

# The Handbook of Major Housing Data Compiled by Radar Logic



R A D A R L O G I C  
I N C O R P O R A T E D  
Making property derivatives real  
[www.radarlogic.com](http://www.radarlogic.com)

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# Introduction

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- ▶ The financial crisis has catapulted housing data into the media forefront. It is almost impossible to pick up a newspaper or turn on the news and not be “informed” of some new read on the state of housing. The problem is that if one does not examine the subtle differences of these measures, there is meaningful risk of misinterpretation.
- ▶ This pamphlet is intended to help interested people better understand the various data that are being offered regarding housing. With better understanding, there can be better analysis.
- ▶ All of the information contained in this booklet was obtained from public sources. It is presented here to provide interested people with some guidance which will hopefully lead to a broader and better understanding of the housing market indicators.

# Table of Contents

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Pg. 4	Housing Data providers
Pg. 5	Release Calendar
Pg. 6	Analysis Type and Data Sources matrix
Pg. 7	Mortgage Bankers Associations (MBA) Purchase Applications report
Pg. 8	National Association of Realtors (NAR) Pending Homes Sales report
Pg. 9	CoreLogic House Price Index
Pg.10	RealtyTrac U.S. Foreclosure Market Report
Pg.11	National Association of Home Builders(NAHB) Home Market Index report
Pg.12	National Association of Realtors (NAR) Existing Home Sales
Pg.13	Federal Housing Finance Agency (FHFA) Housing Price Index
Pg.14	United States Census Bureau New Home Sales
Pg.15	Radar Logic Corp. RPX daily pricing & monthly research
Pg. 16	FISERV Standard & Poor's (S&P) Case Shiller Index (CSI)

# Housing Data Providers

Data Release	When	Source	Description
Pending Home Sales	Released 1 <sup>st</sup> week of the month	National Association of Realtors (NAR) <a href="http://www.realtor.org">http://www.realtor.org</a>	Index of pending sales based on survey of brokers and Multiple Listing Services (MLS)
CoreLogic HPI	Released approximately the middle of the month	CoreLogic <a href="http://www.corelogic.com">www.corelogic.com</a>	Repeat sales index of housing prices based on public records from closed transactions. Covers transactions of existing single-family homes.
Purchase Applications	Released every Wednesday	Mortgage Banking Association (MBA) <a href="http://www.mbaa.org">http://www.mbaa.org</a>	Index of mortgage loan applications based on a survey of mortgage bankers, commercial banks and thrifts.
NAHB-Wells Fargo Housing Market Index (HMI)	Released mid-month	National Association of Home Builders & Wells Fargo <a href="http://www.nahb.org/">http://www.nahb.org/</a>	Confidence index of home builders based on a survey of NAHB members. 50 is neutral.
Existing Home Sales	Released on or about the 25 <sup>th</sup> of each month	National Association of Realtors (NAR) <a href="http://www.realtor.org/">http://www.realtor.org/</a>	Seasonally adjusted annual homes sales rate based on a survey of brokers and Multiple Listing Services (MLS)
FHFA Housing Price Index (HPI)	Released approximately on or about the 25 <sup>th</sup> of each month	Government Sponsored Enterprises <a href="http://www.fhfa.gov/">http://www.fhfa.gov/</a>	Repeat sales index of housing prices based on records from single family mortgages either purchased or securitized by Freddie Mac & Fannie Mae.
New Home Sales	Released near the end of each month	U.S Census Bureau <a href="http://www.census.gov">http://www.census.gov</a>	An estimate of new home sales activity based on a mail survey of local building permit officials
Radar Logic RPX	Daily pricing, monthly research released the Thursday before the last Tuesday of each month	Radar Logic Incorporated <a href="http://www.radarlogic.com">www.radarlogic.com</a>	A daily “spot” value based on public records from closed transactions on all housing transactions nationally. Expressed as a price per square foot
S&P Case Shiller Index (CSI)	Released the last Tuesday of each month.	FISERV <a href="http://www.caseshiller.fiserv.com">http://www.caseshiller.fiserv.com</a>	Repeat sales index of housing prices based on public records from closed transactions. Covers transactions of existing single-family homes.
RealtyTrac U.S. Foreclosure Market data	Daily data available, Monthly report released the second week of the month.	RealtyTrac <a href="http://www.RealtyTrac.com">www.RealtyTrac.com</a>	An estimate of homes in the foreclosure process (in any of the three stages) based on data from over 2,200 public offices.

