Connecticut Real Estate Trends & Market Insights (2012–2022)

By Adaora Nwogbo

EXECUTIVE SUMMARY

The **real estate industry** plays a vital role in shaping local economies, driving urban development, influencing housing policy, and guiding investment decisions. Centered on the buying, selling, and valuation of properties, each transaction reflects broader shifts in affordability, demand, and regional growth.

To better understand these dynamics, I developed a Power BI dashboard that analyzes **Connecticut's real estate market from 2012 to 2022**. It transforms raw property records, including sale amounts, assessed values, property types, towns, and sales ratios into an interactive, story-driven report that uncovers a decade of market behavior.

The Dashboard Was Built to Answer:

- Where did the market grow the fastest?
- Which towns led the boom?
- When did the slowdown take hold?
- How did seasonality impact pricing and transaction volume?

Challenges Faced:

This project involved cleaning and standardizing a large, inconsistent dataset of over 500,000 records, creating custom DAX measures for dynamic KPIs, and designing responsive visuals with multi-select filters like Town and Year. Additional effort went into building dynamic titles and custom tooltips, while also balancing technical depth with visual clarity for a broad audience.

The Result: A clean, actionable, and visually compelling dashboard that equips analysts, policymakers, and decision-makers with insights to better navigate Connecticut's housing landscape.

Metrics & Modeling

An overview of the key indicators, data structures, and calculations used to reveal market trends

