





Market Value Analysis (MVA): Houston

Released April 2017

Reinvestment Fund

Reinvestment Fund builds wealth and opportunity for low-wealth communities and low and moderate income individuals through the promotion of socially and environmentally responsible development.

We achieve our mission through

Capital.

Grants, loans, and equity investments

Knowledge.

Information and policy analysis

Innovation.

Products, markets, and strategic partnerships



The Market Value Analysis

The Market Value Analysis (MVA) is a tool to assist residents and policymakers to identify and understand the elements of their local real estate markets. It is an objective, data-driven tool built on local administrative data and validated with local experts.

With an MVA, public officials and private actors can more precisely target intervention strategies in weak markets and support sustainable growth in stronger markets.



Our Normative Assumptions

When analyzing markets we begin with these principles:

- Public **subsidy is scarce**; acting alone, subsidies cannot create a market
- Public policy and subsidy must leverage private investment or create conditions for investment to occur
- In distressed markets, **build from strength** by investing near strong assets
- All residents are customers with an expectation of quality public services and amenities
- The best decisions are based on the sound and objective analysis of quantitative and qualitative data



Who is Using the MVA

MVAs have been funded by government agencies, local foundations, and financial institutions in cities and counties around the country:

- Houston, TX
- Philadelphia, PA
- Washington, DC
- Baltimore, MD
- San Antonio, TX
- Camden, NJ
- Newark, NJ
- Selected (8) NJ regions

- New Orleans, LA
- State of Delaware
- Detroit, MI
- Kansas City, MO
- Milwaukee, WI
- Pittsburgh, PA
- St. Louis, MO
- Atlantic City, NJ
- Allegheny County, PA

- Reading Area, PA
- Jacksonville, FL
- Wilmington, DE
- Prince George's County, MD
- Indianapolis, IN
- Selma, AL
- Akron, OH
- Richmond, VA

How Cities are Using the MVA



- Component of a local land banking strategy (Phila., NOLA)
- Guide capital budget (Detroit)
- Focus code enforcement (Phila., Baltimore, Indianapolis, NOLA)
- Benchmark quality of life measures (Phila.)
- Transportation planning (St. Louis)
- Target statewide Strong Neighborhoods Revolving Loan Fund (DE/DSHA)
- Inform LIHTC QAP (DSHA)
- Develop CDBG ConPlan / Comprehensive plan (Detroit, Wilmington, St. Louis)
- Assess changes in the market over time (Phila., Baltimore, Pittsburgh)
- Evaluate development opportunities (Pittsburgh, Phila., Houston, Detroit, St. Louis, cities in NJ)
- Target demolition and acquisition activities (Baltimore, Phila., Detroit, NOLA)
- Select transformative tipping point projects (Phila., Baltimore, Pittsburgh, NOLA)
- Engage partners philanthropic, non-profit, government in coordinated efforts to rebuild neighborhoods (Baltimore, Milwaukee, NOLA)
- Guide federal Neighborhood Stabilization Program Investment (States of PA & NJ, Houston, Detroit)



The MVA Process

1

Acquire **local administrative data** and geocode to Census block group geographies.

2

Manually inspect and **validate data layers** by driving the area.

3

Use statistical **cluster analysis** to identify areas with common attributes.

4

Manually inspect areas for conformity with **local experts** to assess fit.

5

Iterative

Alter parameters; **re-solve and re-inspect** until model accurately represents area.

6

Summarize and describe the characteristics of each market.

Lessons from 15+ years of experience

Validating Data Is Critical.

Researchers must systematically visit and observe neighborhoods in the city to understand the data and final model.

Geographic Scale Matters.

MSA and Census tract geographies are too large to accurately reflect the nuances of local real estate markets. One Size Does Not Fit All.

MVA components and models share some similarities across cities but must be customized to the unique traits of each city.

Integrate Local Knowledge.

All models are tested with local experts to incorporate qualitative feedback from each geography.

Incorporating Local Knowledge and Expertise

The **Local Stakeholder Group** works with the Reinvestment Fund team to adapt the MVA to the local context, review interim findings, and affirm final results.

Tasks and Responsibilities

Help Team Secure Local

Housing Data

Advise on Data Issues and Limitations

Help Validate Models and Methods

Support Dissemination to the Community

Contribute Local Knowledge

of Markets

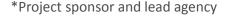
Recommend Strategic Actions for

Public & Private Actors

Organizations on the Houston Stakeholder Committee

- City of Houston Housing and Community Development (HCD) Dept.*
- Covenant Community Capital
- Houston Housing Authority
- Houston Galveston Area Council

- Kinder Institute for Urban Research at Rice University
- LISC Local Initiatives Support Corporation
- Texas Low Income Housing Information Service





2016 Market Value Analysis: Houston, Texas

The remainder of this report is organized into the following four sections:

I.	Market
	Characteristics

II. Market Value
Analysis Results

III. Supplemental Analyses

IV. Next Steps and Looking Ahead

- Overview of Houston
- Interpreting the MVA
- Change Over Time

Analyses

Discussion

Market Indicators

- Market Characteristics
- Houston Maps

Geographic-level





I. Market Characteristics

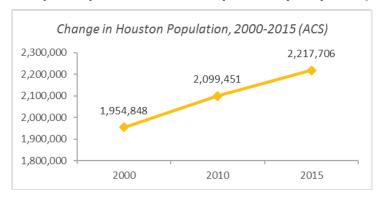
Analyzing the characteristics of the residential real estate markets in Houston, Texas.

- Overview of Houston
- Market Indicators

- I. MarketCharacteristics
- II. Market Value
 Analysis Results
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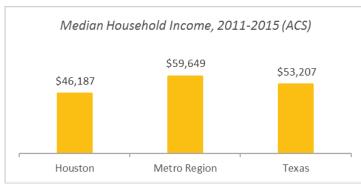
Overview of Houston

Rapid Population Growth Spurred by Hispanic (Ethnicity) and White (Race) Populations



Race/Ethnicity	Popul	ation	Pop. Change	Pct. Chang
	2000	2015	2000-2015	2000-2015
White	963,437	1,290,888	327,451	34.09
Hispanic	731,680	972,785	241,105	33.09
Asian	102,484	142,260	39,776	38.89
African American	493,149	511,729	18,580	3.89

Incomes Within the City Lag Behind State and Larger Metro Area Medians



Source: PolicyMap, "Community Profile Report"

Top Five Industries by Employment, 2011 to 2015 (ACS)

- 1. Health Care and Social Assistance (11%)
- 2. Retail and Trade (11%)
- 3. Construction (10%)
- 4. Manufacturing (9%)
- 5. Accommodation and Food Service (8%)

Available Indicators of Residential Market Strength

Working with city officials and a local steering committee we identified a core set of 16 indicators that describe the characteristics and vitality of residential real estate markets.

