

COUNTRY EXPOSURE MODEL

Review main statistic of a exposure model and create summaries for a given Country.

```
/home/risk/venvs/py38w/lib/python3.8/site-packages/geopandas/_compat.py:111: UserWarning: The Shapely GEOS version (3.9.1-CAPI-1.14.2) is incompatible with the GEOS version PyGEOS was compiled with (3.10.1-CAPI-1.16.0). Conversions between both will be slow.
  warnings.warn(
```

```
# Parameters
country = "United_Kingdom"
```

Exposure files:
Exposure_Com_United_Kingdom.csv
Exposure_Ind_United_Kingdom.csv
Exposure_Res_United_Kingdom.csv

Sanity checks and formats

Exposure at National level

Summary by occupancy type

	OCCUPANTS	BUILDINGS	COST_USD	BUILDINGS_%	COST_USD_%
OCCUPANCY					
Res	66.8M	14,668.2K	\$4,210.4B	94.79%	66.55%
Ind	26.5M	201.2K	\$735.2B	1.30%	11.62%
Com	26.7M	605.8K	\$1,380.8B	3.91%	21.83%

Other metrics to consider

	AREA_SQM	COST_BUILDING_USD	AVG_BUILDING_AREA_SQM	AVG_COST_PER_AREA_USD
OCCUPANCY				
Total	1,996.8M	\$4,352.8B	129	\$3,168
Res	1,646.7M	\$3,368.3B	112	\$2,557
Ind	123.9M	\$294.1B	616	\$5,933
Com	226.3M	\$690.4B	374	\$6,103

Exposure summary at Admin level 1

	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
NAME_1						
England	\$5,307.1B	12,966.9K	98,903.0K	83.89%	83.79%	82.37%
Scotland	\$539.6B	1,320.9K	10,657.3K	8.53%	8.54%	8.88%
Wales	\$312.9B	753.0K	6,160.8K	4.95%	4.87%	5.13%
Northern Ireland	\$166.8B	434.4K	4,354.5K	2.64%	2.81%	3.63%

Exposure by simplified taxonomy

Adding `MACRO_TAXO` column

	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
MACRO_TAXO						
MUR	\$3,345.1B	9,741.1K	61,206.2K	52.88%	62.95%	50.97%
RC	\$2,280.9B	4,874.4K	38,704.1K	36.05%	31.50%	32.23%
S	\$521.0B	149.7K	17,448.3K	8.23%	0.97%	14.53%
W	\$179.4B	710.0K	2,717.0K	2.84%	4.59%	2.26%

Exposure by taxonomy

Showing only taxonomies that represent 90% of the total `COST_USD`

		COST_USD	BUILDINGS	COST_USD_%	BUILDINGS_%
MACRO_TAXO	TAXONOMY				
MUR	MUR+CL/LWAL+CDN/HBET:1-4/RES	\$2,259.1B	7,379.6K	39.87%	48.51%
RC	CR/LFINF+CDN/HBET:4-10/RES	\$1,116.5B	3,397.9K	19.71%	22.34%
	CR/LWAL+CDN/HBET:4-10/RES	\$399.6B	1,216.1K	7.05%	7.99%
	MUR+CL/LWAL+CDN/H:1/COM	\$313.1B	143.3K	5.53%	0.94%
MUR	MUR+ST/LWAL+CDN/HBET:1-4/RES	\$305.2B	1,993.9K	5.39%	13.11%
S	S/LFM+CDN/H:1/IND	\$293.2B	80.5K	5.17%	0.53%
RC	CR/LFINF+CDL/HBET:3-5/COM	\$209.1B	86.8K	3.69%	0.57%
	CR/LFINF+CDL/H:1/COM	\$171.1B	54.2K	3.02%	0.36%
	CR/LWAL+CDL/HBET:3-5/COM	\$138.7B	59.2K	2.45%	0.39%
W	W/LPB+CDL/HBET:1-3/RES	\$130.0B	680.7K	2.29%	4.47%
MUR	MUR/LWAL+CDN/H:1/IND	\$111.4B	32.2K	1.97%	0.21%
S	S+SL/LFM+CDN/H:1/IND	\$109.9B	30.2K	1.94%	0.20%
MUR	MUR+CL/LWAL+CDN/HBET:3-5/COM	\$109.1B	57.4K	1.92%	0.38%

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