



Manage Financial Risk Under Climate Change

risQ leverages data and physical sciences to drive climate adaptation

Fixed Income Analytics

Delivering Solutions to 25+ Leading Asset Managers, Banks, Bond Insurers, Rating Agencies in U.S. Fixed Income

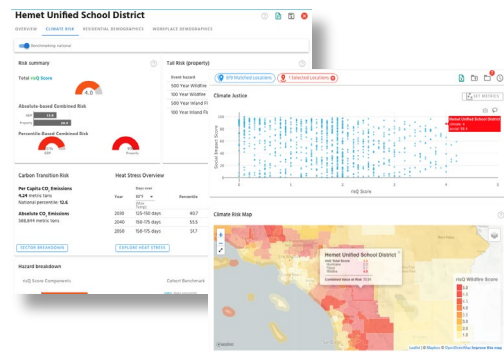
Data file, web user interface, and API products:

Municipal Finance

Unparalleled and comprehensive library of the precise spatial footprint of U.S. debt issuers, allowing for rich climate and social characterization

CUSIP-level coverage for ~98% of all \$3.9T in outstanding U.S. municipal debt, delivered in partnership with InterContinental Exchange

Portfolio analysis, real-time risk monitoring, weekly market commentary, monthly deep dive research, and automated data & report generation tools

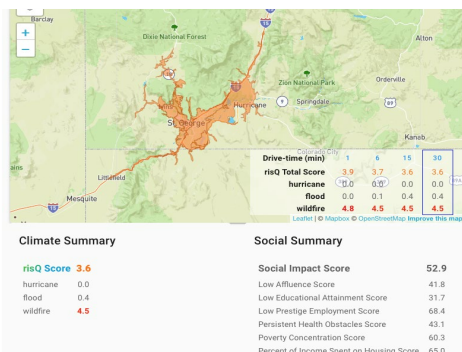


ESG-as-a-Service

Enter an address anywhere in the US, and within minutes, get back an in depth report with analytics on climate and environmental risk, social vulnerability and impact, and governance

Customizable API calls allowing users to enter asset characteristics to inform asset-level climate risk analysis

Analytics at both the asset level as well as the surrounding neighborhood, customizable by drive time radius



Securitized Real Estate

One-of-a-kind model linking trillions in government backed loan collateral to space, allowing for detailed and precise climate and ESG analysis, in partnership with Level11 Analytics

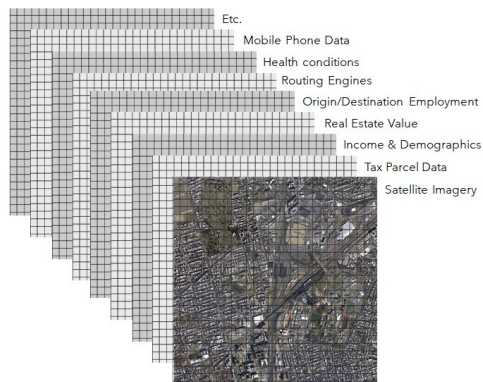
~95% coverage of all outstanding real estate securities and loan value

Comprehensive residential and commercial mortgage-backed security analytics, serving risk and ESG applications

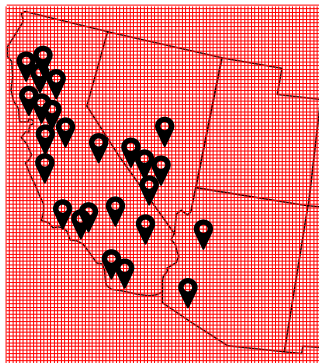
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Leveraging Intex and eMBS, Monthly MBS ESG Data is Enabled