Property Value and Investment

- Number of Residential Sales
- Median Residential Sales Prices
- Variance of Sales Prices
- Single Family and Multifamily New Construction

Blight, Distress, and Vacancy

- Homes with Maintenance Violations
- Foreclosure Filings
- Homes with Water Service Shut Off
- Dangerous Buildings
- Demolished Homes
- Homes with Signs of Vacancy

Housing Characteristics

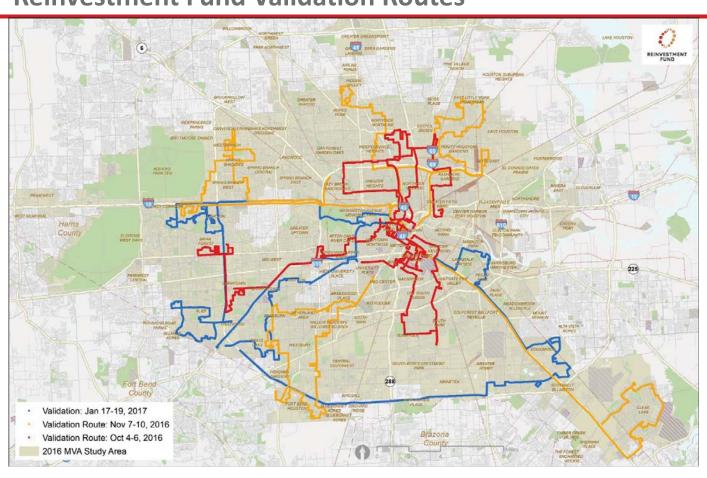
- Owner Occupied Homes
- Units of Subsidized Housing
- Commercial and Industrial Land



Market Value Analysis Sources and Definitions

	Variable	Definition	Source
	Median Home Values , 2014-2015	The median value of all residential home sales occurring between 2014 and 2015, excluding purchases for values below \$1,000 or above \$4,000,000.	InfoUSA
Property Values and	Variance of Sales Price , 2014-2015	The coefficient of variance of homes used in the calculation above (Average Value ÷ Standard Deviation).	InfoUSA
Investment	Share of Single Family or Multifamily Homes with New Construction, 2014-15	The share of residential properties with new construction permits valued between 2014 and 2015.	City of Houston
Dista	Foreclosure Filings, 2014Q2- Aug 2016	The Harris County foreclosure filings, derived from the Constables' Foreclosure Auction Daily Court Review, 2014Q2- Aug 2016, as a percentage of all sales transactions.	Daily Court Review
Blight, Distress, and	Share of Homes w/ Maintenance Violations, 2014-2016Q2	The share of residential properties that were issued a maintenance-related citation between 2014 and 2016Q2.	City of Houston
Vacancy	Vacant Properties as a Share of Residential Properties, 2016	The share of residential properties that had water service shut off, were cited on the city's dangerous buildings list, or were demolished and had no new construction, as of 2016.	City of Houston, Kinder Institute
	Percent Owner Occupied Households, 2015	Percent of households that reported owning their home.	ACS (2015)
Housing Characteristics	Commercial or Industrial Land, 2016	Percent of land area categorized as commercial or industrial, 2016.	HGAC
3.1.2.2.2.1.3.1.03	Share of Households with Subsidy, 2016	Number of subsidized units, including voucher-based, project-based, and LIHTC, as a share of all households, 2016.	HHA, City of Houston

Reinvestment Fund Validation Routes



Available Indicators of Residential Market Strength

Property Values provide important information about how the private market values the properties and amenities in different areas of the city.

Property Value and Investment

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- Variance of Sales Prices
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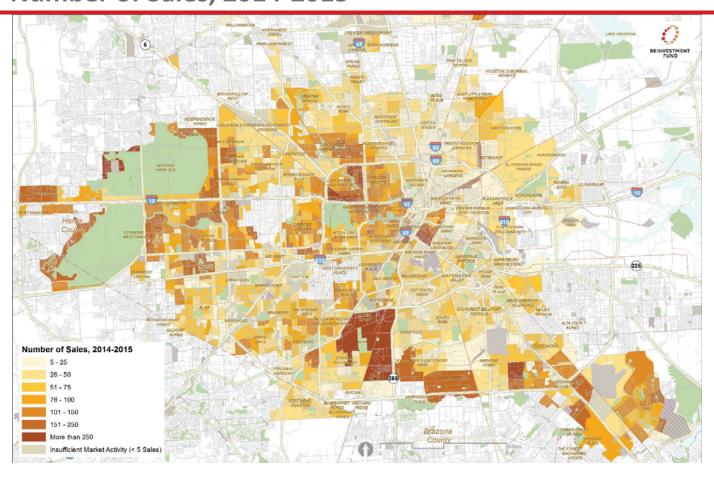
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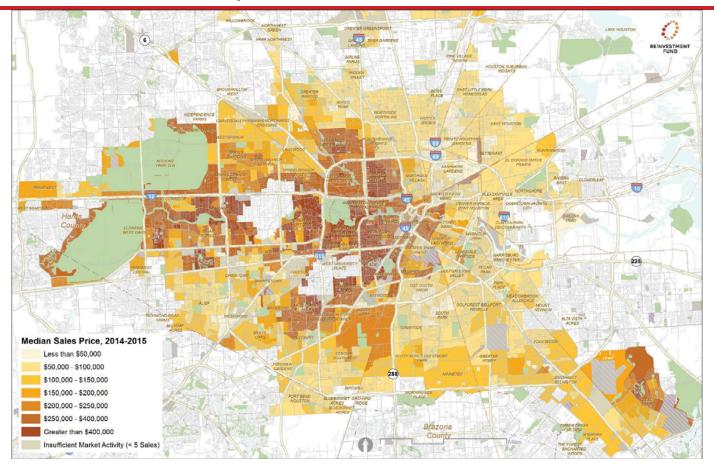
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- Units of Subsidized Housing
- Commercial and Industrial Land