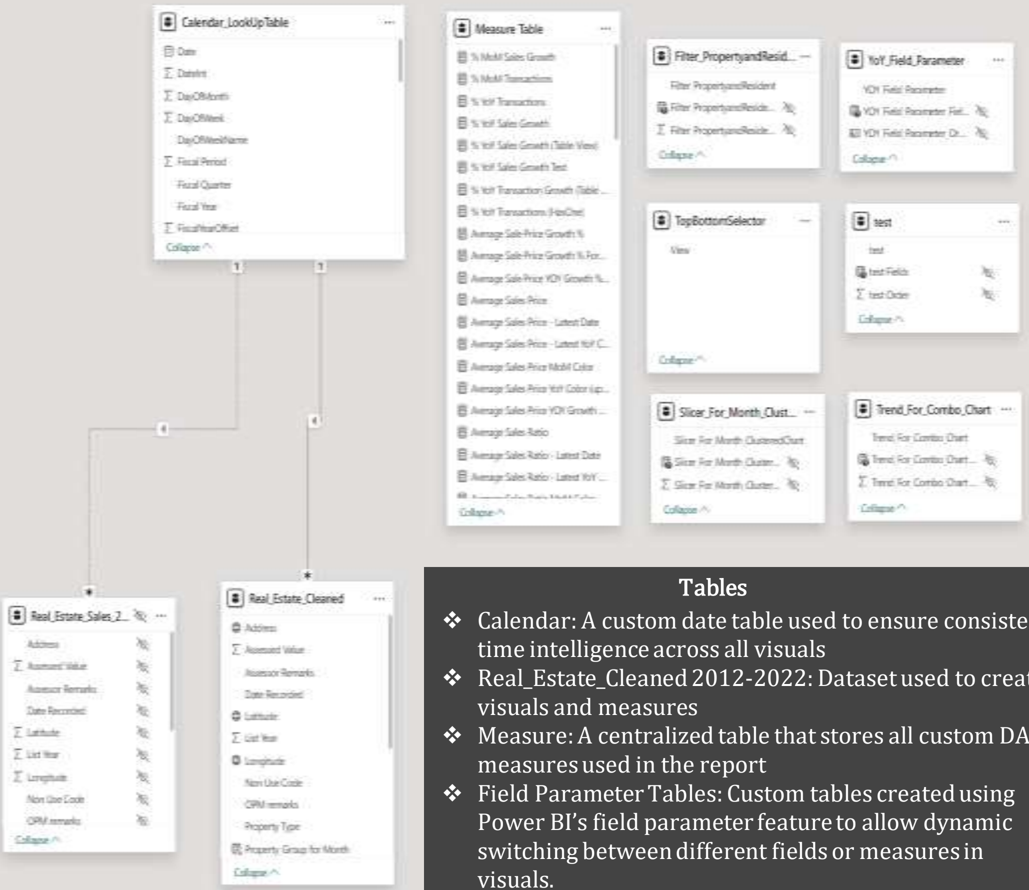
KEY PERFORMANCE INDICATORS USED FOR DASHBOARD

<table>
<tr><th>KPI Name</th><th>Description</th><th>DAX Calculation</th></tr>
<tr><td>Total Sales</td><td>The total dollar amount of all recorded property sales across Connecticut between 2012 and 2022, based on the "Sale Amount" column in the dataset.</td><td>Total Sale Amount =
CALCULATE(
SUM('Real_Estate_Cleaned'[Sale Amount]))</td></tr>
<tr><td>Total Transactions</td><td>The total number of individual property transactions in the dataset, counted row by row from the cleaned real estate records.</td><td>Total Transactions =
COUNTROWS('Real_Estate_Cleaned')</td></tr>
<tr><td>Average Sales Price</td><td>The average price at which properties were sold, calculated by dividing the total sale amount by the total number of transactions.</td><td>Average Sales Price =
DIVIDE(
[Total Sale Amount],
[Total Transactions])</td></tr>
<tr><td>Average Sales Ratio</td><td>The average ratio between a property's sale amount and its assessed value, offering insight into how much buyers paid relative to official valuations.</td><td>Average Sales Ratio =
AVERAGEX(
'Real_Estate_Cleaned',
'Real_Estate_Cleaned'[Sale Amount] / 'Real_Estate_Cleaned'[Assessed Value])</td></tr>
<tr><td>% YoY Sales</td><td>The year-over-year growth or decline in total sales amount, used to track annual shifts in market performance.</td><td>Total Sales YoY Growth % =
VAR PrevSales = [Previous Year Sales]
VAR CurrSales = [Total Sale Amount]
VAR YoY = DIVIDE(CurrSales - PrevSales, PrevSales)

RETURN
IF(
ISBLANK(PrevSales) || ISBLANK(CurrSales) ||
PrevSales < 100000 || CurrSales < 100000 || YoY = -1,
BLANK(),
YoY)</td></tr>
<tr><td>% MoM Transactions</td><td>The month-over-month growth or decline in total property transactions, helping to identify short-term trends or seasonal shifts in market activity.</td><td>Total Transactions MoM Growth % (corrected for 0) =
VAR PrevSales = [Previous Month Transactions]
VAR CurrSales = [Total Transactions]
VAR _value = DIVIDE(CurrSales - PrevSales, PrevSales)

RETURN
IF(
ISBLANK(PrevSales) || PrevSales = 0,
BLANK(),
_value)</td></tr>
</table>

DATA DICTIONARY



Tables

- Calendar: A custom date table used to ensure consistent time intelligence across all visuals
- Real_Estate_Cleaned 2012-2022: Dataset used to create visuals and measures
- Measure: A centralized table that stores all custom DAX measures used in the report
- Field Parameter Tables: Custom tables created using Power BI's field parameter feature to allow dynamic switching between different fields or measures in visuals.

Measure Data Dictionary = INFO.VIEW.MEASURES()

Table Data Dictionary = INFO.VIEW.TABLES()

Relationship Data Dictionary = INFO.VIEW.RELATIONSHIPS()

Columns Data Dictionary = INFO.VIEW.COLUMNS()

Behind the Build

Tackling Complexities in Data Wrangling, Analysis and Design

CHALLENGES ENCOUNTERED DURING THE PROJECT

1. Handling Duplicate Transactions with Unique ID Creation

The dataset contained repeated serial numbers, which made it hard to uniquely identify and sort transactions. I solved this by generating a Unique Transaction ID using a combination of address, sale amount, and date.

2&3. Cleaning the Dataset by Removing Invalid Transactions and Outlier Sales Ratios

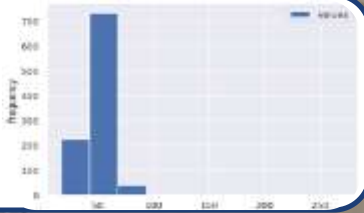
Many records had a sale amount or assessed value of zero, and others had extreme sales ratios that distorted KPIs. I created a **“Real_Estate_Cleaned” table** using DAX to remove invalid rows and restrict Sales Ratio to a valid 0–3 range.

4. Fixing Classification of Property and Residential Types

Property Type and Residential Type were inconsistently labeled, with subcategories like “Single Family” appearing in both columns. I created a conditional logic column to shift subcategories correctly and reclassify values like “Other/Unspecified” as “Apartments,” improving the data model for visuals.

5. Filtering for Valid Town-Level YoY Analysis

Initial insights were skewed by towns with very low transaction counts, which produced exaggerated % changes in YoY growth. To ensure more meaningful and realistic analysis, I applied a minimum threshold of 5 valid transactions per year. This filtering approach helped provide insight into towns with substantial market activity. Additionally, I applied a Top 10 filter to highlight the most impactful positive and negative sales trends across active towns.



