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### About the American County Review:

The primary focus of the American County Review (ACRe) is the aggregation of data from numerous non-subjective sources, and creating from that data a unique ranking system that is not currently available from other vendors. Each county in the United States is ranked using a proprietary methodology that analyzes census data, crime data, environmental data, personal infrastructure data and climate change data.

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## Rankings – The American County Review

The American County Review has been created to fill a gap in the economic, and social analysis, of America’s homeland. By creating a composite ranking for each of the 3,141 counties across the U.S.A., the American County Review (ACRe, for short) provides a broad and detailed risk analysis of the social, economic, and environmental status, for these counties that can be utilized by both U.S. Municipal Debt participants, as well as the Real Estate marketplace.

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*“a unique and non-arbitrary risk assessment of issuers at the county level.” – [National Post](#)*

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Counties are ranked both within their own individual state, as well as against all counties nationally, and are available for license at [acredata.com](http://acredata.com)

## HIV/HCV AND ZIKA – RISKS AT THE COUNTY LEVEL

### BACKGROUND

As a result of a frightening outbreak of HIV in late 2014 and early 2015 in Scott County Indiana, the CDC (Center for Disease Control) put together a research paper listing 220 of the most at risk counties within the U.S.A. for a possible HIV/HCV outbreak similar to that of what occurred in Indiana. The CDC paper was released in June 2016, and published in the [Journal of Acquired Immune Deficiency Syndromes](#).

Recently the CDC issued its first ever travel warning for a destination within the continental United States, when it issued a travel warning in regards to the Zika virus on August 1, 2016 - for areas within the Miami-Dade County, Florida.

## HIV/HCV

Why is the [American County Review](#) taking a detailed look at the CDC report regarding possible outbreaks of HIV/HCV? The answer, is apart from the tragic personal and community toll that HIV can have, it can also impose a large fiscal strain upon the community, county, and even state. The recent outbreak of HIV in Scott County is reported to have a lifetime cost of over \$100 million <sup>1</sup> with other sources claiming double that <sup>2</sup> figure - with a per individual lifetime cost of \$1 million, totaling almost \$200 million. Scott County has a population of just over 23,000 with 190 individuals infected with HIV. Over 180 of those infections stemmed from the recent outbreak, which was centered around the Town of Austin (population 4,100). In Indiana, where prior to the outbreak, needle exchanges had been illegal - deeply ingrained drug use in Austin, and its accompanying endless sharing of needles - was the catalyst of an epidemic.

