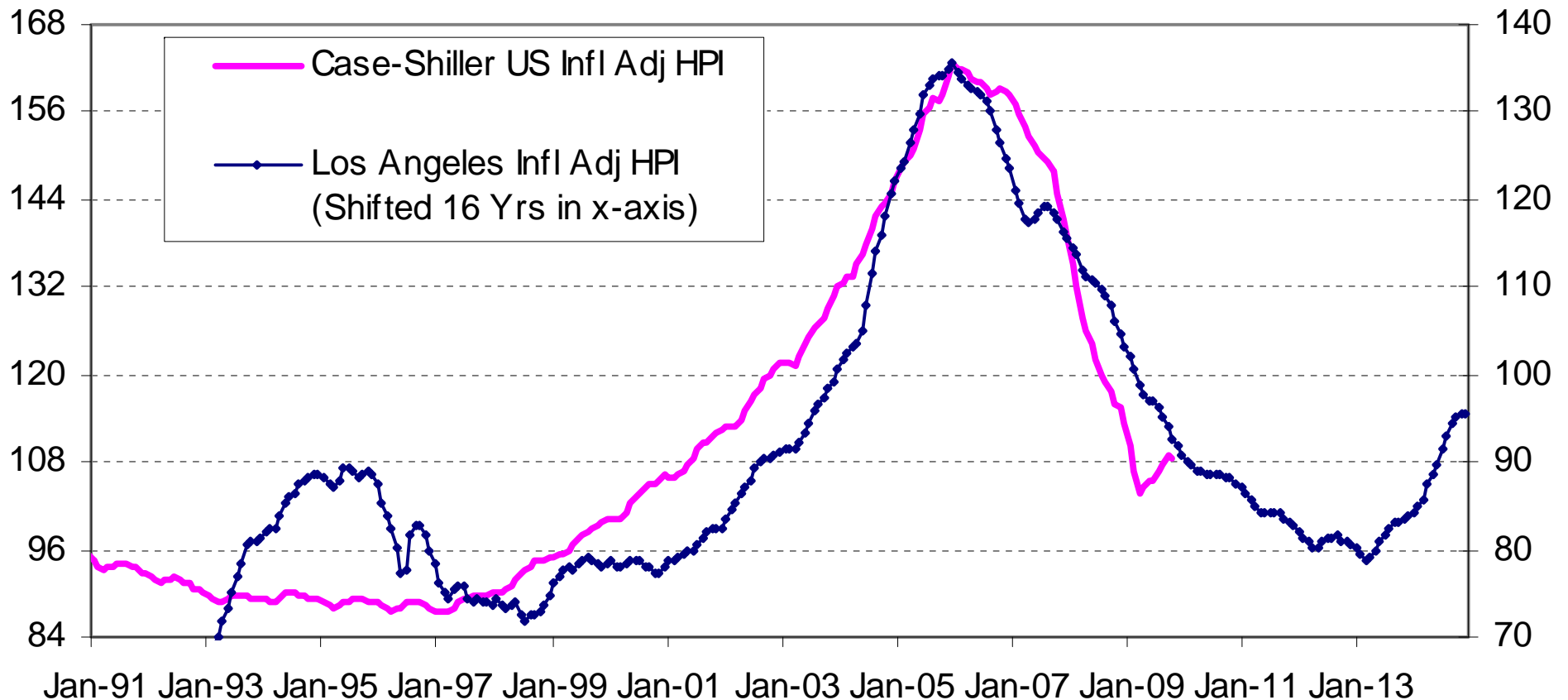
- Shifts in RPX/Radar Logic forwards have made sense
- Implied HPA starting from end of 2009 (really Oct 09) is flat for 5 years

Source: RPX/Radar Logic and Citi. Reference levels for RPX contracts represent simple avg of 28-day RPX Daily Prices from last 5 publication dates of each quarter.

# Perspective #5: Los Angeles 1990s Guide



Overlaying Trajectory of Then Severe Los Angeles 1990s Downturn (16 Year X-Axis Shift) on US Home Price Experience



Source: S&P Case-Shiller and Citi.

- **Overlaying Los Angeles 1990s downturn on top of US home price data shows that two booms and busts are comparable.**
- **Assuming US tracks Los Angeles trajectory suggests further nominal home price decline of a little over 10%. Furthermore, suggests that home prices may not bottom for a more few years.**

- Home prices may be getting close to a bottom, but:
  - Large seasonal swings
  - High unemployment trend line
  - Price-to-income affordability metric
  - Los Angeles 1990s experiencesuggest possibility of further drops in home prices
- Additional 10% drop in home prices seems plausible