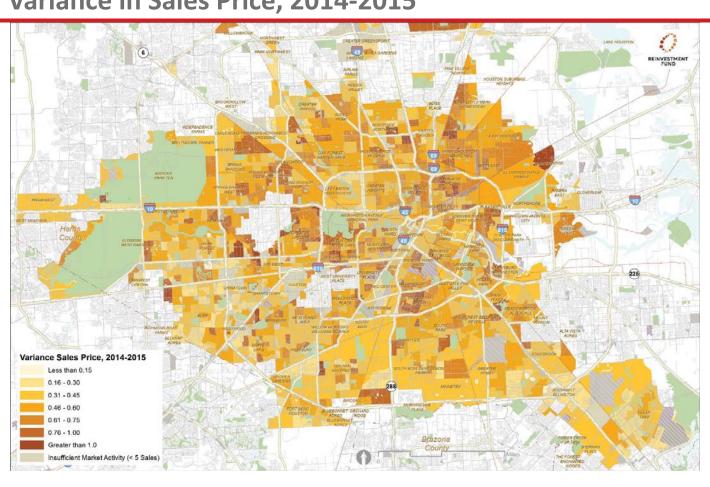
Number of Sales, 2014-2015



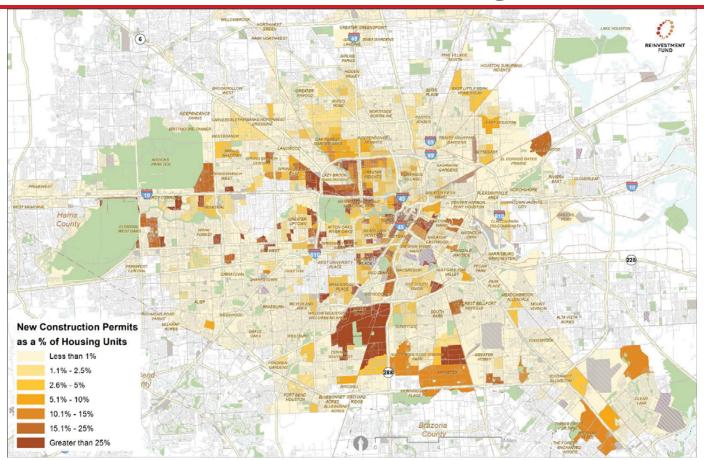
Median Sales Price, 2014-2015



Variance in Sales Price, 2014-2015



New Construction Permits as % of Housing Units, 2013-15





Available Indicators of Residential Market Strength

Blight, Distress, and Vacancy measures describe the level of distress in different areas of the city, indicating areas that may require additional investment or support.

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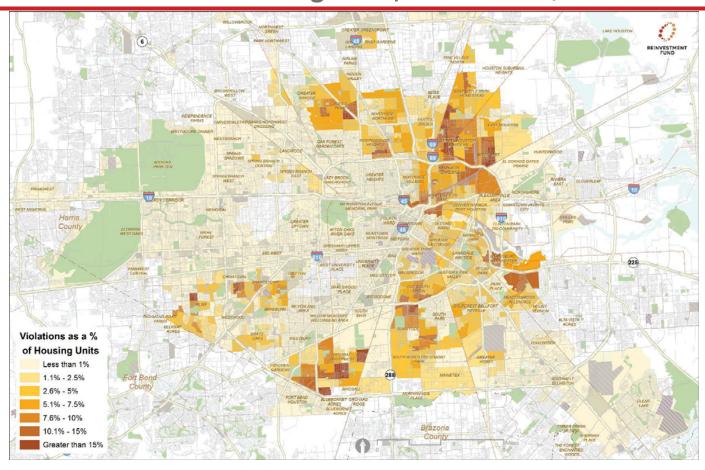
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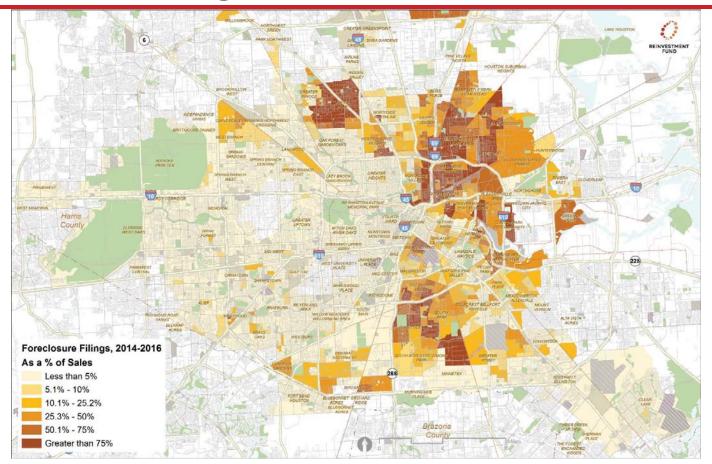
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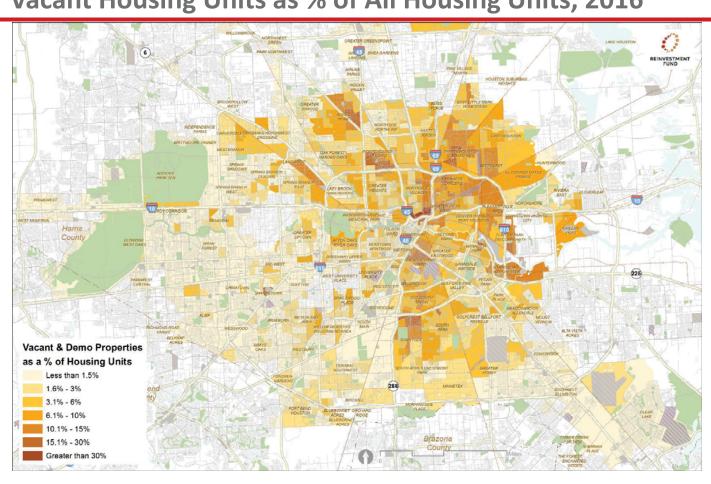
Violations as % of Housing Units, 2014-2016Q2



Foreclosures Filings as % of Sales, 2014Q2-2016Q2



Vacant Housing Units as % of All Housing Units, 2016



Available Indicators of Residential Market Strength

Housing Characteristics describe the housing stock and tenure of residents living in different areas of the city.

