

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 = "Moldova"
```

Exposure files:
Exposure_Com_Moldova.csv
Exposure_Ind_Moldova.csv
Exposure_Res_Moldova.csv

Sanity checks and formats

Exposure at National level

Summary by occupancy type

	OCCUPANTS	BUILDINGS	COST_USD	BUILDINGS_%	COST_USD_%
OCCUPANCY					
Res	2,658.0K	789,437	\$38,616.8M	97.15%	78.12%
Ind	1,000.4K	3,982	\$6,828.0M	0.49%	13.81%
Com	1,063.2K	19,204	\$3,986.0M	2.36%	8.06%

Other metrics to consider

	AREA_SQM	COST_BUILDING_USD	AVG_BUILDING_AREA_SQM	AVG_COST_PER_AREA_USD
OCCUPANCY				
Total	70,801.8K	\$35,617.6M	87	\$698
Res	64,822.4K	\$30,893.4M	82	\$596
Ind	3,748.1K	\$2,731.2M	941	\$1,822
Com	2,231.3K	\$1,993.0M	116	\$1,786

Exposure summary at Admin level 1

	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
NAME_1						
Mun. Chisinau	\$15,216.5M	59,510	800.7K	30.78%	7.32%	16.96%
Mun. Balti	\$2,917.3M	12,890	174.8K	5.90%	1.59%	3.70%
U.T.A. Gagauzia	\$2,163.1M	36,875	229.5K	4.38%	4.54%	4.86%
Edinet	\$1,635.7M	26,879	122.6K	3.31%	3.31%	2.60%
Ungheni	\$1,564.3M	28,330	172.4K	3.16%	3.49%	3.65%
Briceni	\$1,488.4M	27,525	119.5K	3.01%	3.39%	2.53%
Orhei	\$1,414.5M	31,672	173.1K	2.86%	3.90%	3.67%
Cahul	\$1,312.2M	26,807	179.7K	2.65%	3.30%	3.81%
Drochia	\$1,290.4M	29,950	127.0K	2.61%	3.69%	2.69%
Soroca	\$1,243.9M	28,276	132.5K	2.52%	3.48%	2.81%
Floresti	\$1,152.3M	29,000	130.4K	2.33%	3.57%	2.76%
Hincesti	\$1,132.0M	34,143	177.0K	2.29%	4.20%	3.75%
Ialoveni	\$1,070.1M	28,636	158.9K	2.16%	3.52%	3.37%
Falesti	\$1,051.1M	27,862	133.5K	2.13%	3.43%	2.83%
Straseni	\$1,006.7M	23,921	141.0K	2.04%	2.94%	2.99%
Anenii Noi	\$952.6M	24,778	134.8K	1.93%	3.05%	2.85%
Singerei	\$945.9M	26,765	136.1K	1.91%	3.29%	2.88%
Causeni	\$935.9M	24,996	138.5K	1.89%	3.08%	2.93%
Donduseni	\$928.4M	17,477	64.6K	1.88%	2.15%	1.37%
Criuleni	\$844.7M	25,013	120.5K	1.71%	3.08%	2.55%
Riscani	\$794.2M	22,491	101.0K	1.61%	2.77%	2.14%
Calarasi	\$777.0M	21,816	109.9K	1.57%	2.68%	2.33%
Stefan Voda	\$725.6M	20,655	105.9K	1.47%	2.54%	2.24%
Ocnita	\$705.7M	17,893	80.9K	1.43%	2.20%	1.71%
Rezina	\$670.5M	13,216	72.5K	1.36%	1.63%	1.53%
Glodeni	\$648.6M	18,962	68.1K	1.31%	2.33%	1.44%
Telenesti	\$647.9M	20,701	81.1K	1.31%	2.55%	1.72%