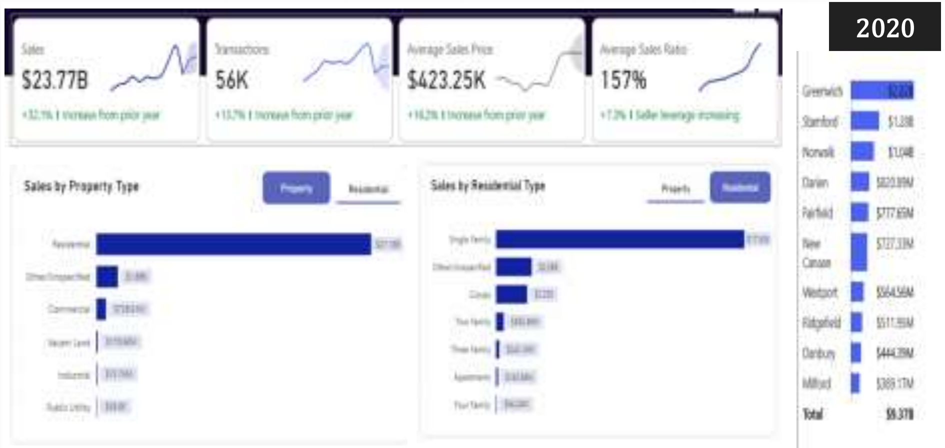
Zooming In Closer: The Boom Years

Unpacking the Momentum Behind Connecticut's Strongest Growth Periods

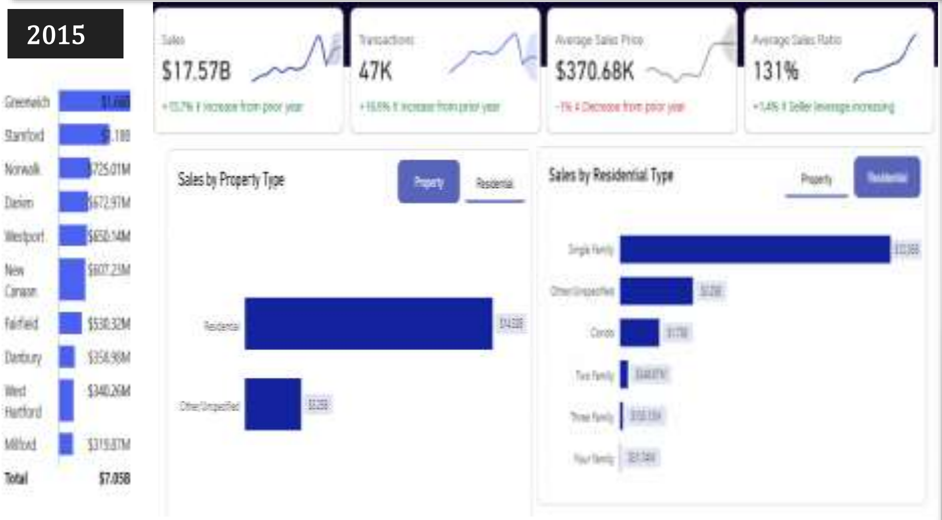
KEY INSIGHTS & TAKEAWAYS: VISUALS

2021

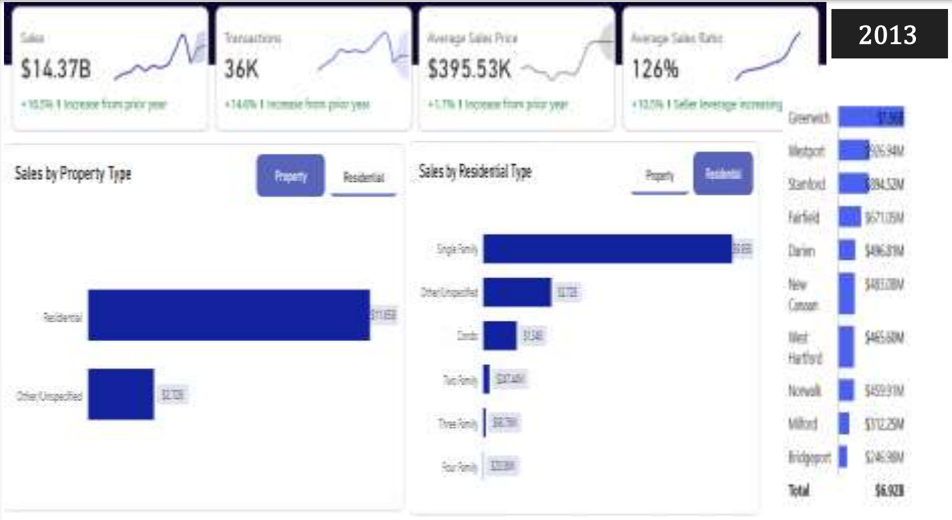
2020



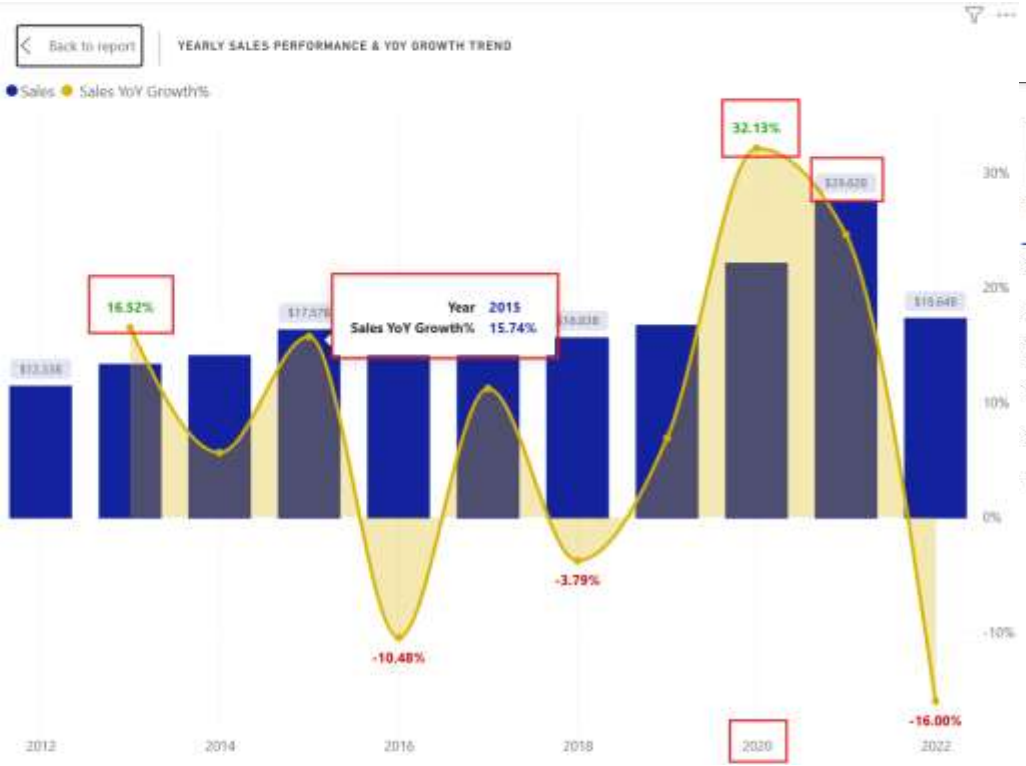
2015



2013



KEY INSIGHTS & TAKEAWAYS: VISUALS



Sales surged during the **pandemic and mid-decade** recovery years, peaking at **nearly $30B in 2021.**

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Year	Sales	Avg Sales Price	Avg Sales Ratio	Transactions	Transactions YoY Growth %	Sales YoY Growth %
2021	$29.62B	$486.11K	179%	61K	8.50%	24.61%
2020	$23.77B	$423.25K	157%	56K	13.69%	32.13%
2019	$17.99B	$364.17K	146%	49K	8.71%	6.90%
2015	$17.57B	$370.68K	131%	47K	16.88%	15.74%
2013	$14.37B	$395.53K	126%	36K	14.56%	16.52%
Total	$103.32B	$412.91K	151%	250K	12.07%	20.00%

Transaction volumes rose alongside prices indicating buyer confidence, not just inflation

KEY INSIGHTS & TAKEAWAYS

Key Insights

In Connecticut, **2013, 2015, 2020, and 2021 emerged as pivotal boom years**, each driven by distinct forces but all reflected surging demand, buyer confidence, and accelerated market activity.

❖ 2013: The Rebound

Following the Great Recession, buyers re-entered the market with restored confidence. **Sales grew +16.5%, transactions rose +14.6%** driven by affordable suburban towns such as Greenwich, Westport, and Stamford. Single-family homes remained the dominant choice for returning buyers.

