COUNTRY EXPOSURE MODEL

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

```python
# Parameters
country = "Luxembourg"
```

```
Exposure files:
   Exposure_Com_Luxembourg.csv
   Exposure_Ind_Luxembourg.csv
   Exposure_Res_Luxembourg.csv
```

Sanity checks and formats

Exposure at National level

Summary by occupancy type

OCCUPANCY	OCCUPANTS	BUILDINGS	COST_USD	BUILDINGS_%	COST_USD_%
Res	620.0K	119,597	$52.0B	91.37%	55.63%
Ind	248.0K	2,100	$11.0B	1.60%	11.73%
Com	248.0K	9,190	$30.5B	7.02%	32.63%

Other metrics to consider

OCCUPANCY	AREA_SQM	COST_BUILDING_USD	AVG_BUILDING_AREA_SQM	AVG_COST_PER_AREA_USD
Total	29,205.8K	$61,280.3M	223	$3,203
Res	22,046.4K	$41,629.2M	184	$2,360
Ind	2,017.7K	$4,389.3M	961	$5,438
Com	5,141.7K	$15,261.8M	560	$5,937

Exposure summary at Admin level 1

NAME_1	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
Luxembourg	$69.5B	95.5K	813.6K	74.33%	72.93%	72.90%
Diekirch	$13.6B	19.9K	169.7K	14.51%	15.18%	15.21%
Grevenmacher	$10.4B	15.6K	132.7K	11.16%	11.89%	11.89%

Exposure by simplified taxonomy

```
Adding `MACRO_TAXO` column
```

MACRO_TAXO	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
MUR	$57,710.1M	100,284	663.4K	61.70%	76.62%	59.44%
RC	$29,591.1M	25,771	327.0K	31.64%	19.69%	29.30%
S	$4,853.0M	945	111.6K	5.19%	0.72%	10.00%
W	$1,379.2M	3,887	14.0K	1.47%	2.97%	1.26%

Exposure by taxonomy

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

MACRO_TAXO	TAXONOMY	COST_USD	BUILDINGS	COST_USD_%	BUILDINGS_%
MUR	MUR+CL/LWAL+CDN/HBET:1-4/RES	$37,378.2M	86,149	45.14%	71.25%
RC	CR/LFINF+CDN/HBET:4-10/RES	$9,127.8M	19,375	11.02%	16.03%
	CR/LFINF+CDL/HBET:3-5/COM	$8,276.7M	999	10.00%	0.83%
MUR	MUR+CL/LWAL+CDN/H:1/COM	$7,578.7M	3,421	9.15%	2.83%
	MUR+CL/LWAL+CDN/H:2/COM	$7,510.9M	3,199	9.07%	2.65%
RC	CR+PC/LFM+CDN/H:2/IND	$3,963.4M	735	4.79%	0.61%
S	S/LFM+CDN/H:1/IND	$3,774.6M	735	4.56%	0.61%
MUR	MUR+ST/LWAL+CDN/HBET:1-4/RES	$2,749.9M	5,935	3.32%	4.91%
RC	CR/LWAL+CDL/HBET:3-5/COM	$2,442.6M	355	2.95%	0.29%