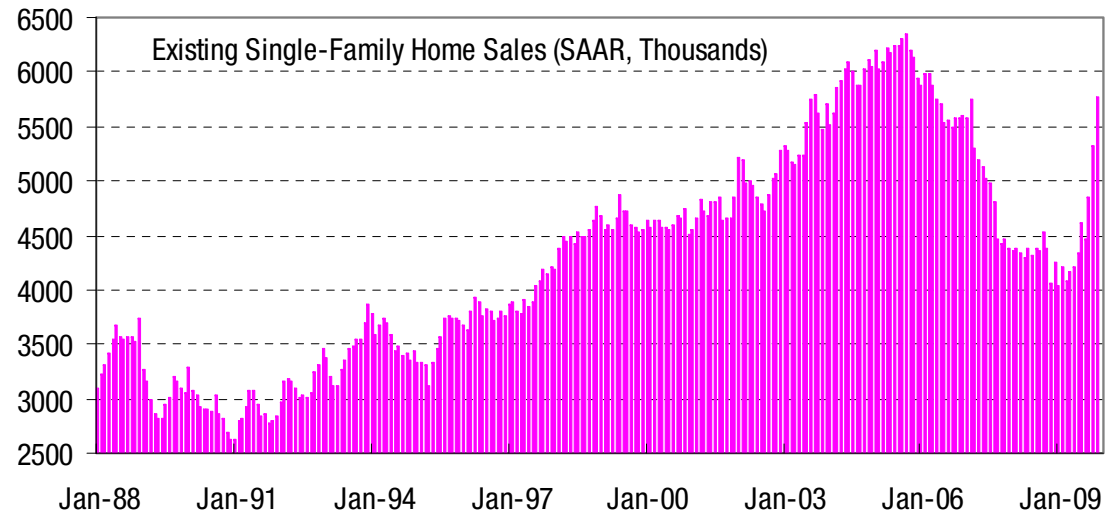
# Supply and Demand Measures

A) Too Many Houses

# Estimating Pent-up Demand – Dip in Home Sales, Starts

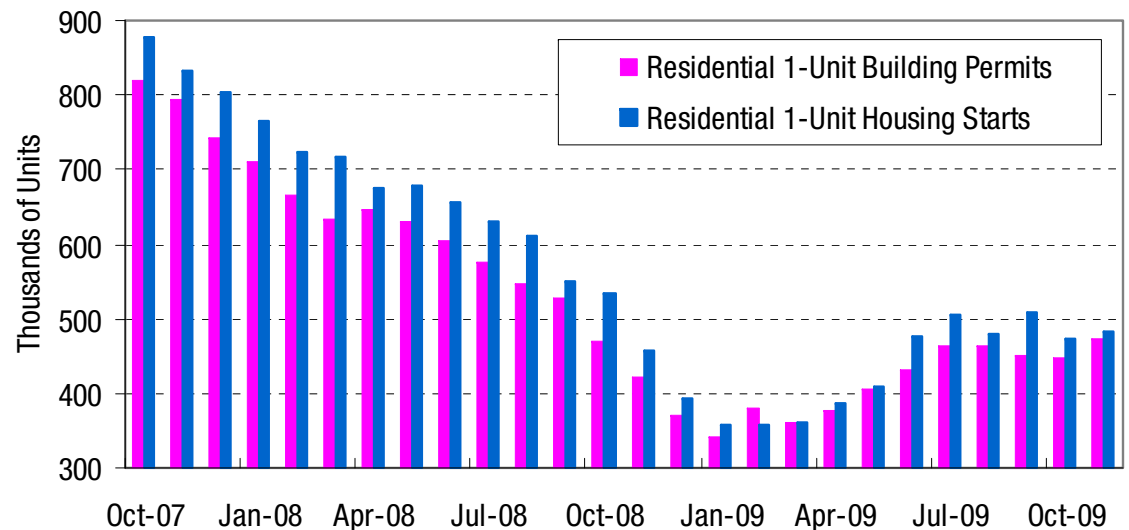


- **Dip was especially pronounced in the period from November 2008-May 2009**
- **Ballpark 2 months of pent-up sales demand, about 1 million units**
- **Some of these pent-up homebuyers are also sellers, so 1 million overstates pent-up demand**
- **Including rentals, guesstimate half a million total housing units of pent-up demand**



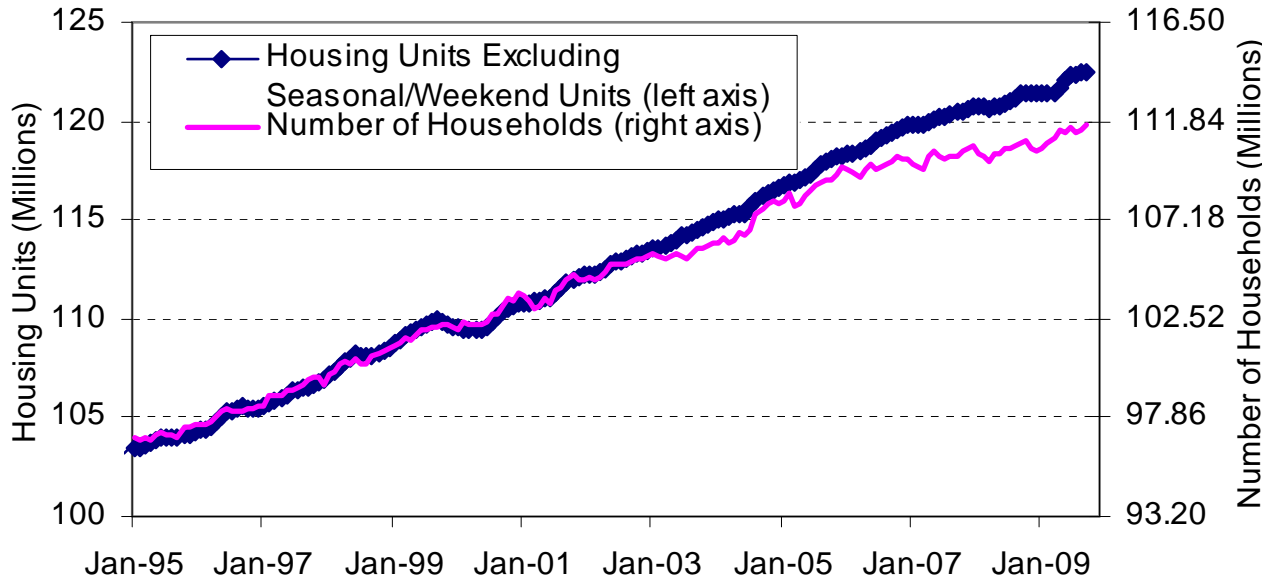
Source: National Association of Realtors, Moody's Economy.com, Citi.