**Socioeconomics,
demographics, and proprietary
asset locating data**



MBS ESG Analytics



**Climate change conditioned
risk models**

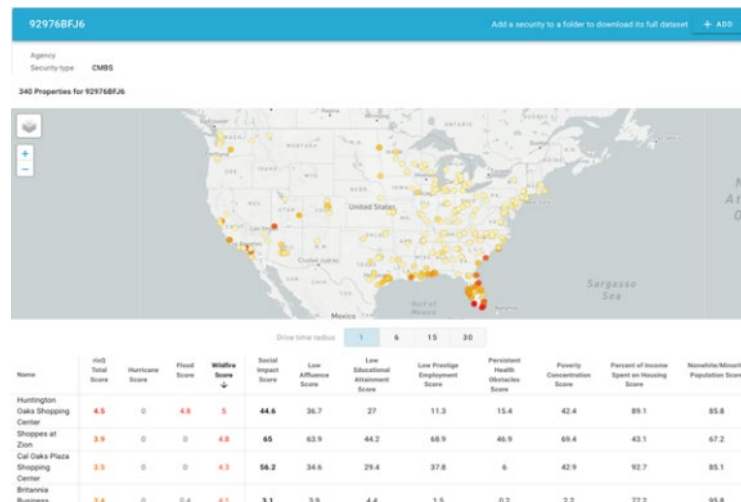


Geospaxial™ MBS Climate Risk and ESG Opportunity Deliverables

FTP File Delivery

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
REV DT	DEAL NAME	effective date	CUSIP list	drive time	risk score	hurricane score	floor score	wildfire score	inland flood base score	inland flood base 3c	inland flood base 3c	hurricane flood rpt45	hurricane flood rpt45 10yr												
20210501	BNK18B15	4/1/2021 060	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
20210501	BNK18B15	4/1/2021 060																							
20210501	BNK18B15	4/1/2021 060																							
20210501	CD16CD1	4/1/2021 125	REV DT	DEAL NAME	effective date	CUSIP list	drive time		ad pct 25up	trimmed ad discretion	average household income	average monthly housing costs	total occupied housing units	total renters											
20210501	CD16CD1	4/1/2021 125																							
20210501	CD16CD1	4/1/2021 125																							
20210501	CD16CD1	4/1/2021 125																							
20210501	CF19CF2	4/1/2021 125																							
20210501	CF19CF2	4/1/2021 125	20210501	BNK18B15	4/1/2021 060	06056AA9,0603		1	0.07	60768.71	48131.26	1495.56	2026.04	1080	605.49										
20210501	CF19CF2	4/1/2021 125	20210501	BNK18B15	4/1/2021 060	06056AA9,0603		6	0.08	60582.94	40121.52	1503.53	70128.64	28905	451.43										
20210501	CF19CF2	4/1/2021 125	20210501	BNK18B15	4/1/2021 060	06056AA9,0603		8	0.08	61948.79	239377.97	1372.82	385706	78945	2524.64										
20210501	CF19CF2	4/1/2021 125	20210501	BNK18B15	4/1/2021 060	06056AA9,0603		9	0.07	56831.26	24476.76	1441.17	130719	67009	3155.18										
20210501	CTG1G11	4/1/2021 173	20210501	CD16CD1	4/1/2021 125	12514MAA3,125		1	0.04	78198.04	97659.62	1628.26	2905.02	1099	1469.19										
20210501	CTG1G11	4/1/2021 173	20210501	CD16CD1	4/1/2021 125	12514MAA3,125		6	0.04	82159.24	124934.44	1684.88	157030.3	20653	1640.74										
20210501	CTG1G11	4/1/2021 173	20210501	CD16CD1	4/1/2021 125	12514MAA3,125		8	0.06	70006.91	122861.5	1593.52	1142434	817722	1891.77										
20210501	CTG1G11	4/1/2021 173	20210501	CD16CD1	4/1/2021 125	12514MAA3,125		30	0.06	6471.19	157439.9	1550.98	1349678	270204	1816.53										
20210501	CTG1G11	4/1/2021 173	20210501	CD16CD1	4/1/2021 125	12514MAA3,125		30	0.06	6984.76	170815.96	1545.96	7081.88	201	484.47										
