

Overview

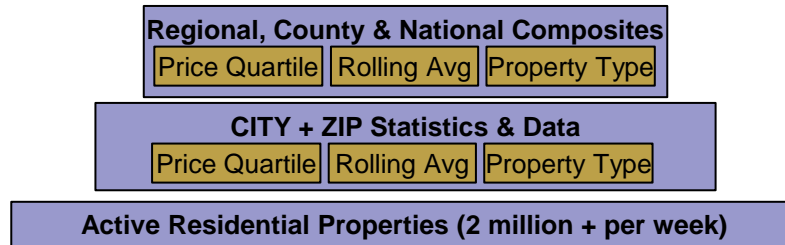
The Altos Research Real Estate Market Indicators & Analytics platform is organized into four dimensions for actionable analysis: Geographic Scope, Price Range Quartile, Rolling Average, and Property Type. Market Indicators & Analytics are calculated with each dimension in combination with all other dimensions (For example: *Days on Market for the top price quartile of single family homes in Los Altos, CA 94024 over a 90-day rolling average*). The result is the most granular, real-time real estate data available, with literally hundreds of distinct market measures available at any geographic scope.



Products and Availability

All Altos Research market indicators and analytics are **published every Monday**, based on the active listed properties of the preceding week. Clients subscribe to direct data feed of any geographic scope and stat combination, regional and national reports, or per zip code reports. Regional and national composites lead traditional data sources, such as the Case Shiller Index, by 90 days.

The Altos Research data hierarchy enables instant analysis of trends from a micro-market to a national view:



Data Products	Description	Available Products
Regional & National Composites	Composites and weighted averages for planning, derivatives traders	- Case Shiller & Radar Logic Derivatives Market Report . - Regional data feeds [CSV, XML, Spreadsheet]
City/Zip	Local Market statistical analysis, trend analysis	- Available as local market reports [PDF] and - Custom geography + stat data feeds [CSV, XML, Spreadsheet]
Property	Individual property data for specific property analysis, AVMs, fraud detection, mortgage analysis	Property data feeds [CSV, XML, Spreadsheet]

Geographic Scope

The real estate market is viewed by some definition of geography, depending on the analytical application

Geographic Scope	Description	Application
Zip	Zip Code is the smallest geographic unit used for market analysis.	Most detailed local analysis. 15,000+ US zip codes
City	Each city is measured with All zip codes aggregated for a city-level view. City-zip combinations defined by the USPS	City-level aggregate view
Metro Region	Metropolitan regions defined by the Census Bureau's MSAs. All zip codes in the MSA aggregated for a regional-level view	Regional view for futures and derivatives trading. Over 135 MSA regions with new markets added monthly.
Custom Region	Custom regions can be defined for specific client investigation.	Client-specific analysis, for example to track the market for luxury homes in a region

Trending Rolling Averages

All market indicators and analytics are calculated in two rolling average sets: weekly for the most current data points, and smoothed over a 90-day rolling average

Trending	Description	Application
7-Day Sample	All statistics are calculated weekly for the most recent data points.	Most recent data point available for every statistic
90-Day Rolling Average	An average of the previous 13 weeks of weekly data to more clearly illustrate trends	Smoothed trendline clears weekly noise. Some stats, like Market Action Index are most valuable with 90-day rolling average. Other stats, like inventory or Days on Market, have less weekly variation so the 7-day sample is preferred.

Micro Market Analysis

For more actionable data within each geography, two micro-market dimensions are added.