## Decline in Housing Starts Looks Like Noise, Leading Indicator Permits Steady

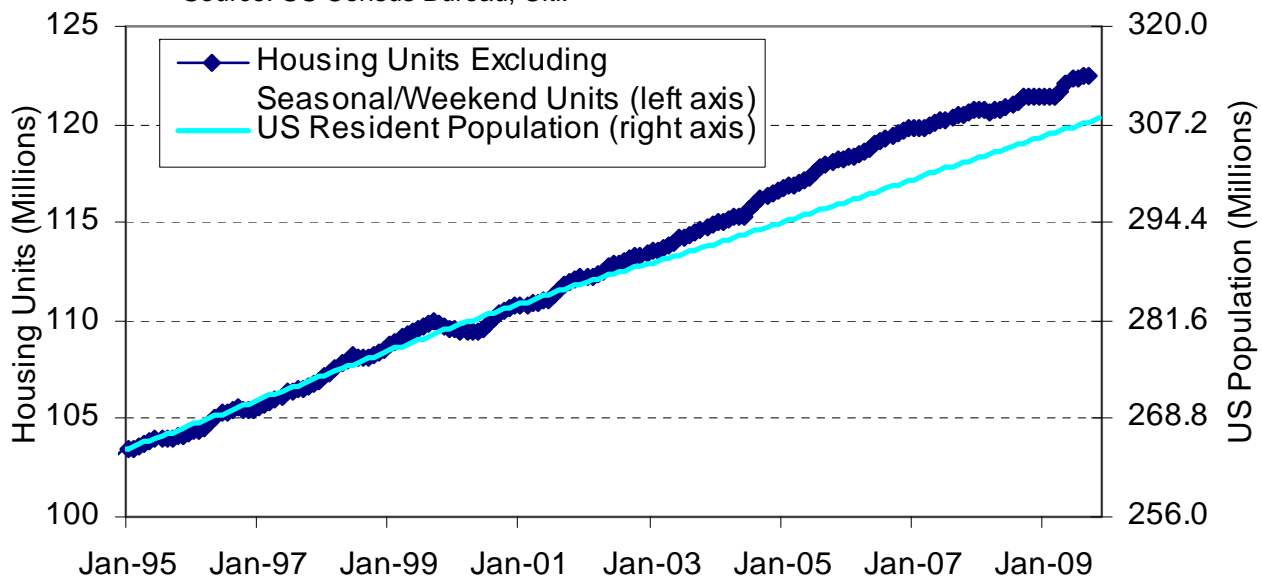


Source: US Census Bureau, Citi.

# Excess Supply Estimates versus Pent-up Demand



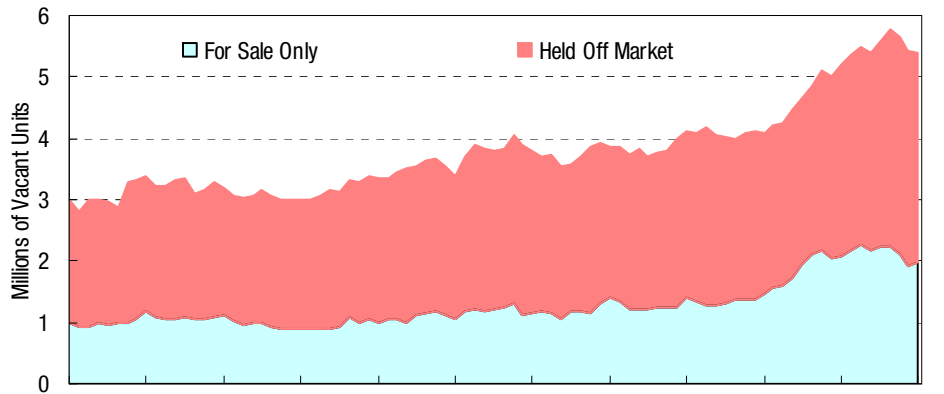
Source: US Census Bureau, Citi.



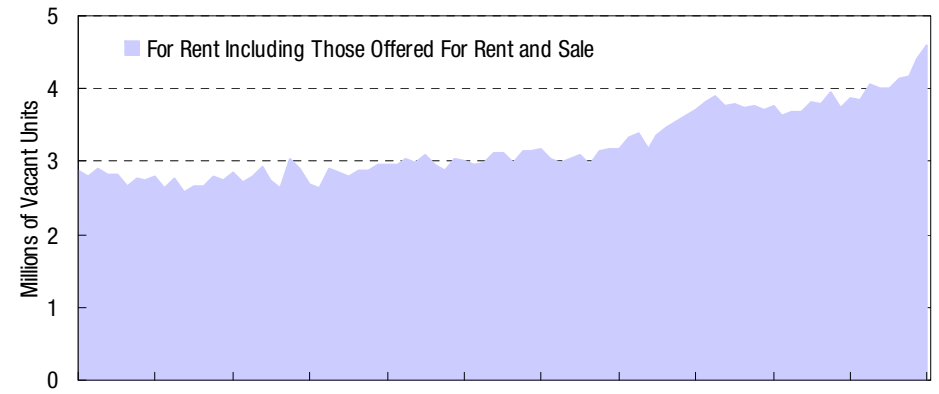
Source: US Census Bureau, Citi.