Property Value and Investment

- Number of Residential Sales
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 Sales Prices
- Variance of Sales Prices
- Single Family and Multifamily New Construction

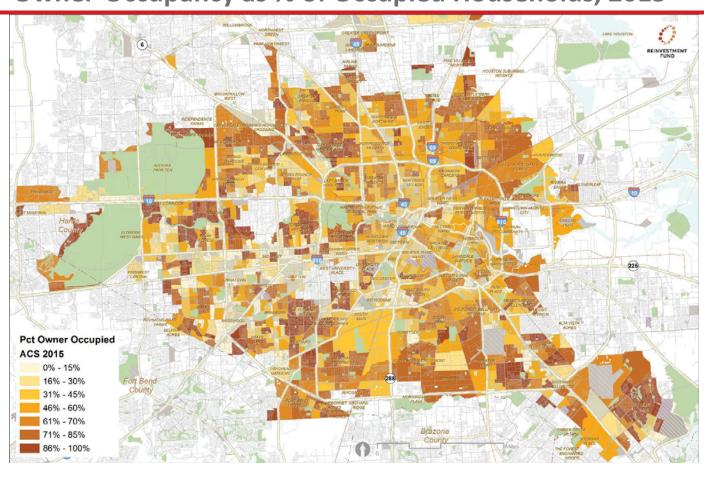
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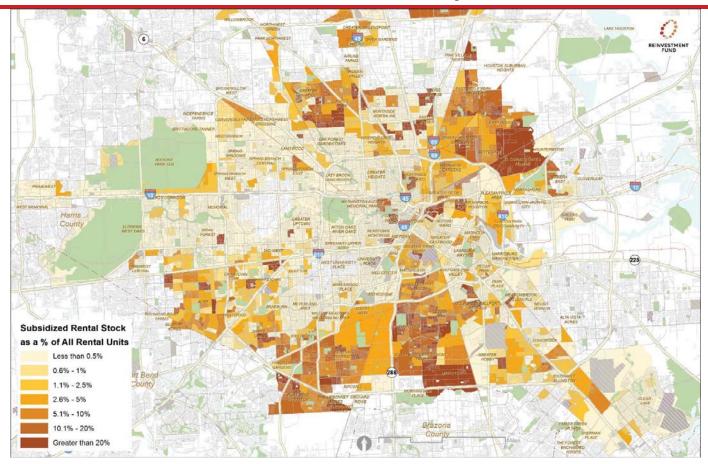
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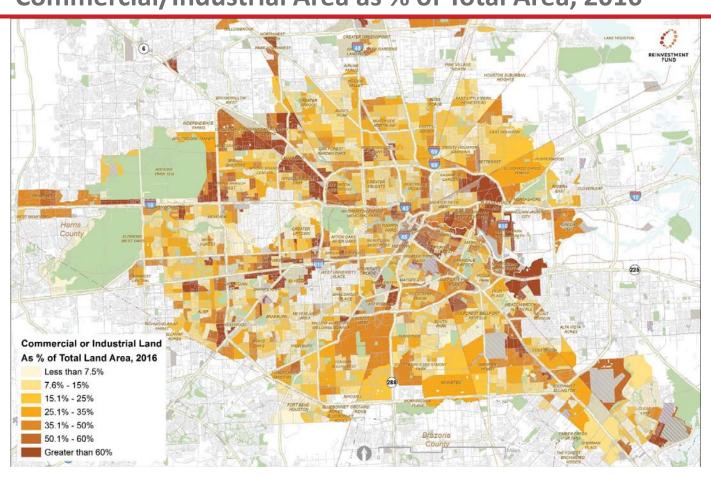
Owner-Occupancy as % of Occupied Households, 2015



Subsidized Rental as % of Renter-Occupied Households, 2016



Commercial/Industrial Area as % of Total Area, 2016





II. Market Value Analysis Results

Characterizing the strength of residential real estate markets

- Interpreting the MVA
- Market Characteristics
- Maps

- I. Market
 Characteristics
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- III. Supplemental Analyses
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Interpreting Market Value Analysis Results

The Houston **Market Value Analysis** (MVA) uses a statistical cluster analysis to identify Census block groups - a geographic area of approximately six square blocks - with similar real estate market characteristics.

Each "cluster" describes a distinct type of real estate market in Houston. Understanding the challenges and opportunities unique to each market type provides a starting point to consider necessary investments and interventions to support local communities.

The MVA results are vetted with the Stakeholder Committee and through a visual examination of nearly every neighborhood in the city to ensure assigned market types accurately reflect the range of real estate markets in the city.

Market Indicators Used in the MVA

- Median Sales Price
- Variance of Sales Price
- New Construction Permits
- Foreclosure Filings
- Maintenance Violations
- Residential Vacancy
- Owner Occupancy
- Commercial/Industrial Land Use
- Subsidized Households

Summary of Market Characteristics

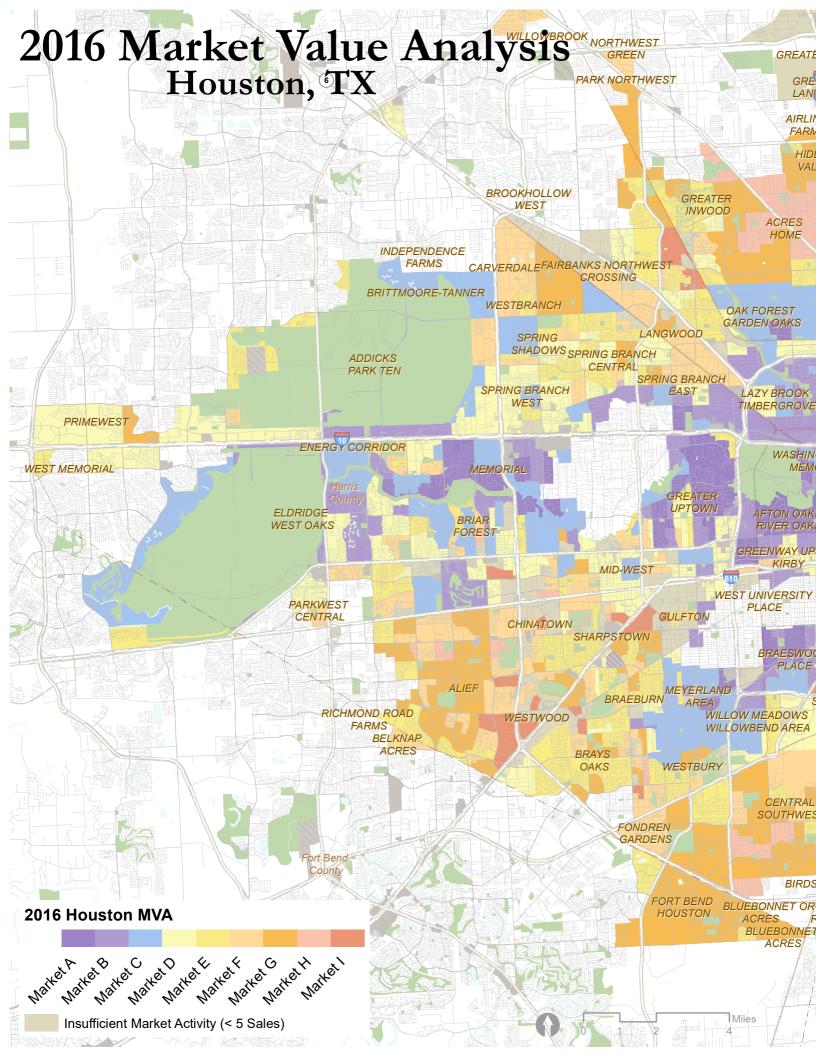
Average Characteristics for Houston Market Types