# Release Calendar (approximate release dates)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1 (RPX 1,7,28-day) <b>Pending home Sale Index (NAR)</b>	2 (RPX 1,7,28-day)	3 (RPX 1,7,28-day) <b>MBA Purchase Applications</b>	4 (RPX 1,7,28-day)	5 (RPX 1,7,28-day)	6
7	8 (RPX 1,7,28-day)	9 (RPX 1,7,28-day) <b>CoreLogic HPI (approx)</b>	10 (RPX 1,7,28-day) <b>MBA Purchase Applications</b>	11 (RPX 1,7,28-day) <b>RealtyTrac U.S. Foreclosure Market Monthly Report (approx)</b>	12 (RPX 1,7,28-day)	13
14	15 (RPX 1,7,28-day) <b>Housing Market Index (NAHB)</b>	16 (RPX 1,7,28-day)	17 (RPX 1,7,28-day) <b>MBA Purchase Applications</b>	18 (RPX 1,7,28-day)	19 (RPX 1,7,28-day)	20
21	22 (RPX 1,7,28-day) <b>Existing Home Sales (NAR)</b>	23 (RPX 1,7,28-day) <b>FHFA HPI</b>	24 (RPX 1,7,28-day) <b>MBA Purchase Applications</b> <b>New Home Sale (Census)</b>	25 (RPX 1,7,28-day) <b>Radar Logic Monthly Report</b>	26 (RPX 1,7,28-day)	27
28	29 (RPX 1,7,28-day)	30 (RPX 1,7,28-day) <b>S&amp;P Case Shiller 10 &amp; 20 City Index</b>	31 (RPX 1,7,28-day) <b>MBA Purchase Applications</b>			

# Analysis Type and Data Source

	Public Records	Real Estate Broker	Other
Price Index	CoreLogic HPI S&P Case Shiller Index (CSI) FHFA	S&P Case Shiller Index (CSI) <sup>1</sup>	CoreLogic HPI <sup>2</sup>
Most Likely Price	RPX		
Count Estimate	RealtyTrac U.S. Foreclosure Market Report	Pending Homes Sales Existing Homes Sales	New Home Sales Purchase Applications
Indexed Survey			Housing Market Index

6 1. Standard & Poor's discloses the use of MLS data when public source data is not available in certain cases.  
2. CoreLogic discloses the use of loan level data when public source data is not available in certain cases.



[www.mbaa.org](http://www.mbaa.org)

# Purchase Applications

## **SUMMARY**

### **MBA Purchase Applications**

Measures applications at mortgage lenders. This is a leading indicator for single-family home sales and housing construction

Measures application activity for fixed rate, adjustable rate, conventional and government loans for home purchases and refinances.

Covers over 50 percent of all U.S. retail residential mortgage applications.

Has been conducted weekly since 1990.

The **Mortgage Applications Survey** is published weekly on a one week delay. A subscription-based survey, it contains 15 indices covering application activity for fixed rate, adjustable rate, conventional and government loans for home purchases and refinances. A new report is posted every Wednesday with the previous week's market activity. The weekly data dates from 1990 through the most current week. Historical data is available at an additional cost. The report also includes percent changes in number and dollar volume of applications from a week, a month and a year prior; average loan size; average contract interest rates and corresponding points for six popular mortgage products and the refinance and ARM shares of applications (by application number and dollar amount).

The **Mortgage Applications Survey** report is released every Wednesday.

For more information please go to: [www.mbaa.org](http://www.mbaa.org)

# Pending Home Sales Index (PHSI)

## **SUMMARY**

### **National Association of Realtors (NAR) Pending Home Sales Index (PHSI)**

Based on signed real estate contracts for existing single-family homes, condos and co-ops

Excludes new construction

Based on Multiple Listing Services (MLS) data samples from across the country

Published on a one month lag

The index is calculated by dividing the number of signed contracts within a sample for the current reporting period by the number of signed contracts in a sample for the same time period in the previous year and then multiplying by the previous year's PHSI.