20210501	CTG1G11	4/1/2021 173	20210501	CF19CF2	4/1/2021 125	12528VA7,1252		6	0.08	53887.85	57702.88	1402.20	31407.59	23355	690.93										
20210501	CTG1G11	4/1/2021 173	20210501	CF19CF2	4/1/2021 125	12528VA7,1252		5	0.07	57994.14	111575.6	1246.83	347001.6	215920	1331										
20210501	MSB17C34	4/1/2021 617	20210501	CF19CF2	4/1/2021 125	12528VA7,1252		30	0.08	60585	146897.4	1291.01	1050055	56666	1831.94										
20210501	MSB17C34	4/1/2021 617	20210501	CF19CF2	4/1/2021 125	12528VA7,1252		30	0.07	68912.36	108186.6	1448.49	108186.6	275	1572.1										
20210501	MSB17C34	4/1/2021 617	20210501	CTG1G11	4/1/2021 173	17320DAAG,1732		67	0.07	60278.98	145604.49	1495.75	49958.69	34861	2031.31										
20210501	MSB17C34	4/1/2021 617	20210501	CTG1G11	4/1/2021 173	17320DAAG,1732		67	0.04	63454.79	159377.5	1410.22	469807.07	31282	2178.9										
20210501	WFC19C31	4/1/2021 950	20210501	CTG1G11	4/1/2021 173	17320DAAG,1732		30	0.0022	60222.49	185862	1363.89	1571800	93584	2619.72										
20210501	WFC19C31	4/1/2021 950	20210501	CTG1G11	4/1/2021 173	17320DAAG,1732		1	0.007	537.55	498147	1448.25	792.11	37	6735.82										
20210501	WFC19C31	4/1/2021 950	20210501	CTG1G11	4/1/2021 173	17320DAAG,1732		67	0.06	69844.76	370184.9	1448.49	20160.75	1816	3916.45										
20210501	WFC19C31	4/1/2021 950	20210501	CTG1G11	4/1/2021 173	17320DAAG,1732		30	0.07	65272.6	404049.6	1370.99	234909.2	123544	4237.26										
20210501	WFR18C14	4/1/2021 928	20210501	CTG1G11	4/1/2021 173	17320DAAG,1732		30	0.04	89491.01	464118.2	1371.4	852743	404654	5651.64										
20210501	WFR18C14	4/1/2021 928	20210501	MSB17C34	4/1/2021 617	17677EA2A,6176		1	0.04	68466.27	188002.6	1849.83	744.49	549	1553.25										
20210501	WFR18C14	4/1/2021 928	20210501	MSB17C34	4/1/2021 617	17677EA2A,6176		30	0.07	68944.76	370184.9	1448.49	20160.75	1816	3916.45										
20210501	MSB17C34	4/1/2021 617	20210501	MSB17C34	4/1/2021 617	17677EA2A,6176		30	0.06	66853.28	183187.9	1505.80	93904.8	676602	1506.92										
20210501	MSB17C34	4/1/2021 617	20210501	MSB17C34	4/1/2021 617	17677EA2A,6176		30	0.04	64377.7	77727.5	1479.14	257976	153659	2228.69										
20210501	WFC19C31	4/1/2021 950	20210501	WFC19C31	4/1/2021 950	19001VAA8,9503		67	0.00939	135659.3	1439.35	591.47	30	1781.45											
20210501	WFC19C31	4/1/2021 950	20210501	WFC19C31	4/1/2021 950	19001VAA8,9503		67	0.0477	60479.89	229551.8	1366.14	26044.23	15794	3485.8										
20210501	WFC19C31	4/1/2021 950	20210501	WFC19C31	4/1/2021 950	19001VAA8,9503		67	0.00939	135659.3	1439.35	591.47	30	1781.45											