Micro Market	Description	Application
Residence Type	All statistics in all geographic areas are analyzed by single-family homes or by condominiums/townhomes.	Focus analysis on specific property types for most meaningful, actionable information
Price Range Quartile	<p>Four equally sized segments of the current properties. Quartile 1 is the most expensive 25% of homes on the market or the Top Quartile. Quartile 4 is the least expensive 25% of homes on the market, or the Bottom Quartile.</p> <p>For example, if there are 80 homes for sale in Scottsdale, AZ, four quartiles are generated with 20 properties in each quartile based on individual property list prices.</p> <p>Quartile analysis is available for every market statistic.</p>	<p>Quartile data enables market trend analysis at various price levels in a specific geography (zip code, city, county, MSA).</p> <p>For example, Days on Market may be higher for expensive properties than for the low-end.</p> <p>Also useful for tracking specific neighborhoods inside a particular zip code.</p>

Housing Market Leading Indicators, Statistics & Analytics

The following table lists the individual statistics tracked by Altos Research across all dimensions in each market.

Statistic	Description	Application
Median Price	Median asking price for properties currently on the market in specified geographic area, in Dollars	Simplest measurement of current real estate price
Median Price New Listings	Median asking price for properties entering the market during most recent week	Identifies sellers confidence levels as individual pricing decisions are based on recent pending & closed transactions. Leads Market Median Price by several weeks and transaction prices by 1-6 months.
Median Price Listings Absorbed	Median asking price for properties exiting the market during the most recent week.	When compared to Median Ask Price and Median Price of New Listings, indicates the bid-ask spread trend. Indicates each market's proximity to equilibrium.
Inventory	Current number of properties on the market	Simplest measurement of available supply
Mean Days on Market	The average duration properties have been on the market, in Days	Simple measurement of demand for homes in a market. Average Days will be skewed higher by certain properties that have been on the market for a very long time
Median Days on Market	Half the properties have been on the market this many days	Useful to compare to mean days on market. When median days on market is significantly lower than mean days on market, that implies that the "good" properties have faster turnover and the average is skewed higher by "stale" properties
Median Days on Market of Listings Absorbed	Based on the properties exiting the market, calculates the number of days properties were available for sale in the active market.	Provides close approximation of "time to sale," as compared "time on market of active listings" calculated by Median Days on Market and Mean Days on Market.
New Listings	Number of properties newly listed for sale during the previous week	Measures new supply activity
Absorbed	Number of properties that have come off the market, due to sales or other reasons, in the previous week	Measurement of turnover activity in the market.
Estimated Sales	Estimate of the number of transactions by examining the number of listings absorbed and correcting relisted percentage	Provides a real-time approximation of the number of sales in a given market area.
Square Footage	Average or median size of homes in the market segment	Basic property characteristics. In some markets, square footage data may be unreliable.
Median Price per Sq Ft	Dollars per square foot	Useful as a common denominator measurement of value in a market. In some markets, square footage data may be unreliable.
Months of Inventory	Market absorption rate as measured in months.	Estimates the number of months it would take to clear the existing inventory in a market based on current rate of transactions.
Lot Size	Average or median size of the lot for homes in the market segment	Basic property characteristic measuring size of lots in square footage and acreage.
Price per Lot Size	Median price divided by lot size	Indicator of land value in a market
Bed Count	Average or median number of bedrooms for homes in the market segment	Basic property characteristic measuring number of bedrooms in properties available for sale.
Bath Count	Average or median number of bathrooms for homes in the market segment	Basic property characteristic measuring number of bathrooms in properties available for sale.
Age	Average or median age of homes in the market segment	Basic property characteristics measuring structural age of properties based on "year built"