- Including rentals gives about half a million total housing units of pent-up demand
- Size of gap between the number of total housing units and number of households/people is a measure of the excess supply of housing units
- Based on households, 2.7 million excess housing units
- Based on population, 2.3 million excess housing units
- About 2 million more units of excess supply than pent-up demand

# Vacant Homes Inventory Up – Vacant For Sale/Rent Up, Held Off Market Down



Source: US Census Bureau, Citi.

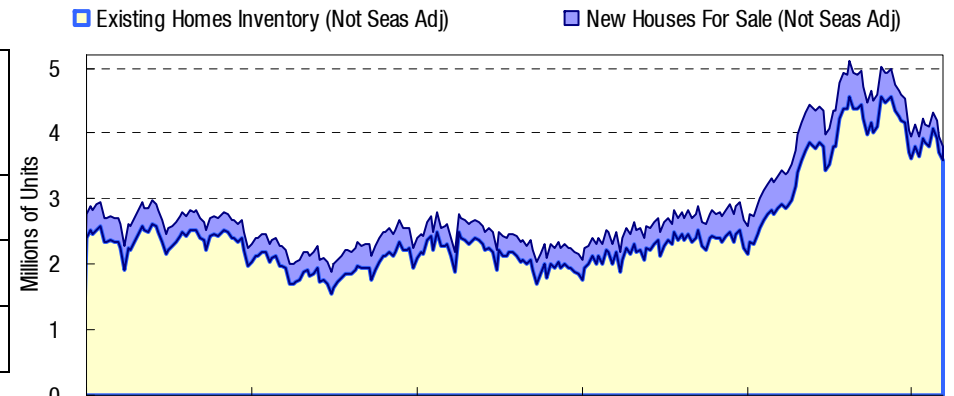


Source: US Census Bureau, Citi.

## “Excess” Inventory of Vacant Homes Down Roughly 10%

Category	Q2 2009 Excess Number of Units (Thousands)	Q3 2009 Excess Number of Units (Thousands)	Q2 2009 to Q3 2009 Change
For Sale Only	630	710	+80
Held Off Market	690	580	-110
For Rent	1020	1220	+200

Source: US Census Bureau, Citi.



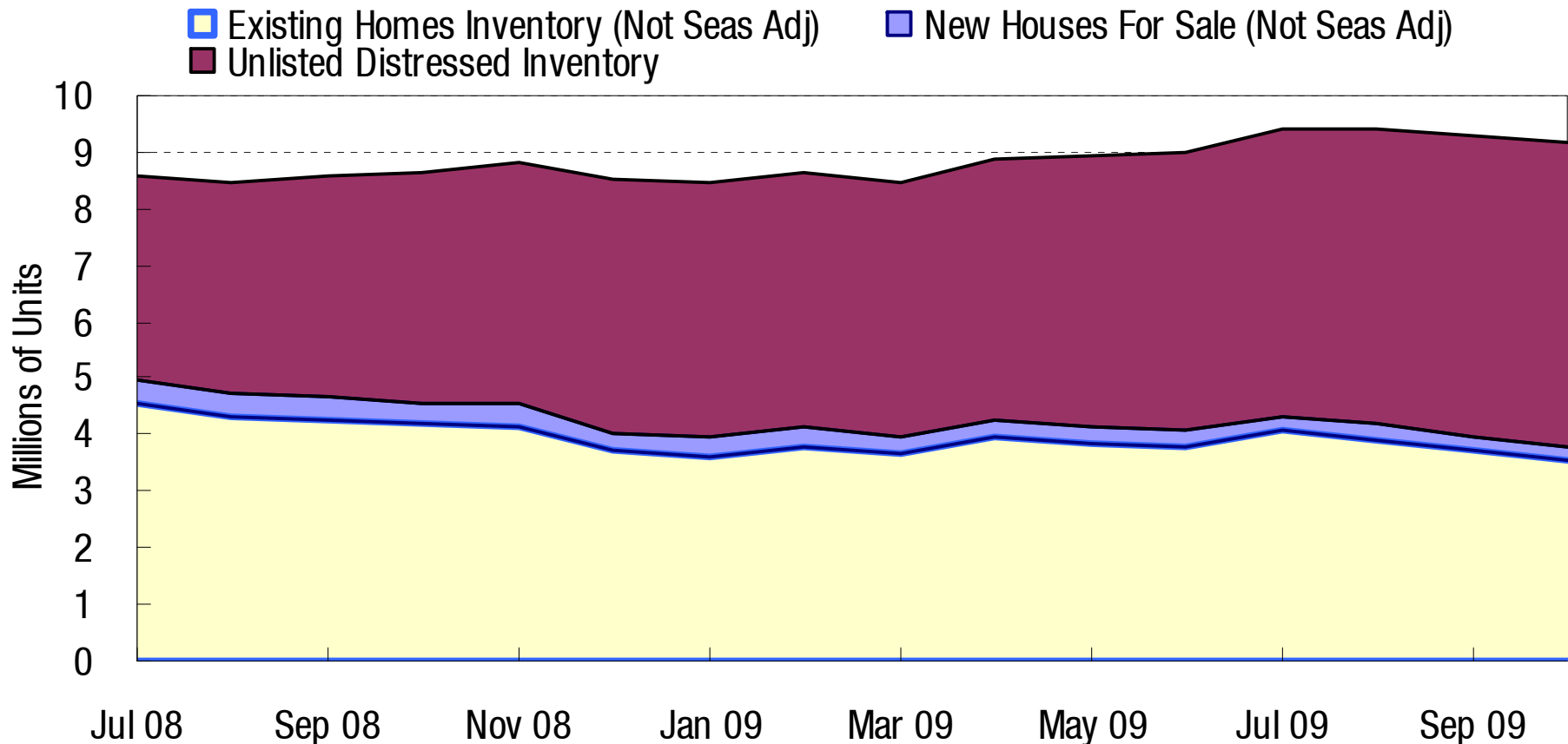
Source: National Association of Realtors, US Census Bureau, Citi.