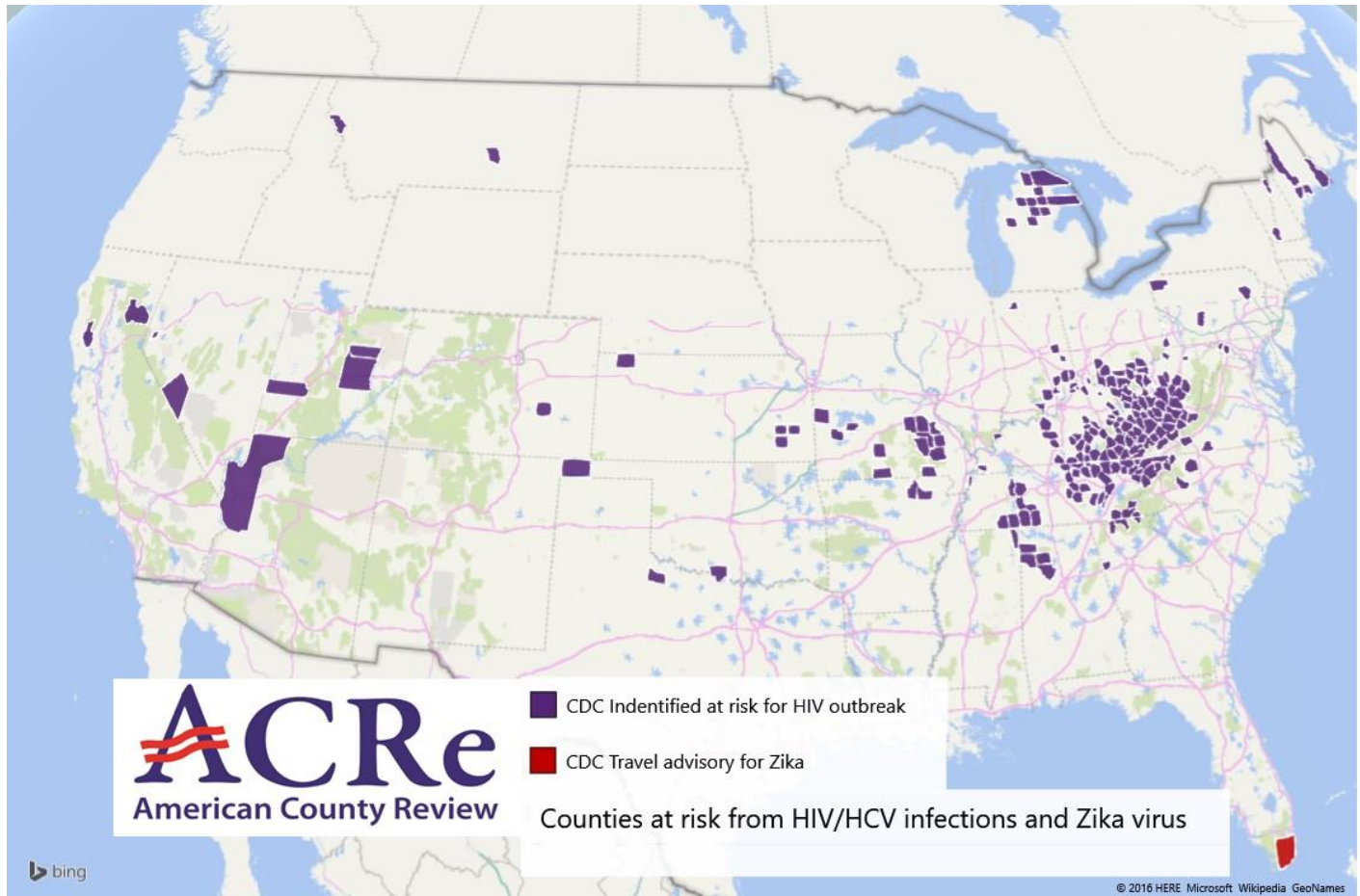


Figure 2 - Source: CDC – Center for Disease Control

<sup>1</sup> <https://www.poz.com/article/cdc-lists-220-counties-high-risk-hiv-hepatitis-c-outbreaks>

<sup>2</sup> <http://www.chicagotribune.com/suburbs/post-tribune/opinion/ct-ptb-rutter-on-scott-county-st-0607-20150606-story.html>

## HIV/HCV cont..

In the June 2016 study, the CDC isolated counties besieged with poverty, high unemployment, dangerous drug usage, and drug related crime. By isolating the 220 counties in question and reviewing the American County Review rankings for both unemployment data as well as Firm Concentration Risk, we are able to provide a breakdown by quartiles as to where these counties rank in relation to the 3,141 counties in the U.S.A.

Firm Concentration Risk as shown in Figure 2 below is a proprietary analytic of the [American County Review](#). This analytic is built by analyzing the percentage of employment of any one firm that exceeds 2% within the respective county. The higher the percentage of employment to a single firm, the greater the Firm Concentration risk level. Firms that move operations to other geographies, close lines, reduce shifts, or even encounter financial difficulties; could have a dramatic impact upon the status of the county where the Firm Concentration risk is significant.

In Figure 2 below the first quartile represents the lowest Firm Risk Concentration, and lowest Unemployment figures. Seven counties listed in the CDC study ranked in the top 25% of all 3,141 counties in terms of unemployment (having the lowest rates of unemployment), while over half (122) of the 220 counties in question have punishing unemployment and rank in the bottom 25% of the nation (3,141 counties).

When we further compare the counties in the fourth quartile for Unemployment, and fourth quartile for Firm Concentration Risk, we find forty-three counties (*see Appendix A*) are in the fourth quartile for both data elements. This is worrisome given that these counties are already experiencing high unemployment figures, and yet have a strong dependence for employment upon a few firms. As well these counties have already been identified as having high drug usage, and a further shift to higher unemployment may then trigger the more catastrophic results that occurred in Scott County, Indiana.

In the case of Austin, Indiana (Scott County) – in the late 90’s a large local employer reduced many of the low skill positions with either automation of higher skilled positions, and the resulting impact forced many of the established residents to sell and move out<sup>3</sup>, which then resulted in a more transient resident base. This was a contributing factor to the recent HIV outbreak in Austin, and a reminder why Industrial Concentration risk, and Firm Concentration risk should be incorporated into any risk model.