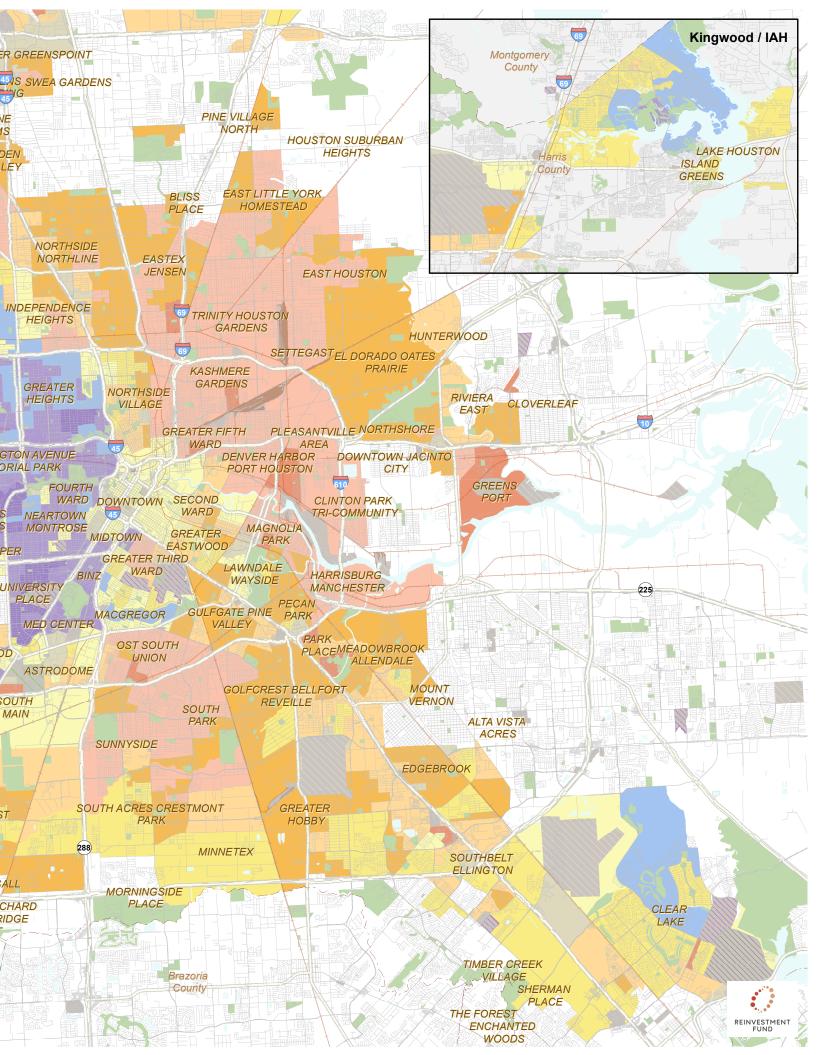
MVA Cluster	Number of Block Groups	Median Sales Price, '14-'15		Variance Sales Price, '14-'15	Foreclosures as a % of Sales. '14-'16	Vacancy as a % of Housing Units, '14-'16	Permits as a % of Housing Units, '14-'15	Pct Owner Occupied, 2015	Publicly Subsidized Rental, 2016	Pct Commercial/ Industrial Area, 2016	Violations as a % of Housing Units, '14-'16
Α	51	\$	715,627	0.57	0.22%	2.88%	7.09%	81.60%	0.83%	9.56%	0.01%
В	111	\$	412,707	0.52	0.44%	2.36%	13.38%	33.70%	0.78%	26.97%	0.07%
С	132	\$	337,200	0.48	0.65%	2.56%	3.43%	81.93%	0.68%	11.35%	0.07%
D	130	\$	218,961	0.46	3.77%	2.20%	8.13%	31.52%	2.61%	41.69%	0.63%
E	178	\$	149,390	0.44	3.11%	1.40%	0.54%	72.09%	5.16%	13.45%	1.29%
F	165	\$	104,433	0.48	10.83%	1.46%	1.36%	24.39%	3.65%	35.44%	0.70%
G	229	\$	86,096	0.46	12.77%	2.47%	0.94%	65.34%	7.47%	19.06%	2.98%
Н	169	\$	53,846	0.61	75.15%	8.26%	0.80%	52.70%	7.75%	19.75%	6.06%
1	36	\$	33,208	0.53	27.02%	1.54%	0.38%	16.26%	3.67%	34.83%	0.94%
Not Classified	131		N/A	N/A	13.10%	2.50%	2.45%	2.60%	2.92%	42.26%	0.08%
Study Area	1332	\$	190,764	0.49	16.00%	2.90%	3.30%	48.37%	4.21%	24.94%	1.65%