❖ 2015: Mid-Decade Confidence

Market activity continued strong. Sales and transactions both **rose over 15%,** signaling stability and growing optimism. High-performing towns included Stamford, Norwalk, and Darien, showcasing suburban and coastal strength. Buyers favored spacious, predictable options in stable residential neighborhoods.

❖ 2020: The Pandemic Surge

Everything changed. With historic low interest rates, lockdown lifestyle shifts, and remote work drove a dramatic housing boom. **Sales soared +32.1%, the highest YoY growth of the decade, while transactions jumped +13.7%.** Hotspots like Stamford, Greenwich, and Danbury became magnets for buyers seeking space near metro hubs. Residential properties led, with rising interest in condos and multifamily units in denser hubs.

❖ 2021: The Market Peaks

The momentum culminated. With $29.62B in sales, 61,000+ transactions, and **record-high average prices ($486K avg.), 2021 was the market's pinnacle**. Luxury towns like Stamford, Ridgefield, New Canaan, and rising cities like Danbury and Waterbury saw surges. Single-family homes retained their crown amid intensified competition.

Takeaways

Each boom year had its own catalyst whether economic recovery, interest rate policy, or lifestyle redefinition. **The underlying story remained constant, buyers consistently pursued space, accessibility, and quality of life**. From post-recession optimism to pandemic urgency, Connecticut's suburban towns emerged as the most resilient and desirable markets.