Software UI



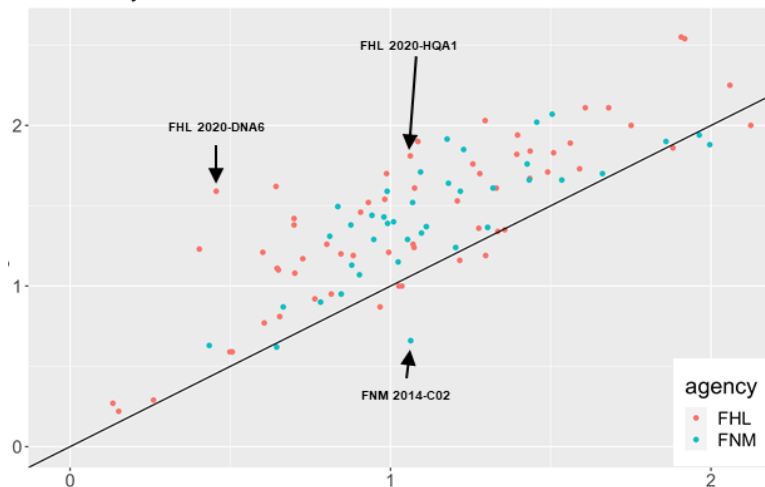
- CUSIP-linked climate risk, social and demographic data (300-400 data fields)
- Loan/Property- and summary pool-level files
- Summary level risQ Scores (for climate) and Social Impact Scores
- Loan performance correlated to ESG data for agency RMBS & CRT
- Data provided across multiple distance/service/catchment areas for each CMBS property
- Monthly universe file delivery

- Searchable by CUSIP or (CMBS) property name
- Download CUSIP data direct to .xls, or save & build portfolios in bulk
- Deep-dive analysis of a CMBS property or pool of interest across climate risk and social impact data
- User controlled selection and visualization of property service/catchment areas and data
- Upload property locations of upcoming deals and benchmark to the existing CMBS universe

Geospaxial™ RMBS quantifies climate risk accurately and uncovers strong but previously unknown ESG effects on prepay risk.

ESG: CRT pools can have very different climate risk than you could know from ZIP3 level. For any climate risk assessment of CRT tranches this will result in mispricing risk

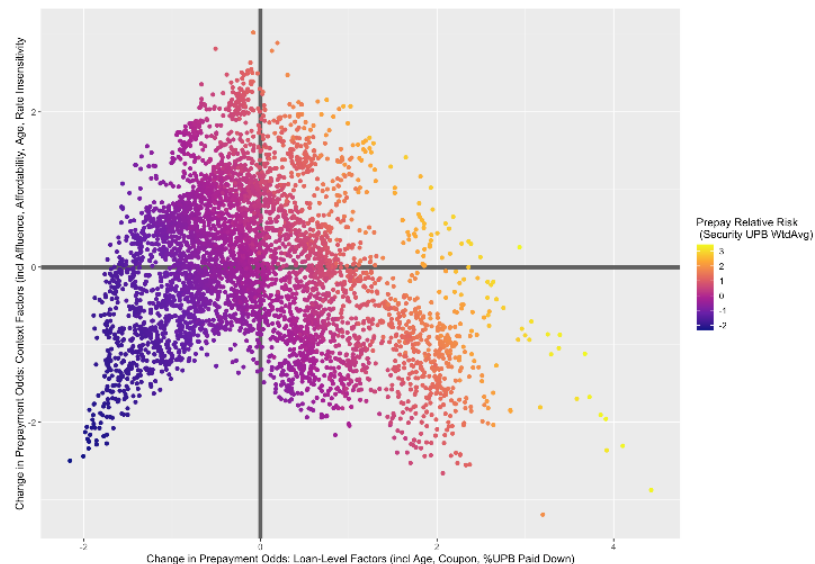
CRT Pools and Storm Surge Property VaR
Real vs. Synthetic



X axis: 99th percentile Storm Surge VaR using Zip3 data

Y axis: 99th percentile Storm Surge VaR using refined CRT loan locations

ESG: The market might be mis-predicting prepay risk by not having appropriate insight into the specific location-based ESG characteristics for a given loan in a given pool.



