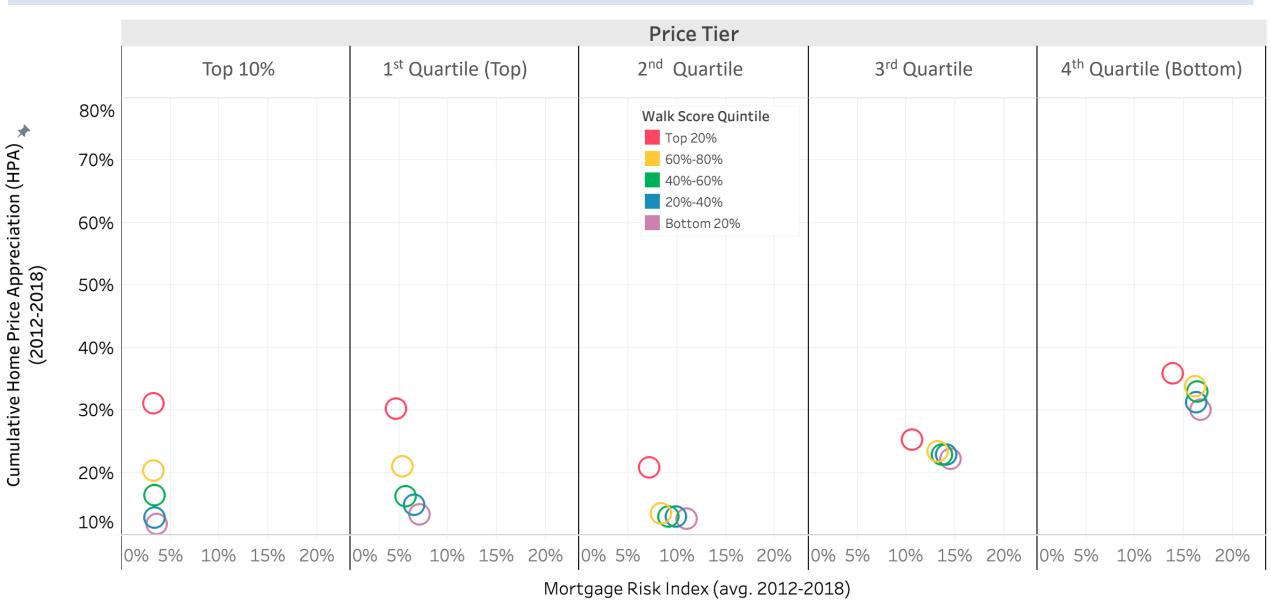
Evaluation of Walkability, Constant-quality Home Price Appreciation(HPA), & Leverage: Top 50 Metros

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Joint work with Ed Pinto and Tobias Peter

HPA Trend by Walk Score and Price Tiers: Washington, DC Metro Area



Note: Price Segment is defined by the AVM of each sale as of Dec-2018. Each sale is assigned a walk score based on its census tract score. Source: Redfin Real Estate <u>https://www.walkscore.com/</u> and AEI Housing Center, <u>www.AEI.org/housing</u>

HPA Trend by Walk Score and Price Tiers: North Port, FL Metro Area



Note: Price Segment is defined by the AVM of each sale as of Dec-2018. Each sale is assigned a walk score based on its census tract score. Source: Redfin Real Estate <u>https://www.walkscore.com/</u> and AEI Housing Center, <u>www.AEI.org/housing</u>

(Intrinsic) Value Depends on Location, & Location on Convenience, & Convenience on Nearness (Hurd, The Principles of City Land Values, 1903)

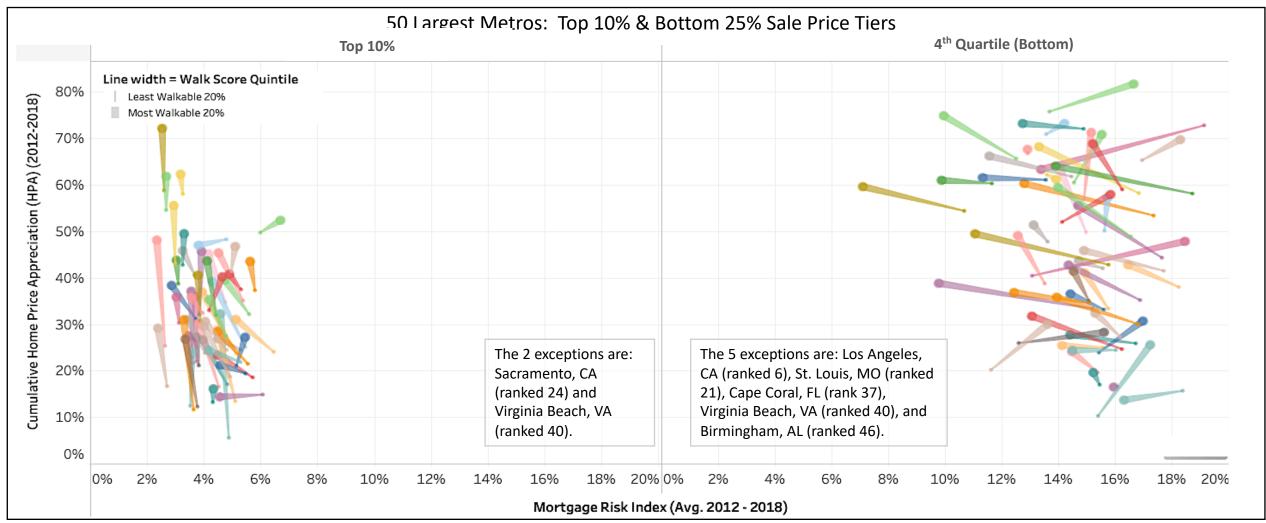
50 Largest Metros: HPA Trend by Walk Score and Price Tiers Line width = Walk Score Quintile **Price Tier** Least Walkable 20% 2nd Quartile 1st Quartile (Top) 4th Quartile (Bottom) Top 10% 3rd Quartile Most Walkable 20% 3 exceptions: 7 exceptions: Miami, FL 2 exceptions : 1 exception: 80% **Cumulative Home Price Appreciation** Virginia Beach, VA. Baltimore, MD (ranked (ranked 4), San Diego, VA Sacramento, CA 26), Milwaukee, WI (rank 27), Cape Coral, (ranked 24) and (ranked 44), Tucson, FL(ranked 37), North Virginia Beach, VA (ranked 40). AZ (ranked 45). Port(ranked 38), Virginia Beach, VA, Milwaukee, 60% (HPA) (2012-2018) WI, Tucson, AZ. 40% The 5 exceptions are: Los Angeles, CA (ranked 6), St. Louis, MO (ranked 21), 20% Cape Coral, FL, Virginia Beach, VA, Birmingham, AL (ranked 46). 0% 0% 5% 10% 15% 0% 5% 10% 15% 0% 5% 10% 15% 0% 5% 10% 15% 0% 5% 10% 15% Mortgage Risk Index (Avg. 2012-2018)