- Excess inventory of vacant homes appeared to stabilize in first 2 quarters of 2009, but increased in Q3
- Vacant Homes For Sale up 80K, offset by Held Off Market drop? – sellers think market has stabilized?
- For Rent (includes units offered for both sale and rent) continues to rise relatively sharply – Q1 2009 rental vacancy rate of 10% has risen to 11% in Q3.

# Estimating “True” Housing Inventory



Components of Housing Inventory – Estimating Additional Distressed Inventory “Not Realtor-Listed” – “Shadow Inventory”

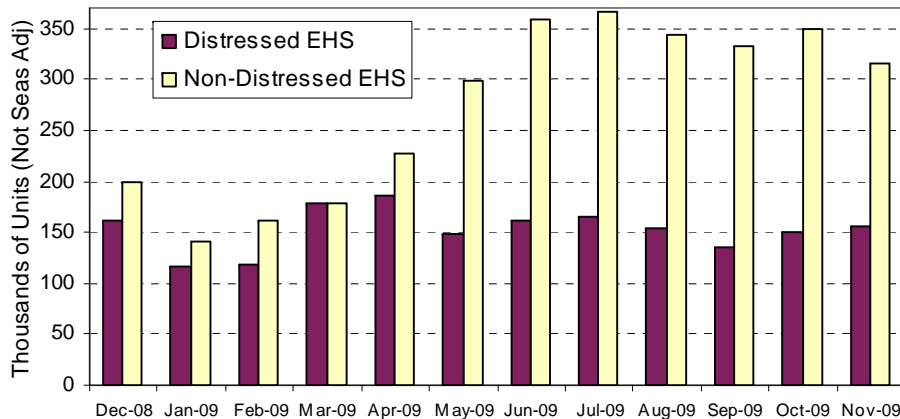


Source: National Association of Realtors, US Census Bureau, Mortgage Bankers Association, Moody's Economy.com, Citi.

- Traditional inventory measures – existing homes and new homes for sale – have been falling for well over a year
- But “not realtor-listed” distressed inventory is comparable in absolute size and has more than offset decline in traditional inventories of homes

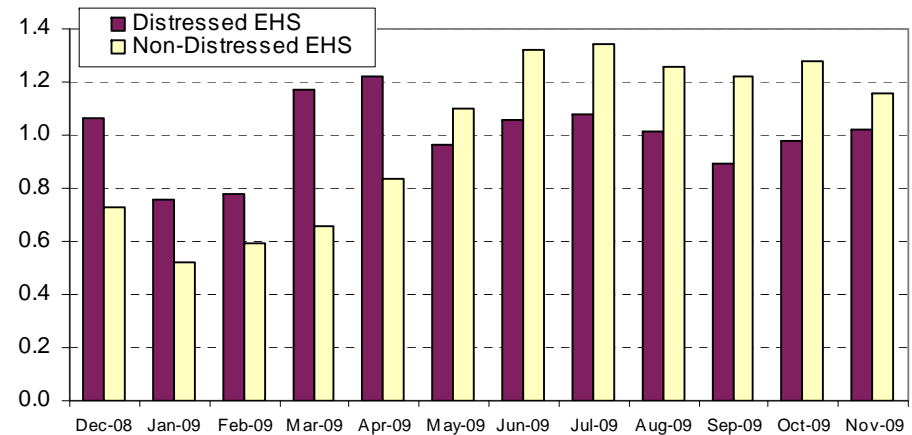
# How Excess Supply Was Overcome During Summer – Seasonal Mismatch

Distressed Existing Home Sales - Flat Seasonal Pattern



Source: National Association of Realtors, Citi.

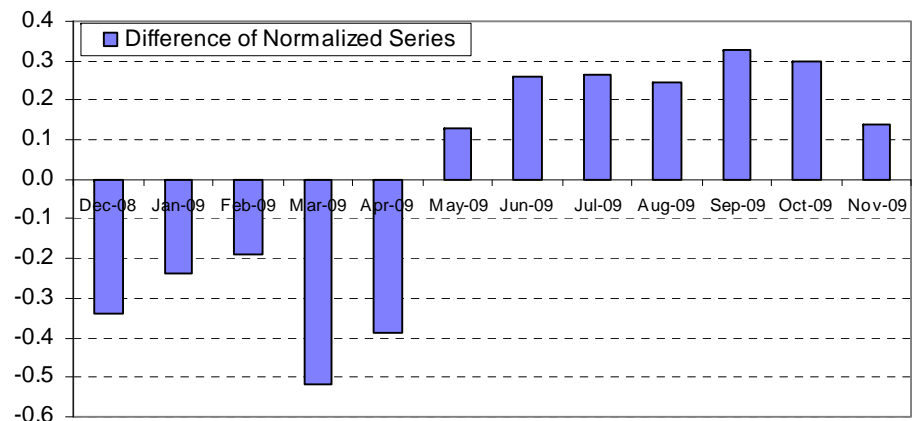
Distressed and Non-Distressed Sales Normalized to 1.0



Source: National Association of Realtors, Citi.