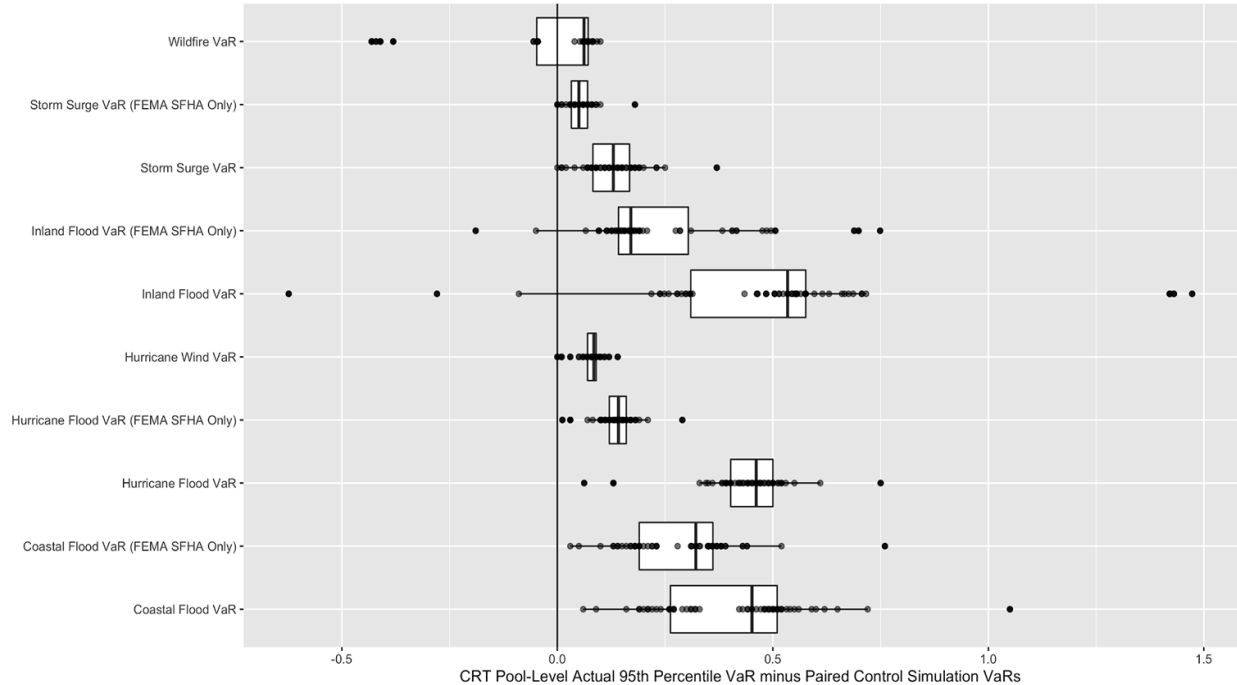
X axis: loan level factors basically known by the market

Y axis: ESG and spatial factors that Geospaxial™ delivers.

Relative climate risk in CRTs is higher and not in SFHA alone

CRTs are Disproportionately at Risk to Flood and Hurricane Compared to U.S. Housing on the Whole
52 FHL Pools as of 2020-12

- Using Level 11 geospatially-linked loans, the 95th percentile climate VaRs are calculated for each pool
- Parallel “control” pools are simulated using the exact same zip3 profiles as the real pools but generically across the zip3 compared to Level 11 capability.
- 95th percentile climate VaRs of the control pools are subtracted from the real 95th percentile VaRs



CRTs carry disproportionate flood and hurricane risk compared to the U.S. housing market as a whole. This is exacerbated for flood risks not covered by FEMA 1-in-100 year insurance zones (SFHAs)



Start a Conversation

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