

Misery Index: 2016 Q2

The Misery Index is an indicator measuring the impact of changing economic conditions on people. This index, as calculated by CEDBR, is a combination of the quarterly percent change in the Housing Price Index (HPI), the quarterly average change in the Consumer Price Index (CPI), and the quarterly average unemployment rate (UR). The combination of changes in these factors indicates the changing level of economic misery experienced by people in different geographic areas.

Misery Index

								Change					
		Index Value		% Change in Index				in Index Components					
		2016 Q2	2016 Q1	Qı	uarterly		Annual		HPI		CPI		UR
	U.S.	4.76	5.20		-8.5%	\triangleright	-9.9%	4	0.011	\triangleright	0.000	Þ	-0.433
	Kansas	3.78	4.20	$\overline{}$	-9.9%	\triangleright	-12.9%	_	0.019		0.002	$\overline{}$	-0.400
Kansas	Wichita, KS	4.22	4.60	$\overline{}$	-8.2%	$\overline{}$	-12.6%	$\overline{}$	-0.001	_	0.024	$\overline{}$	-0.400
	Kansas City, MO-KS	4.12	4.41	$\overline{}$	-6.6%	\triangleright	-15.9%		0.025	_	0.002	$\overline{}$	-0.267
	Lawrence, KS	3.42	3.46	~	-1.0%	$\overline{}$	-11.9%	—	-0.009	_	0.024	~	-0.067
	Topeka, KS	3.75	4.41	\triangleright	-14.9%	\triangleright	-12.6%	4	0.013	_	0.024	ightharpoons	-0.667
Region	Oklahoma City, OK	4.20	3.79	_	11.0%	_	9.6%	_	0.006	_	0.024	_	0.400
	Omaha, NE	3.23	3.54	$\overline{}$	-8.9%	\triangleright	-0.4%	_	0.006		0.024	$\overline{}$	-0.333
	St. Louis, MO-IL	4.53	5.10	~	-11.1%	\checkmark	-12.0%	_	0.001	_	0.002	~	-0.567
	Tulsa, OK	4.85	4.52		7.4%	4	13.8%	4	0.024	<u> </u>	0.024	<u> </u>	0.333
Peer	Akron, OH	4.78	5.73	$\overline{}$	-16.6%	_	1.2%	_	0.043	_	0.024	$\overline{}$	-0.933
	Grand Rapids, MI	3.14	3.30	$\overline{}$	-4.8%	\triangleright	-19.2%		0.016	_	0.024	$\overline{}$	-0.167
	Greenville, SC	4.71	4.93	$\overline{}$	-4.5%	$\overline{}$	-13.5%	_	0.020	$\overline{}$	0.000	$\overline{}$	-0.200
	Lancaster, PA	4.11	4.12	$\overline{}$	-0.3%	$\overline{}$	-1.3%		0.045	_	0.001		0.033

Values are impacted by rounding.

Between the first and second quarters of 2016, the general level of misery experienced by people in the United States decreased and remains well below the 2015 level. This can be attributed to continued decreases in the unemployment rate, low levels of inflation and increases in housing prices. The level of misery in Kansas also decreased between the first and second quarters and remains below the 2015 level.

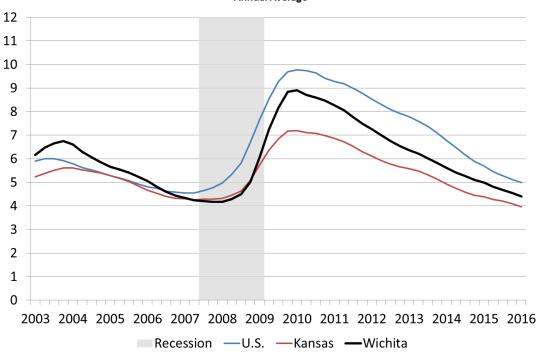
Within each of the metropolitan areas in Kansas, the misery index remains lower than in the United States as a whole. The misery levels in Lawrence and Topeka are lower than the state as a whole. The

misery levels in Kansas City and Wichita are above the state level. Misery in Wichita and Topeka is decreasing faster than the state level. Misery in Kansas City and Lawrence is decreasing more slowly than the state as a whole.