Walkability matters. For the five price tier scenarios of 50 metros (total 250 scenarios), walkability provides HPA lift in 93% of the cases.

Note: Top 50 metros cover 20.4 million single-family 1-4 sales from 2012-2018, about 50% of all US single-family home sales over the period. In the chart, each color represents a metro. Source: Redfin Real Estate https://www.walkscore.com/ and AEI Housing Center, www.AEI.org/housing

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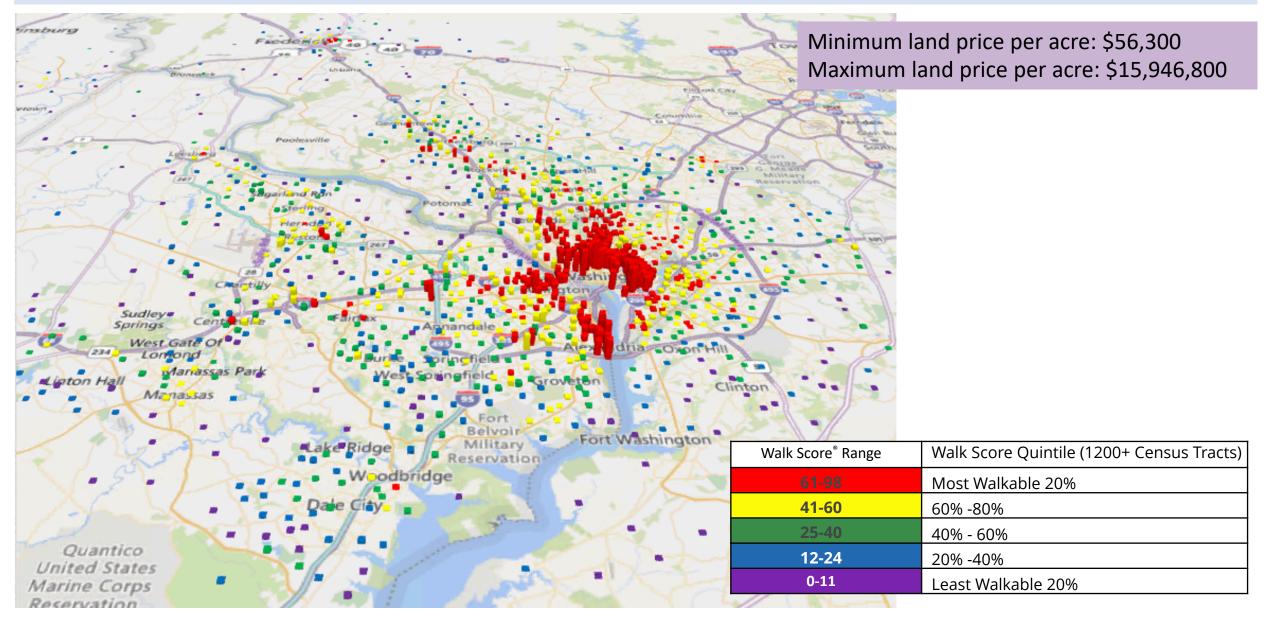
- Top 10% sale price tier: for 48 metros, House Price Appreciation (HPA) was higher in the most walkable quintile than the least walkable one (avg. HPA premium of 8.6%) and the MRI range is very tight, with the average MRI difference being only 0.5%.
- Bottom 25% sale price tier: for 45 metros HPA was higher in the most walkable quintile than the least walkable one (avg. HPA premium of 5.2%) and the MRI range is much wider, with the average MRI difference being 2.1%.



5

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Depiction of Walkability and Land Price Per Acre: Washington, DC Census Tract 3D Map



Note: Walk Scores were provided by Redfin at the census tract level and are "population weighted based on home locations within each tract" from Redfin Real Estate. Source: AEI Housing Center, <u>www.AEI.org/housing</u>, Redfin Real Estate <u>https://www.walkscore.com/</u> and land price per acre from joint FHFA/AEI/Rutgers University research.

6