	Ranking for Firm Concentration Risk (2014)	Ranking for Unemployment Rate (2014)
First Quartile	63	7
Second Quartile	72	25
Third Quartile	0	66
Fourth Quartile	85	122
Total	220	220

Figure 1 Breakdown of the 220 Counties identified by the CDC as at risk of a HIV/HCV outbreak

<sup>3</sup> <http://www.indystar.com/story/news/2016/04/08/year-after-hiv-outbreak-austin-still-community-recovery/82133598/>

## HIV/HCV cont..

When we further look at this list of forty-three counties (*Appendix A*), we can identify one county that has been previously identified in an earlier white paper - [Oil & Gas – Risk Assessment](#) - as having Industrial Concentration Risk with a concentration of employment in the Oil & Gas Industry. Obviously with the volatility of the spot price of Oil, this identifies the further need for diligence when investing in the county in question which is: [Roane County, West Virginia](#) (10.70% employment in Oil & Gas) . Industry Concentration risk is measured when a county has 10% or higher employment in one Industry.

## Zika Virus

As we mentioned in the beginning the CDC issued a travel advisory in regards to the Zika virus for two locations within Miami-Dade County, Florida. This was the first time that the CDC issued a travel advisory for a destination within the continental United States. Miami-Dade County has a population of 2.7 million with a working population of 920,000, which includes a retail industry of 135,000 – or 14.77% of the working total. With a retail industry that large, and Miami known as a tourist destination, you can assume that a large portion of the retail workforce is dependent upon ongoing tourism. With the travel advisory there may well be pressure on the tourism sector of the retail industry as [International media](#) has provided extensive coverage of the Zika warnings for Miami-Dade, and this will only dampen foreign interest in both travel, and real estate for the area.

The CDC has been leading the fight to combat Zika, however the CDC has utilized the vast majority of its Zika funds in Puerto Rico where the outbreak is dramatic, and as a result the CDC is now essentially out of funding to further fight the Zika virus. As reported at the end of August 2016, by Maggie Fox of [NBC news](#)

*“Last February, President Barack Obama asked Congress for \$1.9 billion in emergency funds to fight Zika. [Congress has resisted](#), with controlling Republicans saying they want more accountability for the money and saying health agencies like the CDC and National Institutes of Health need to find money left over from fighting Ebola and other projects. Democrats turned down a Republican plan that would give the CDC and NIH some money but would take money away from Planned Parenthood.”*

At present there is no vaccination in effect for Zika and it may be years before one is developed. The fight to stop the spread of the Zika virus continues to be complicated as not only is the threat from mosquito, but also sexual transmission.

## The political and dangerous link between HIV/HCV and the Zika Virus

In 2013, the Indiana legislature finally succeeded in its desire to defund Planned Parenthood. Now while this entity is widely known in the media for its position on abortions, it was less known for the five clinics it previously ran in Indiana. These clinics tested for HIV and offered prevention, intervention and counseling for better health. <sup>4</sup> With funding pulled, all clinics were closed and many rural counties were left to fend for themselves. Can this scenario occur again (and again)? We can see from the fight over Zika funding that Congress is prepared to rob Peter, to pay Paul. The problem is if you move funding to fight Zika from other sources like Planned Parenthood, the outcome could be catastrophic. There are no winners here, and the risks for the public, and the investor cannot be ignored.

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<sup>4</sup> <http://www.chicagotribune.com/suburbs/post-tribune/opinion/ct-ptb-rutter-on-scott-county-st-0607-20150606-story.html>

## Summary

The intent of this white paper is to draw investors' attention to those issuers (or issuers contained within the respective county borders) that have specific risk that may not be known, or previously understood. We are not stating that any County (or issuer within that County) is a good, or poor investment. We are stating that every interpretation of risk is accompanied by an acceptable level of pricing – be it in a smaller, or wider spread on bonds, or a greater, or smaller valuation on real estate. Our mandate is to ensure that clients have access to as much information as possible to let them make informed decisions when it comes to valuation, and in turn investing.

## Acknowledgements:

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- Azfar-E-Alam Siddiqi, MD, PhD, Division of HIV/AIDS Prevention, National Center for HIV, Viral Hepatitis, STD, and TB Prevention, Centers for Disease Control and Prevention, Atlanta, Georgia, United States

## Final Rankings

The American County Review calculates scores for each of the thirty-eight data inputs. Rankings are calculated for each of these inputs as well but it is the final score which is consolidated from each of the thirty-eight inputs that calculates the Final Rankings. This method enables the relative measurement of each variable to be taken into account rather than simply using the thirty-eight rankings to determine the Final Ranking. An example would be where one county had a very low Crime Ratio and ranked 1<sup>st</sup> in the State, however the 2<sup>nd</sup> place county may have a substantially larger Crime Ratio that would not be properly reflected by simply utilizing its 2<sup>nd</sup> place status to assist in creating the Final Ranking.

