

Disaster on the Horizon: The Price Effect of Sea Level Rise State Level Outcomes

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We estimate the impact of sea level rise exposure utilizing the methodology from [Disaster on the Horizon: The Price Effect of Sea Level Rise](#) by Bernstein, Gustafson and Lewis.¹ We employ the model corresponding to Column 6 of Table 2 which compares transactions of houses of the same type that have the same number of beds with the same buyer type, within the same zip code, quarter, distance to coast bin and elevation bin.² We demand at least 25,000 transactions within a quarter mile of the coast to include a state in this sample, which eliminates a few states with high exposure areas such as Louisiana and Alabama, but relatively few transactions over the sample period.

The state by state analysis in Table 1 shows significant negative pricing for sea level exposure for 4 states (Florida, Massachusetts, New Jersey and New York) across all buyer types. Columns 2 and 3 present the results for the "Owner Occupying" and "Investor/Second Home Buyer" groups respectively. We see significant differences between the segments in 3 states: investors appear to demand a larger discount in Florida, Maryland and New Jersey. The difference between Owner Occupiers and Investors is economically large in 3 additional states, Connecticut, New York, and North Carolina, but is not statistically significant.

¹Please cite this paper when referring to the findings presented here

²To narrow the analysis to the state level, we introduce transactions where prices are imputed from tax documents rather than read directly from the closing documents (e.g. we add CF and CR transactions to our existing RD sample)

Table 1: State Level Analysis

This table presents ordinary least squares estimates where the dependent variable is $\ln(\text{Price})$. The explanatory variable of interest is SLR Exposed, which equals one for a property that would be inundated with a 6 foot SLR and zero otherwise, interacted with categorical dummies equal to one for each state. The sample is restricted to sales of residential properties within 0.25 miles of the coast between 2007 and 2016. Regressions include zip code (Z) x quarterly time (Q) x distance-to-coast bin (D) x 2 meter property elevation bins (E) x indicators for occupancy status and different zip of buyer (O) x whether the property is a condominium (P) x total bedrooms (B) interacted fixed effects to control for geographic features. There are six distance-to-coast bins, corresponding to the following miles to coast cutoffs: 0.01, 0.02, 0.04, 0.08, and 0.16. T-statistics based on standard errors that are clustered at the zip code level are presented below the coefficients. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	(1)	(2)	(3)
CALIFORNIA	0.066 (1.61)	0.059 (1.39)	0.073 (1.06)
CONNECTICUT	0.009 (0.20)	0.022 (0.49)	-0.078 (-0.86)
FLORIDA	-0.043** (-2.07)	-0.011 (-0.86)	-0.055** (-2.04)
MARYLAND	-0.050 (-1.36)	0.029 (1.18)	-0.101*** (-3.79)
MASSACHUSETTS	-0.092*** (-2.77)	-0.081** (-2.06)	-0.116** (-2.36)
NEW JERSEY	-0.091*** (-3.29)	-0.024 (-1.41)	-0.109*** (-3.16)
NEW YORK	-0.072** (-2.15)	-0.051** (-2.33)	-0.178 (-1.19)
NORTH CAROLINA	-0.039 (-0.98)	0.036 (0.83)	-0.063 (-1.23)
SOUTH CAROLINA	-0.005 (-0.09)	-0.014 (-0.52)	0.005 (0.05)
VIRGINIA	-0.001 (-0.05)	0.001 (0.03)	-0.035 (-0.58)
WASHINGTON	-0.126 (-1.16)	-0.095 (-0.61)	-0.132 (-1.12)
Sqft Pctls	Y	Y	Y
Age Pctls	Y	Y	Y
Z x Q x D x E x O x P x B	Y	Y	Y
Buyer Type	All	Owner Occupier	Investor
R^2	0.864	0.874	0.859
N	709,931	334,230	375,701