Population & Housing Distribution by Market Type

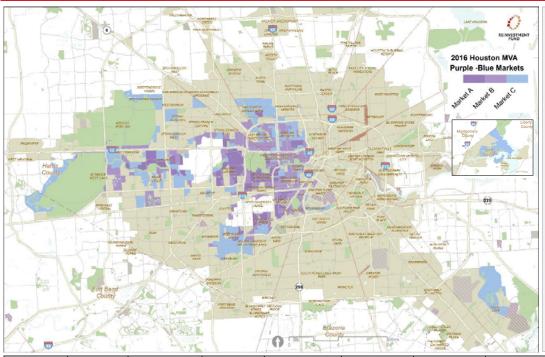
								/ 1		
	Block (Groups	Popula	ntion	Housin	g Units	Owner O House		Renter Occupied Households	
MVA Cluster	Number Percent		Number	Percent	Number	Percent	Number	Percent	Number	Percent
Α	51	4%	61,674	3%	28,387	3%	19,978	5%	6,074	1%
В	111	8%	163,965	8%	98,894	11%	28,300	8%	56,397	13%
С	132	10%	181,800	9%	79,486	9%	59,540	16%	14,277	3%
D	130	10%	227,632	11%	109,590	12%	28,471	8%	65,369	15%
E	178	13%	298,444	14%	114,558	13%	76,872	21%	29,114	7%
F	165	12%	291,501	14%	127,600	14%	28,478	8%	80,160	19%
G	229	17%	397,890	19%	128,200	14%	77,714	21%	39,914	9%
Н	169	13%	219,599	10%	84,646	9%	38,580	11%	34,204	8%
1	36	3%	62,152	3%	27,617	3%	3,929	1%	19,218	4%
Split BG	3	0%	18,650	1%	7,940	1%	2,878	1%	4,258	1%
Not Classified	131	10%	214,484	10%	98,116	11%	1,628	0%	79,096	18%
Study Area	1335	100%	2,137,791	100%	905,034	100%	366,368	100%	428,081	100%







Market Overview: Purple & Blue Markets

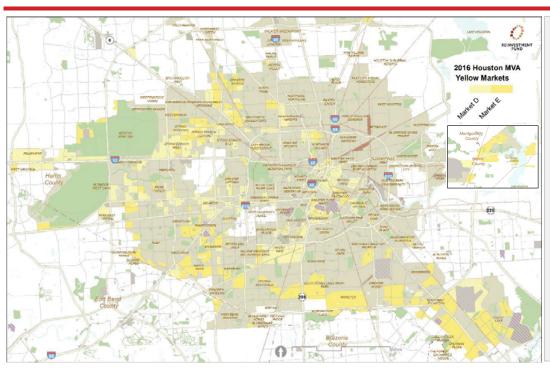


A, B and C markets represent the strongest real estate markets in Houston, with home sale prices and new construction activity well above city averages. 3% of the city's population reside in A markets, 8% live in B markets, and 9% are in C markets.

All three markets have very strong sales figures, and we see a linear pattern of increasing median sales prices progressing from above citywide average values in C markets to the highest values in A markets. B markets are distinguished by lower levels of owner occupancy (34%) compared with A and C markets (82%). The permitting activity in B markets (13%) is also elevated well above that of A markets (7%) and C markets (3%).

MVA Cluster	Number of Block Groups	Me	dian Sales ce, '14-'15	Variance Sales Price, '14-'15	Foreclosures as a % of Sales, '14-'16	% of Housing	of Housing	Occupied,	Publicly Subsidized Rental, 2016	Commercial	Violations as a % of Housing Units, '14-'16
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С	132	\$	337,200	0.48	0.65%	2.56%	3.43%	81.93%	0.68%	11.35%	0.07%

Market Overview: Yellow Markets

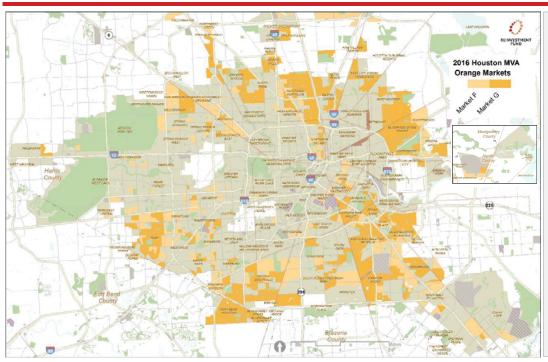


D and E markets represent middle markets in Houston's real estate landscape – these are relatively stable neighborhoods with more moderate home sale prices. 11% of the city's 1,332 population reside in D markets, and 14% live in E markets, collectively representing about one quarter of the city's population.

Yellow markets are distinguished from each other on several MVA variables. In D markets, sale prices, permitting activity, and commercial/industrial land use are typically higher than in E markets, while E markets have much high concentrations of owner occupants. D markets are generally located within the I-610 loop or west of downtown along 1-10. E markets are further afield, in southern and northwestern parts of Houston.

MVA Cluster	Number of Block Groups	Me	dian Sales ce, '14-'15	Variance Sales Price, '14-'15	Foreclosures as a % of Sales, '14-'16	% of Housing	of Housing	Occupied,	Publicly Subsidized Rental, 2016	Commercial	Violations as a % of Housing Units, '14-'16
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Market Overview: Orange Markets

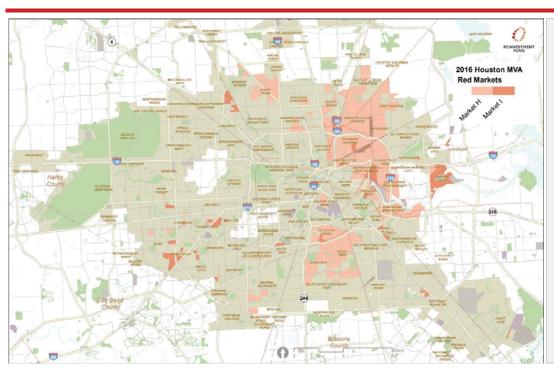


F and G markets in Houston lie between middle markets and distressed markets, these areas may be stable while also at elevated risk for market decline. 14% of the city's population live in F markets, and 19% live in G markets, together representing one-third of the city's population.

Orange markets generally have sales prices near \$100k, with elevated foreclosure rates relative to purple, blue or yellow markets. F and G markets differ substantially in terms of owner occupancy. F markets are predominantly rental (only 24% owner occupied), whereas G markets are nearly two-thirds (65%) owner occupied. G markets have elevated rates of rental subsidy (7%) and housing violations (3%) as well, second only to H markets on both measures.

MVA Cluster	Number of Block Groups	Me	dian Sales ce, '14-'15	Variance Sales Price, '14-'15		% of Housing	of Housing	Occupied,	Publicly Subsidized Rental, 2016	Commercial	Violations as a % of Housing Units, '14-'16
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G	229	\$	86,096	0.46	12.77%	2.47%	0.94%	65.34%	7.47%	19.06%	2.98%

Market Overview: Red Markets



H and I markets are the most distressed real estate markets in Houston. 10% of the city's population reside in H markets, and 3% live in I markets.