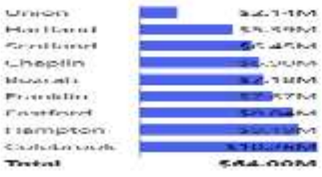
Cracks in the Momentum: The Bust Years

When the Surge Slowed and Market Realities Set In

KEY INSIGHTS & TAKEAWAYS: VISUALS

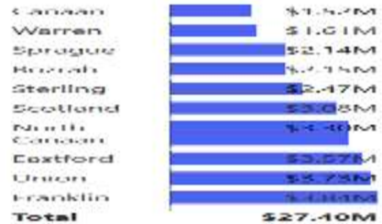
2022

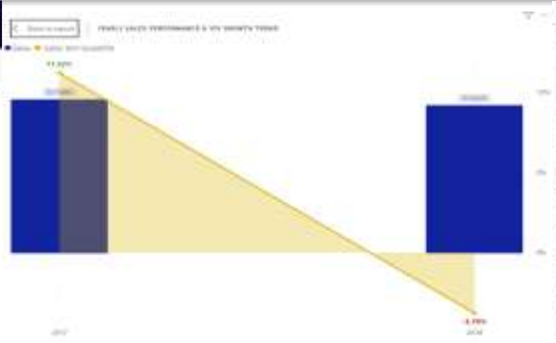
Bottom 10 Towns by Sales



2018

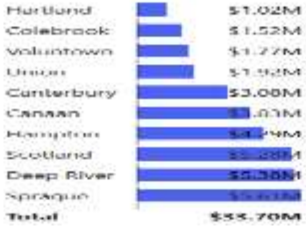
Bottom 10 Towns by Sales

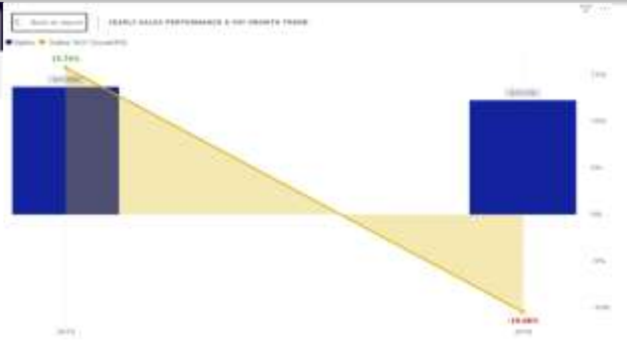




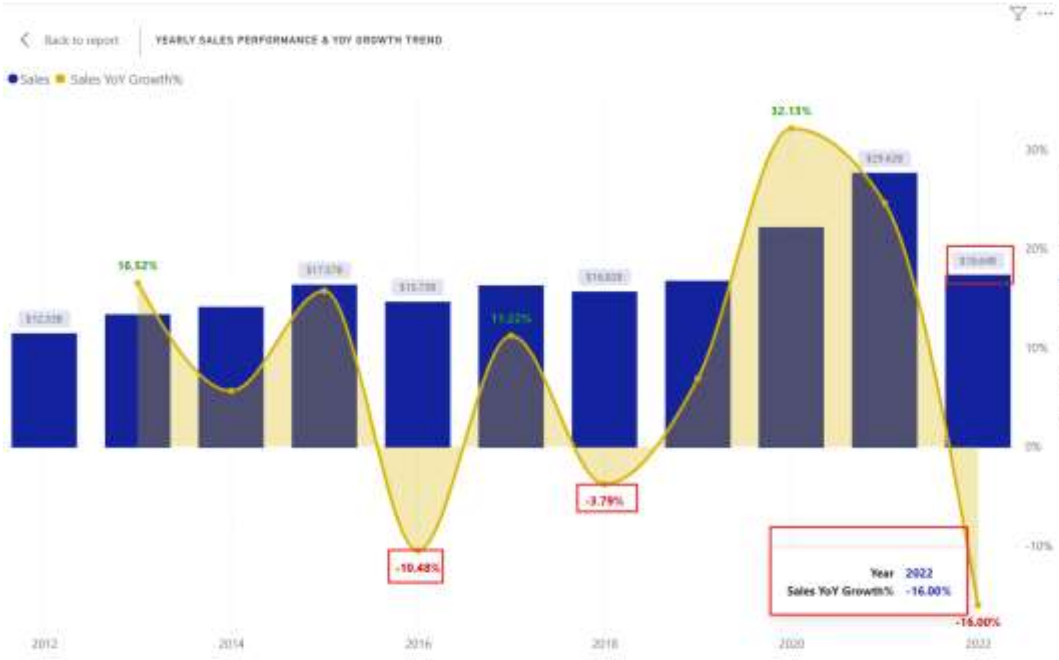
2016

Bottom 10 Towns by Sales





KEY INSIGHTS & TAKEAWAYS: VISUALS



Sales fell after both the mid-decade and pandemic booms, with post-recovery slowdowns in 2016 and 2018 culminating in a sharp drop to **$18.64B in 2022, a –16% plunge that marked the decade's steepest correction**

