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 Sh
apely 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(
```

```python
# Parameters
country = "Latvia"
```

```
Exposure files:
  Exposure_Com_Latvia.csv
  Exposure_Ind_Latvia.csv
  Exposure_Res_Latvia.csv
```

Sanity checks and formats

Exposure at National level

Summary by occupancy type

OCCUPANCY	OCCUPANTS	BUILDINGS	COST_USD	BUILDINGS_%	COST_USD_%
Res	1,913.0K	349.8K	$63.8B	91.26%	58.74%
Ind	765.2K	13.2K	$24.0B	3.44%	22.10%
Com	765.2K	20.3K	$20.8B	5.30%	19.17%

Other metrics to consider

OCCUPANCY	AREA_SQM	COST_BUILDING_USD	AVG_BUILDING_AREA_SQM	AVG_COST_PER_AREA_USD
Total	63.3M	$71.0B	165	$1,715
Res	48.6M	$51.0B	139	$1,312
Ind	8.3M	$9.6B	628	$2,895
Com	6.4M	$10.4B	315	$3,249

Exposure summary at Admin level 1

NAME_1	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
Riga	$58.2B	185.1K	1,655.0K	53.63%	48.30%	48.06%
Latgale	$15.5B	60.9K	522.7K	14.28%	15.90%	15.18%
Kurzeme	$13.5B	50.5K	465.0K	12.40%	13.19%	13.50%
Zemgale	$12.1B	46.6K	437.5K	11.15%	12.16%	12.70%
Vidzeme	$9.3B	40.1K	363.3K	8.54%	10.46%	10.55%

Exposure by simplified taxonomy

Adding `MACRO_TAXO` column

MACRO_TAXO	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
RC	$74.1B	232.5K	2,275.8K	68.21%	60.66%	66.09%
MUR	$14.3B	88.9K	506.4K	13.19%	23.19%	14.71%
S	$10.6B	5.9K	344.3K	9.79%	1.55%	10.00%
W	$9.6B	56.0K	316.9K	8.81%	14.61%	9.20%

Exposure by taxonomy

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

MACRO_TAXO	TAXONOMY	COST_USD	BUILDINGS	COST_USD_%	BUILDINGS_%
RC	**CR/LFINF+CDN/H:3/RES**	$36,766.3M	199,472	37.66%	55.81%
	CR/LWAL+CDN/HBET:4-10/RES	$11,322.5M	15,357	11.60%	4.30%
	CR/LFINF+CDM/HBET:3-5/COM	$7,427.5M	2,913	7.61%	0.81%
	CR+PC/LFM+CDN/H:1/IND	$6,201.1M	3,300	6.35%	0.92%
S	**S/LFM+CDN/H:1/IND**	$5,905.8M	3,300	6.05%	0.92%
MUR	**MUR+CL/LWAL+CDN/HBET:1-4/RES**	$4,837.1M	37,271	4.96%	10.43%
S	**S+SL/LFM+CDN/H:1/IND**	$4,724.6M	2,640	4.84%	0.74%
W	**W/LPB+CDL/HBET:1-3/RES**	$4,525.2M	36,754	4.64%	10.28%
	CR/LFINF+CDL/H:1/COM	$4,409.2M	6,669	4.52%	1.87%
RC	**CR/LWAL+CDN/H:1/IND**	$2,480.4M	1,320	2.54%	0.37%
	CR/LFINF+CDM/H:2/COM	$2,461.1M	2,000	2.52%	0.56%
MUR	**MUR+CB/LWAL+CDN/HBET:1-4/RES**	$2,447.7M	10,871	2.51%	3.04%
	MUR+CB/LWAL+CDN/HBET:1-2/RES	$2,124.5M	34,511	2.18%	9.66%
RC	**CR/LFM+CDN/H:2/IND**	$1,984.3M	1,056	2.03%	0.30%