

# COMMISSIONER OF SECURITIES & INSURANCE

MONICA J. LINDEEN  
COMMISSIONER



OFFICE OF THE MONTANA  
STATE AUDITOR

DATE: May 13, 2014  
TO: Economic Affairs Interim Committee  
FROM: Mari Kindberg, FCAS, MAAA  
RE: Analysis of Competition using the Herfindahl-Hirshman Index (HHI)

This document provides information on the Herfindahl-Hirshman Index (HHI). The HHI index is a commonly accepted measure of market concentration, and is one of the measures utilized to determine whether or not a reasonable degree of competition exists in a marketplace. The HHI is calculated by squaring the market share of each insurer competing in the market and then adding together the sums of the squares. For example, for a market consisting of four insurers with shares of 30, 30, 20, and 20 percent, the HHI is 2,600 ( $30^2 + 30^2 + 20^2 + 20^2 = 2,600$ ). The HHI value ranges from 0 (many insurers) to 10,000 (single insurer). The U. S. Department of Justice classifies markets into the following three types:

Un-Concentrated Markets: HHI below 1,500  
Moderately Concentrated Markets: HHI between 1,500 and 2,500  
Highly Concentrated Markets: HHI above 2,500

The laws that regulate the rates of private insurers (plan No. 2 insurers), embodied in Mont. Code Ann. § 33-16-10, are influenced greatly by whether or not a competitive workers' compensation marketplace exists in Montana. The criteria utilized to make a competitive workers' compensation market determination are in § 33-16-1020. The HHI market concentration calculation is pivotal in this determination. Currently, the law only allows plan No. 2 insurers to be included in the determination. Per § 33-16-1020(3), the workers' compensation market may not be determined to be noncompetitive if the market concentration of the 50 largest insurers writing workers' compensation insurance under plan No. 2 satisfies the U. S. Department of Justice merger guidelines for an un-concentrated market. The HHI based upon 2013 market shares for the 50 largest plan No. 2 writers in Montana is 530, thus the market is un-concentrated per § 33-16-1020(3). Since the enactment of § 33-16-1020 in 1995 the market has not been determined to be noncompetitive.

If the Montana State Fund (MSF) is included in the determination the HHI becomes 3,684 which is a highly concentrated market per the U. S. Department of Justice guidelines. If the MSF were to be included in the competitive market determination under current law the Commissioner of Insurance would be required to issue an order adopting findings of fact and conclusions of law following a hearing held on the matter. The Commissioner would need to consider not only the HHI but numerous other factors in making the determination. Those other factors include number of insurers; market shares; changes in market shares; ease of entry; long-term profitability; and generally accepted relevant tests relating to competitive market structure, market performance, and market conduct.