Credit Risk is a different measurement for each individual, or institution – but it is something that should be viewed, analyzed, and measured, on a timely and non-emotional basis. We believe that the Quarterly updated, non-interpretive analysis, that the American County Review provides is an invaluable tool for any investor in the Municipal Bond and Real Estate marketplaces of America.

*To review the methodology utilized in calculation the rankings provide by the American County Review – [click here](#).*

*Clients have the option of licensing just the Final Rankings as detailed above, or all underlying data utilized in calculating scores for each of the thirty-eight inputs, and their accompanying Final Rankings.*

*For more information, please see [acredata.com](http://acredata.com) or follow us on Twitter [@acredata](https://twitter.com/acredata)*



Appendix A – Rankings are out of the 3,141 counties, with the lowest figures being the best rankings



FIPS Code	County, State	Counties in State	2015 Est.Pop (Avg 102,330)	National Rank All Populations (3,141 Counties in Total)	National Rank Unemployment Rate 2014	National Rank Firm Concentration Risk 2014	
01127	Walker County, Alabama	1	67	65294	2796	2807	2882
04015	Mohave County, Arizona	1	15	204737	2563	2936	2882
06033	Lake County, California	1	58	64591	2711	3046	2882
13111	Fannin County, Georgia	1	159	24303	2000	2952	2882
17069	Hardin County, Illinois	1	102	4135	2973	2988	2939
18065	Henry County, Indiana	1	92	48985	1473	2531	2882
21003	Allen County, Kentucky	1	120	20640	922	2650	2939
21019	Boyd County, Kentucky	1	120	48325	1527	2531	2882
21041	Carroll County, Kentucky	1	120	10699	3030	2988	2999
21043	Carter County, Kentucky	1	120	27158	2091	2650	2882
21045	Casey County, Kentucky	1	120	15808	2033	2377	3096
21105	Hickman County, Kentucky	1	120	4612	375	2754	2882
21147	McCreary County, Kentucky	1	120	17878	2835	3110	2999
21153	Magoffin County, Kentucky	1	120	12808	763	2483	3038
21159	Martin County, Kentucky	1	120	12307	1717	3112	2882
21165	Menifee County, Kentucky	1	120	6358	2410	3046	3065
21167	Mercer County, Kentucky	1	120	21407	2766	2846	3038
21189	Owsley County, Kentucky	1	120	4461	367	2976	3038
21193	Perry County, Kentucky	1	120	27565	1594	2874	3038
21195	Pike County, Kentucky	1	120	61792	2843	2428	2882
21235	Whitley County, Kentucky	1	120	36129	615	2650	2882
26031	Cheboygan County, Michigan	1	83	25427	2371	3014	2882
26129	Ogemaw County, Michigan	1	83	20937	1639	2846	2882
26141	Presque Isle County, Michigan	1	83	12841	2199	2943	2882
29093	Iron County, Missouri	1	115	10125	2614	2669	2882
29179	Reynolds County, Missouri	1	115	6432	2475	2860	2882
30061	Mineral County, Montana	1	56	4251	2397	2982	3065
32009	Esmeralda County, Nevada	1	17	829	3123	3009	2882
37023	Burke County, North Carolina	1	100	88842	1863	2807	2882
37193	Wilkes County, North Carolina	1	100	68502	2734	2952	2882
39009	Athens County, Ohio	1	88	65886	1340	2554	2882
39145	Scioto County, Ohio	1	88	76825	1369	2454	2882
47063	Hamblen County, Tennessee	1	95	63402	1450	2554	2882
47067	Hancock County, Tennessee	1	95	6572	1289	3012	3141
47089	Jefferson County, Tennessee	1	95	53240	731	2377	2882
47095	Lake County, Tennessee	1	95	7576	821	2897	2882
47099	Lawrence County, Tennessee	1	95	42564	1012	2531	2882
47121	Meigs County, Tennessee	1	95	11830	3018	3090	3038
47135	Perry County, Tennessee	1	95	7929	2045	2669	3038
51105	Lee County, Virginia	1	133	24742	2714	2587	2882
54003	Berkeley County, West Virginia	1	55	111901	735	2483	2882
54087	Roane County, West Virginia	1	55	14435	2683	2568	3038
54101	Webster County, West Virginia	1	55	8755	2748	2943	2882

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