Nisporeni	\$637.0M	18,202	70.5K	1.29%	2.24%	1.49%
Cimisia	\$631.1M	16,650	84.1K	1.28%	2.05%	1.78%
Leova	\$585.8M	13,523	76.3K	1.19%	1.66%	1.61%
Cantemir	\$528.7M	16,564	88.9K	1.07%	2.04%	1.88%
Taraclia	\$496.3M	10,151	63.7K	1.00%	1.25%	1.35%
Soldanesti	\$479.7M	13,898	62.7K	0.97%	1.71%	1.33%
Basarabeasca	\$342.2M	6,839	39.3K	0.69%	0.84%	0.83%
Dubasari	\$317.1M	9,653	49.9K	0.64%	1.19%	1.06%
Bender	\$177.6M	104	0.0K	0.36%	0.01%	0.00%

Exposure by simplified taxonomy

Adding `MACRO_TAXO` column

	COST_USD	BUILDINGS	OCCUPANTS	COST_USD_%	BUILDINGS_%	OCCUPANTS_%
MACRO_TAXO						
RC	\$19,388.5M	35,622	1,446.5K	39.22%	4.38%	30.64%
MUR	\$14,510.6M	426,299	1,596.2K	29.36%	52.46%	33.81%
MCF	\$13,194.3M	349,308	1,328.8K	26.69%	42.99%	28.14%
S	\$2,337.3M	1,394	350.1K	4.73%	0.17%	7.42%

Exposure by taxonomy

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

		COST_USD	BUILDINGS	COST_USD_%	BUILDINGS_%
MACRO_TAXO	TAXONOMY				
MCF	MCF/LWAL+CDL/H:2/RES	\$6,390.8M	185,855	14.46%	23.65%
	MCF/LWAL+CDL/H:1/RES	\$4,776.9M	155,764	10.80%	19.82%
	MUR+CL/LWAL+CDN/H:1/RES	\$4,388.1M	157,098	9.93%	19.99%
MUR	MUR+CL/LWAL+CDN/H:2/RES	\$3,172.5M	103,942	7.18%	13.22%
	MUR+ST/LWAL+CDN/H:2/RES	\$2,433.6M	76,781	5.50%	9.77%
RC	CR/LFINF+CDM/HBET:3-5/RES	\$2,099.3M	4,638	4.75%	0.59%
MUR	MUR+ST/LWAL+CDN/H:1/RES	\$2,069.6M	76,987	4.68%	9.79%
RC	CR/LFINF+CDN/HBET:6-/RES	\$1,680.7M	1,830	3.80%	0.23%
S	S+SL/LFM+CDH/H:1/IND	\$1,669.5M	996	3.78%	0.13%
MCF	MCF/LWAL+CDL/H:2/COM	\$1,464.4M	4,424	3.31%	0.56%
	CR/LFM+CDH/H:2/IND	\$1,402.3M	796	3.17%	0.10%
	CR+PC/LWAL+CDL/HBET:3-5/RES	\$1,344.5M	2,509	3.04%	0.32%
RC	CR+PC/LFM+CDL/H:1/IND	\$1,262.0M	717	2.85%	0.09%
	CR+PC/LWAL+CDL/HBET:6-/RES	\$1,120.5M	1,220	2.53%	0.16%
	CR+PC/LWAL+CDM/HBET:6-/RES	\$1,120.5M	1,220	2.53%	0.16%
	CR/LDUAL+CDH/HBET:6-/RES	\$1,120.5M	1,220	2.53%	0.16%
	CR/LDUAL+CDL/HBET:6-/RES	\$1,120.5M	1,220	2.53%	0.16%
	CR/LDUAL+CDM/HBET:6-/RES	\$1,120.5M	1,220	2.53%	0.16%
	CR/LFINF+CDL/H:2/IND	\$1,051.7M	597	2.38%	0.08%
	CR/LFINF+CDL/HBET:3-5/RES	\$933.1M	1,968	2.11%	0.25%
	CR/LDUAL+CDL/HBET:3-5/RES	\$846.2M	1,730	1.91%	0.22%
	CR/LDUAL+CDM/HBET:3-5/RES	\$846.2M	1,730	1.91%	0.22%
RC	CR+PC/LWAL+CDM/HBET:3-5/RES	\$776.6M	1,540	1.76%	0.20%