Each February, NAR Research conducts a normal review of PHSI seasonal adjustment factors and fine-tunes monthly data for the past three years

The **Pending Home Sales Index** is released monthly by the National Association of Realtors (NAR). The report is derived from data collected from Multiple Listing Services (MLS) across the country. Data are based on a sample that typically representing about 20 percent of existing-home sales nationwide. The reports are published monthly on a one month lag and are subject to multiple revisions.

The index measures housing contract activity. It is based on a sample of signed real estate contracts for existing single-family homes, condos and co-ops. The index is calculated by dividing the number of signed contracts within a sample for the current reporting period by the number of signed contracts in a sample for the same time period in the previous year and then multiplying by the previous year's PHSI.

An index of 100 is equal to the average level of contract activity during 2001, which was the first year to be examined, as well as the first of five consecutive record years for existing-home sales; it coincides with a level that is historically healthy.

The **Pending Home Sales Index** is published the first week of each month.

For more information please go to: <http://www.realtor.org/research/research/ehspage>



# CoreLogic HPI

## **SUMMARY**

### **CoreLogic HPI**

Calculated using a weighted repeat sales methodology based public source records.

Requires sales pairing which matches recent sales with a prior sale for the same property.

Collected from public source and supplemented by loan level analytics

Published five weeks after data collection. January, 2011 HPI Index published in mid-march, 2011.

Revisions: Data series are re-estimated each month to allow inclusion of new transactions.

The **CoreLogic HPI** is calculated using a weighted repeat sales methodology based on public source data. In situations where public source information is not available CoreLogic loan level data will be supplemented. The CoreLogic HPI methodology requires sales pairs, matching a recent sale with a prior sale for the same property. The CoreLogic HPI includes distressed sales data as well as data on condominiums and co-op sales, but does not include data regarding new construction as no previous sale records are available.

The CoreLogic HPI is published on approximately a 5 week lag from the end of the data collection period. For example, the CoreLogic January HPI will be published in mid-March.

**The CoreLogic HPI** is published mid-month approximately five weeks after the collection period.

For more information please go to: [www.corelogic.com](http://www.corelogic.com)



# RealtyTrac U.S Foreclosure Market Report

## **SUMMARY**

### **U.S. Foreclosure Market Report:**

Aggregates foreclosure data and appends the data with estimated property values, comparable sales, loan history, tax lien and bankruptcy records, trustee and lender information, property details

Collects and aggregates foreclosure data from more than 2,200 counties, covering more than 90 percent of U.S. households

Monthly foreclosure report published on one month lag.

Daily database updated twice a day

Monthly, Quarterly and annual report recapping foreclosure rates nationally

RealtyTrac is an online marketplace of foreclosure properties, with more than 1.5 million default, auction and bank-owned listings from over 2,200 U.S. counties. RealtyTrac provides data about foreclosure filings, auctions, sales of bank-owned homes and short sales.

RealtyTrac tracks sales of properties in all three stages of foreclosures along with the sales date and sales price. Each property in the RealtyTrac database comes with estimated property values, value ranges, loan history, lien and bankruptcy data. RealtyTrac also provides interactive mapping, MLS listings and photographs as well as up to 15 sales records of adjacent properties.

**RealtyTrac U.S. Foreclosure Market Monthly Report** is released the second week of each month.

For more information please go to: <http://www.realtytrac.com/home/>

# Housing Market Index (HMI)

## SUMMARY

### Housing Market Index (HMI)

Weighted average of separate diffusion indexes: present sales of new homes, sale of new homes expected in the next six months, and traffic of prospective buyers in new homes

Produced in a joint effort between National Association of Home Builders and Wells Fargo.

Reported nationally and for four geographic regions.

Based on survey's completed by builders, home buyers, and renters for single family

The Housing Market Index is published monthly with no future revisions.

The **NAHB-Wells Fargo Housing Market Index (HMI)** is based on a monthly survey of NAHB members. The survey asks respondents to rate market conditions for the sale of new homes at the present time and in the next 6 months as well as the traffic of prospective buyers of new homes.