- **How excess supply may have been more than offset during summer 2009 – seasonal demand overwhelmed “not-seasonal” distressed supply**
- **Distressed home sales is proxy for distressed supply while non-distressed home sales is proxy for non-distressed demand.**
- **Gives ballpark estimate of seasonal demand versus less seasonal supply mismatch.**

Difference of Normalized Series Above

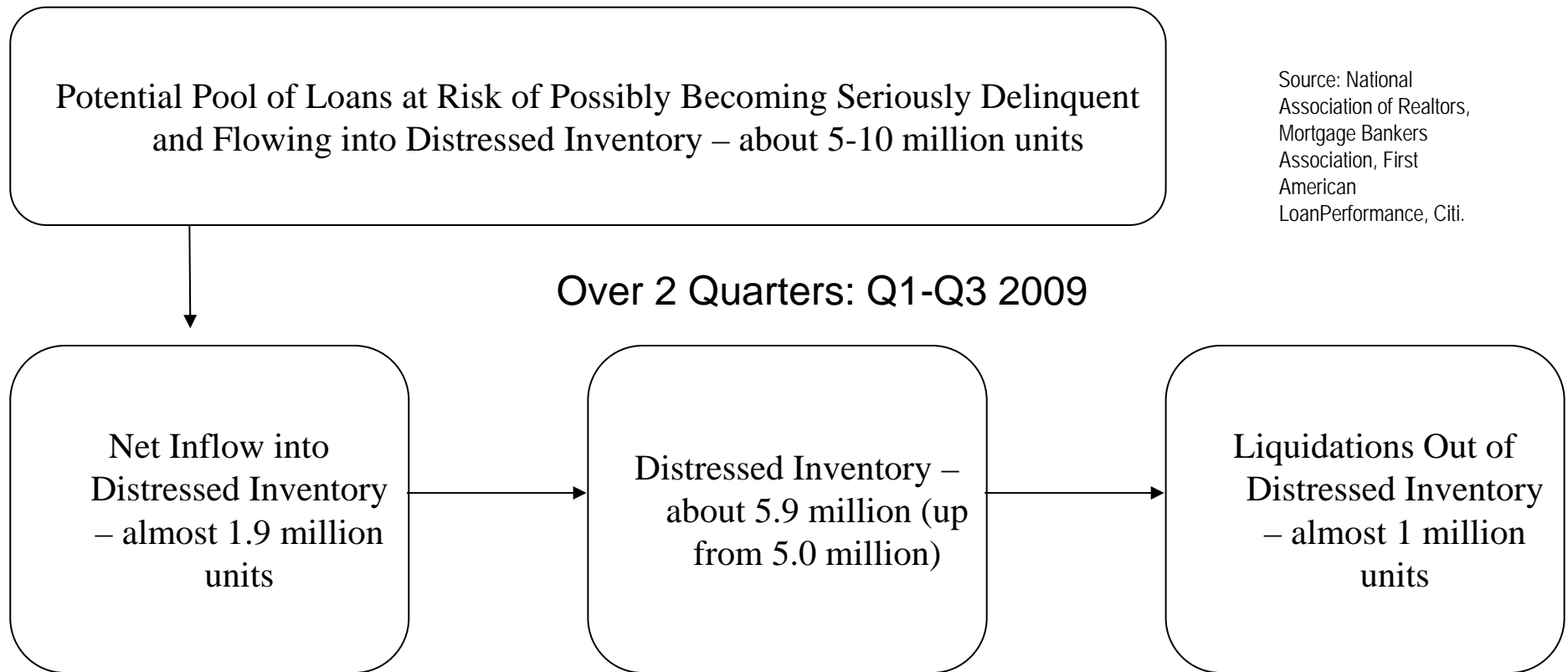


Source: National Association of Realtors, Citi.