Together these markets make up 13% of the city's population.

Red markets are characterized by low median sales values, often below \$55k. Within these areas, H and I markets differ in owner occupancy. In H markets, about half (53%) of residents are owner occupants, while only 16% of units in I markets are owner occupied, the lowest level across all markets. In H markets, rental subsidies (7.7%), foreclosures (75%), residential vacancy (8.3%) and violations (6.1%) are the highest across all nine market types. Elevated levels of foreclosure (27%) are also found in I markets.

MVA Cluster	Number of Block Groups	Median Sales Price, '14-'15	Variance Sales Price, '14-'15	Foreclosures as a % of Sales, '14-'16	% of Housing	of Housing	Occupied,	Publicly Subsidized Rental, 2016	Commercial	Violations as a % of Housing Units, '14-'16
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1	36	\$ 33,208	0.53	27.02%	1.54%	0.38%	16.26%	3.67%	34.83%	0.94%



III. Supplemental Analyses

Contextualizing changes in housing market characteristics since the 2013 Houston MVA

- Notable Market Changes
- Sales Price and Foreclosure Change
- Potential Areas for Market Growth

- I. MarketCharacteristics
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Supplemental Analyses

Comparing results from the 2013 and 2016 Houston Market Value Analyses can provide important context for understanding changes in neighborhood development, housing, and economic development. Below are some examples of additional analyses using the Market Value Analysis in combination with historical MVA data.

Potential Growth Markets

Areas above the city average in both sales variance and new construction permit activity

Geographic Level Analyses

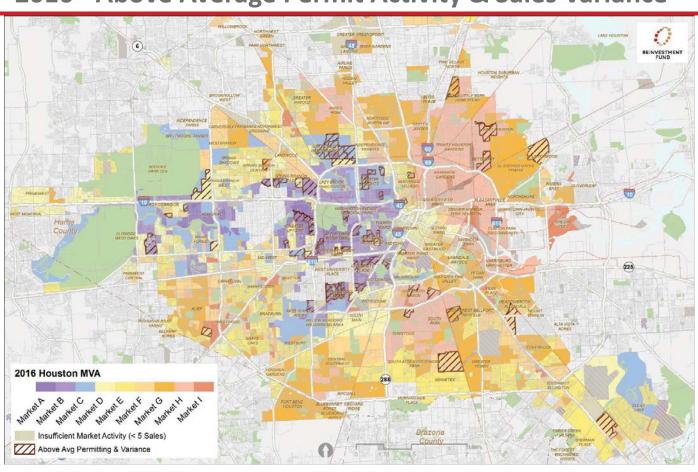
Notable Market Changes

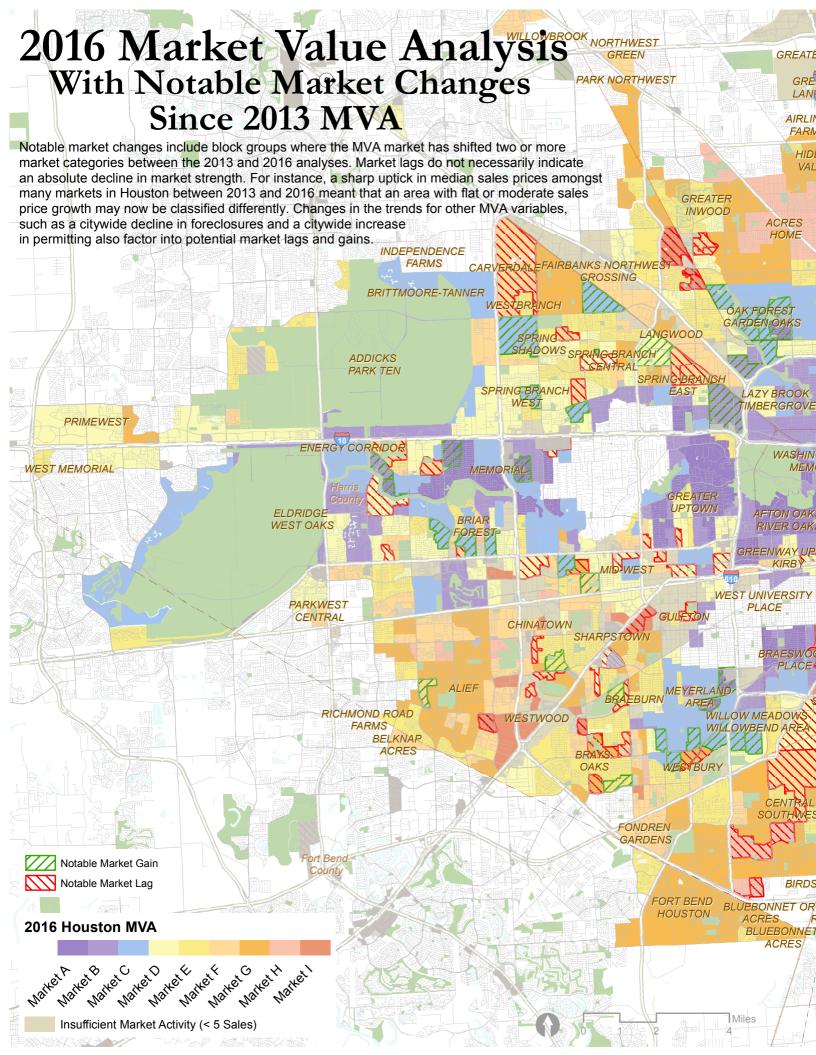
Markets that have shifted two or more categories between the 2013 and 2016 MVAs