The HMI is a weighted average of three separate diffusion indices corresponding to the three questions in the member survey. A diffusion index is calculated for each series by applying the formula  $“(Good-Poor+100)/2”$  to the present and future sales series and  $“(High/Very High - Low/Very Low + 100)/2”$  to the traffic series. Each resulting index is then seasonally adjusted and weighted to produce the HMI.

Based on this calculation, the HMI can range between 0 and 100, with a 50 being neutral.

The **NAHB-Wells Fargo Housing Market Index (HMI)** is released mid-month, one day prior to the Census Bureau's housing starts report.

For more information please go to: <http://www.nahb.org>

# Existing Home Sales Index (EHSI)

## **SUMMARY**

### **National Association of Realtors (NAR) Existing Home Sales Index (EHSI)**

Based on Multiple Listing Services (MLS) data samples from across the country

Based on completed transactions for single-family, townhomes, condominiums and co-ops

Published on a one month lag

Requires multiple future revisions

Expressed as a seasonally adjusted annual rate, which represents what the total number of actual sales for a year would be if the relative pace for that month were maintained for 12 consecutive months

The **Existing Home Sales Index (EHSI)** is calculated by the National Association of Realtors (NAR) using data on existing-home sales (single-family, condos and co-ops) from local associations/boards and multiple listing services (MLS) nationwide. NAR captures 30-40% of all existing-home sale transactions with its monthly survey. The reports are published monthly on a one-month lag along with more granular reports (Condo & CO-OP, single family only). The Existing Home Sales Index (EHSI) is subject to multiple revisions.

The monthly Existing Homes Sales index is based on a representative sample of 160 Boards/MLSs. The home sales data (raw data) is divided into the four census regions: Northeast, South, Midwest and West. Aggregated raw volume figures are weighted to represent sales activity for each region of the country. The weights are benchmarked every 10 years to reflect shifts in regional demand.

- **Existing Home Sales Index** is published on or about the 25<sup>th</sup> of each month.

For more information please go to: <http://www.realtor.org/research/research/ehspage>



# Federal Housing Finance Agency (FHFA) HPI

## SUMMARY

### Federal Housing Finance Agency's (FHFA) seasonally adjusted purchase- only house price index (HPI)

Repeat sales index; the methodology is a modified version of the S&P Case-Shiller geometric weighted repeat sales procedure

Derived from transactions involving ONLY conforming conventional mortgages purchased or securitized by Fannie Mae or Freddie Mac

Excludes new construction, Condo and multi-family properties

Released Quarterly (MSAs) and monthly (US & Census divisions) with data collection periods quarterly (MSA) and monthly (US & Census divisions)

Weights properties based on changes in property quality between sales.

Revised quarterly.

The **Federal Housing Finance Agency (FHFA) House Price Index (HPI)** tracks prices of single-family homes using data provided by Fannie Mae and Freddie Mac. The House Price Index is based on transactions involving conforming conventional mortgages purchased or securitized by Fannie Mae or Freddie Mac. In contrast to other house price indexes, the sample is limited by the ceiling amount for conforming loans purchased by these government-sponsored enterprises (GSE).

The FHFA HPI is calculated using a modified version of the S&P Case-Shiller Index repeat sales methodology. As with the S&P Case Shiller Index, the FHFA HPI requires sales pairs, matching a recent sale with a prior sale for the same property, and excludes new construction, condo and multi-family properties. The FHFA HPI also excludes any property that hasn't been purchased or securitized by Fannie Mae or Freddie Mac. The index is revised each quarter.

- FHFA publishes the **FHFA MSA HPI** quarterly
- FHFA publishes the **FHFA US & Census divisions HPI** monthly

For more information please go to: <http://www.fhfa.gov/Default.aspx?Page=14>



# U.S Census Bureau New Homes Sales

## **SUMMARY**

### **Census New Home Sales**

Based the Survey building permit officials across the country

Reported nationally for four geographic regions

Published the month following the collection period (June is released in July)

Subject to revision

**Census New Home Sales** measure the number of newly constructed homes with a committed sale during the month. A house is considered sold when either a sales contract has been signed or a deposit accepted. Included in the estimates are houses for which a sales contract is signed or deposit accepted before construction has actually started; for instance, houses sold from a model or from plans before any work has started on the footings or foundations. These estimates also include houses sold while under construction or after completion. The Census New home Sales measure is broken out in four geographic regions.