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Year	Sales	Avg Sales Price	Avg Sales Ratio	Transactions	Transactions YoY Growth %	Sales YoY Growth %
2022	$18.64B	$492.99K	192%	33K	-17.17%	-16.00%
2018	$16.83B	$370.33K	142%	45K	-3.54%	-3.79%
2016	$15.73B	$342.34K	134%	46K	-3.07%	-10.48%
Total	**$51.20B**	**$396.28K**	**154%**	**129K**	**-7.82%**	**-10.57%**

Even as home prices **climbed from $342K to nearly $493K**, sales and transactions declined each bust year **signaling that high costs, not demand, became the market's barrier.**

KEY INSIGHTS & TAKEAWAYS

Key Insights

While Connecticut's real estate market surged through the early and mid-2010s into a pandemic-era boom, several years revealed underlying weaknesses. **2016, 2018, and especially 2022** stand out as clear signals that the market's climb wasn't without disruption.

❖ 2016: Market Momentum Falters

After years of steady growth, 2016 marked the first notable slowdown. Sales declined by −10.48%, and transactions fell −3.07%, **marking the first year of negative growth since the post-recession recovery began.** Average prices also dropped to $342.3K, the lowest since 2013 as rising mortgage rates and election-year uncertainty cooled demand. Towns like Fairfield, Greenwich and Bridgeport were among the hardest hit in transaction volume, despite the slowdown, single-family homes remained the market's backbone.

❖ 2018: Affordability Begins to Bite

By 2018, new economic pressures began to surface: **rising mortgage rates, buyer fatigue, affordability challenges, and new tax policies that penalized higher-tax towns, particularly in states like Connecticut**[1]. Sales slipped −3.80%, and transactions fell −3.54%. Declines were felt in suburban towns like Stamford, Danbury and Waterbury. While residential sales remained dominant, price growth began outpacing wage growth, straining many would-be buyers.

❖ 2022: The Market Correction

Then came 2022, the most dramatic shift of the decade. **Sales fell −16.00%, and transactions dropped −17.17%, wiping out nearly all of the pandemic-era gains in volume**. Yet, average prices held firm at $492.99K, intensifying concerns around affordability and access, especially for first-time buyers. Emerging towns like Plainville, which thrived during the pandemic boom, saw −70% transaction drops, while even luxury towns like New Canaan weren't spared. **Across the Hartford area, record-low inventory further constrained the market—listings were still 77.7% below pre-pandemic levels as of mid-2025 (CT Insider).**

Takeaways

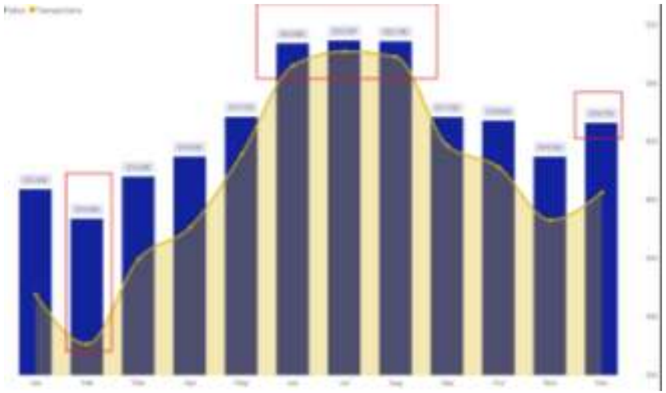
The bust years weren't driven by a single factor, **but by a convergence of economic stressors from affordability and rising interest rates to policy shifts and supply shortages.** Despite stable or rising home values, the decline in sales and transactions made clear that demand was not limitless, even strong towns lost momentum as price growth outpaced incomes. Ultimately, the market's corrections served as a critical reminder: real estate growth is not linear, and structural challenges like high costs and low inventory can disrupt even the strongest markets.

Price & Seasonality Trends

How Timing & Patterns Shaped Buyer Behavior

KEY INSIGHTS & TAKEAWAYS: VISUALS

Monthly Sales Performance & Transactions

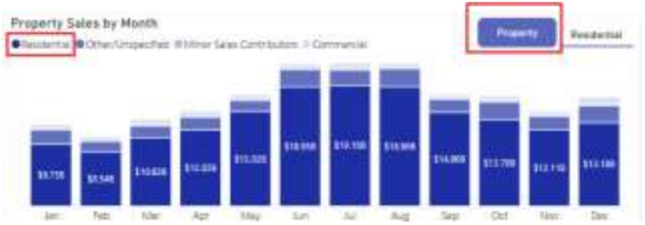


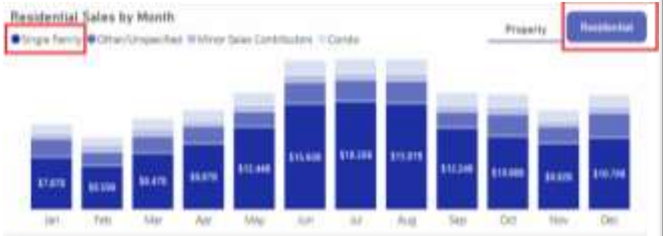
Seasonal peak (May–August) and Winter troughs (Jan–Feb).