# Supply and Demand Measures

B) Build-up of Huge Foreclosure Supply

# Distressed Inventory D60++ Flows and Levels Overview

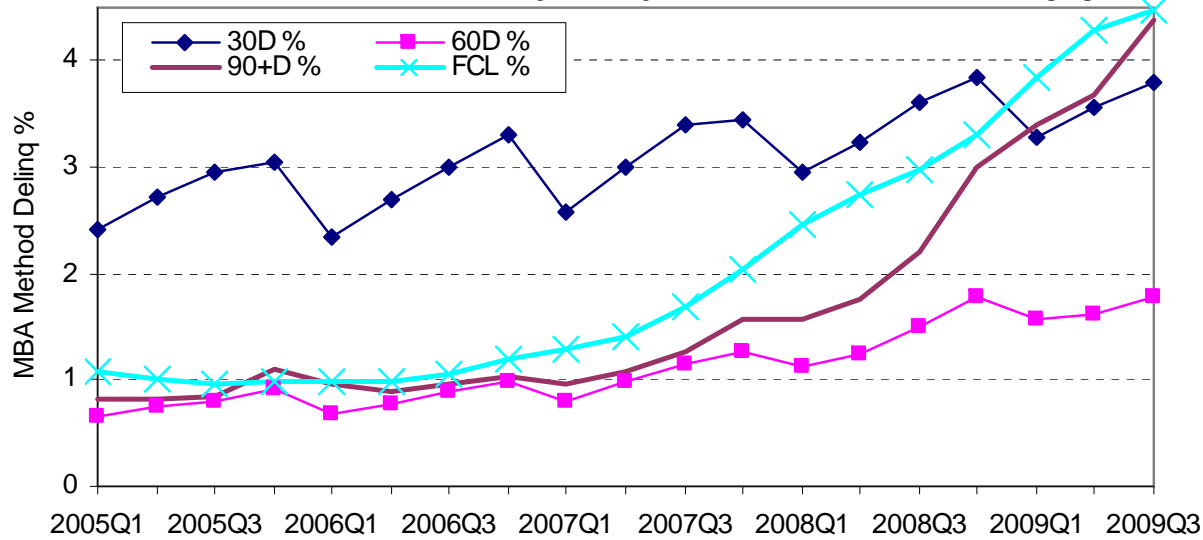


Source: National Association of Realtors, Mortgage Bankers Association, First American LoanPerformance, Citi.

- **Enough loans to feed distressed liquidation rate doubling? Yes**
- **Motivation to delay liquidation**
- **Enough buyers to absorb greater numbers of liquidations?**

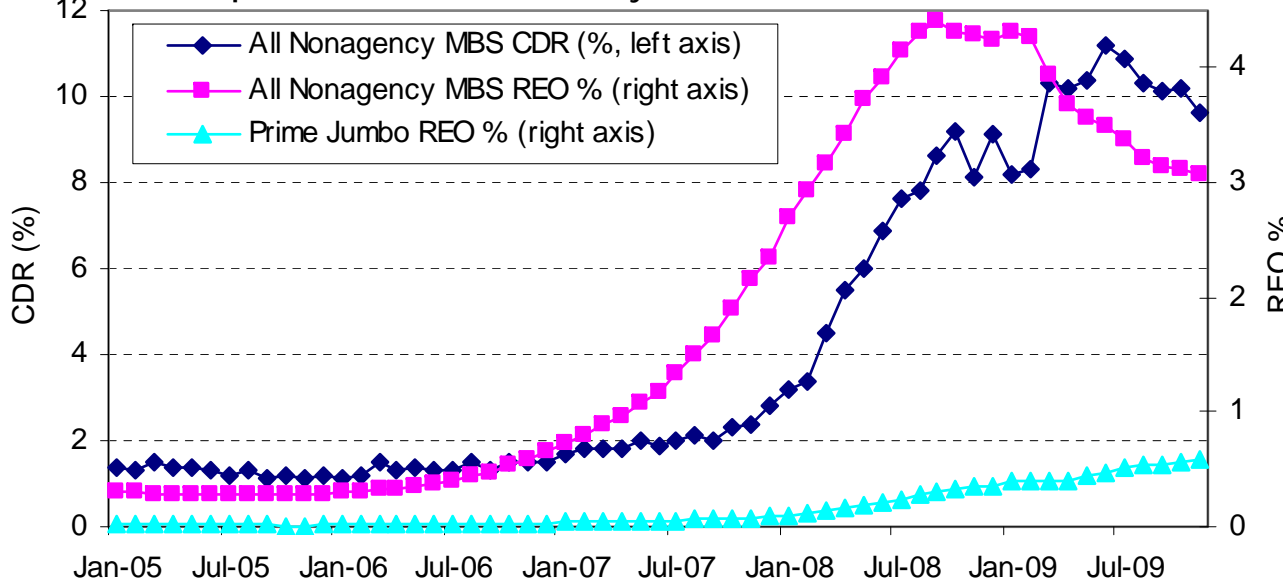
# Keeping Families in Their Homes – Not Working or Working?

Increase in Distressed Inventory Mostly in 90+D and FCL (All Mortgages)



Source: Mortgage Bankers Association, Moody's Economy.com, Citi.

Liquidations, REO % Relatively Stable



- Distressed inventory increase primarily occurring in 90+D and Foreclosure (FCL) categories
- Liquidation rates and REO % appear relatively stable
- Nonagency breakdown of 90+D and FCL suggests about 75% of these two categories are 180+D
- If 2/3 180+D overall (suggested by prime jumbo), then almost 6% not paying for 6+ months – 3 million mortgages! Only temporary in most cases, but is slowing foreclosure sales into REO. Not fair to just complain about ~100K permanent HAMP mods.

Source: First American LoanPerformance, CPR&CDR Technologies, Citi.