The compilation of the new home sales series is a multistage process. First, an estimate is made monthly of the number of housing units for which building permits are issued in 19,000 permit-issuing places. Second, for each permit selected in 900 permit-issuing places, an inquiry is made of the owner or the builder to determine if the house was already sold or is for sale. Third, houses identified as sold in the monthly canvass of non-permit areas are weighted appropriately to provide an estimate of total houses sold in areas not covered by building permit systems. Adding this estimate of sales in non-permit areas to the estimate of sales in the permit-issuing places results in an estimate of total houses sold.

**Census New Home Sales** report is published at the end of each month

For more information please go to:

<http://www.census.gov/const/www/newressalesindex.html>

# Radar Logic RPX Pricing

## SUMMARY

### Radar Logic Daily Prices (RPX)

Publishes 1,7 and 28-day values

Publishes daily

Publishes on a PPSF basis

Publishes daily transaction counts

Available for all property types(New Construction, Condo, single family, multifamily up to 4 units) are included

Published daily for 25-MSAs. Pricing for 270+ additional MSAs is available.

RPX values for Motivated (distressed) and Other (non-distressed) submarkets are available.

Based on public records only

**RPX prices** reflect the “most likely observed” price for residential real estate, expressed on a per square foot basis.

RPX prices are calculated daily using public source data for all residential property transactions nationwide. If a record includes square footage, sales price and transaction date then the record qualifies for inclusion in the RPX calculation. RPX daily pricing data is calculated using Radar Logic’s proprietary Triple Power Law methodology. Disclosures are available on [www.Radarlogic.com](http://www.Radarlogic.com) along with a white paper summary and FAQ regarding Triple Power Law for review and analysis. RPX daily pricing is published on a 63-day lag which means data published today represents the “most likely observed” price for residential real estate on a per square foot basis 63-days prior to the publication date (e.g., RPX prices published on 03/01/11 represent the “most likely observed” price on 12/28/10).

On each trading day, Radar Logic publishes three prices for each of the markets it covers. The three prices reflect transactions that occurred during 1-, 7- and 28-day periods, respectively, ending on the specified transaction date. Prices are available for 25 metropolitan statistical areas. A fixed weight average of the 25 is published as the 25 - MSA RPX Composite.

•Radar Logic publishes a **monthly research report** on the third Thursday of each month.

For more information please go to: [www.RadarLogic.com](http://www.RadarLogic.com)



## **SUMMARY**

### **S&P Case-Shiller Monthly Index**

Calculated using a weighted repeat sales methodology based public source records.

Requires sales pairing which matches recent sales with a prior sale for the same property.

Excludes new construction as well as condo and multifamily.

Weights transactions based on changes in property quality, time between sales, turnover frequency and initial home value

Publishes monthly on a two month lag based on three months of public source data.

The **S&P Case-Shiller Home Price Indexes (CSI)** track monthly changes in the value of residential real estate in 20 metropolitan regions across the U.S. The indexes measure changes in prices of existing single-family homes. Separate indexes are available for condominiums. In addition to the 20 metropolitan area indexes there are two composite indexes, one based on data for 10 cities and the other based on data for 20 cities. There are also regional indexes.

The S&P Case-Shiller home price indexes are calculated using a weighted repeat sales methodology applied to public records. The CSI is reported with a two-month lag and is based on three months of data. For example, data released in January 2011 was for the three months ended November 2010 (November, October, September 2010). The methodology requires sales pairs, matching a recent sale with a prior sale for the same property. As a result, the CSI does not reflect prices of newly constructed homes. The methodology used to calculate the CSI weights transactions based on changes in property quality, time between sales, turnover frequency and initial home value.

Fiserv publishes the **S&P Case-Shiller Home Price Indexes** the last Tuesday of each month.

For more information please go to: <http://www.caseshiller.fiserv.com>