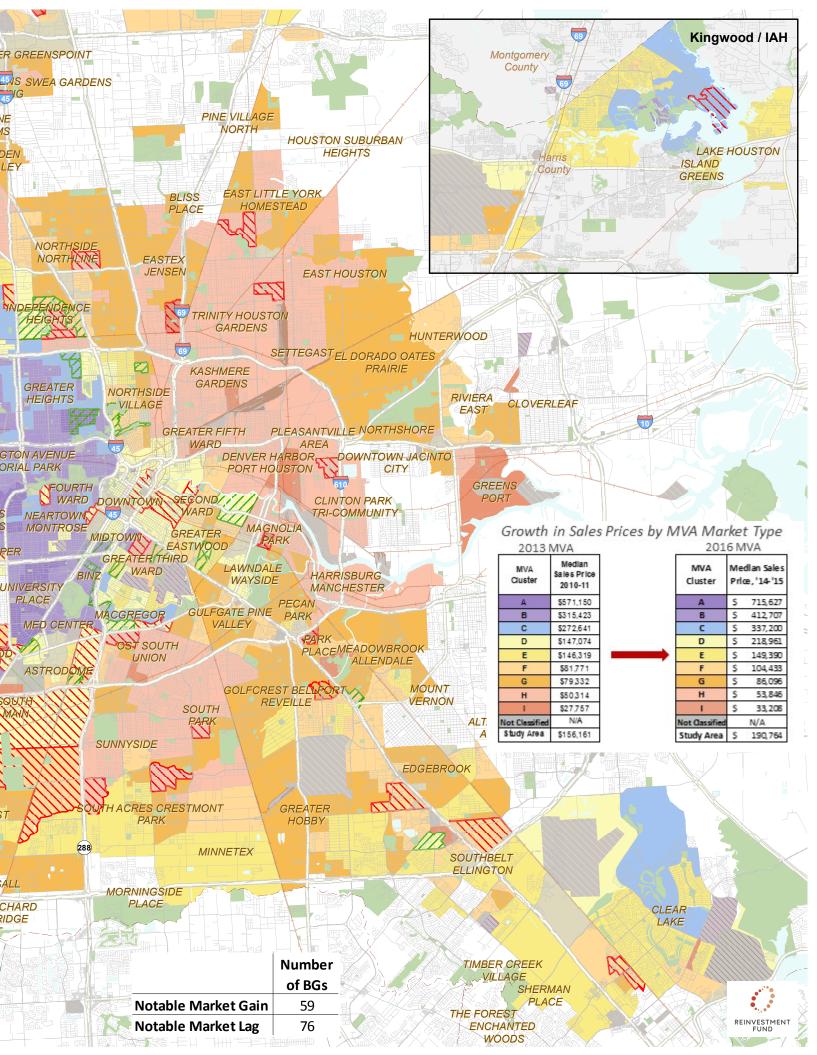
Median Sales Price Change

Displaying both absolute difference and percent changes in inflation-adjusted prices

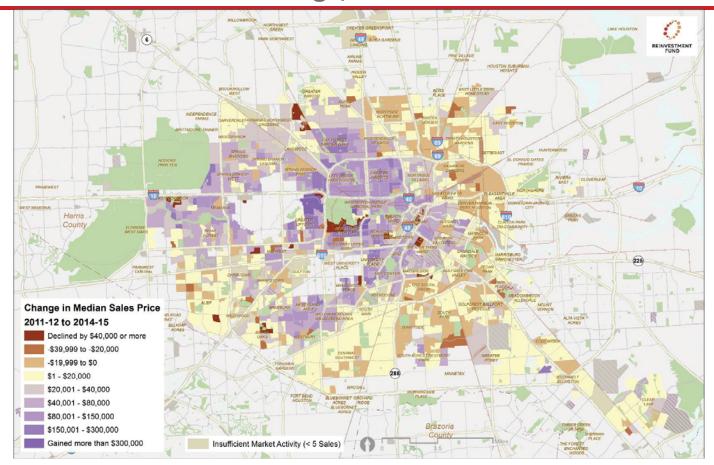
2016 - Above Average Permit Activity & Sales Variance



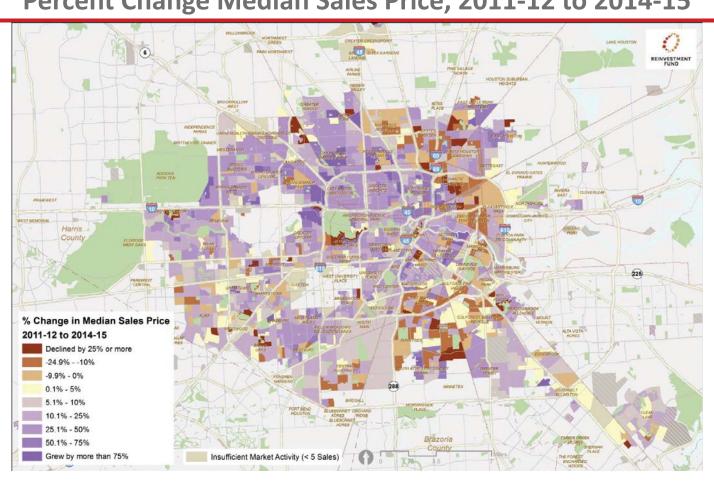




Median Sales Price Change, 2011-12 to 2014-15



Percent Change Median Sales Price, 2011-12 to 2014-15





IV. Next Steps and Discussion

- I. MarketCharacteristics
- II. Market Value Analysis Results
- III. Supplemental Analyses
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Reinvestment Fund Policy Solutions

Ira Goldstein, President ira.goldstein@reinvestment.com

Michael Norton, Chief Policy Analyst michael.norton@reinvestment.com

Contact: 215-574-5800

Additional publications on developing a data-driven approach to neighborhood improvement using the Market Value Analysis

Making Sense of Markets: Using Data to Guide Reinvestment Strategies

Chapter on the MVA in <u>What Counts: Harnessing Data for America's</u> <u>Communities</u>, outlining opportunities and challenges for the strategic use of data to reduce poverty, improve health, expand access to quality education, and build stronger communities.

Maximizing the Impact of Federal NSP Investments through the Strategic Use of Local Market Data

Chapter by Reinvestment Fund's Ira Goldstein for the book <u>REO & Vacant Properties: Strategies for Neighborhood Stabilization</u>, discussing the MVA as a means to strategize the targeting of resources under the federal Neighborhood Stabilization Program.

A Data-Based Approach to Understanding Urban Housing Markets

Chapter on the MVA by Reinvestment Fund's Ira Goldstein in <u>Putting Data to Work: Data-Driven Approaches to Strengthening Neighborhoods</u>, by the Board of Governors of the Federal Reserve System. The chapter highlights how the MVA approach can inform citywide strategies and decision-making.

On the Edge: America's Middle Neighborhoods

<u>Book edited by Paul C. Brophy</u> on ways that policymakers and community development professionals can support "middle neighborhoods," communities on the edge of decline or improvement.

Market Value Analysis: Understanding Where and How to Invest Limited Resources

<u>Article by Ira Goldstein and Sean Closkey</u> on using the Market Value Analysis (MVA) to prioritize investments for *Bridges*, the quarterly publication of the St. Louis Federal Reserve Bank.