- June/July: “Seasonal Peak – $22.25B in Sales
- Feb: “Winter Low – $10.4B in Sales”

December Rebound at $14.77B likely driven by year-end urgency or closing deadlines.

Property and Residential Sales by Month

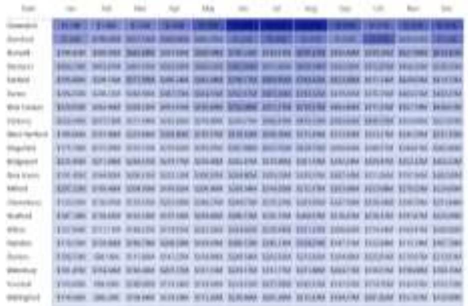




Residential properties showed steady performance **even in slower winter months like Jan/February**

Across all months, **single-family homes led demand dominating the residential segment** and driving summer highs $16.30B in July.

Sales by Season and Town Heatmap



Summer generated $66.5B **accounting for nearly 1 in every 3 real estate dollars spent across the year.** In contrast, Winter trailed behind at $39.5B

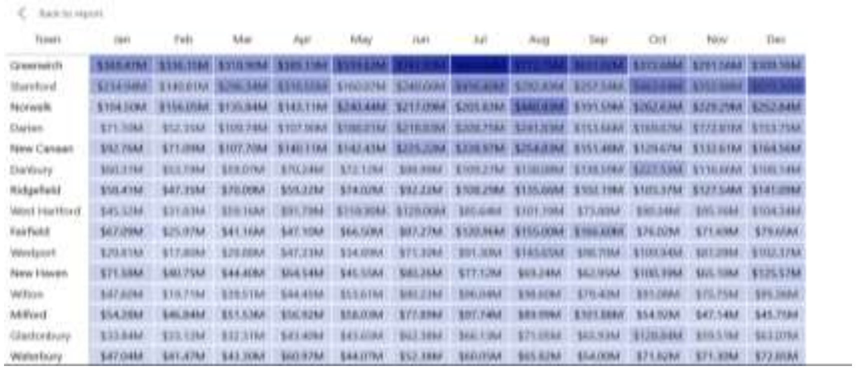
Metro towns like Greenwich and Stamford drove volume with summer highs and strong December closings (e.g., Stamford $1.34B), **while most towns peaked May–August, confirming consistent but varied seasonal demand**.

KEY INSIGHTS & TAKEAWAYS: VISUALS

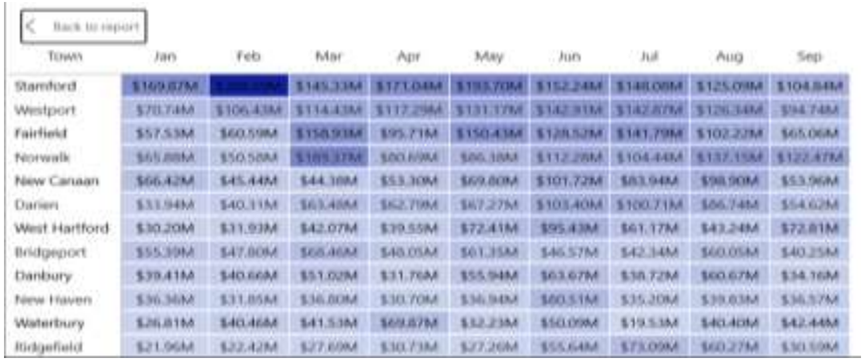
2020-2021 (pandemic boom) Dashboard

2022 (post-pandemic correction) Dashboard

2020-2021 (pandemic boom) Sales Heatmap by Town



2022 (post-pandemic correction) Sales Heatmap by Town



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Town	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Stamford	$169.87M	[illegible]	$145.33M	$171.04M	$193.70M	$152.24M	$148.08M	$125.09M	$104.84M
Westport	$70.74M	$106.43M	$114.43M	$117.29M	$131.17M	$142.91M	$142.87M	$126.34M	$94.74M
Fairfield	$57.53M	$60.59M	$158.93M	$95.71M	$150.43M	$128.52M	$141.79M	$102.22M	$65.06M
Norwalk	$65.88M	$50.58M	$189.37M	$80.69M	$86.38M	$112.28M	$104.44M	$137.15M	$122.47M
New Canaan	$66.42M	$45.44M	$44.38M	$53.30M	$69.80M	$101.72M	$83.94M	$98.90M	$53.96M
Darien	$33.94M	$40.11M	$63.48M	$62.79M	$67.27M	$103.40M	$100.71M	$86.74M	$54.62M
West Hartford	$30.20M	$31.93M	$42.07M	$39.55M	$72.41M	$95.43M	$61.17M	$43.24M	$72.81M
Bridgeport	$55.39M	$47.80M	$68.46M	$48.05M	$61.35M	$46.57M	$42.34M	$60.05M	$40.25M
Danbury	$39.41M	$40.66M	$51.02M	$31.76M	$55.94M	$63.67M	$38.72M	$60.67M	$34.16M
New Haven	$36.36M	$31.85M	$36.80M	$30.70M	$36.94M	$60.51M	$35.20M	$39.83M	$36.57M
Waterbury	$26.81M	$40.46M	$41.53M	$69.87M	$32.23M	$50.09M	$19.53M	$40.40M	$42.44M
Ridgefield	$21.96M	$22.42M	$27.69M	$30.73M	$27.26M	$55.64M	$73.09M	$60.27M	$30.59M