ALTOS RESEARCH UNIQUE STATS

Market Action Index (TM)	Measurement of several statistics that compare demand levels relative to supply levels. Proprietary Altos Research methodology. Above 30 demand is robust to indicate "Sellers Market". Below 30 indicates weak demand or "Buyers" opportunity markets.	Single, at-a-glance answer to, "How's the Market?" Provides real-time visibility to supply and demand trends in a market. This stat is useful when examining trends over a time series to indicate if a market is weakening, mixed, or strengthening over time. Also indicates seasonal fluctuations in real time.
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Percent Price Decrease	Percent of properties currently on the market that have also been on the market recently at a higher price	An insightful measurement of demand in a market. As properties stay on the market longer, they tend to have price reductions. This stat measures how often properties are having their prices reduced.
Percent Relisted	Percent of properties currently on the market that have been pulled and relisted in the last 90-day period. Measured as a percentage of total inventory	Properties get re-listed to seem "fresh" to buyers or because they have a new listing agent. The higher this number, the weaker demand is in a market
Percent Price Increase	Percent of properties currently on the market that have also been on the market recently at lower price	Sometimes called "Percent Flips" (though not all price increases are "flips") this stat is a way to measure investment activity in a market.
Magnitude Price Decrease	Of the homes with price reductions, how big are those reductions, in percentage of price	In tandem with Percent Price Decrease, the magnitude of price drops illustrates the velocity of price change in a market
Magnitude Price Increase	Of the homes with price increases, how big are those increases, in percentage of price	Useful for measuring the potential return on investment in a market
YoY Price Change	Percentage change from current week versus same week previous year in price	Year over year trends remove seasonality from the data
YoY Inventory Change	Percentage change from current week versus same week previous year in Inventory	Year over year trends remove seasonality from the data. In addition, there is some evidence that year-over-year inventory changes are predictive of price changes another year in the future
YoY Absorbed	Percentage change from current week versus same week previous year in absorption	Year over year trends remove seasonality from the data
YoY New Listings	Percentage change from current week versus same week previous year in new listings rate	Year over year trends remove seasonality from the data
YoY Market Action Index	Percentage change from current week versus same week previous year in the Market Action Index	Year over year trends remove seasonality from the data
YoY Days on Market	Percentage change from current week versus same week previous year in the Mean and Median Days on Market	Year over year trends remove seasonality from the data

ALTOS RESEARCH TRANSACTION STATS		
Sold Price	Sold/closed transaction prices for properties recent sold in specified geographic area, in Dollars. Lags real-time market indicators by 120 days. Also available as Year-on-Year Sold Price.	Provides reference point for determining best use of Altos Research leading indicators.
Sold Count	Number of properties that have transacted in the specified geographic area. Also available as Year-on-Year Sold Count.	Measures actual transactions in a specified market area.
List-to-Sold Price Ratio	Determines ratio of current asking prices to most recent sold price.	Enables ask-sold price gap analysis.
Newly-Listed-to-Sold Price Ratio	Determines ratio of newly listed properties to most recent sold price.	Illustrates market efficiency and new seller responses to recent transactions.
Sold Price per....	All sold price measures relative to property characteristics, including Sold Price per Bedroom, Sold Price per Bathroom, Sold Price per Square Foot, Sold Price per Lot Size, Sold Price Age, etc.	Enables analysis based on key property characteristics for normalization and cash flow analysis.

Descriptive Stats

In addition to the core market measure above, each is tracked with a collection of statistics that describe the distribution of values in each sample. For example: Minimum price, or maximum bed-count, or the standard deviation of price per square foot of the condos in this week's sample for zip code 55110.

Descriptive Stats		
Mean and Median	Median and arithmetic mean (average)	In some stats, like price, a single outlier data point will skew an average, so median is preferred. In some stats, like Days on Market, both average and median are useful for understanding market conditions. Mean and Median are calculated for all stats.
Min and Max	Minimum and Maximum values in each sample	Useful for understanding the distribution of properties in the sample.
Standard Deviation	The distribution of values of each stat in the sample	Useful for understanding the distribution of properties in the sample.
Peak Value	Highest observed value of the statistic over time	Used by the Altos Research reporting analytics system to interpret the data over time.
Trough Value	Lowest observed value of the statistic over time	Used by the Altos Research reporting analytics system to interpret the data over time.
Current Trend	Algorithmic description of the last 13 weeks of data. Up, Down, or Mixed	Used by the Altos Research reporting analytics system to interpret the data over time.
Trend Strength	Algorithmic description of the last 13 weeks of data. Strong or Weak	Used by the Altos Research reporting analytics system to interpret the data over time.
Current Tic	The directional move of this week's observation	Used by the Altos Research reporting analytics system to interpret the data over time.