Within the region, Tulsa now has the highest level of misery, followed by St. Louis and Wichita. The lowest level of misery in the region continues to be in Omaha, followed by Lawrence. Tulsa in the only area in the region with a higher level of misery than the United States as a whole. Tulsa and Oklahoma City were the only areas in the region to experience an increase in misery between the first and second quarters.

For comparison, the misery index for four metropolitan areas similar to Wichita in population, demographics, and industrial mix are also provided. Within these peer communities, Greenville has the highest level of misery. The level of misery in Greenville and Akron is currently higher than the level of misery in Wichita. Grand Rapids and Lancaster have lower levels of misery than Wichita. Grand Rapids has had the most significant decrease in misery over the past year.



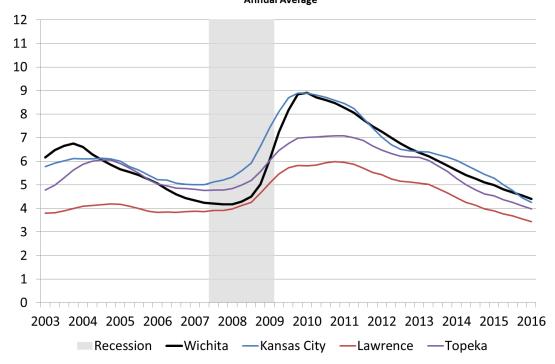


Misery Index: Regional Metropolitan Areas Annual Average

12
11
10
9
8
7
6
5
4
3
2
10
2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016

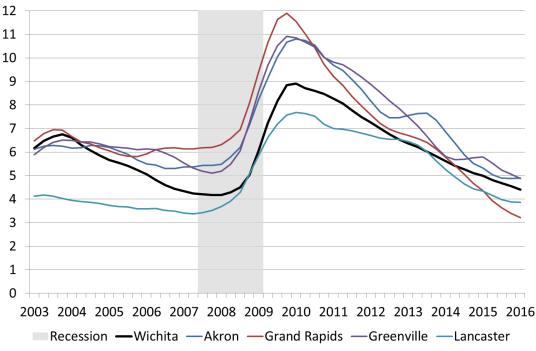
Recession —Wichita —Oklahoma City —Omaha —St. Louis —Tulsa

Misery Index: Kansas Metropolitan Areas Annual Average



Misery Index: Peer Metropolitan Areas

Annual Average



Methodology

The Misery Index calculated by the Center for Economic Development and Business Research (CEDBR) includes the following information:

- The Consumer Price Index (CPI) from the Bureau of Labor Statistics¹
- House Price Index (HPI) from the Federal Housing Finance Agency²
- Unemployment Rates (UR) from the Bureau of Labor Statistics³

Not seasonally adjusted, monthly data values for the Consumer Price Index – All Urban Consumers were used to calculate the quarterly inflation rates. The specific indices used are as follows. U.S. city average, with a base period of 1982-84, was used for the United States inflation rate. Midwest urban, with a base period of 1982-84, was used for the Kansas inflation rate. Midwest – Size Class A, with a base year of 1982-84, was used for the Kansas City and St. Louis metropolitan area's inflation rates. Midwest – Size Class B/C, with a base year of December 1996, was used for the Wichita, Topeka, Lawrence, Grand Rapids, Omaha, Akron, Oklahoma City and Tulsa metropolitan area's inflation rates. Northeast urban – Size Class B/C, with a base period of December 1996, was used for the Lancaster metropolitan area

¹ http://www.bls.gov/cpi/ Data accessed August 24, 2016.

² http://www.fhfa.gov/Default.aspx?Page=87 Data accessed August 24, 2016.

³ http://www.bls.gov/bls/unemployment.htm Data accessed August 24, 2016.

inflation rate. South – Size Class B/C, with a base period of December 1996, was used for the Greenville metropolitan area inflation rate.

The HPI is a measure of single family home prices within specific areas. This series is used because the index is produced for a wide range of geographic areas. The CEDBR used the "All-Transactions Index" values for each respective area. The percentage change from the previous quarter was used in the Misery Index. The HPI is a positive indicator for consumers. Therefore, if the HPI is increasing, the Misery Index will decline.

The CEDBR used not seasonally adjusted, area specific, unemployment data (the official unemployment rate) to calculate the Misery Index. The unemployment rate is a negative indicator for consumers. Therefore, if the unemployment rate is increasing, the Misery Index will also increase.

For additional information and methodology details please click <u>HERE</u>.