KEY INSIGHTS & TAKEAWAYS

Key Insights

Connecticut's housing market followed a **clear seasonal rhythm peaking in summer and dipping in winter**. June led with $22.25B in sales and 52.7k transactions, while February hit a low of $10.4B with a -13.26 MoM transaction drop. Over the decade, summer captured nearly a third of annual sales ($66.5B vs. $39.5B in winter). Residential and single-family homes remained in steady demand year-round, anchoring the market even in slower months.

❖ 2020–2021: The Pandemic Boom

Connecticut's seasonality intensified during the pandemic with summer remaining the dominant season statewide, **fueled by urban flight and remote work flexibility**. Metro-adjacent towns like Greenwich and Stamford surged, especially in July and August as demand for space near New York City soared. Stamford **summer months collectively brought in nearly $950M, yet December stood out contributing over $610M across 442 transactions showcasing elevated demand**. This year-end spike pointed towards luxury home activity, tax-driven closings, and relocation deadlines.

❖ 2022: Post-Pandemic Correction

Despite record-high prices averaging $492.99K, sales volume fell to $18.64B, **signaling a clear market cooldown**. Summer still led ($7.38B), but with reduced seasonal strength, compared to the boom years. **Town-level activity also showed growing fragmentation** Stamford spiked atypically in February ($388.59M), while others began tapering off by Fall. Plainville saw months with no sales, and Union remained one of the lowest performers, further reflecting the widening gap between high-performing hubs and smaller rural markets.

Takeaways

Connecticut's housing seasonality shifted in response to external forces: **pandemic-driven remote work, buyer urgency, rising home prices, and affordability constraints**. During the boom, summer demand surged, and momentum continued into months like December as seen in Stamford's peak. But by 2022, that momentum faded. **High prices, economic uncertainty, and limited inventory softened seasonal trends and exposed the vulnerability of smaller towns**. Revealing that economic conditions, evolving buyer priorities and town-level dynamics can have intensifying or weakening effects on seasonal rhythms.

From Insights to Actions

What to Improve and Where to Go From Here

RECOMMENDATIONS & NEXT STEPS

1. Align Listings with Market Timing
To maximize sales opportunities, stakeholders should time property listings around **Connecticut's peak demand periods (May–August), while also leveraging December spikes in high-demand towns** such as Stamford and Greenwich. These surges are likely driven by luxury buyers, tax motivations, and relocation deadlines offering unique windows of opportunity for targeted year-end marketing.

2. Prioritize Resilient, High-Demand Markets
Towns like Stamford and Waterbury demonstrated strong performance during both boom-and-bust periods, making them ideal models for balanced growth. **These areas should be prioritized for continued investment, residential development, and strategic retention efforts.** Their success stories can serve as blueprints for identifying future resilient towns, particularly those offering space, accessibility, and strong community amenities.

3. Track Buyer Shifts & Affordability Trends
Post-2022 trends reflect more cautious buyers, price-sensitive buyers. With affordability pressures intensifying and buyer fatigue becoming more visible, especially in towns with stagnant inventory or declining transactions, it is critical to monitor these stress points closely. Utilizing targeted policies like down payment assistance, zoning reform, and smart-density housing options can help maintain market accessibility. To be effective, **these tools must be paired with strong educational outreach and digital engagement strategies** that connect with today's tech-savvy buyers.

4. Address Structural Supply Constraints with Policy Innovation
Low inventory continues to limit sales potential across many Connecticut towns. Stakeholders should explore targeted zoning reforms and public-private development initiatives that promote housing supply growth **particularly in the first-time buyer and middle-market segments**. Easing structural barriers to new construction and expanding housing diversity will be vital for ensuring long-term affordability and market stability.

5. Implement Real-Time Monitoring for Decision-Making
To anticipate and respond to market shifts more effectively, decision-makers should leverage dynamic dashboards that track real-time activity. **Monitoring tools that analyze** transaction velocity by town, detect seasonal deviations, and differentiate between luxury and standard market segments will enable quicker, data-driven decisions in an evolving environment.