# Enormous Distressed Supply Summary

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- High level of distressed inventory is alarming – recent weakening in home prices tells us that “pent-up” demand is limited relative to magnitude of excess supply
- But many reasons for the inventory dam to leak more, but not burst:
  - Some of backup and delays in delinquency pipeline due to structural reasons like judicial foreclosure procedures in Florida, New York, New Jersey
  - Servicer color suggests relatively slow bank liquidation rates unlikely to jump dramatically
  - The government might intervene and could for example institute another foreclosure moratorium if housing market once again deteriorates quickly
  - Accounting benefits may also be contributing to liquidation delays if liquidation were to result in substantial writedowns
  - House sitting – may be better to keep house occupied to prevent damage

These factors may continue to outweigh \$50-\$100 daily carrying costs

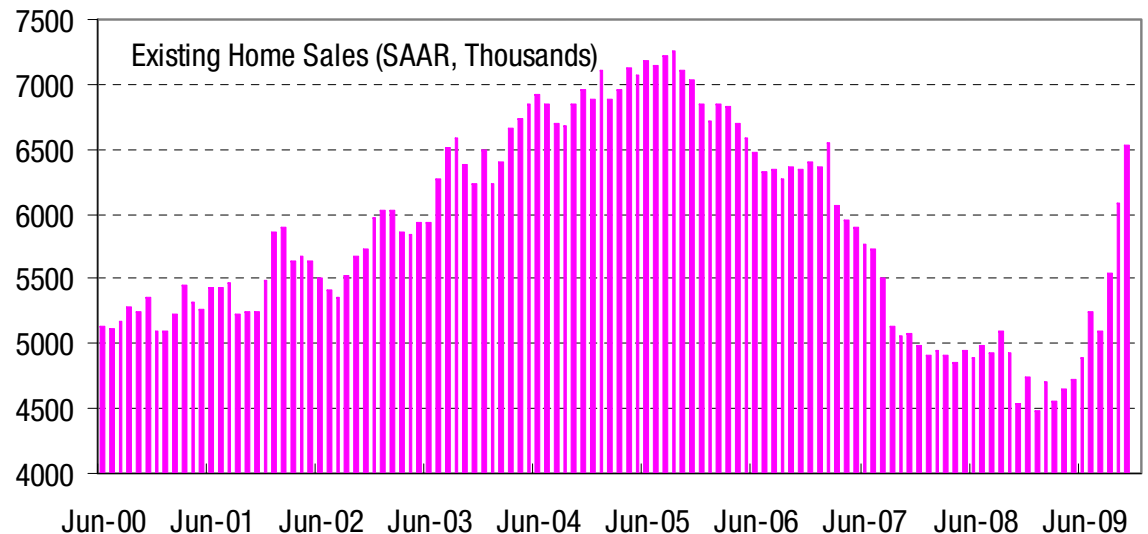
- Spread the pain into future also seen in renting out homes, investor cash purchases, homes held off the market, consistent with RPX/Radar Logic forwards and consistent with Los Angeles 1990s experience

# Outlook

# Near-term Outlook Cloudy

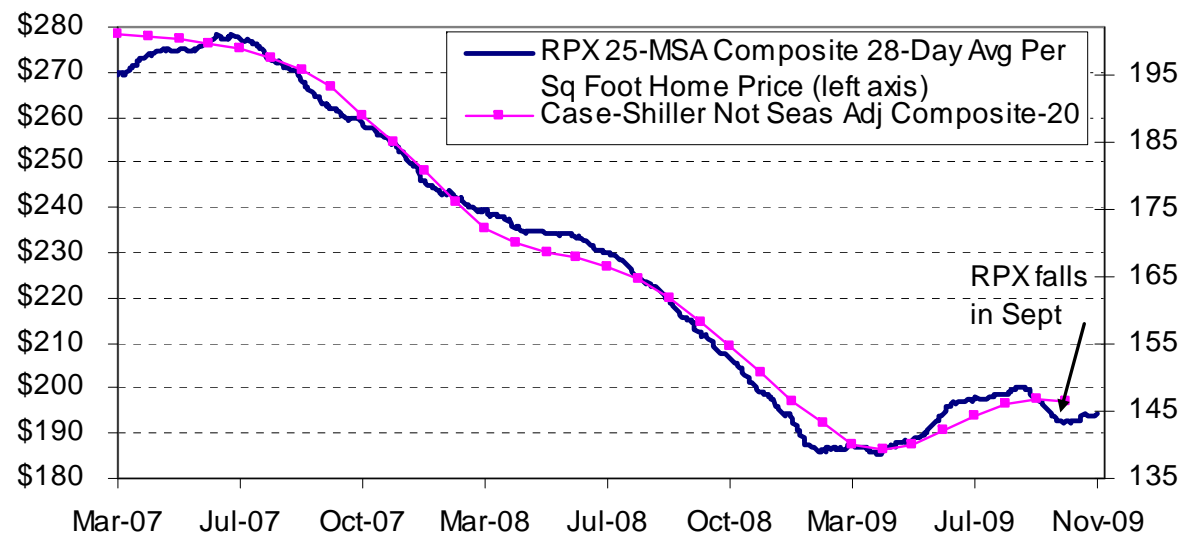


- **Decline in RPX/Radar Logic suggested Case Shiller could go negative**
- **Oct/Nov sharp home sales point to original end of Nov homebuyer tax credit expiration distortions**
  - **First-time homebuyers increase from Jul-Aug 30% to Oct-Nov 50%**
  - **Low price tiers outperforming**
- **Suggests RPX/Radar Logic recent stabilization may be short-lived**
- **As discussed earlier, overall 10% further home price drop still seems plausible**



Source: National Association of Realtors, Moody's Economy.com, and Citi.

## RPX/Radar Logic is Leading Indicator of Case-Shiller



Source: RPX/Radar Logic, S&P Case-Shiller, Citi

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## Appendix A-1 (Continued)



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